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Lethbridge, Alberta T1H 5J3
Tel: (403)892-6036

ATTERBERG LIMITS

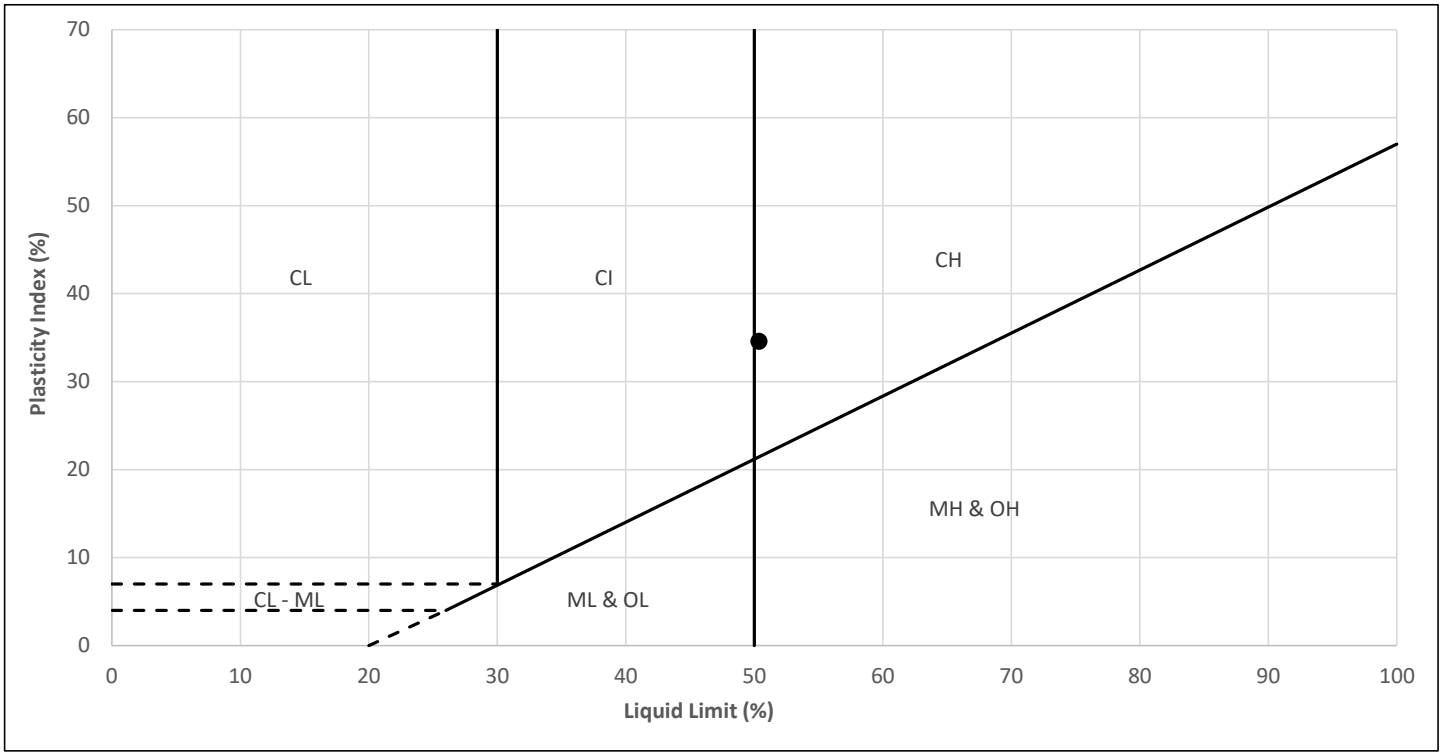
Project:	Snake Lake Reservoir Expansion	**Sample #:**	100AU3
Project No.:	1560-193-00	**Source:**	22BH100
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 100AU3	**Date:**	28-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.4
Plastic Limit (PL)	15.8
Plasticity Index (PI)	34.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

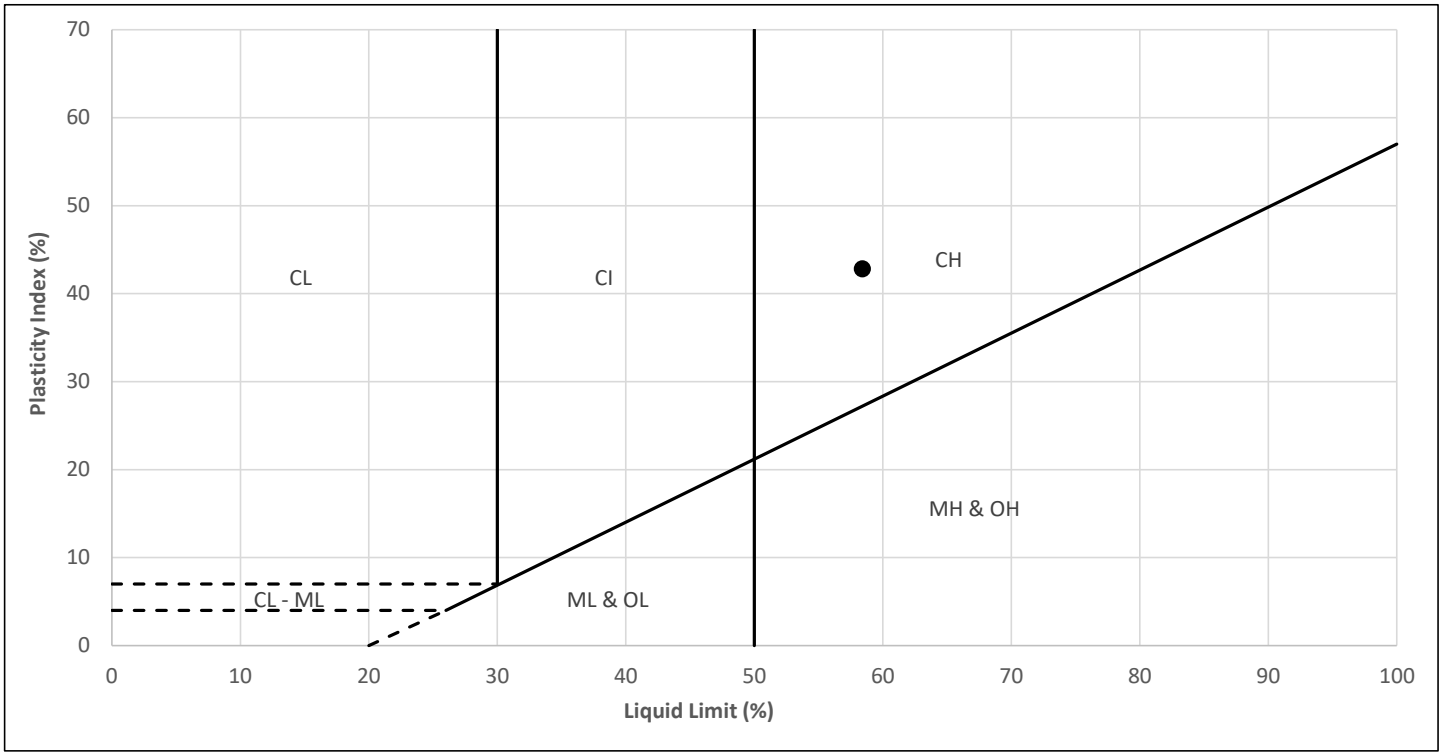
Project:	Snake Lake Reservoir Expansion	**Sample #:**	101AU3
Project No.:	1560-193-00	**Source:**	22BH101
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 101AU3	**Date:**	29-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	58.4
Plastic Limit (PL)	15.6
Plasticity Index (PI)	42.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

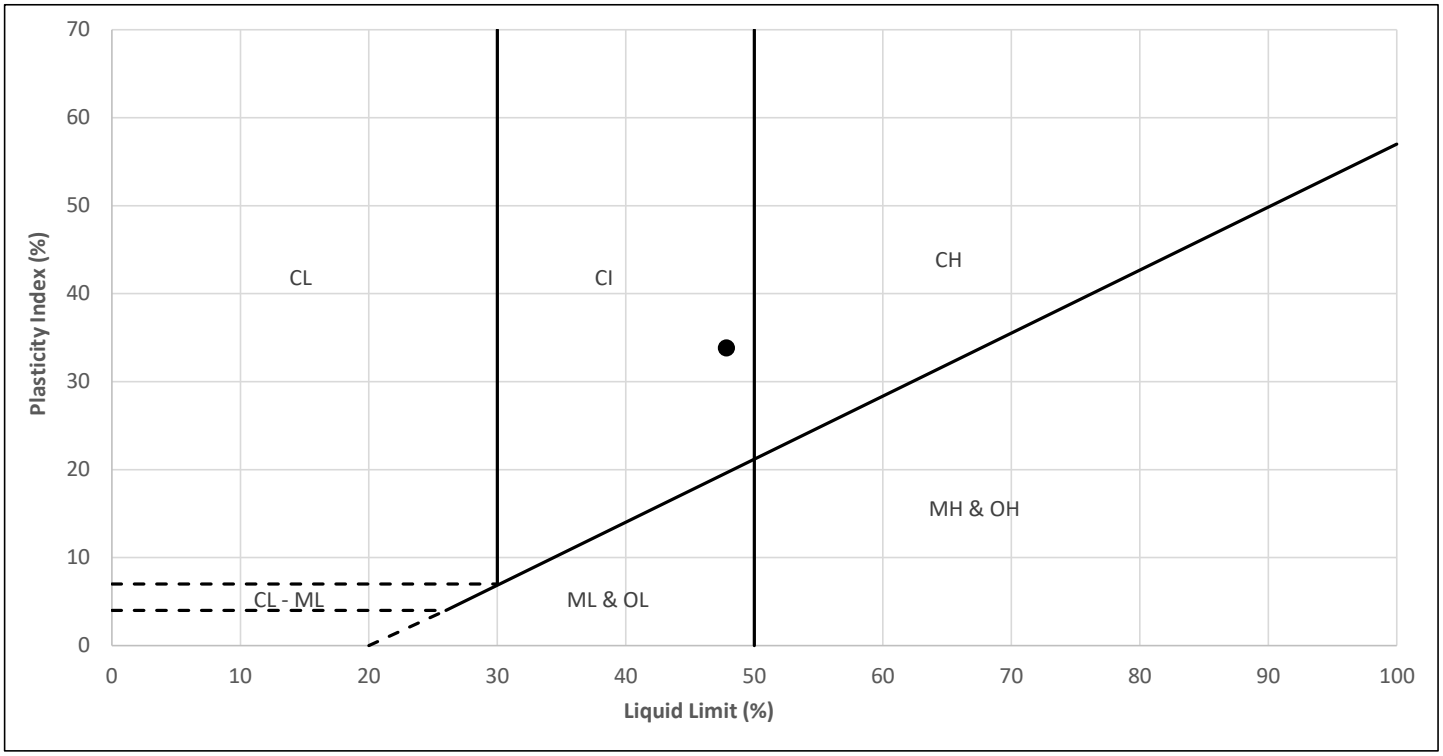
Project:	Snake Lake Reservoir Expansion	**Sample #:**	102AU3
Project No.:	1560-193-00	**Source:**	22BH102
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 102AU3	**Date:**	29-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	47.8
Plastic Limit (PL)	14.0
Plasticity Index (PI)	33.8

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

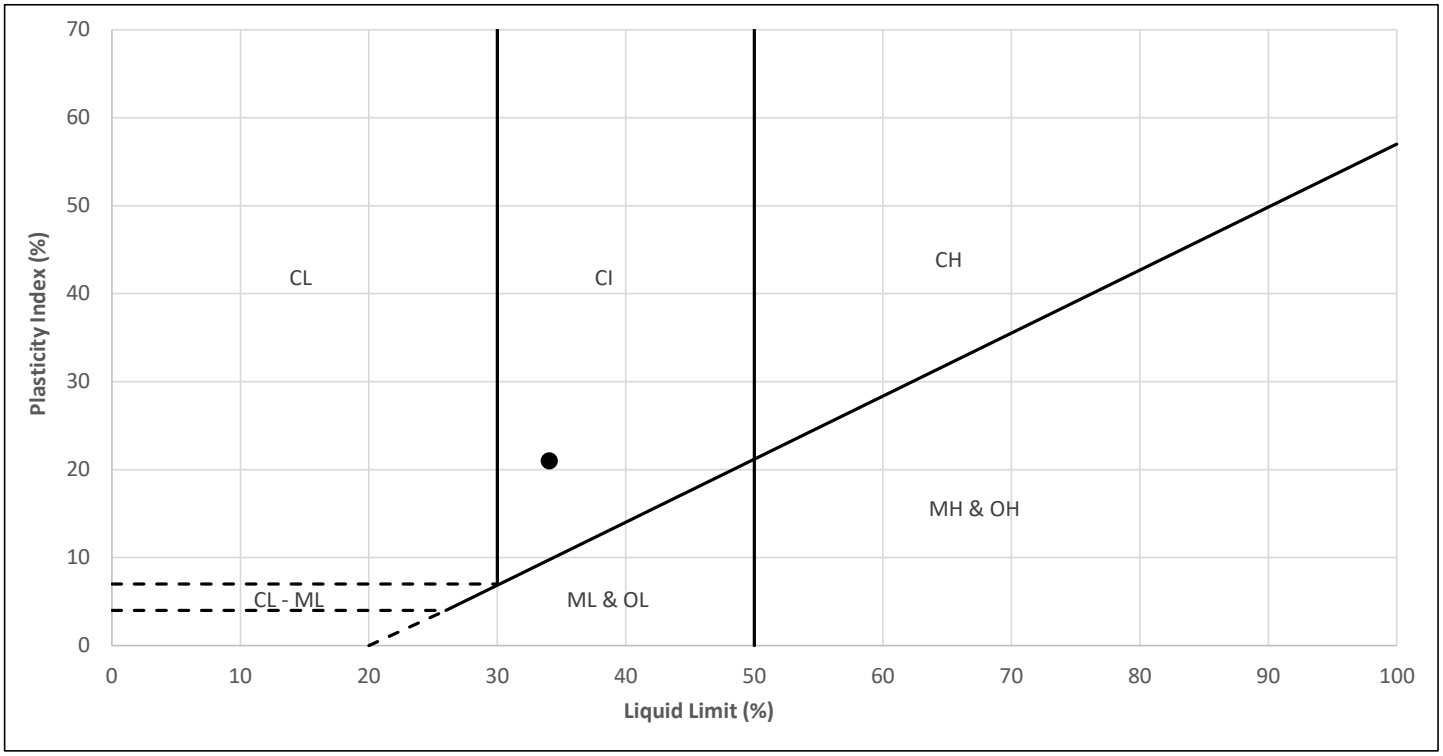
Project:	Snake Lake Reservoir Expansion	**Sample #:**	102AU6
Project No.:	1560-193-00	**Source:**	22BH102
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 102AU6	**Date:**	29-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	34.0
Plastic Limit (PL)	13.0
Plasticity Index (PI)	21.0

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

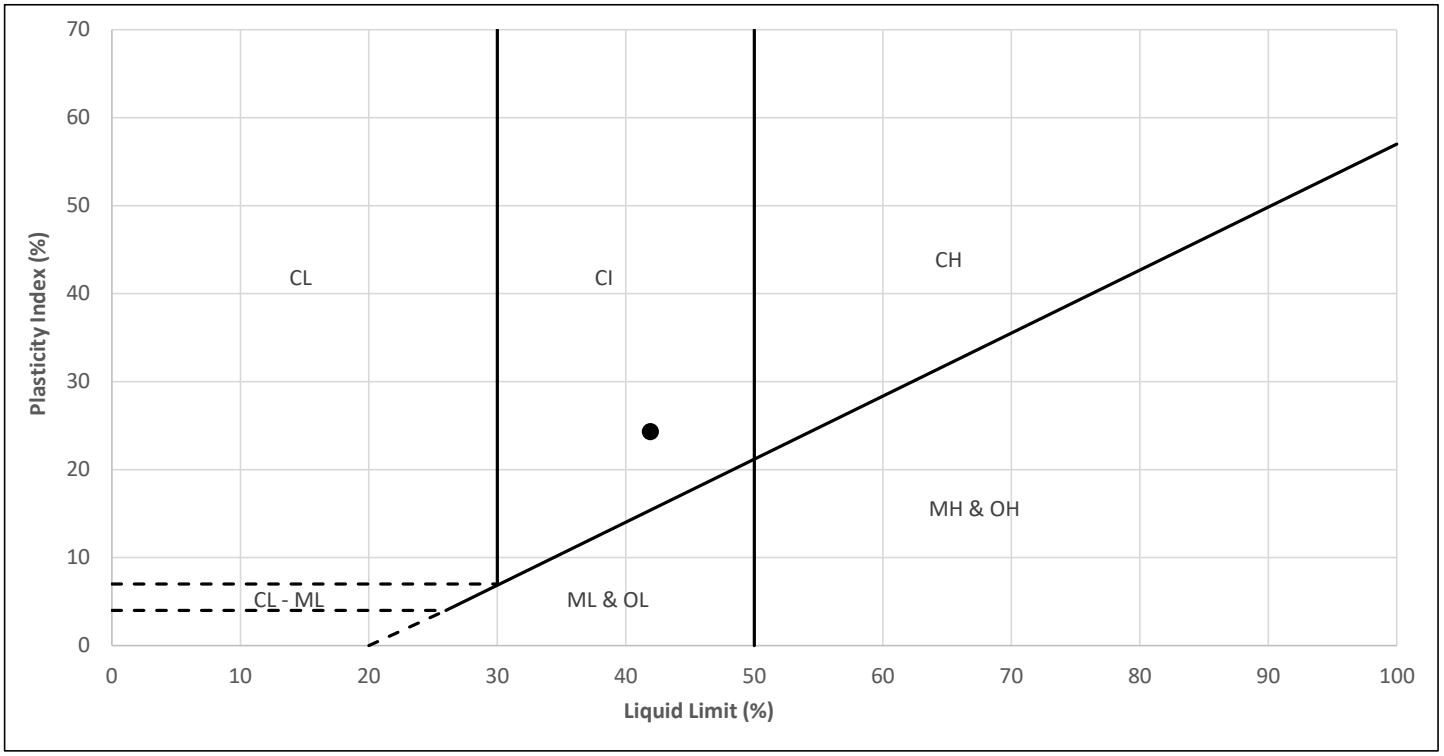
Project:	Snake Lake Reservoir Expansion	**Sample #:**	103AU6
Project No.:	1560-193-00	**Source:**	22BH103
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 103AU6	**Date:**	29-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	41.9
Plastic Limit (PL)	17.6
Plasticity Index (PI)	24.3

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

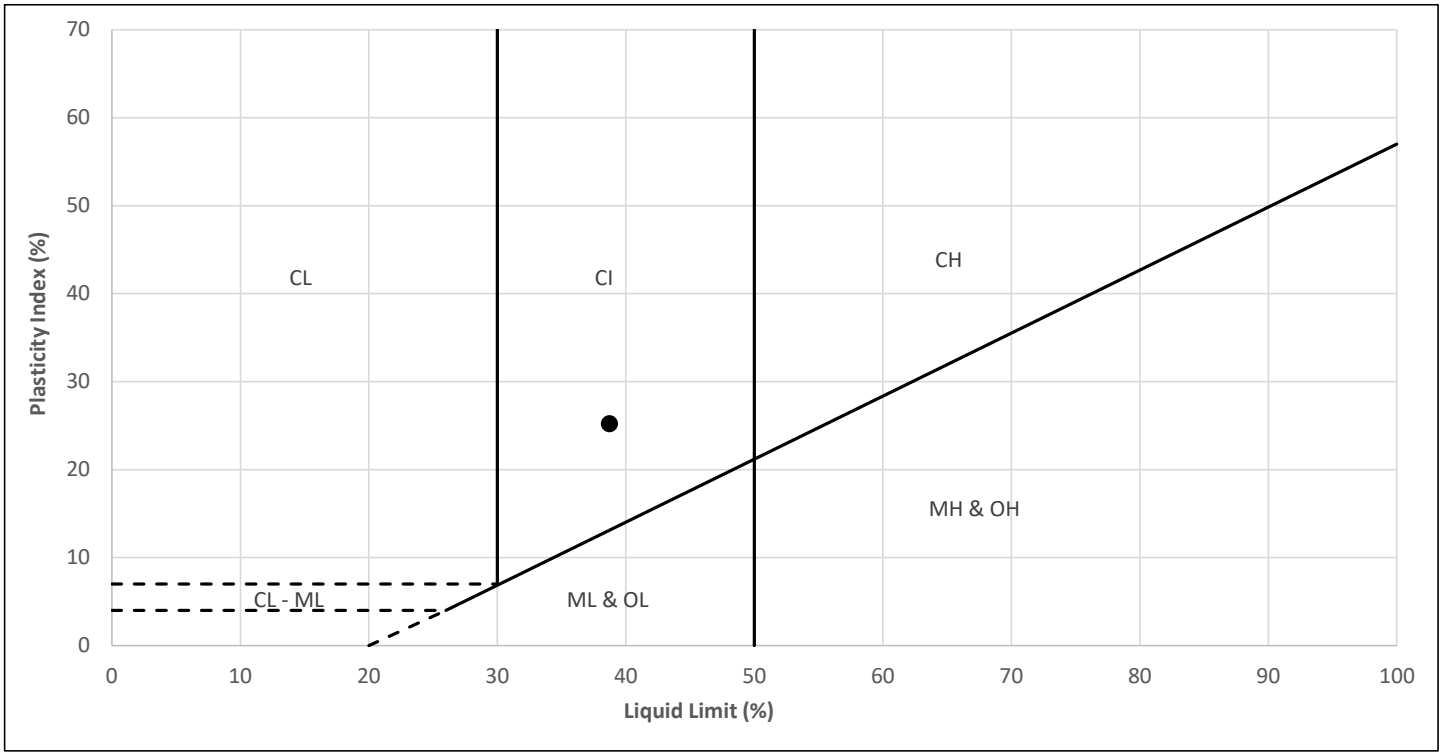
Project:	Snake Lake Reservoir Expansion	**Sample #:**	104AU2
Project No.:	1560-193-00	**Source:**	22BH104
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 104AU2	**Date:**	29-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	38.7
Plastic Limit (PL)	13.5
Plasticity Index (PI)	25.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

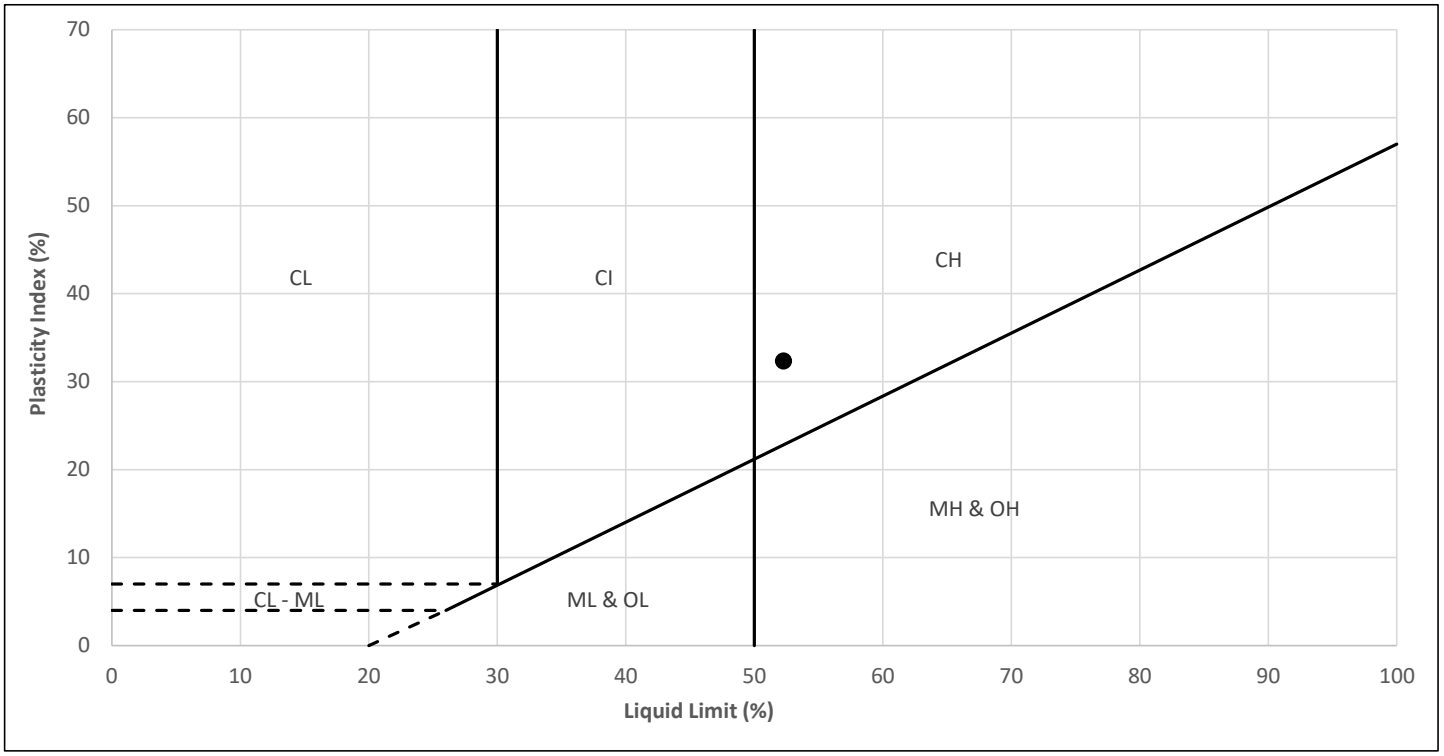
Project:	Snake Lake Reservoir Expansion	**Sample #:**	104AU4
Project No.:	1560-193-00	**Source:**	22BH104
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 104AU4	**Date:**	5-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.3
Plastic Limit (PL)	19.9
Plasticity Index (PI)	32.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

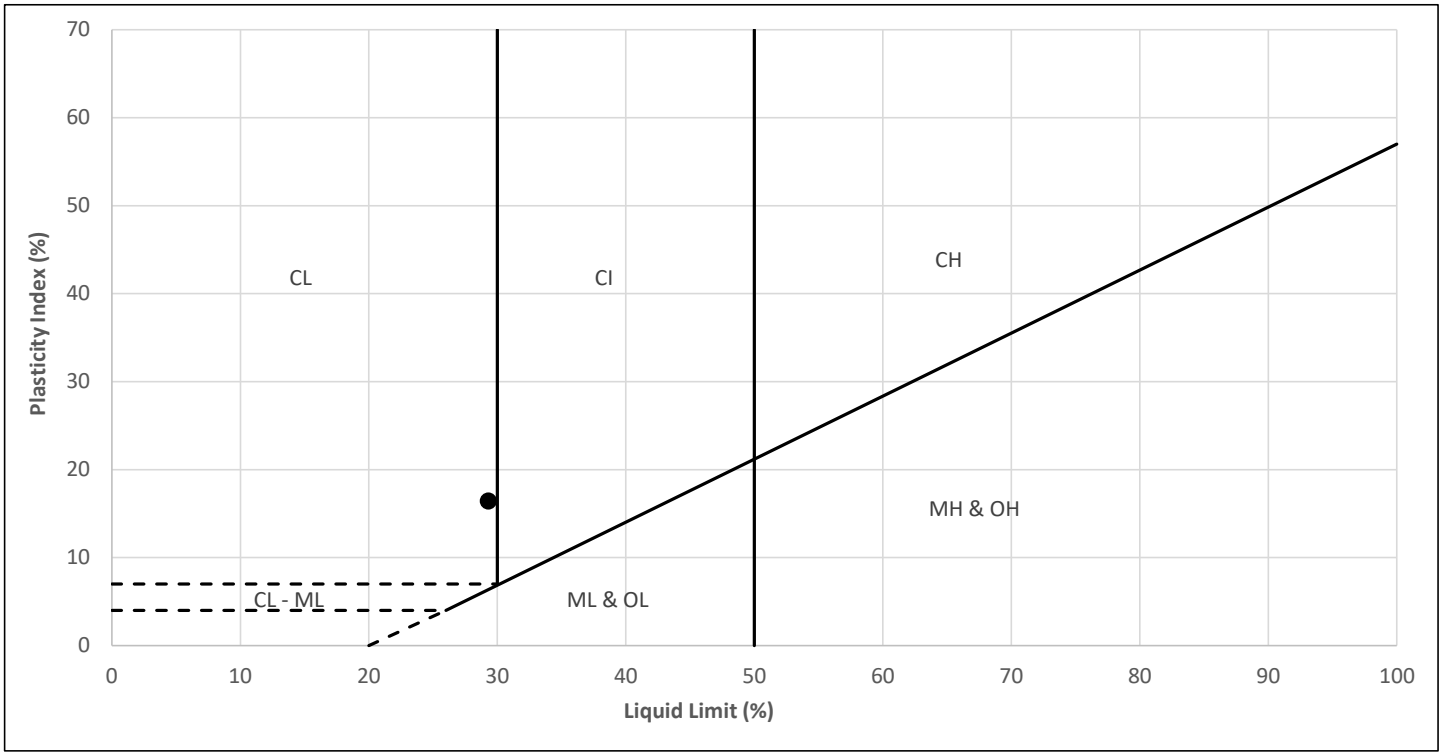
Project:	Snake Lake Reservoir Expansion	**Sample #:**	105AU7
Project No.:	1560-193-00	**Source:**	22BH105
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 105AU7	**Date:**	5-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays

Liquid Limit (LL)	29.3
Plastic Limit (PL)	12.8
Plasticity Index (PI)	16.5

Soil Plasticity	Low
Soil Classification	CL



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ATTERBERG LIMITS

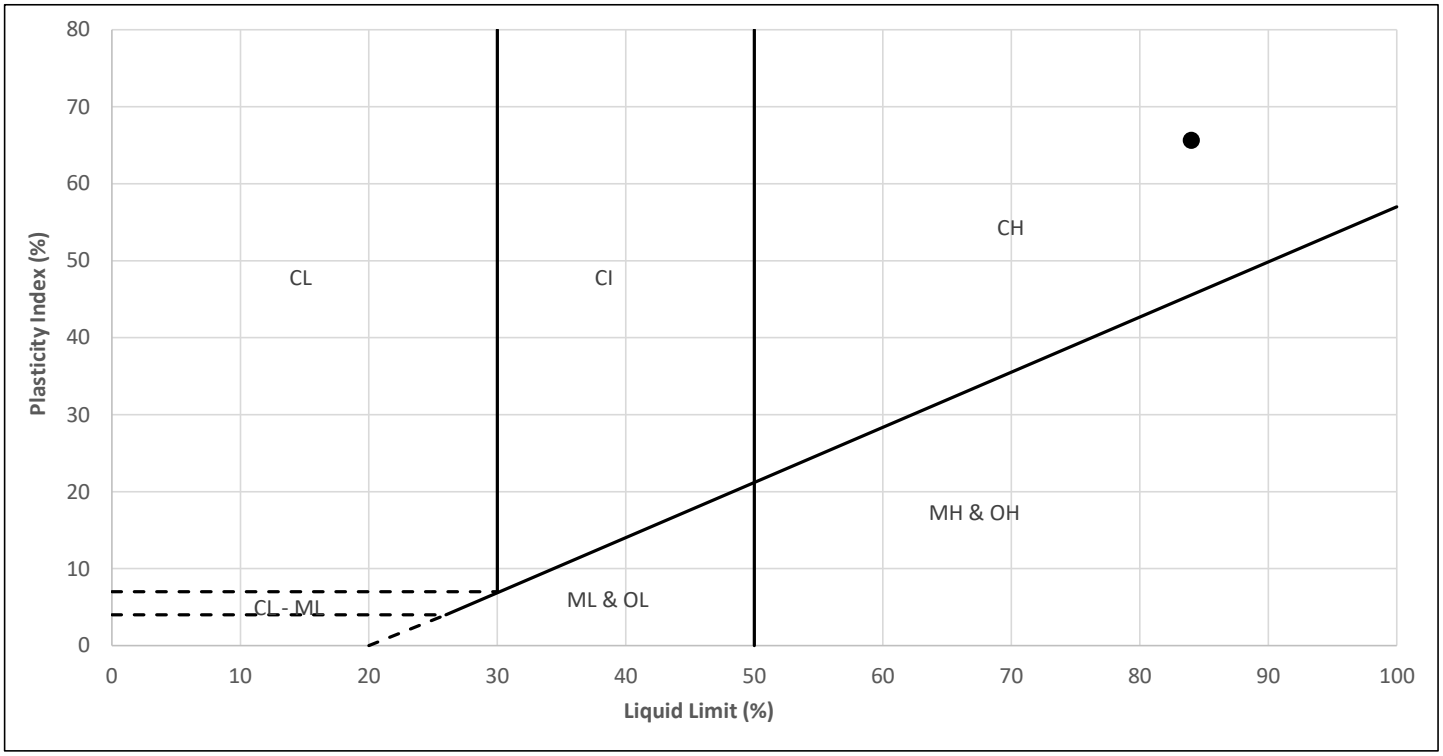
Project:	Snake Lake Reservoir Expansion	**Sample #:**	105RC5
Project No.:	1560-193-00	**Source:**	22CH105
Owner:	EID	**Sample Depth:**	10.0m
File No.:	AL - 105RC5	**Test Date:**	16-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	84.0
Plastic Limit (PL)	18.4
Plasticity Index (PI)	65.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

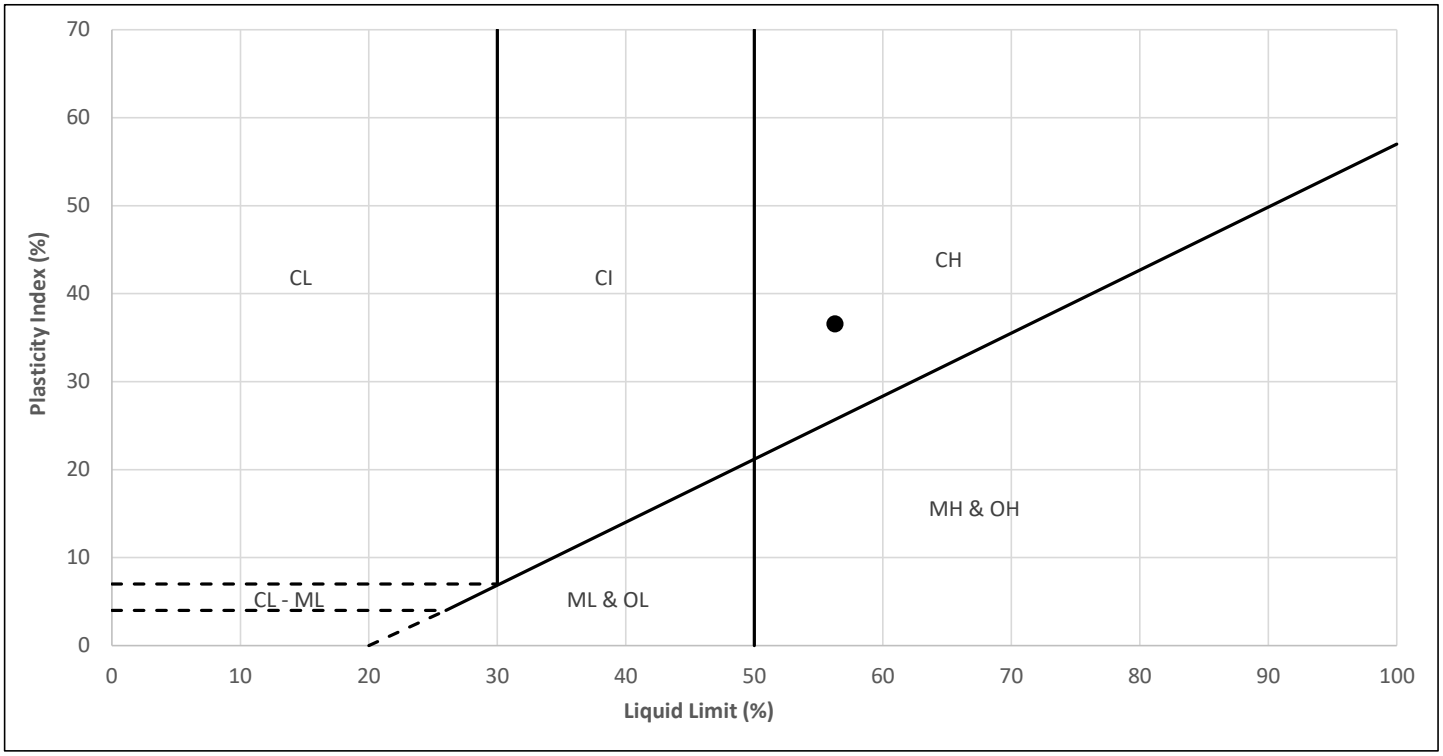
Project:	Snake Lake Reservoir Expansion	**Sample #:**	106AU4
Project No.:	1560-193-00	**Source:**	22BH106
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 106AU4	**Date:**	7-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	56.3
Plastic Limit (PL)	19.7
Plasticity Index (PI)	36.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

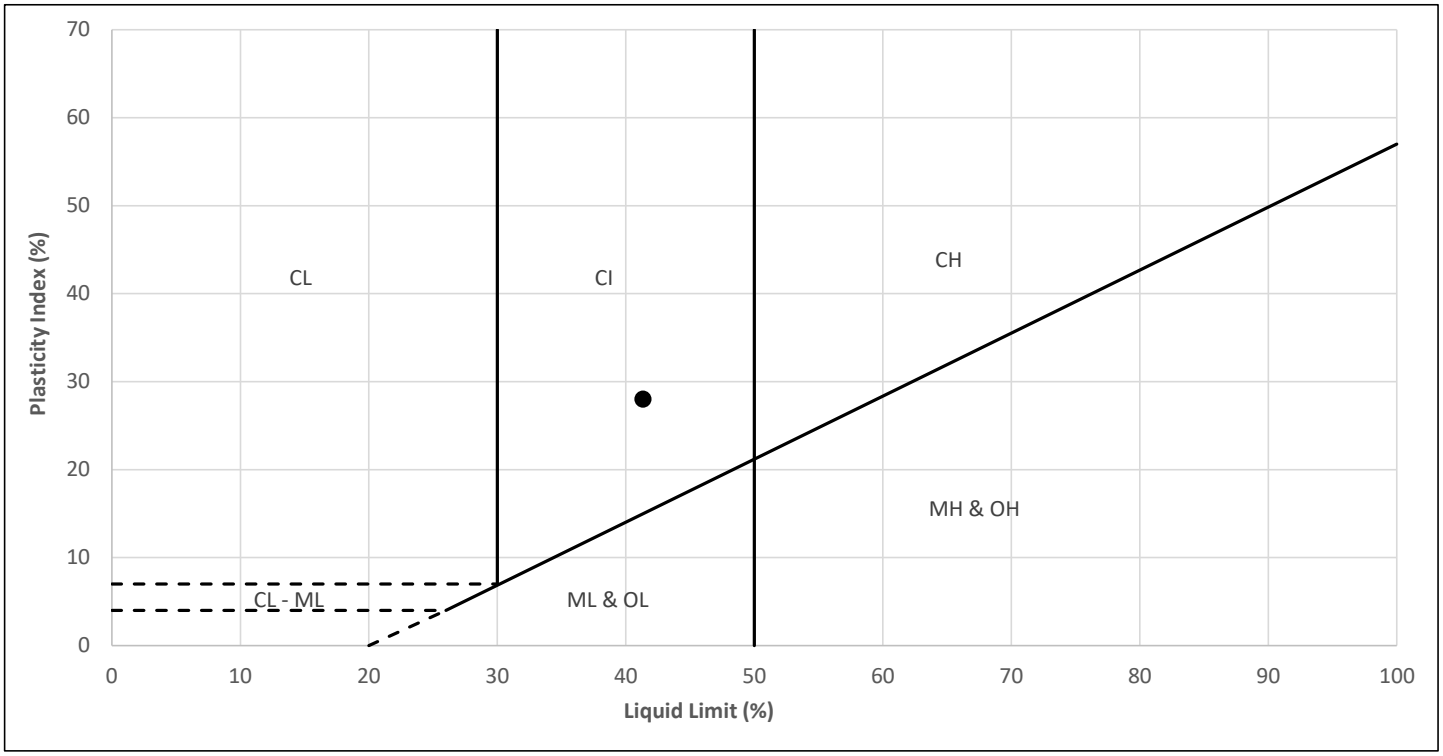
Project:	Snake Lake Reservoir Expansion	**Sample #:**	106AU9
Project No.:	1560-193-00	**Source:**	22BH106
Owner:	EID	**Sample Depth:**	6.7m
File No.:	AL - 106AU9	**Date:**	7-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	41.3
Plastic Limit (PL)	13.3
Plasticity Index (PI)	28.0

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

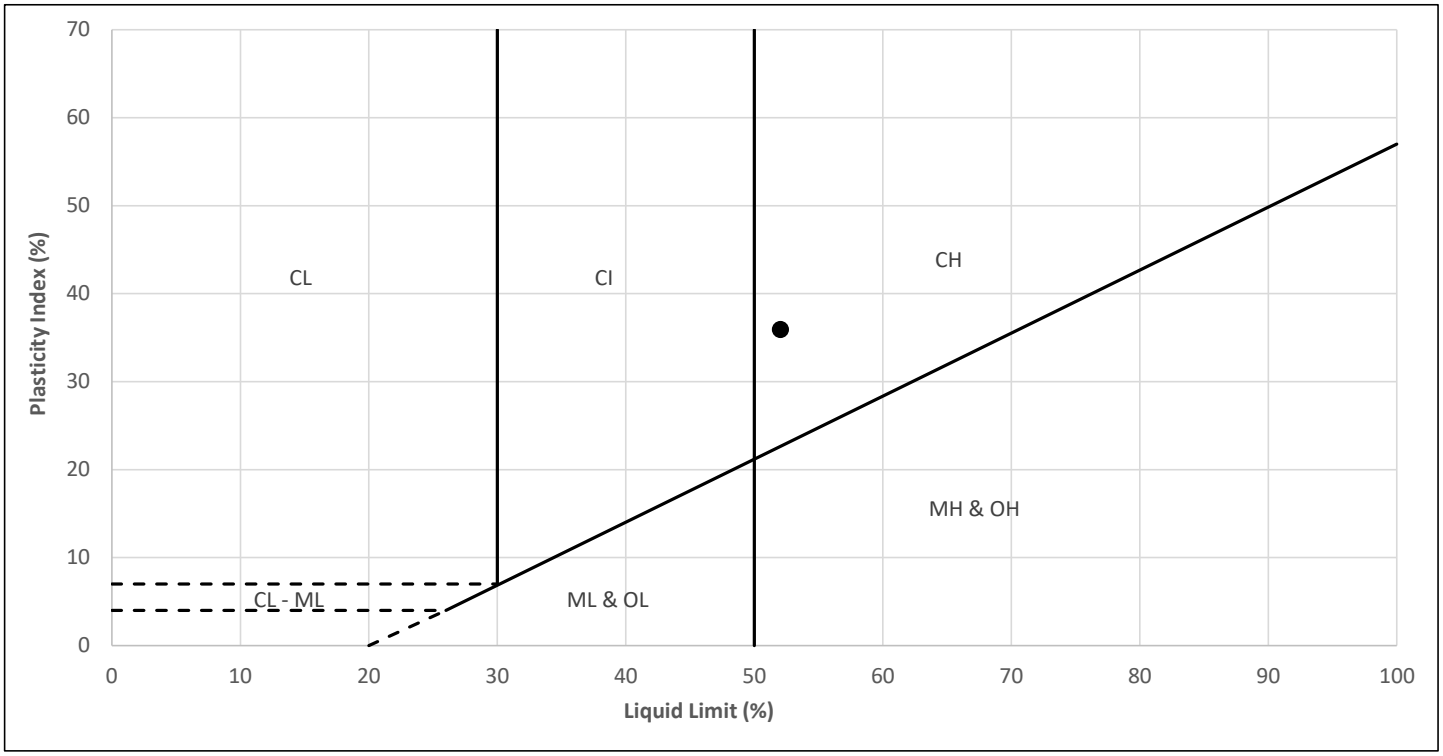
Project:	Snake Lake Reservoir Expansion	**Sample #:**	107AU2
Project No.:	1560-193-00	**Source:**	22BH107
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 107AU2	**Date:**	7-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.0
Plastic Limit (PL)	16.1
Plasticity Index (PI)	35.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

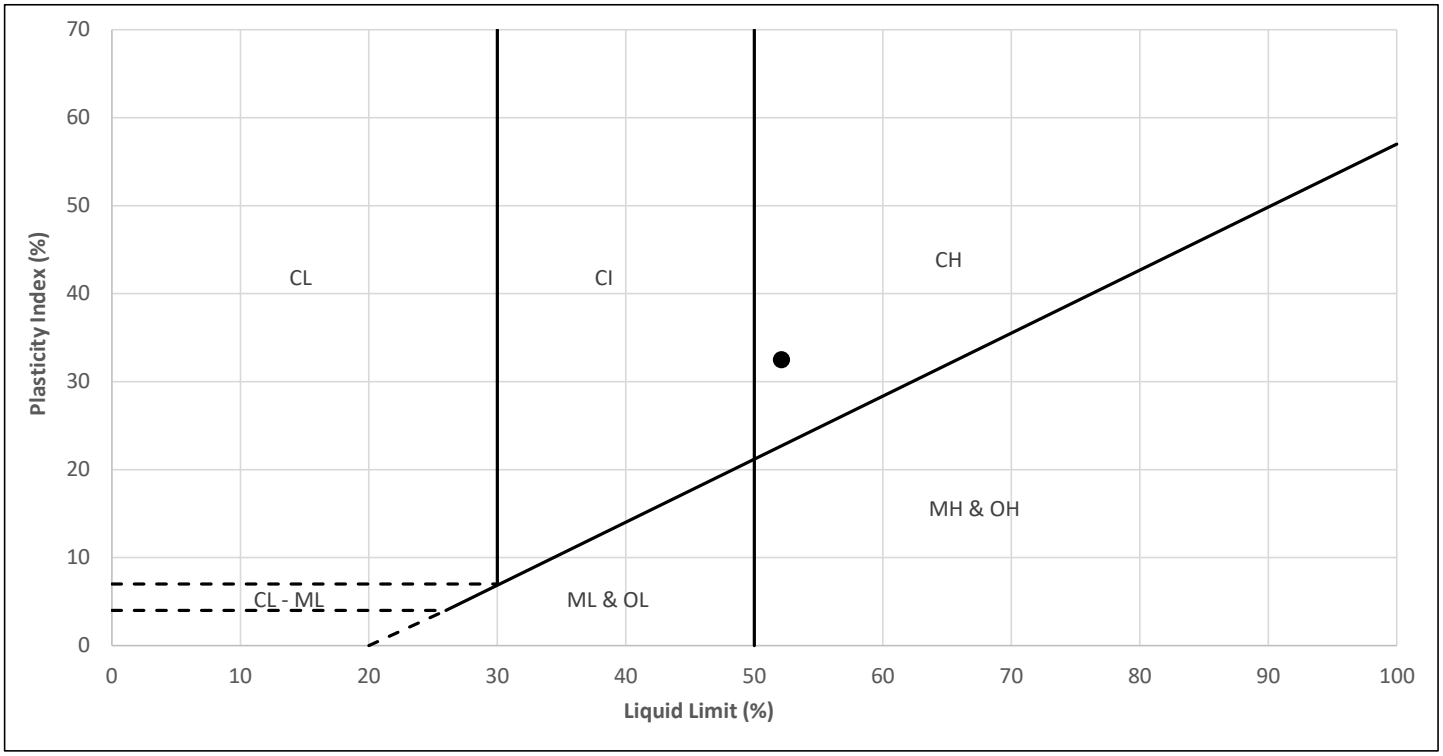
Project:	Snake Lake Reservoir Expansion	**Sample #:**	108AU3
Project No.:	1560-193-00	**Source:**	22BH108
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 108AU3	**Date:**	7-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.1
Plastic Limit (PL)	19.6
Plasticity Index (PI)	32.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

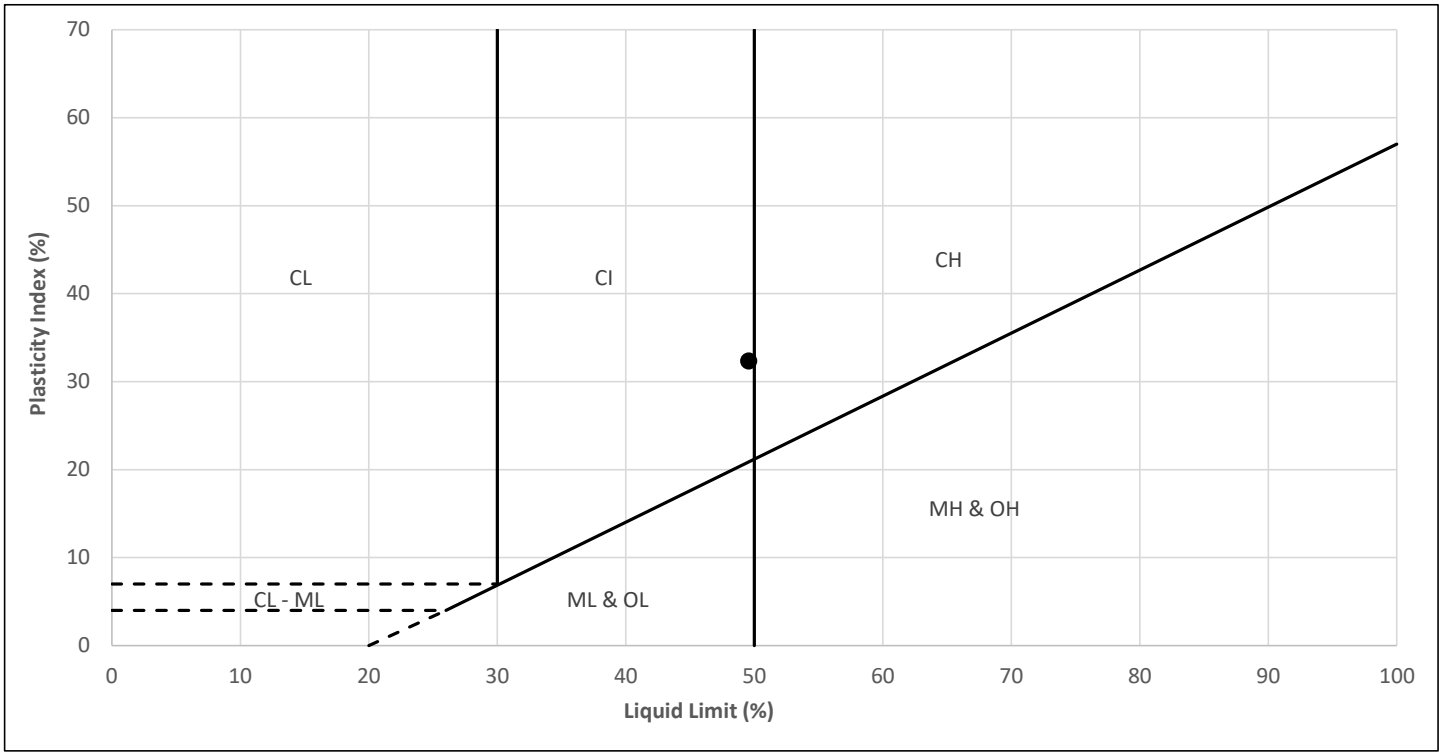
Project:	Snake Lake Reservoir Expansion	**Sample #:**	108AU5
Project No.:	1560-193-00	**Source:**	22BH108
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 108AU5	**Date:**	12-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.6
Plastic Limit (PL)	17.2
Plasticity Index (PI)	32.4

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

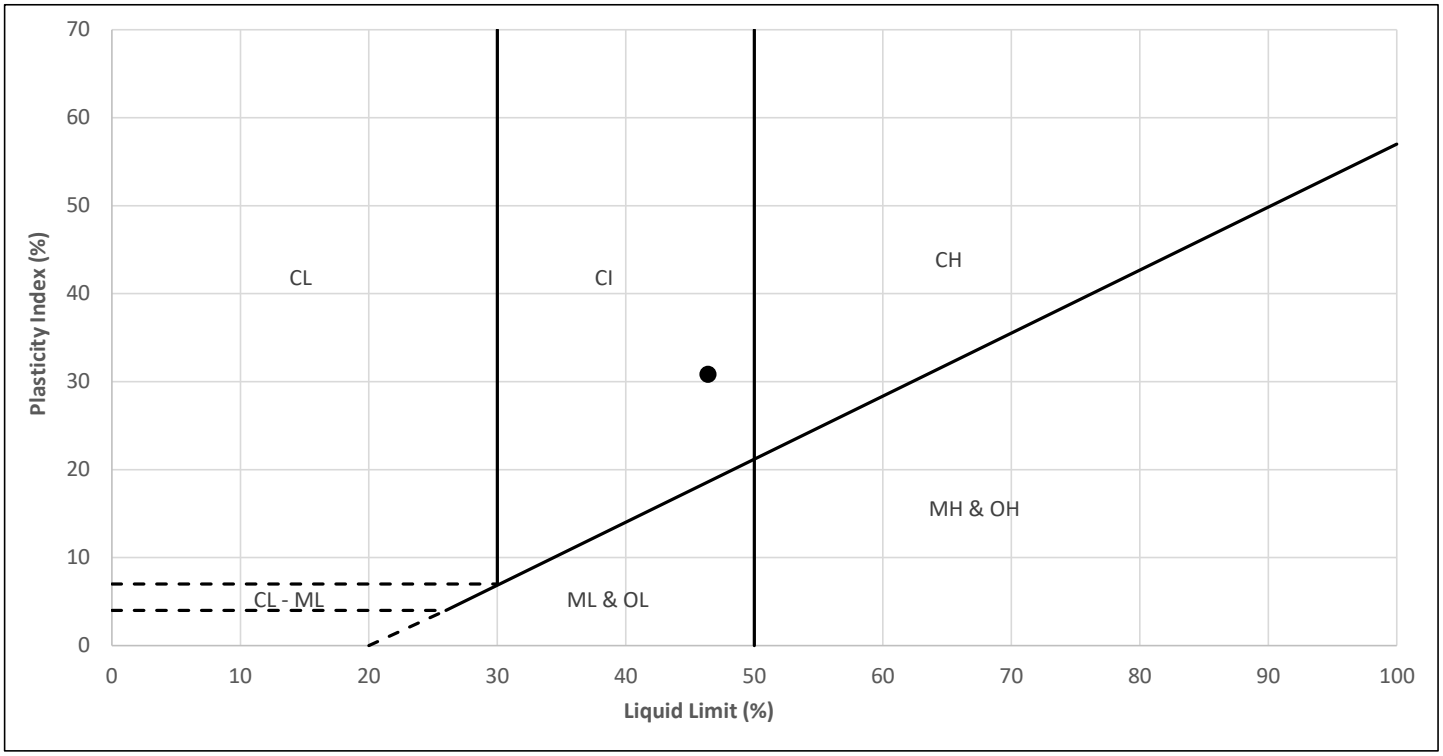
Project:	Snake Lake Reservoir Expansion	**Sample #:**	109AU2
Project No.:	1560-193-00	**Source:**	22BH109
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 109AU2	**Date:**	11-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	46.4
Plastic Limit (PL)	15.5
Plasticity Index (PI)	30.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

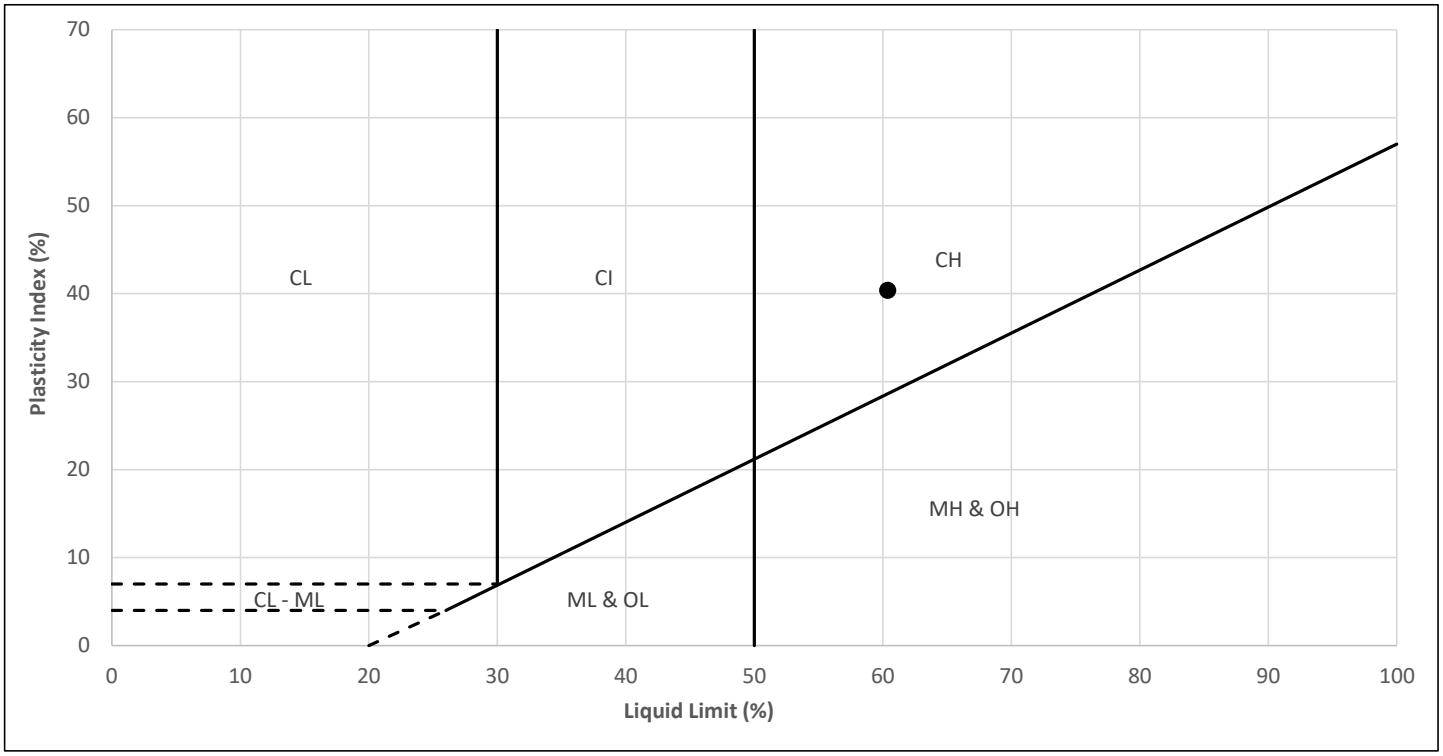
Project:	Snake Lake Reservoir Expansion	**Sample #:**	109AU9
Project No.:	1560-193-00	**Source:**	22BH109
Owner:	EID	**Sample Depth:**	6.7m
File No.:	AL - 109AU9	**Date:**	12-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	60.4
Plastic Limit (PL)	20.0
Plasticity Index (PI)	40.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

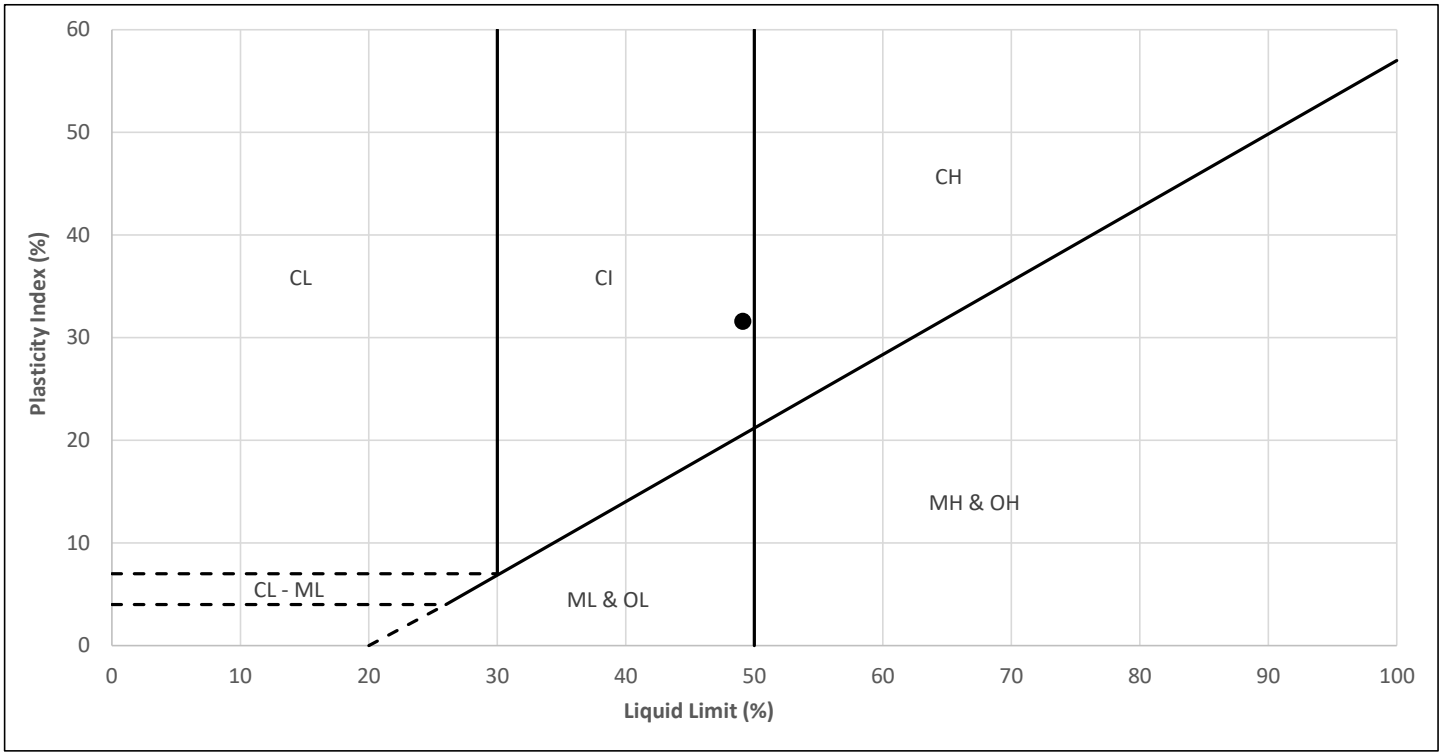
Project:	Snake Lake Reservoir Expansion	**Sample #:**	109RC1
Project No.:	1560-193-00	**Source:**	22CH109
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 109RC1	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.1
Plastic Limit (PL)	17.5
Plasticity Index (PI)	31.6

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

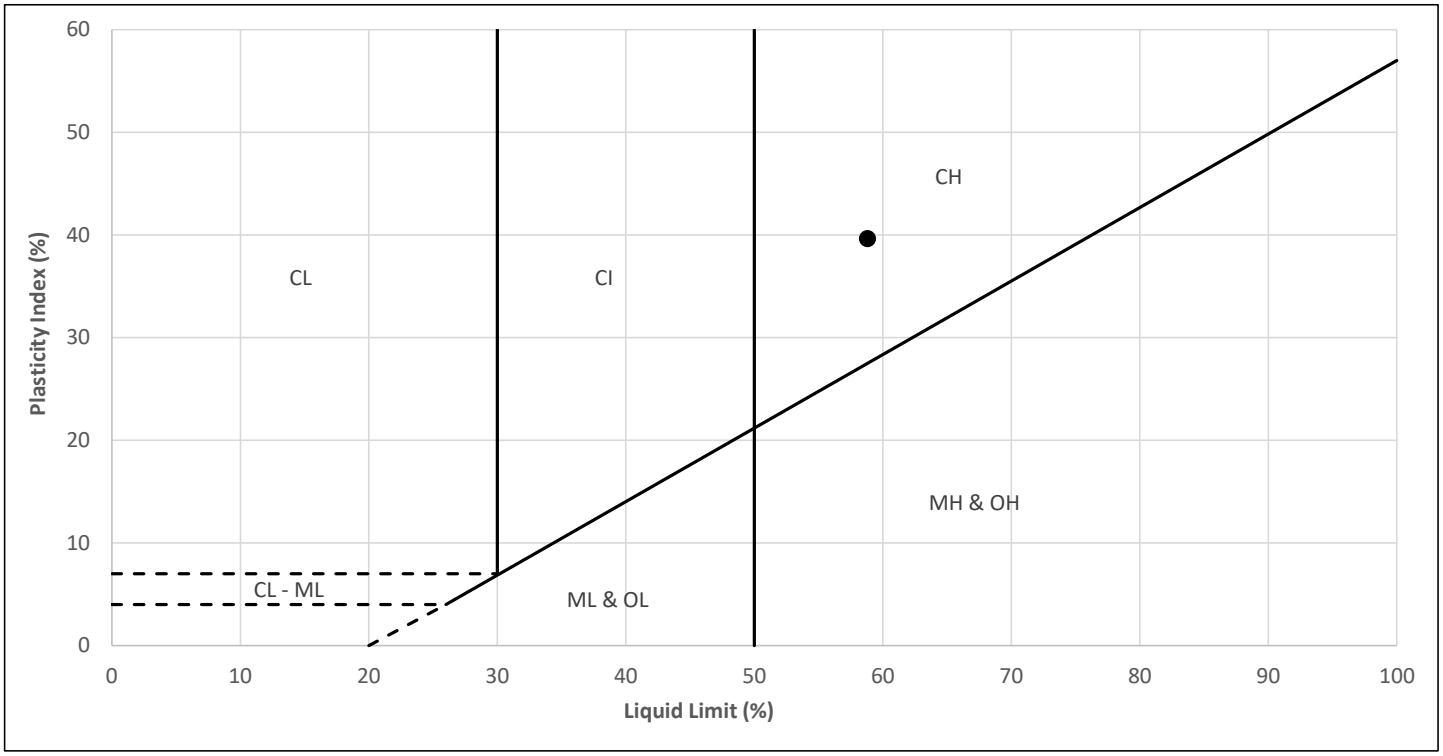
Project:	Snake Lake Reservoir Expansion	**Sample #:**	109RC6
Project No.:	1560-193-00	**Source:**	22CH109
Owner:	EID	**Sample Depth:**	7.7m
File No.:	AL - 109RC6	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	58.8
Plastic Limit (PL)	19.2
Plasticity Index (PI)	39.6

Soil Plasticity	High
Soil Classification	CH



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Tel: (403)892-6036

ATTERBERG LIMITS

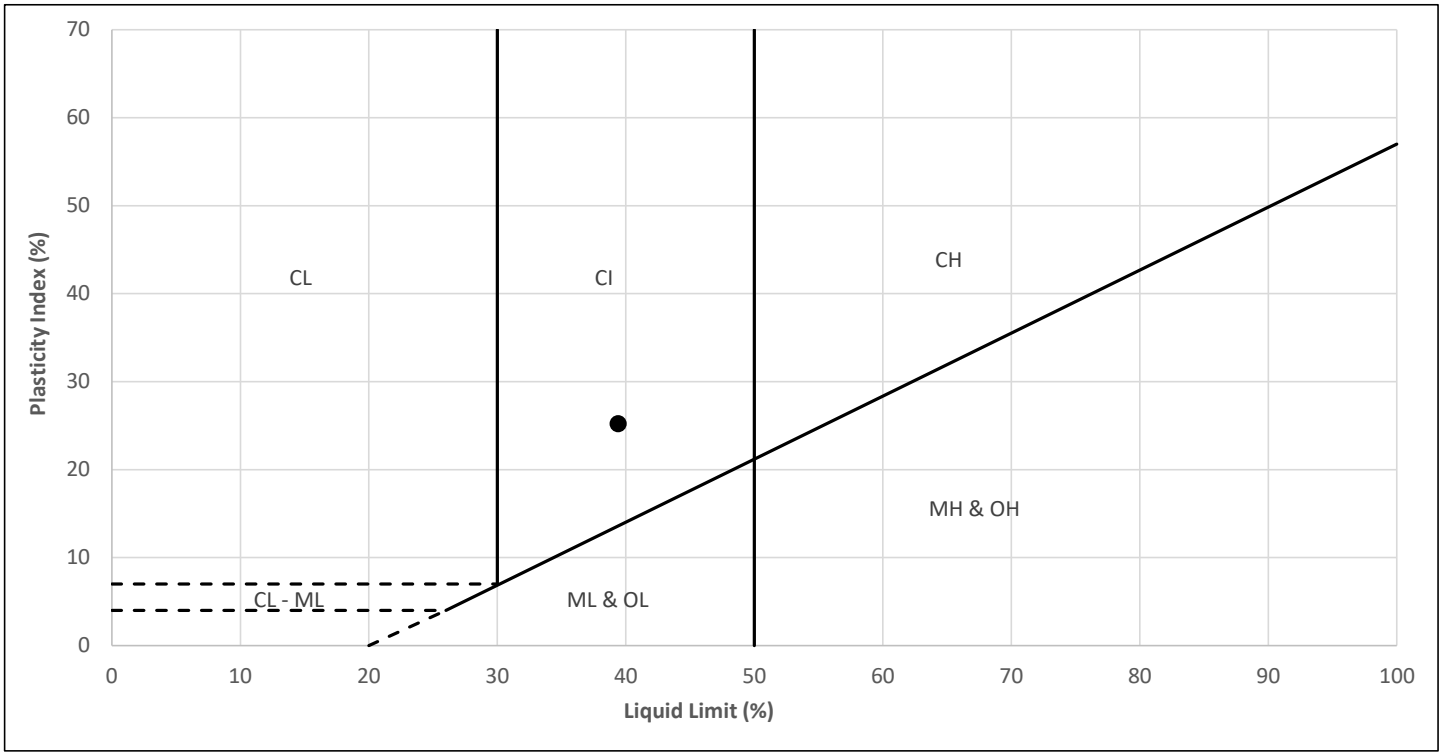
Project:	Snake Lake Reservoir Expansion	**Sample #:**	110AU2
Project No.:	1560-193-00	**Source:**	22BH110
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 110AU2	**Date:**	11-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	39.4
Plastic Limit (PL)	14.2
Plasticity Index (PI)	25.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

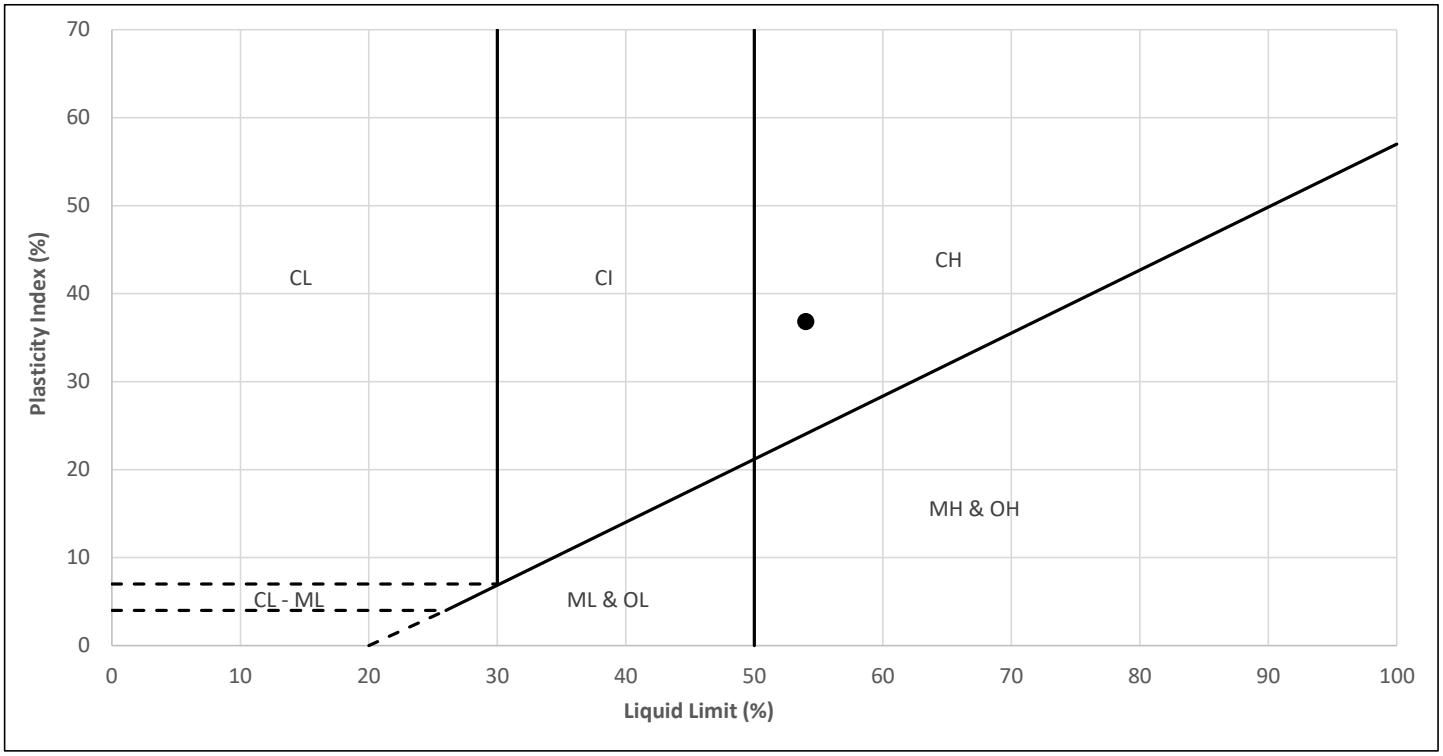
Project:	Snake Lake Reservoir Expansion	**Sample #:**	111AU6
Project No.:	1560-193-00	**Source:**	22BH111
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 111AU6	**Date:**	11-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.0
Plastic Limit (PL)	17.2
Plasticity Index (PI)	36.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

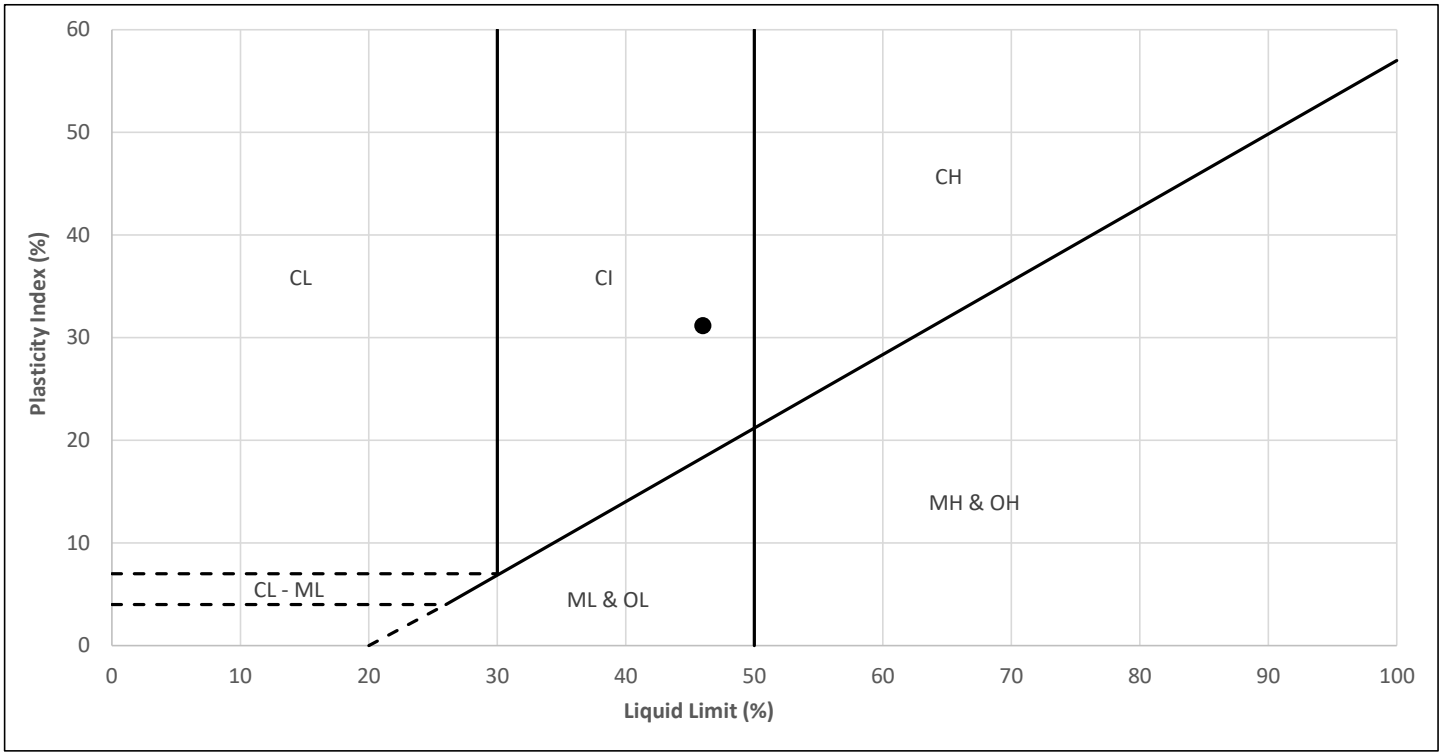
Project:	Snake Lake Reservoir Expansion	**Sample #:**	111RC2
Project No.:	1560-193-00	**Source:**	22CH111
Owner:	EID	**Sample Depth:**	7.0m
File No.:	AL - 111RC2	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	46.0
Plastic Limit (PL)	14.8
Plasticity Index (PI)	31.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

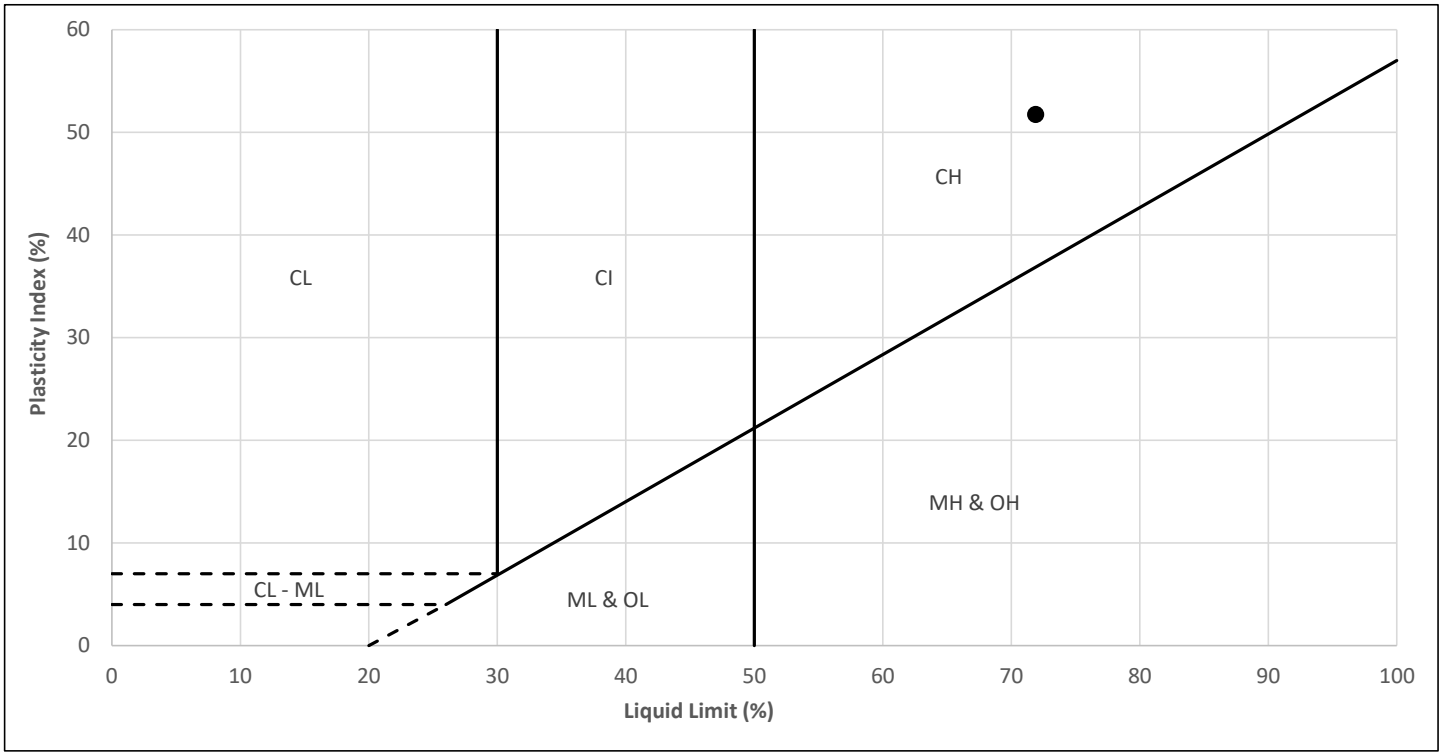
Project:	Snake Lake Reservoir Expansion	**Sample #:**	111RC3
Project No.:	1560-193-00	**Source:**	22CH111
Owner:	EID	**Sample Depth:**	8.6m
File No.:	AL - 111RC3	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	71.9
Plastic Limit (PL)	20.1
Plasticity Index (PI)	51.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

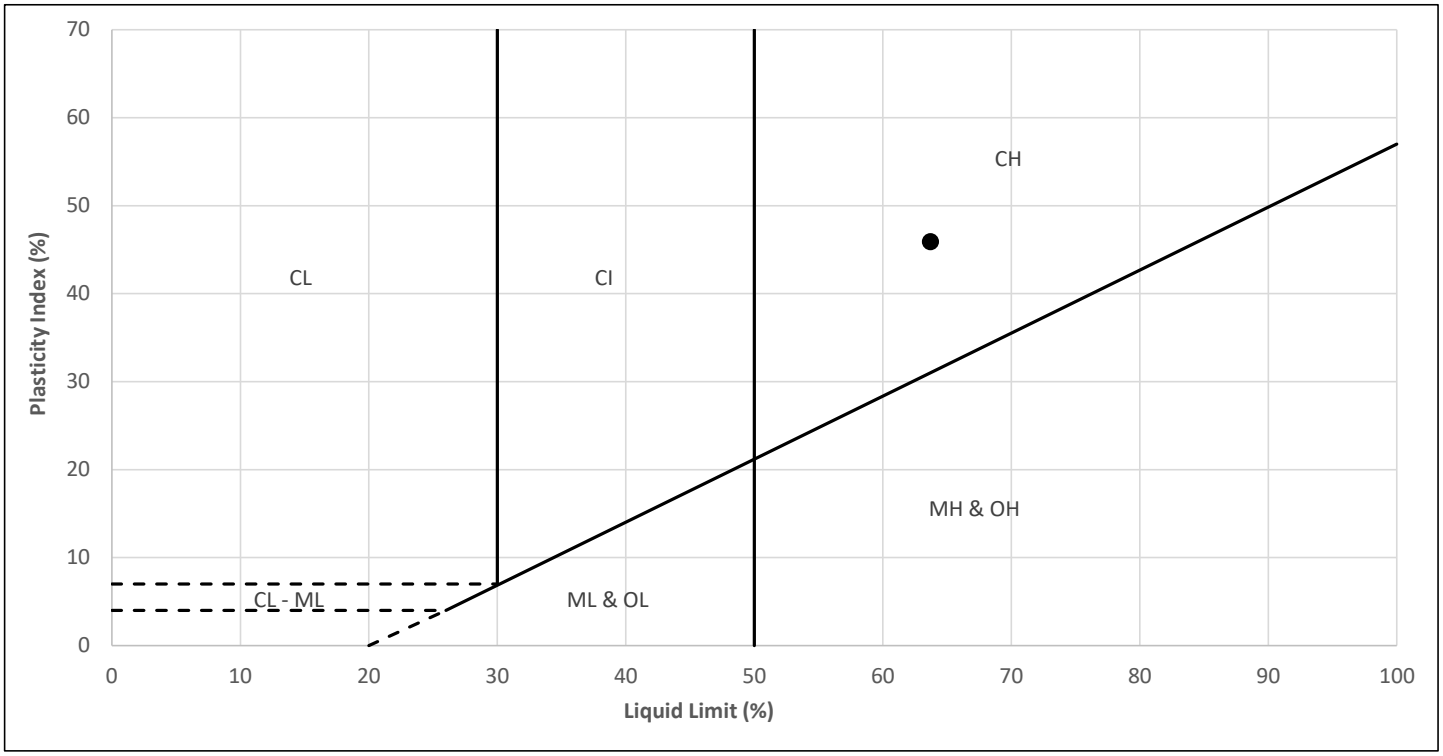
Project:	Snake Lake Reservoir Expansion	**Sample #:**	112AU11
Project No.:	1560-193-00	**Source:**	22BH112
Owner:	EID	**Sample Depth:**	8.2m
File No.:	AL - 112AU11	**Date:**	11-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	63.7
Plastic Limit (PL)	17.8
Plasticity Index (PI)	45.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

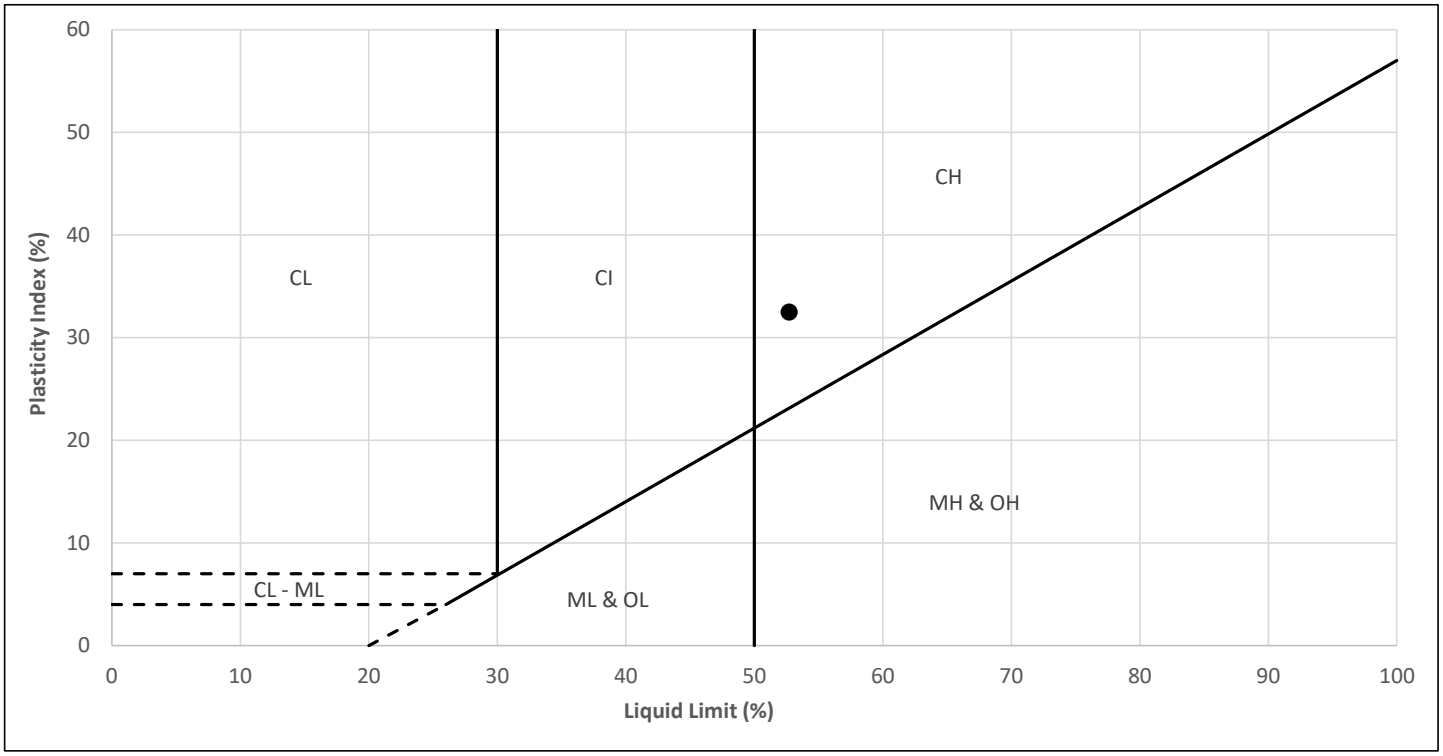
Project:	Snake Lake Reservoir Expansion	**Sample #:**	112RC2
Project No.:	1560-193-00	**Source:**	22CH112
Owner:	EID	**Sample Depth:**	5.0m
File No.:	AL - 112RC2	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.7
Plastic Limit (PL)	20.2
Plasticity Index (PI)	32.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

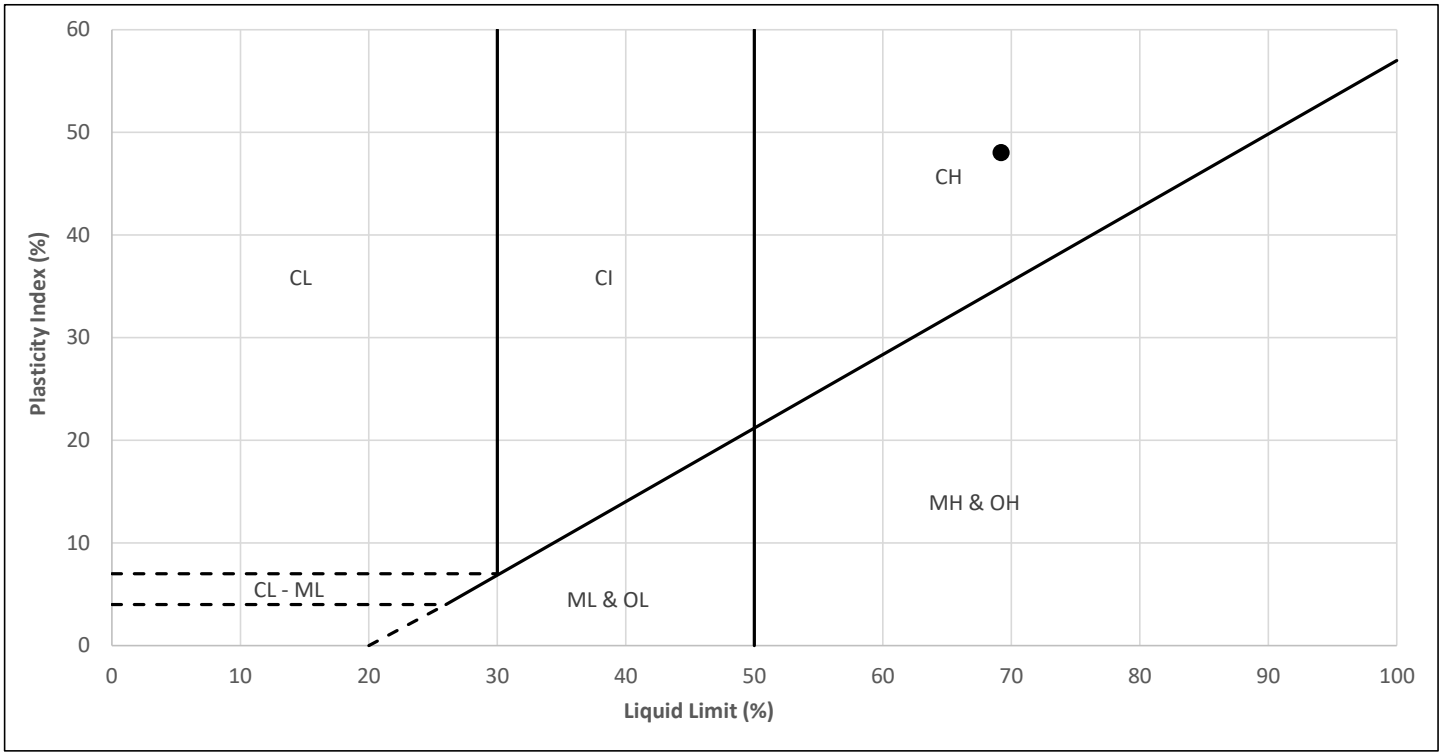
Project:	Snake Lake Reservoir Expansion	**Sample #:**	112RC4
Project No.:	1560-193-00	**Source:**	22CH112
Owner:	EID	**Sample Depth:**	7.8m
File No.:	AL - 112RC4	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	69.2
Plastic Limit (PL)	21.2
Plasticity Index (PI)	48.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

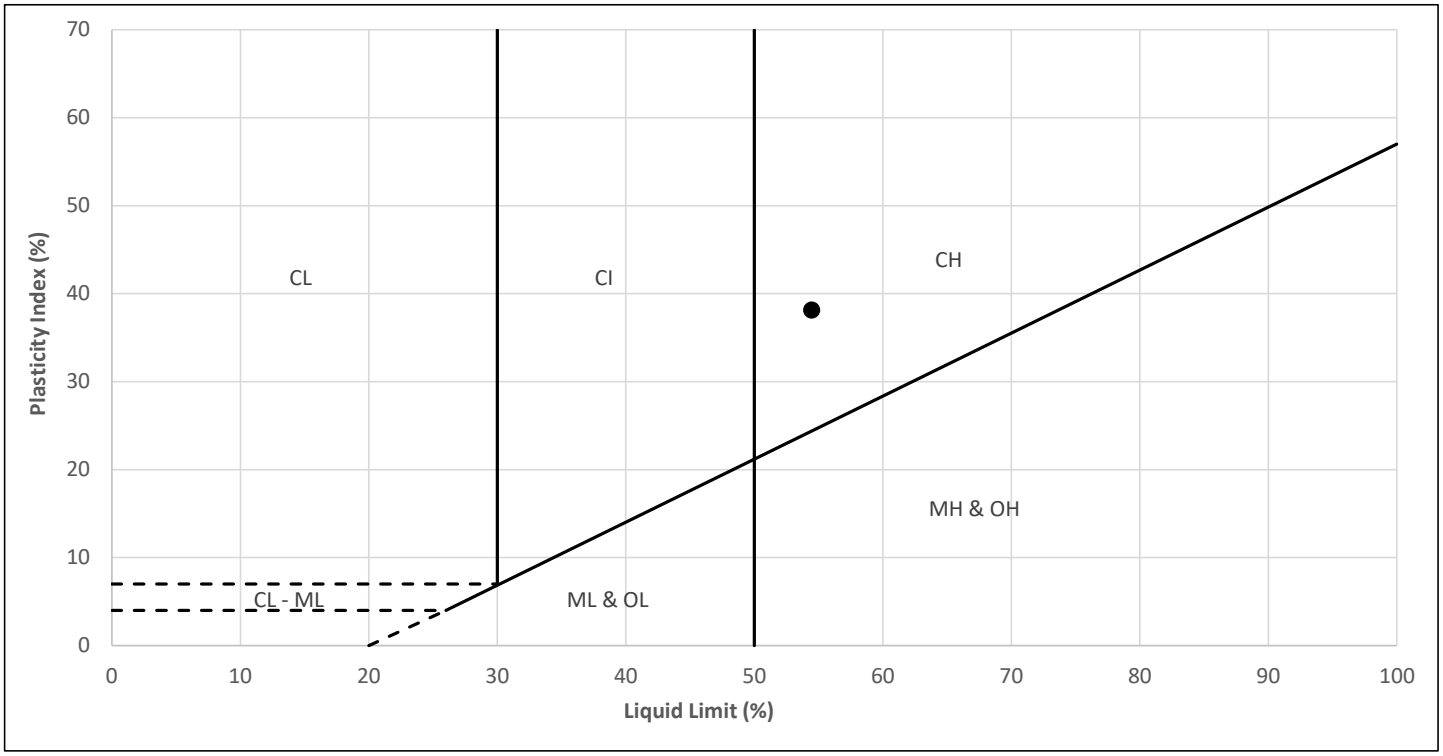
Project:	Snake Lake Reservoir Expansion	**Sample #:**	113AU7
Project No.:	1560-193-00	**Source:**	22BH113
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 113AU7	**Date:**	11-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.5
Plastic Limit (PL)	16.3
Plasticity Index (PI)	38.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

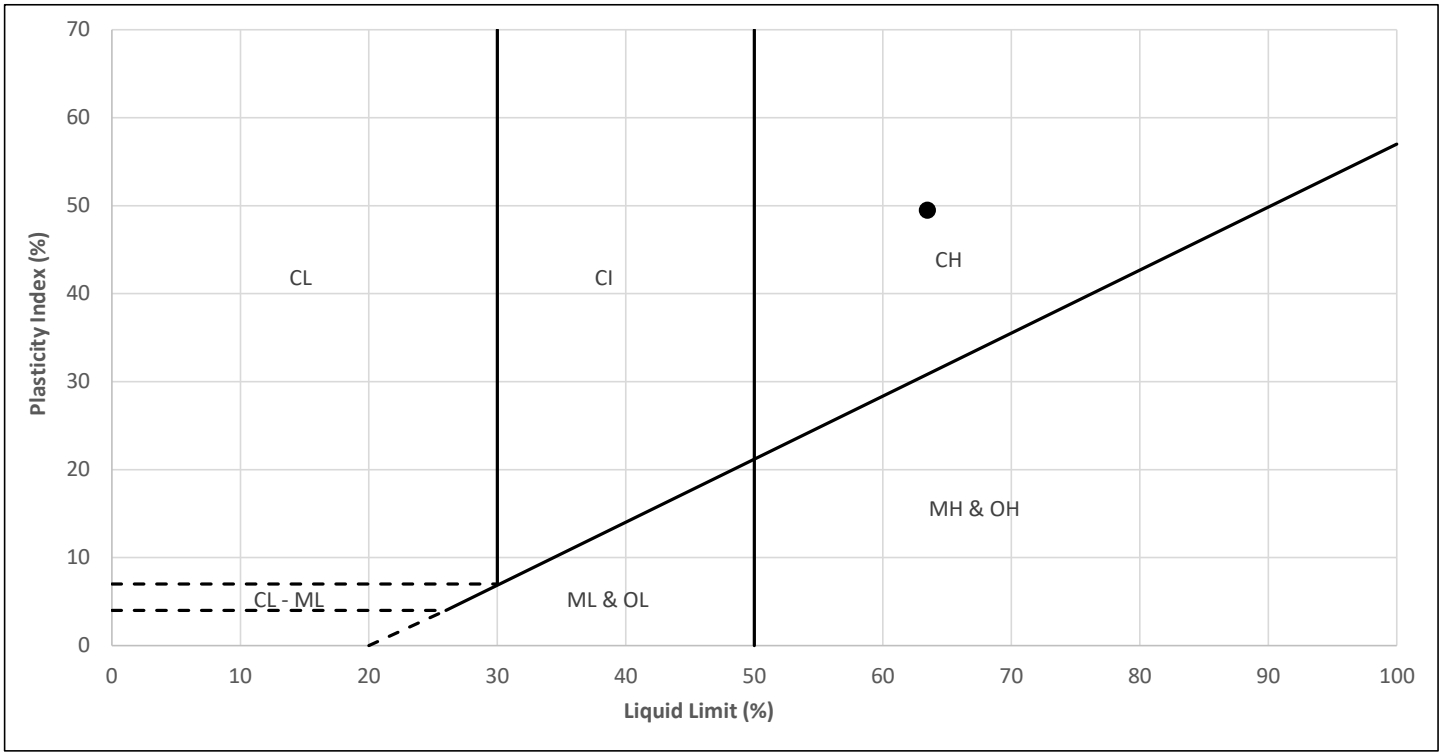
Project:	Snake Lake Reservoir Expansion	**Sample #:**	113AU11
Project No.:	1560-193-00	**Source:**	22BH113
Owner:	EID	**Sample Depth:**	8.2m
File No.:	AL - 113AU11	**Date:**	12-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	63.5
Plastic Limit (PL)	14.0
Plasticity Index (PI)	49.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

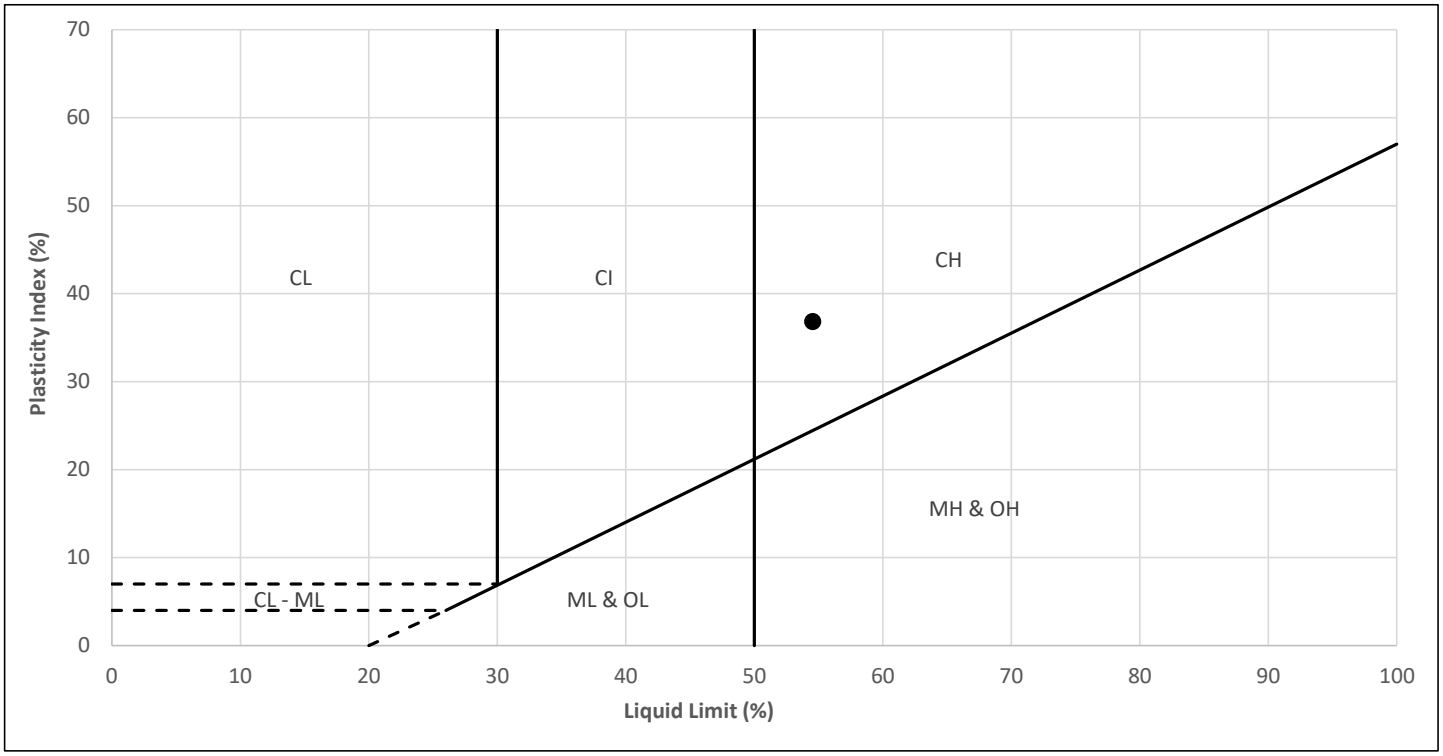
Project:	Snake Lake Reservoir Expansion	**Sample #:**	114AU7
Project No.:	1560-193-00	**Source:**	22BH114
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 114AU7	**Date:**	12-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.5
Plastic Limit (PL)	17.7
Plasticity Index (PI)	36.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

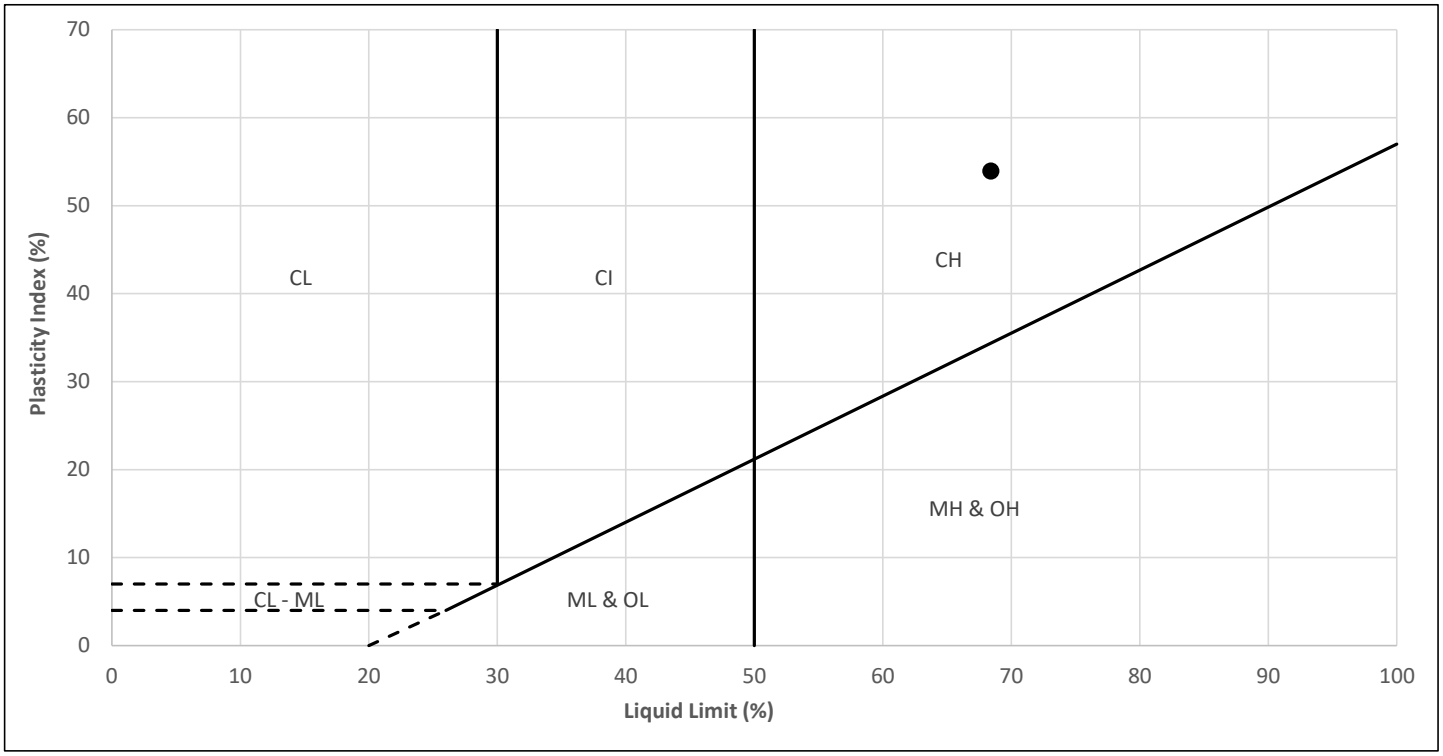
Project:	Snake Lake Reservoir Expansion	**Sample #:**	114AU12
Project No.:	1560-193-00	**Source:**	22BH114
Owner:	EID	**Sample Depth:**	8.8m
File No.:	AL - 114AU12	**Date:**	12-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	68.4
Plastic Limit (PL)	14.5
Plasticity Index (PI)	53.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

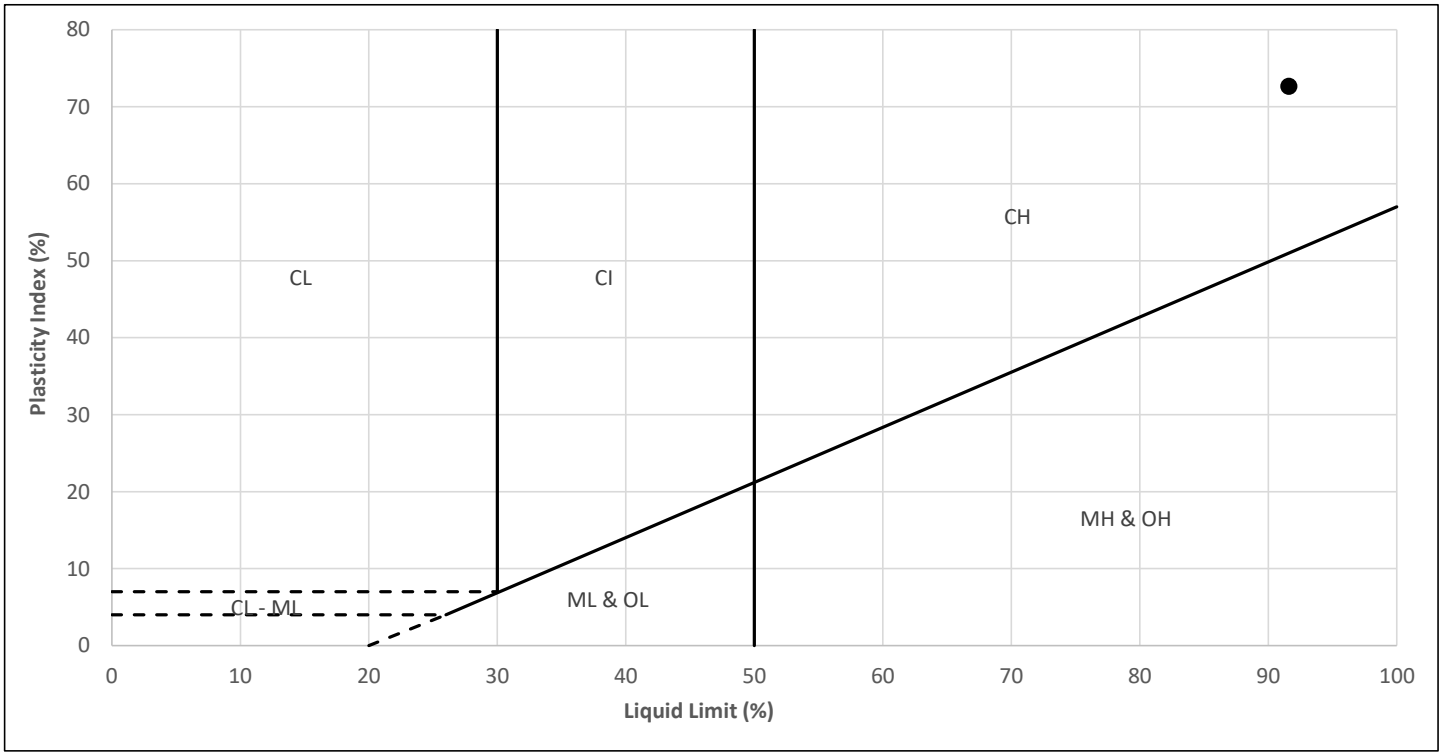
Project:	Snake Lake Reservoir Expansion	**Sample #:**	114UD1
Project No.:	1560-193-00	**Source:**	22CH114
Owner:	EID	**Sample Depth:**	11.2m
File No.:	AL - 114UD1	**Test Date:**	12-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	91.6
Plastic Limit (PL)	19.0
Plasticity Index (PI)	72.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

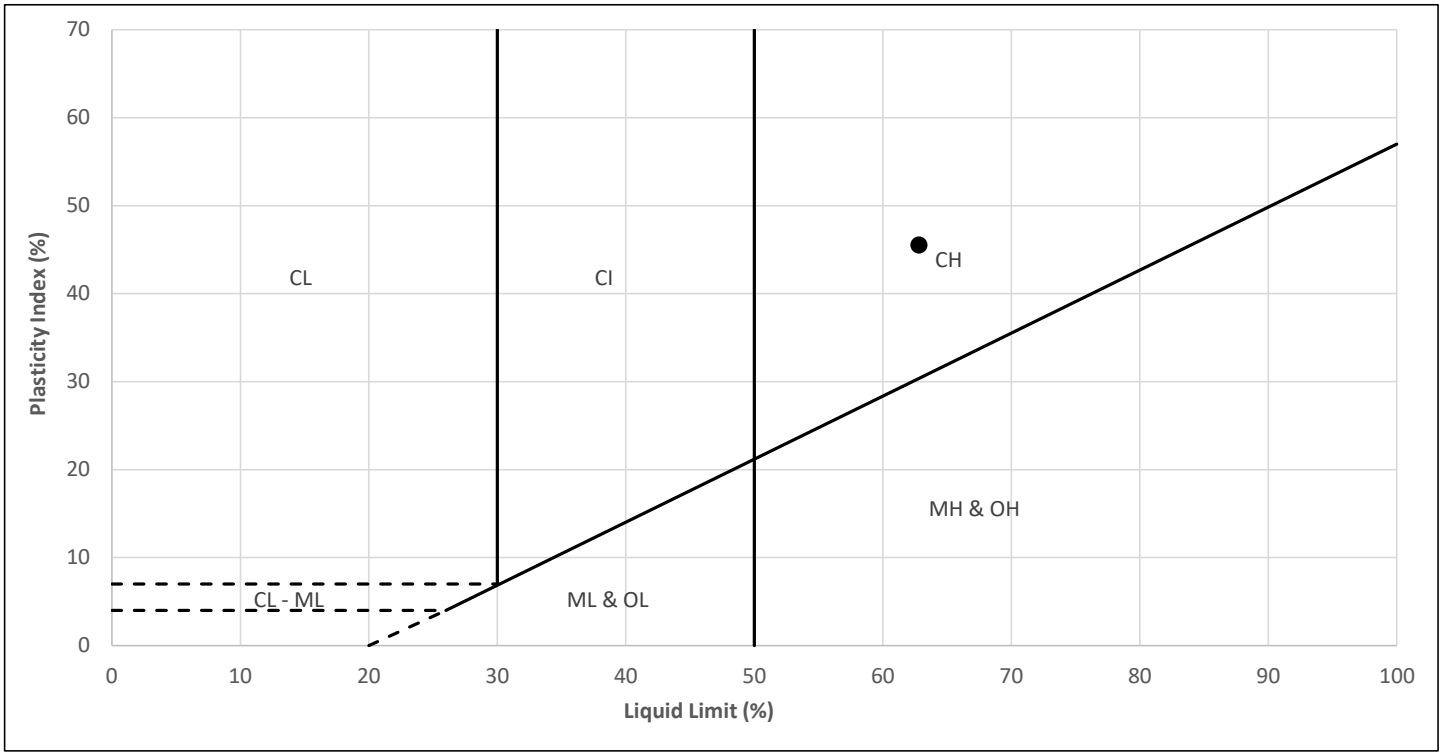
Project:	Snake Lake Reservoir Expansion	**Sample #:**	115AU10
Project No.:	1560-193-00	**Source:**	22BH115
Owner:	EID	**Sample Depth:**	7.3m
File No.:	AL - 115AU10	**Date:**	12-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	62.8
Plastic Limit (PL)	17.3
Plasticity Index (PI)	45.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

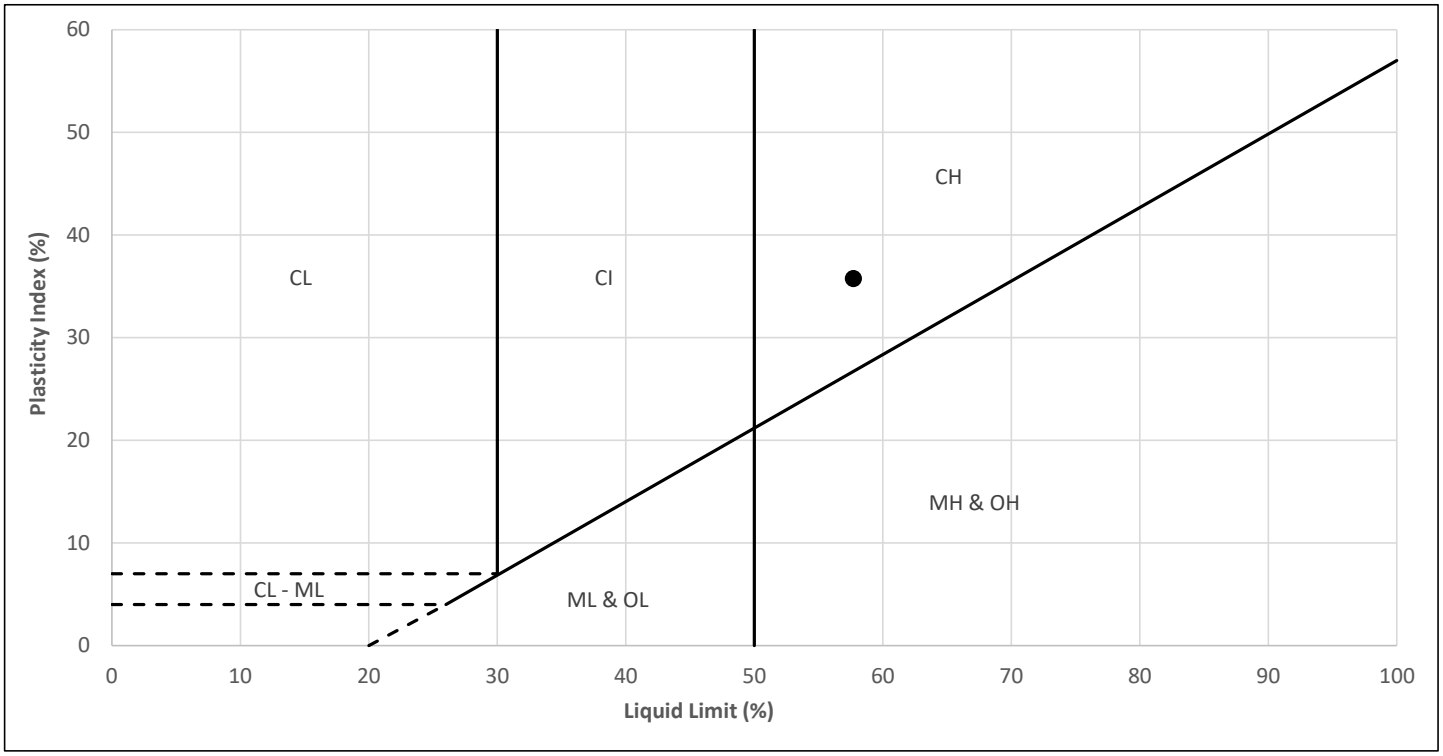
Project:	Snake Lake Reservoir Expansion	**Sample #:**	115RC2
Project No.:	1560-193-00	**Source:**	22CH115
Owner:	EID	**Sample Depth:**	7.0m
File No.:	AL - 115RC2	**Test Date:**	3-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	57.7
Plastic Limit (PL)	21.9
Plasticity Index (PI)	35.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

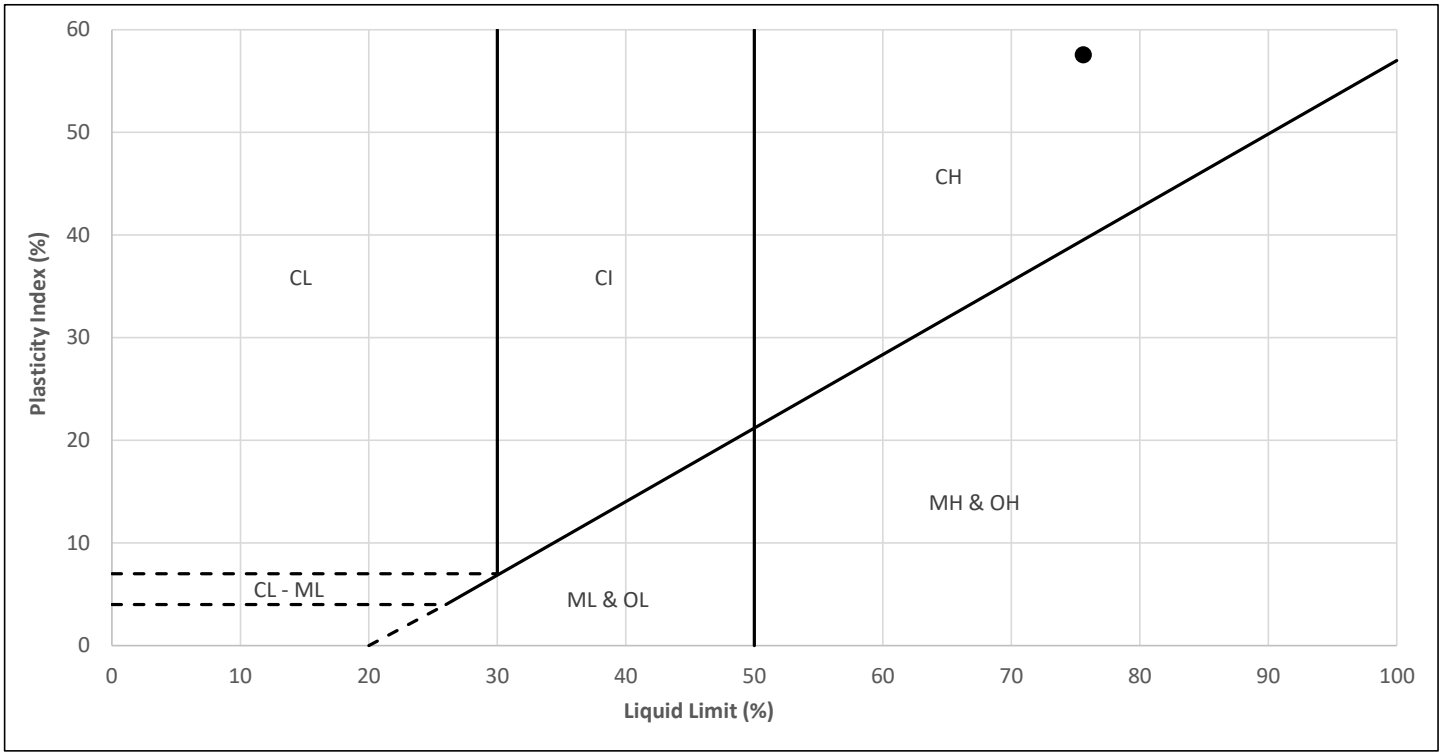
Project:	Snake Lake Reservoir Expansion	**Sample #:**	115UD1
Project No.:	1560-193-00	**Source:**	22CH115
Owner:	EID	**Sample Depth:**	10.4m
File No.:	AL - 115UD1	**Test Date:**	14-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	75.6
Plastic Limit (PL)	18.0
Plasticity Index (PI)	57.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

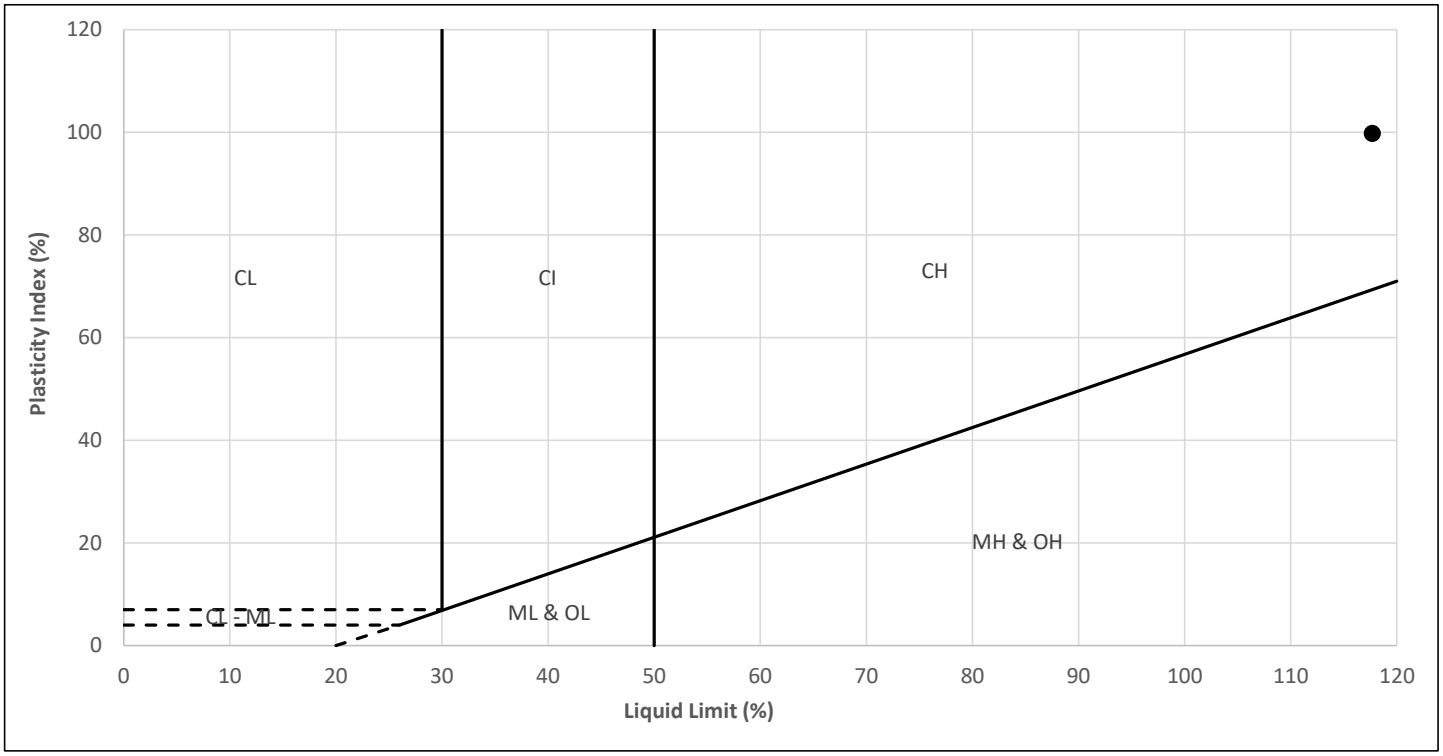
Project:	Snake Lake Reservoir Expansion	**Sample #:**	115UD3
Project No.:	1560-193-00	**Source:**	22CH115
Owner:	EID	**Sample Depth:**	14.22m
File No.:	AL - 115UD3	**Test Date:**	29-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	117.7
Plastic Limit (PL)	17.9
Plasticity Index (PI)	99.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

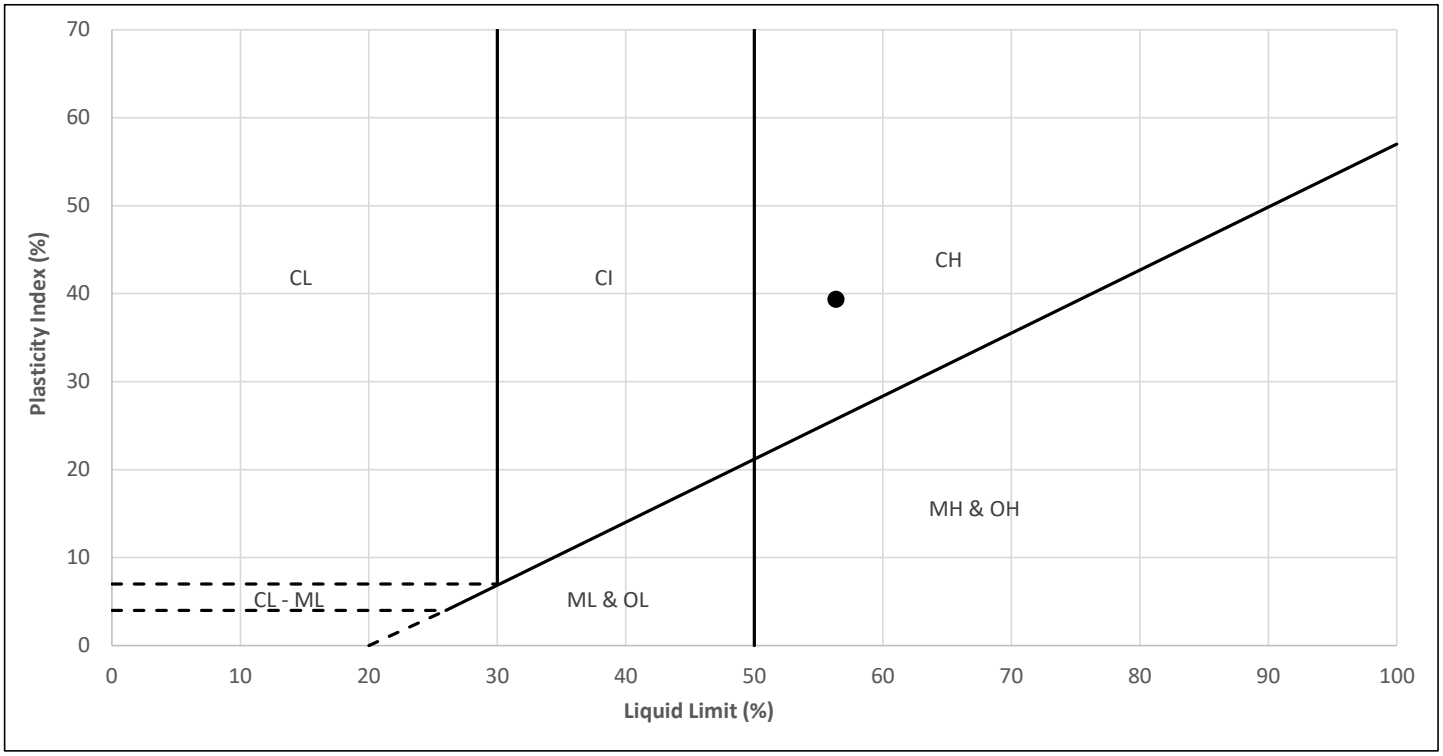
Project:	Snake Lake Reservoir Expansion	**Sample #:**	116AU3
Project No.:	1560-193-00	**Source:**	22BH116
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 116AU3	**Date:**	13-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	56.4
Plastic Limit (PL)	17.0
Plasticity Index (PI)	39.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

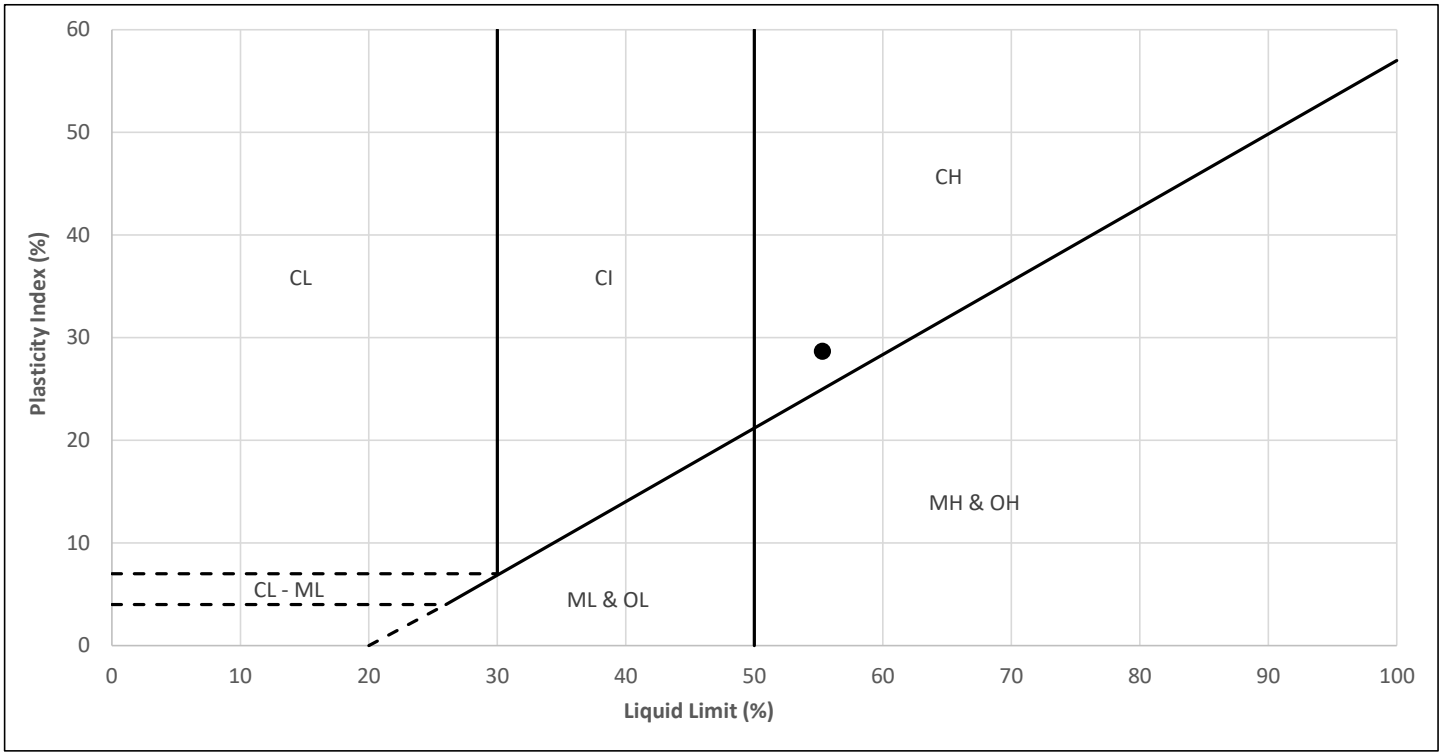
Project:	Snake Lake Reservoir Expansion	**Sample #:**	116RC1
Project No.:	1560-193-00	**Source:**	22CH116
Owner:	EID	**Sample Depth:**	5.3m
File No.:	AL - 116RC1	**Test Date:**	1-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.3
Plastic Limit (PL)	26.6
Plasticity Index (PI)	28.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

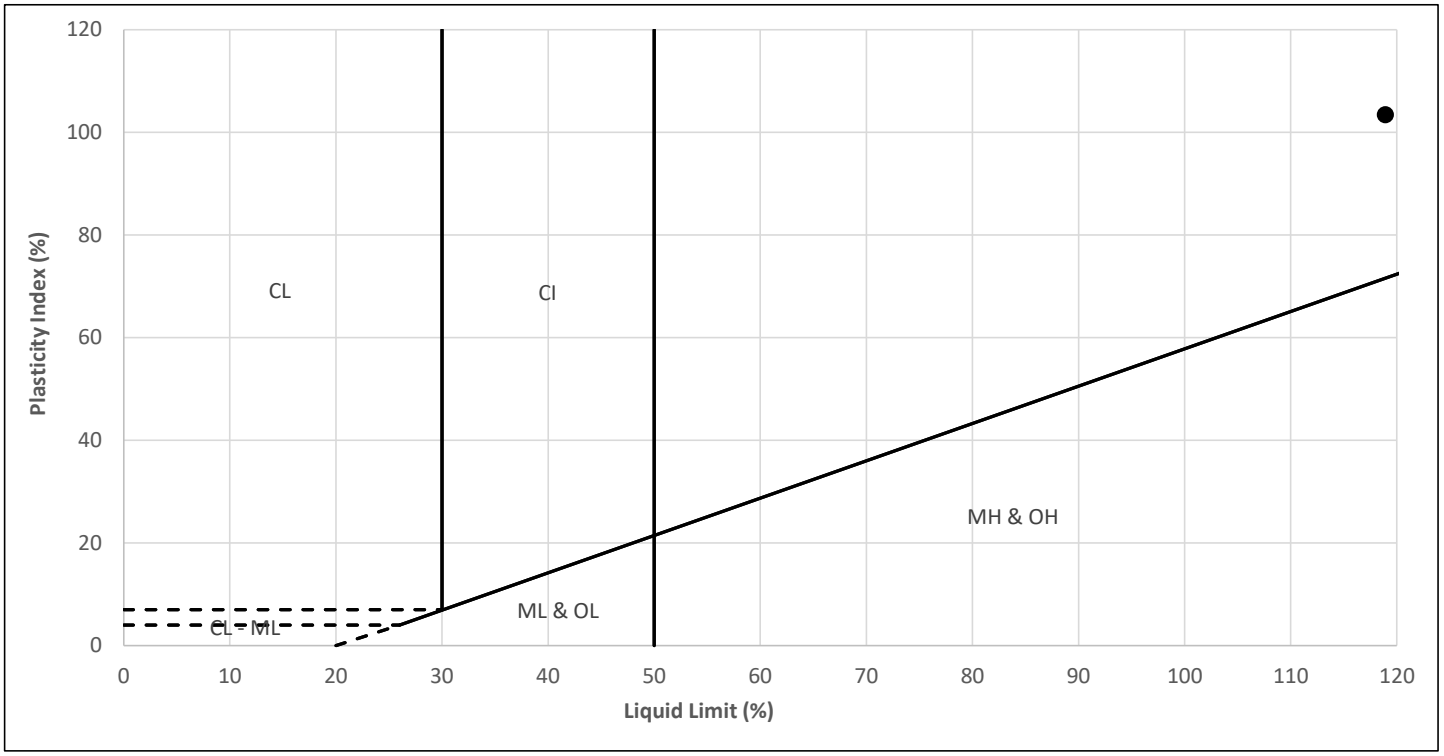
Project:	Snake Lake Reservoir Expansion	**Sample #:**	116RC5
Project No.:	1560-193-00	**Source:**	22CH116
Owner:	EID	**Sample Depth:**	10.0m
File No.:	AL - 116RC5	**Test Date:**	5-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	118.9
Plastic Limit (PL)	15.4
Plasticity Index (PI)	103.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

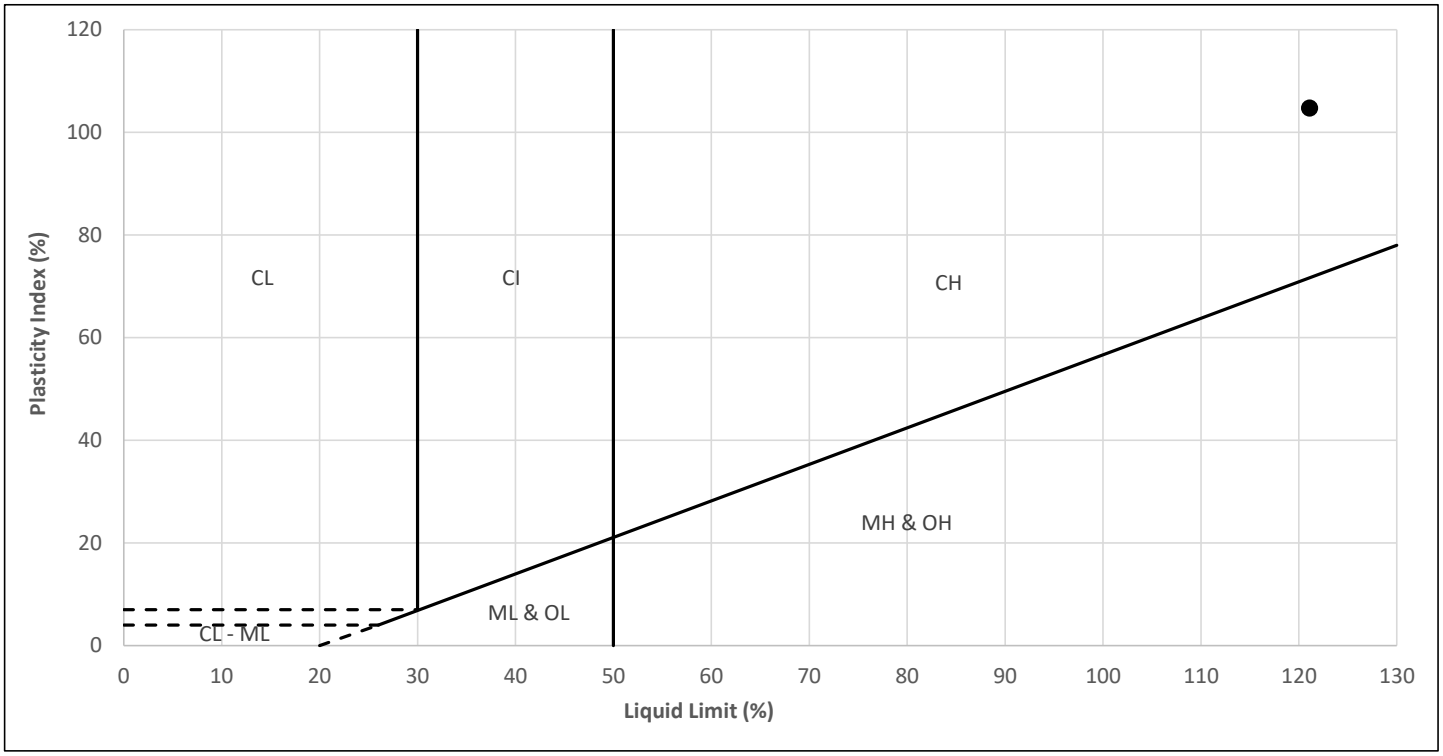
Project:	Snake Lake Reservoir Expansion	**Sample #:**	116RC8
Project No.:	1560-193-00	**Source:**	22CH116
Owner:	EID	**Sample Depth:**	13.0m
File No.:	AL - 116RC8	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	121.1
Plastic Limit (PL)	16.4
Plasticity Index (PI)	104.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

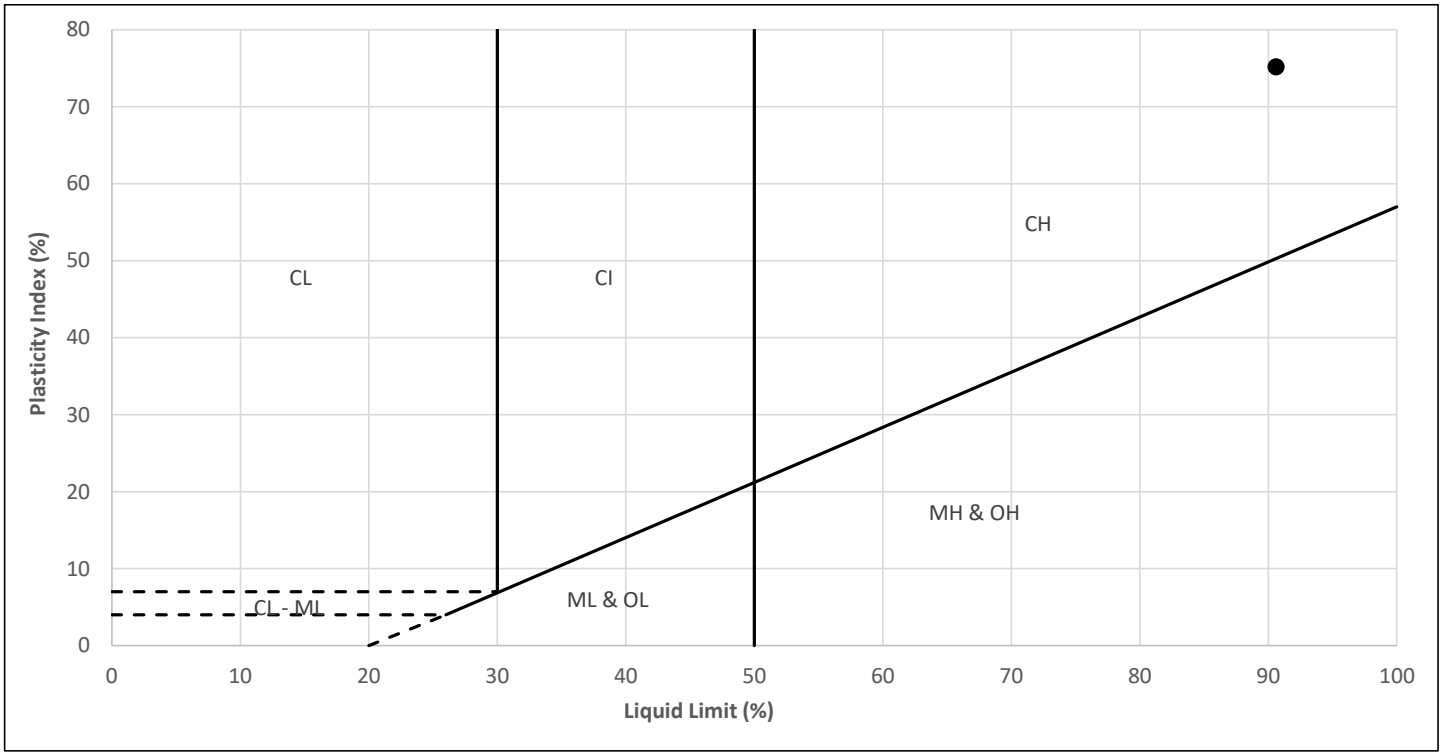
Project:	Snake Lake Reservoir Expansion	**Sample #:**	116RC8 GW
Project No.:	1560-193-00	**Source:**	22CH116
Owner:	EID	**Sample Depth:**	13.0m
File No.:	AL - 116RC8 GW	**Test Date:**	14-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	90.6
Plastic Limit (PL)	15.4
Plasticity Index (PI)	75.2

Soil Plasticity	High
Soil Classification	CH



Comments: Groundwater used to complete sample

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ATTERBERG LIMITS

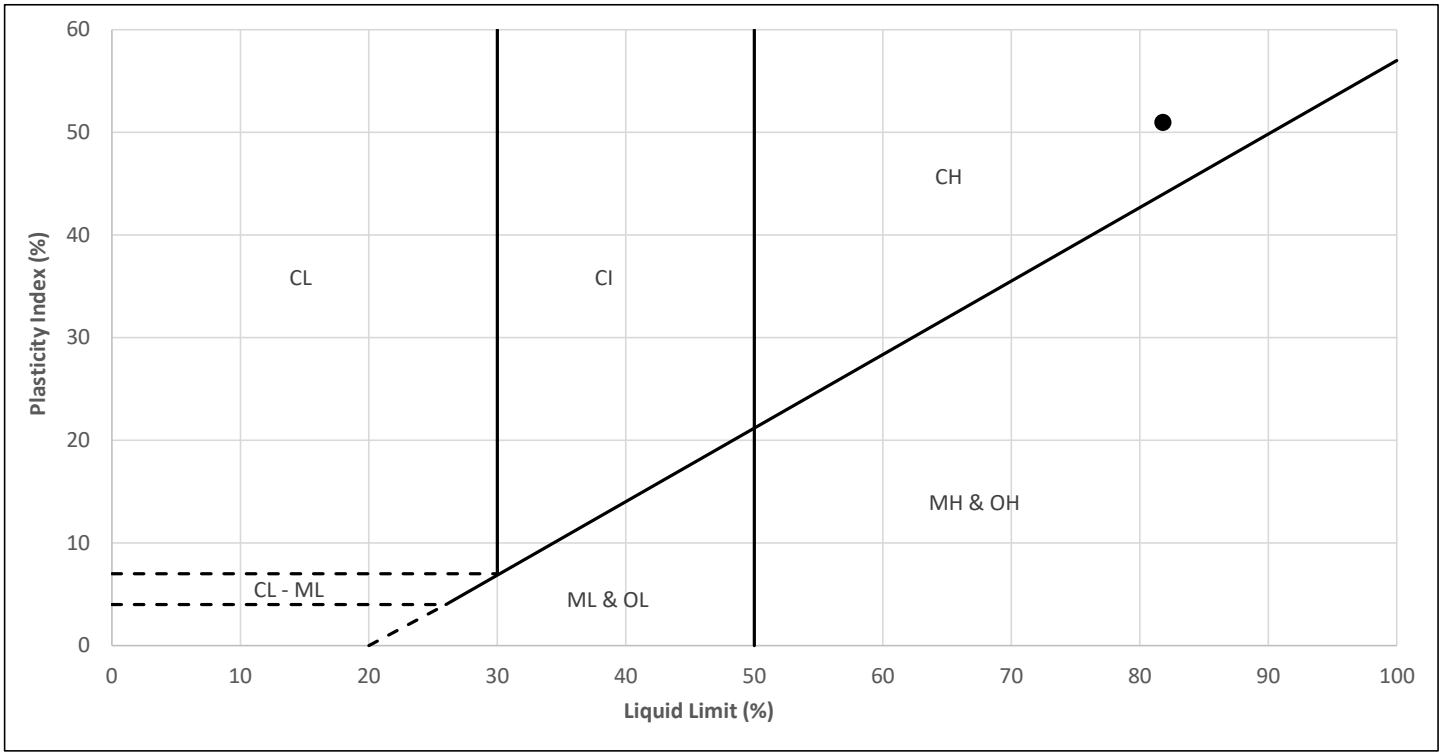
Project:	Snake Lake Reservoir Expansion	**Sample #:**	116RC10
Project No.:	1560-193-00	**Source:**	22CH116
Owner:	EID	**Sample Depth:**	16.0m
File No.:	AL - 116RC10	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	81.8
Plastic Limit (PL)	30.8
Plasticity Index (PI)	51.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

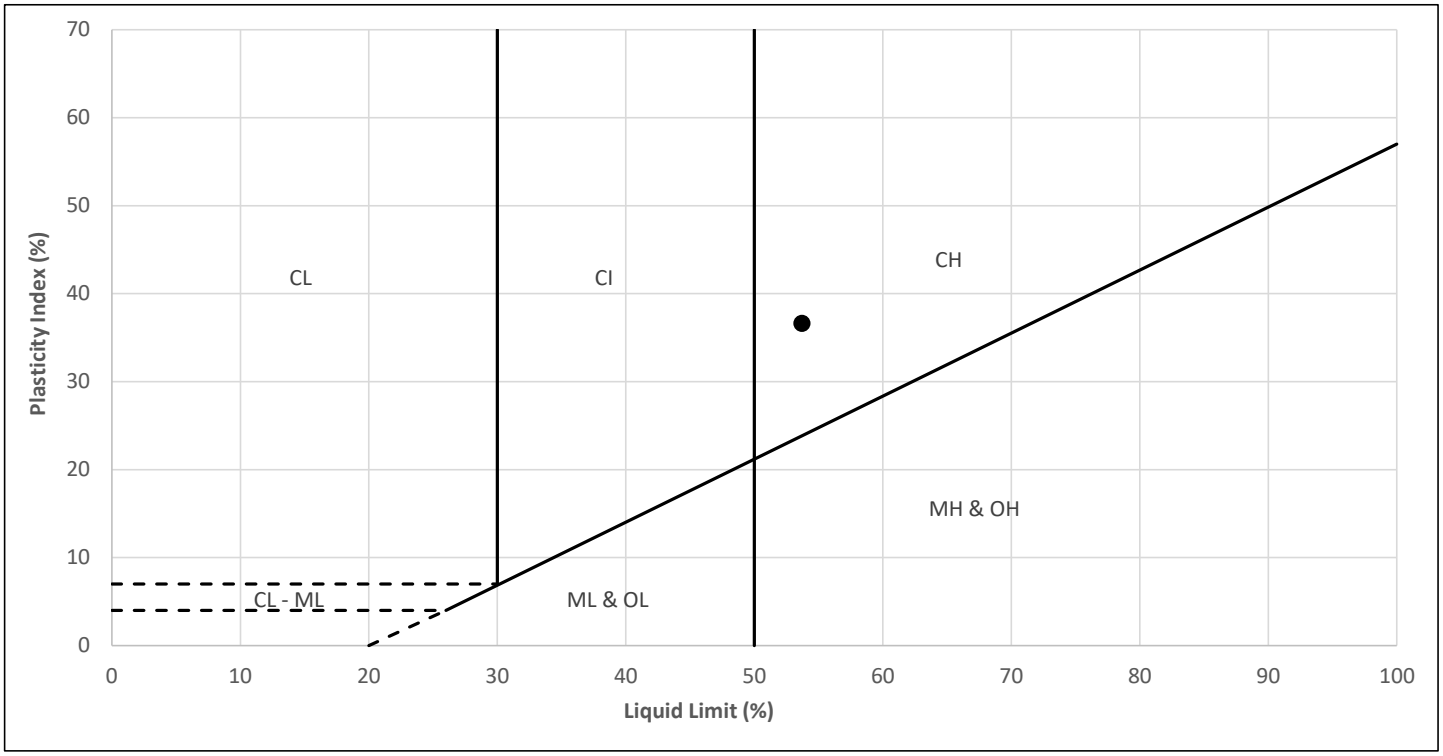
Project:	Snake Lake Reservoir Expansion	**Sample #:**	117AU3
Project No.:	1560-193-00	**Source:**	22BH117
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 117AU3	**Date:**	13-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.7
Plastic Limit (PL)	17.1
Plasticity Index (PI)	36.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

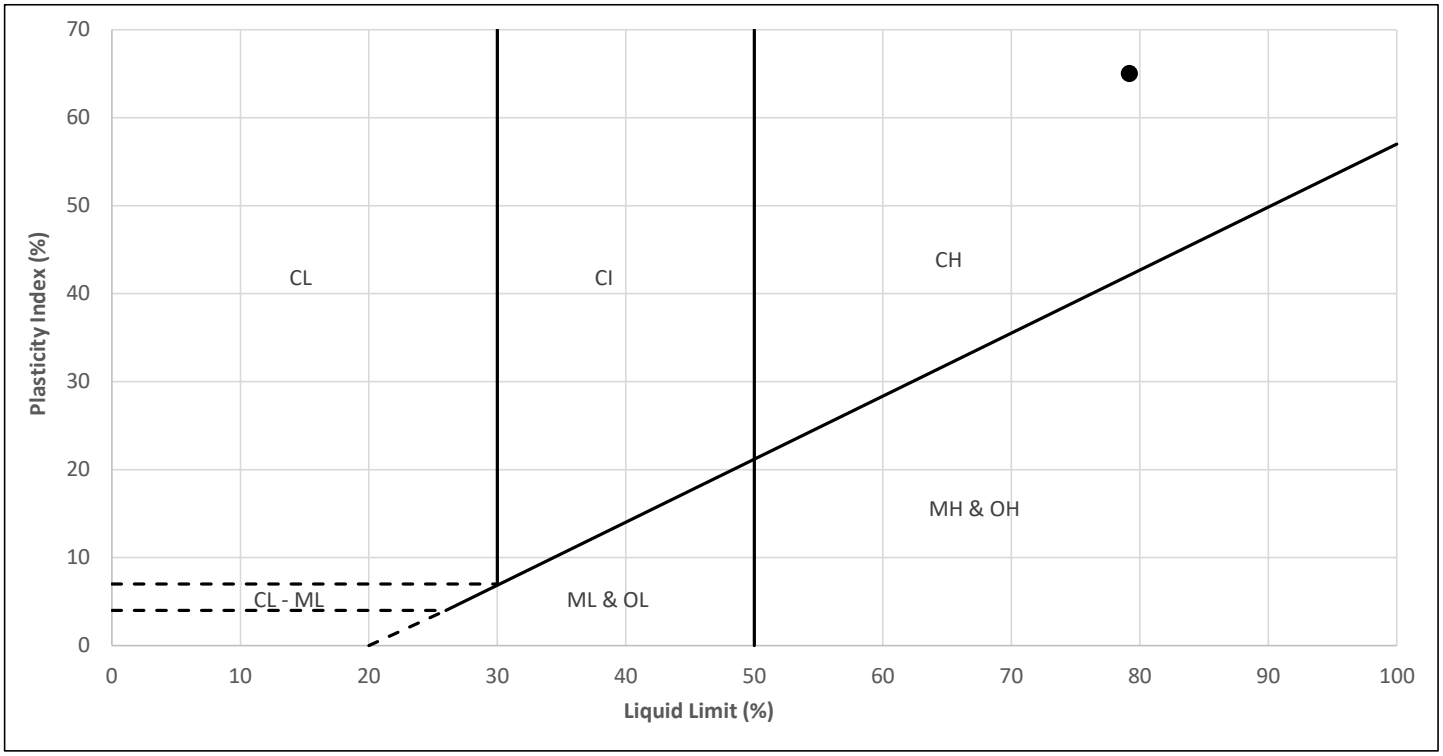
Project:	Snake Lake Reservoir Expansion	**Sample #:**	117AU13
Project No.:	1560-193-00	**Source:**	22BH117
Owner:	EID	**Sample Depth:**	9.8m
File No.:	AL - 117AU13	**Date:**	13-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	79.2
Plastic Limit (PL)	14.2
Plasticity Index (PI)	65.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

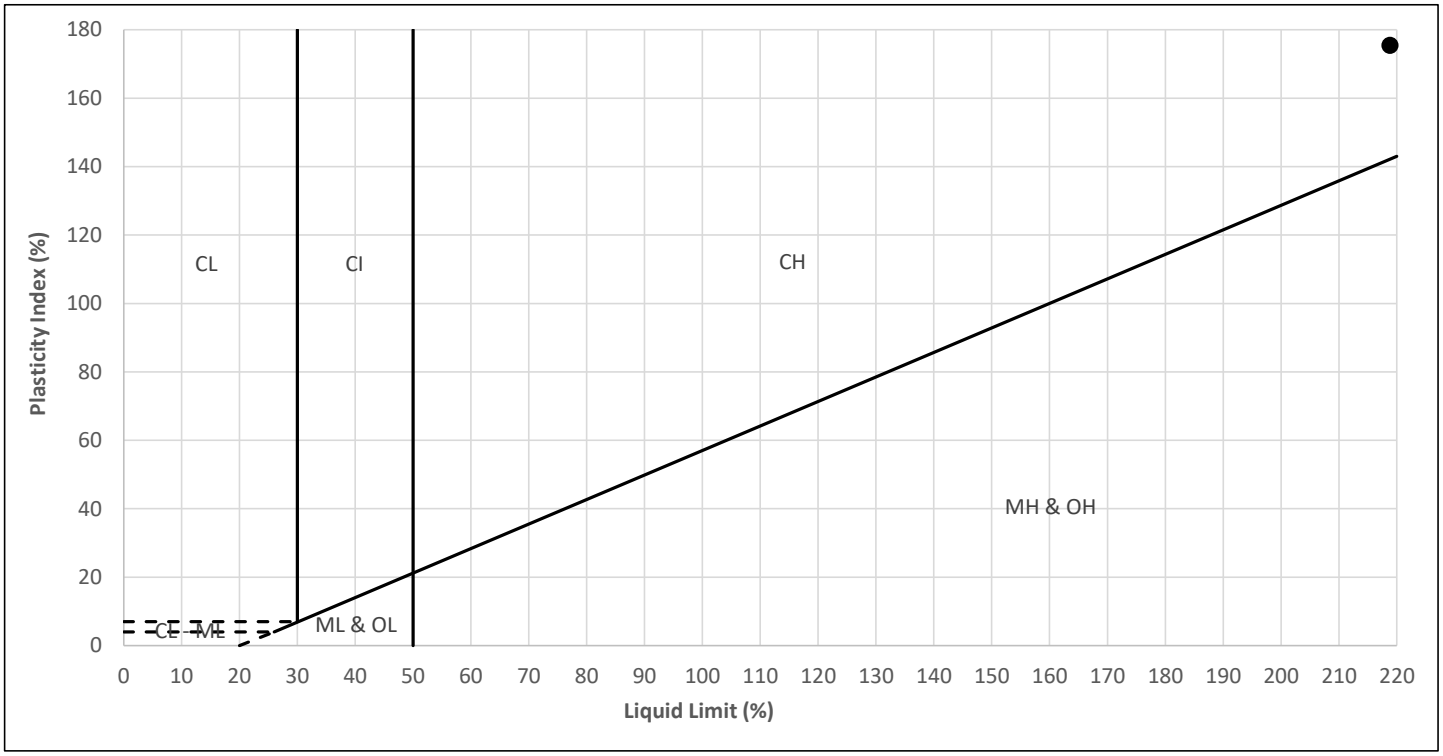
Project:	Snake Lake Reservoir Expansion	**Sample #:**	117RC1
Project No.:	1560-193-00	**Source:**	22CH117
Owner:	EID	**Sample Depth:**	9.7m
File No.:	AL - 117RC1	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	218.8
Plastic Limit (PL)	43.3
Plasticity Index (PI)	175.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

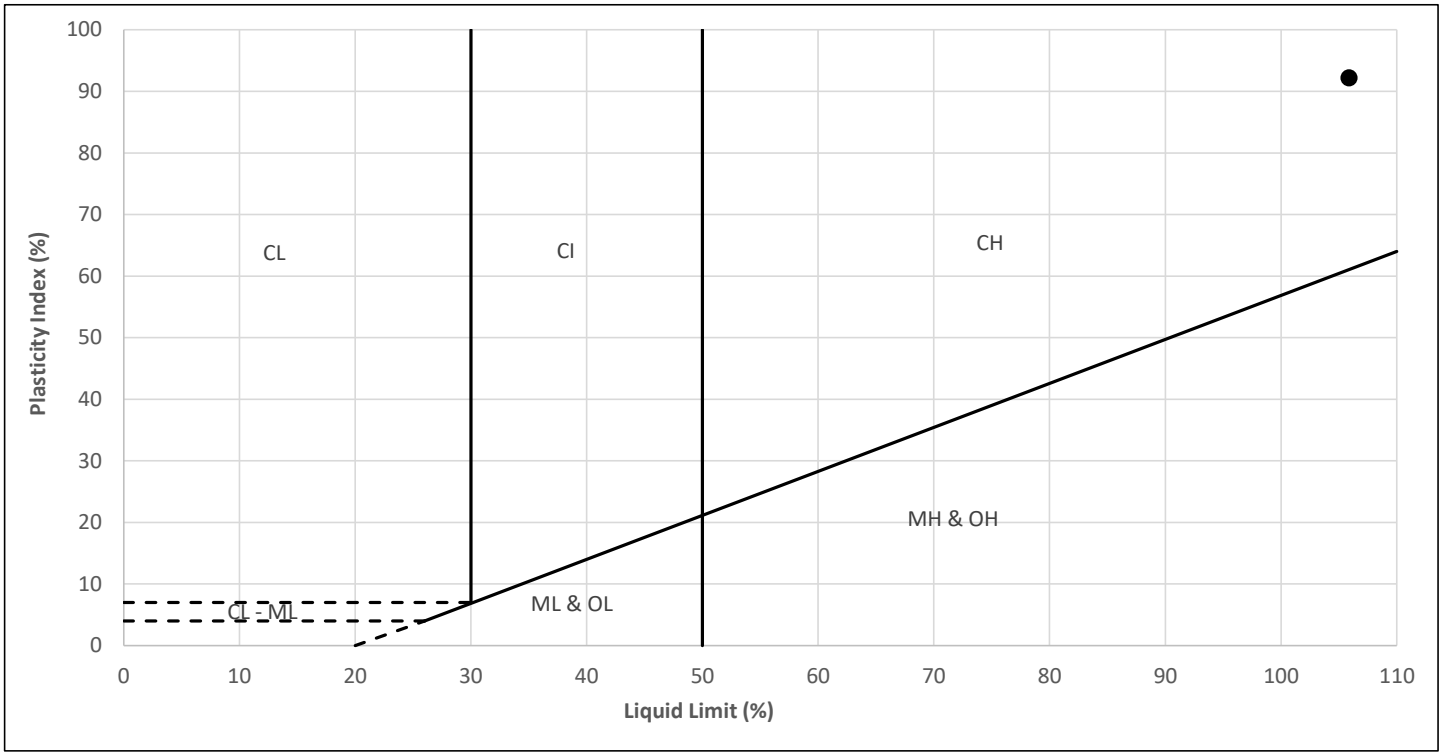
Project:	Snake Lake Reservoir Expansion	**Sample #:**	117UD1
Project No.:	1560-193-00	**Source:**	22CH117
Owner:	EID	**Sample Depth:**	10.4m
File No.:	AL - 117UD1	**Test Date:**	5-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	105.9
Plastic Limit (PL)	13.7
Plasticity Index (PI)	92.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

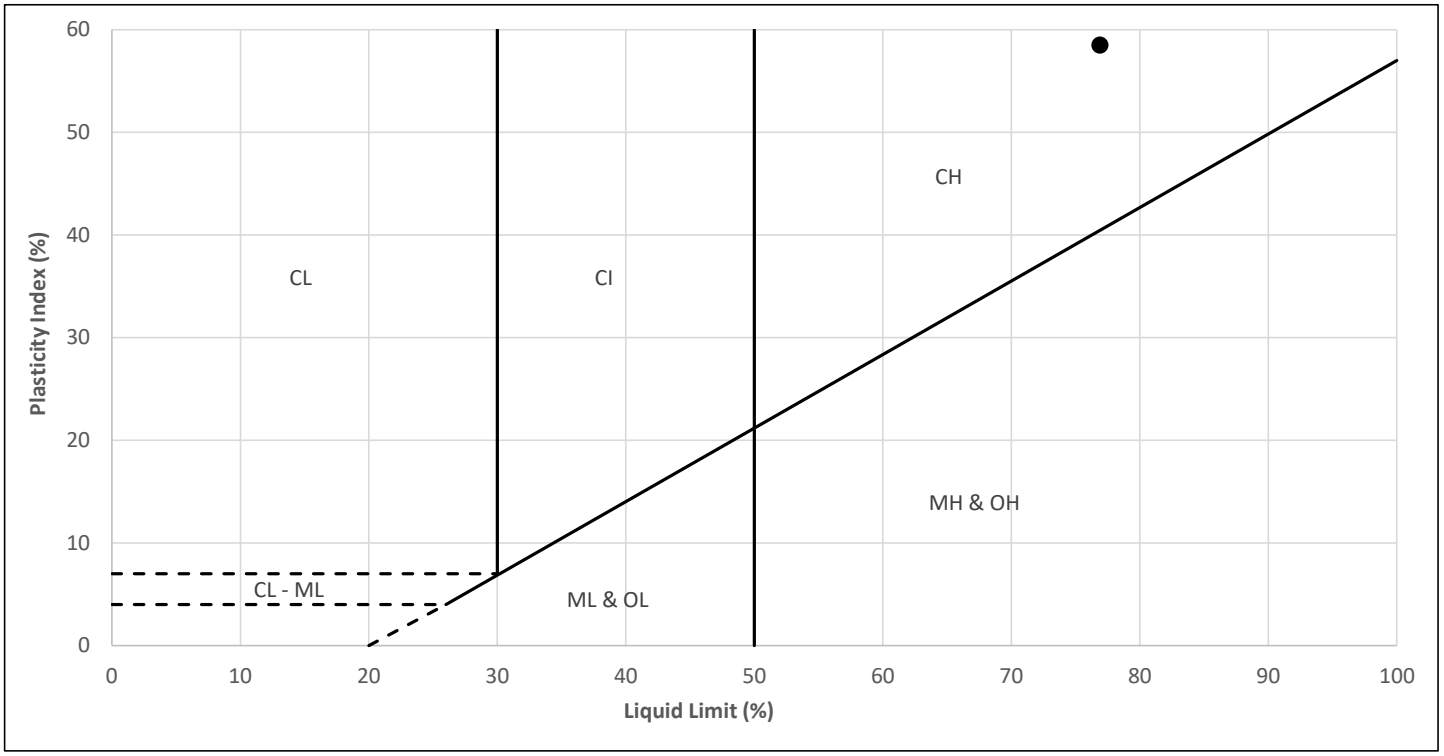
Project:	Snake Lake Reservoir Expansion	**Sample #:**	117UD2
Project No.:	1560-193-00	**Source:**	22CH117
Owner:	EID	**Sample Depth:**	14.7m
File No.:	AL - 117UD2	**Test Date:**	9-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	76.9
Plastic Limit (PL)	18.4
Plasticity Index (PI)	58.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

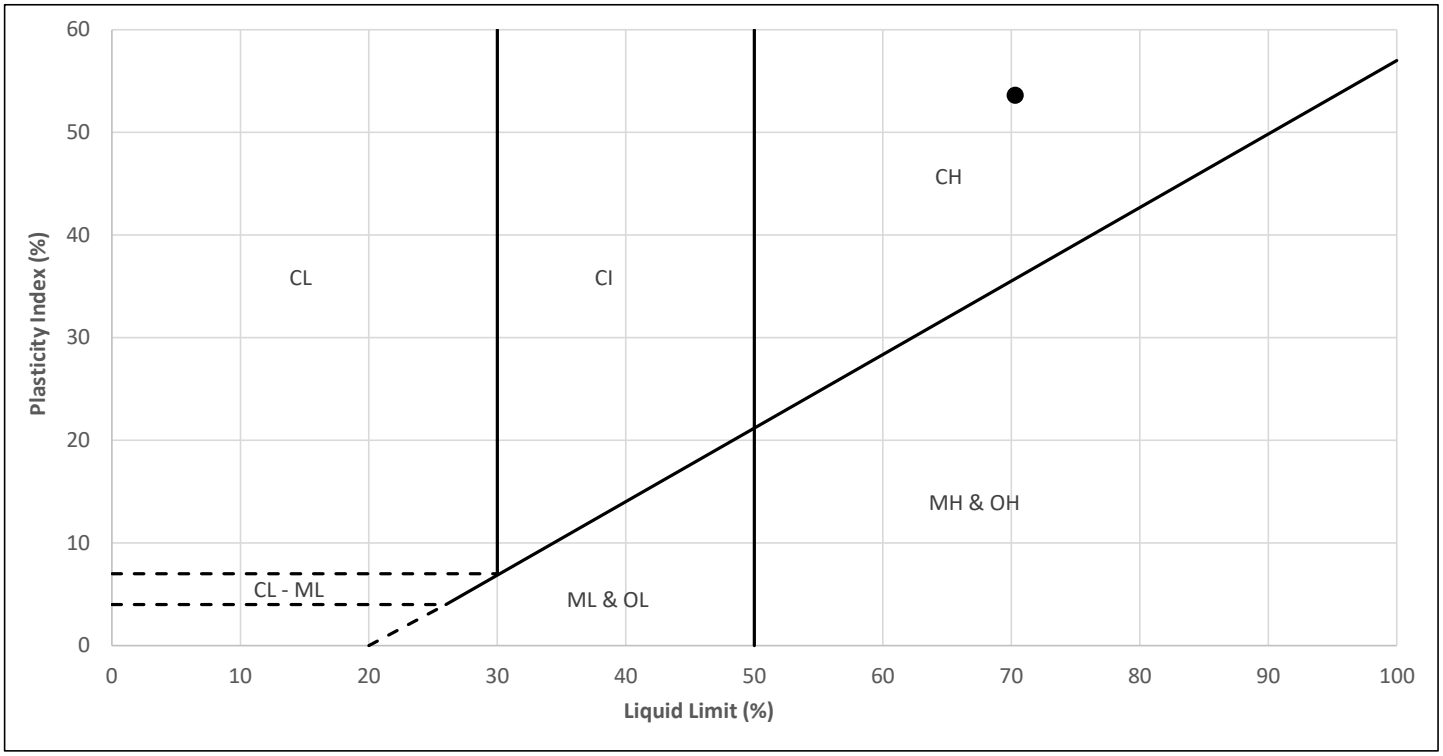
Project:	Snake Lake Reservoir Expansion	**Sample #:**	118AU2
Project No.:	1560-193-00	**Source:**	22BH118
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 118AU2	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	70.3
Plastic Limit (PL)	16.7
Plasticity Index (PI)	53.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

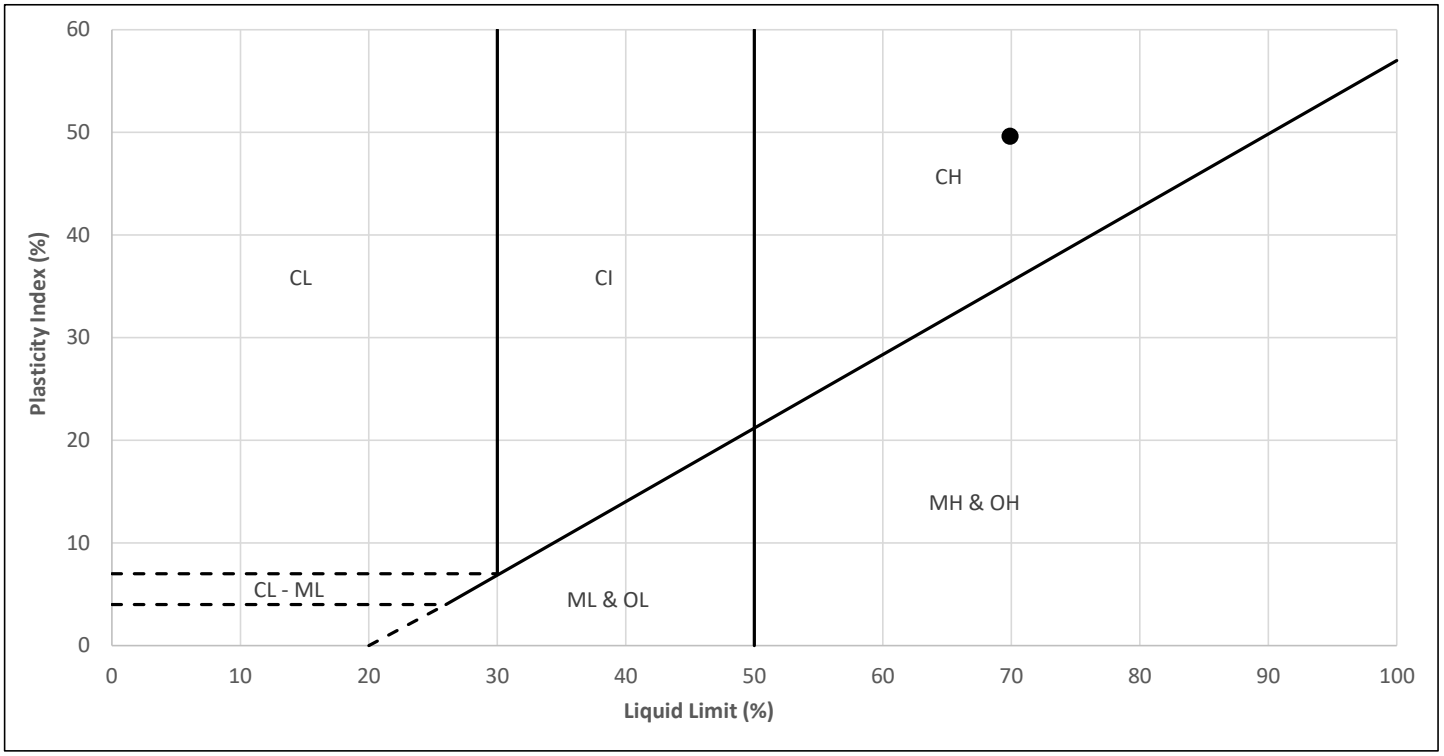
Project:	Snake Lake Reservoir Expansion	**Sample #:**	118AU4
Project No.:	1560-193-00	**Source:**	22BH118
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 118AU4	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	69.9
Plastic Limit (PL)	20.3
Plasticity Index (PI)	49.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

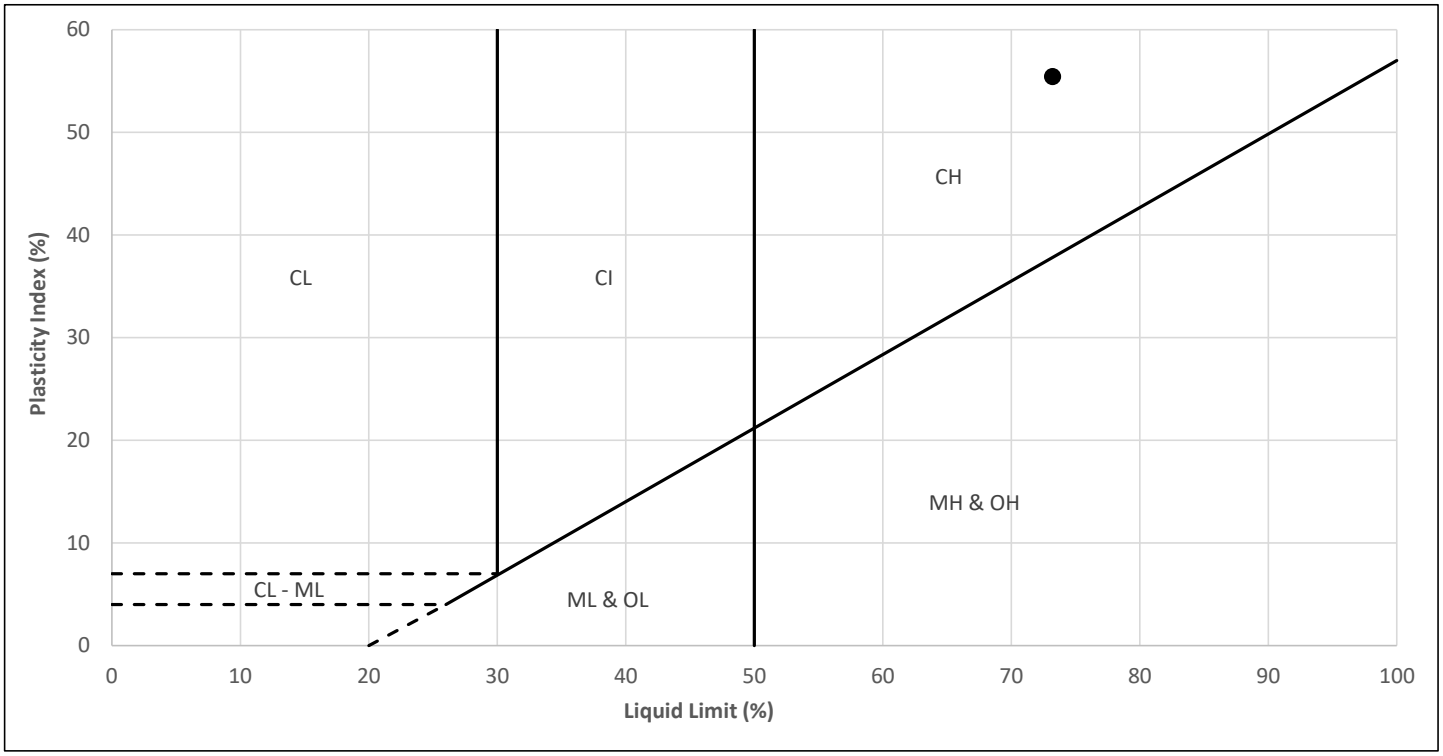
Project:	Snake Lake Reservoir Expansion	**Sample #:**	118UD1
Project No.:	1560-193-00	**Source:**	22CH118
Owner:	EID	**Sample Depth:**	3.3m
File No.:	AL - 118UD1	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	73.2
Plastic Limit (PL)	17.7
Plasticity Index (PI)	55.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

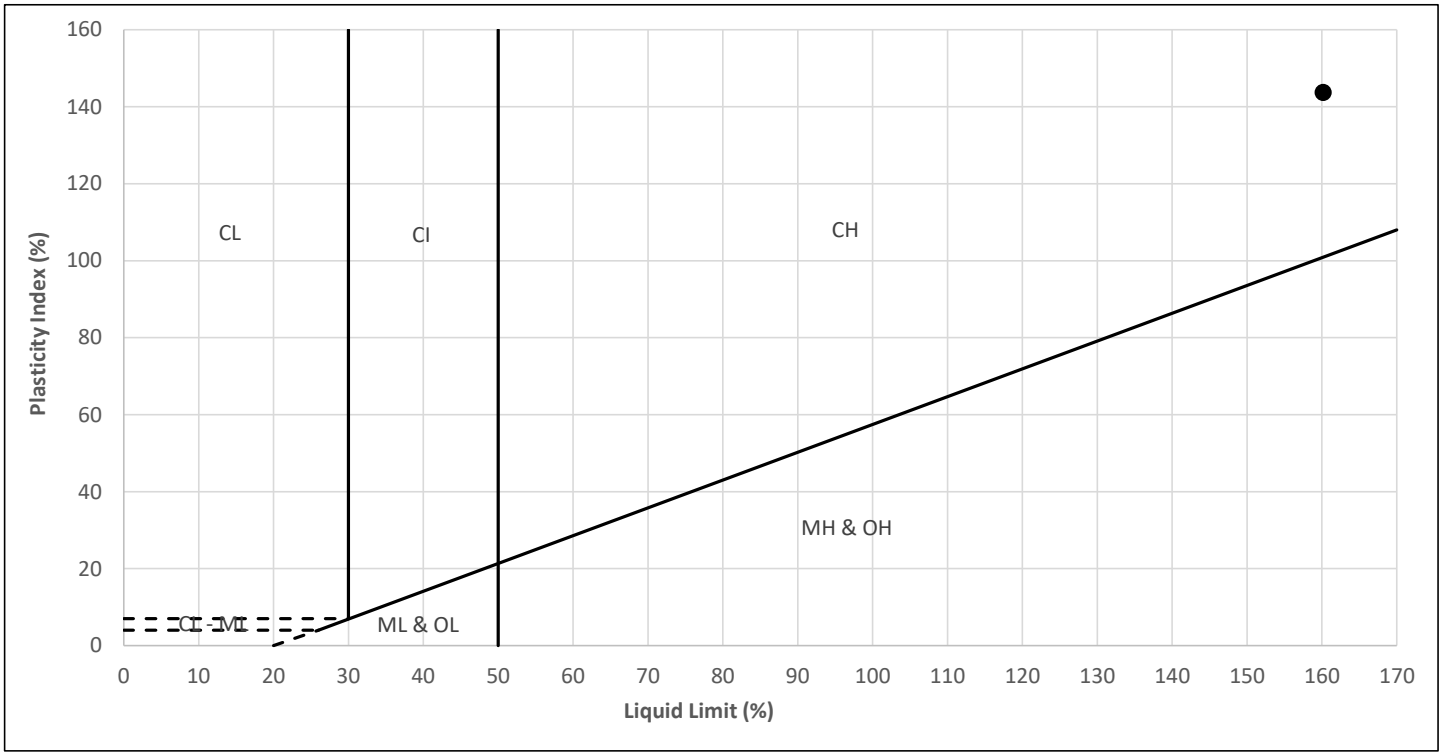
Project:	Snake Lake Reservoir Expansion	**Sample #:**	118UD4
Project No.:	1560-193-00	**Source:**	22CH118
Owner:	EID	**Sample Depth:**	6.0m
File No.:	AL - 118UD4	**Test Date:**	5-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	160.2
Plastic Limit (PL)	16.4
Plasticity Index (PI)	143.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

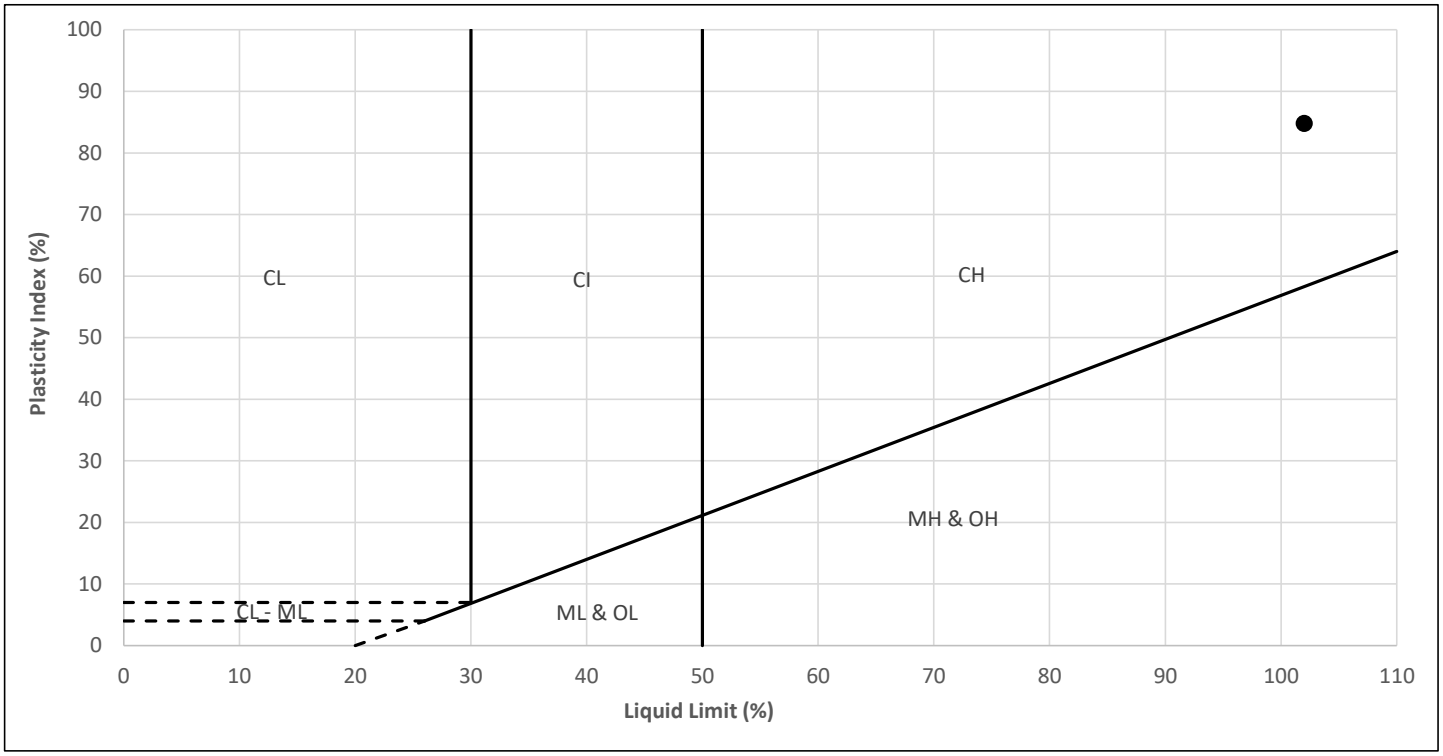
Project:	Snake Lake Reservoir Expansion	**Sample #:**	118UD7
Project No.:	1560-193-00	**Source:**	22CH118
Owner:	EID	**Sample Depth:**	11.3m
File No.:	AL - 118UD7	**Test Date:**	29-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	102.0
Plastic Limit (PL)	17.2
Plasticity Index (PI)	84.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

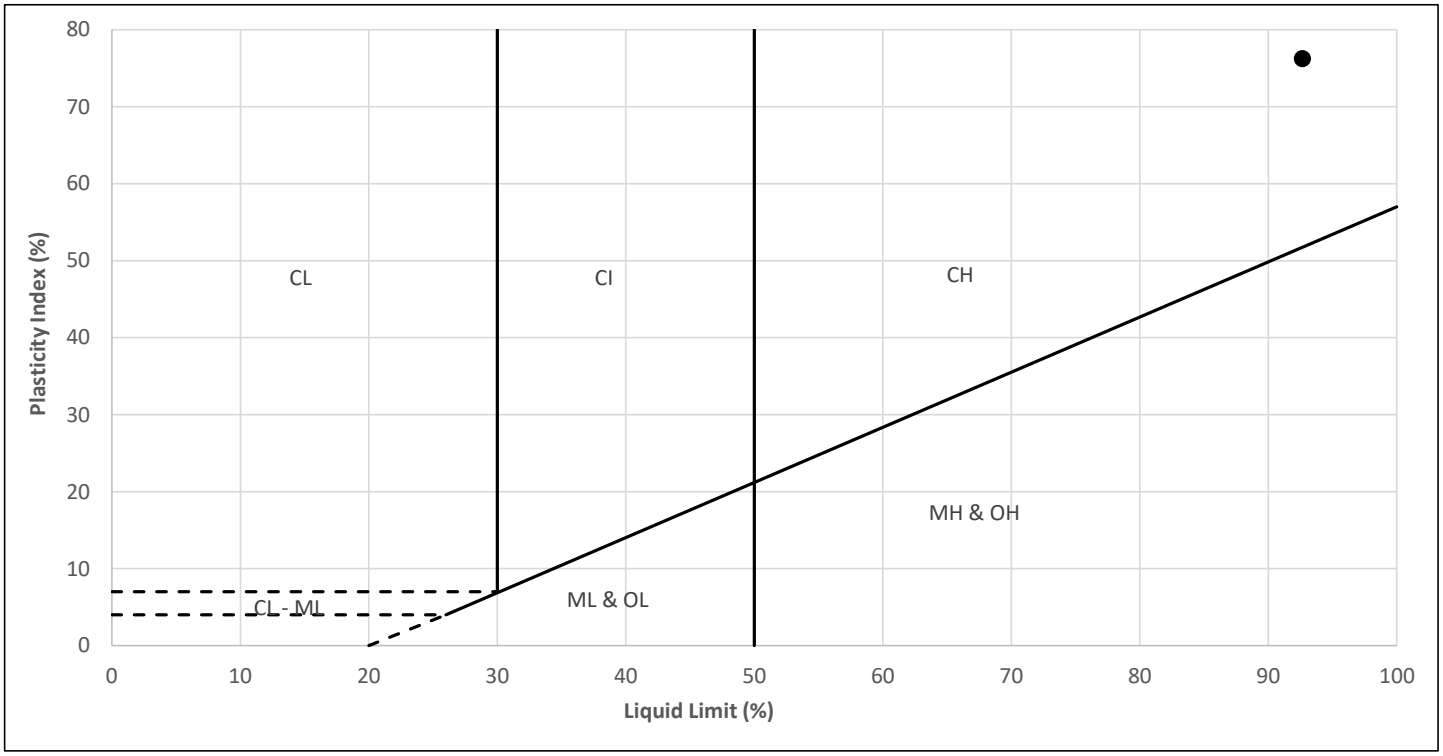
Project:	Snake Lake Reservoir Expansion	**Sample #:**	118UD9
Project No.:	1560-193-00	**Source:**	22BH118
Owner:	EID	**Sample Depth:**	20.0m
File No.:	AL - 118UD9	**Test Date:**	29-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	92.7
Plastic Limit (PL)	16.4
Plasticity Index (PI)	76.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

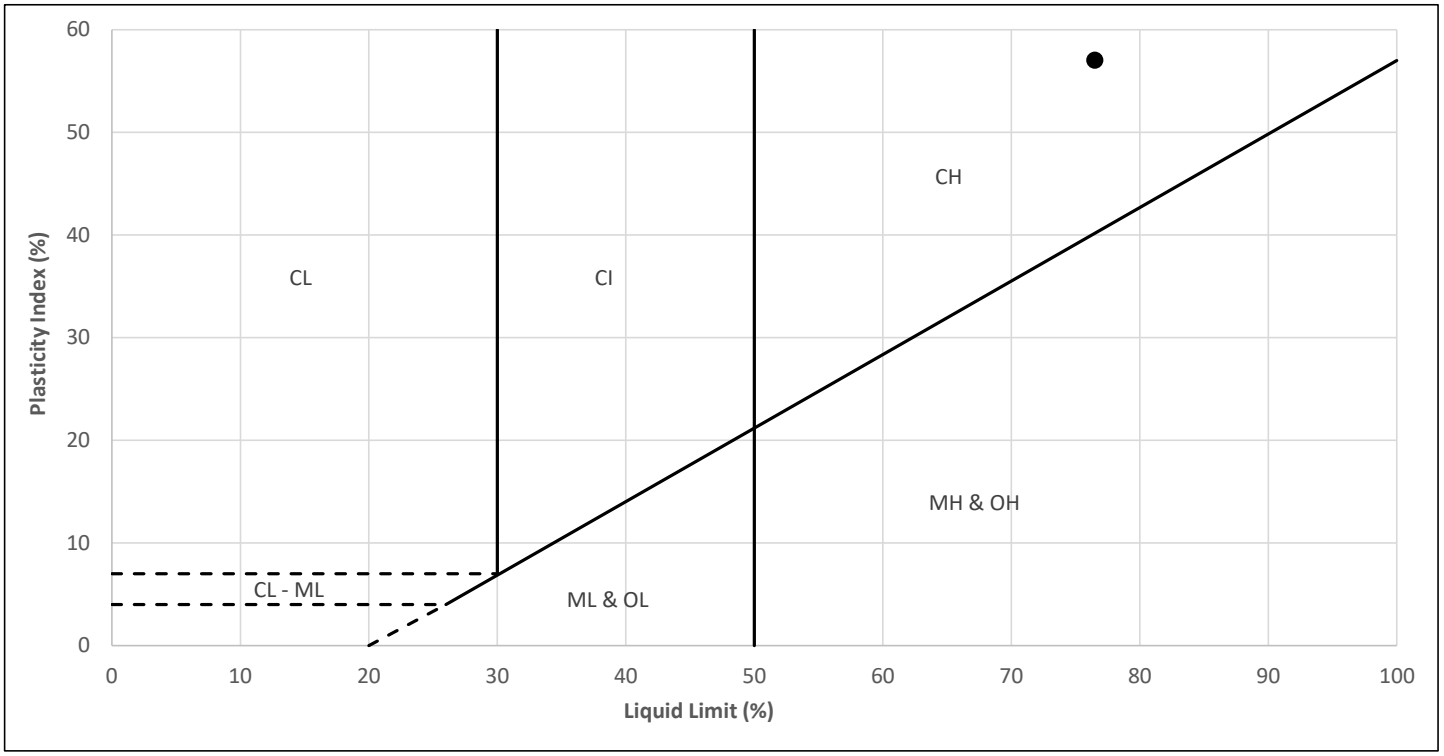
Project:	Snake Lake Reservoir Expansion	**Sample #:**	119AU1
Project No.:	1560-193-00	**Source:**	22BH119
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 119AU1	**Test Date:**	21-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	76.5
Plastic Limit (PL)	19.5
Plasticity Index (PI)	57.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

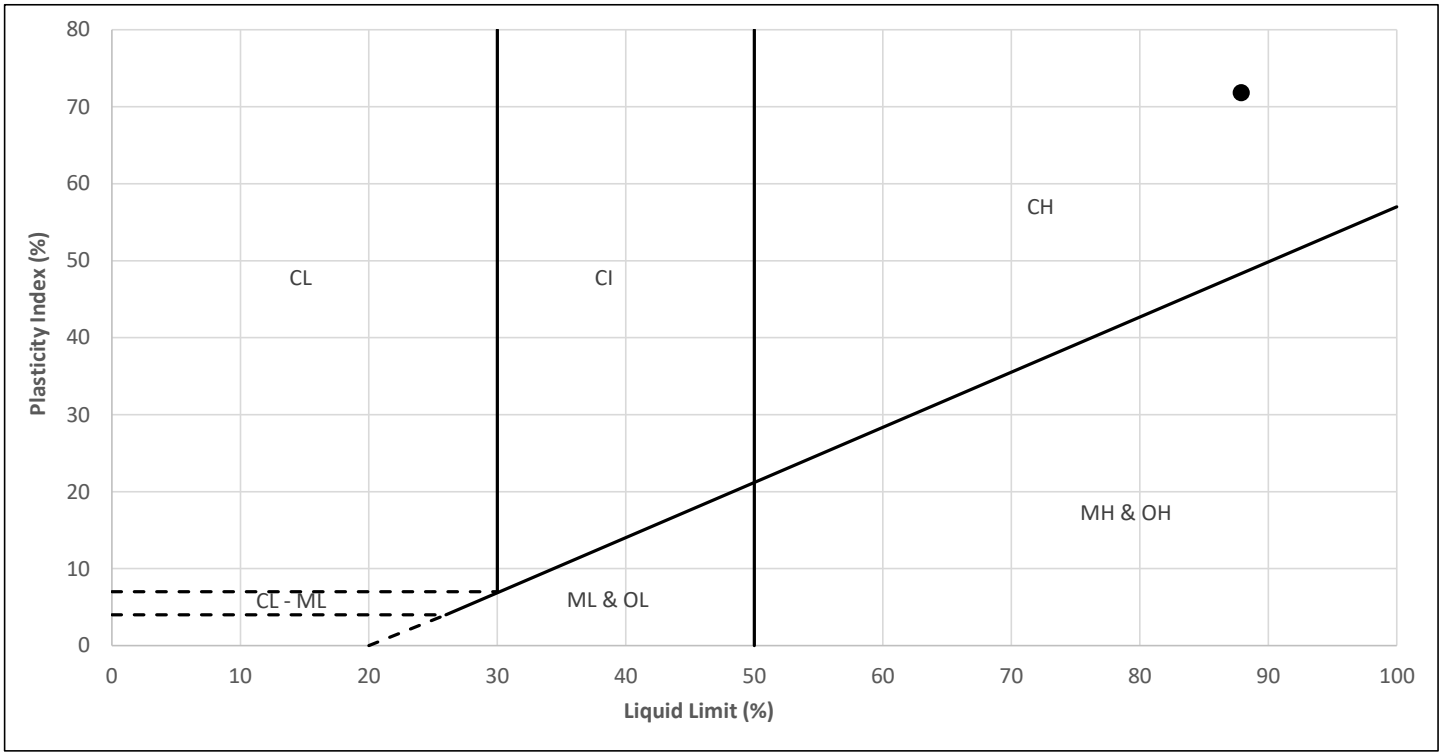
Project:	Snake Lake Reservoir Expansion	**Sample #:**	119AU5
Project No.:	1560-193-00	**Source:**	22BH119
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 119AU5	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	87.9
Plastic Limit (PL)	16.1
Plasticity Index (PI)	71.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

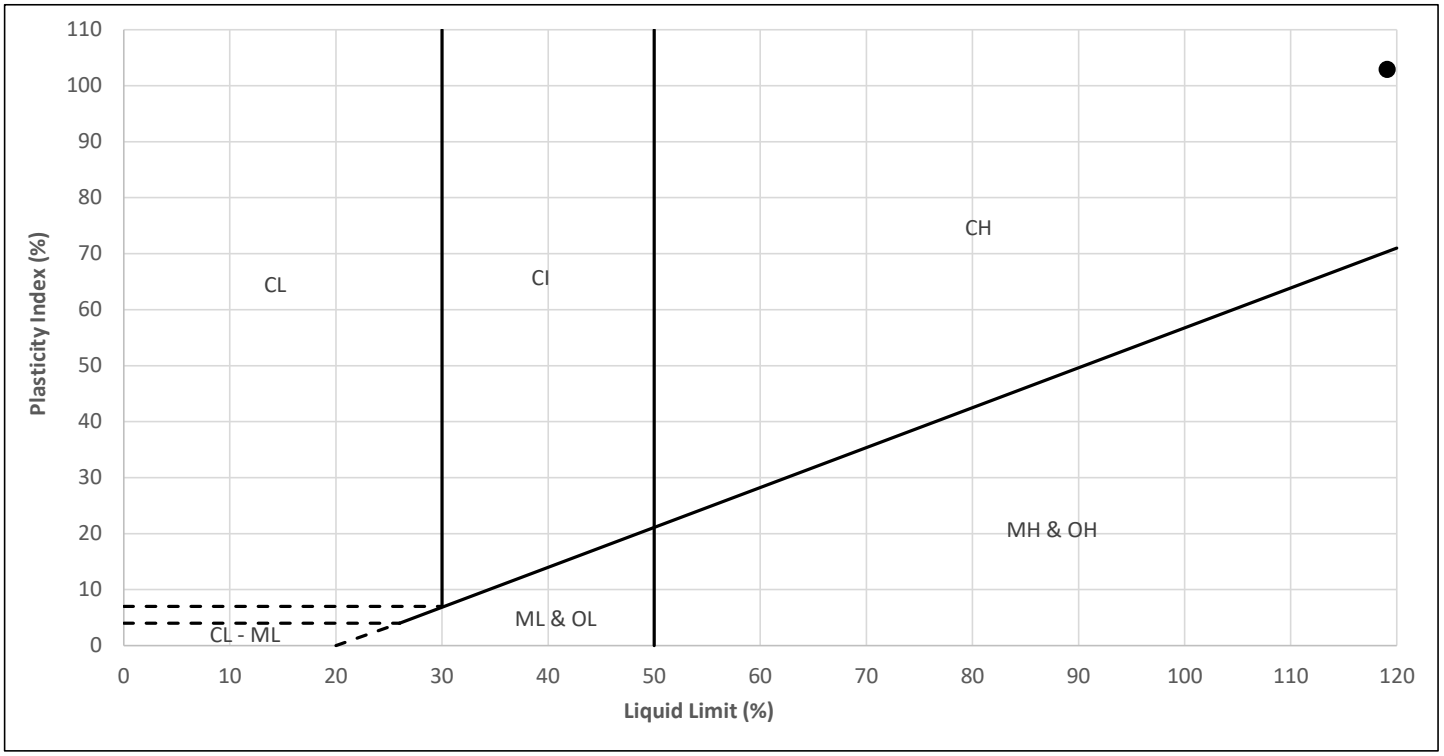
Project:	Snake Lake Reservoir Expansion	**Sample #:**	119RC1
Project No.:	1560-193-00	**Source:**	22CH119
Owner:	EID	**Sample Depth:**	5.4m
File No.:	AL - 119RC1	**Test Date:**	13-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	119.1
Plastic Limit (PL)	16.2
Plasticity Index (PI)	102.9

Soil Plasticity	High
Soil Classification	CH



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Lethbridge, Alberta T1H 5J3
Tel: (403)892-6036

ATTERBERG LIMITS

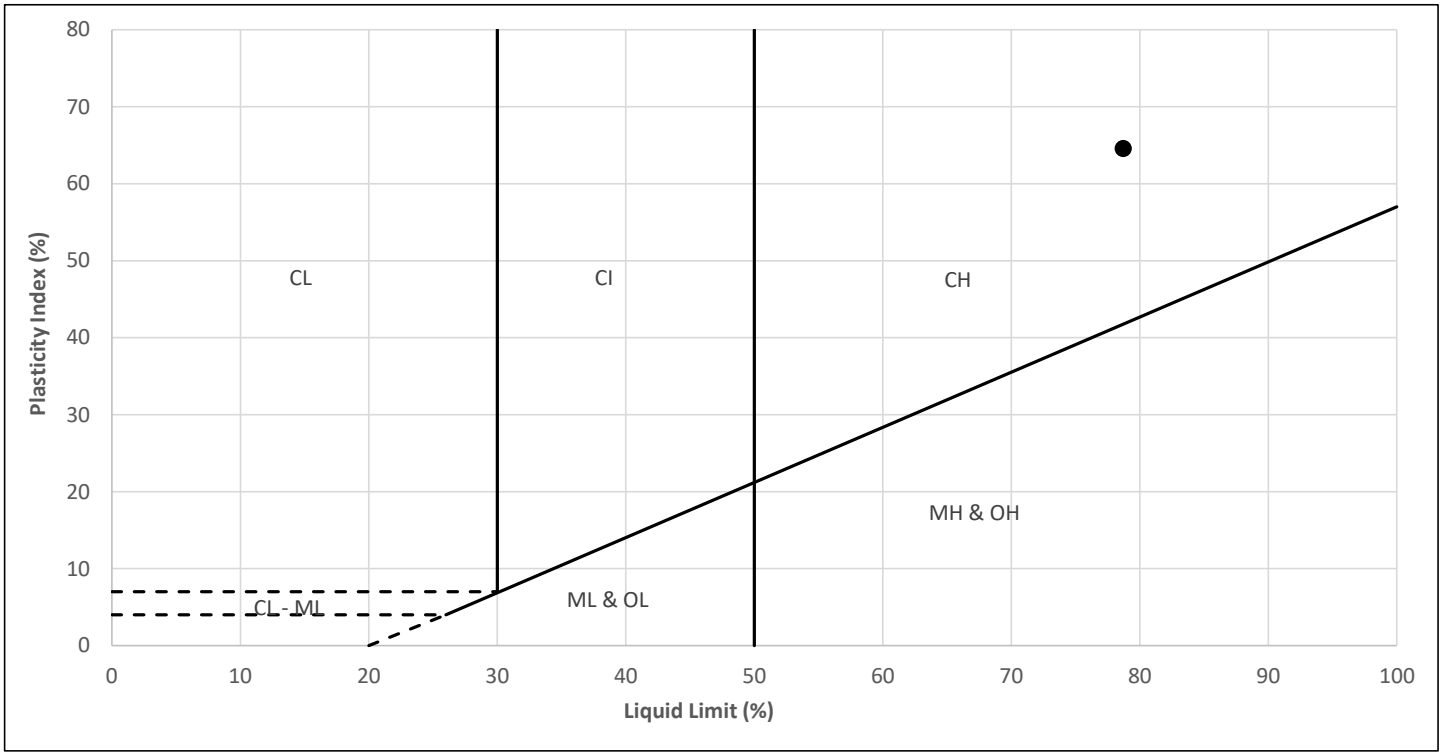
Project:	Snake Lake Reservoir Expansion	**Sample #:**	119UD1
Project No.:	1560-193-00	**Source:**	22CH119
Owner:	EID	**Sample Depth:**	11.5m
File No.:	AL - 119UD1	**Test Date:**	29-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	78.7
Plastic Limit (PL)	14.1
Plasticity Index (PI)	64.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

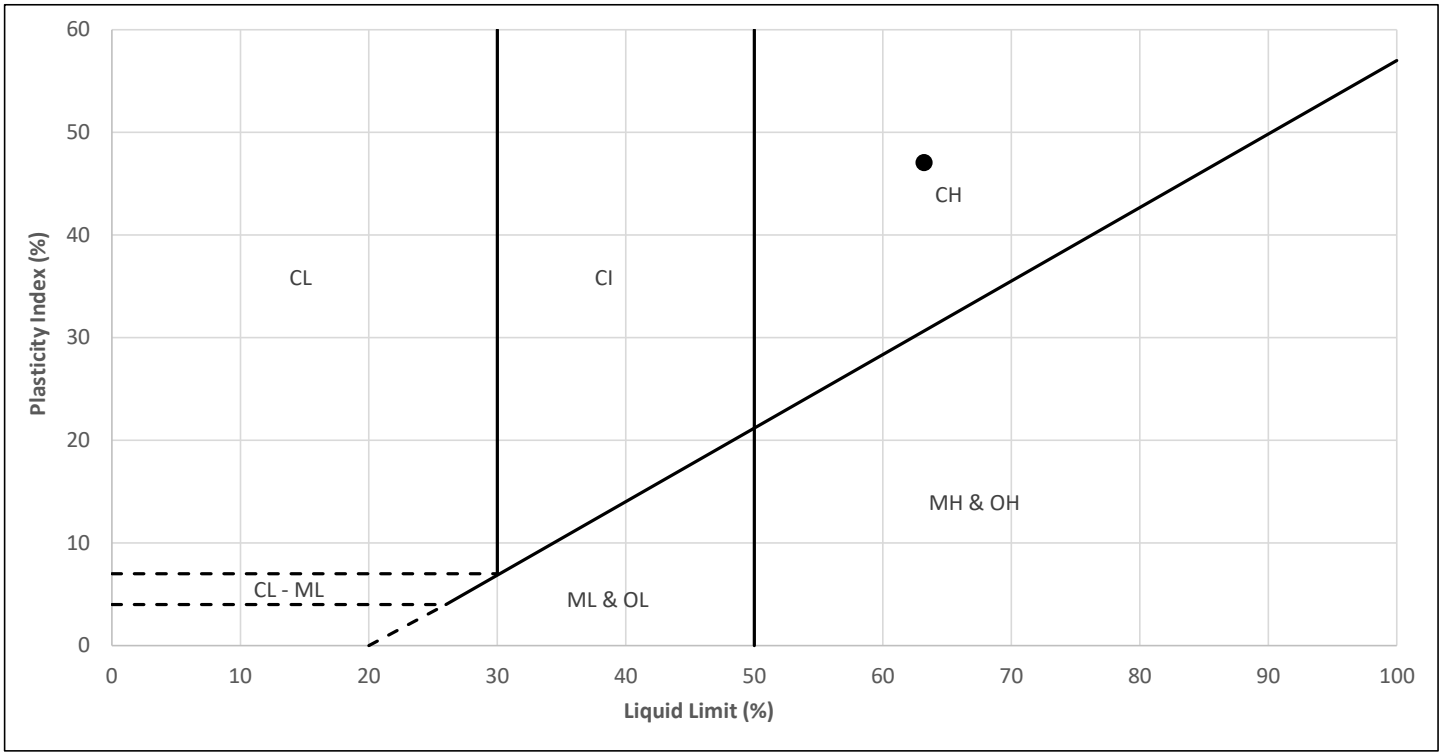
Project:	Snake Lake Reservoir Expansion	**Sample #:**	119UD3
Project No.:	1560-193-00	**Source:**	22CH119
Owner:	EID	**Sample Depth:**	21.05m
File No.:	AL - 119UD3	**Test Date:**	8-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	63.2
Plastic Limit (PL)	16.1
Plasticity Index (PI)	47.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

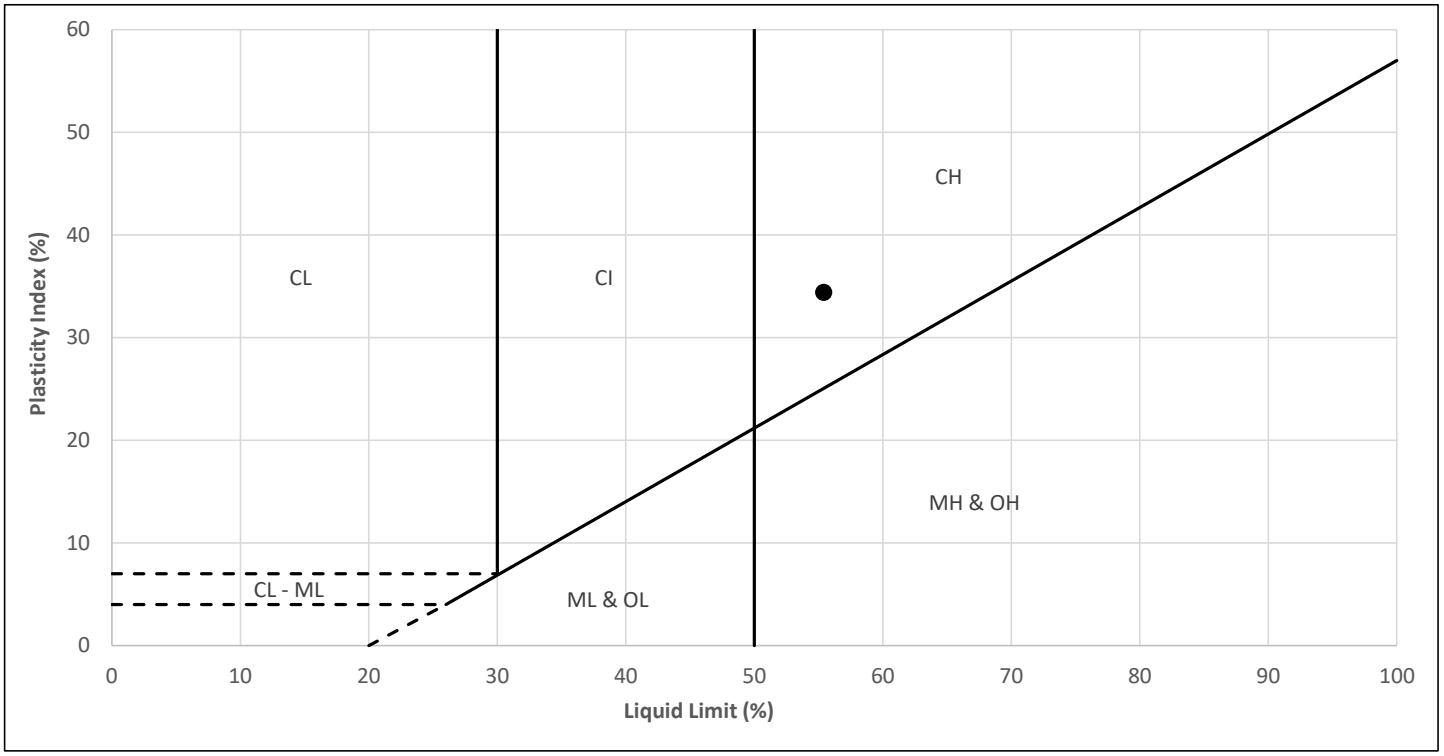
Project:	Snake Lake Reservoir Expansion	**Sample #:**	119UD5
Project No.:	1560-193-00	**Source:**	22CH119
Owner:	EID	**Sample Depth:**	26.02m
File No.:	AL - 119UD5	**Test Date:**	7-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.4
Plastic Limit (PL)	21.0
Plasticity Index (PI)	34.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

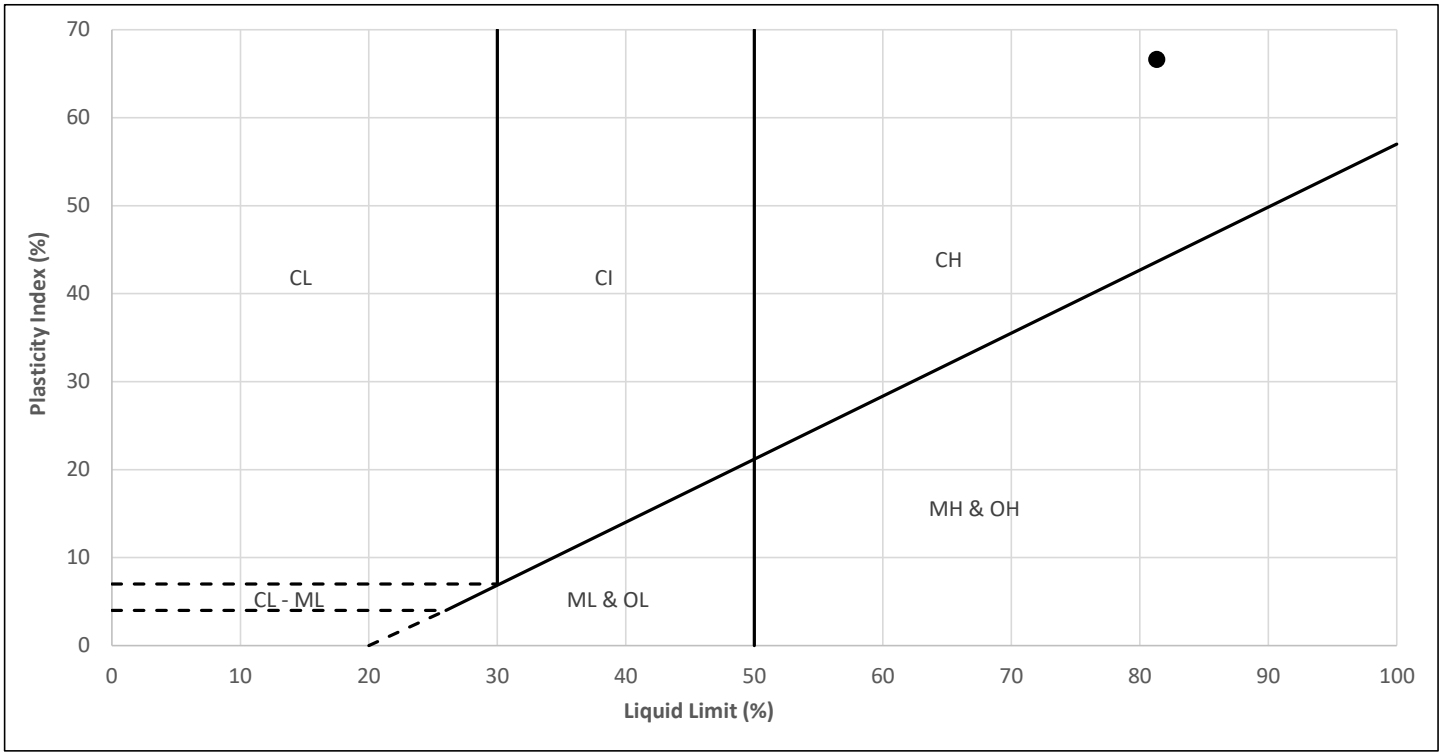
Project:	Snake Lake Reservoir Expansion	**Sample #:**	120AU14
Project No.:	1560-193-00	**Source:**	22BH120
Owner:	EID	**Sample Depth:**	10.4m
File No.:	AL - 120AU14	**Date:**	18-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	81.3
Plastic Limit (PL)	14.7
Plasticity Index (PI)	66.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

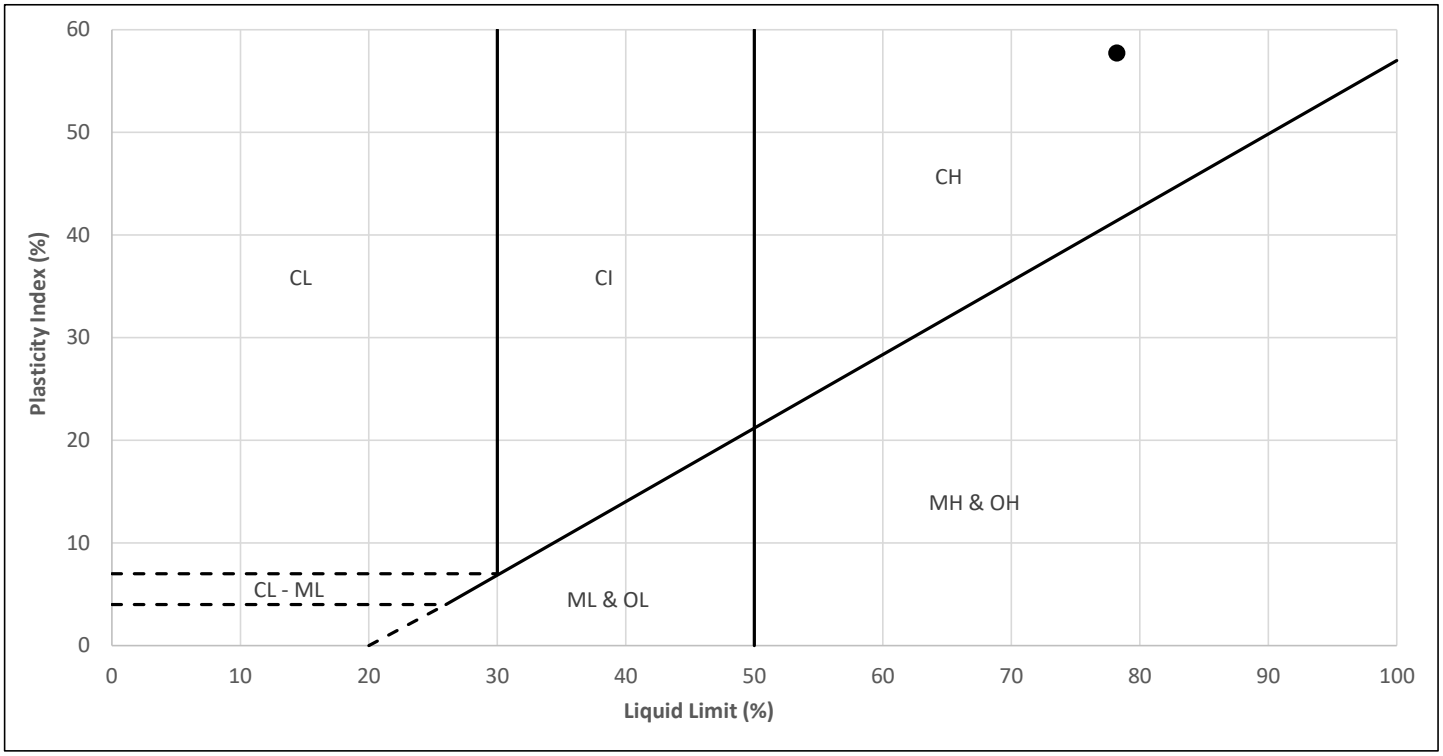
Project:	Snake Lake Reservoir Expansion	**Sample #:**	120RC1
Project No.:	1560-193-00	**Source:**	22CH120
Owner:	EID	**Sample Depth:**	6.5m
File No.:	AL - 120RC1	**Test Date:**	6-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	78.2
Plastic Limit (PL)	20.5
Plasticity Index (PI)	57.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

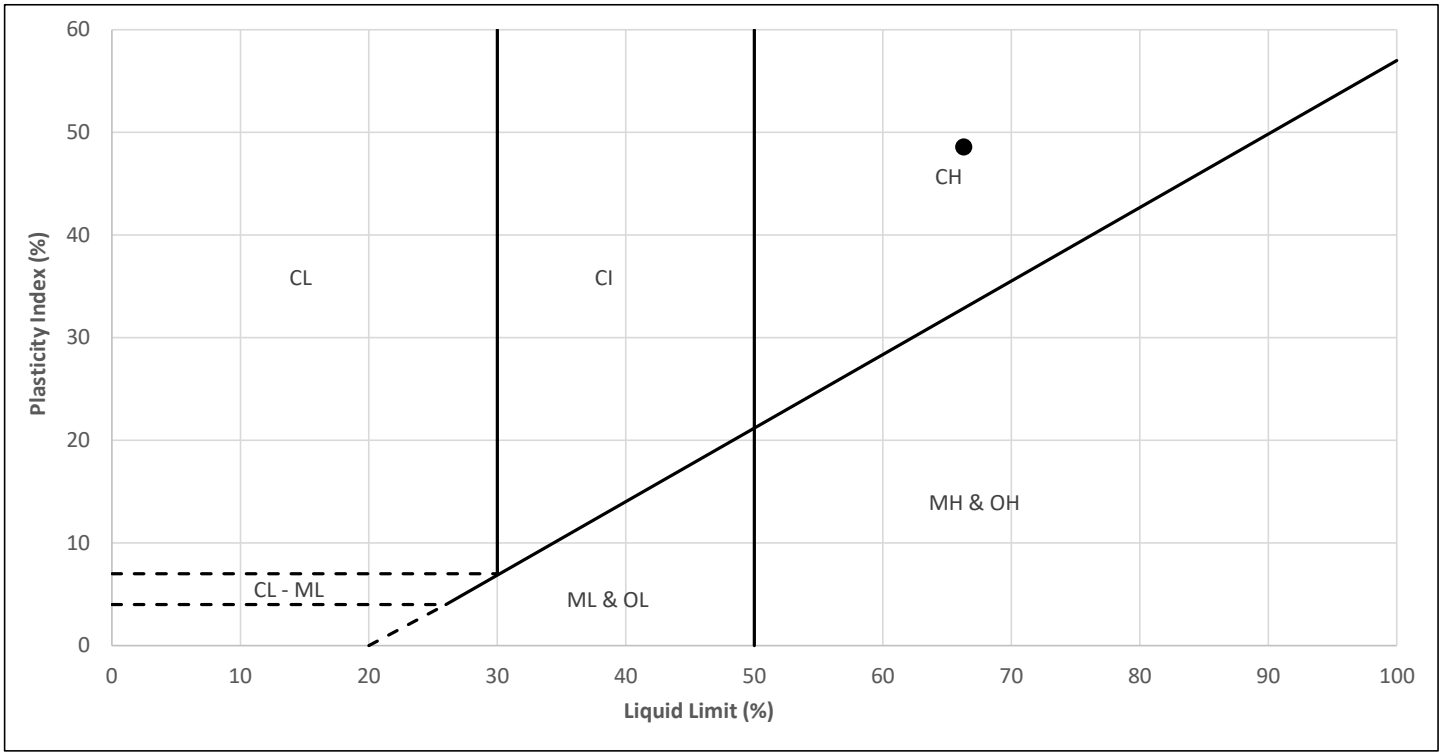
Project:	Snake Lake Reservoir Expansion	**Sample #:**	120UD4
Project No.:	1560-193-00	**Source:**	22CH120
Owner:	EID	**Sample Depth:**	17.7m
File No.:	AL - 120UD4	**Test Date:**	7-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	66.3
Plastic Limit (PL)	17.7
Plasticity Index (PI)	48.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

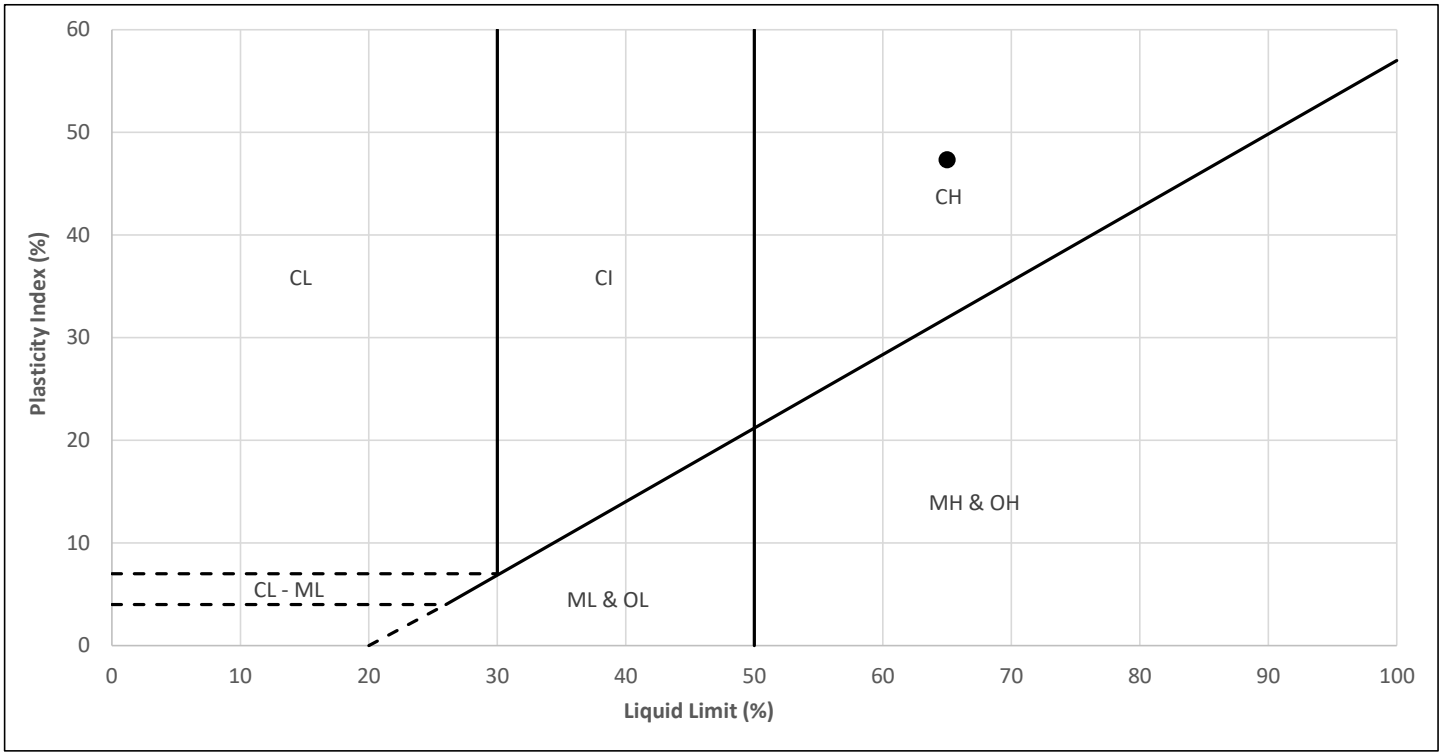
Project:	Snake Lake Reservoir Expansion	**Sample #:**	120UD7
Project No.:	1560-193-00	**Source:**	22CH120
Owner:	EID	**Sample Depth:**	25.71m
File No.:	AL - 120UD7	**Test Date:**	30-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	65.0
Plastic Limit (PL)	17.7
Plasticity Index (PI)	47.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

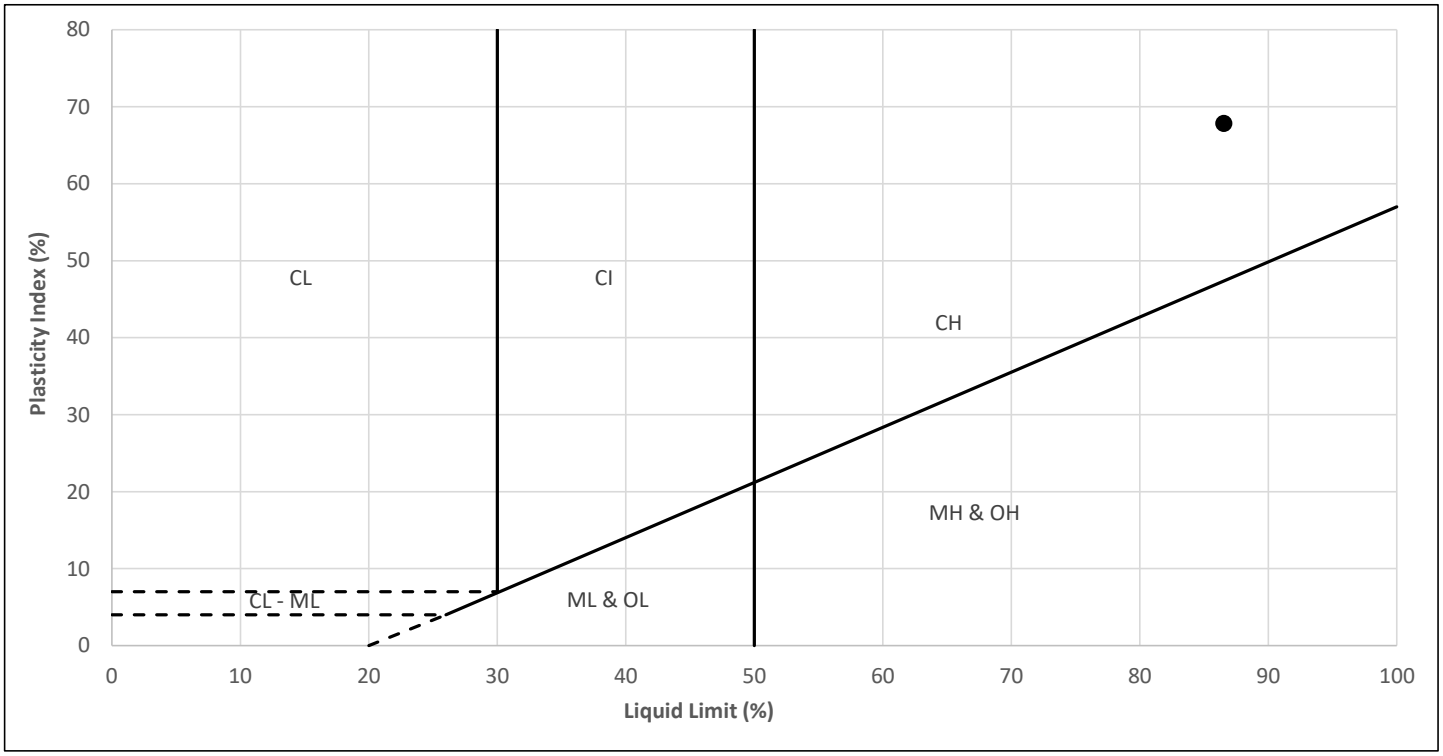
Project:	Snake Lake Reservoir Expansion	**Sample #:**	121AU4
Project No.:	1560-193-00	**Source:**	22BH121
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 121AU4	**Date:**	16-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	86.5
Plastic Limit (PL)	18.7
Plasticity Index (PI)	67.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

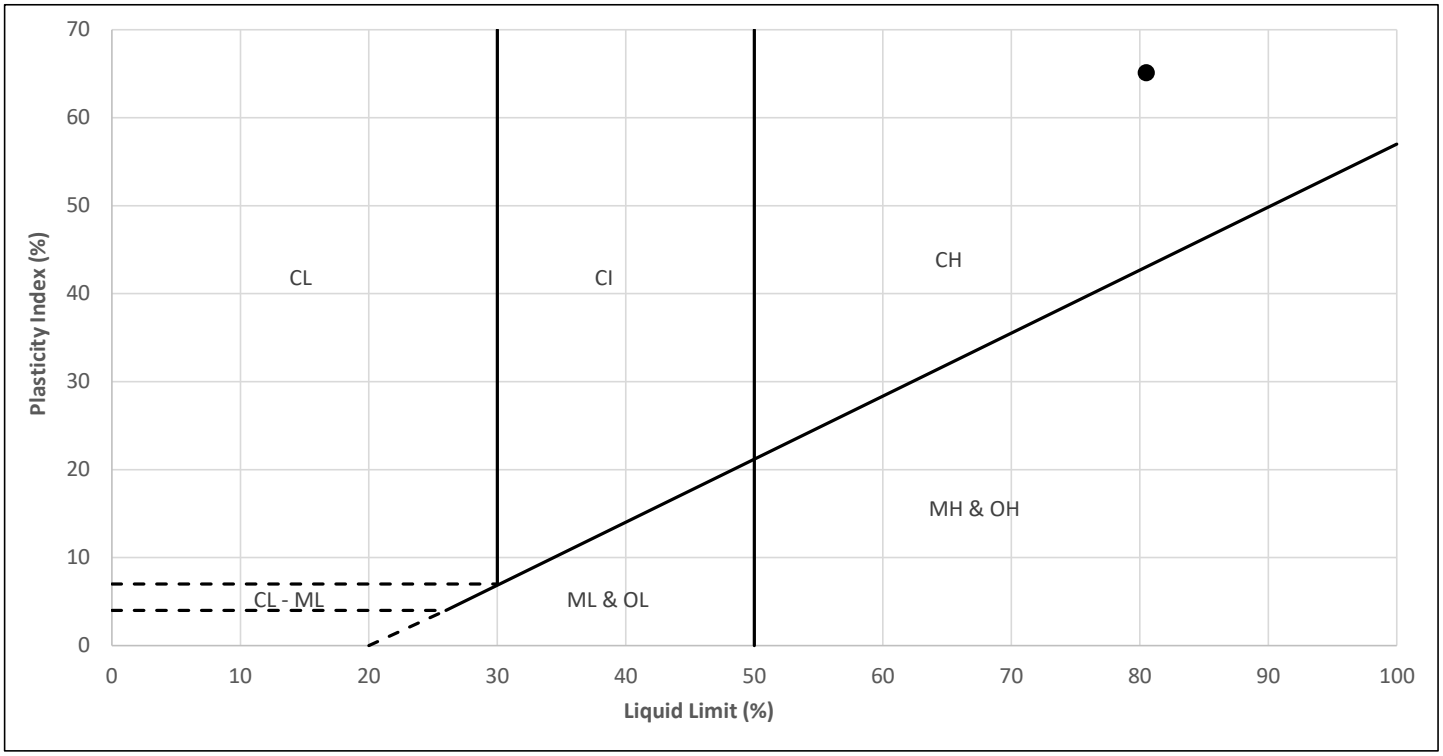
Project:	Snake Lake Reservoir Expansion	**Sample #:**	121AU13
Project No.:	1560-193-00	**Source:**	22BH121
Owner:	EID	**Sample Depth:**	9.8m
File No.:	AL - 121AU13	**Date:**	16-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	80.5
Plastic Limit (PL)	15.4
Plasticity Index (PI)	65.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

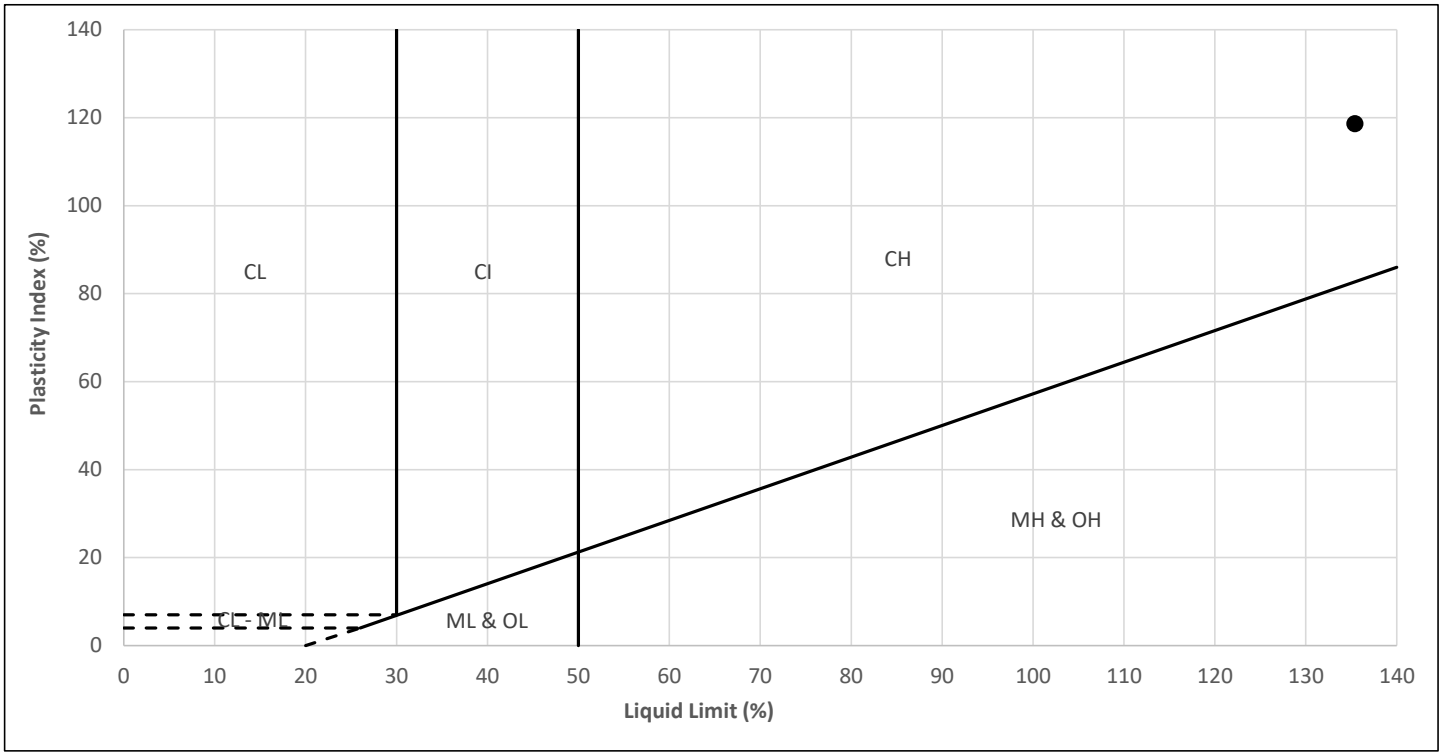
Project:	Snake Lake Reservoir Expansion	**Sample #:**	121UD2
Project No.:	1560-193-00	**Source:**	22CH121
Owner:	EID	**Sample Depth:**	11.6m
File No.:	AL - 121UD2	**Test Date:**	13-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	135.4
Plastic Limit (PL)	16.7
Plasticity Index (PI)	118.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

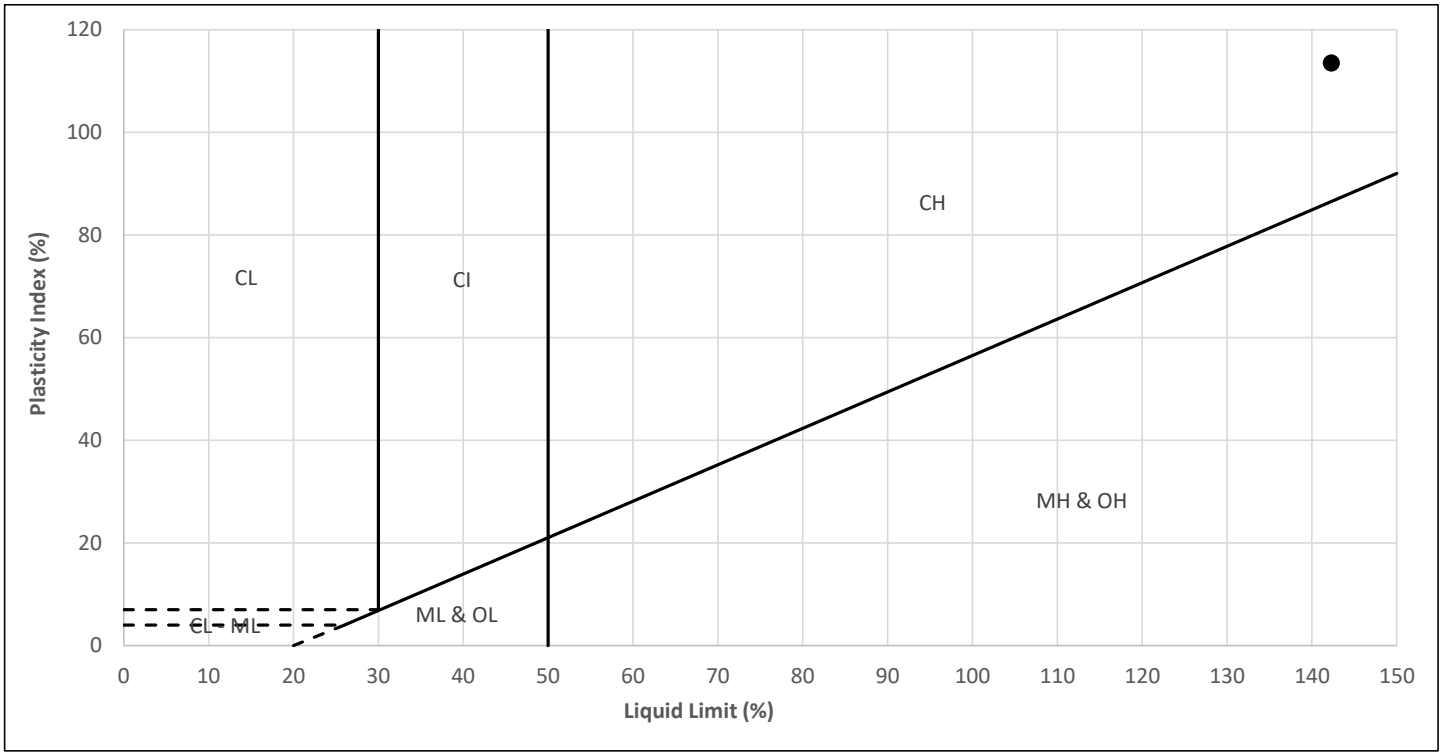
Project:	Snake Lake Reservoir Expansion	**Sample #:**	121UD4
Project No.:	1560-193-00	**Source:**	22CH121
Owner:	EID	**Sample Depth:**	15.48m
File No.:	AL - 121UD4	**Test Date:**	12-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	142.3
Plastic Limit (PL)	28.8
Plasticity Index (PI)	113.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

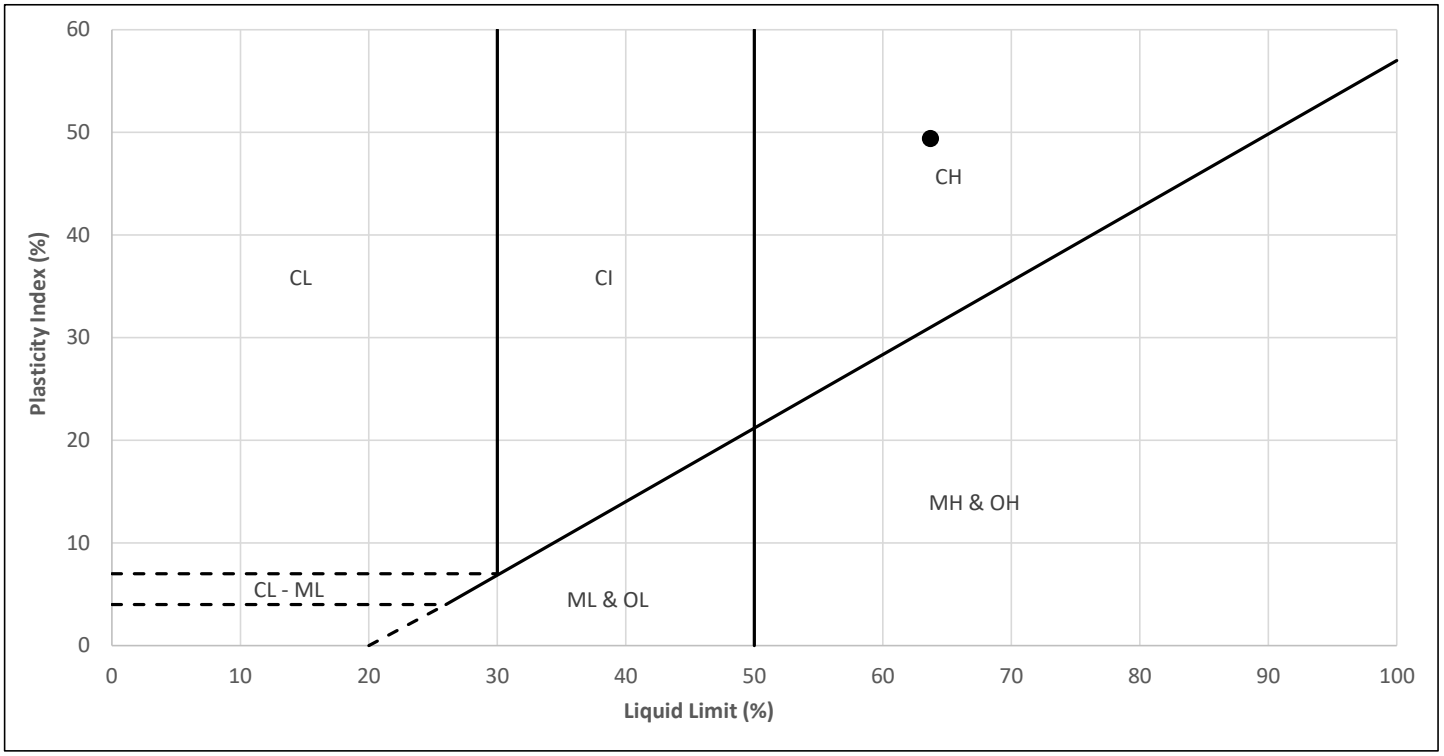
Project:	Snake Lake Reservoir Expansion	**Sample #:**	122AU1
Project No.:	1560-193-00	**Source:**	22BH122
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 122AU1	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	63.7
Plastic Limit (PL)	14.3
Plasticity Index (PI)	49.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

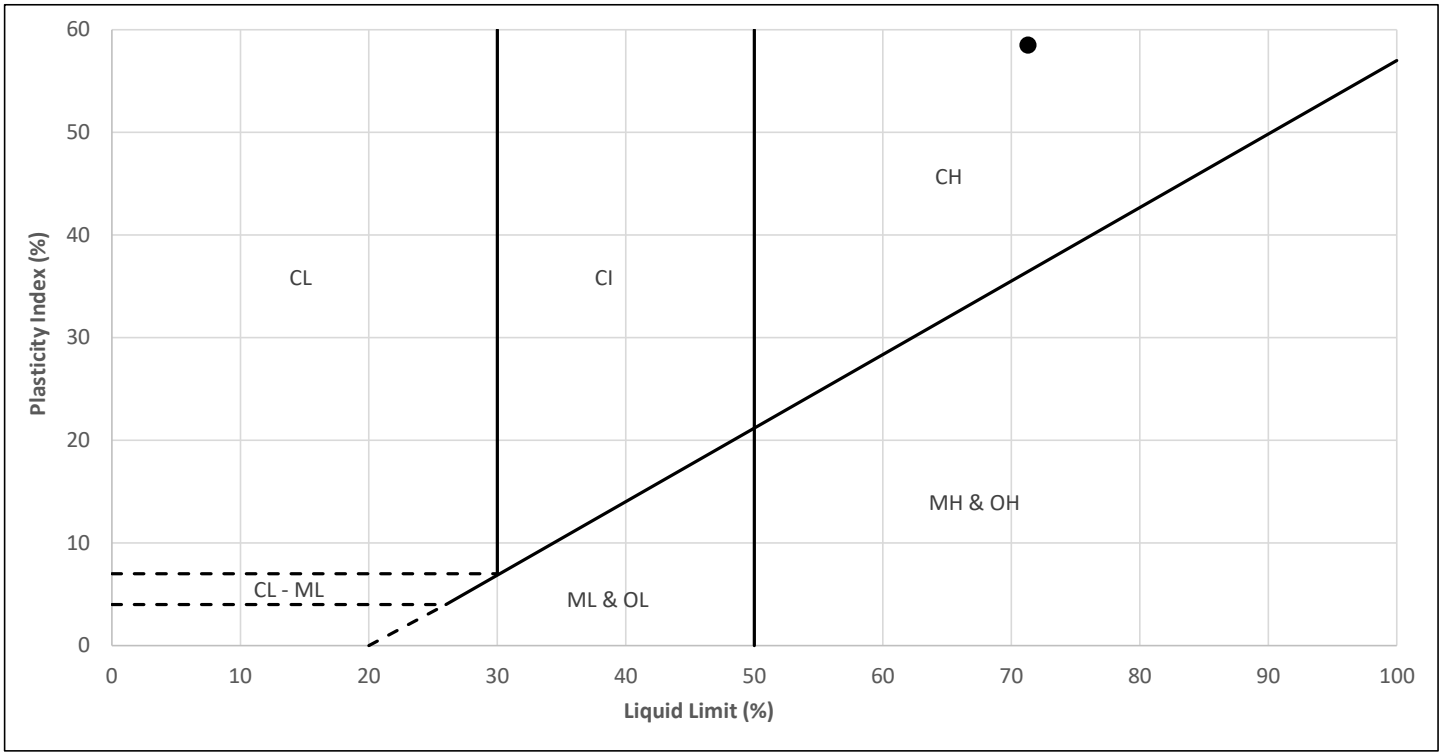
Project:	Snake Lake Reservoir Expansion	**Sample #:**	122AU2
Project No.:	1560-193-00	**Source:**	22BH122
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 122AU2	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	71.3
Plastic Limit (PL)	12.8
Plasticity Index (PI)	58.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

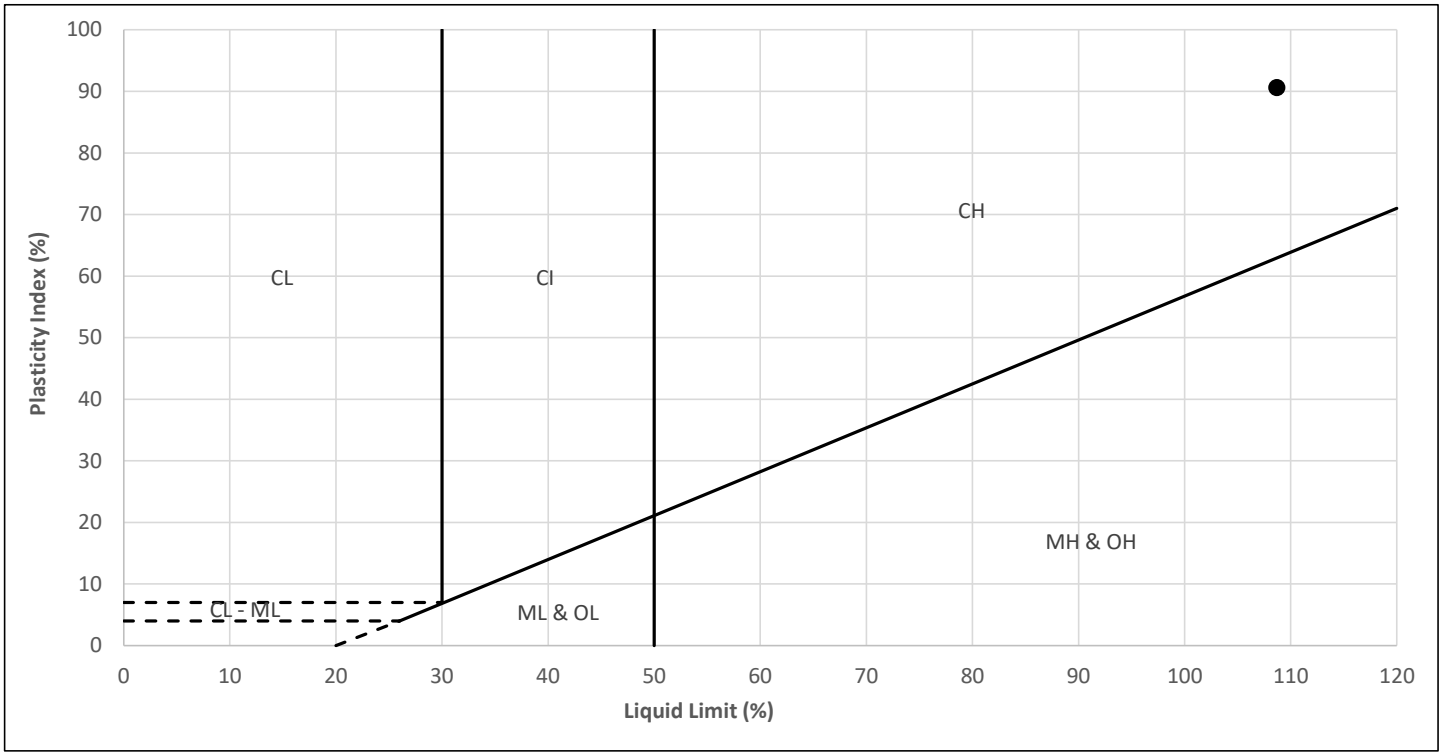
Project:	Snake Lake Reservoir Expansion	**Sample #:**	122AU5
Project No.:	1560-193-00	**Source:**	22BH122
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 122AU5	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	108.7
Plastic Limit (PL)	18.1
Plasticity Index (PI)	90.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

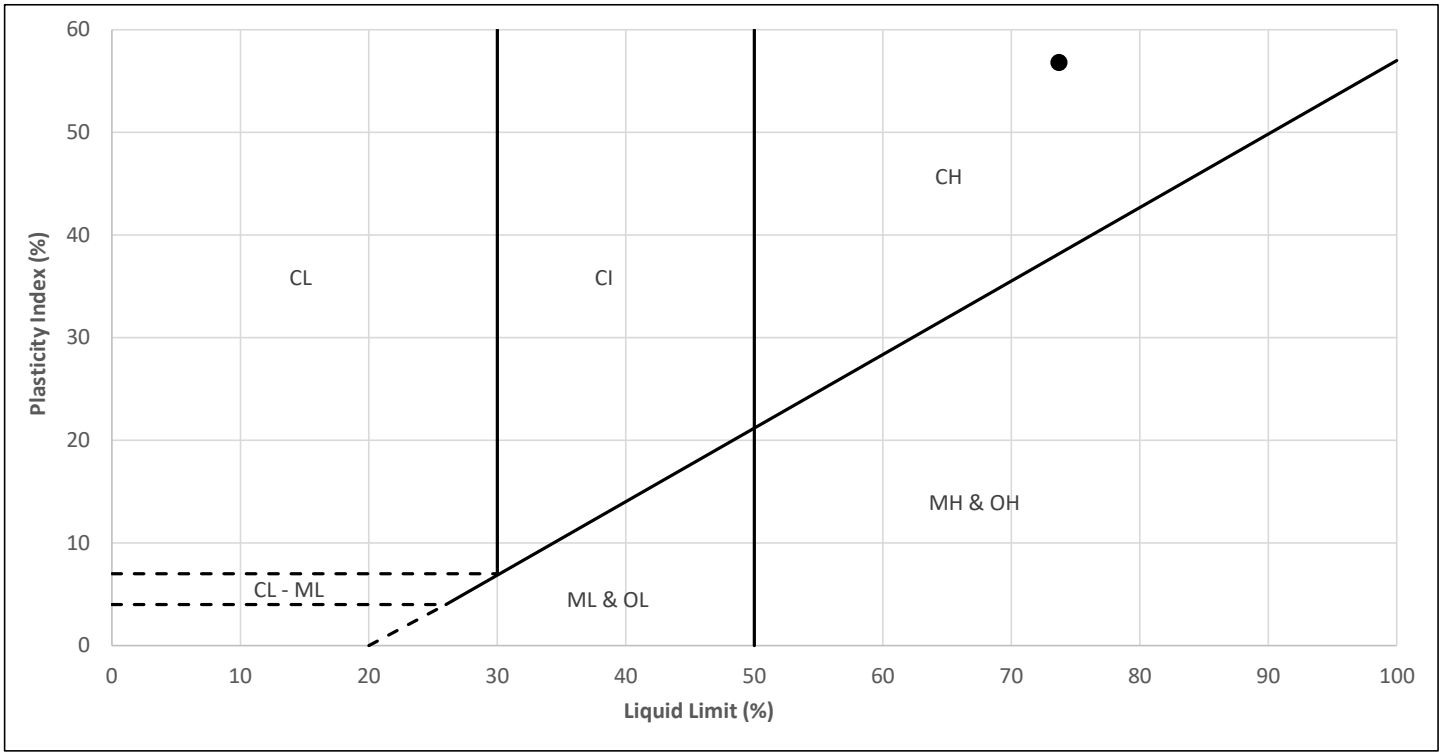
Project:	Snake Lake Reservoir Expansion	**Sample #:**	122RC1 GW
Project No.:	1560-193-00	**Source:**	22CH122
Owner:	EID	**Sample Depth:**	5.1m
File No.:	AL - 122RC1 GW	**Test Date:**	18-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	73.7
Plastic Limit (PL)	16.9
Plasticity Index (PI)	56.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

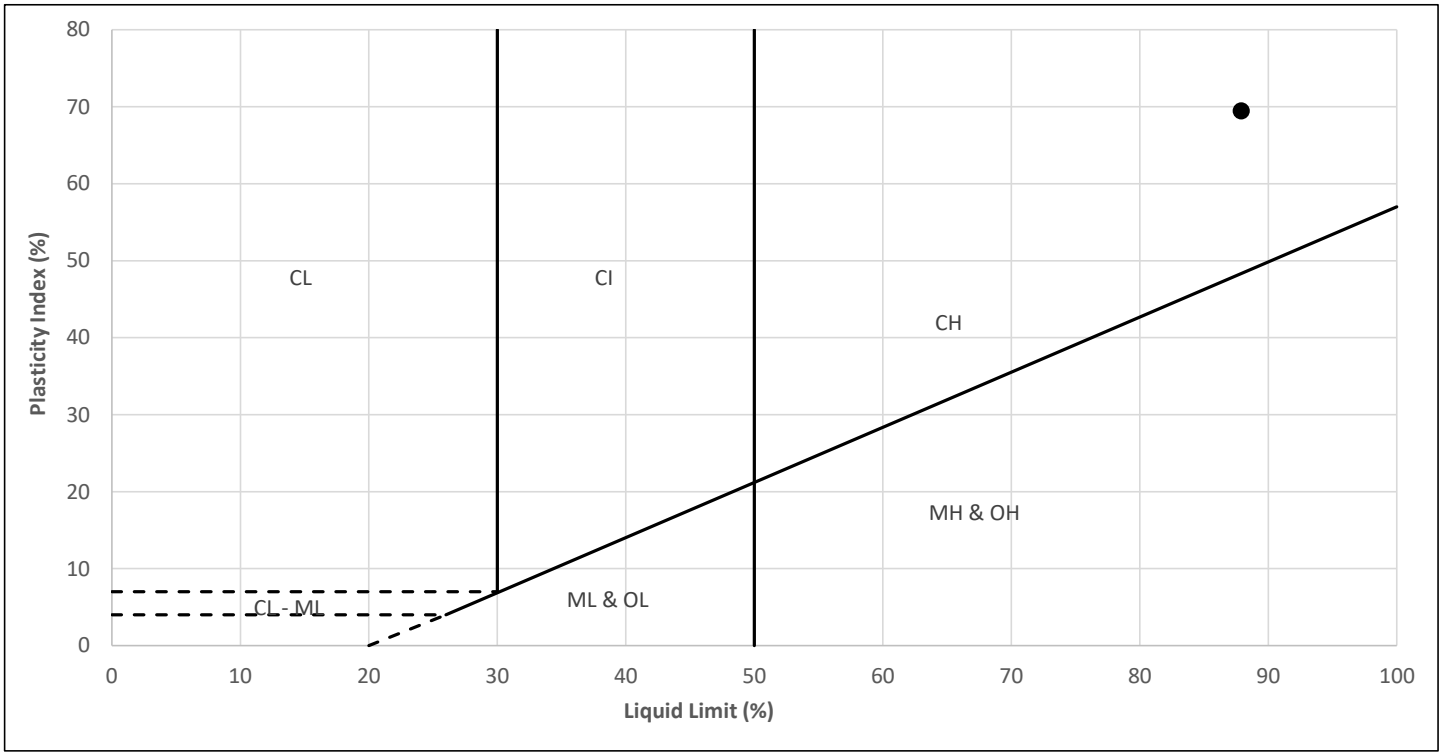
Project:	Snake Lake Reservoir Expansion	**Sample #:**	122RC1
Project No.:	1560-193-00	**Source:**	22CH122
Owner:	EID	**Sample Depth:**	5.1m
File No.:	AL - 122RC1	**Test Date:**	5-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	87.9
Plastic Limit (PL)	18.4
Plasticity Index (PI)	69.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

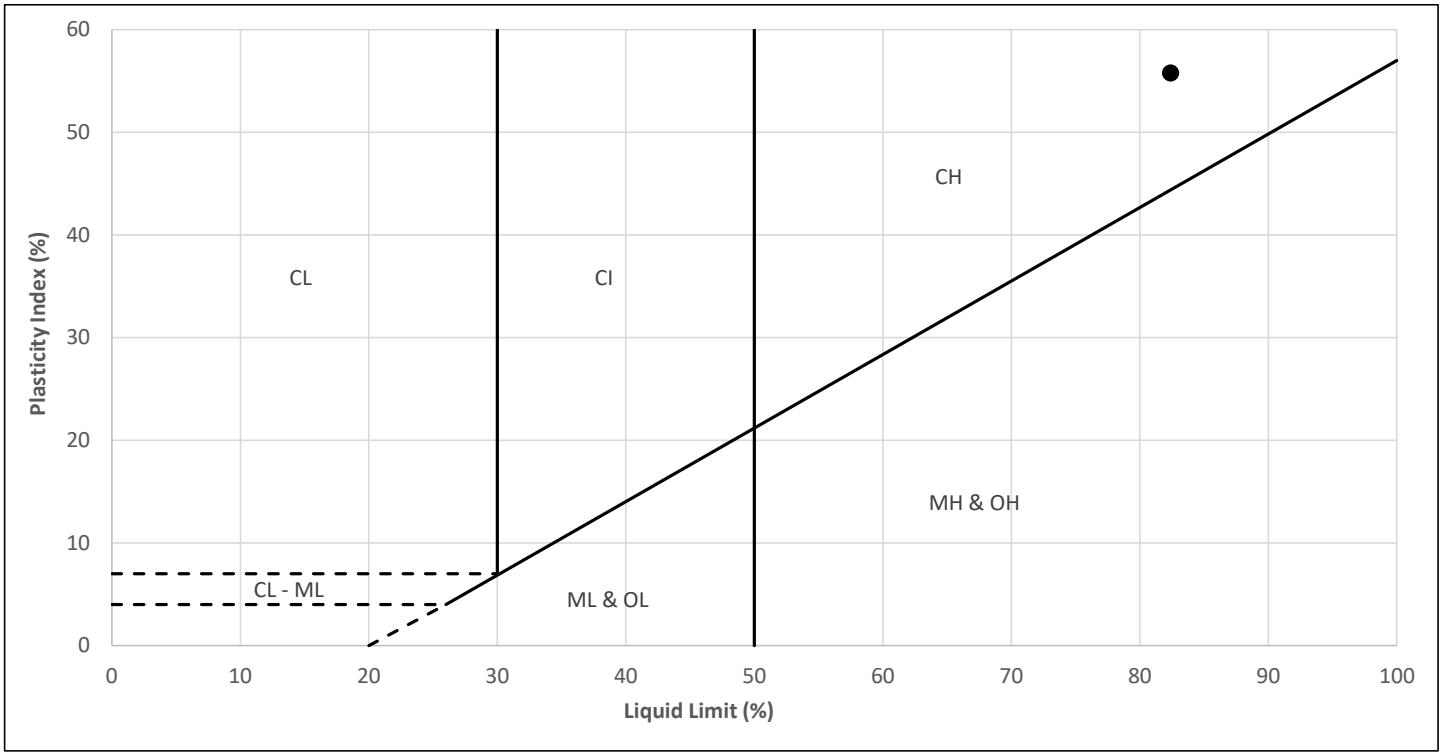
Project:	Snake Lake Reservoir Expansion	**Sample #:**	122RC3
Project No.:	1560-193-00	**Source:**	22CH122
Owner:	EID	**Sample Depth:**	8.5m
File No.:	AL - 122RC3	**Test Date:**	1-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	82.4
Plastic Limit (PL)	26.6
Plasticity Index (PI)	55.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

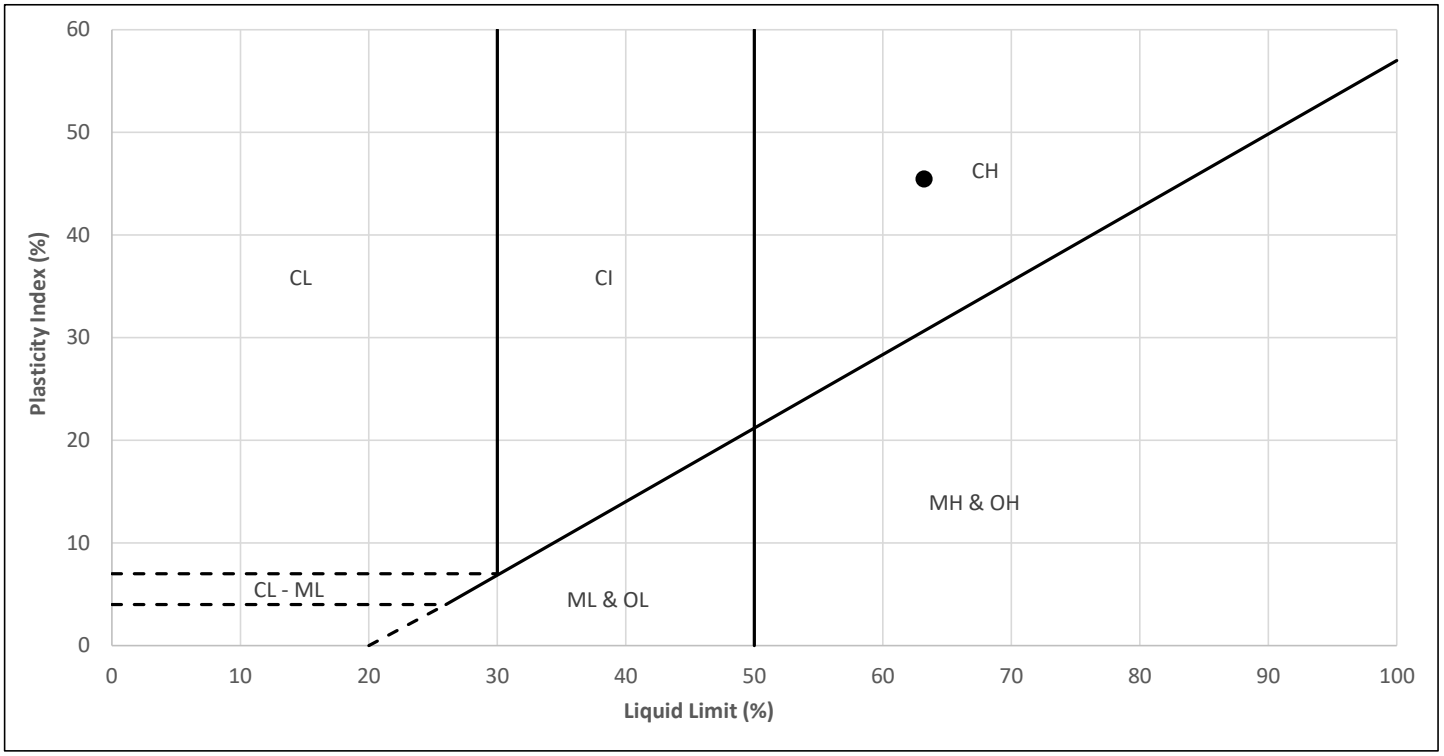
Project:	Snake Lake Reservoir Expansion	**Sample #:**	122RC17
Project No.:	1560-193-00	**Source:**	22CH122
Owner:	EID	**Sample Depth:**	28.0m
File No.:	AL - 122RC17	**Test Date:**	7-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	63.2
Plastic Limit (PL)	17.7
Plasticity Index (PI)	45.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

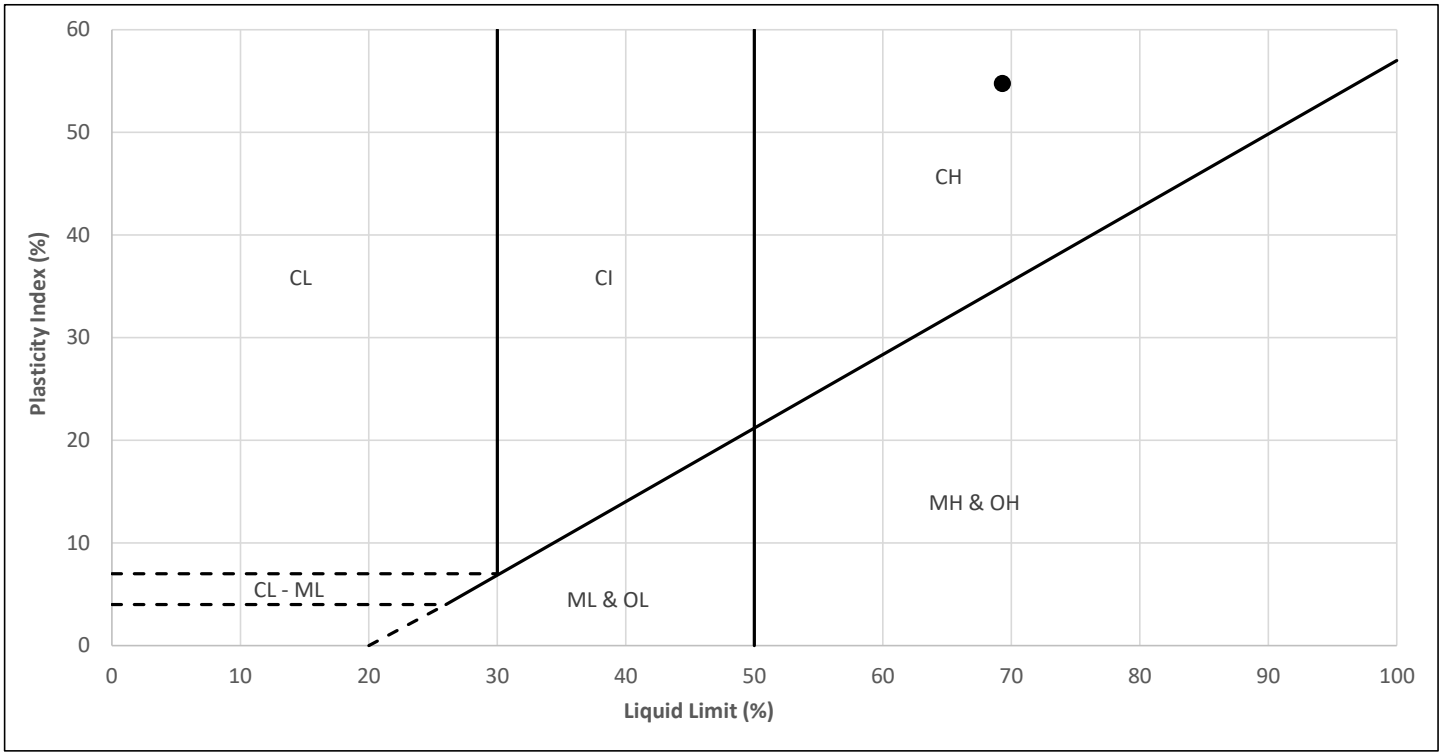
Project:	Snake Lake Reservoir Expansion	**Sample #:**	122UD1
Project No.:	1560-193-00	**Source:**	22CH122
Owner:	EID	**Sample Depth:**	18.3m
File No.:	AL - 122UD1	**Test Date:**	5-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	69.3
Plastic Limit (PL)	14.5
Plasticity Index (PI)	54.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

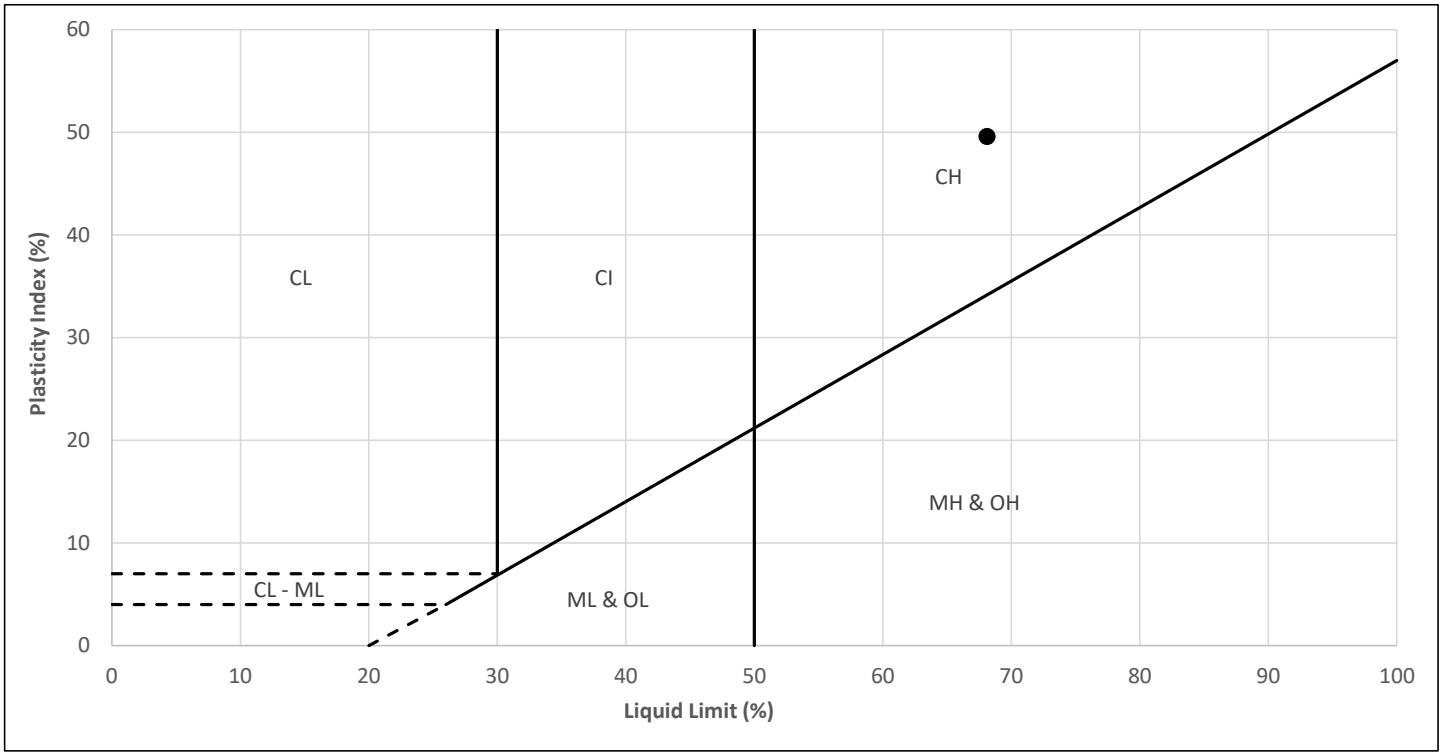
Project:	Snake Lake Reservoir Expansion	**Sample #:**	122UD2
Project No.:	1560-193-00	**Source:**	22CH122
Owner:	EID	**Sample Depth:**	24.5m
File No.:	AL - 122UD2	**Test Date:**	8-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	68.1
Plastic Limit (PL)	18.5
Plasticity Index (PI)	49.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

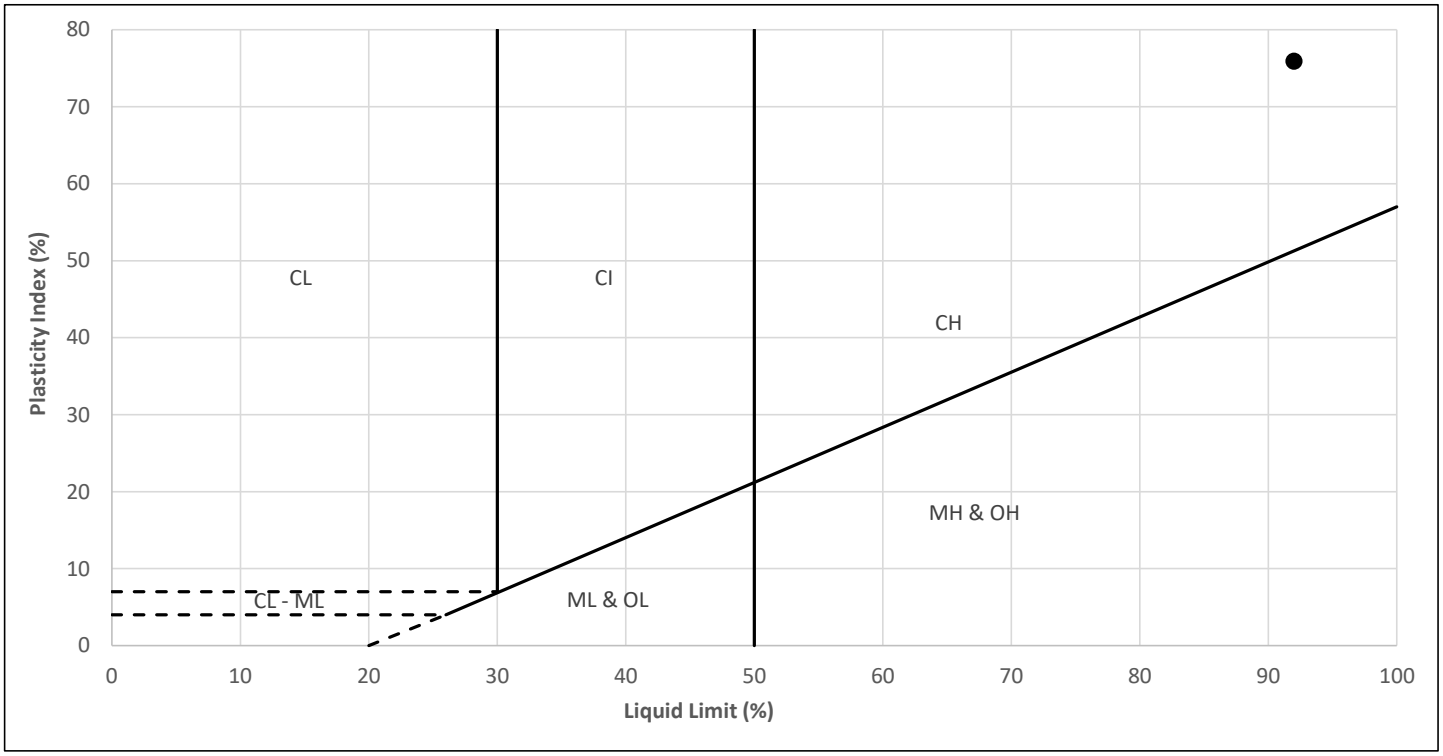
Project:	Snake Lake Reservoir Expansion	**Sample #:**	123AU3
Project No.:	1560-193-00	**Source:**	22BH123
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 123AU3	**Date:**	21-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	92.0
Plastic Limit (PL)	16.1
Plasticity Index (PI)	75.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

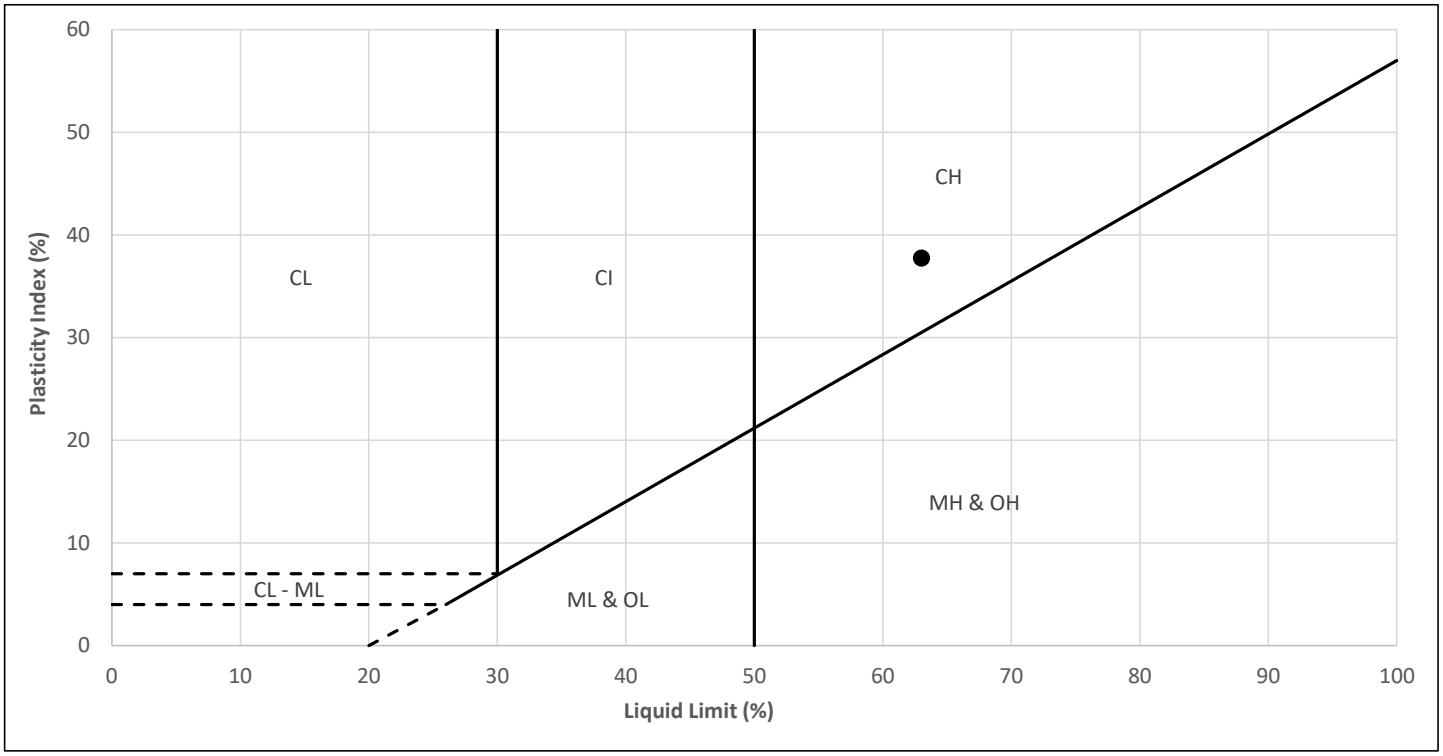
Project:	Snake Lake Reservoir Expansion	**Sample #:**	123RC1
Project No.:	1560-193-00	**Source:**	22CH123
Owner:	EID	**Sample Depth:**	6.9m
File No.:	AL - 123RC1	**Test Date:**	11-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	63.0
Plastic Limit (PL)	25.2
Plasticity Index (PI)	37.8

Soil Plasticity	High
Soil Classification	CH



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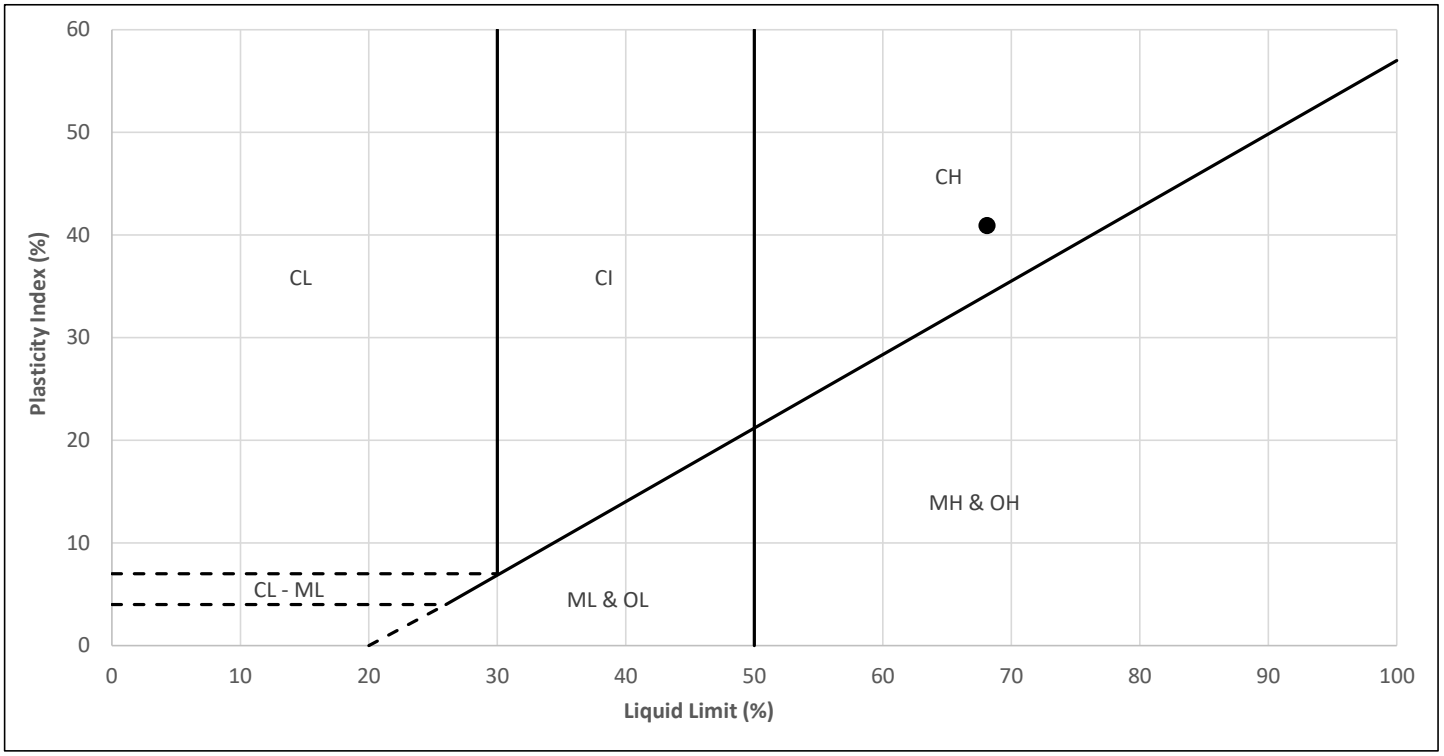
Project:	Snake Lake Reservoir Expansion	**Sample #:**	123RC3
Project No.:	1560-193-00	**Source:**	22CH123
Owner:	EID	**Sample Depth:**	9.9m
File No.:	AL - 123RC3	**Test Date:**	29-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	68.1
Plastic Limit (PL)	27.2
Plasticity Index (PI)	40.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

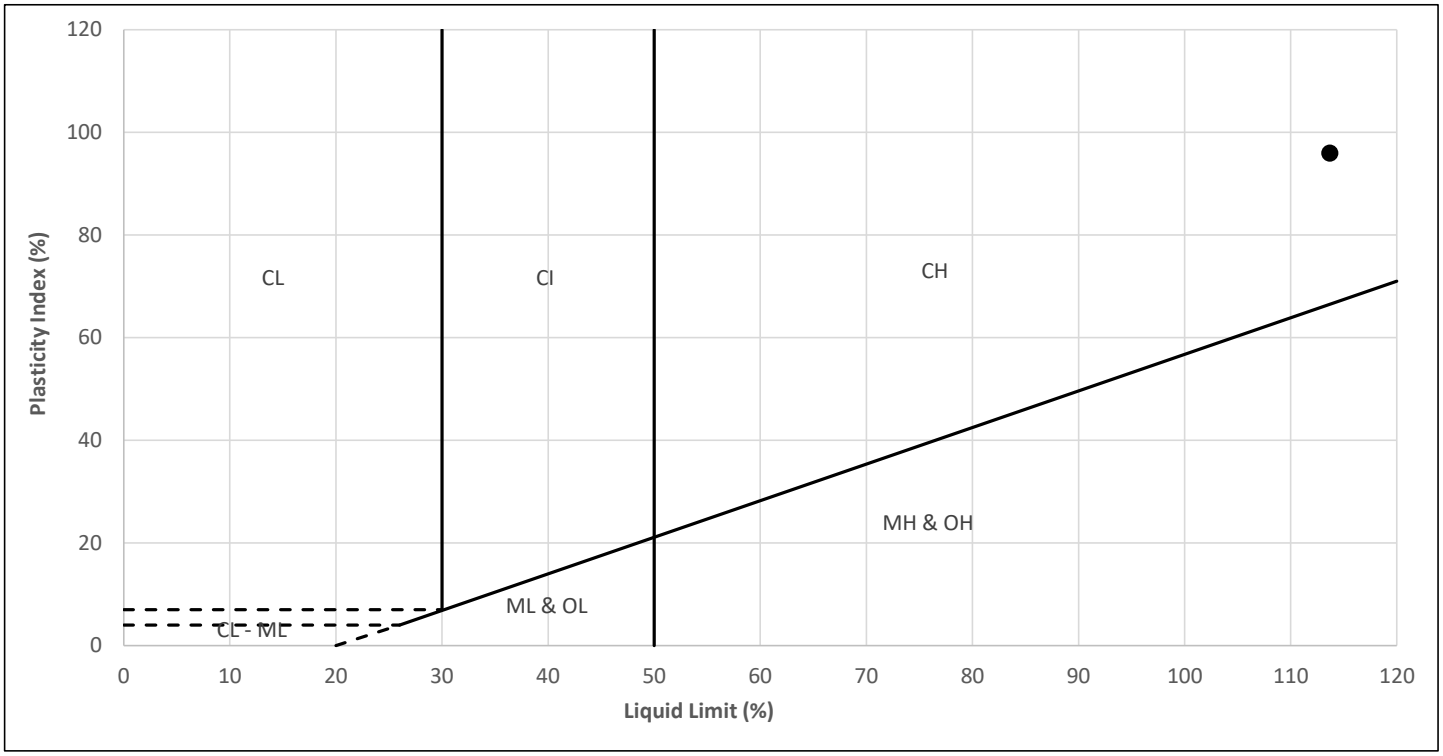
Project:	Snake Lake Reservoir Expansion	**Sample #:**	123RC8
Project No.:	1560-193-00	**Source:**	22CH123
Owner:	EID	**Sample Depth:**	17.5m
File No.:	AL - 123RC8	**Test Date:**	5-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	113.7
Plastic Limit (PL)	17.7
Plasticity Index (PI)	96.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

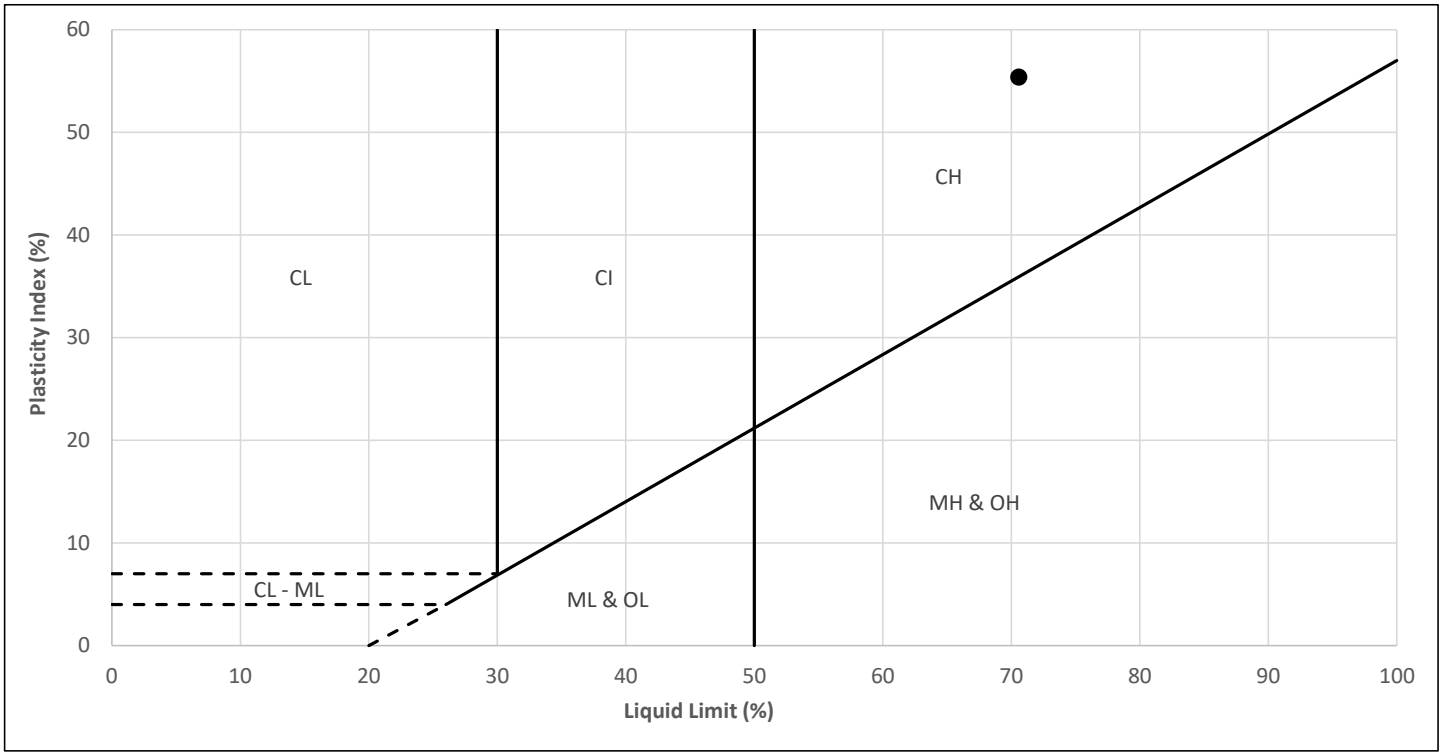
Project:	Snake Lake Reservoir Expansion	**Sample #:**	124AU3
Project No.:	1560-193-00	**Source:**	22BH124
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 124AU3	**Date:**	16-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	70.6
Plastic Limit (PL)	15.2
Plasticity Index (PI)	55.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

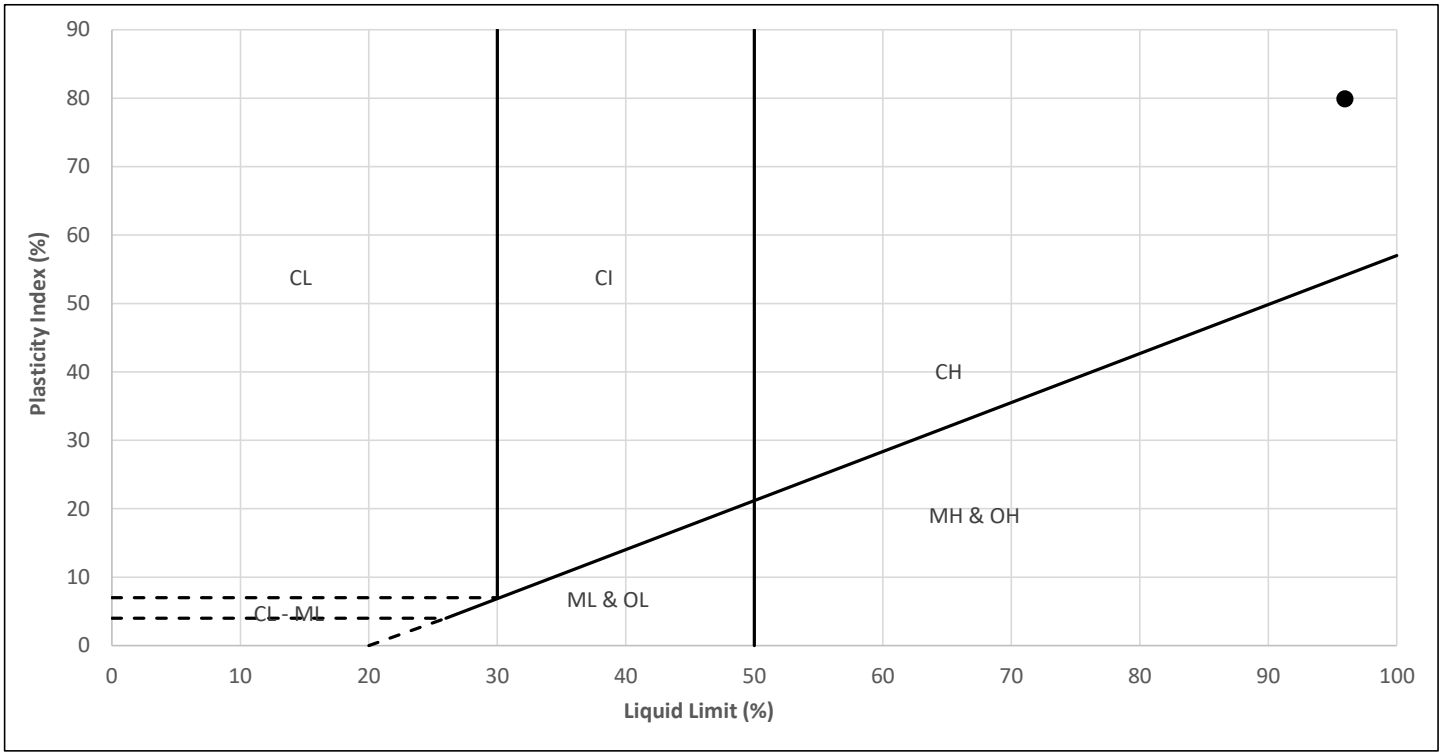
Project:	Snake Lake Reservoir Expansion	**Sample #:**	124AU13
Project No.:	1560-193-00	**Source:**	22BH124
Owner:	EID	**Sample Depth:**	9.8m
File No.:	AL - 124AU13	**Date:**	21-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	96.0
Plastic Limit (PL)	16.1
Plasticity Index (PI)	79.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

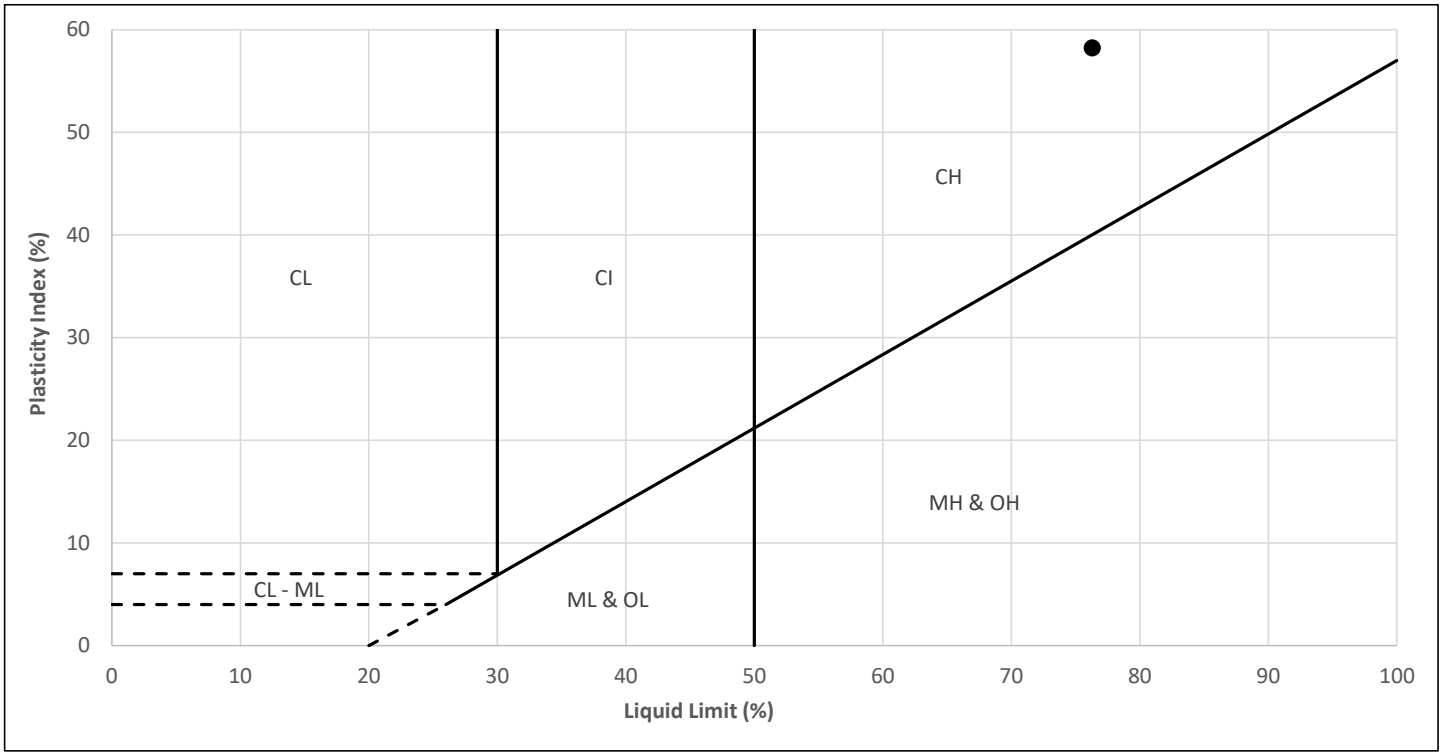
Project:	Snake Lake Reservoir Expansion	**Sample #:**	124RC4
Project No.:	1560-193-00	**Source:**	22CH124
Owner:	EID	**Sample Depth:**	11.1m
File No.:	AL - 124RC4	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	76.3
Plastic Limit (PL)	18.1
Plasticity Index (PI)	58.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

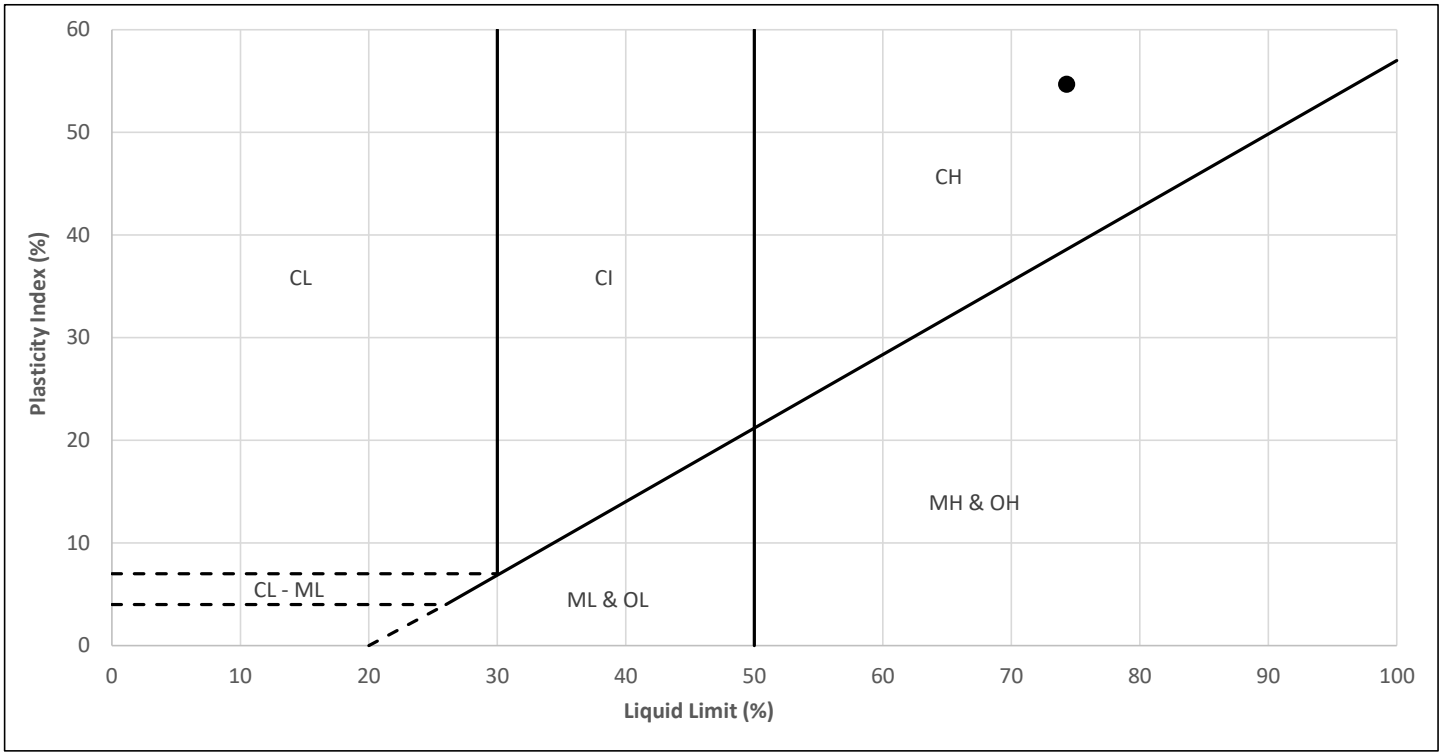
Project:	Snake Lake Reservoir Expansion	**Sample #:**	124RC10
Project No.:	1560-193-00	**Source:**	22CH124
Owner:	EID	**Sample Depth:**	18.7m
File No.:	AL - 124RC10	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	74.3
Plastic Limit (PL)	19.6
Plasticity Index (PI)	54.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

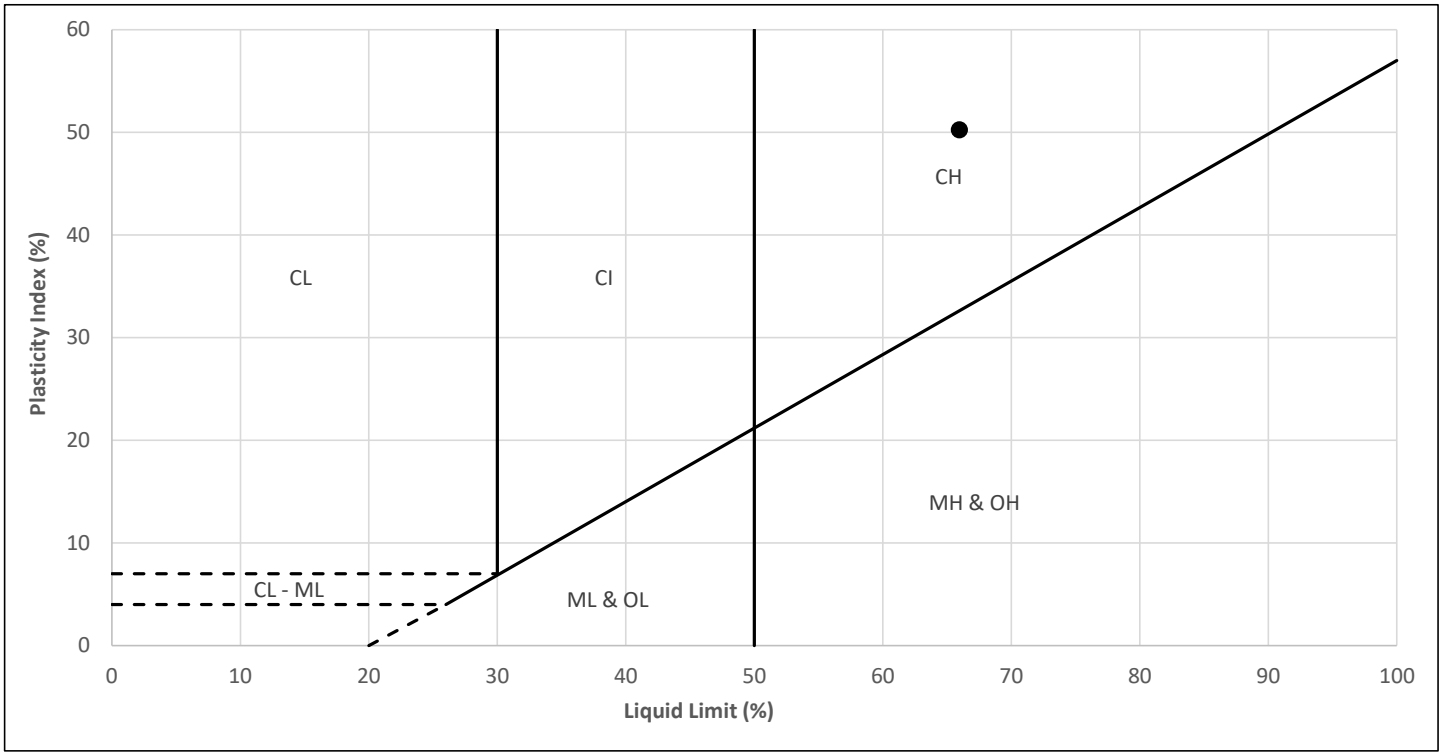
Project:	Snake Lake Reservoir Expansion	**Sample #:**	124UD1
Project No.:	1560-193-00	**Source:**	22CH124
Owner:	EID	**Sample Depth:**	8.1m
File No.:	AL - 124UD1	**Test Date:**	18-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	66.0
Plastic Limit (PL)	15.7
Plasticity Index (PI)	50.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

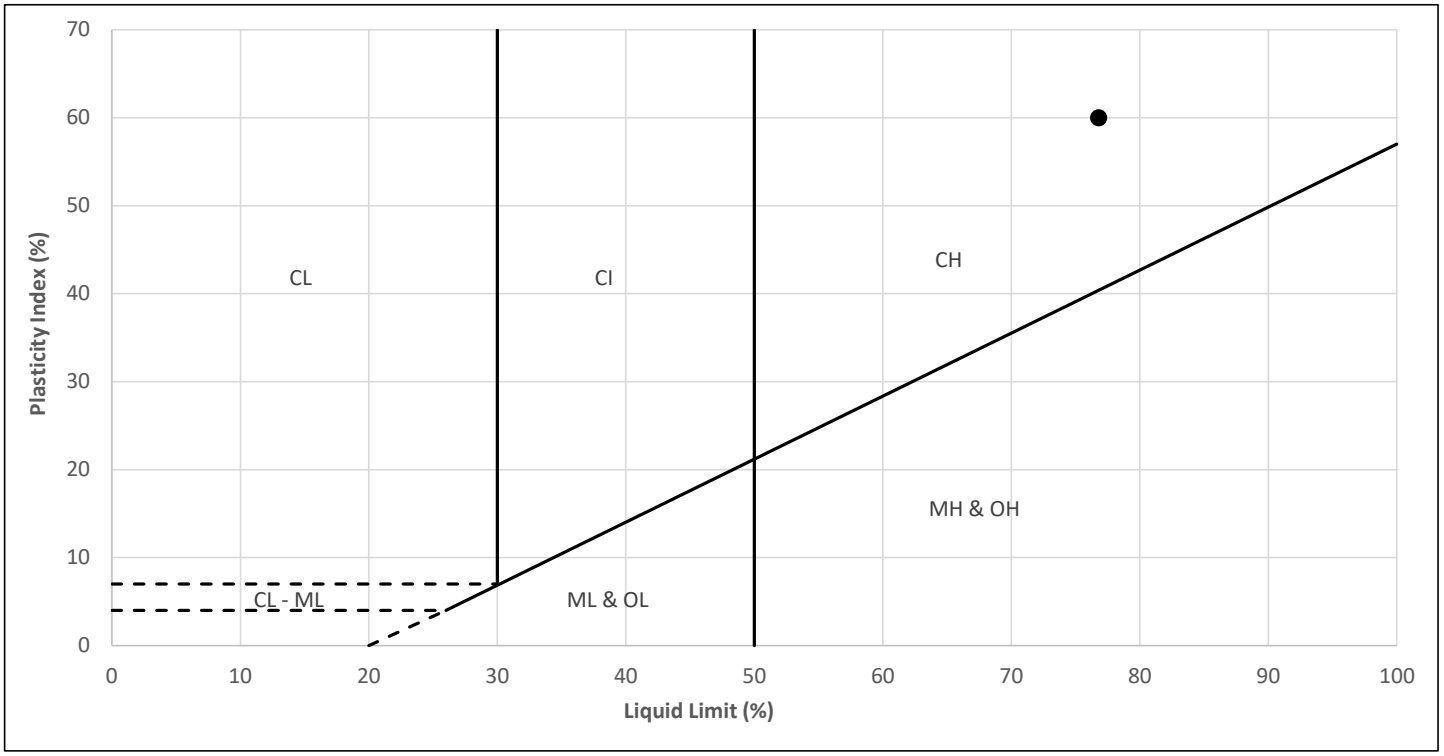
Project:	Snake Lake Reservoir Expansion	**Sample #:**	124UD6
Project No.:	1560-193-00	**Source:**	22CH124
Owner:	EID	**Sample Depth:**	25.35m
File No.:	AL - 124UD6	**Test Date:**	13-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	76.8
Plastic Limit (PL)	16.8
Plasticity Index (PI)	60.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

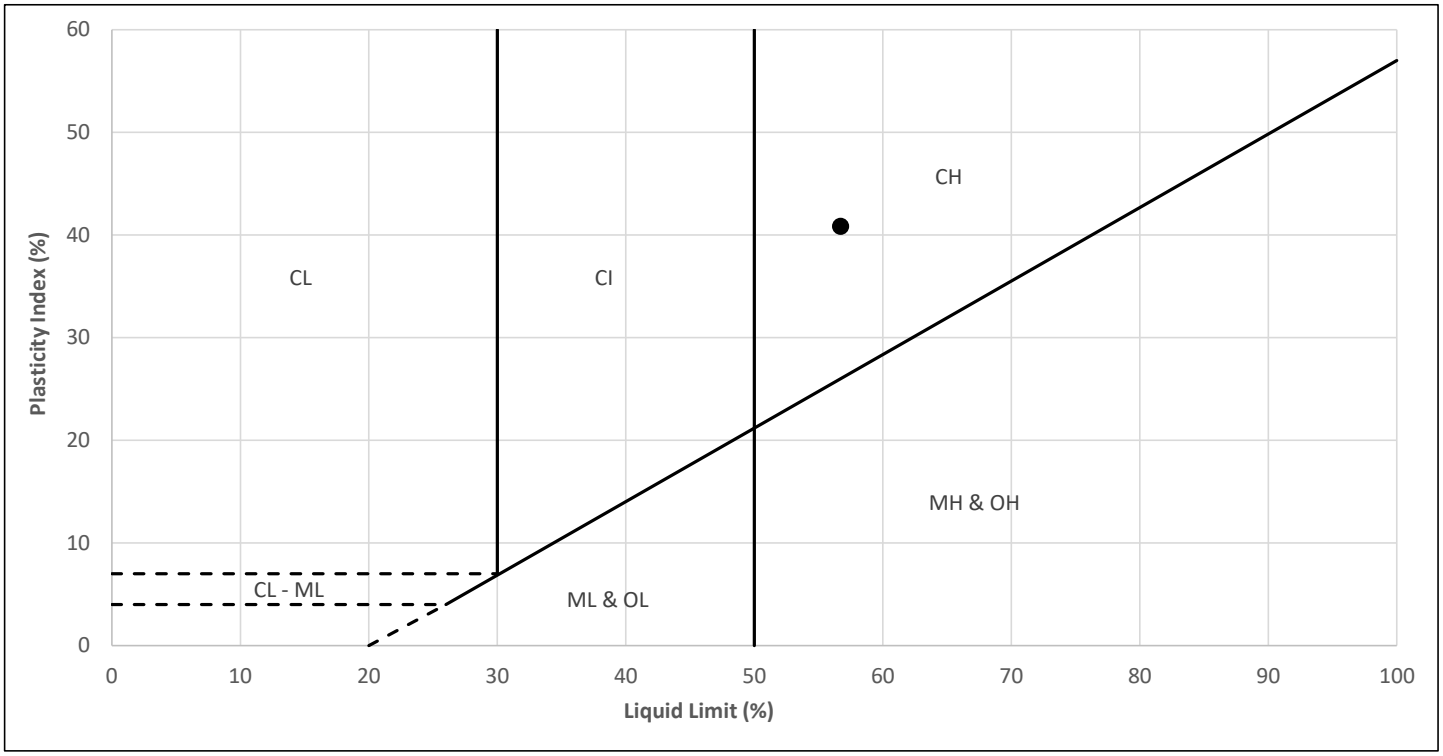
Project:	Snake Lake Reservoir Expansion	**Sample #:**	125AU9
Project No.:	1560-193-00	**Source:**	22BH125
Owner:	EID	**Sample Depth:**	6.7m
File No.:	AL - 125AU9	**Date:**	21-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	56.7
Plastic Limit (PL)	15.8
Plasticity Index (PI)	40.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

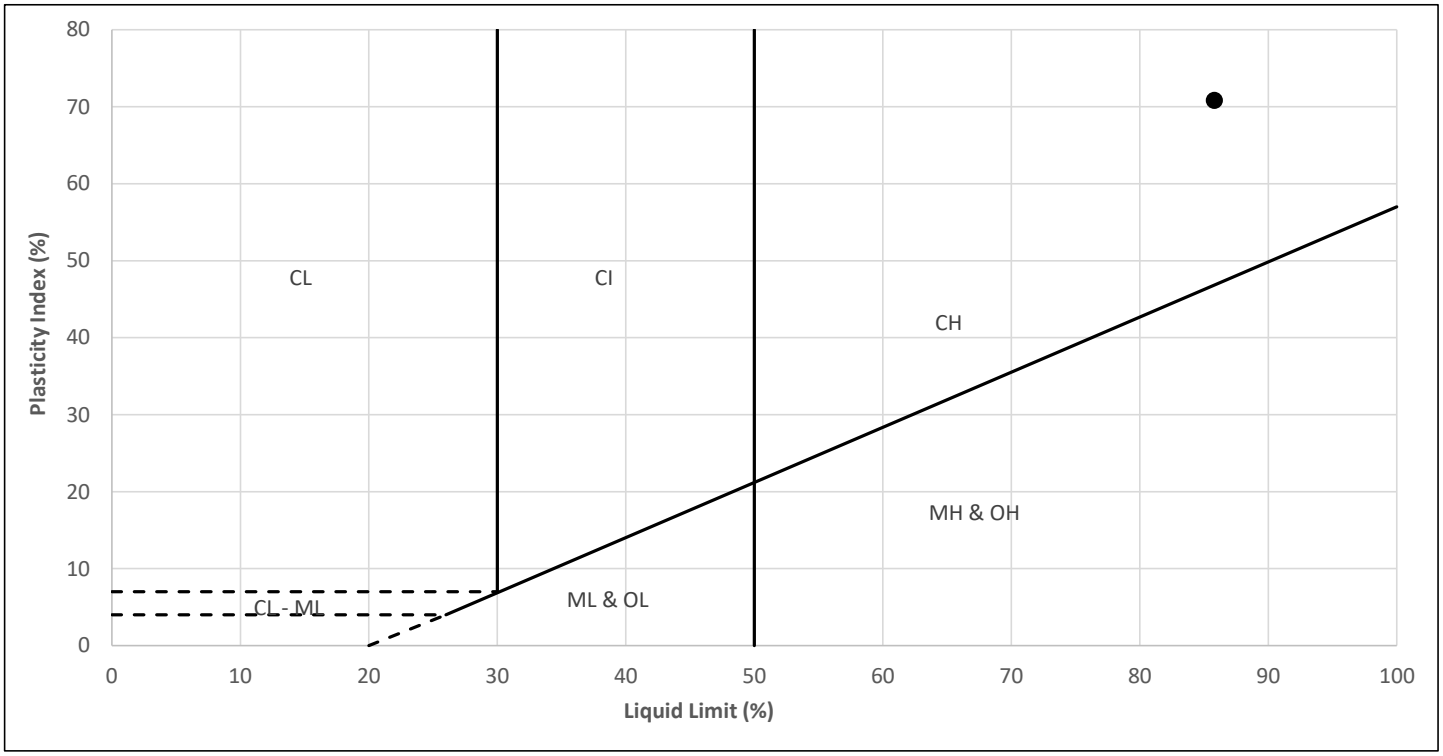
Project:	Snake Lake Reservoir Expansion	**Sample #:**	125AU14
Project No.:	1560-193-00	**Source:**	22BH125
Owner:	EID	**Sample Depth:**	10.4m
File No.:	AL - 125AU14	**Date:**	21-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	85.8
Plastic Limit (PL)	15.0
Plasticity Index (PI)	70.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

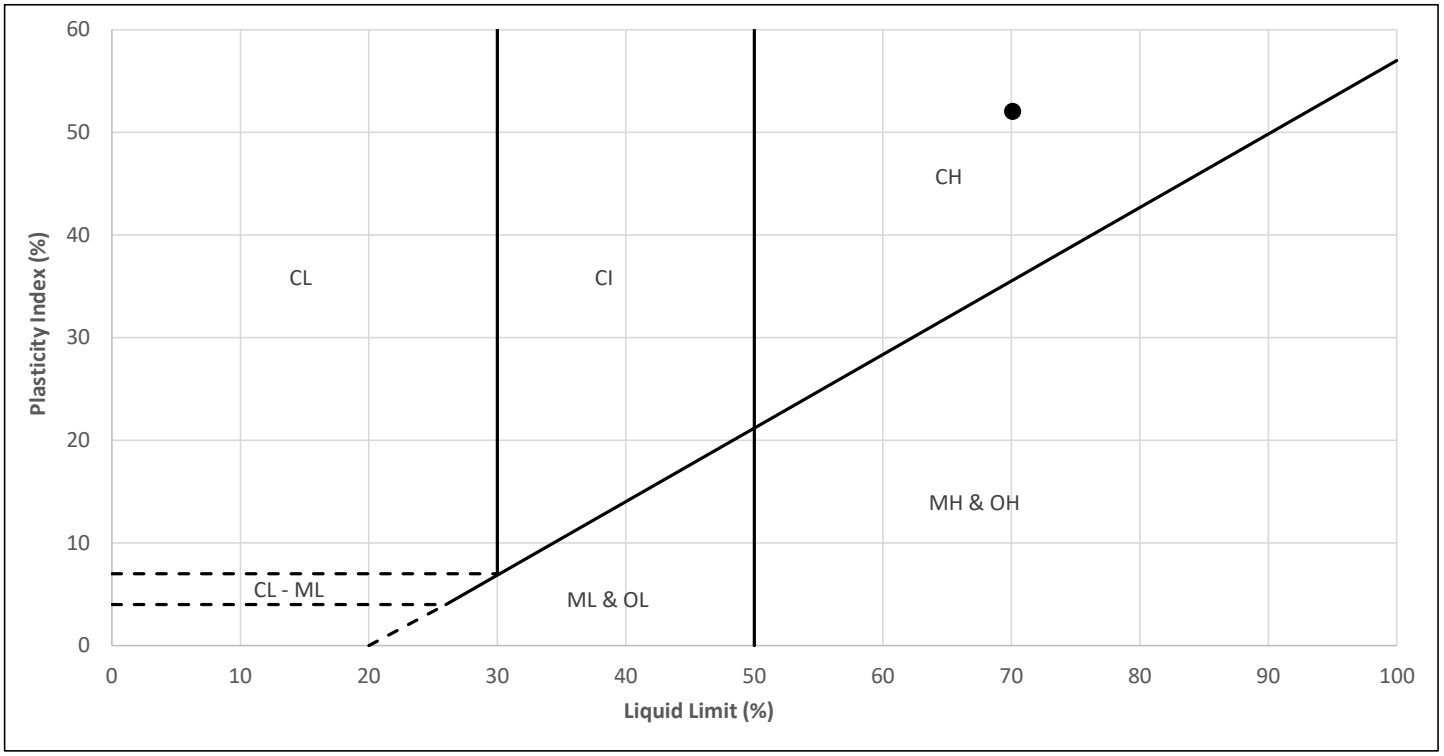
Project:	Snake Lake Reservoir Expansion	**Sample #:**	125RC3
Project No.:	1560-193-00	**Source:**	22CH125
Owner:	EID	**Sample Depth:**	9.5m
File No.:	AL - 125RC3	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	70.1
Plastic Limit (PL)	18.1
Plasticity Index (PI)	52.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

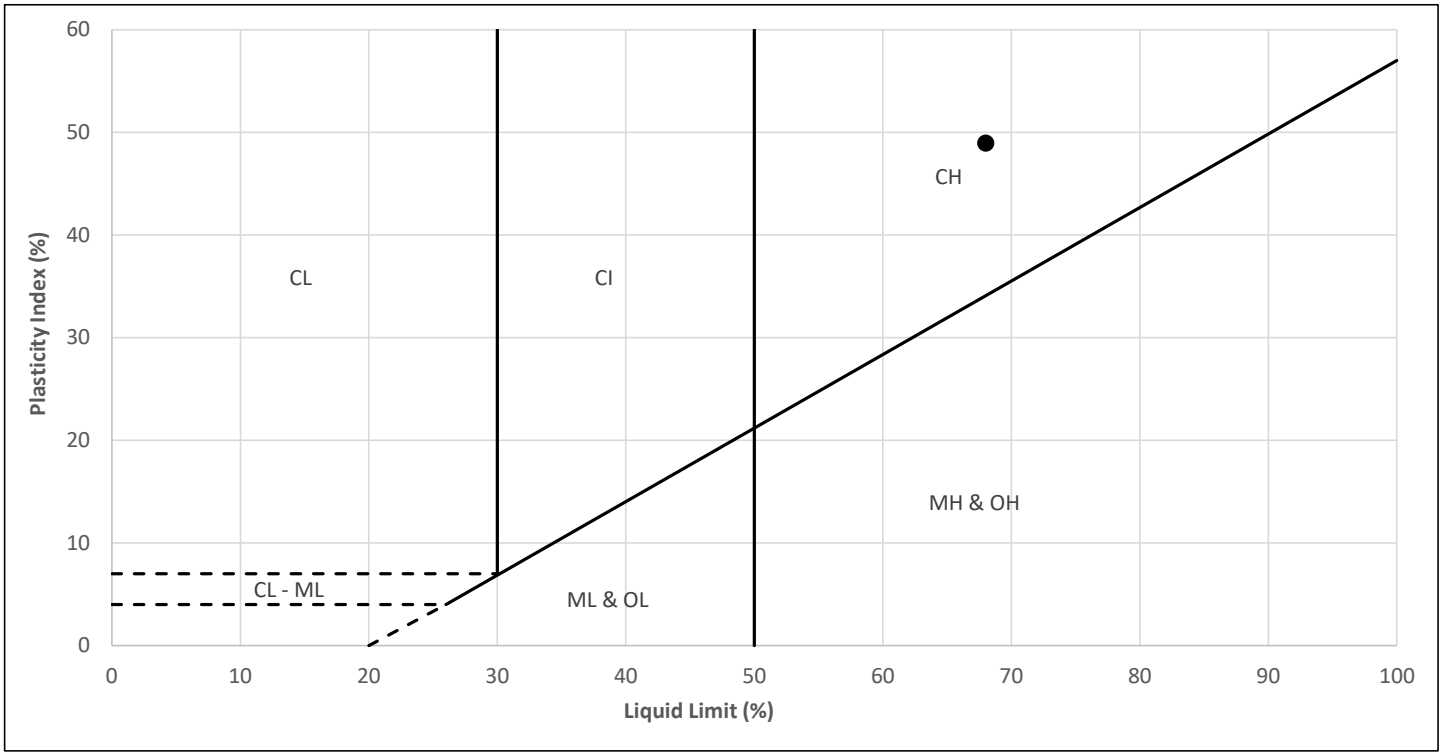
Project:	Snake Lake Reservoir Expansion	**Sample #:**	125RC8
Project No.:	1560-193-00	**Source:**	22CH125
Owner:	EID	**Sample Depth:**	17.1m
File No.:	AL - 125RC8	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	68.0
Plastic Limit (PL)	19.0
Plasticity Index (PI)	49.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

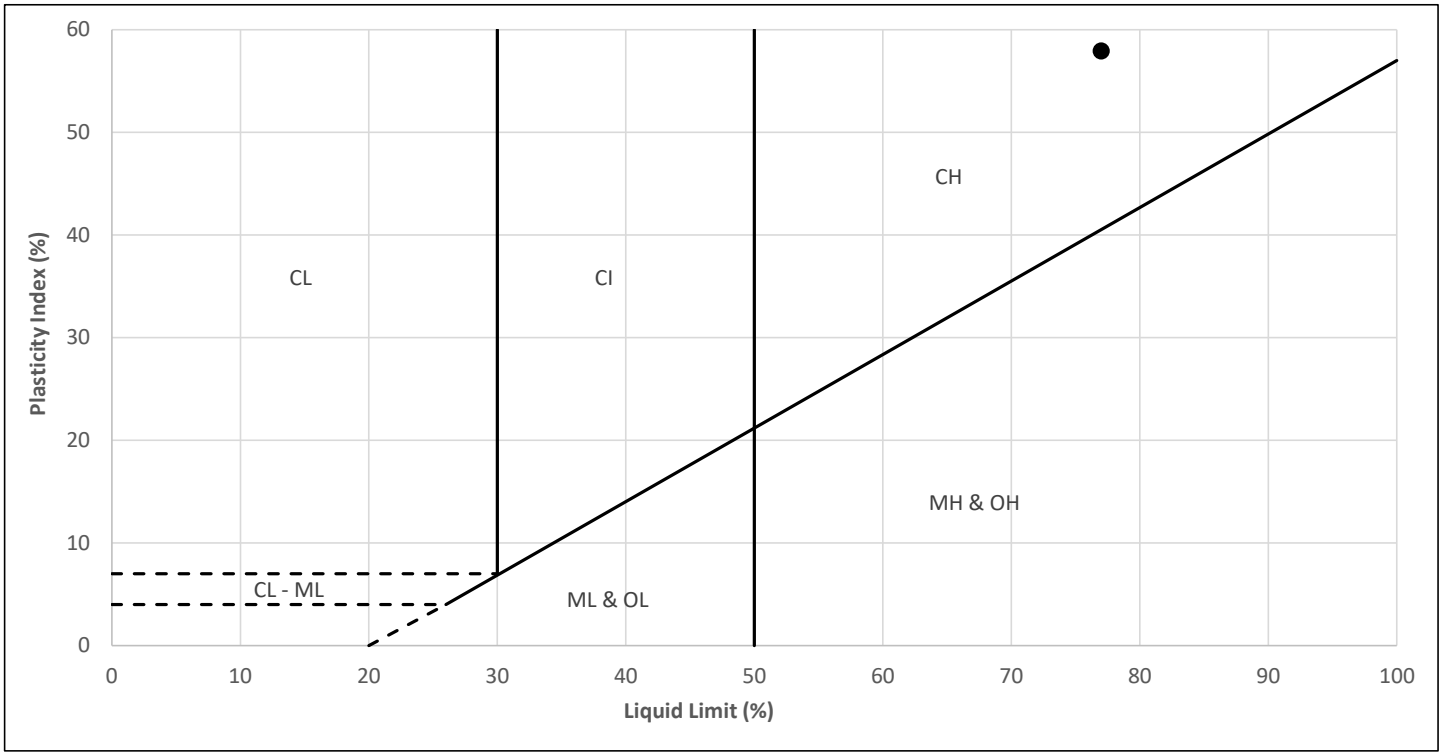
Project:	Snake Lake Reservoir Expansion	**Sample #:**	125UD5
Project No.:	1560-193-00	**Source:**	22CH125
Owner:	EID	**Sample Depth:**	22.3m
File No.:	AL - 125UD5	**Test Date:**	13-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	77.0
Plastic Limit (PL)	19.1
Plasticity Index (PI)	57.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

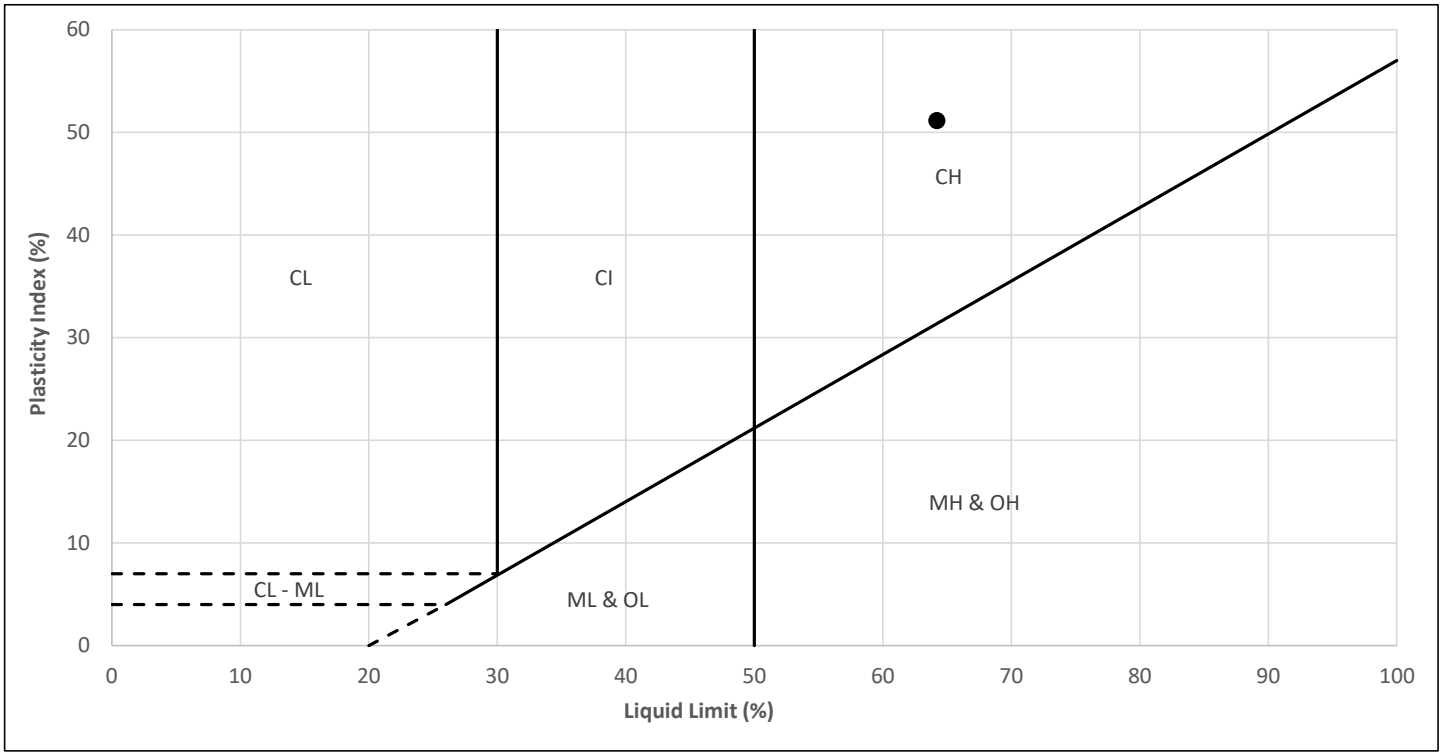
Project:	Snake Lake Reservoir Expansion	**Sample #:**	125UD6
Project No.:	1560-193-00	**Source:**	22CH125
Owner:	EID	**Sample Depth:**	24.9m
File No.:	AL - 125UD6	**Test Date:**	19-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	64.2
Plastic Limit (PL)	13.0
Plasticity Index (PI)	51.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

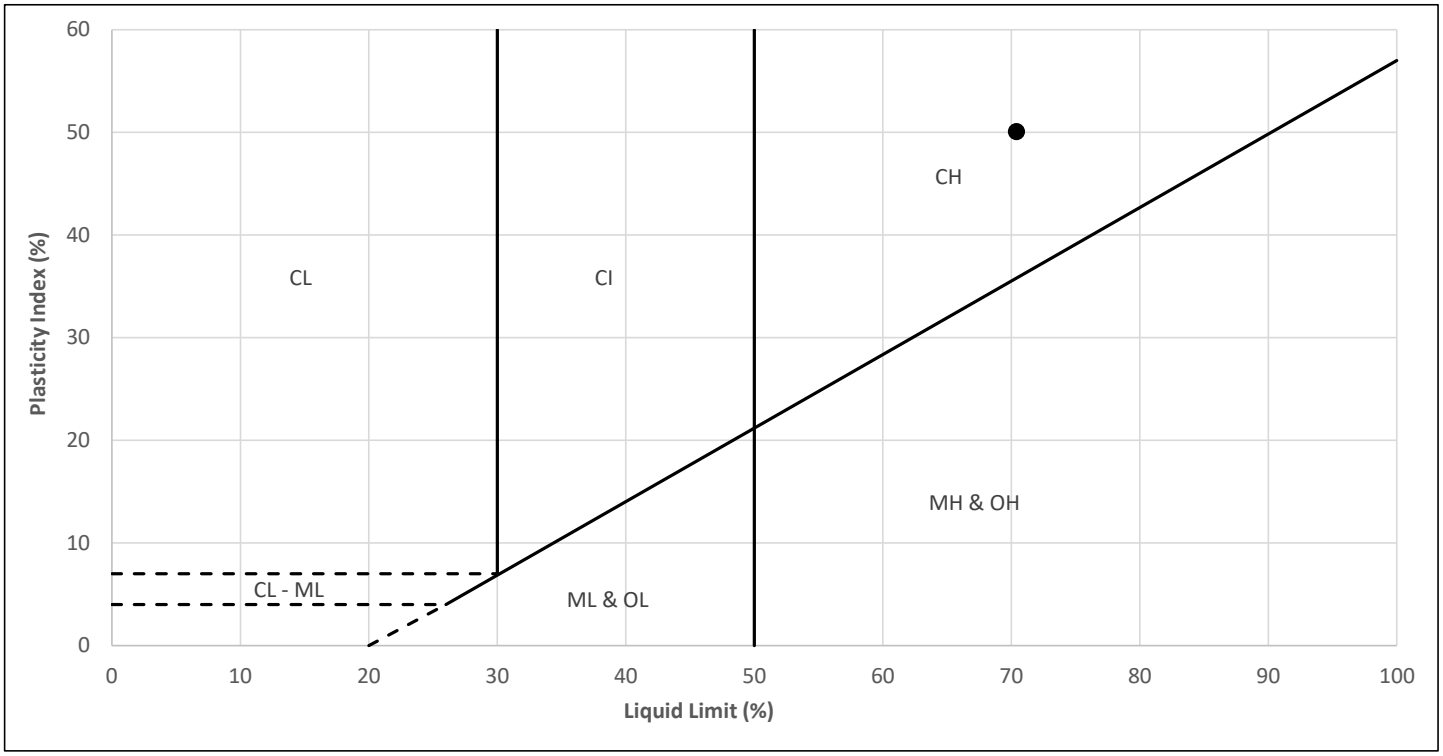
Project:	Snake Lake Reservoir Expansion	**Sample #:**	126AU8
Project No.:	1560-193-00	**Source:**	22BH126
Owner:	EID	**Sample Depth:**	5.8m
File No.:	AL - 126AU8	**Date:**	21-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	70.4
Plastic Limit (PL)	20.3
Plasticity Index (PI)	50.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

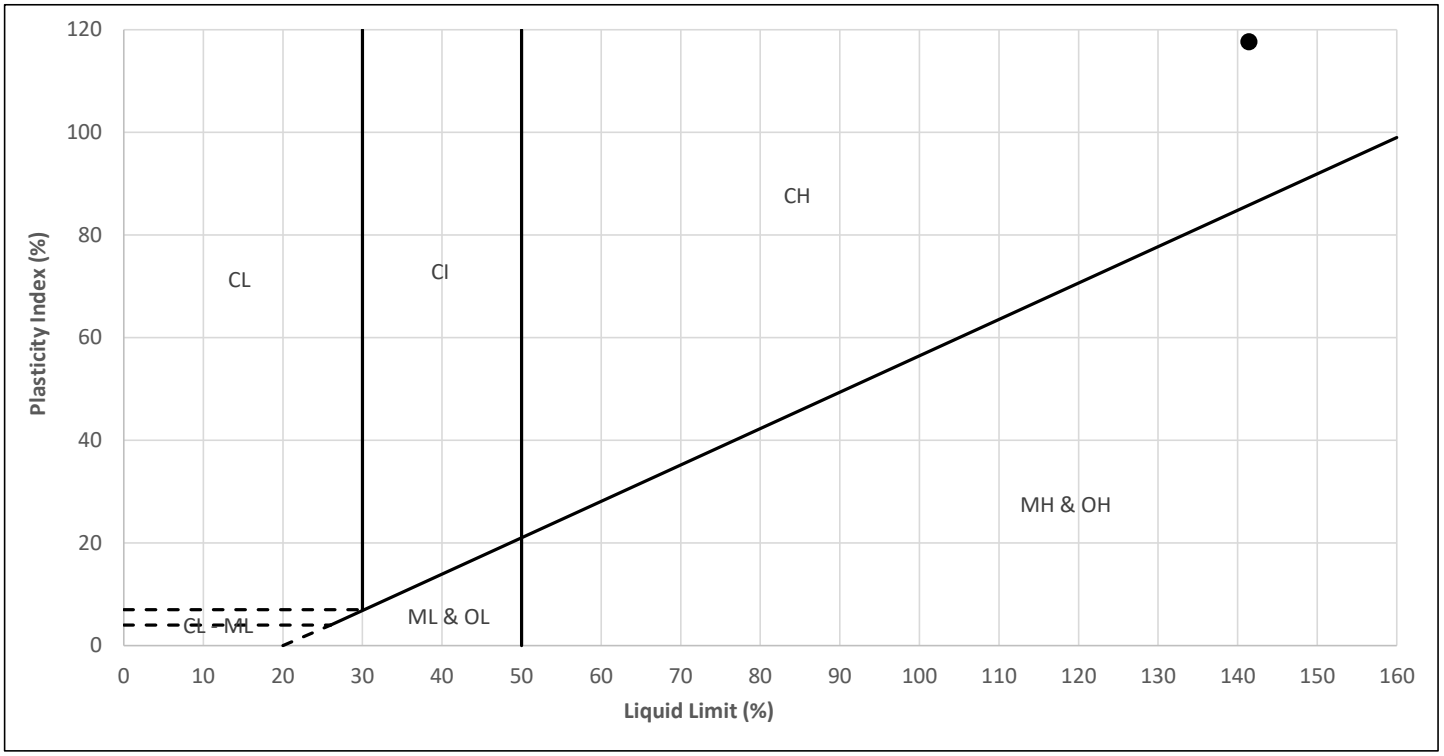
Project:	Snake Lake Reservoir Expansion	**Sample #:**	126RC8
Project No.:	1560-193-00	**Source:**	22CH126
Owner:	EID	**Sample Depth:**	16.6m
File No.:	AL - 126RC8	**Test Date:**	12-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	141.4
Plastic Limit (PL)	23.7
Plasticity Index (PI)	117.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

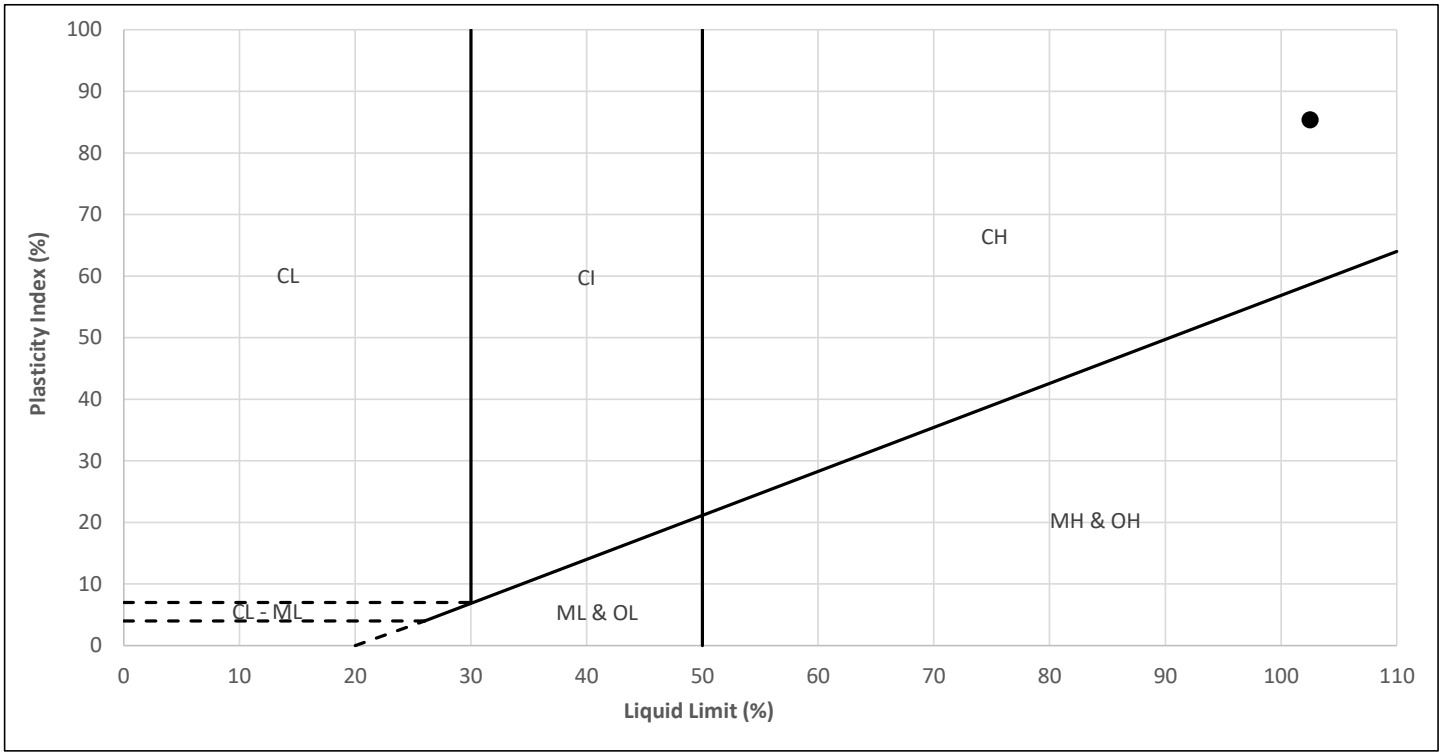
Project:	Snake Lake Reservoir Expansion	**Sample #:**	126RC10
Project No.:	1560-193-00	**Source:**	22CH126
Owner:	EID	**Sample Depth:**	18.0m
File No.:	AL - 126RC10	**Test Date:**	5-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	102.5
Plastic Limit (PL)	17.1
Plasticity Index (PI)	85.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

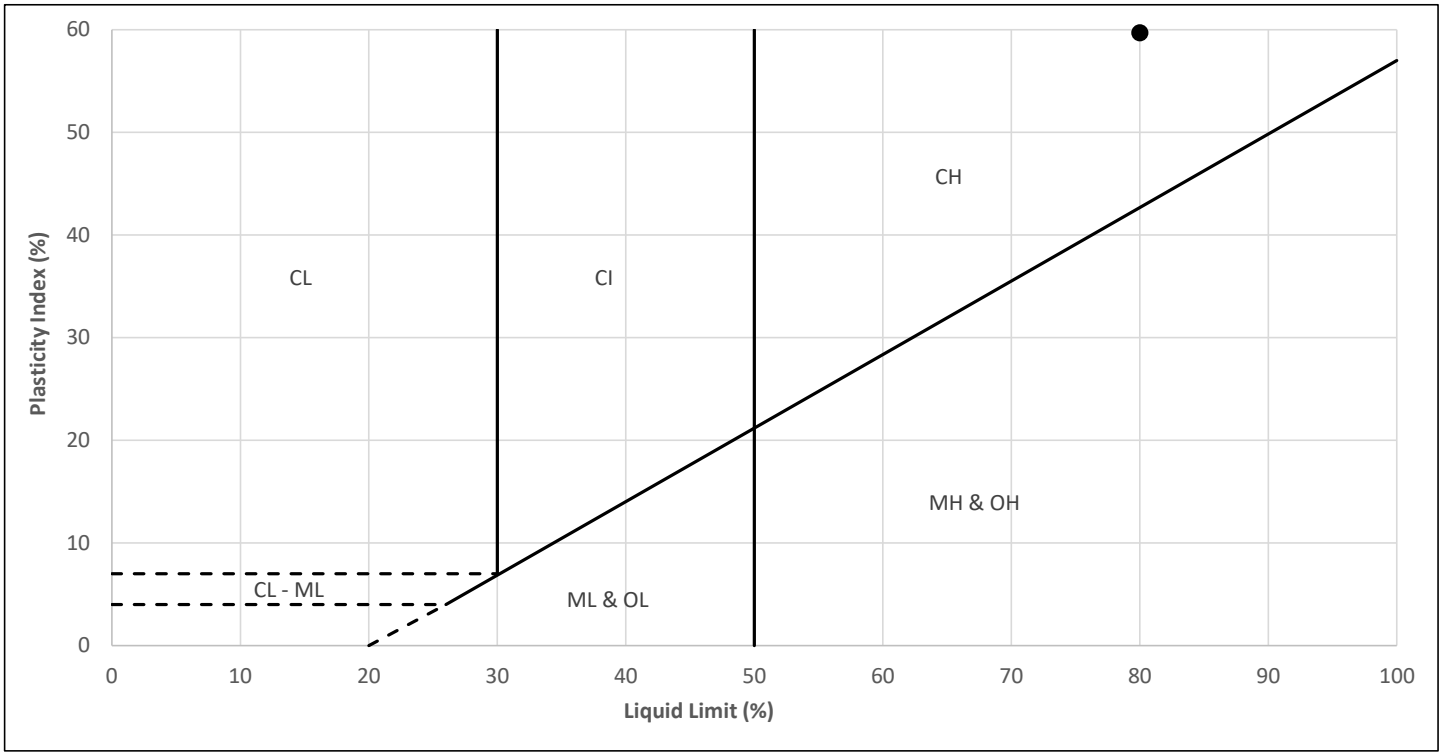
Project:	Snake Lake Reservoir Expansion	**Sample #:**	126UD4
Project No.:	1560-193-00	**Source:**	22CH126
Owner:	EID	**Sample Depth:**	21.99m
File No.:	AL - 126UD4	**Test Date:**	21-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	80.0
Plastic Limit (PL)	20.3
Plasticity Index (PI)	59.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

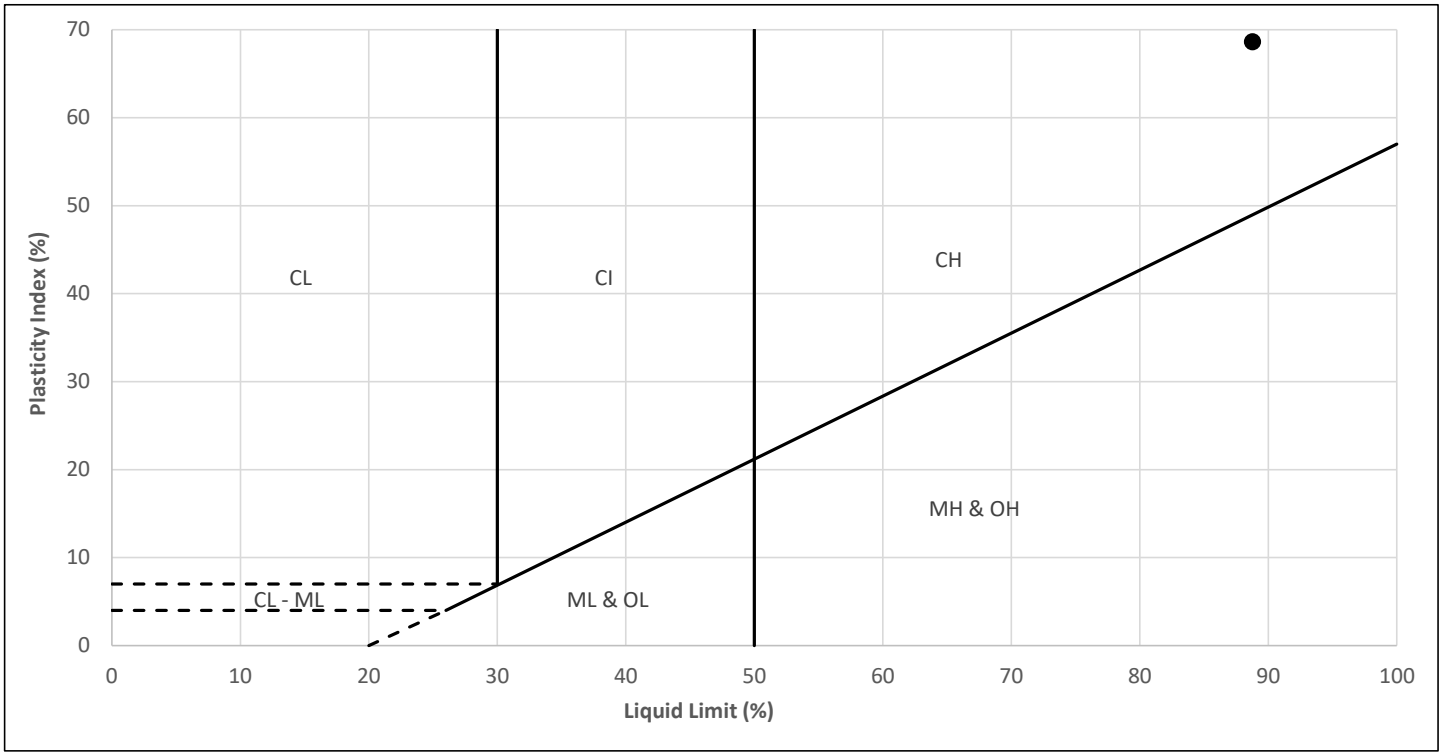
Project:	Snake Lake Reservoir Expansion	**Sample #:**	130AU4
Project No.:	1560-193-00	**Source:**	22BH130
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 130AU4	**Date:**	20-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information avalible upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	88.8
Plastic Limit (PL)	20.1
Plasticity Index (PI)	68.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

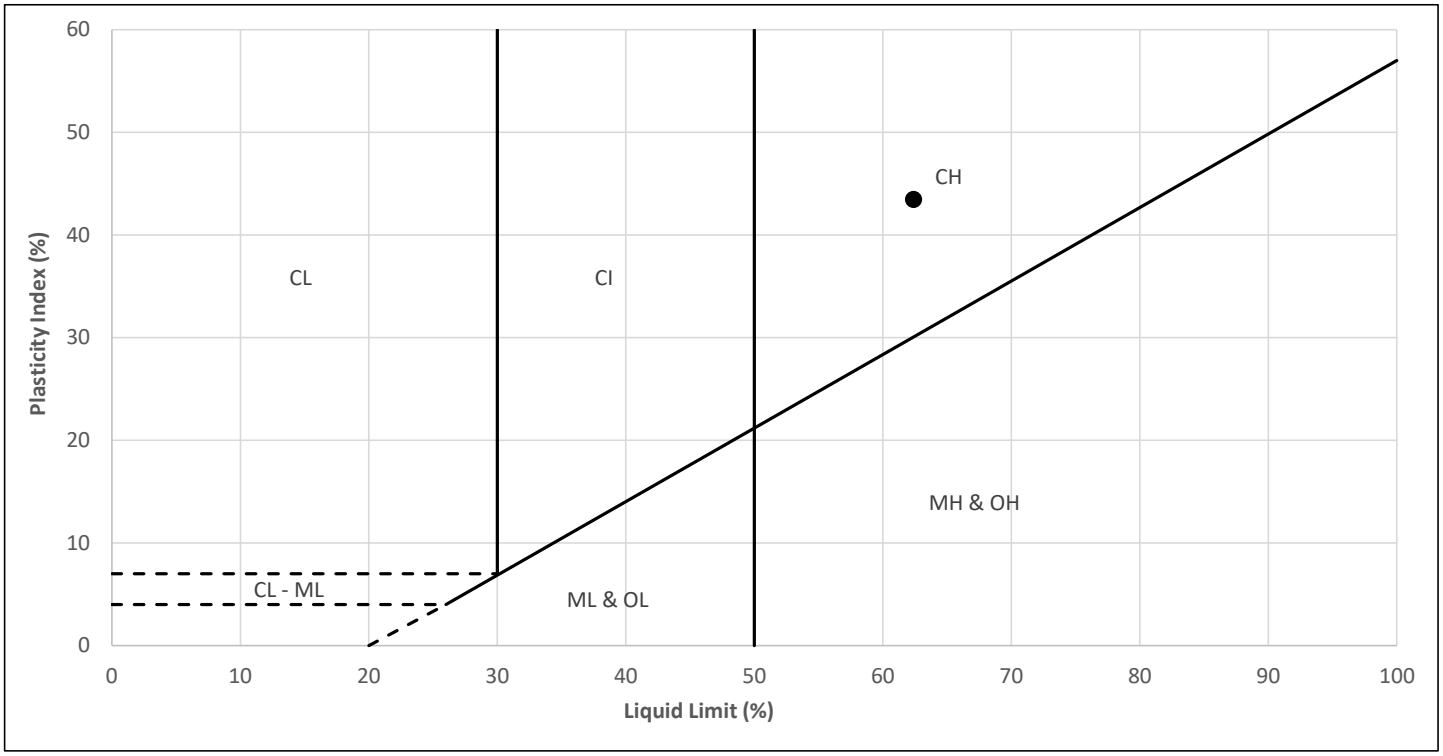
Project:	Snake Lake Reservoir Expansion	**Sample #:**	130AU8
Project No.:	1560-193-00	**Source:**	22BH130
Owner:	EID	**Sample Depth:**	5.8m
File No.:	AL - 130AU8	**Test Date:**	9-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	62.4
Plastic Limit (PL)	18.9
Plasticity Index (PI)	43.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

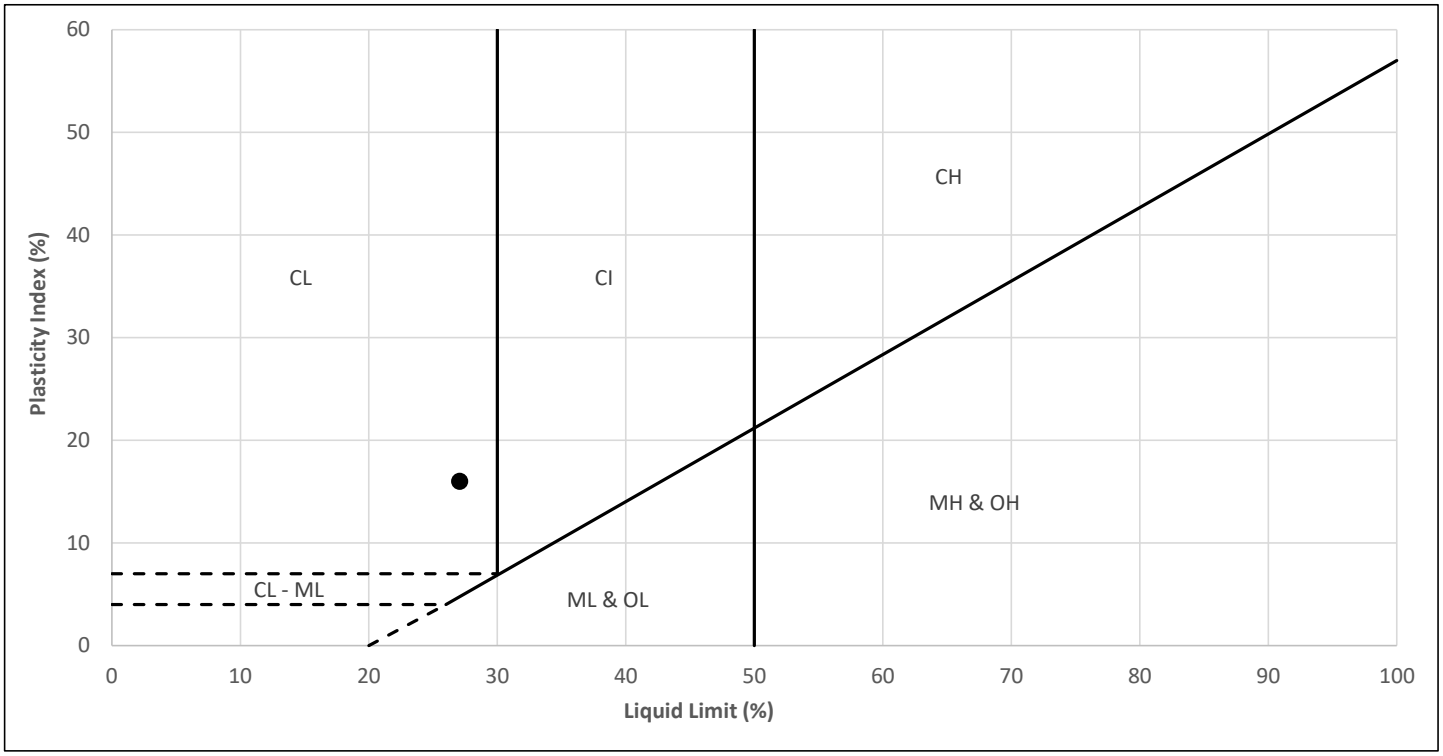
Project:	Snake Lake Reservoir Expansion	**Sample #:**	133AU2
Project No.:	1560-193-00	**Source:**	22BH133
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 133AU2	**Date:**	21-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays

Liquid Limit (LL)	27.1
Plastic Limit (PL)	11.1
Plasticity Index (PI)	16.0

Soil Plasticity	Low
Soil Classification	CL



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ATTERBERG LIMITS

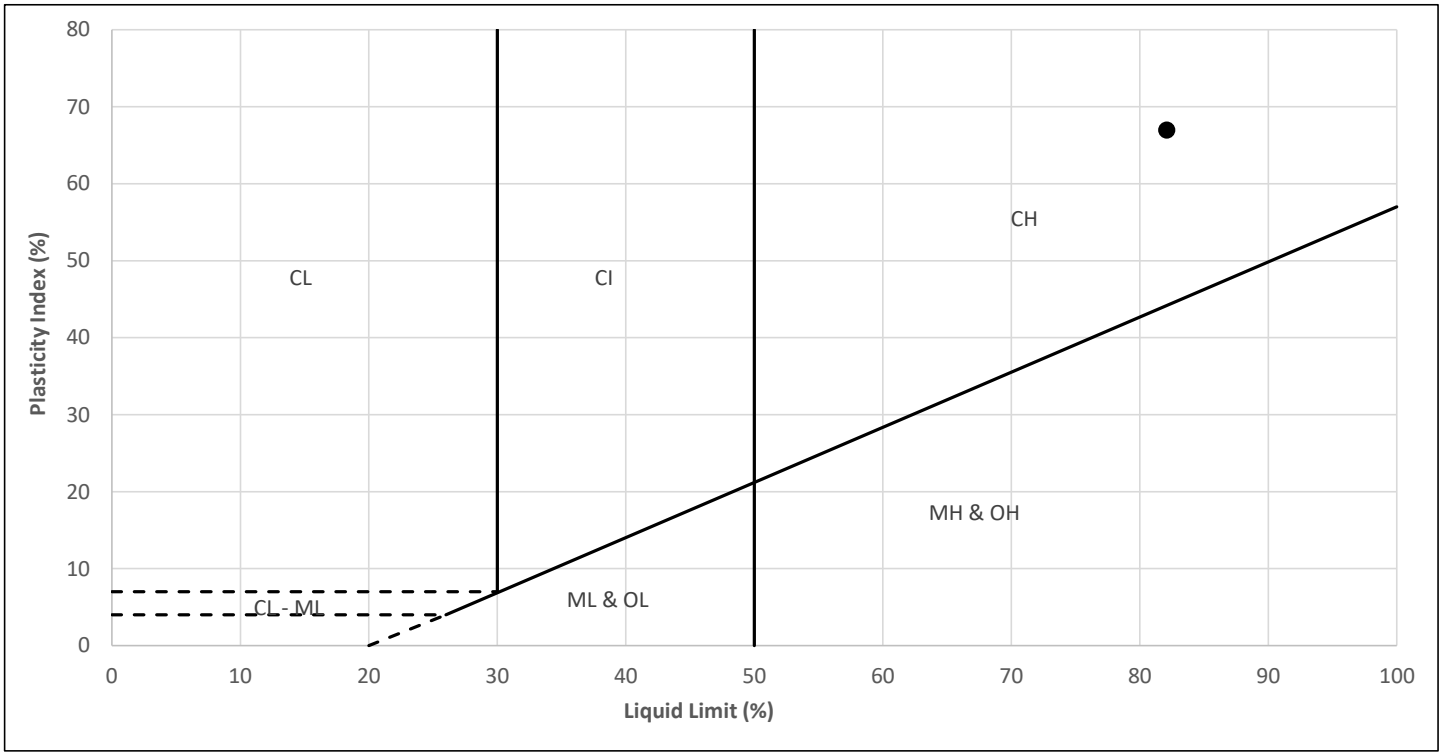
Project:	Snake Lake Reservoir Expansion	**Sample #:**	133AU11
Project No.:	1560-193-00	**Source:**	22BH133
Owner:	EID	**Sample Depth:**	8.2m
File No.:	AL - 133AU11	**Date:**	24-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	82.1
Plastic Limit (PL)	15.1
Plasticity Index (PI)	67.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

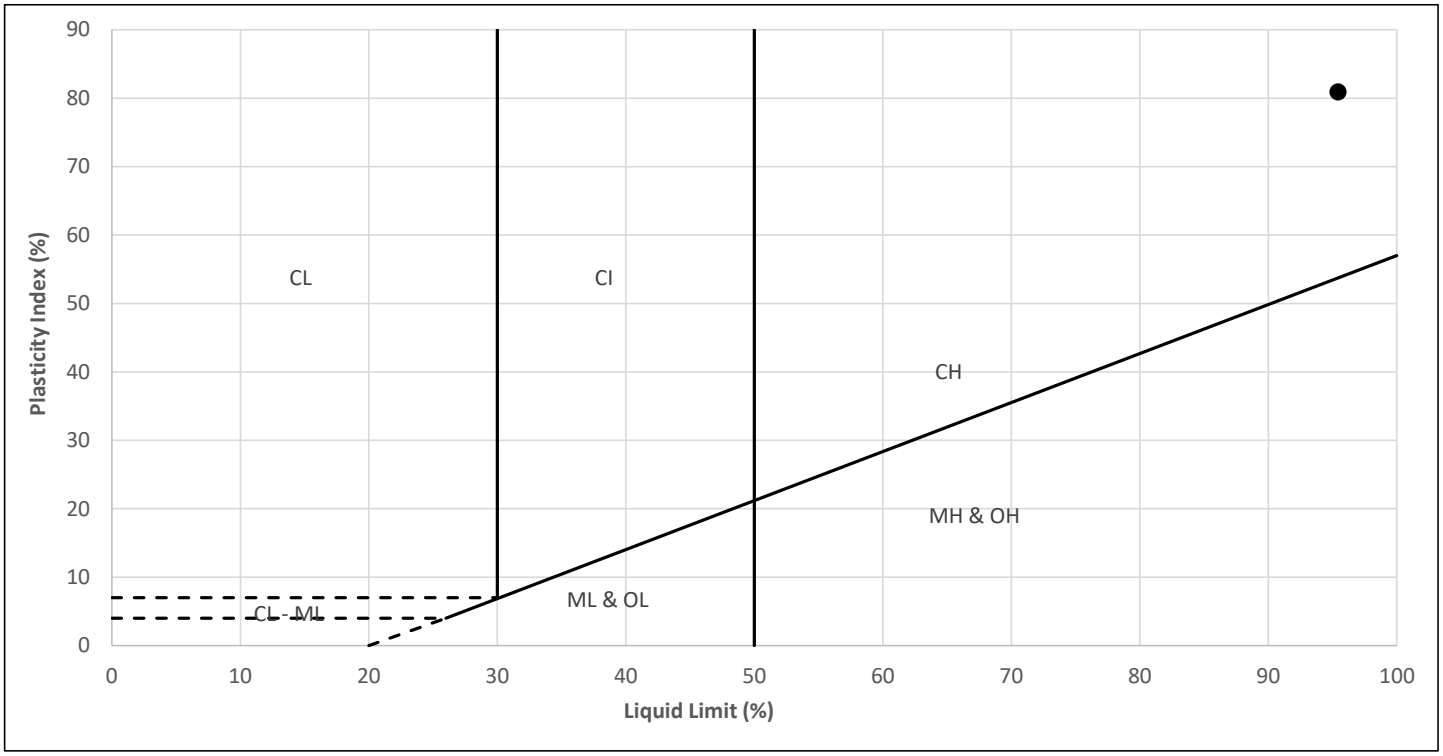
Project:	Snake Lake Reservoir Expansion	**Sample #:**	134AU5
Project No.:	1560-193-00	**Source:**	22BH134
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 134AU5	**Date:**	24-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	95.4
Plastic Limit (PL)	14.5
Plasticity Index (PI)	80.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

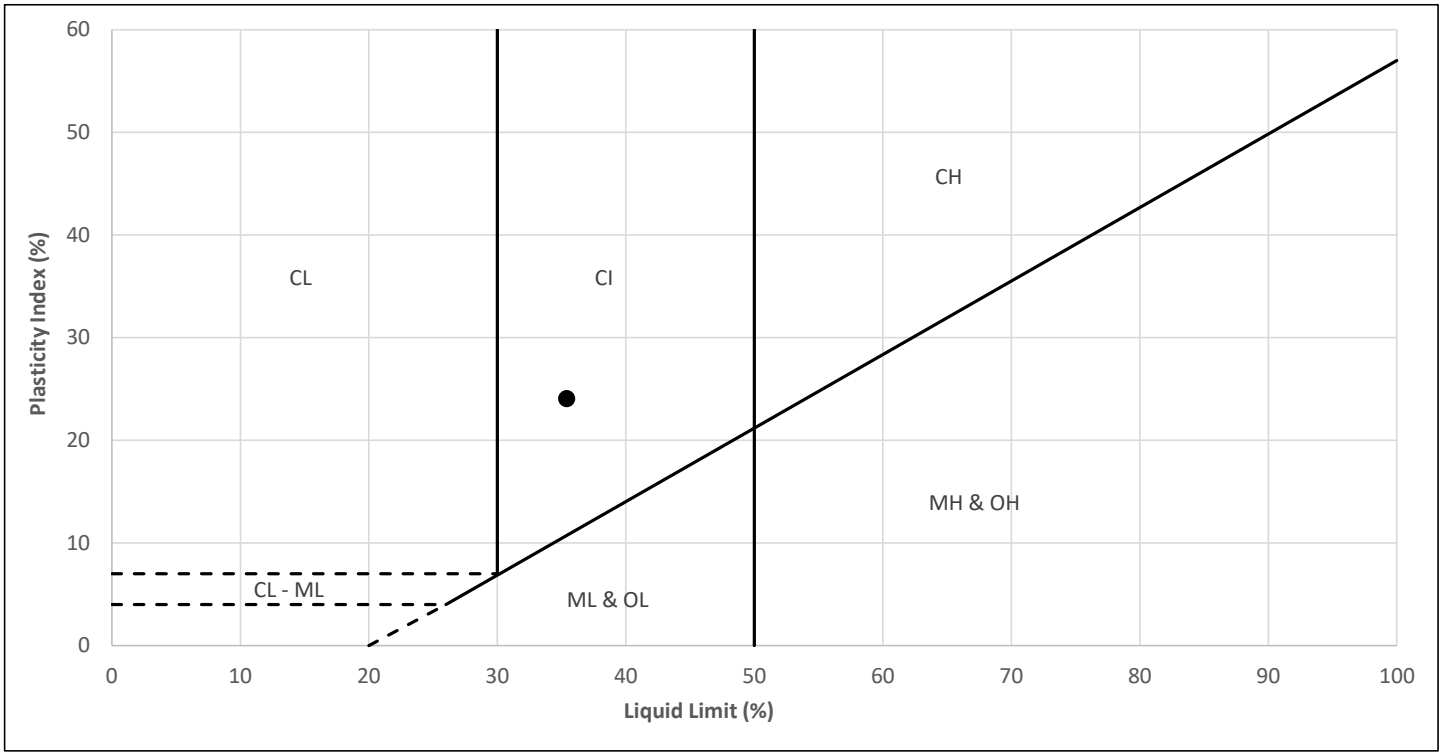
Project:	Snake Lake Reservoir Expansion	**Sample #:**	135AU1
Project No.:	1560-193-00	**Source:**	22BH135
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 135AU1	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	35.4
Plastic Limit (PL)	11.3
Plasticity Index (PI)	24.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

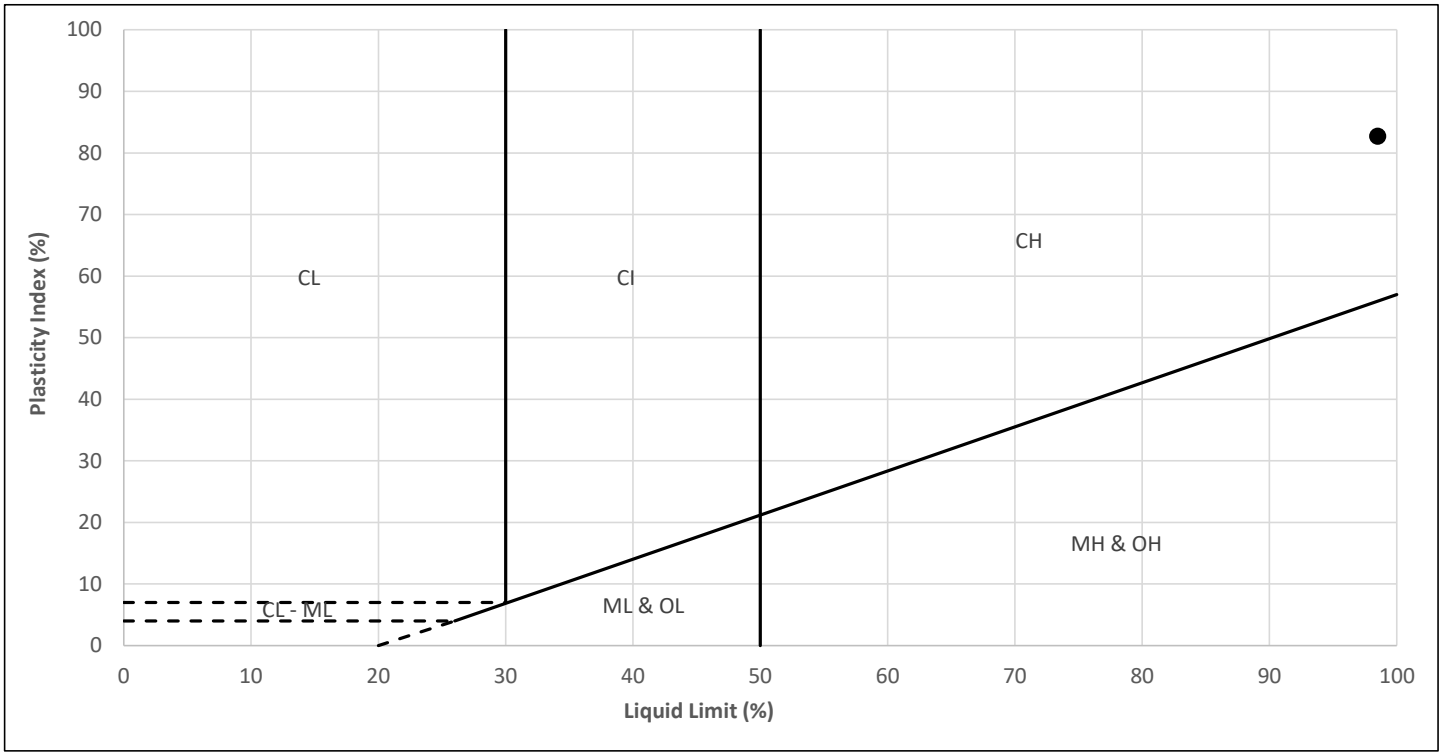
Project:	Snake Lake Reservoir Expansion	**Sample #:**	135AU4
Project No.:	1560-193-00	**Source:**	22BH135
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 135AU4	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	98.5
Plastic Limit (PL)	15.8
Plasticity Index (PI)	82.7

Soil Plasticity	Medium
Soil Classification	CH



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ATTERBERG LIMITS

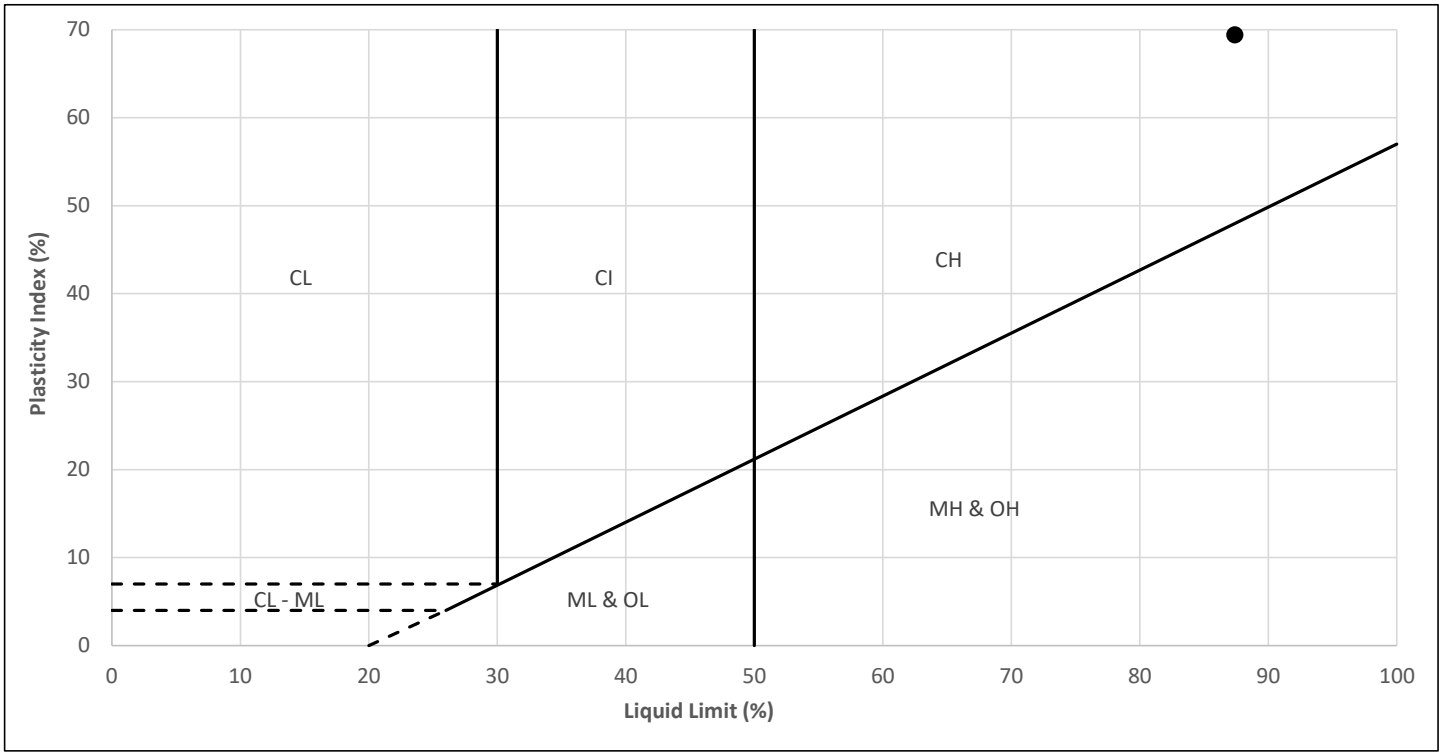
Project:	Snake Lake Reservoir Expansion	**Sample #:**	135AU6
Project No.:	1560-193-00	**Source:**	22BH135
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 135AU6	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	87.4
Plastic Limit (PL)	18.0
Plasticity Index (PI)	69.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

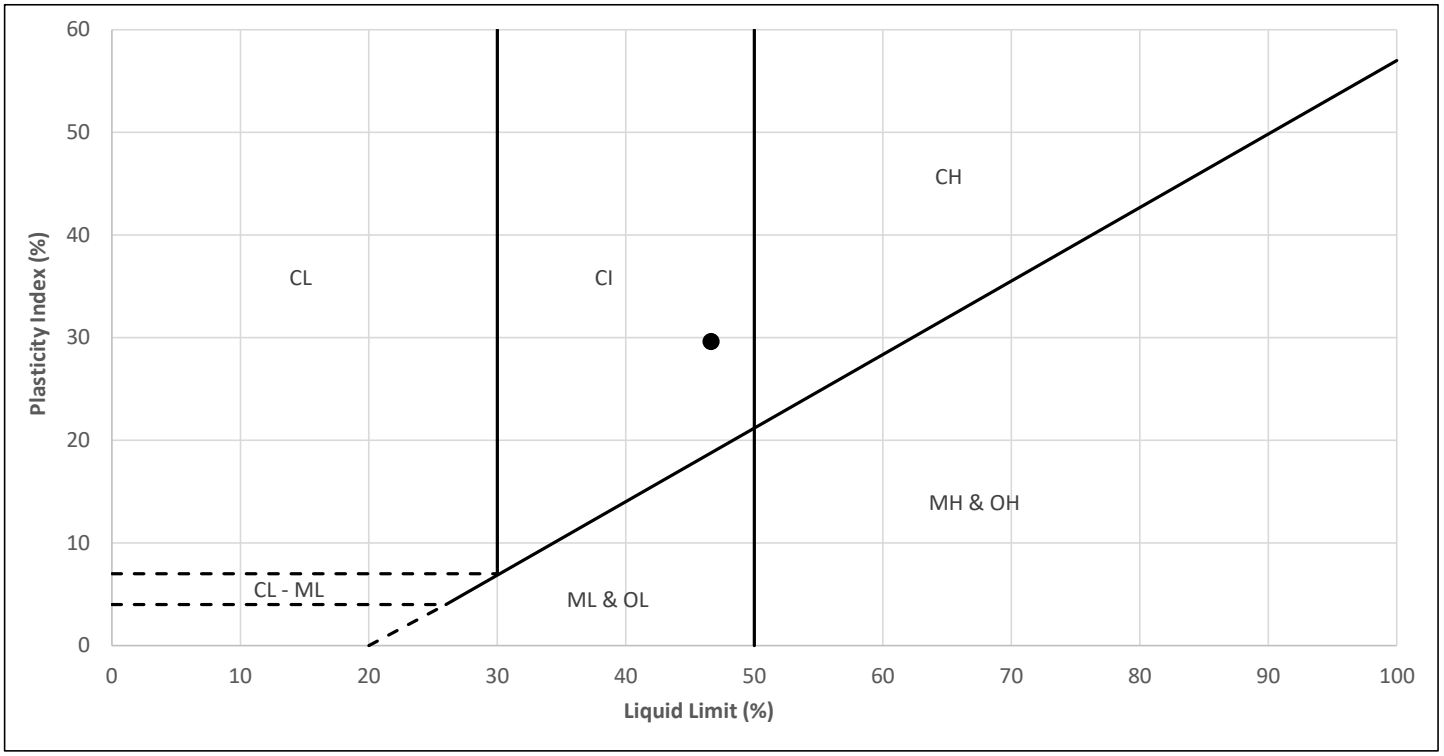
Project:	Snake Lake Reservoir Expansion	**Sample #:**	135RC3
Project No.:	1560-193-00	**Source:**	22CH135
Owner:	EID	**Sample Depth:**	8.1m
File No.:	AL - 135RC3	**Test Date:**	18-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	46.6
Plastic Limit (PL)	17.0
Plasticity Index (PI)	29.6

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

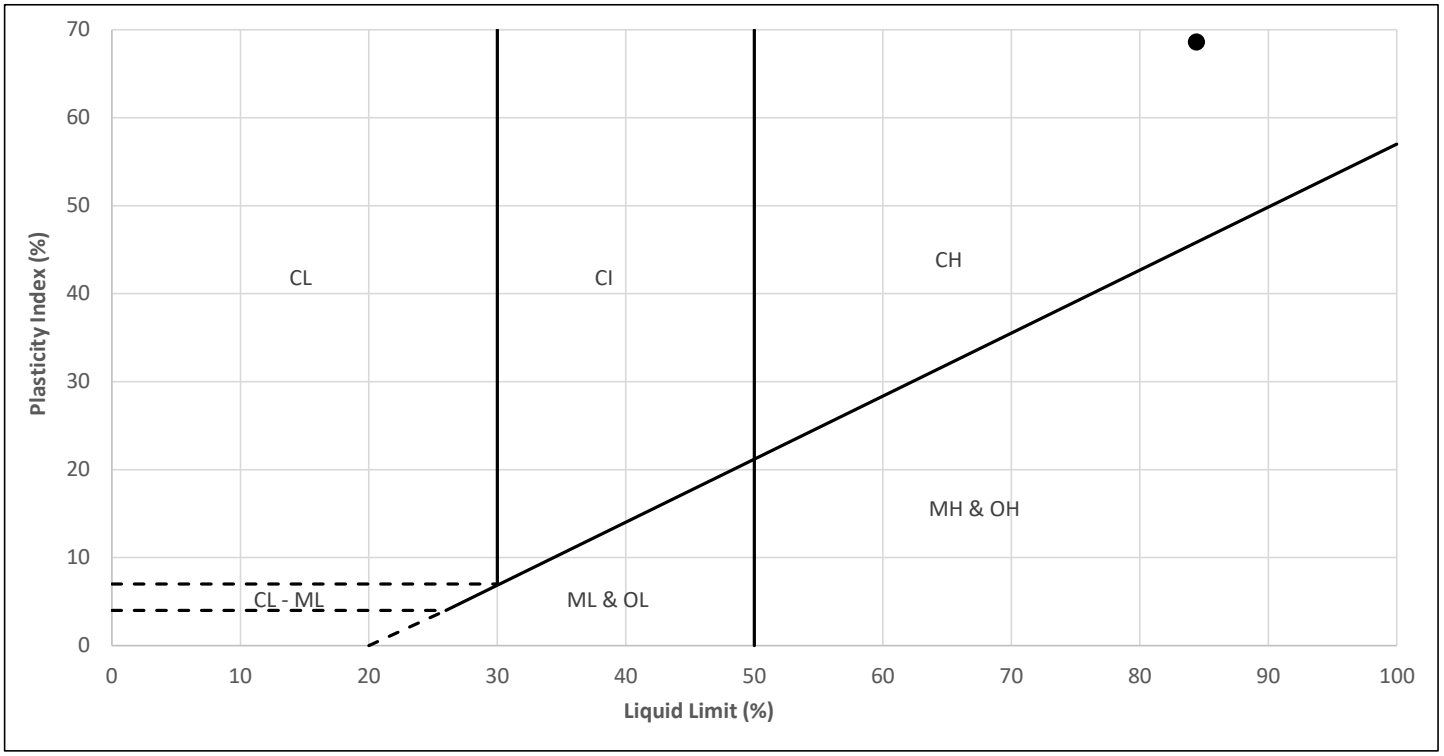
Project:	Snake Lake Reservoir Expansion	**Sample #:**	135RC6
Project No.:	1560-193-00	**Source:**	22CH135
Owner:	EID	**Sample Depth:**	13.0m
File No.:	AL - 135RC6	**Test Date:**	14-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	84.4
Plastic Limit (PL)	15.8
Plasticity Index (PI)	68.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

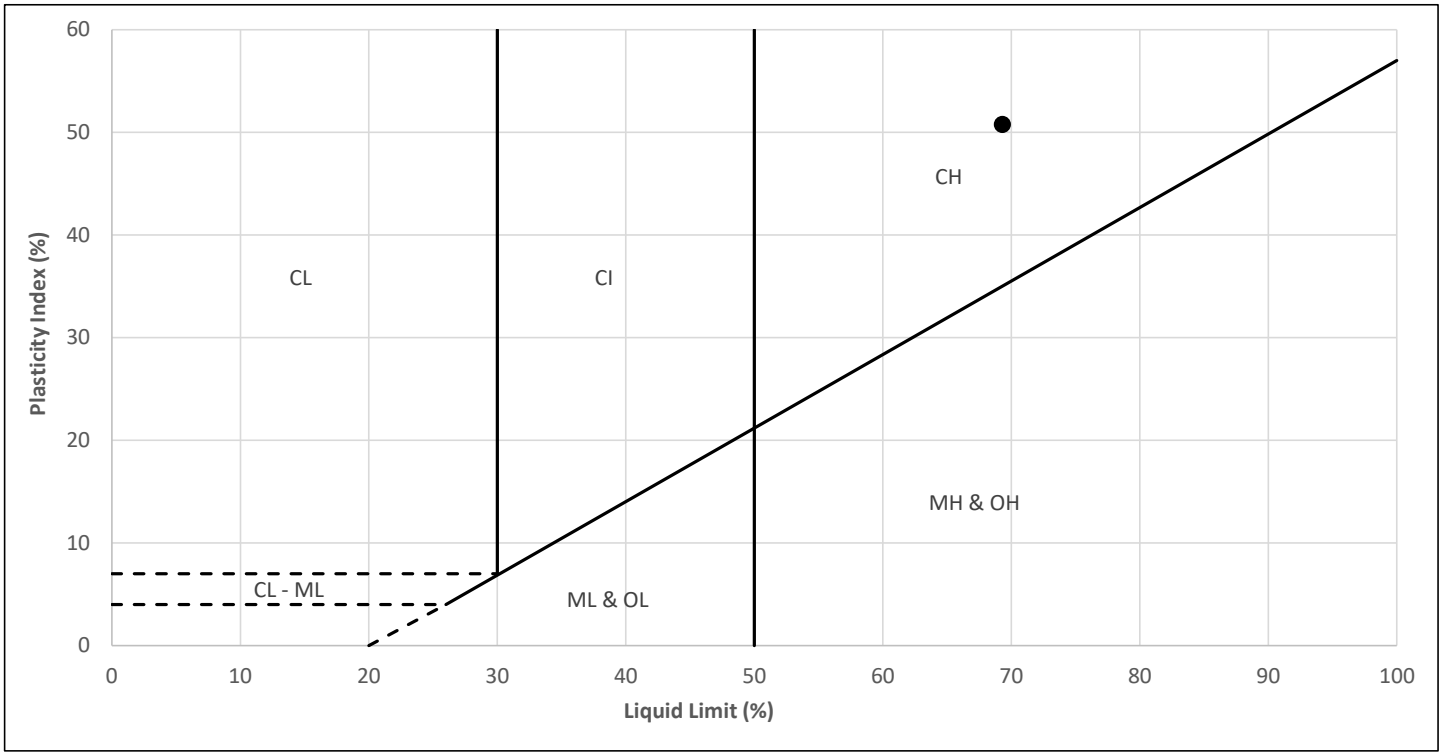
Project:	Snake Lake Reservoir Expansion	**Sample #:**	135UD5
Project No.:	1560-193-00	**Source:**	22CH135
Owner:	EID	**Sample Depth:**	20.93m
File No.:	AL - 135UD5	**Test Date:**	30-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	69.3
Plastic Limit (PL)	18.5
Plasticity Index (PI)	50.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

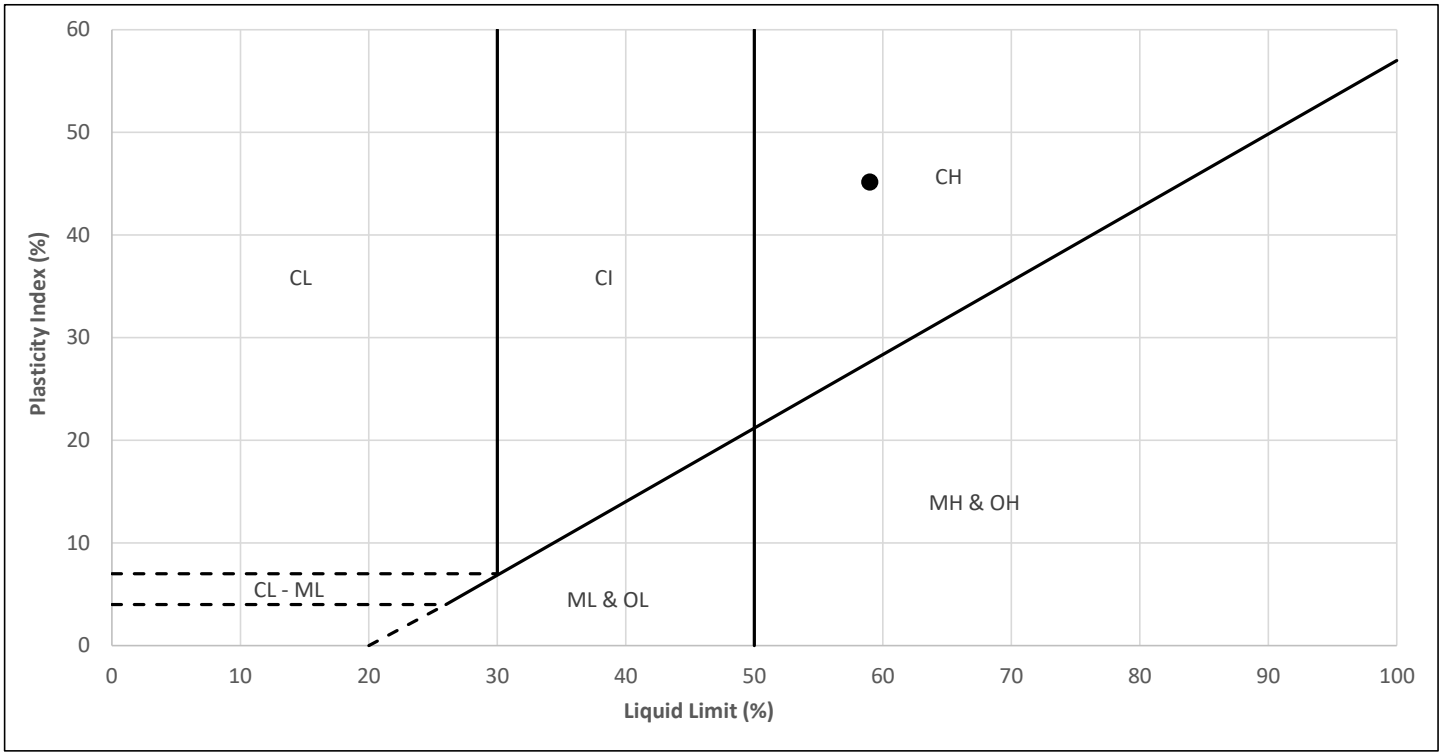
Project:	Snake Lake Reservoir Expansion	**Sample #:**	136AU1
Project No.:	1560-193-00	**Source:**	22BH136
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 136AU1	**Date:**	24-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	59.0
Plastic Limit (PL)	13.8
Plasticity Index (PI)	45.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

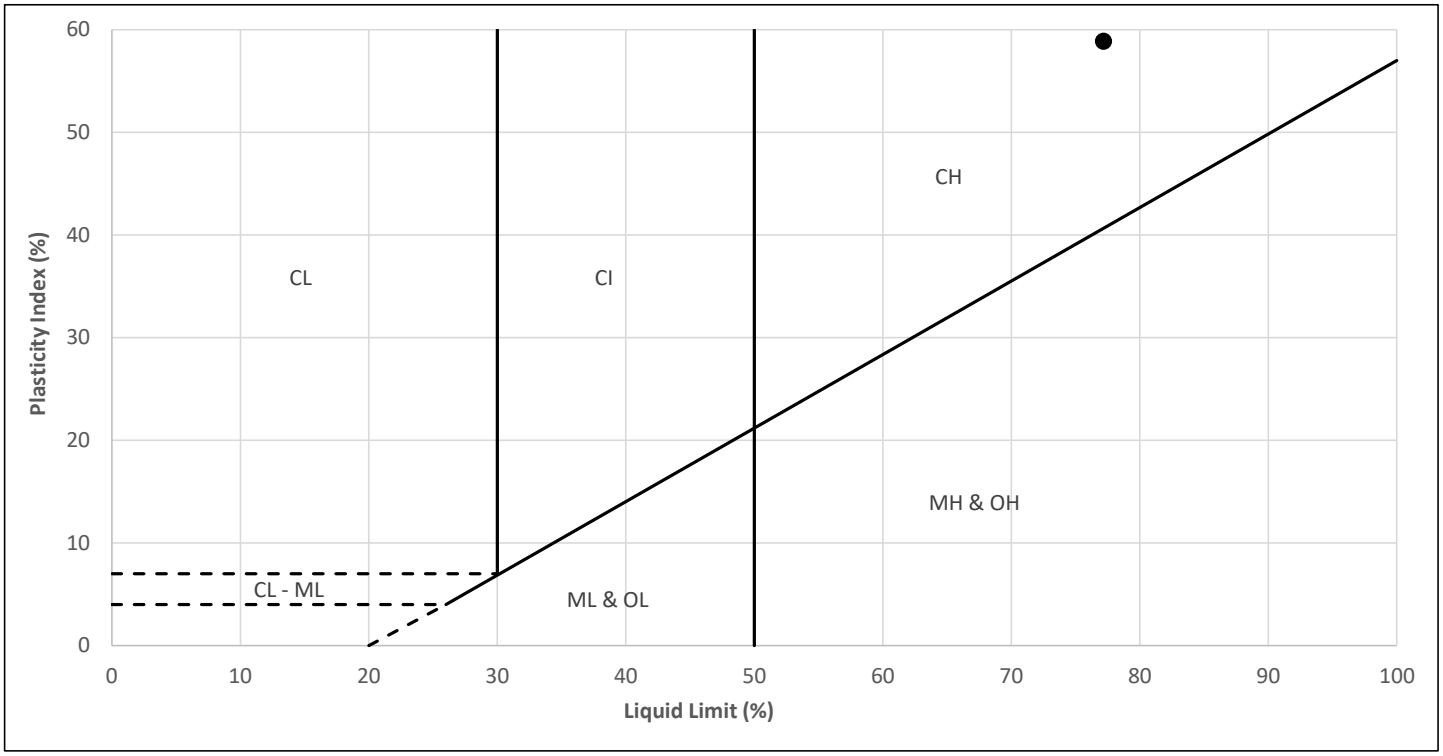
Project:	Snake Lake Reservoir Expansion	**Sample #:**	136AU7
Project No.:	1560-193-00	**Source:**	22BH136
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 136AU7	**Date:**	24-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	77.2
Plastic Limit (PL)	18.3
Plasticity Index (PI)	58.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

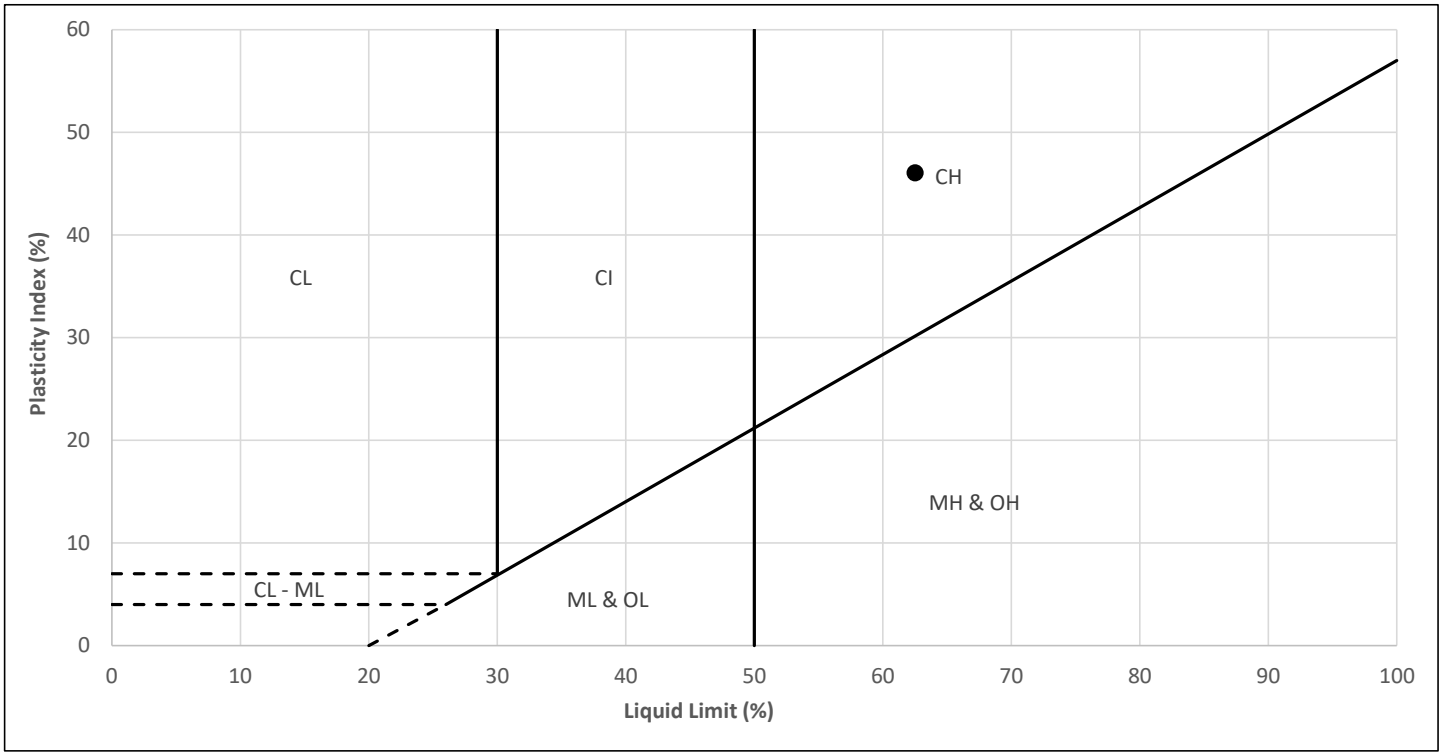
Project:	Snake Lake Reservoir Expansion	**Sample #:**	136UD5
Project No.:	1560-193-00	**Source:**	22CH136
Owner:	EID	**Sample Depth:**	16.7m
File No.:	AL - 136UD5	**Test Date:**	8-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	62.5
Plastic Limit (PL)	16.4
Plasticity Index (PI)	46.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

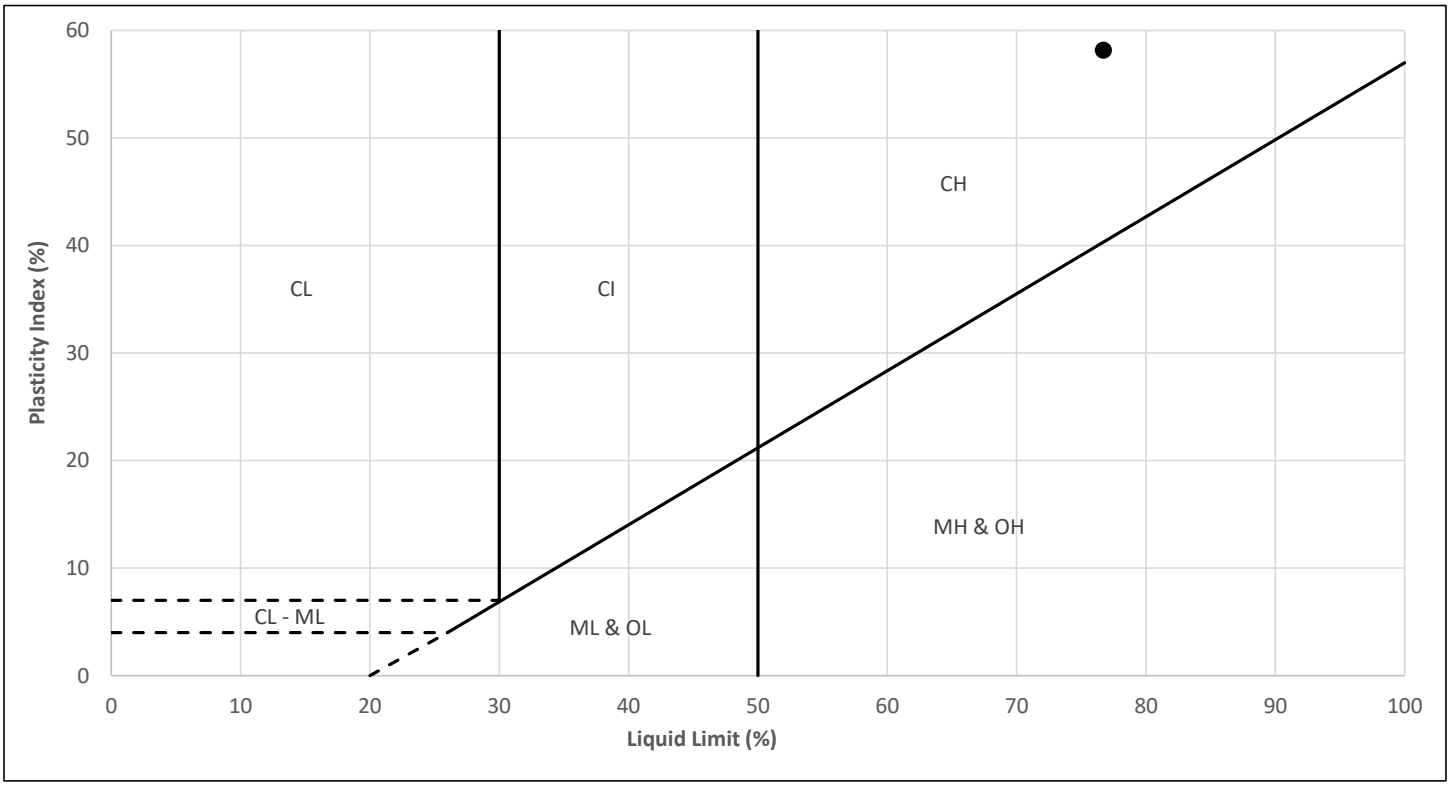
Project:	Snake Lake Reservoir Expansion	**Sample #:**	137RC4
Project No.:	1560-193-00	**Source:**	22CH137
Owner:	EID	**Sample Depth:**	8.1m
File No.:	AL - 137RC4	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	76.7
Plastic Limit (PL)	18.5
Plasticity Index (PI)	58.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

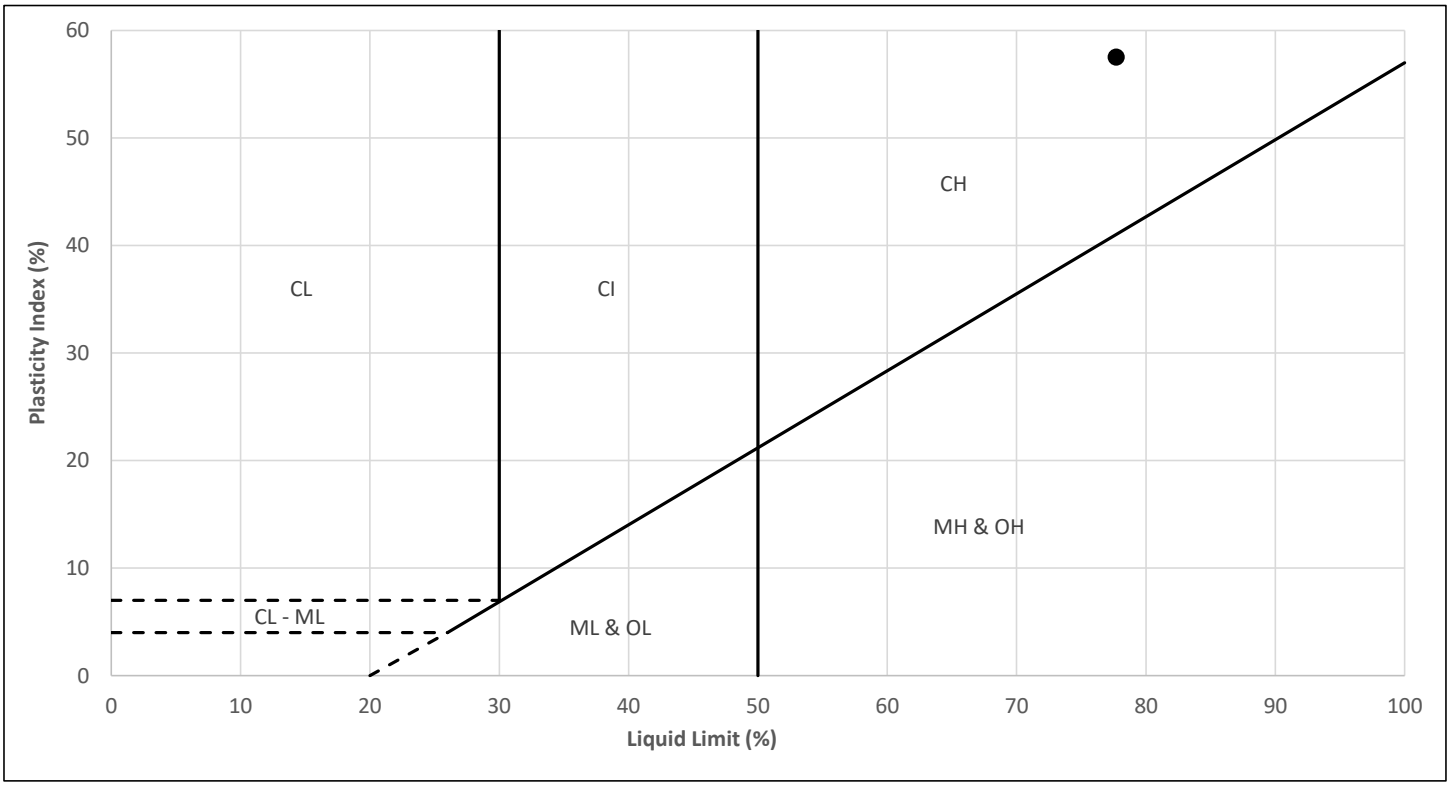
Project:	Snake Lake Reservoir Expansion	**Sample #:**	137RC13
Project No.:	1560-193-00	**Source:**	22CH137
Owner:	EID	**Sample Depth:**	22.4m
File No.:	AL - 137RC13	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	77.7
Plastic Limit (PL)	20.2
Plasticity Index (PI)	57.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

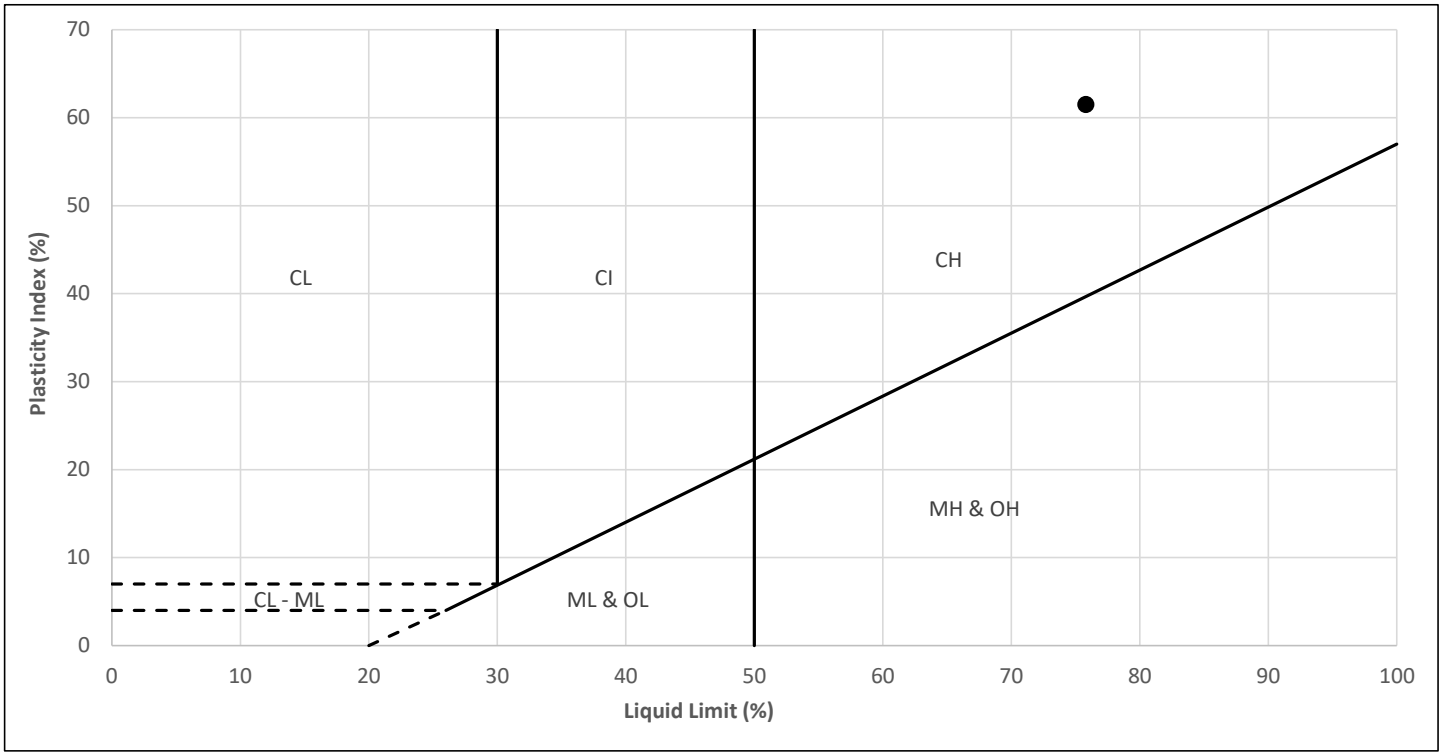
Project:	Snake Lake Reservoir Expansion	**Sample #:**	137SPT5
Project No.:	1560-193-00	**Source:**	22BH137
Owner:	EID	**Sample Depth:**	7.6m
File No.:	AL - 137SPT5	**Date:**	24-Mar-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	75.8
Plastic Limit (PL)	14.3
Plasticity Index (PI)	61.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

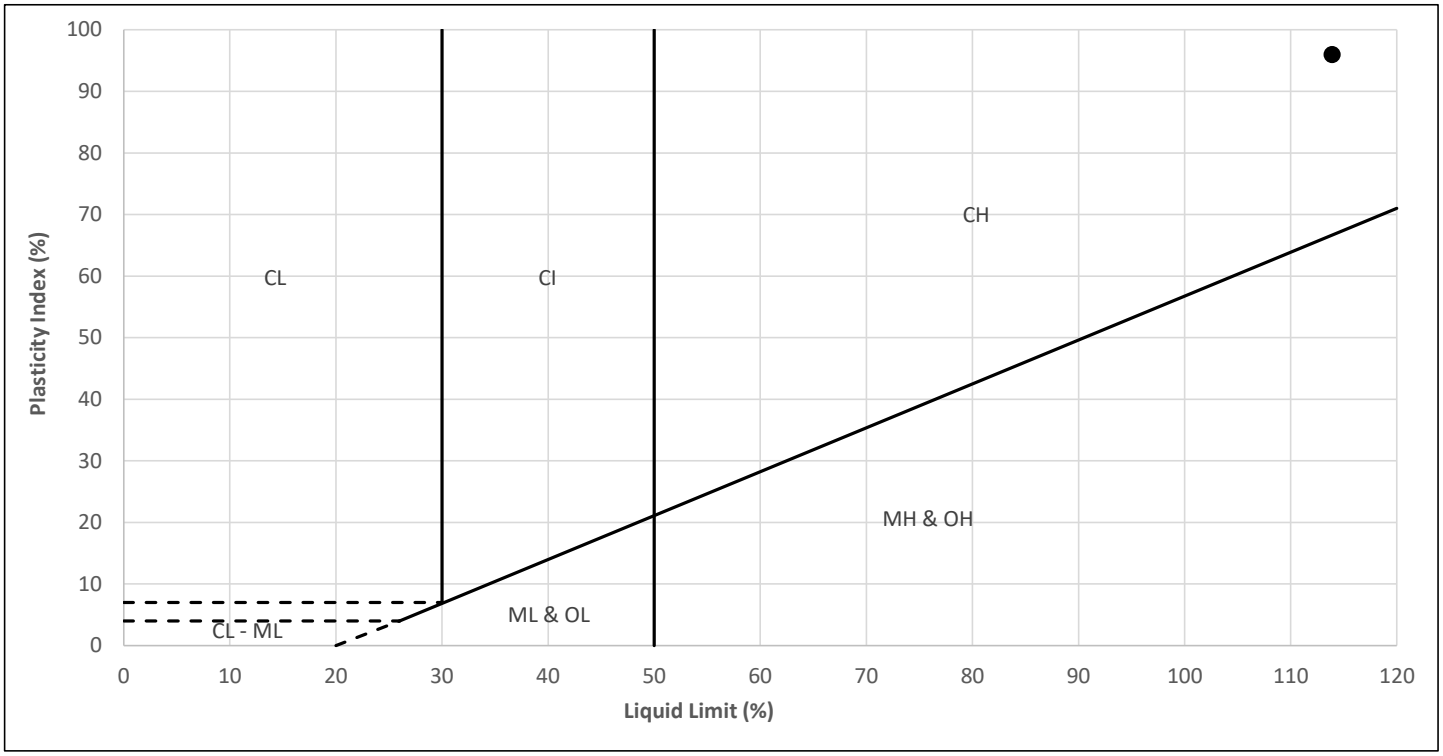
Project:	Snake Lake Reservoir Expansion	**Sample #:**	137UD2
Project No.:	1560-193-00	**Source:**	22CH137
Owner:	EID	**Sample Depth:**	8.5m
File No.:	AL - 137UD2	**Test Date:**	9-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	113.9
Plastic Limit (PL)	17.9
Plasticity Index (PI)	96.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

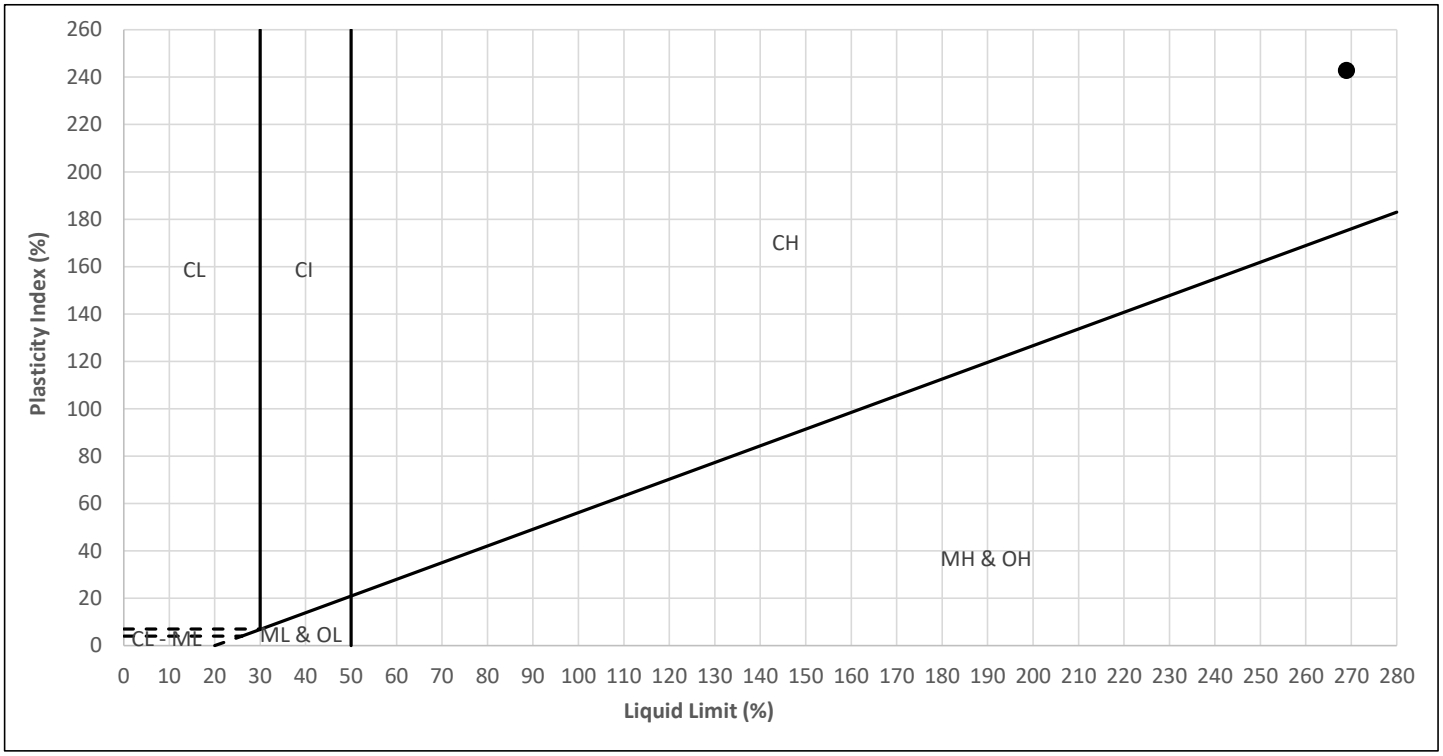
Project:	Snake Lake Reservoir Expansion	**Sample #:**	137UD5
Project No.:	1560-193-00	**Source:**	22CH137
Owner:	EID	**Sample Depth:**	13.3m
File No.:	AL - 137UD5	**Test Date:**	8-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	268.9
Plastic Limit (PL)	26.0
Plasticity Index (PI)	242.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

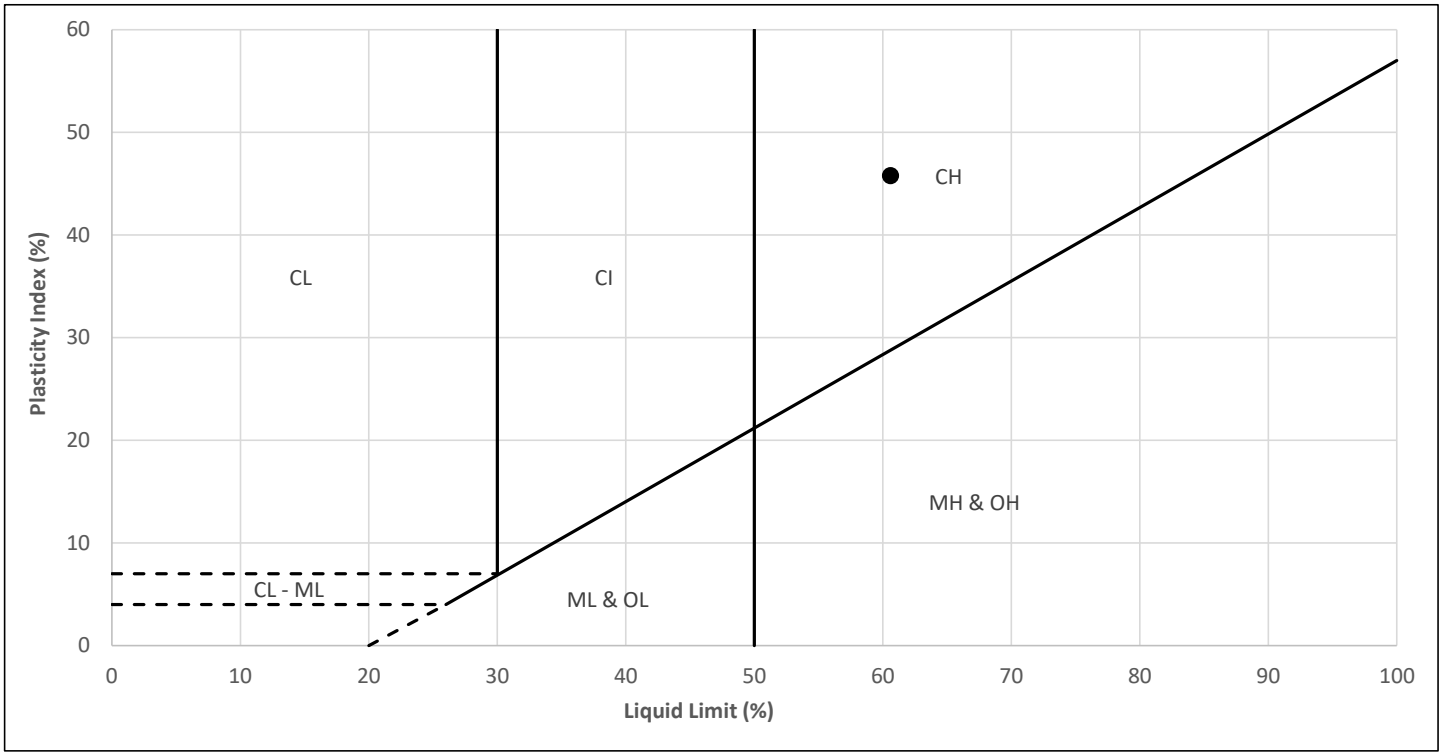
Project:	Snake Lake Reservoir Expansion	**Sample #:**	137UD9
Project No.:	1560-193-00	**Source:**	22CH137
Owner:	EID	**Sample Depth:**	27.0m
File No.:	AL - 137UD9	**Test Date:**	9-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	60.6
Plastic Limit (PL)	14.8
Plasticity Index (PI)	45.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

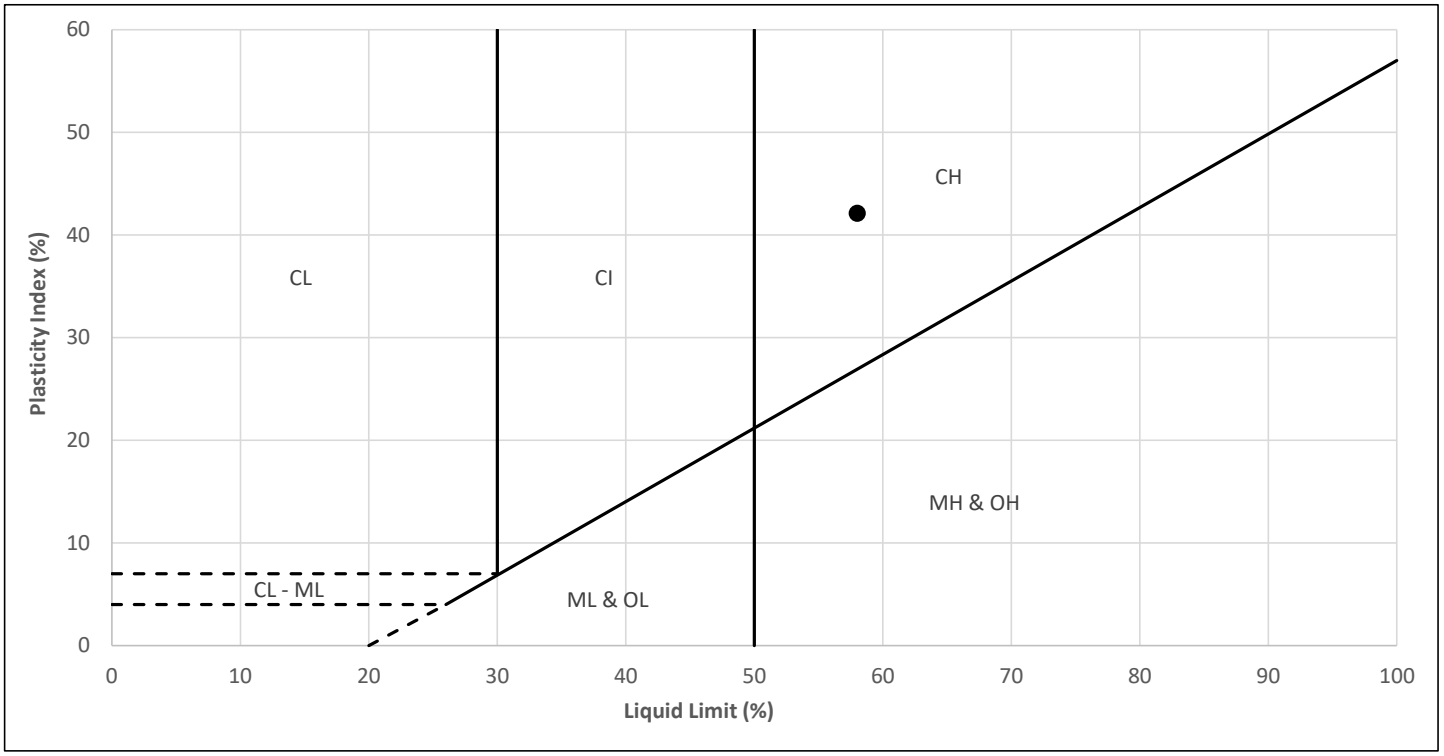
Project:	Snake Lake Reservoir Expansion	**Sample #:**	138RC1
Project No.:	1560-193-00	**Source:**	22CH138
Owner:	EID	**Sample Depth:**	3.1m
File No.:	AL - 138RC1	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	58.0
Plastic Limit (PL)	15.9
Plasticity Index (PI)	42.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

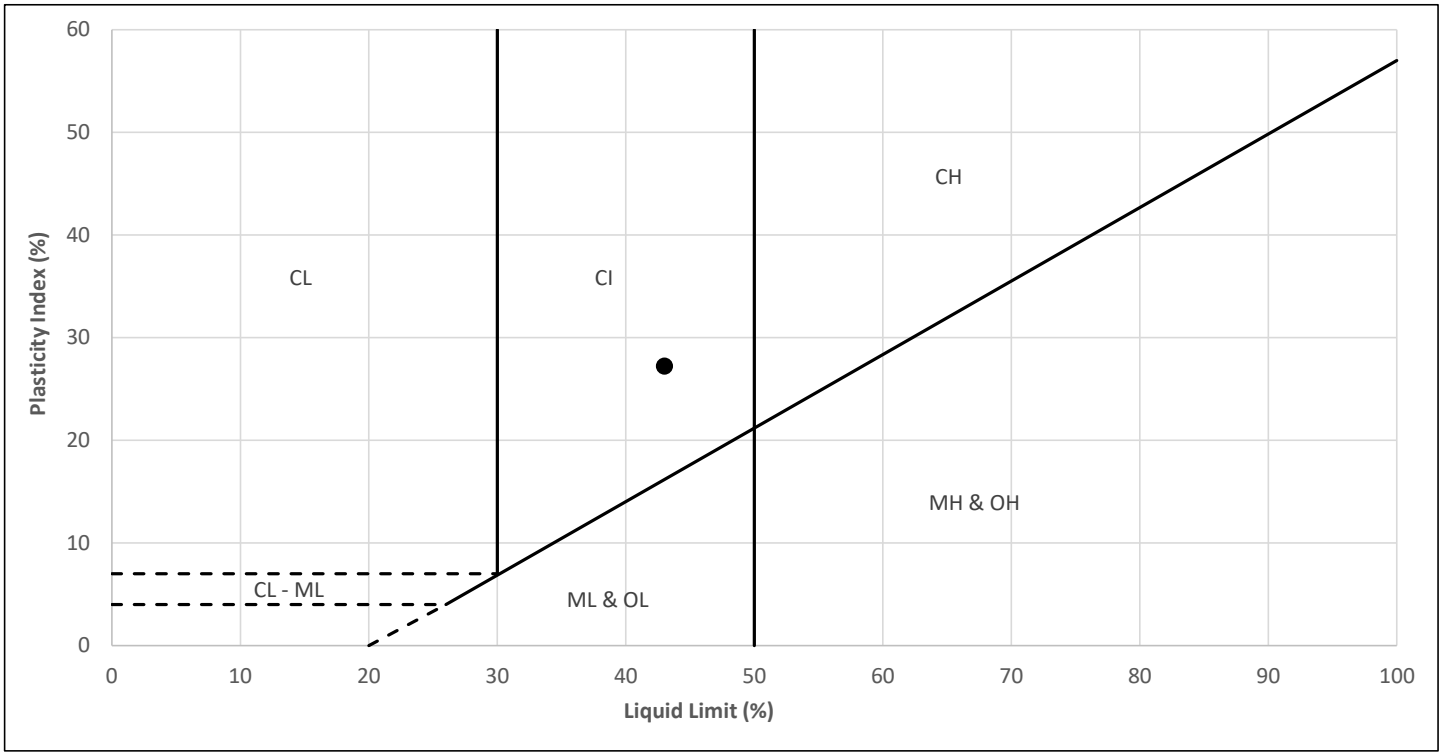
Project:	Snake Lake Reservoir Expansion	**Sample #:**	138RC2
Project No.:	1560-193-00	**Source:**	22CH138
Owner:	EID	**Sample Depth:**	5.4m
File No.:	AL - 138RC2	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	43.0
Plastic Limit (PL)	15.8
Plasticity Index (PI)	27.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

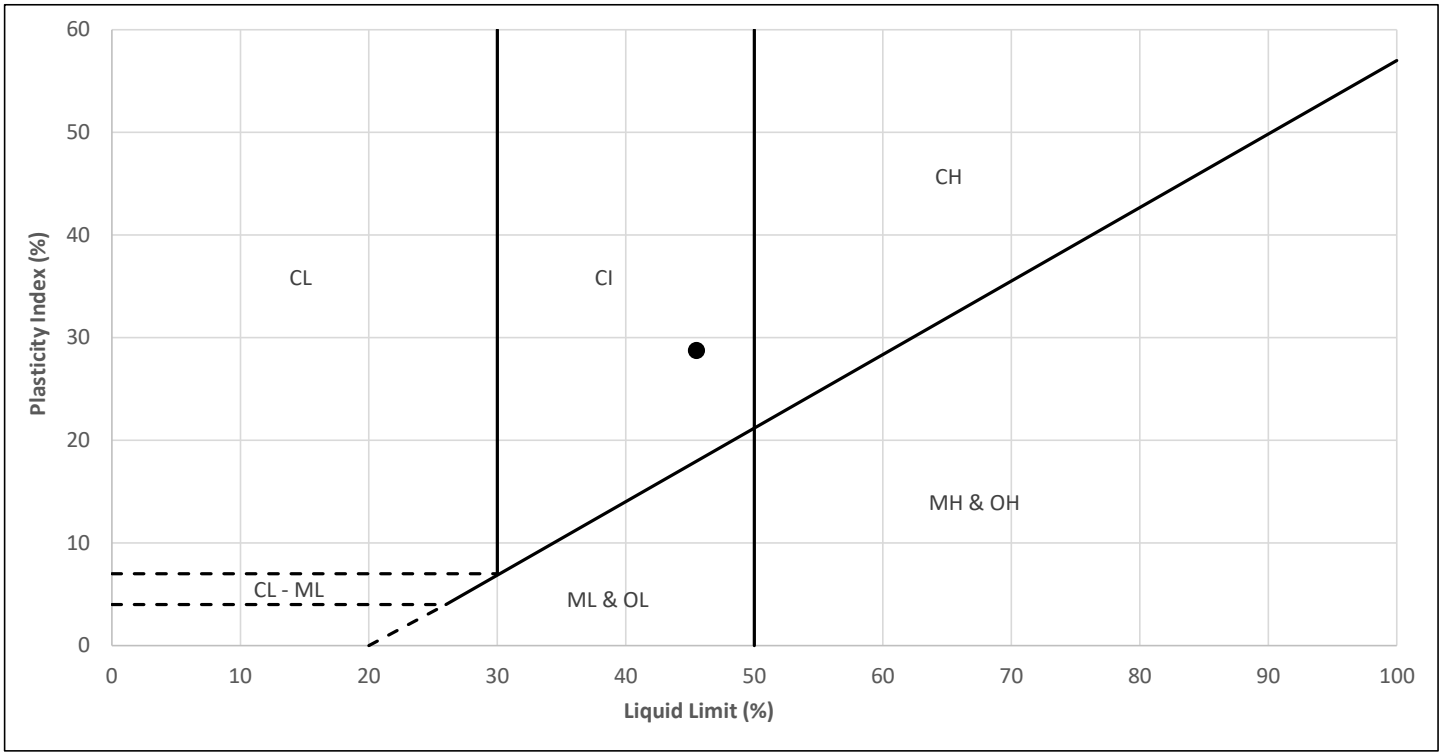
Project:	Snake Lake Reservoir Expansion	**Sample #:**	138RC3
Project No.:	1560-193-00	**Source:**	22CH138
Owner:	EID	**Sample Depth:**	6.2m
File No.:	AL - 138RC3	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	45.5
Plastic Limit (PL)	16.7
Plasticity Index (PI)	28.8

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

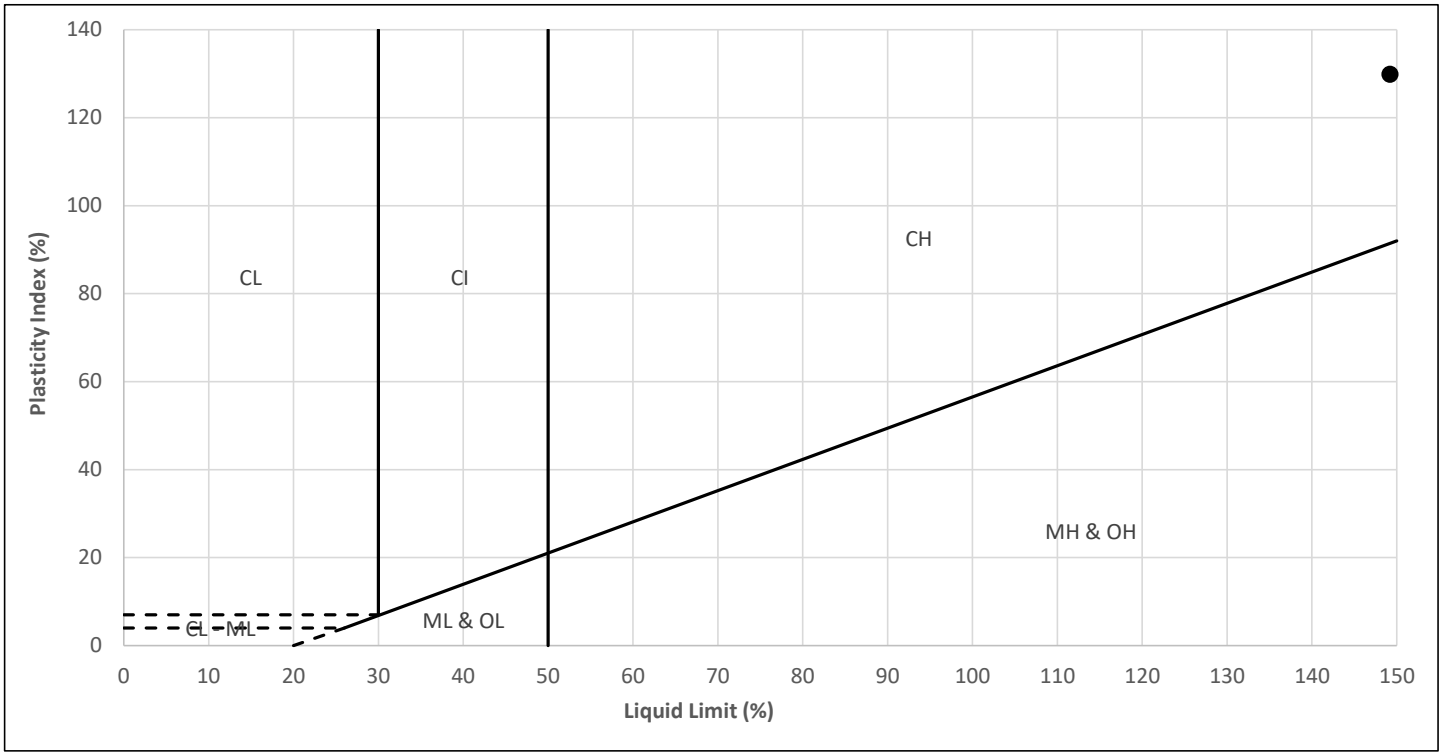
Project:	Snake Lake Reservoir Expansion	**Sample #:**	138RC6
Project No.:	1560-193-00	**Source:**	22CH138
Owner:	EID	**Sample Depth:**	11.3m
File No.:	AL - 138RC6	**Test Date:**	21-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	149.2
Plastic Limit (PL)	19.3
Plasticity Index (PI)	129.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

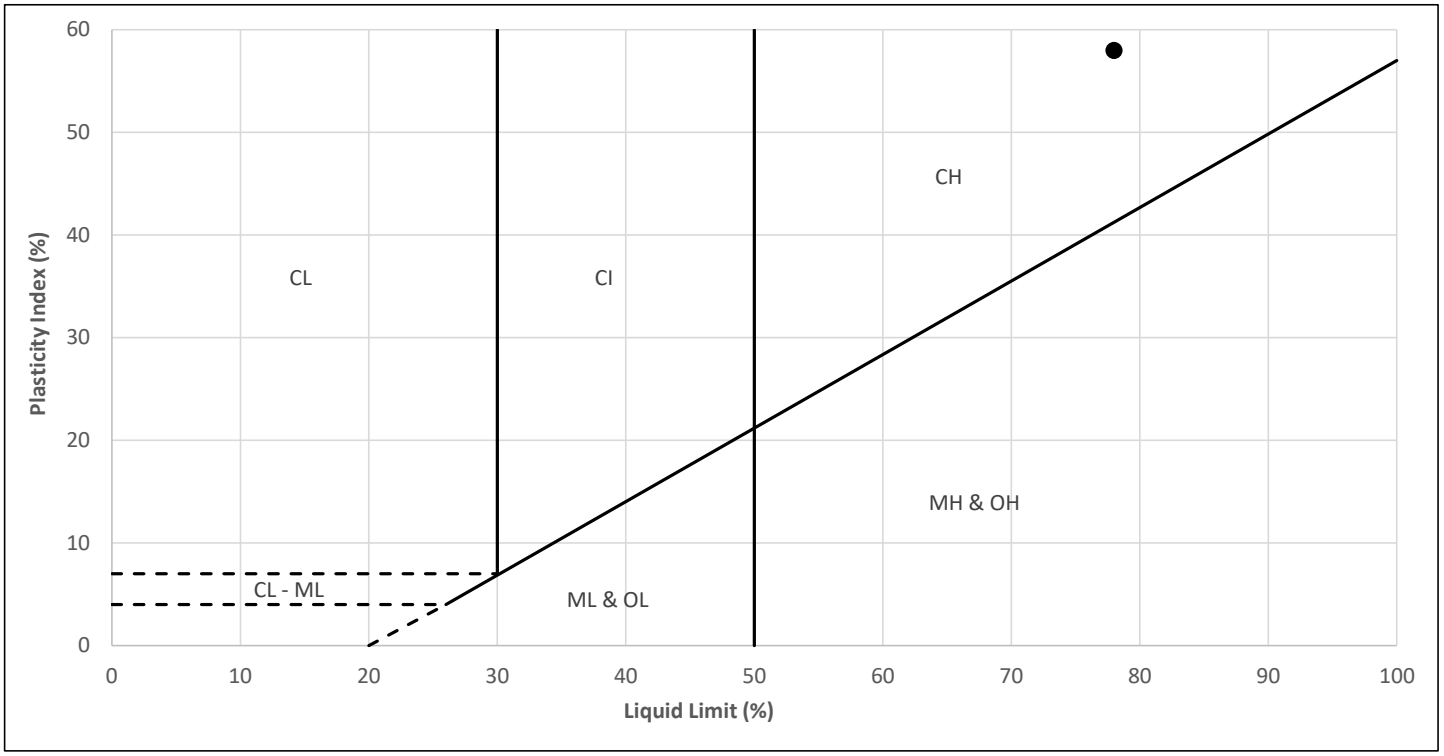
Project:	Snake Lake Reservoir Expansion	**Sample #:**	138RC8
Project No.:	1560-193-00	**Source:**	22CH138
Owner:	EID	**Sample Depth:**	14.1m
File No.:	AL - 138RC8	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	78.0
Plastic Limit (PL)	20.0
Plasticity Index (PI)	58.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

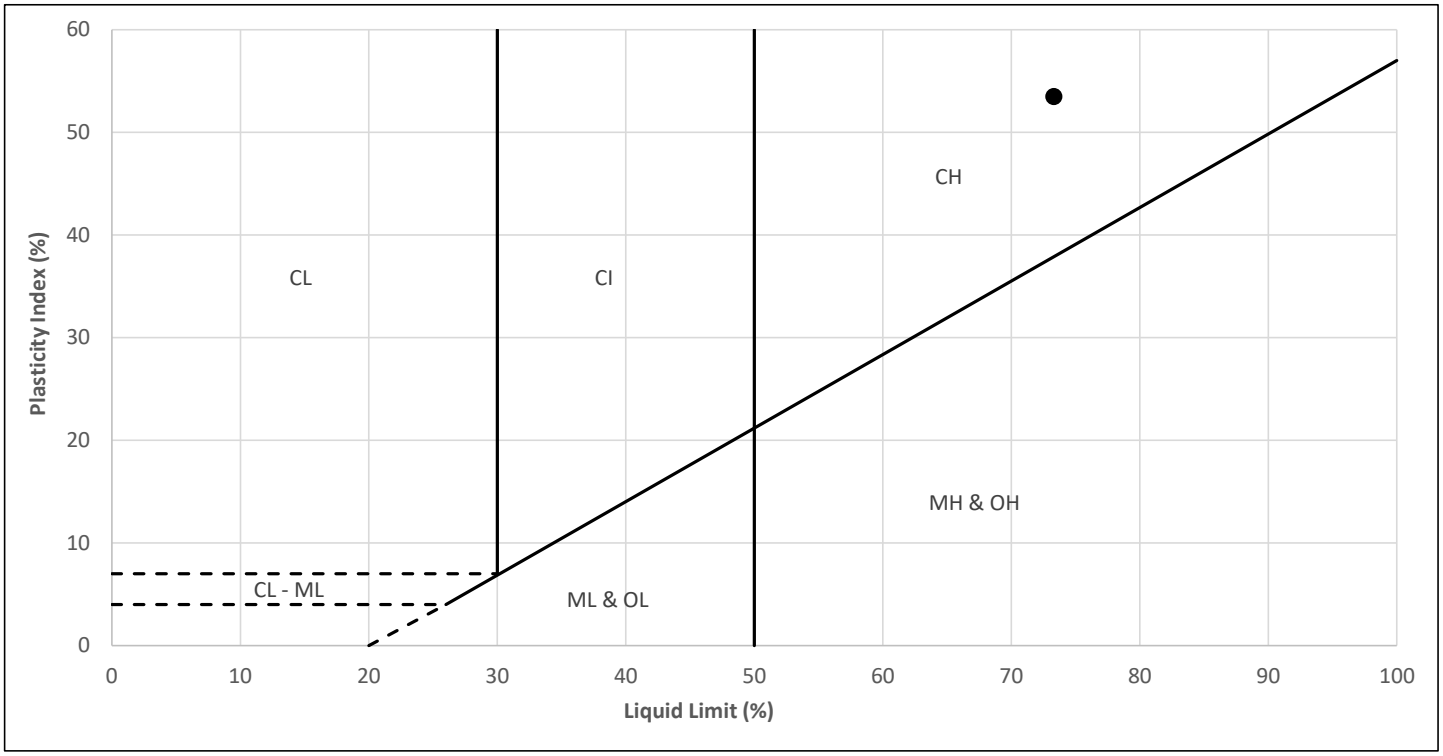
Project:	Snake Lake Reservoir Expansion	**Sample #:**	139RC1
Project No.:	1560-193-00	**Source:**	22CH139
Owner:	EID	**Sample Depth:**	3.2m
File No.:	AL - 139RC1	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	73.3
Plastic Limit (PL)	19.8
Plasticity Index (PI)	53.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

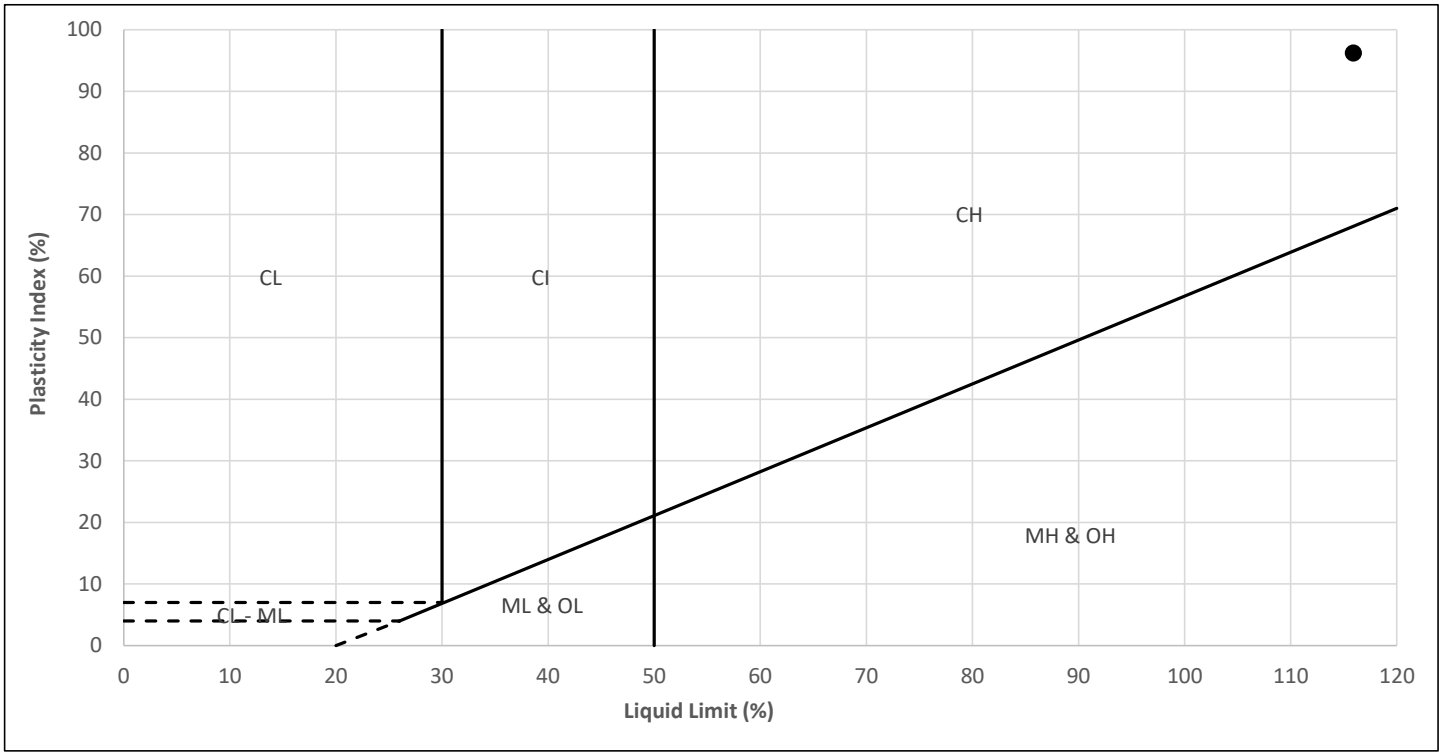
Project:	Snake Lake Reservoir Expansion	**Sample #:**	139RC3
Project No.:	1560-193-00	**Source:**	22CH139
Owner:	EID	**Sample Depth:**	6.5m
File No.:	AL - 139RC3	**Test Date:**	21-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	115.9
Plastic Limit (PL)	19.7
Plasticity Index (PI)	96.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

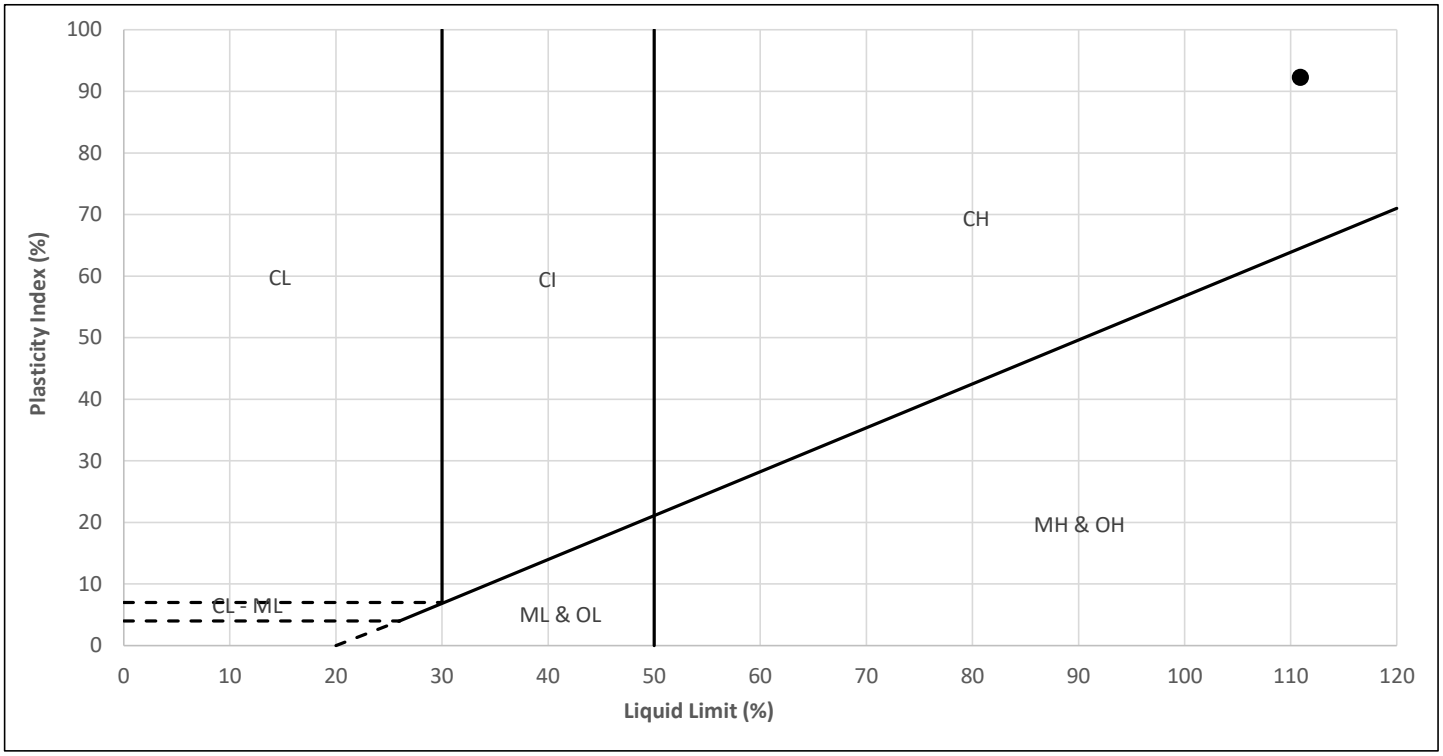
Project:	Snake Lake Reservoir Expansion	**Sample #:**	139RC5
Project No.:	1560-193-00	**Source:**	22CH139
Owner:	EID	**Sample Depth:**	9.2m
File No.:	AL - 139RC5	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	110.9
Plastic Limit (PL)	18.6
Plasticity Index (PI)	92.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

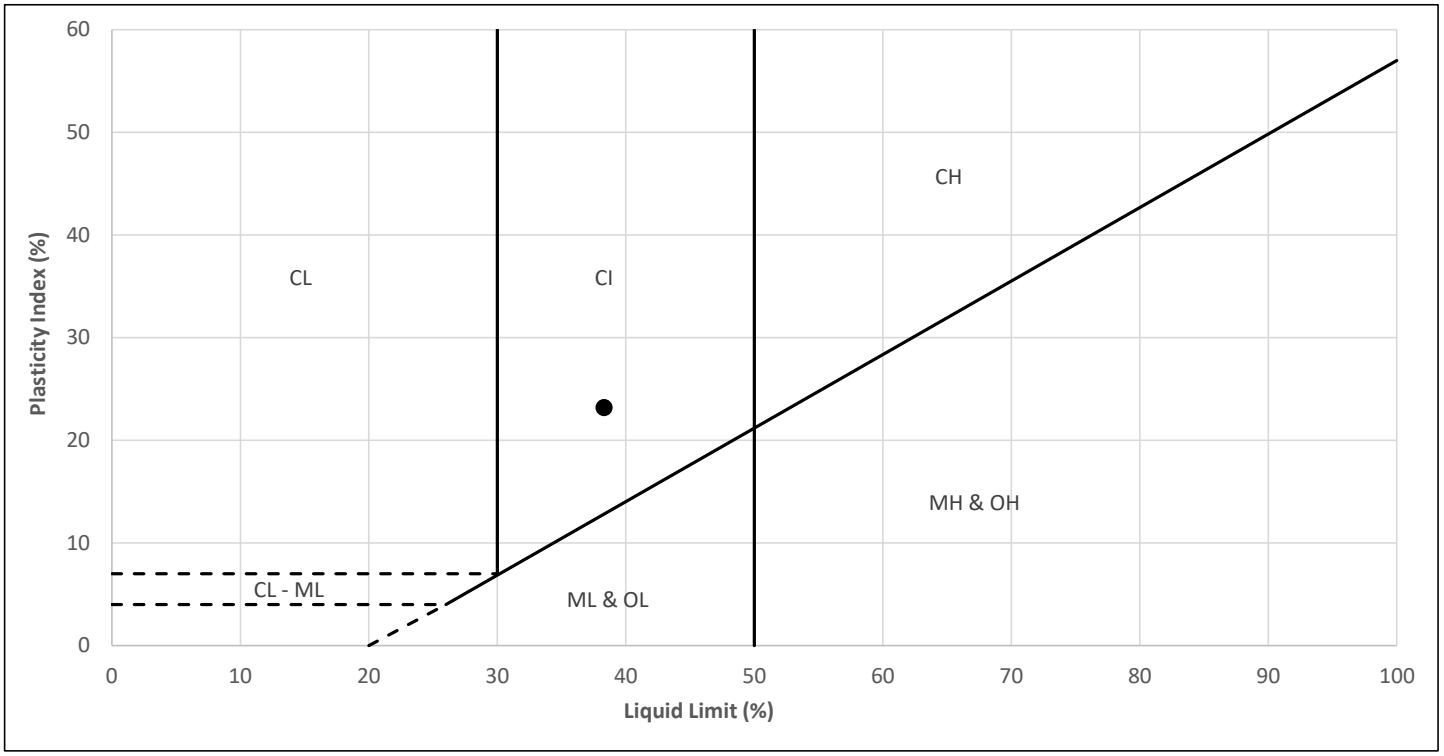
Project:	Snake Lake Reservoir Expansion	**Sample #:**	139RC7
Project No.:	1560-193-00	**Source:**	22CH139
Owner:	EID	**Sample Depth:**	12.6m
File No.:	AL - 139RC7	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	38.3
Plastic Limit (PL)	15.1
Plasticity Index (PI)	23.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

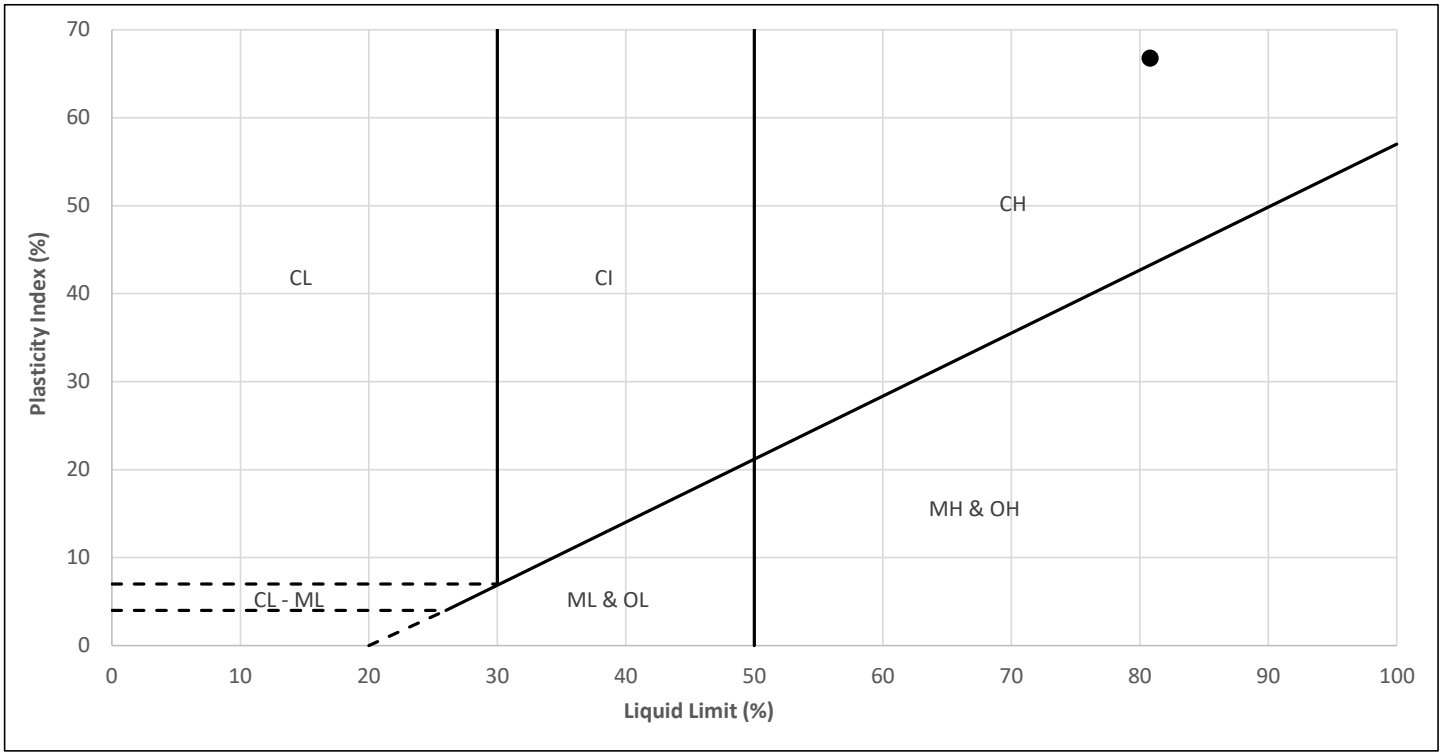
Project:	Snake Lake Reservoir Expansion	**Sample #:**	140AU1
Project No.:	1560-193-00	**Source:**	22CH140
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 140AU1	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	80.8
Plastic Limit (PL)	14.0
Plasticity Index (PI)	66.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

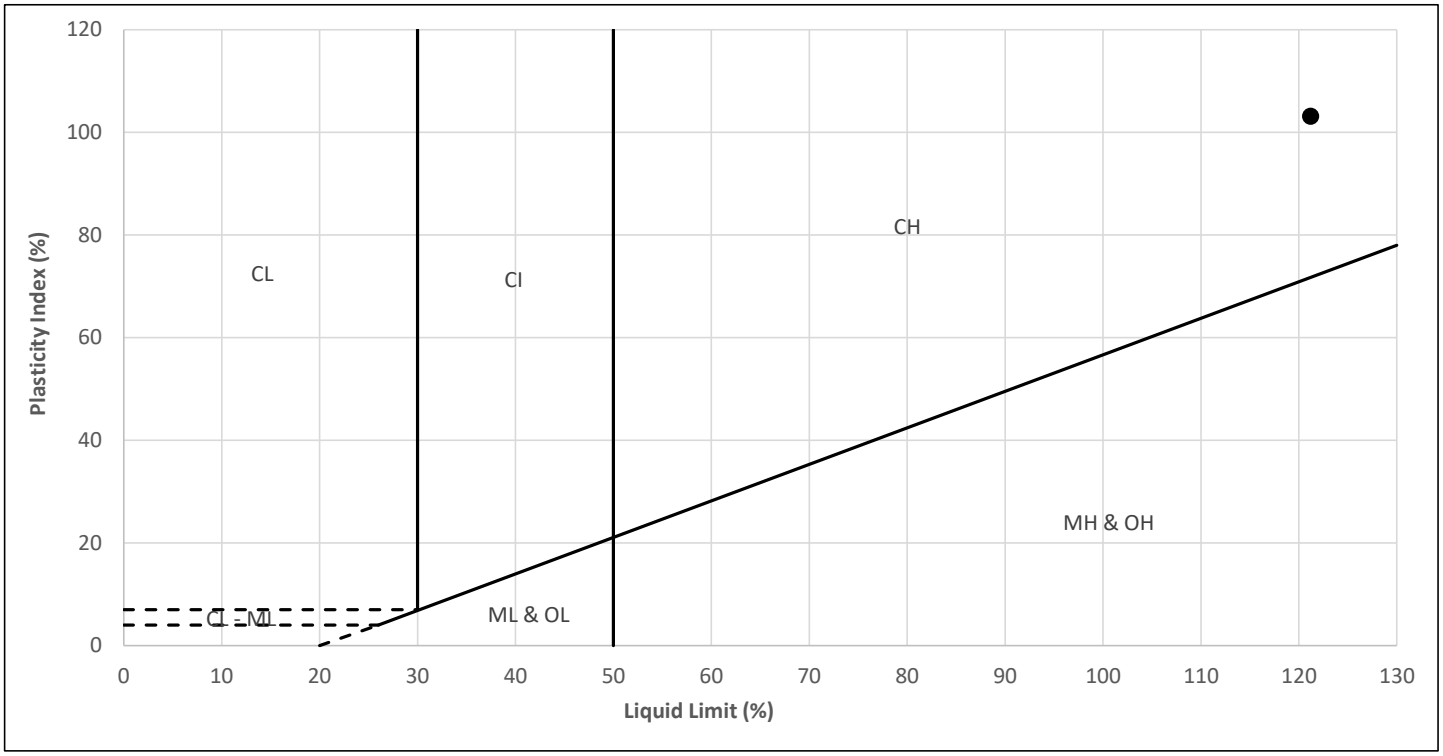
Project:	Snake Lake Reservoir Expansion	**Sample #:**	140AU2
Project No.:	1560-193-00	**Source:**	22CH140
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 140AU2	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	121.2
Plastic Limit (PL)	18.0
Plasticity Index (PI)	103.2

Soil Plasticity	High
Soil Classification	CH



Comments:

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ATTERBERG LIMITS

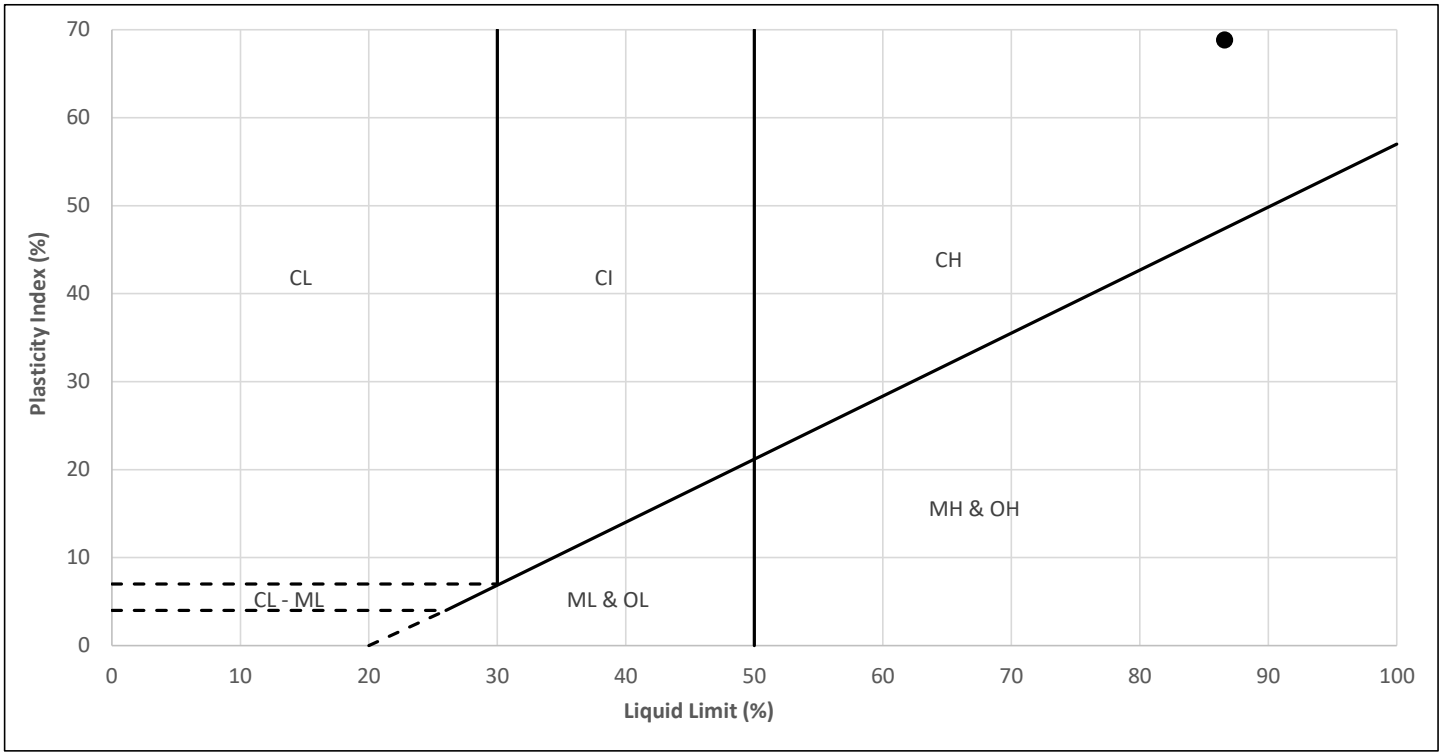
Project:	Snake Lake Reservoir Expansion	**Sample #:**	140RC4
Project No.:	1560-193-00	**Source:**	22CH140
Owner:	EID	**Sample Depth:**	8.2m
File No.:	AL - 140RC4	**Test Date:**	19-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	86.6
Plastic Limit (PL)	17.8
Plasticity Index (PI)	68.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

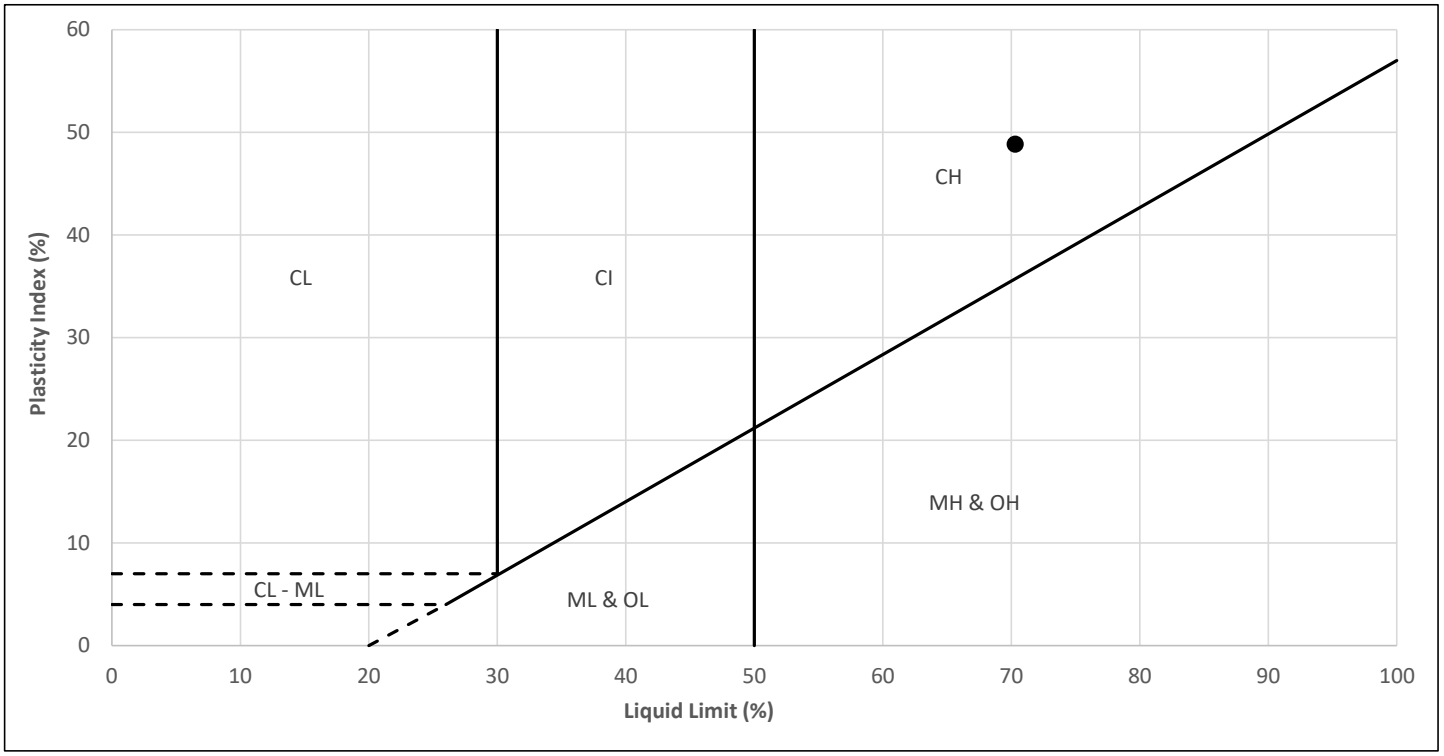
Project:	Snake Lake Reservoir Expansion	**Sample #:**	140RC6
Project No.:	1560-193-00	**Source:**	22CH140
Owner:	EID	**Sample Depth:**	10.2m
File No.:	AL - 140RC6	**Test Date:**	19-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	70.3
Plastic Limit (PL)	21.4
Plasticity Index (PI)	48.9

Soil Plasticity	High
Soil Classification	CH



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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	105SPT3
Project No.:	1560-193-00	**Source:**	22BH105
Owner:	Eastern irrigation District	**Sample Depth:**	4.6m
File No.:	DT - 105SPT3	**Date:**	9-May-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CL	Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays
Sample Type:	SPT	

Course Material >2mm:	18.5	%	**Test Method:**	Method A	
Specimen Density:	1773.7	kg/m^3	**Classification:**	ND1	
Moisture Content (before):	14.8	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	19.8	%	**Flow Rate:**	1.54	ml/s
Length of Sample:	38.5	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	108SPT1
Project No.:	1560-193-00	**Source:**	22BH108
Owner:	Eastern irrigation District	**Sample Depth:**	3.0m
File No.:	DT - 108SPT1	**Date:**	9-May-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	SPT	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1785.3	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	10.1	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	15.6	%	**Flow Rate:**	2.60	ml/s
Length of Sample:	32.0	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments: Sample below required 38mm ASTM Standard

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	109SPT2
Project No.:	1560-193-00	**Source:**	22BH109
Owner:	Eastern irrigation District	**Sample Depth:**	3.0m
File No.:	DT - 109SPT2	**Date:**	9-May-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CI	Inorganic clays of medium plasticity, silty clays
Sample Type:	SPT	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1721.9	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	15.4	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	15.4	%	**Flow Rate:**	2.09	ml/s
Length of Sample:	38.4	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	112SPT6
Project No.:	1560-193-00	**Source:**	22BH112
Owner:	Eastern irrigation District	**Sample Depth:**	9.1m
File No.:	DT - 109SPT2	**Date:**	9-May-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	SPT	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1724.5	kg/m^3	**Classification:**	ND4	
Moisture Content (before):	14.3	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	12.9	%	**Flow Rate:**	0.93	ml/s
Length of Sample:	40.9	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	116RC5
Project No.:	1560-193-00	**Source:**	22CH116
Owner:	Eastern irrigation District	**Sample Depth:**	10.0m
File No.:	DT - 116RC5	**Date:**	6-Jul-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Intact	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1603	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	15.6	%	**Hydraulic Head:**	380	mm
Moisture Content (After):	11.8	%	**Flow Rate:**	2.37	ml/s
Length of Sample:	38.5	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	118UD2
Project No.:	1560-193-00	**Source:**	22CH118
Owner:	Eastern irrigation District	**Sample Depth:**	3.8m
File No.:	DT - 118UD2	**Date:**	19-Jul-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Core	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1591.0	kg/m^3	**Classification:**	D2	
Moisture Content (before):	20.7	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	20.0	%	**Flow Rate:**	1.41	ml/s
Length of Sample:	38.0	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	118UD5
Project No.:	1560-193-00	**Source:**	22BH118
Owner:	Eastern irrigation District	**Sample Depth:**	8.6m
File No.:	DT - 118UD5	**Date:**	19-Jul-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Core	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1712.6	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	12.8	%	**Hydraulic Head:**	180	mm
Moisture Content (After):	18.8	%	**Flow Rate:**	2.62	ml/s
Length of Sample:	37.5	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	120RC2
Project No.:	1560-193-00	**Source:**	22CH120
Owner:	Eastern irrigation District	**Sample Depth:**	7.0m
File No.:	DT - 120RC2	**Date:**	19-Jul-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Core	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1629.7	kg/m^3	**Classification:**	D2	
Moisture Content (before):	21.0	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	21.7	%	**Flow Rate:**	1.07	ml/s
Length of Sample:	38.1	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	120SPT7
Project No.:	1560-193-00	**Source:**	22BH120
Owner:	Eastern irrigation District	**Sample Depth:**	10.7m
File No.:	DT - 120SPT7	**Date:**	11-May-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	SPT	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1743.6	kg/m^3	**Classification:**	D2	
Moisture Content (before):	14.6	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	14.0	%	**Flow Rate:**	1.58	ml/s
Length of Sample:	37.2	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
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Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	123B1
Project No.:	1560-193-00	**Source:**	22CH123
Owner:	Eastern irrigation District	**Sample Depth:**	11.3m
File No.:	DT - 123B1	**Date:**	6-Jul-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Intact	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1733	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	13.1	%	**Hydraulic Head:**	180	mm
Moisture Content (After):	11.7	%	**Flow Rate:**	3.00	ml/s
Length of Sample:	40.8	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
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Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	124UD1
Project No.:	1560-193-00	**Source:**	22CH124
Owner:	Eastern irrigation District	**Sample Depth:**	8.1m
File No.:	DT - 124UD1	**Date:**	19-Jul-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Core	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1747.9	kg/m^3	**Classification:**	D2	
Moisture Content (before):	13.7	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	16.7	%	**Flow Rate:**	1.93	ml/s
Length of Sample:	38.0	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	125UD3
Project No.:	1560-193-00	**Source:**	22CH125
Owner:	EID	**Sample Depth:**	12.7m
File No.:	DT - 125UD3	**Date:**	27-Jul-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CH — Inorganic clays of high plasticity, fat clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1627.3	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	19.7	%	**Hydraulic Head:**	180	mm
Moisture Content (After):	19.2	%	**Flow Rate:**	2.10	ml/s
Length of Sample:	39.6	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	129SPT3
Project No.:	1560-193-00	**Source:**	22BH129
Owner:	Eastern irrigation District	**Sample Depth:**	4.6m
File No.:	DT - 129SPT3	**Date:**	26-May-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI — Inorganic clays of medium plasticity, silty clays
Sample Type: SPT

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1710	kg/m^3	**Classification:**	D2	
Moisture Content (before):	17.9	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	18.9	%	**Flow Rate:**	1.21	ml/s
Length of Sample:	39.8	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	132SPT3
Project No.:	1560-193-00	**Source:**	22BH132
Owner:	Eastern irrigation District	**Sample Depth:**	4.6m
File No.:	DT - 132SPT3	**Date:**	26-May-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CI	Inorganic clays of medium plasticity, silty clays
Sample Type:	SPT	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1778	kg/m^3	**Classification:**	D2	
Moisture Content (before):	17.6	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	19.6	%	**Flow Rate:**	1.35	ml/s
Length of Sample:	40.2	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	135UD4
Project No.:	1560-193-00	**Source:**	22CH135
Owner:	EID	**Sample Depth:**	16.5m
File No.:	DT - 135UD4	**Date:**	27-Jul-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CH — Inorganic clays of high plasticity, fat clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1671.9	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	18.3	%	**Hydraulic Head:**	180	mm
Moisture Content (After):	17.2	%	**Flow Rate:**	1.72	ml/s
Length of Sample:	38.2	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	137UD2
Project No.:	1560-193-00	**Source:**	22CH137
Owner:	EID	**Sample Depth:**	7.9m
File No.:	DT - 137UD2	**Date:**	27-Jul-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CH — Inorganic clays of high plasticity, fat clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1815.0	kg/m^3	**Classification:**	ND4	
Moisture Content (before):	12.8	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	14.2	%	**Flow Rate:**	0.91	ml/s
Length of Sample:	39.9	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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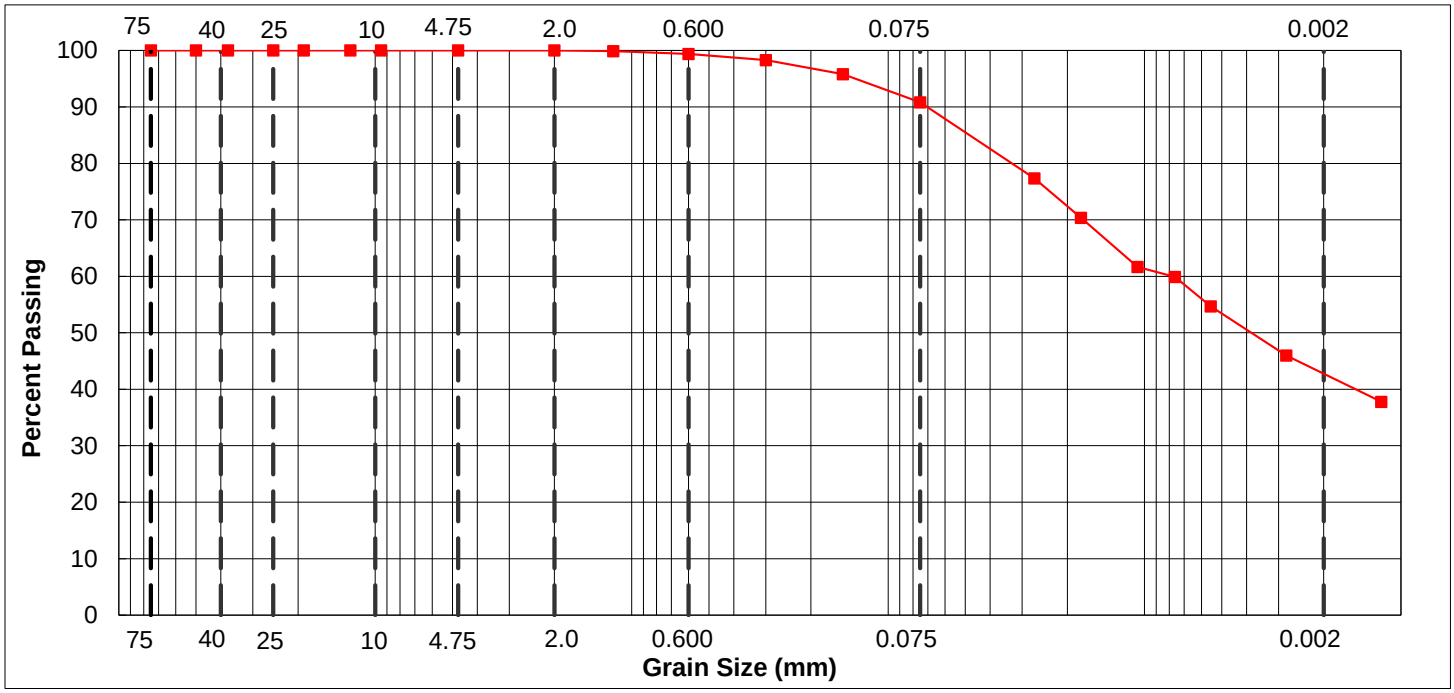
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	101AU2
Project No.:	1560-193-00	**Source:**	22BH101
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 101AU2	**Test Date:**	8-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	98.3
50.0	100.0	0.150	95.8
37.5	100.0	0.075	90.8
25.0	100.0	0.0269	77.3
19.0	100.0	0.0177	70.4
12.5	100.0	0.0107	61.7
9.5	100.0	0.0076	59.9
4.75	100.0	0.0055	54.7
2.00	100.0	0.0028	46.0
1.180	99.9	0.0012	37.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	8.6	425 µm to 75 µm
Silt	48.1	75 µm to 2 µm
Clay	42.7	<2 µm



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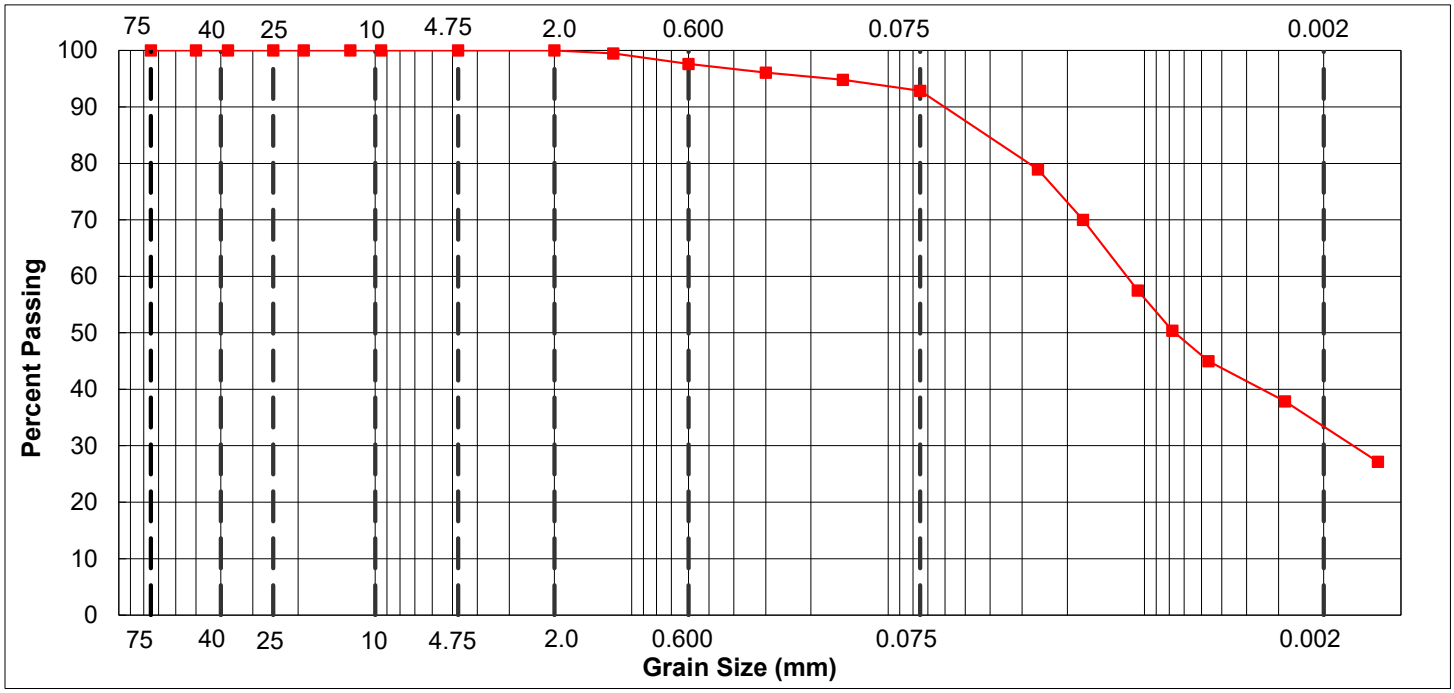
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	103AU6
Project No.:	1560-193-00	**Source:**	22BH103
Owner:	EID	**Sample Depth:**	4.3m
File No.:	GSA - 103AU6	**Date:**	29-Mar-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.6
75.0	100.0	0.300	96.1
50.0	100.0	0.150	94.8
37.5	100.0	0.075	92.8
25.0	100.0	0.0260	78.9
19.0	100.0	0.0174	70.0
12.5	100.0	0.0106	57.5
9.5	100.0	0.0078	50.4
4.75	100.0	0.0056	45.0
2.00	100.0	0.0028	37.9
1.180	99.5	0.0012	27.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.4	2.00 mm to 425 µm
Fine Sand	4.8	425 µm to 75 µm
Silt	59.4	75 µm to 2 µm
Clay	33.4	<2 µm



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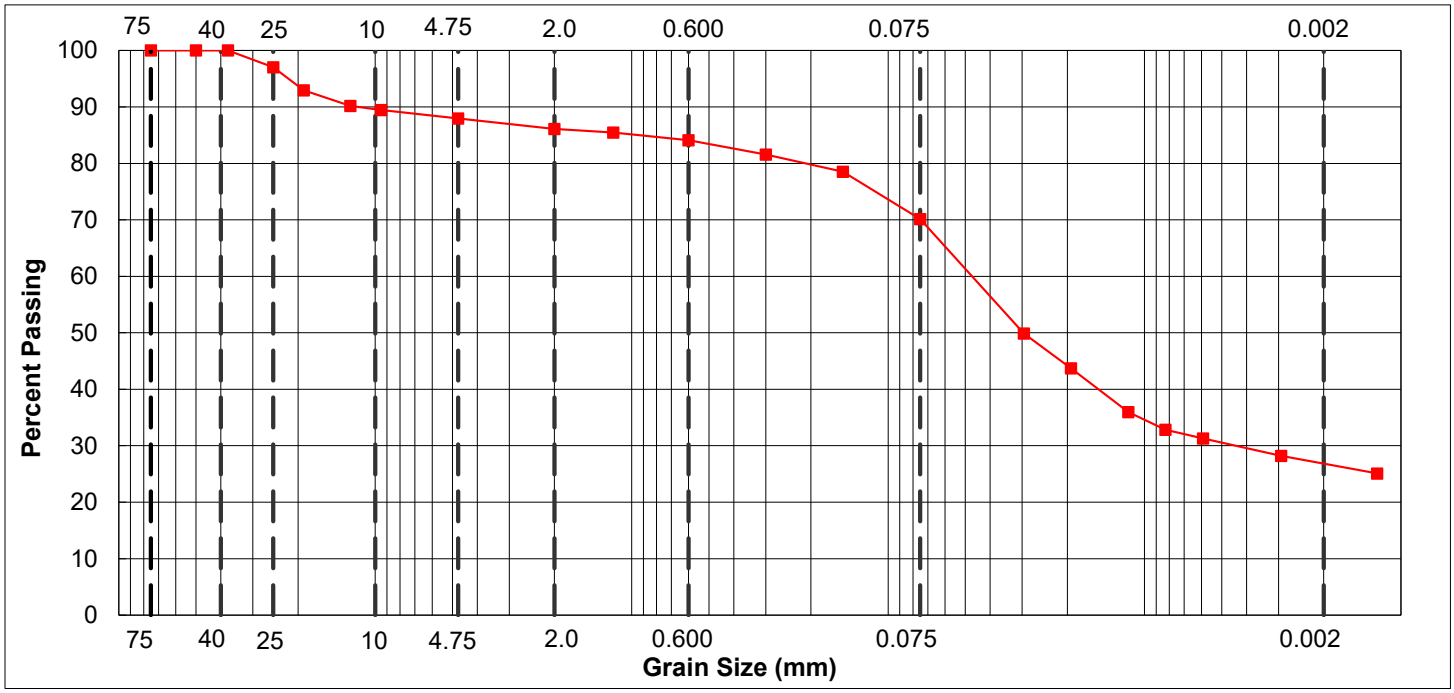
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	104AU2
Project No.:	1560-193-00	**Source:**	22BH104
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 104AU2	**Date:**	29-Mar-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	84.1
75.0	100.0	0.300	81.5
50.0	100.0	0.150	78.5
37.5	100.0	0.075	70.1
25.0	97.0	0.0295	49.9
19.0	93.0	0.0193	43.7
12.5	90.2	0.0116	35.9
9.5	89.5	0.0083	32.8
4.75	88.0	0.0059	31.3
2.00	86.1	0.0029	28.2
1.180	85.5	0.0012	25.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	3.0	80 mm to 20 mm
Fine Gravel	9.1	20 mm to 4.75 mm
Coarse Sand	1.9	4.75 mm to 2.00 mm
Medium Sand	2.0	2.00 mm to 425 µm
Fine Sand	13.9	425 µm to 75 µm
Silt	43.3	75 µm to 2 µm
Clay	26.8	<2 µm



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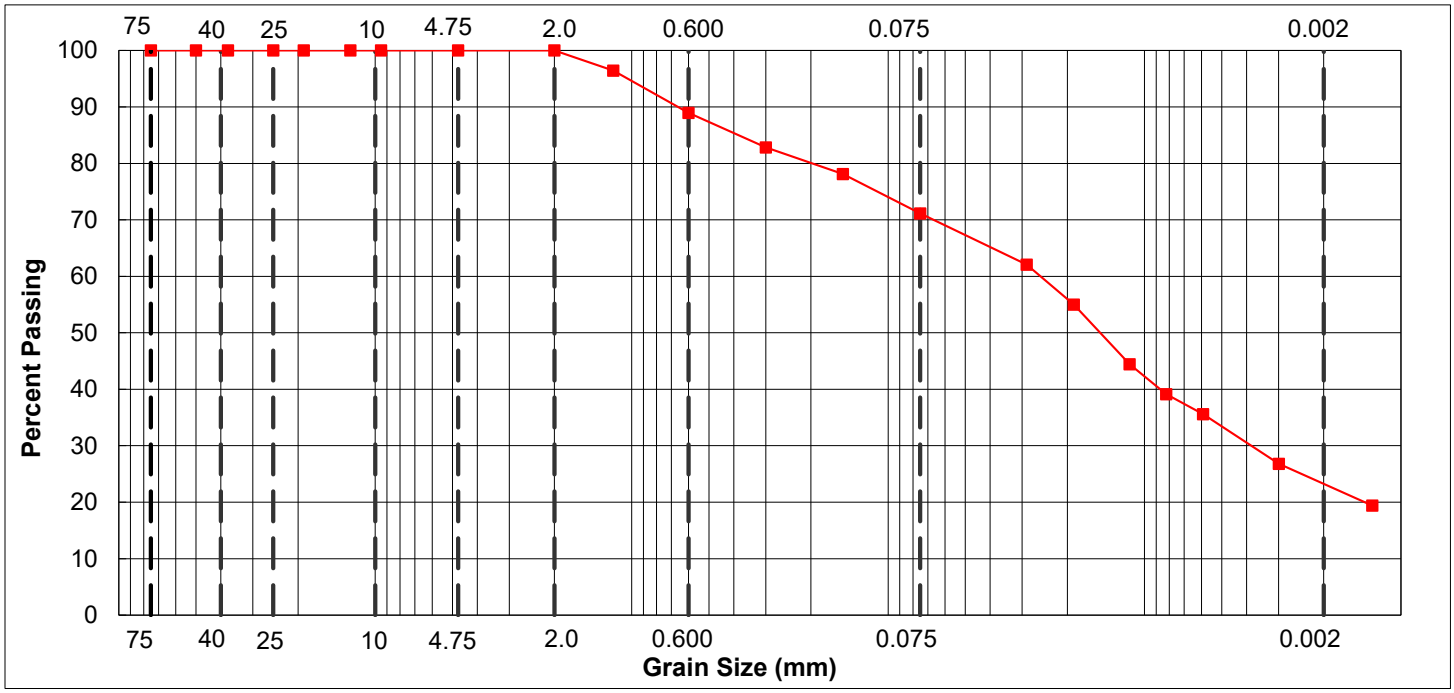
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	105AU7
Project No.:	1560-193-00	**Source:**	22BH105
Owner:	EID	**Sample Depth:**	5.2m
File No.:	GSA - 105AU7	**Date:**	1-Apr-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	89.0
75.0	100.0	0.300	82.8
50.0	100.0	0.150	78.1
37.5	100.0	0.075	71.1
25.0	100.0	0.0288	62.1
19.0	100.0	0.0189	55.0
12.5	100.0	0.0114	44.4
9.5	100.0	0.0082	39.1
4.75	100.0	0.0059	35.6
2.00	100.0	0.0030	26.8
1.180	96.5	0.0013	19.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	11.0	2.00 mm to 425 µm
Fine Sand	17.9	425 µm to 75 µm
Silt	47.9	75 µm to 2 µm
Clay	23.2	<2 µm



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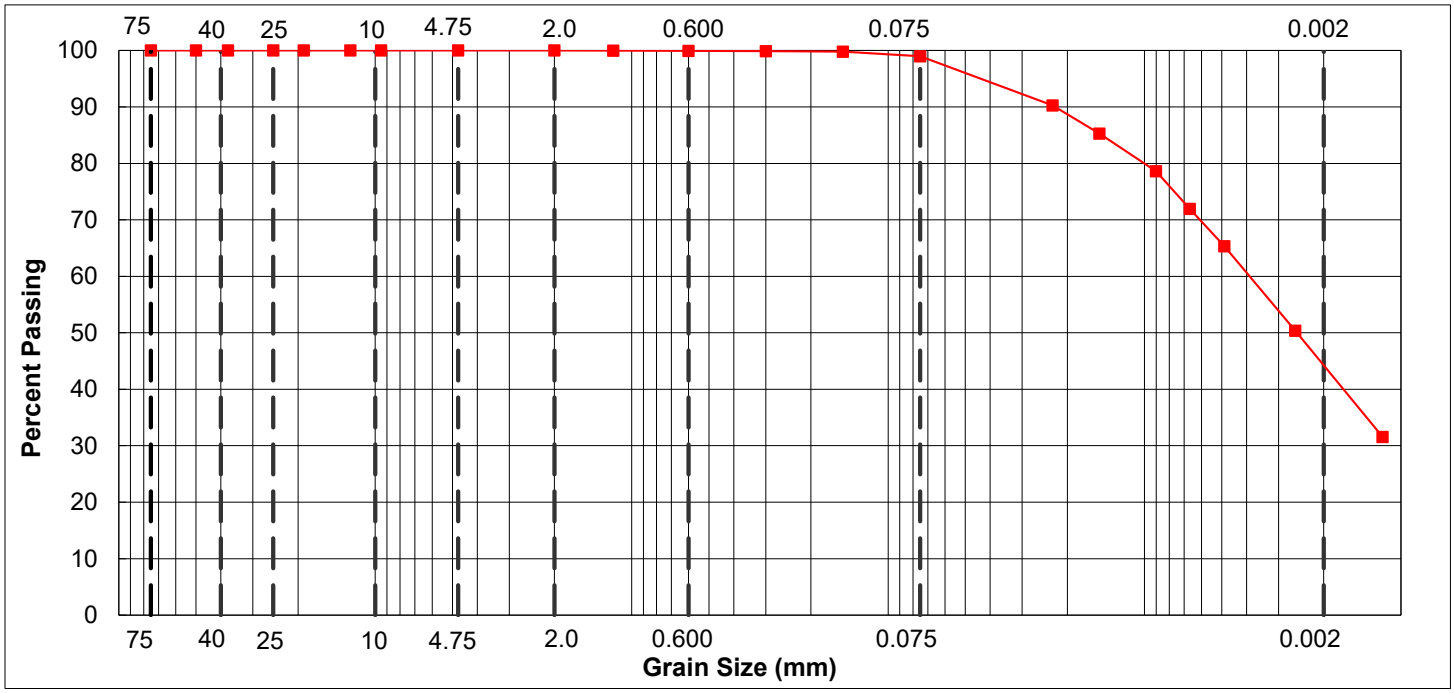
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	105RC5
Project No.:	1560-193-00	**Source:**	22CH105
Owner:	EID	**Sample Depth:**	9.5m
File No.:	GSA - 105RC5	**Test Date:**	6-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.0
25.0	100.0	0.0228	90.3
19.0	100.0	0.0150	85.3
12.5	100.0	0.0090	78.6
9.5	100.0	0.0067	72.0
4.75	100.0	0.0049	65.3
2.00	100.0	0.0026	50.4
1.180	100.0	0.0012	31.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	1.0	425 µm to 75 µm
Silt	54.7	75 µm to 2 µm
Clay	44.2	<2 µm



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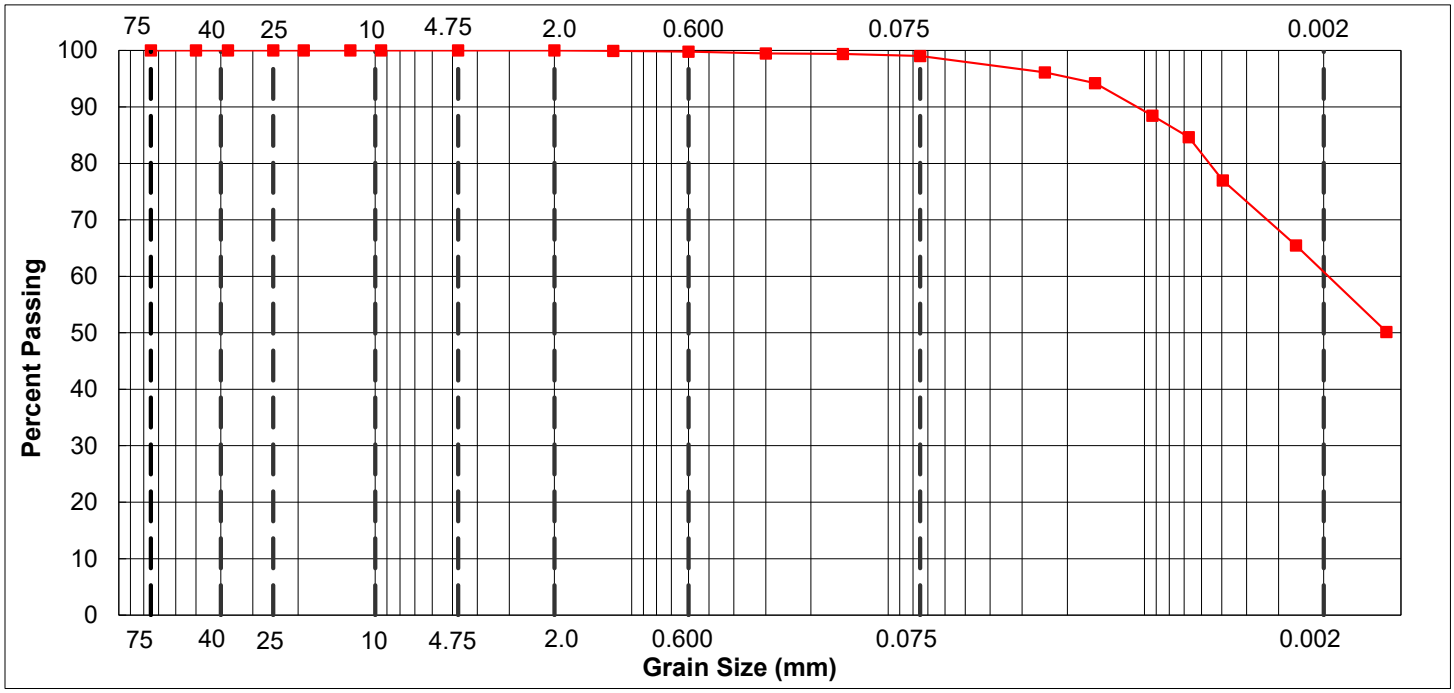
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	106AU4
Project No.:	1560-193-00	**Source:**	22BH106
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 106AU4	**Date:**	1-Apr-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.4
37.5	100.0	0.075	99.0
25.0	100.0	0.0245	96.1
19.0	100.0	0.0156	94.2
12.5	100.0	0.0093	88.5
9.5	100.0	0.0067	84.6
4.75	100.0	0.0050	77.0
2.00	100.0	0.0026	65.5
1.180	99.9	0.0011	50.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	0.8	425 µm to 75 µm
Silt	38.2	75 µm to 2 µm
Clay	60.8	<2 µm



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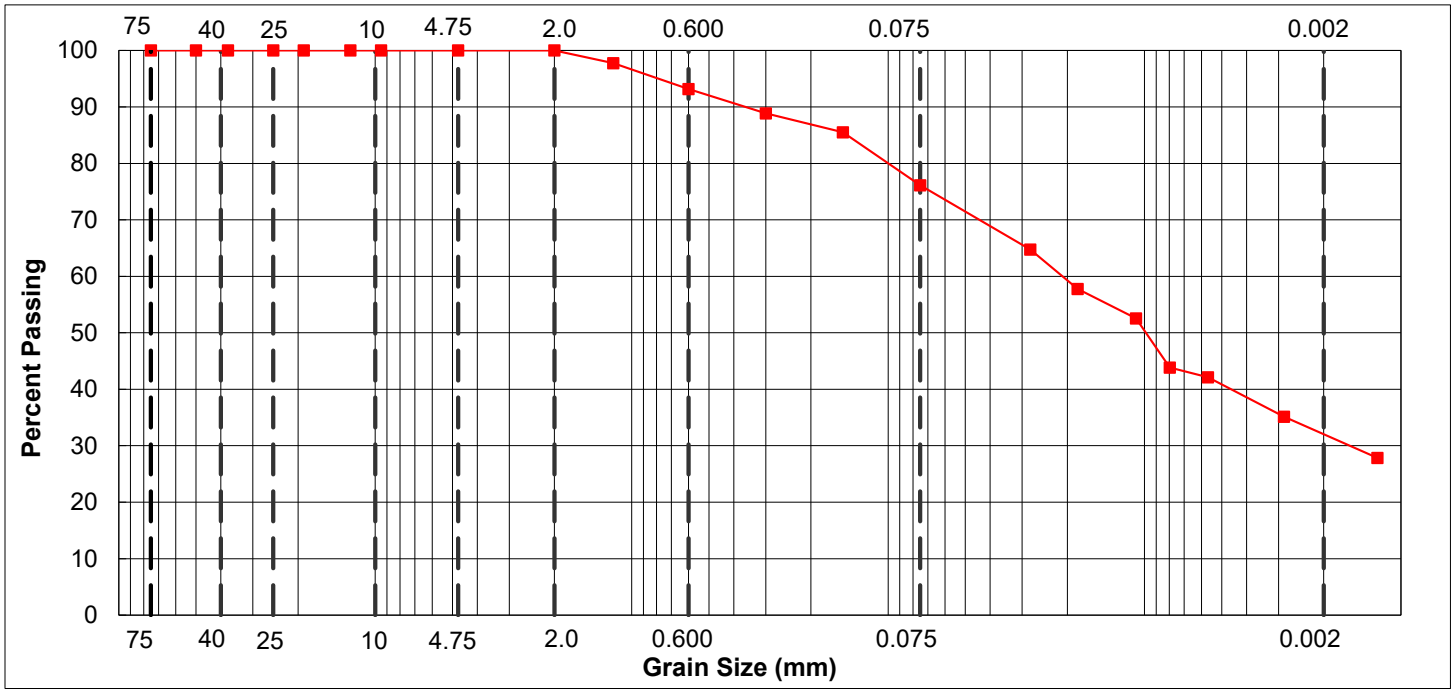
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	106AU9
Project No.:	1560-193-00	**Source:**	22BH106
Owner:	EID	**Sample Depth:**	6.7m
File No.:	GSA - 106AU9	**Date:**	1-Apr-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	93.2
75.0	100.0	0.300	88.8
50.0	100.0	0.150	85.5
37.5	100.0	0.075	76.1
25.0	100.0	0.0279	64.7
19.0	100.0	0.0182	57.8
12.5	100.0	0.0108	52.6
9.5	100.0	0.0080	43.9
4.75	100.0	0.0057	42.1
2.00	100.0	0.0029	35.1
1.180	97.7	0.0012	27.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	6.8	2.00 mm to 425 µm
Fine Sand	17.1	425 µm to 75 µm
Silt	44.1	75 µm to 2 µm
Clay	32.0	<2 µm



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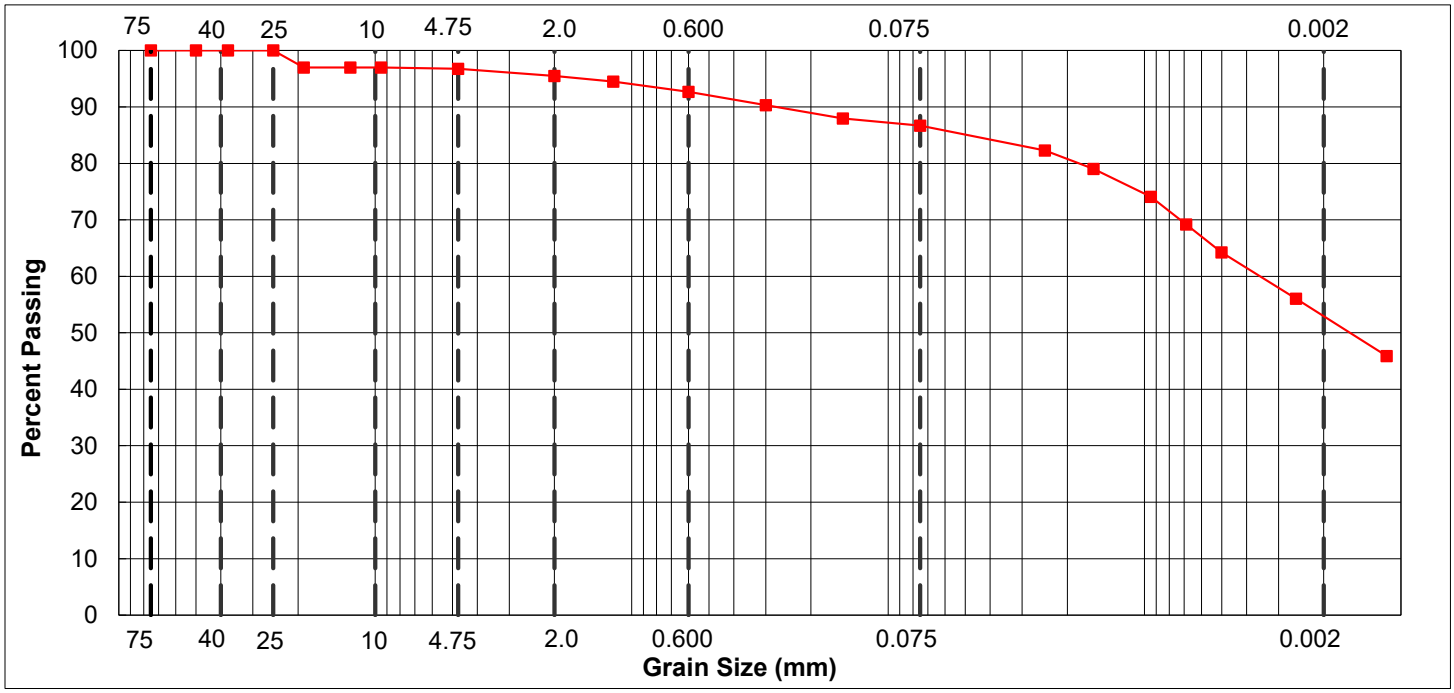
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	107AU2
Project No.:	1560-193-00	**Source:**	22BH107
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 107AU2	**Date:**	1-Apr-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	92.7
75.0	100.0	0.300	90.3
50.0	100.0	0.150	88.0
37.5	100.0	0.075	86.7
25.0	100.0	0.0245	82.3
19.0	97.0	0.0158	79.0
12.5	97.0	0.0094	74.1
9.5	97.0	0.0069	69.2
4.75	96.8	0.0050	64.3
2.00	95.5	0.0026	56.1
1.180	94.5	0.0011	45.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	3.2	20 mm to 4.75 mm
Coarse Sand	1.3	4.75 mm to 2.00 mm
Medium Sand	2.8	2.00 mm to 425 µm
Fine Sand	6.0	425 µm to 75 µm
Silt	33.7	75 µm to 2 µm
Clay	53.0	<2 µm



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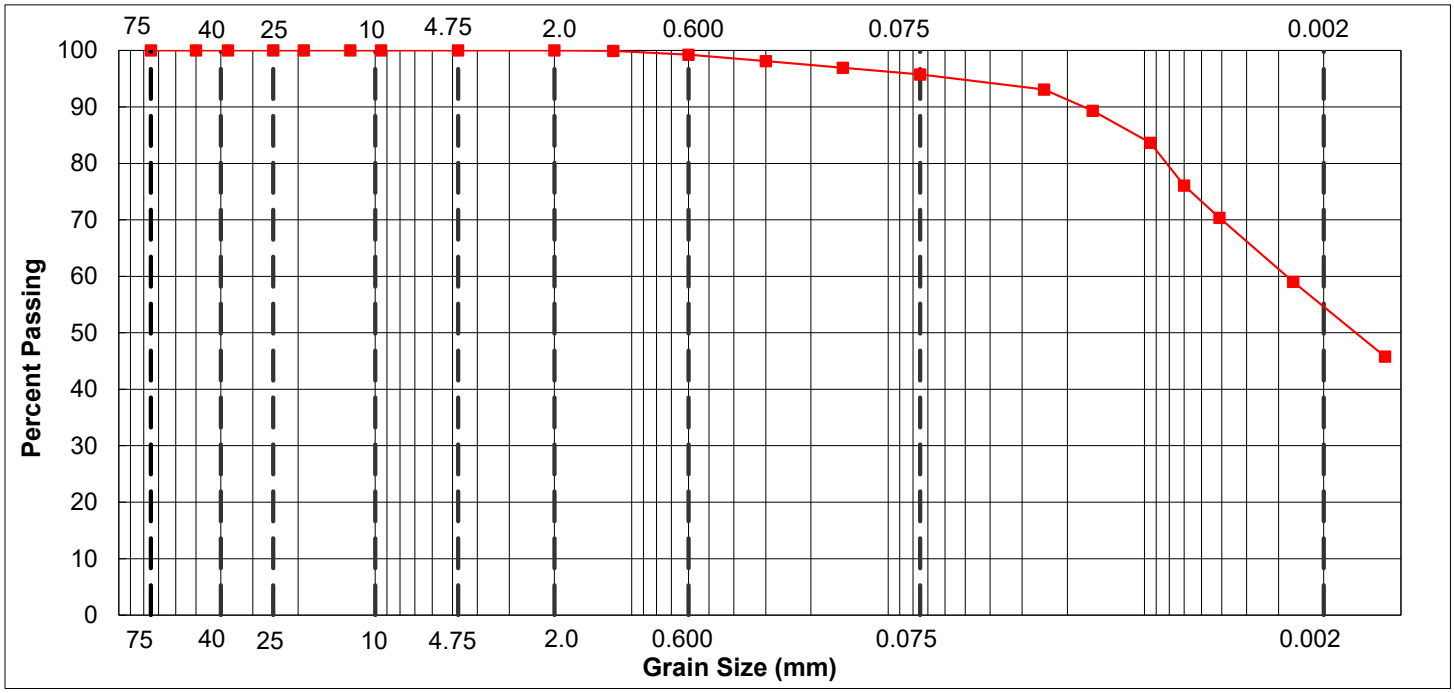
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	109AU9
Project No.:	1560-193-00	**Source:**	22BH109
Owner:	EID	**Sample Depth:**	6.7m
File No.:	GSA - 109AU9	**Date:**	11-Apr-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	98.1
50.0	100.0	0.150	96.9
37.5	100.0	0.075	95.8
25.0	100.0	0.0247	93.1
19.0	100.0	0.0159	89.3
12.5	100.0	0.0095	83.6
9.5	100.0	0.0070	76.1
4.75	100.0	0.0051	70.4
2.00	100.0	0.0026	59.0
1.180	99.9	0.0012	45.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	3.5	425 µm to 75 µm
Silt	41.1	75 µm to 2 µm
Clay	54.6	<2 µm



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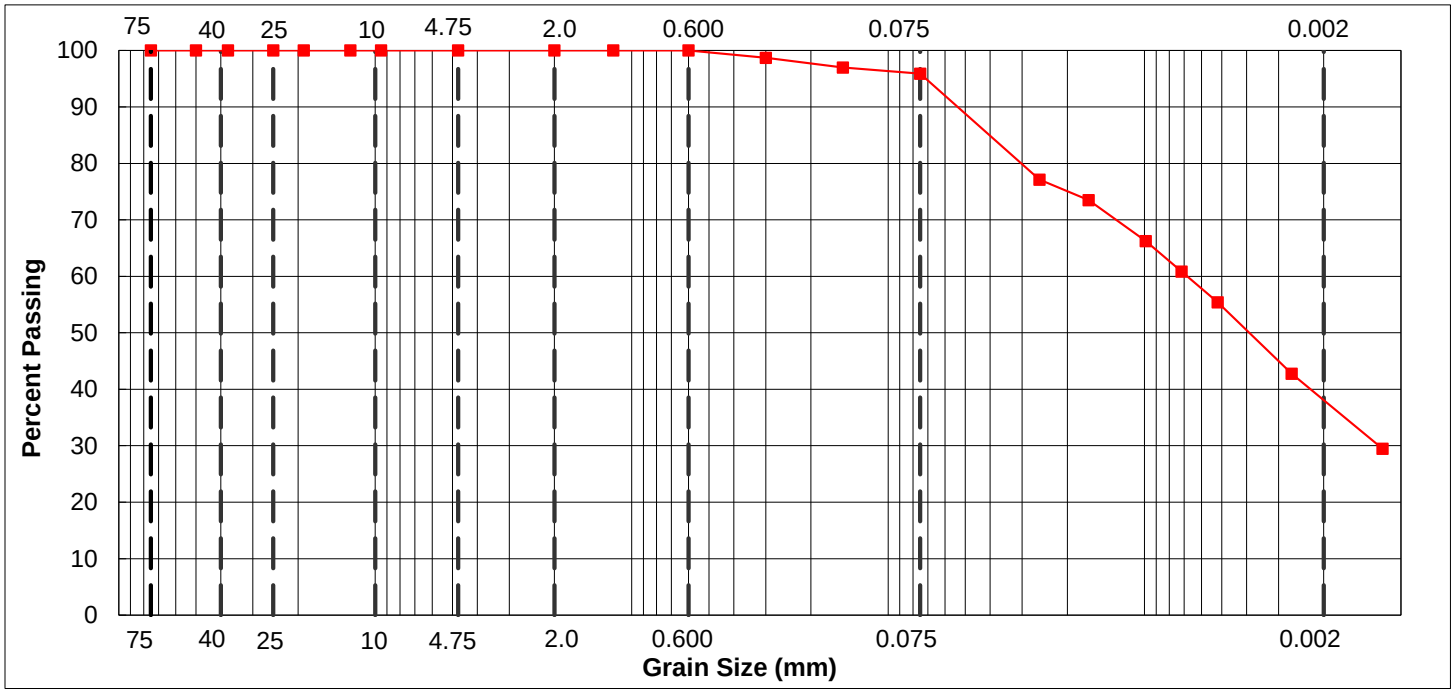
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	109RC2
Project No.:	1560-193-00	**Source:**	22CH109
Owner:	EID	**Sample Depth:**	4.8m
File No.:	GSA - 109RC2	**Test Date:**	4-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	98.7
50.0	100.0	0.150	97.0
37.5	100.0	0.075	95.9
25.0	100.0	0.0257	77.1
19.0	100.0	0.0165	73.5
12.5	100.0	0.0099	66.3
9.5	100.0	0.0072	60.8
4.75	100.0	0.0052	55.4
2.00	100.0	0.0027	42.8
1.180	100.0	0.0012	29.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	4.1	425 µm to 75 µm
Silt	57.8	75 µm to 2 µm
Clay	38.1	<2 µm



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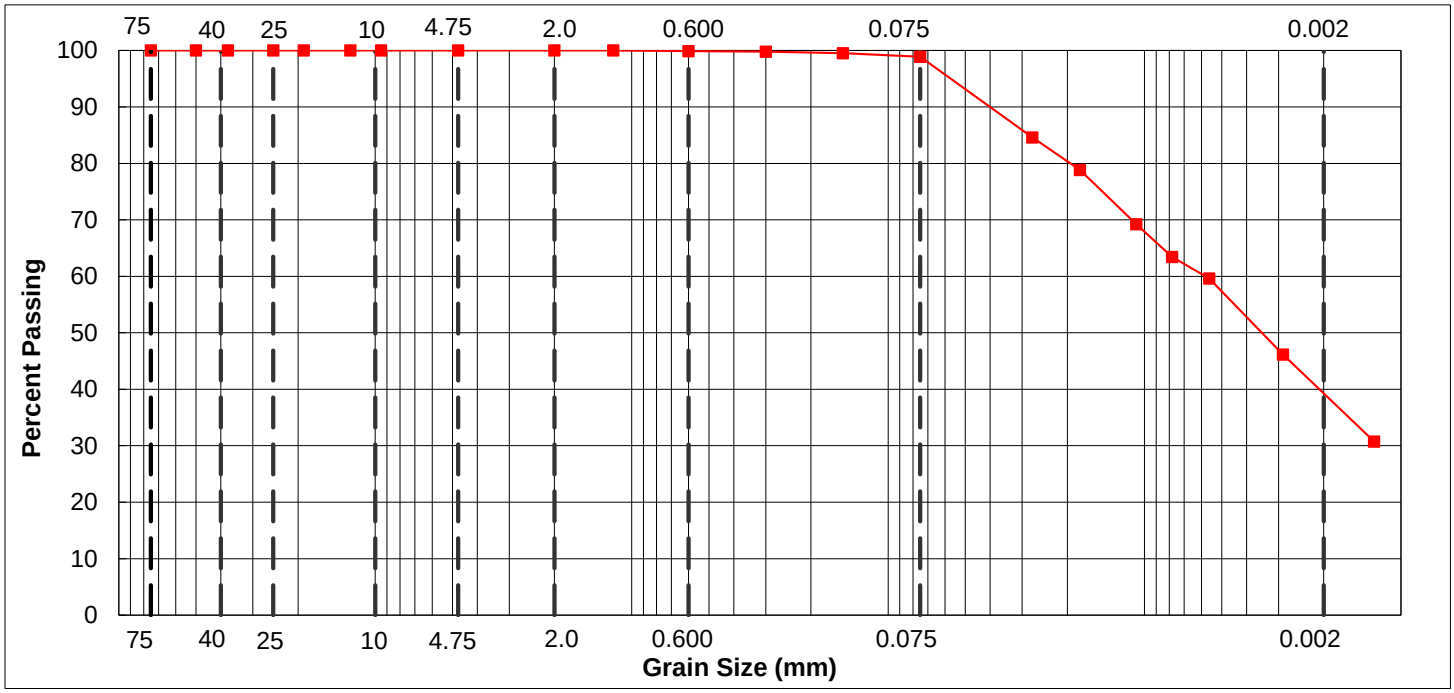
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	22CH111
Project No.:	1560-193-00	**Source:**	111RC1
Owner:	EID	**Sample Depth:**	5.4m
File No.:	GSA - 22CH111	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.5
37.5	100.0	0.075	98.9
25.0	100.0	0.0274	84.6
19.0	100.0	0.0178	78.8
12.5	100.0	0.0108	69.2
9.5	100.0	0.0078	63.4
4.75	100.0	0.0056	59.6
2.00	100.0	0.0029	46.1
1.180	100.0	0.0013	30.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	1.0	425 µm to 75 µm
Silt	59.6	75 µm to 2 µm
Clay	39.3	<2 µm



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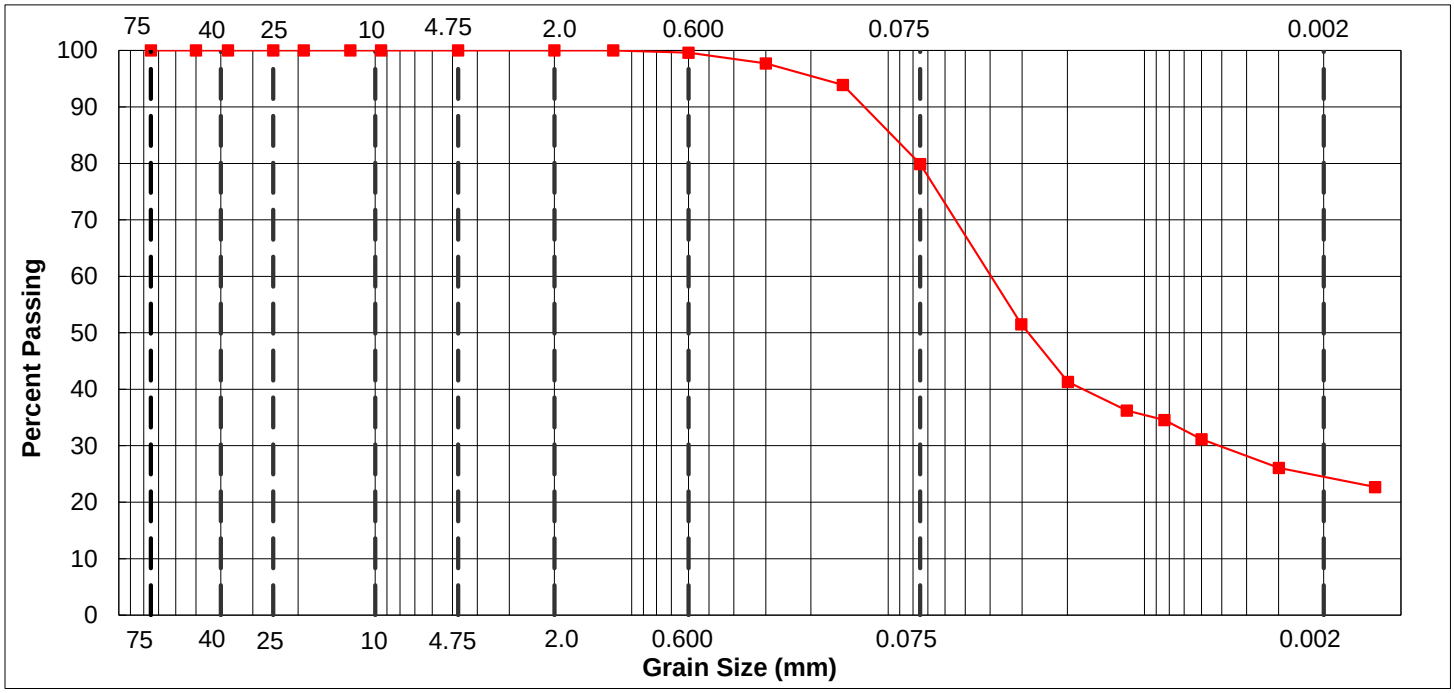
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	112AU1
Project No.:	1560-193-00	**Source:**	22BH112
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 112AU1	**Test Date:**	15-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	97.7
50.0	100.0	0.150	93.9
37.5	100.0	0.075	79.9
25.0	100.0	0.0302	51.5
19.0	100.0	0.0199	41.3
12.5	100.0	0.0117	36.2
9.5	100.0	0.0084	34.6
4.75	100.0	0.0060	31.2
2.00	100.0	0.0030	26.1
1.180	100.0	0.0013	22.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	19.7	425 µm to 75 µm
Silt	55.4	75 µm to 2 µm
Clay	24.5	<2 µm



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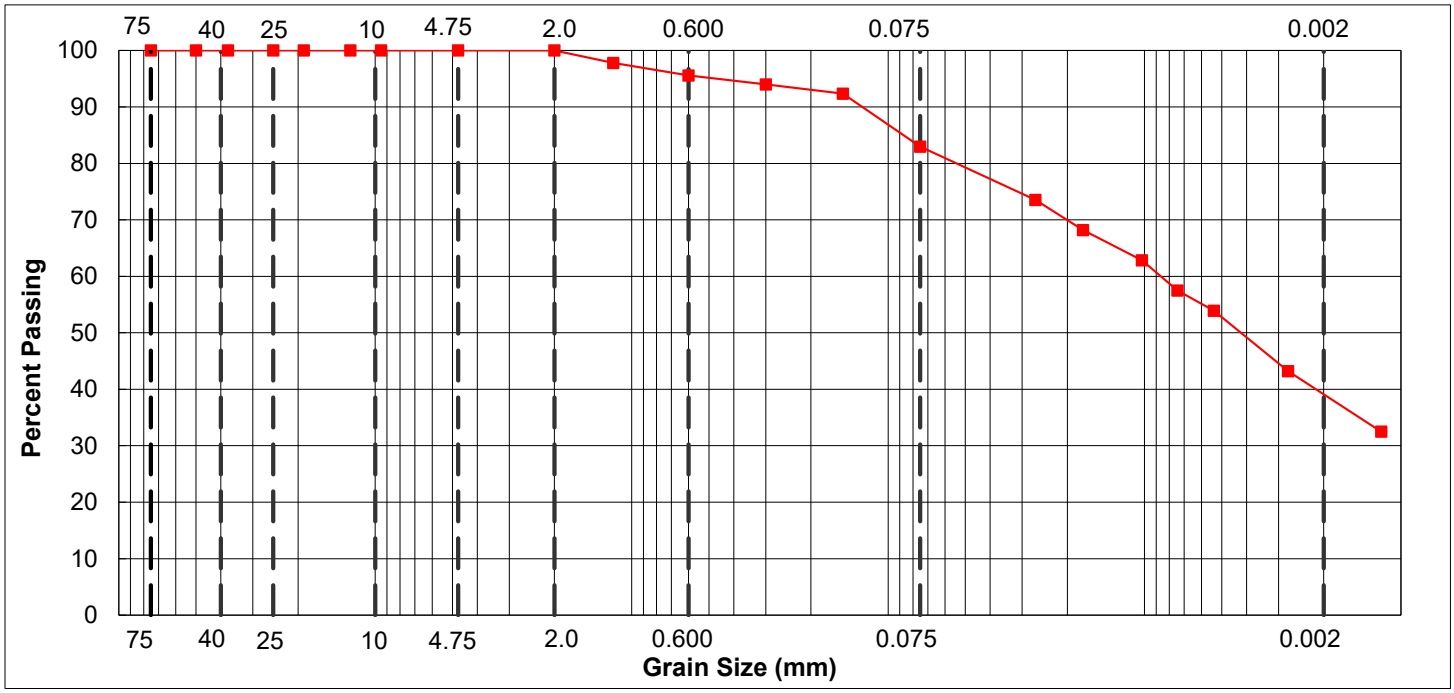
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	112AU11
Project No.:	1560-193-00	**Source:**	22BH112
Owner:	EID	**Sample Depth:**	8.2m
File No.:	GSA - 112AU11	**Date:**	11-Apr-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	95.6
75.0	100.0	0.300	94.0
50.0	100.0	0.150	92.4
37.5	100.0	0.075	83.0
25.0	100.0	0.0267	73.6
19.0	100.0	0.0174	68.2
12.5	100.0	0.0103	62.8
9.5	100.0	0.0074	57.5
4.75	100.0	0.0054	53.9
2.00	100.0	0.0028	43.2
1.180	97.8	0.0012	32.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	4.4	2.00 mm to 425 µm
Fine Sand	12.6	425 µm to 75 µm
Silt	43.9	75 µm to 2 µm
Clay	39.1	<2 µm



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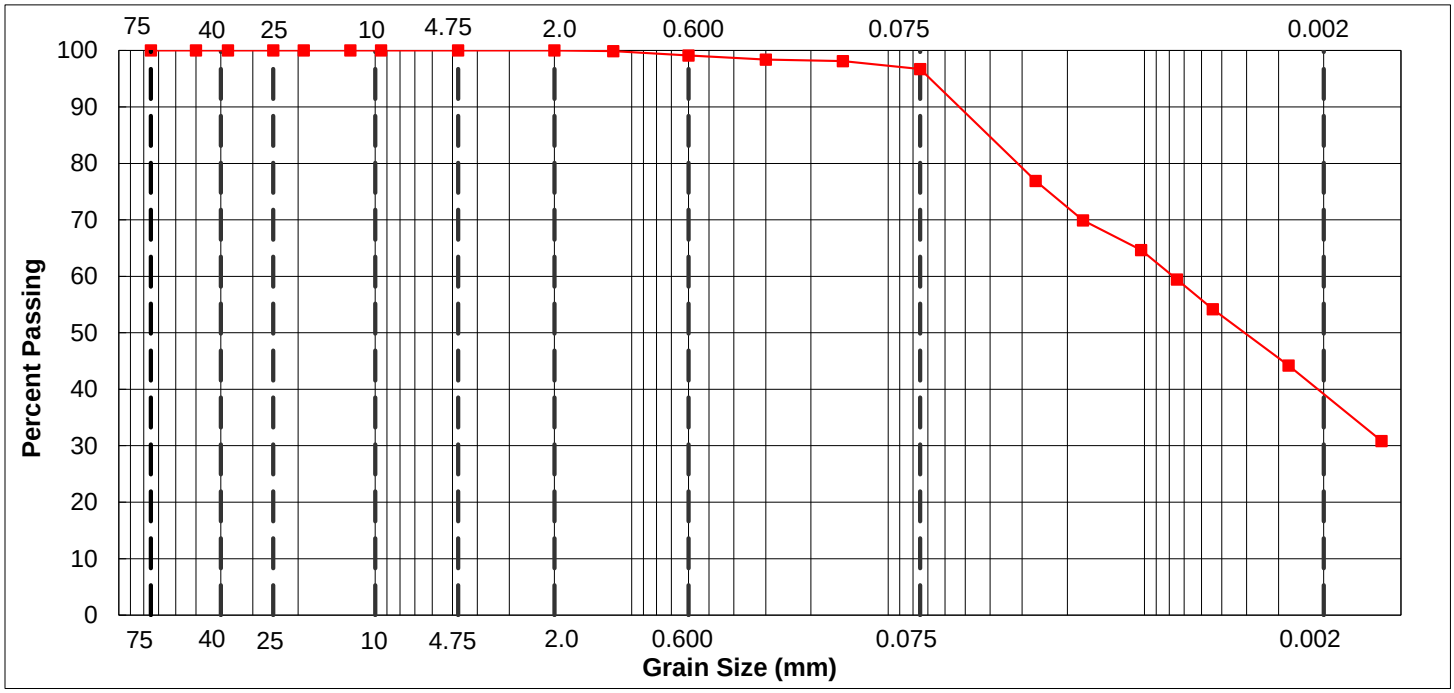
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	112RC2
Project No.:	1560-193-00	**Source:**	22CS112
Owner:	EID	**Sample Depth:**	5.0m
File No.:	GSA - 112RC2	**Test Date:**	6-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.1
75.0	100.0	0.300	98.4
50.0	100.0	0.150	98.1
37.5	100.0	0.075	96.7
25.0	100.0	0.0266	76.9
19.0	100.0	0.0174	69.9
12.5	100.0	0.0103	64.7
9.5	100.0	0.0075	59.4
4.75	100.0	0.0054	54.2
2.00	100.0	0.0027	44.2
1.180	99.9	0.0012	30.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.9	2.00 mm to 425 µm
Fine Sand	2.4	425 µm to 75 µm
Silt	57.5	75 µm to 2 µm
Clay	39.2	<2 µm



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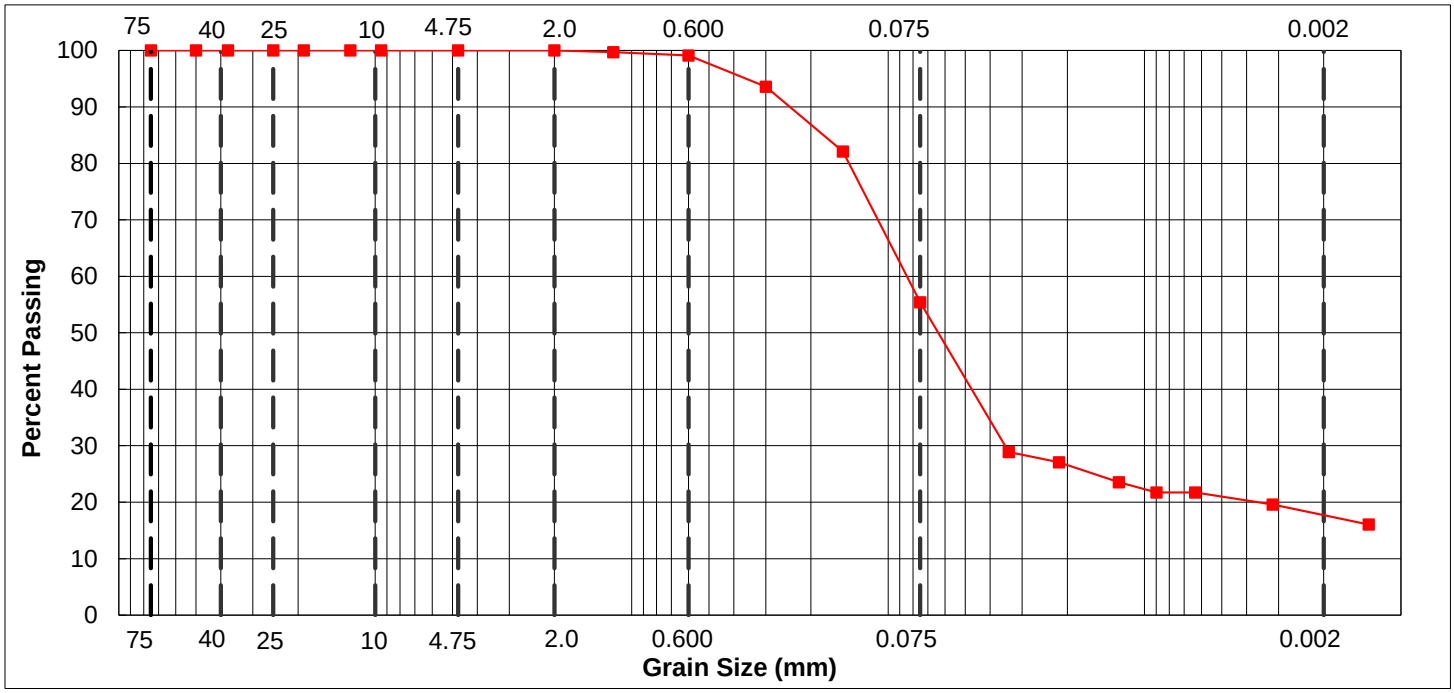
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	112RC5
Project No.:	1560-193-00	**Source:**	22CH112
Owner:	EID	**Sample Depth:**	9.1m
File No.:	GSA - 112RC5	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.1
75.0	100.0	0.300	93.6
50.0	100.0	0.150	82.1
37.5	100.0	0.075	55.4
25.0	100.0	0.0339	28.9
19.0	100.0	0.0216	27.1
12.5	100.0	0.0126	23.5
9.5	100.0	0.0090	21.7
4.75	100.0	0.0063	21.7
2.00	100.0	0.0032	19.6
1.180	99.7	0.0013	16.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.9	2.00 mm to 425 µm
Fine Sand	43.7	425 µm to 75 µm
Silt	37.7	75 µm to 2 µm
Clay	17.7	<2 µm



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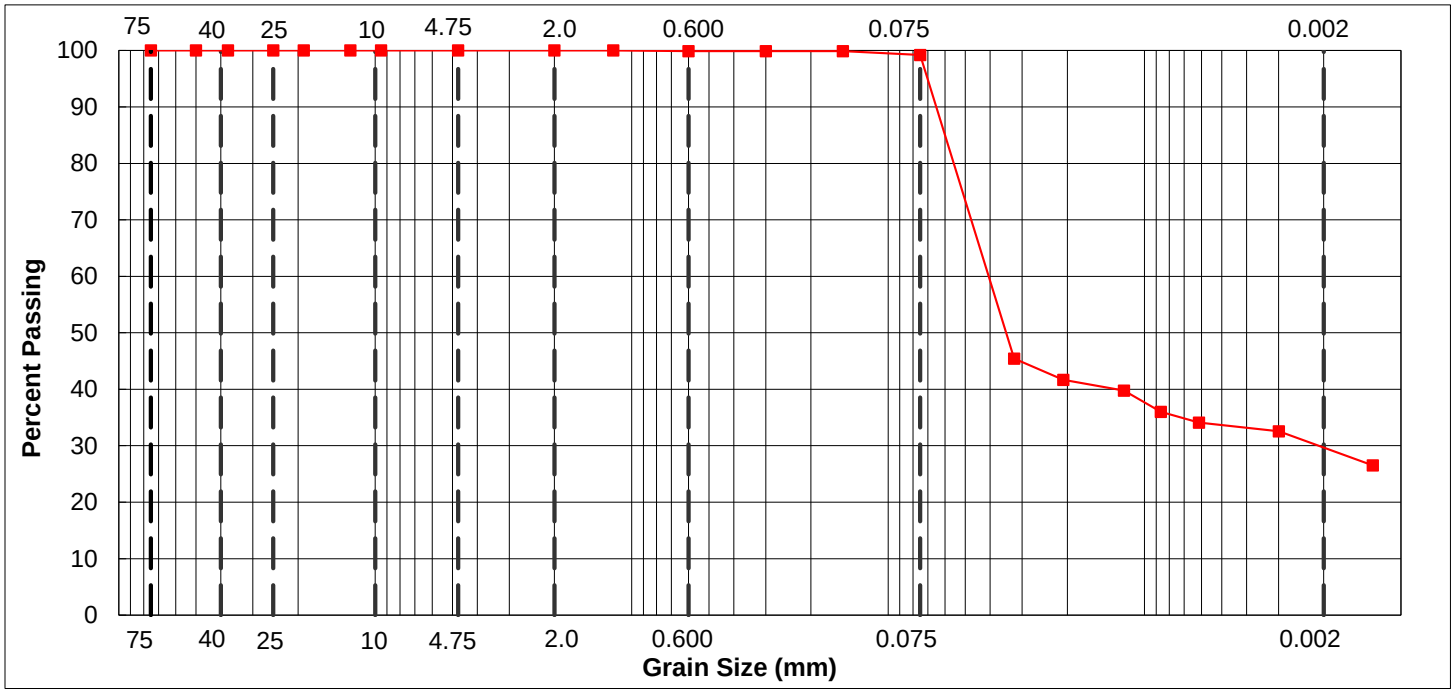
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	22CH112
Project No.:	1560-193-00	**Source:**	112RC6
Owner:	EID	**Sample Depth:**	11.2m
File No.:	GSA - 22CH112	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.2
25.0	100.0	0.0323	45.5
19.0	100.0	0.0207	41.7
12.5	100.0	0.0120	39.8
9.5	100.0	0.0086	36.0
4.75	100.0	0.0061	34.1
2.00	100.0	0.0030	32.6
1.180	100.0	0.0013	26.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.7	425 µm to 75 µm
Silt	69.5	75 µm to 2 µm
Clay	29.7	<2 µm



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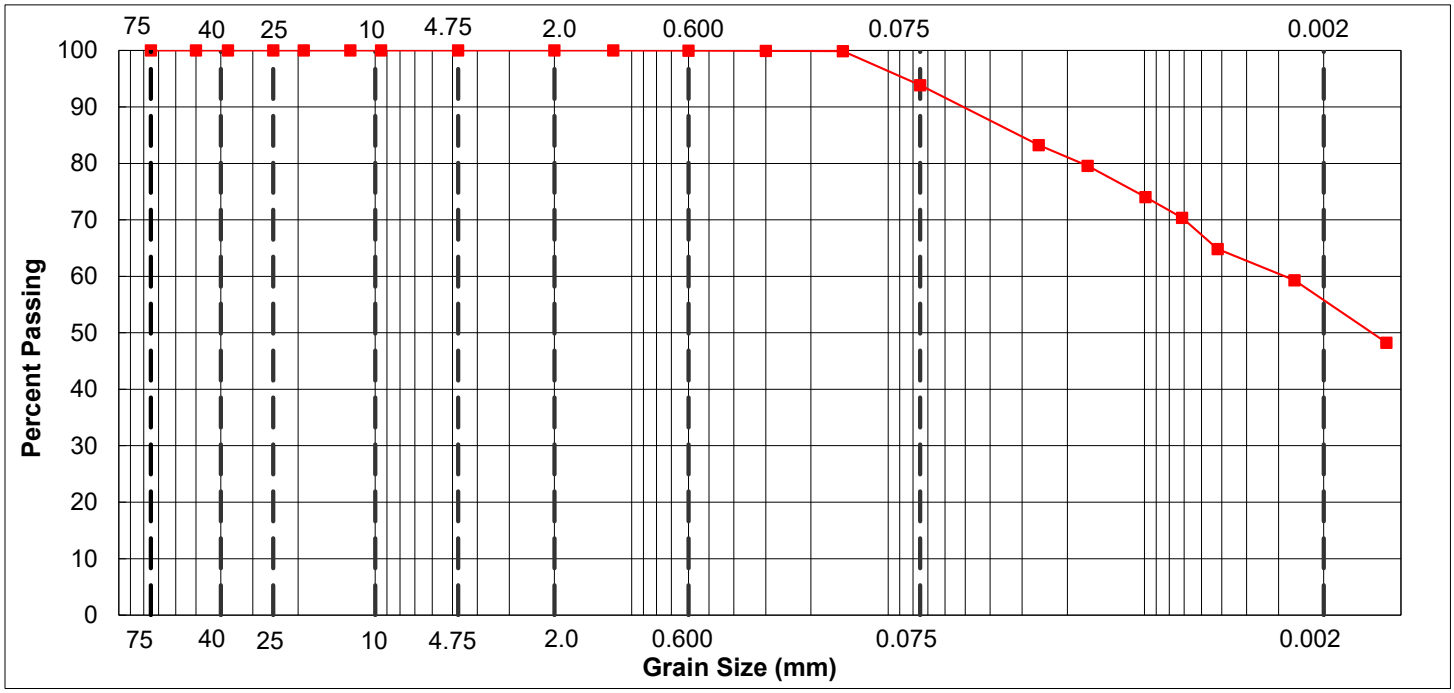
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	113AU11
Project No.:	1560-193-00	**Source:**	22BH113
Owner:	EID	**Sample Depth:**	8.2m
File No.:	GSA - 113AU11	**Date:**	11-Apr-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	93.9
25.0	100.0	0.0259	83.2
19.0	100.0	0.0167	79.6
12.5	100.0	0.0099	74.0
9.5	100.0	0.0071	70.4
4.75	100.0	0.0052	64.8
2.00	100.0	0.0026	59.3
1.180	100.0	0.0011	48.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	6.1	425 µm to 75 µm
Silt	38.1	75 µm to 2 µm
Clay	55.8	<2 µm



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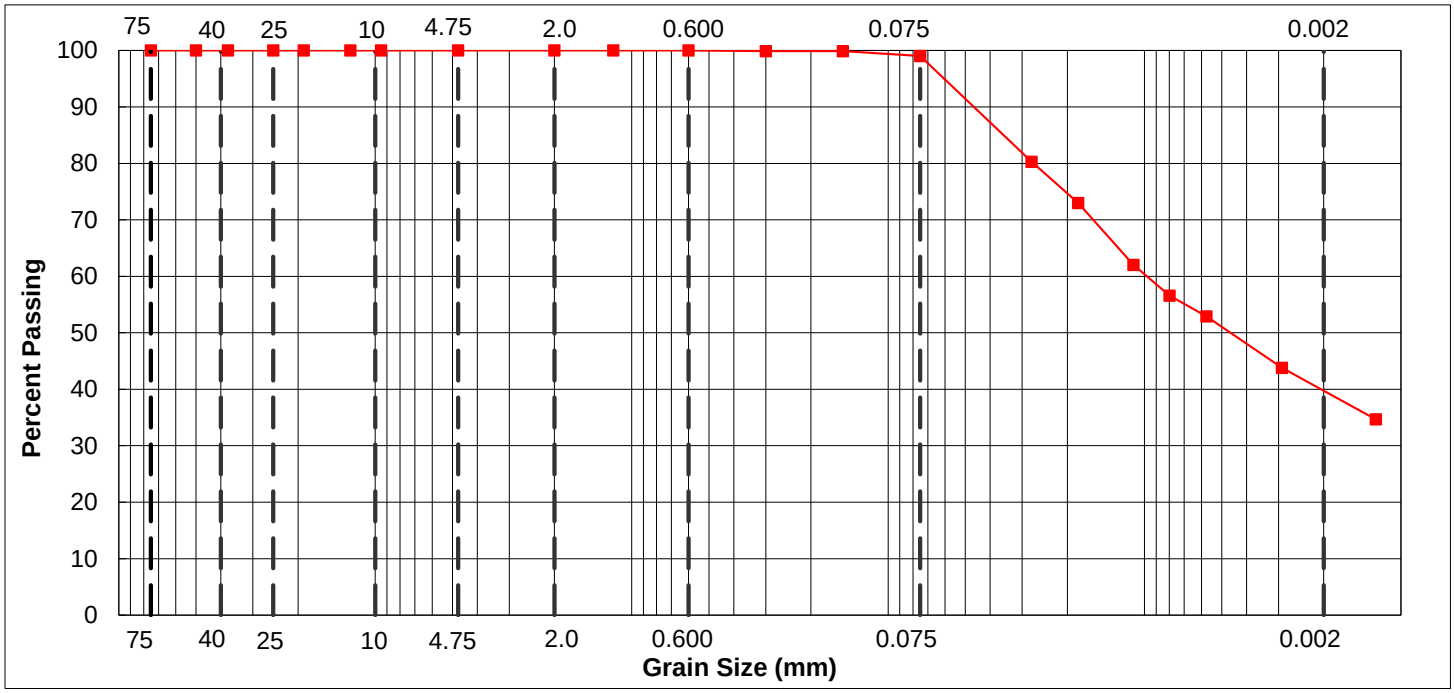
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	114UD1
Project No.:	1560-193-00	**Source:**	22CH114
Owner:	EID	**Sample Depth:**	11.2m
File No.:	GSA - 114UD1	**Test Date:**	8-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.0
25.0	100.0	0.0276	80.3
19.0	100.0	0.0181	73.0
12.5	100.0	0.0110	62.0
9.5	100.0	0.0080	56.6
4.75	100.0	0.0057	52.9
2.00	100.0	0.0029	43.8
1.180	100.0	0.0013	34.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	1.0	425 µm to 75 µm
Silt	59.3	75 µm to 2 µm
Clay	39.7	<2 µm



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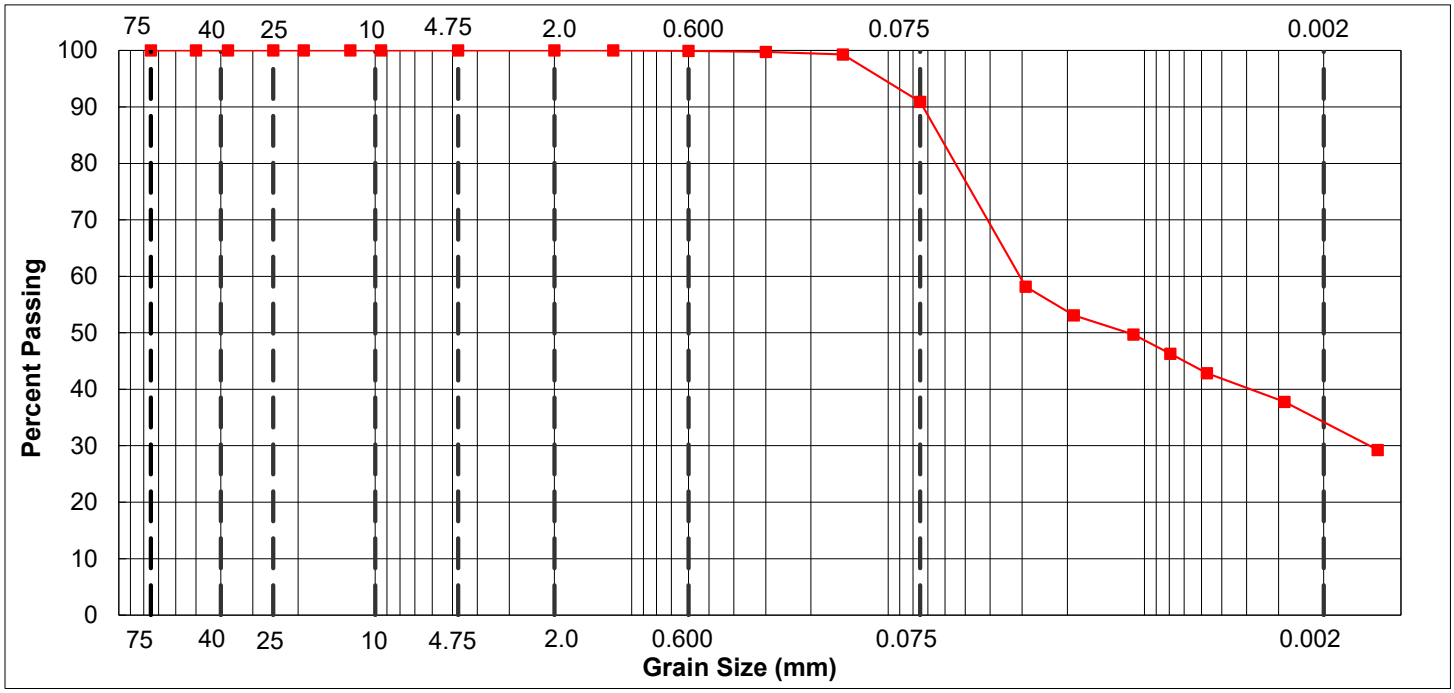
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	115UD2
Project No.:	1560-193-00	**Source:**	22CH115
Owner:	EID	**Sample Depth:**	13.5m
File No.:	GSA - 115UD2	**Test Date:**	8-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.3
37.5	100.0	0.075	90.9
25.0	100.0	0.0291	58.2
19.0	100.0	0.0189	53.1
12.5	100.0	0.0111	49.7
9.5	100.0	0.0079	46.3
4.75	100.0	0.0057	42.9
2.00	100.0	0.0028	37.8
1.180	100.0	0.0012	29.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	9.0	425 µm to 75 µm
Silt	56.7	75 µm to 2 µm
Clay	34.2	<2 µm



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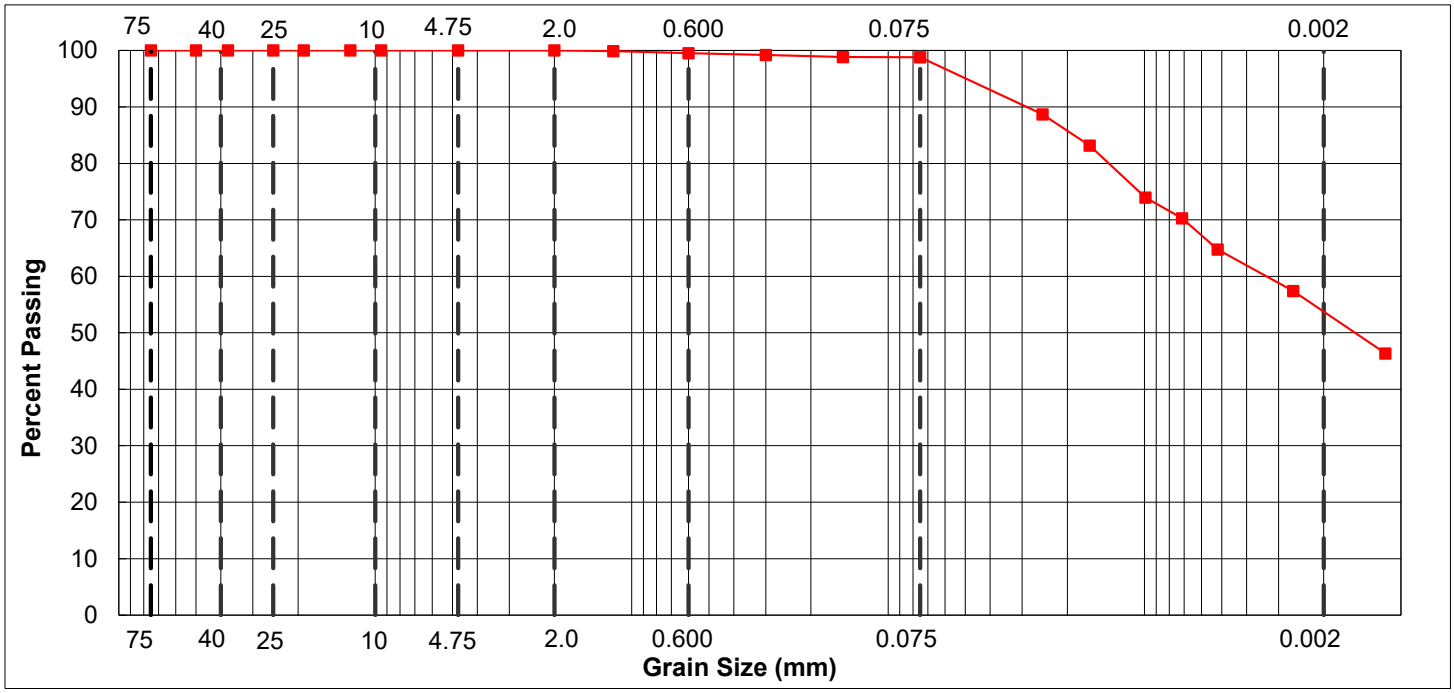
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	116AU3
Project No.:	1560-193-00	**Source:**	22BH116
Owner:	EID	**Sample Depth:**	2.1m
File No.:	GSA - 116AU3	**Date:**	12-Apr-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.2
50.0	100.0	0.150	98.9
37.5	100.0	0.075	98.8
25.0	100.0	0.0250	88.7
19.0	100.0	0.0163	83.2
12.5	100.0	0.0099	74.0
9.5	100.0	0.0071	70.3
4.75	100.0	0.0052	64.8
2.00	100.0	0.0026	57.4
1.180	99.9	0.0011	46.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	0.7	425 µm to 75 µm
Silt	45.1	75 µm to 2 µm
Clay	53.7	<2 µm



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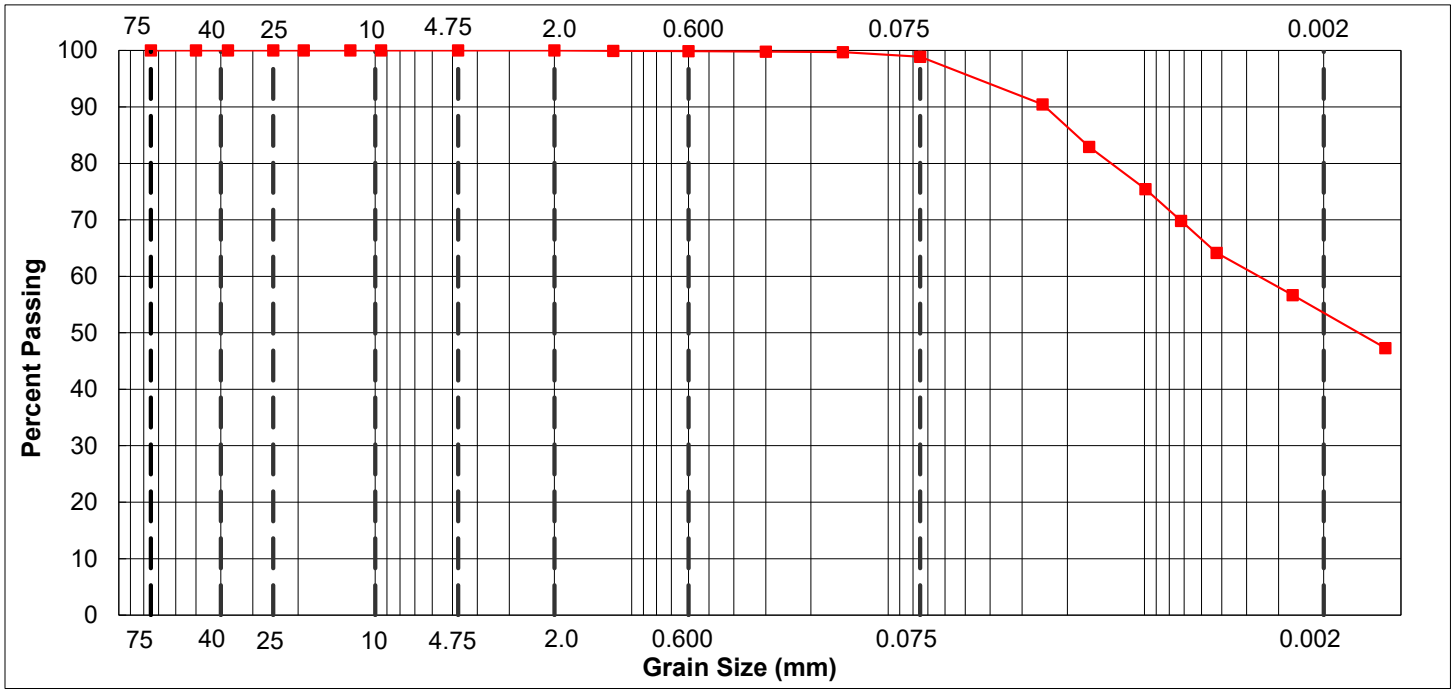
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	116AU9
Project No.:	1560-193-00	**Source:**	22BH116
Owner:	EID	**Sample Depth:**	6.7m
File No.:	GSA - 116AU9	**Date:**	12-Apr-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.7
37.5	100.0	0.075	98.9
25.0	100.0	0.0250	90.5
19.0	100.0	0.0165	82.9
12.5	100.0	0.0099	75.4
9.5	100.0	0.0072	69.8
4.75	100.0	0.0052	64.2
2.00	100.0	0.0026	56.7
1.180	99.9	0.0011	47.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	1.0	425 µm to 75 µm
Silt	45.4	75 µm to 2 µm
Clay	53.5	<2 µm



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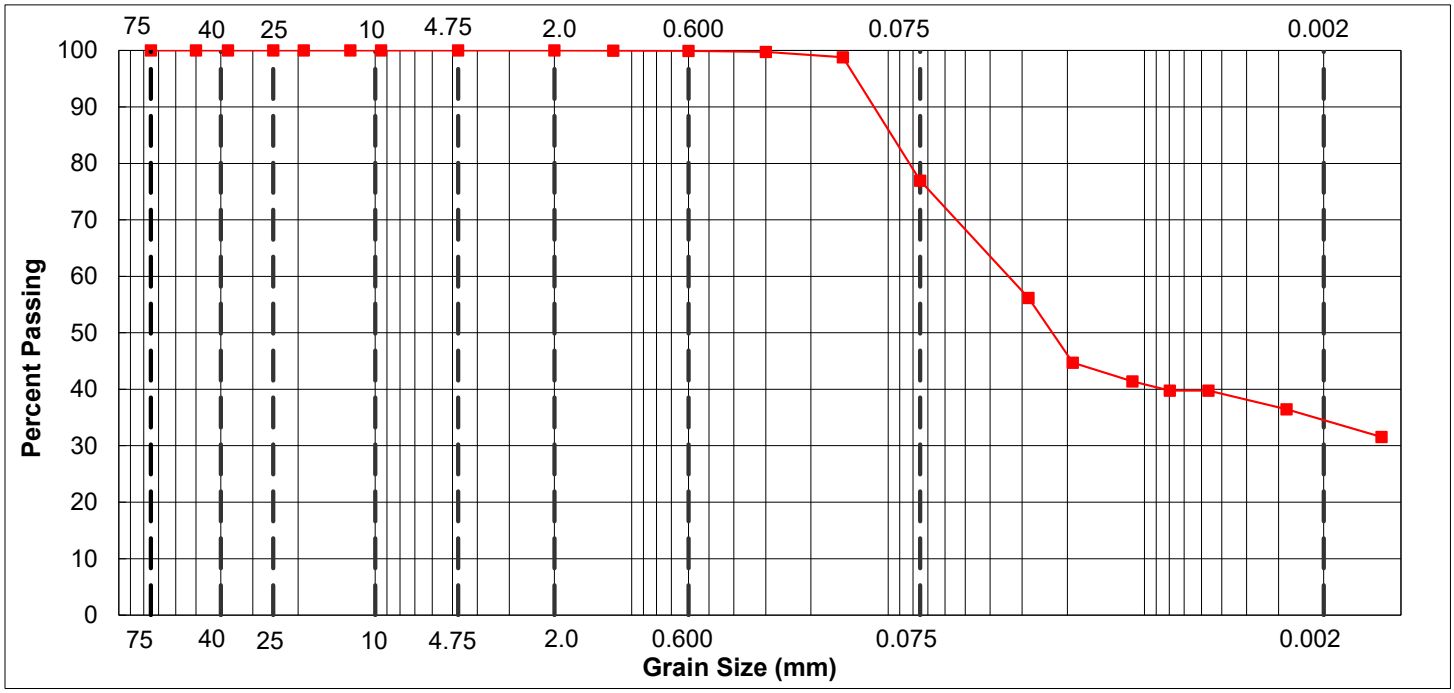
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	116RC5
Project No.:	1560-193-00	**Source:**	22CH116
Owner:	EID	**Sample Depth:**	10.0m
File No.:	GSA - 116RC5	**Test Date:**	6-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.7
50.0	100.0	0.150	98.8
37.5	100.0	0.075	76.9
25.0	100.0	0.0284	56.2
19.0	100.0	0.0191	44.7
12.5	100.0	0.0112	41.4
9.5	100.0	0.0080	39.8
4.75	100.0	0.0056	39.8
2.00	100.0	0.0028	36.5
1.180	100.0	0.0012	31.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	23.0	425 µm to 75 µm
Silt	42.4	75 µm to 2 µm
Clay	34.5	<2 µm



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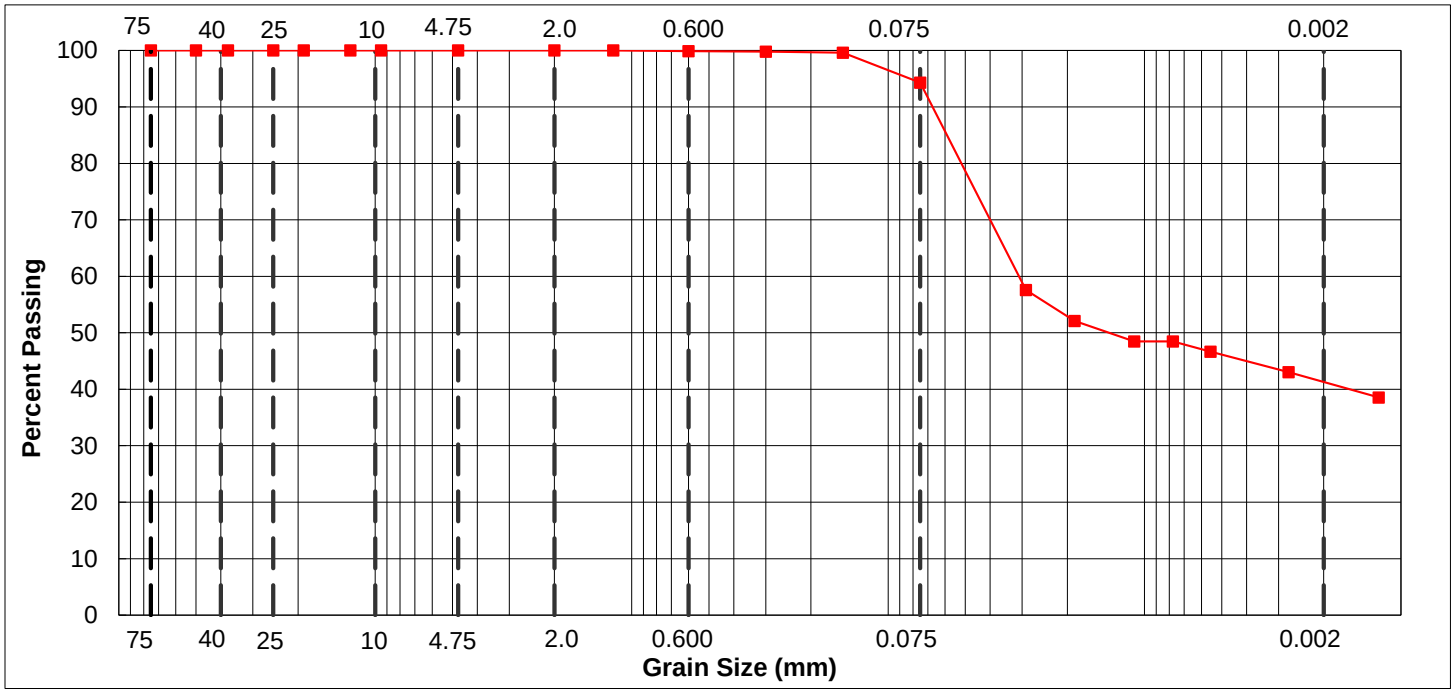
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	116RC6
Project No.:	1560-193-00	**Source:**	22CH116
Owner:	EID	**Sample Depth:**	11.1m
File No.:	GSA - 116RC6	**Test Date:**	5-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.6
37.5	100.0	0.075	94.3
25.0	100.0	0.0290	57.6
19.0	100.0	0.0188	52.1
12.5	100.0	0.0110	48.5
9.5	100.0	0.0078	48.5
4.75	100.0	0.0055	46.7
2.00	100.0	0.0027	43.0
1.180	100.0	0.0012	38.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	5.6	425 µm to 75 µm
Silt	53.0	75 µm to 2 µm
Clay	41.3	<2 µm



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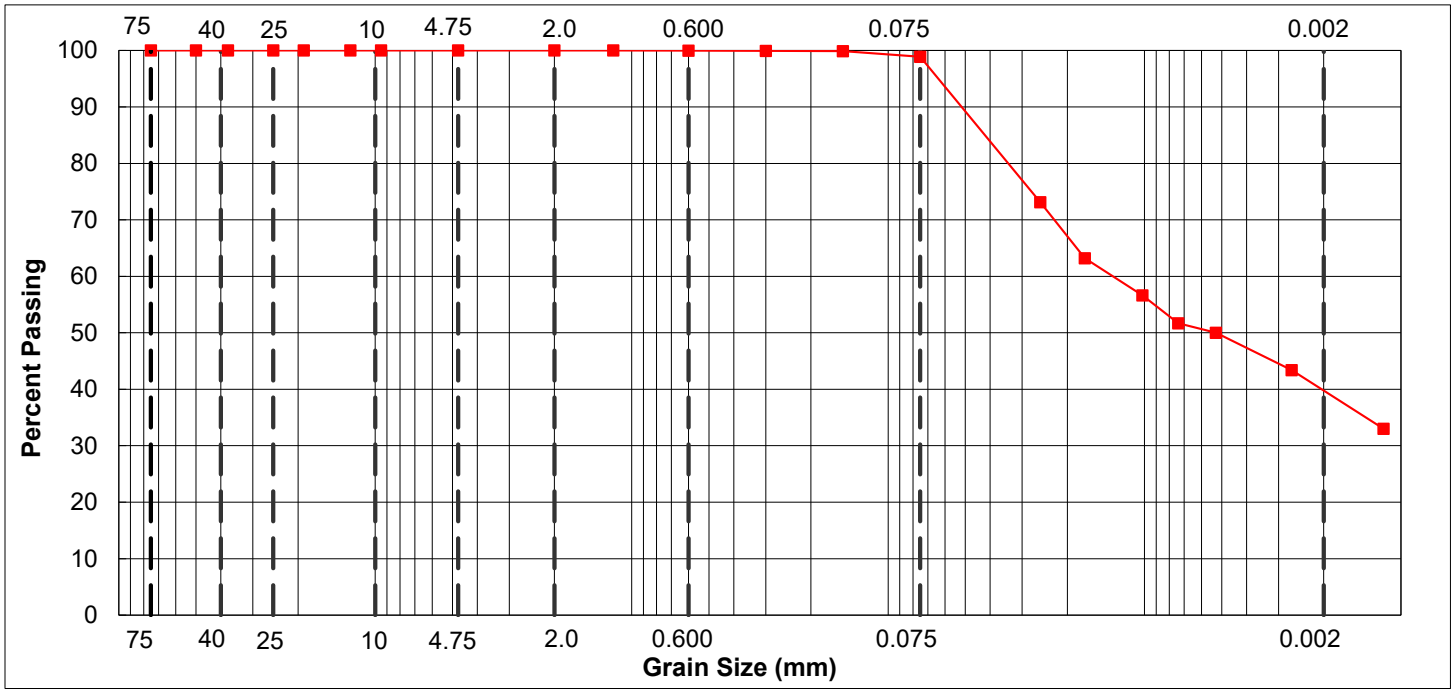
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	116RC9
Project No.:	1560-193-00	**Source:**	22CH116
Owner:	EID	**Sample Depth:**	14.5m
File No.:	GSA - 116RC9	**Test Date:**	15-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	98.9
25.0	100.0	0.0255	73.1
19.0	100.0	0.0171	63.2
12.5	100.0	0.0102	56.6
9.5	100.0	0.0074	51.7
4.75	100.0	0.0053	50.0
2.00	100.0	0.0027	43.4
1.180	100.0	0.0012	33.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	1.1	425 µm to 75 µm
Silt	59.1	75 µm to 2 µm
Clay	39.8	<2 µm



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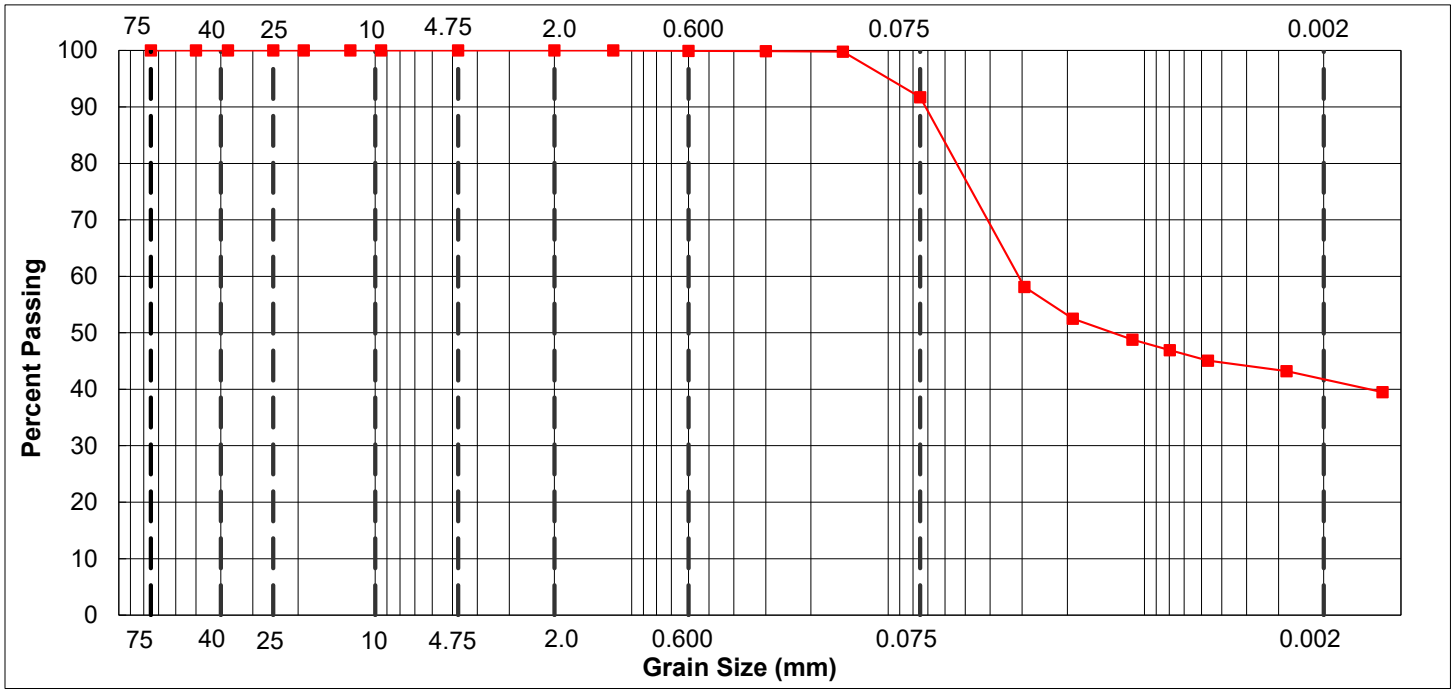
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	117AU12
Project No.:	1560-193-00	**Source:**	22BH117
Owner:	EID	**Sample Depth:**	8.8m
File No.:	GSA - 117AU12	**Date:**	12-Apr-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.8
37.5	100.0	0.075	91.7
25.0	100.0	0.0294	58.1
19.0	100.0	0.0191	52.5
12.5	100.0	0.0112	48.8
9.5	100.0	0.0080	46.9
4.75	100.0	0.0057	45.1
2.00	100.0	0.0028	43.2
1.180	100.0	0.0012	39.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	8.2	425 µm to 75 µm
Silt	50.0	75 µm to 2 µm
Clay	41.7	<2 µm



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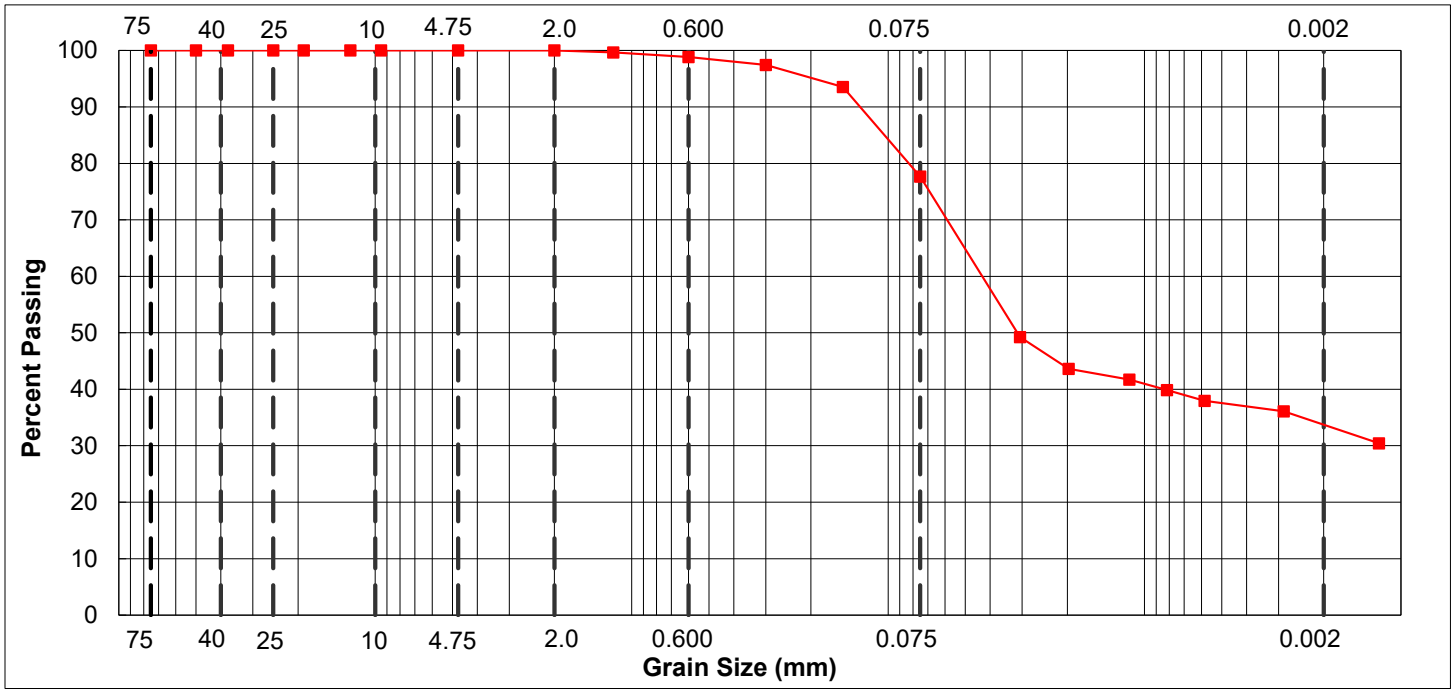
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	117AU13
Project No.:	1560-193-00	**Source:**	22BH117
Owner:	EID	**Sample Depth:**	9.8m
File No.:	GSA - 117AU13	**Date:**	12-Apr-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.8
75.0	100.0	0.300	97.4
50.0	100.0	0.150	93.5
37.5	100.0	0.075	77.7
25.0	100.0	0.0306	49.2
19.0	100.0	0.0198	43.6
12.5	100.0	0.0115	41.7
9.5	100.0	0.0082	39.8
4.75	100.0	0.0058	38.0
2.00	100.0	0.0029	36.1
1.180	99.6	0.0012	30.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.2	2.00 mm to 425 µm
Fine Sand	21.1	425 µm to 75 µm
Silt	44.0	75 µm to 2 µm
Clay	33.7	<2 µm



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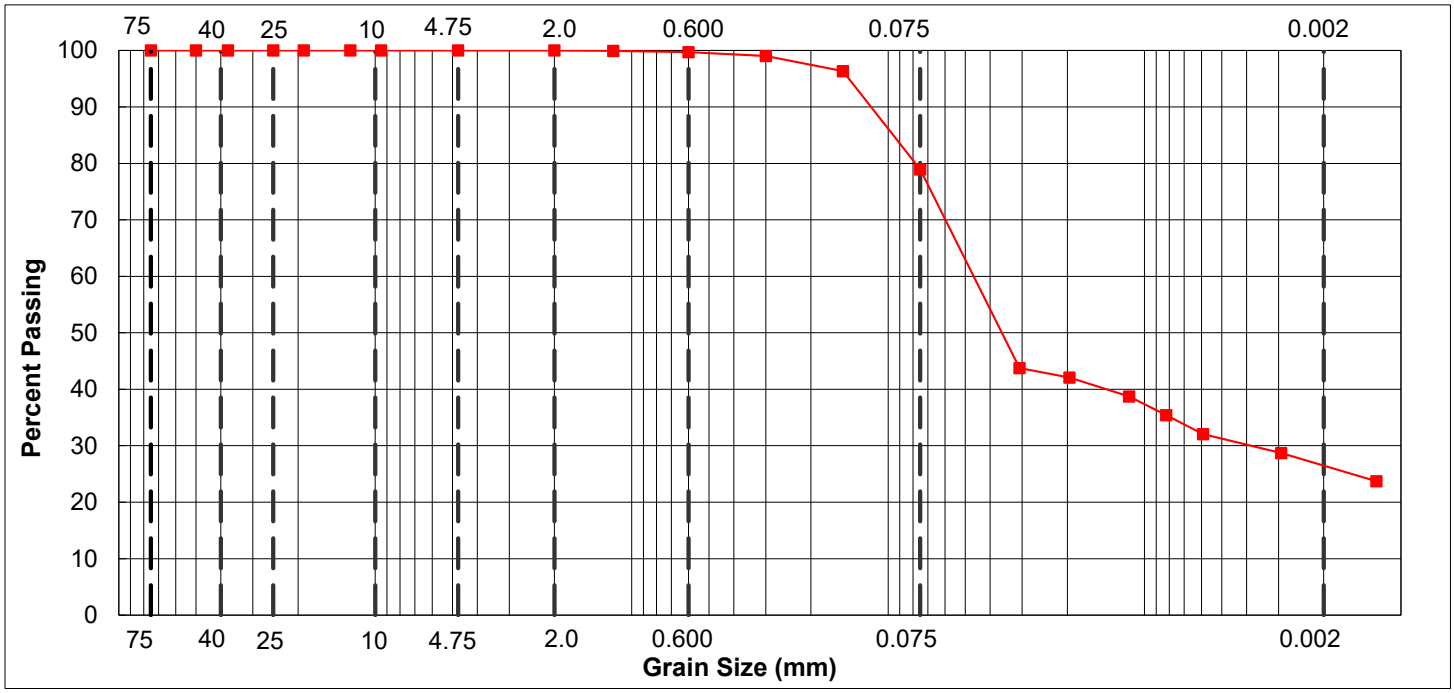
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	117UD1
Project No.:	1560-193-00	**Source:**	22CH117
Owner:	EID	**Sample Depth:**	10.4m
File No.:	GSA - 117UD1	**Test Date:**	6-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.0
50.0	100.0	0.150	96.3
37.5	100.0	0.075	78.9
25.0	100.0	0.0307	43.8
19.0	100.0	0.0196	42.1
12.5	100.0	0.0115	38.7
9.5	100.0	0.0082	35.4
4.75	100.0	0.0059	32.1
2.00	100.0	0.0029	28.7
1.180	99.9	0.0012	23.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	20.8	425 µm to 75 µm
Silt	52.4	75 µm to 2 µm
Clay	26.5	<2 µm



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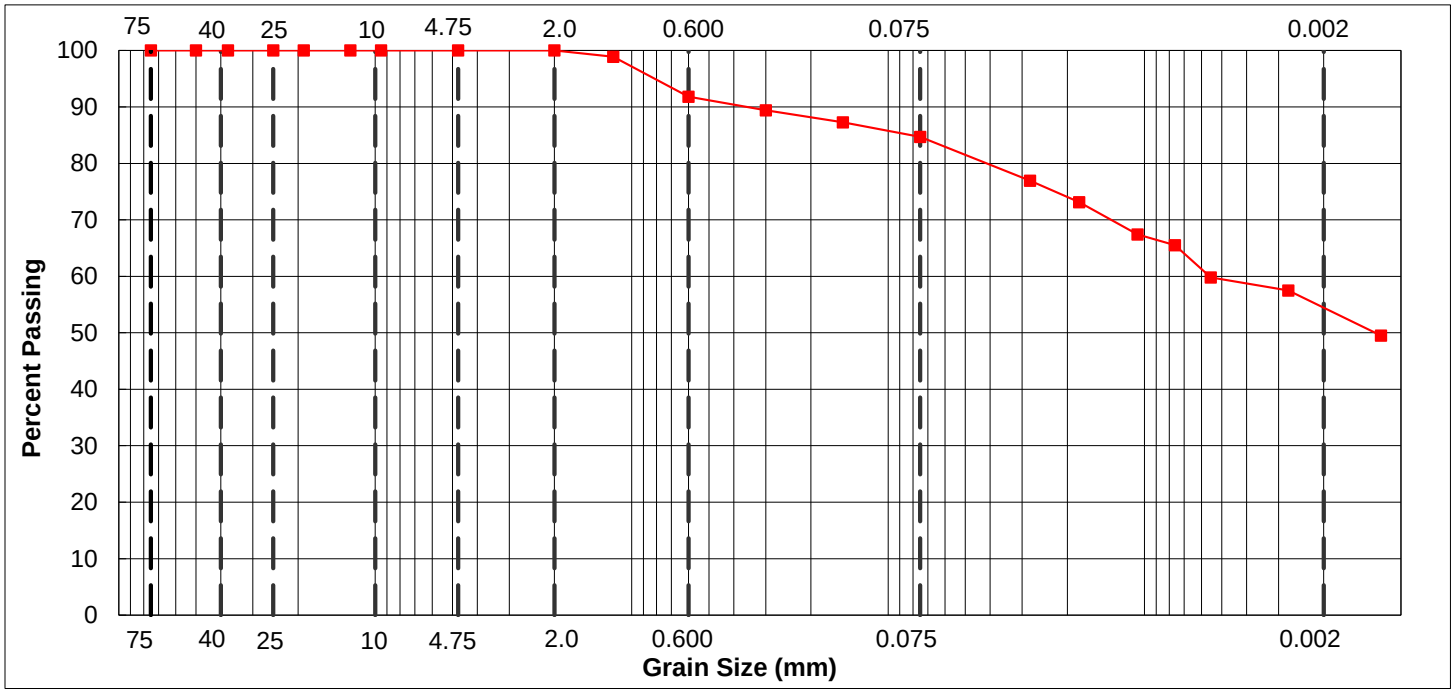
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	118AU1
Project No.:	1560-193-00	**Source:**	22BH118
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 118AU1	**Test Date:**	28-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	91.8
75.0	100.0	0.300	89.4
50.0	100.0	0.150	87.3
37.5	100.0	0.075	84.7
25.0	100.0	0.0280	76.9
19.0	100.0	0.0180	73.1
12.5	100.0	0.0107	67.4
9.5	100.0	0.0076	65.5
4.75	100.0	0.0055	59.8
2.00	100.0	0.0027	57.5
1.180	98.9	0.0012	49.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	8.2	2.00 mm to 425 µm
Fine Sand	7.1	425 µm to 75 µm
Silt	30.2	75 µm to 2 µm
Clay	54.5	<2 µm



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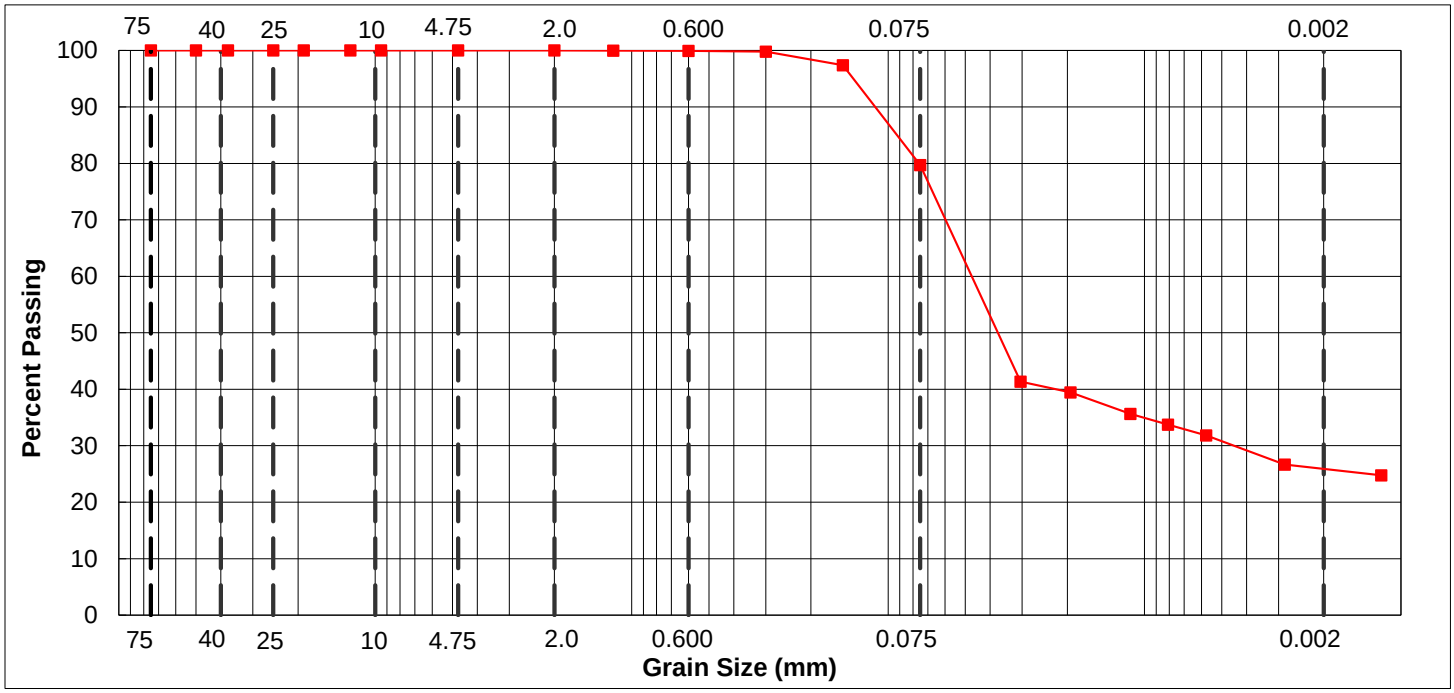
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	118UD3
Project No.:	1560-193-00	**Source:**	22CH118
Owner:	EID	**Sample Depth:**	6.6m
File No.:	GSA - 118UD3	**Test Date:**	2-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	97.4
37.5	100.0	0.075	79.7
25.0	100.0	0.0305	41.3
19.0	100.0	0.0194	39.4
12.5	100.0	0.0114	35.6
9.5	100.0	0.0081	33.7
4.75	100.0	0.0058	31.8
2.00	100.0	0.0028	26.7
1.180	100.0	0.0012	24.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	20.2	425 µm to 75 µm
Silt	53.8	75 µm to 2 µm
Clay	25.9	<2 µm



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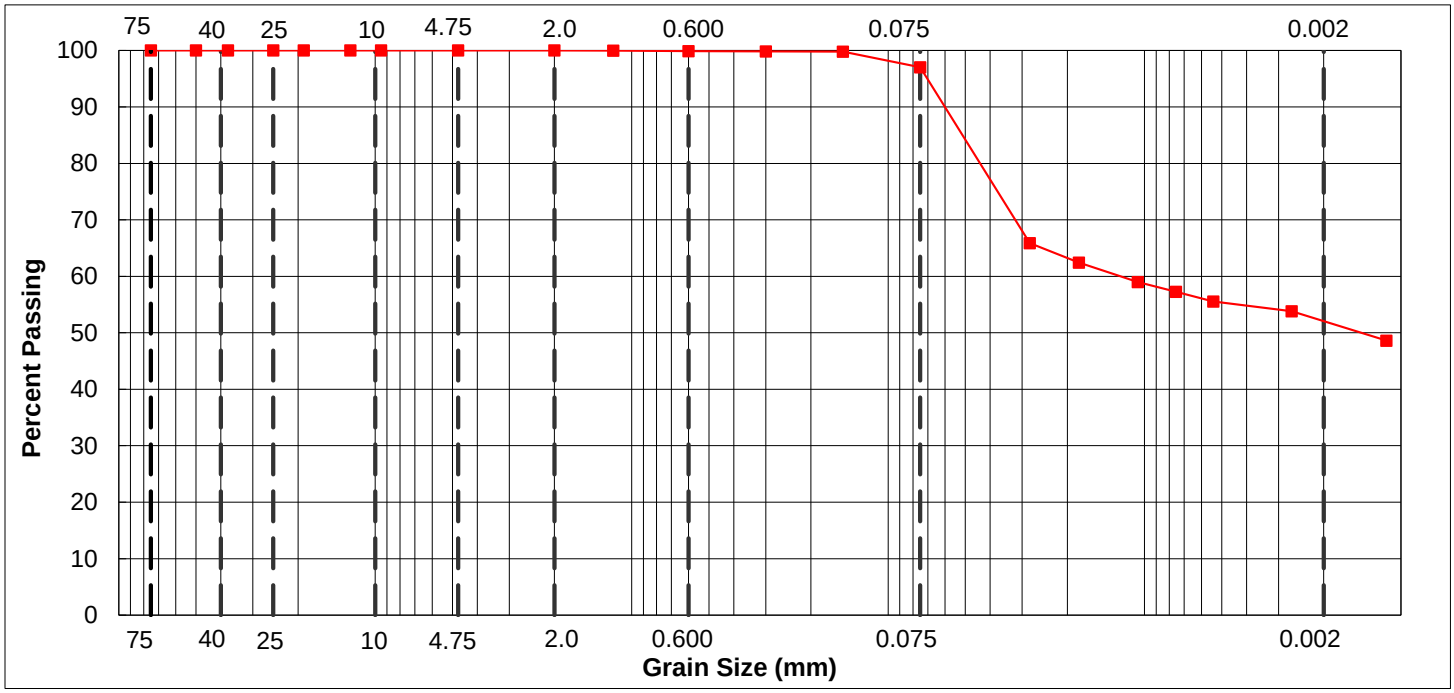
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	118UD4
Project No.:	1560-193-00	**Source:**	22CH118
Owner:	EID	**Sample Depth:**	6.2m
File No.:	GSA - 118UD4	**Test Date:**	11-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.8
37.5	100.0	0.075	97.0
25.0	100.0	0.0280	65.9
19.0	100.0	0.0180	62.4
12.5	100.0	0.0106	59.0
9.5	100.0	0.0076	57.2
4.75	100.0	0.0054	55.5
2.00	100.0	0.0027	53.8
1.180	100.0	0.0011	48.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	2.9	425 µm to 75 µm
Silt	45.0	75 µm to 2 µm
Clay	52.0	<2 µm



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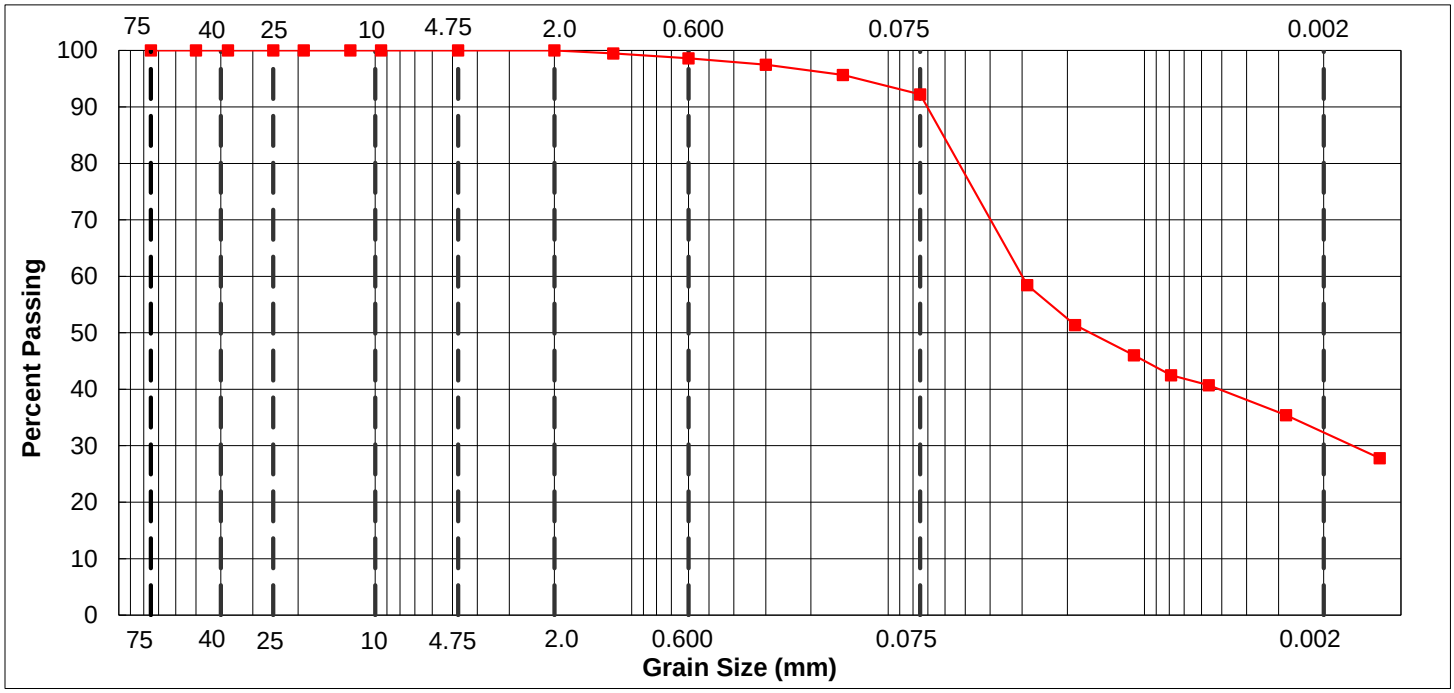
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	118UD8
Project No.:	1560-193-00	**Source:**	22CH118
Owner:	EID	**Sample Depth:**	14.6m
File No.:	GSA - 118UD8	**Test Date:**	28-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.6
75.0	100.0	0.300	97.5
50.0	100.0	0.150	95.7
37.5	100.0	0.075	92.2
25.0	100.0	0.0287	58.4
19.0	100.0	0.0186	51.4
12.5	100.0	0.0110	46.0
9.5	100.0	0.0079	42.5
4.75	100.0	0.0056	40.7
2.00	100.0	0.0028	35.4
1.180	99.5	0.0012	27.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.4	2.00 mm to 425 µm
Fine Sand	6.4	425 µm to 75 µm
Silt	59.9	75 µm to 2 µm
Clay	32.3	<2 µm



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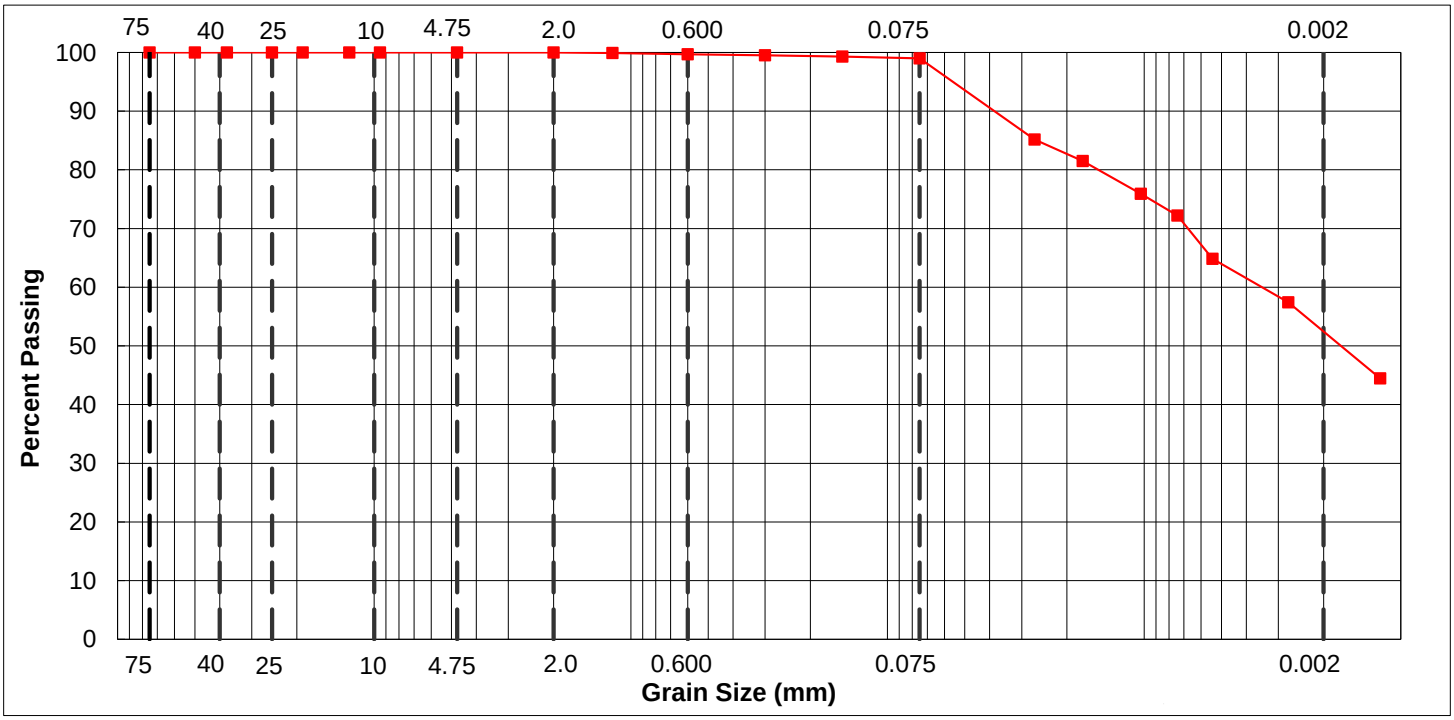
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	119AU2
Project No.:	1560-193-00	**Source:**	22BH119
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 119AU2	**Test Date:**	24-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.3
37.5	100.0	0.075	99.0
25.0	100.0	0.0267	85.2
19.0	100.0	0.0173	81.5
12.5	100.0	0.0103	75.9
9.5	100.0	0.0074	72.2
4.75	100.0	0.0054	64.8
2.00	100.0	0.0027	57.4
1.180	99.9	0.0012	44.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	0.7	425 µm to 75 µm
Silt	46.6	75 µm to 2 µm
Clay	52.4	<2 µm



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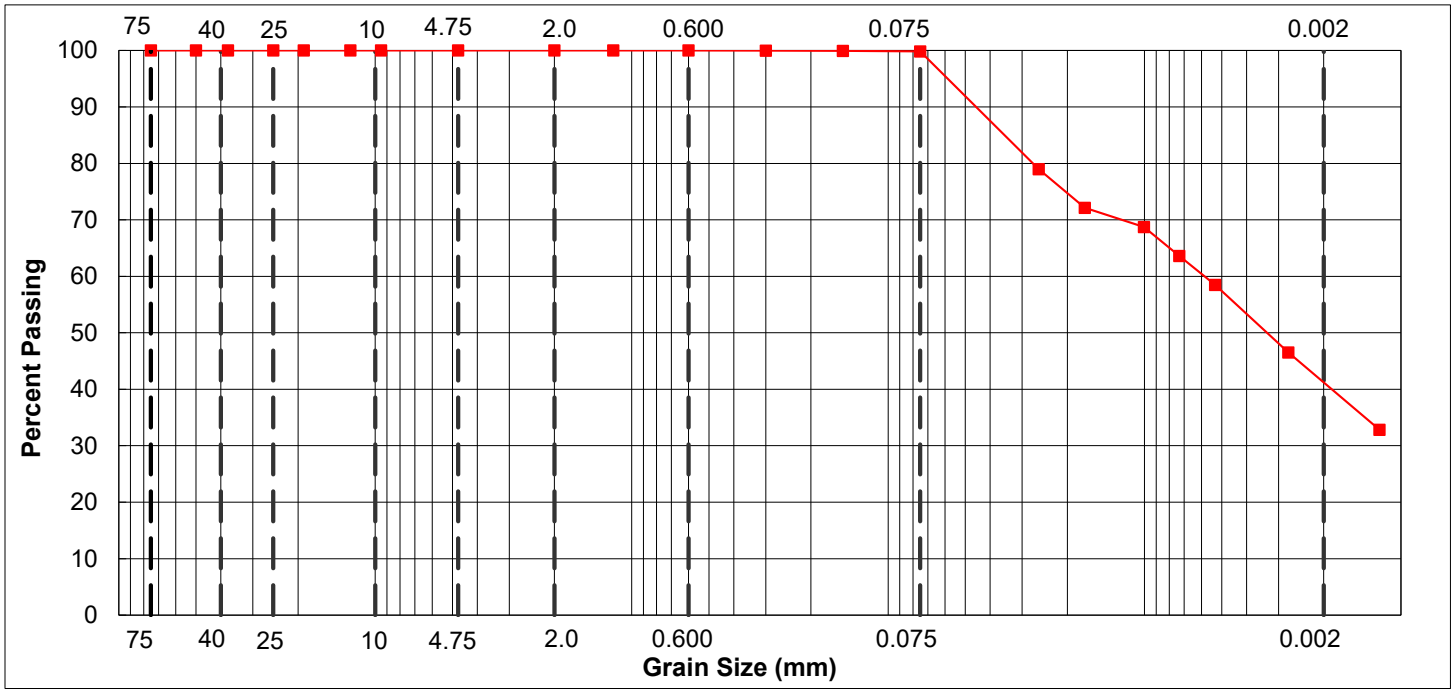
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	119UD2
Project No.:	1560-193-00	**Source:**	22CH119
Owner:	EID	**Sample Depth:**	18.7m
File No.:	GSA - 119UD2	**Test Date:**	8-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0259	79.0
19.0	100.0	0.0171	72.2
12.5	100.0	0.0101	68.7
9.5	100.0	0.0073	63.6
4.75	100.0	0.0053	58.5
2.00	100.0	0.0027	46.5
1.180	100.0	0.0012	32.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	58.6	75 µm to 2 µm
Clay	41.2	<2 µm



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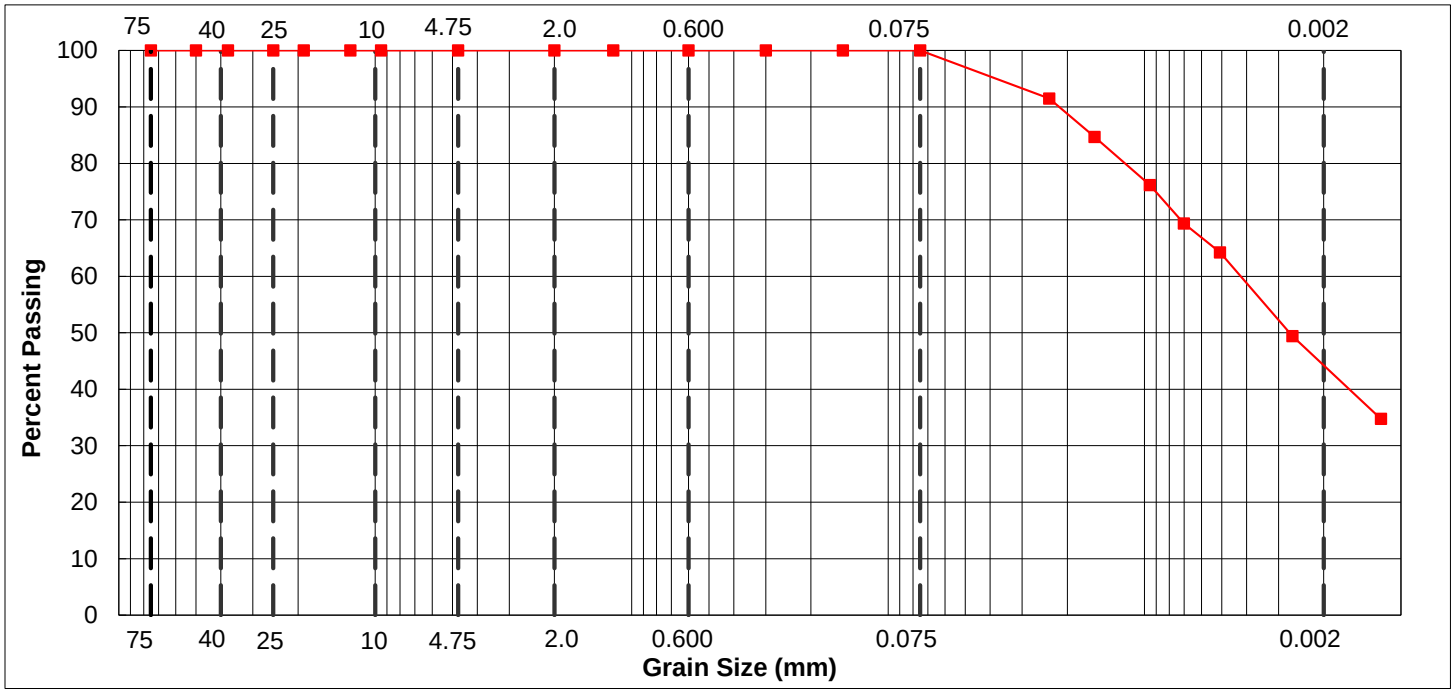
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	119UD4
Project No.:	1560-193-00	**Source:**	22CH119
Owner:	EID	**Sample Depth:**	24.0 m
File No.:	GSA - 119UD4	**Test Date:**	7-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	100.0
25.0	100.0	0.0236	91.5
19.0	100.0	0.0157	84.7
12.5	100.0	0.0095	76.2
9.5	100.0	0.0070	69.4
4.75	100.0	0.0051	64.2
2.00	100.0	0.0027	49.4
1.180	100.0	0.0012	34.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.0	425 µm to 75 µm
Silt	55.8	75 µm to 2 µm
Clay	44.2	<2 µm



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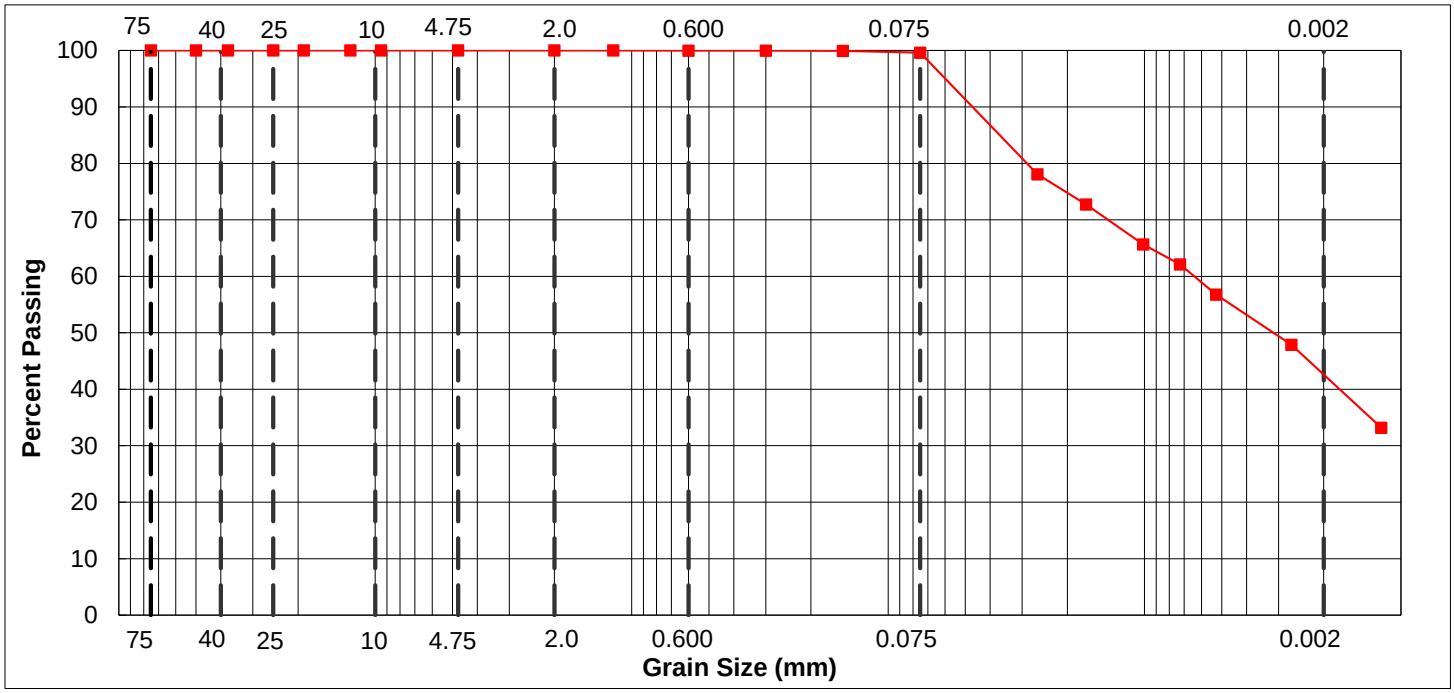
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	119UD5
Project No.:	1560-193-00	**Source:**	22CH119
Owner:	EID	**Sample Depth:**	26.02m
File No.:	GSA - 119UD5	**Test Date:**	28-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.6
25.0	100.0	0.0261	78.1
19.0	100.0	0.0169	72.7
12.5	100.0	0.0101	65.6
9.5	100.0	0.0073	62.1
4.75	100.0	0.0053	56.8
2.00	100.0	0.0027	47.9
1.180	100.0	0.0012	33.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	57.0	75 µm to 2 µm
Clay	42.6	<2 µm



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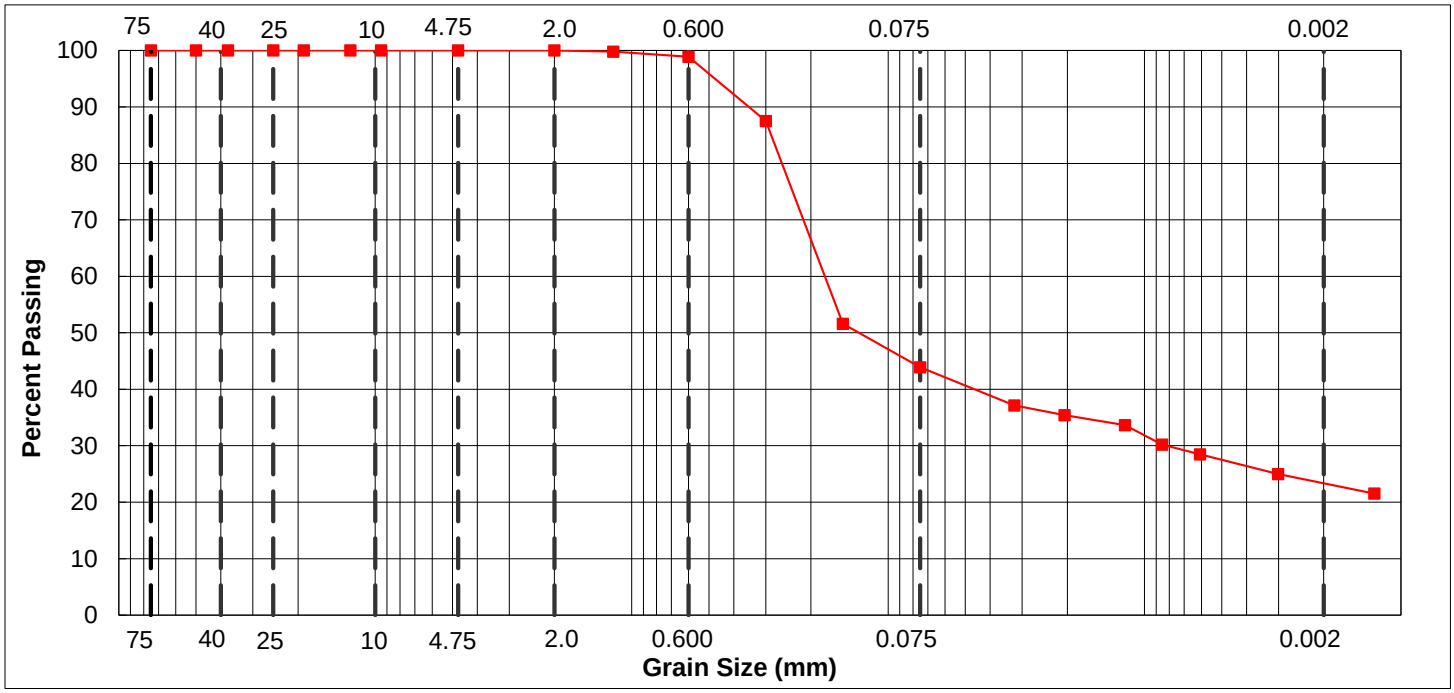
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	120AU1
Project No.:	1560-193-00	**Source:**	22BH120
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 120AU1	**Test Date:**	15-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.9
75.0	100.0	0.300	87.5
50.0	100.0	0.150	51.6
37.5	100.0	0.075	43.9
25.0	100.0	0.0321	37.1
19.0	100.0	0.0205	35.4
12.5	100.0	0.0119	33.7
9.5	100.0	0.0085	30.2
4.75	100.0	0.0061	28.5
2.00	100.0	0.0030	25.0
1.180	99.8	0.0013	21.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.1	2.00 mm to 425 µm
Fine Sand	55.0	425 µm to 75 µm
Silt	20.6	75 µm to 2 µm
Clay	23.3	<2 µm



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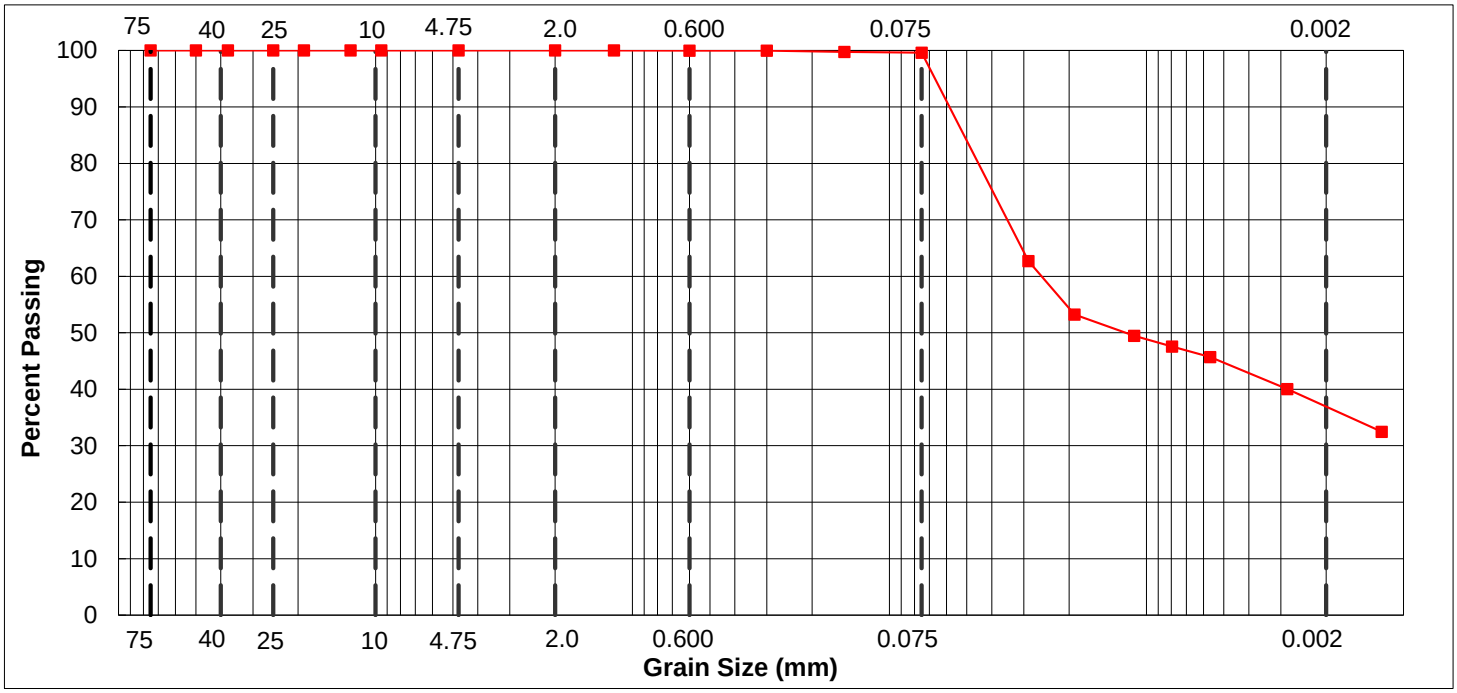
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	120AU14
Project No.:	1560-193-00	**Source:**	22BH120
Owner:	EID	**Sample Depth:**	10.4m
File No.:	GSA - 120AU14	**Date:**	12-Apr-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.6
25.0	100.0	0.0288	62.7
19.0	100.0	0.0191	53.2
12.5	100.0	0.0112	49.5
9.5	100.0	0.0080	47.6
4.75	100.0	0.0057	45.7
2.00	100.0	0.0028	40.0
1.180	100.0	0.0012	32.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	62.7	75 µm to 2 µm
Clay	36.9	<2 µm



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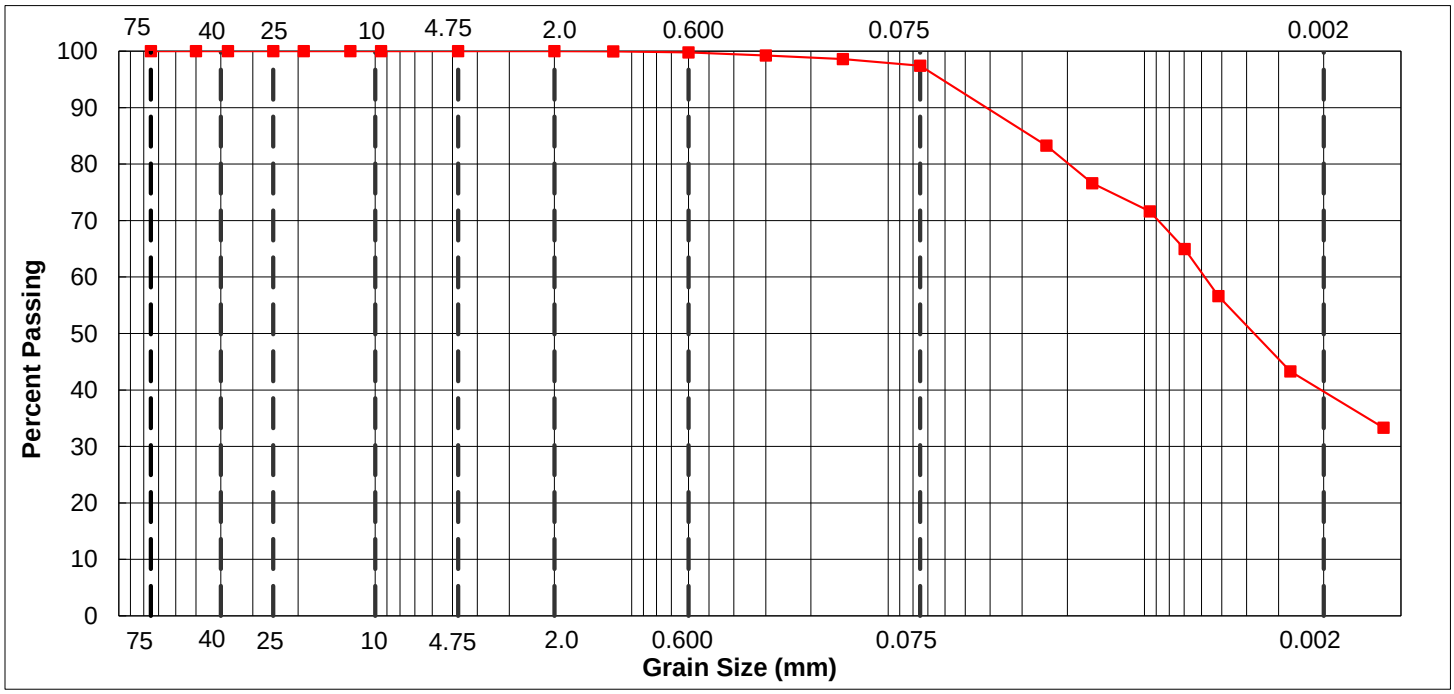
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	120RC2
Project No.:	1560-193-00	**Source:**	22CH120
Owner:	EID	**Sample Depth:**	6.9m
File No.:	GSA - 120RC2	**Date:**	18-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.2
50.0	100.0	0.150	98.6
37.5	100.0	0.075	97.4
25.0	100.0	0.0242	83.3
19.0	100.0	0.0160	76.6
12.5	100.0	0.0095	71.6
9.5	100.0	0.0070	65.0
4.75	100.0	0.0052	56.6
2.00	100.0	0.0027	43.3
1.180	100.0	0.0012	33.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	2.4	425 µm to 75 µm
Silt	57.7	75 µm to 2 µm
Clay	39.7	<2 µm



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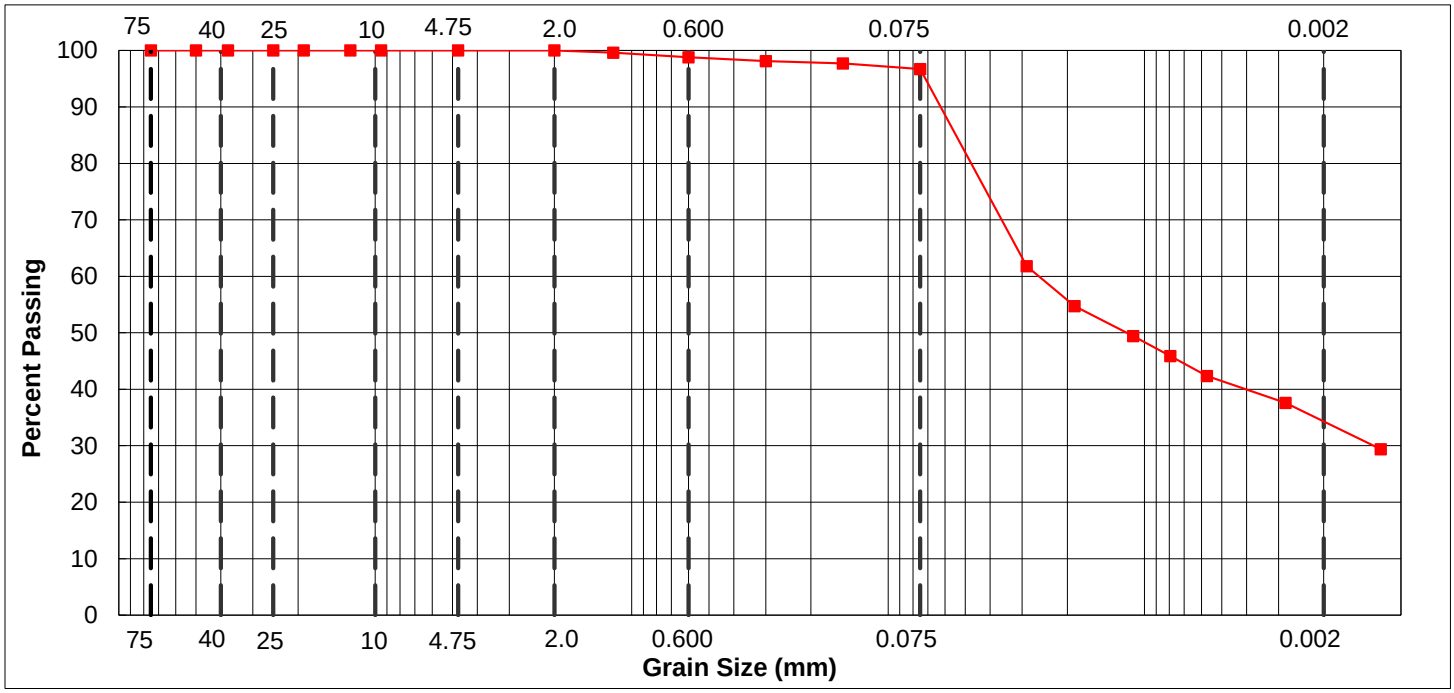
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	120RC4
Project No.:	1560-193-00	**Source:**	122CH120
Owner:	EID	**Sample Depth:**	9.1m
File No.:	GSA - 120RC4	**Test Date:**	6-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.8
75.0	100.0	0.300	98.1
50.0	100.0	0.150	97.7
37.5	100.0	0.075	96.7
25.0	100.0	0.0288	61.8
19.0	100.0	0.0188	54.7
12.5	100.0	0.0111	49.4
9.5	100.0	0.0079	45.9
4.75	100.0	0.0057	42.4
2.00	100.0	0.0028	37.6
1.180	99.6	0.0012	29.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.2	2.00 mm to 425 µm
Fine Sand	2.1	425 µm to 75 µm
Silt	62.4	75 µm to 2 µm
Clay	34.3	<2 µm



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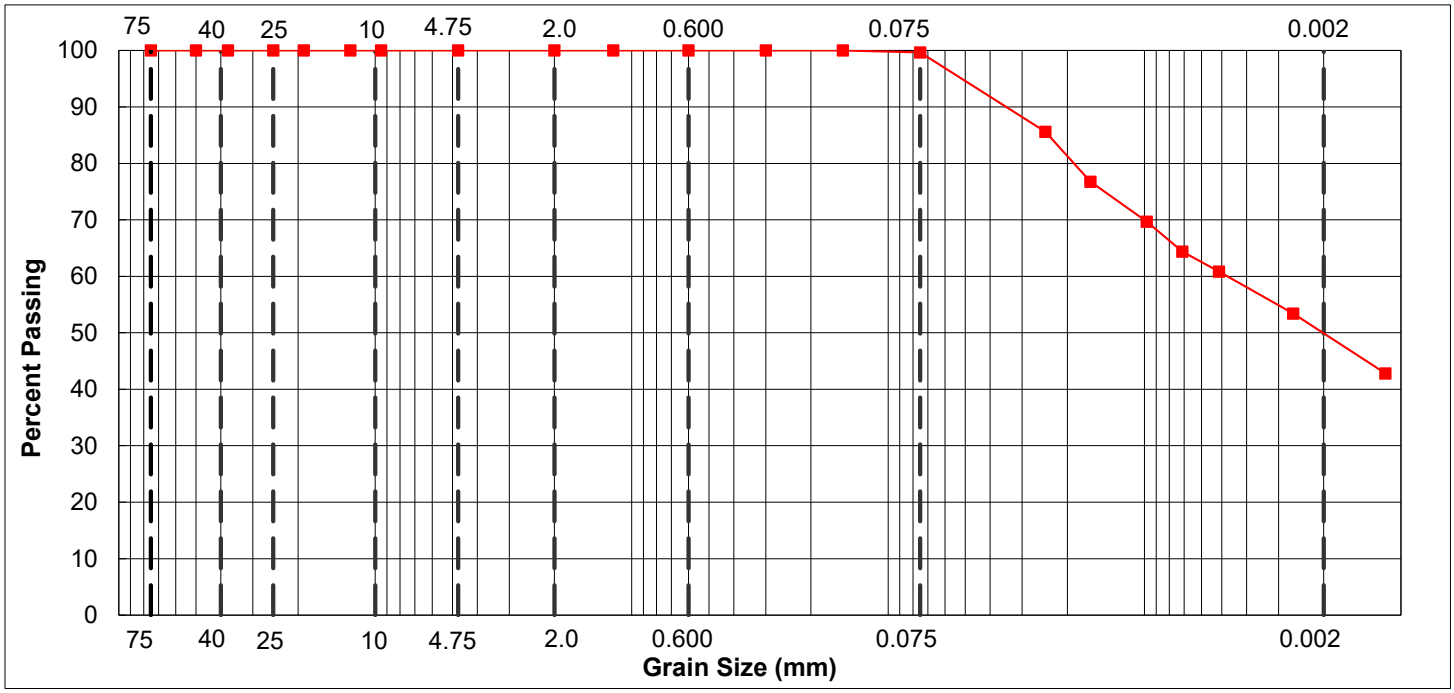
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	121AU4
Project No.:	1560-193-00	**Source:**	22BH121
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 121AU4	**Date:**	16-Mar-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.6
25.0	100.0	0.0244	85.6
19.0	100.0	0.0163	76.8
12.5	100.0	0.0098	69.7
9.5	100.0	0.0071	64.4
4.75	100.0	0.0051	60.9
2.00	100.0	0.0026	53.4
1.180	100.0	0.0011	42.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	49.7	75 µm to 2 µm
Clay	49.9	<2 µm



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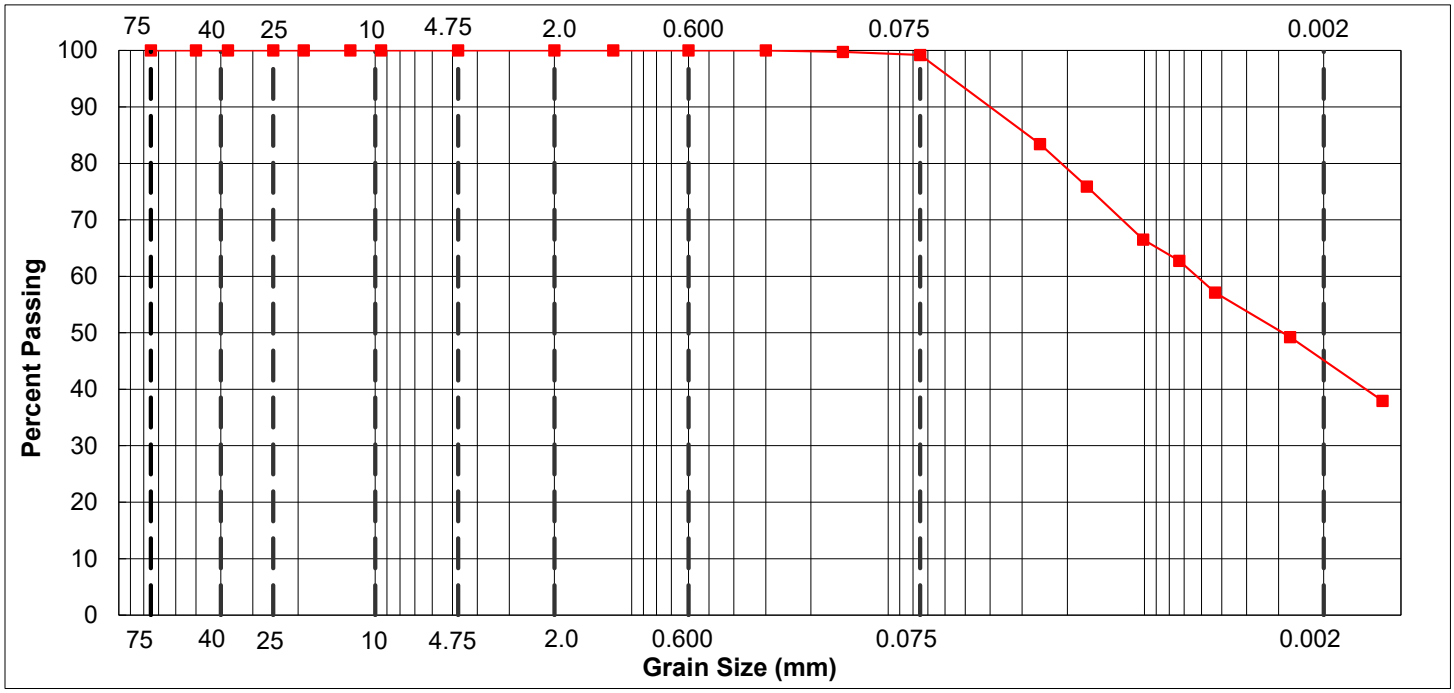
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	121AU13
Project No.:	1560-193-00	**Source:**	22BH121
Owner:	EID	**Sample Depth:**	9.8m
File No.:	GSA - 121AU13	**Date:**	16-Mar-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.2
25.0	100.0	0.0256	83.4
19.0	100.0	0.0168	75.9
12.5	100.0	0.0101	66.5
9.5	100.0	0.0073	62.8
4.75	100.0	0.0053	57.1
2.00	100.0	0.0027	49.2
1.180	100.0	0.0012	38.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.8	425 µm to 75 µm
Silt	54.1	75 µm to 2 µm
Clay	45.1	<2 µm



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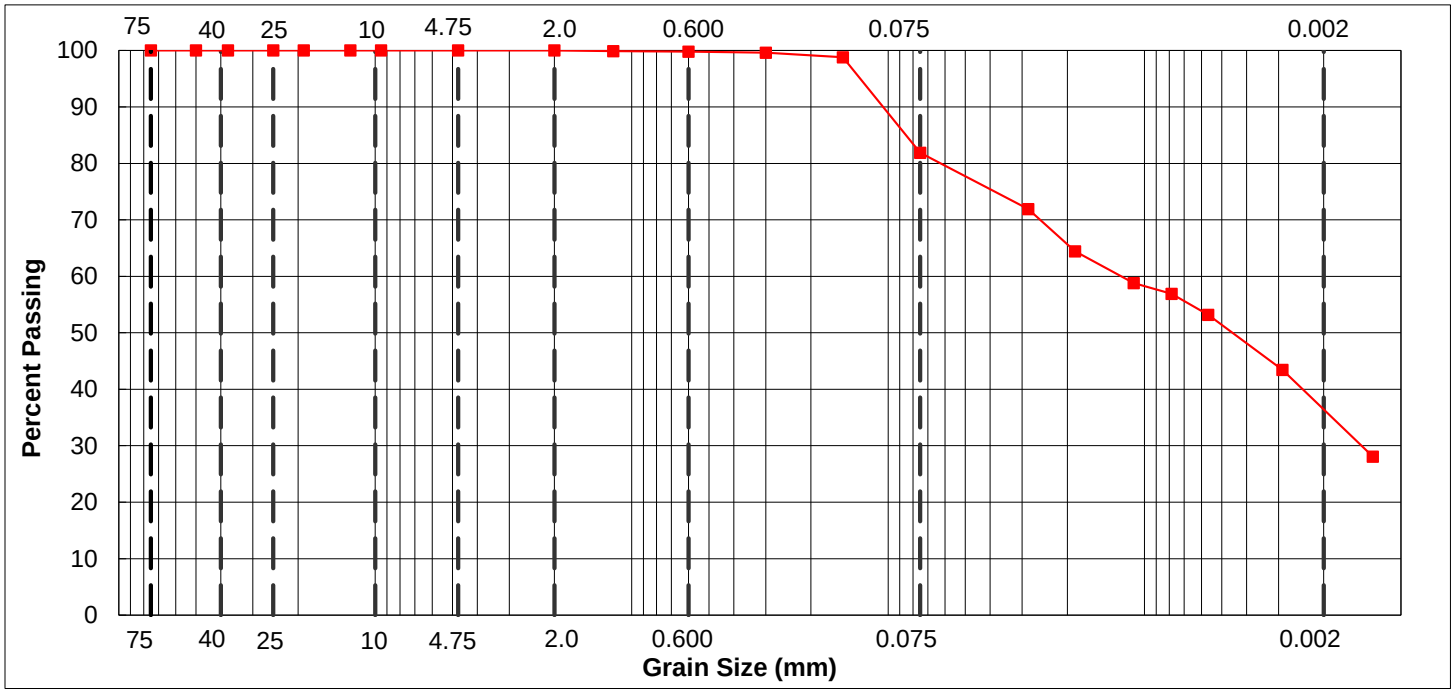
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	22CH121
Project No.:	1560-193-00	**Source:**	121RC6
Owner:	EID	**Sample Depth:**	13.3m
File No.:	GSA - 22CH121	**Test Date:**	28-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.6
50.0	100.0	0.150	98.8
37.5	100.0	0.075	81.9
25.0	100.0	0.0284	71.9
19.0	100.0	0.0186	64.4
12.5	100.0	0.0110	58.8
9.5	100.0	0.0078	56.9
4.75	100.0	0.0056	53.2
2.00	100.0	0.0029	43.4
1.180	99.9	0.0013	28.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	17.9	425 µm to 75 µm
Silt	45.5	75 µm to 2 µm
Clay	36.4	<2 µm



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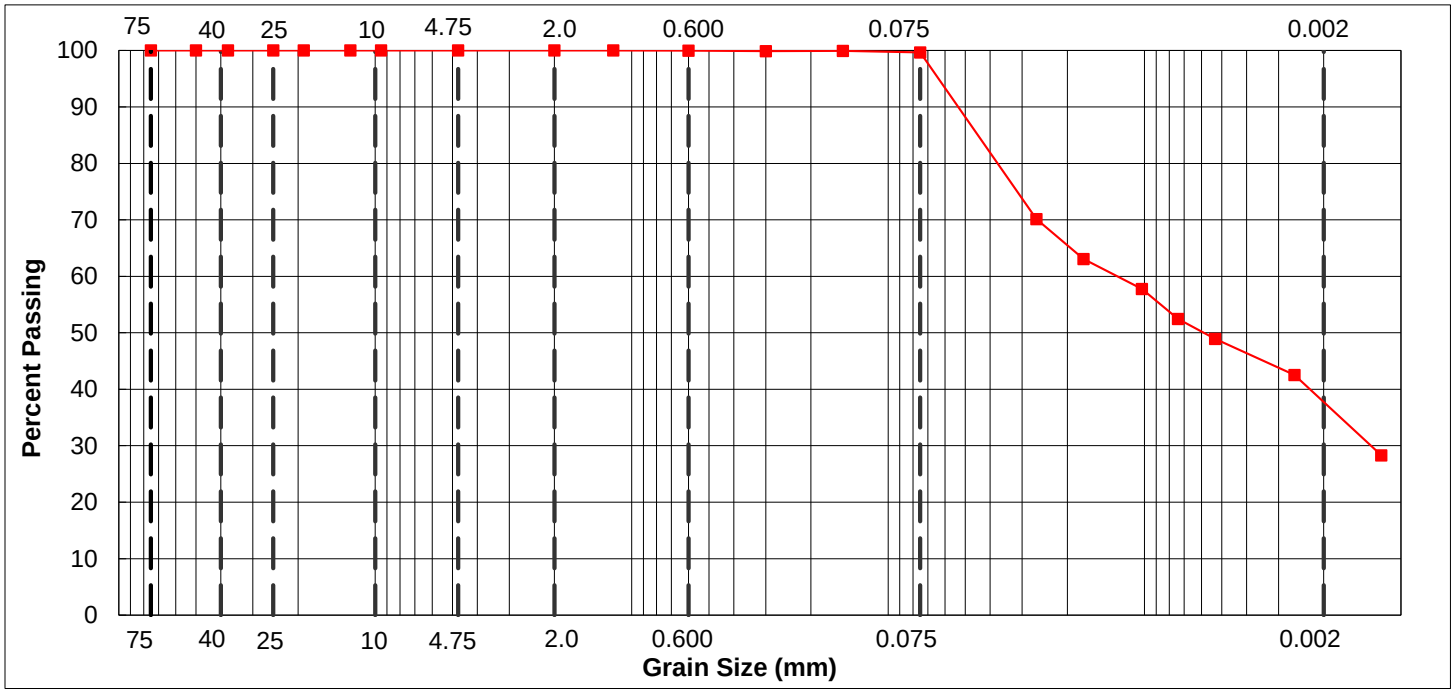
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	121UD6
Project No.:	1560-193-00	**Source:**	22CH121
Owner:	EID	**Sample Depth:**	21.49m
File No.:	GSA - 121UD6	**Test Date:**	1-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.7
25.0	100.0	0.0264	70.2
19.0	100.0	0.0173	63.1
12.5	100.0	0.0102	57.8
9.5	100.0	0.0074	52.5
4.75	100.0	0.0053	48.9
2.00	100.0	0.0026	42.6
1.180	100.0	0.0012	28.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	62.0	75 µm to 2 µm
Clay	37.7	<2 µm



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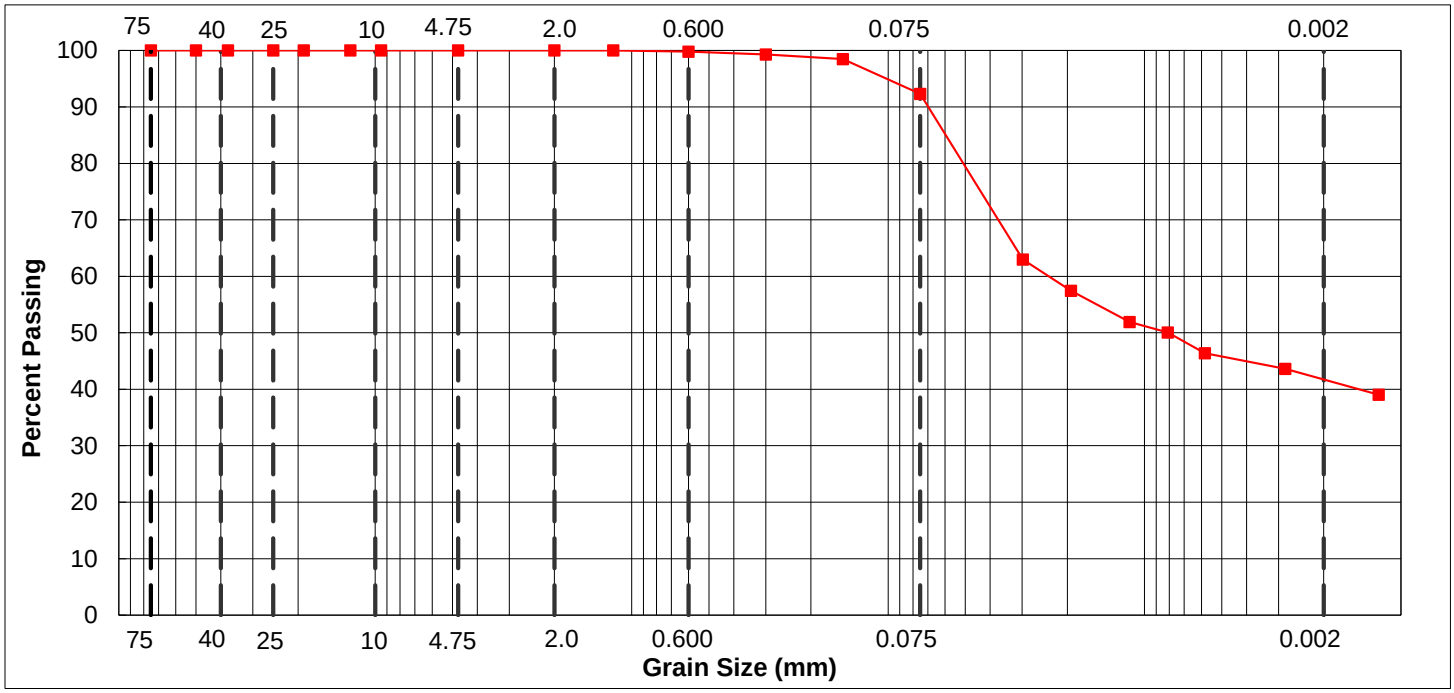
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	122AU2
Project No.:	1560-193-00	**Source:**	22CH122
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 122AU2	**Test Date:**	18-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.3
50.0	100.0	0.150	98.5
37.5	100.0	0.075	92.3
25.0	100.0	0.0298	63.0
19.0	100.0	0.0193	57.4
12.5	100.0	0.0114	51.9
9.5	100.0	0.0081	50.1
4.75	100.0	0.0058	46.4
2.00	100.0	0.0028	43.6
1.180	100.0	0.0012	39.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	7.5	425 µm to 75 µm
Silt	50.6	75 µm to 2 µm
Clay	41.7	<2 µm



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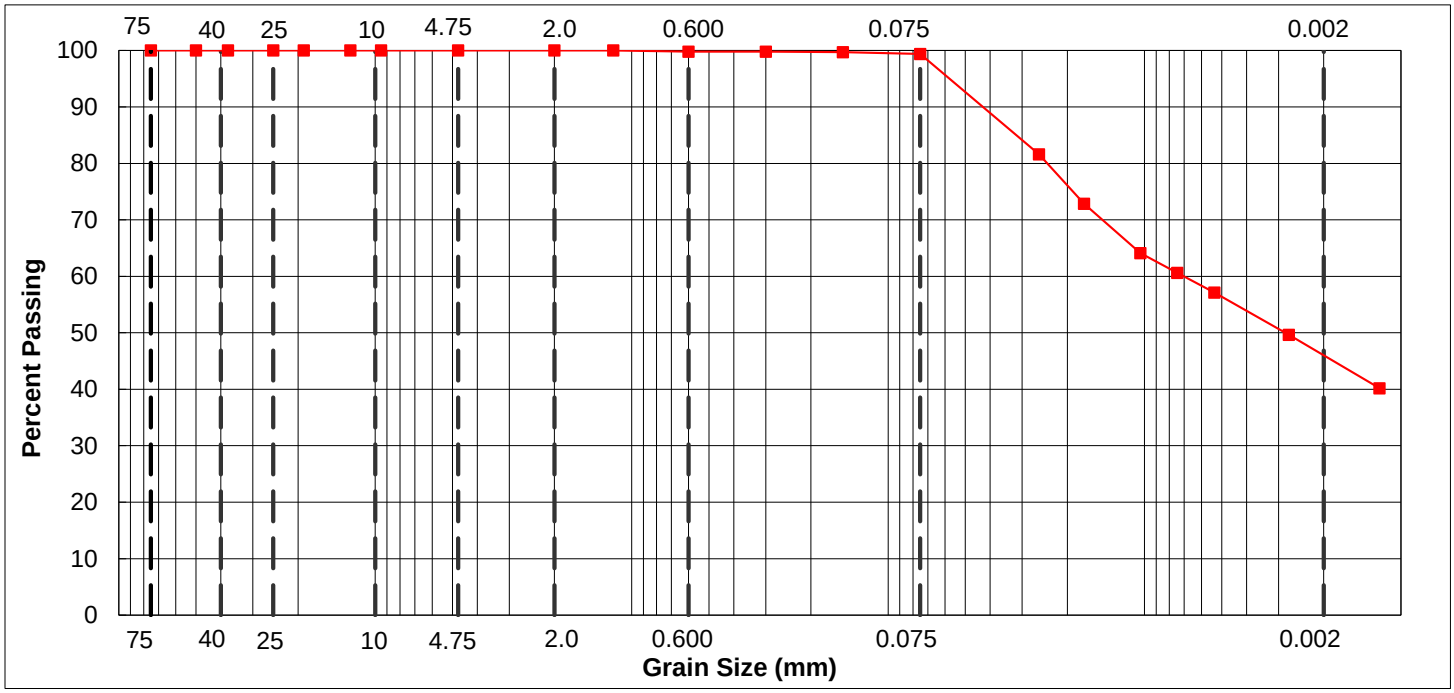
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	122AU6
Project No.:	1560-193-00	**Source:**	22BH122
Owner:	EID	**Sample Depth:**	4.3m
File No.:	GSA - 122AU6	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.4
25.0	100.0	0.0258	81.6
19.0	100.0	0.0172	72.9
12.5	100.0	0.0104	64.1
9.5	100.0	0.0075	60.6
4.75	100.0	0.0053	57.1
2.00	100.0	0.0027	49.6
1.180	100.0	0.0012	40.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	53.4	75 µm to 2 µm
Clay	46.0	<2 µm



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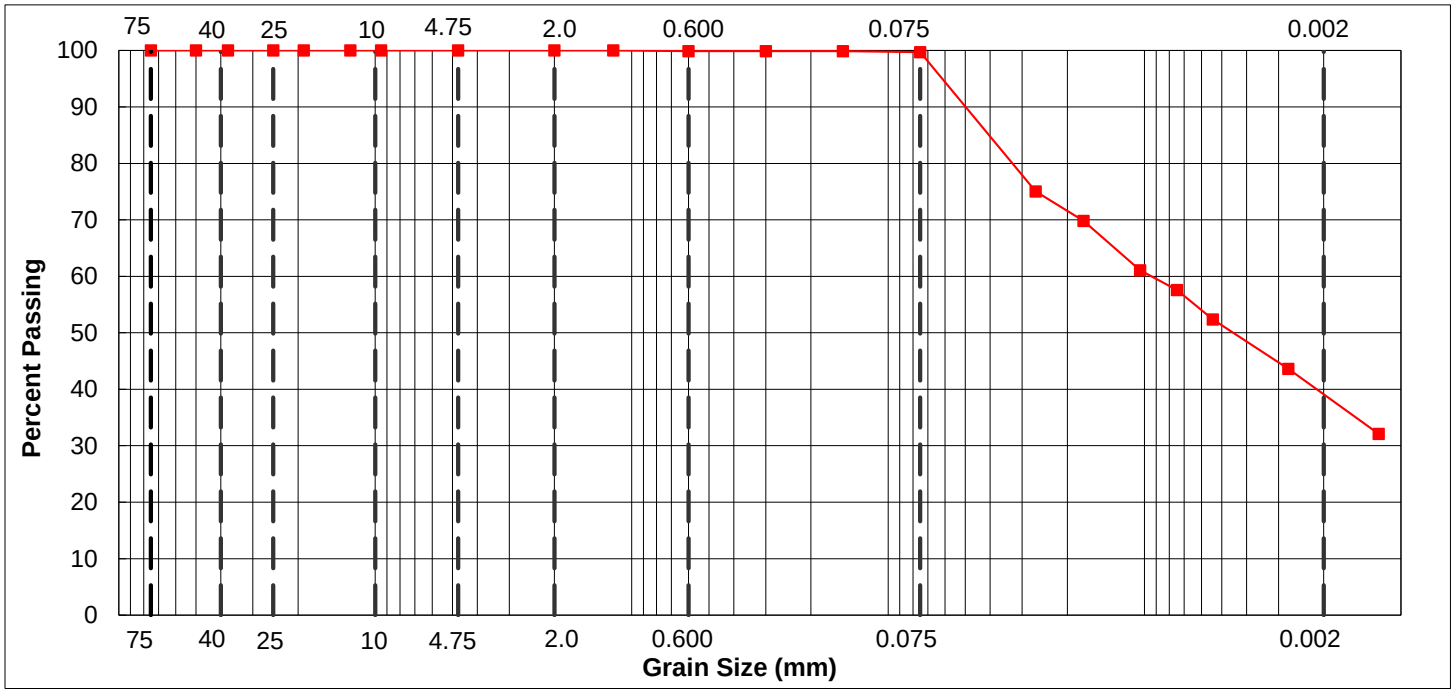
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	122RC1
Project No.:	1560-193-00	**Source:**	22CH122
Owner:	EID	**Sample Depth:**	5.1m
File No.:	GSA - 122RC1	**Test Date:**	19-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.7
25.0	100.0	0.0266	75.0
19.0	100.0	0.0173	69.8
12.5	100.0	0.0104	61.1
9.5	100.0	0.0075	57.6
4.75	100.0	0.0054	52.4
2.00	100.0	0.0027	43.6
1.180	100.0	0.0012	32.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	60.6	75 µm to 2 µm
Clay	39.1	<2 µm



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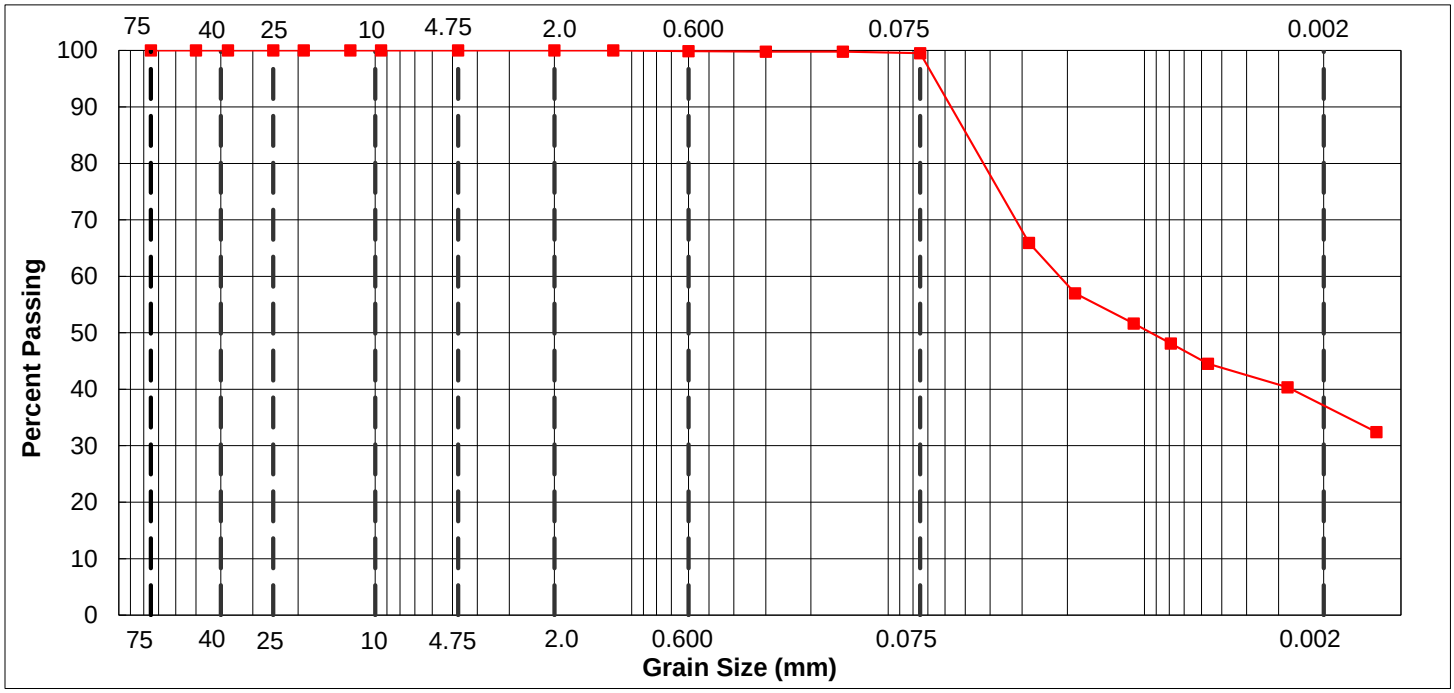
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	122RC3
Project No.:	1560-193-00	**Source:**	22CH122
Owner:	EID	**Sample Depth:**	8.5m
File No.:	GSA - 122RC3	**Test Date:**	7-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.5
25.0	100.0	0.0282	65.9
19.0	100.0	0.0187	57.0
12.5	100.0	0.0110	51.7
9.5	100.0	0.0079	48.1
4.75	100.0	0.0057	44.5
2.00	100.0	0.0028	40.4
1.180	100.0	0.0012	32.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	62.4	75 µm to 2 µm
Clay	37.1	<2 µm



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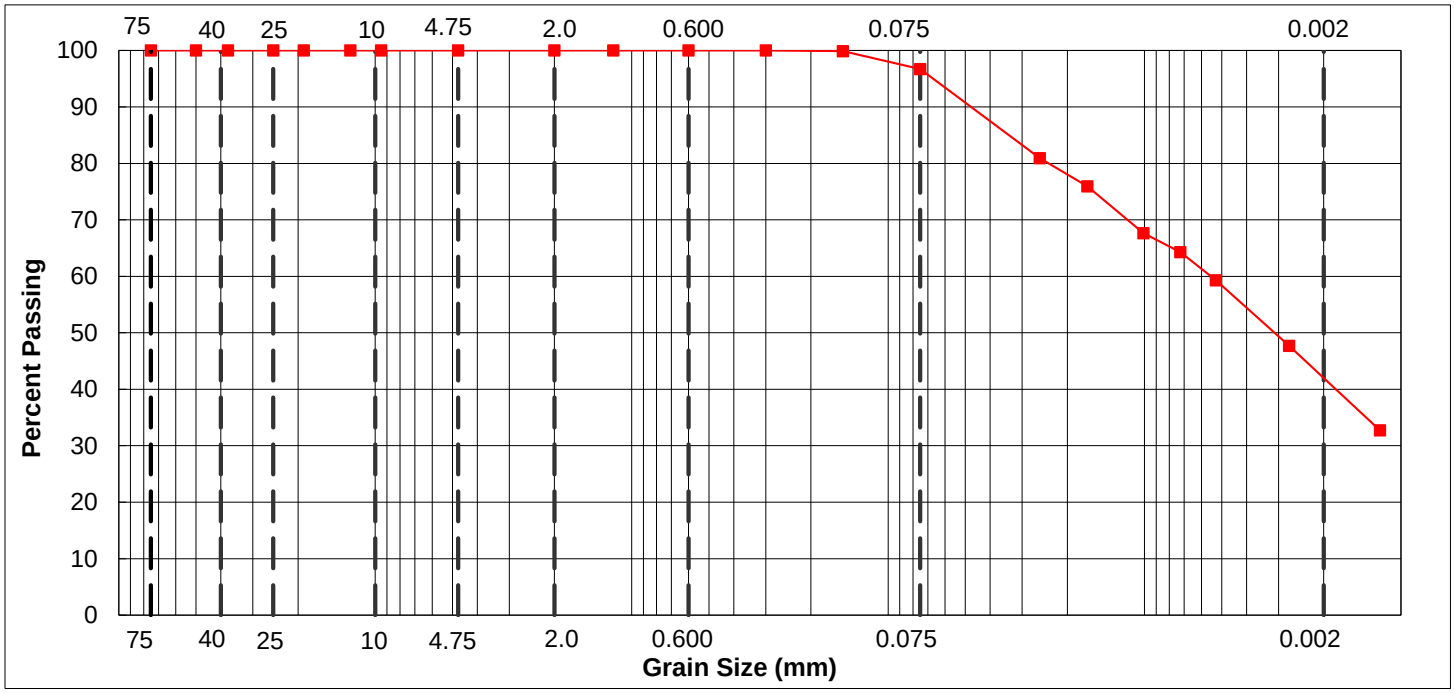
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	122RC17
Project No.:	1560-193-00	**Source:**	22BH117
Owner:	EID	**Sample Depth:**	28.0m
File No.:	GSA - 122RC17	**Test Date:**	16-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	96.7
25.0	100.0	0.0256	80.9
19.0	100.0	0.0167	75.9
12.5	100.0	0.0101	67.6
9.5	100.0	0.0073	64.3
4.75	100.0	0.0053	59.3
2.00	100.0	0.0027	47.7
1.180	100.0	0.0012	32.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	3.3	425 µm to 75 µm
Silt	54.7	75 µm to 2 µm
Clay	42.0	<2 µm



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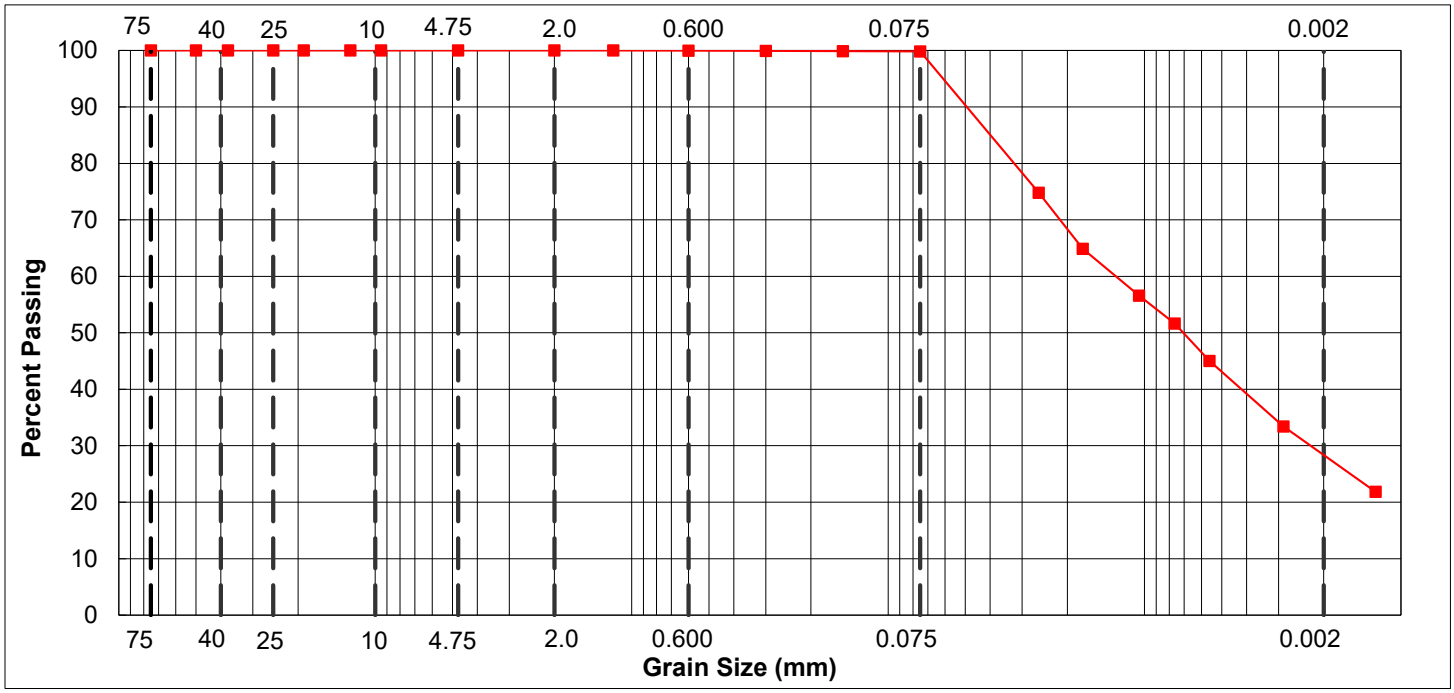
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	122UD1
Project No.:	1560-193-00	**Source:**	22CH122
Owner:	EID	**Sample Depth:**	18.3m
File No.:	GSA - 122UD1	**Test Date:**	6-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0259	74.8
19.0	100.0	0.0174	64.9
12.5	100.0	0.0105	56.6
9.5	100.0	0.0076	51.6
4.75	100.0	0.0056	45.0
2.00	100.0	0.0029	33.4
1.180	100.0	0.0013	21.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	71.4	75 µm to 2 µm
Clay	28.4	<2 µm



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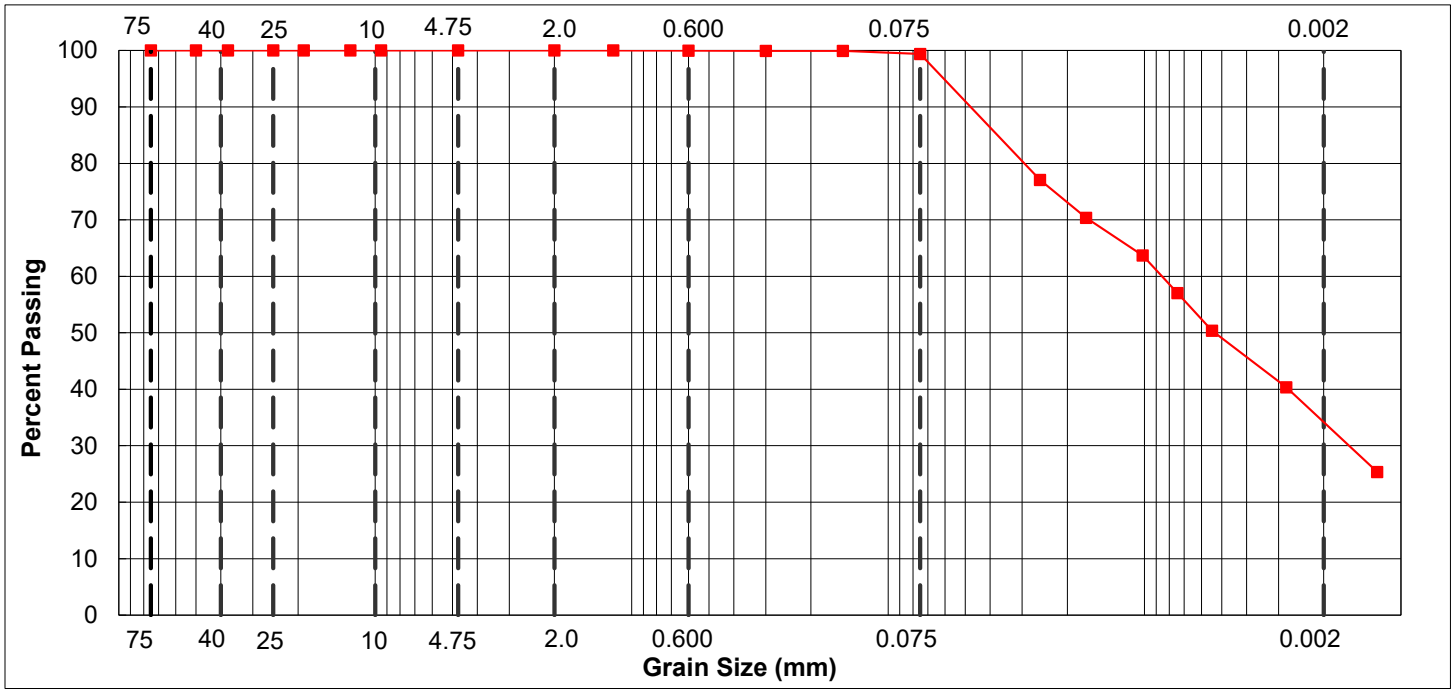
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	123B1
Project No.:	1560-193-00	**Source:**	22CH123
Owner:	EID	**Sample Depth:**	11.3m
File No.:	GSA - 123B1	**Test Date:**	6-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.4
25.0	100.0	0.0255	77.1
19.0	100.0	0.0169	70.4
12.5	100.0	0.0102	63.7
9.5	100.0	0.0074	57.0
4.75	100.0	0.0054	50.4
2.00	100.0	0.0028	40.4
1.180	100.0	0.0012	25.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.6	425 µm to 75 µm
Silt	65.2	75 µm to 2 µm
Clay	34.2	<2 µm



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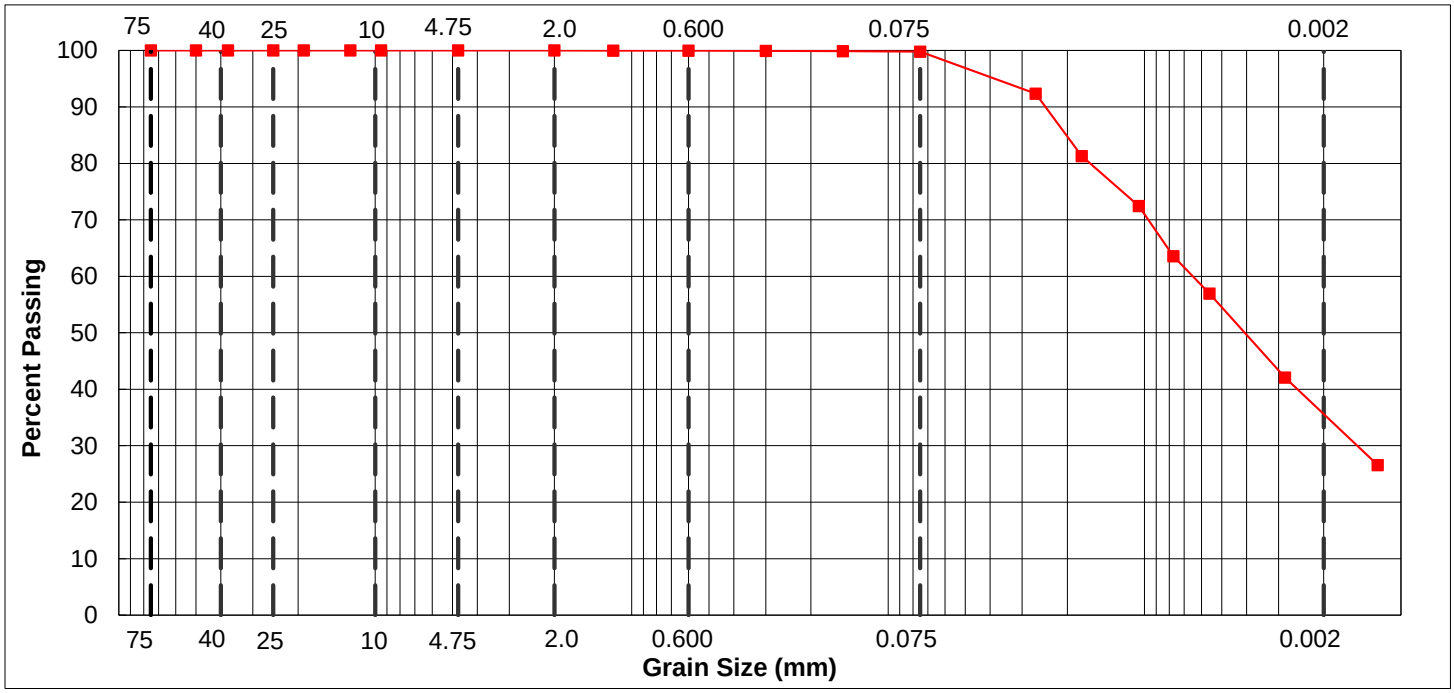
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	123RC1
Project No.:	1560-193-00	**Source:**	22CH123
Owner:	EID	**Sample Depth:**	6.9m
File No.:	GSA - 123RC1	**Test Date:**	7-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0266	92.4
19.0	100.0	0.0176	81.3
12.5	100.0	0.0105	72.4
9.5	100.0	0.0077	63.6
4.75	100.0	0.0056	56.9
2.00	100.0	0.0028	42.1
1.180	100.0	0.0012	26.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	64.2	75 µm to 2 µm
Clay	35.6	<2 µm



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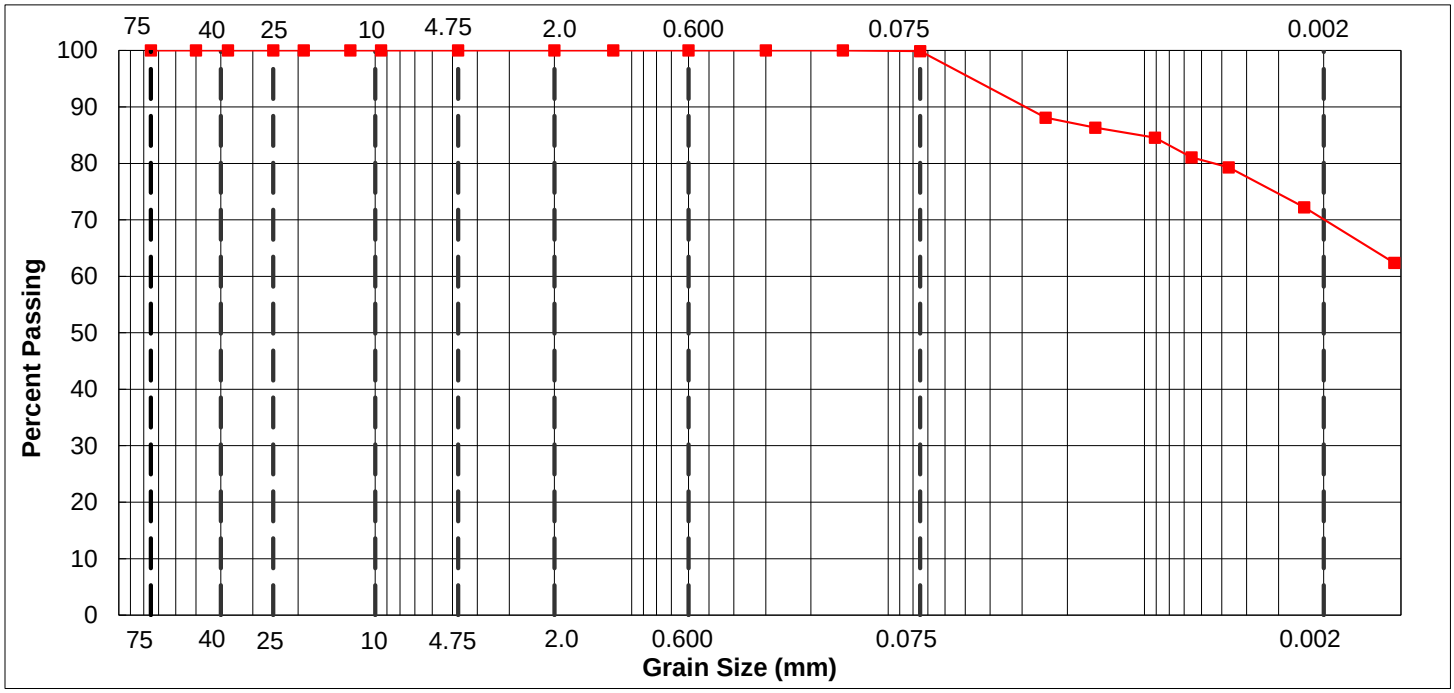
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	123RC8
Project No.:	1560-193-00	**Source:**	22CH123
Owner:	EID	**Sample Depth:**	17.5
File No.:	GSA - 123RC8	**Test Date:**	18-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.9
25.0	100.0	0.0243	88.1
19.0	100.0	0.0156	86.3
12.5	100.0	0.0091	84.6
9.5	100.0	0.0066	81.0
4.75	100.0	0.0047	79.3
2.00	100.0	0.0024	72.2
1.180	100.0	0.0011	62.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	29.8	75 µm to 2 µm
Clay	70.1	<2 µm



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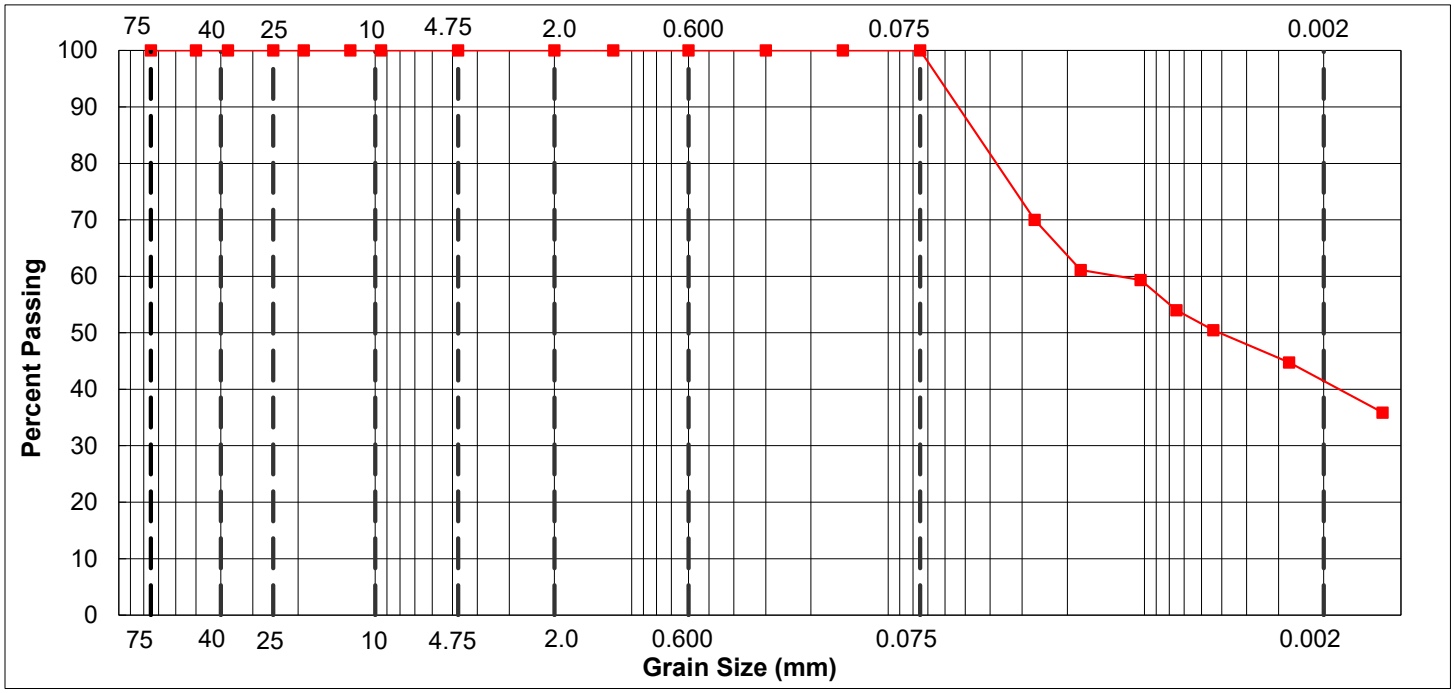
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	124AU9
Project No.:	1560-193-00	**Source:**	22BH124
Owner:	EID	**Sample Depth:**	6.7m
File No.:	GSA - 124AU9	**Date:**	16-Mar-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	100.0
25.0	100.0	0.0268	70.0
19.0	100.0	0.0177	61.1
12.5	100.0	0.0104	59.3
9.5	100.0	0.0075	54.0
4.75	100.0	0.0054	50.5
2.00	100.0	0.0027	44.8
1.180	100.0	0.0012	35.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.0	425 µm to 75 µm
Silt	58.5	75 µm to 2 µm
Clay	41.5	<2 µm



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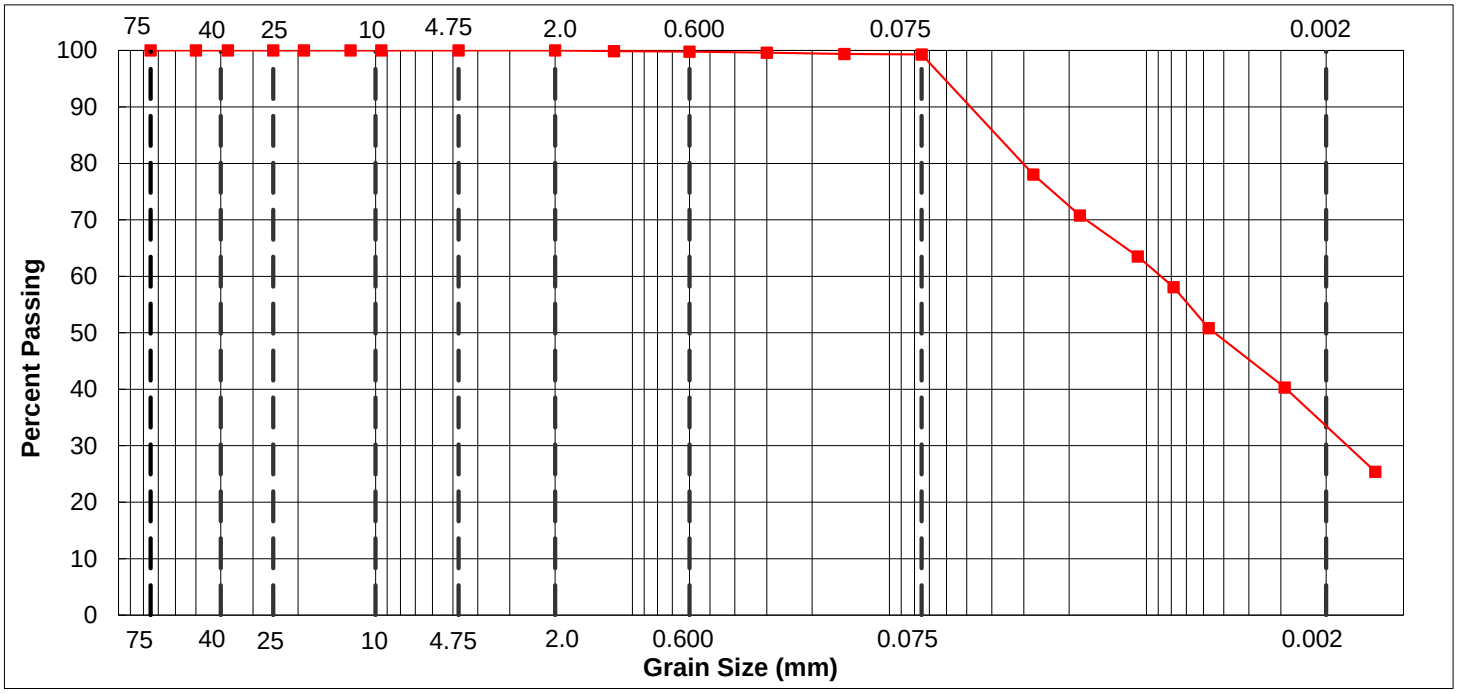
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	22CH124
Project No.:	1560-193-00	**Source:**	124RC8
Owner:	EID	**Sample Depth:**	15.6m
File No.:	GSA - 22CH124	**Test Date:**	28-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.6
50.0	100.0	0.150	99.4
37.5	100.0	0.075	99.3
25.0	100.0	0.0276	78.1
19.0	100.0	0.0181	70.8
12.5	100.0	0.0108	63.5
9.5	100.0	0.0078	58.1
4.75	100.0	0.0057	50.8
2.00	100.0	0.0029	40.3
1.180	99.9	0.0013	25.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	0.5	425 µm to 75 µm
Silt	65.8	75 µm to 2 µm
Clay	33.5	<2 µm



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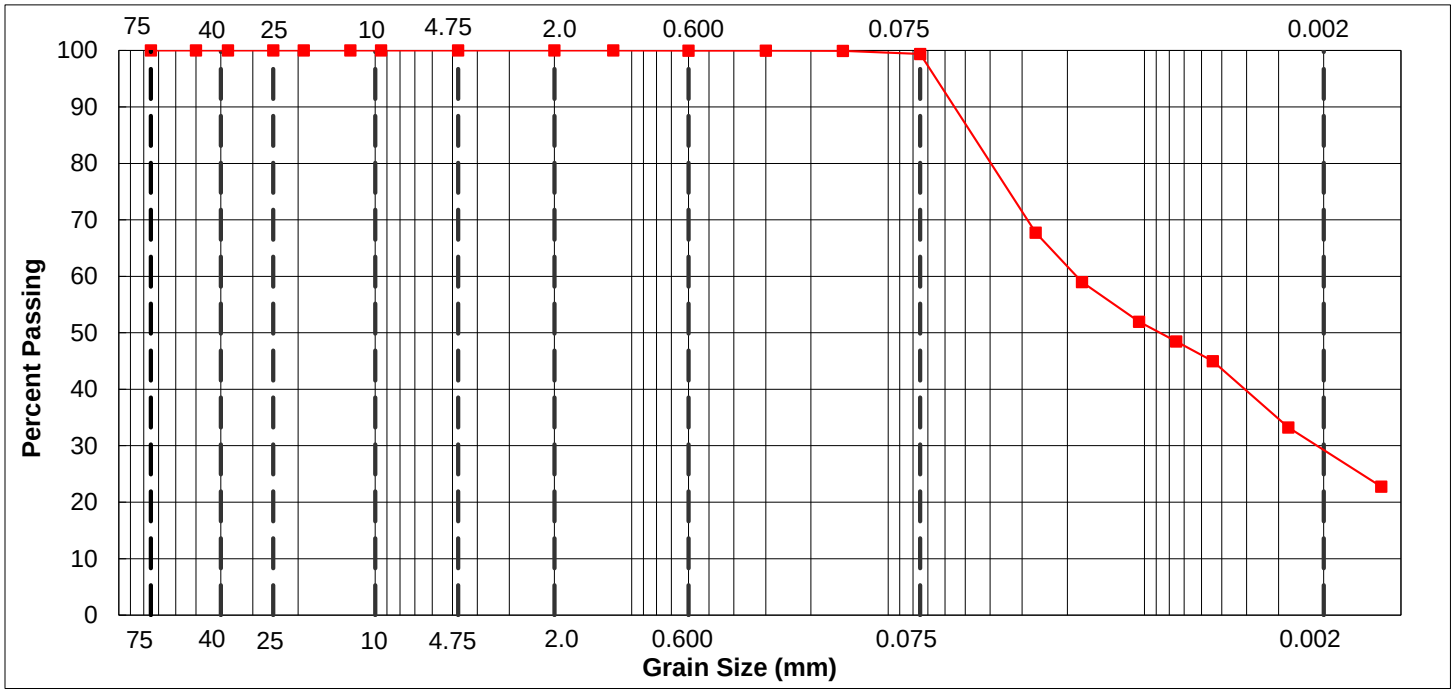
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	124UD5
Project No.:	1560-193-00	**Source:**	22CH124
Owner:	EID	**Sample Depth:**	22.46m
File No.:	GSA - 124UD5	**Test Date:**	2-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.4
25.0	100.0	0.0266	67.7
19.0	100.0	0.0175	59.0
12.5	100.0	0.0105	52.0
9.5	100.0	0.0075	48.5
4.75	100.0	0.0054	45.0
2.00	100.0	0.0028	33.2
1.180	100.0	0.0012	22.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.6	425 µm to 75 µm
Silt	70.2	75 µm to 2 µm
Clay	29.2	<2 µm



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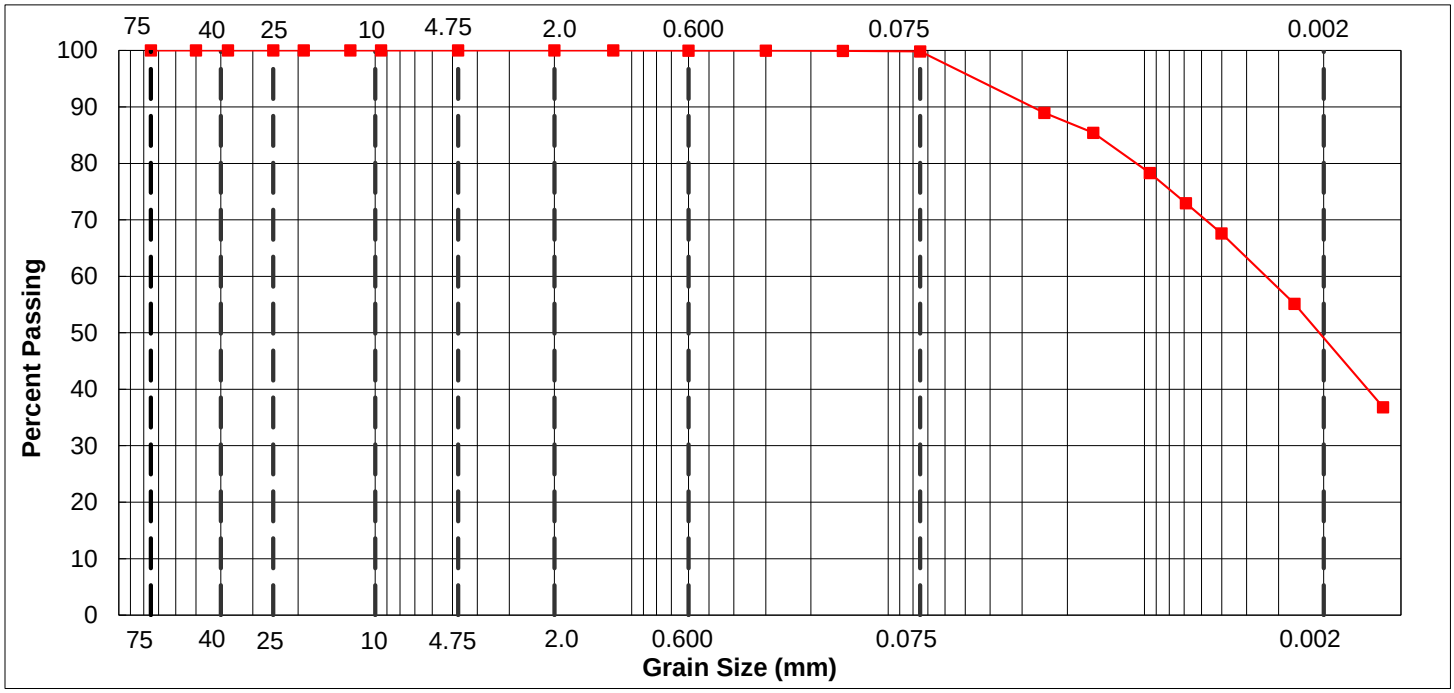
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	124UD6
Project No.:	1560-193-00	**Source:**	22CH124
Owner:	EID	**Sample Depth:**	25.35m
File No.:	GSA - 124UD6	**Test Date:**	28-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.9
25.0	100.0	0.0246	89.0
19.0	100.0	0.0159	85.4
12.5	100.0	0.0095	78.3
9.5	100.0	0.0069	72.9
4.75	100.0	0.0050	67.6
2.00	100.0	0.0026	55.2
1.180	100.0	0.0012	36.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	50.8	75 µm to 2 µm
Clay	49.1	<2 µm



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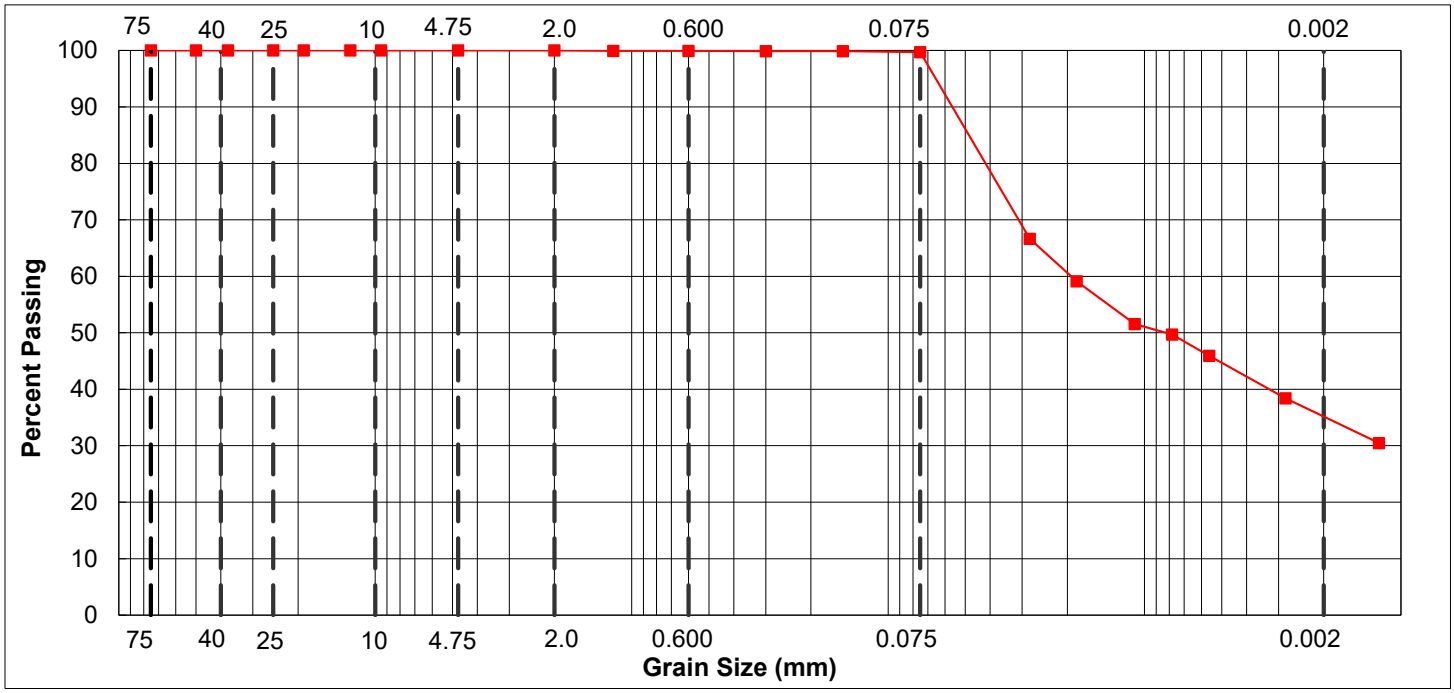
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	125AU9
Project No.:	1560-193-00	**Source:**	22BH125
Owner:	EID	**Sample Depth:**	6.7m
File No.:	GSA - 125AU9	**Date:**	21-Mar-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.7
25.0	100.0	0.0281	66.6
19.0	100.0	0.0184	59.1
12.5	100.0	0.0109	51.6
9.5	100.0	0.0078	49.7
4.75	100.0	0.0056	45.9
2.00	100.0	0.0028	38.4
1.180	99.9	0.0012	30.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	64.5	75 µm to 2 µm
Clay	35.2	<2 µm



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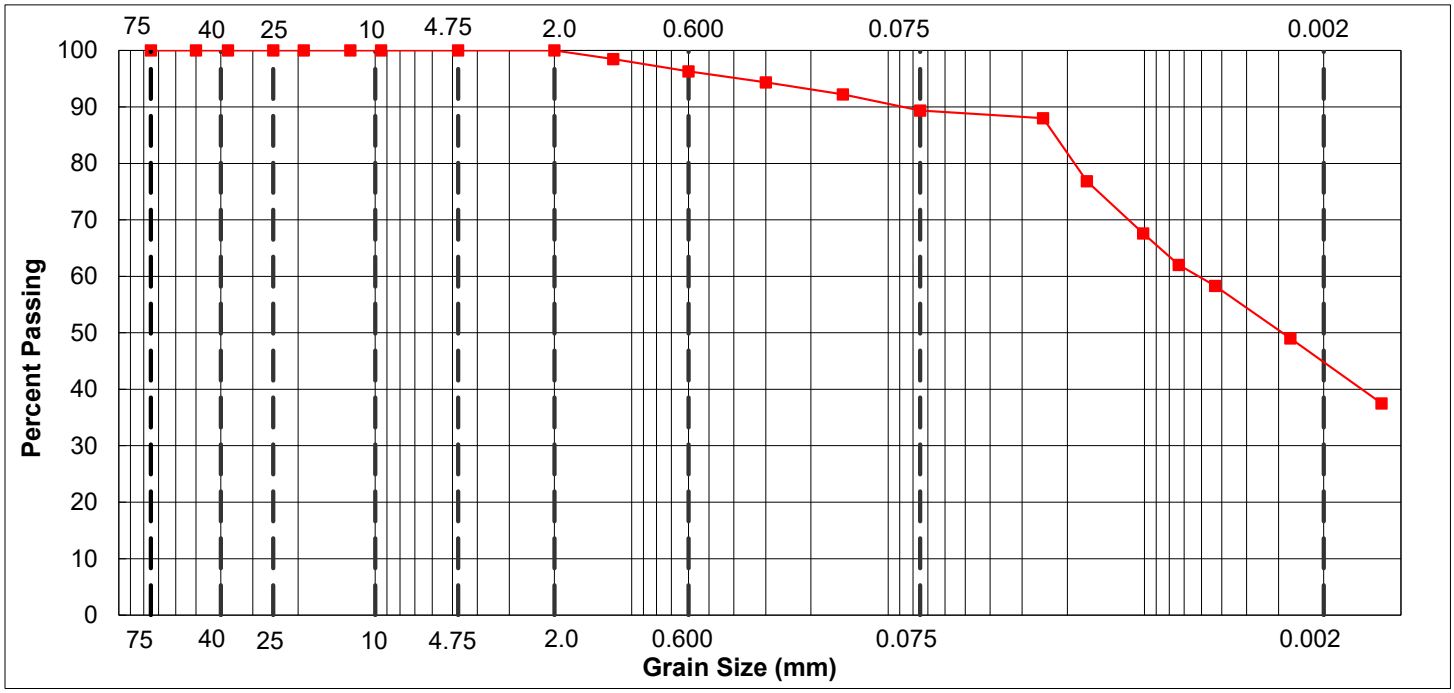
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	125AU14
Project No.:	1560-193-00	**Source:**	22BH125
Owner:	EID	**Sample Depth:**	10.4m
File No.:	GSA - 125AU14	**Date:**	21-Mar-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	96.3
75.0	100.0	0.300	94.4
50.0	100.0	0.150	92.2
37.5	100.0	0.075	89.4
25.0	100.0	0.0249	88.0
19.0	100.0	0.0168	76.9
12.5	100.0	0.0101	67.6
9.5	100.0	0.0074	62.0
4.75	100.0	0.0053	58.3
2.00	100.0	0.0027	49.0
1.180	98.5	0.0012	37.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	3.7	2.00 mm to 425 µm
Fine Sand	7.0	425 µm to 75 µm
Silt	44.5	75 µm to 2 µm
Clay	44.8	<2 µm



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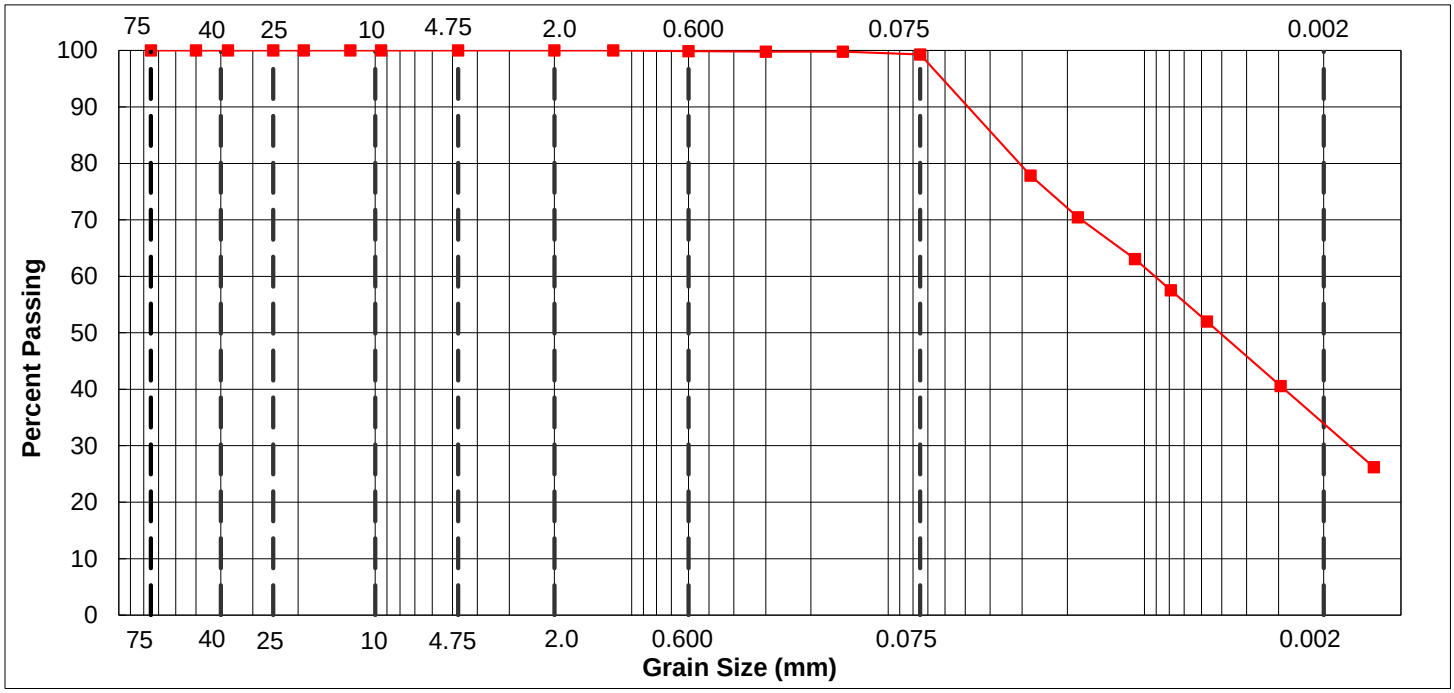
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	125RC4
Project No.:	1560-193-00	**Source:**	22CH125
Owner:	EID	**Sample Depth:**	11.2m
File No.:	GSA - 125RC4	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.3
25.0	100.0	0.0279	77.8
19.0	100.0	0.0182	70.5
12.5	100.0	0.0109	63.1
9.5	100.0	0.0079	57.6
4.75	100.0	0.0057	52.0
2.00	100.0	0.0029	40.6
1.180	100.0	0.0013	26.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.6	425 µm to 75 µm
Silt	65.4	75 µm to 2 µm
Clay	33.9	<2 µm



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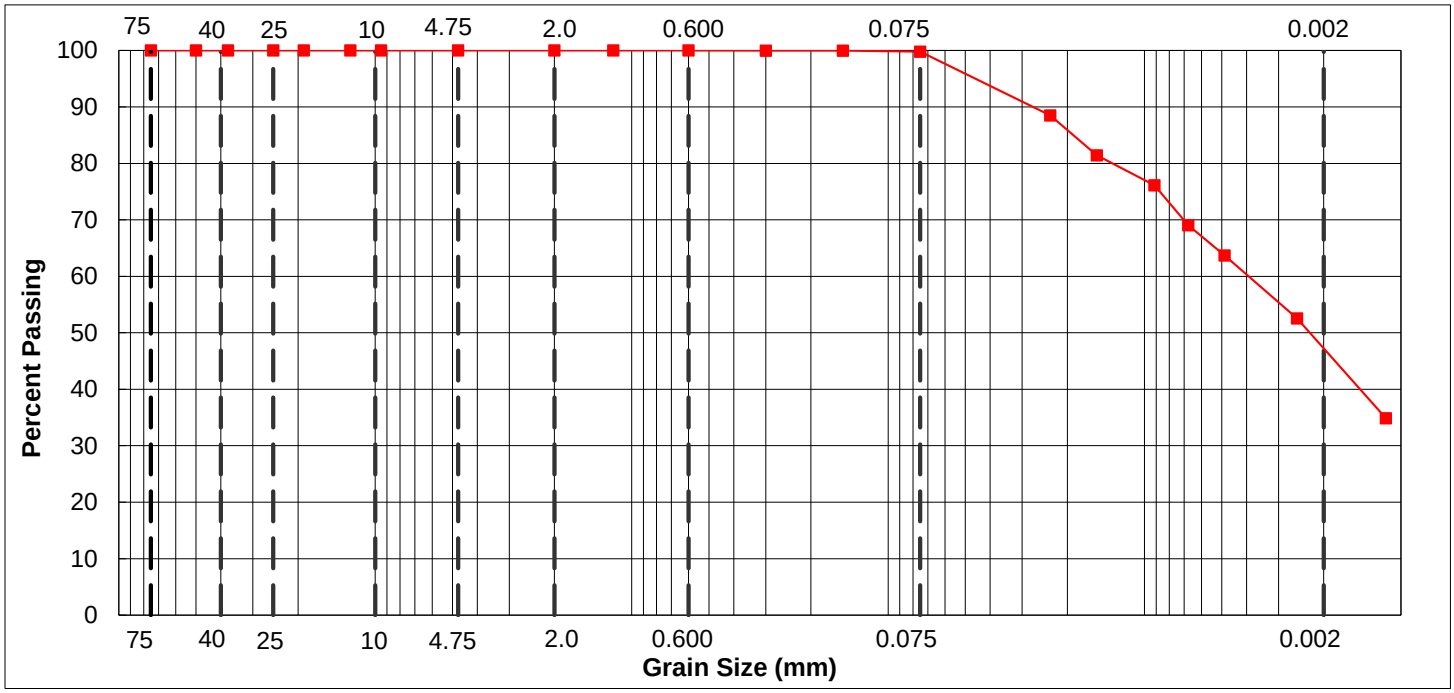
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	125UD4
Project No.:	1560-193-00	**Source:**	22CH125
Owner:	EID	**Sample Depth:**	21.0m
File No.:	GSA - 125UD4	**Test Date:**	29-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.8
25.0	100.0	0.0233	88.5
19.0	100.0	0.0154	81.4
12.5	100.0	0.0092	76.1
9.5	100.0	0.0067	69.0
4.75	100.0	0.0049	63.7
2.00	100.0	0.0025	52.6
1.180	100.0	0.0011	34.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	52.6	75 µm to 2 µm
Clay	47.2	<2 µm



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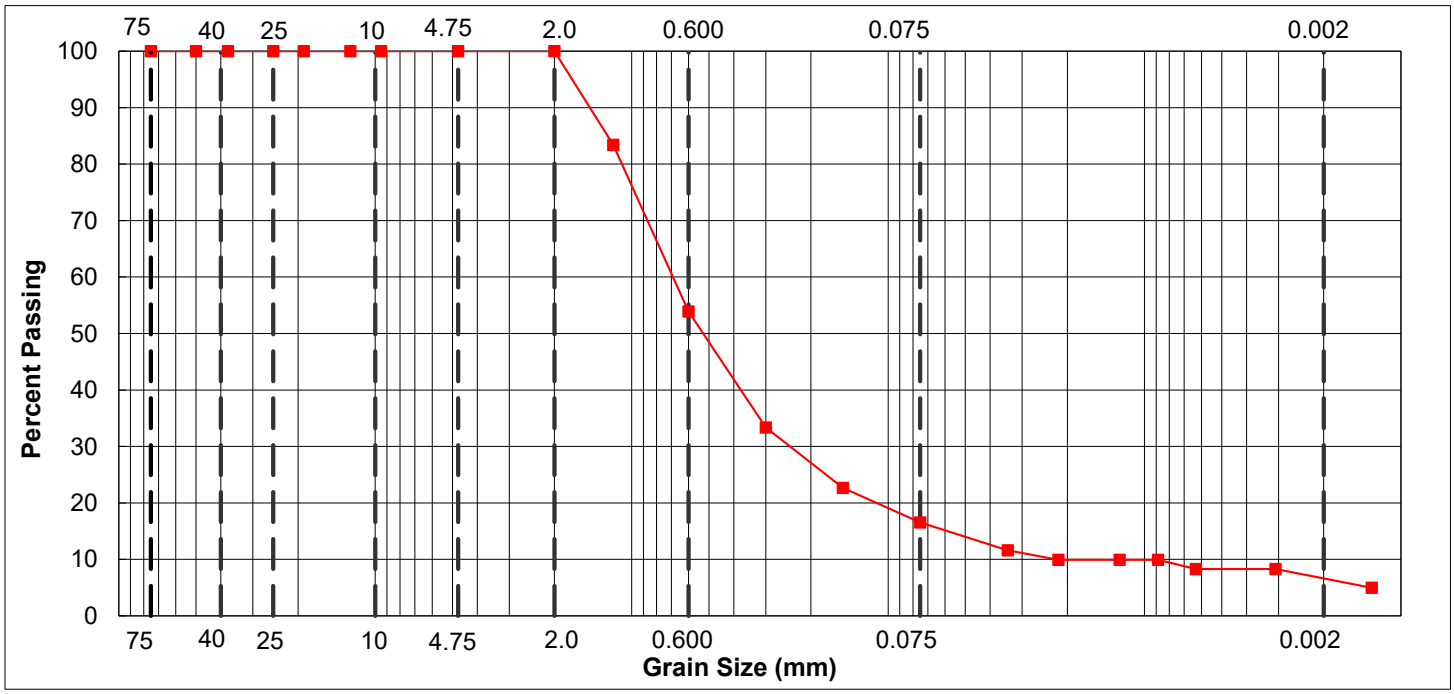
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	125UD6
Project No.:	1560-193-00	**Source:**	22CH125
Owner:	EID	**Sample Depth:**	25.0 m
File No.:	GSA - 125UD6	**Date:**	27-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	53.9
75.0	100.0	0.300	33.4
50.0	100.0	0.150	22.7
37.5	100.0	0.075	16.6
25.0	100.0	0.0342	11.6
19.0	100.0	0.0217	9.9
12.5	100.0	0.0125	9.9
9.5	100.0	0.0089	9.9
4.75	100.0	0.0063	8.3
2.00	100.0	0.0031	8.3
1.180	83.4	0.0013	5.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	46.1	2.00 mm to 425 µm
Fine Sand	37.3	425 µm to 75 µm
Silt	10.0	75 µm to 2 µm
Clay	6.6	<2 µm



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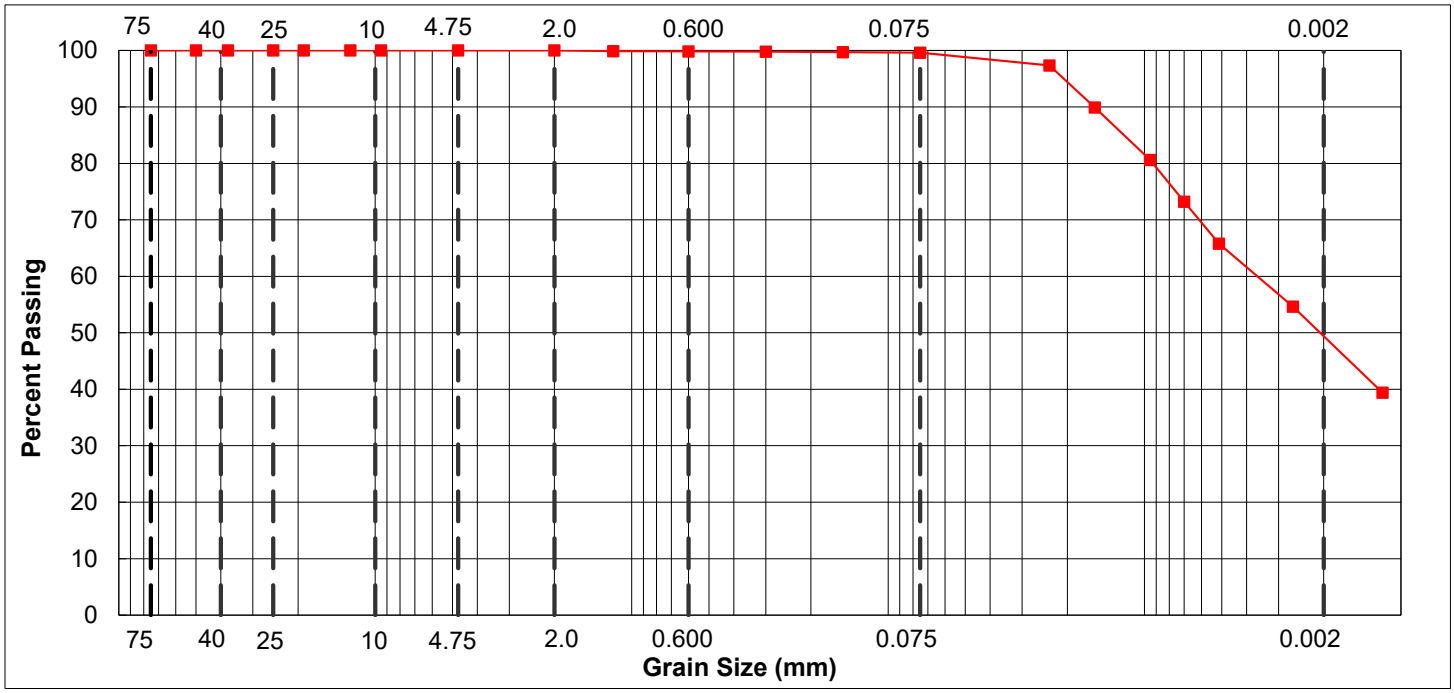
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	126AU8
Project No.:	1560-193-00	**Source:**	22BH126
Owner:	EID	**Sample Depth:**	5.8m
File No.:	GSA - 126AU8	**Date:**	21-Mar-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.6
25.0	100.0	0.0235	97.4
19.0	100.0	0.0156	89.9
12.5	100.0	0.0095	80.6
9.5	100.0	0.0070	73.2
4.75	100.0	0.0051	65.8
2.00	100.0	0.0026	54.6
1.180	99.9	0.0012	39.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	50.2	75 µm to 2 µm
Clay	49.4	<2 µm



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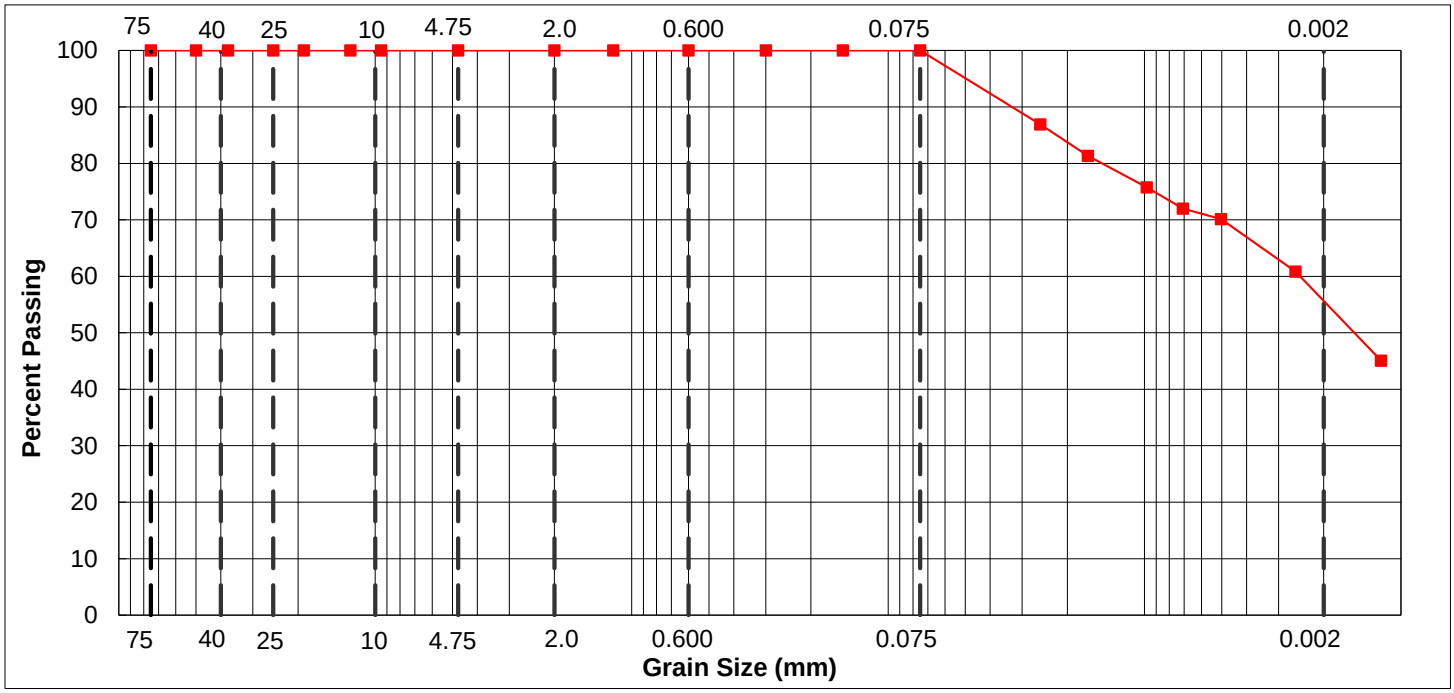
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	126RC8
Project No.:	1560-193-00	**Source:**	22CH126
Owner:	EID	**Sample Depth:**	16.6m
File No.:	GSA - 126RC8	**Test Date:**	5-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	100.0
25.0	100.0	0.0255	86.9
19.0	100.0	0.0166	81.3
12.5	100.0	0.0098	75.7
9.5	100.0	0.0071	72.0
4.75	100.0	0.0050	70.2
2.00	100.0	0.0026	60.8
1.180	100.0	0.0012	45.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.0	425 µm to 75 µm
Silt	44.4	75 µm to 2 µm
Clay	55.6	<2 µm



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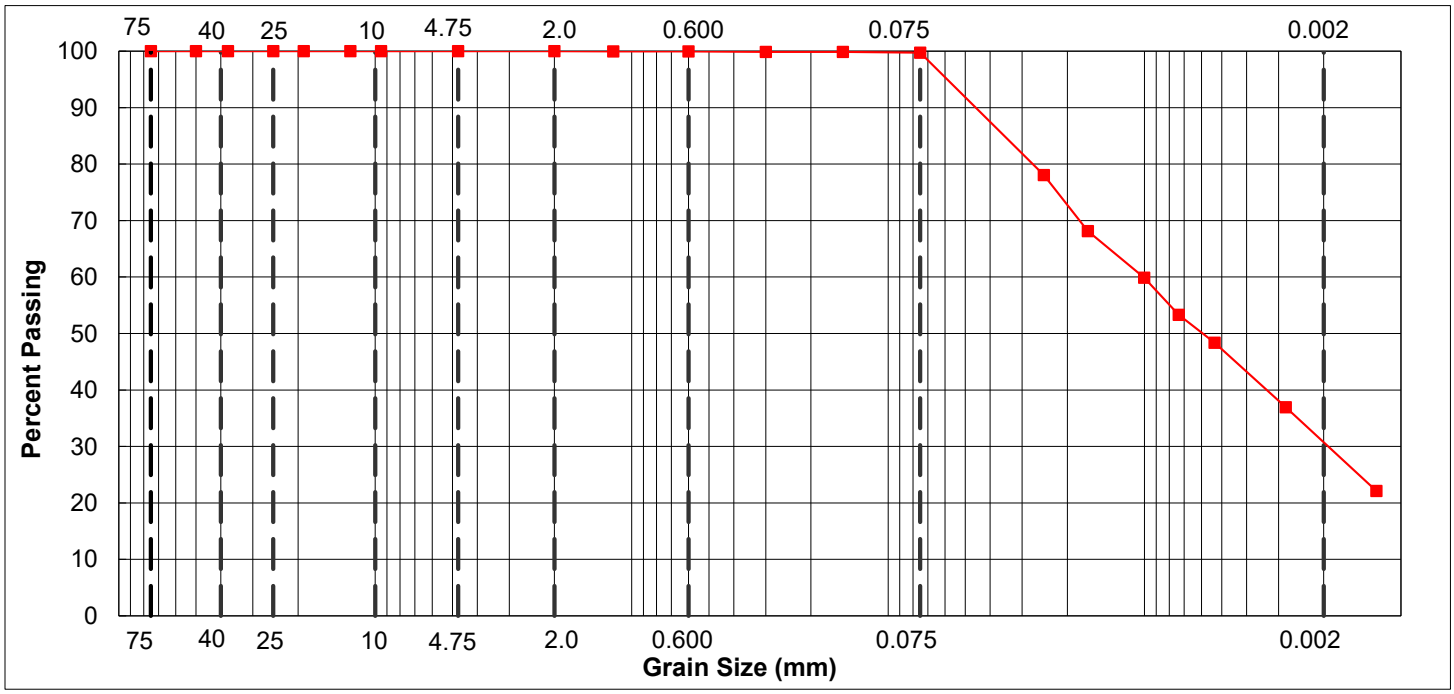
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	126RC9
Project No.:	1560-193-00	**Source:**	22CH126
Owner:	EID	**Sample Depth:**	17.2m
File No.:	GSA - 126RC9	**Date:**	18-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.7
25.0	100.0	0.0247	78.1
19.0	100.0	0.0166	68.2
12.5	100.0	0.0100	59.9
9.5	100.0	0.0074	53.3
4.75	100.0	0.0053	48.4
2.00	100.0	0.0028	37.0
1.180	100.0	0.0012	22.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	69.0	75 µm to 2 µm
Clay	30.7	<2 µm



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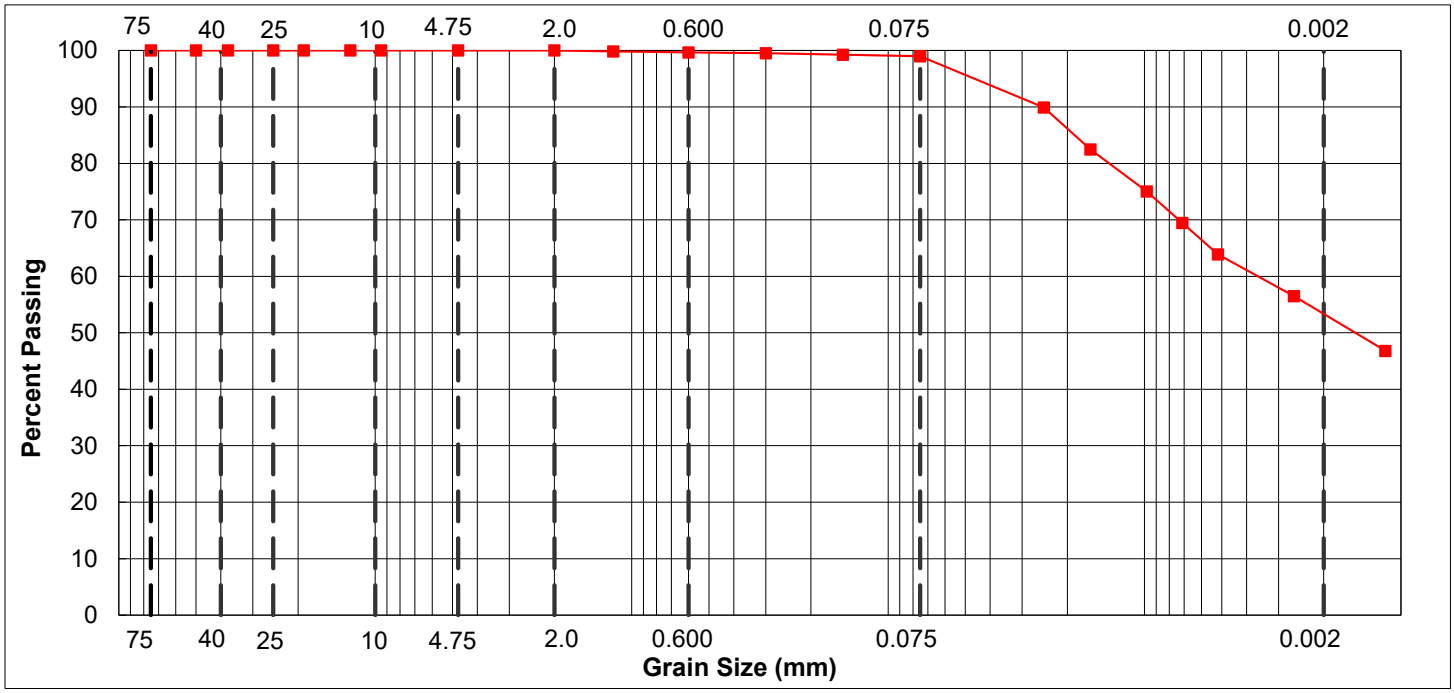
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	127AU5
Project No.:	1560-193-00	**Source:**	22BH127
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 127AU5	**Date:**	21-Mar-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.3
37.5	100.0	0.075	99.0
25.0	100.0	0.0247	89.9
19.0	100.0	0.0163	82.5
12.5	100.0	0.0098	75.1
9.5	100.0	0.0071	69.5
4.75	100.0	0.0052	63.9
2.00	100.0	0.0026	56.5
1.180	99.8	0.0011	46.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	0.6	425 µm to 75 µm
Silt	45.7	75 µm to 2 µm
Clay	53.3	<2 µm



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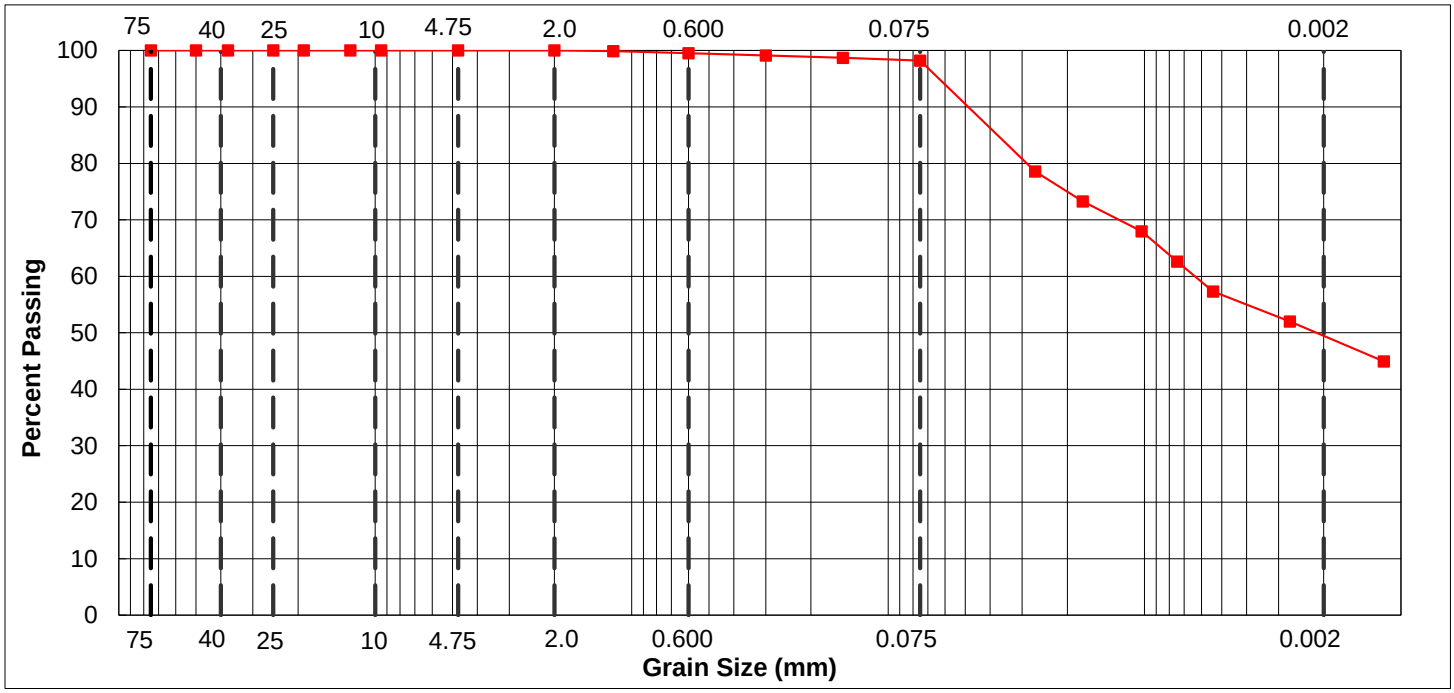
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	131AU6
Project No.:	1560-193-00	**Source:**	22BH131
Owner:	EID	**Sample Depth:**	4.1m
File No.:	GSA - 131AU6	**Test Date:**	15-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.1
50.0	100.0	0.150	98.7
37.5	100.0	0.075	98.2
25.0	100.0	0.0267	78.6
19.0	100.0	0.0174	73.3
12.5	100.0	0.0103	67.9
9.5	100.0	0.0075	62.6
4.75	100.0	0.0054	57.3
2.00	100.0	0.0027	52.0
1.180	99.9	0.0012	44.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	1.3	425 µm to 75 µm
Silt	48.7	75 µm to 2 µm
Clay	49.5	<2 µm



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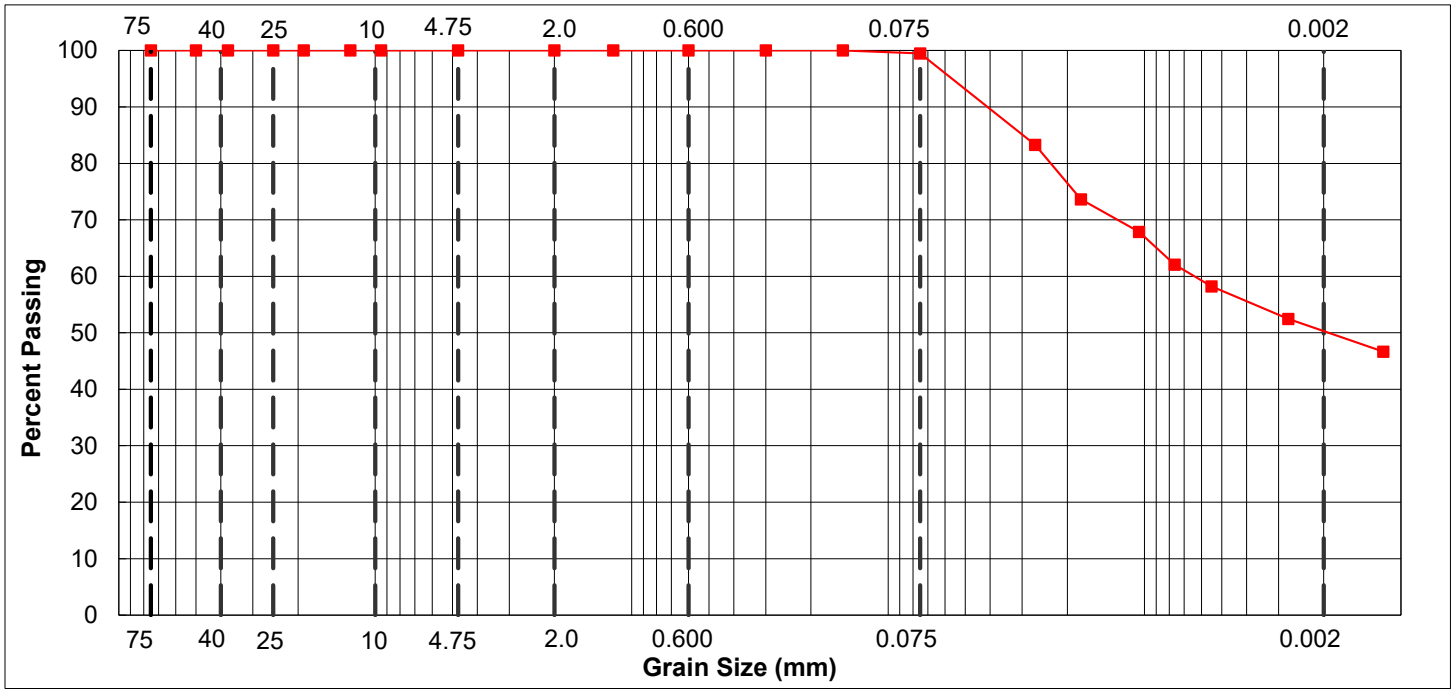
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	132AU5
Project No.:	1560-193-00	**Source:**	22BH132
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 132AU5	**Date:**	20-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.5
25.0	100.0	0.0267	83.3
19.0	100.0	0.0177	73.7
12.5	100.0	0.0105	67.9
9.5	100.0	0.0076	62.1
4.75	100.0	0.0055	58.2
2.00	100.0	0.0027	52.4
1.180	100.0	0.0012	46.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.5	425 µm to 75 µm
Silt	49.2	75 µm to 2 µm
Clay	50.3	<2 µm



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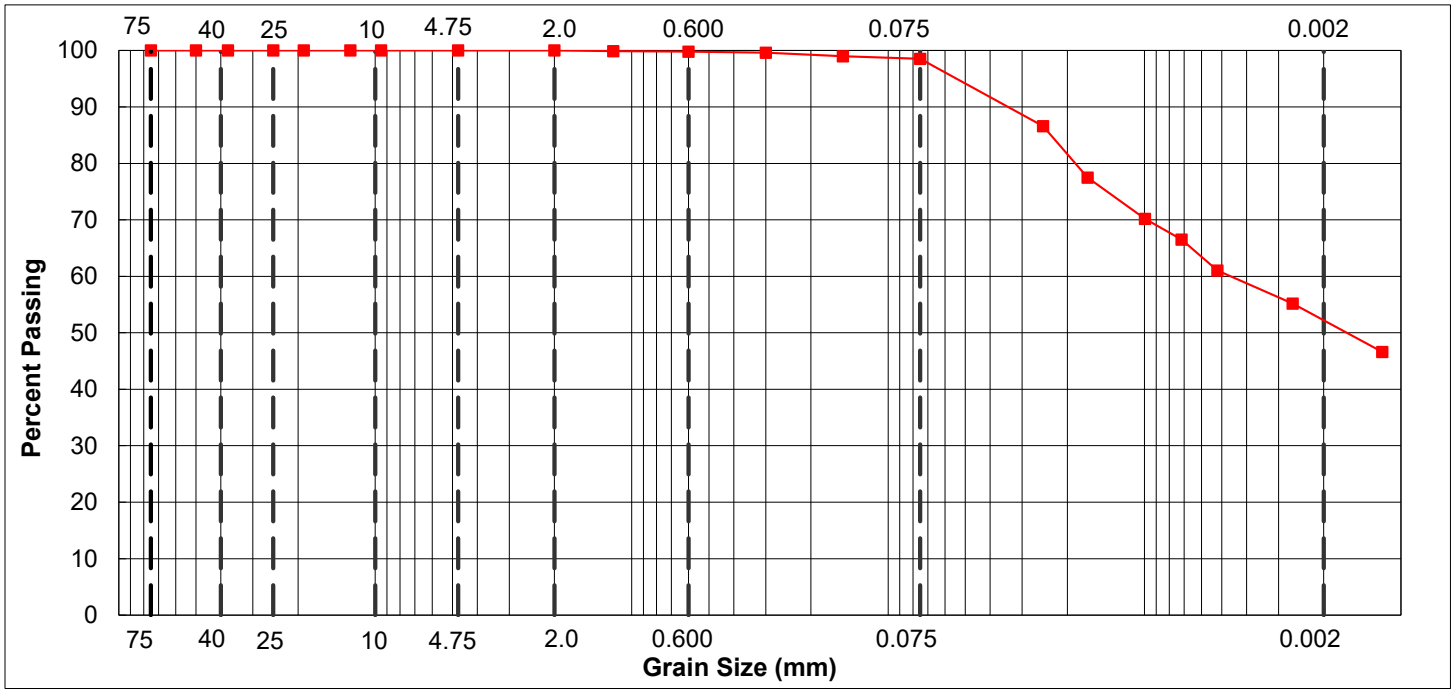
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	133AU6
Project No.:	1560-193-00	**Source:**	22BH133
Owner:	EID	**Sample Depth:**	4.3m
File No.:	GSA - 133AU6	**Date:**	24-Mar-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.6
50.0	100.0	0.150	99.0
37.5	100.0	0.075	98.5
25.0	100.0	0.0249	86.6
19.0	100.0	0.0167	77.5
12.5	100.0	0.0100	70.2
9.5	100.0	0.0072	66.5
4.75	100.0	0.0052	61.0
2.00	100.0	0.0026	55.2
1.180	99.9	0.0012	46.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	1.3	425 µm to 75 µm
Silt	46.3	75 µm to 2 µm
Clay	52.2	<2 µm



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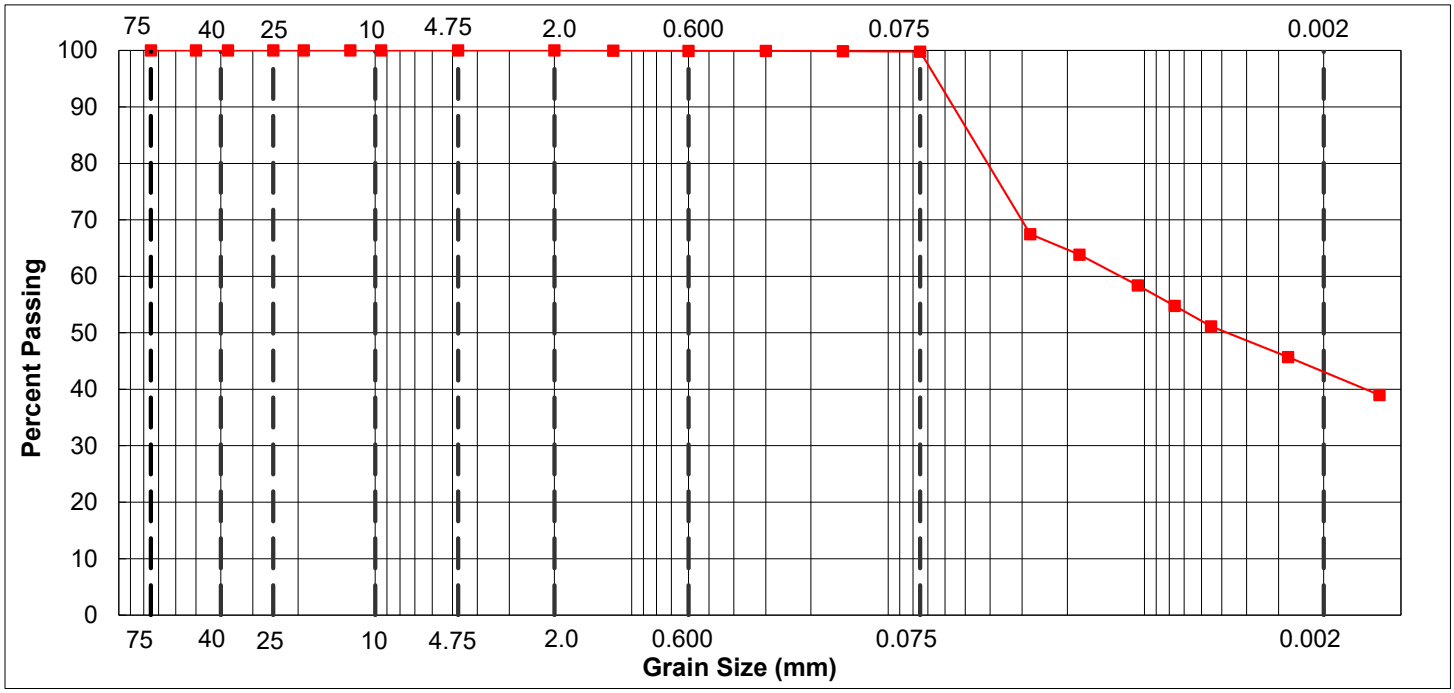
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	133AU11
Project No.:	1560-193-00	**Source:**	22BH133
Owner:	EID	**Sample Depth:**	8.2m
File No.:	GSA - 133AU11	**Date:**	24-Mar-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0279	67.5
19.0	100.0	0.0179	63.8
12.5	100.0	0.0106	58.4
9.5	100.0	0.0076	54.8
4.75	100.0	0.0055	51.1
2.00	100.0	0.0028	45.7
1.180	100.0	0.0012	39.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	56.7	75 µm to 2 µm
Clay	43.1	<2 µm



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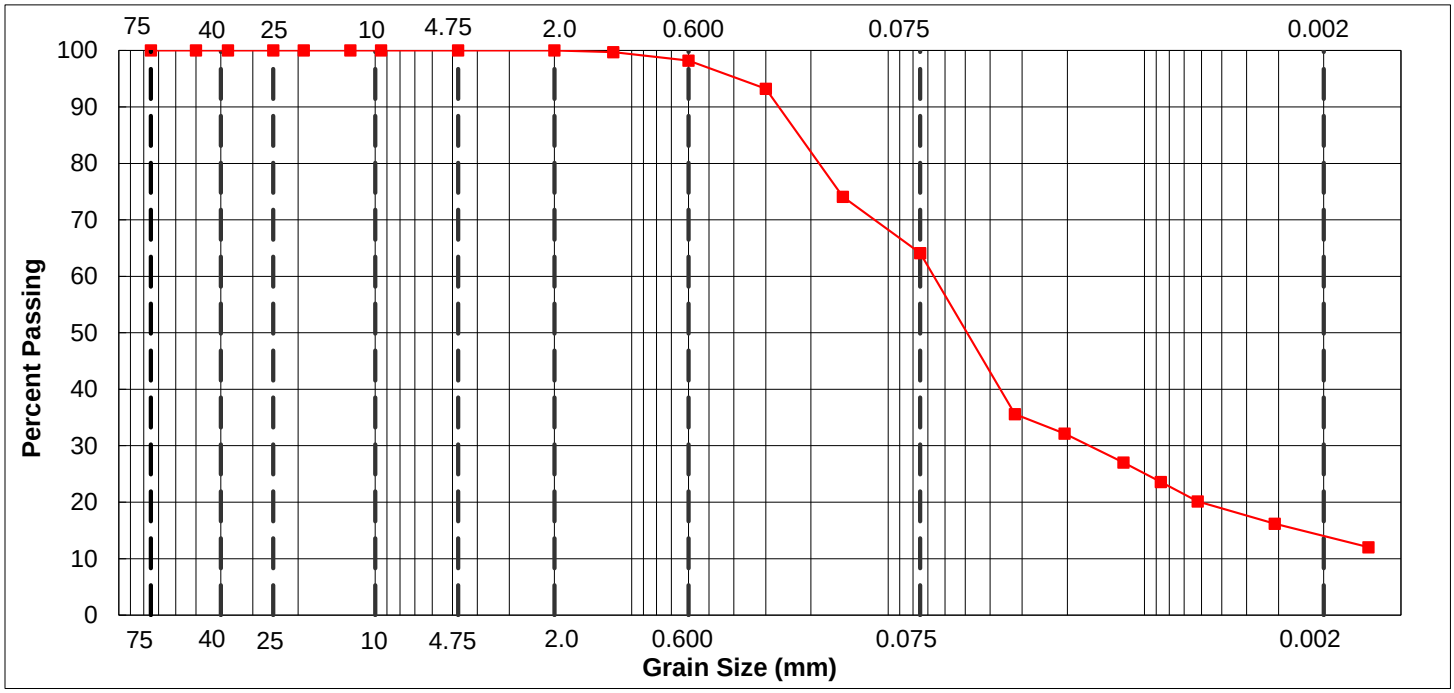
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	135AU2
Project No.:	1560-193-00	**Source:**	22BH135
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 135AU2	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.2
75.0	100.0	0.300	93.2
50.0	100.0	0.150	74.1
37.5	100.0	0.075	64.1
25.0	100.0	0.0320	35.6
19.0	100.0	0.0205	32.2
12.5	100.0	0.0121	27.0
9.5	100.0	0.0086	23.6
4.75	100.0	0.0062	20.1
2.00	100.0	0.0031	16.2
1.180	99.7	0.0013	12.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.8	2.00 mm to 425 µm
Fine Sand	34.1	425 µm to 75 µm
Silt	50.1	75 µm to 2 µm
Clay	14.0	<2 µm



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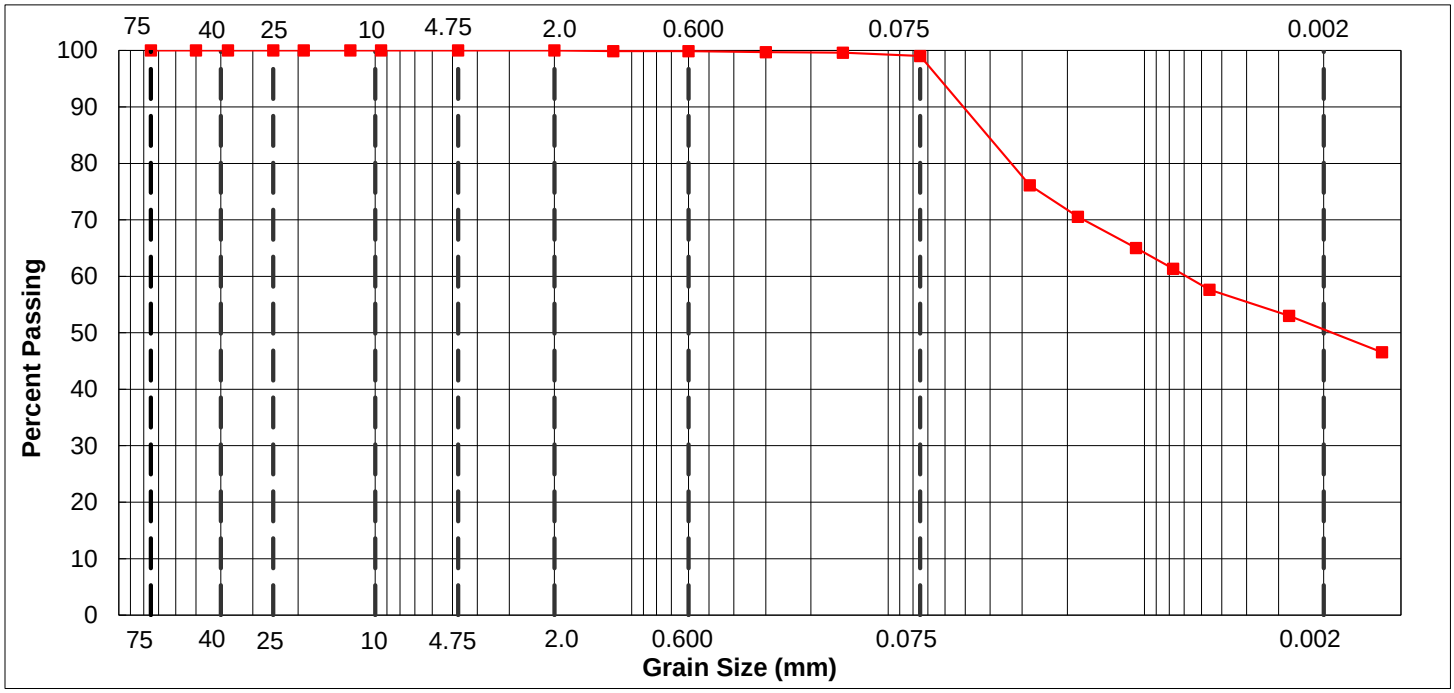
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	135AU4
Project No.:	1560-193-00	**Source:**	22BH135
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 135AU4	**Test Date:**	18-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.7
50.0	100.0	0.150	99.6
37.5	100.0	0.075	99.0
25.0	100.0	0.0280	76.1
19.0	100.0	0.0182	70.6
12.5	100.0	0.0108	65.0
9.5	100.0	0.0077	61.3
4.75	100.0	0.0056	57.6
2.00	100.0	0.0027	53.0
1.180	99.9	0.0012	46.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.9	425 µm to 75 µm
Silt	48.4	75 µm to 2 µm
Clay	50.6	<2 µm



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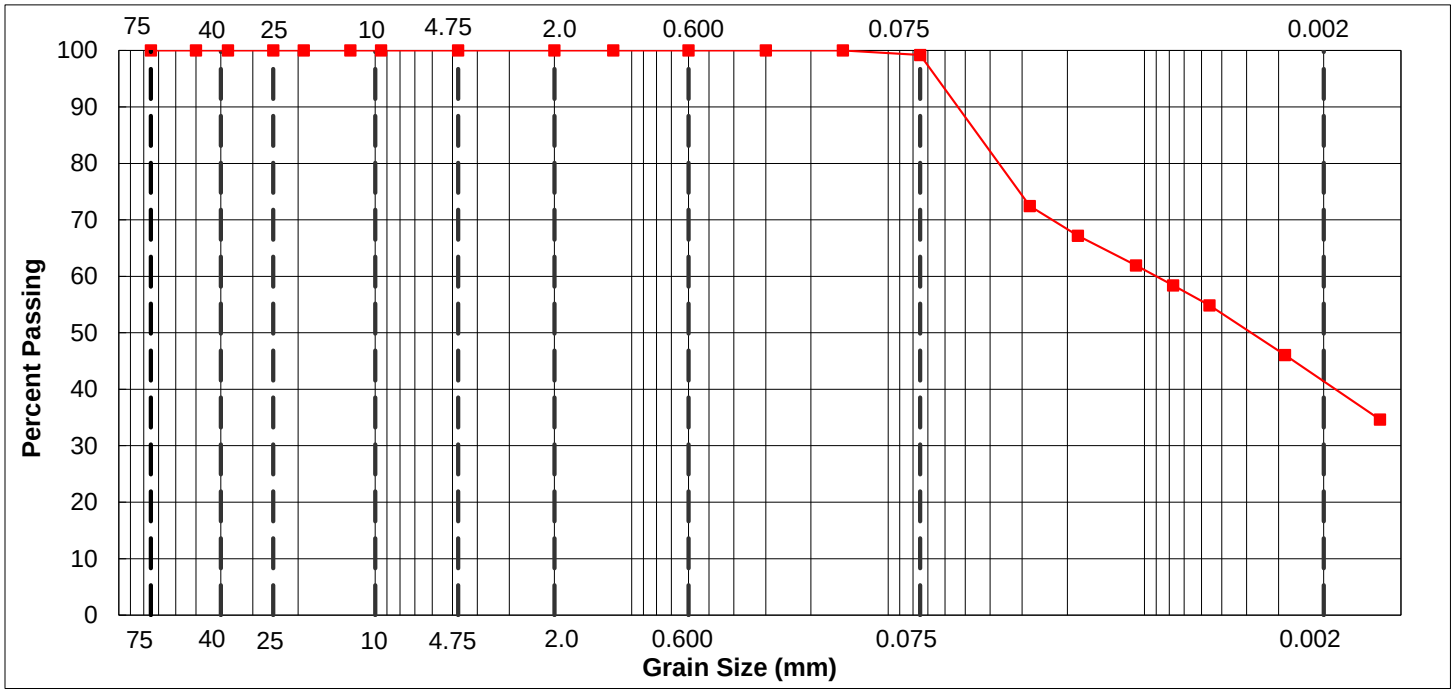
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	135RC6
Project No.:	1560-193-00	**Source:**	22CH135
Owner:	EID	**Sample Depth:**	13.0m
File No.:	GSA - 135RC6	**Test Date:**	7-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.2
25.0	100.0	0.0280	72.5
19.0	100.0	0.0182	67.2
12.5	100.0	0.0108	61.9
9.5	100.0	0.0077	58.4
4.75	100.0	0.0056	54.9
2.00	100.0	0.0028	46.1
1.180	100.0	0.0012	34.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.8	425 µm to 75 µm
Silt	57.8	75 µm to 2 µm
Clay	41.4	<2 µm



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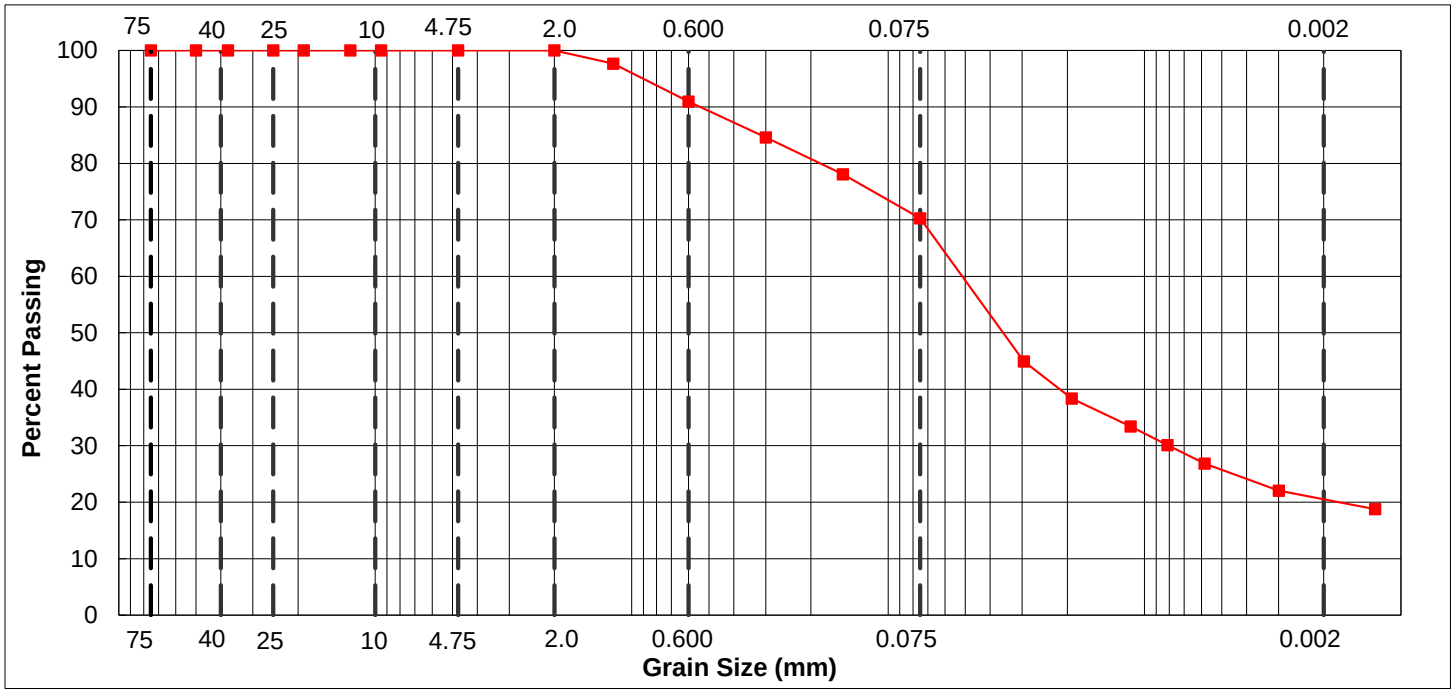
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	135UD1
Project No.:	1560-193-00	**Source:**	22CH135
Owner:	EID	**Sample Depth:**	8.1m
File No.:	GSA - 135UD1	**Date:**	18-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	91.0
75.0	100.0	0.300	84.6
50.0	100.0	0.150	78.1
37.5	100.0	0.075	70.3
25.0	100.0	0.0296	44.9
19.0	100.0	0.0192	38.3
12.5	100.0	0.0113	33.4
9.5	100.0	0.0081	30.1
4.75	100.0	0.0058	26.8
2.00	100.0	0.0030	22.1
1.180	97.7	0.0013	18.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	9.0	2.00 mm to 425 µm
Fine Sand	20.7	425 µm to 75 µm
Silt	49.8	75 µm to 2 µm
Clay	20.5	<2 µm



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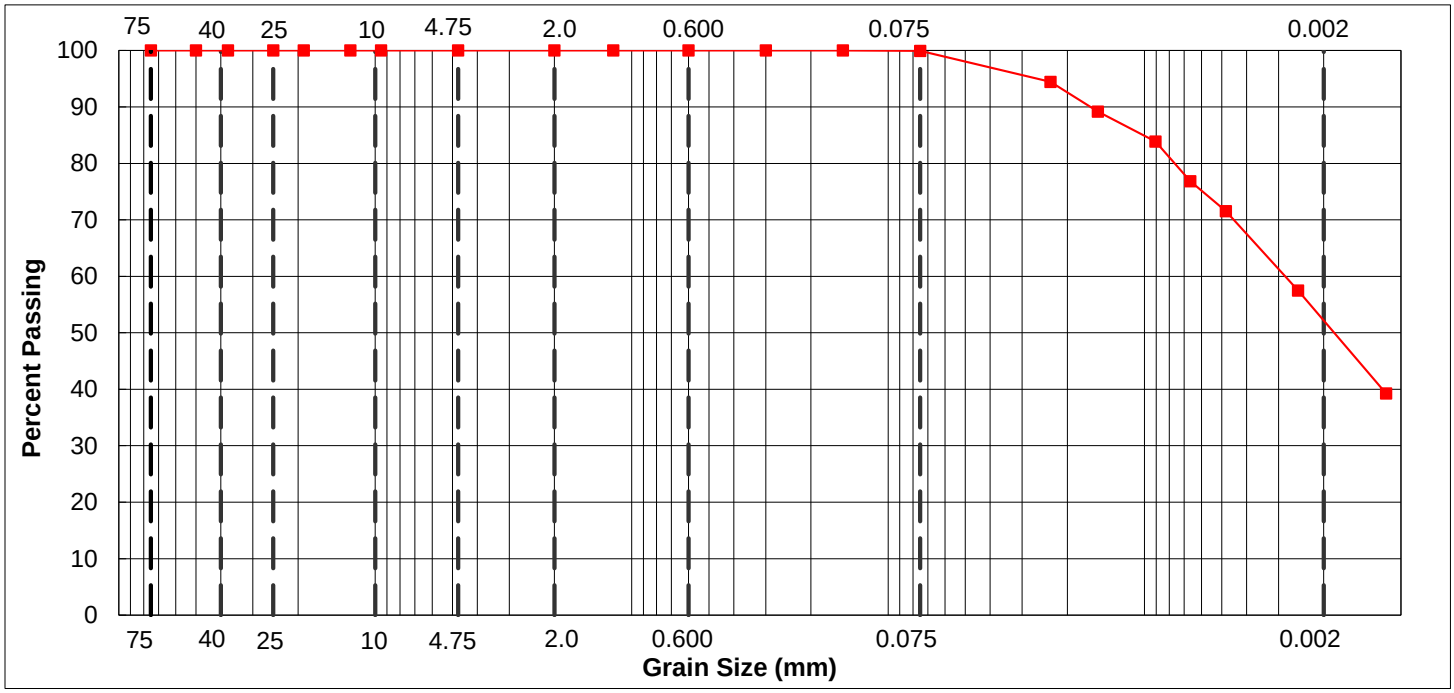
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	135UD7
Project No.:	1560-193-00	**Source:**	22CH135
Owner:	EID	**Sample Depth:**	25.7m
File No.:	GSA - 135UD7	**Test Date:**	23-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.9
25.0	100.0	0.0233	94.4
19.0	100.0	0.0152	89.2
12.5	100.0	0.0091	83.9
9.5	100.0	0.0066	76.8
4.75	100.0	0.0048	71.6
2.00	100.0	0.0025	57.5
1.180	100.0	0.0011	39.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	47.7	75 µm to 2 µm
Clay	52.2	<2 µm



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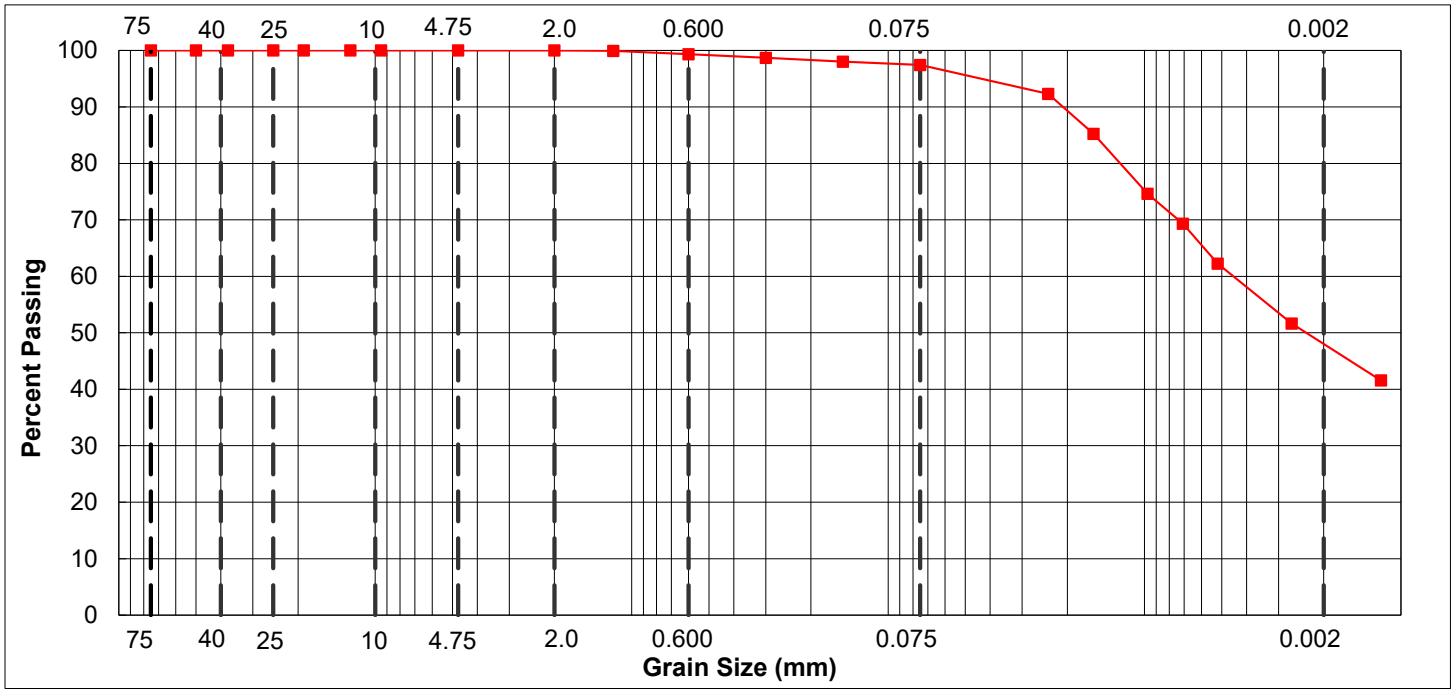
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	136AU7
Project No.:	1560-193-00	**Source:**	22BH136
Owner:	EID	**Sample Depth:**	5.2m
File No.:	GSA - 136AU7	**Date:**	24-Mar-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	98.7
50.0	100.0	0.150	98.0
37.5	100.0	0.075	97.5
25.0	100.0	0.0238	92.3
19.0	100.0	0.0158	85.3
12.5	100.0	0.0097	74.6
9.5	100.0	0.0071	69.3
4.75	100.0	0.0052	62.3
2.00	100.0	0.0027	51.6
1.180	99.9	0.0012	41.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	1.9	425 µm to 75 µm
Silt	49.2	75 µm to 2 µm
Clay	48.3	<2 µm



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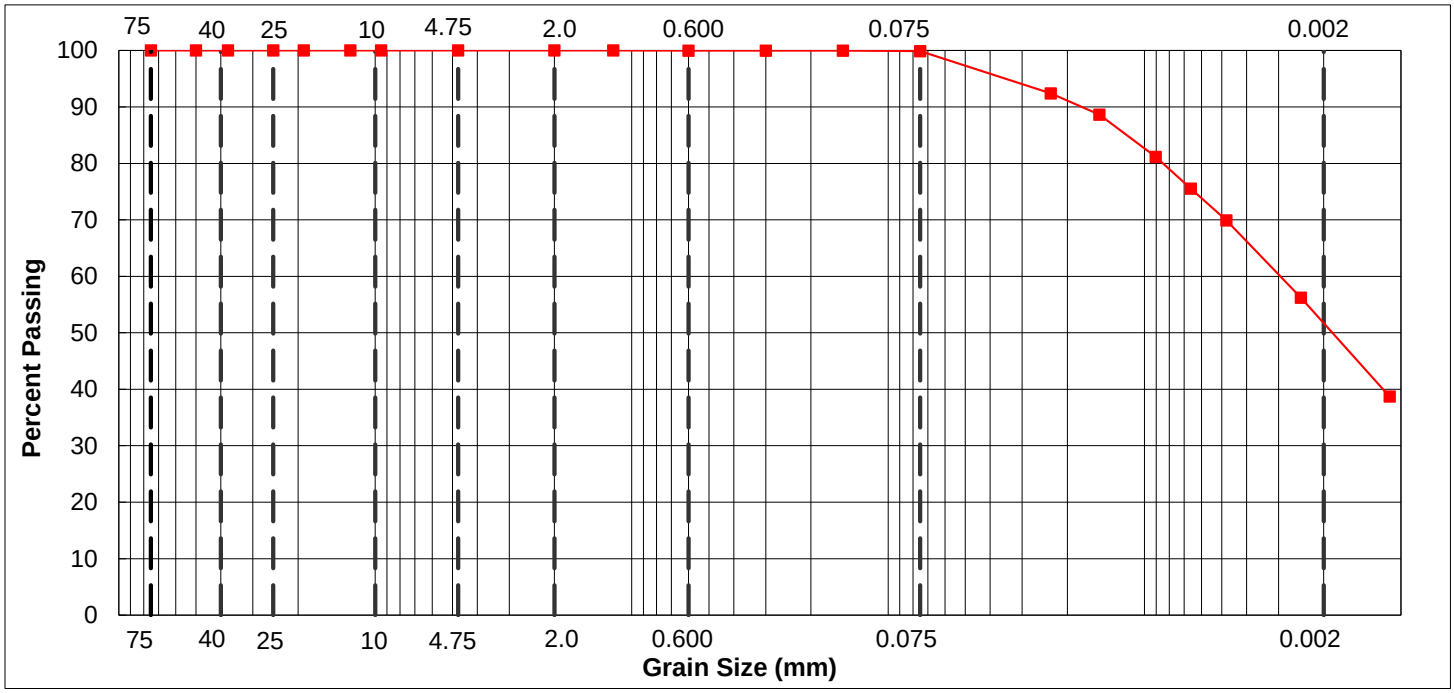
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	136UD7
Project No.:	1560-193-00	**Source:**	22CH136
Owner:	EID	**Sample Depth:**	27.28m
File No.:	GSA - 136UD7	**Test Date:**	31-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.9
25.0	100.0	0.0232	92.4
19.0	100.0	0.0150	88.7
12.5	100.0	0.0091	81.2
9.5	100.0	0.0066	75.5
4.75	100.0	0.0048	69.9
2.00	100.0	0.0025	56.2
1.180	100.0	0.0011	38.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	48.2	75 µm to 2 µm
Clay	51.7	<2 µm



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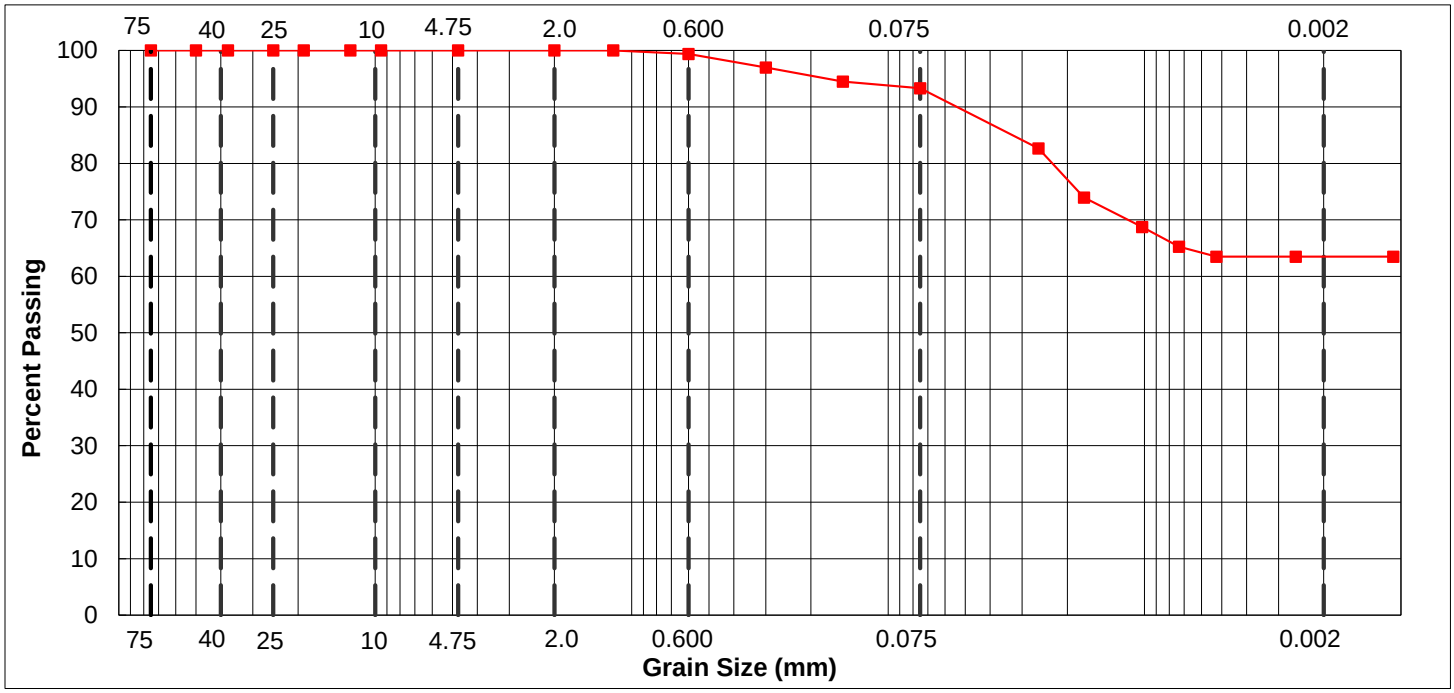
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	137AU1
Project No.:	1560-193-00	**Source:**	22BH137
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 137AU1	**Test Date:**	15-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	97.0
50.0	100.0	0.150	94.5
37.5	100.0	0.075	93.3
25.0	100.0	0.0259	82.7
19.0	100.0	0.0172	74.0
12.5	100.0	0.0102	68.7
9.5	100.0	0.0073	65.2
4.75	100.0	0.0052	63.5
2.00	100.0	0.0026	63.5
1.180	100.0	0.0011	63.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	6.1	425 µm to 75 µm
Silt	29.8	75 µm to 2 µm
Clay	63.5	<2 µm



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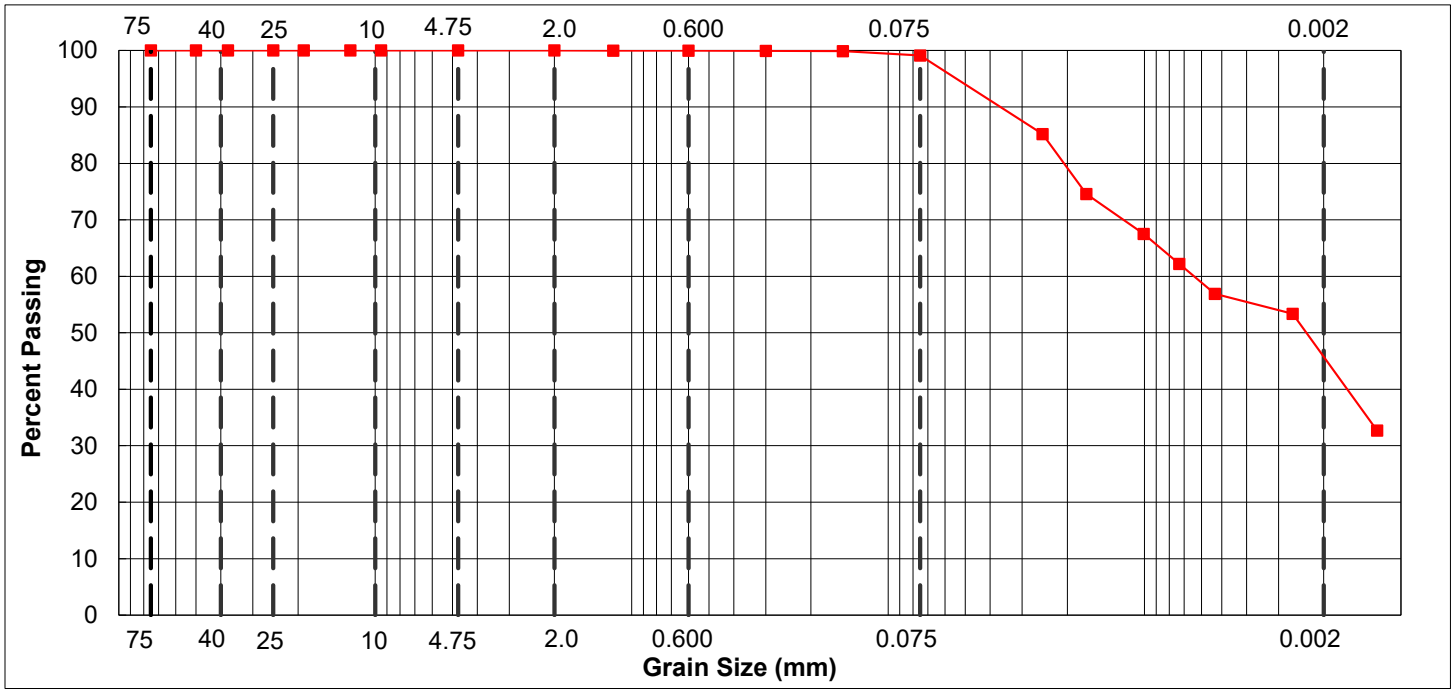
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	137SPT5
Project No.:	1560-193-00	**Source:**	22BH137
Owner:	EID	**Sample Depth:**	7.6m
File No.:	GSA - 137SPT5	**Date:**	24-Mar-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.1
25.0	100.0	0.0250	85.2
19.0	100.0	0.0169	74.6
12.5	100.0	0.0101	67.5
9.5	100.0	0.0073	62.2
4.75	100.0	0.0053	56.9
2.00	100.0	0.0026	53.4
1.180	100.0	0.0012	32.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.8	425 µm to 75 µm
Silt	53.4	75 µm to 2 µm
Clay	45.8	<2 µm



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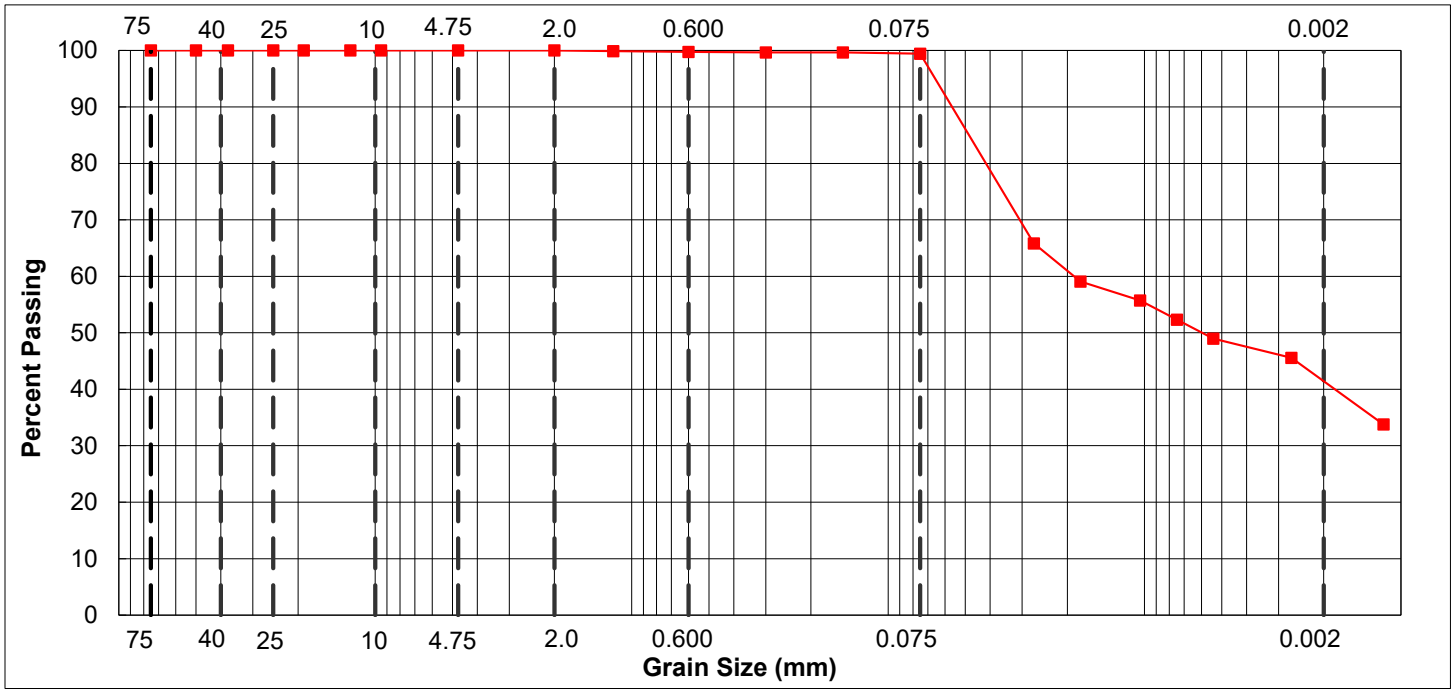
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	137RC1
Project No.:	1560-193-00	**Source:**	22CH137
Owner:	EID	**Sample Depth:**	3.6m
File No.:	GSA - 137RC1	**Date:**	27-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.7
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.4
25.0	100.0	0.0270	65.9
19.0	100.0	0.0178	59.1
12.5	100.0	0.0104	55.7
9.5	100.0	0.0075	52.3
4.75	100.0	0.0054	49.0
2.00	100.0	0.0027	45.6
1.180	99.9	0.0012	33.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	58.0	75 µm to 2 µm
Clay	41.4	<2 µm



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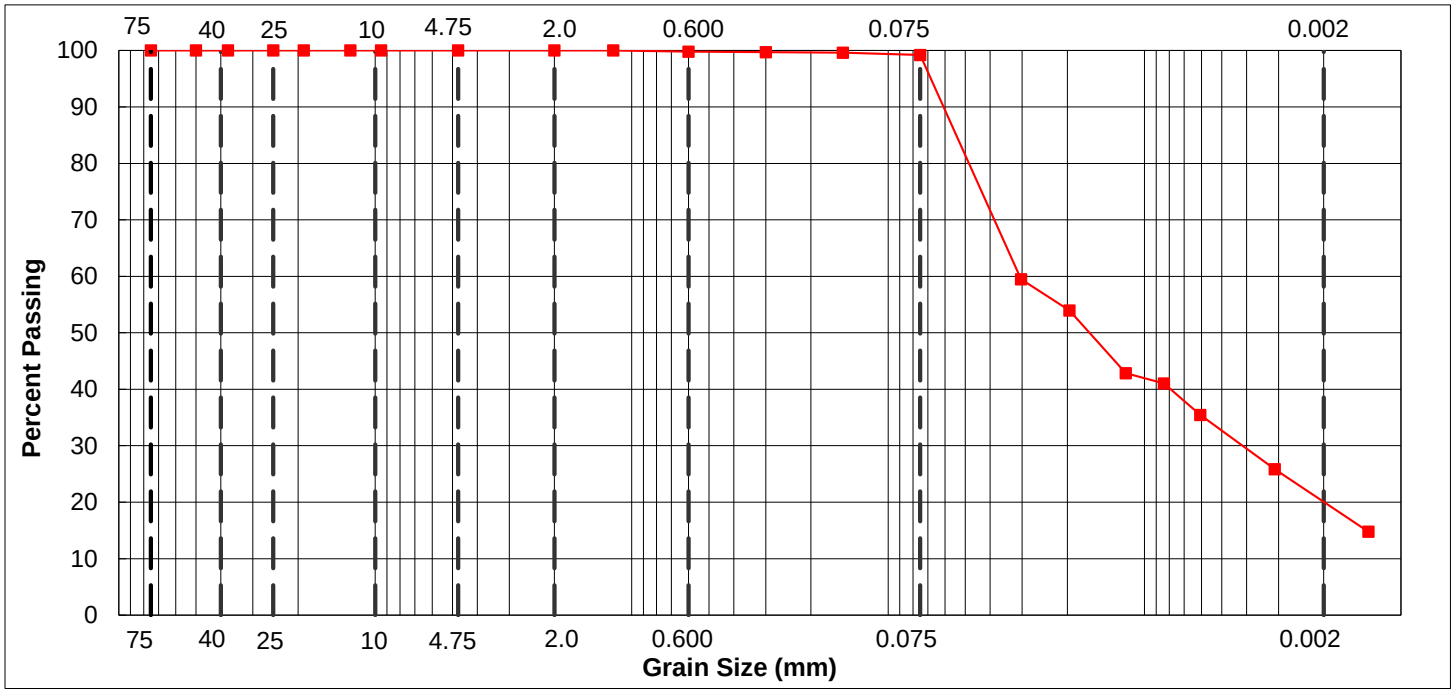
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	137RC8
Project No.:	1560-193-00	**Source:**	22CH137
Owner:	EID	**Sample Depth:**	14.0m
File No.:	GSA - 137RC8	**Test Date:**	26-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.7
50.0	100.0	0.150	99.6
37.5	100.0	0.075	99.2
25.0	100.0	0.0303	59.5
19.0	100.0	0.0196	54.0
12.5	100.0	0.0118	42.9
9.5	100.0	0.0084	41.0
4.75	100.0	0.0061	35.5
2.00	100.0	0.0031	25.9
1.180	100.0	0.0013	14.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	0.6	425 µm to 75 µm
Silt	79.1	75 µm to 2 µm
Clay	20.1	<2 µm



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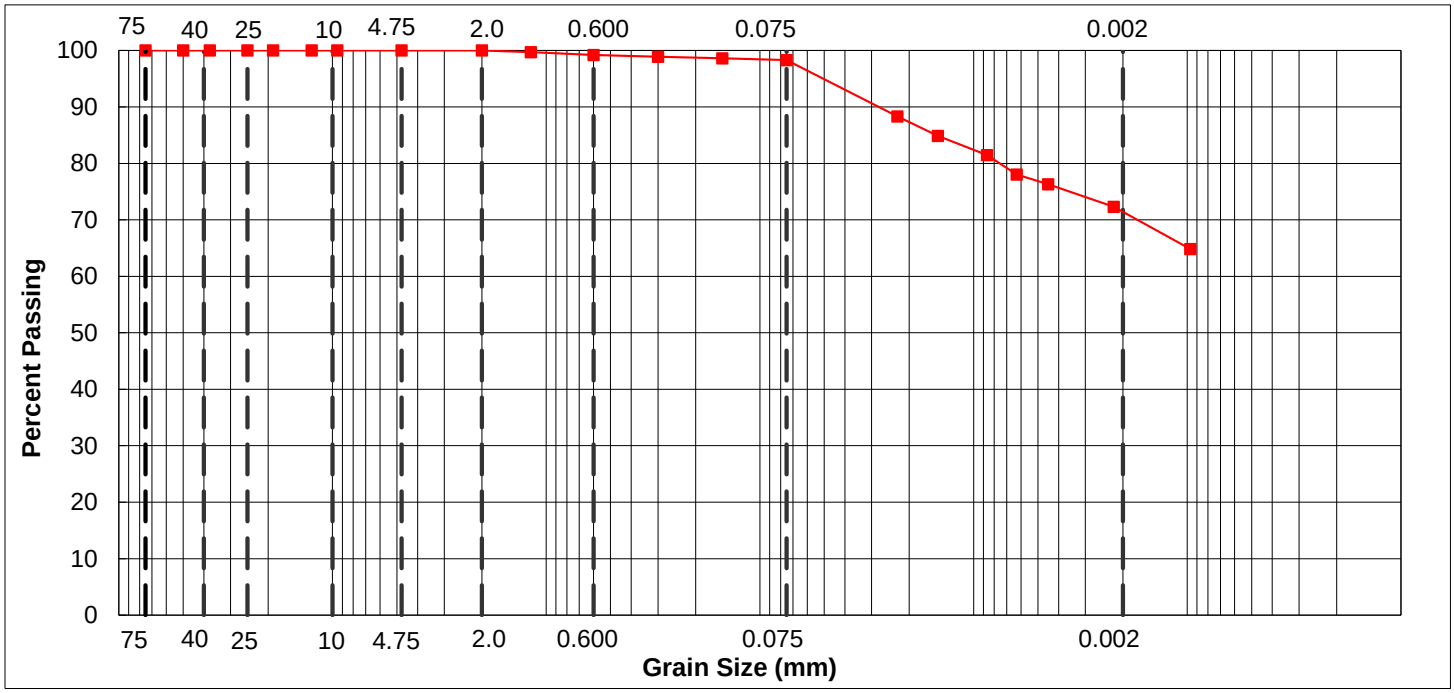
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	137UD5
Project No.:	1560-193-00	**Source:**	22CH137
Owner:	EID	**Sample Depth:**	13.3m
File No.:	GSA - 137UD5	**Test Date:**	31-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	98.9
50.0	100.0	0.150	98.6
37.5	100.0	0.075	98.3
25.0	100.0	0.0227	88.3
19.0	100.0	0.0147	84.9
12.5	100.0	0.0087	81.5
9.5	100.0	0.0063	78.0
4.75	100.0	0.0045	76.3
2.00	100.0	0.0022	72.3
1.180	99.7	0.0010	64.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	0.9	425 µm to 75 µm
Silt	26.9	75 µm to 2 µm
Clay	71.4	<2 µm



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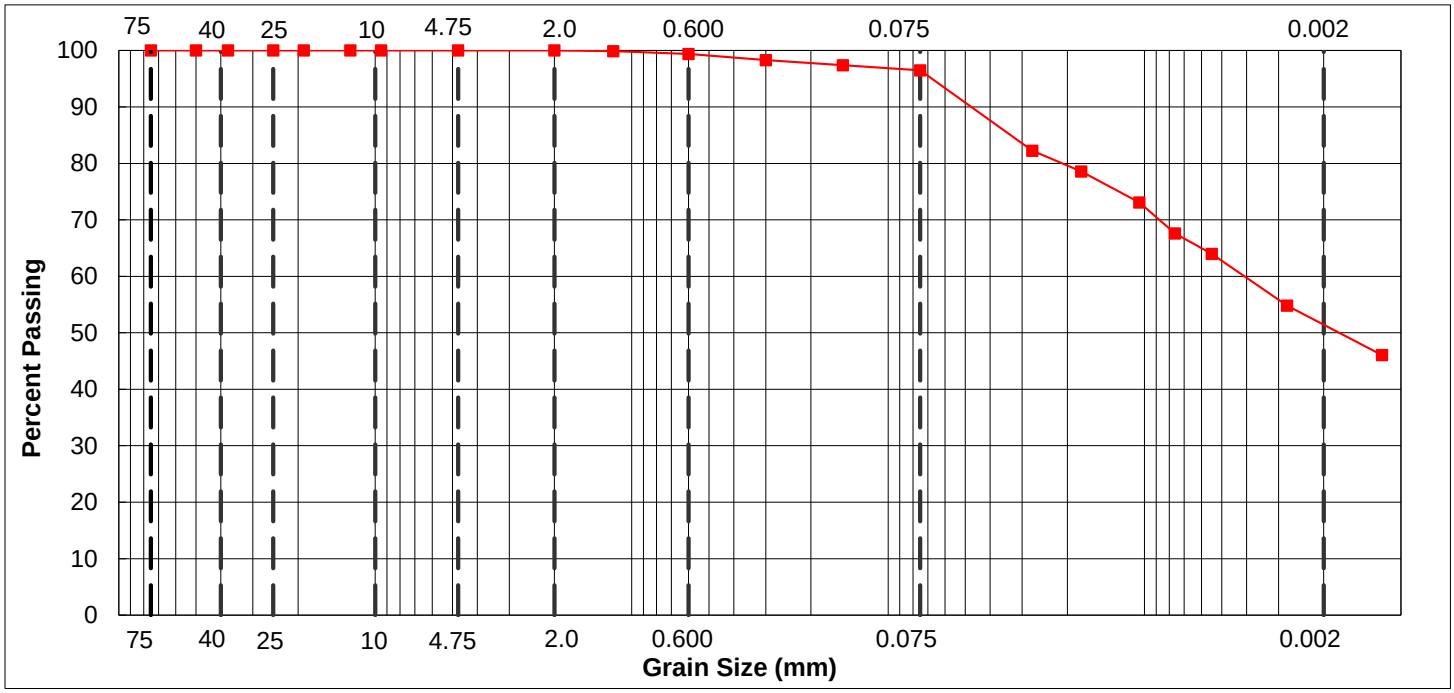
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	138RC1
Project No.:	1560-193-00	**Source:**	22CH138
Owner:	EID	**Sample Depth:**	3.1m
File No.:	GSA - 138RC1	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	98.3
50.0	100.0	0.150	97.4
37.5	100.0	0.075	96.5
25.0	100.0	0.0274	82.2
19.0	100.0	0.0176	78.6
12.5	100.0	0.0105	73.1
9.5	100.0	0.0076	67.6
4.75	100.0	0.0055	64.0
2.00	100.0	0.0028	54.8
1.180	99.9	0.0012	46.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	2.9	425 µm to 75 µm
Silt	45.1	75 µm to 2 µm
Clay	51.4	<2 µm



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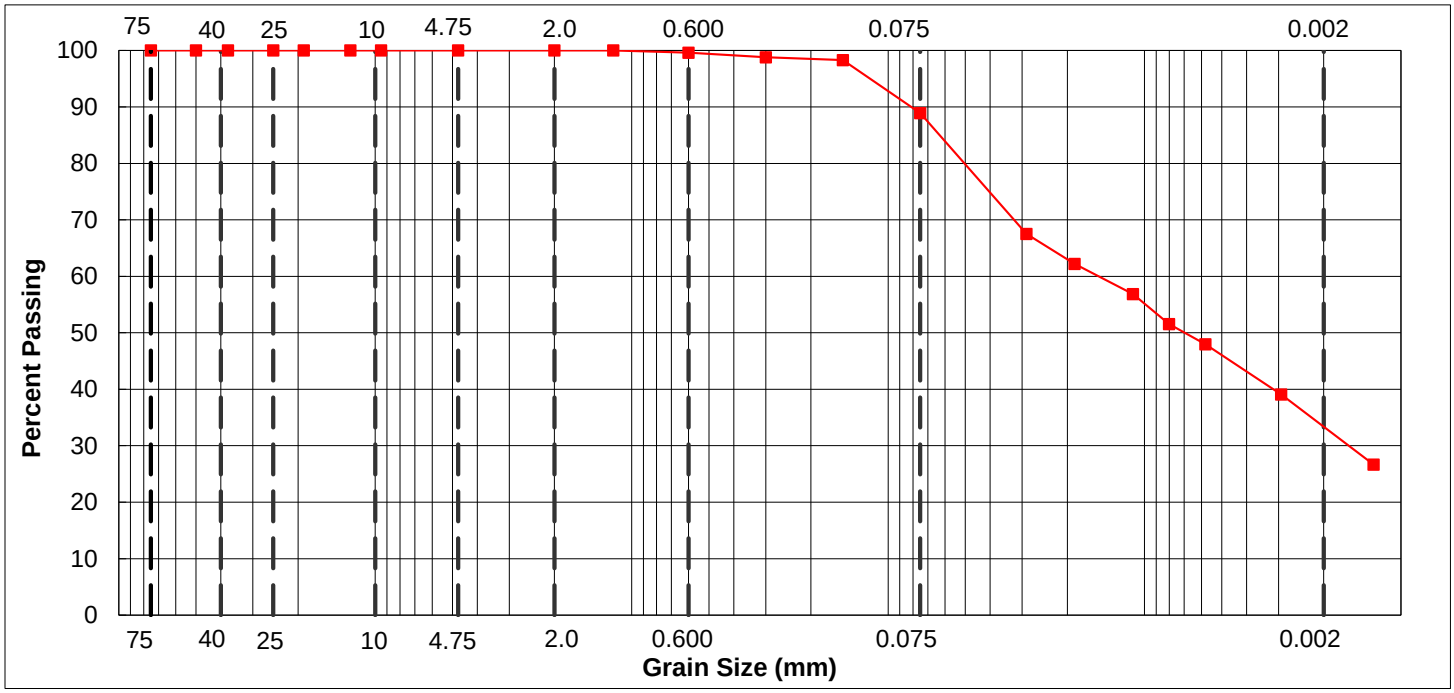
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	138RC2
Project No.:	1560-193-00	**Source:**	22CH138
Owner:	EID	**Sample Depth:**	5.4m
File No.:	GSA - 138RC2	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	98.8
50.0	100.0	0.150	98.3
37.5	100.0	0.075	88.9
25.0	100.0	0.0288	67.5
19.0	100.0	0.0187	62.2
12.5	100.0	0.0111	56.9
9.5	100.0	0.0080	51.5
4.75	100.0	0.0058	48.0
2.00	100.0	0.0029	39.1
1.180	100.0	0.0013	26.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	10.7	425 µm to 75 µm
Silt	55.5	75 µm to 2 µm
Clay	33.4	<2 µm



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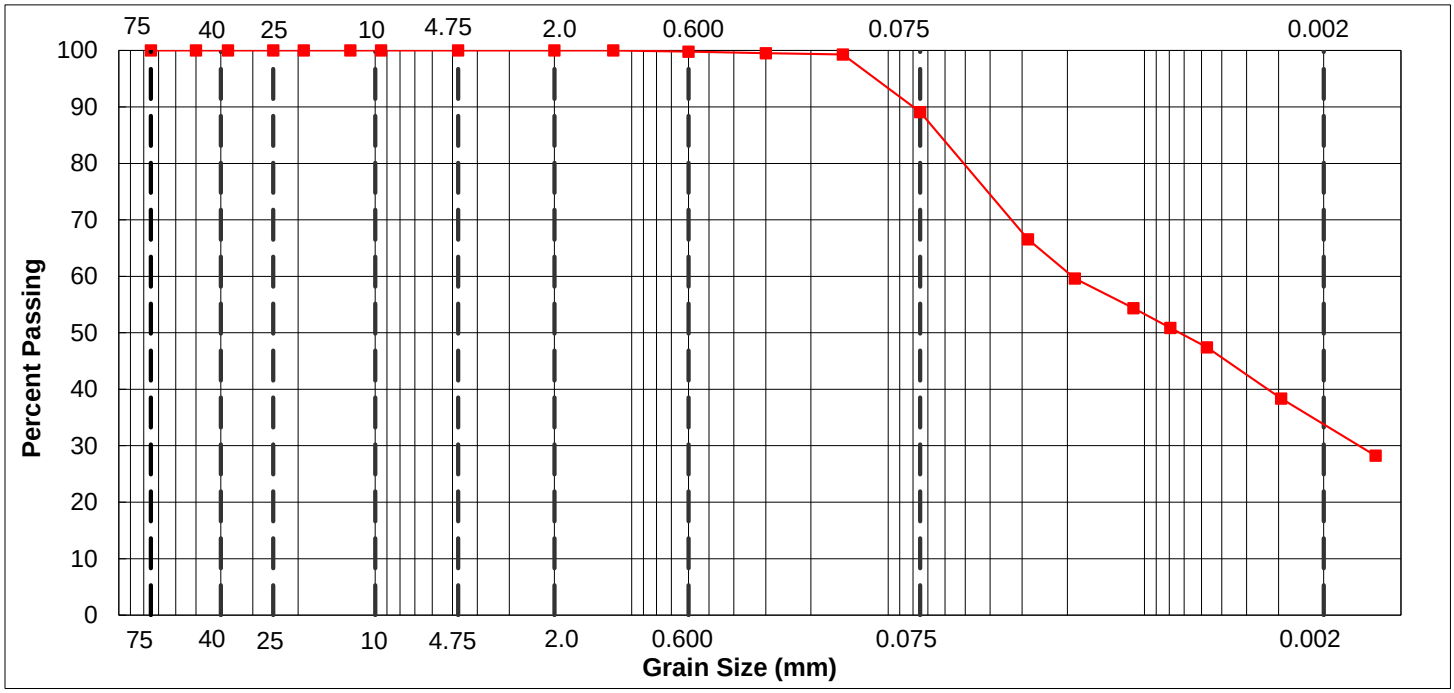
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	138RC3
Project No.:	1560-193-00	**Source:**	22CH138
Owner:	EID	**Sample Depth:**	6.2m
File No.:	GSA - 138RC3	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.3
37.5	100.0	0.075	89.1
25.0	100.0	0.0285	66.6
19.0	100.0	0.0187	59.6
12.5	100.0	0.0111	54.4
9.5	100.0	0.0079	50.9
4.75	100.0	0.0057	47.4
2.00	100.0	0.0029	38.3
1.180	100.0	0.0013	28.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	10.7	425 µm to 75 µm
Silt	55.3	75 µm to 2 µm
Clay	33.8	<2 µm



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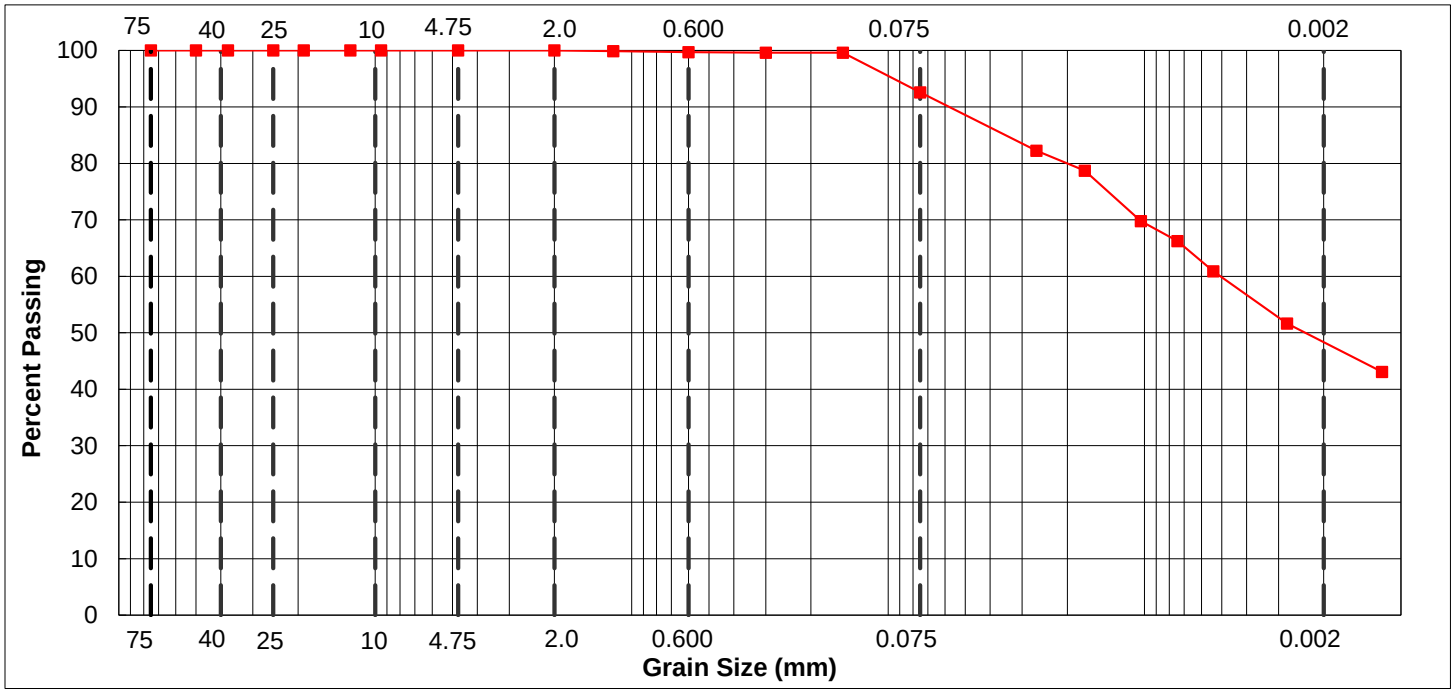
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	139RC1
Project No.:	1560-193-00	**Source:**	22CH139
Owner:	EID	**Sample Depth:**	3.2m
File No.:	GSA - 139RC1	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.6
50.0	100.0	0.150	99.6
37.5	100.0	0.075	92.6
25.0	100.0	0.0264	82.3
19.0	100.0	0.0171	78.7
12.5	100.0	0.0103	69.8
9.5	100.0	0.0074	66.2
4.75	100.0	0.0054	60.9
2.00	100.0	0.0028	51.6
1.180	99.9	0.0012	43.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	7.1	425 µm to 75 µm
Silt	44.3	75 µm to 2 µm
Clay	48.3	<2 µm



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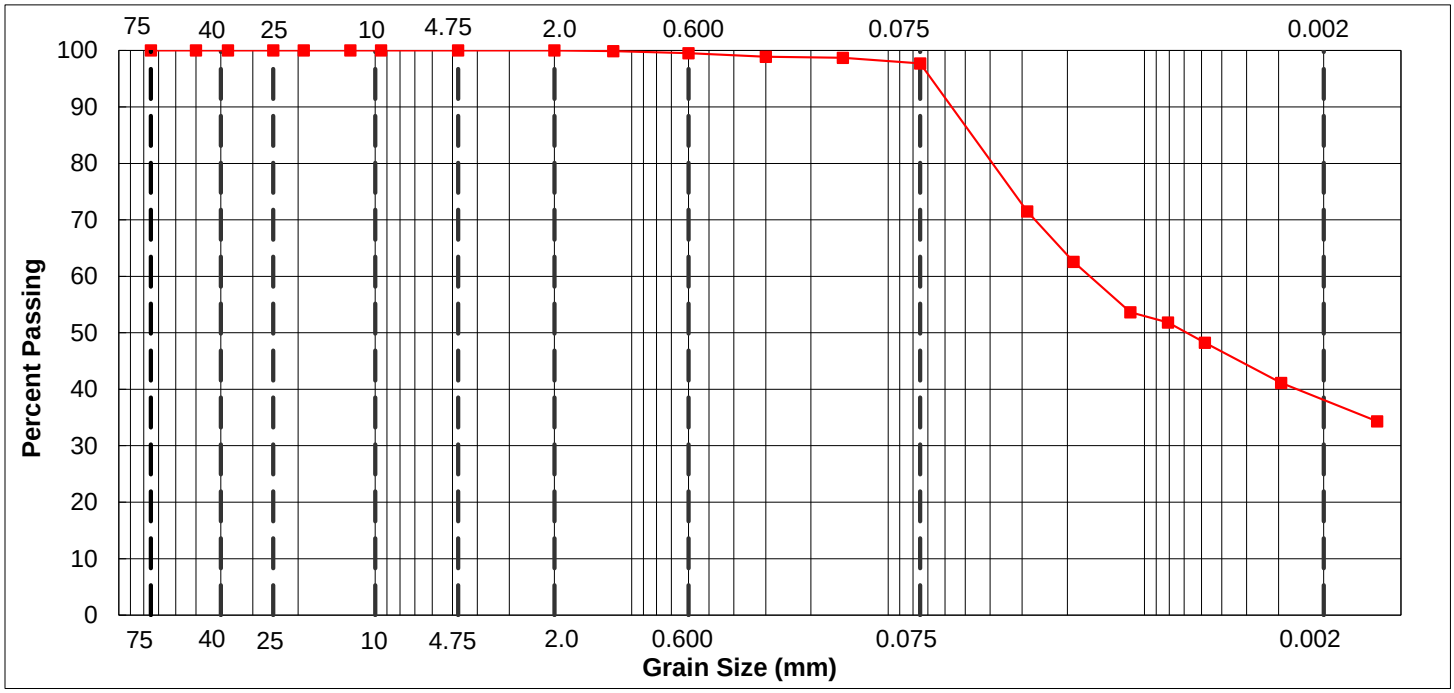
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	139RC3
Project No.:	1560-193-00	**Source:**	22BH139
Owner:	EID	**Sample Depth:**	7.2m
File No.:	GSA - 139RC3	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	98.9
50.0	100.0	0.150	98.7
37.5	100.0	0.075	97.7
25.0	100.0	0.0287	71.5
19.0	100.0	0.0189	62.6
12.5	100.0	0.0114	53.6
9.5	100.0	0.0081	51.8
4.75	100.0	0.0058	48.3
2.00	100.0	0.0029	41.1
1.180	99.9	0.0012	34.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	1.8	425 µm to 75 µm
Silt	59.6	75 µm to 2 µm
Clay	38.1	<2 µm



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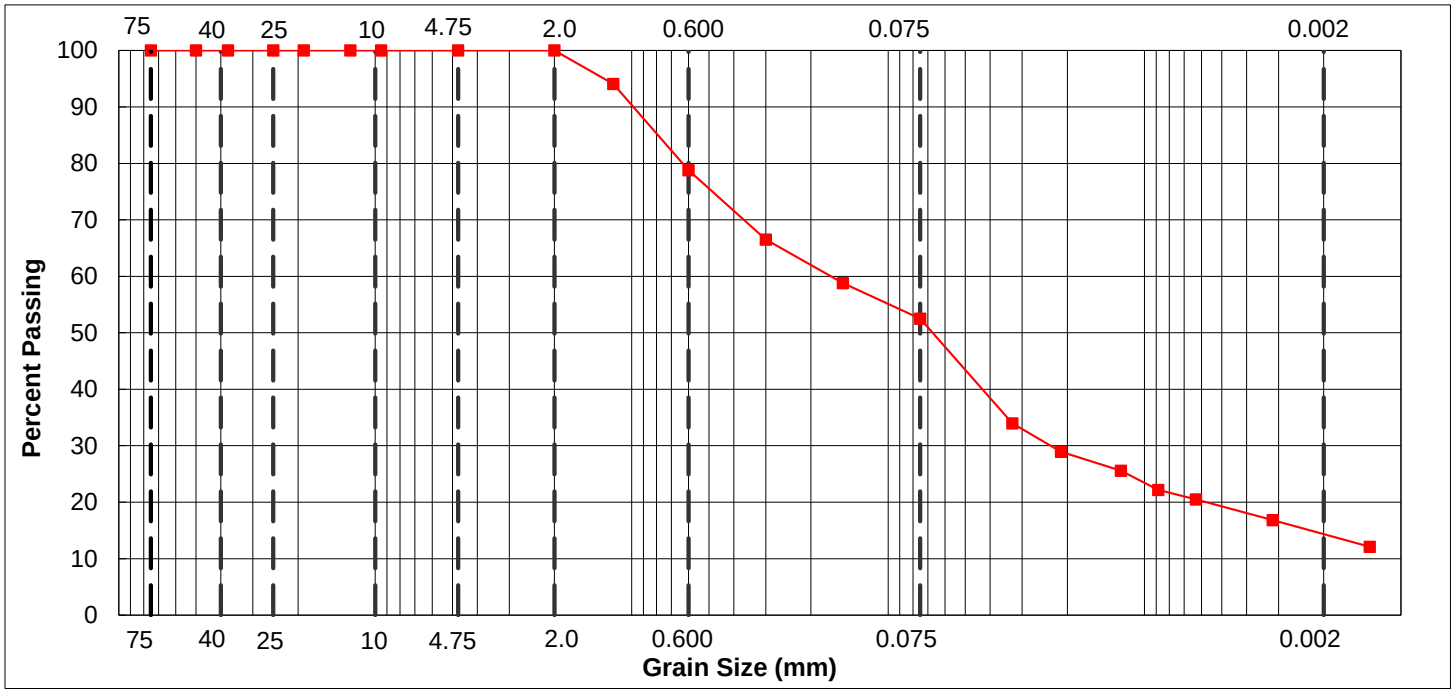
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	139RC7
Project No.:	1560-193-00	**Source:**	22CH139
Owner:	EID	**Sample Depth:**	12.6m
File No.:	GSA - 139RC7	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	78.8
75.0	100.0	0.300	66.5
50.0	100.0	0.150	58.8
37.5	100.0	0.075	52.5
25.0	100.0	0.0328	34.0
19.0	100.0	0.0212	28.9
12.5	100.0	0.0124	25.6
9.5	100.0	0.0088	22.2
4.75	100.0	0.0063	20.5
2.00	100.0	0.0032	16.8
1.180	94.1	0.0013	12.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	21.2	2.00 mm to 425 µm
Fine Sand	26.3	425 µm to 75 µm
Silt	38.2	75 µm to 2 µm
Clay	14.3	<2 µm



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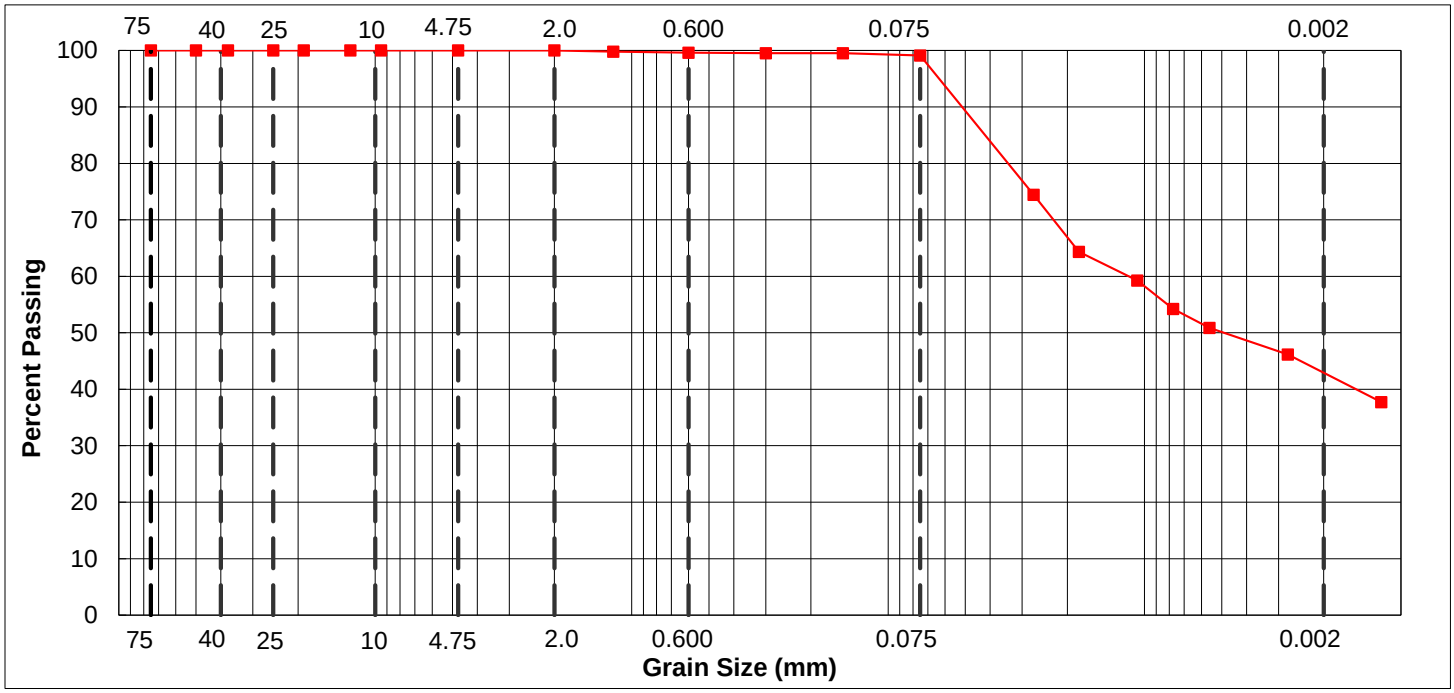
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	140AU3
Project No.:	1560-193-00	**Source:**	22CH140
Owner:	EID	**Sample Depth:**	2.1m
File No.:	GSA - 140AU3	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.5
37.5	100.0	0.075	99.1
25.0	100.0	0.0271	74.4
19.0	100.0	0.0180	64.3
12.5	100.0	0.0107	59.3
9.5	100.0	0.0077	54.2
4.75	100.0	0.0056	50.9
2.00	100.0	0.0028	46.1
1.180	99.8	0.0012	37.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	0.5	425 µm to 75 µm
Silt	56.2	75 µm to 2 µm
Clay	42.9	<2 µm



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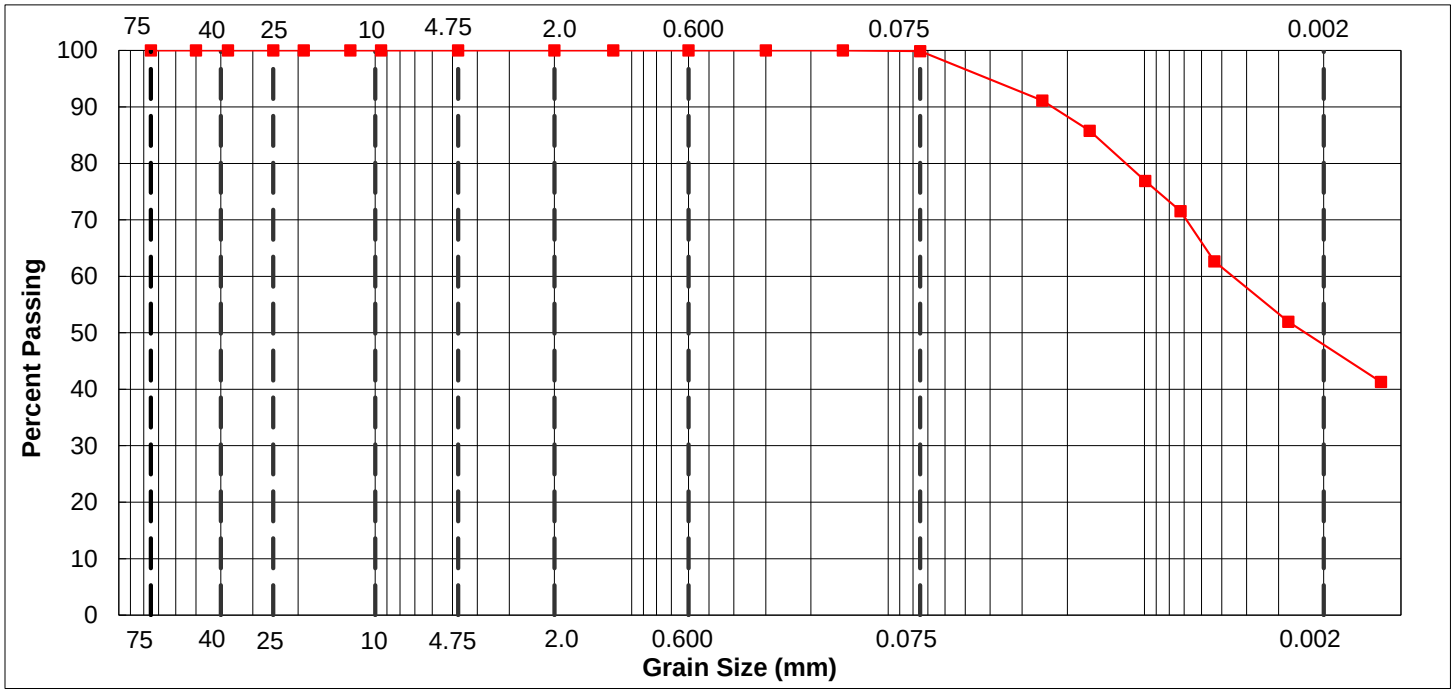
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	140RC3
Project No.:	1560-193-00	**Source:**	22CH140
Owner:	EID	**Sample Depth:**	6.2m
File No.:	GSA - 140RC3	**Test Date:**	16-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.9
25.0	100.0	0.0250	91.1
19.0	100.0	0.0164	85.8
12.5	100.0	0.0099	76.9
9.5	100.0	0.0072	71.6
4.75	100.0	0.0053	62.7
2.00	100.0	0.0027	52.0
1.180	100.0	0.0012	41.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	52.0	75 µm to 2 µm
Clay	47.9	<2 µm



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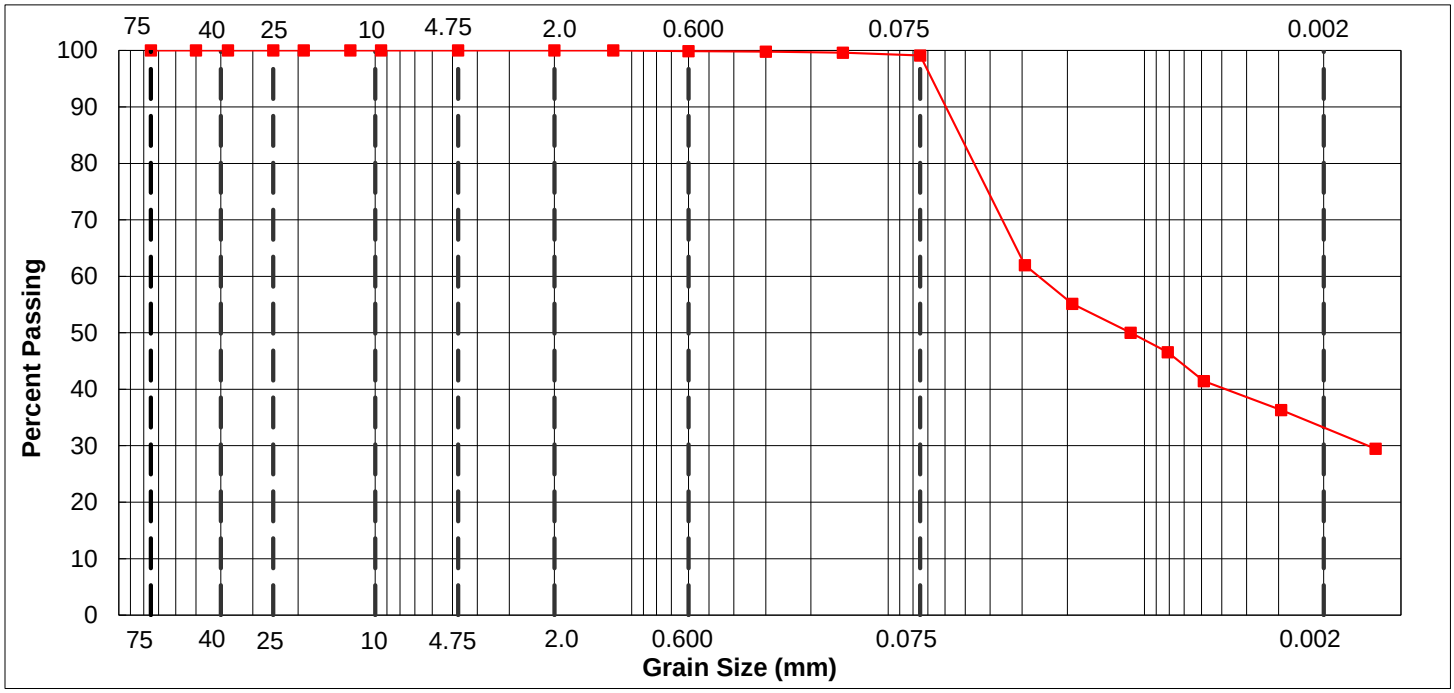
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	140RC4
Project No.:	1560-193-00	**Source:**	22CH140
Owner:	EID	**Sample Depth:**	8.5m
File No.:	GSA - 140RC4	**Test Date:**	14-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.6
37.5	100.0	0.075	99.1
25.0	100.0	0.0292	62.0
19.0	100.0	0.0192	55.2
12.5	100.0	0.0113	50.0
9.5	100.0	0.0081	46.6
4.75	100.0	0.0059	41.4
2.00	100.0	0.0029	36.3
1.180	100.0	0.0013	29.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.8	425 µm to 75 µm
Silt	65.9	75 µm to 2 µm
Clay	33.2	<2 µm



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ATTERBERG LIMITS

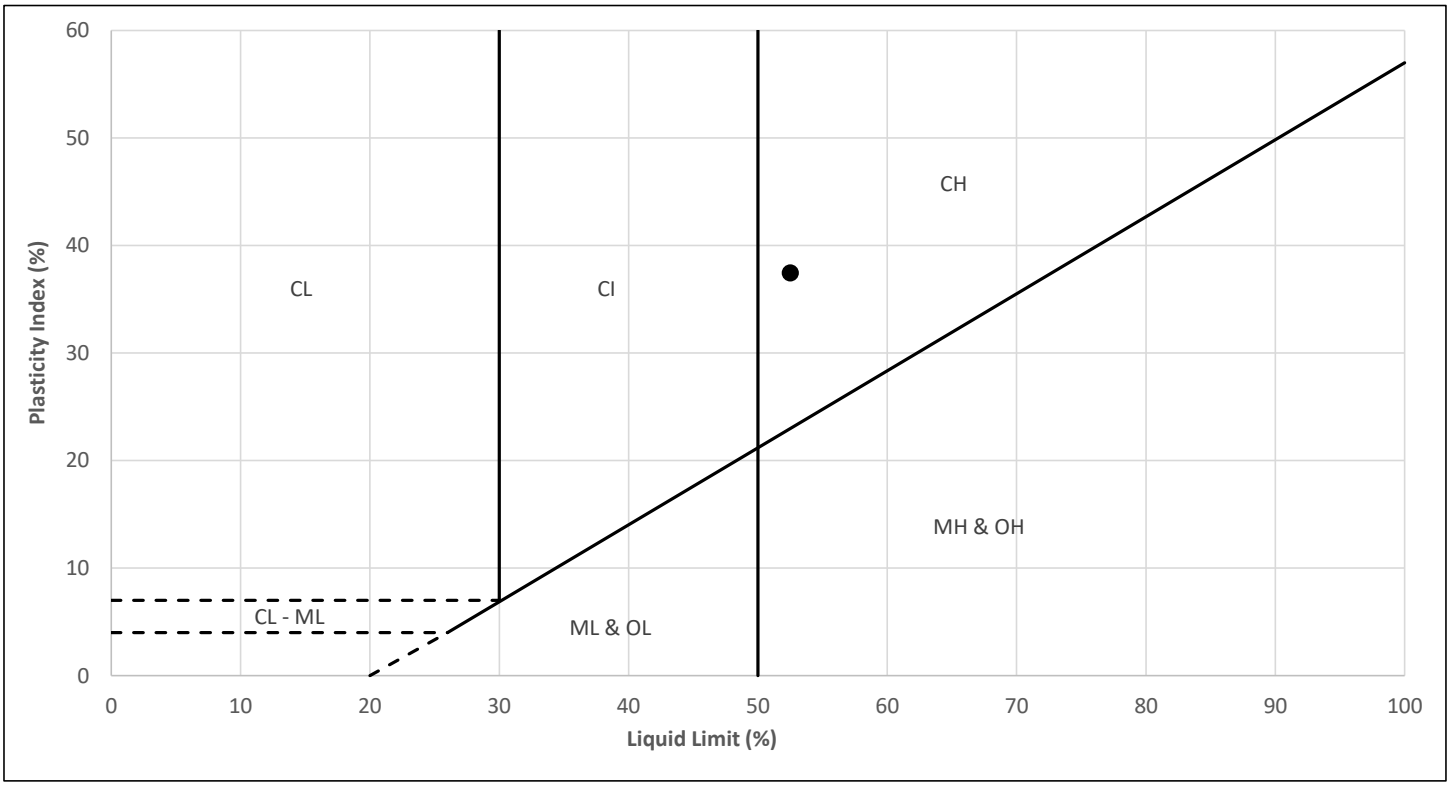
Project:	Snake Lake Reservoir Expansion	**Sample #:**	200AU2
Project No.:	1560-193-00	**Source:**	22BH200
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 200AU2	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.5
Plastic Limit (PL)	15.0
Plasticity Index (PI)	37.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

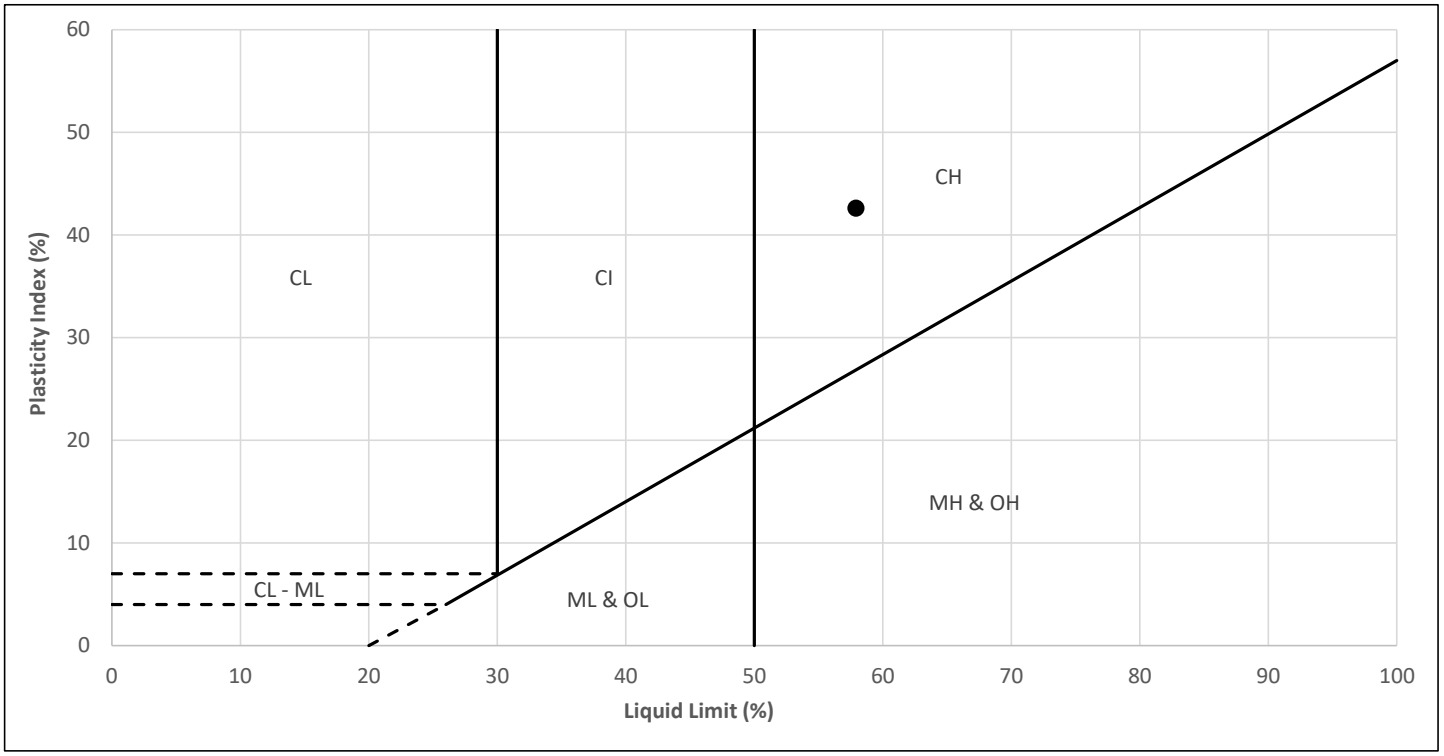
Project:	Snake Lake Reservoir Expansion	**Sample #:**	200AU5
Project No.:	1560-193-00	**Source:**	22BH200
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 200AU5	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	57.9
Plastic Limit (PL)	15.3
Plasticity Index (PI)	42.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

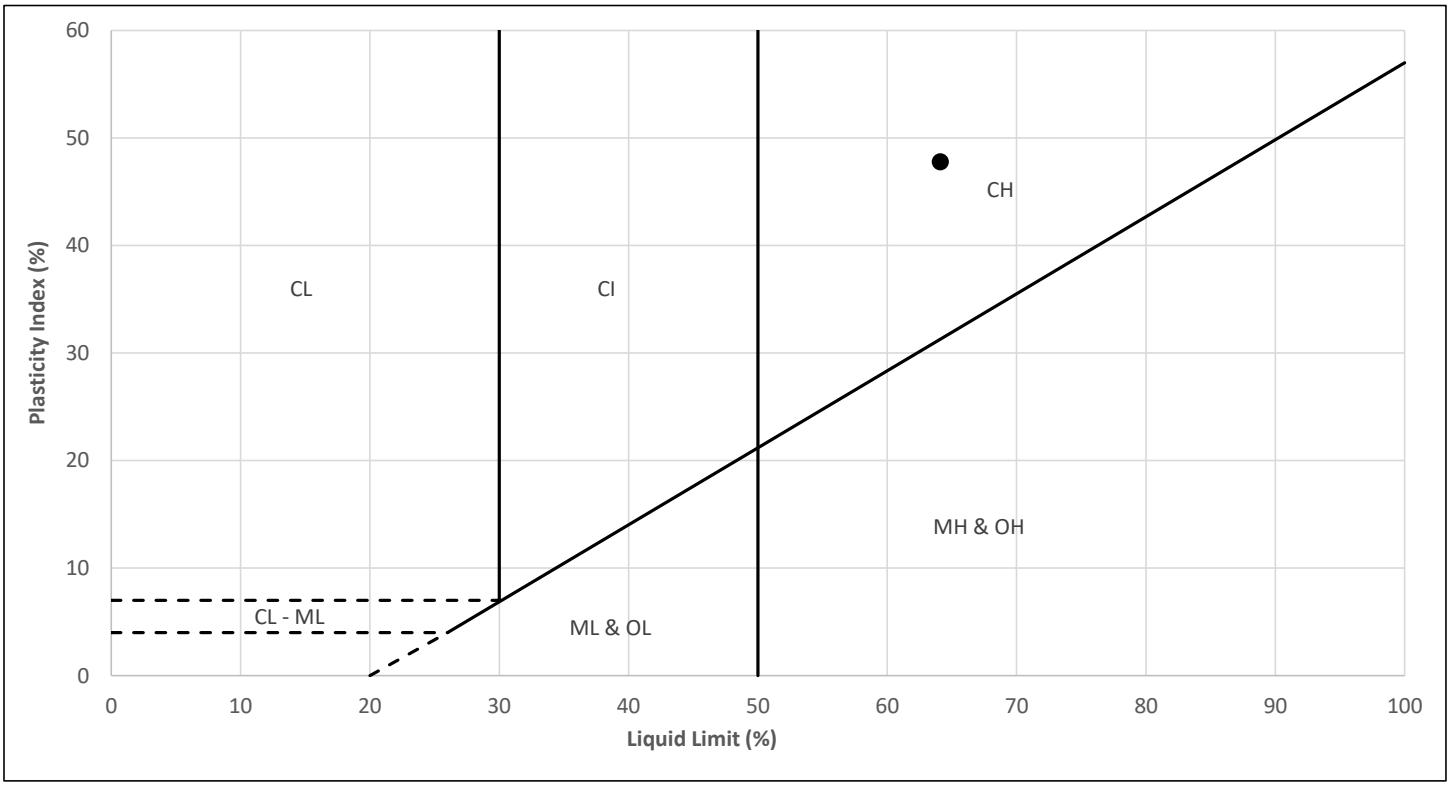
Project:	Snake Lake Reservoir Expansion	**Sample #:**	200AU8
Project No.:	1560-193-00	**Source:**	22BH200
Owner:	EID	**Sample Depth:**	5.8m
File No.:	AL - 200AU8	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	64.1
Plastic Limit (PL)	16.3
Plasticity Index (PI)	47.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

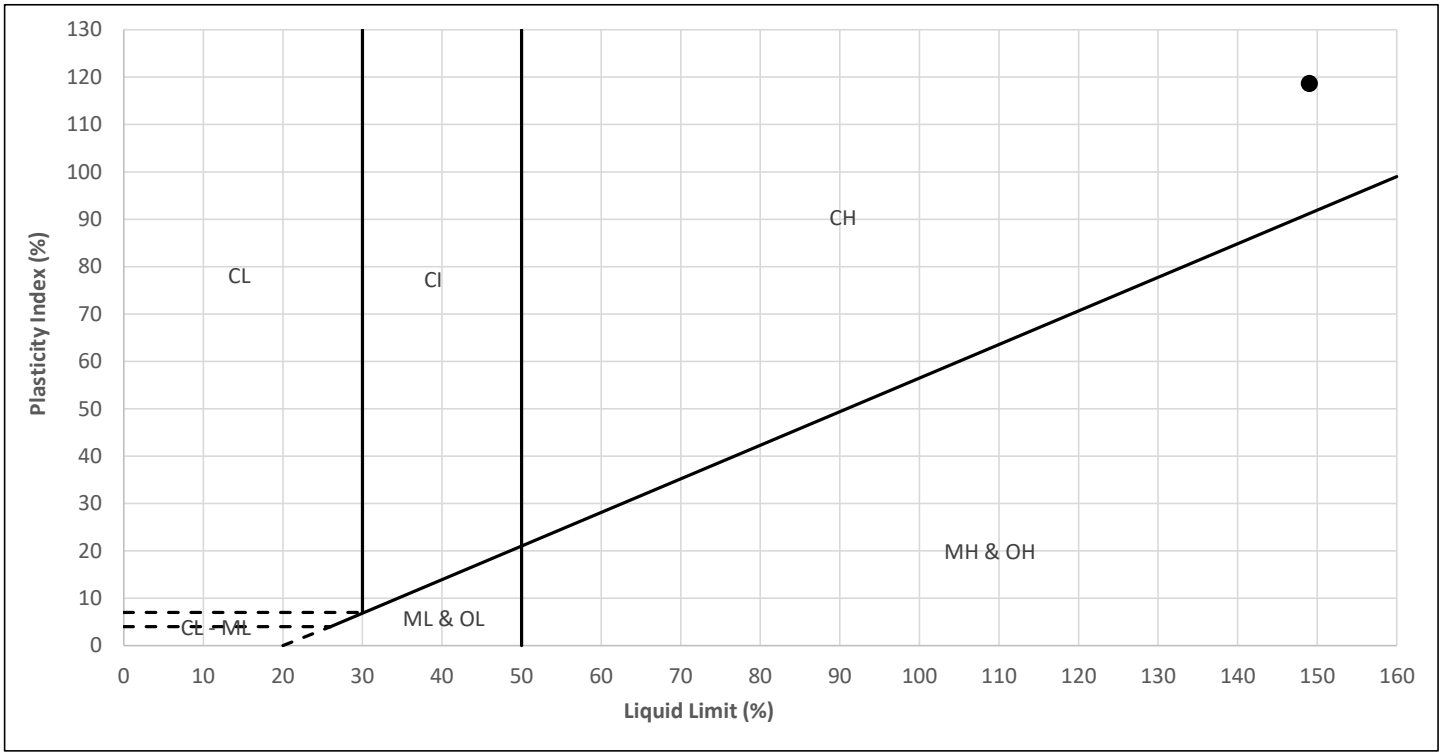
Project:	Snake Lake Reservoir Expansion	**Sample #:**	200RC4
Project No.:	1560-193-00	**Source:**	22CH200
Owner:	EID	**Sample Depth:**	11.4m
File No.:	AL - 200RC4	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	149.0
Plastic Limit (PL)	30.3
Plasticity Index (PI)	118.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

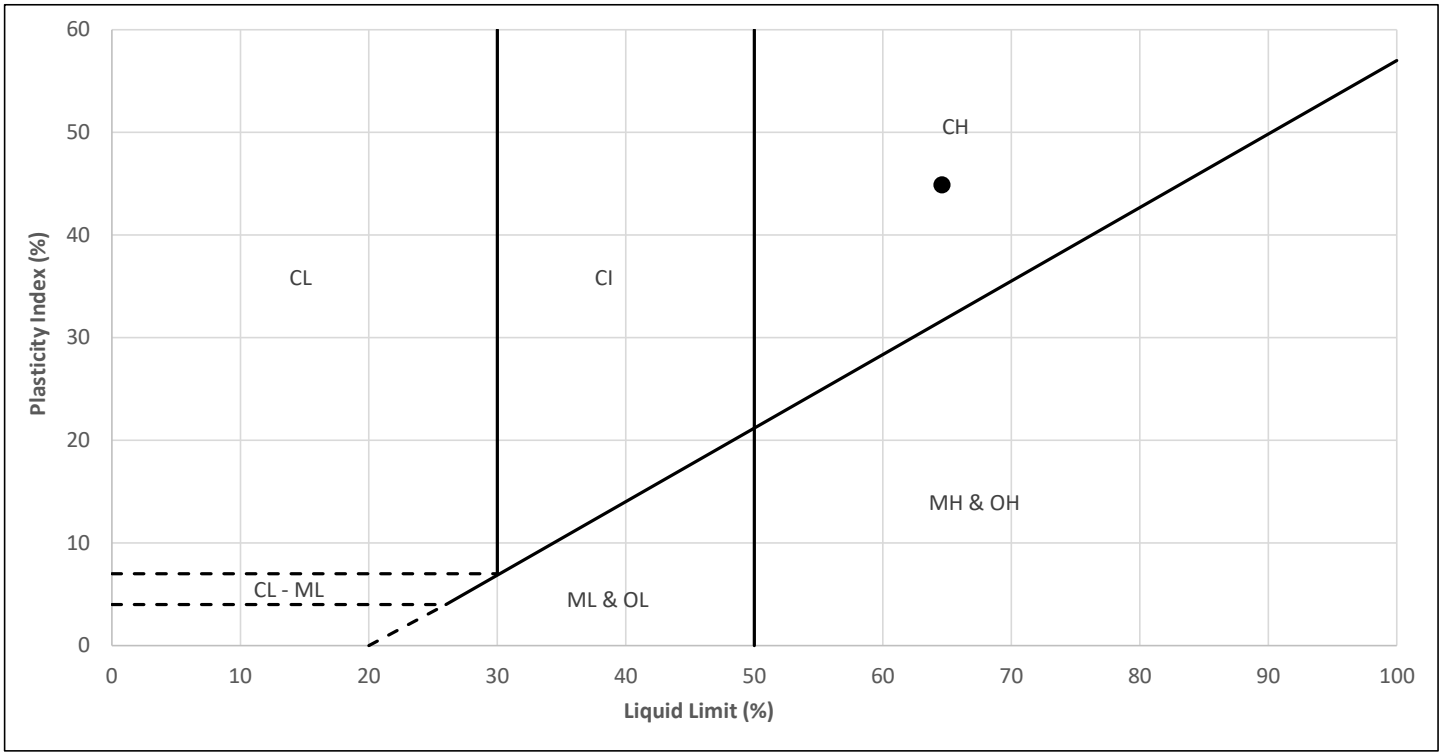
Project:	Snake Lake Reservoir Expansion	**Sample #:**	200RC10
Project No.:	1560-193-00	**Source:**	22CH200
Owner:	EID	**Sample Depth:**	21.4m
File No.:	AL - 200RC10	**Test Date:**	19-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	64.6
Plastic Limit (PL)	19.7
Plasticity Index (PI)	44.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

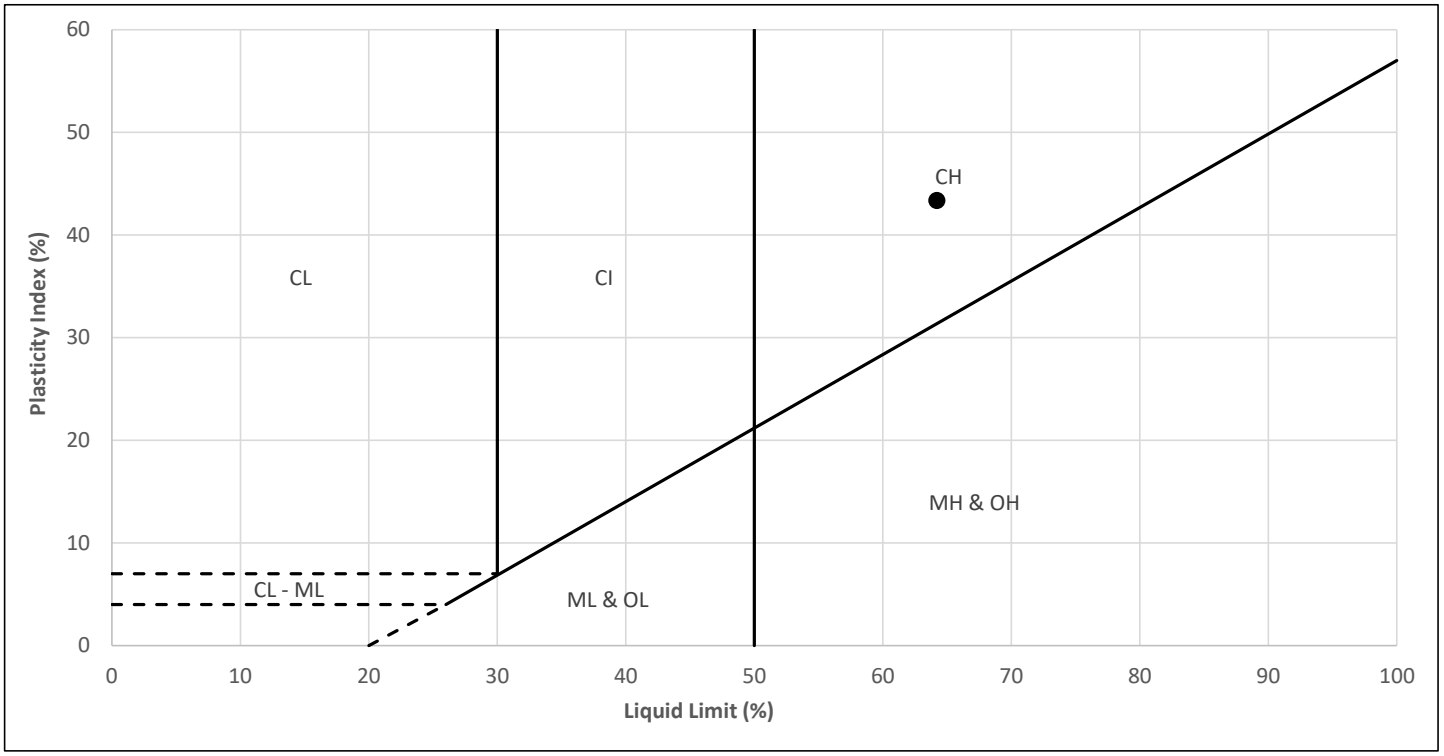
Project:	Snake Lake Reservoir Expansion	**Sample #:**	200RC16
Project No.:	1560-193-00	**Source:**	22CH200
Owner:	EID	**Sample Depth:**	31.0m
File No.:	AL - 200RC16	**Test Date:**	19-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	64.2
Plastic Limit (PL)	20.8
Plasticity Index (PI)	43.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

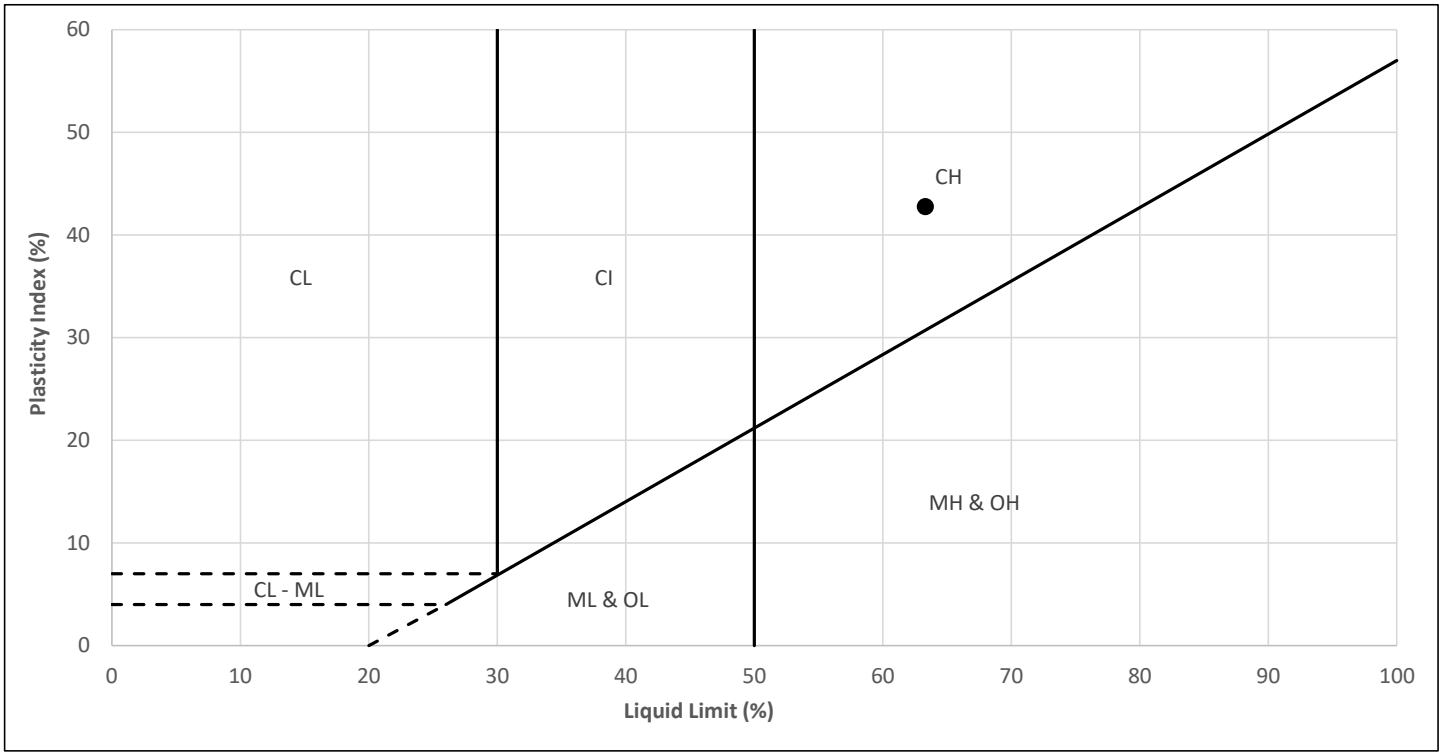
Project:	Snake Lake Reservoir Expansion	**Sample #:**	201AU3
Project No.:	1560-193-00	**Source:**	22BH201
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 201AU3	**Test Date:**	21-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	63.3
Plastic Limit (PL)	20.5
Plasticity Index (PI)	42.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

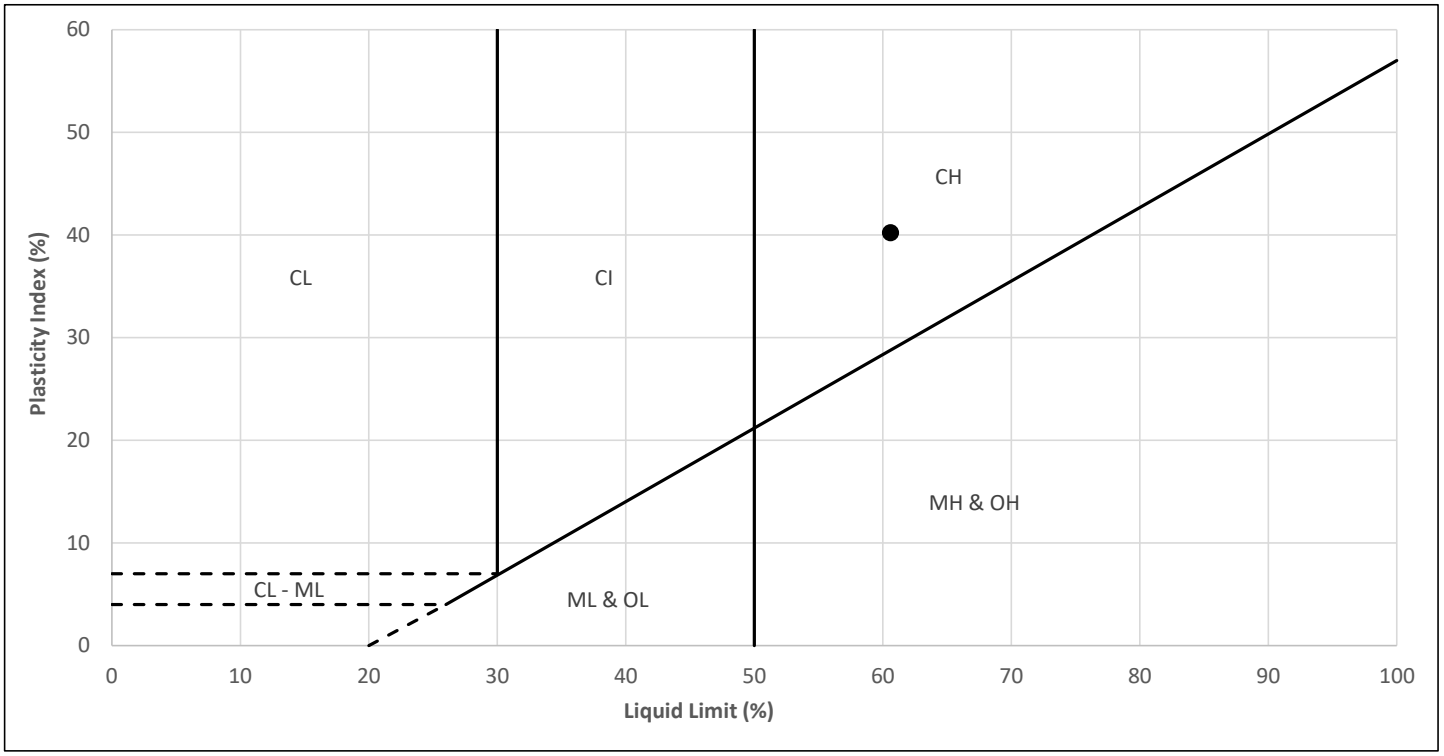
Project:	Snake Lake Reservoir Expansion	**Sample #:**	201AU4
Project No.:	1560-193-00	**Source:**	22BH201
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 201AU4	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	60.6
Plastic Limit (PL)	20.4
Plasticity Index (PI)	40.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

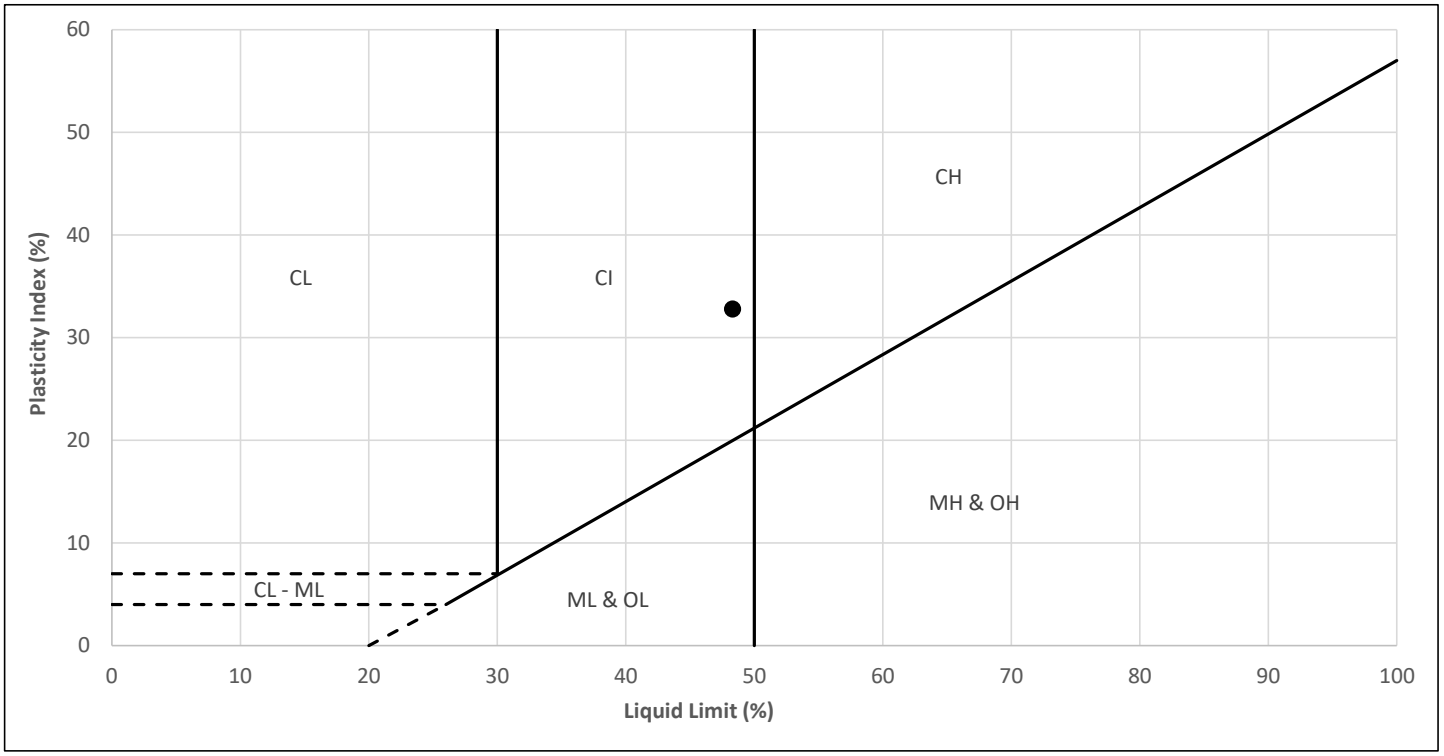
Project:	Snake Lake Reservoir Expansion	**Sample #:**	201RC1
Project No.:	1560-193-00	**Source:**	22CH201
Owner:	EID	**Sample Depth:**	3.5m
File No.:	AL - 201RC1	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	48.3
Plastic Limit (PL)	15.5
Plasticity Index (PI)	32.8

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

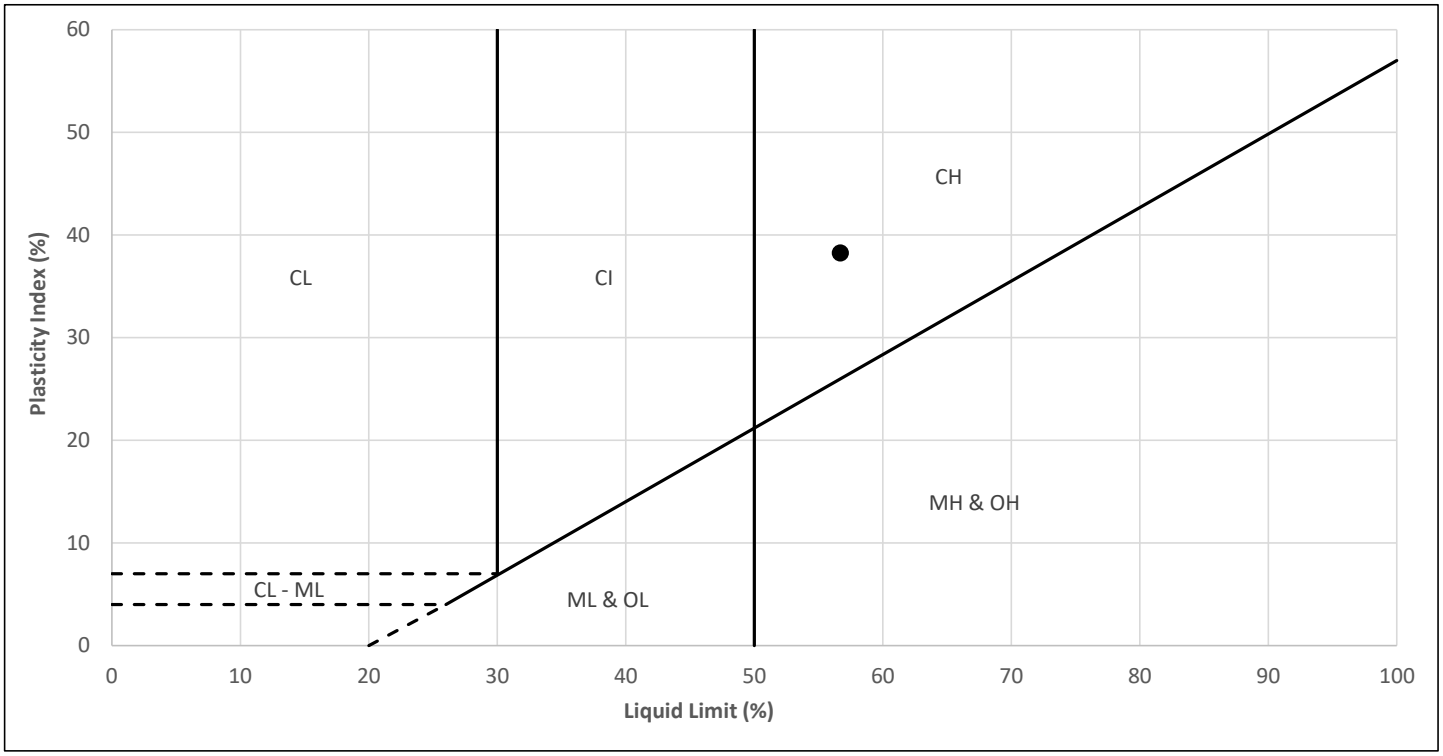
Project:	Snake Lake Reservoir Expansion	**Sample #:**	201RC3
Project No.:	1560-193-00	**Source:**	22CH201
Owner:	EID	**Sample Depth:**	7.0m
File No.:	AL - 201RC3	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	56.7
Plastic Limit (PL)	18.4
Plasticity Index (PI)	38.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

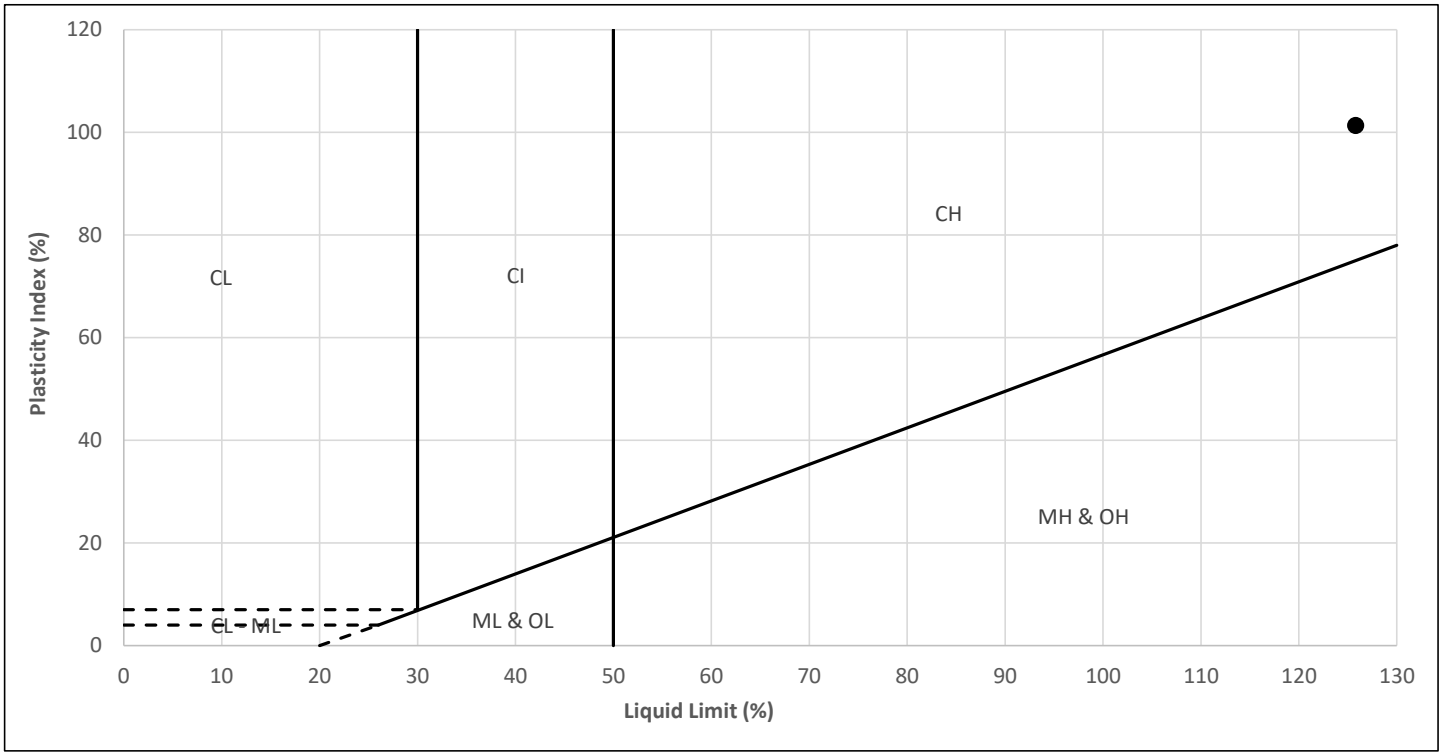
Project:	Snake Lake Reservoir Expansion	**Sample #:**	201RC7
Project No.:	1560-193-00	**Source:**	22CH201
Owner:	EID	**Sample Depth:**	13.7m
File No.:	AL - 201RC7	**Test Date:**	14-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	125.8
Plastic Limit (PL)	24.4
Plasticity Index (PI)	101.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

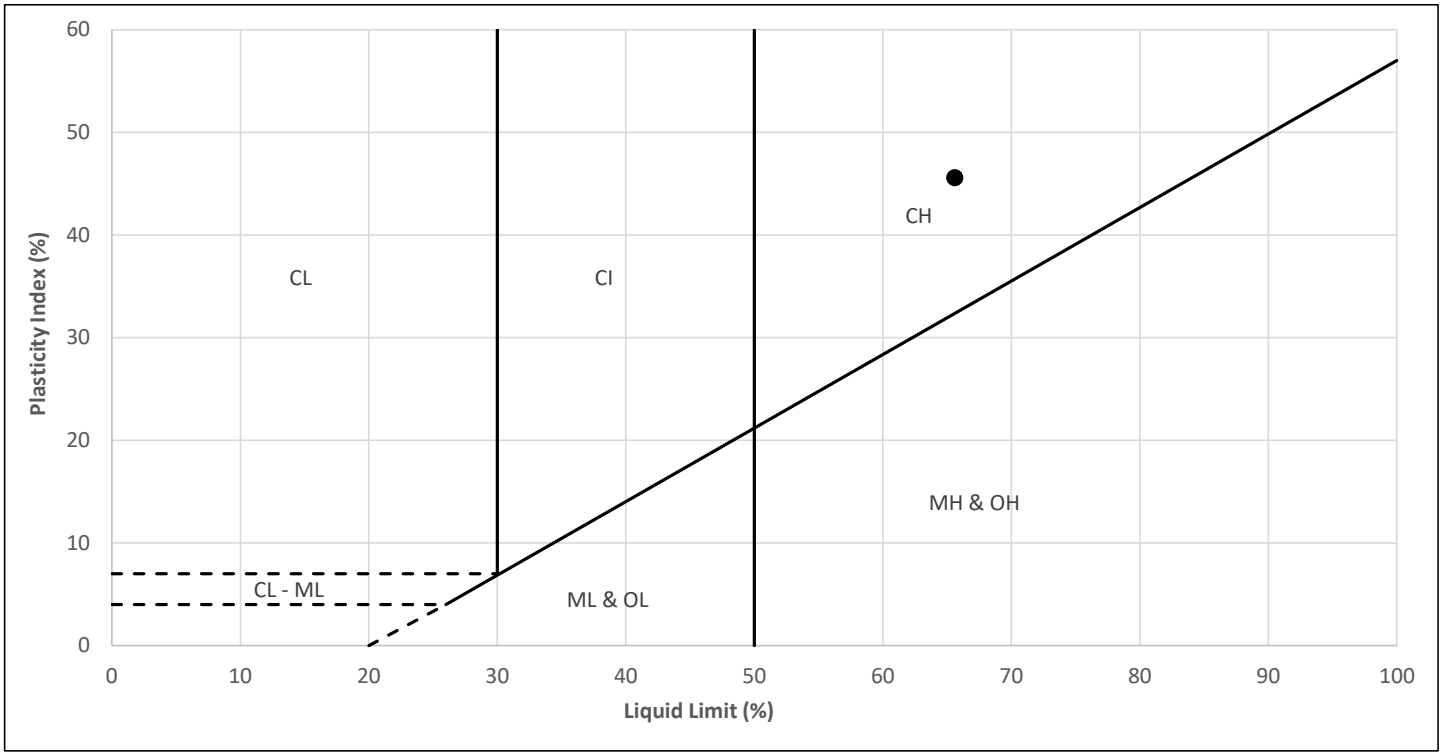
Project:	Snake Lake Reservoir Expansion	**Sample #:**	201RC13
Project No.:	1560-193-00	**Source:**	22CH201
Owner:	EID	**Sample Depth:**	21.5m
File No.:	AL - 201RC13	**Test Date:**	21-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	65.6
Plastic Limit (PL)	20.0
Plasticity Index (PI)	45.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

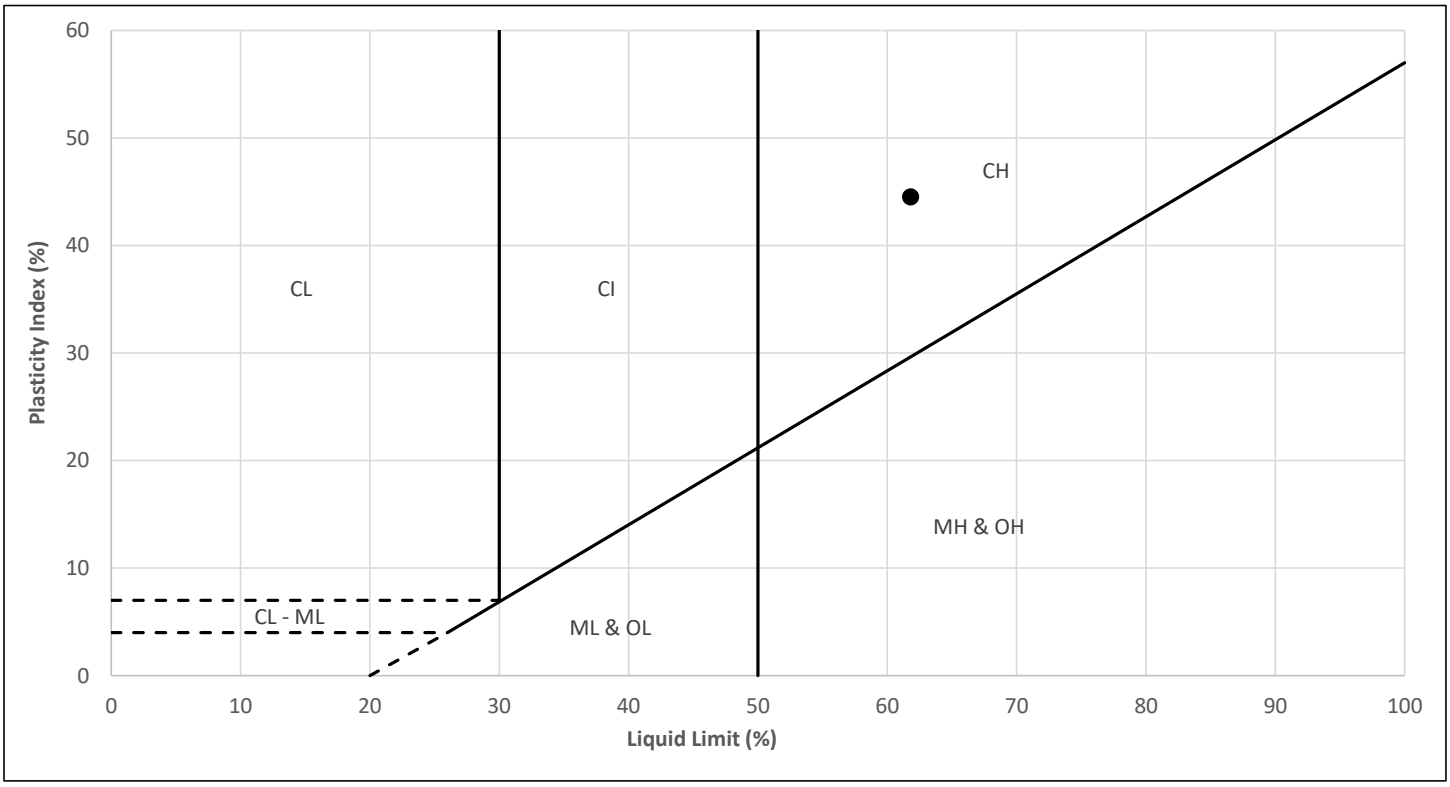
Project:	Snake Lake Reservoir Expansion	**Sample #:**	201RC18
Project No.:	1560-193-00	**Source:**	22CH201
Owner:	EID	**Sample Depth:**	30.4m
File No.:	AL - 201RC18	**Test Date:**	26-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	61.8
Plastic Limit (PL)	17.3
Plasticity Index (PI)	44.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

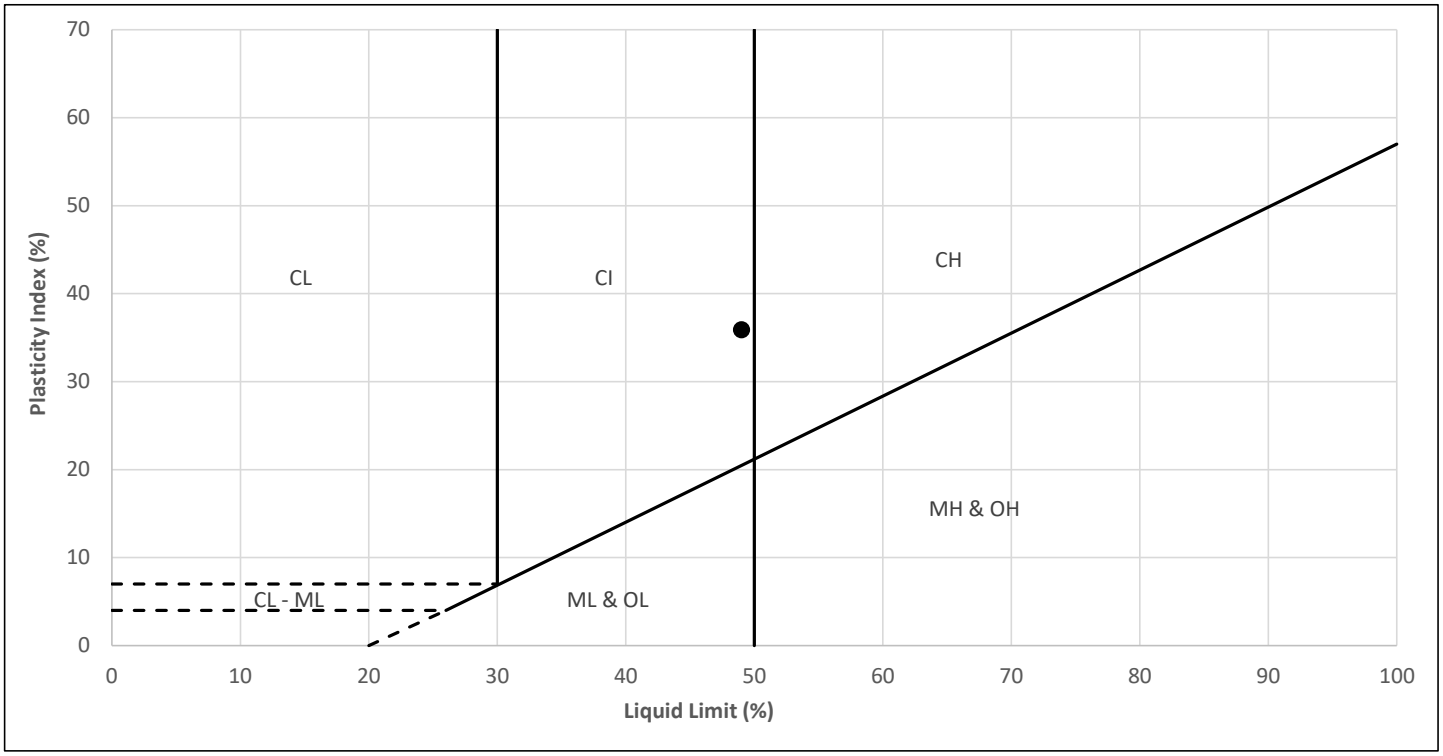
Project:	Snake Lake Reservoir Expansion	**Sample #:**	202AU2
Project No.:	1560-193-00	**Source:**	22BH202
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 202AU2	**Date:**	27-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.0
Plastic Limit (PL)	13.1
Plasticity Index (PI)	35.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

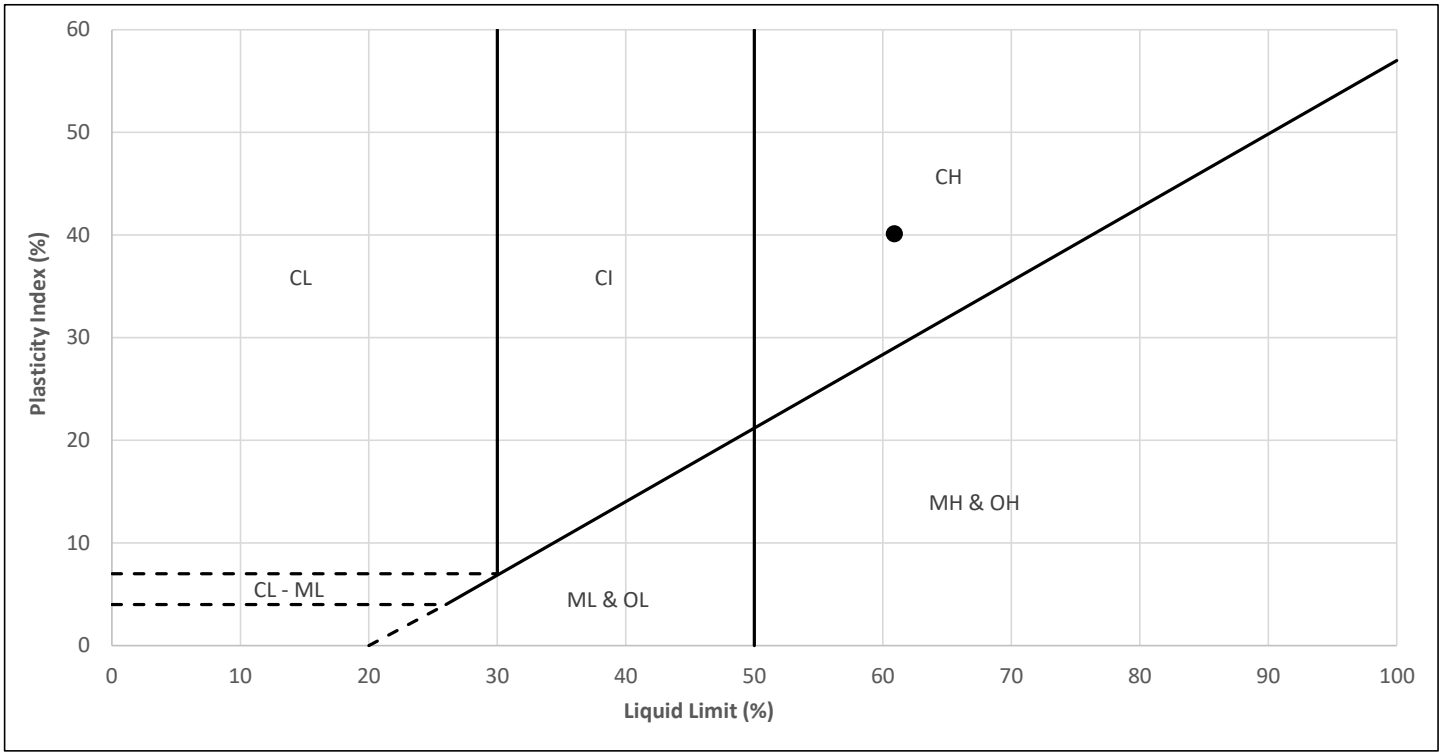
Project:	Snake Lake Reservoir Expansion	**Sample #:**	202RC1
Project No.:	1560-193-00	**Source:**	22CH201
Owner:	EID	**Sample Depth:**	3.3m
File No.:	AL - 202RC1	**Test Date:**	14-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	60.9
Plastic Limit (PL)	20.8
Plasticity Index (PI)	40.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

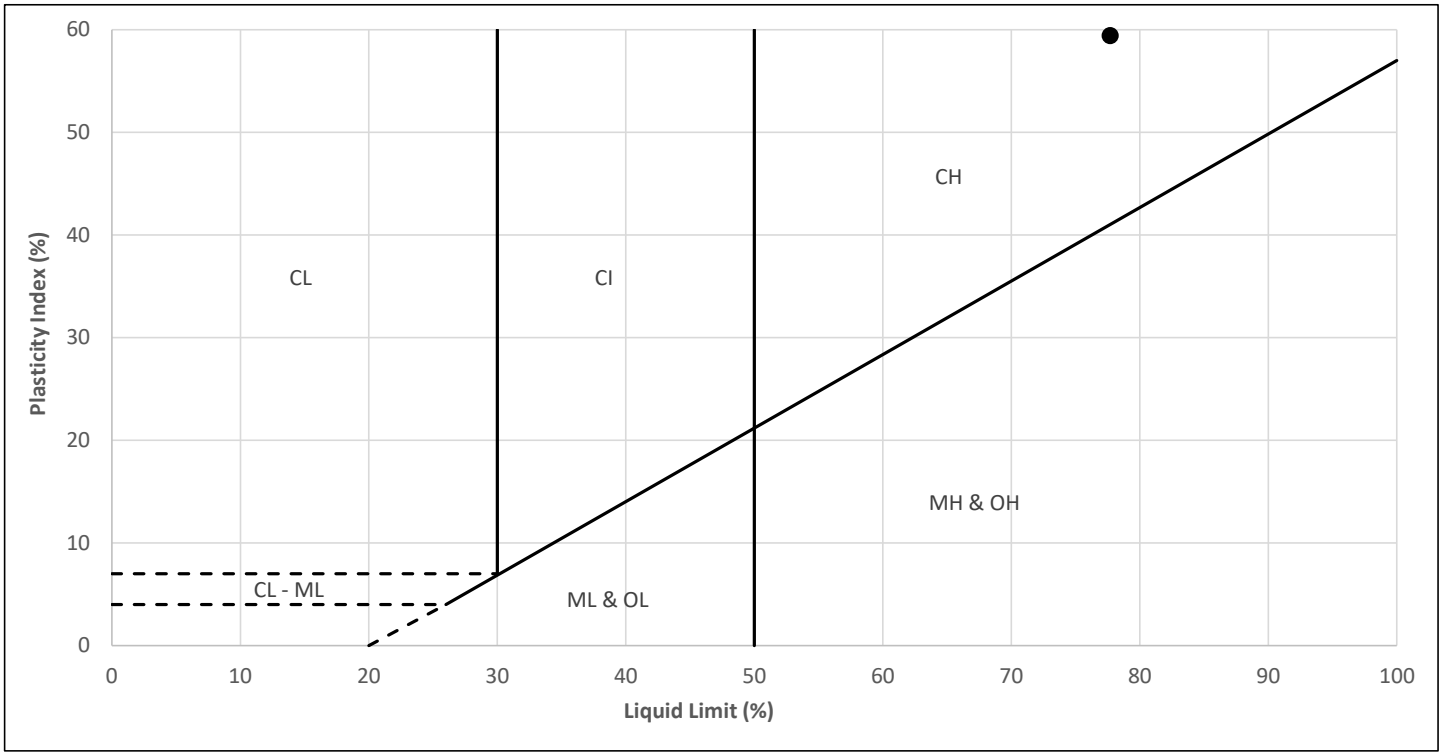
Project:	Snake Lake Reservoir Expansion	**Sample #:**	202RC2
Project No.:	1560-193-00	**Source:**	22CH202
Owner:	EID	**Sample Depth:**	5.3m
File No.:	AL - 202RC2	**Test Date:**	14-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	77.7
Plastic Limit (PL)	18.3
Plasticity Index (PI)	59.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

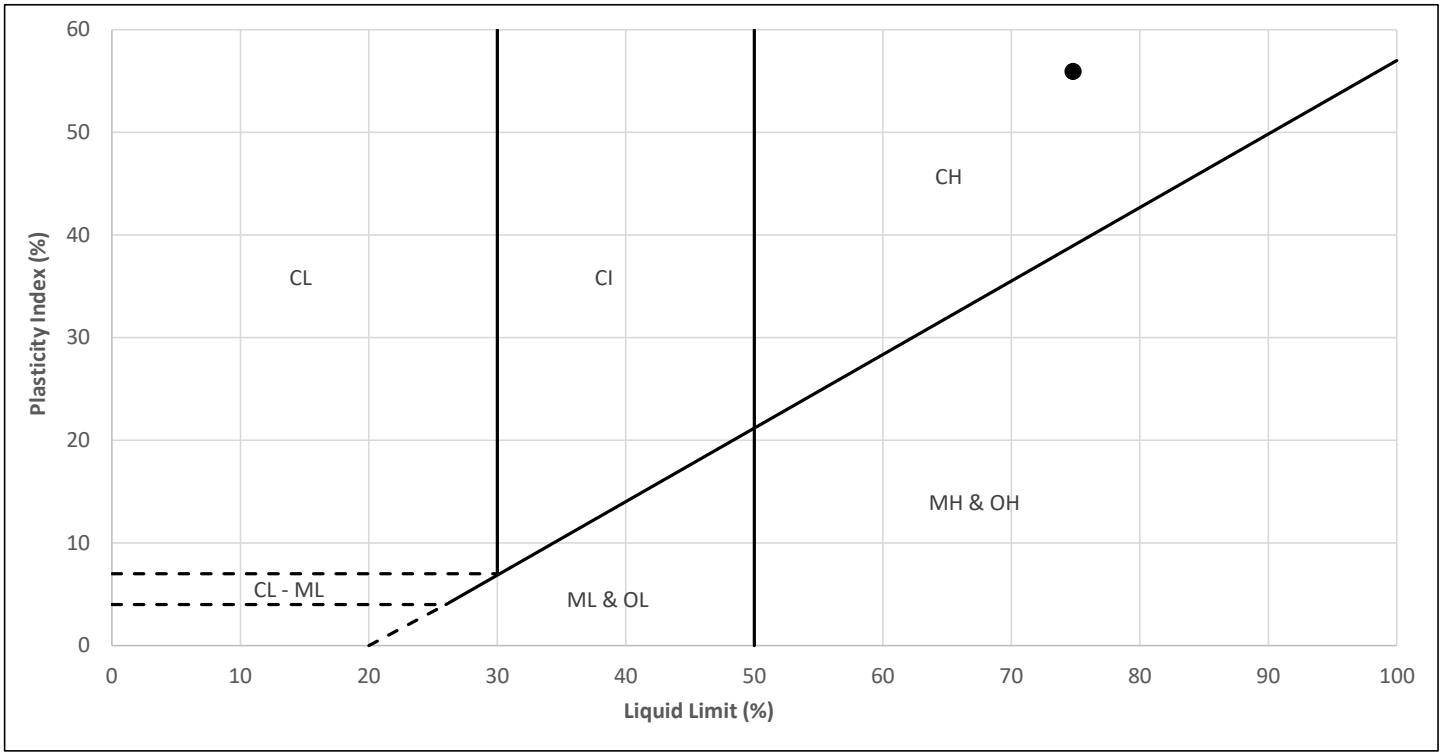
Project:	Snake Lake Reservoir Expansion	**Sample #:**	202RC6
Project No.:	1560-193-00	**Source:**	22CH202
Owner:	EID	**Sample Depth:**	10.7m
File No.:	AL - 202RC6	**Test Date:**	14-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	74.8
Plastic Limit (PL)	18.8
Plasticity Index (PI)	56.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

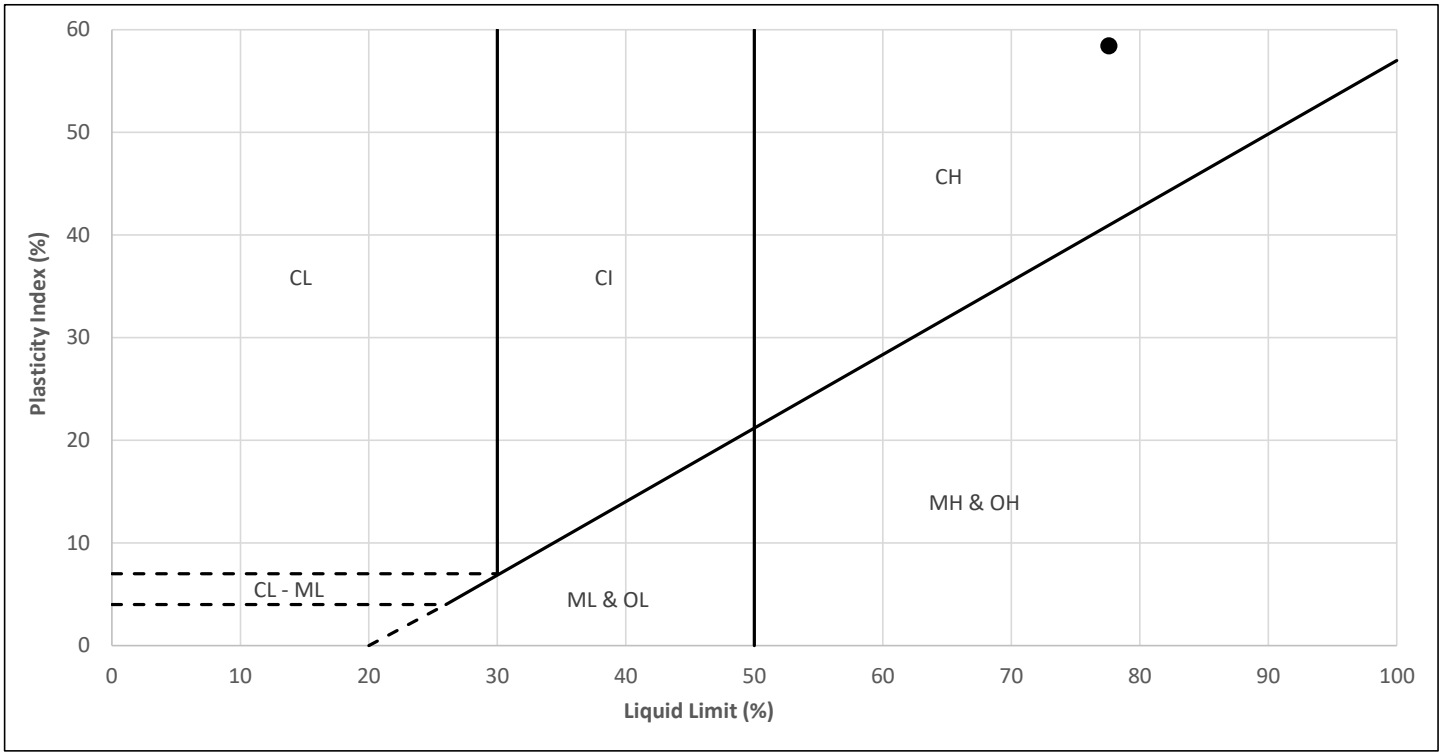
Project:	Snake Lake Reservoir Expansion	**Sample #:**	202RC10
Project No.:	1560-193-00	**Source:**	22CH202
Owner:	EID	**Sample Depth:**	16.7m
File No.:	AL - 202RC10	**Test Date:**	14-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	77.6
Plastic Limit (PL)	19.2
Plasticity Index (PI)	58.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

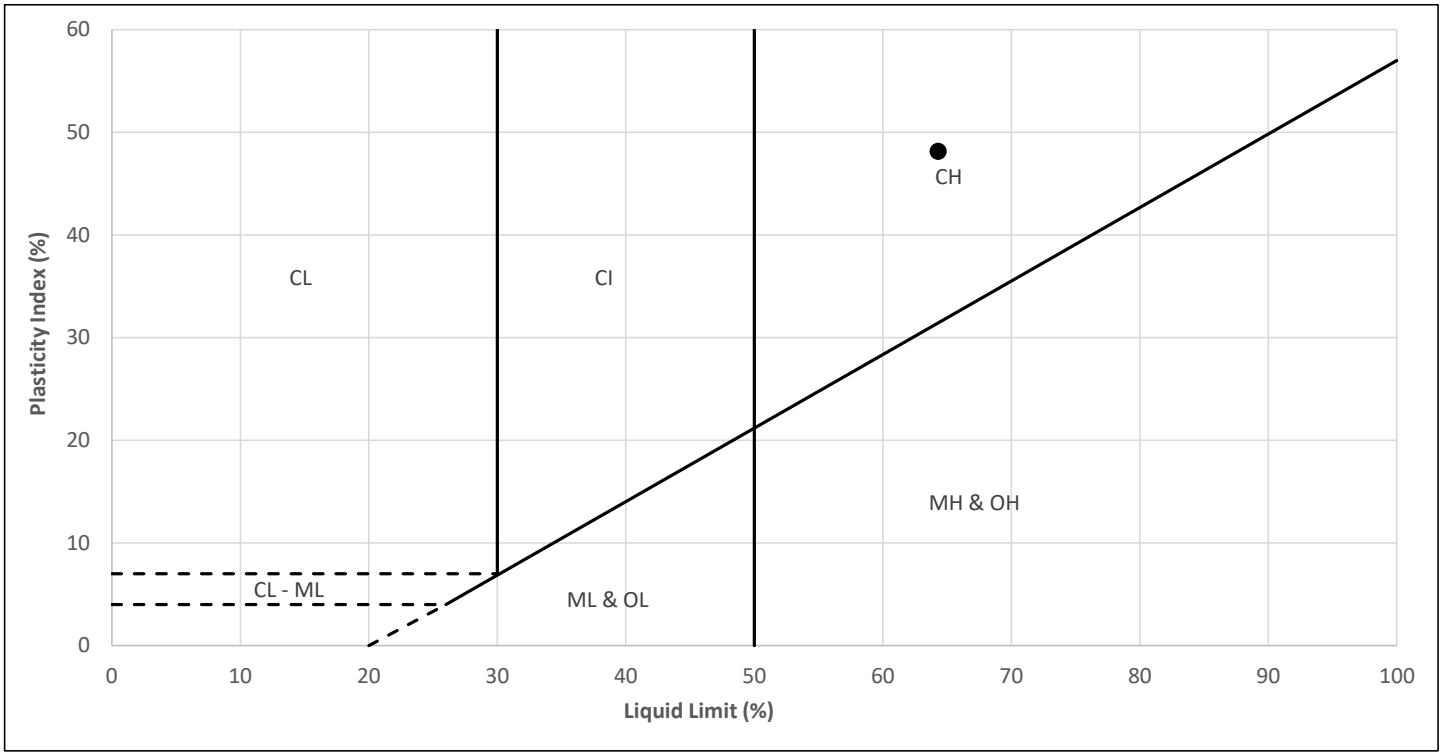
Project:	Snake Lake Reservoir Expansion	**Sample #:**	202RC17
Project No.:	1560-193-00	**Source:**	22CH202
Owner:	EID	**Sample Depth:**	28.3m
File No.:	AL - 202RC17	**Test Date:**	14-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	64.3
Plastic Limit (PL)	16.1
Plasticity Index (PI)	48.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

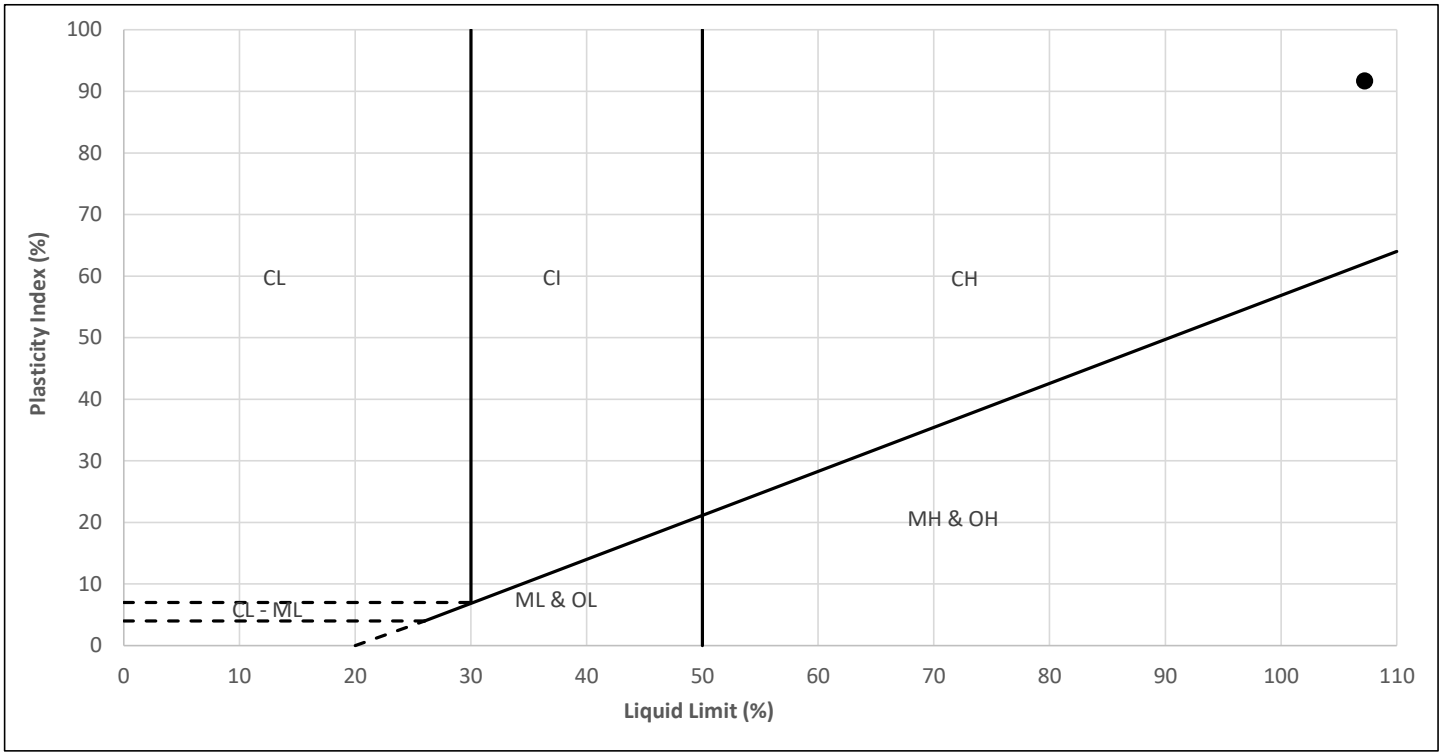
Project:	Snake Lake Reservoir Expansion	**Sample #:**	203AU2
Project No.:	1560-193-00	**Source:**	22BH203
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 203AU2	**Date:**	27-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	107.2
Plastic Limit (PL)	15.5
Plasticity Index (PI)	91.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

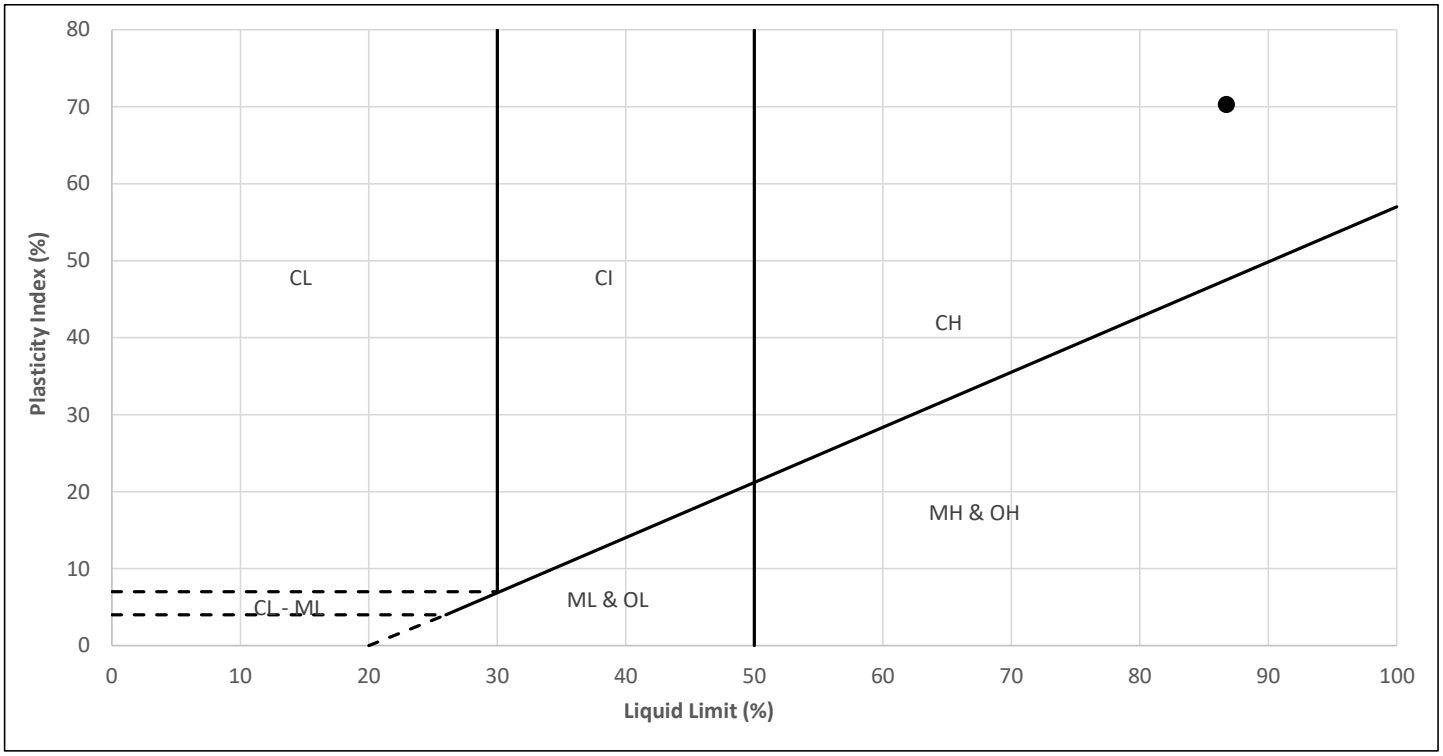
Project:	Snake Lake Reservoir Expansion	**Sample #:**	203AU3
Project No.:	1560-193-00	**Source:**	22BH203
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 203AU3	**Date:**	27-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	86.7
Plastic Limit (PL)	16.4
Plasticity Index (PI)	70.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

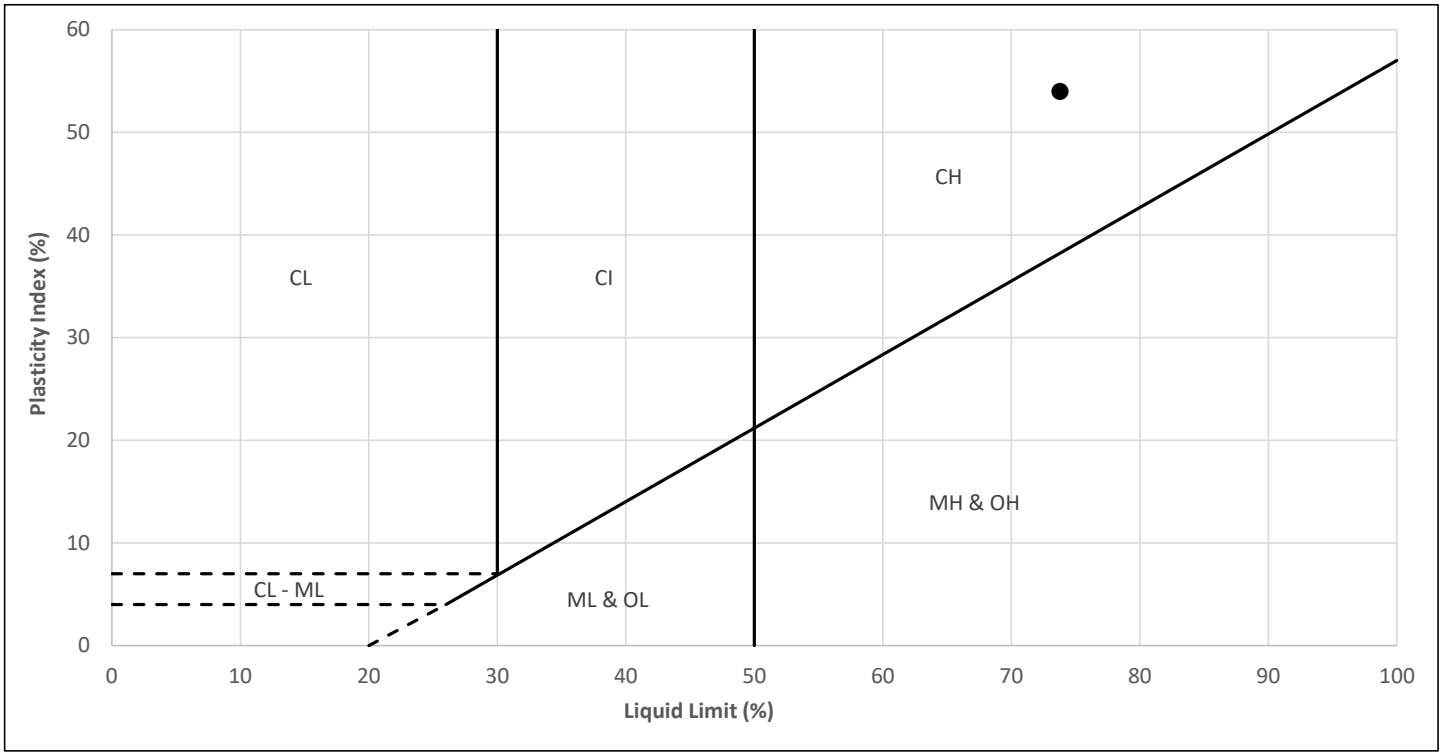
Project:	Snake Lake Reservoir Expansion	**Sample #:**	203RC13
Project No.:	1560-193-00	**Source:**	22CH203
Owner:	EID	**Sample Depth:**	25.0m
File No.:	AL - 203RC13	**Test Date:**	15-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	73.8
Plastic Limit (PL)	19.8
Plasticity Index (PI)	54.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

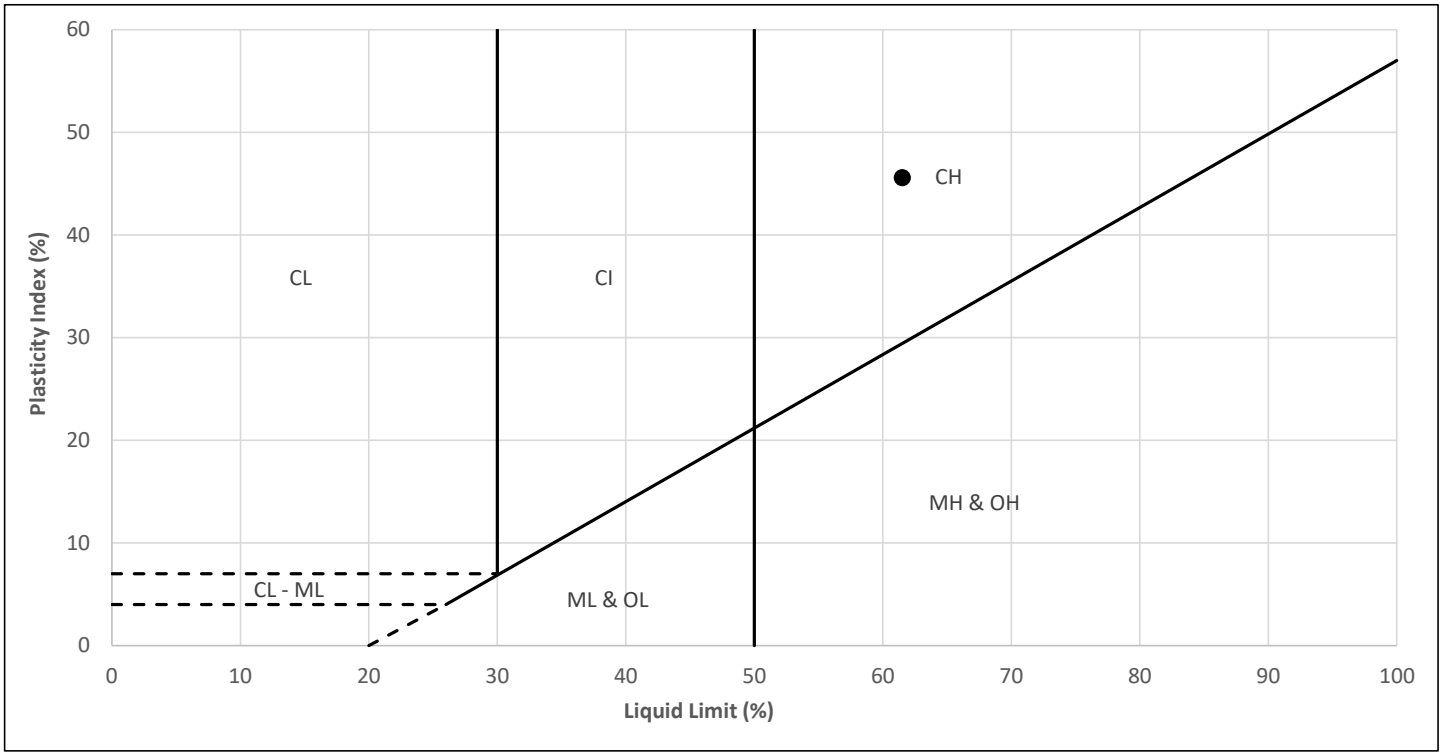
Project:	Snake Lake Reservoir Expansion	**Sample #:**	203RC18
Project No.:	1560-193-00	**Source:**	22CH203
Owner:	EID	**Sample Depth:**	32.3m
File No.:	AL - 203RC18	**Test Date:**	16-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	61.5
Plastic Limit (PL)	15.9
Plasticity Index (PI)	45.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

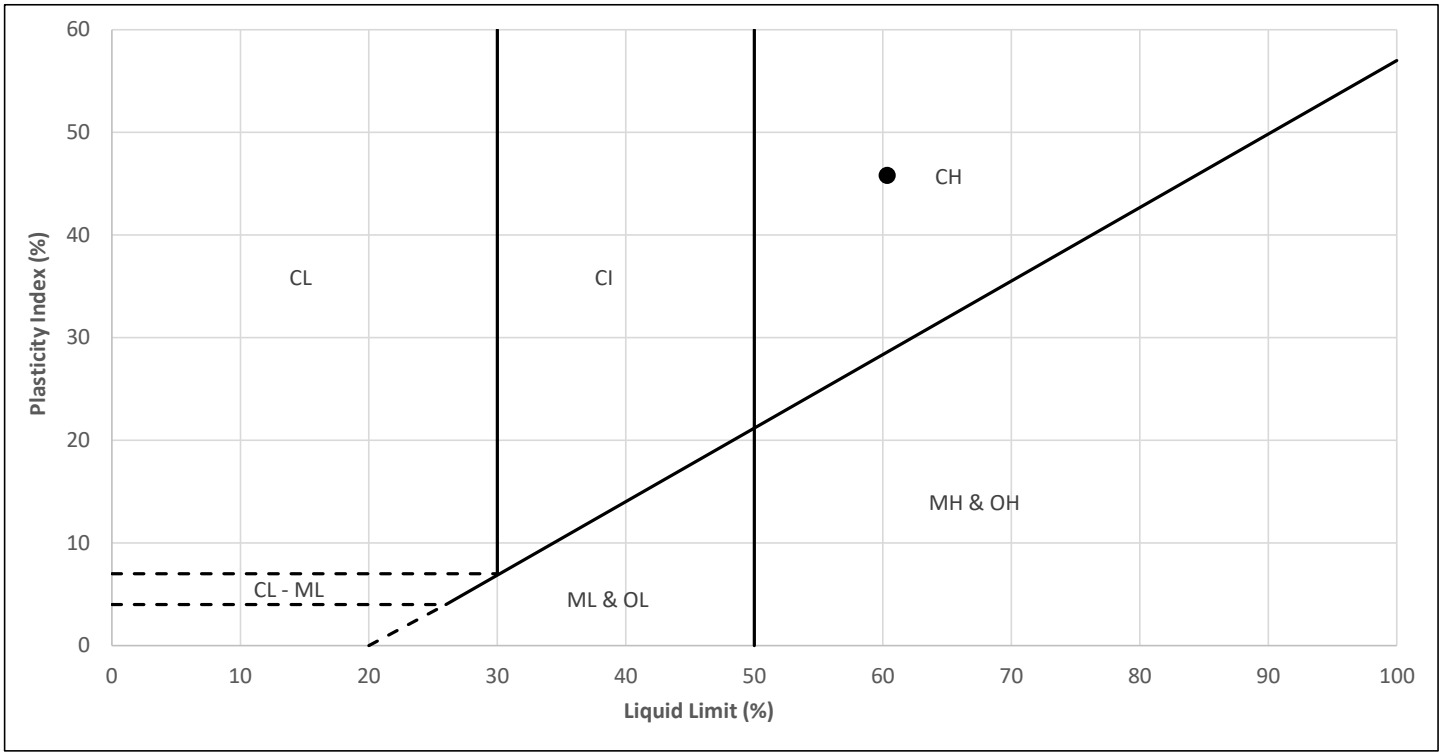
Project:	Snake Lake Reservoir Expansion	**Sample #:**	203UD3
Project No.:	1560-193-00	**Source:**	22CH203
Owner:	EID	**Sample Depth:**	16.3m
File No.:	AL - 203UD3	**Test Date:**	15-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	60.3
Plastic Limit (PL)	14.5
Plasticity Index (PI)	45.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

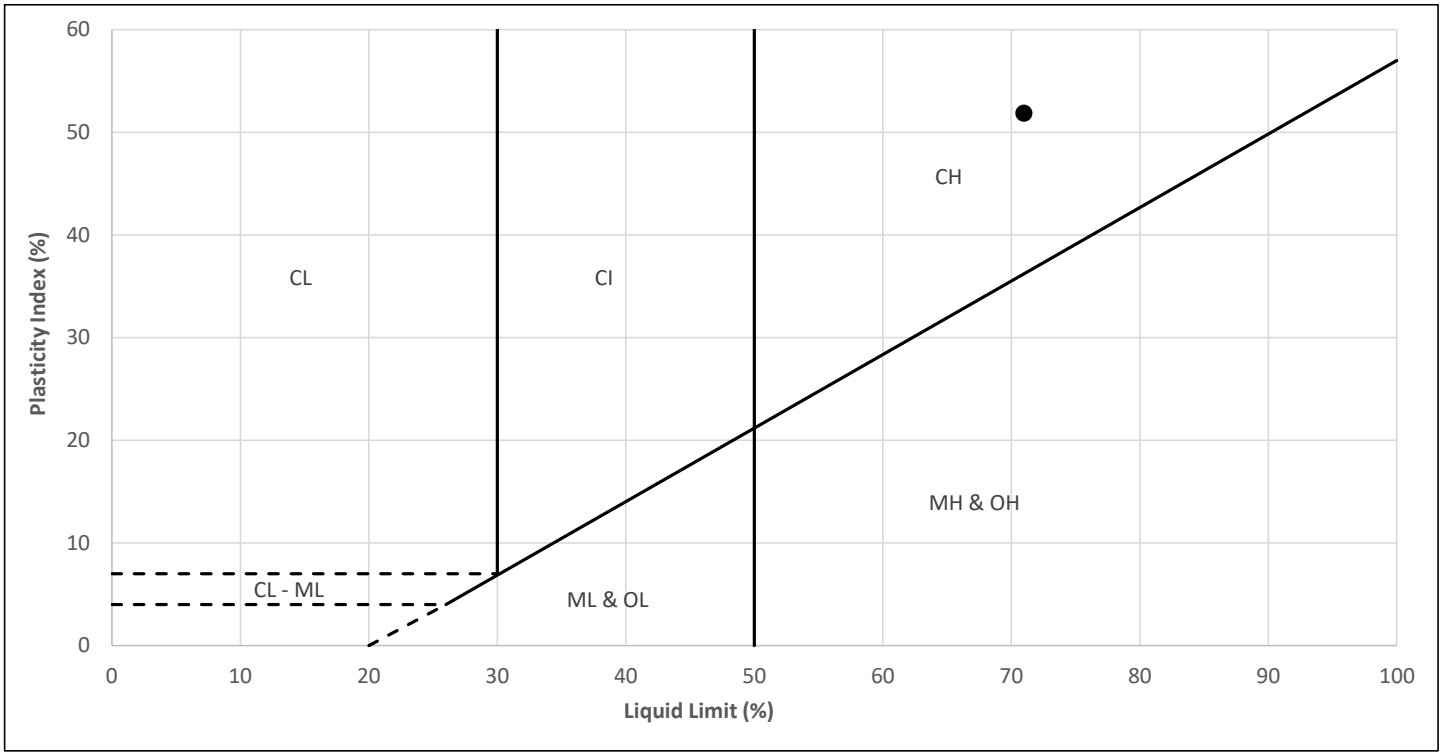
Project:	Snake Lake Reservoir Expansion	**Sample #:**	203UD6
Project No.:	1560-193-00	**Source:**	22CH203
Owner:	EID	**Sample Depth:**	25.7m
File No.:	AL - 203UD6	**Test Date:**	21-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	71.0
Plastic Limit (PL)	19.1
Plasticity Index (PI)	51.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

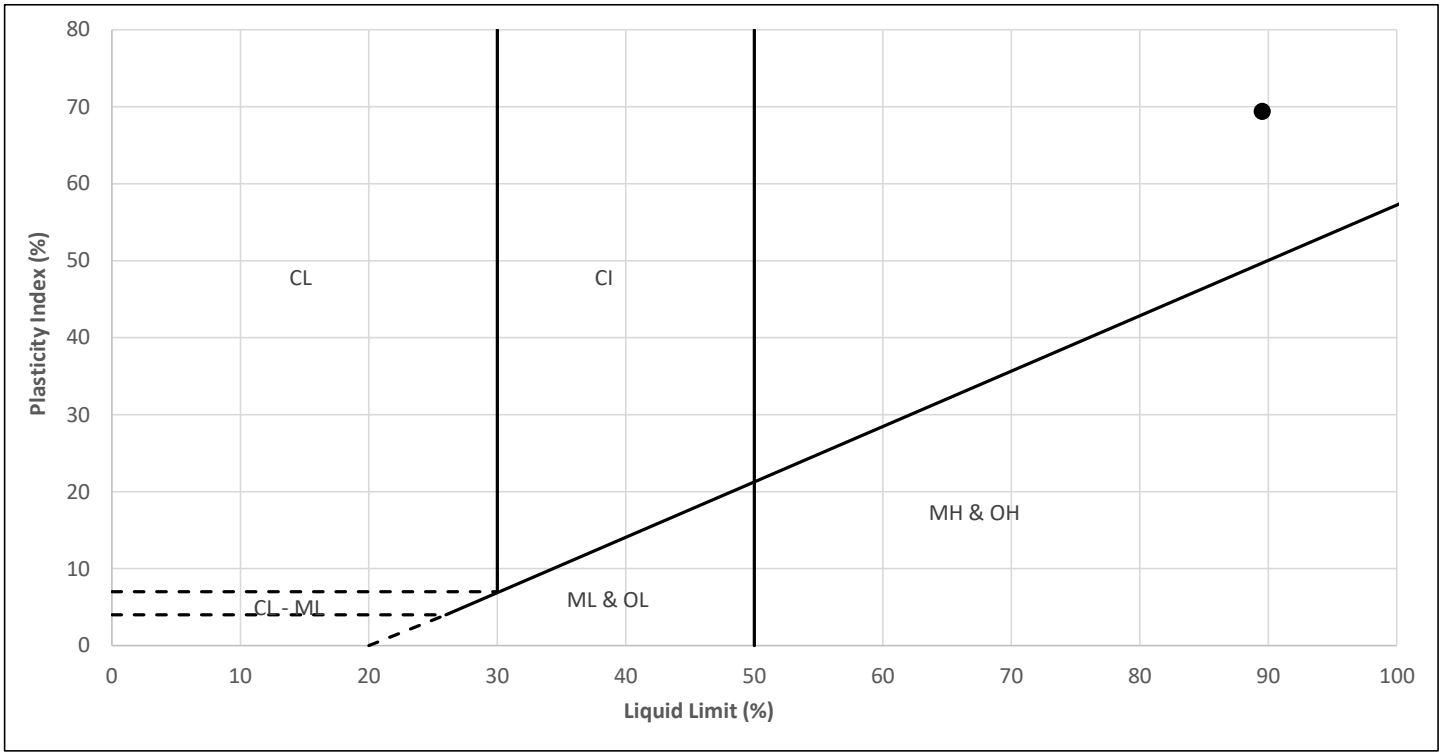
Project:	Snake Lake Reservoir Expansion	**Sample #:**	204RC1
Project No.:	1560-193-00	**Source:**	22CH204
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 204RC1	**Test Date:**	3-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	89.5
Plastic Limit (PL)	20.1
Plasticity Index (PI)	69.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

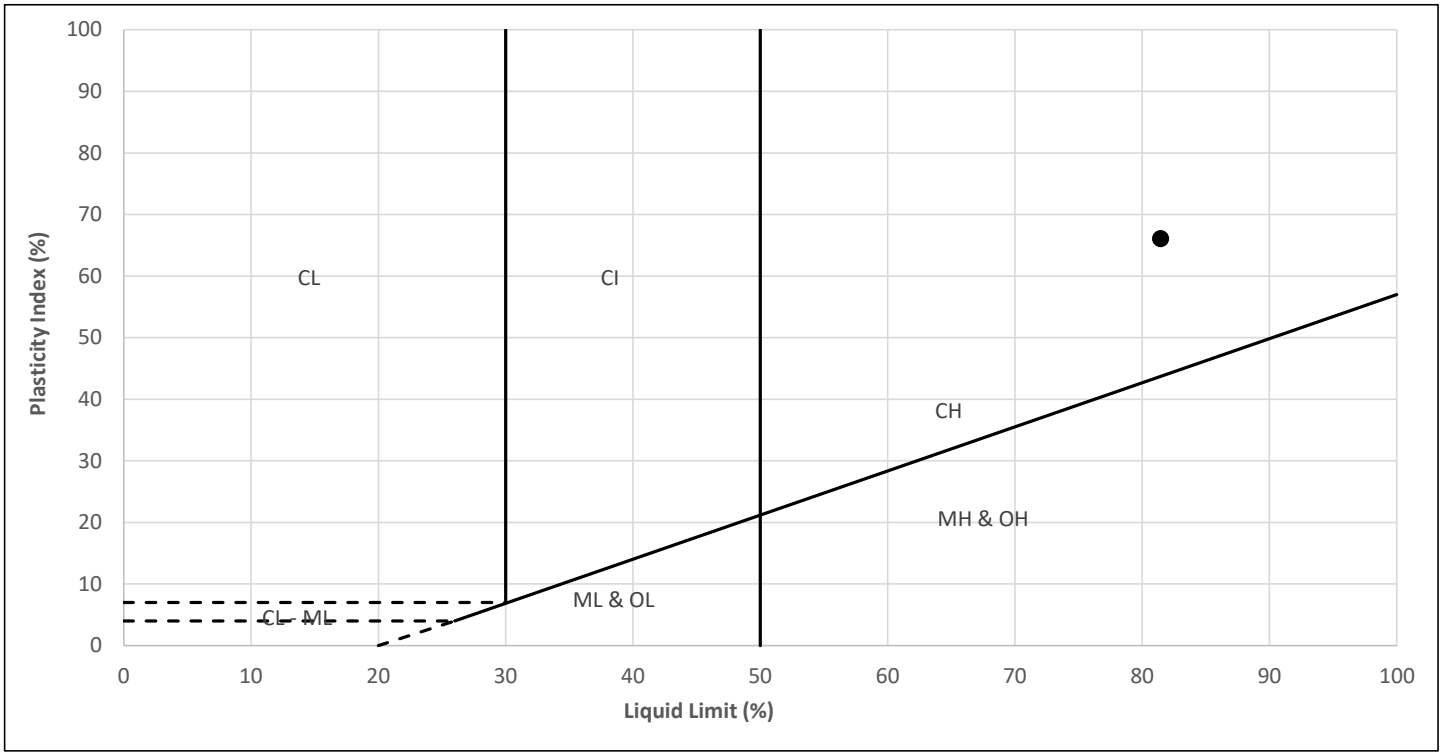
Project:	Snake Lake Reservoir Expansion	**Sample #:**	204UD4
Project No.:	1560-193-00	**Source:**	22CH204
Owner:	EID	**Sample Depth:**	15.4m
File No.:	AL - 204UD4	**Test Date:**	19-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	81.4
Plastic Limit (PL)	15.3
Plasticity Index (PI)	66.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

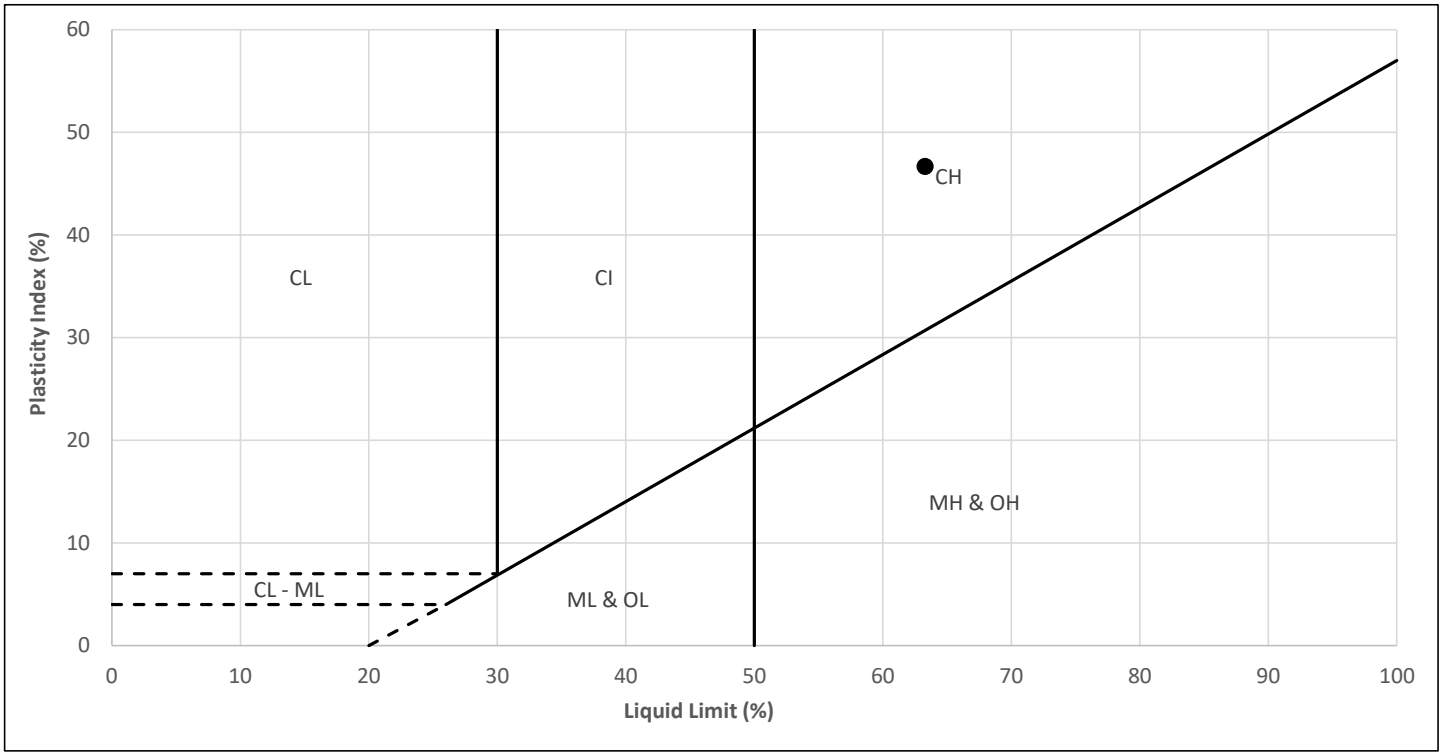
Project:	Snake Lake Reservoir Expansion	**Sample #:**	204UD10
Project No.:	1560-193-00	**Source:**	22CH204
Owner:	EID	**Sample Depth:**	30.5m
File No.:	AL - 204UD10	**Test Date:**	21-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	63.3
Plastic Limit (PL)	16.6
Plasticity Index (PI)	46.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

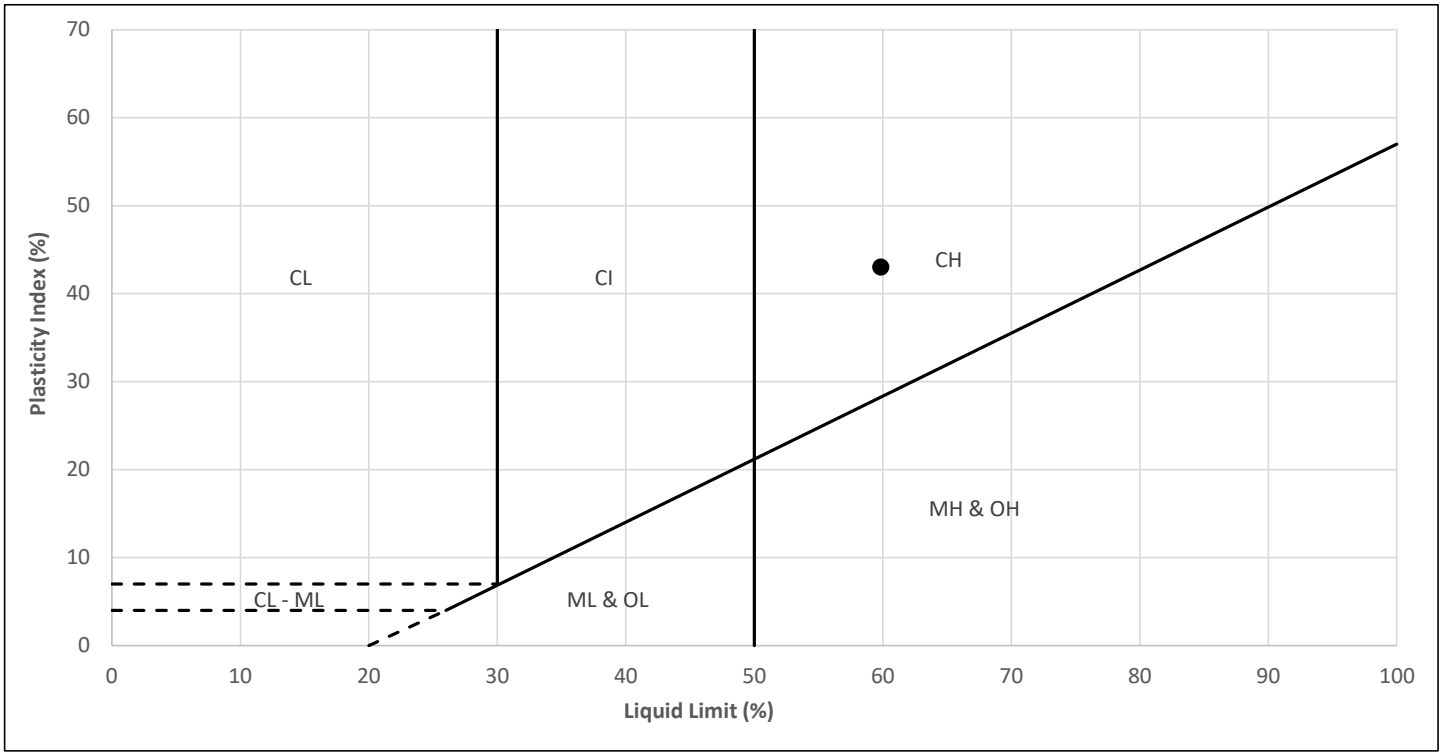
Project:	Snake Lake Reservoir Expansion	**Sample #:**	205AU5
Project No.:	1560-193-00	**Source:**	22BH205
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 205AU5	**Date:**	27-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	59.8
Plastic Limit (PL)	16.8
Plasticity Index (PI)	43.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

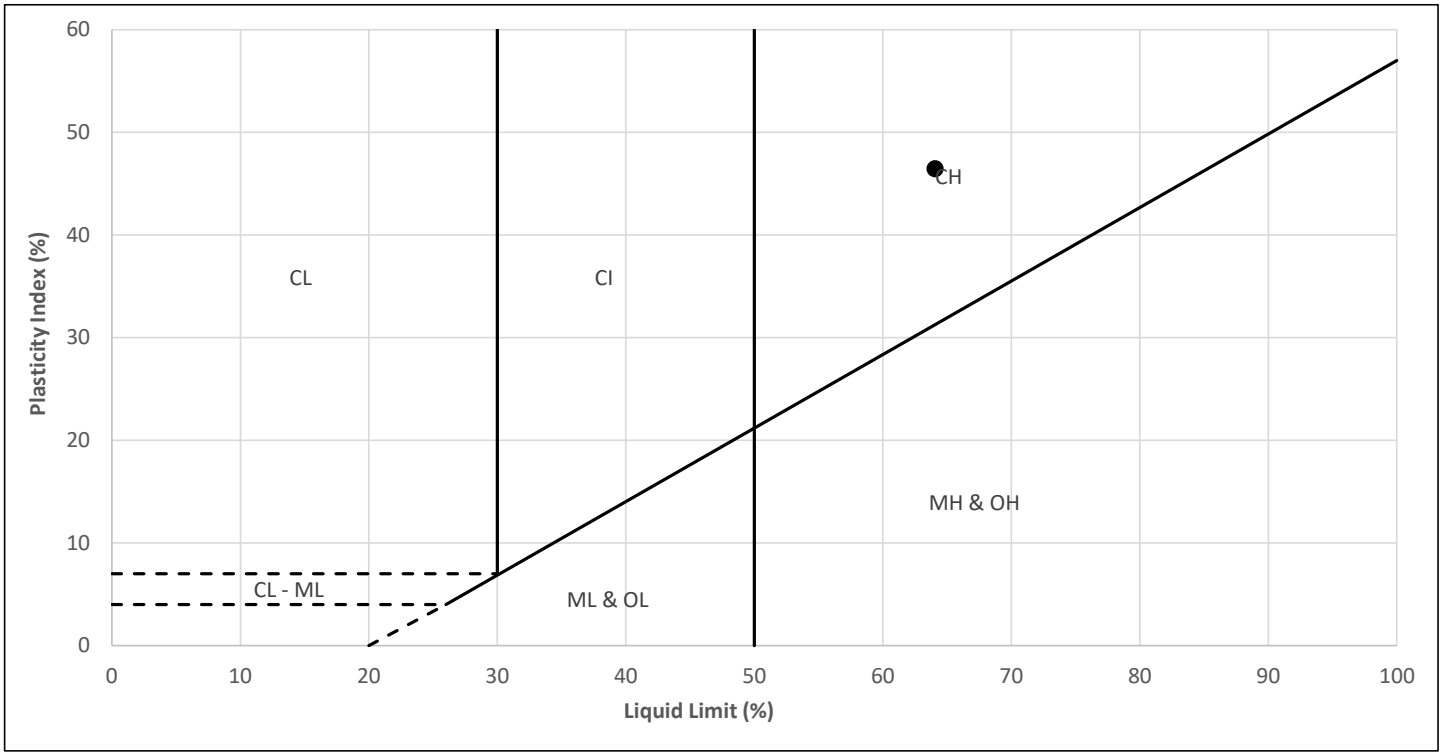
Project:	Snake Lake Reservoir Expansion	**Sample #:**	205RC3
Project No.:	1560-193-00	**Source:**	22CH205
Owner:	EID	**Sample Depth:**	6.0m
File No.:	AL - 205RC3	**Test Date:**	22-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	64.1
Plastic Limit (PL)	17.6
Plasticity Index (PI)	46.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

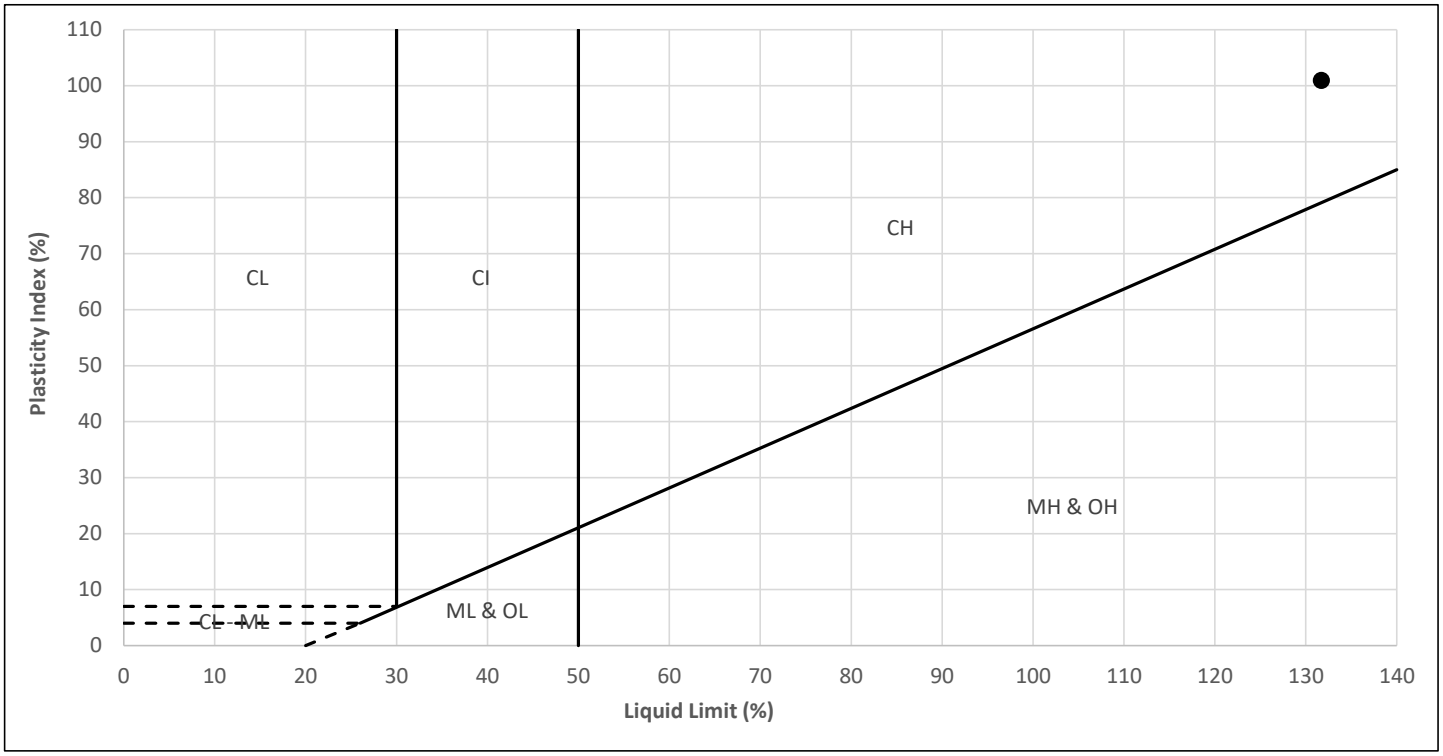
Project:	Snake Lake Reservoir Expansion	**Sample #:**	205RC9
Project No.:	1560-193-00	**Source:**	22CH205
Owner:	EID	**Sample Depth:**	15.2m
File No.:	AL - 205RC9	**Test Date:**	15-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	131.7
Plastic Limit (PL)	30.7
Plasticity Index (PI)	101.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

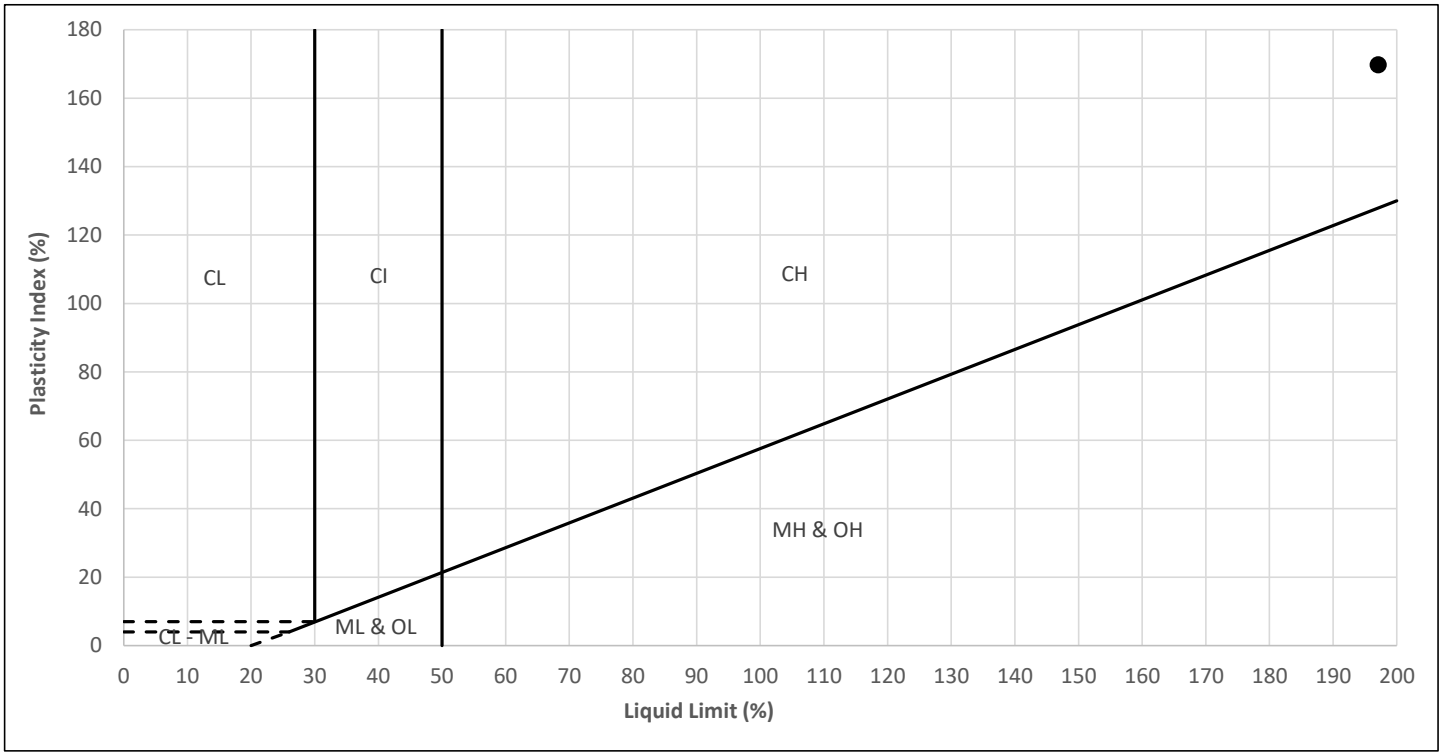
Project:	Snake Lake Reservoir Expansion	**Sample #:**	205UD5
Project No.:	1560-193-00	**Source:**	22CH205
Owner:	EID	**Sample Depth:**	15.2m
File No.:	AL - 205UD5	**Test Date:**	21-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	197.1
Plastic Limit (PL)	27.3
Plasticity Index (PI)	169.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

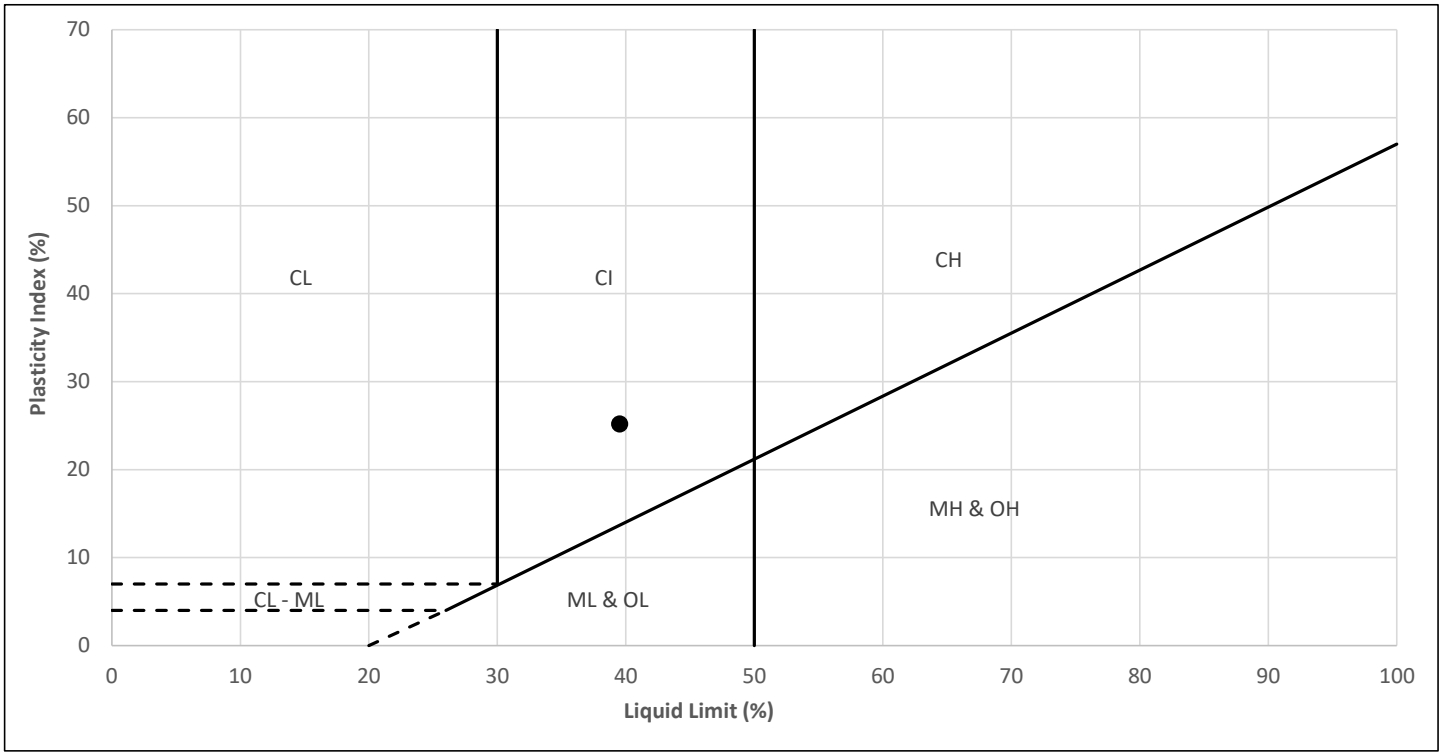
Project:	Snake Lake Reservoir Expansion	**Sample #:**	206AU3
Project No.:	1560-193-00	**Source:**	22BH206
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 206AU3	**Date:**	29-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	39.5
Plastic Limit (PL)	14.3
Plasticity Index (PI)	25.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

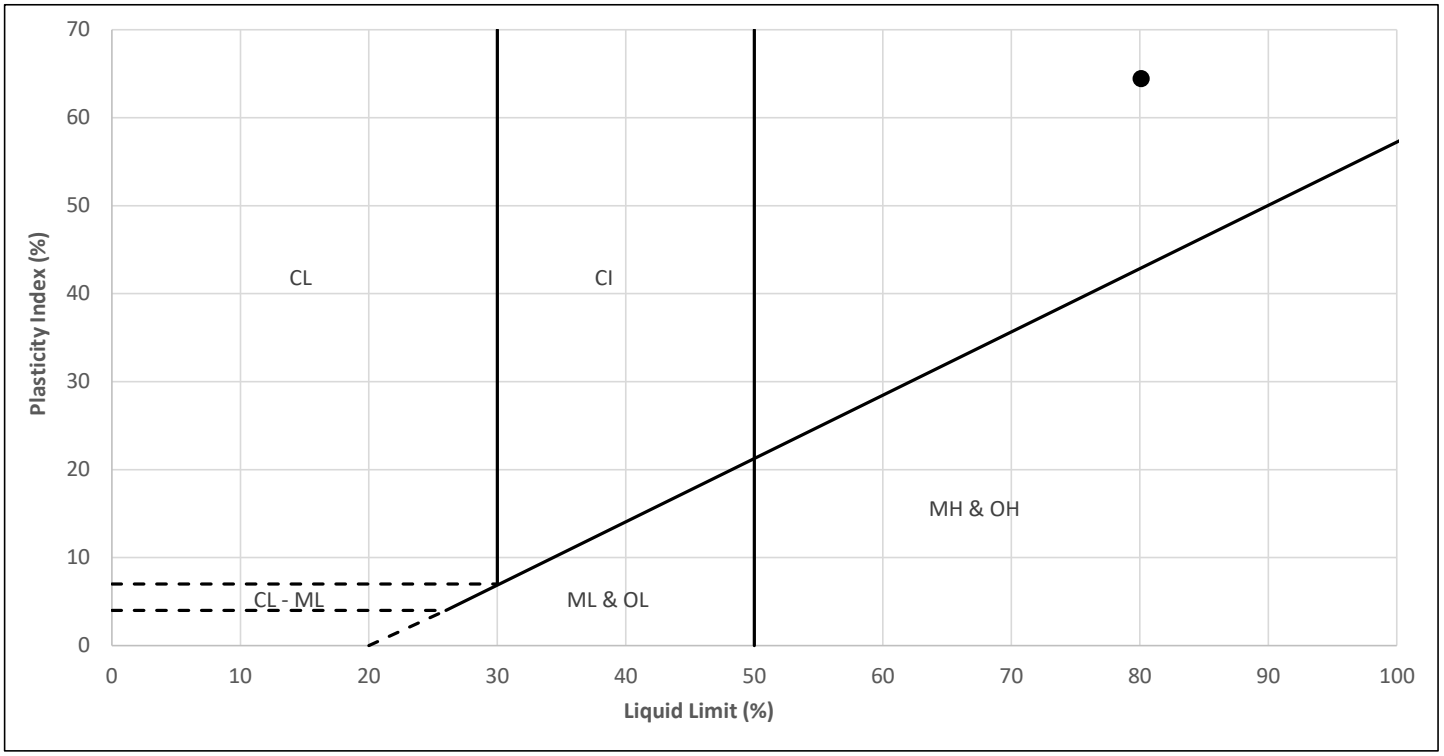
Project:	Snake Lake Reservoir Expansion	**Sample #:**	206RC5
Project No.:	1560-193-00	**Source:**	22CH206
Owner:	EID	**Sample Depth:**	8.8m
File No.:	AL - 206RC5	**Test Date:**	2-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	80.1
Plastic Limit (PL)	15.7
Plasticity Index (PI)	64.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

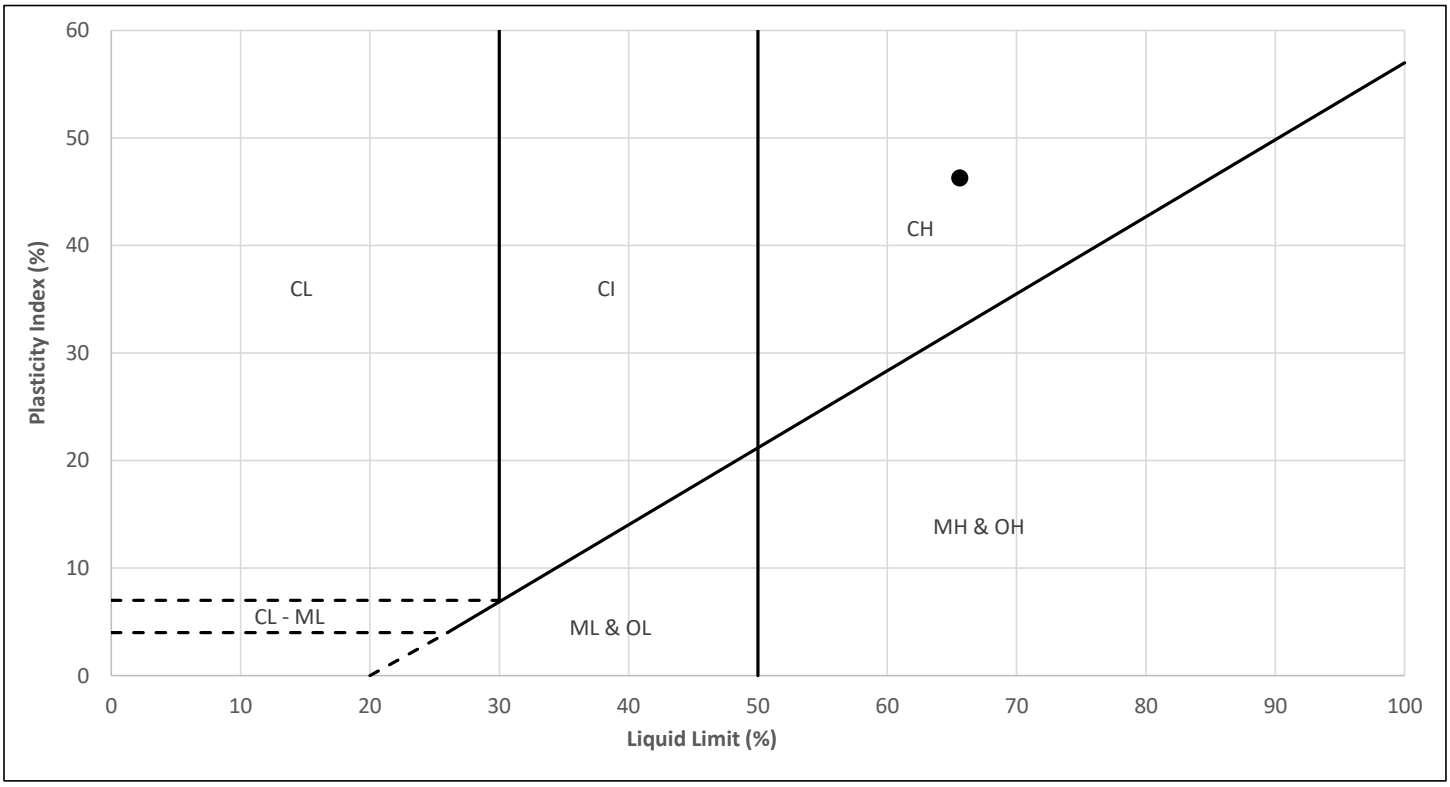
Project:	Snake Lake Reservoir Expansion	**Sample #:**	206RC7
Project No.:	1560-193-00	**Source:**	22CH206
Owner:	EID	**Sample Depth:**	11.1m
File No.:	AL - 206RC7	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	65.6
Plastic Limit (PL)	19.3
Plasticity Index (PI)	46.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

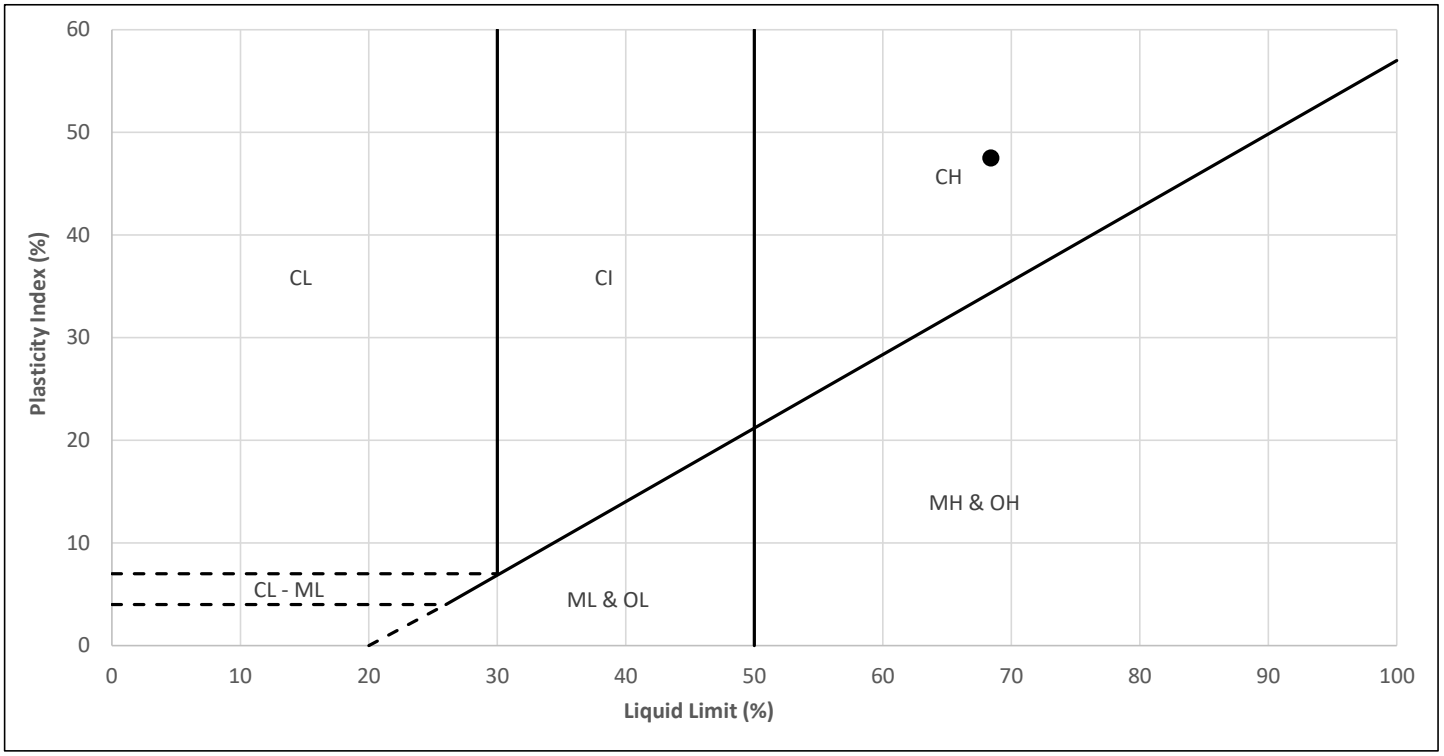
Project:	Snake Lake Reservoir Expansion	**Sample #:**	206RC13
Project No.:	1560-193-00	**Source:**	22CH206
Owner:	EID	**Sample Depth:**	21.0m
File No.:	AL - 206RC13	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	68.4
Plastic Limit (PL)	20.9
Plasticity Index (PI)	47.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

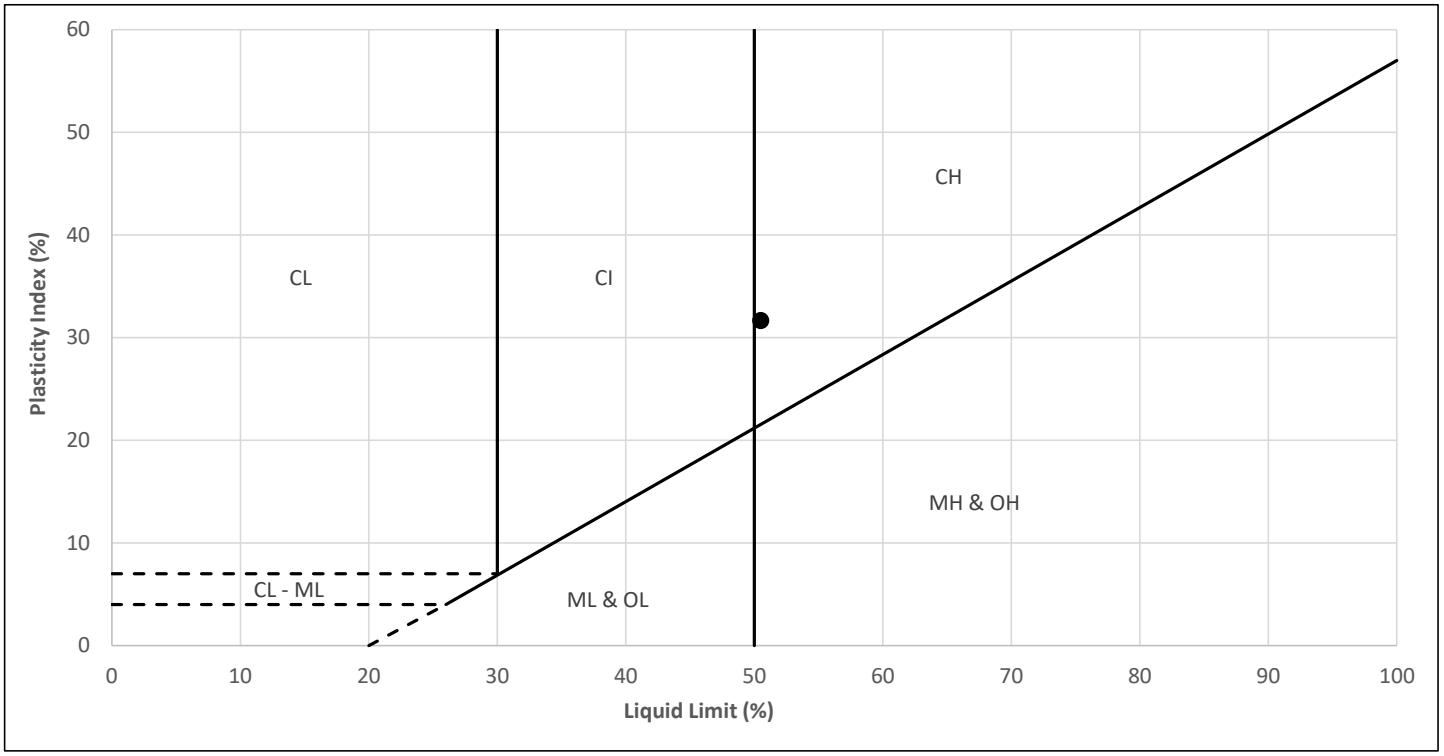
Project:	Snake Lake Reservoir Expansion	**Sample #:**	206RC19
Project No.:	1560-193-00	**Source:**	22CH206
Owner:	EID	**Sample Depth:**	28.2m
File No.:	AL - 206RC19	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.5
Plastic Limit (PL)	18.8
Plasticity Index (PI)	31.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

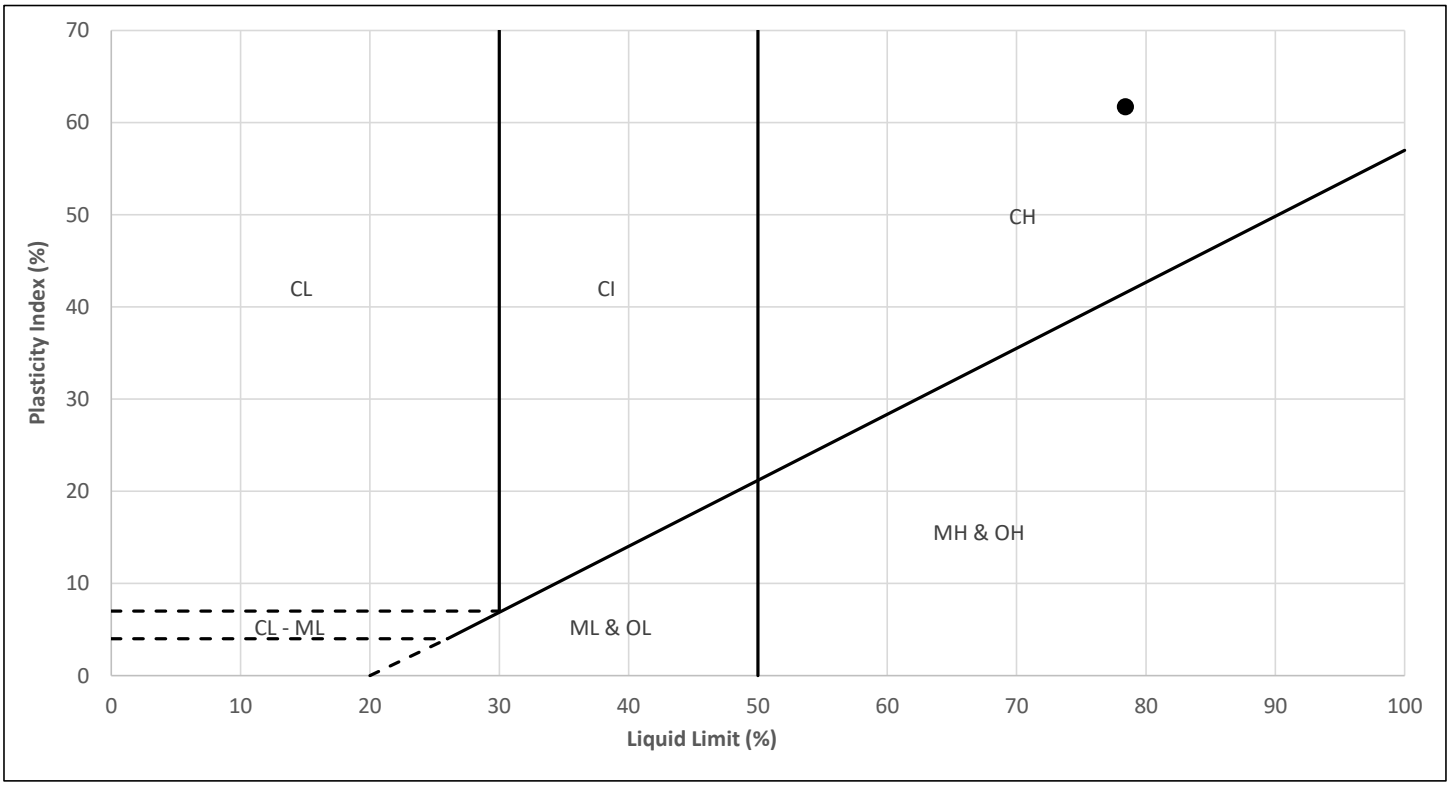
Project:	Snake Lake Reservoir Expansion	**Sample #:**	207RC2
Project No.:	1560-193-00	**Source:**	22CH207
Owner:	EID	**Sample Depth:**	7.0m
File No.:	AL - 207RC2	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	78.4
Plastic Limit (PL)	16.7
Plasticity Index (PI)	61.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

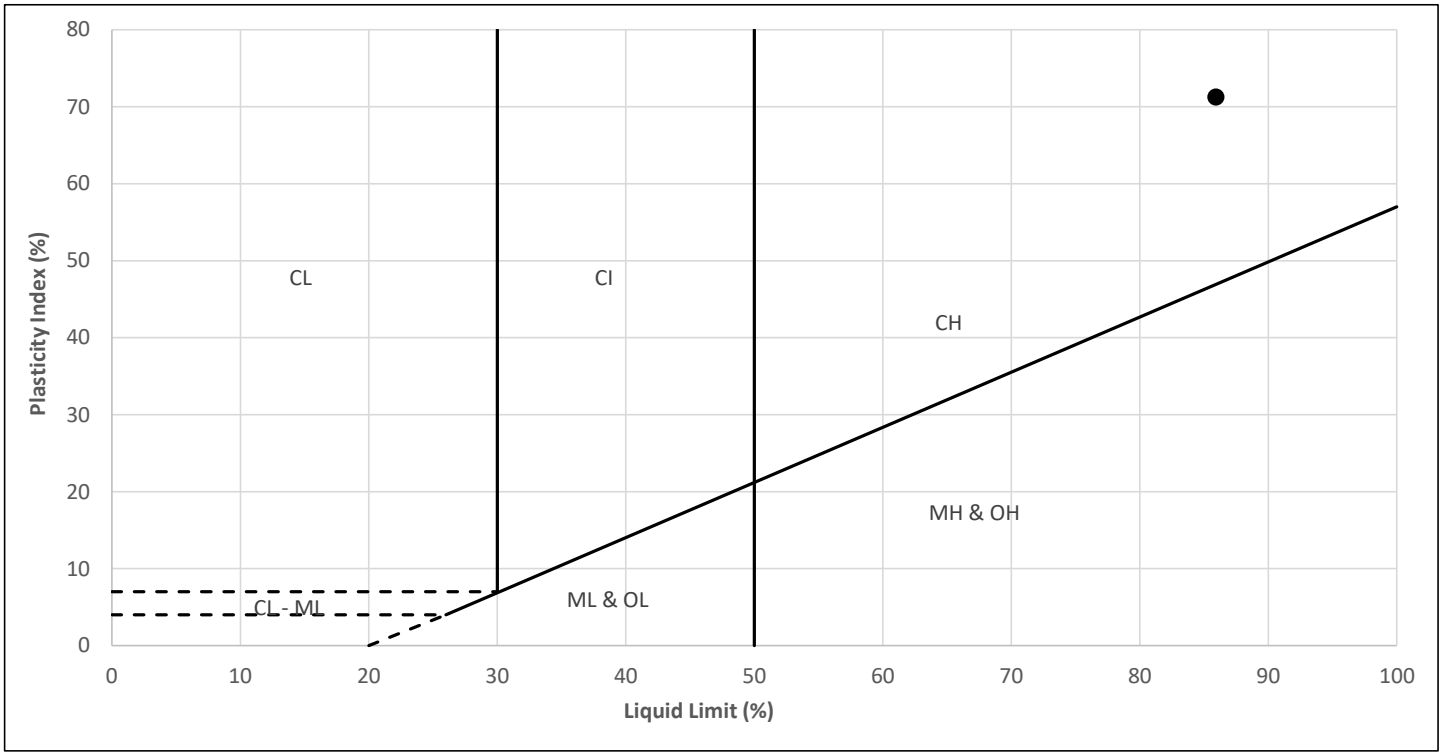
Project:	Snake Lake Reservoir Expansion	**Sample #:**	207RC6
Project No.:	1560-193-00	**Source:**	22CH207
Owner:	EID	**Sample Depth:**	12.4m
File No.:	AL - 207RC6	**Test Date:**	27-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	85.9
Plastic Limit (PL)	14.7
Plasticity Index (PI)	71.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

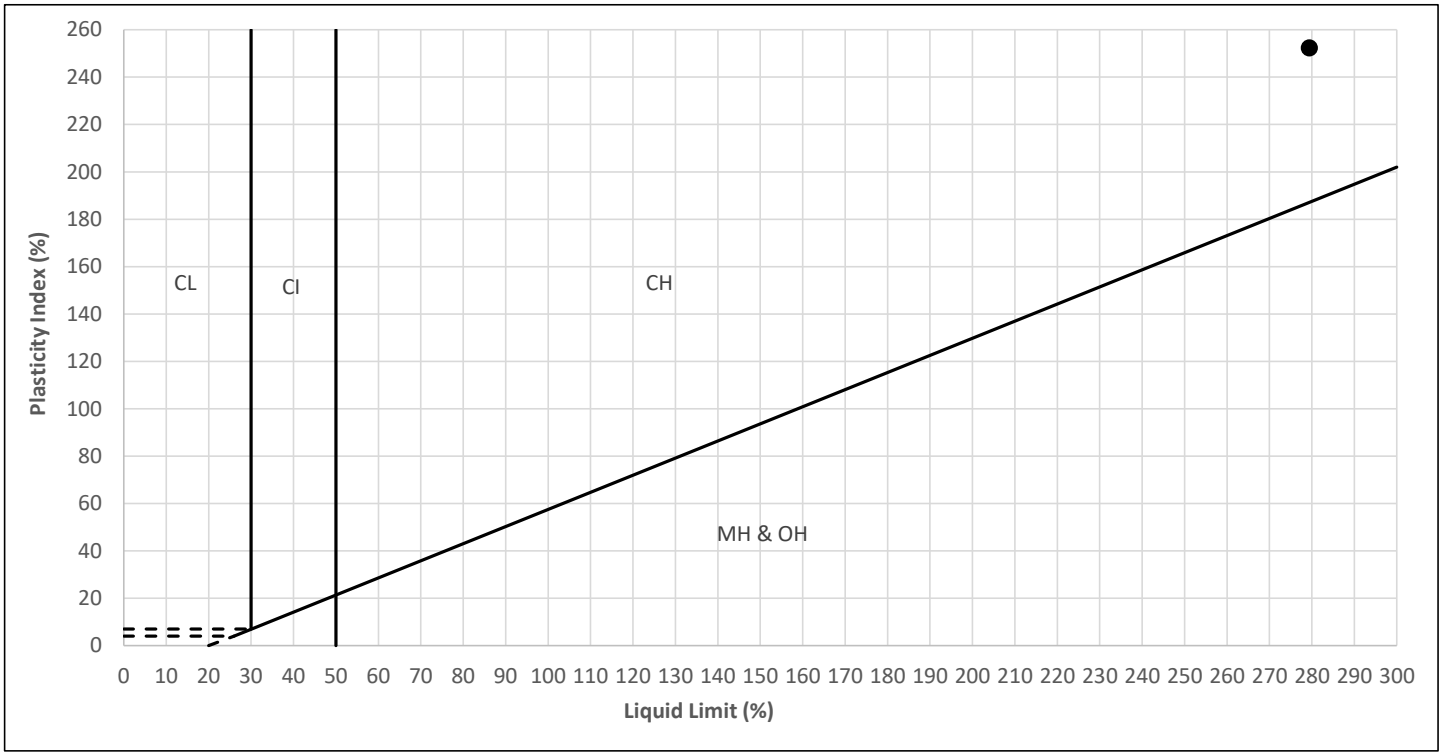
Project:	Snake Lake Reservoir Expansion	**Sample #:**	207UD4
Project No.:	1560-193-00	**Source:**	22CH207
Owner:	EID	**Sample Depth:**	16.7m
File No.:	AL - 207UD4	**Test Date:**	26-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	279.4
Plastic Limit (PL)	27.0
Plasticity Index (PI)	252.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

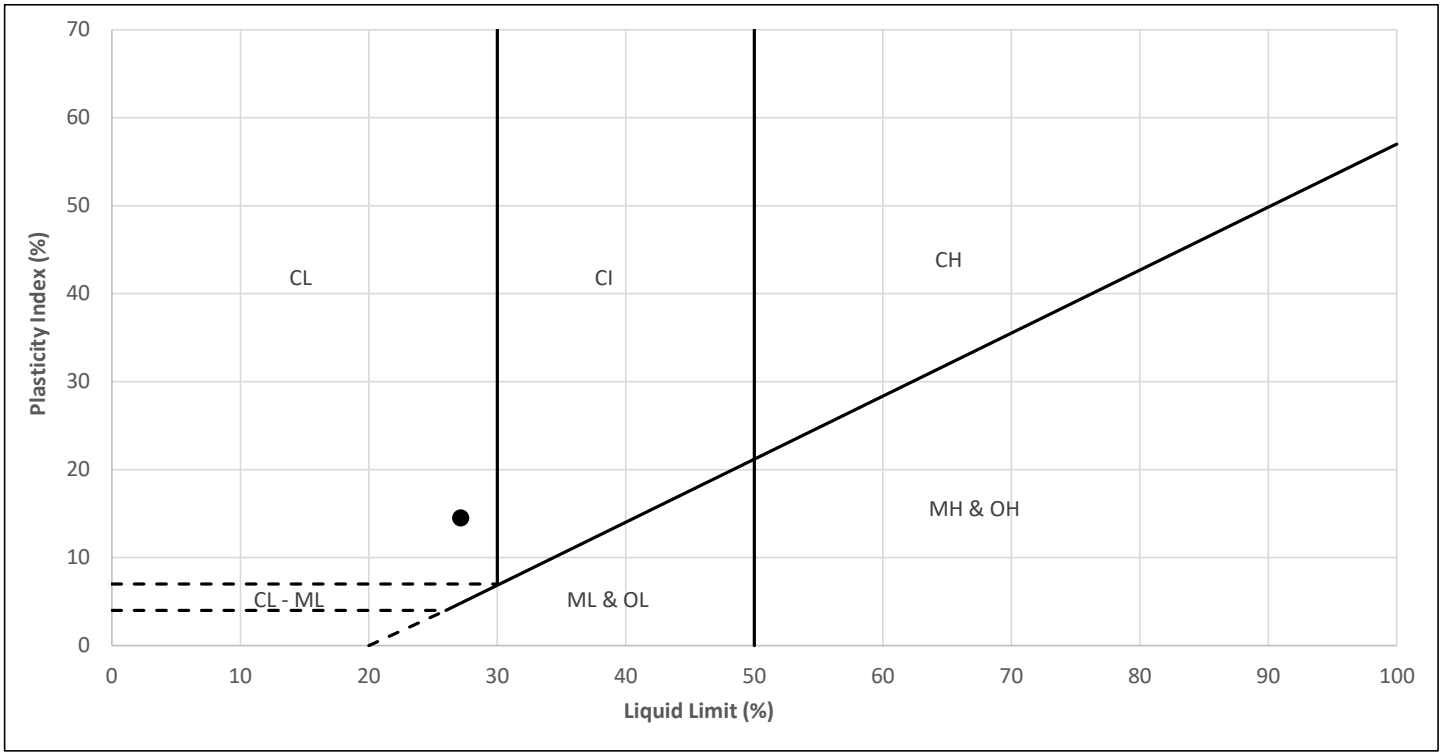
Project:	Snake Lake Reservoir Expansion	**Sample #:**	208AU6
Project No.:	1560-193-00	**Source:**	22BH208
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 208AU6	**Date:**	29-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays

Liquid Limit (LL)	27.1
Plastic Limit (PL)	12.6
Plasticity Index (PI)	14.5

Soil Plasticity	Low
Soil Classification	CL



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ATTERBERG LIMITS

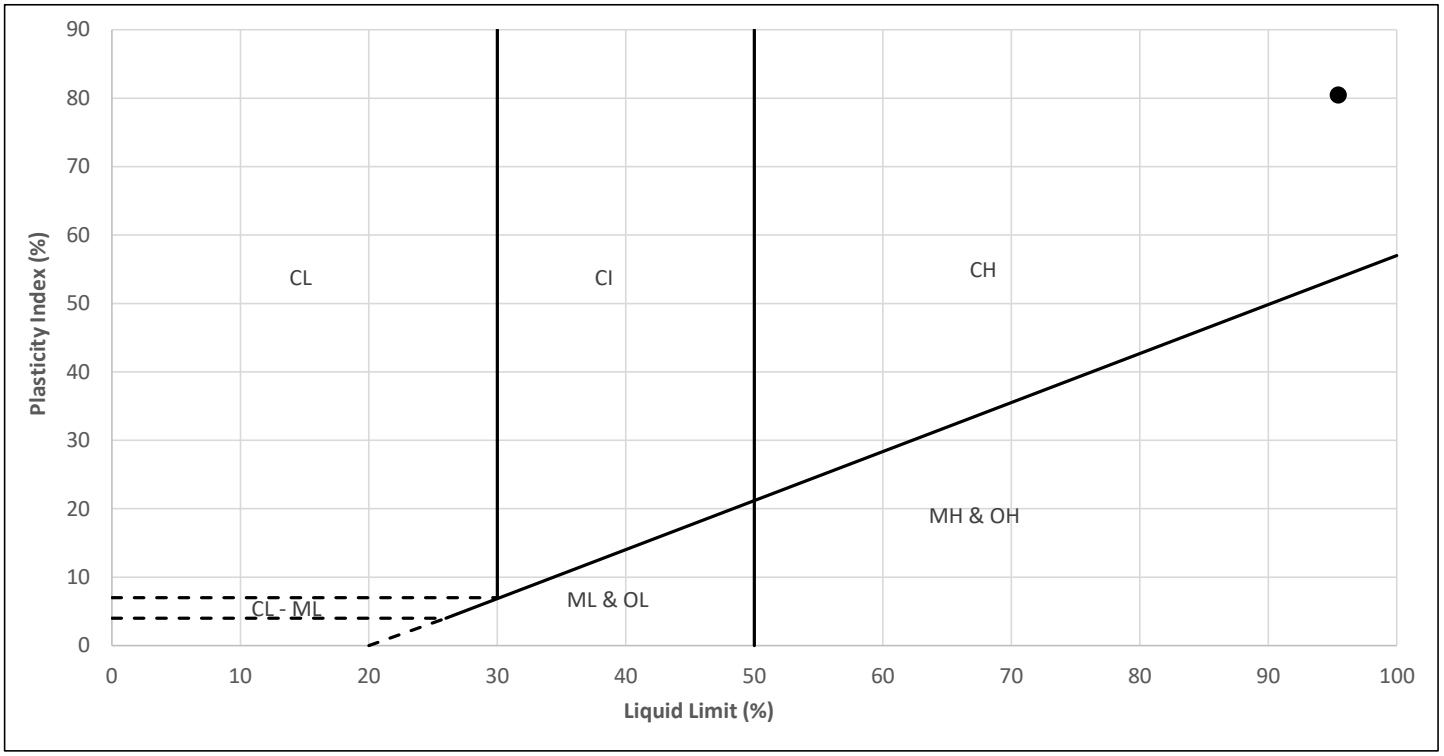
Project:	Snake Lake Reservoir Expansion	**Sample #:**	208UD2
Project No.:	1560-193-00	**Source:**	22CH208
Owner:	EID	**Sample Depth:**	12.5m
File No.:	AL - 208UD2	**Test Date:**	27-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	95.5
Plastic Limit (PL)	15.0
Plasticity Index (PI)	80.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

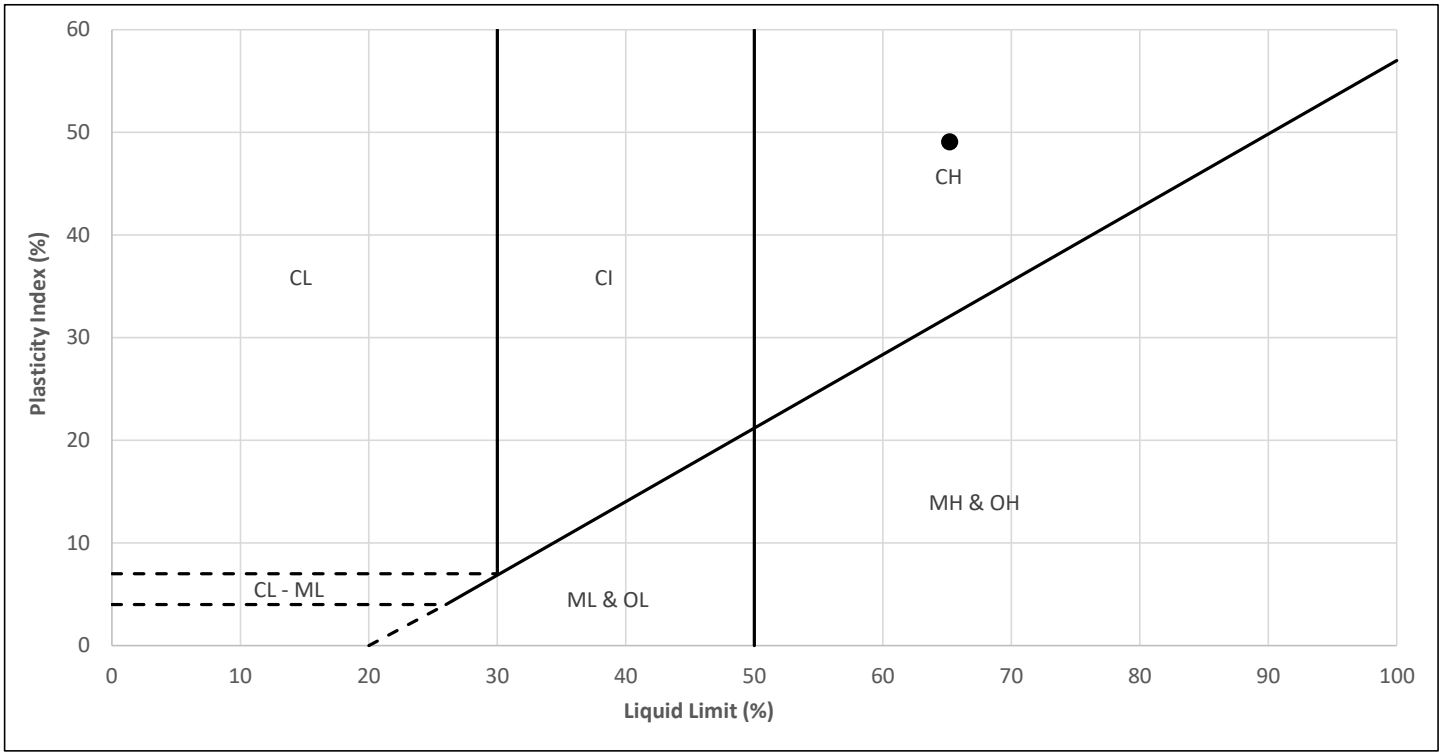
Project:	Snake Lake Reservoir Expansion	**Sample #:**	208UD5
Project No.:	1560-193-00	**Source:**	22CH208
Owner:	EID	**Sample Depth:**	25.5m
File No.:	AL - 208UD5	**Test Date:**	28-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	65.2
Plastic Limit (PL)	16.1
Plasticity Index (PI)	49.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

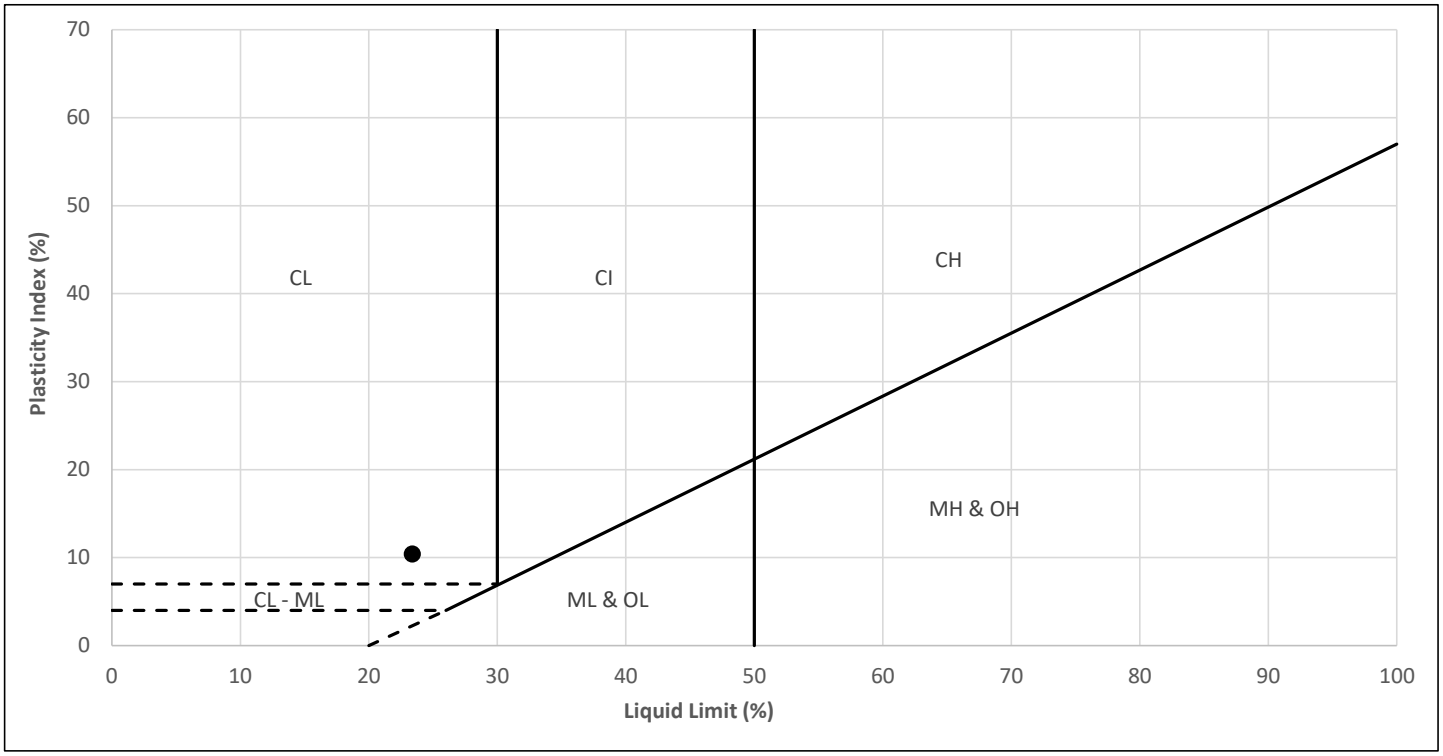
Project:	Snake Lake Reservoir Expansion	**Sample #:**	209AU2
Project No.:	1560-193-00	**Source:**	22BH209
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 209AU2	**Date:**	29-Apr-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays

Liquid Limit (LL)	23.4
Plastic Limit (PL)	13.0
Plasticity Index (PI)	10.4

Soil Plasticity	Low
Soil Classification	CL



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ATTERBERG LIMITS

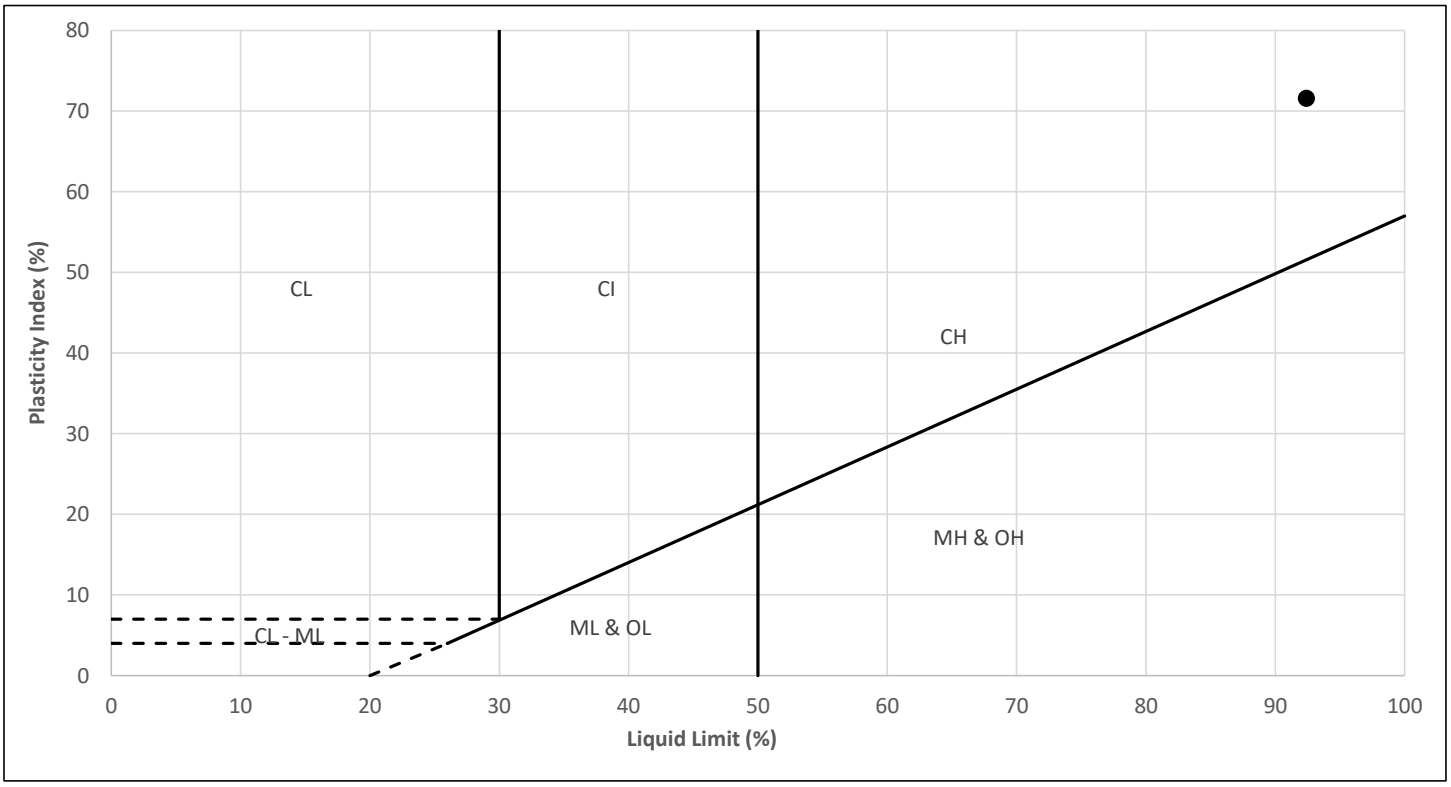
Project:	Snake Lake Reservoir Expansion	**Sample #:**	209RC2
Project No.:	1560-193-00	**Source:**	22CH209
Owner:	EID	**Sample Depth:**	6.3m
File No.:	AL - 209RC2	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	92.4
Plastic Limit (PL)	20.8
Plasticity Index (PI)	71.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

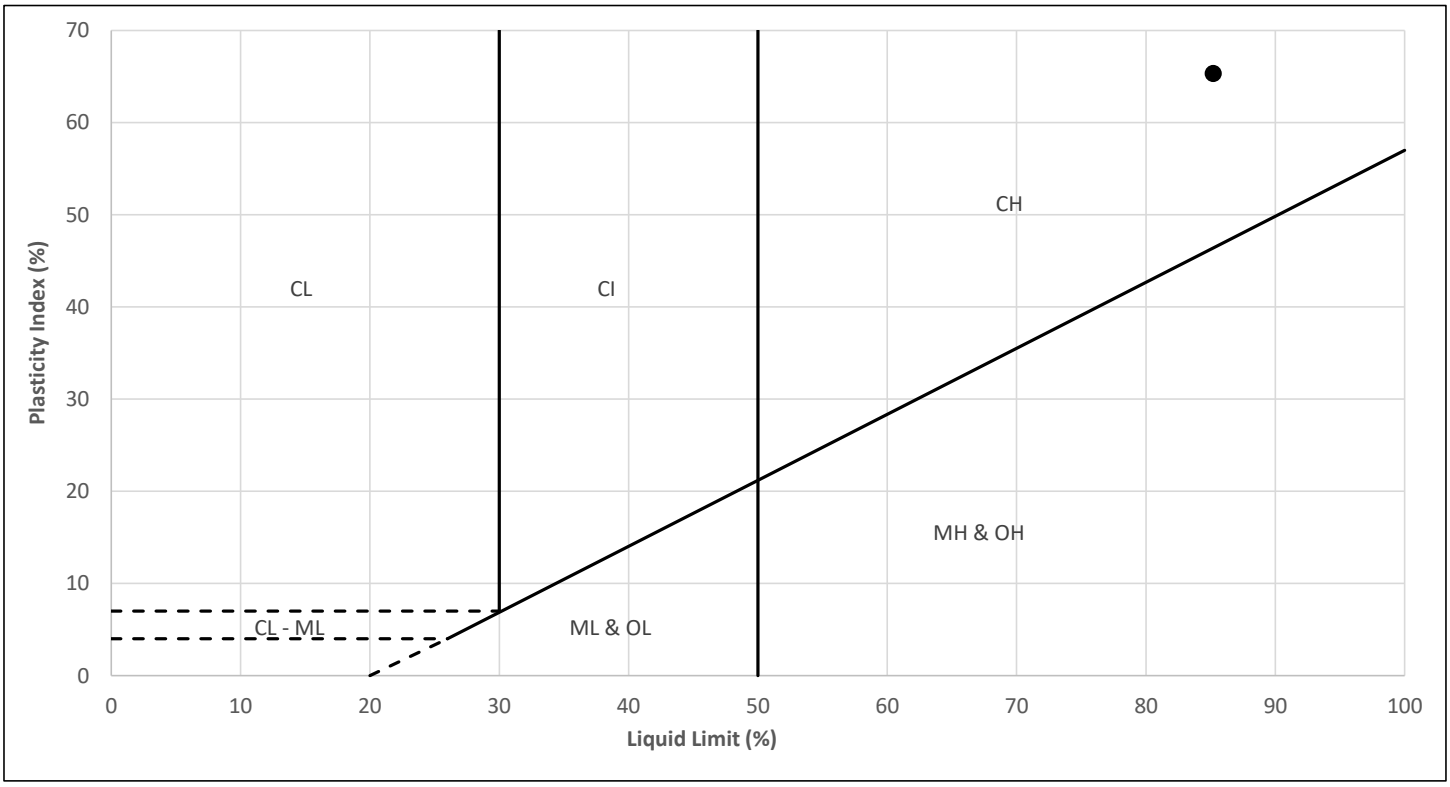
Project:	Snake Lake Reservoir Expansion	**Sample #:**	209RC11
Project No.:	1560-193-00	**Source:**	22CH209
Owner:	EID	**Sample Depth:**	20.5m
File No.:	AL - 209RC11	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	85.2
Plastic Limit (PL)	19.9
Plasticity Index (PI)	65.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

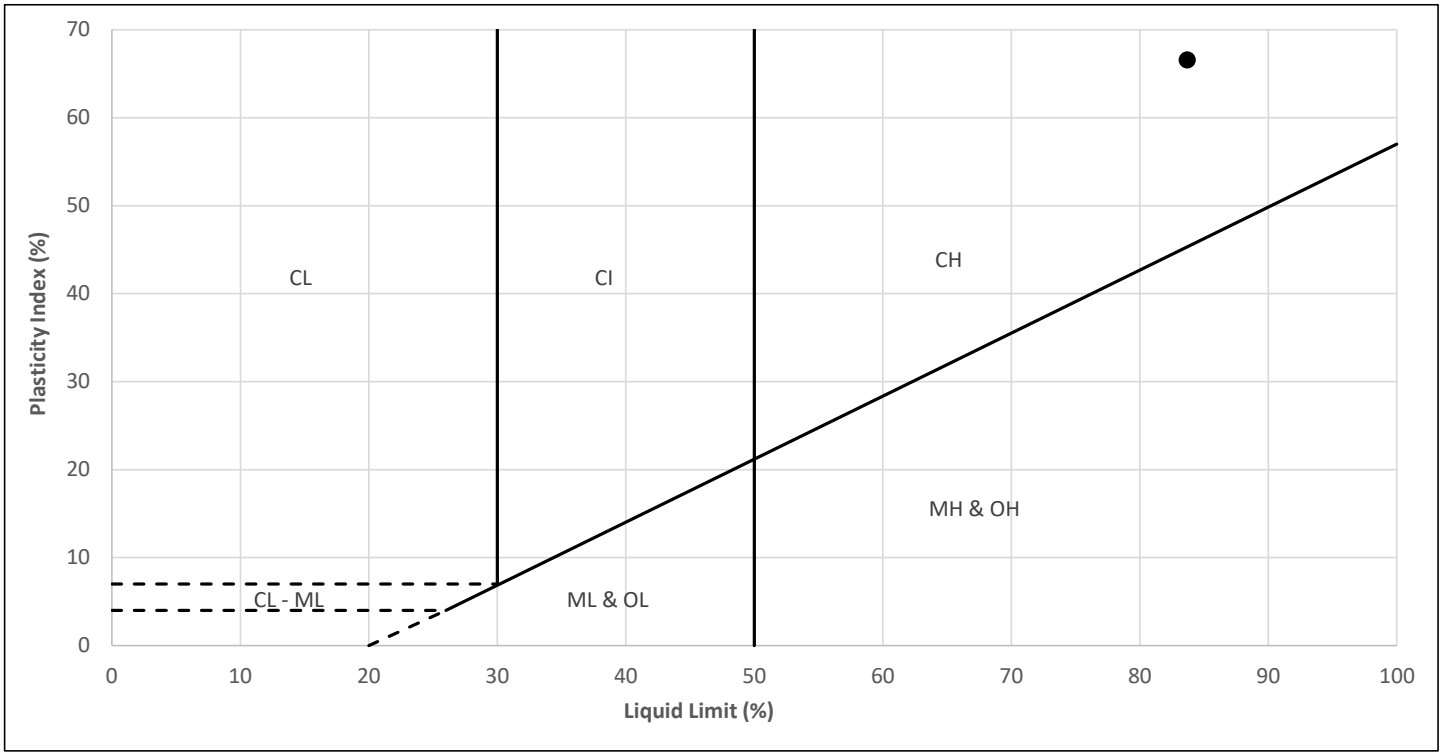
Project:	Snake Lake Reservoir Expansion	**Sample #:**	209UD2
Project No.:	1560-193-00	**Source:**	22CH209
Owner:	EID	**Sample Depth:**	11.2m
File No.:	AL - 209UD2	**Test Date:**	26-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	83.7
Plastic Limit (PL)	17.1
Plasticity Index (PI)	66.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

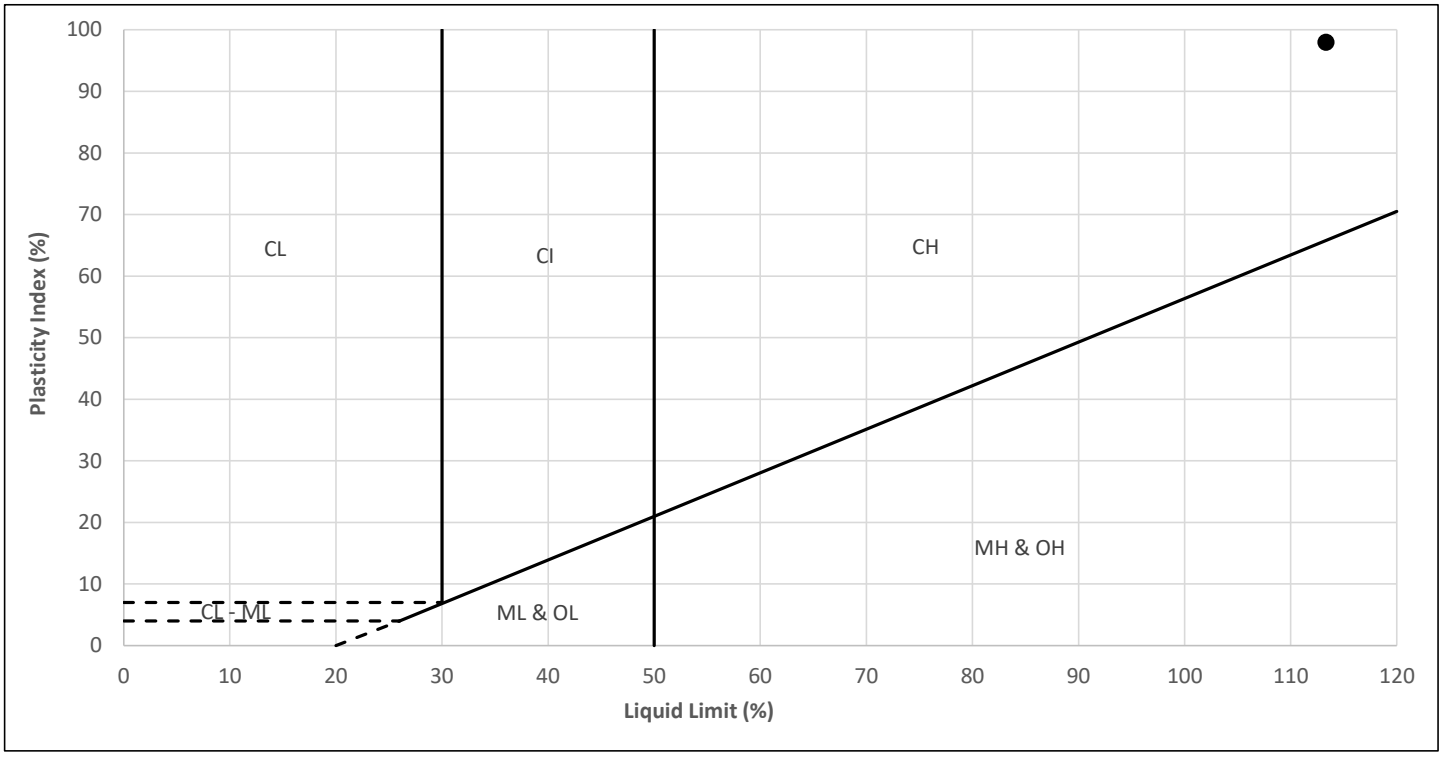
Project:	Snake Lake Reservoir Expansion	**Sample #:**	210AU4
Project No.:	1560-193-00	**Source:**	22BH210
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 210AU4	**Date:**	3-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	113.3
Plastic Limit (PL)	15.3
Plasticity Index (PI)	98.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

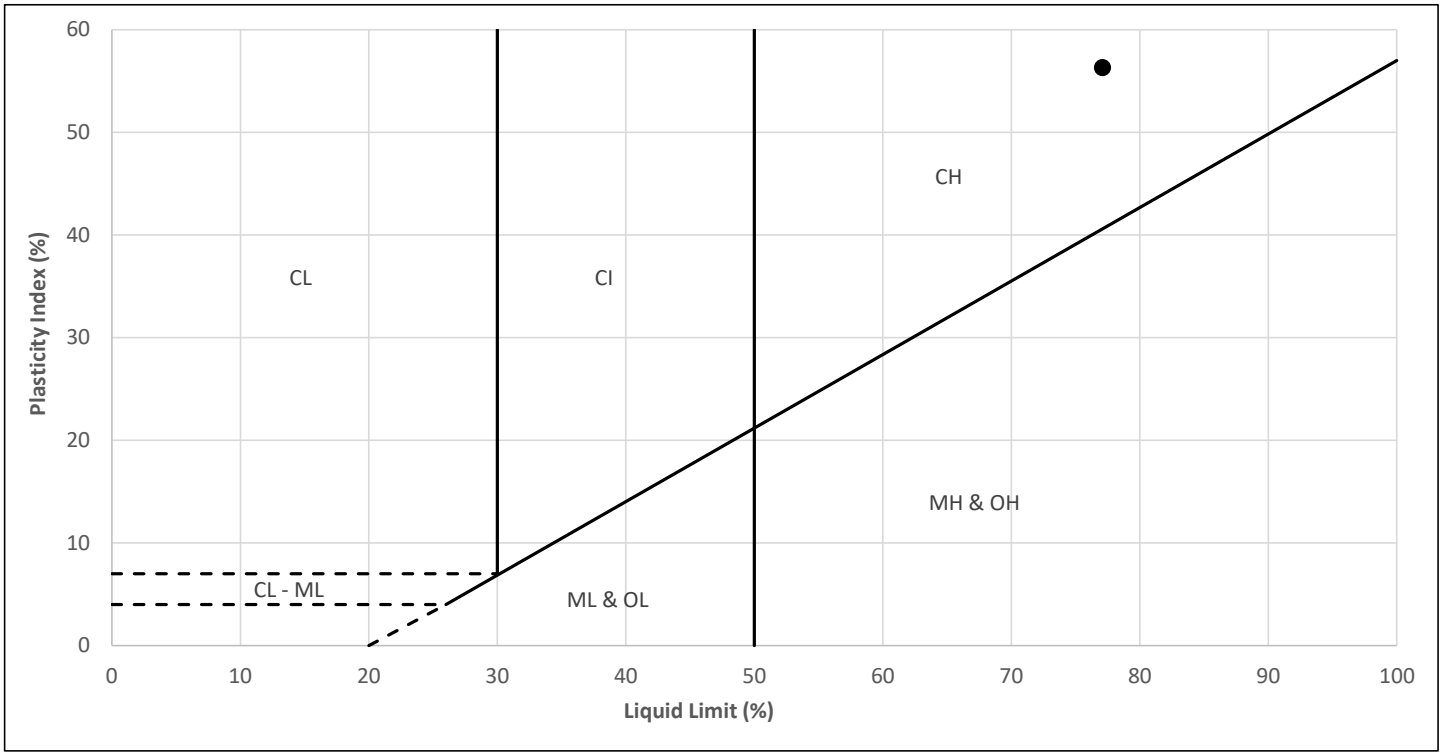
Project:	Snake Lake Reservoir Expansion	**Sample #:**	210RC2
Project No.:	1560-193-00	**Source:**	22CH210
Owner:	EID	**Sample Depth:**	4.6m
File No.:	AL - 210RC2	**Test Date:**	2-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	77.1
Plastic Limit (PL)	20.8
Plasticity Index (PI)	56.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

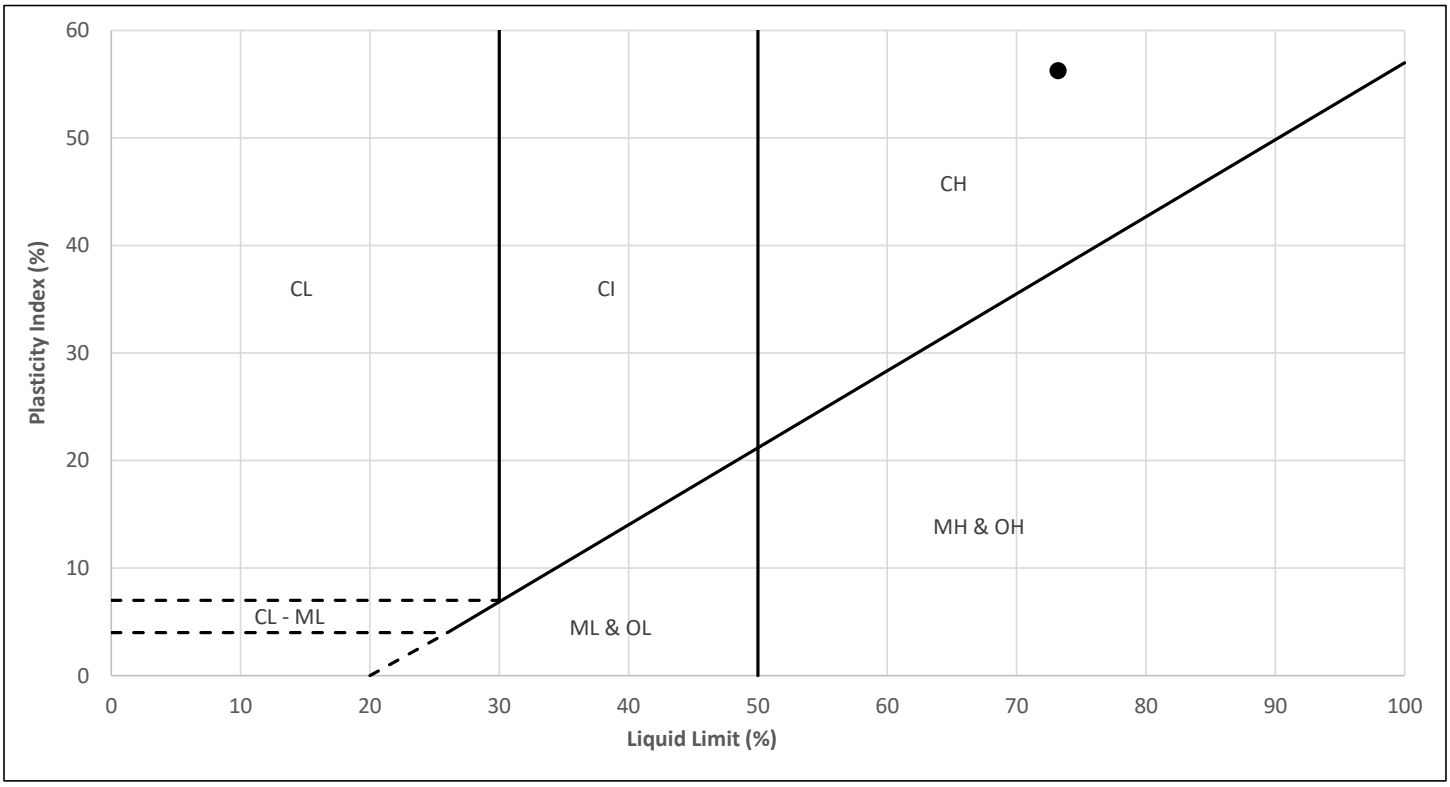
Project:	Snake Lake Reservoir Expansion	**Sample #:**	210RC13
Project No.:	1560-193-00	**Source:**	22CH210
Owner:	EID	**Sample Depth:**	21.5m
File No.:	AL - 210RC13	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	73.2
Plastic Limit (PL)	16.9
Plasticity Index (PI)	56.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

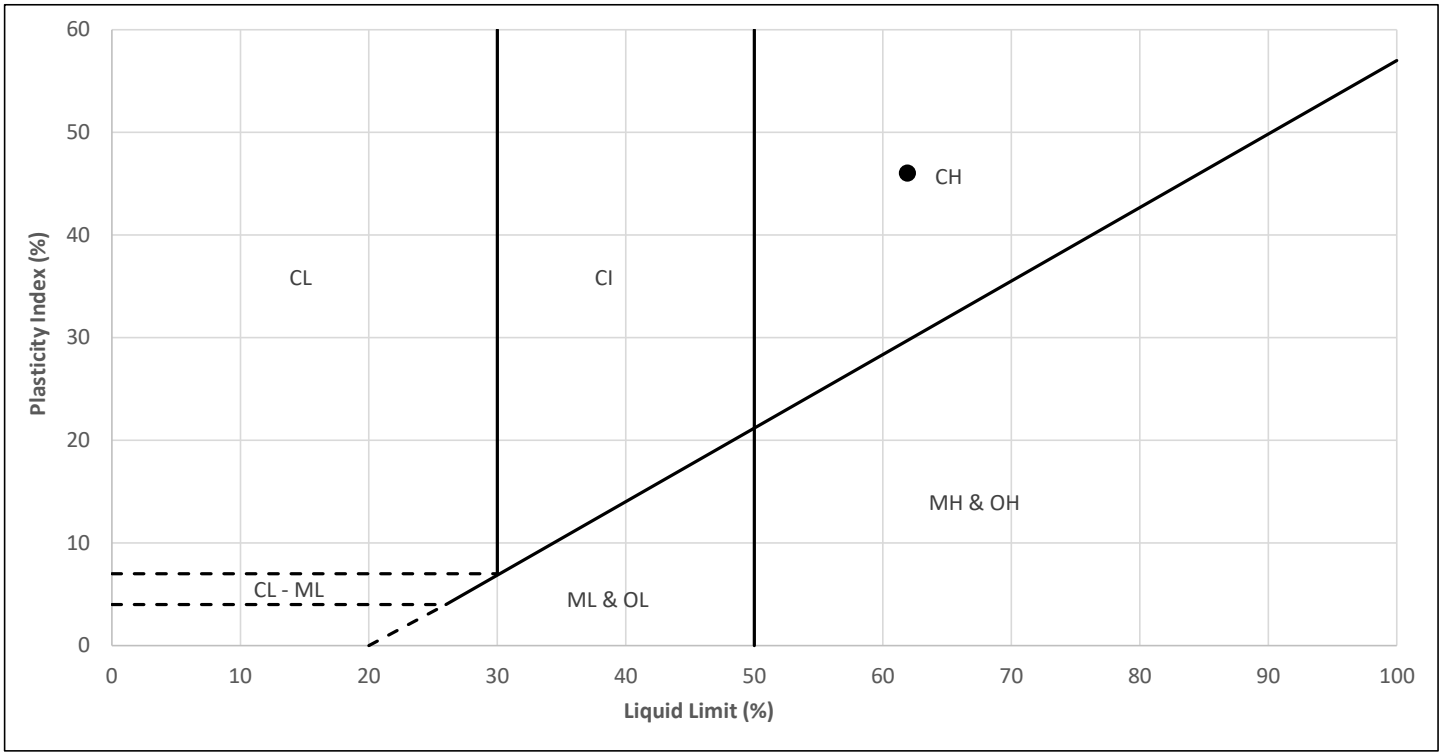
Project:	Snake Lake Reservoir Expansion	**Sample #:**	210RC15
Project No.:	1560-193-00	**Source:**	22CH210
Owner:	EID	**Sample Depth:**	25.7m
File No.:	AL - 210RC15	**Test Date:**	26-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	61.9
Plastic Limit (PL)	15.9
Plasticity Index (PI)	46.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

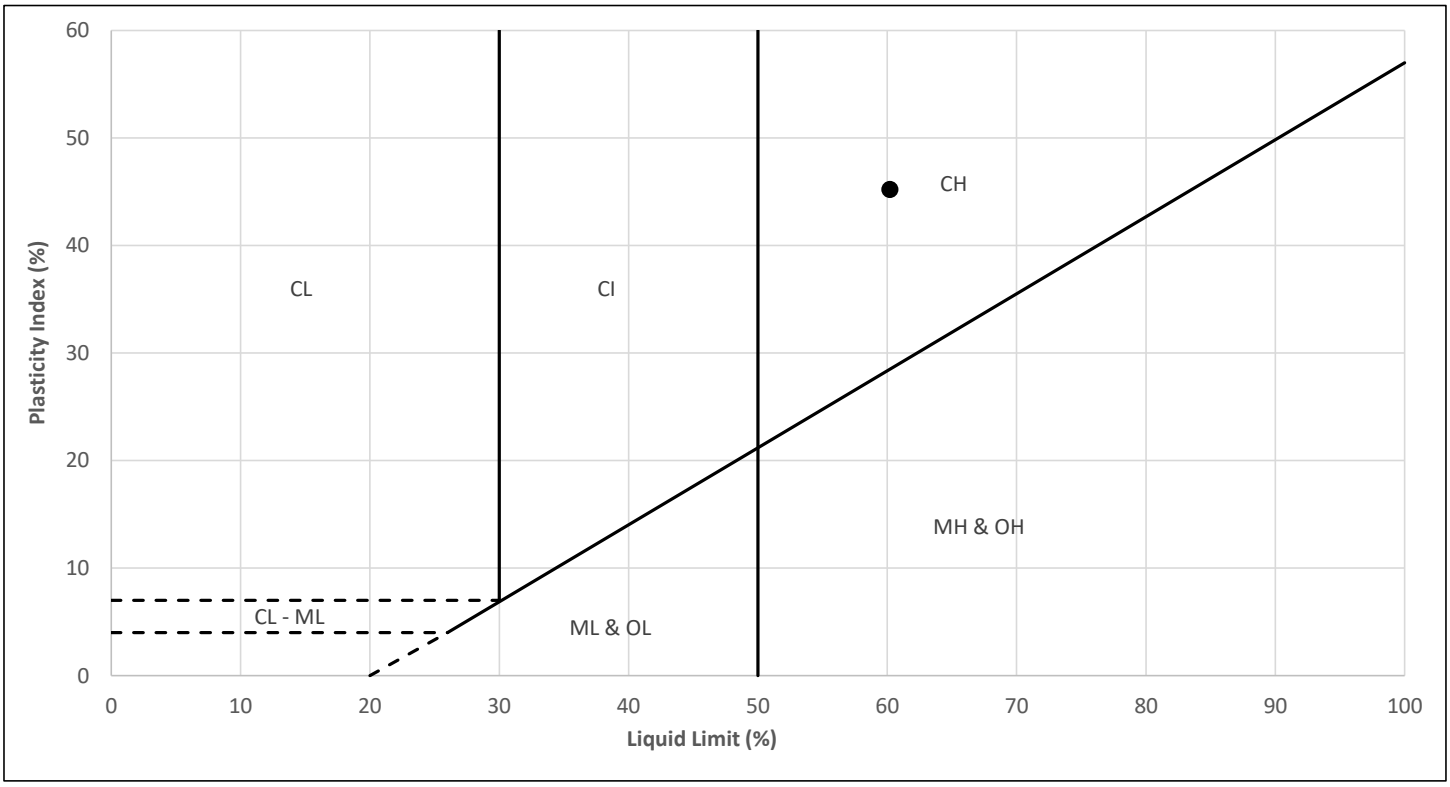
Project:	Snake Lake Reservoir Expansion	**Sample #:**	210RC19
Project No.:	1560-193-00	**Source:**	22CH210
Owner:	EID	**Sample Depth:**	31.0m
File No.:	AL - 210RC19	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	60.2
Plastic Limit (PL)	15.0
Plasticity Index (PI)	45.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

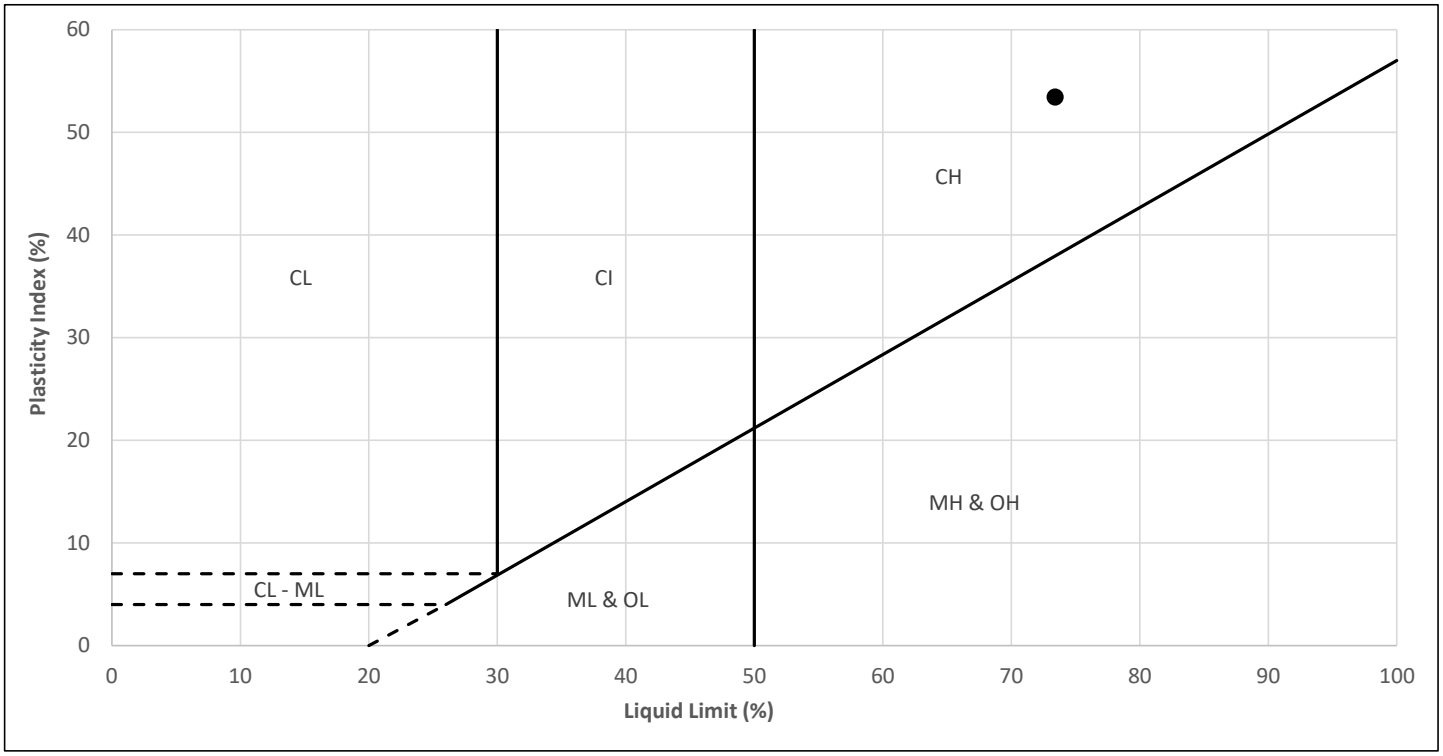
Project:	Snake Lake Reservoir Expansion	**Sample #:**	211AU3
Project No.:	1560-193-00	**Source:**	22BH211
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 211AU3	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	73.4
Plastic Limit (PL)	19.9
Plasticity Index (PI)	53.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

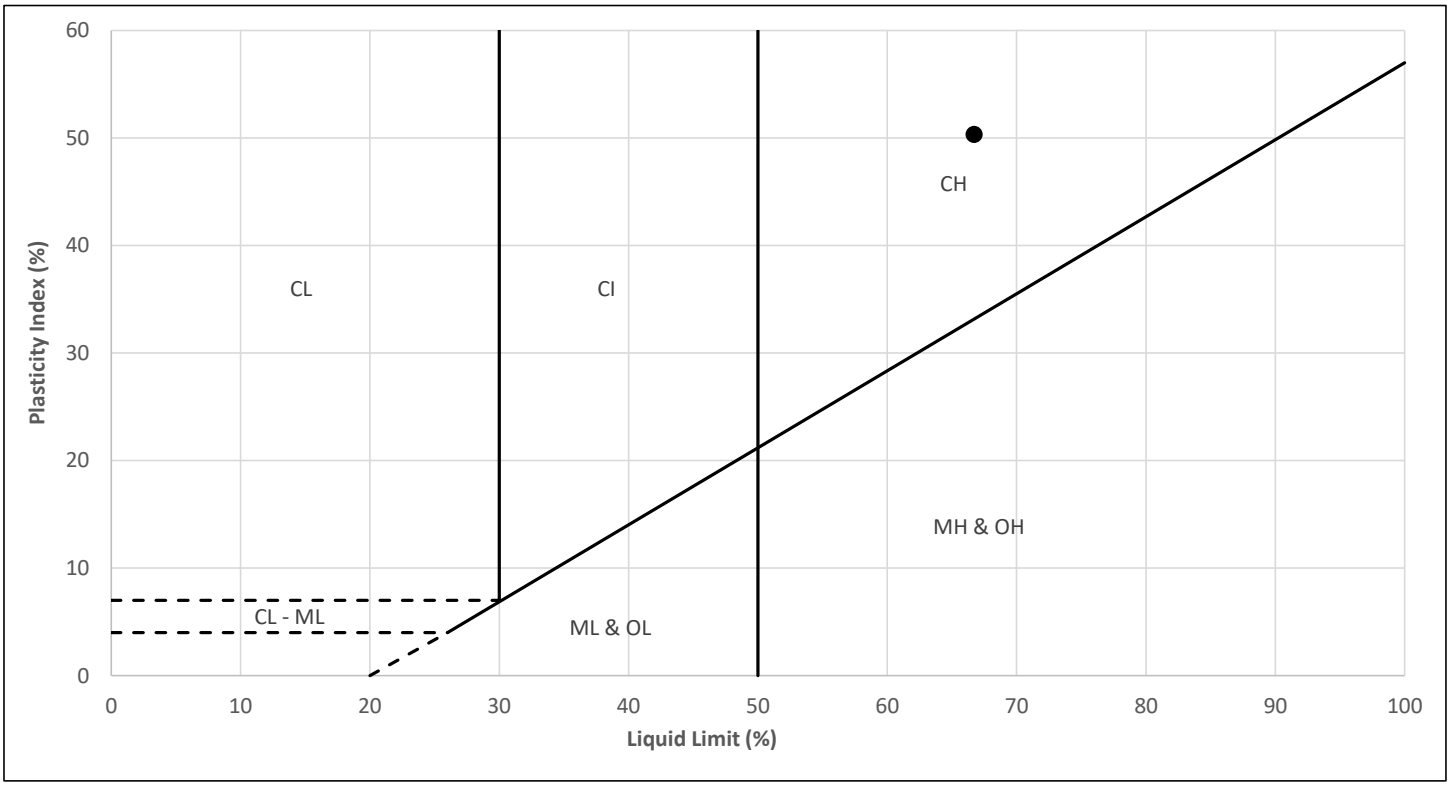
Project:	Snake Lake Reservoir Expansion	**Sample #:**	211RC4
Project No.:	1560-193-00	**Source:**	22CH211
Owner:	EID	**Sample Depth:**	7.6m
File No.:	AL - 211RC4	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	66.7
Plastic Limit (PL)	16.4
Plasticity Index (PI)	50.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

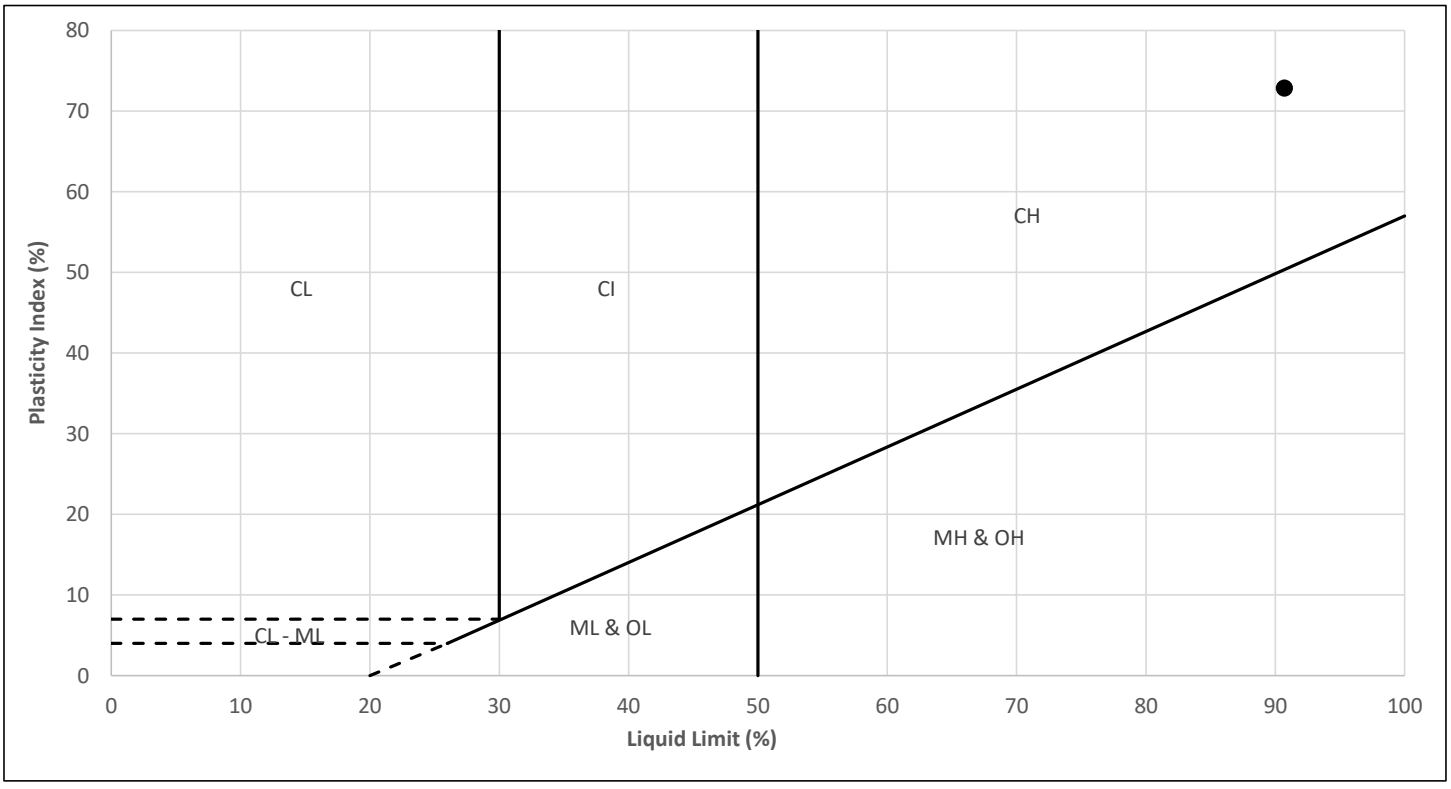
Project:	Snake Lake Reservoir Expansion	**Sample #:**	211RC10
Project No.:	1560-193-00	**Source:**	22CH211
Owner:	EID	**Sample Depth:**	17.4m
File No.:	AL - 211RC10	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	90.7
Plastic Limit (PL)	17.8
Plasticity Index (PI)	72.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

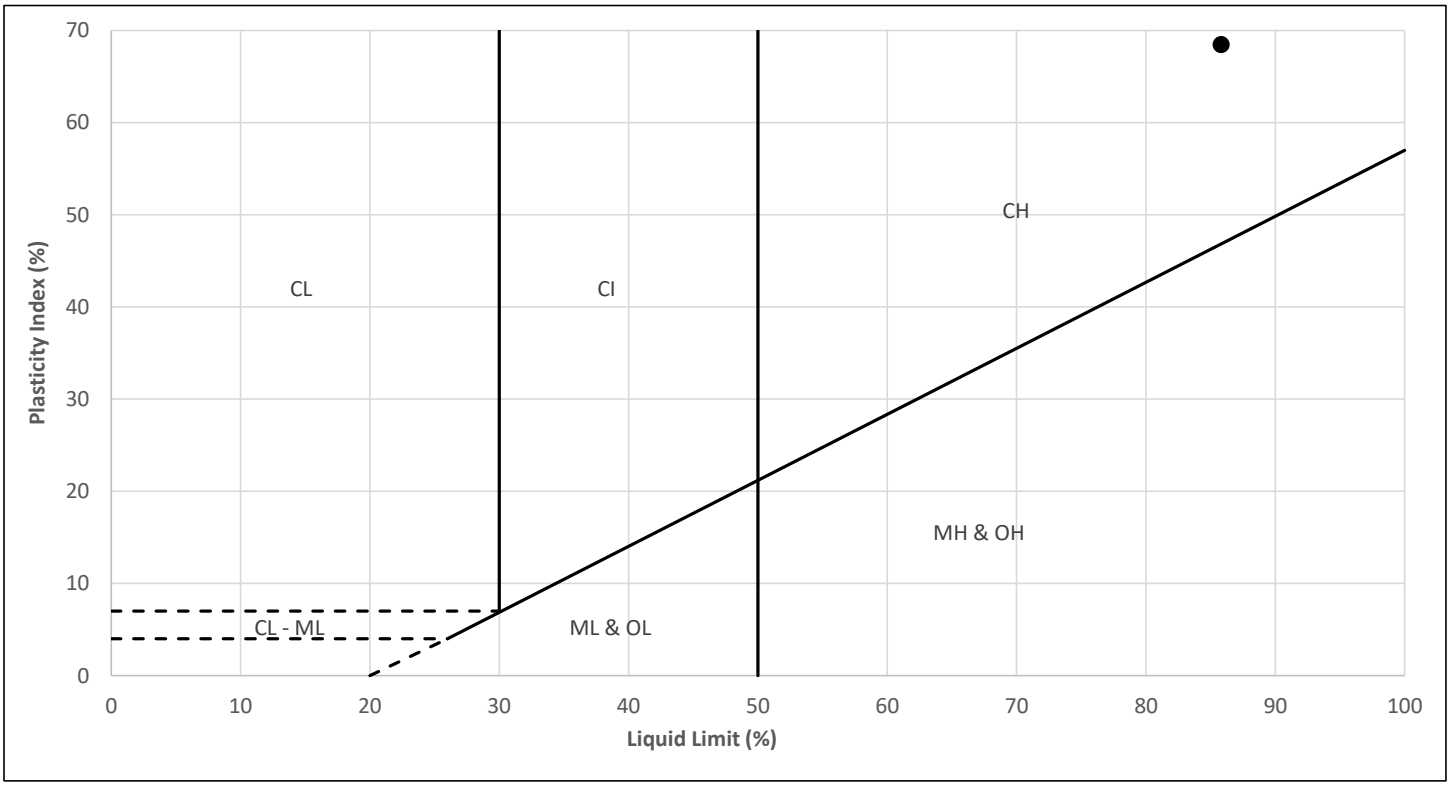
Project:	Snake Lake Reservoir Expansion	**Sample #:**	211RC12
Project No.:	1560-193-00	**Source:**	22CH211
Owner:	EID	**Sample Depth:**	20.8m
File No.:	AL - 211RC12	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	85.8
Plastic Limit (PL)	17.3
Plasticity Index (PI)	68.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

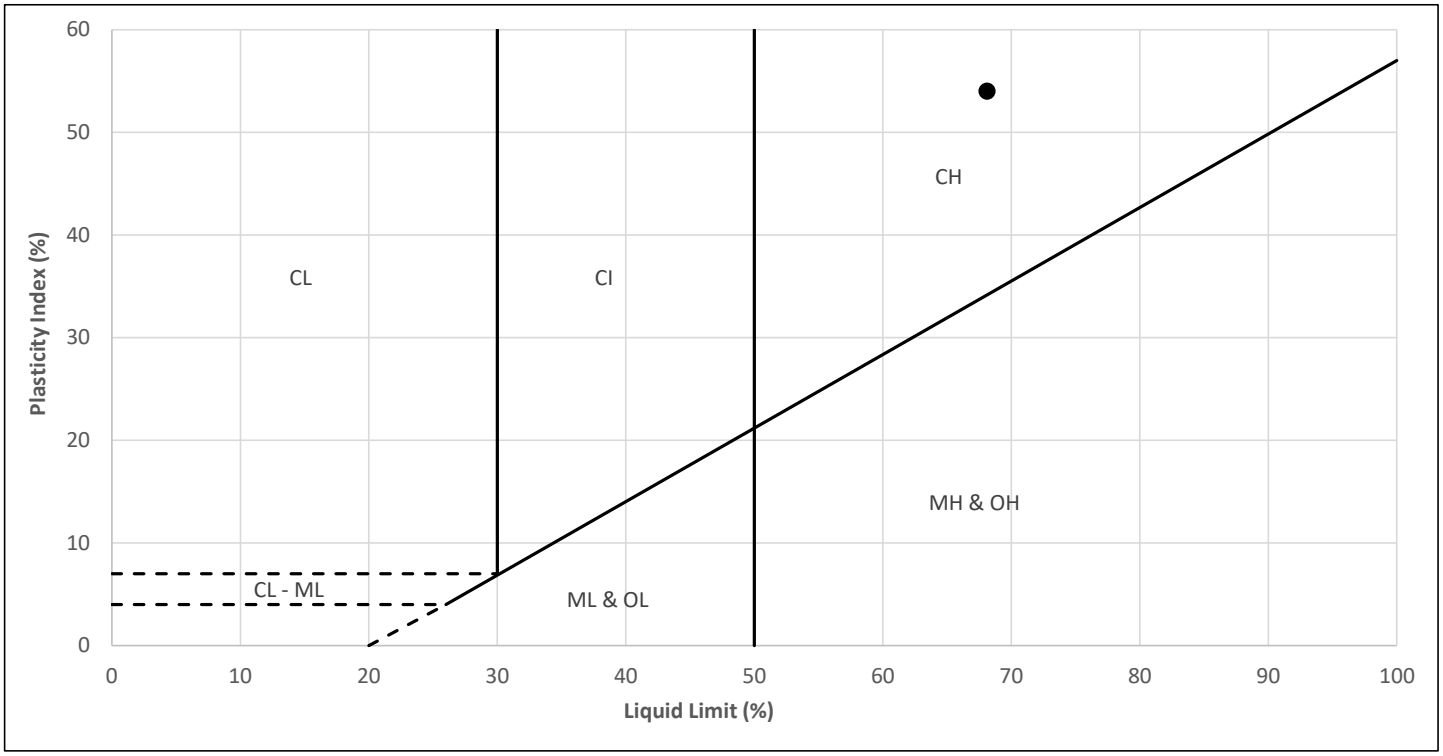
Project:	Snake Lake Reservoir Expansion	**Sample #:**	211UD7
Project No.:	1560-193-00	**Source:**	22CH211
Owner:	EID	**Sample Depth:**	27.7m
File No.:	AL - 211UD7	**Test Date:**	26-Jul-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	68.1
Plastic Limit (PL)	14.1
Plasticity Index (PI)	54.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

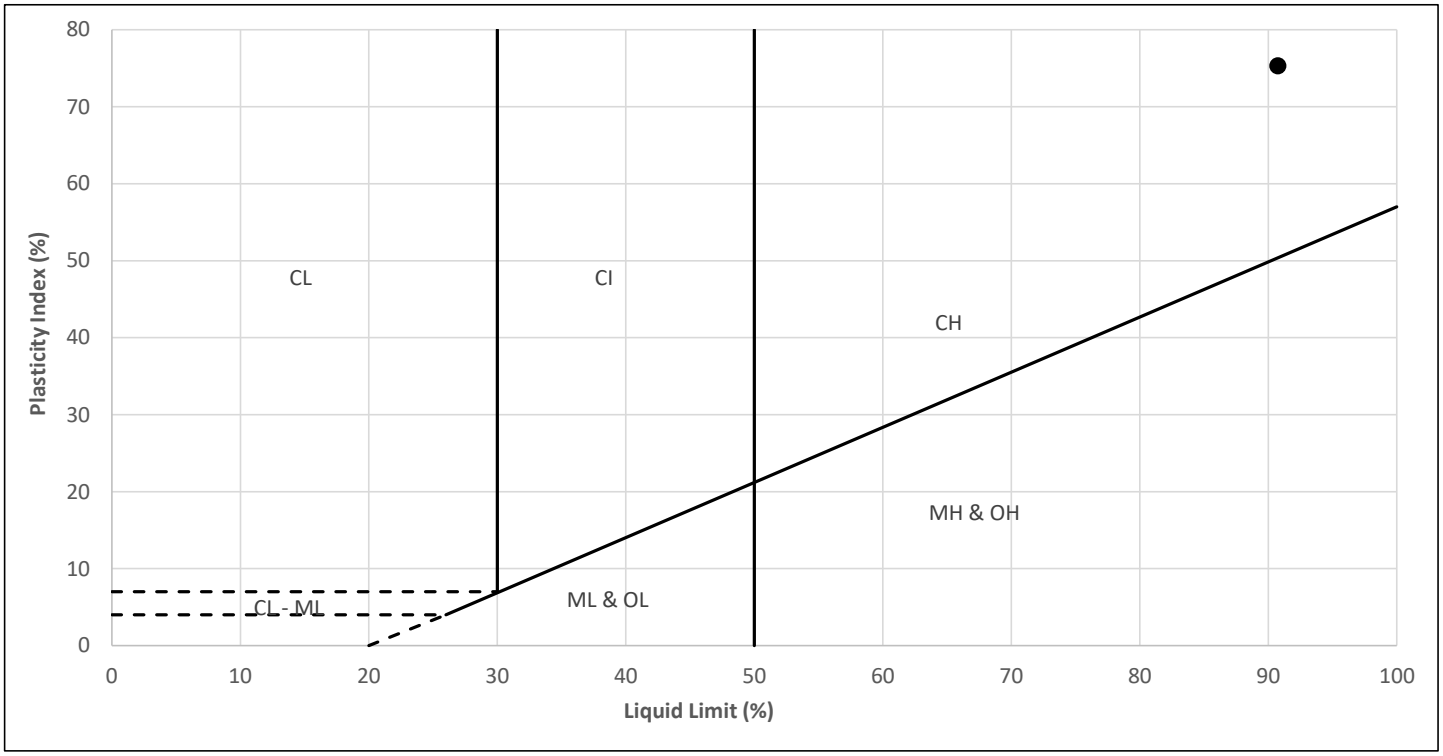
Project:	Snake Lake Reservoir Expansion	**Sample #:**	212AU6
Project No.:	1560-193-00	**Source:**	22BH212
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 212AU6	**Date:**	3-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	90.7
Plastic Limit (PL)	15.4
Plasticity Index (PI)	75.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

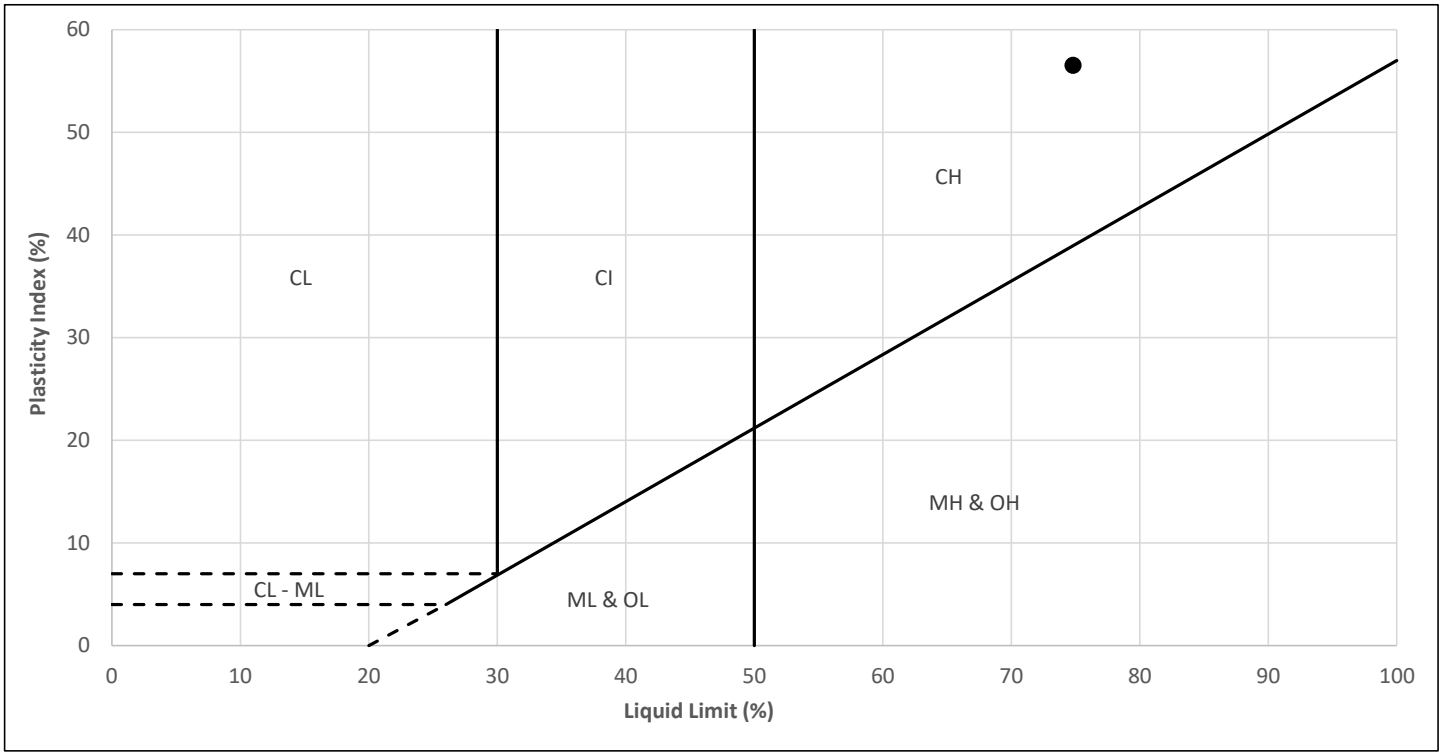
Project:	Snake Lake Reservoir Expansion	**Sample #:**	212RC1
Project No.:	1560-193-00	**Source:**	22CH212
Owner:	EID	**Sample Depth:**	4.8m
File No.:	AL - 212RC1	**Test Date:**	18-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	74.8
Plastic Limit (PL)	18.2
Plasticity Index (PI)	56.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

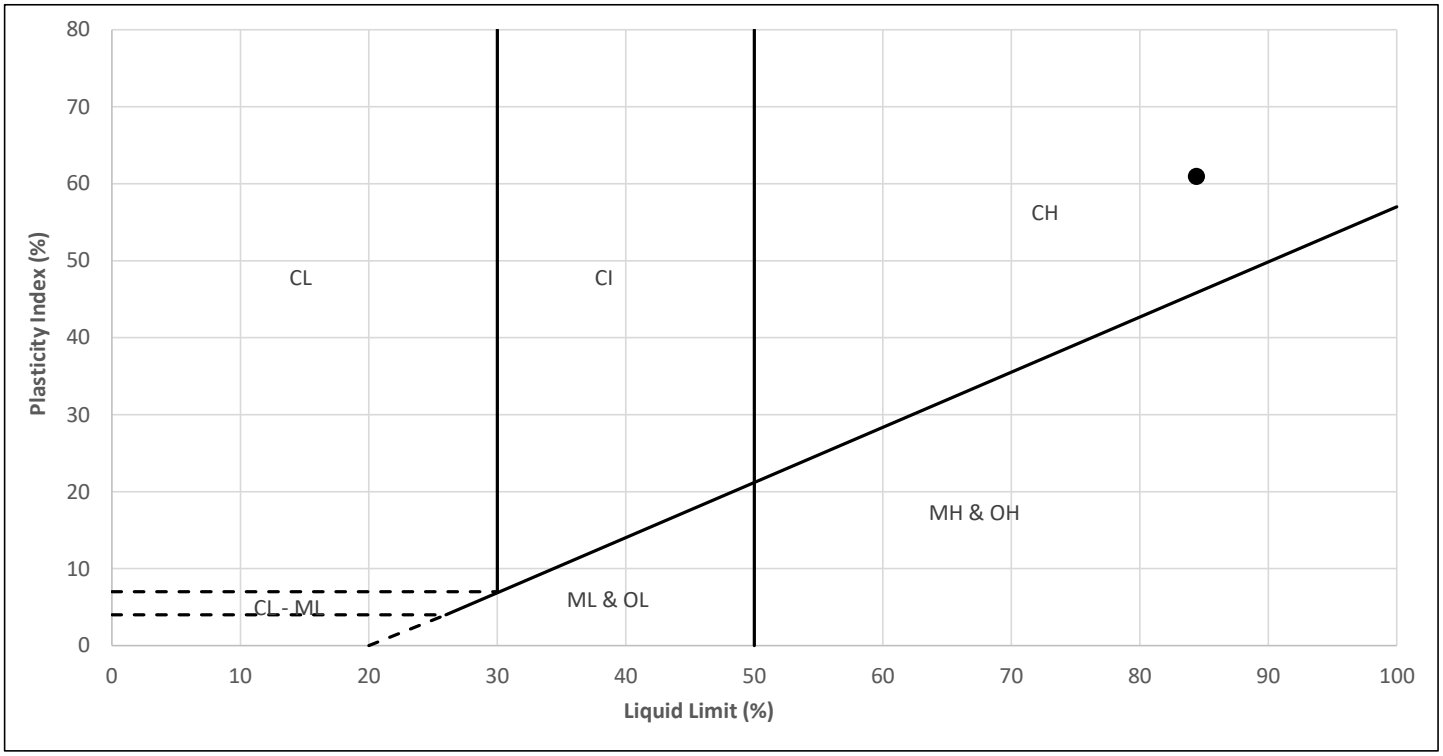
Project:	Snake Lake Reservoir Expansion	**Sample #:**	212RC2
Project No.:	1560-193-00	**Source:**	22CH212
Owner:	EID	**Sample Depth:**	7.9m
File No.:	AL - 212RC2	**Test Date:**	15-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	84.4
Plastic Limit (PL)	23.4
Plasticity Index (PI)	61.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

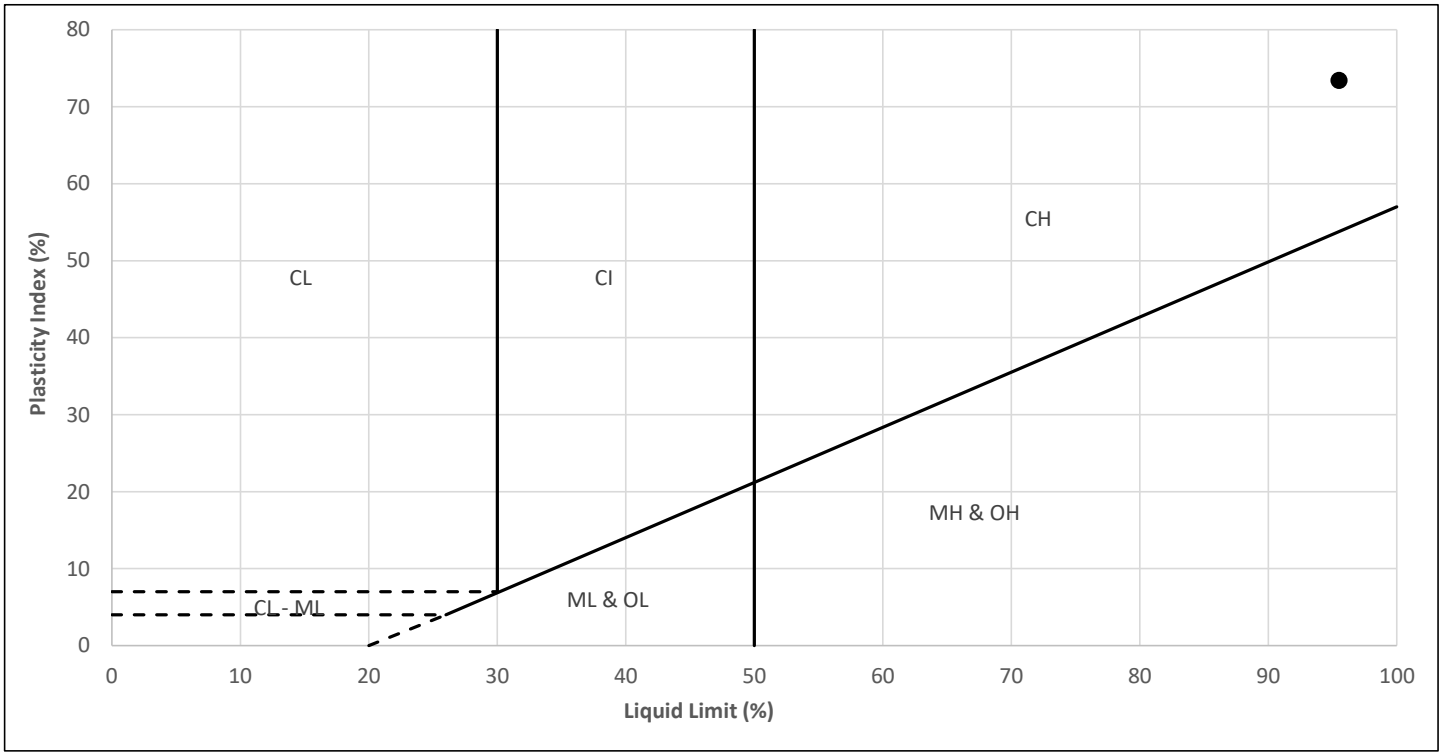
Project:	Snake Lake Reservoir Expansion	**Sample #:**	212RC5
Project No.:	1560-193-00	**Source:**	22CH212
Owner:	EID	**Sample Depth:**	11.1m
File No.:	AL - 212RC5	**Test Date:**	14-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	95.5
Plastic Limit (PL)	22.1
Plasticity Index (PI)	73.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

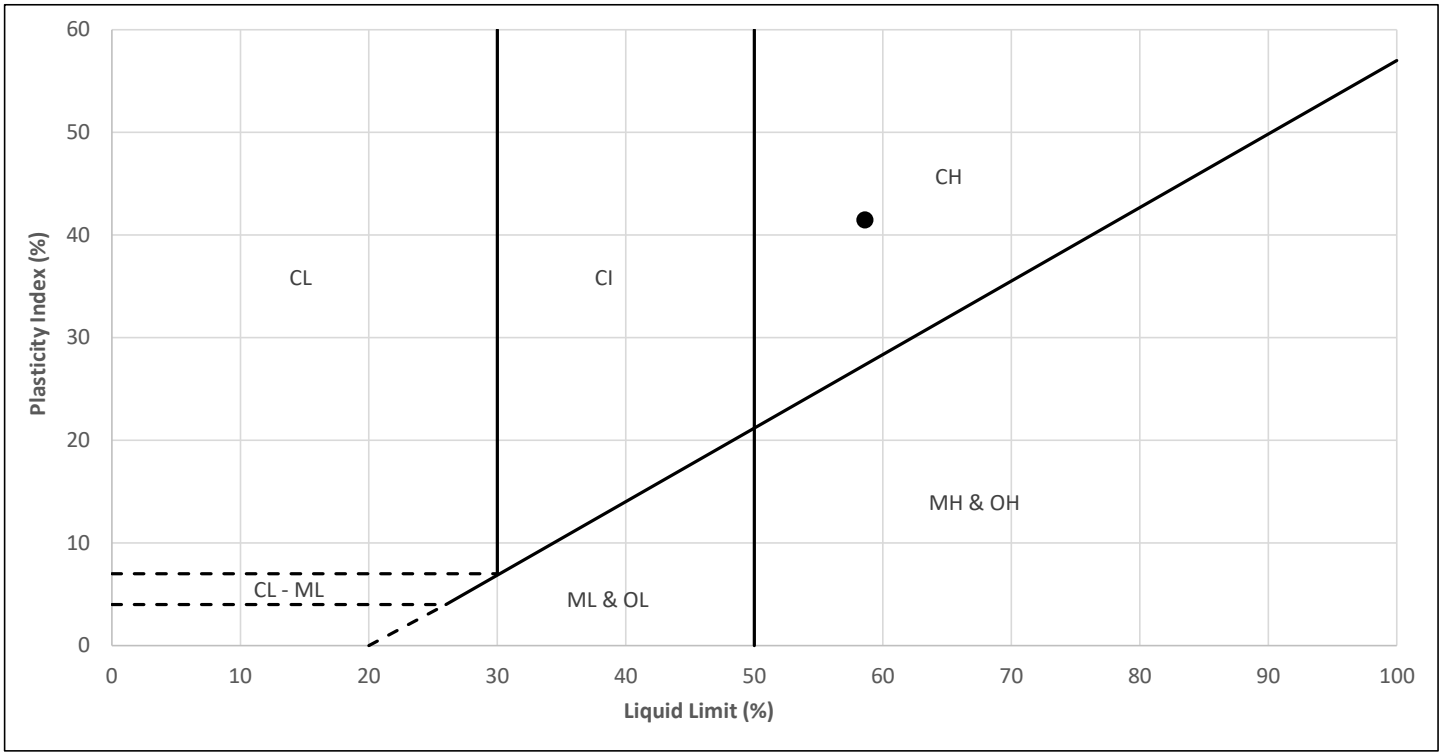
Project:	Snake Lake Reservoir Expansion	**Sample #:**	212RC16
Project No.:	1560-193-00	**Source:**	22CH212
Owner:	EID	**Sample Depth:**	28.6m
File No.:	AL - 212RC16	**Test Date:**	19-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	58.6
Plastic Limit (PL)	17.1
Plasticity Index (PI)	41.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

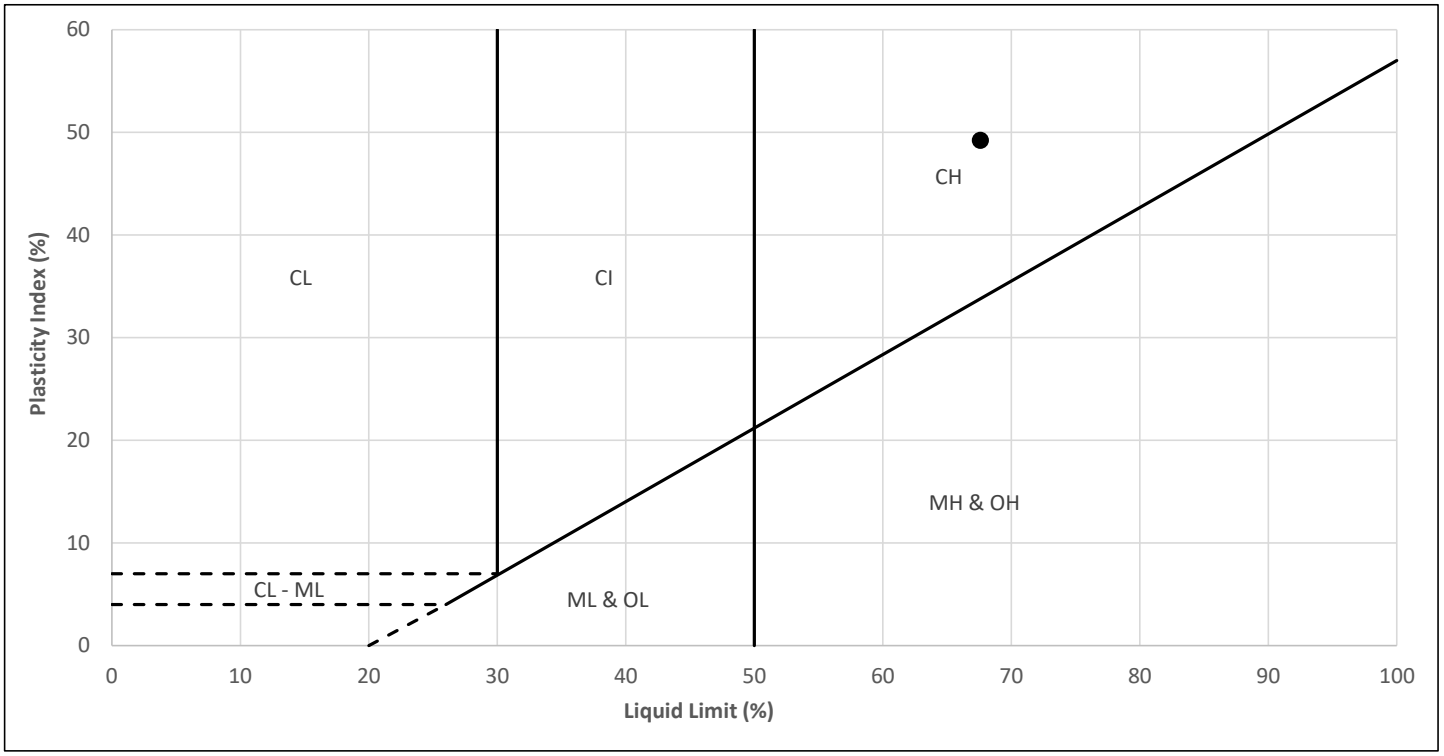
Project:	Snake Lake Reservoir Expansion	**Sample #:**	212RC18
Project No.:	1560-193-00	**Source:**	22CH212
Owner:	EID	**Sample Depth:**	32.0m
File No.:	AL - 212RC18	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	67.6
Plastic Limit (PL)	18.4
Plasticity Index (PI)	49.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

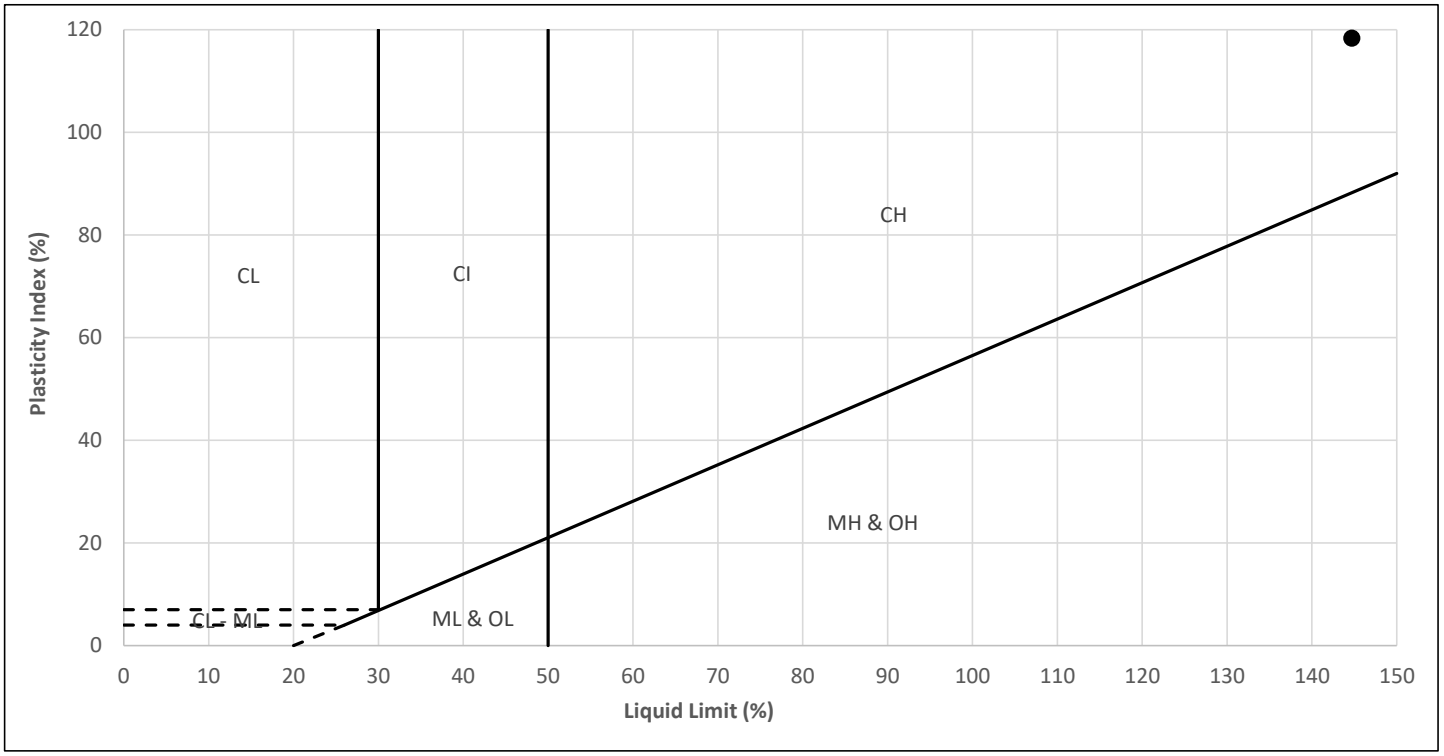
Project:	Snake Lake Reservoir Expansion	**Sample #:**	212RC23
Project No.:	1560-193-00	**Source:**	22CH212
Owner:	EID	**Sample Depth:**	38.5m
File No.:	AL - 212RC23	**Test Date:**	13-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	144.7
Plastic Limit (PL)	26.3
Plasticity Index (PI)	118.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

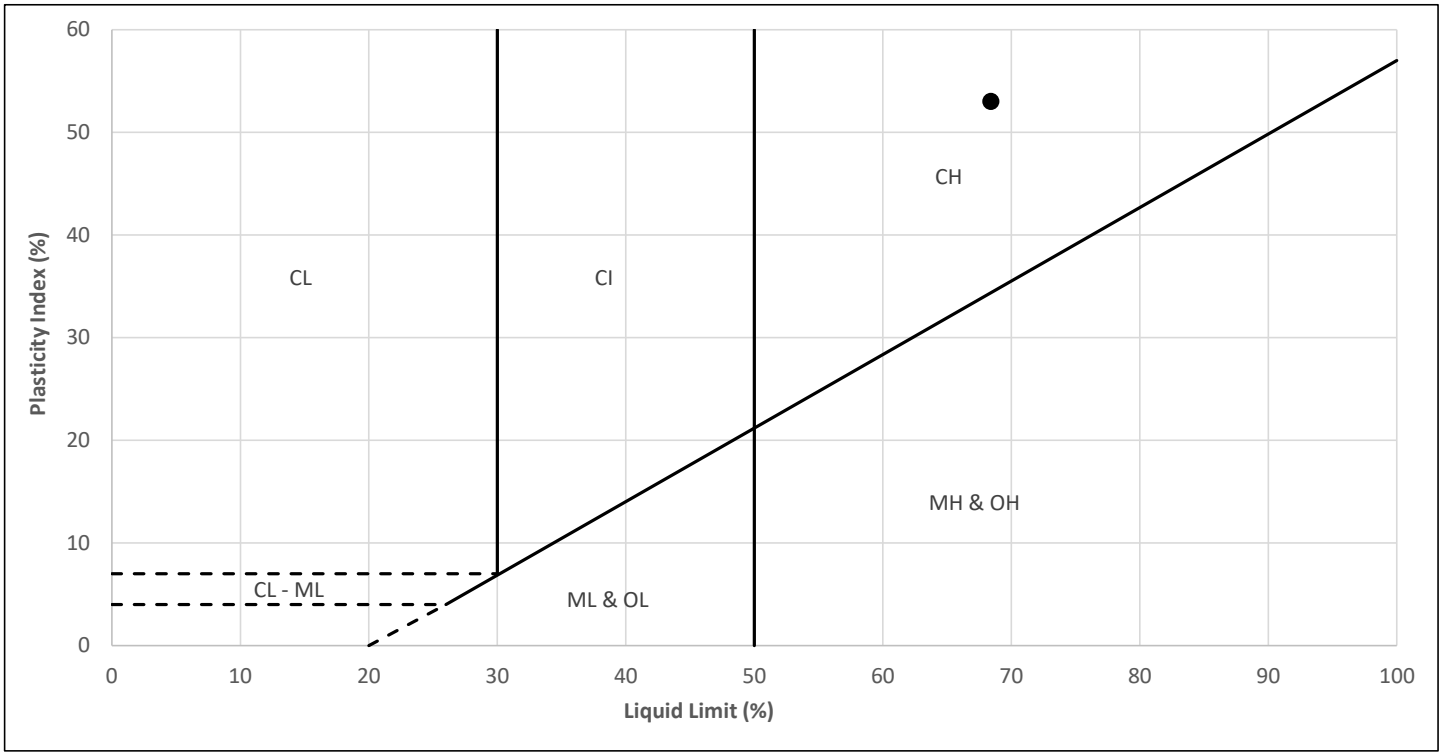
Project:	Snake Lake Reservoir Expansion	**Sample #:**	213AU4
Project No.:	1560-193-00	**Source:**	22BH213
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 213AU4	**Test Date:**	9-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	68.4
Plastic Limit (PL)	15.4
Plasticity Index (PI)	53.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

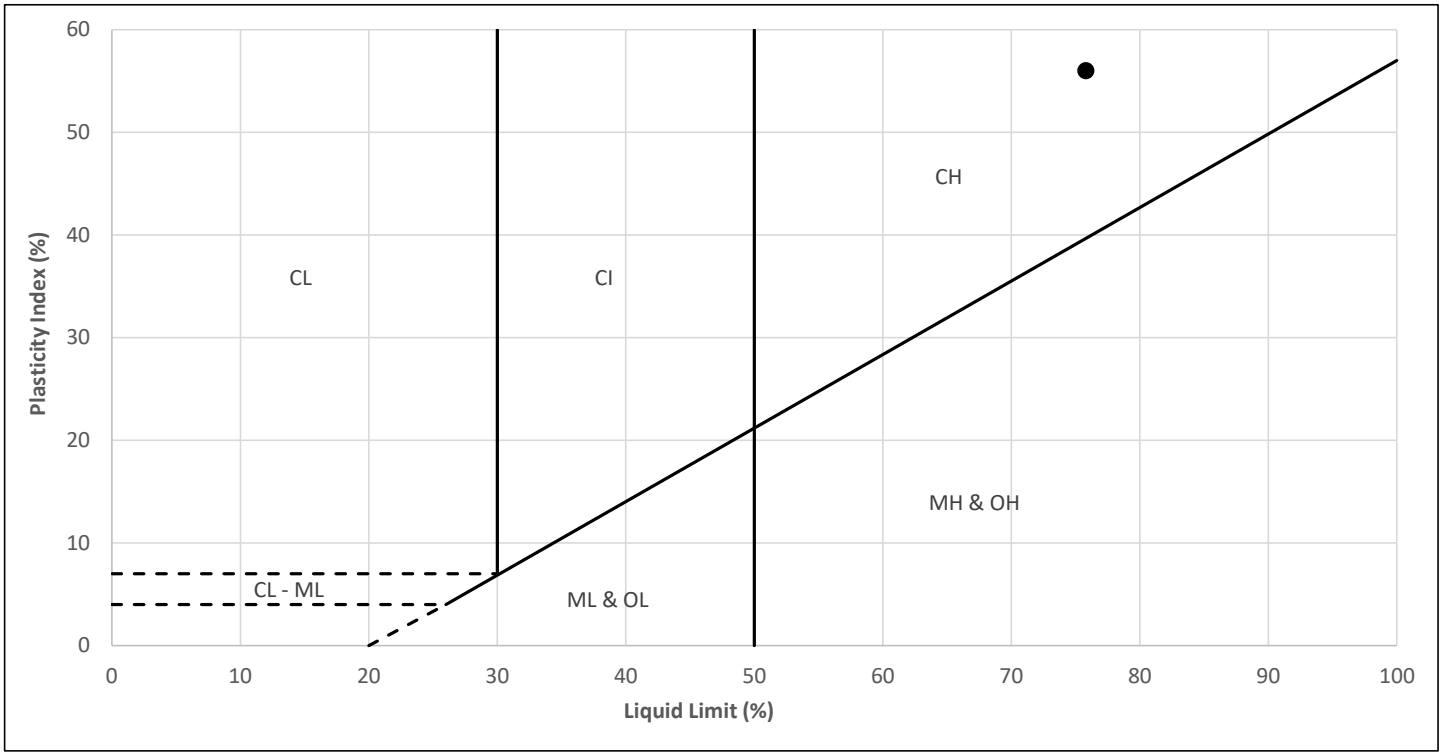
Project:	Snake Lake Reservoir Expansion	**Sample #:**	213UD1
Project No.:	1560-193-00	**Source:**	22CH213
Owner:	EID	**Sample Depth:**	5.0m
File No.:	AL - 213UD1	**Test Date:**	6-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	75.8
Plastic Limit (PL)	19.8
Plasticity Index (PI)	56.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

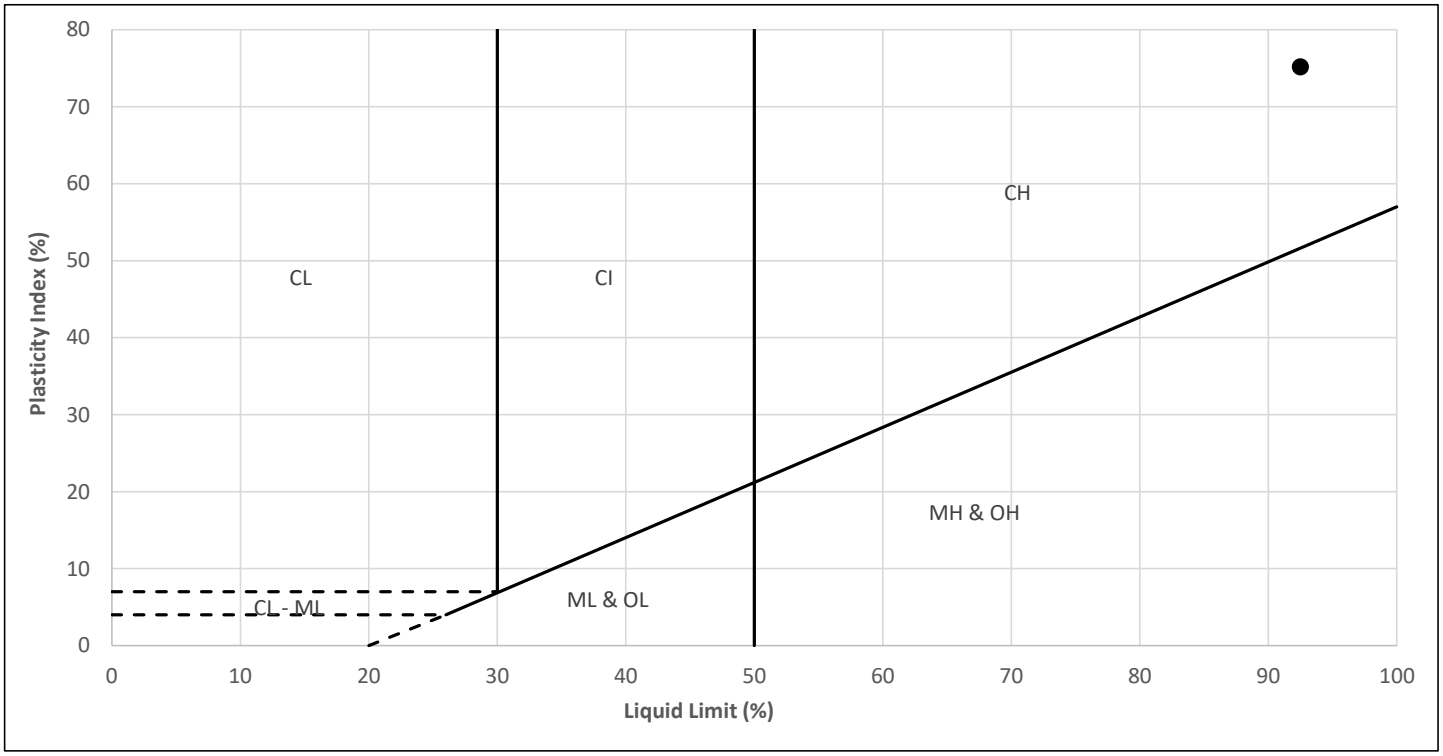
Project:	Snake Lake Reservoir Expansion	**Sample #:**	213UD2
Project No.:	1560-193-00	**Source:**	22CH213
Owner:	EID	**Sample Depth:**	10.3m
File No.:	AL - 213UD2	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	92.5
Plastic Limit (PL)	17.3
Plasticity Index (PI)	75.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

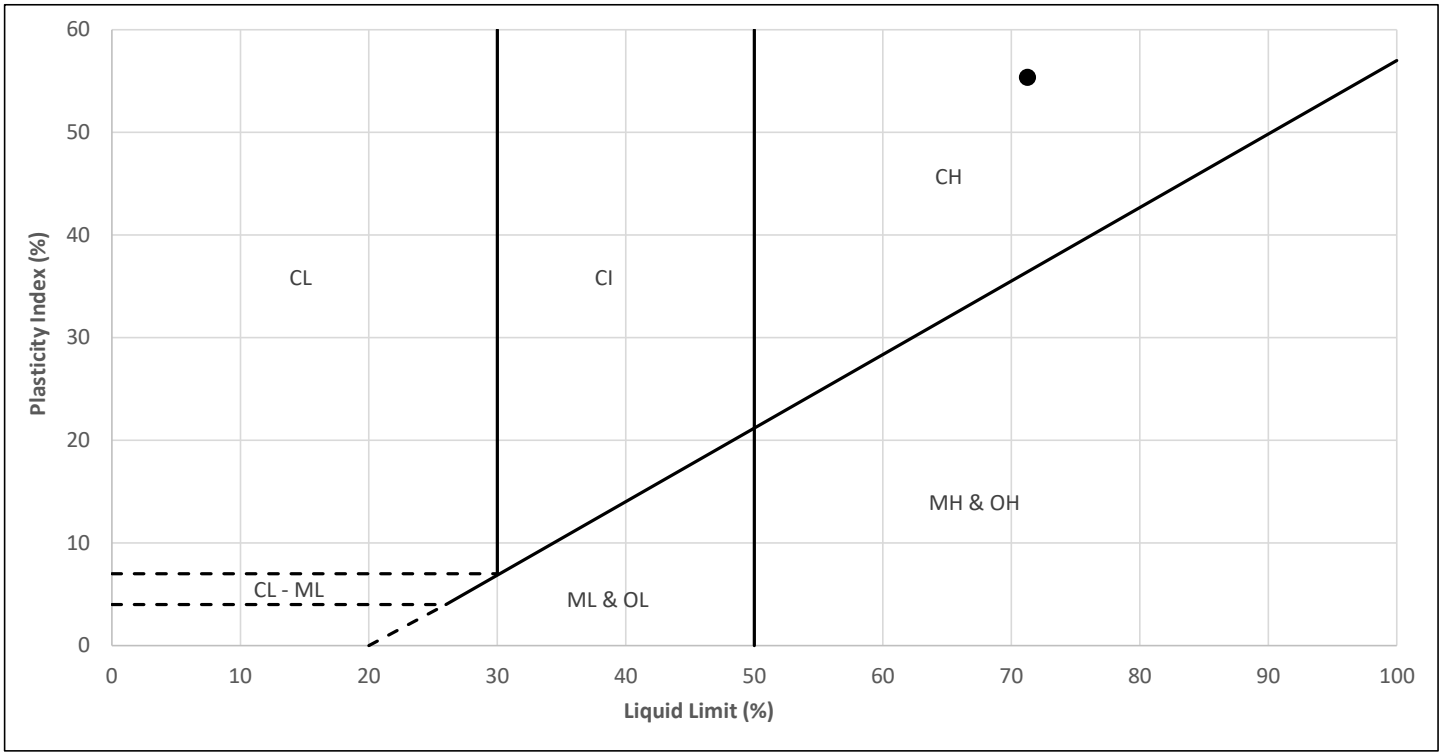
Project:	Snake Lake Reservoir Expansion	**Sample #:**	213UD4
Project No.:	1560-193-00	**Source:**	22CH213
Owner:	EID	**Sample Depth:**	17.77m
File No.:	AL - 213UD4	**Test Date:**	30-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	71.3
Plastic Limit (PL)	15.9
Plasticity Index (PI)	55.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

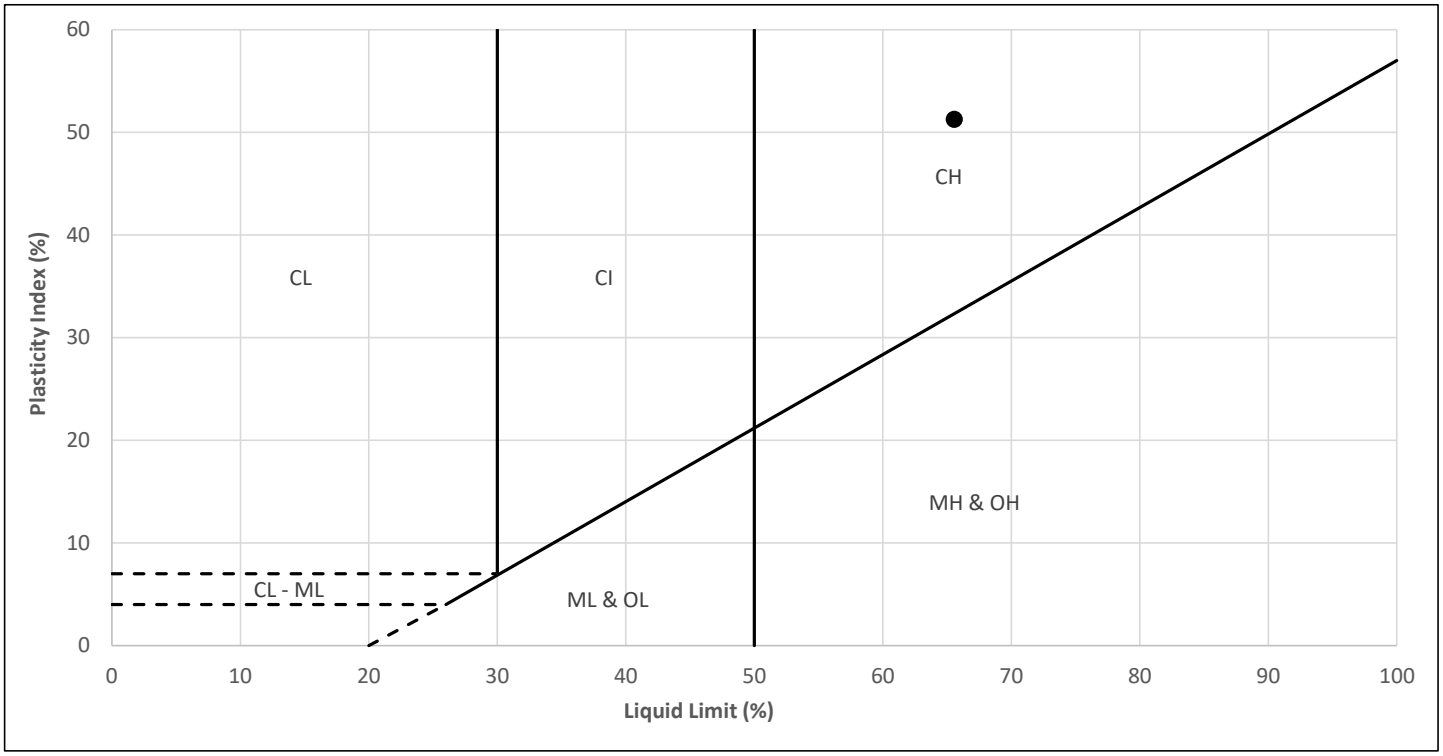
Project:	Snake Lake Reservoir Expansion	**Sample #:**	213UD8
Project No.:	1560-193-00	**Source:**	22CH213
Owner:	EID	**Sample Depth:**	32.75m
File No.:	AL - 213UD8	**Test Date:**	30-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	65.6
Plastic Limit (PL)	14.3
Plasticity Index (PI)	51.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

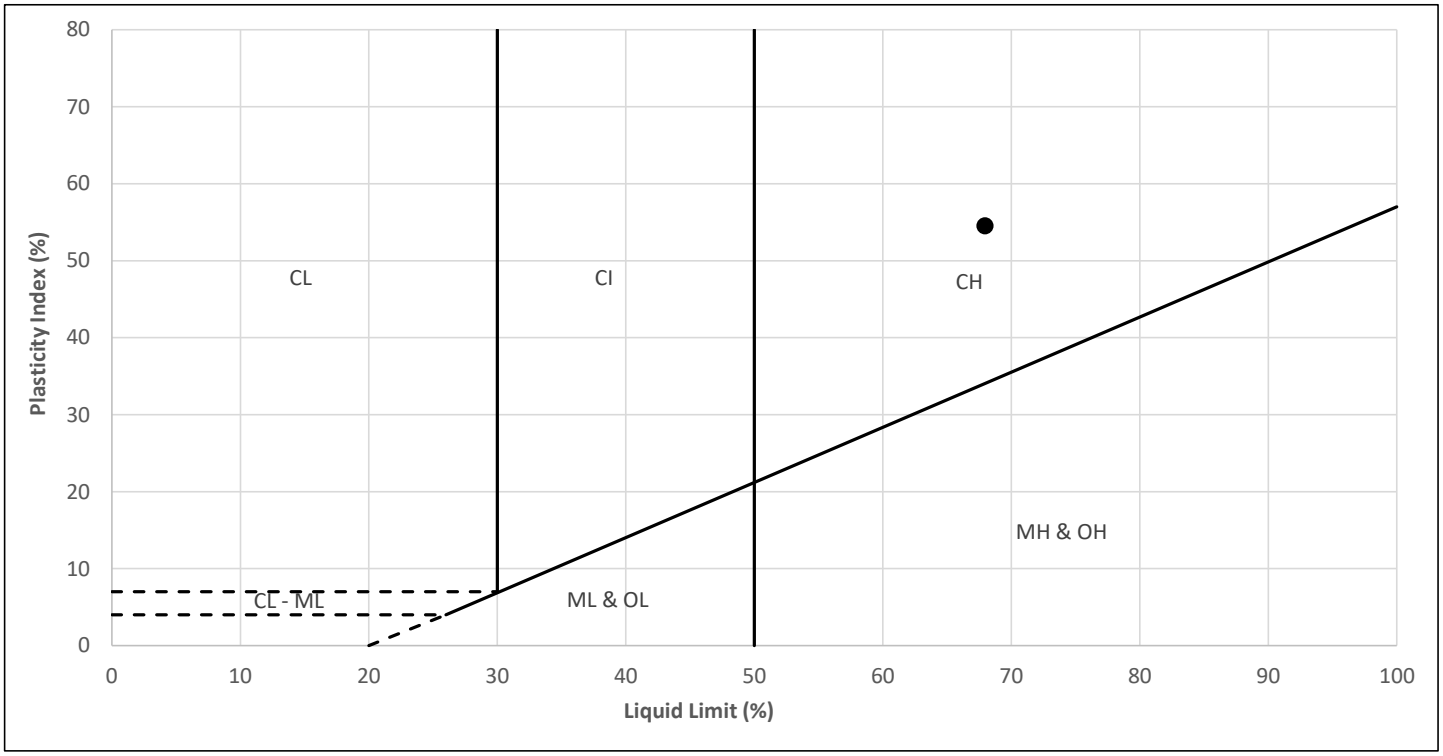
Project:	Snake Lake Reservoir Expansion	**Sample #:**	213UD10
Project No.:	1560-193-00	**Source:**	22CH213
Owner:	EID	**Sample Depth:**	39.26m
File No.:	AL - 213UD10	**Test Date:**	8-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	67.9
Plastic Limit (PL)	13.4
Plasticity Index (PI)	54.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

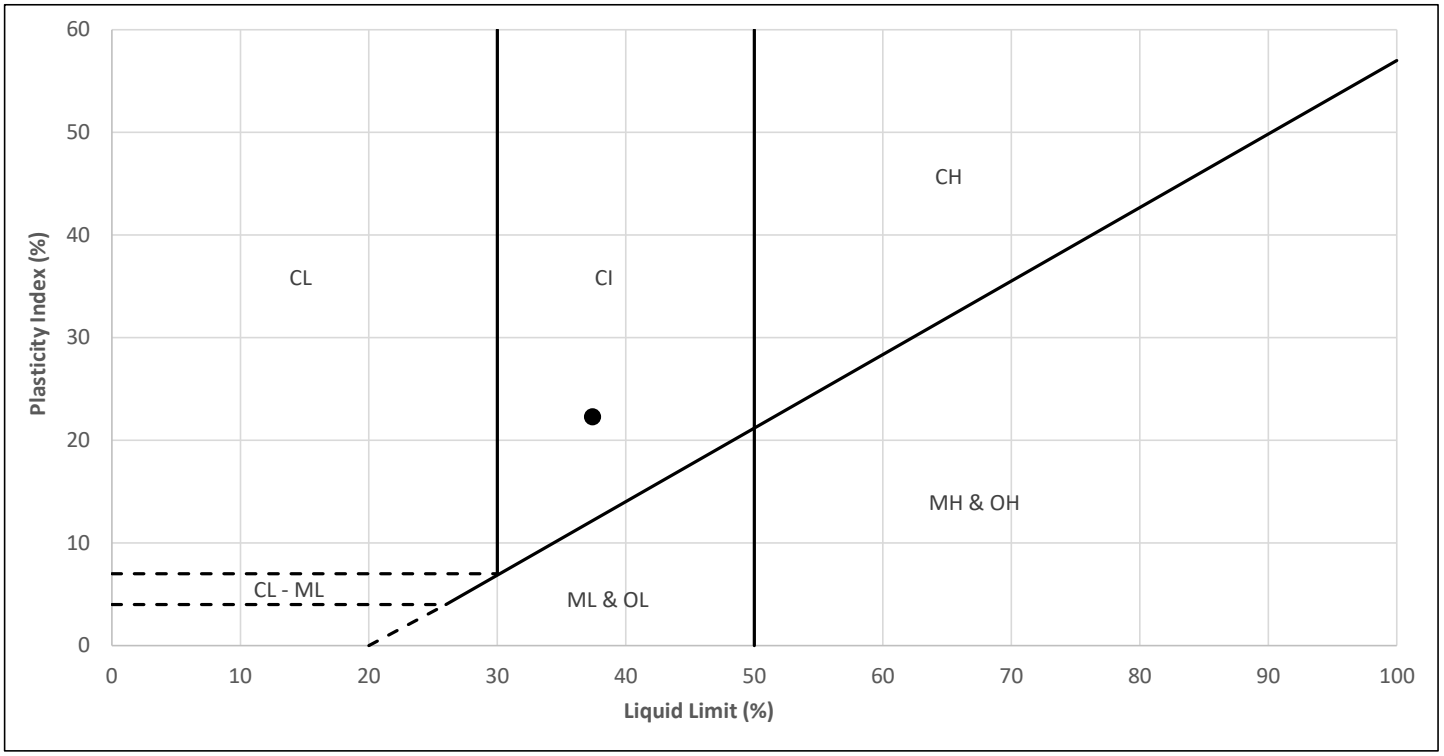
Project:	Snake Lake Reservoir Expansion	**Sample #:**	214AU2
Project No.:	1560-193-00	**Source:**	22BH214
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 214AU2	**Test Date:**	13-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	37.4
Plastic Limit (PL)	15.1
Plasticity Index (PI)	22.3

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

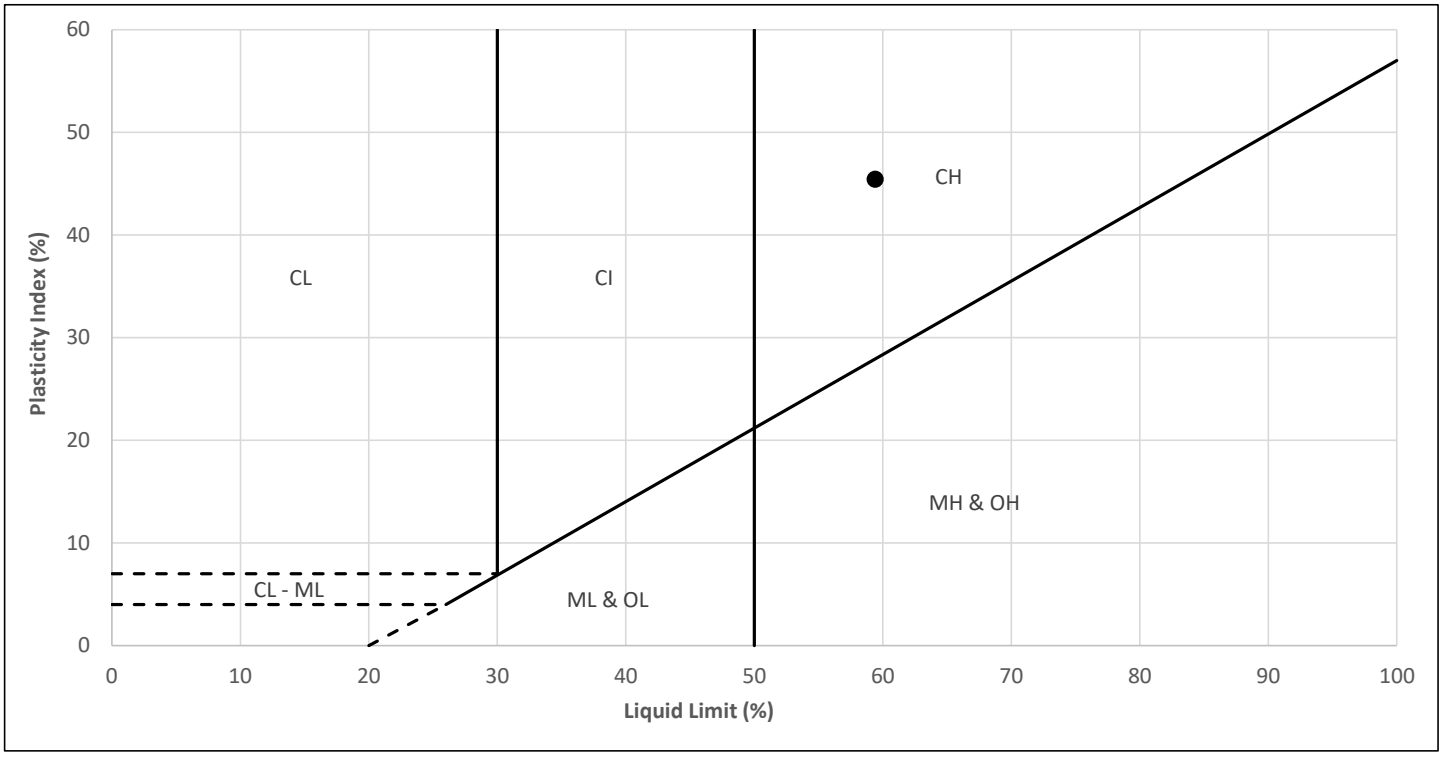
Project:	Snake Lake Reservoir Expansion	**Sample #:**	214RC1
Project No.:	1560-193-00	**Source:**	22CH214
Owner:	EID	**Sample Depth:**	7.0m
File No.:	AL - 214RC1	**Test Date:**	15-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	59.4
Plastic Limit (PL)	14.0
Plasticity Index (PI)	45.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

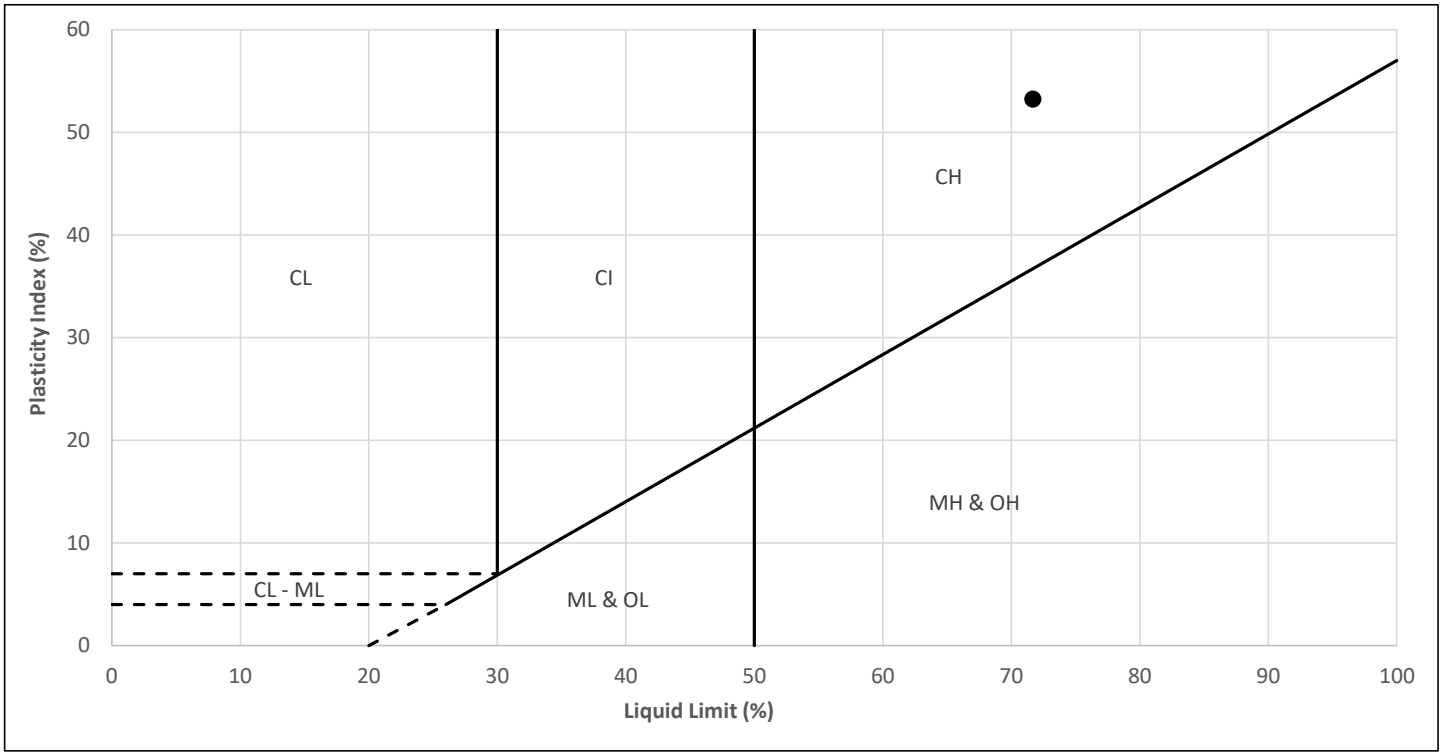
Project:	Snake Lake Reservoir Expansion	**Sample #:**	214RC3
Project No.:	1560-193-00	**Source:**	22CH214
Owner:	EID	**Sample Depth:**	10.1m
File No.:	AL - 214RC3	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	71.7
Plastic Limit (PL)	18.4
Plasticity Index (PI)	53.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

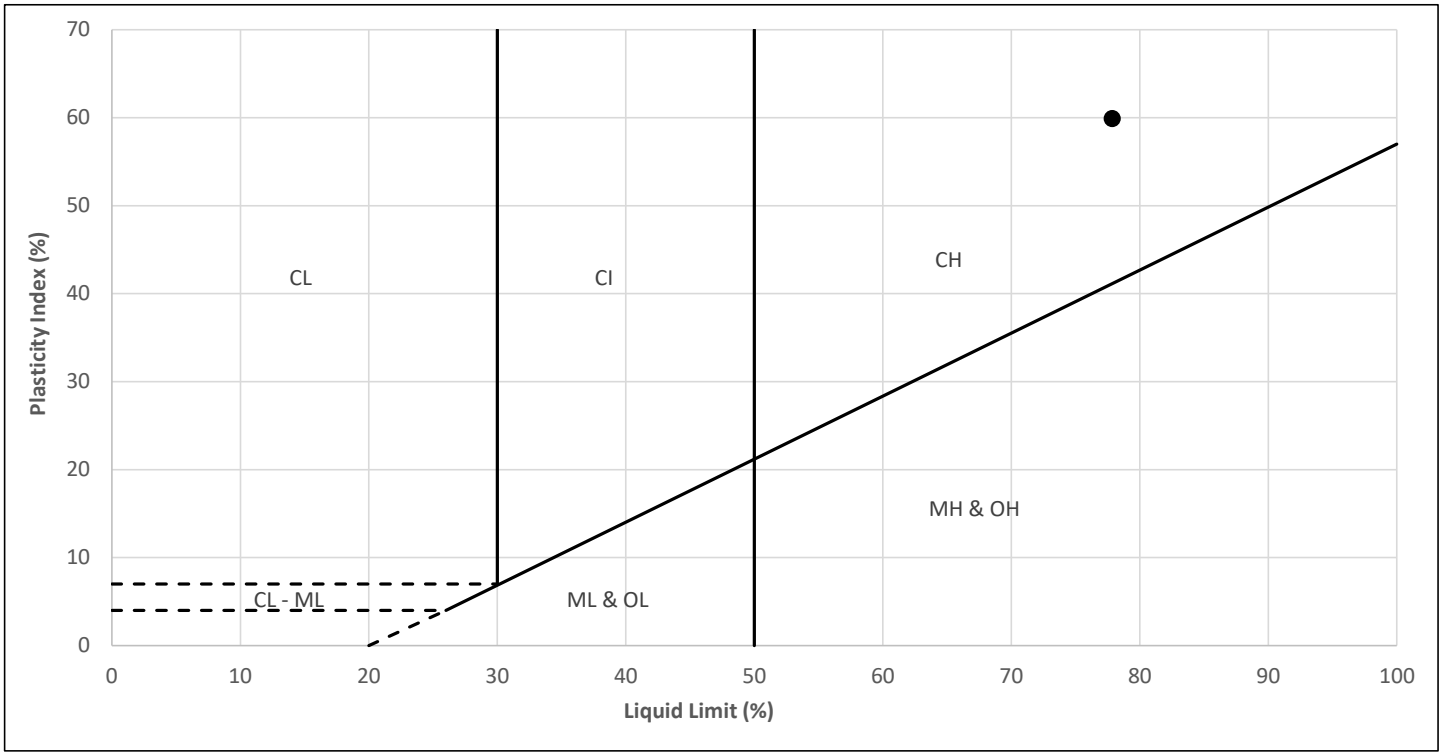
Project:	Snake Lake Reservoir Expansion	**Sample #:**	214RC7
Project No.:	1560-193-00	**Source:**	22CH214
Owner:	EID	**Sample Depth:**	14.0m
File No.:	AL - 214RC7	**Test Date:**	17-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	77.9
Plastic Limit (PL)	17.9
Plasticity Index (PI)	59.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

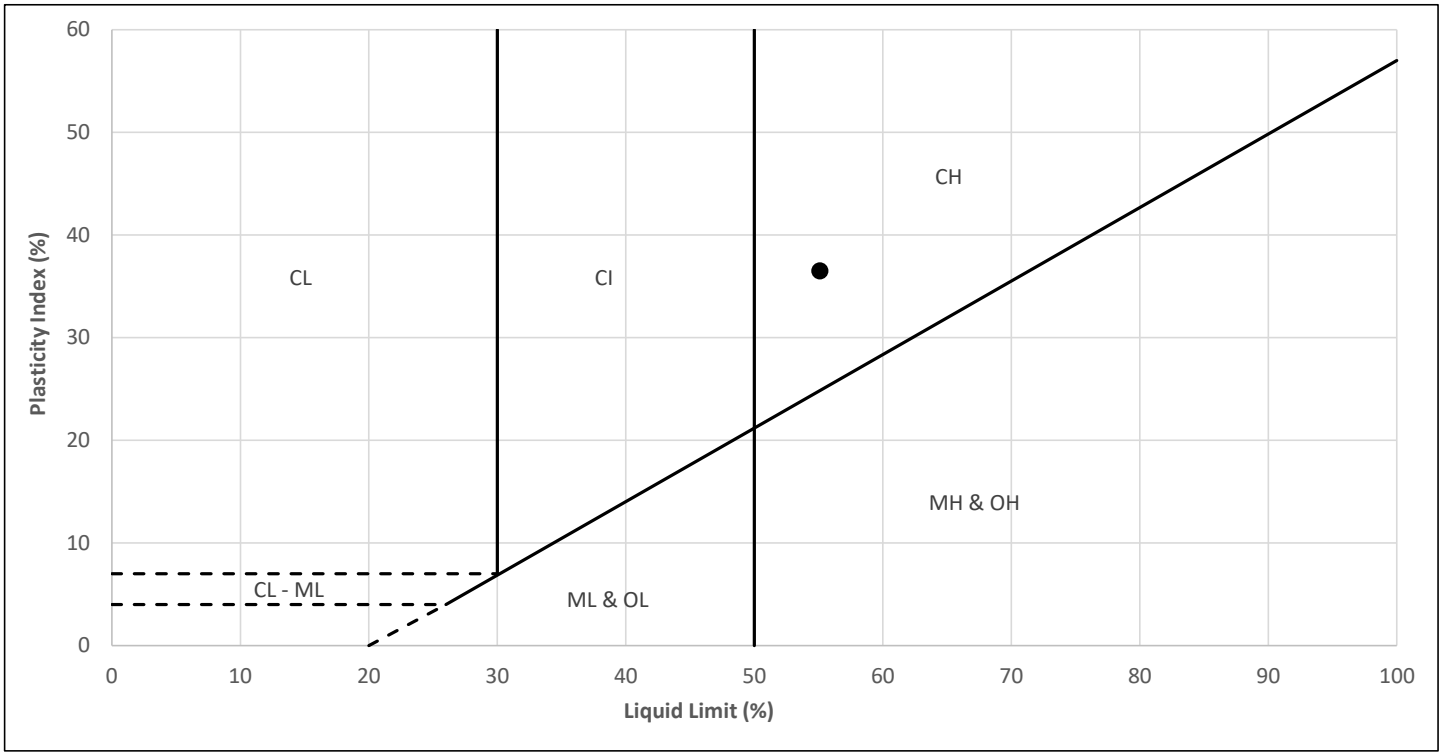
Project:	Snake Lake Reservoir Expansion	**Sample #:**	214RC8
Project No.:	1560-193-00	**Source:**	22CH214
Owner:	EID	**Sample Depth:**	16.3m
File No.:	AL - 214RC8	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.1
Plastic Limit (PL)	18.6
Plasticity Index (PI)	36.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

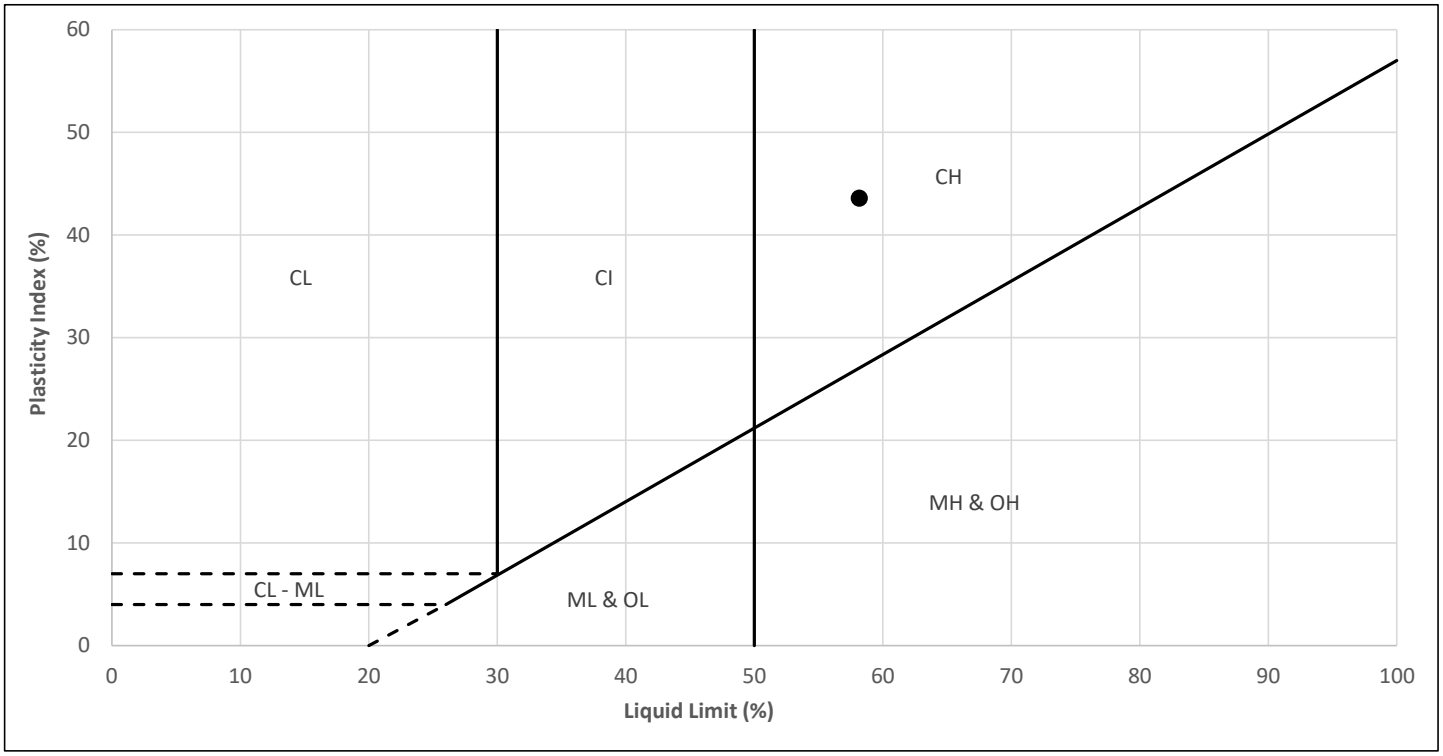
Project:	Snake Lake Reservoir Expansion	**Sample #:**	214RC15
Project No.:	1560-193-00	**Source:**	22CH214
Owner:	EID	**Sample Depth:**	26.8m
File No.:	AL - 214RC15	**Test Date:**	15-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	58.2
Plastic Limit (PL)	14.6
Plasticity Index (PI)	43.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

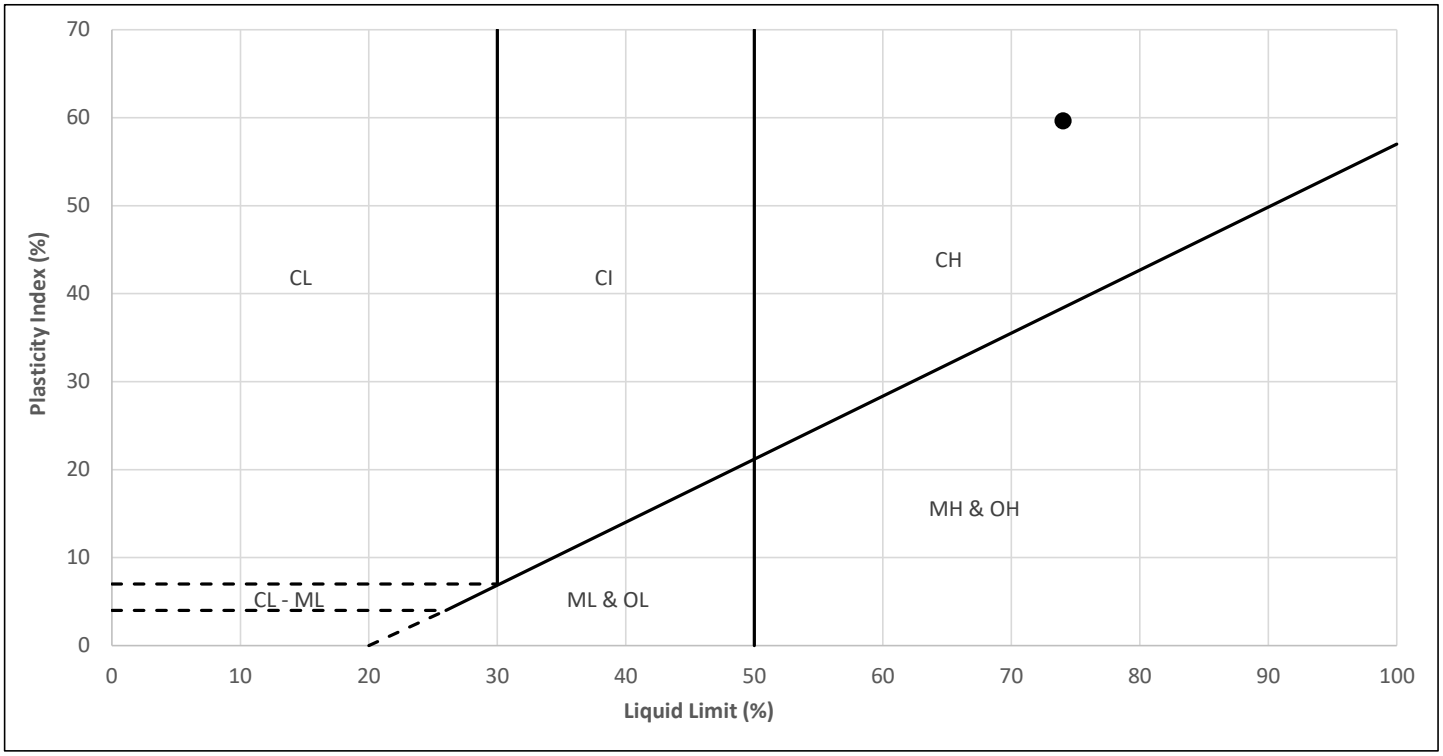
Project:	Snake Lake Reservoir Expansion	**Sample #:**	215RC1
Project No.:	1560-193-00	**Source:**	22CH215
Owner:	EID	**Sample Depth:**	6.5m
File No.:	AL - 215RC1	**Test Date:**	16-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	74.0
Plastic Limit (PL)	14.4
Plasticity Index (PI)	59.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

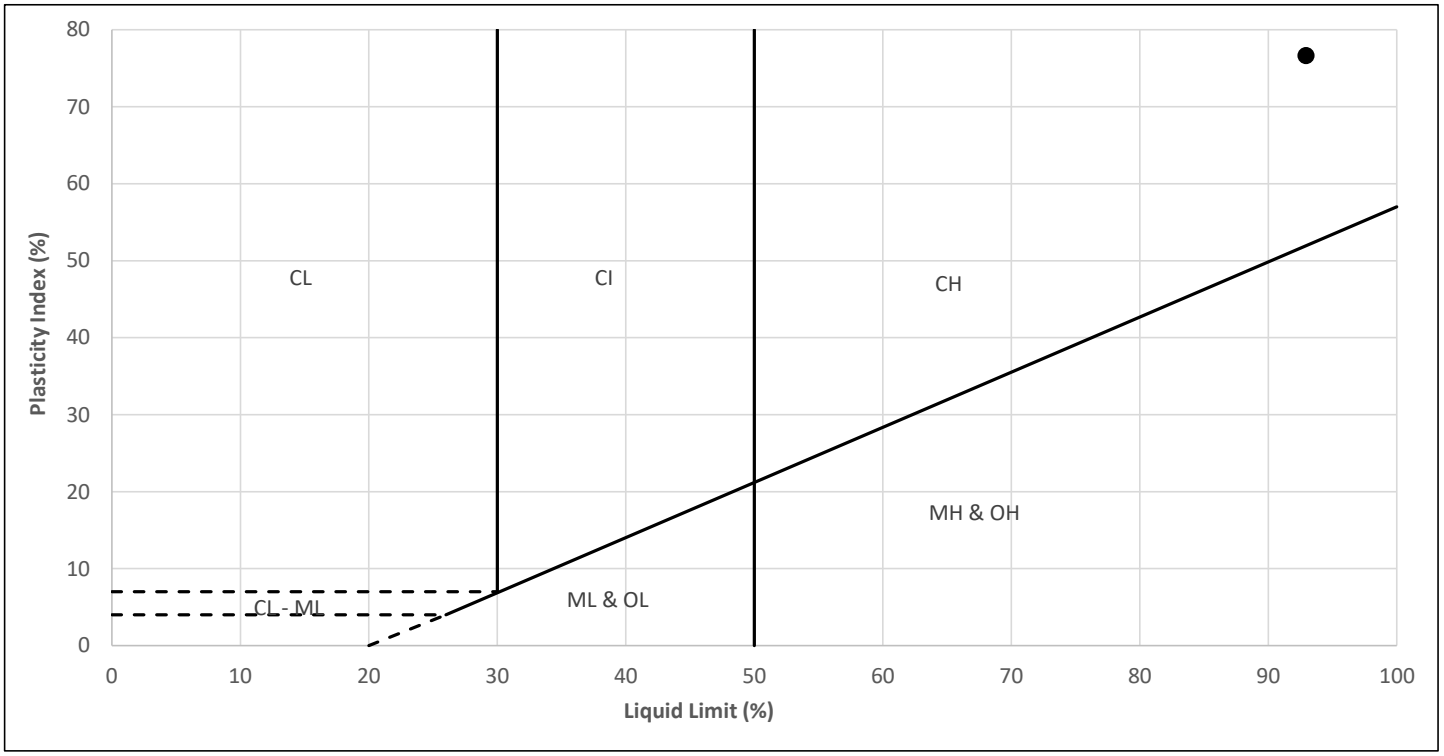
Project:	Snake Lake Reservoir Expansion	**Sample #:**	215RC4
Project No.:	1560-193-00	**Source:**	22CH215
Owner:	EID	**Sample Depth:**	11.1m
File No.:	AL - 215RC4	**Test Date:**	16-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	92.9
Plastic Limit (PL)	16.3
Plasticity Index (PI)	76.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

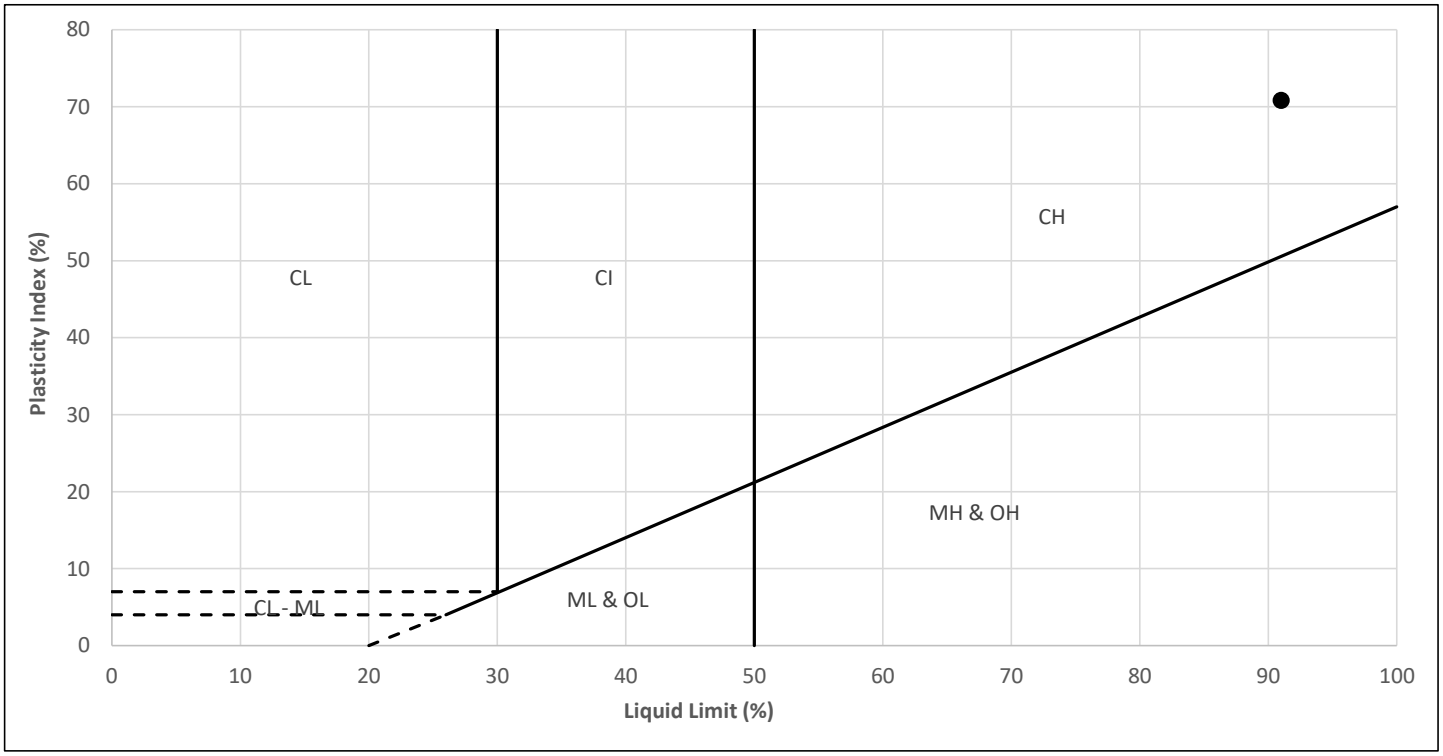
Project:	Snake Lake Reservoir Expansion	**Sample #:**	215RC7
Project No.:	1560-193-00	**Source:**	22CH215
Owner:	EID	**Sample Depth:**	17.2m
File No.:	AL - 215RC7	**Test Date:**	15-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	91.0
Plastic Limit (PL)	20.2
Plasticity Index (PI)	70.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

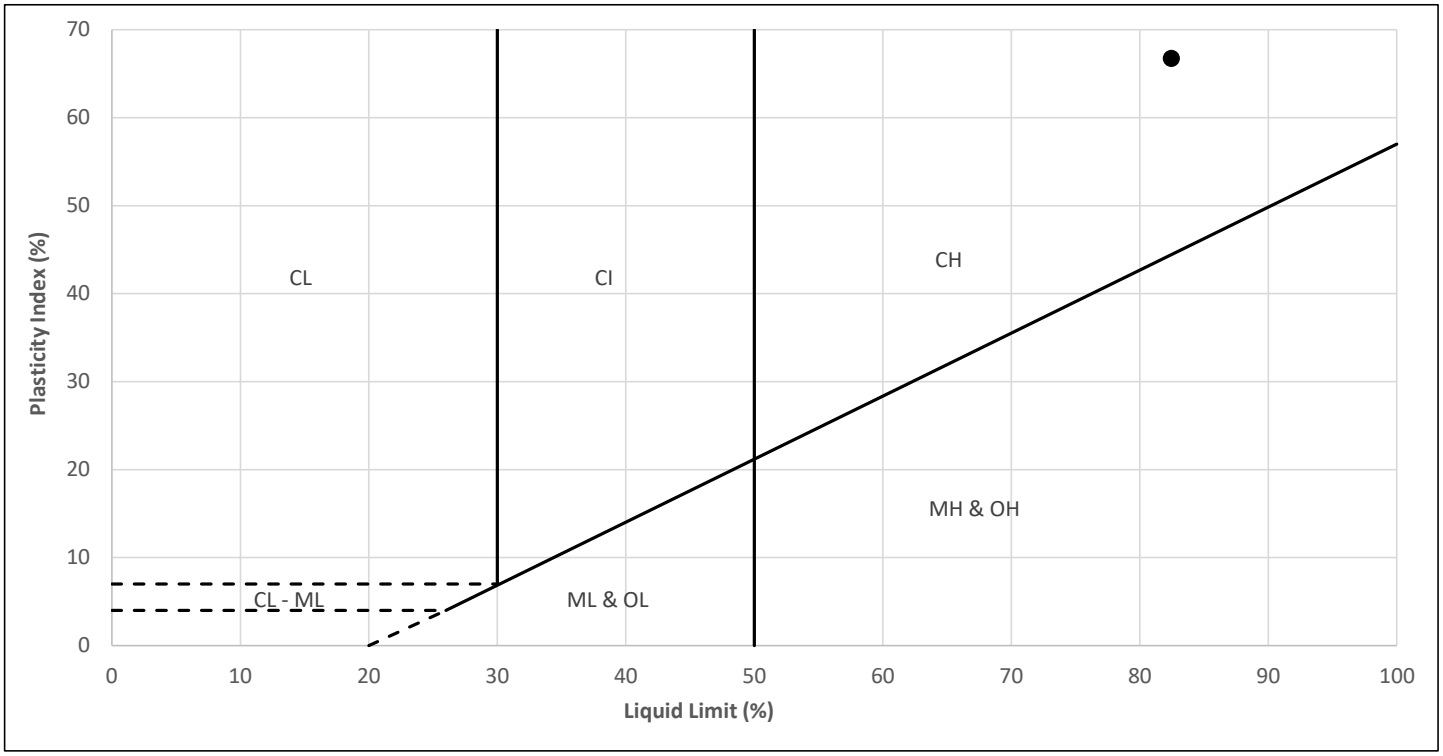
Project:	Snake Lake Reservoir Expansion	**Sample #:**	215RC8
Project No.:	1560-193-00	**Source:**	22CH217
Owner:	EID	**Sample Depth:**	17.2m
File No.:	AL - 215RC8	**Test Date:**	15-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	82.5
Plastic Limit (PL)	15.7
Plasticity Index (PI)	66.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

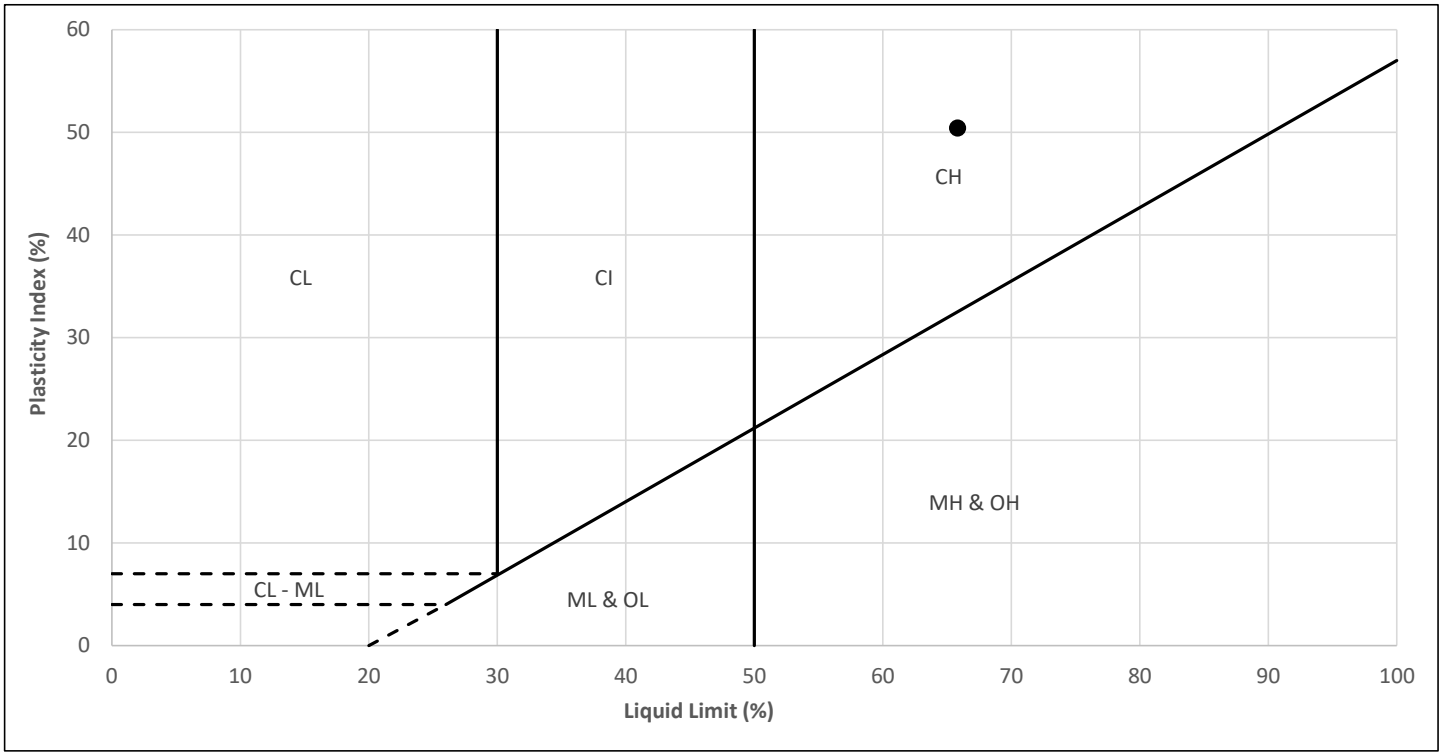
Project:	Snake Lake Reservoir Expansion	**Sample #:**	215RC11
Project No.:	1560-193-00	**Source:**	22CH215
Owner:	EID	**Sample Depth:**	22.3m
File No.:	AL - 215RC11	**Test Date:**	16-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	65.8
Plastic Limit (PL)	15.4
Plasticity Index (PI)	50.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

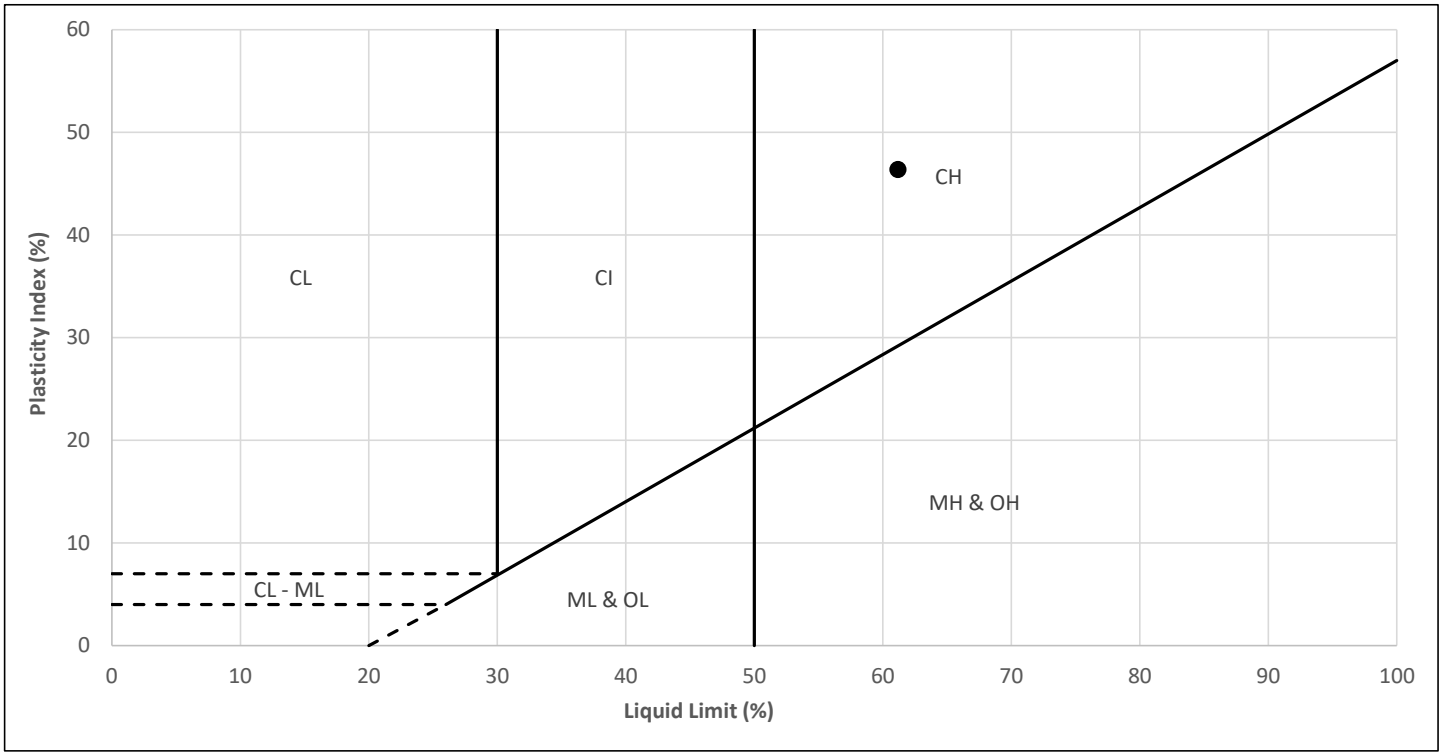
Project:	Snake Lake Reservoir Expansion	**Sample #:**	215RC18
Project No.:	1560-193-00	**Source:**	22CH215
Owner:	EID	**Sample Depth:**	31.0m
File No.:	AL - 215RC18	**Test Date:**	15-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	61.2
Plastic Limit (PL)	14.8
Plasticity Index (PI)	46.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

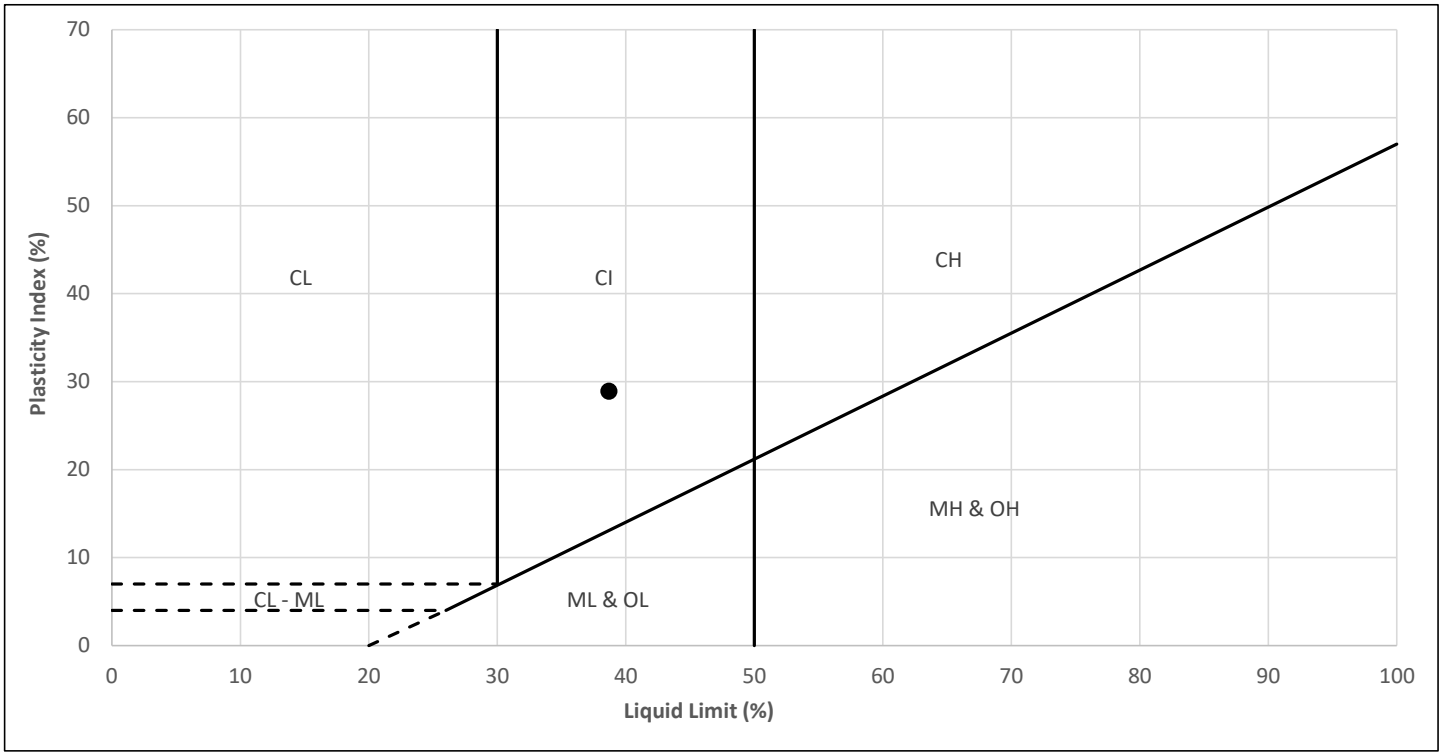
Project:	Snake Lake Reservoir Expansion	**Sample #:**	216AU2
Project No.:	1560-193-00	**Source:**	22BH216
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 216AU2	**Date:**	3-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	38.7
Plastic Limit (PL)	9.8
Plasticity Index (PI)	28.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

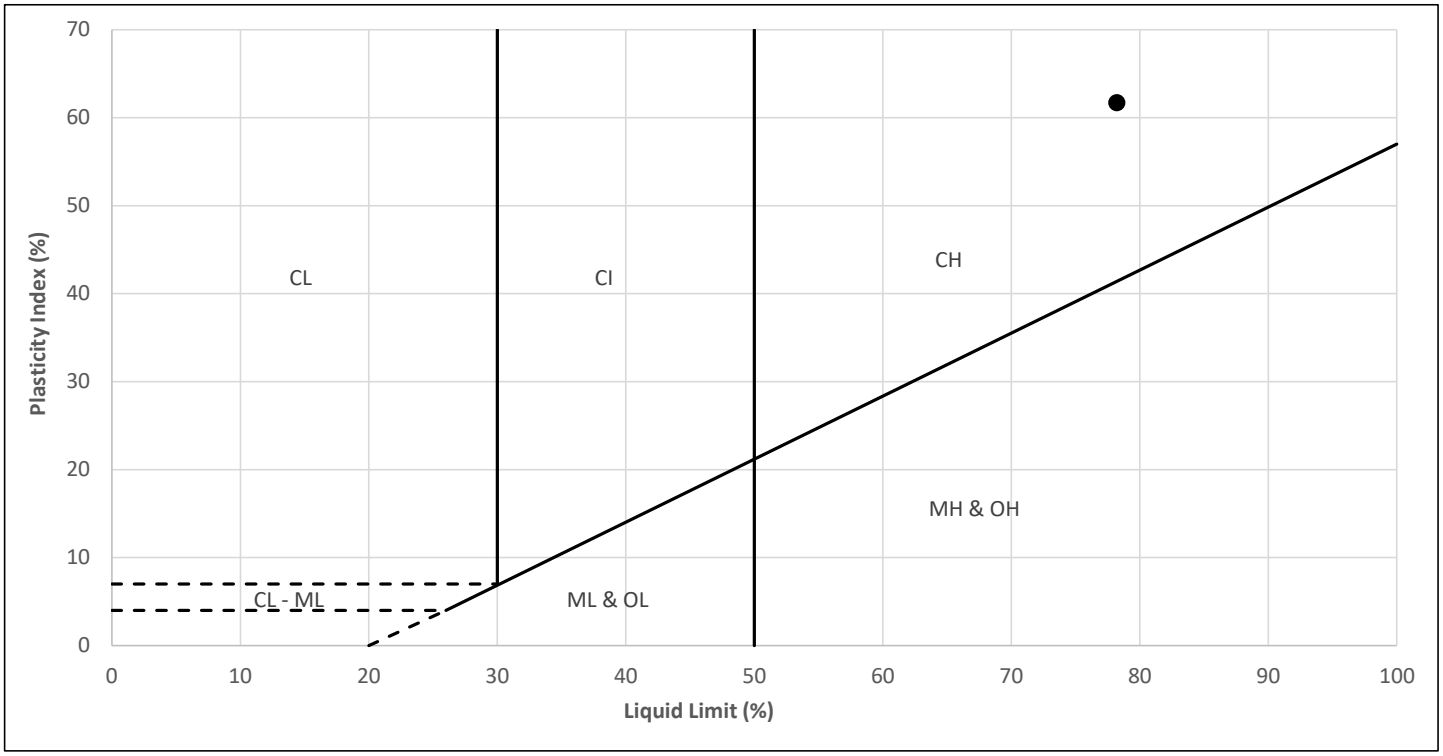
Project:	Snake Lake Reservoir Expansion	**Sample #:**	216RC2
Project No.:	1560-193-00	**Source:**	22CH216
Owner:	EID	**Sample Depth:**	9.1m
File No.:	AL - 216RC2	**Test Date:**	22-Aug-23

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	78.2
Plastic Limit (PL)	16.5
Plasticity Index (PI)	61.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

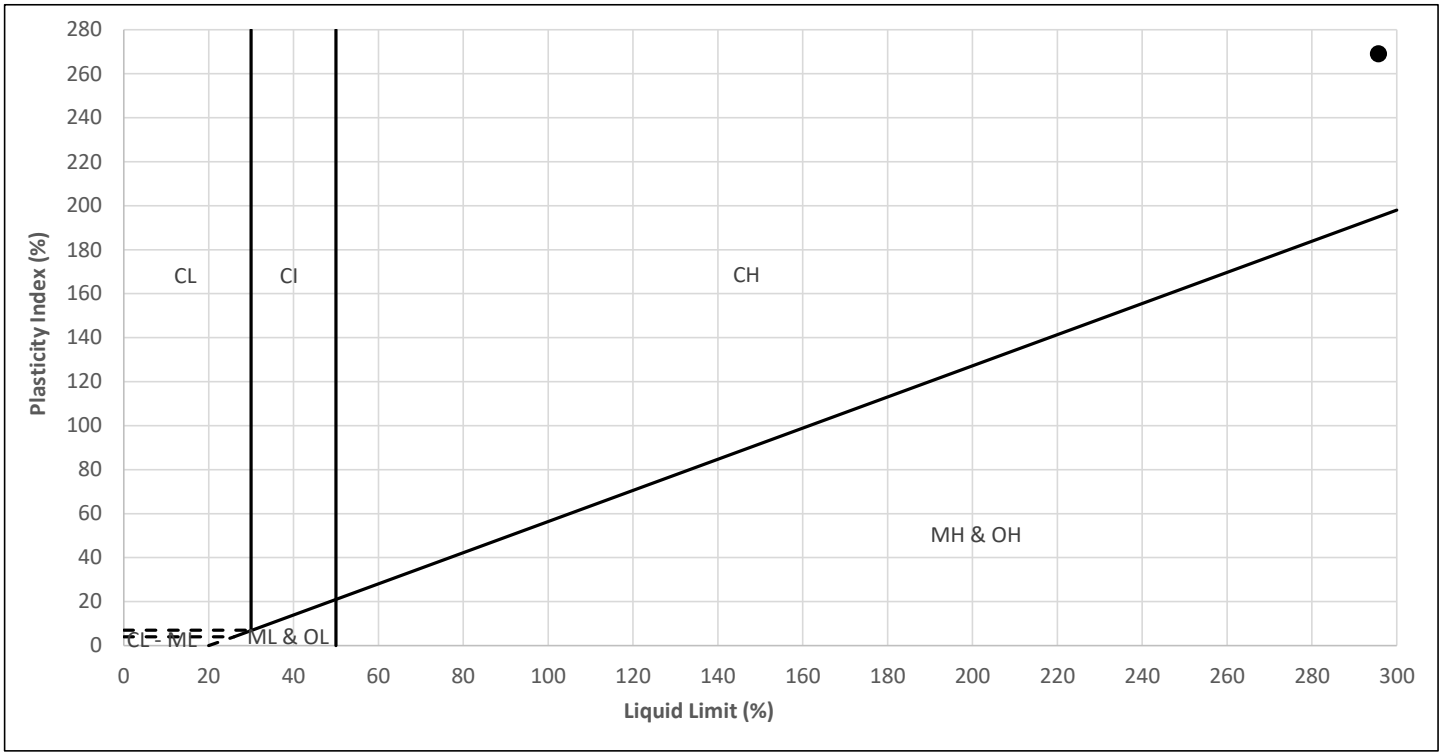
Project:	Snake Lake Reservoir Expansion	**Sample #:**	216RC5
Project No.:	1560-193-00	**Source:**	22CH216
Owner:	EID	**Sample Depth:**	12.1m
File No.:	AL - 216RC5	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	295.7
Plastic Limit (PL)	26.5
Plasticity Index (PI)	269.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

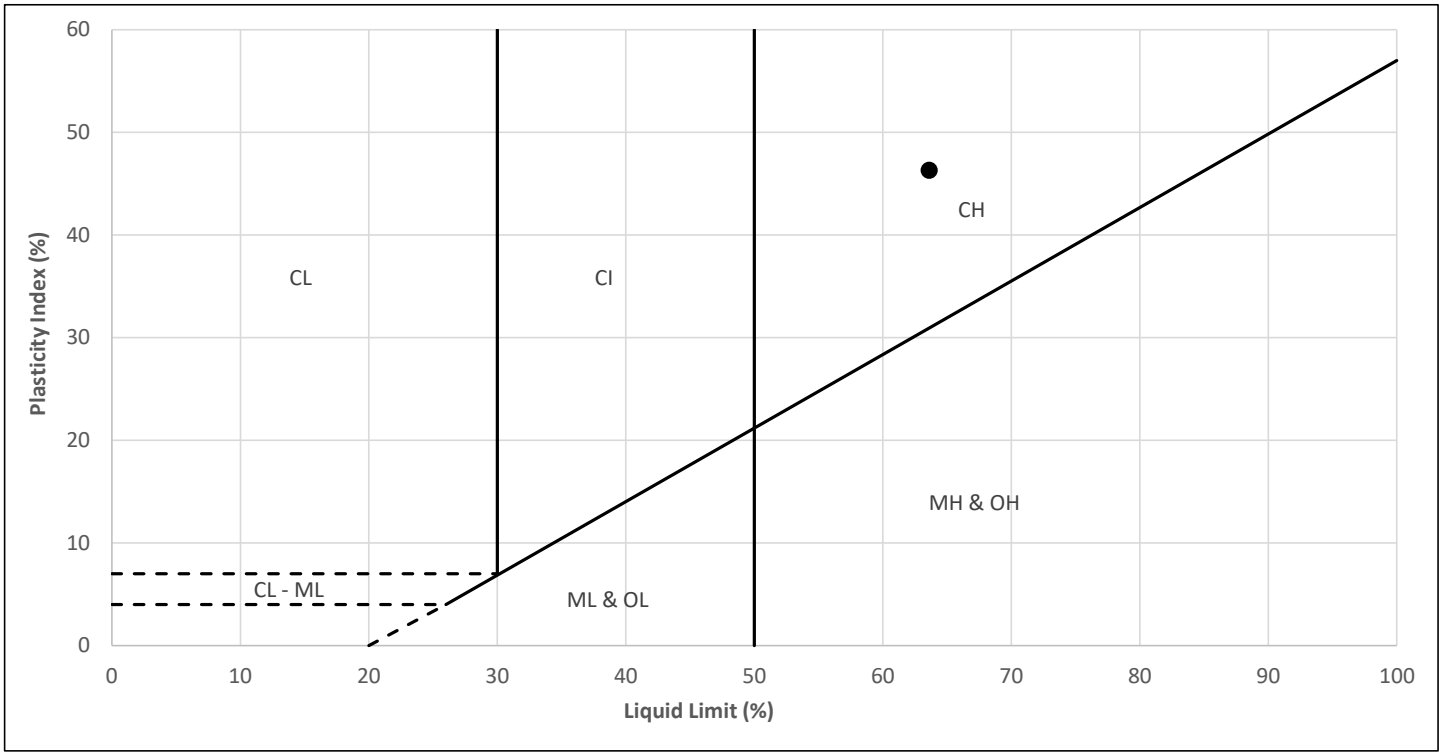
Project:	Snake Lake Reservoir Expansion	**Sample #:**	216RC9
Project No.:	1560-193-00	**Source:**	22CH216
Owner:	EID	**Sample Depth:**	17.6m
File No.:	AL - 216RC9	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	63.6
Plastic Limit (PL)	17.3
Plasticity Index (PI)	46.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

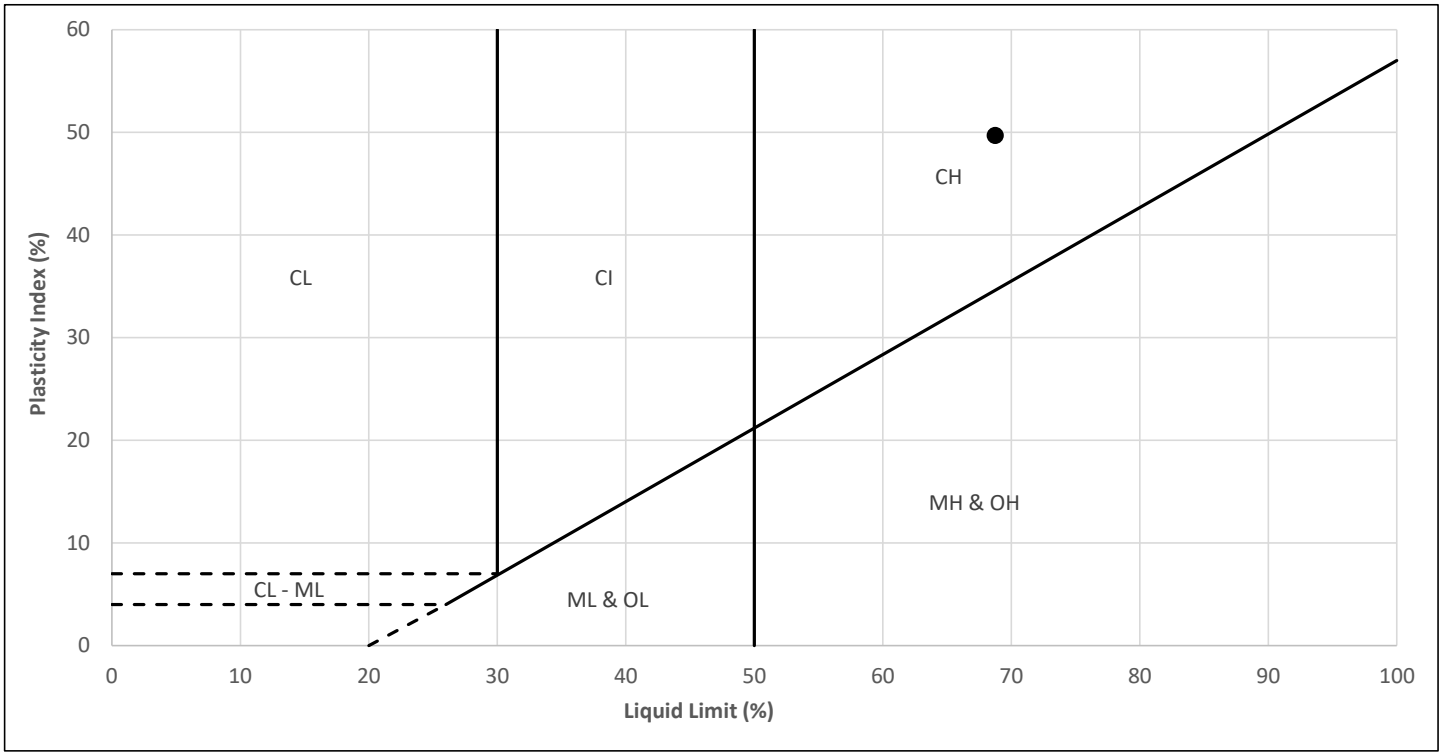
Project:	Snake Lake Reservoir Expansion	**Sample #:**	216RC12
Project No.:	1560-193-00	**Source:**	22CH216
Owner:	EID	**Sample Depth:**	22.2m
File No.:	AL - 216RC12	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	68.8
Plastic Limit (PL)	19.0
Plasticity Index (PI)	49.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

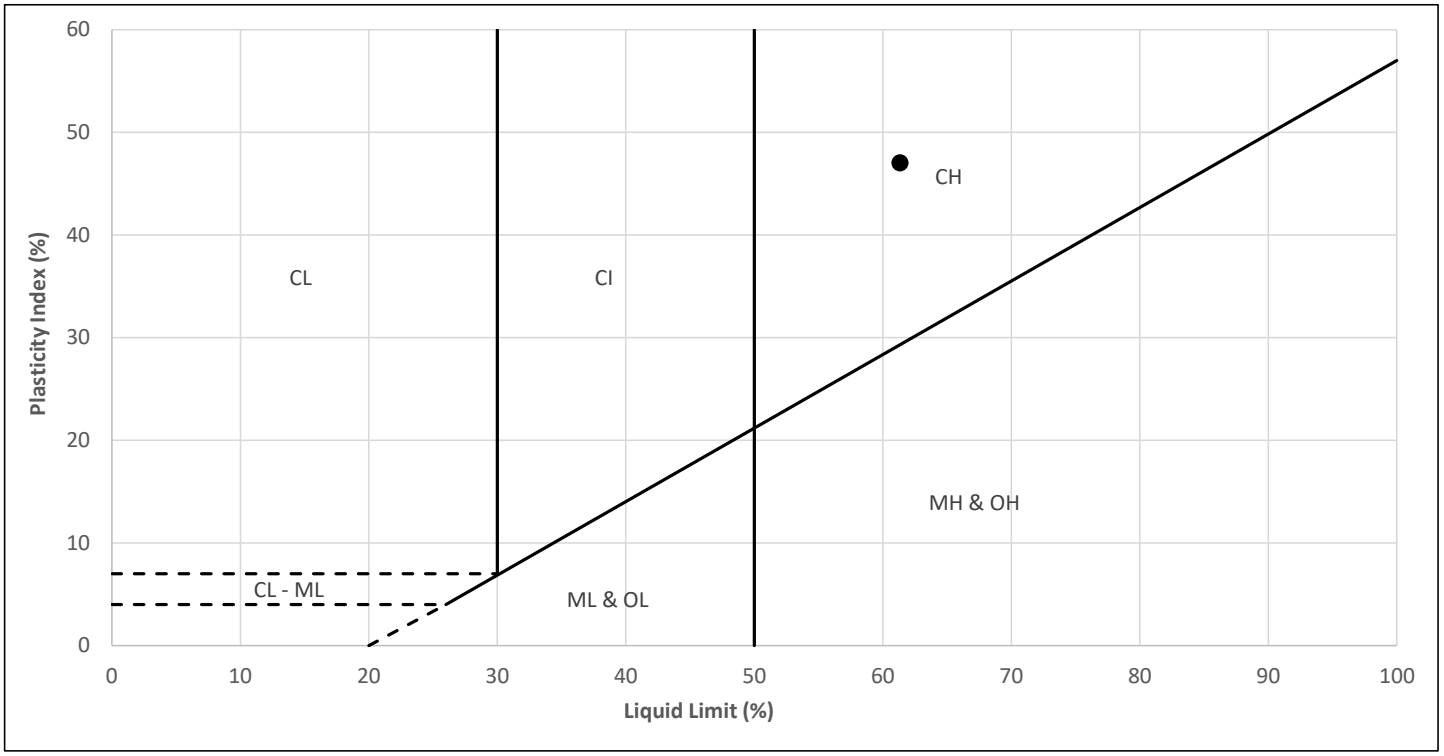
Project:	Snake Lake Reservoir Expansion	**Sample #:**	216RC17
Project No.:	1560-193-00	**Source:**	22CH216
Owner:	EID	**Sample Depth:**	29.2m
File No.:	AL - 216RC17	**Test Date:**	17-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	61.3
Plastic Limit (PL)	14.3
Plasticity Index (PI)	47.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

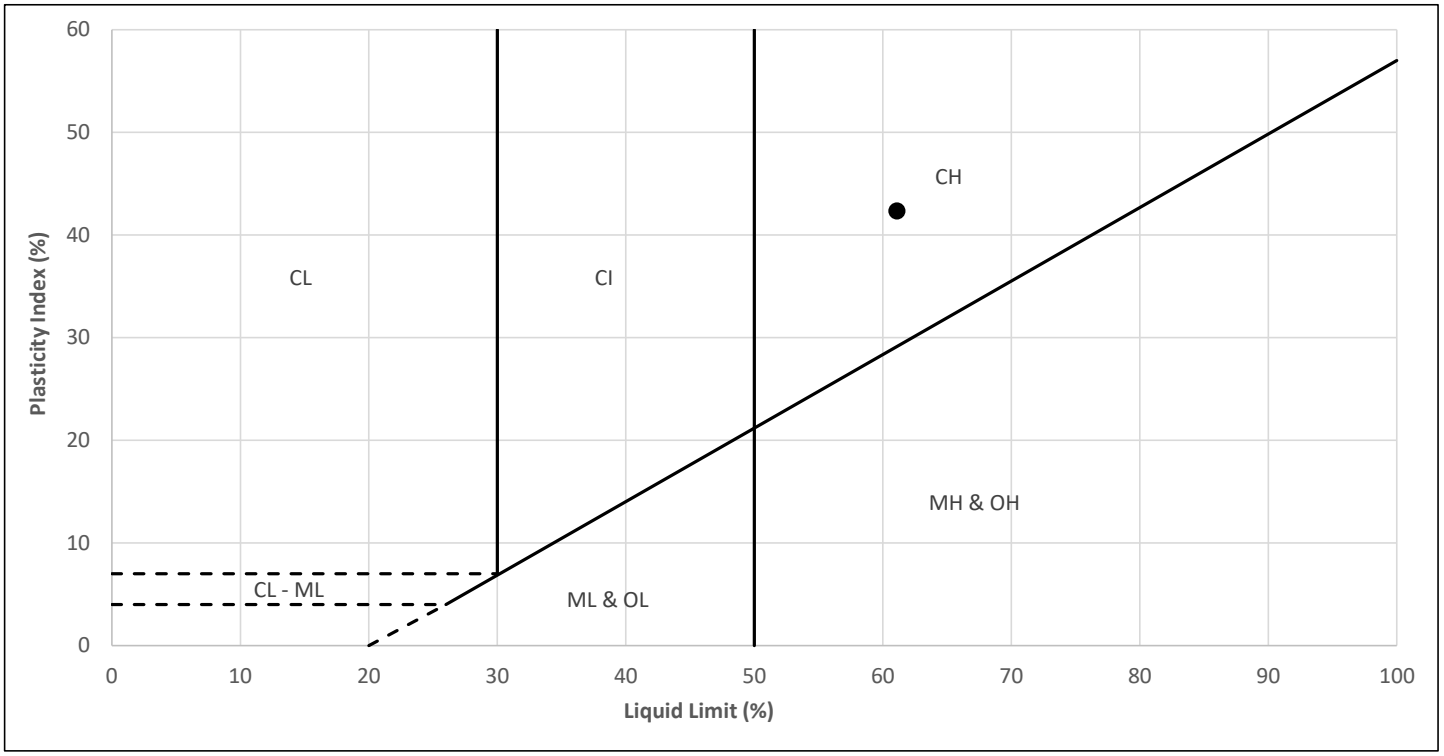
Project:	Snake Lake Reservoir Expansion	**Sample #:**	216RC19
Project No.:	1560-193-00	**Source:**	22CH216
Owner:	EID	**Sample Depth:**	33.0m
File No.:	AL - 216RC19	**Test Date:**	7-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	61.1
Plastic Limit (PL)	18.7
Plasticity Index (PI)	42.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

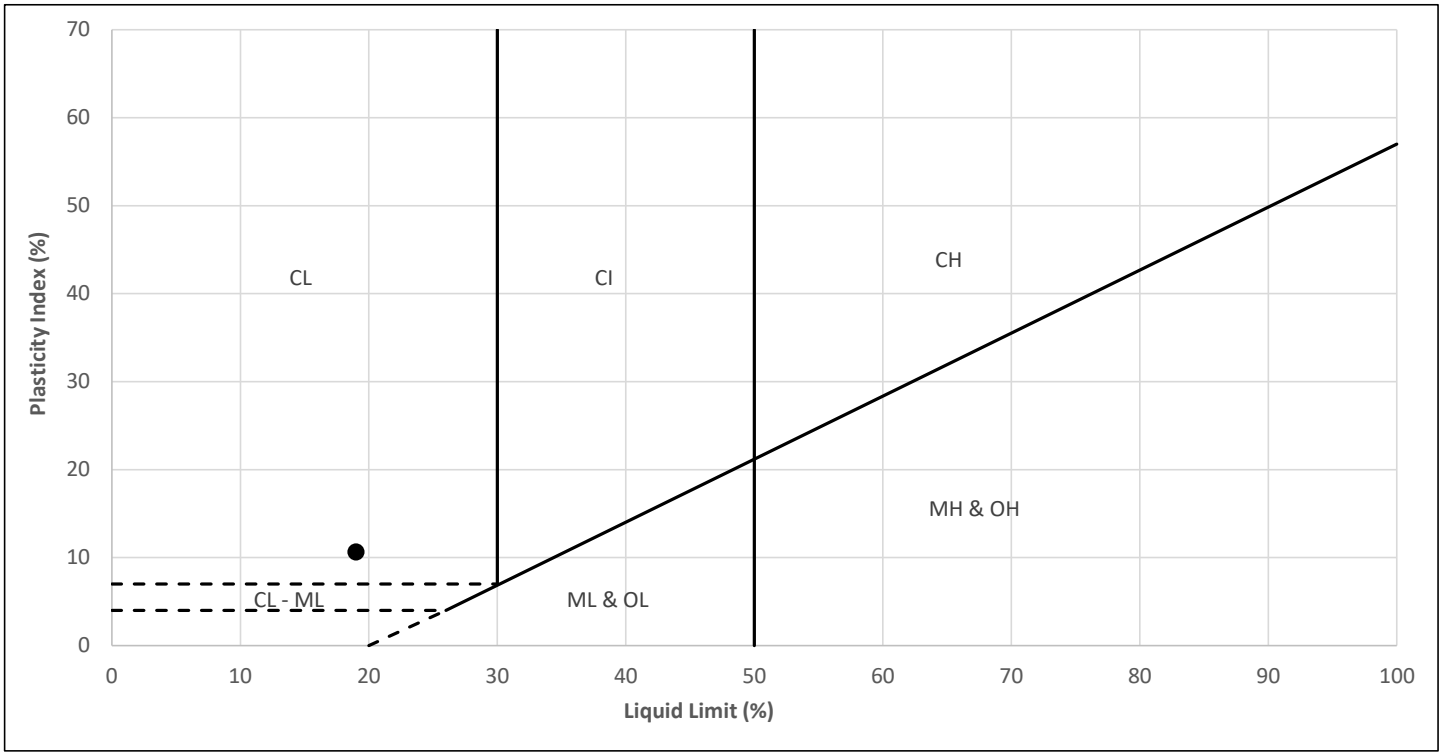
Project:	Snake Lake Reservoir Expansion	**Sample #:**	217AU3
Project No.:	1560-193-00	**Source:**	22BH217
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 217AU3	**Date:**	3-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays

Liquid Limit (LL)	19.0
Plastic Limit (PL)	8.3
Plasticity Index (PI)	10.7

Soil Plasticity	Low
Soil Classification	CL



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ATTERBERG LIMITS

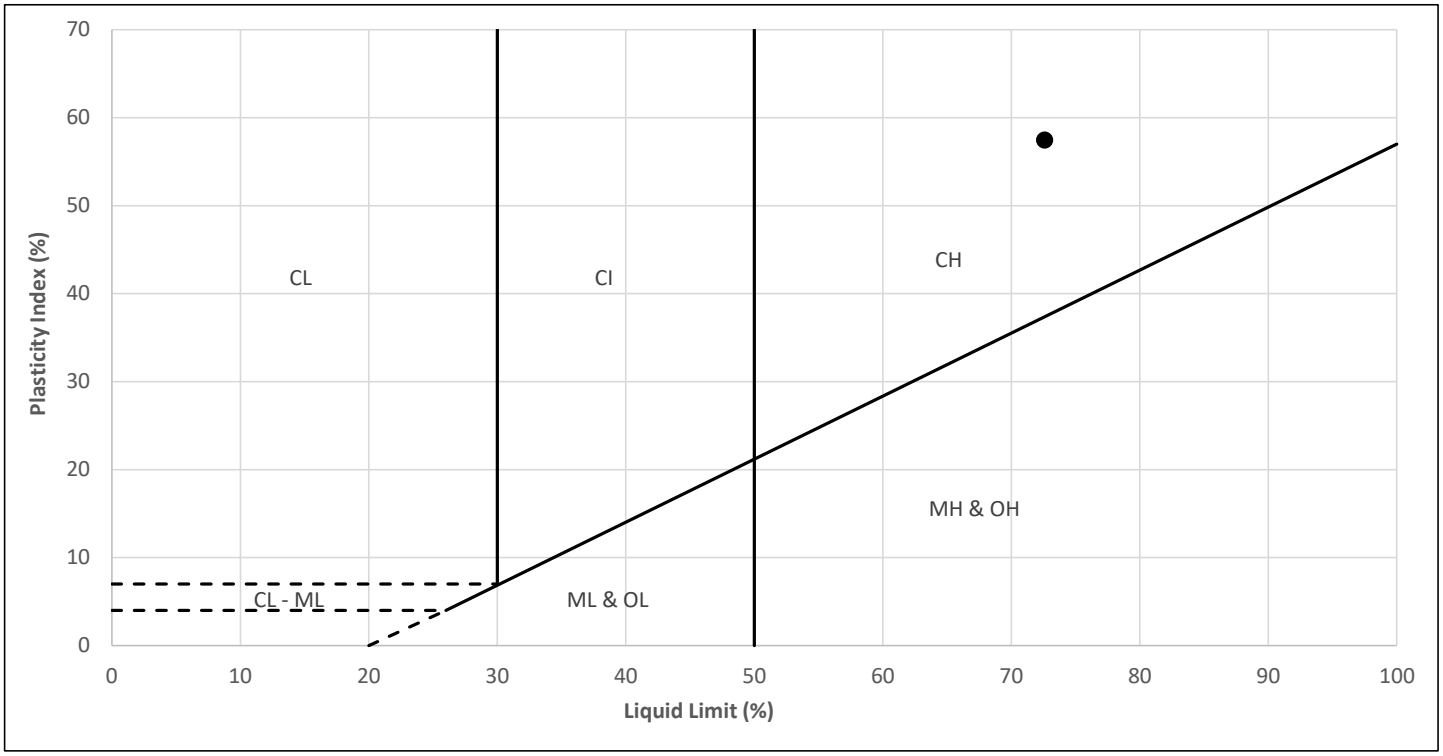
Project:	Snake Lake Reservoir Expansion	**Sample #:**	217AU7
Project No.:	1560-193-00	**Source:**	22BH217
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 217AU7	**Date:**	3-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	72.6
Plastic Limit (PL)	15.1
Plasticity Index (PI)	57.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

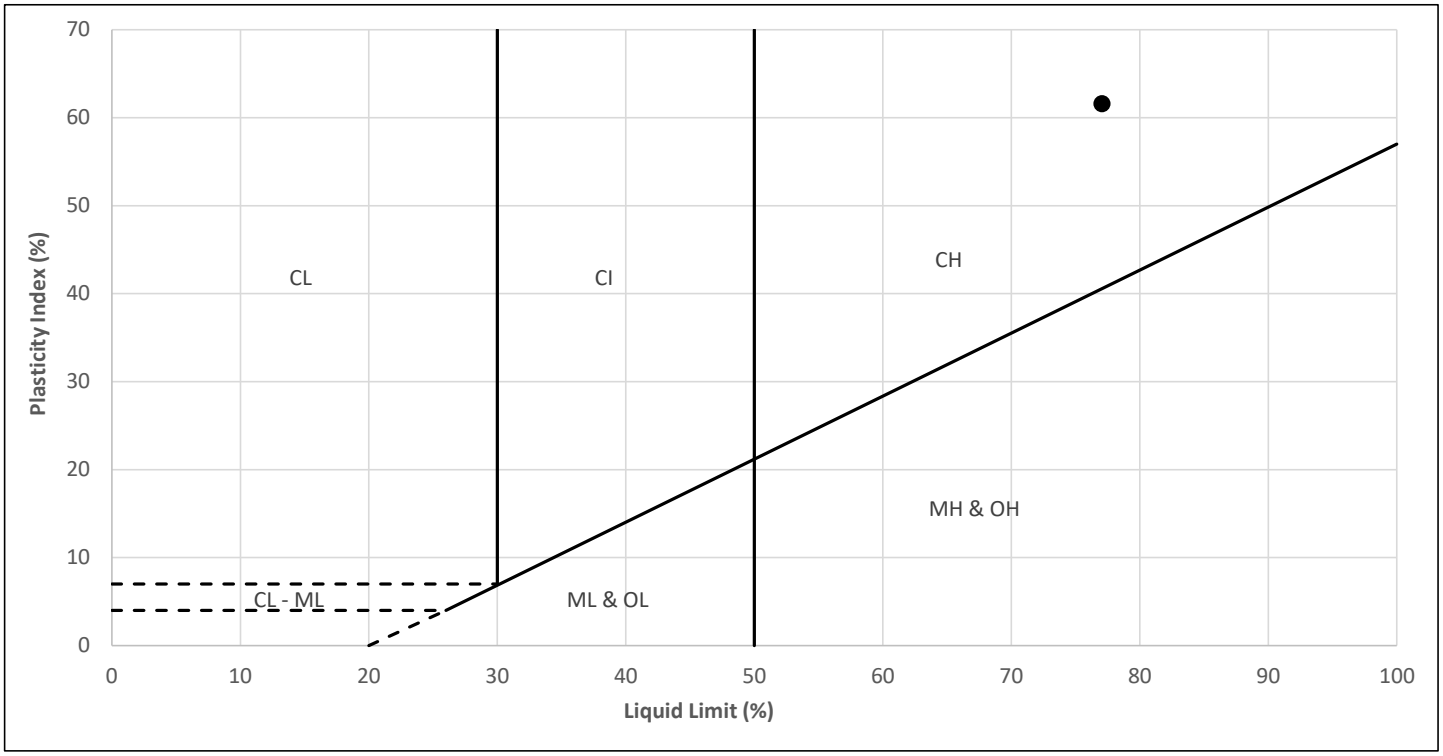
Project:	Snake Lake Reservoir Expansion	**Sample #:**	217RC4
Project No.:	1560-193-00	**Source:**	22CH217
Owner:	EID	**Sample Depth:**	11.5m
File No.:	AL - 217RC4	**Test Date:**	15-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	77.1
Plastic Limit (PL)	15.5
Plasticity Index (PI)	61.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

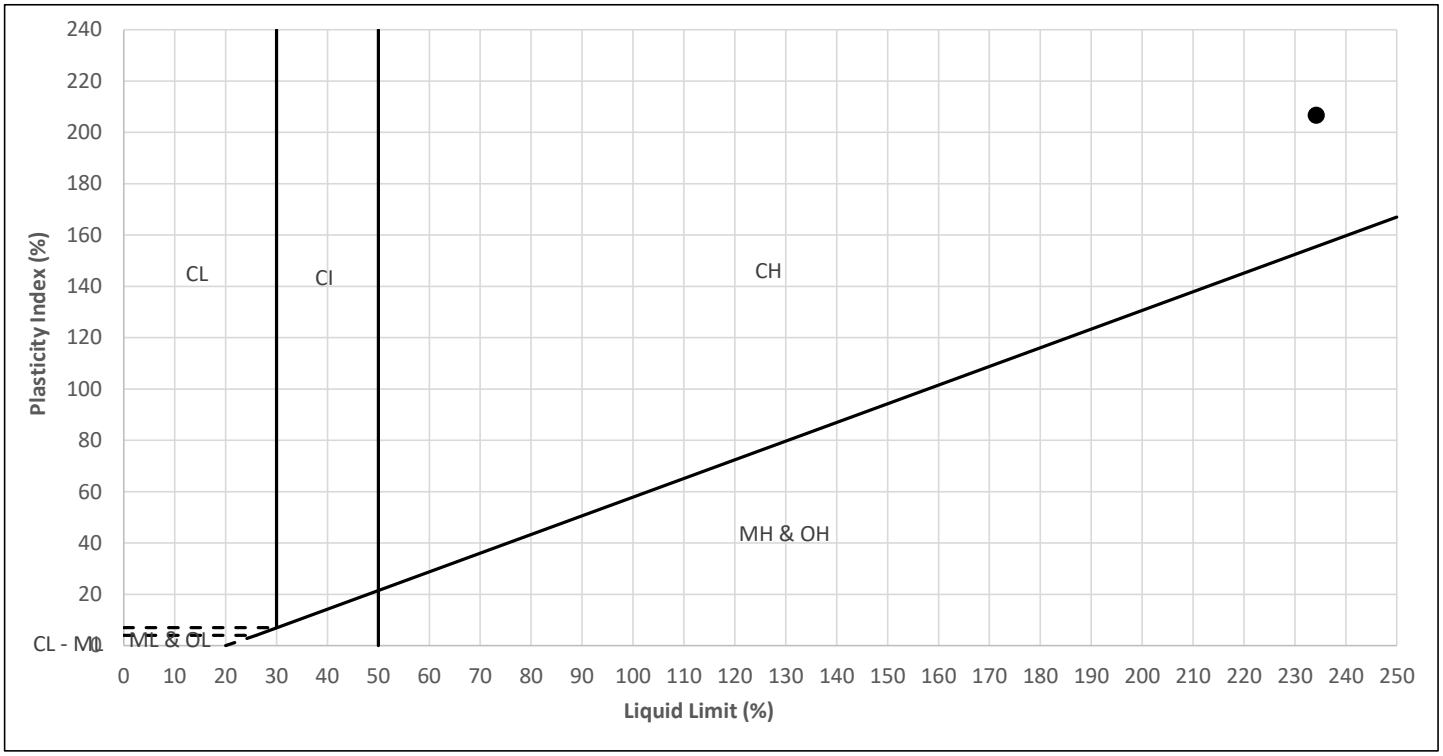
Project:	Snake Lake Reservoir Expansion	**Sample #:**	217RC6
Project No.:	1560-193-00	**Source:**	22CH217
Owner:	EID	**Sample Depth:**	14.6m
File No.:	AL - 217RC6	**Test Date:**	15-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	234.2
Plastic Limit (PL)	27.5
Plasticity Index (PI)	206.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

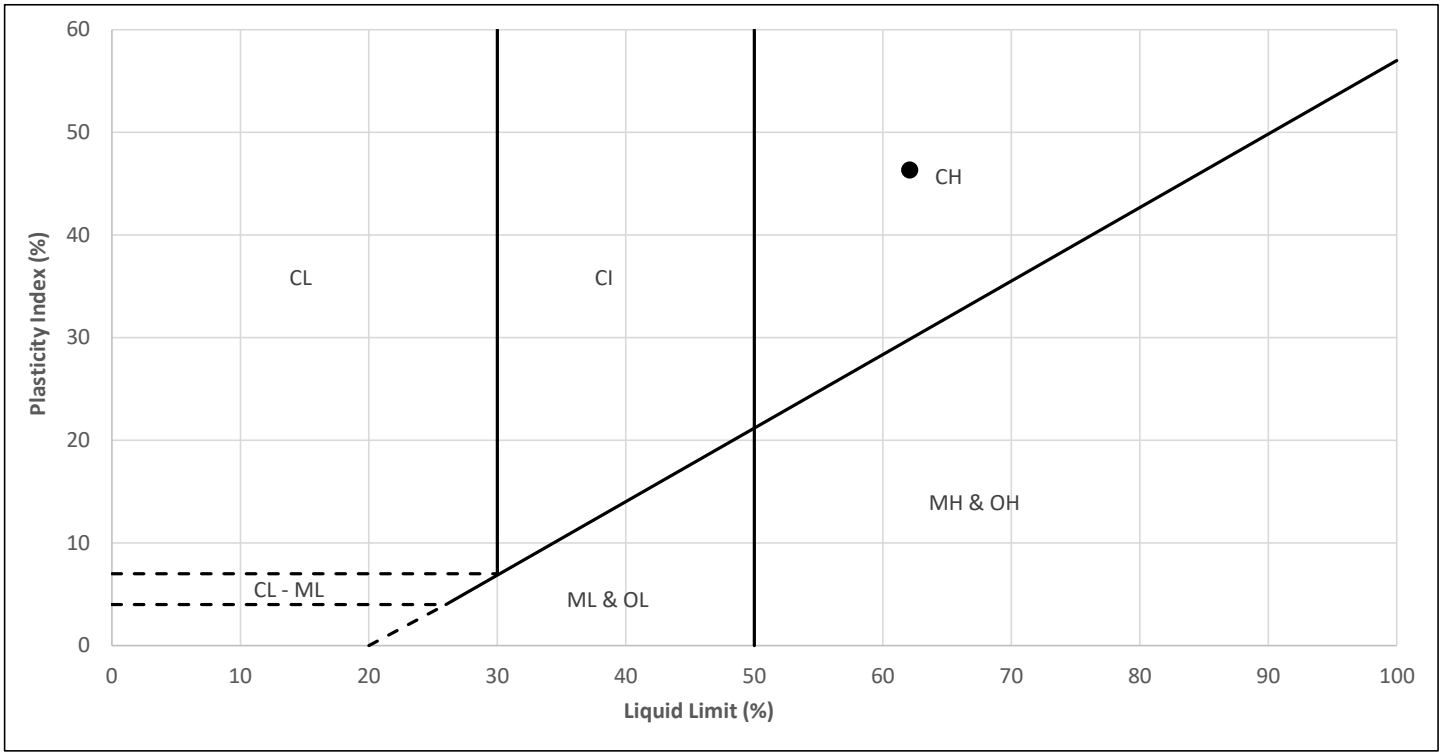
Project:	Snake Lake Reservoir Expansion	**Sample #:**	217RC11
Project No.:	1560-193-00	**Source:**	22CH217
Owner:	EID	**Sample Depth:**	22.0m
File No.:	AL - 217RC11	**Test Date:**	22-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	62.1
Plastic Limit (PL)	15.7
Plasticity Index (PI)	46.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

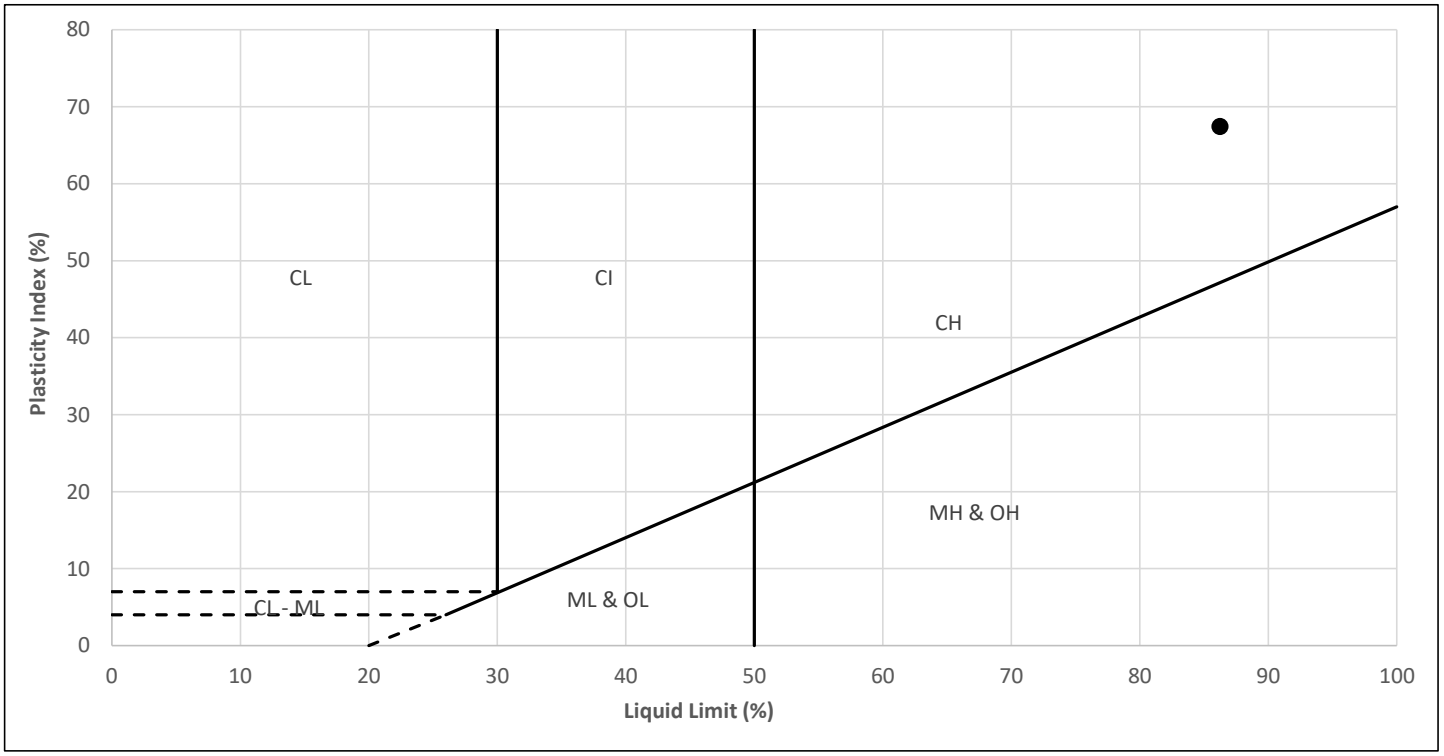
Project:	Snake Lake Reservoir Expansion	**Sample #:**	218RC5
Project No.:	1560-193-00	**Source:**	22CH218
Owner:	EID	**Sample Depth:**	13.1m
File No.:	AL - 218RC5	**Test Date:**	15-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	86.2
Plastic Limit (PL)	18.8
Plasticity Index (PI)	67.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

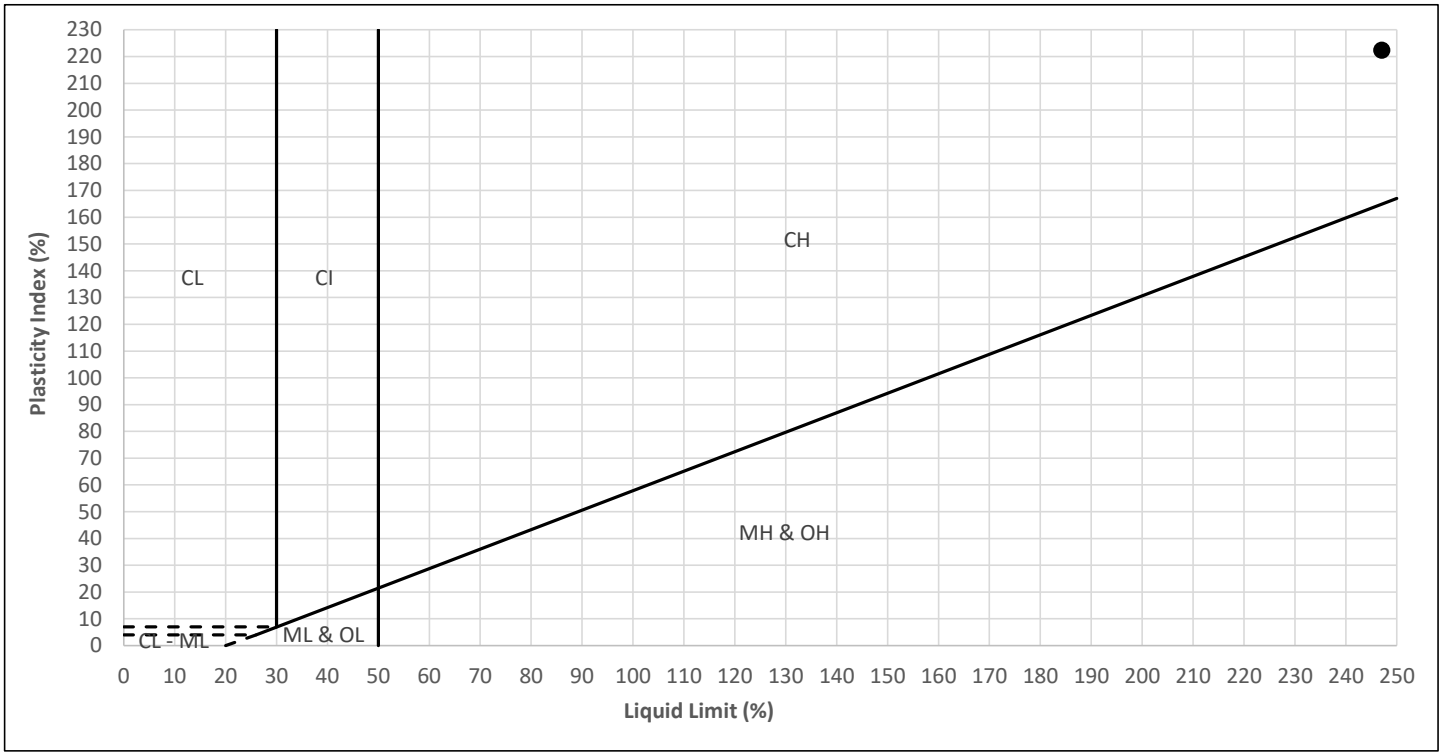
Project:	Snake Lake Reservoir Expansion	**Sample #:**	218RC7
Project No.:	1560-193-00	**Source:**	22CH218
Owner:	EID	**Sample Depth:**	15.4m
File No.:	AL - 218RC7	**Test Date:**	23-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	247.1
Plastic Limit (PL)	24.7
Plasticity Index (PI)	222.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

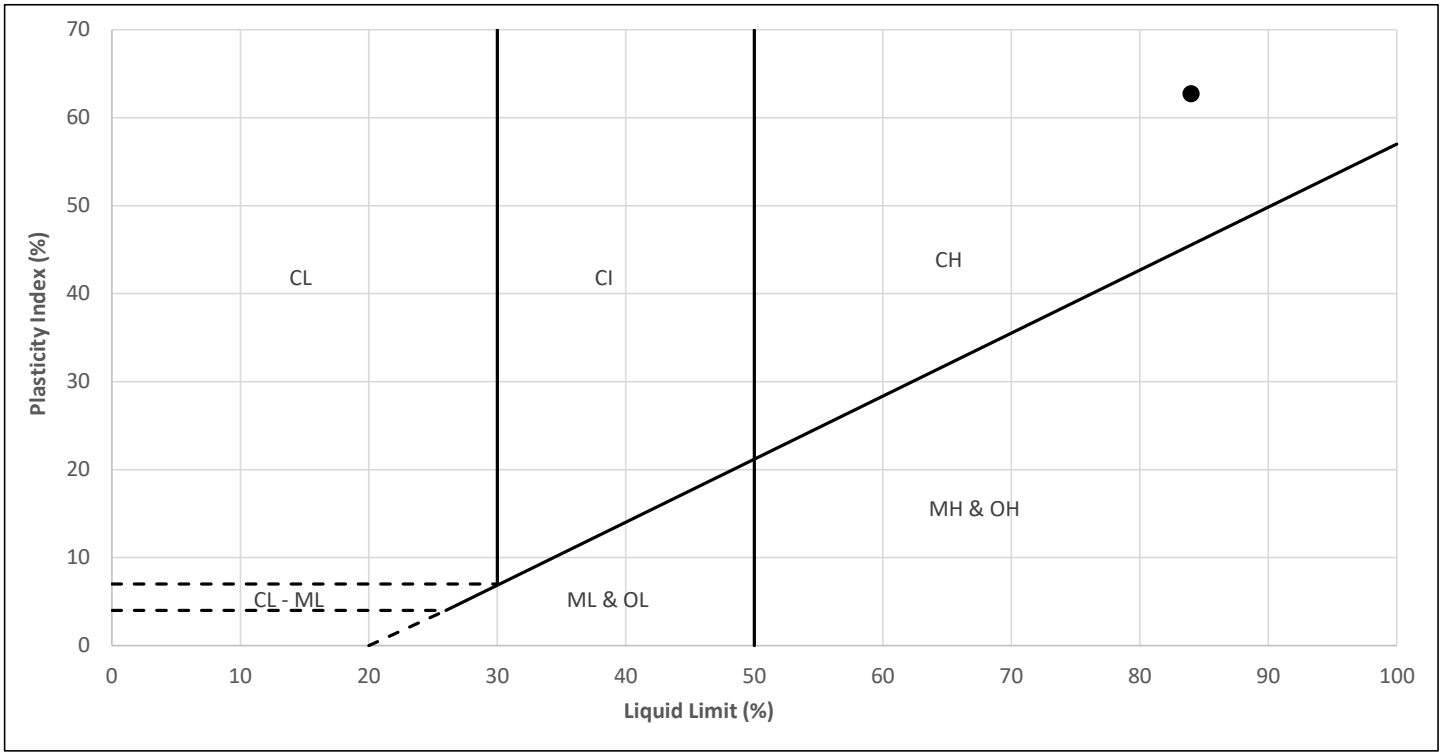
Project:	Snake Lake Reservoir Expansion	**Sample #:**	218RC9
Project No.:	1560-193-00	**Source:**	22CH218
Owner:	EID	**Sample Depth:**	19.2m
File No.:	AL - 218RC9	**Test Date:**	16-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	84.0
Plastic Limit (PL)	21.3
Plasticity Index (PI)	62.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

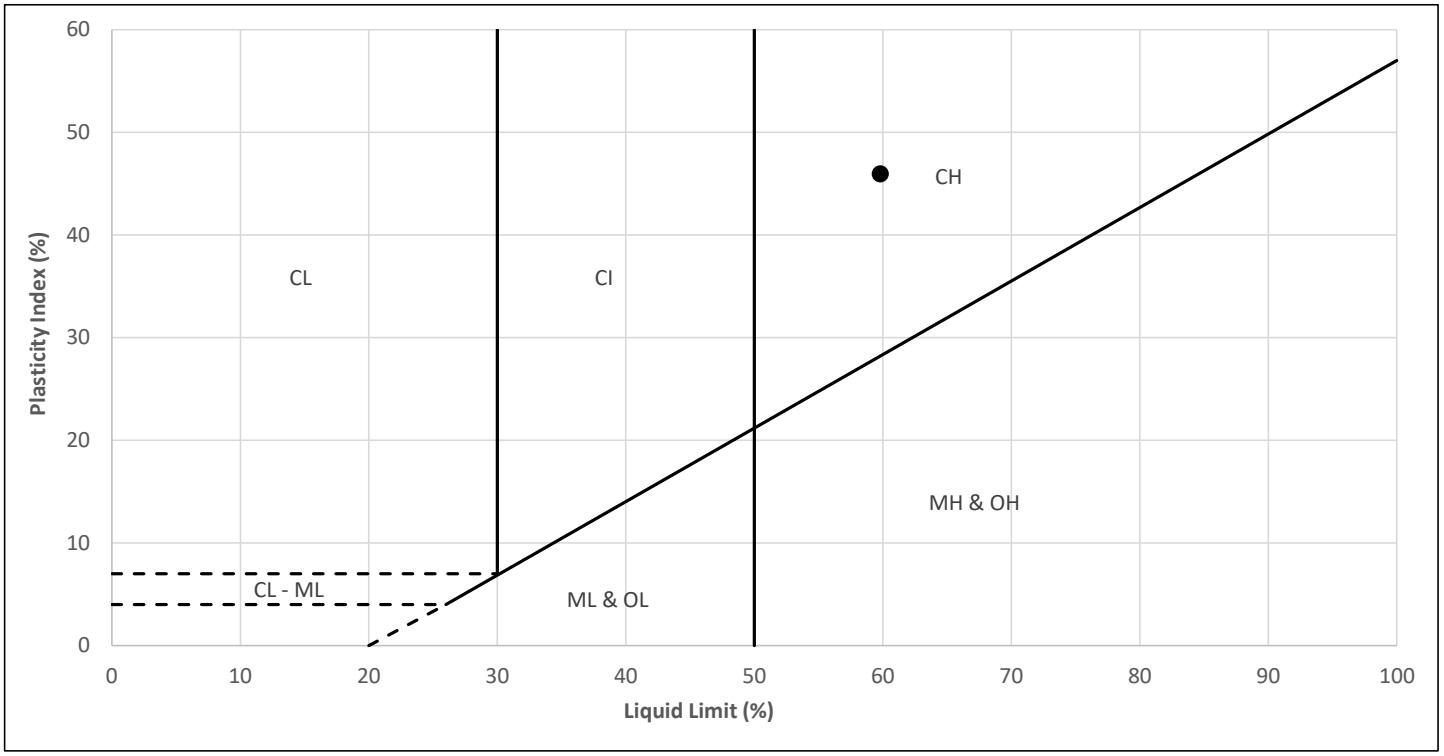
Project:	Snake Lake Reservoir Expansion	**Sample #:**	218RC15
Project No.:	1560-193-00	**Source:**	22CH218
Owner:	EID	**Sample Depth:**	28.0m
File No.:	AL - 218RC15	**Test Date:**	16-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	59.8
Plastic Limit (PL)	13.8
Plasticity Index (PI)	46.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

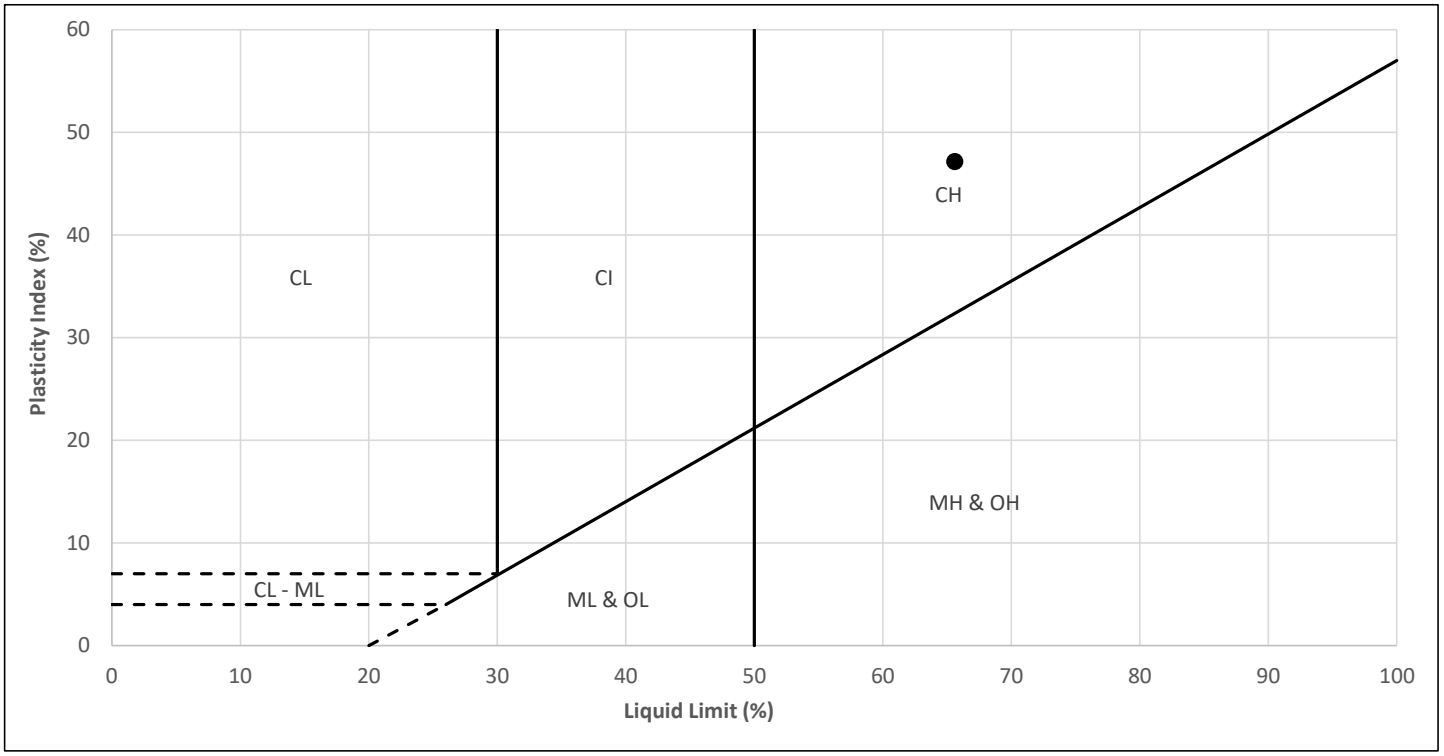
Project:	Snake Lake Reservoir Expansion	**Sample #:**	218UD1
Project No.:	1560-193-00	**Source:**	22CH218
Owner:	EID	**Sample Depth:**	7.5m
File No.:	AL - 218UD1	**Test Date:**	11-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	65.6
Plastic Limit (PL)	18.4
Plasticity Index (PI)	47.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

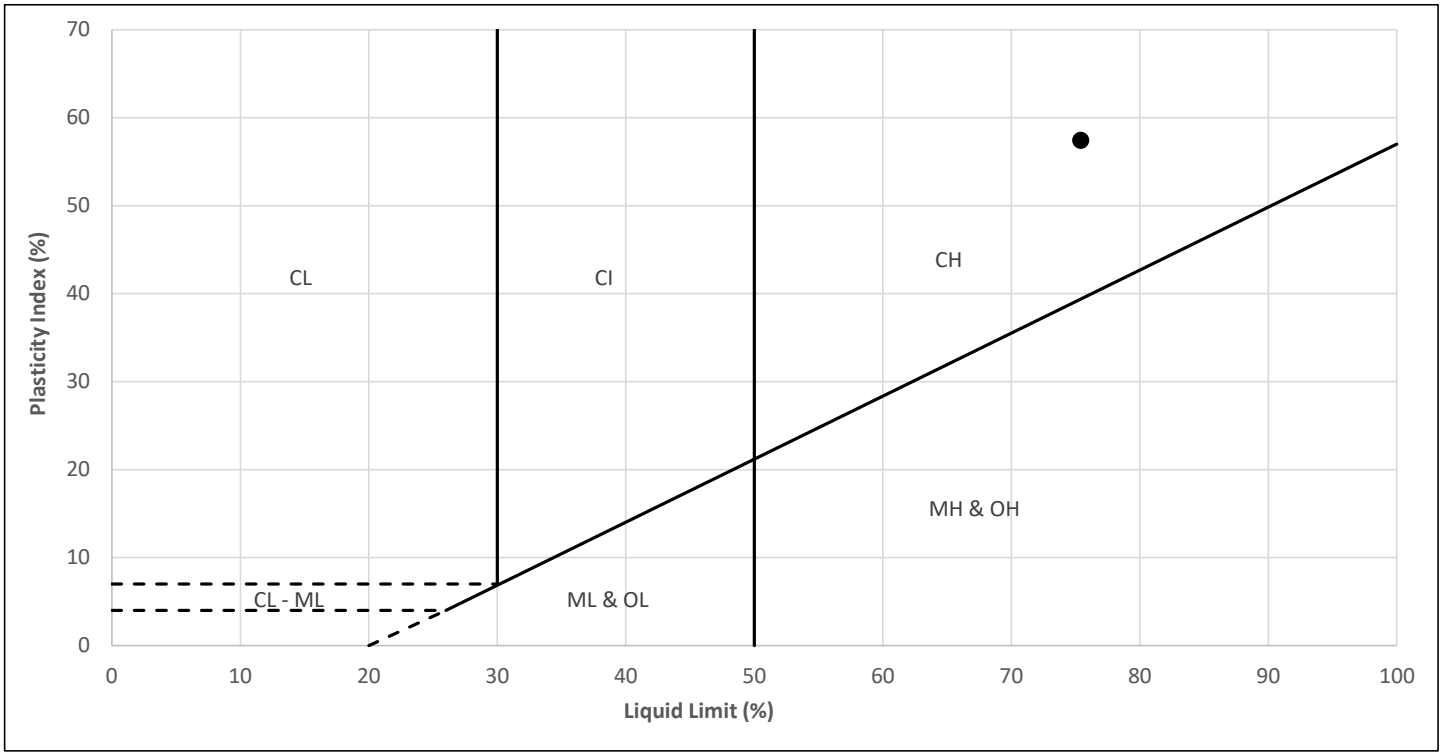
Project:	Snake Lake Reservoir Expansion	**Sample #:**	219AU5
Project No.:	1560-193-00	**Source:**	22BH219
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 219AU5	**Date:**	3-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	75.4
Plastic Limit (PL)	18.0
Plasticity Index (PI)	57.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

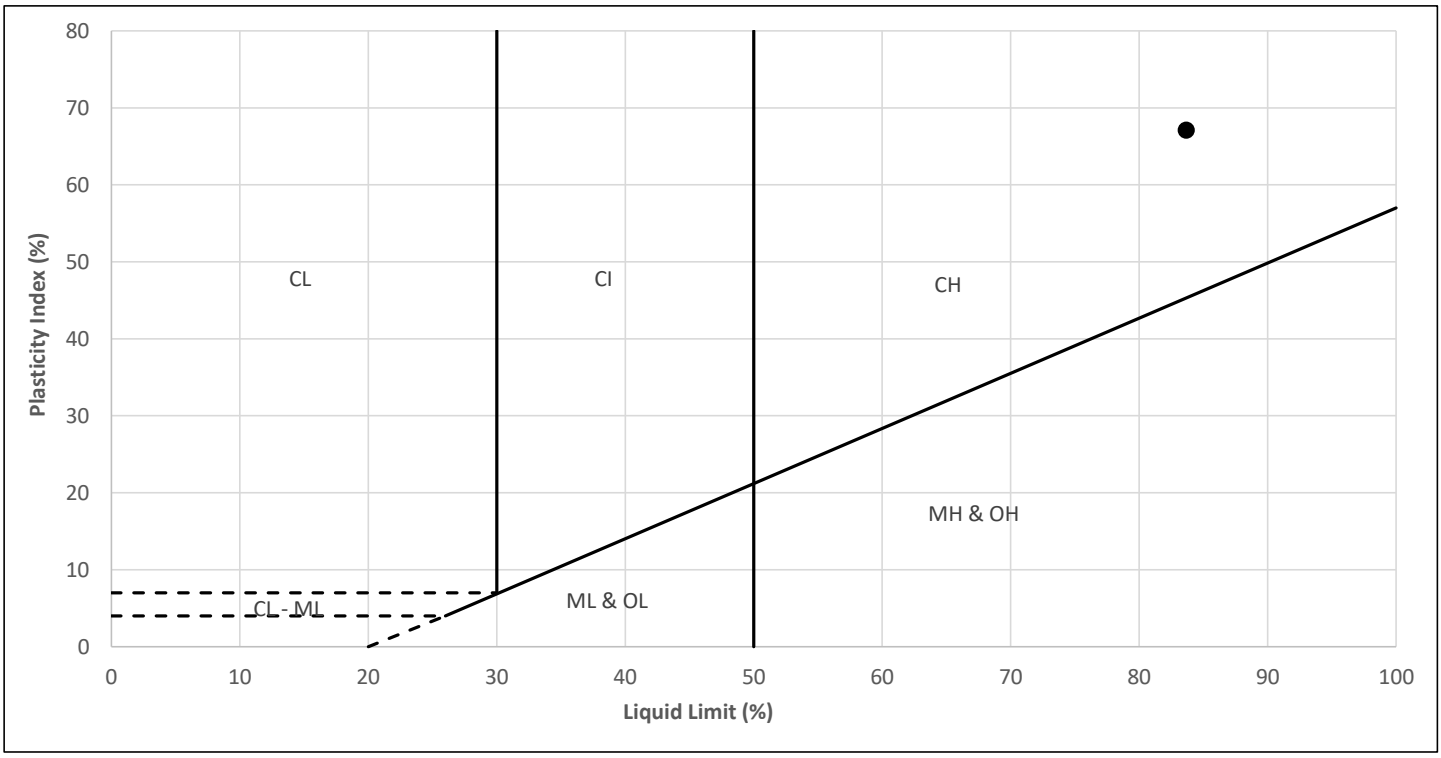
Project:	Snake Lake Reservoir Expansion	**Sample #:**	219RC5
Project No.:	1560-193-00	**Source:**	22CH219
Owner:	EID	**Sample Depth:**	13.3m
File No.:	AL - 219RC5	**Test Date:**	15-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	83.6
Plastic Limit (PL)	16.5
Plasticity Index (PI)	67.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

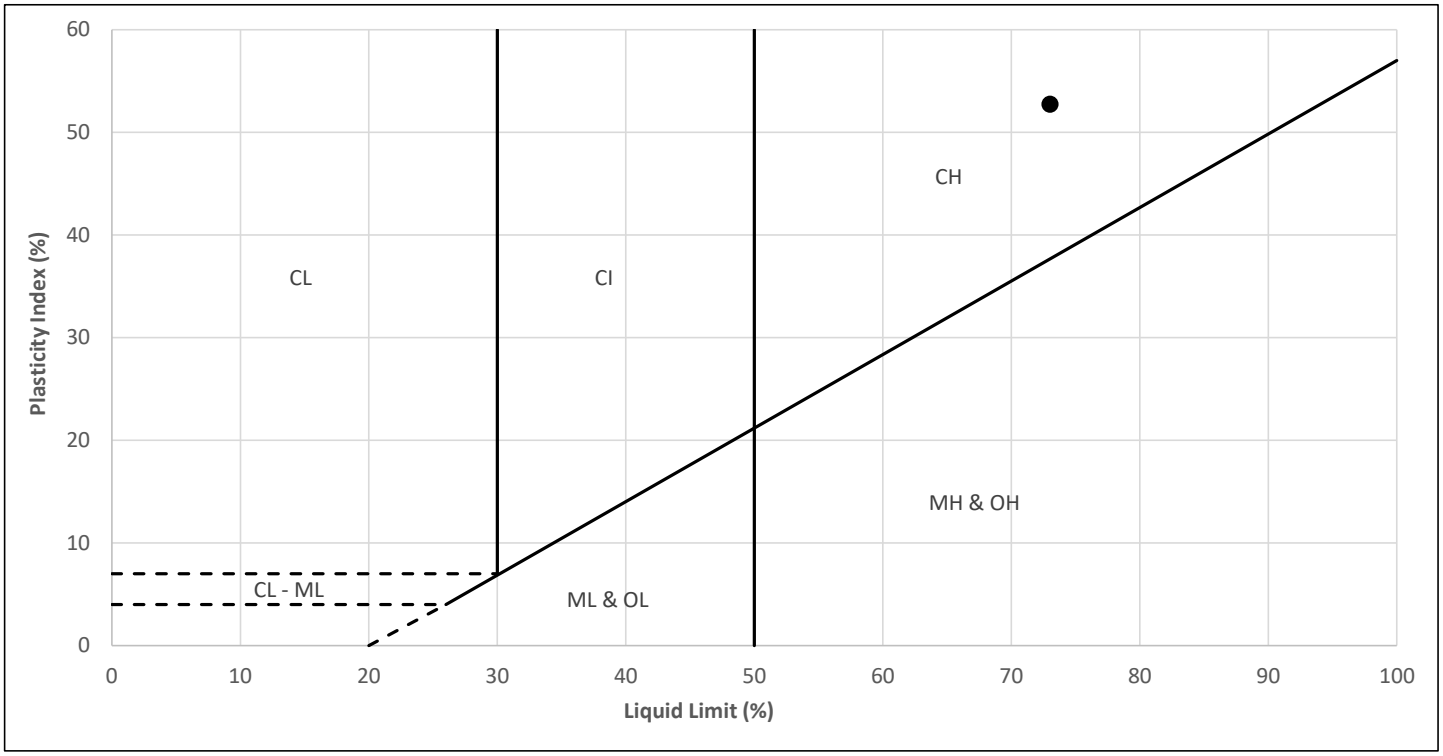
Project:	Snake Lake Reservoir Expansion	**Sample #:**	219RC7
Project No.:	1560-193-00	**Source:**	22CH219
Owner:	EID	**Sample Depth:**	16.3m
File No.:	AL - 219RC7	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	73.0
Plastic Limit (PL)	20.2
Plasticity Index (PI)	52.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

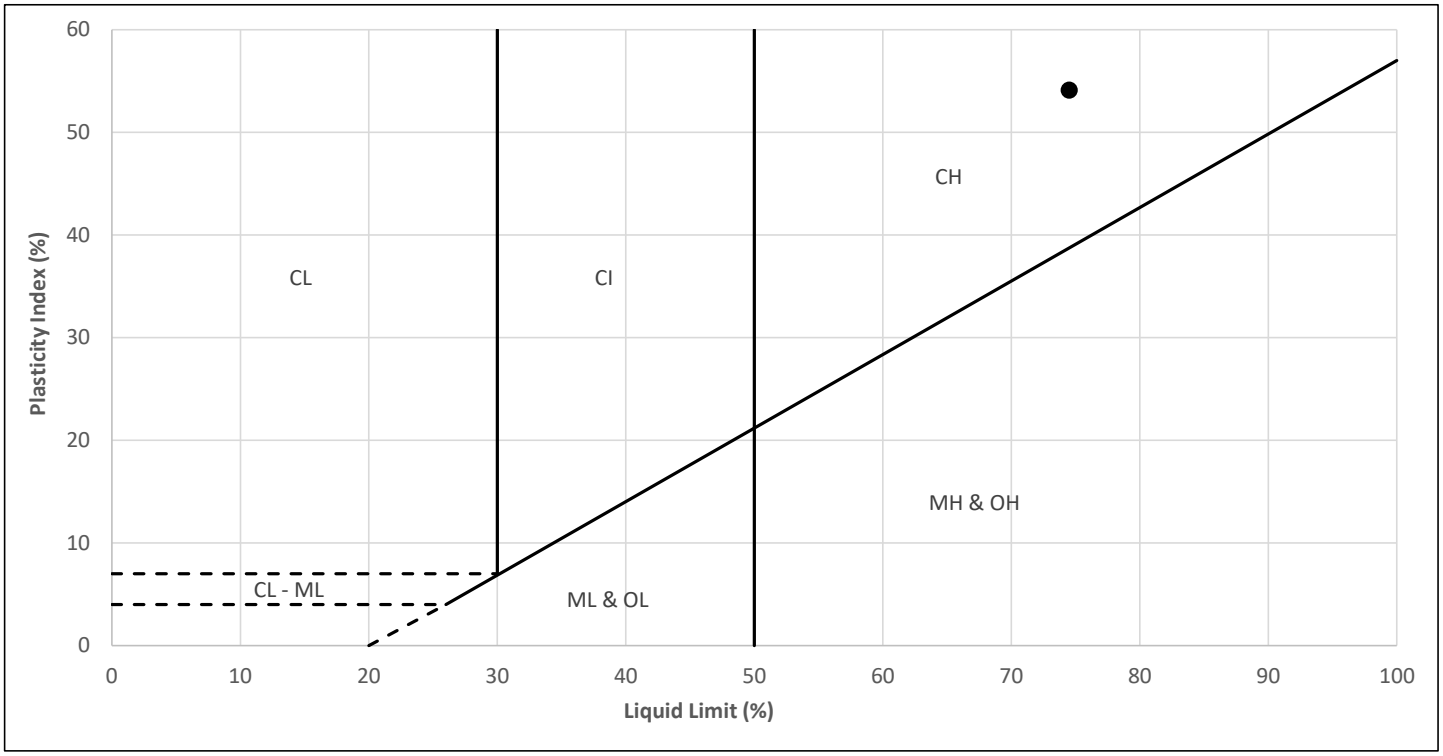
Project:	Snake Lake Reservoir Expansion	**Sample #:**	219RC12 GW
Project No.:	1560-193-00	**Source:**	22CH219
Owner:	EID	**Sample Depth:**	23.3m
File No.:	AL - 219RC12 GW	**Test Date:**	18-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	74.5
Plastic Limit (PL)	20.4
Plasticity Index (PI)	54.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

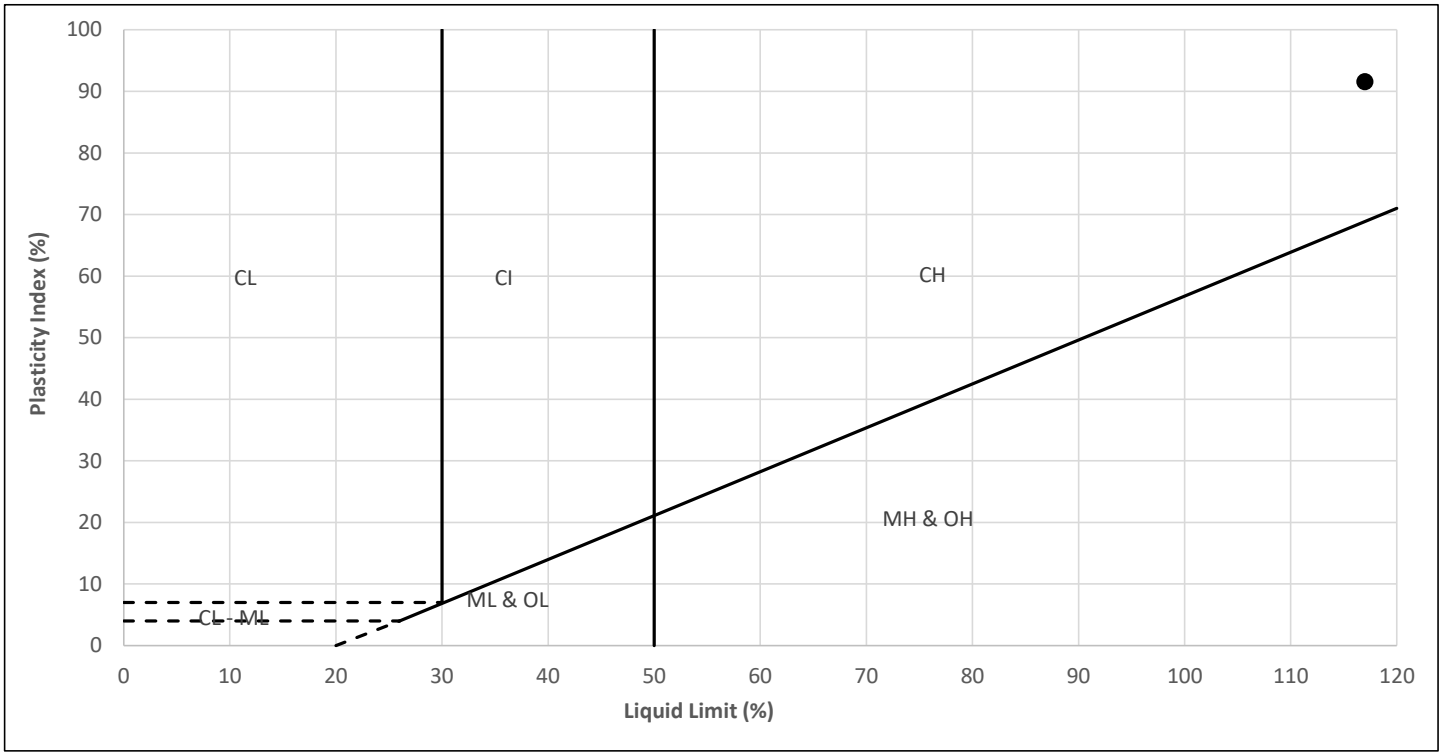
Project:	Snake Lake Reservoir Expansion	**Sample #:**	219RC12
Project No.:	1560-193-00	**Source:**	22CH219
Owner:	EID	**Sample Depth:**	23.3m
File No.:	AL - 219RC12	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	117.0
Plastic Limit (PL)	25.4
Plasticity Index (PI)	91.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

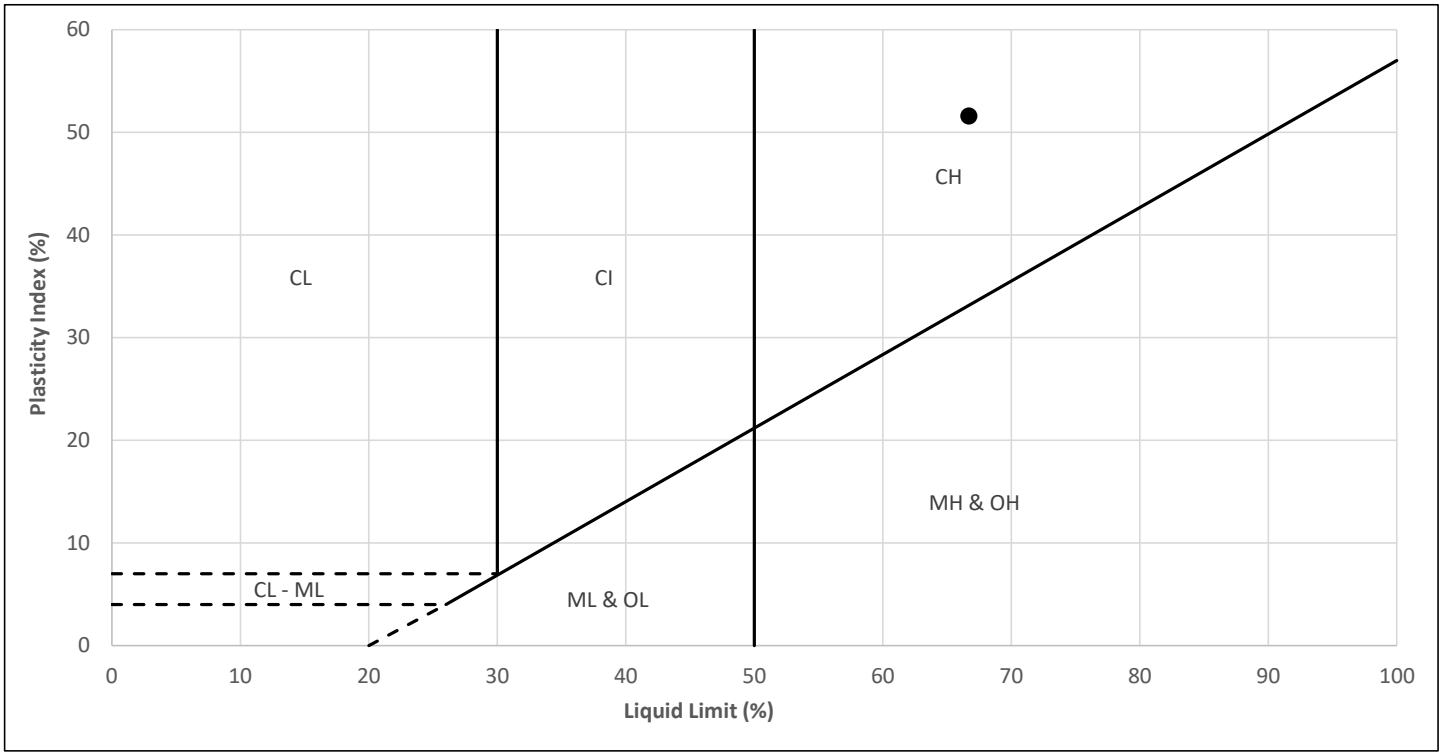
Project:	Snake Lake Reservoir Expansion	**Sample #:**	219RC14
Project No.:	1560-193-00	**Source:**	22CH219
Owner:	EID	**Sample Depth:**	26.6m
File No.:	AL - 219RC14	**Test Date:**	15-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	66.7
Plastic Limit (PL)	15.1
Plasticity Index (PI)	51.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

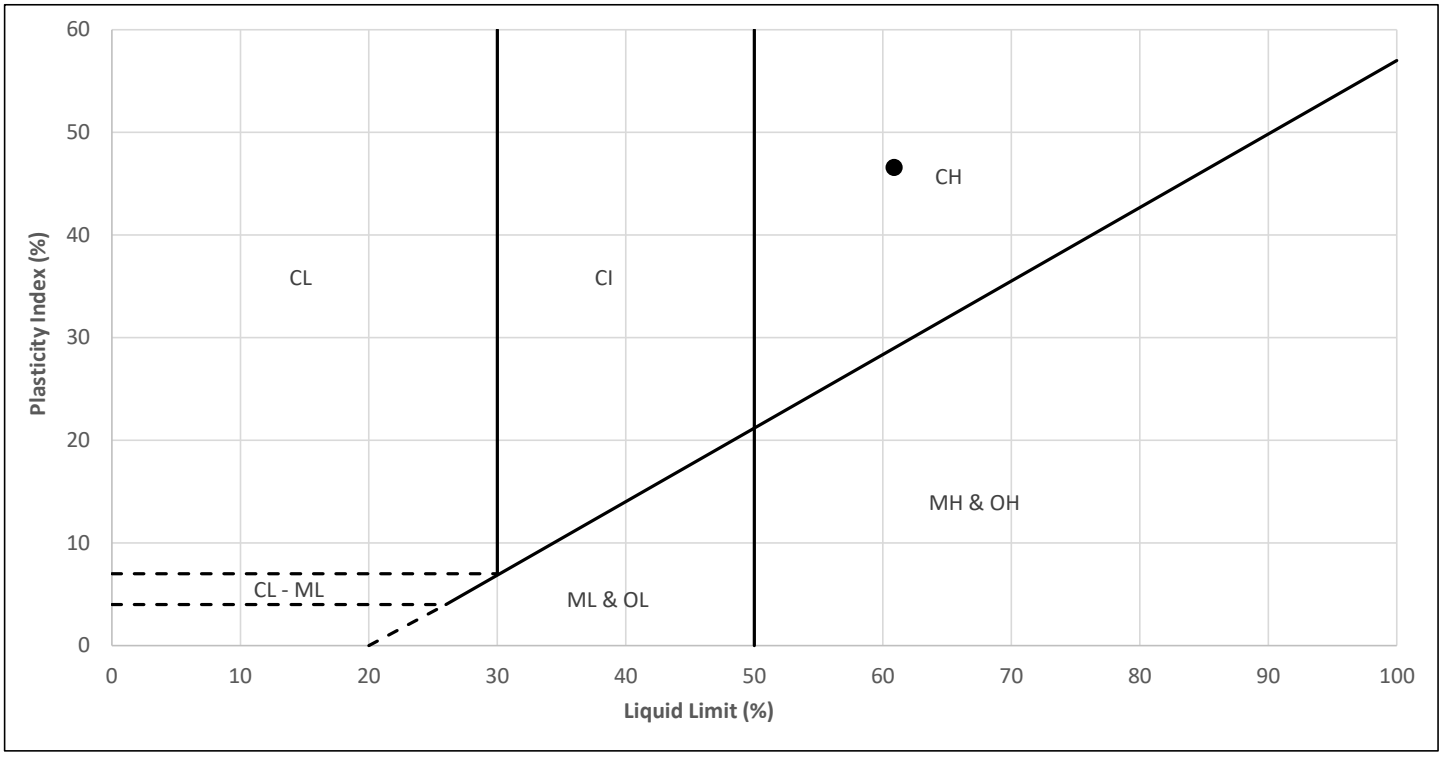
Project:	Snake Lake Reservoir Expansion	**Sample #:**	219RC17
Project No.:	1560-193-00	**Source:**	22CH219
Owner:	EID	**Sample Depth:**	31.5m
File No.:	AL - 219RC17	**Test Date:**	15-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	60.9
Plastic Limit (PL)	14.3
Plasticity Index (PI)	46.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

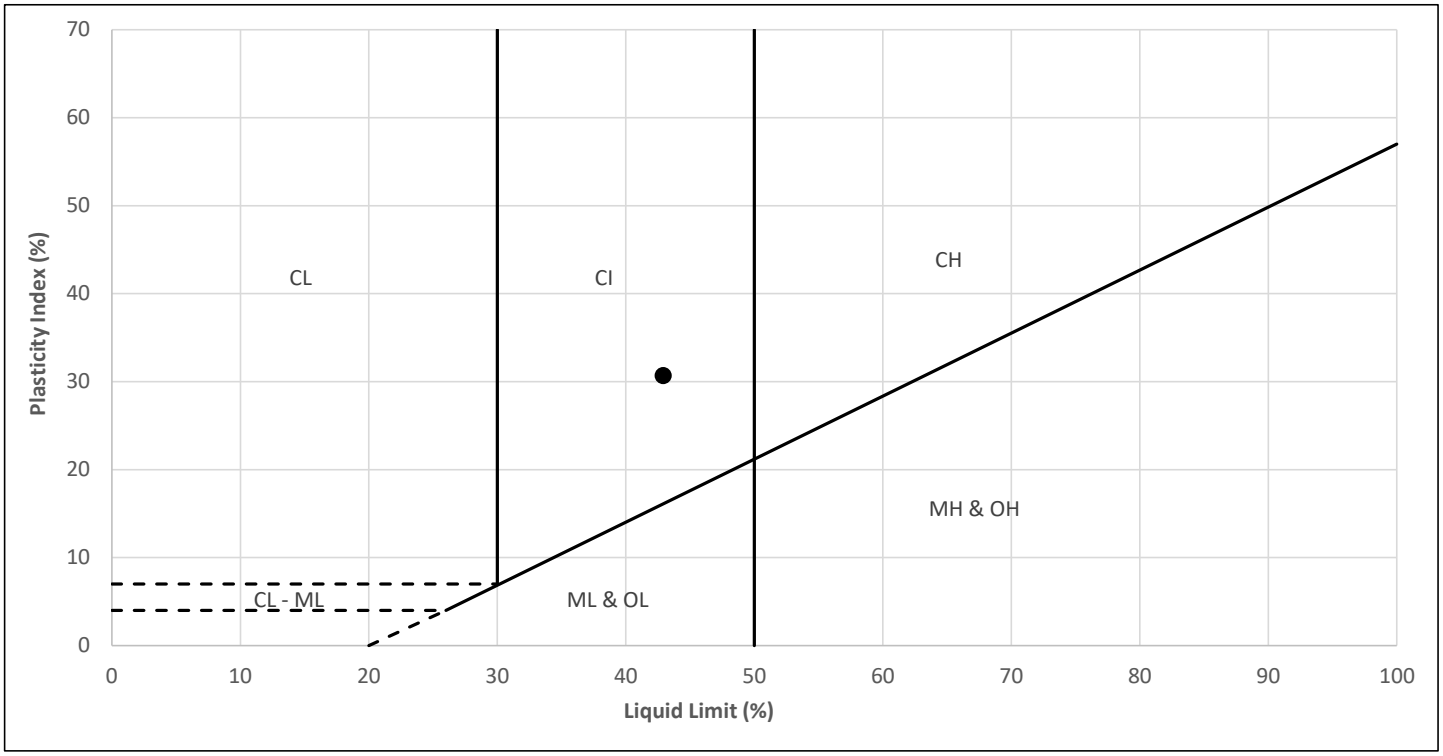
Project:	Snake Lake Reservoir Expansion	**Sample #:**	220AU5
Project No.:	1560-193-00	**Source:**	22BH220
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 220AU5	**Date:**	3-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	42.9
Plastic Limit (PL)	12.2
Plasticity Index (PI)	30.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

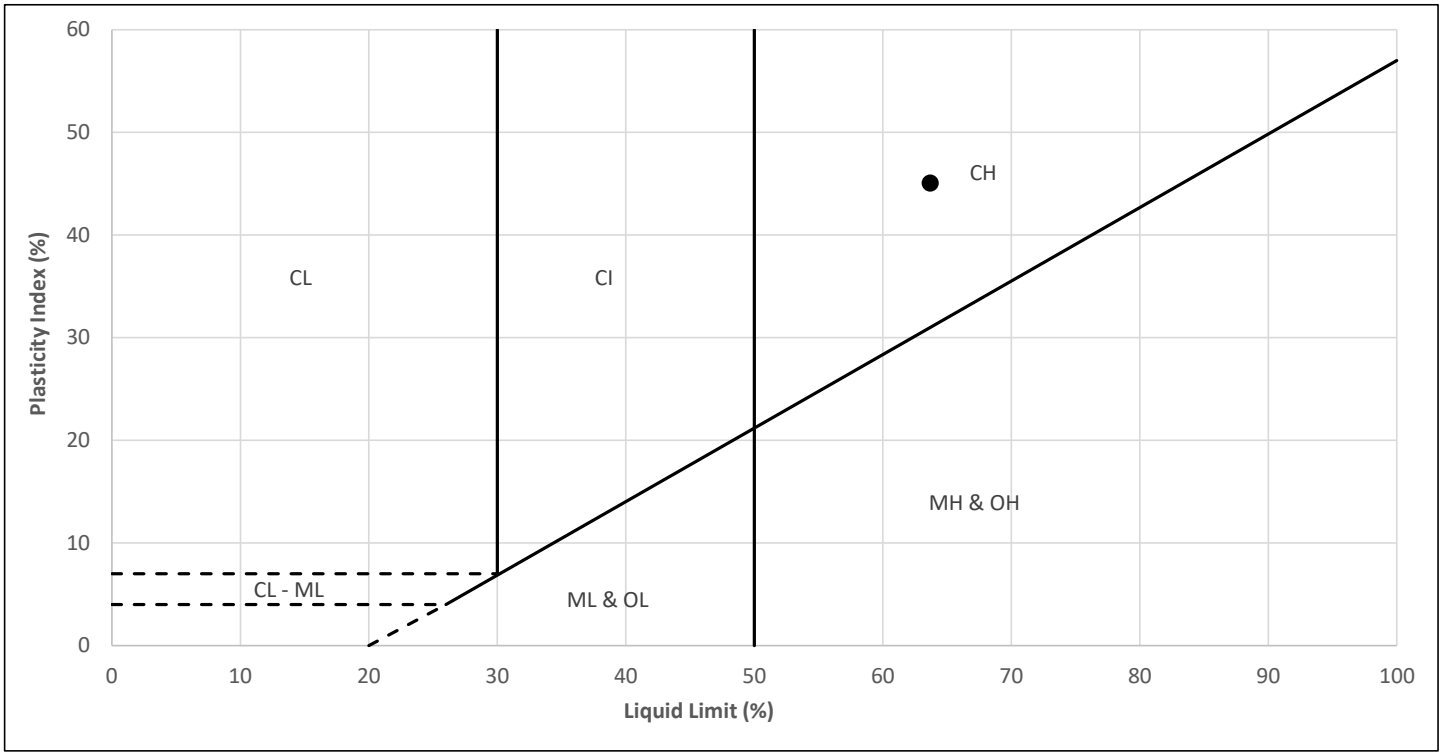
Project:	Snake Lake Reservoir Expansion	**Sample #:**	220RC4
Project No.:	1560-193-00	**Source:**	22CH220
Owner:	EID	**Sample Depth:**	9.2m
File No.:	AL - 220RC4	**Test Date:**	3-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	63.7
Plastic Limit (PL)	18.6
Plasticity Index (PI)	45.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

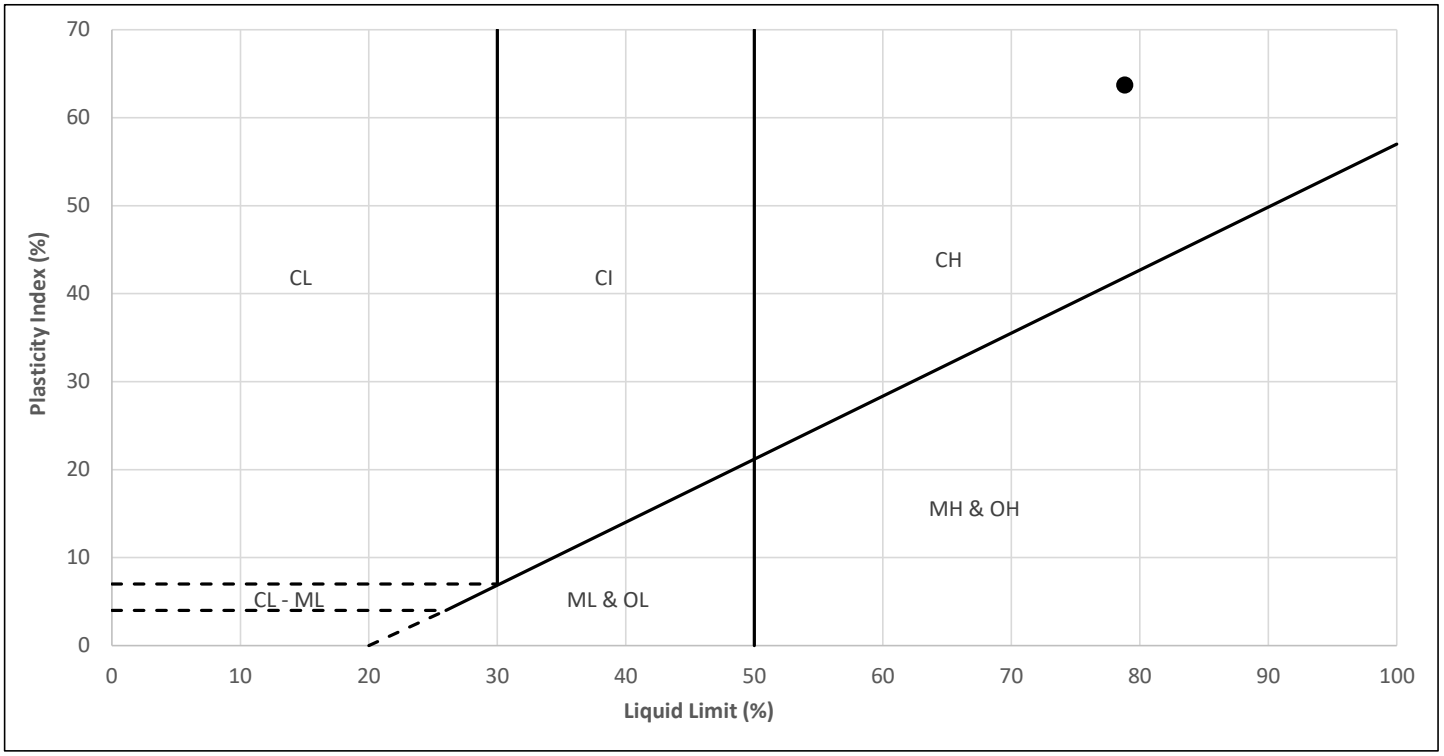
Project:	Snake Lake Reservoir Expansion	**Sample #:**	220UD2
Project No.:	1560-193-00	**Source:**	22CH220
Owner:	EID	**Sample Depth:**	11.0m
File No.:	AL - 220UD2	**Test Date:**	10-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	78.8
Plastic Limit (PL)	15.1
Plasticity Index (PI)	63.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

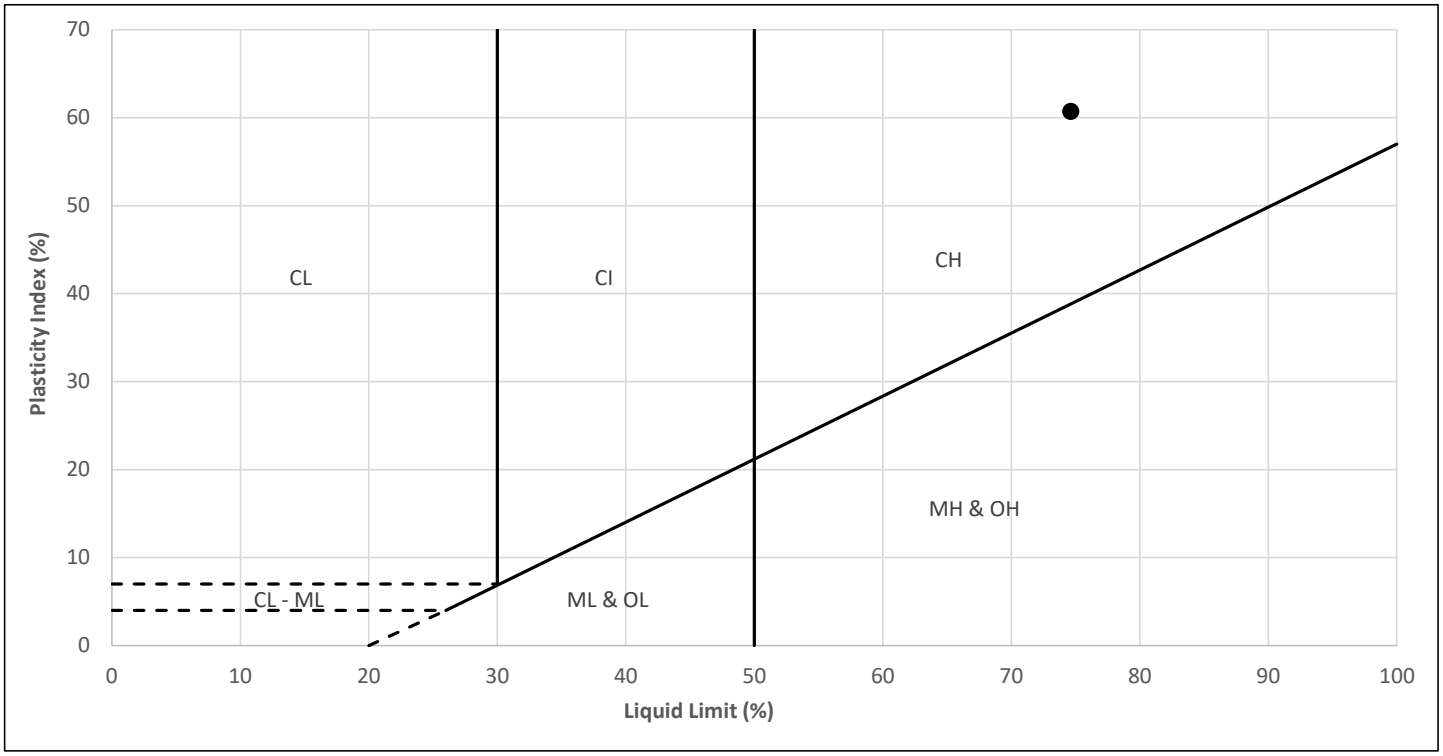
Project:	Snake Lake Reservoir Expansion	**Sample #:**	220UD5
Project No.:	1560-193-00	**Source:**	22CH220
Owner:	EID	**Sample Depth:**	21.3m
File No.:	AL - 220UD5	**Test Date:**	10-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	74.6
Plastic Limit (PL)	13.9
Plasticity Index (PI)	60.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

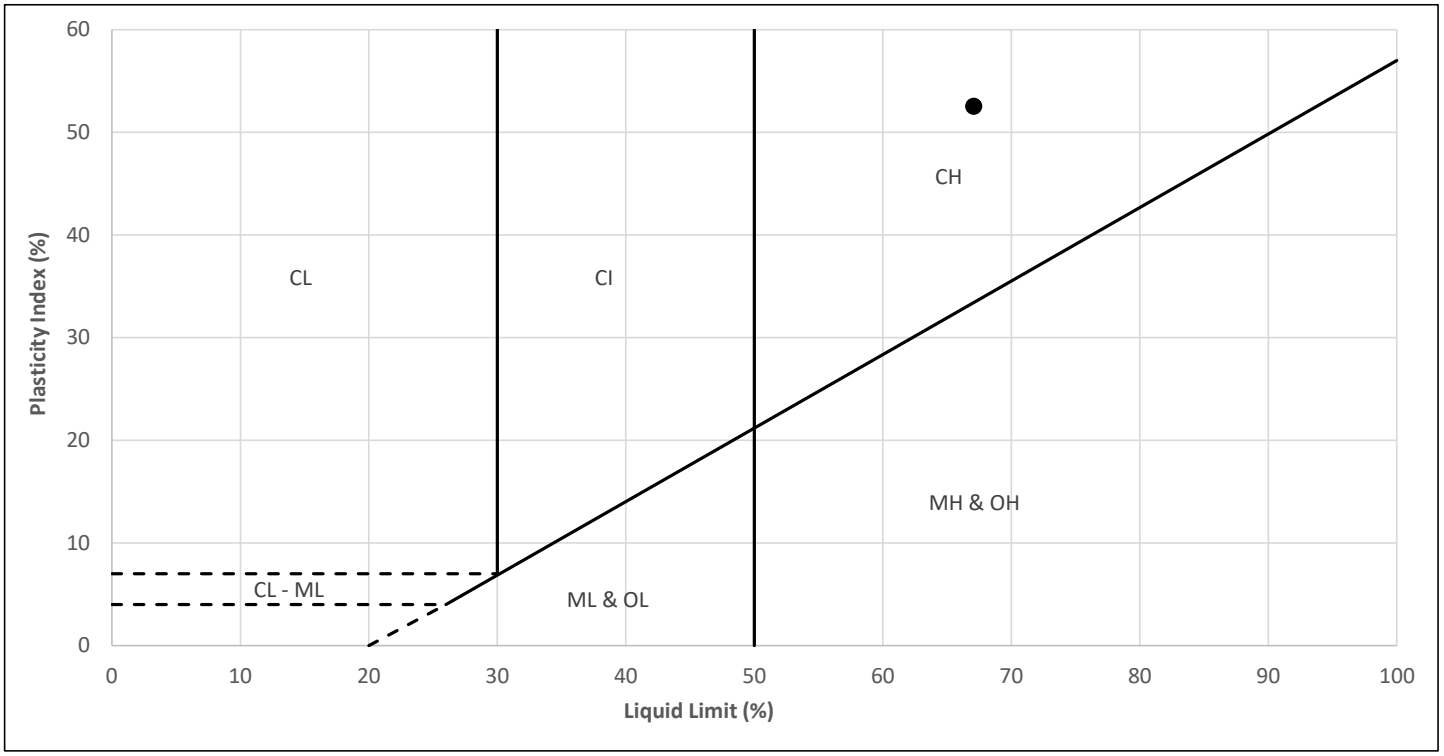
Project:	Snake Lake Reservoir Expansion	**Sample #:**	220UD6
Project No.:	1560-193-00	**Source:**	22CH220
Owner:	EID	**Sample Depth:**	26.0m
File No.:	AL - 220UD6	**Test Date:**	10-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	67.1
Plastic Limit (PL)	14.5
Plasticity Index (PI)	52.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

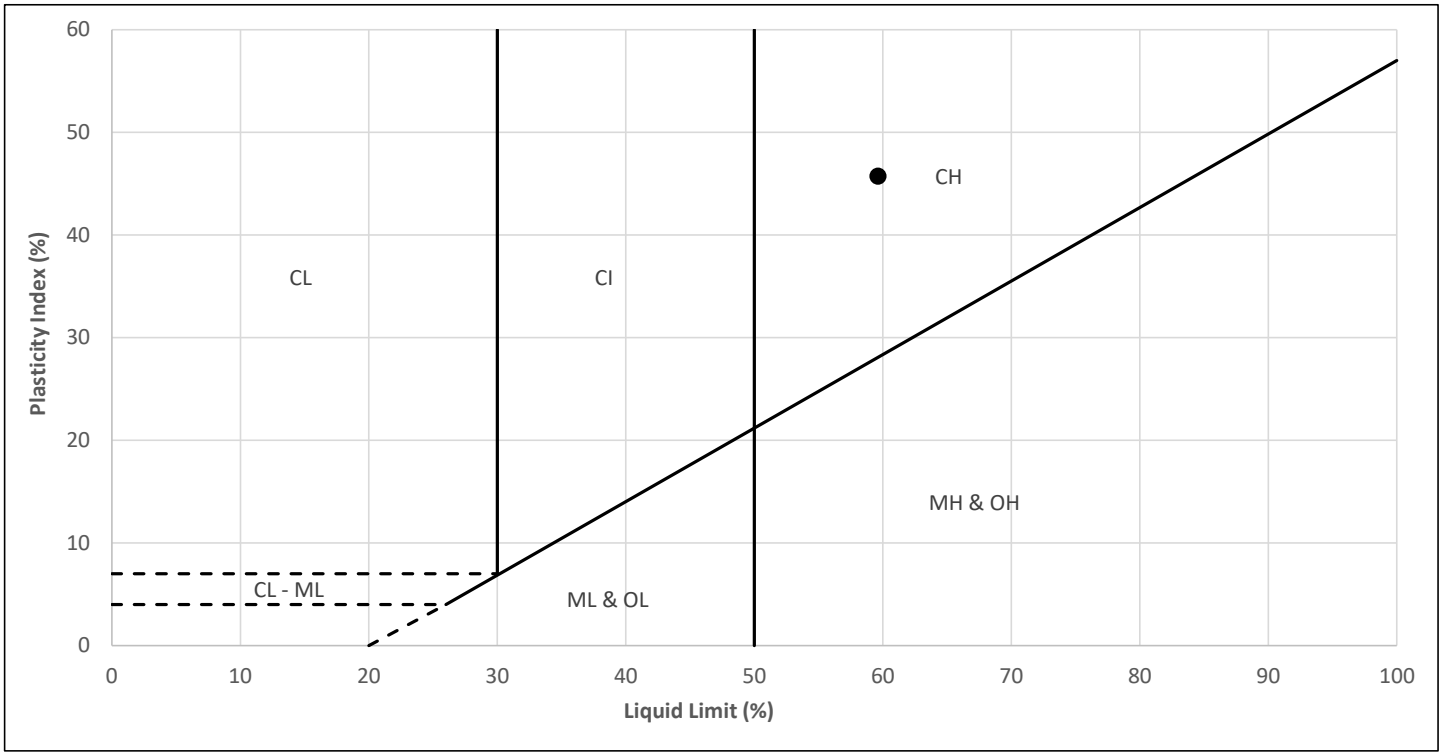
Project:	Snake Lake Reservoir Expansion	**Sample #:**	220UD8
Project No.:	1560-193-00	**Source:**	22CH220
Owner:	EID	**Sample Depth:**	32.5m
File No.:	AL - 220UD8	**Test Date:**	10-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	59.6
Plastic Limit (PL)	13.9
Plasticity Index (PI)	45.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

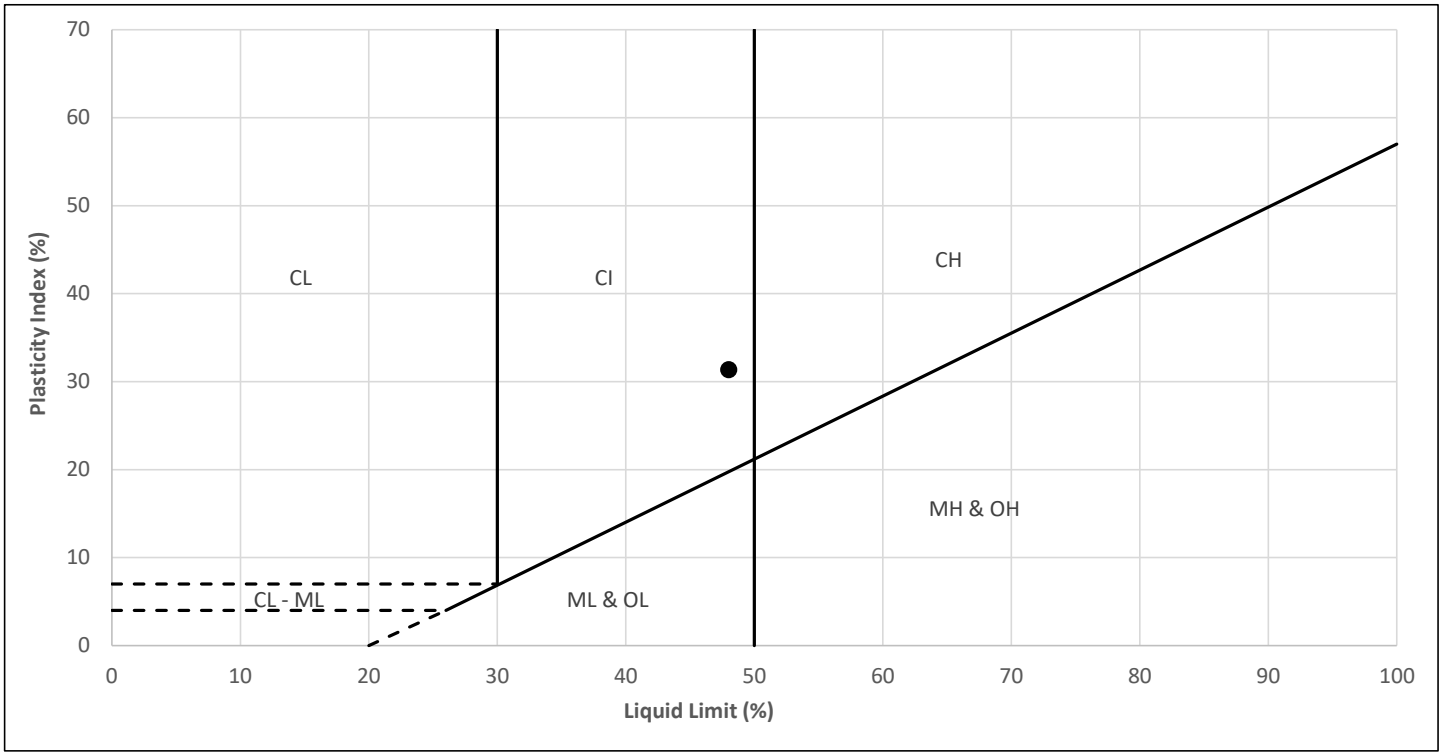
Project:	Snake Lake Reservoir Expansion	**Sample #:**	221AU5
Project No.:	1560-193-00	**Source:**	22BH221
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 221AU5	**Date:**	3-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	48.0
Plastic Limit (PL)	16.6
Plasticity Index (PI)	31.4

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

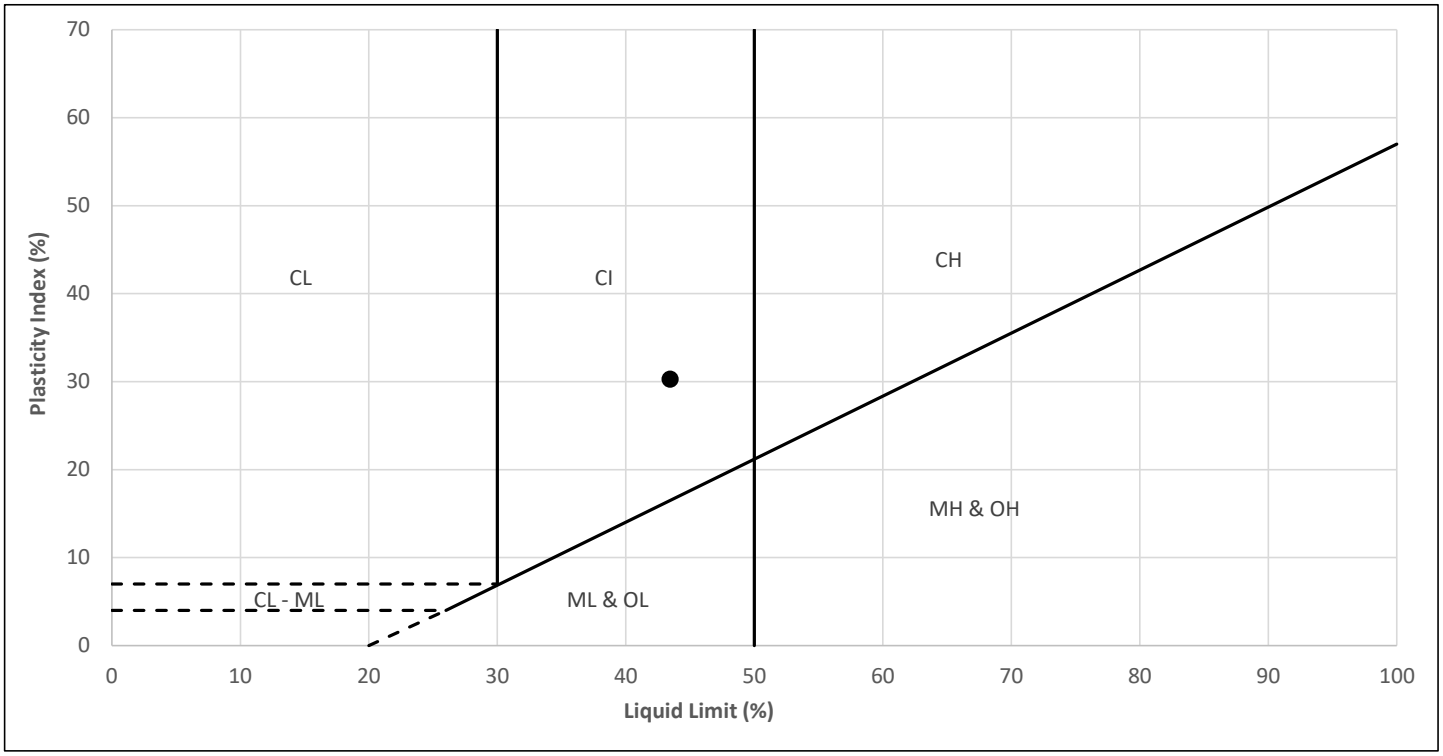
Project:	Snake Lake Reservoir Expansion	**Sample #:**	221AU6
Project No.:	1560-193-00	**Source:**	22BH221
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 221AU6	**Date:**	3-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	43.4
Plastic Limit (PL)	13.1
Plasticity Index (PI)	30.3

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

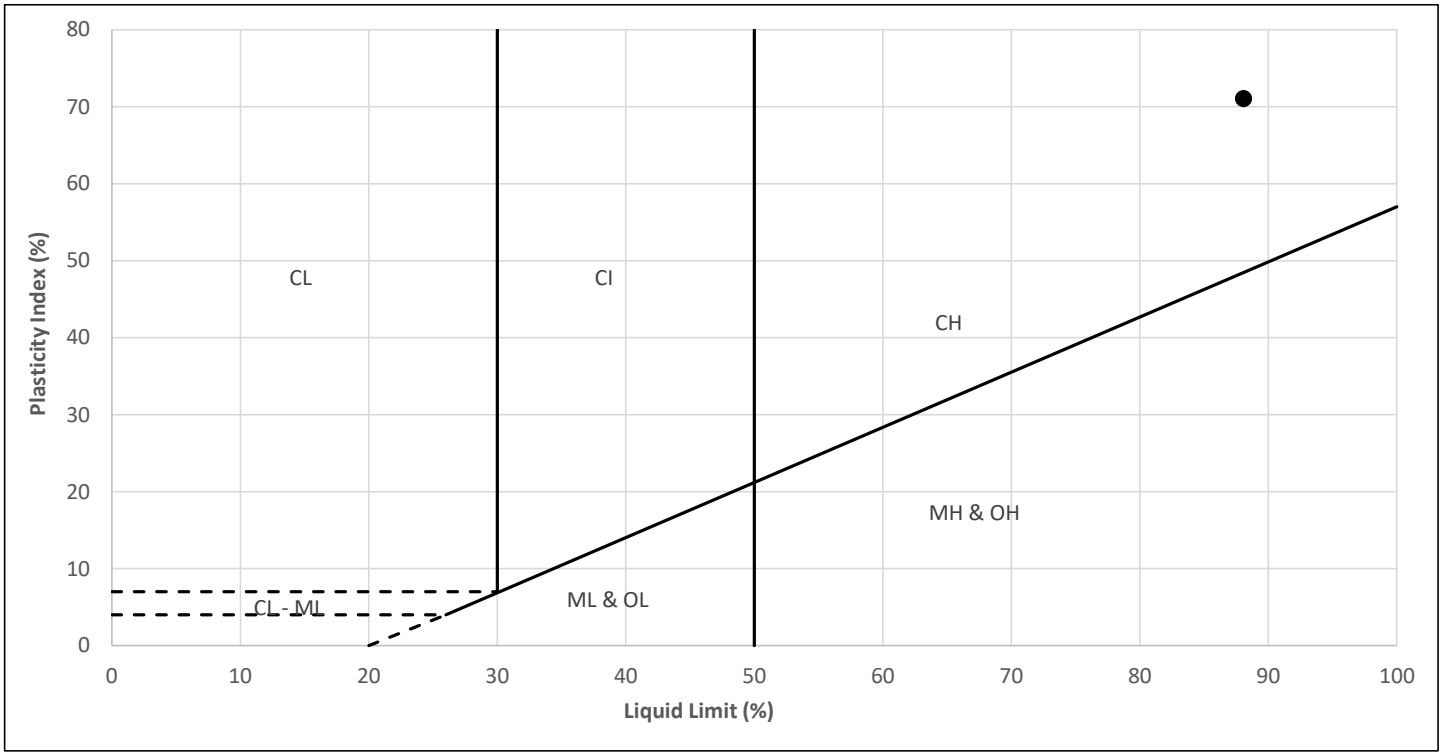
Project:	Snake Lake Reservoir Expansion	**Sample #:**	221RC2
Project No.:	1560-193-00	**Source:**	22CH221
Owner:	EID	**Sample Depth:**	8.8m
File No.:	AL - 221RC2	**Test Date:**	10-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	88.1
Plastic Limit (PL)	17.0
Plasticity Index (PI)	71.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

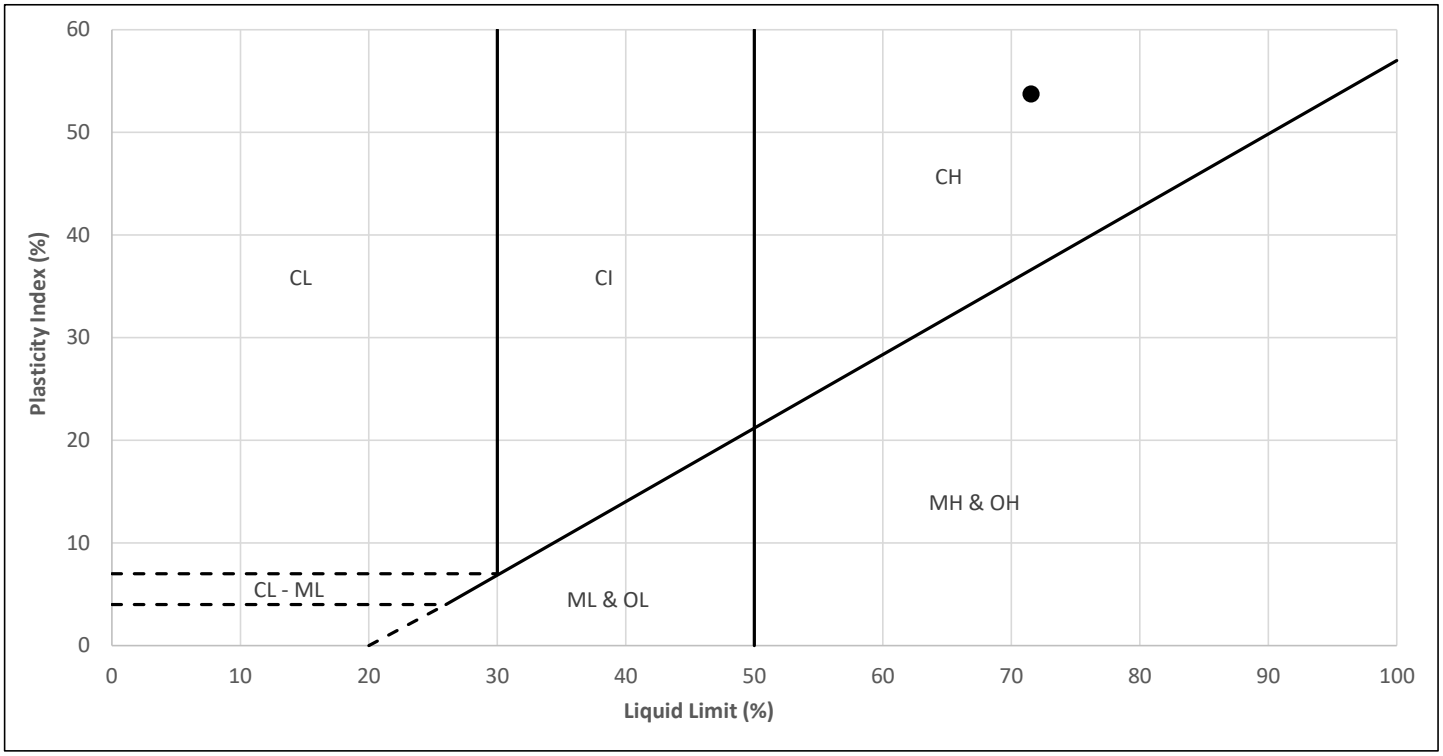
Project:	Snake Lake Reservoir Expansion	**Sample #:**	221UD4
Project No.:	1560-193-00	**Source:**	22CH221
Owner:	EID	**Sample Depth:**	16.4m
File No.:	AL - 221UD4	**Test Date:**	10-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	71.5
Plastic Limit (PL)	17.8
Plasticity Index (PI)	53.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

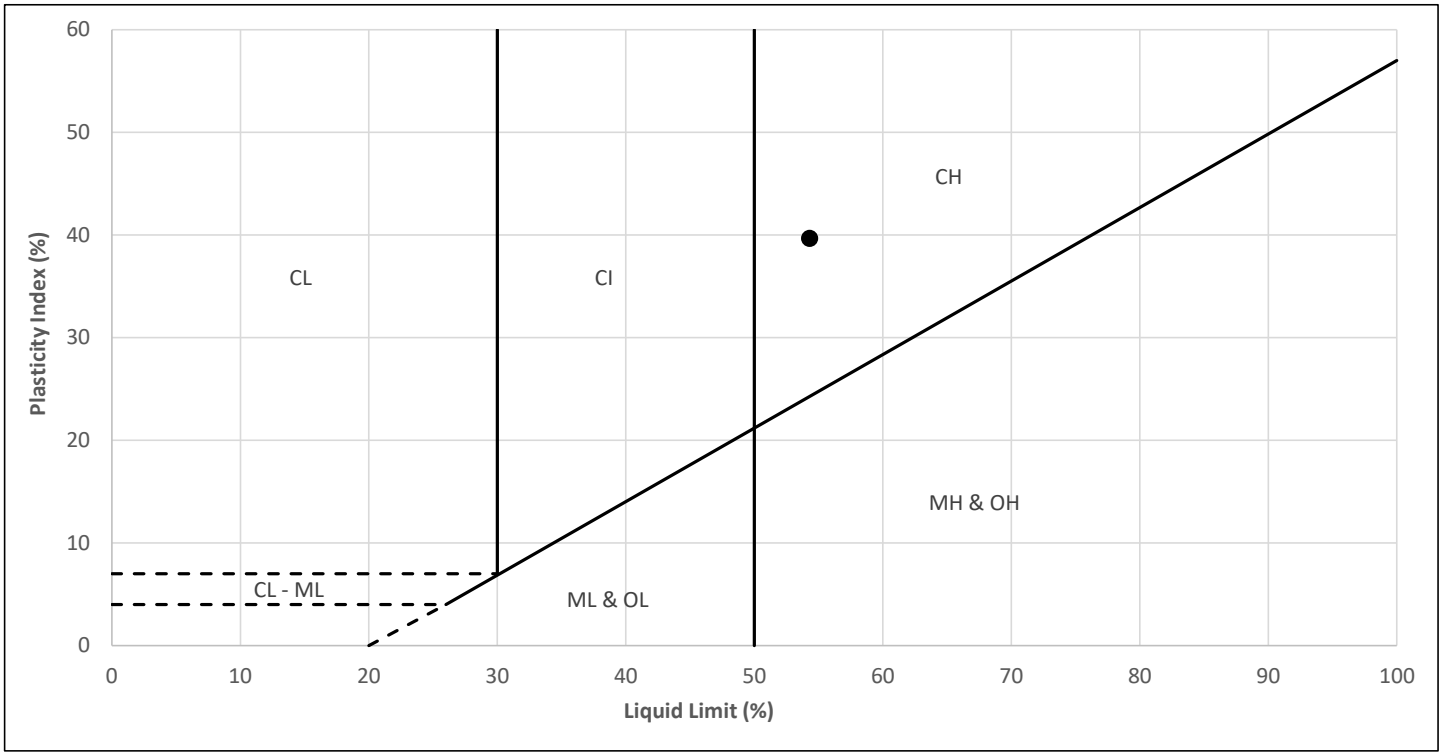
Project:	Snake Lake Reservoir Expansion	**Sample #:**	222AU8
Project No.:	1560-193-00	**Source:**	22BH222
Owner:	EID	**Sample Depth:**	5.8m
File No.:	AL - 222AU8	**Test Date:**	14-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.3
Plastic Limit (PL)	14.6
Plasticity Index (PI)	39.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

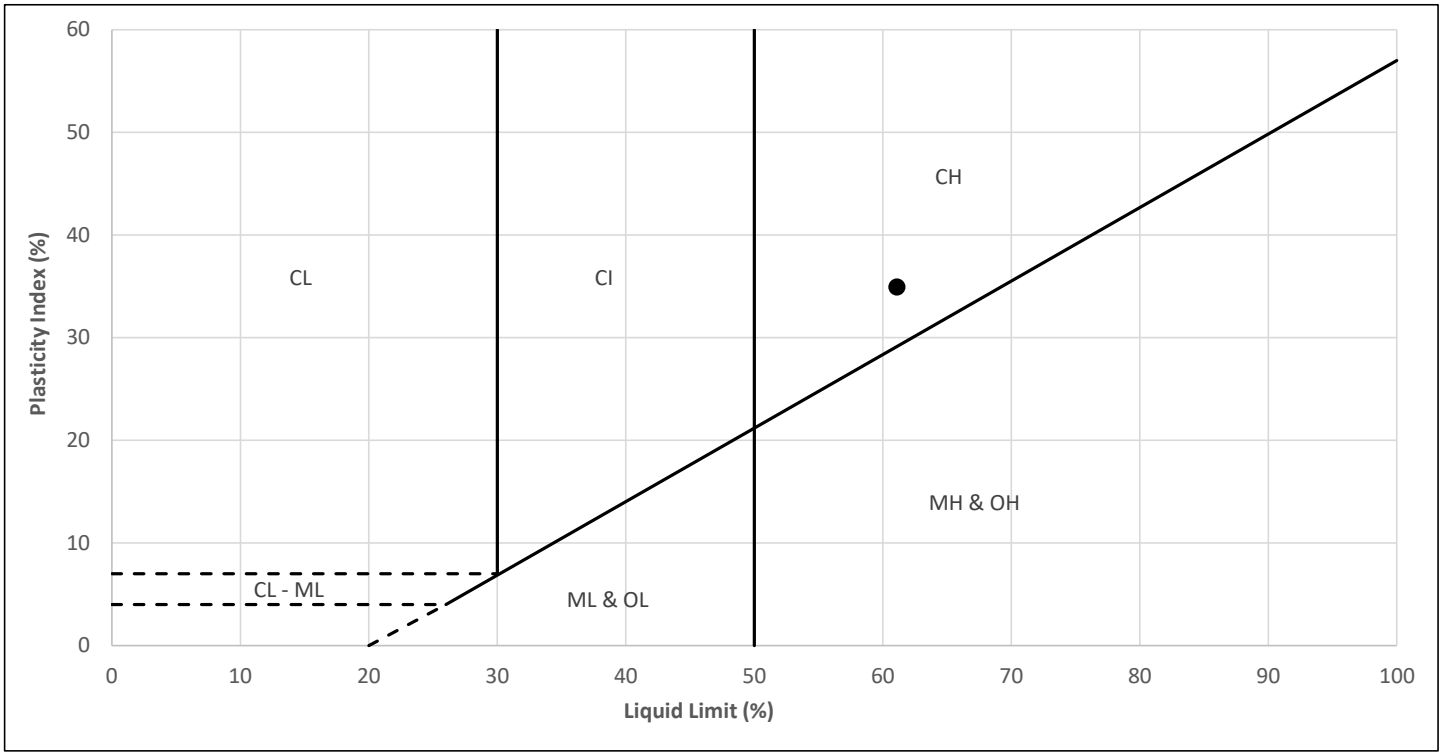
Project:	Snake Lake Reservoir Expansion	**Sample #:**	222UD1
Project No.:	1560-193-00	**Source:**	22CH222
Owner:	EID	**Sample Depth:**	7.1m
File No.:	AL - 222UD1	**Test Date:**	4-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	61.1
Plastic Limit (PL)	26.2
Plasticity Index (PI)	34.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

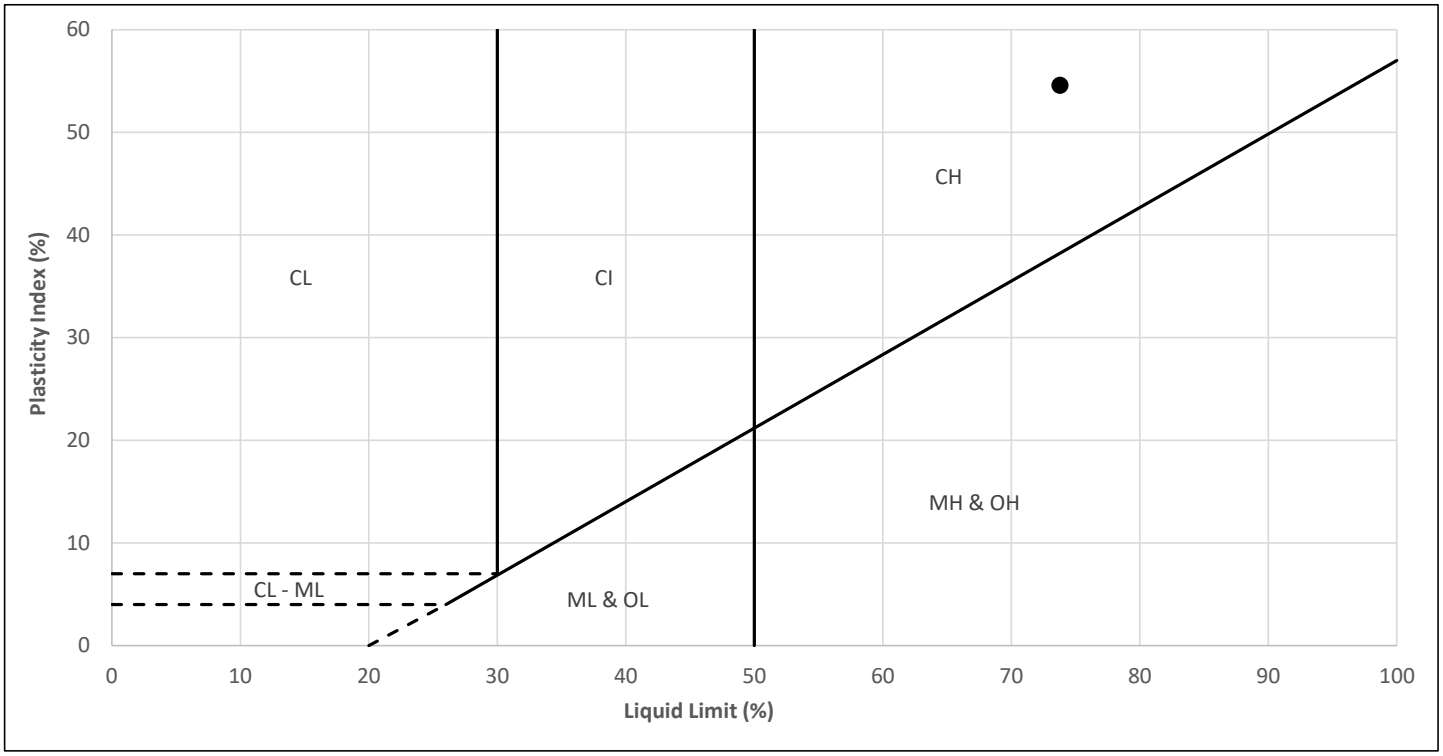
Project:	Snake Lake Reservoir Expansion	**Sample #:**	222UD4
Project No.:	1560-193-00	**Source:**	22CH222
Owner:	EID	**Sample Depth:**	17.77m
File No.:	AL - 222UD4	**Test Date:**	29-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	73.8
Plastic Limit (PL)	19.2
Plasticity Index (PI)	54.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

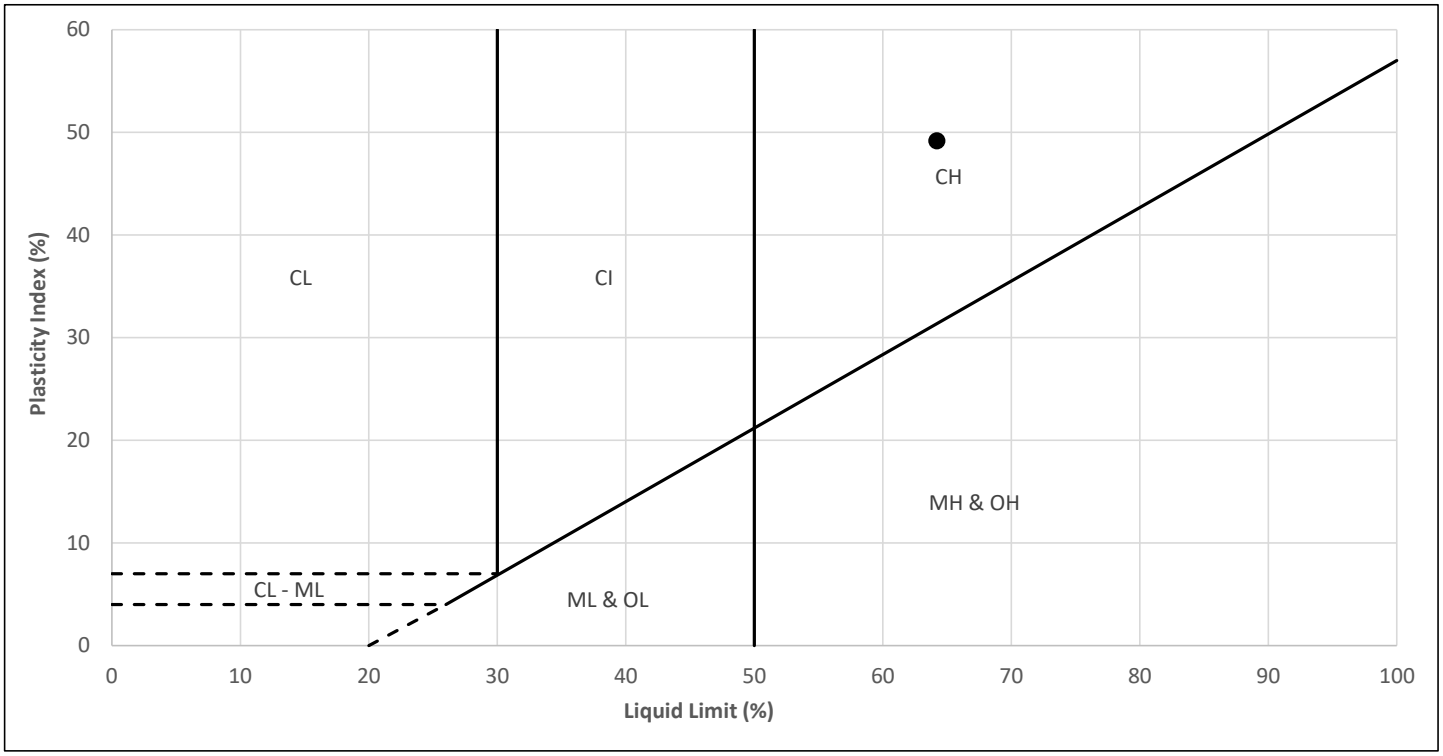
Project:	Snake Lake Reservoir Expansion	**Sample #:**	222UD6
Project No.:	1560-193-00	**Source:**	22CH222
Owner:	EID	**Sample Depth:**	26.0m
File No.:	AL - 222UD6	**Test Date:**	13-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	64.2
Plastic Limit (PL)	15.0
Plasticity Index (PI)	49.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

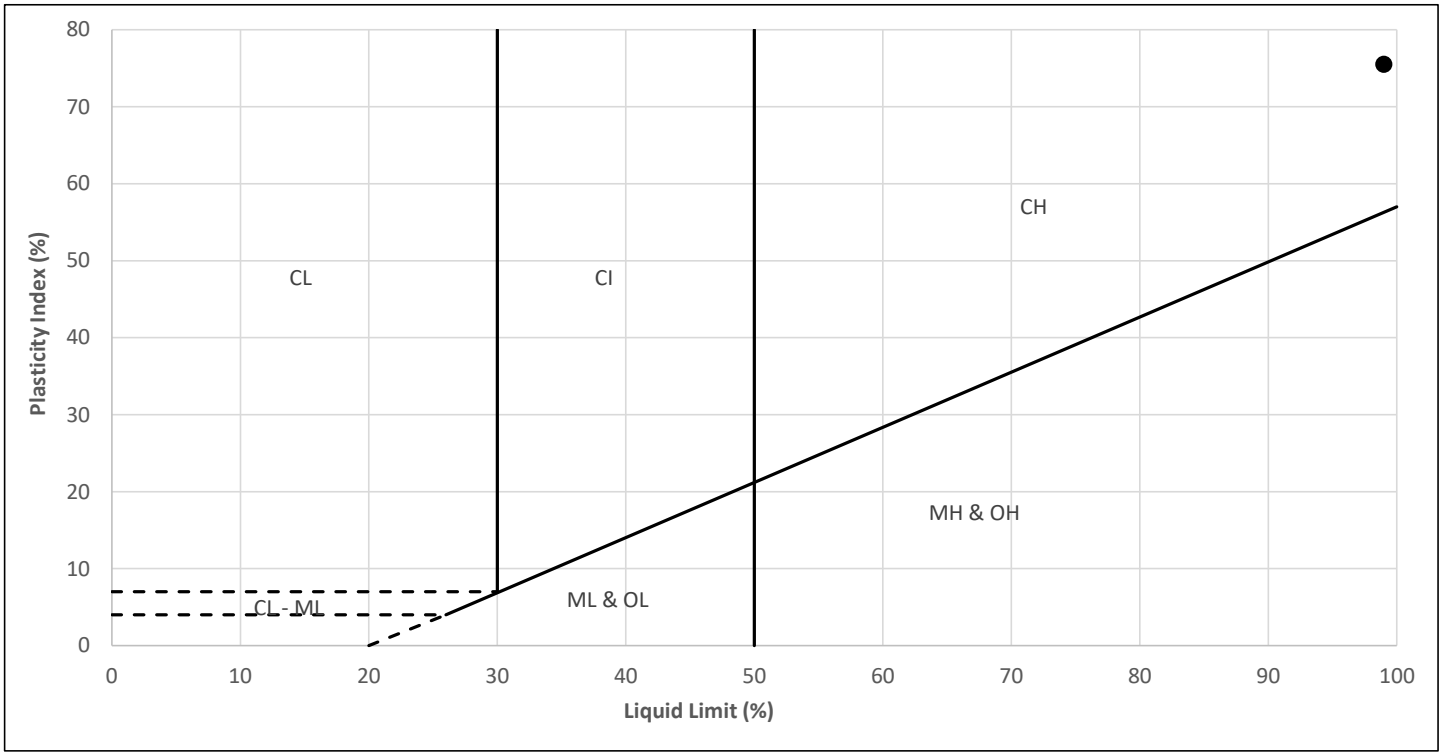
Project:	Snake Lake Reservoir Expansion	**Sample #:**	223AU4
Project No.:	1560-193-00	**Source:**	22BH223
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 223AU4	**Test Date:**	13-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	99.0
Plastic Limit (PL)	23.5
Plasticity Index (PI)	75.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

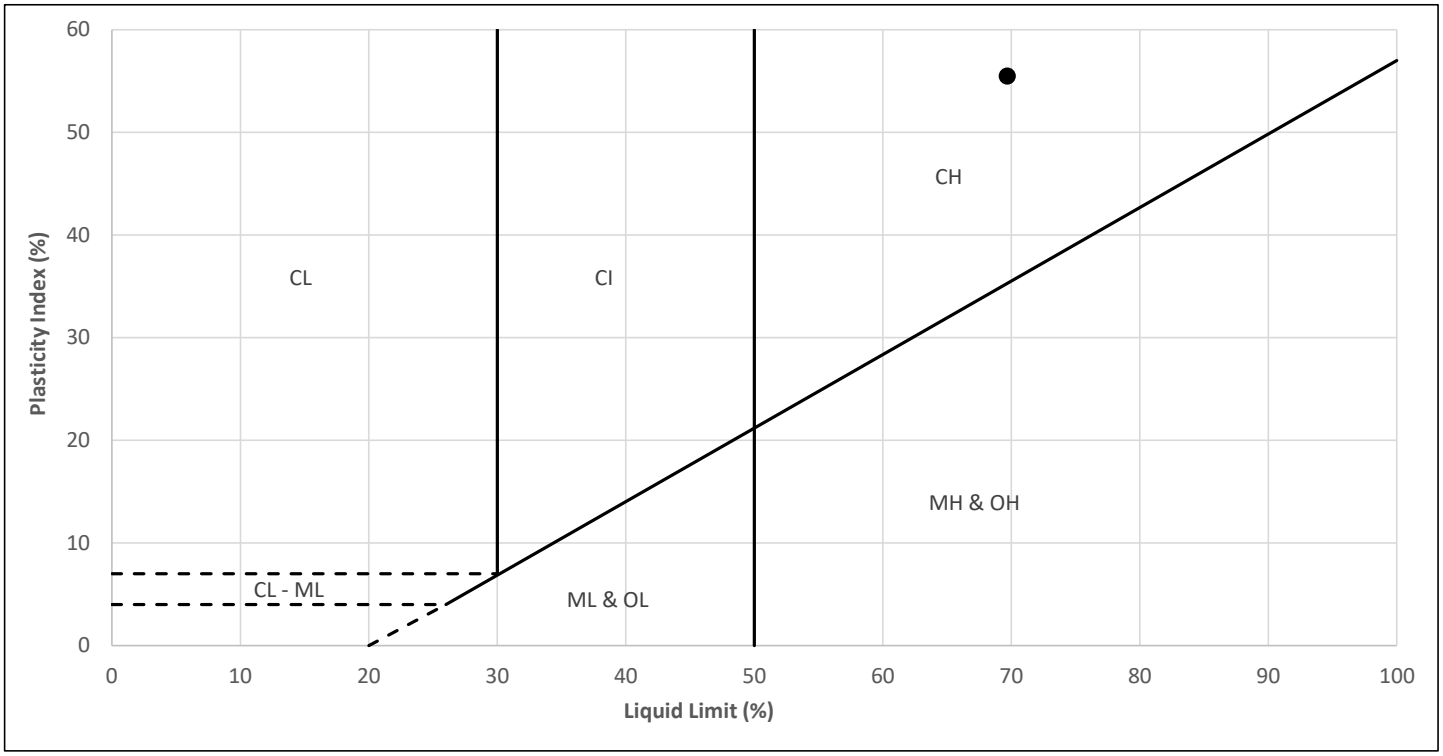
Project:	Snake Lake Reservoir Expansion	**Sample #:**	223RC2
Project No.:	1560-193-00	**Source:**	22CH223
Owner:	EID	**Sample Depth:**	5.0m
File No.:	AL - 223RC2	**Test Date:**	10-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	69.7
Plastic Limit (PL)	14.2
Plasticity Index (PI)	55.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

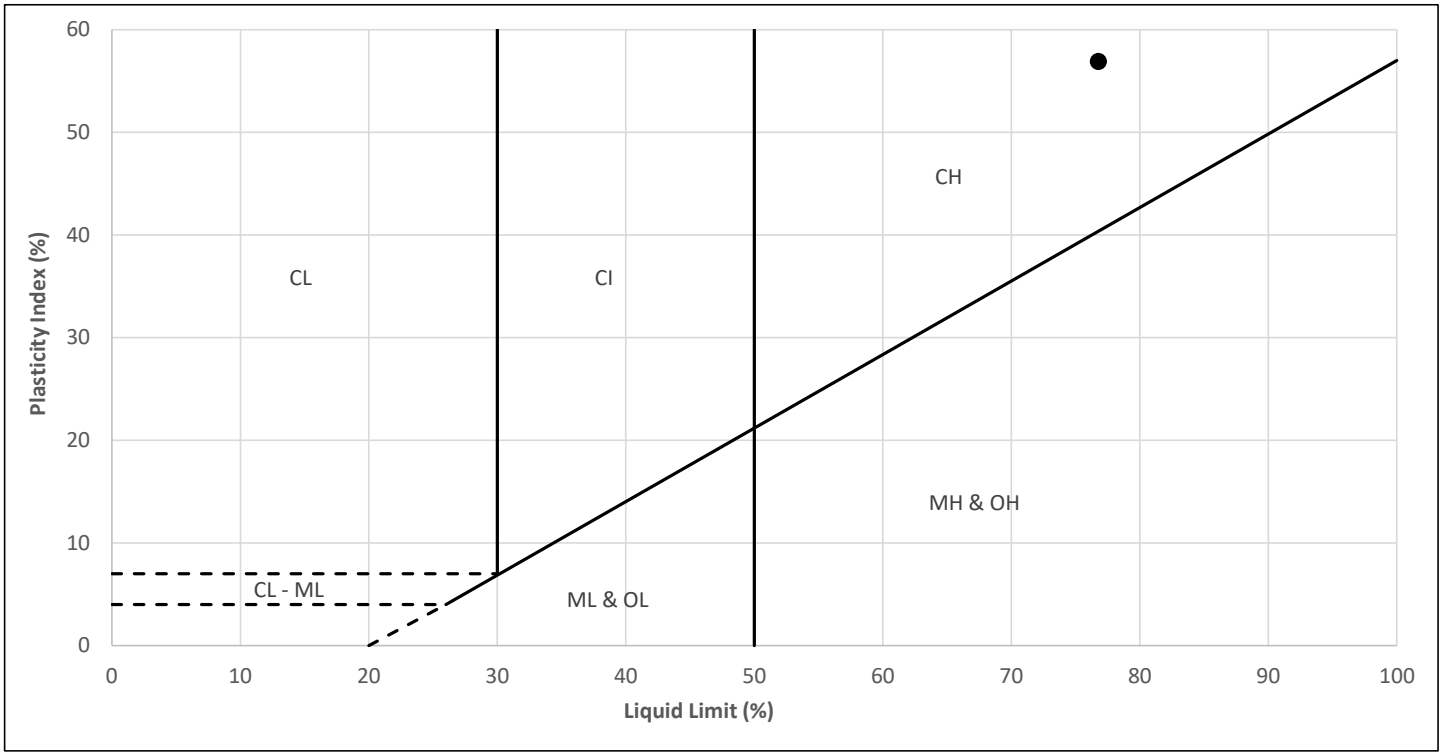
Project:	Snake Lake Reservoir Expansion	**Sample #:**	223RC10
Project No.:	1560-193-00	**Source:**	22CH223
Owner:	EID	**Sample Depth:**	17.1m
File No.:	AL - 223RC10	**Test Date:**	3-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	76.8
Plastic Limit (PL)	19.9
Plasticity Index (PI)	56.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

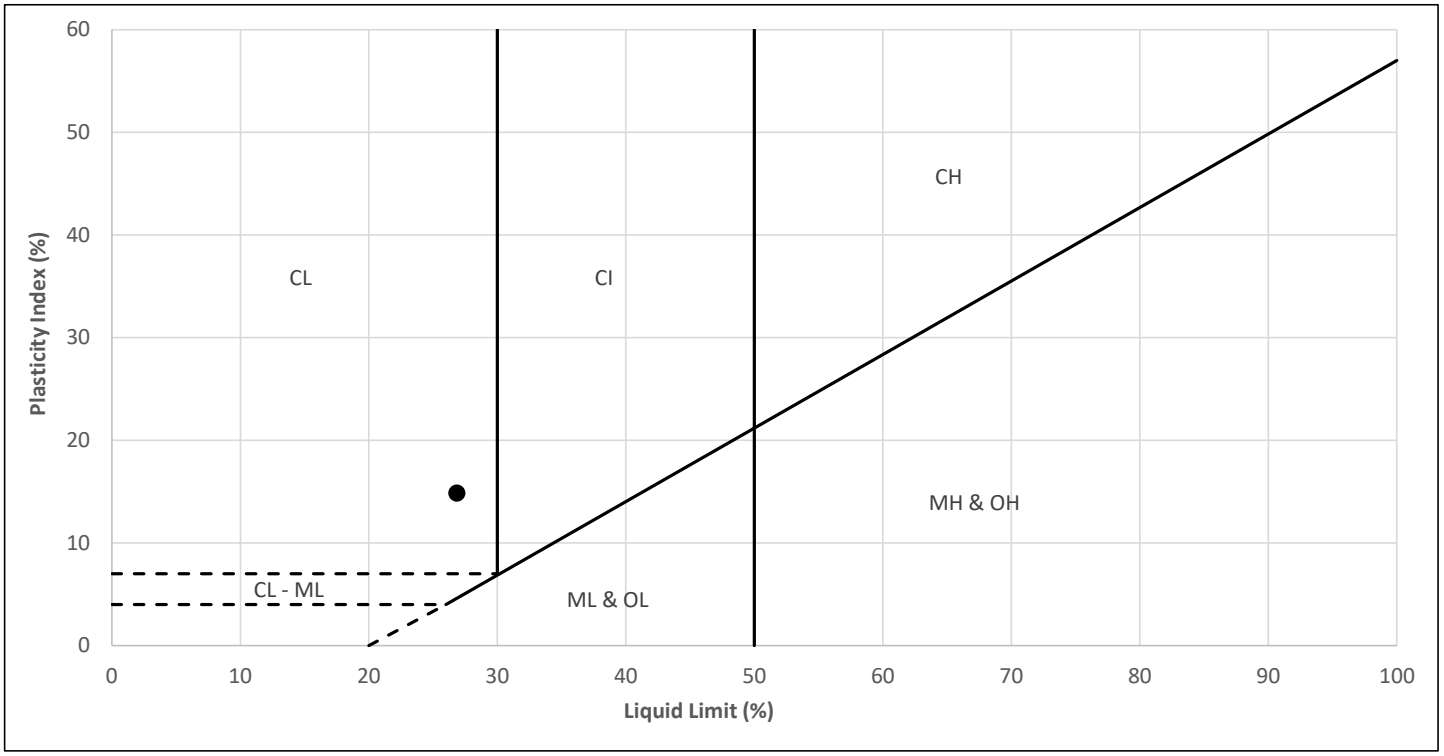
Project:	Snake Lake Reservoir Expansion	**Sample #:**	223RC17
Project No.:	1560-193-00	**Source:**	22CH223
Owner:	EID	**Sample Depth:**	27.5m
File No.:	AL - 223RC17	**Test Date:**	2-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays

Liquid Limit (LL)	26.8
Plastic Limit (PL)	12.0
Plasticity Index (PI)	14.9

Soil Plasticity	Low
Soil Classification	CL



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ATTERBERG LIMITS

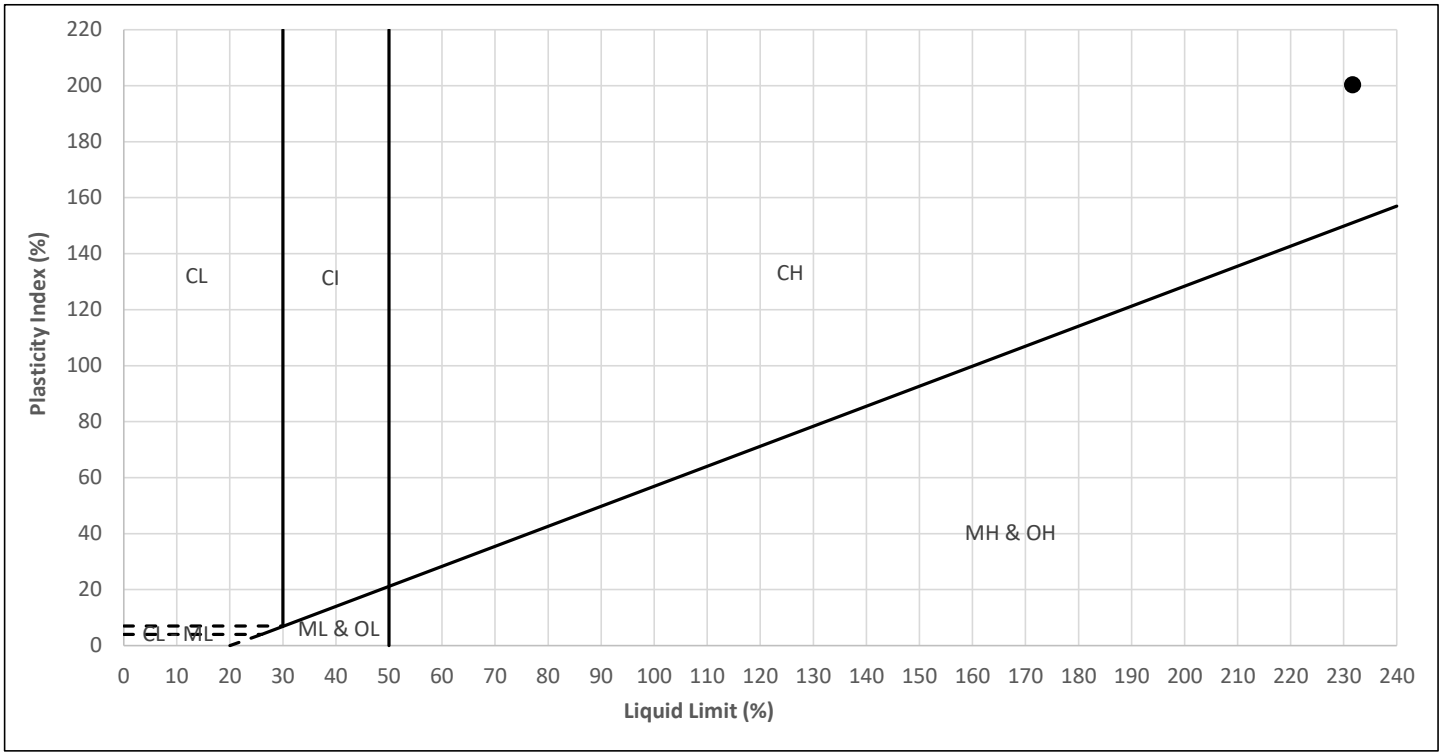
Project:	Snake Lake Reservoir Expansion	**Sample #:**	223UD2
Project No.:	1560-193-00	**Source:**	22CH223
Owner:	EID	**Sample Depth:**	14.0m
File No.:	AL - 223UD2	**Test Date:**	29-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	231.7
Plastic Limit (PL)	31.3
Plasticity Index (PI)	200.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

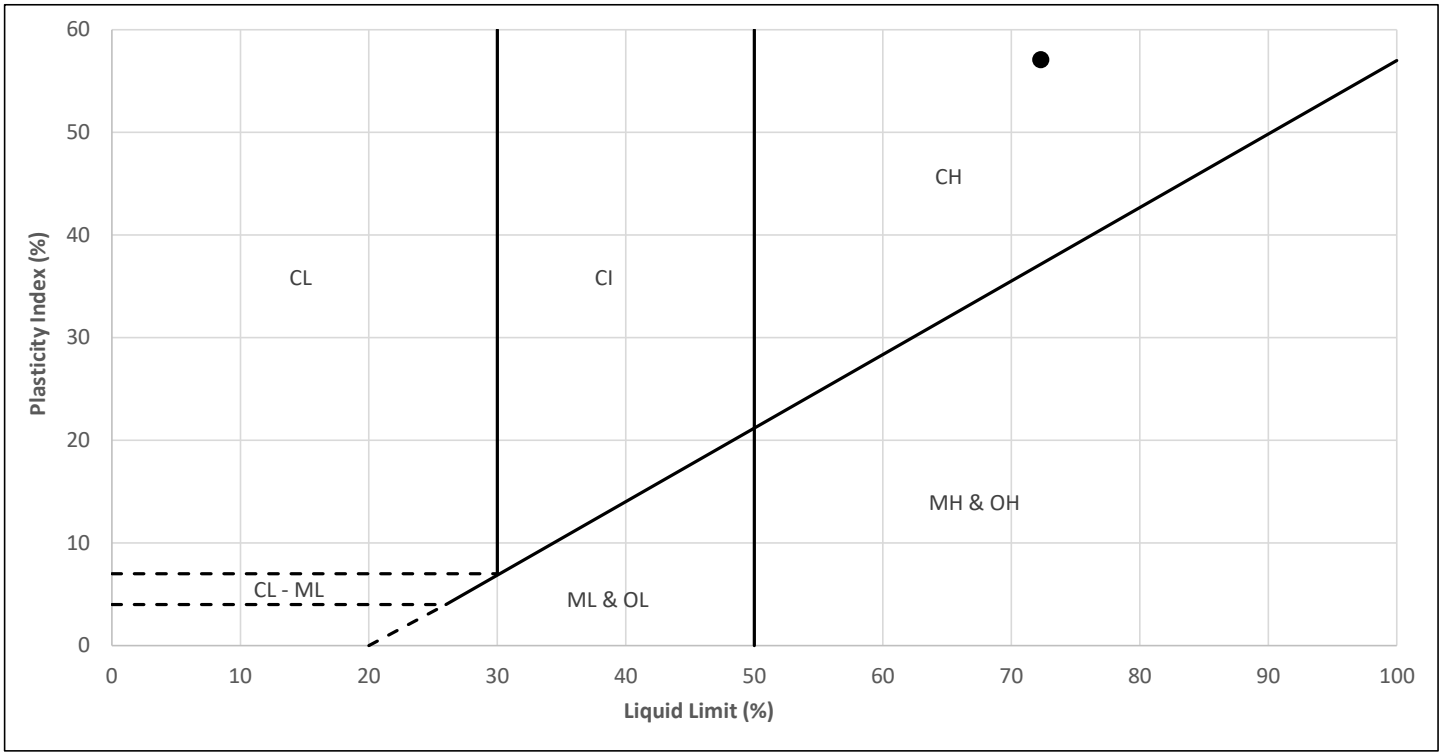
Project:	Snake Lake Reservoir Expansion	**Sample #:**	223UD4
Project No.:	1560-193-00	**Source:**	22CH223
Owner:	EID	**Sample Depth:**	23.50m
File No.:	AL - 223UD4	**Test Date:**	3-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	72.3
Plastic Limit (PL)	15.2
Plasticity Index (PI)	57.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

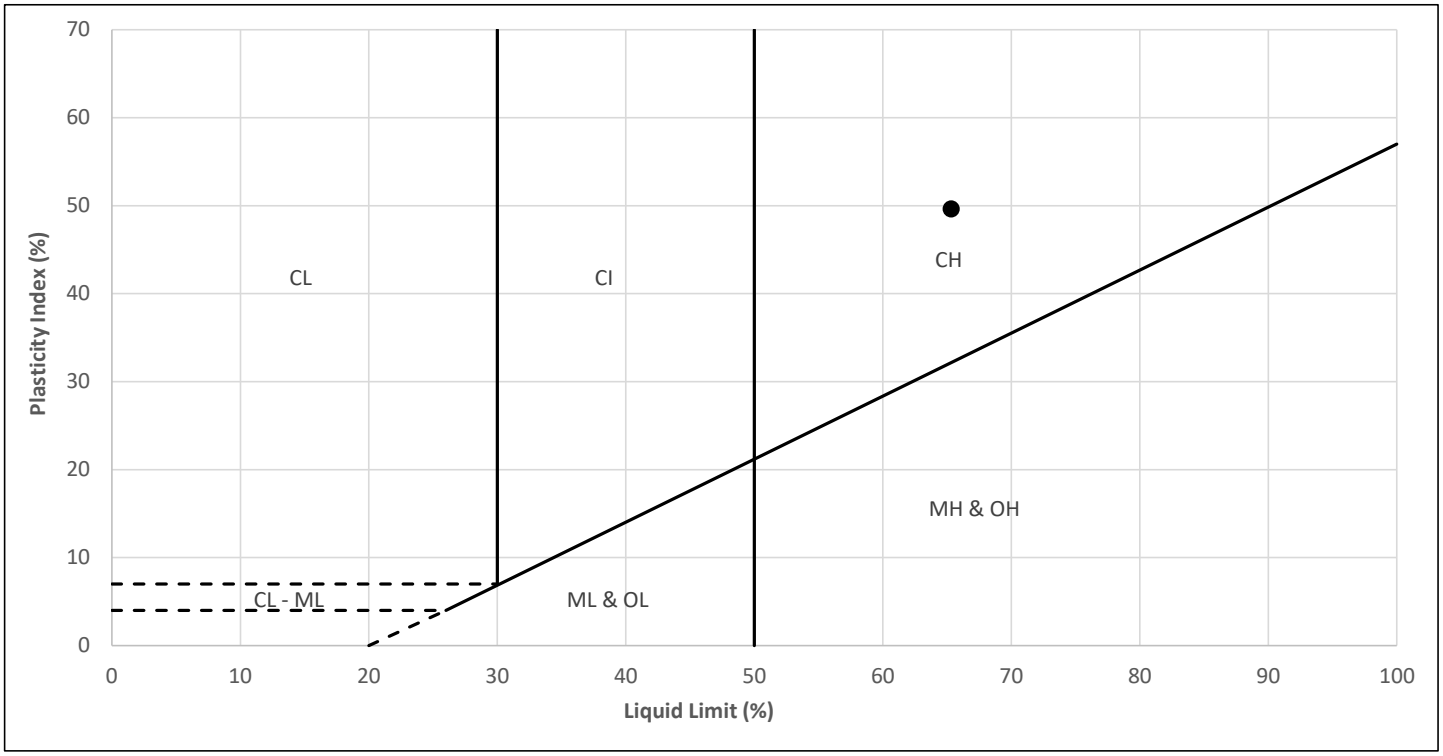
Project:	Snake Lake Reservoir Expansion	**Sample #:**	224AU2
Project No.:	1560-193-00	**Source:**	22BH224
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 224AU2	**Date:**	3-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	65.3
Plastic Limit (PL)	15.7
Plasticity Index (PI)	49.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

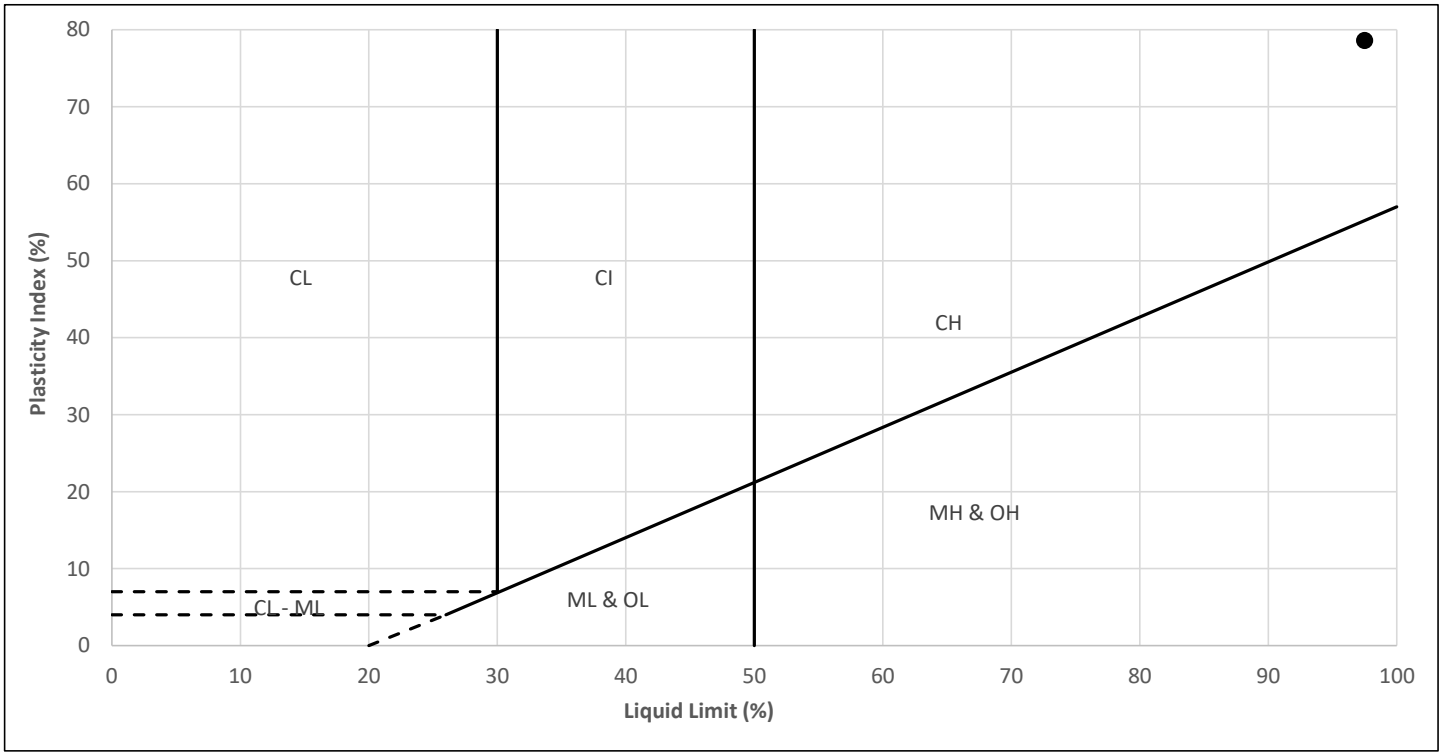
Project:	Snake Lake Reservoir Expansion	**Sample #:**	224RC4
Project No.:	1560-193-00	**Source:**	22CH224
Owner:	EID	**Sample Depth:**	8.5m
File No.:	AL - 224RC4	**Test Date:**	9-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	97.5
Plastic Limit (PL)	18.9
Plasticity Index (PI)	78.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

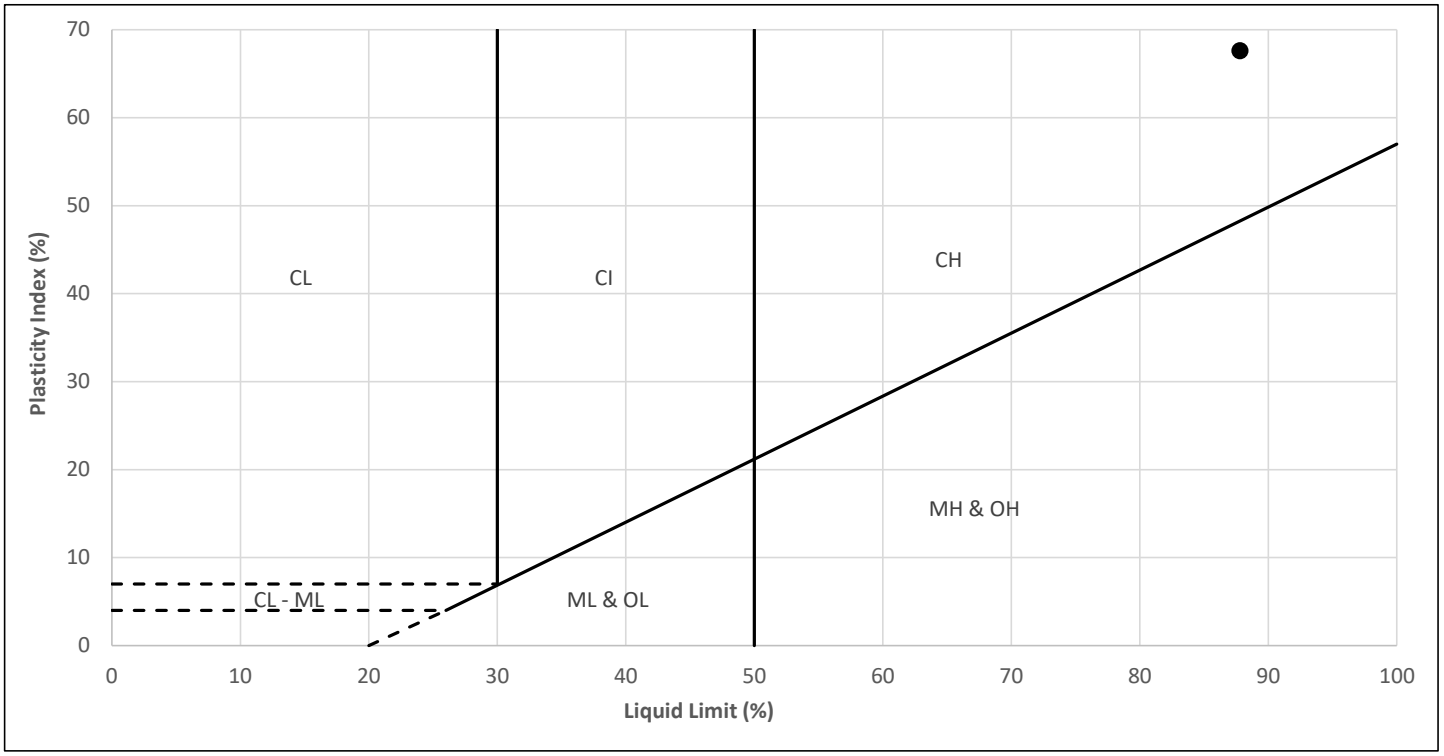
Project:	Snake Lake Reservoir Expansion	**Sample #:**	224RC7
Project No.:	1560-193-00	**Source:**	22CH224
Owner:	EID	**Sample Depth:**	12.2m
File No.:	AL - 224RC7	**Test Date:**	7-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	87.8
Plastic Limit (PL)	20.2
Plasticity Index (PI)	67.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

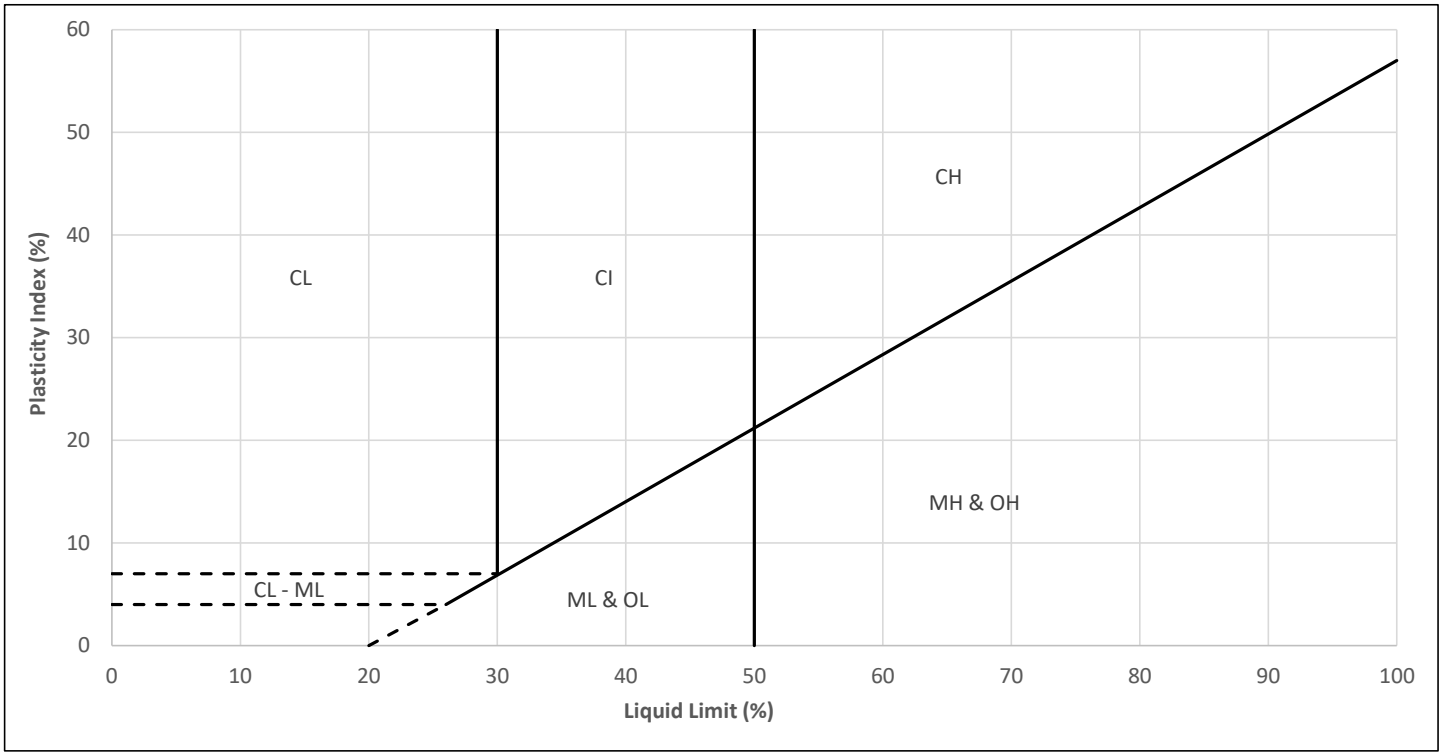
Project:	Snake Lake Reservoir Expansion	**Sample #:**	224RC10
Project No.:	1560-193-00	**Source:**	22CH224
Owner:	EID	**Sample Depth:**	17.7m
File No.:	AL - 224RC10	**Test Date:**	7-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	87.3
Plastic Limit (PL)	21.2
Plasticity Index (PI)	66.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

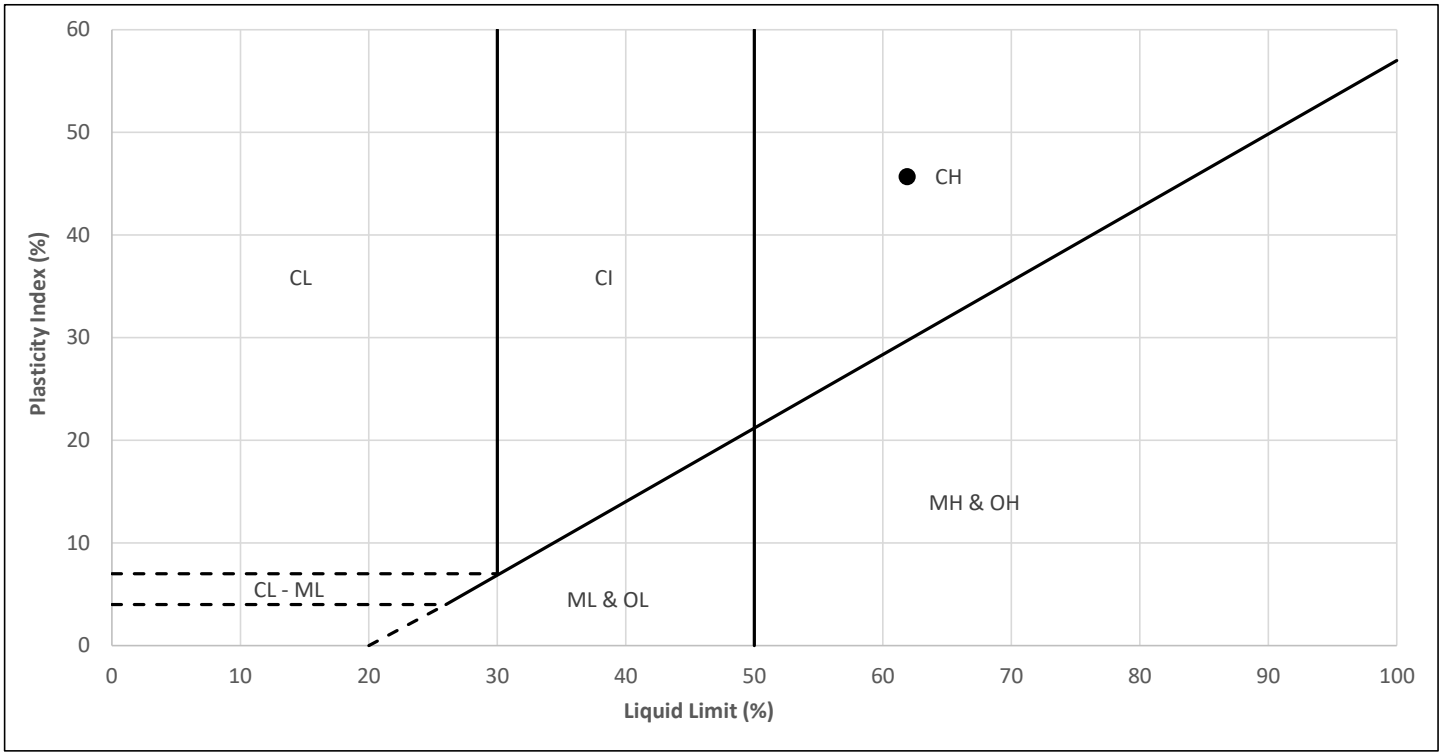
Project:	Snake Lake Reservoir Expansion	**Sample #:**	224RC16
Project No.:	1560-193-00	**Source:**	22CH224
Owner:	EID	**Sample Depth:**	25.8m
File No.:	AL - 224RC16	**Test Date:**	6-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	61.9
Plastic Limit (PL)	16.2
Plasticity Index (PI)	45.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

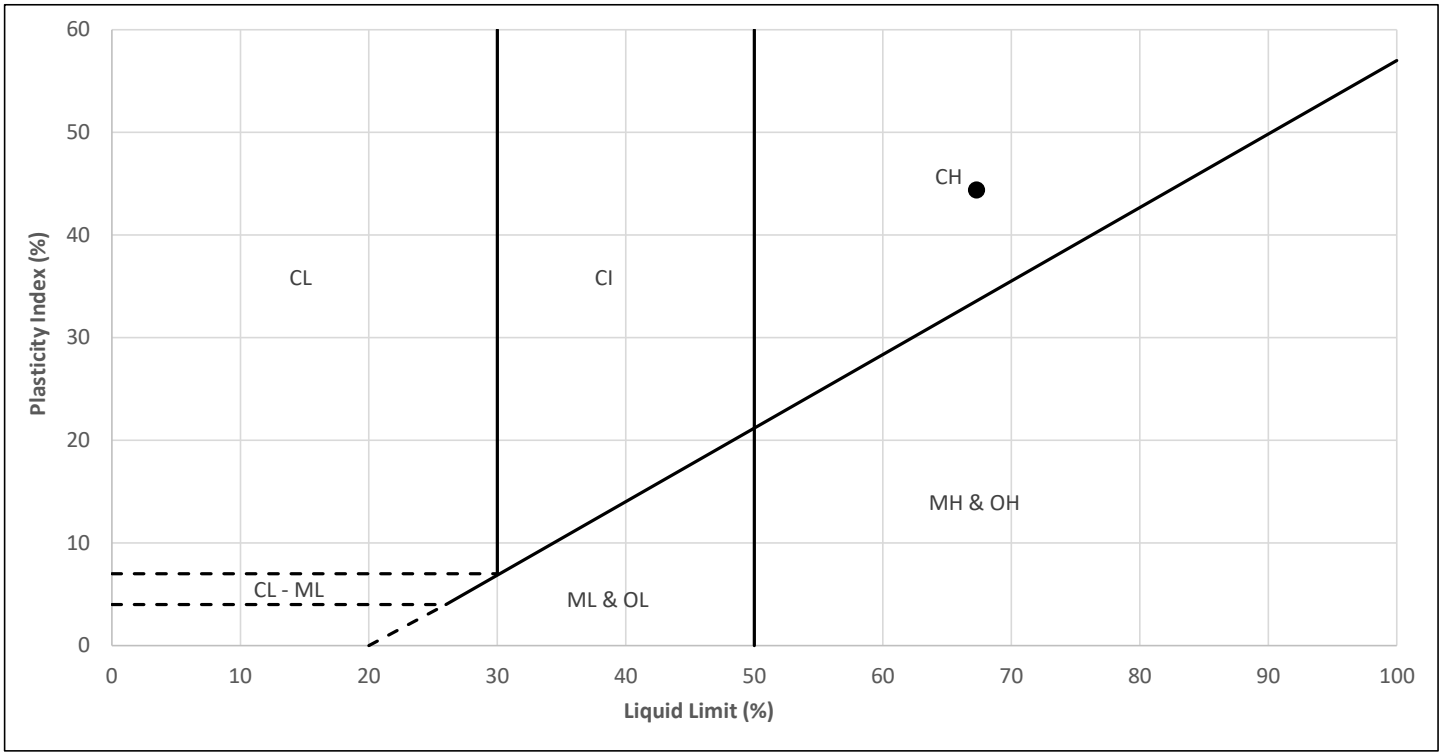
Project:	Snake Lake Reservoir Expansion	**Sample #:**	224RC21
Project No.:	1560-193-00	**Source:**	22CH224
Owner:	EID	**Sample Depth:**	34.2m
File No.:	AL - 224RC21	**Test Date:**	9.2.2022

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	67.3
Plastic Limit (PL)	22.9
Plasticity Index (PI)	44.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

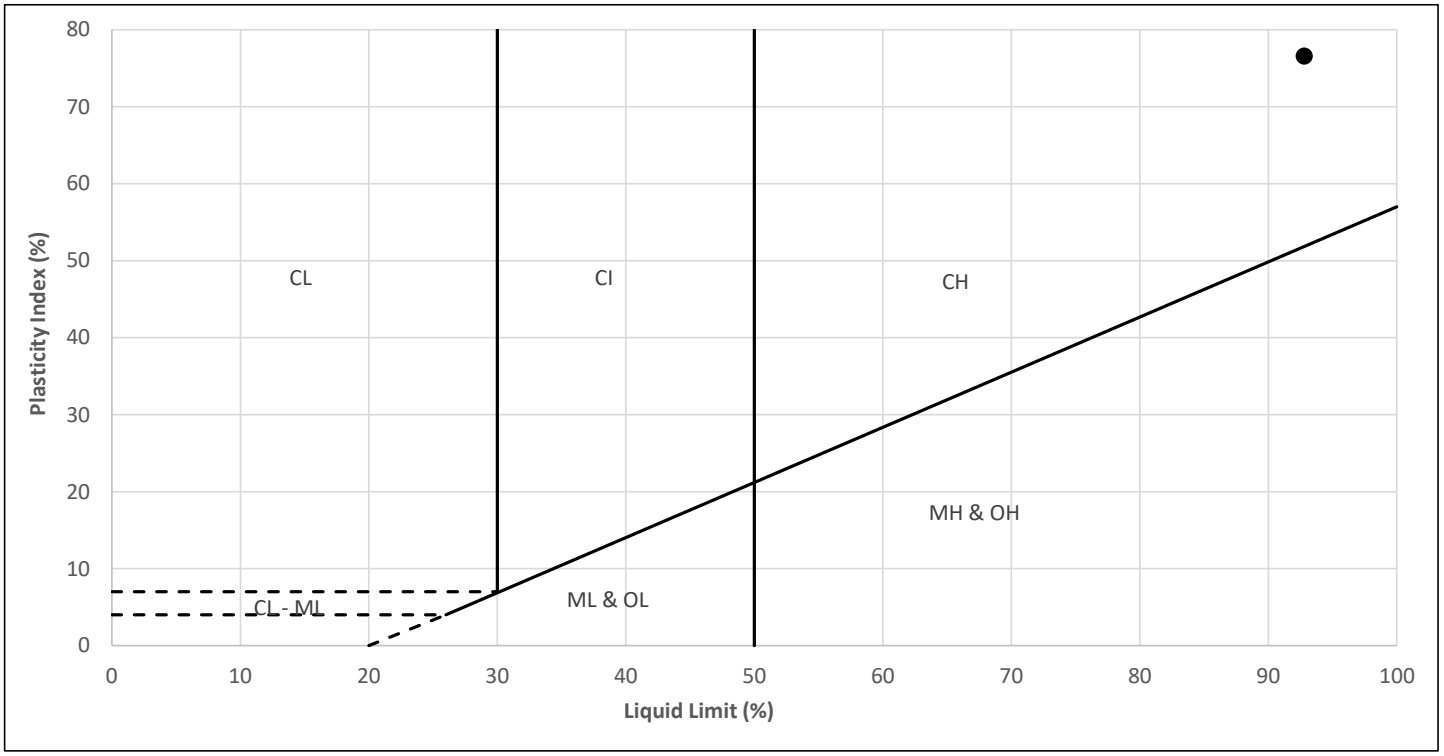
Project:	Snake Lake Reservoir Expansion	**Sample #:**	225RC1
Project No.:	1560-193-00	**Source:**	22CH2225
Owner:	EID	**Sample Depth:**	3.52m
File No.:	AL - 225RC1	**Test Date:**	11-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	92.8
Plastic Limit (PL)	16.2
Plasticity Index (PI)	76.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

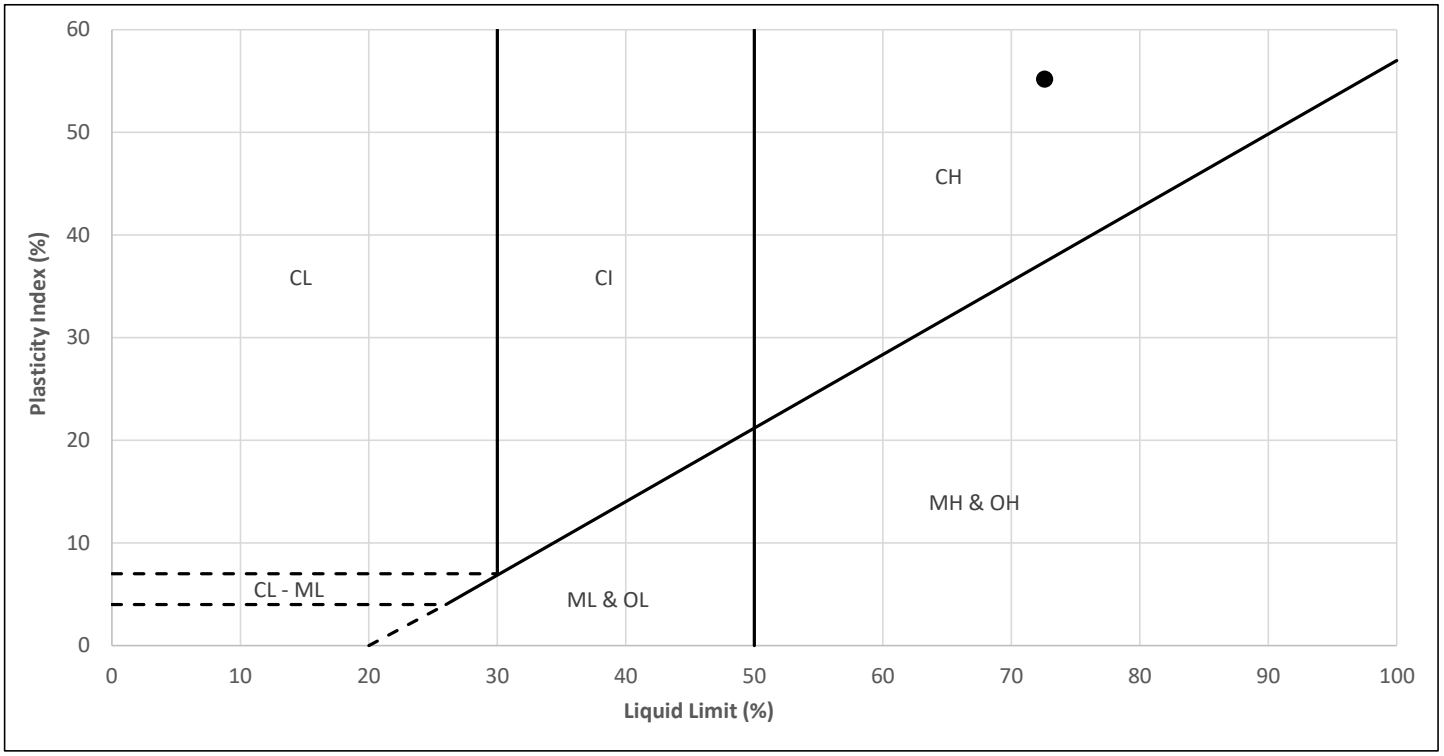
Project:	Snake Lake Reservoir Expansion	**Sample #:**	225RC2
Project No.:	1560-193-00	**Source:**	22CH225
Owner:	EID	**Sample Depth:**	5.0m
File No.:	AL - 225RC2	**Test Date:**	9-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	72.6
Plastic Limit (PL)	17.4
Plasticity Index (PI)	55.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

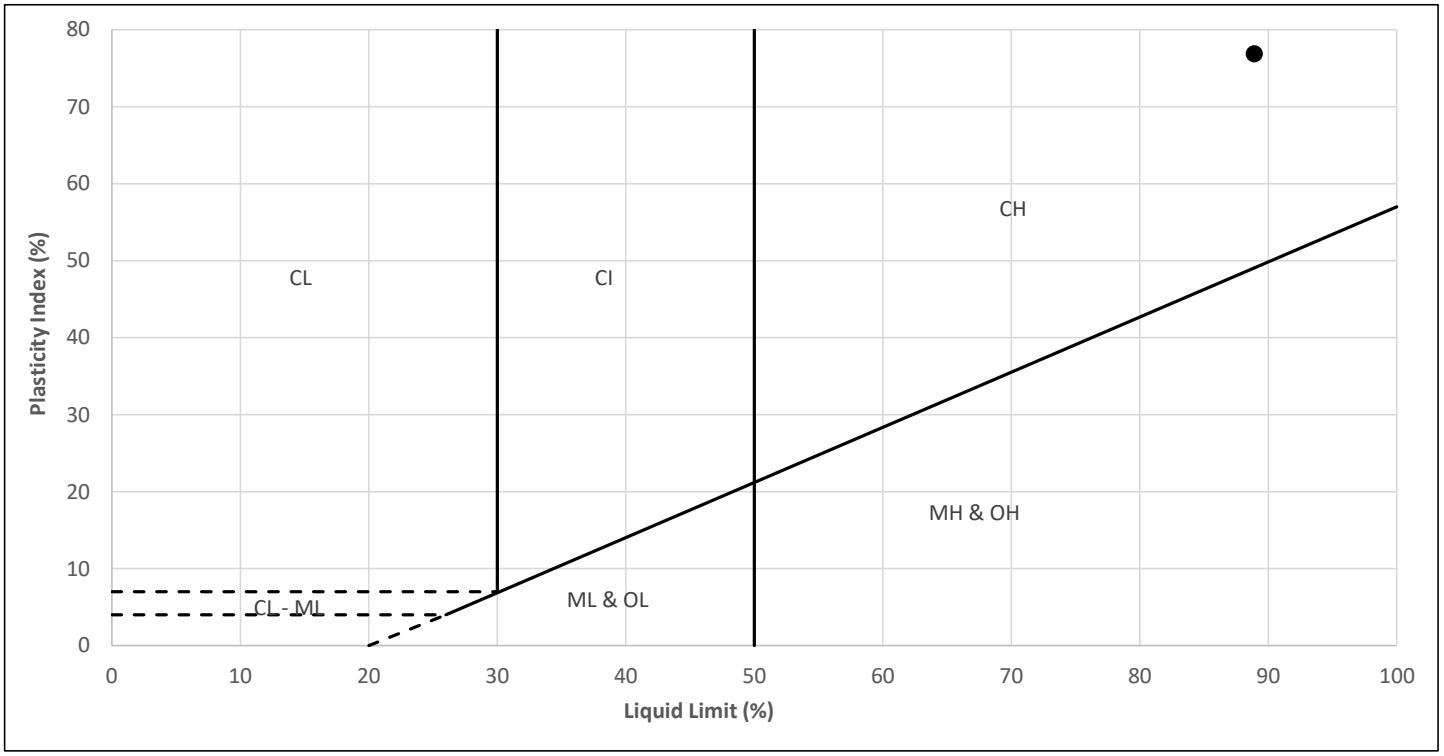
Project:	Snake Lake Reservoir Expansion	**Sample #:**	225UD4
Project No.:	1560-193-00	**Source:**	22CH225
Owner:	EID	**Sample Depth:**	18.2m
File No.:	AL - 225UD4	**Test Date:**	5-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	88.9
Plastic Limit (PL)	12.0
Plasticity Index (PI)	76.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

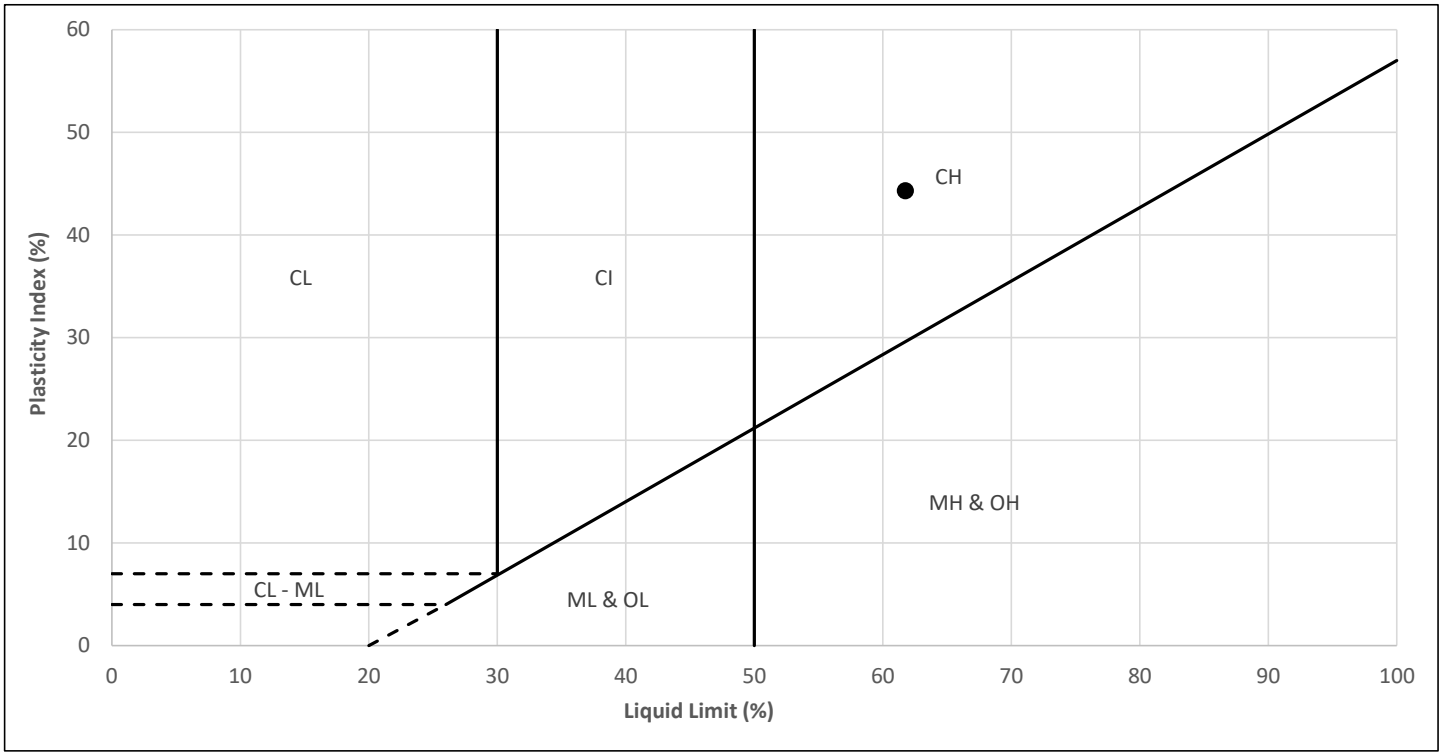
Project:	Snake Lake Reservoir Expansion	**Sample #:**	225UD7
Project No.:	1560-193-00	**Source:**	22CH225
Owner:	EID	**Sample Depth:**	30.36m
File No.:	AL - 225UD7	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	61.7
Plastic Limit (PL)	17.4
Plasticity Index (PI)	44.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

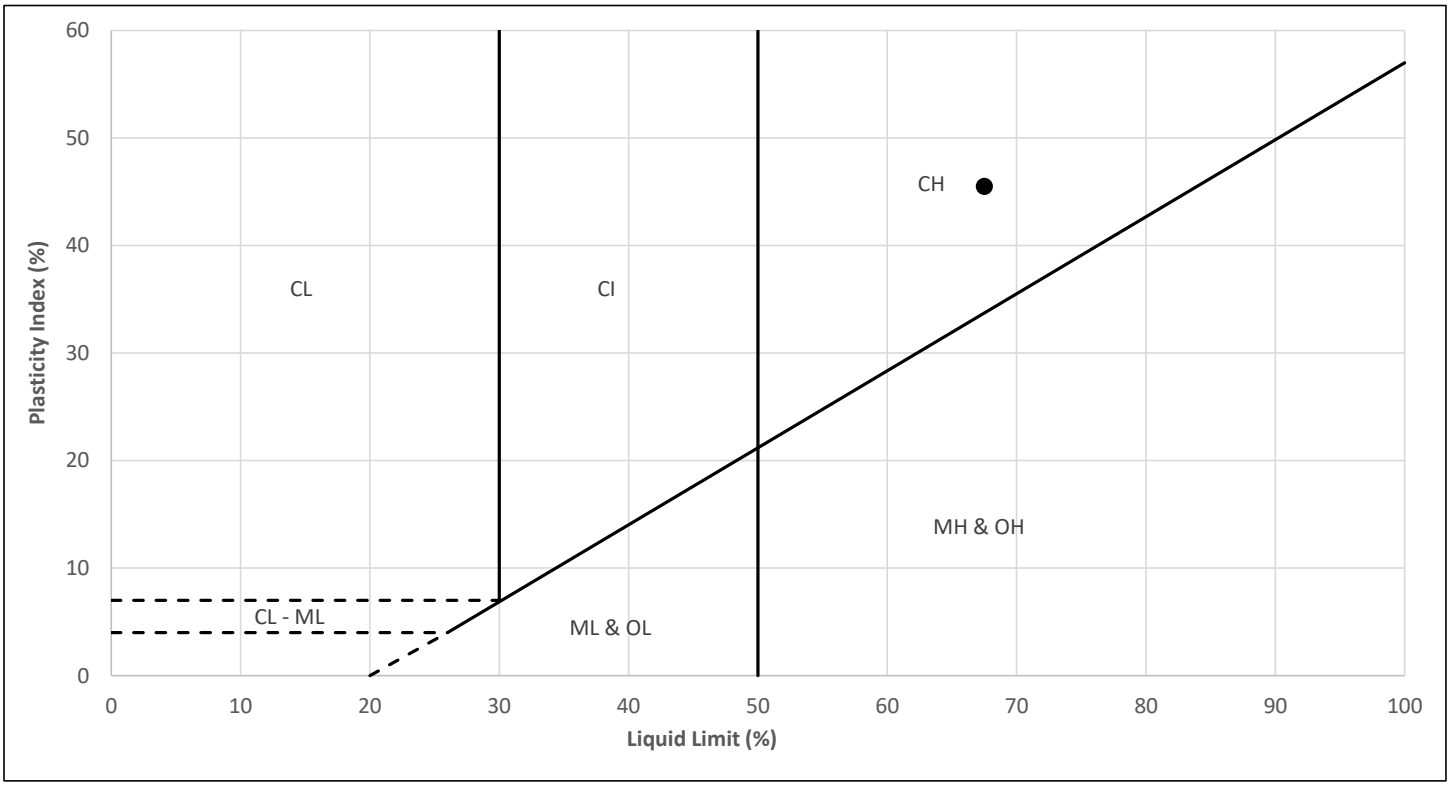
Project:	Snake Lake Reservoir Expansion	**Sample #:**	226AU6
Project No.:	1560-193-00	**Source:**	22BH226
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 226AU6	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	67.5
Plastic Limit (PL)	22.0
Plasticity Index (PI)	45.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

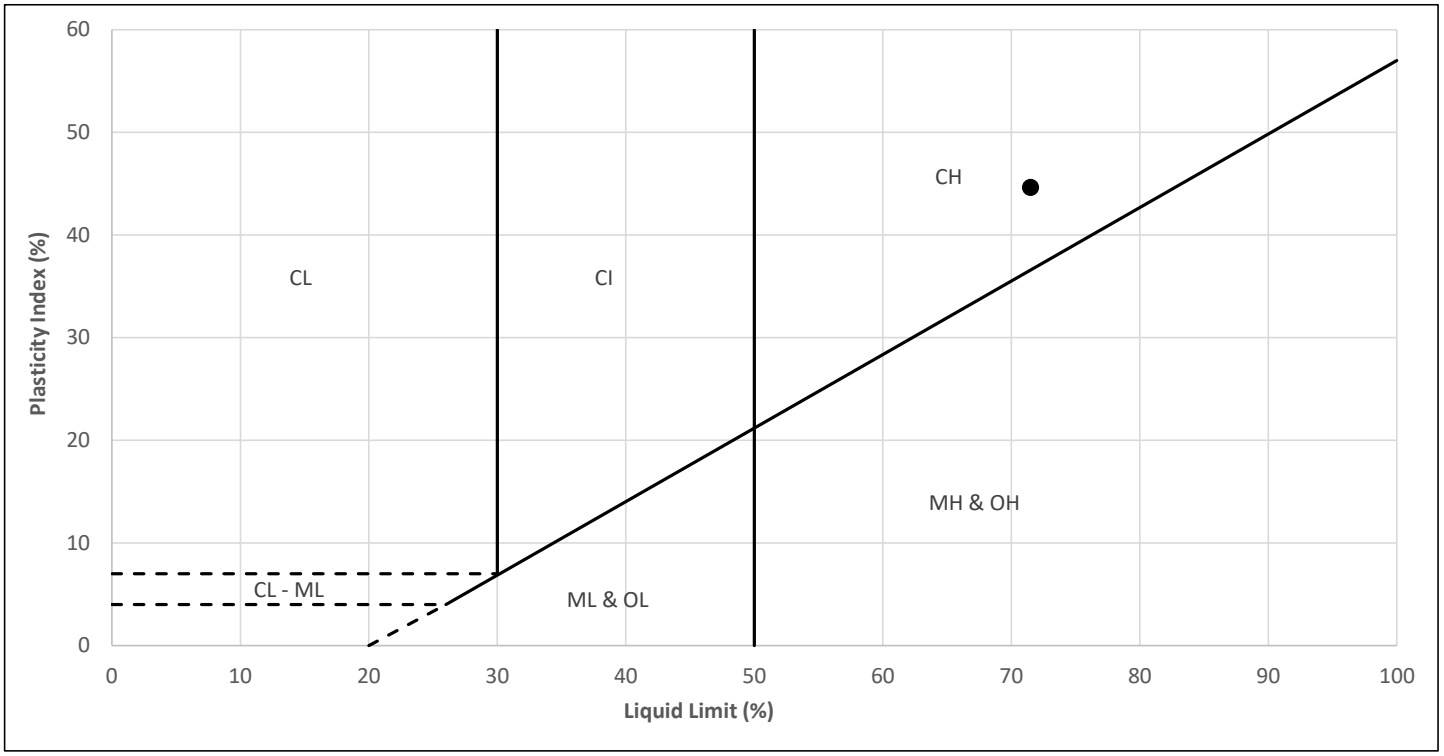
Project:	Snake Lake Reservoir Expansion	**Sample #:**	226RC1
Project No.:	1560-193-00	**Source:**	22CH226
Owner:	EID	**Sample Depth:**	6.5m
File No.:	AL - 226RC1	**Test Date:**	4-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	71.5
Plastic Limit (PL)	26.9
Plasticity Index (PI)	44.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

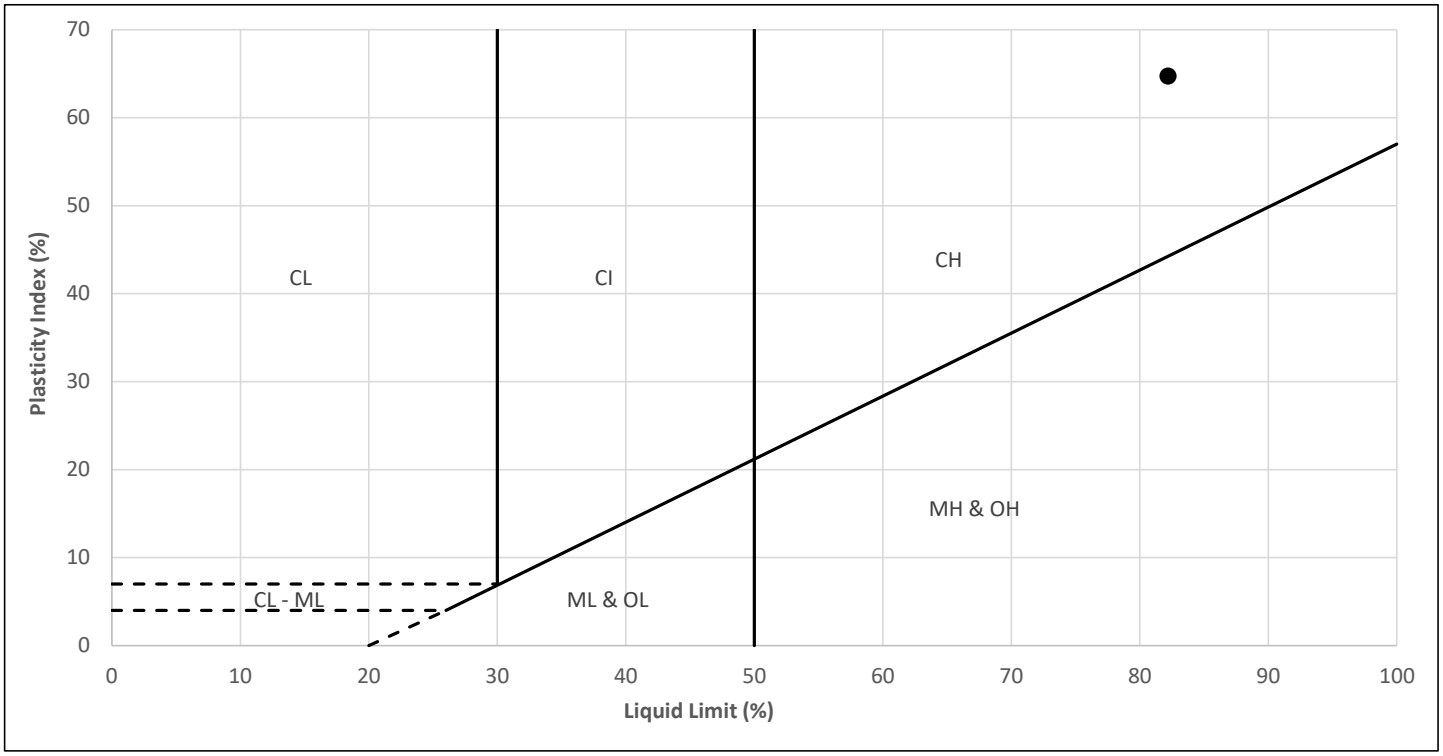
Project:	Snake Lake Reservoir Expansion	**Sample #:**	226UD2
Project No.:	1560-193-00	**Source:**	22CH226
Owner:	EID	**Sample Depth:**	12.32m
File No.:	AL - 226UD2	**Test Date:**	8-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	82.2
Plastic Limit (PL)	17.5
Plasticity Index (PI)	64.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

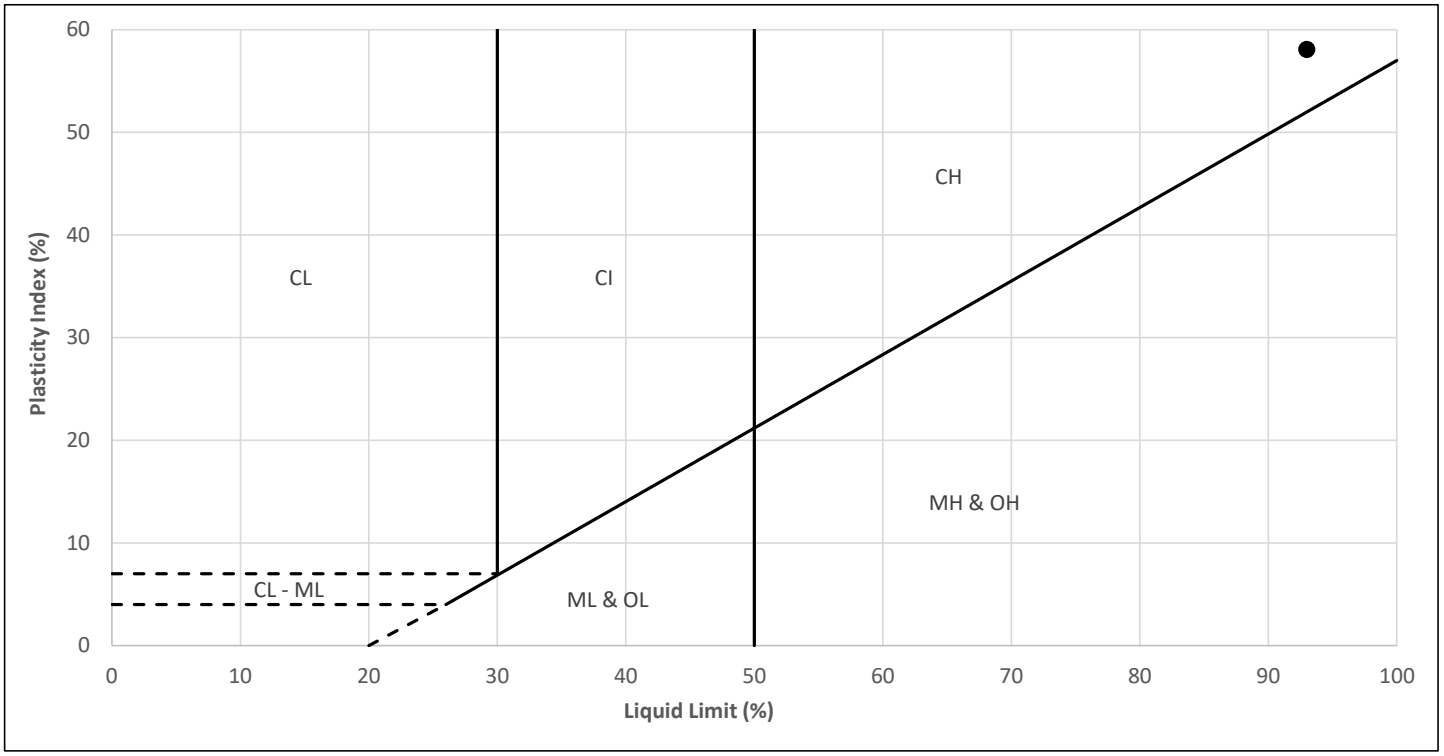
Project:	Snake Lake Reservoir Expansion	**Sample #:**	226UD3
Project No.:	1560-193-00	**Source:**	22CH226
Owner:	EID	**Sample Depth:**	16.64m
File No.:	AL - 226UD3	**Test Date:**	1-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	93.0
Plastic Limit (PL)	34.9
Plasticity Index (PI)	58.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

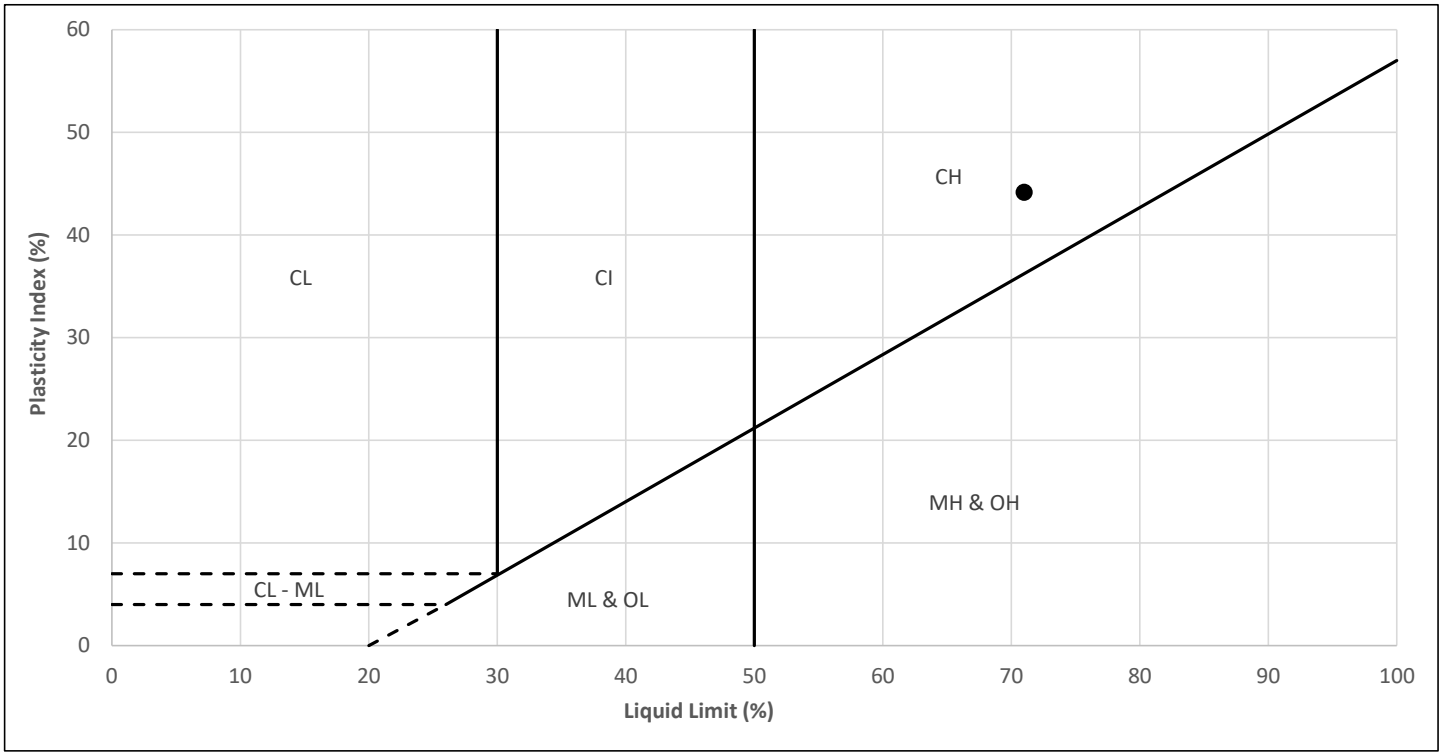
Project:	Snake Lake Reservoir Expansion	**Sample #:**	226UD5
Project No.:	1560-193-00	**Source:**	22CH226
Owner:	EID	**Sample Depth:**	25.76m
File No.:	AL - 226UD5	**Test Date:**	1-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	71.0
Plastic Limit (PL)	26.8
Plasticity Index (PI)	44.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

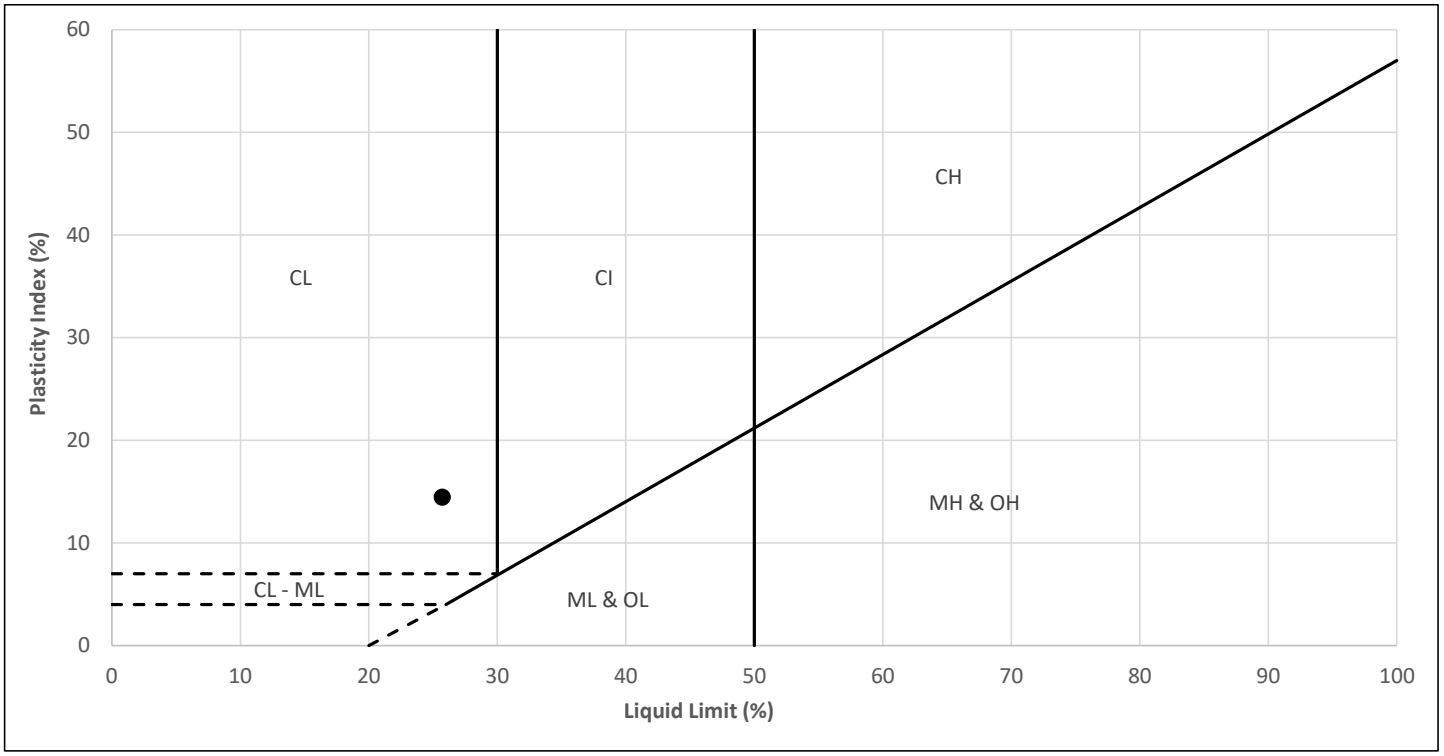
Project:	Snake Lake Reservoir Expansion	**Sample #:**	226UD6
Project No.:	1560-193-00	**Source:**	22CH226
Owner:	EID	**Sample Depth:**	30.05m
File No.:	AL - 226UD6	**Test Date:**	29-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays

Liquid Limit (LL)	25.7
Plastic Limit (PL)	11.2
Plasticity Index (PI)	14.5

Soil Plasticity	Low
Soil Classification	CL



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ATTERBERG LIMITS

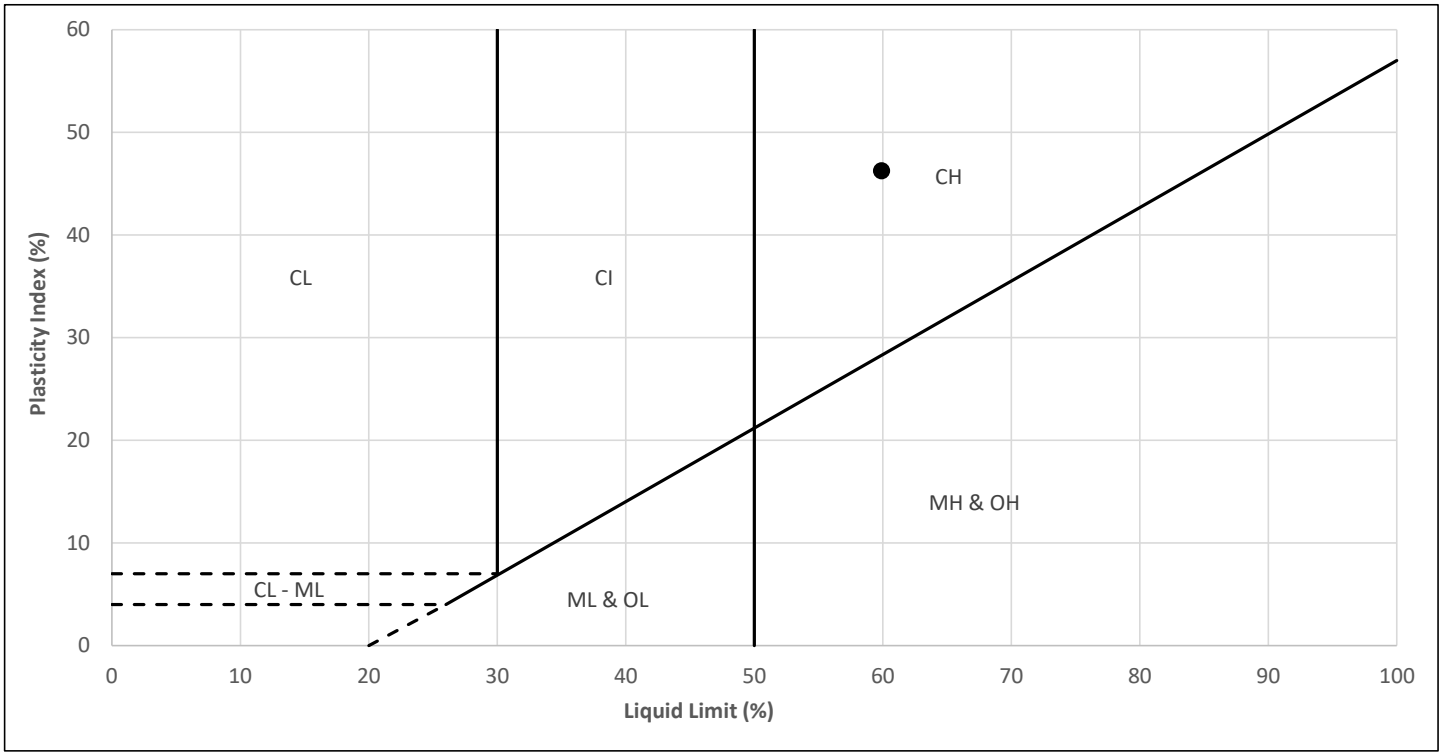
Project:	Snake Lake Reservoir Expansion	**Sample #:**	227AU2
Project No.:	1560-193-00	**Source:**	22BH227
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 227AU2	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	59.9
Plastic Limit (PL)	13.6
Plasticity Index (PI)	46.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

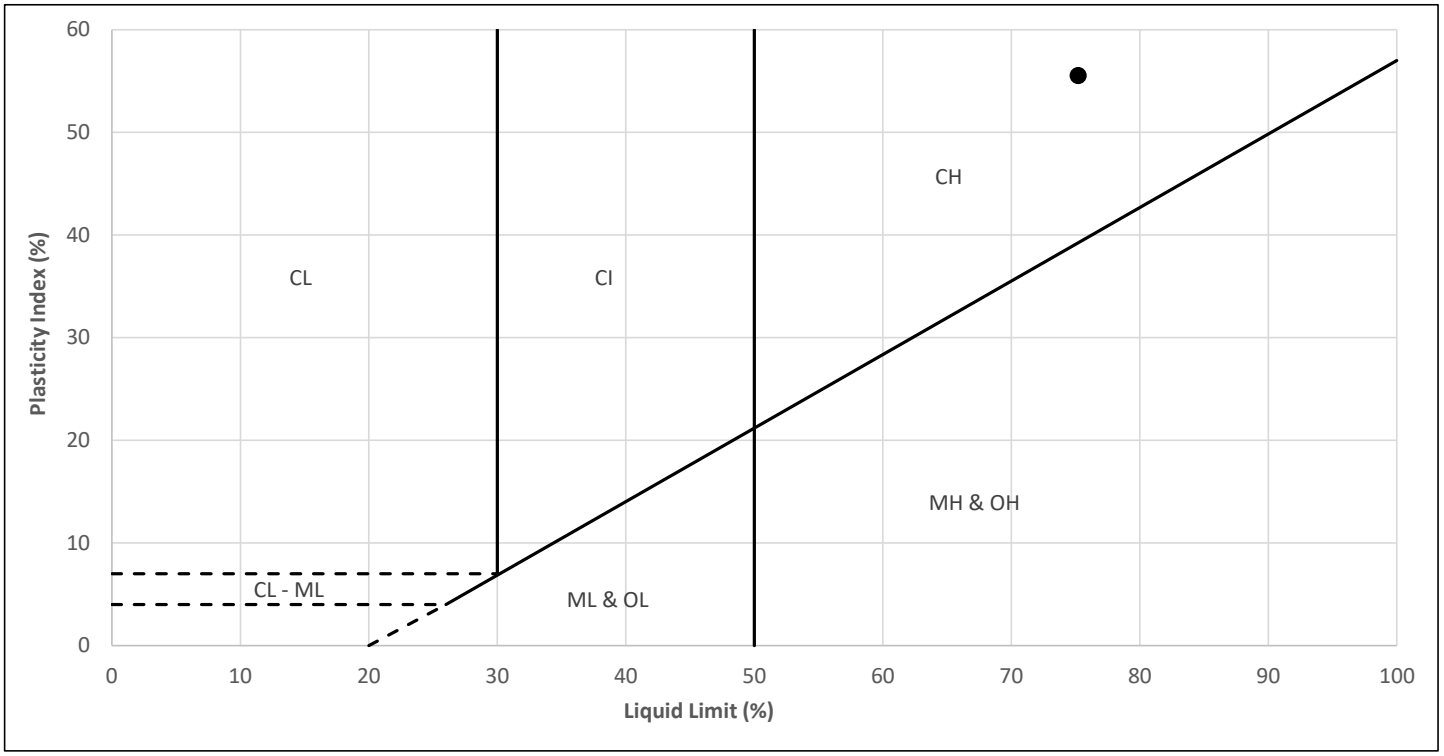
Project:	Snake Lake Reservoir Expansion	**Sample #:**	227AU4
Project No.:	1560-193-00	**Source:**	22BH227
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 227AU4	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	75.2
Plastic Limit (PL)	19.6
Plasticity Index (PI)	55.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

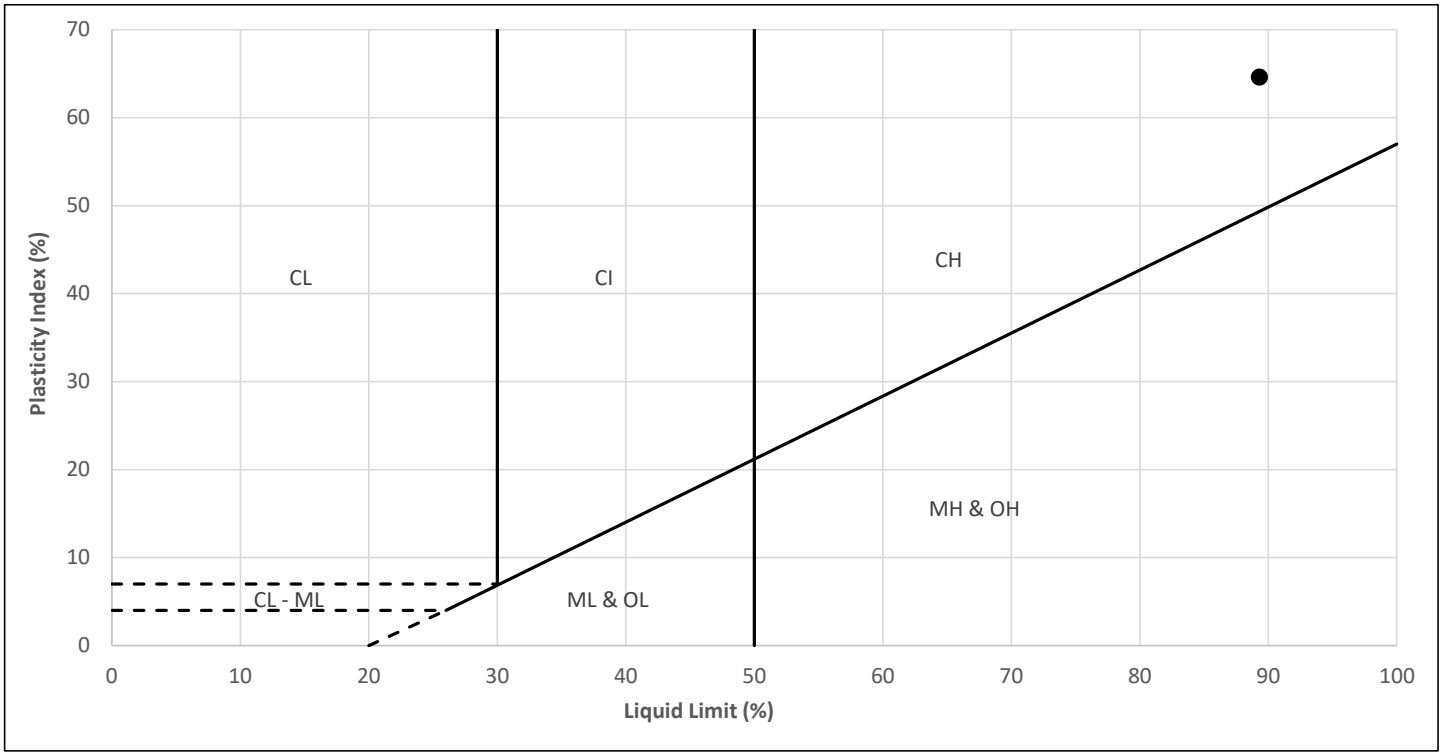
Project:	Snake Lake Reservoir Expansion	**Sample #:**	227RC1
Project No.:	1560-193-00	**Source:**	22CH227
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 227RC1	**Test Date:**	2-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	89.3
Plastic Limit (PL)	24.7
Plasticity Index (PI)	64.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

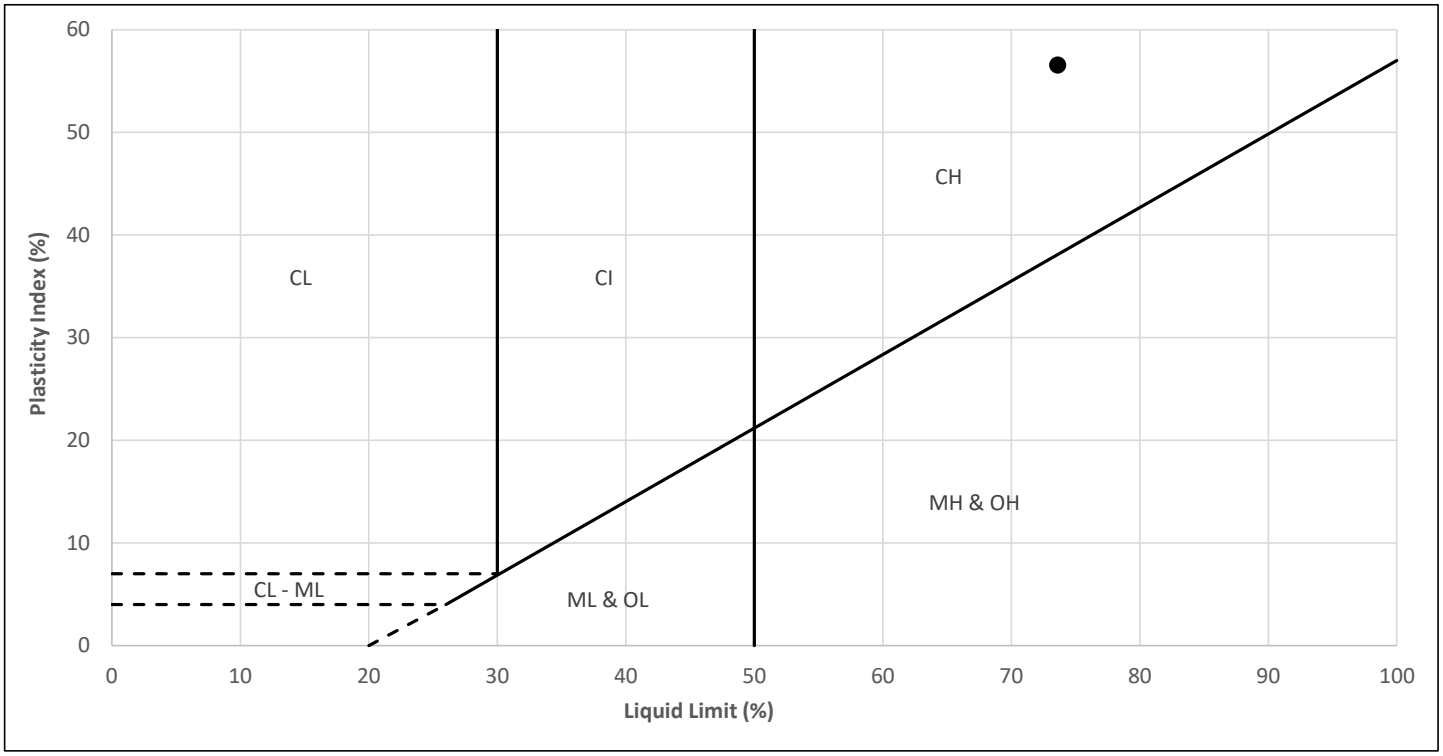
Project:	Snake Lake Reservoir Expansion	**Sample #:**	227RC7
Project No.:	1560-193-00	**Source:**	22CH227
Owner:	EID	**Sample Depth:**	14.5m
File No.:	AL - 227RC7	**Test Date:**	1-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	73.6
Plastic Limit (PL)	17.0
Plasticity Index (PI)	56.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

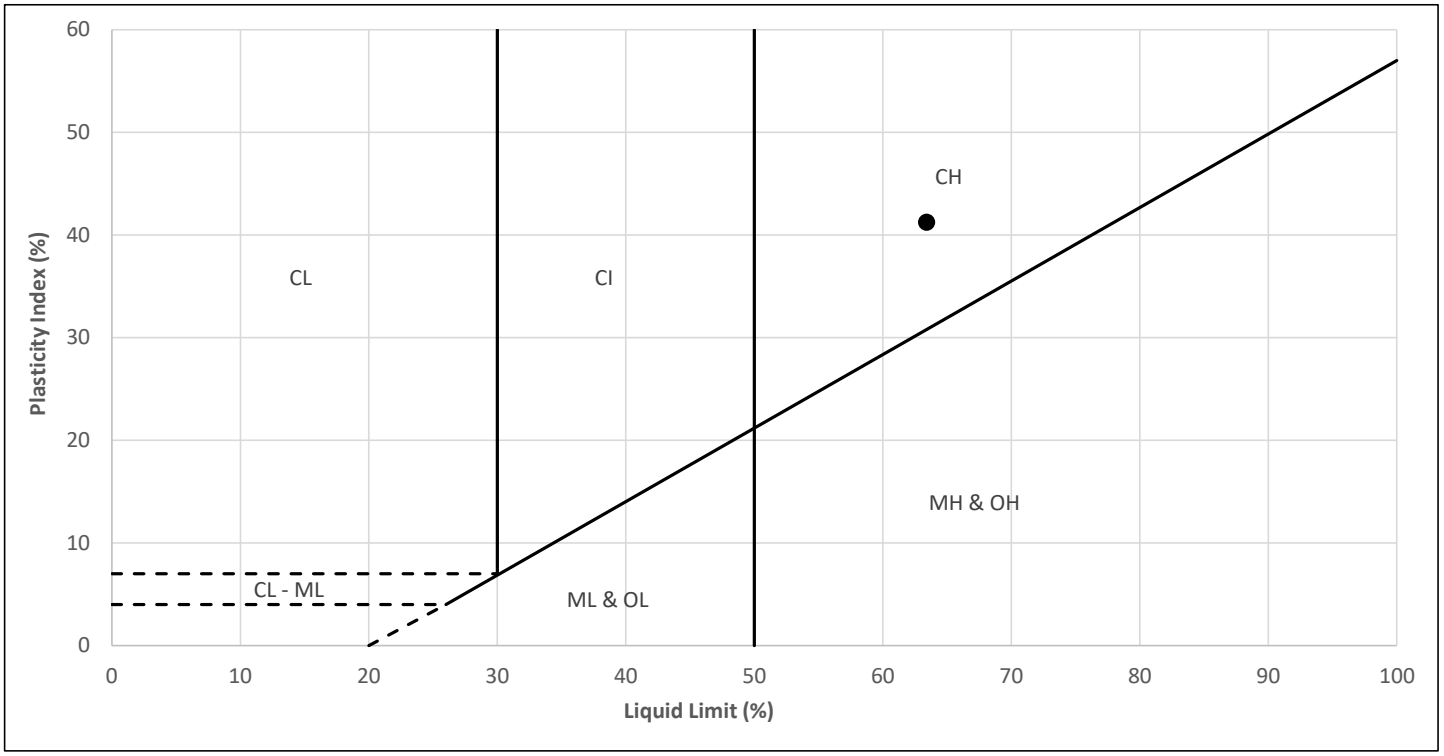
Project:	Snake Lake Reservoir Expansion	**Sample #:**	227RC16
Project No.:	1560-193-00	**Source:**	22CH227
Owner:	EID	**Sample Depth:**	27.4m
File No.:	AL - 227RC16	**Test Date:**	9.1.2022

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	63.4
Plastic Limit (PL)	22.2
Plasticity Index (PI)	41.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

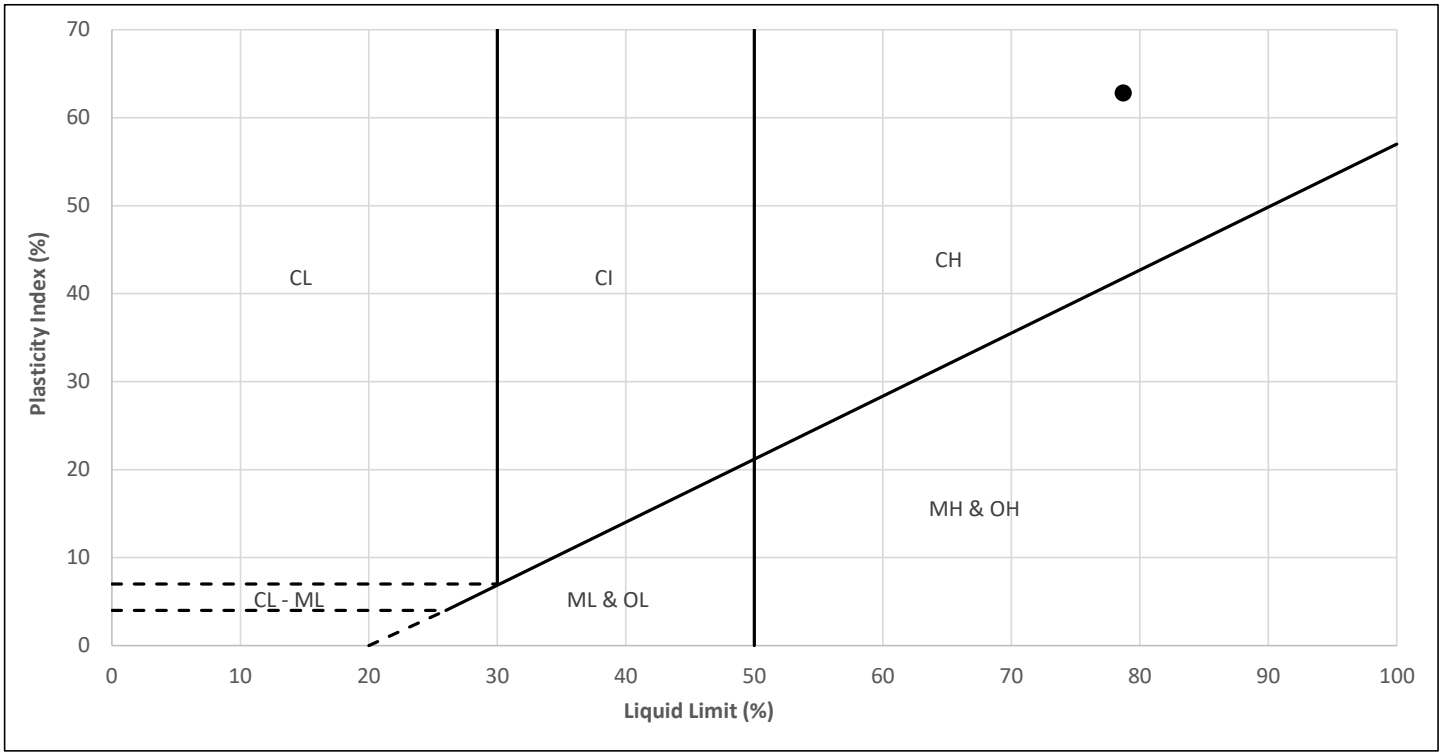
Project:	Snake Lake Reservoir Expansion	**Sample #:**	227UD1
Project No.:	1560-193-00	**Source:**	22CH227
Owner:	EID	**Sample Depth:**	16.07m
File No.:	AL - 227UD1	**Test Date:**	19-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	78.7
Plastic Limit (PL)	15.9
Plasticity Index (PI)	62.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

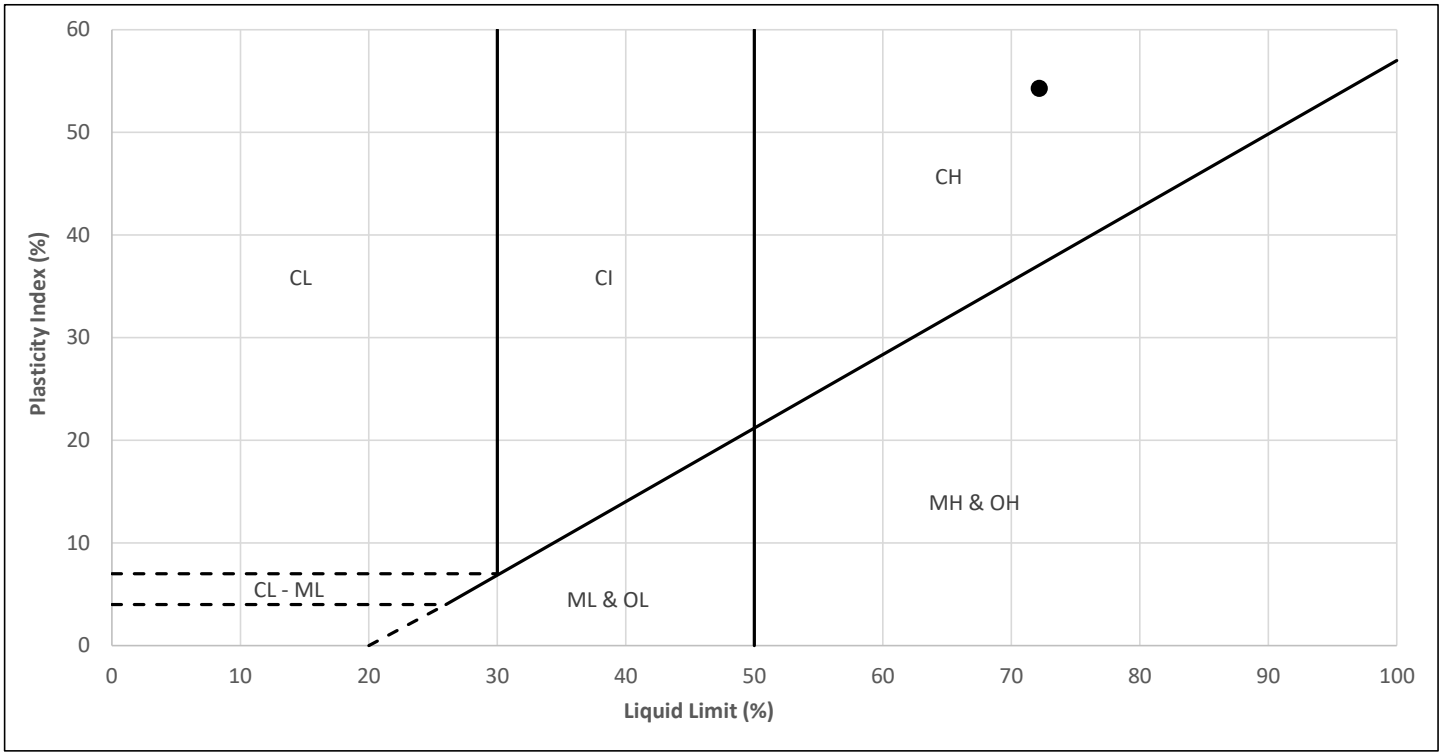
Project:	Snake Lake Reservoir Expansion	**Sample #:**	227UD3
Project No.:	1560-193-00	**Source:**	22CH227
Owner:	EID	**Sample Depth:**	17.0m
File No.:	AL - 227UD3	**Test Date:**	29-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	72.2
Plastic Limit (PL)	17.9
Plasticity Index (PI)	54.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

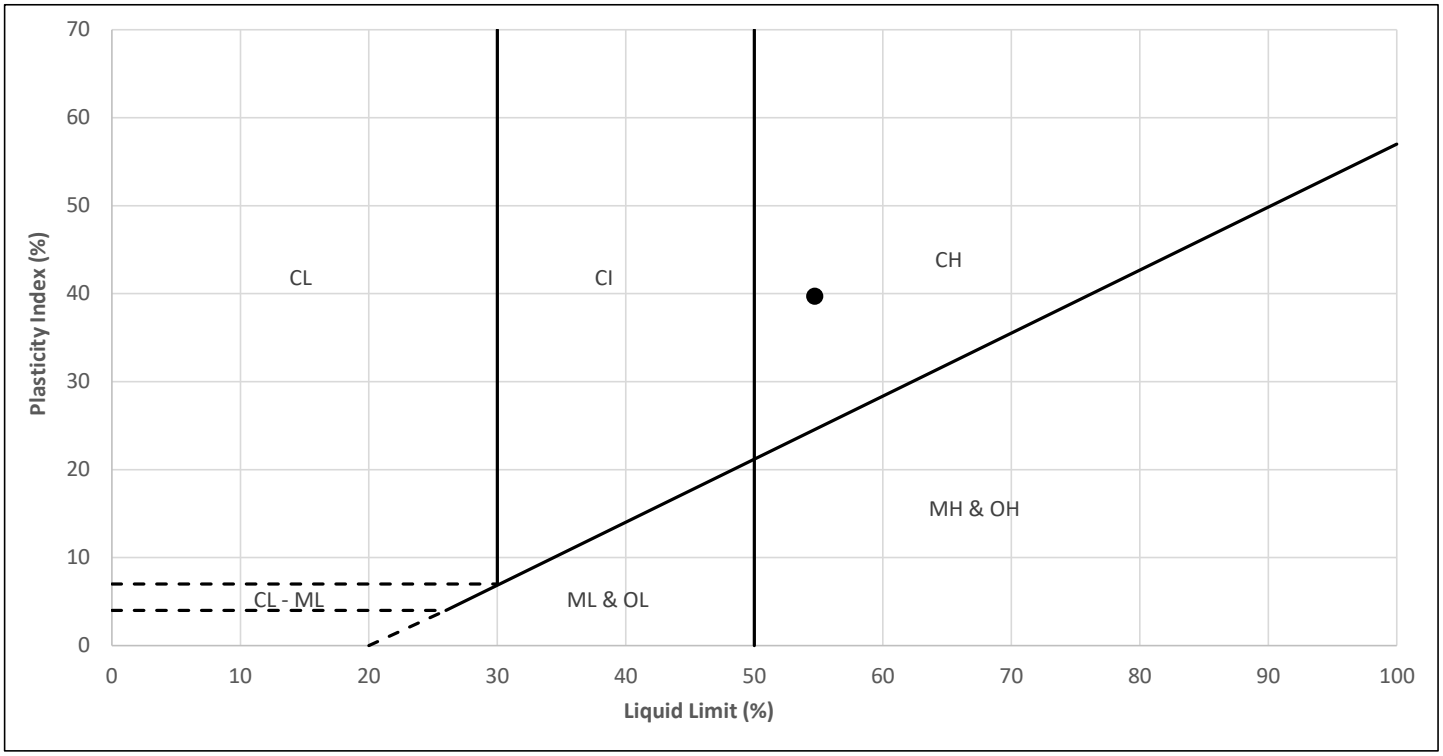
Project:	Snake Lake Reservoir Expansion	**Sample #:**	228AU2
Project No.:	1560-193-00	**Source:**	22BH228
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 228AU2	**Date:**	3-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.7
Plastic Limit (PL)	15.0
Plasticity Index (PI)	39.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

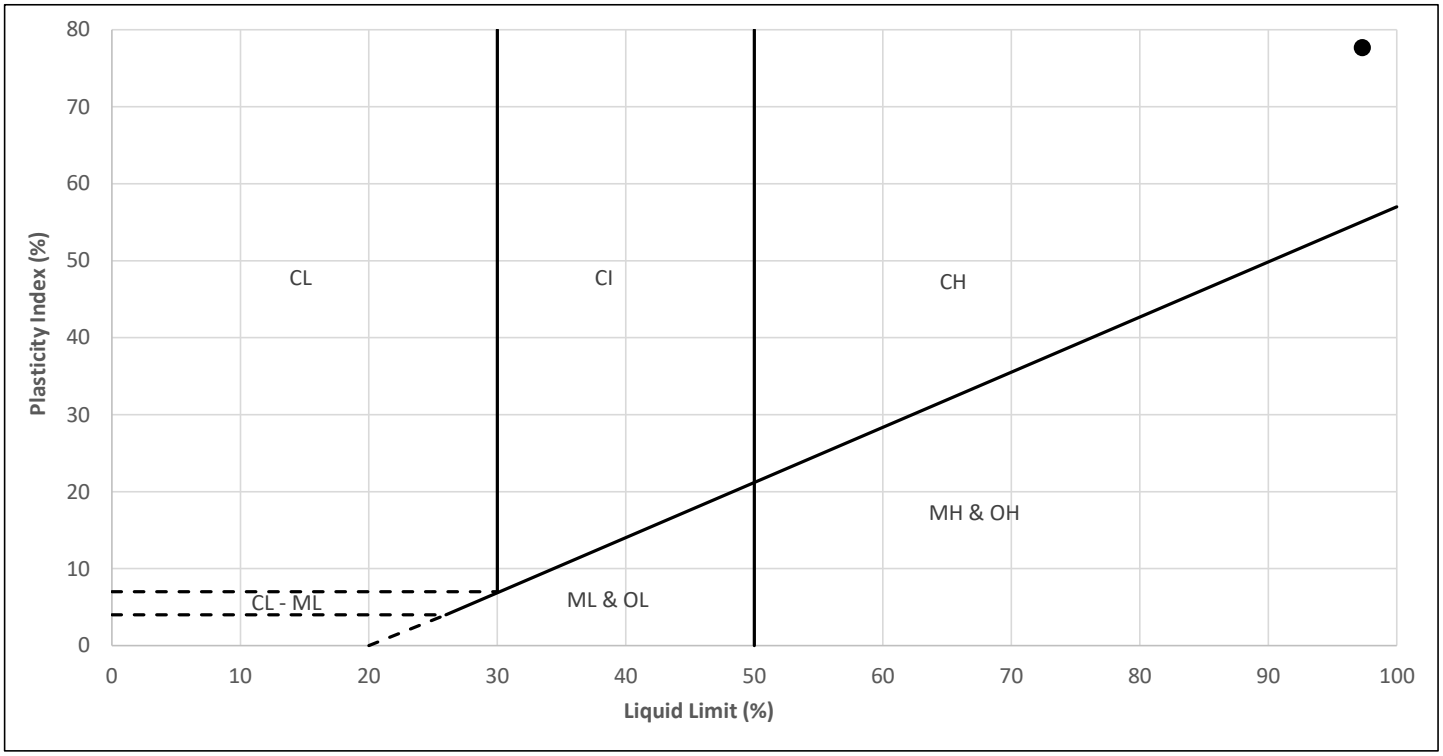
Project:	Snake Lake Reservoir Expansion	**Sample #:**	228AU4
Project No.:	1560-193-00	**Source:**	22BH228
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 228AU4	**Date:**	3-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils)

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	97.3
Plastic Limit (PL)	19.6
Plasticity Index (PI)	77.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

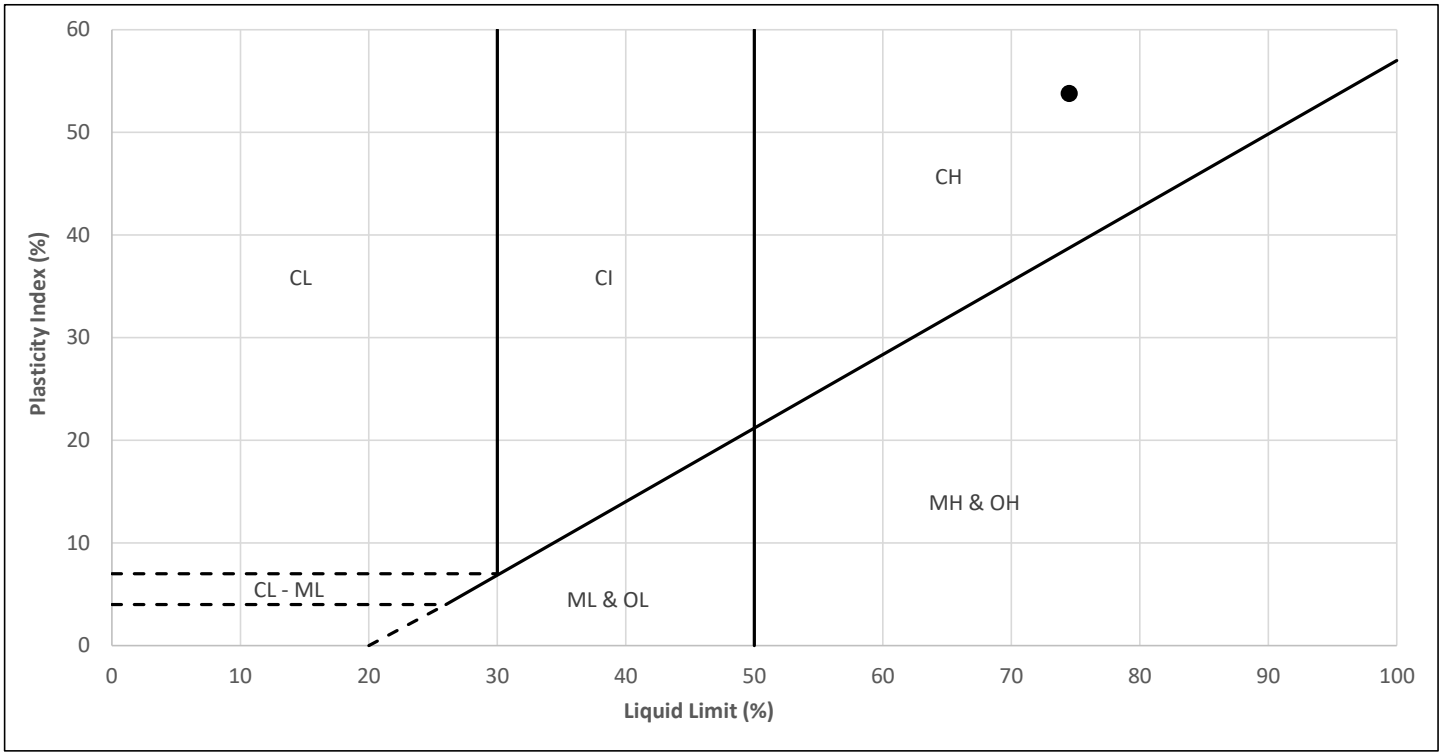
Project:	Snake Lake Reservoir Expansion	**Sample #:**	228ST1
Project No.:	1560-193-00	**Source:**	22CH228
Owner:	EID	**Sample Depth:**	1.7m
File No.:	AL - 228ST1	**Test Date:**	15-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	74.5
Plastic Limit (PL)	20.7
Plasticity Index (PI)	53.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

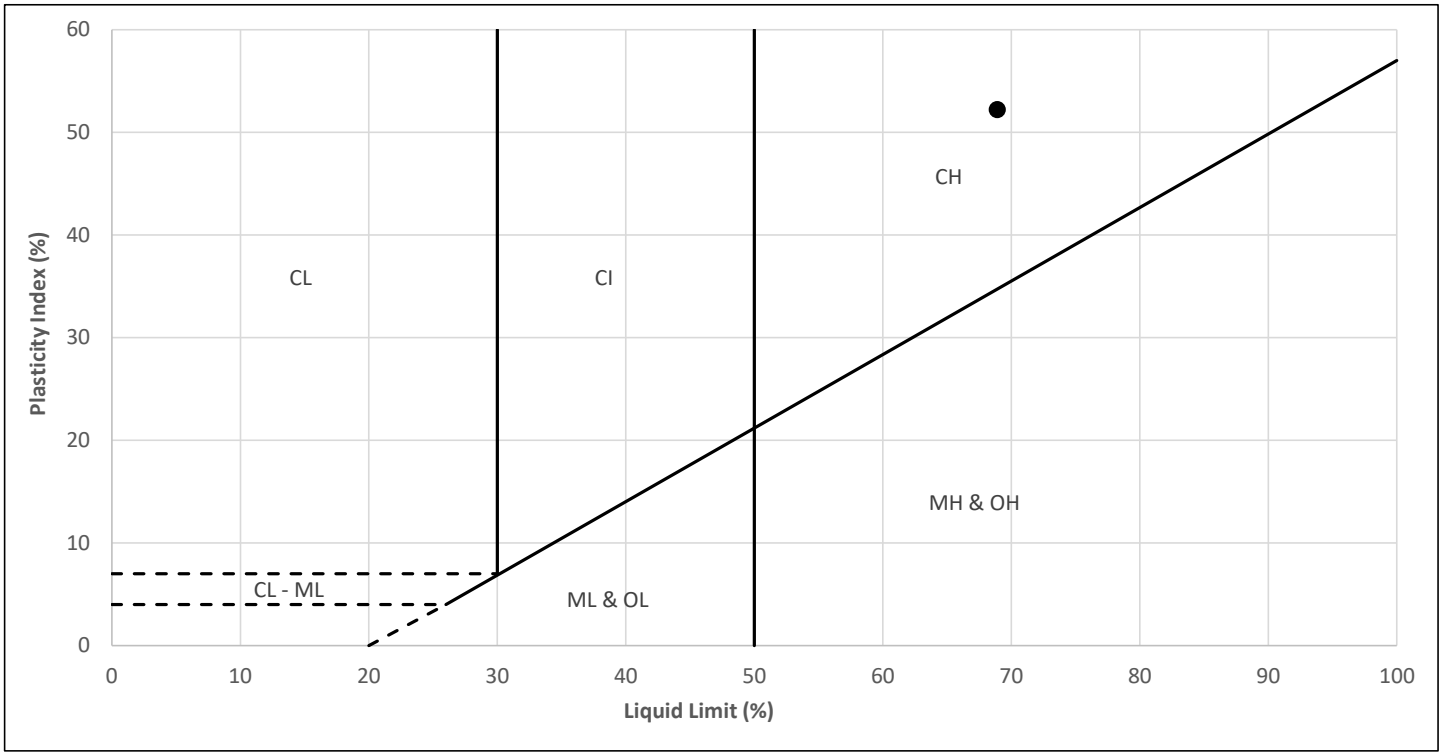
Project:	Snake Lake Reservoir Expansion	**Sample #:**	228UD2
Project No.:	1560-193-00	**Source:**	22CH228
Owner:	EID	**Sample Depth:**	11.2m
File No.:	AL - 228UD2	**Test Date:**	29-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	68.9
Plastic Limit (PL)	16.7
Plasticity Index (PI)	52.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

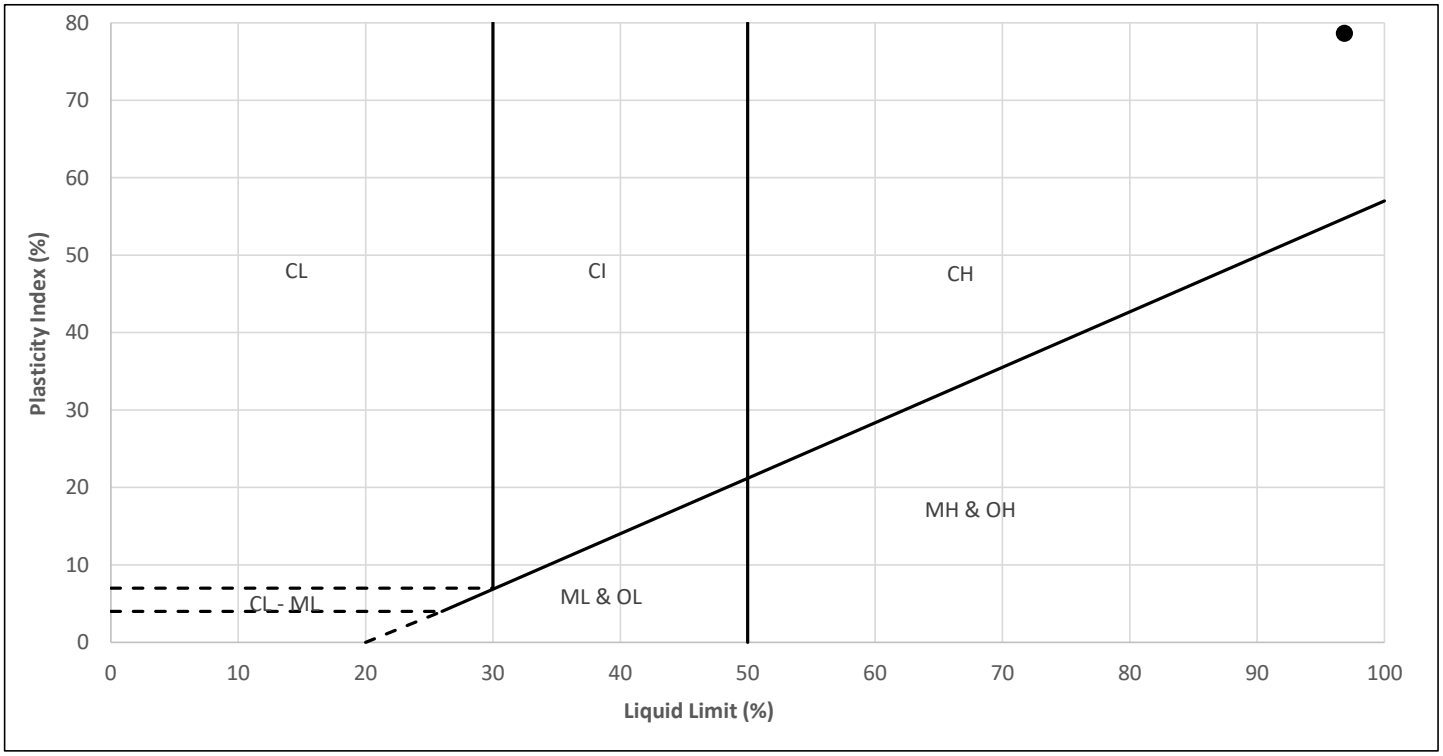
Project:	Snake Lake Reservoir Expansion	**Sample #:**	228UD4
Project No.:	1560-193-00	**Source:**	22CH228
Owner:	EID	**Sample Depth:**	16.58m
File No.:	AL - 228UD4	**Test Date:**	29-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	96.8
Plastic Limit (PL)	18.2
Plasticity Index (PI)	78.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

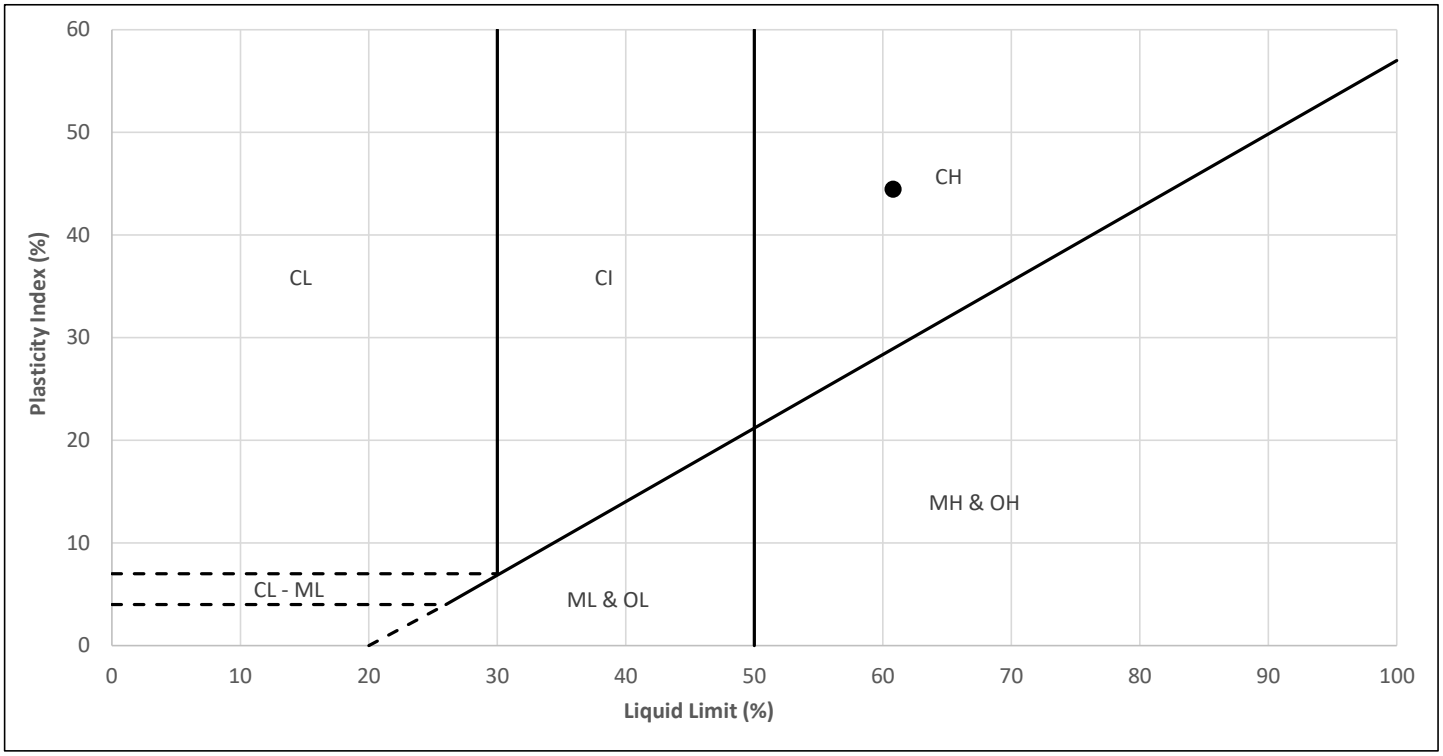
Project:	Snake Lake Reservoir Expansion	**Sample #:**	228UD7
Project No.:	1560-193-00	**Source:**	22CH228
Owner:	EID	**Sample Depth:**	28.7m
File No.:	AL - 228UD7	**Test Date:**	30-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	60.8
Plastic Limit (PL)	16.3
Plasticity Index (PI)	44.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

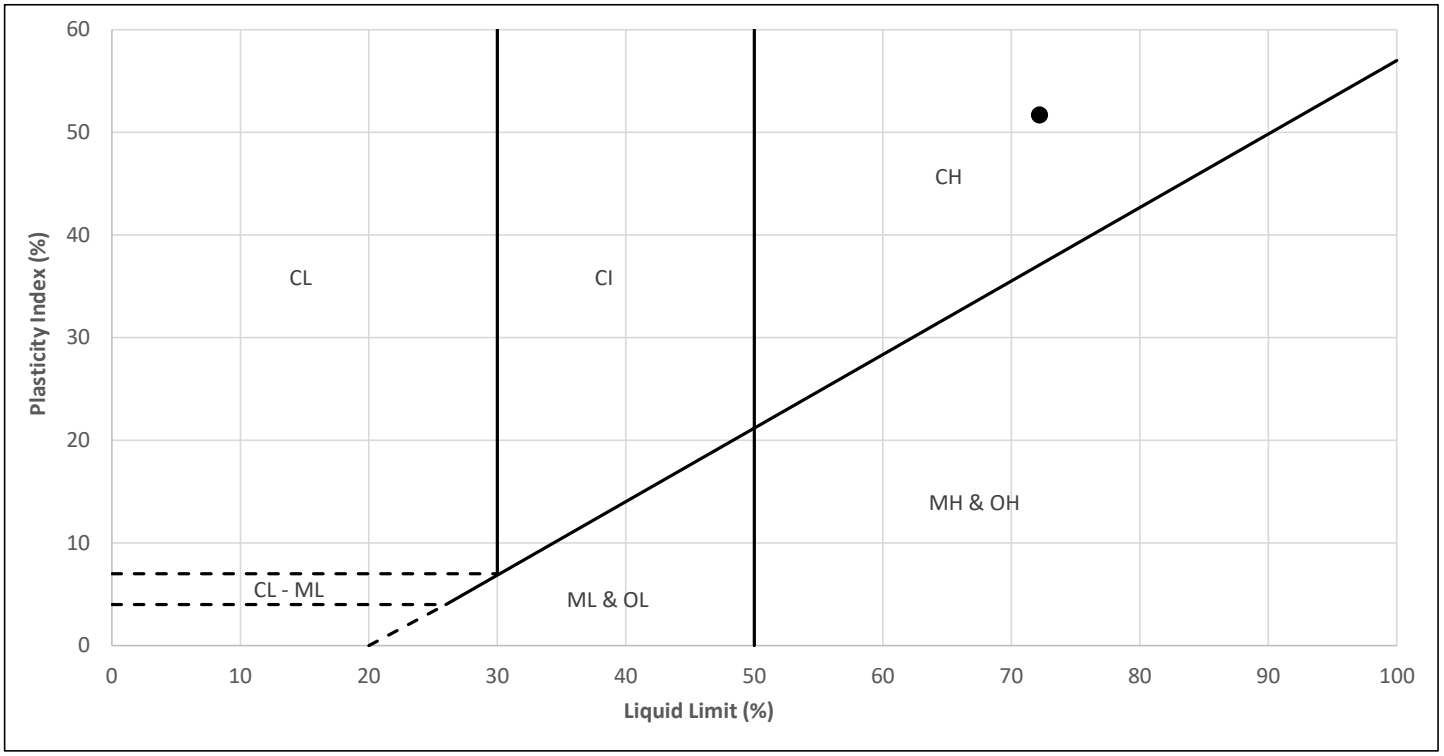
Project:	Snake Lake Reservoir Expansion	**Sample #:**	229RC1
Project No.:	1560-193-00	**Source:**	22CH229
Owner:	EID	**Sample Depth:**	3.2m
File No.:	AL - 229RC1	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	72.2
Plastic Limit (PL)	20.5
Plasticity Index (PI)	51.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

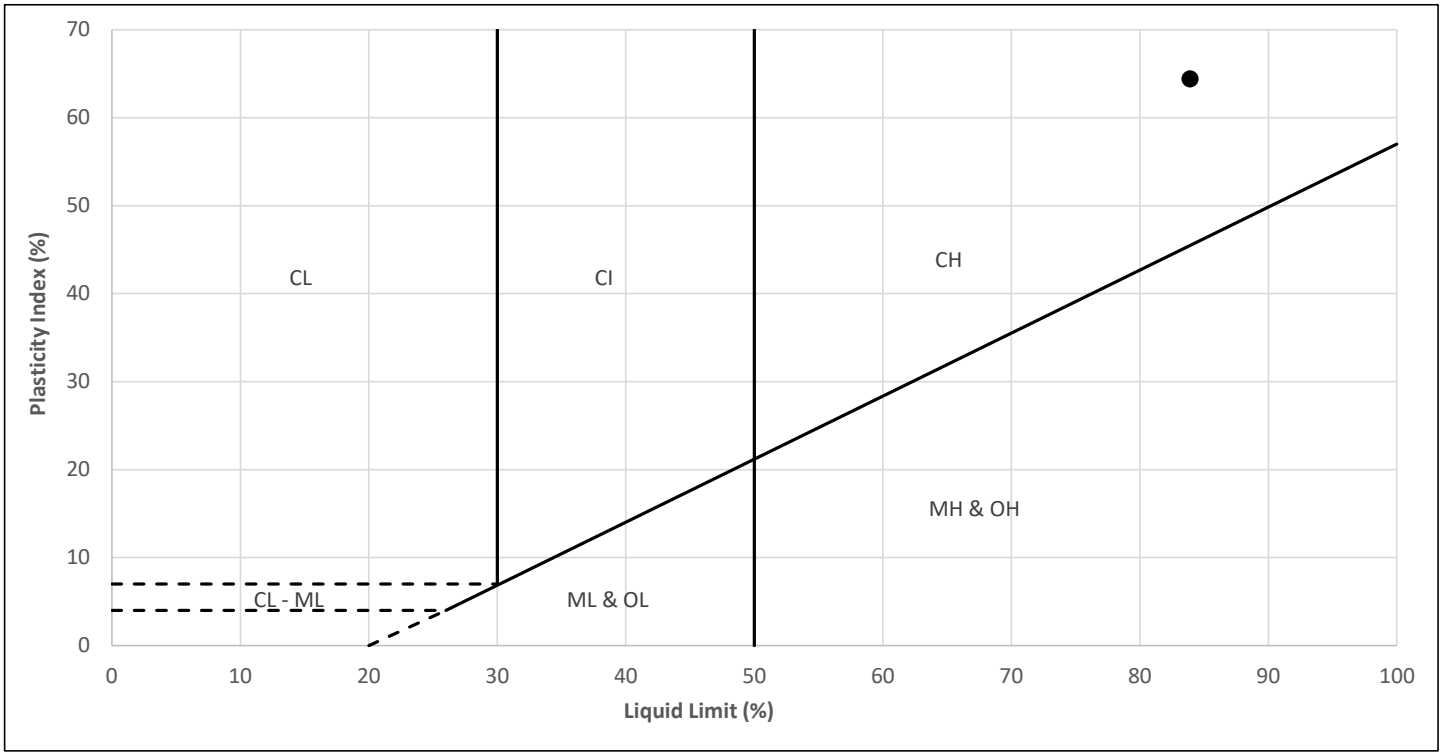
Project:	Snake Lake Reservoir Expansion	**Sample #:**	229RC2
Project No.:	1560-193-00	**Source:**	22CH229
Owner:	EID	**Sample Depth:**	5.7m
File No.:	AL - 229RC2	**Test Date:**	19-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	83.9
Plastic Limit (PL)	19.5
Plasticity Index (PI)	64.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

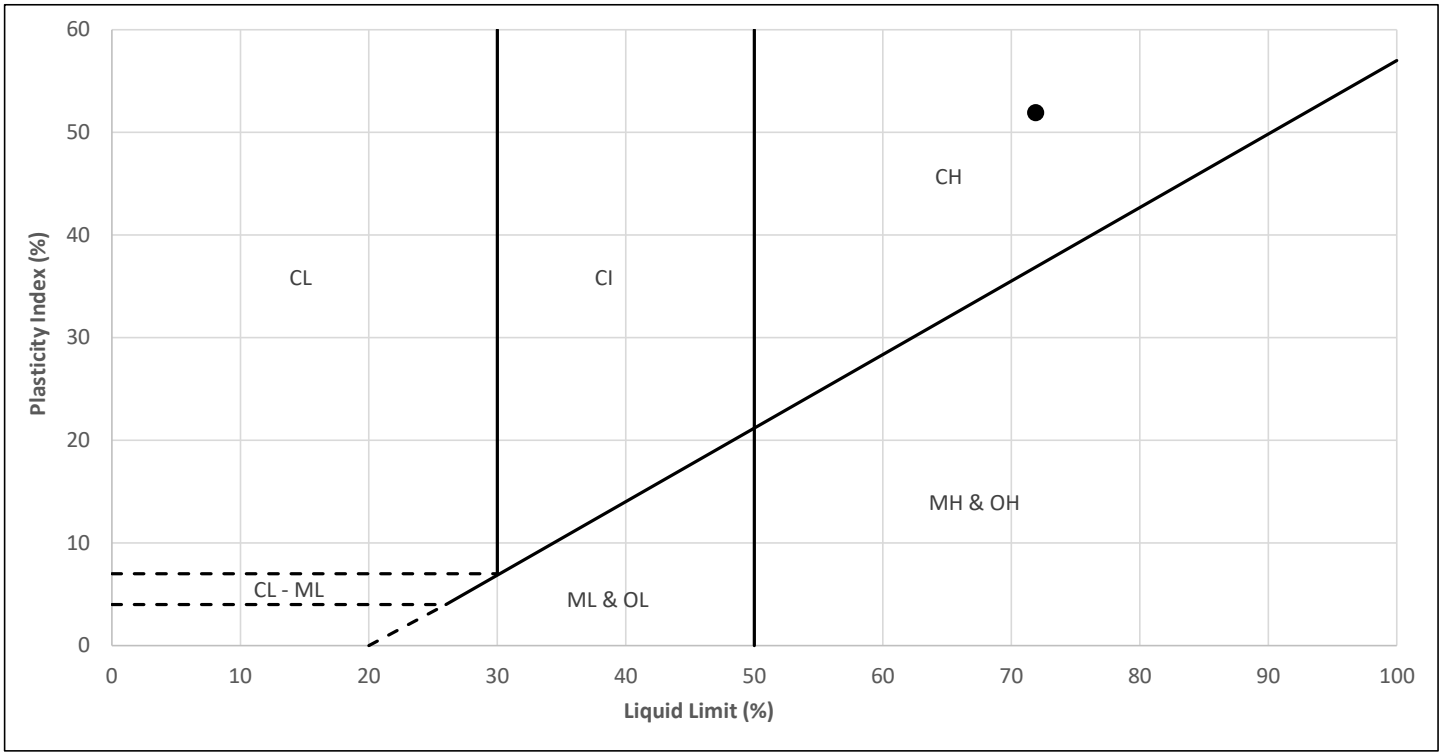
Project:	Snake Lake Reservoir Expansion	**Sample #:**	229RC4
Project No.:	1560-193-00	**Source:**	22CH229
Owner:	EID	**Sample Depth:**	7.8m
File No.:	AL - 229RC4	**Test Date:**	19-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	71.9
Plastic Limit (PL)	20.0
Plasticity Index (PI)	51.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

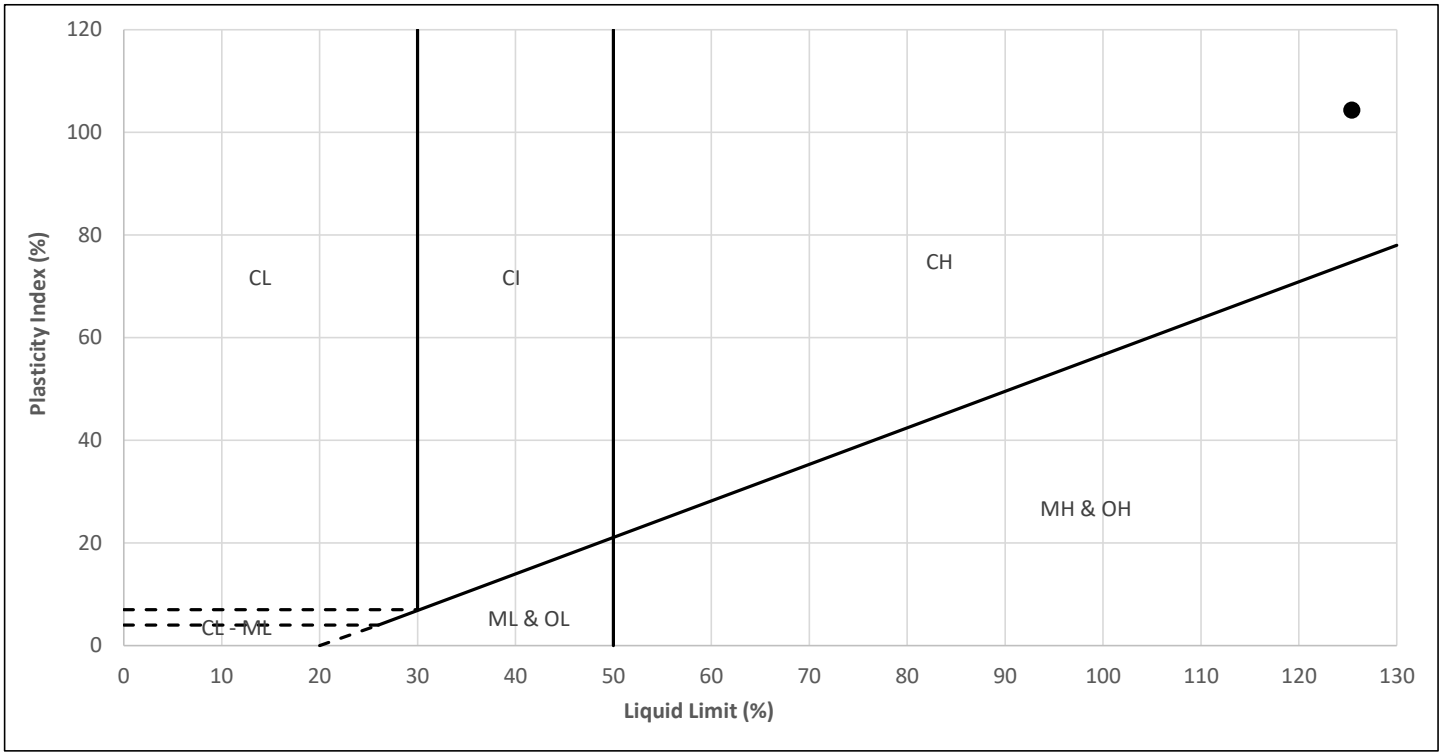
Project:	Snake Lake Reservoir Expansion	**Sample #:**	229RC6
Project No.:	1560-193-00	**Source:**	22CH229
Owner:	EID	**Sample Depth:**	10.9m
File No.:	AL - 229RC6	**Test Date:**	19-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	125.4
Plastic Limit (PL)	21.0
Plasticity Index (PI)	104.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

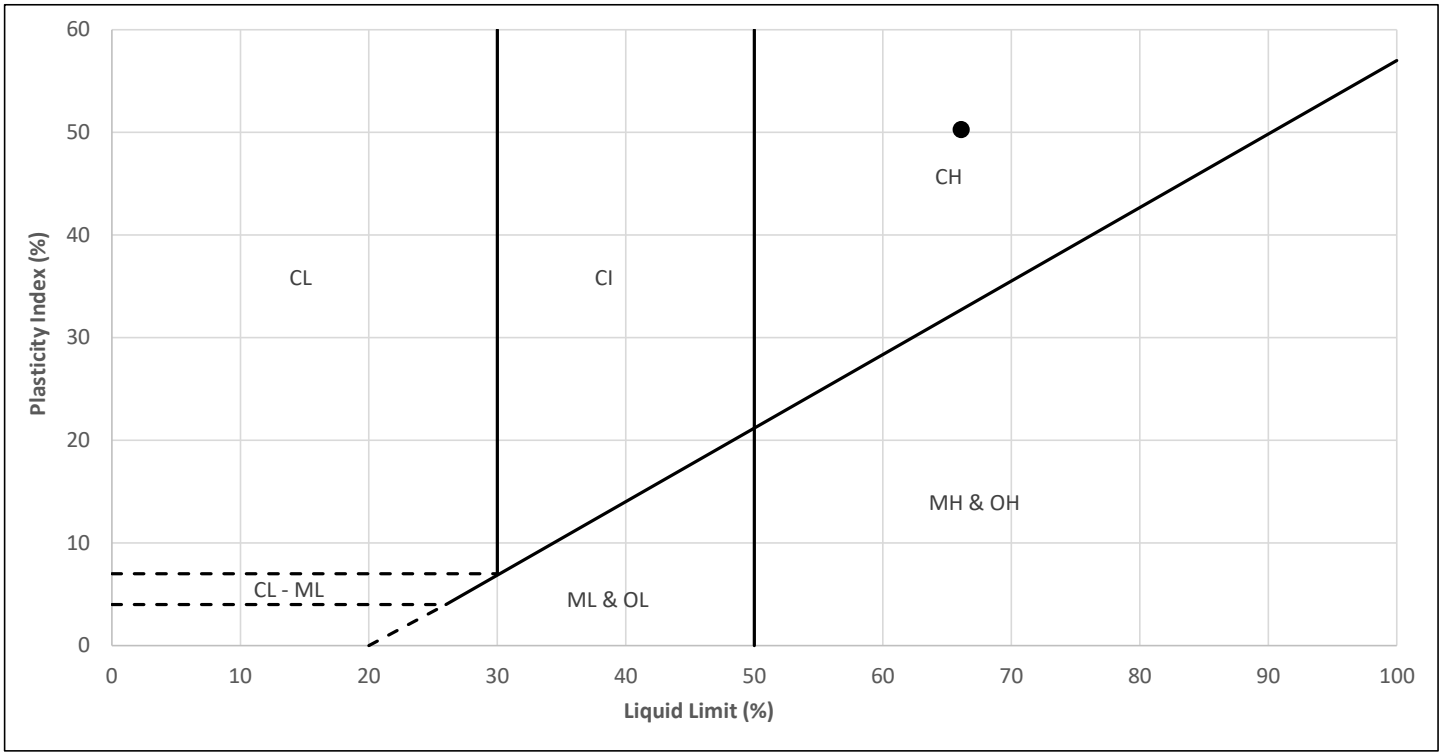
Project:	Snake Lake Reservoir Expansion	**Sample #:**	229RC12
Project No.:	1560-193-00	**Source:**	22CH229
Owner:	EID	**Sample Depth:**	20.4m
File No.:	AL - 229RC12	**Test Date:**	14-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	66.1
Plastic Limit (PL)	15.8
Plasticity Index (PI)	50.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

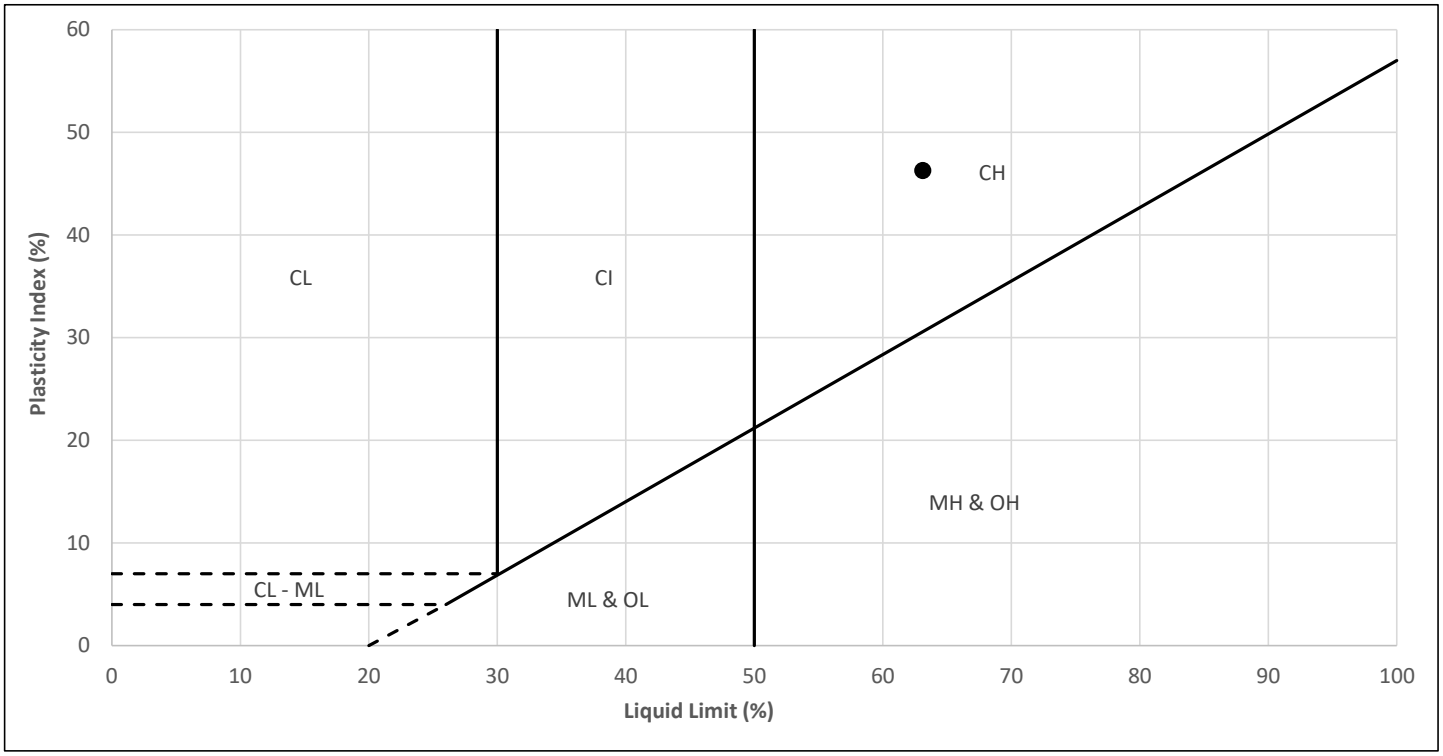
Project:	Snake Lake Reservoir Expansion	**Sample #:**	230AU3
Project No.:	1560-193-00	**Source:**	22CH230
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 230AU3	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	63.1
Plastic Limit (PL)	16.8
Plasticity Index (PI)	46.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

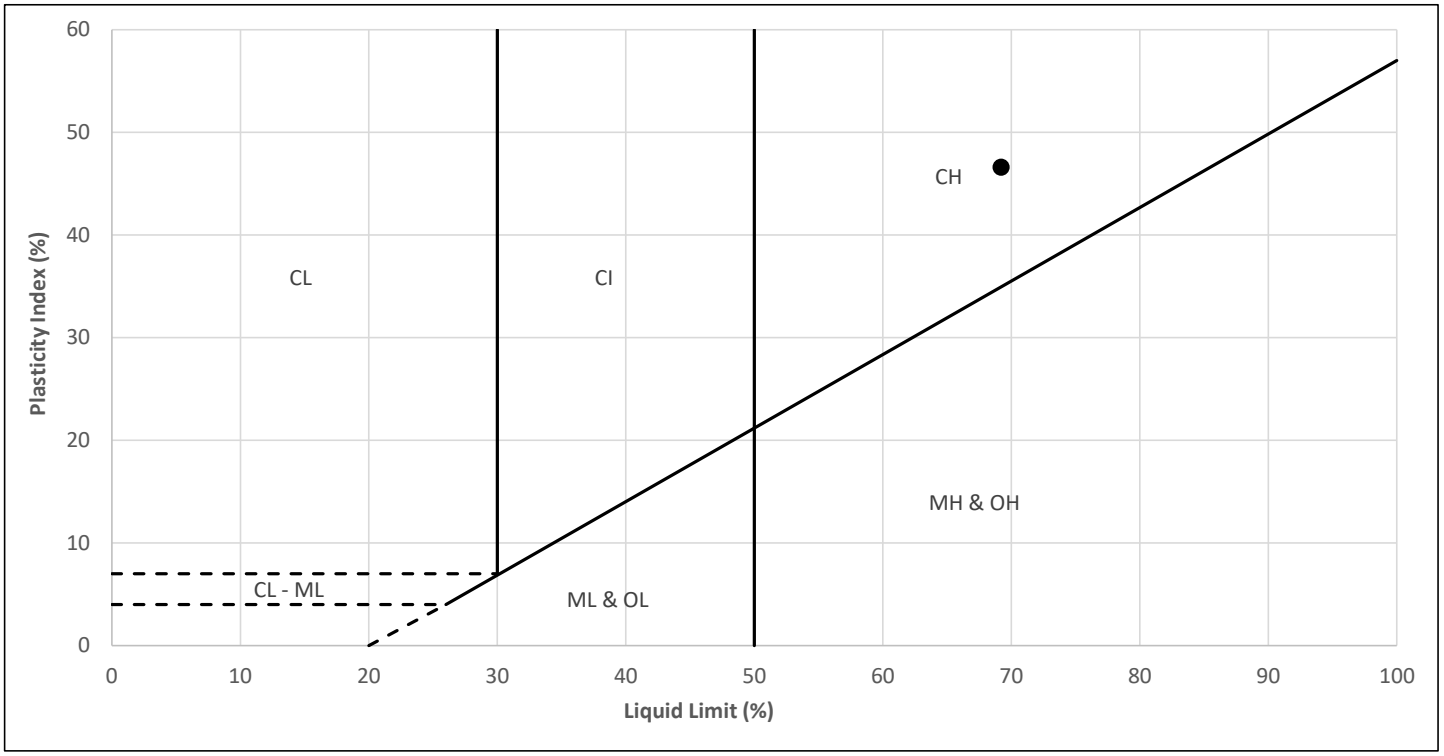
Project:	Snake Lake Reservoir Expansion	**Sample #:**	230RC1
Project No.:	1560-193-00	**Source:**	22CH230
Owner:	EID	**Sample Depth:**	3.6m
File No.:	AL - 230RC1	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	69.2
Plastic Limit (PL)	22.6
Plasticity Index (PI)	46.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

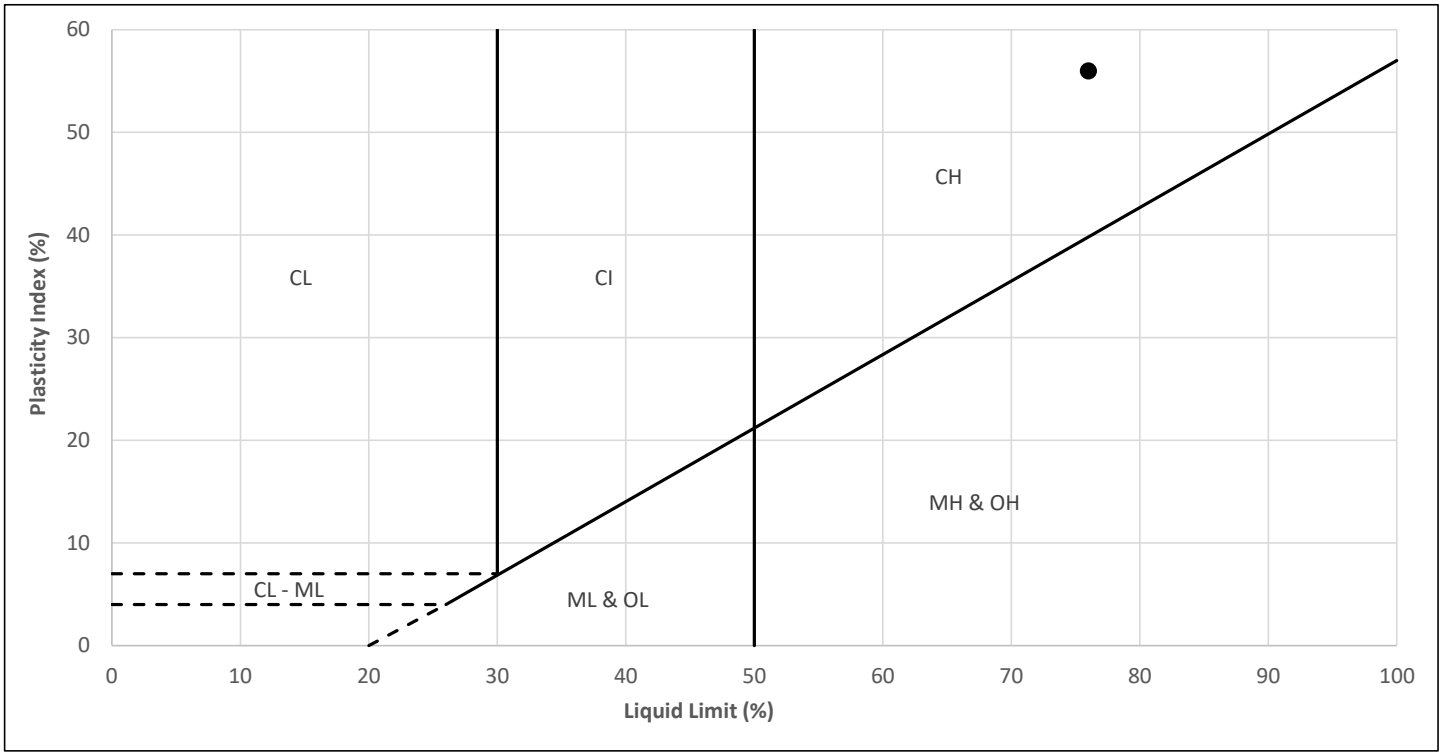
Project:	Snake Lake Reservoir Expansion	**Sample #:**	230RC2
Project No.:	1560-193-00	**Source:**	22CH230
Owner:	EID	**Sample Depth:**	4.9m
File No.:	AL - 230RC2	**Test Date:**	15-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	76.0
Plastic Limit (PL)	20.0
Plasticity Index (PI)	56.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

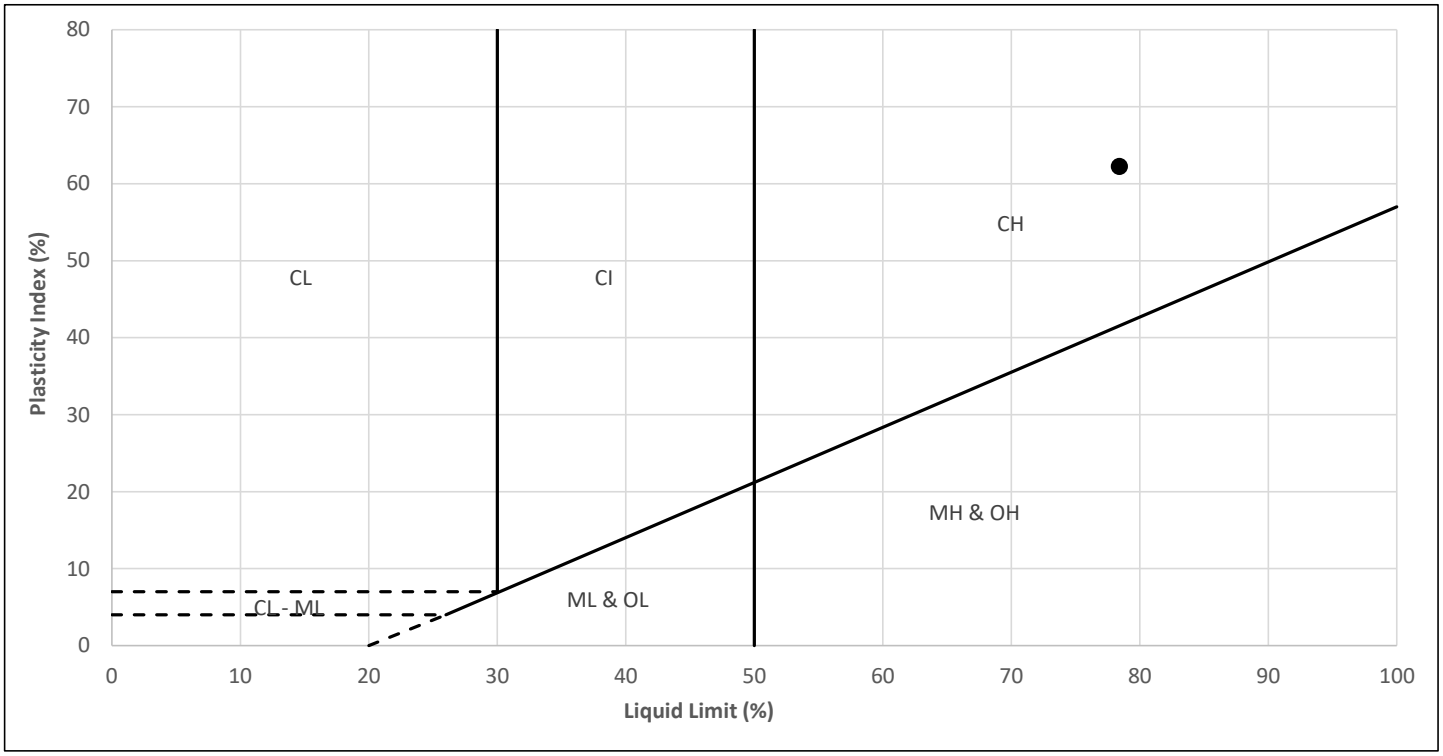
Project:	Snake Lake Reservoir Expansion	**Sample #:**	230RC4
Project No.:	1560-193-00	**Source:**	22CH230
Owner:	EID	**Sample Depth:**	8.1m
File No.:	AL - 230RC4	**Test Date:**	14-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	78.4
Plastic Limit (PL)	16.2
Plasticity Index (PI)	62.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

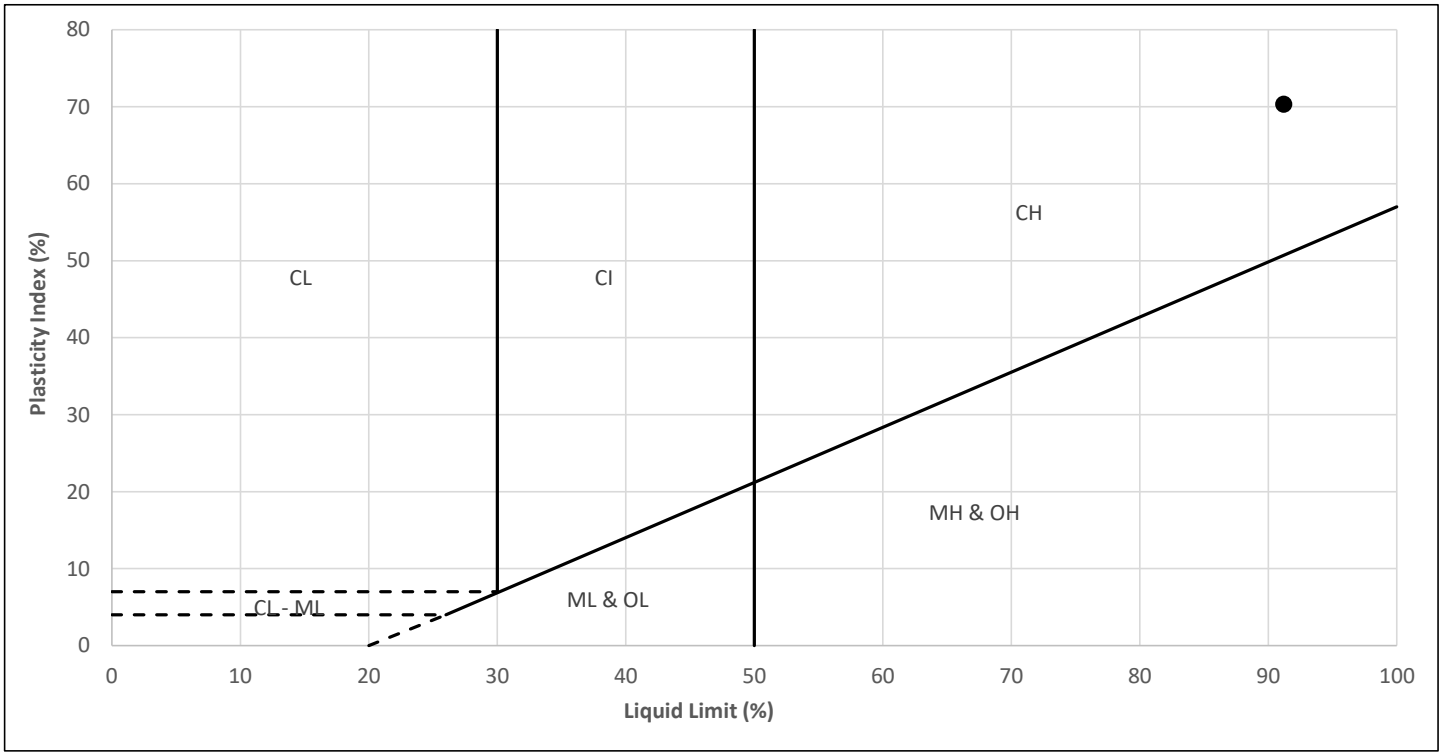
Project:	Snake Lake Reservoir Expansion	**Sample #:**	230RC7
Project No.:	1560-193-00	**Source:**	22CH230
Owner:	EID	**Sample Depth:**	13.9m
File No.:	AL - 230RC7	**Test Date:**	14-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	91.2
Plastic Limit (PL)	20.9
Plasticity Index (PI)	70.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

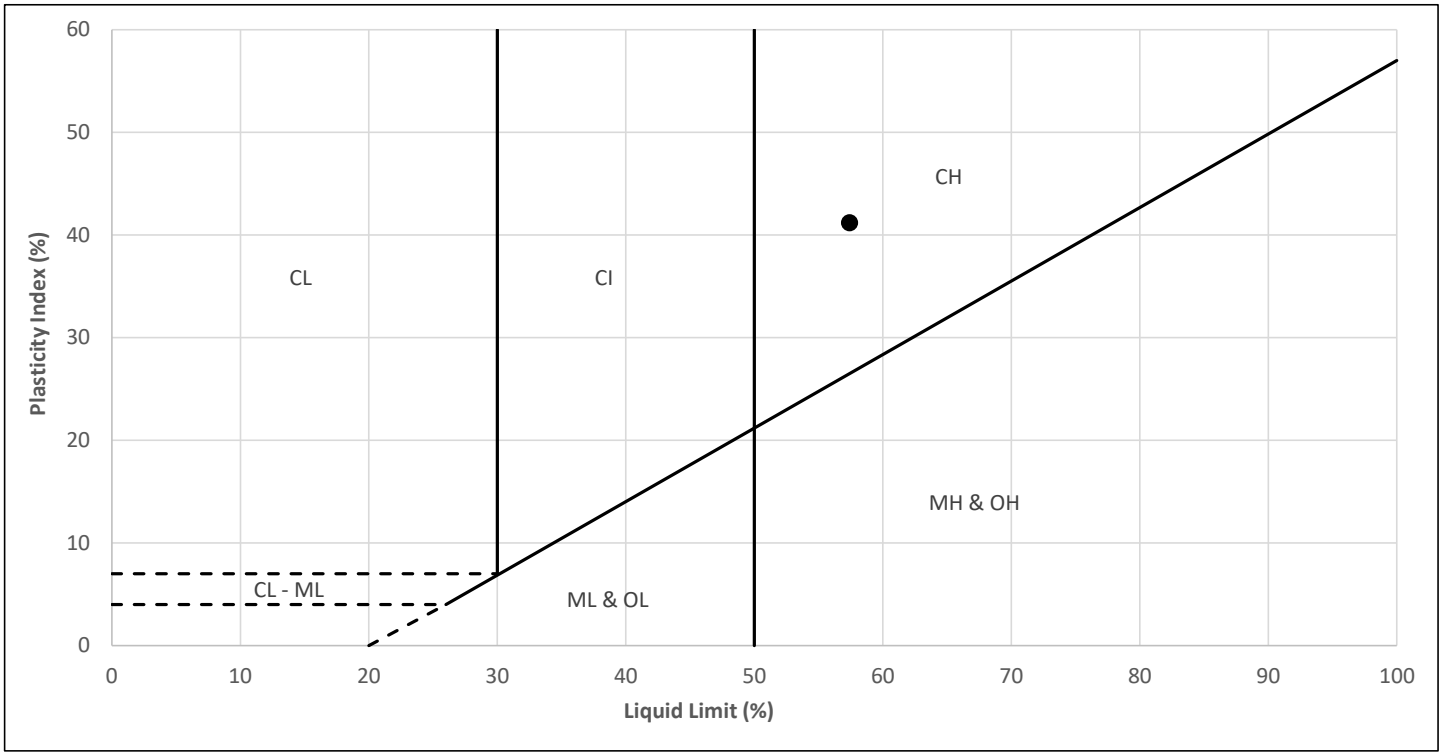
Project:	Snake Lake Reservoir Expansion	**Sample #:**	231AU3
Project No.:	1560-193-00	**Source:**	22CH231
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 231AU3	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	57.4
Plastic Limit (PL)	16.2
Plasticity Index (PI)	41.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

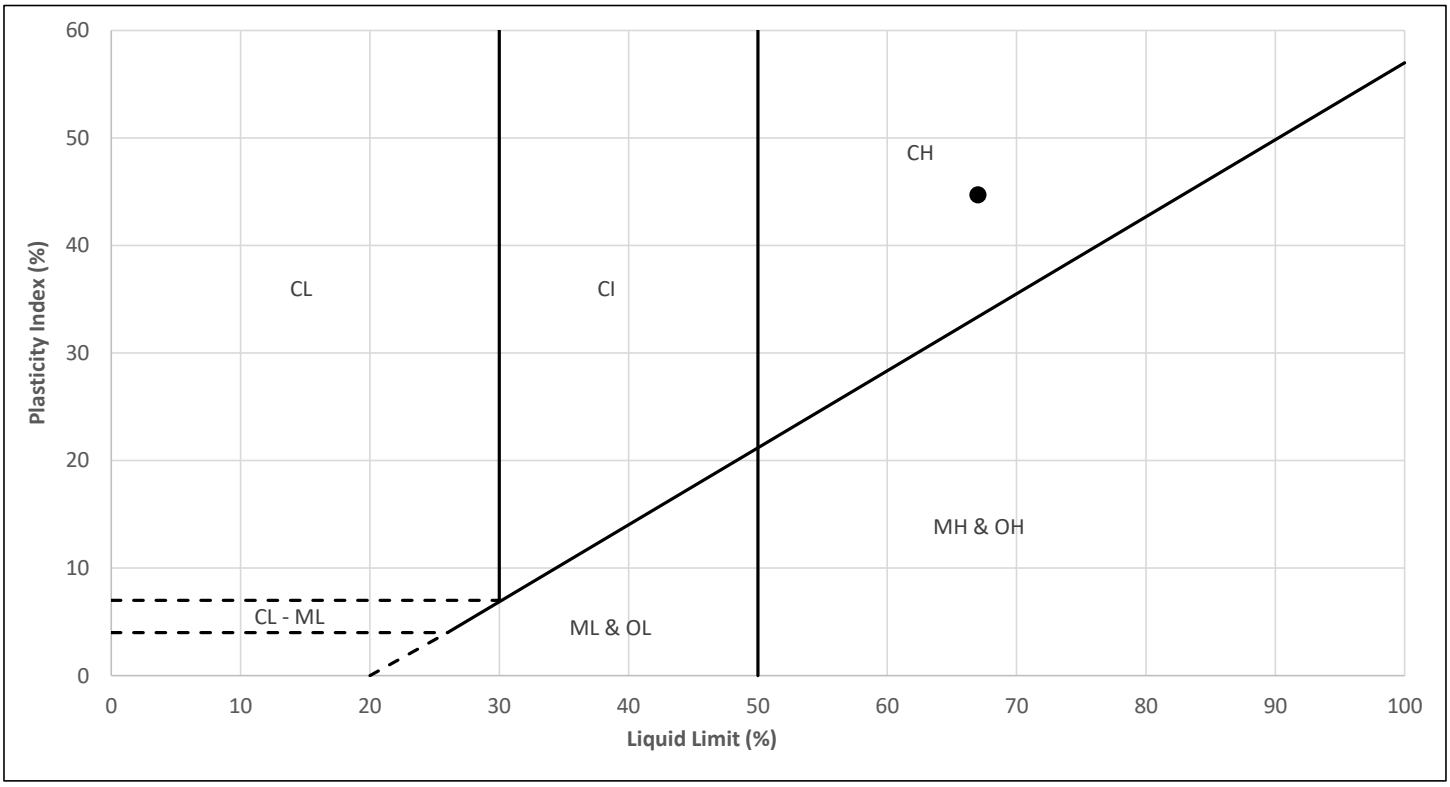
Project:	Snake Lake Reservoir Expansion	**Sample #:**	231RC1
Project No.:	1560-193-00	**Source:**	22CH231
Owner:	EID	**Sample Depth:**	3.6m
File No.:	AL - 231RC1	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	67.0
Plastic Limit (PL)	22.3
Plasticity Index (PI)	44.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

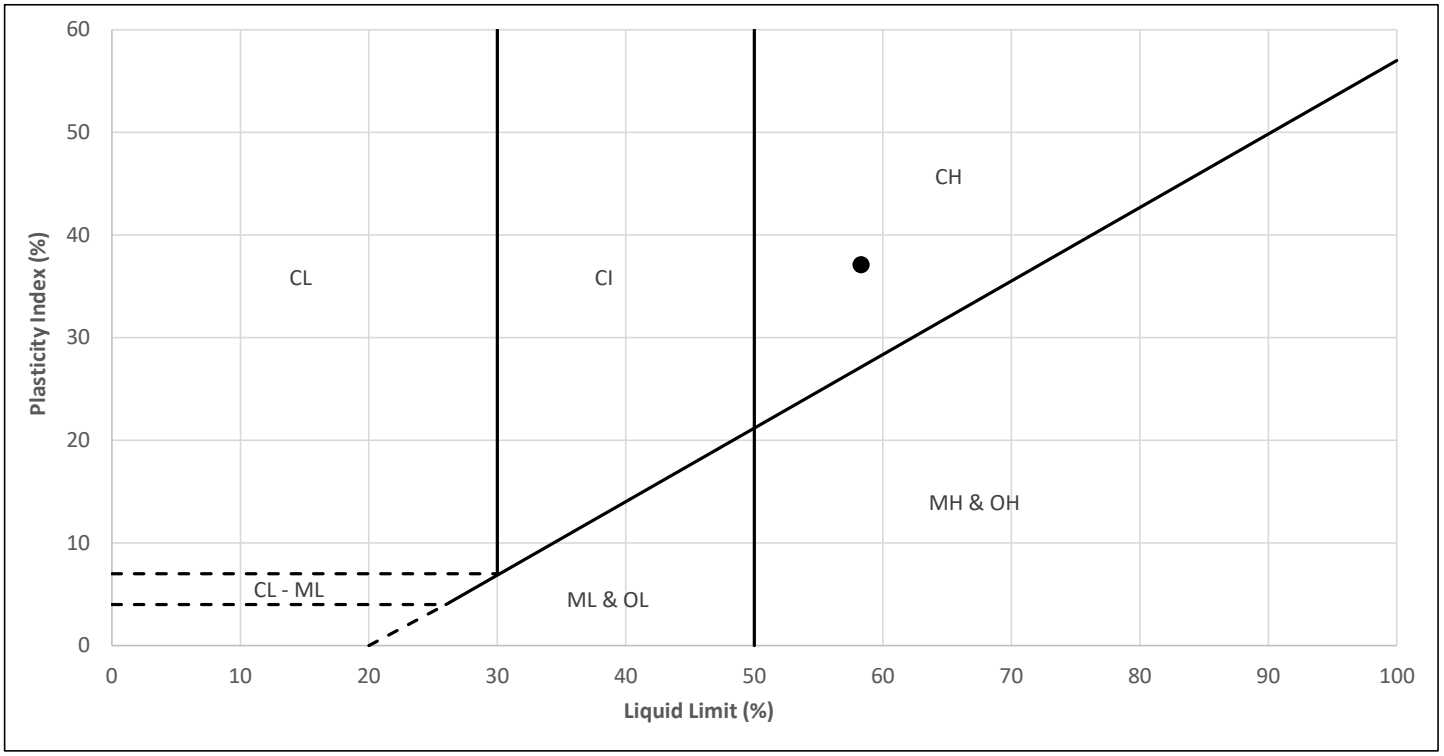
Project:	Snake Lake Reservoir Expansion	**Sample #:**	231RC1
Project No.:	1560-193-00	**Source:**	22CH231
Owner:	EID	**Sample Depth:**	4.1m
File No.:	AL - 231RC1	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	58.3
Plastic Limit (PL)	21.2
Plasticity Index (PI)	37.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

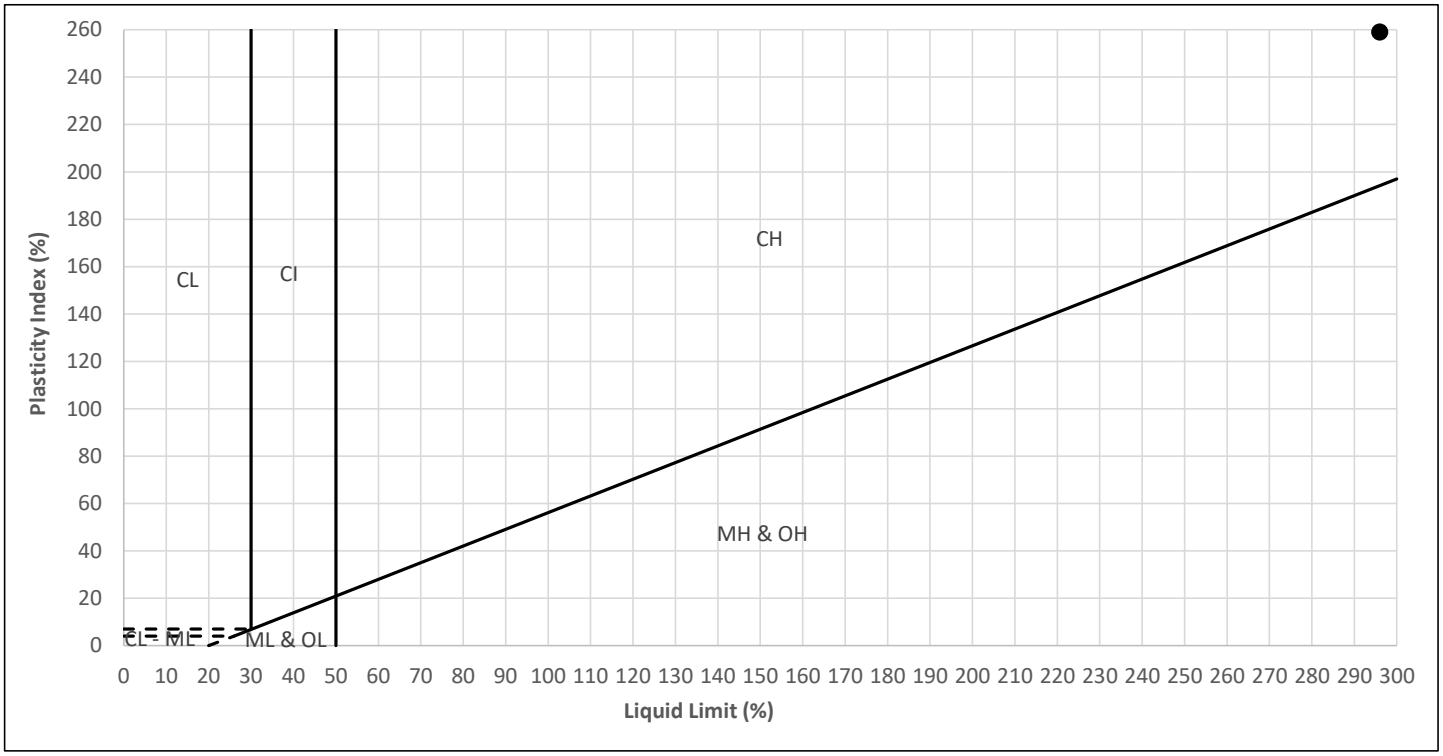
Project:	Snake Lake Reservoir Expansion	**Sample #:**	231RC9
Project No.:	1560-193-00	**Source:**	22CH231
Owner:	EID	**Sample Depth:**	15.5m
File No.:	AL - 231RC9	**Test Date:**	14-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	296.0
Plastic Limit (PL)	36.9
Plasticity Index (PI)	259.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

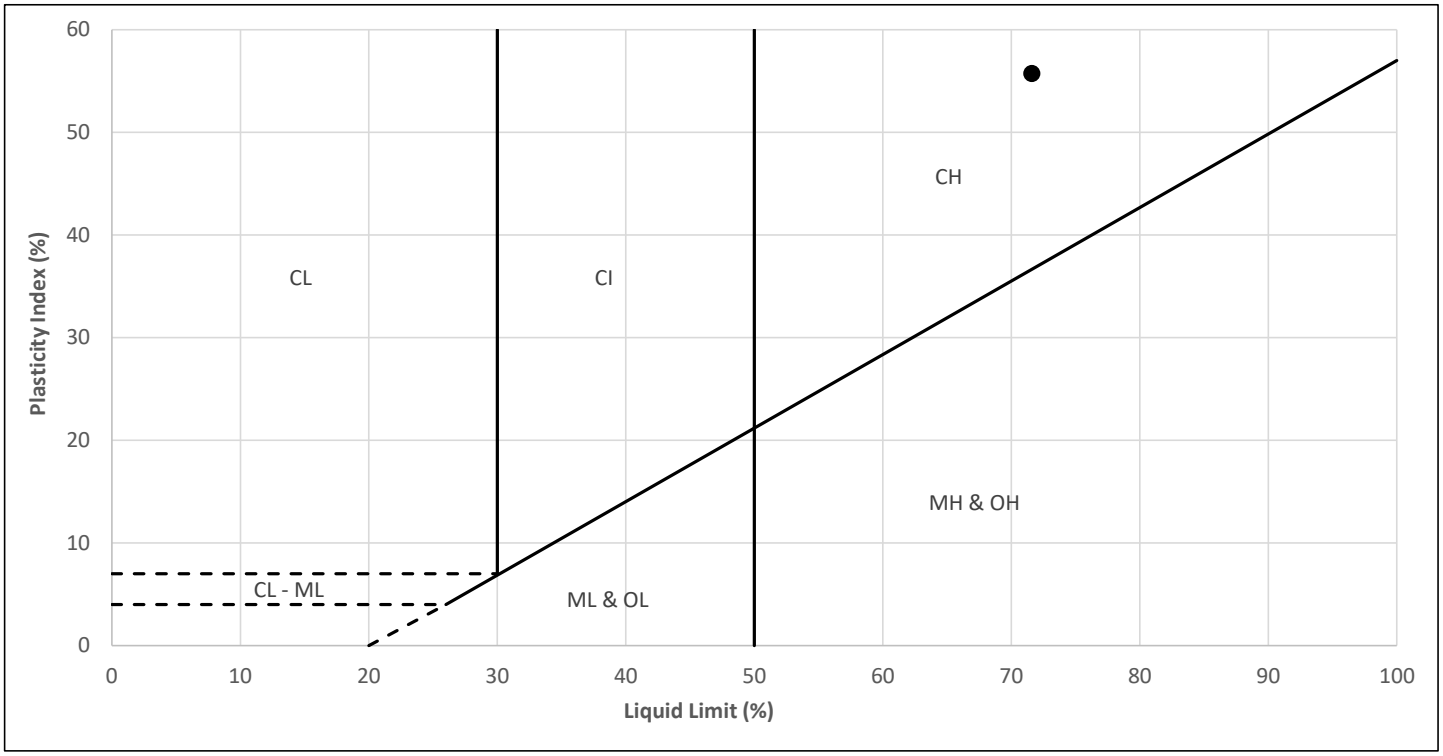
Project:	Snake Lake Reservoir Expansion	**Sample #:**	232RC1
Project No.:	1560-193-00	**Source:**	22CH232
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 232RC1	**Test Date:**	19-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	71.6
Plastic Limit (PL)	15.9
Plasticity Index (PI)	55.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

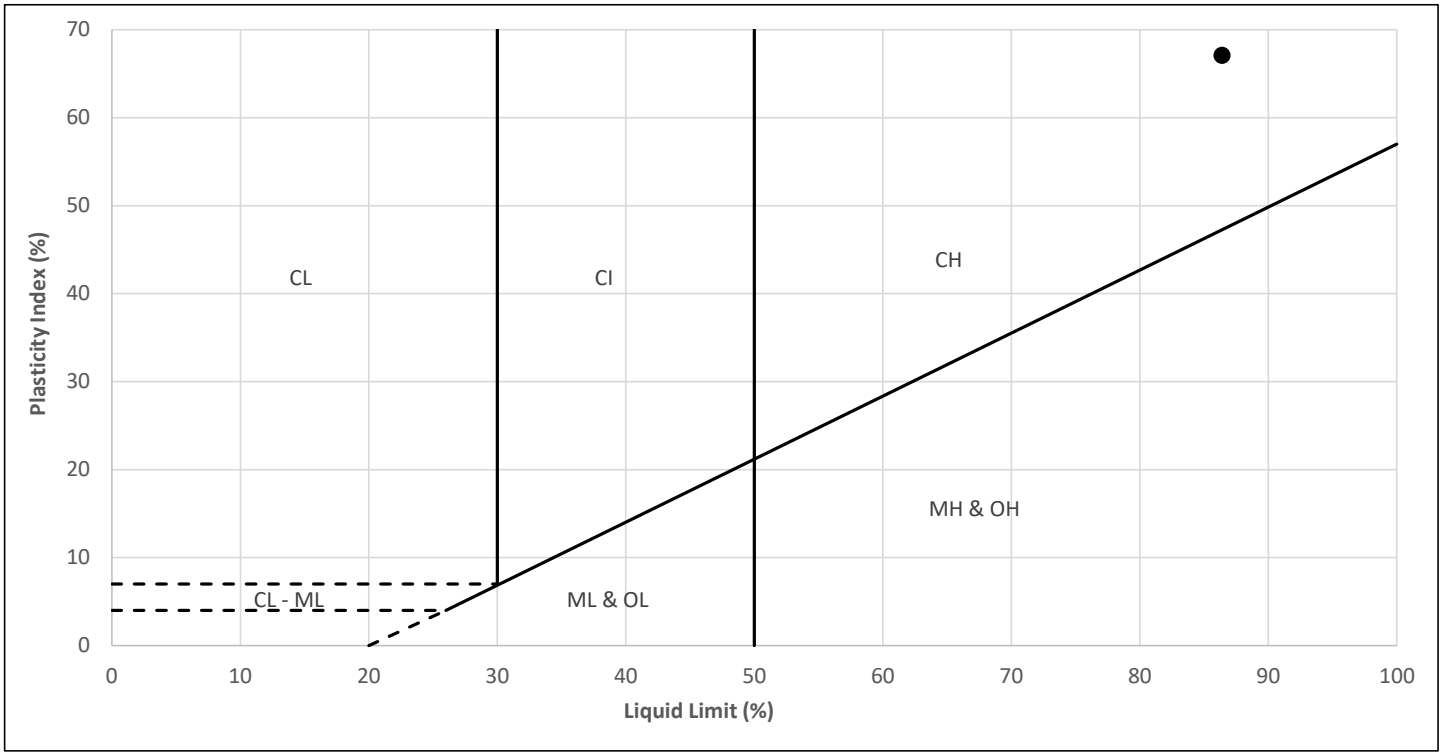
Project:	Snake Lake Reservoir Expansion	**Sample #:**	232RC2
Project No.:	1560-193-00	**Source:**	22CH232
Owner:	EID	**Sample Depth:**	5.3m
File No.:	AL - 232RC2	**Test Date:**	19-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	86.4
Plastic Limit (PL)	19.3
Plasticity Index (PI)	67.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

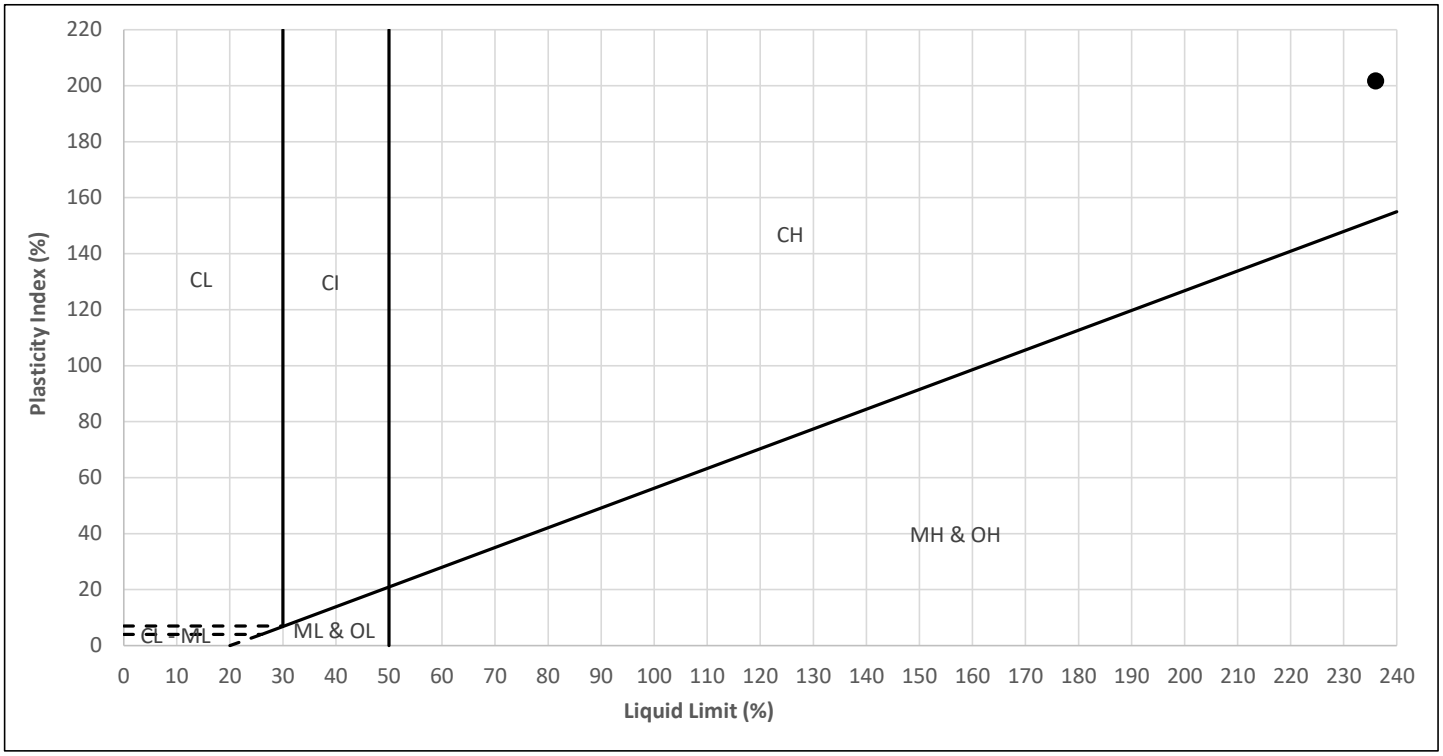
Project:	Snake Lake Reservoir Expansion	**Sample #:**	232RC8
Project No.:	1560-193-00	**Source:**	22CH232
Owner:	EID	**Sample Depth:**	14.2m
File No.:	AL - 232RC8	**Test Date:**	19-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	236.0
Plastic Limit (PL)	34.3
Plasticity Index (PI)	201.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

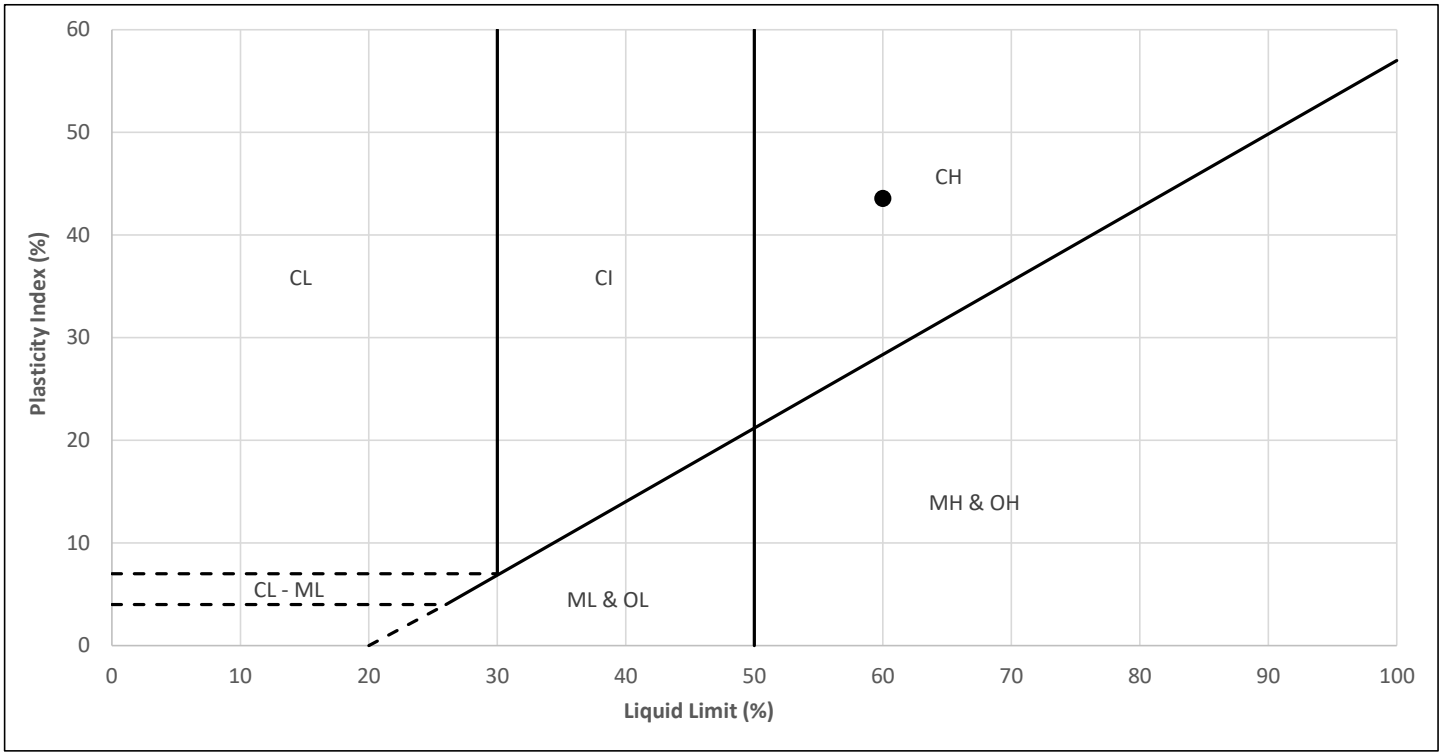
Project:	Snake Lake Reservoir Expansion	**Sample #:**	232RC11
Project No.:	1560-193-00	**Source:**	22CH232
Owner:	EID	**Sample Depth:**	19.3m
File No.:	AL - 232RC11	**Test Date:**	18-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	60.0
Plastic Limit (PL)	16.4
Plasticity Index (PI)	43.6

Soil Plasticity	High
Soil Classification	CH



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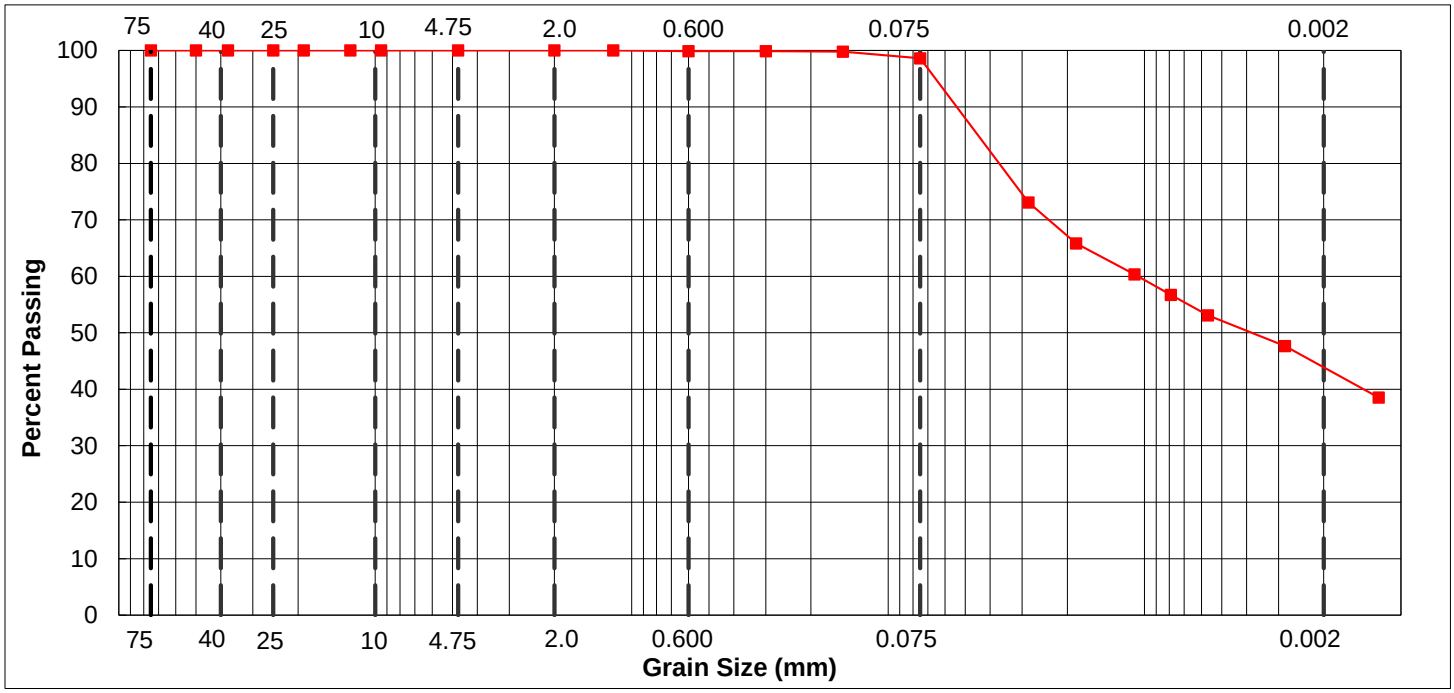
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	200RC2
Project No.:	1560-193-00	**Source:**	22CH200
Owner:	EID	**Sample Depth:**	8.1m
File No.:	GSA - 200RC2	**Test Date:**	14-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.8
37.5	100.0	0.075	98.6
25.0	100.0	0.0283	73.1
19.0	100.0	0.0185	65.8
12.5	100.0	0.0110	60.4
9.5	100.0	0.0079	56.7
4.75	100.0	0.0057	53.1
2.00	100.0	0.0028	47.6
1.180	100.0	0.0012	38.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	1.3	425 µm to 75 µm
Silt	54.7	75 µm to 2 µm
Clay	43.9	<2 µm



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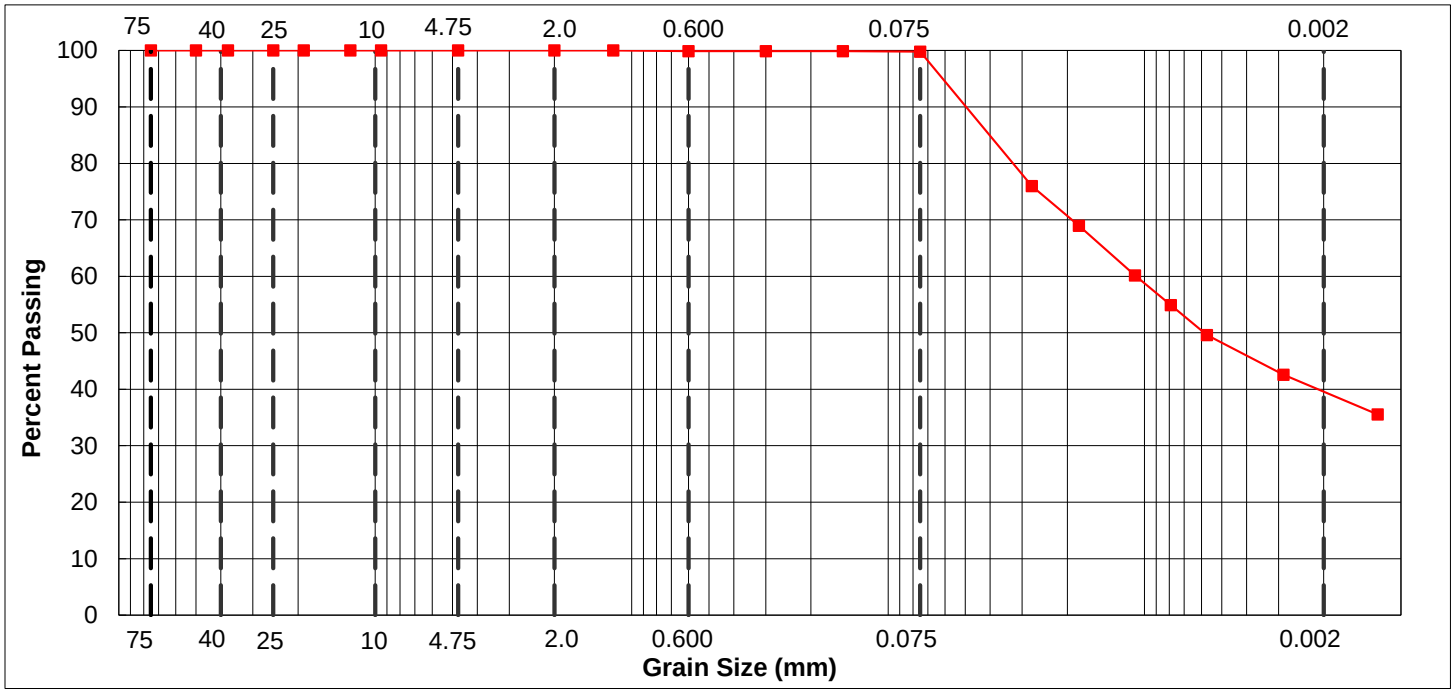
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	200RC6
Project No.:	1560-193-00	**Source:**	22CH200
Owner:	EID	**Sample Depth:**	14.4m
File No.:	GSA - 200RC6	**Test Date:**	14-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0275	76.0
19.0	100.0	0.0180	69.0
12.5	100.0	0.0109	60.2
9.5	100.0	0.0079	54.9
4.75	100.0	0.0057	49.6
2.00	100.0	0.0029	42.6
1.180	100.0	0.0012	35.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	60.2	75 µm to 2 µm
Clay	39.6	<2 µm



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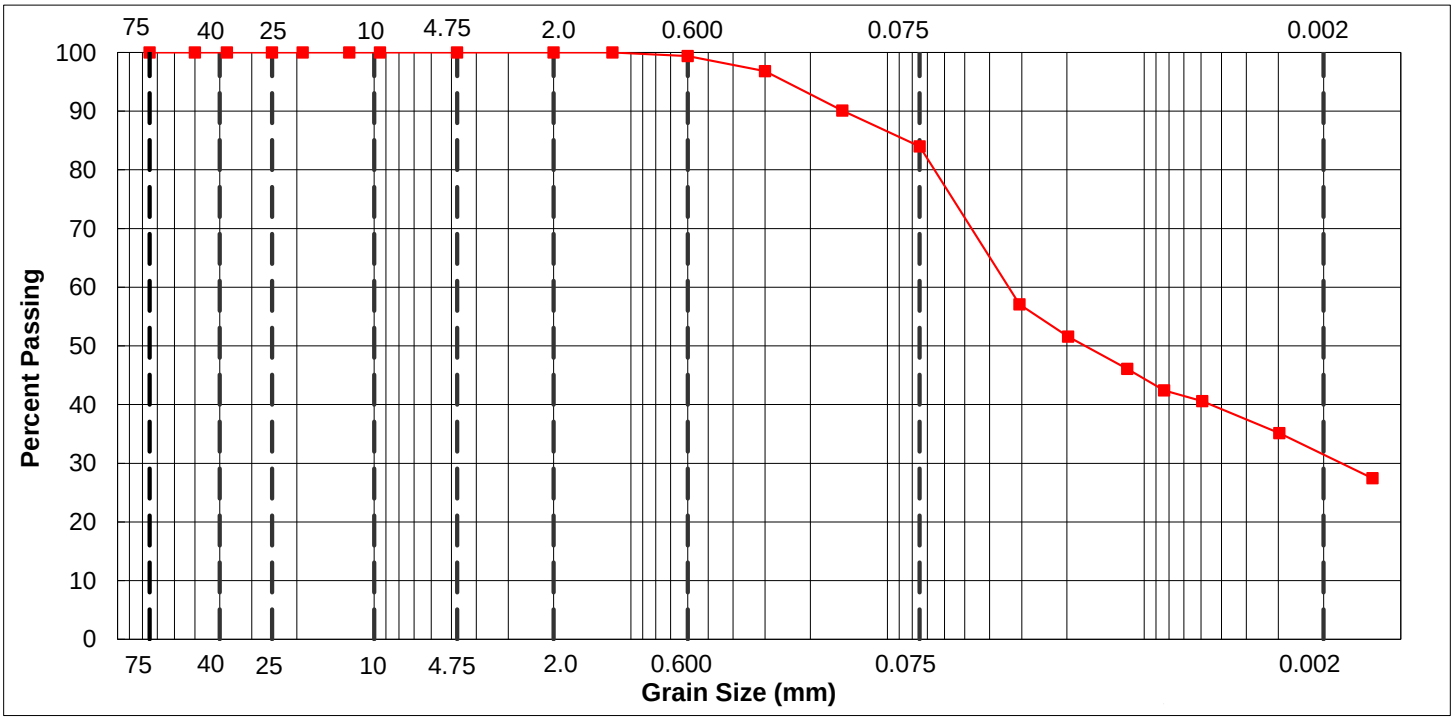
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	201AU1
Project No.:	1560-193-00	**Source:**	22BH201
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 201AU1	**Test Date:**	26-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	96.8
50.0	100.0	0.150	90.1
37.5	100.0	0.075	84.0
25.0	100.0	0.0306	57.1
19.0	100.0	0.0198	51.6
12.5	100.0	0.0116	46.1
9.5	100.0	0.0084	42.4
4.75	100.0	0.0059	40.6
2.00	100.0	0.0030	35.1
1.180	100.0	0.0013	27.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	15.4	425 µm to 75 µm
Silt	52.5	75 µm to 2 µm
Clay	31.5	<2 µm



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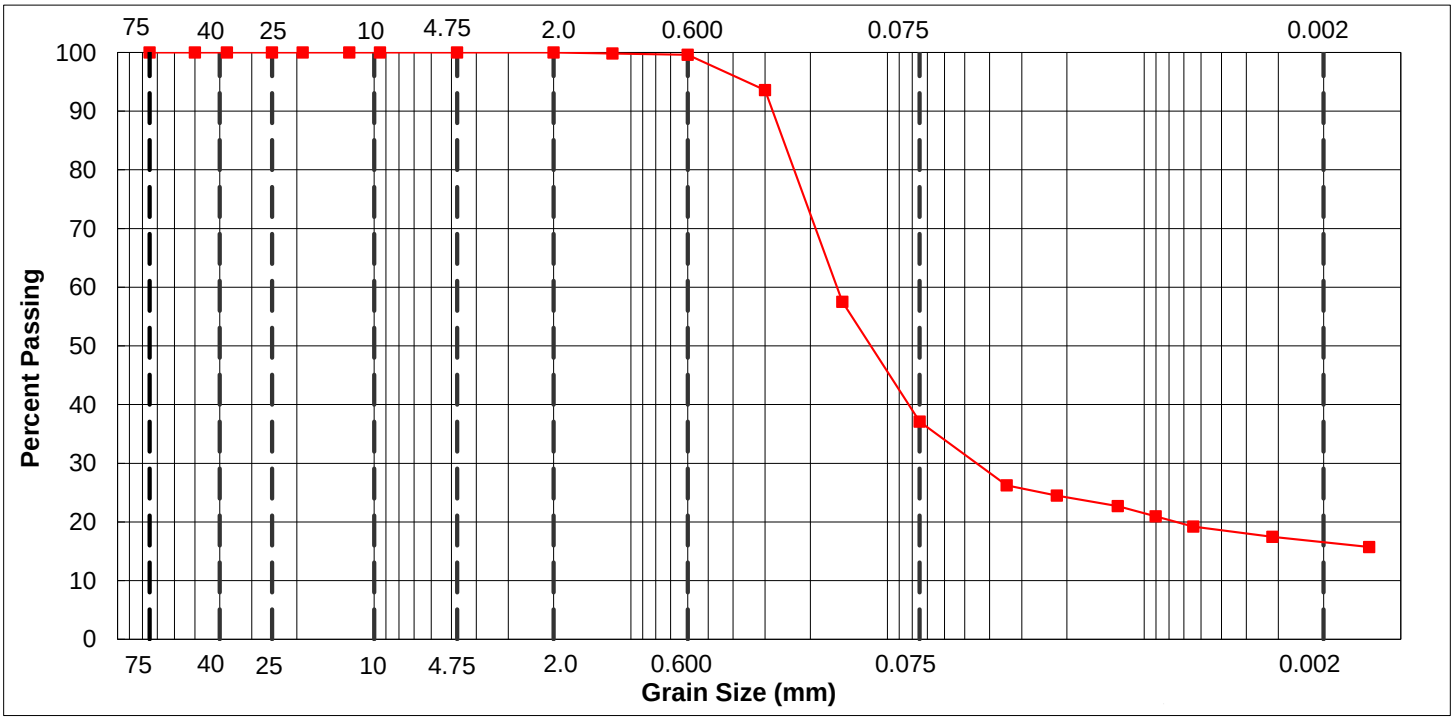
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	201AU2
Project No.:	1560-193-00	**Source:**	22BH201
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 201AU2	**Test Date:**	24-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	93.6
50.0	100.0	0.150	57.5
37.5	100.0	0.075	37.1
25.0	100.0	0.0343	26.2
19.0	100.0	0.0219	24.5
12.5	100.0	0.0127	22.7
9.5	100.0	0.0090	21.0
4.75	100.0	0.0064	19.2
2.00	100.0	0.0032	17.5
1.180	99.8	0.0013	15.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	62.5	425 µm to 75 µm
Silt	20.5	75 µm to 2 µm
Clay	16.6	<2 µm



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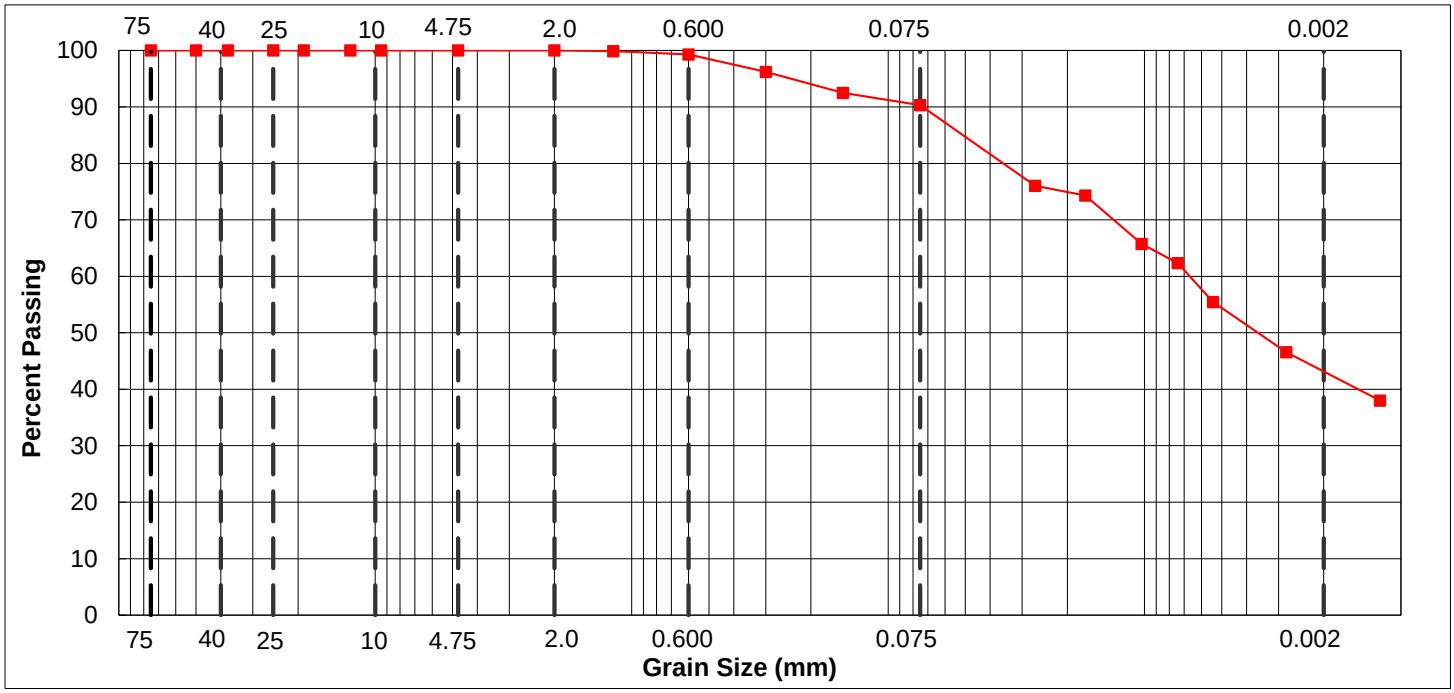
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	201AU4
Project No.:	1560-193-00	**Source:**	22BH201
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 201AU4	**Test Date:**	18-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.3
75.0	100.0	0.300	96.2
50.0	100.0	0.150	92.5
37.5	100.0	0.075	90.3
25.0	100.0	0.0267	76.0
19.0	100.0	0.0170	74.3
12.5	100.0	0.0103	65.7
9.5	100.0	0.0074	62.3
4.75	100.0	0.0054	55.5
2.00	100.0	0.0028	46.6
1.180	99.9	0.0012	38.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.7	2.00 mm to 425 µm
Fine Sand	9.0	425 µm to 75 µm
Silt	47.1	75 µm to 2 µm
Clay	43.2	<2 µm



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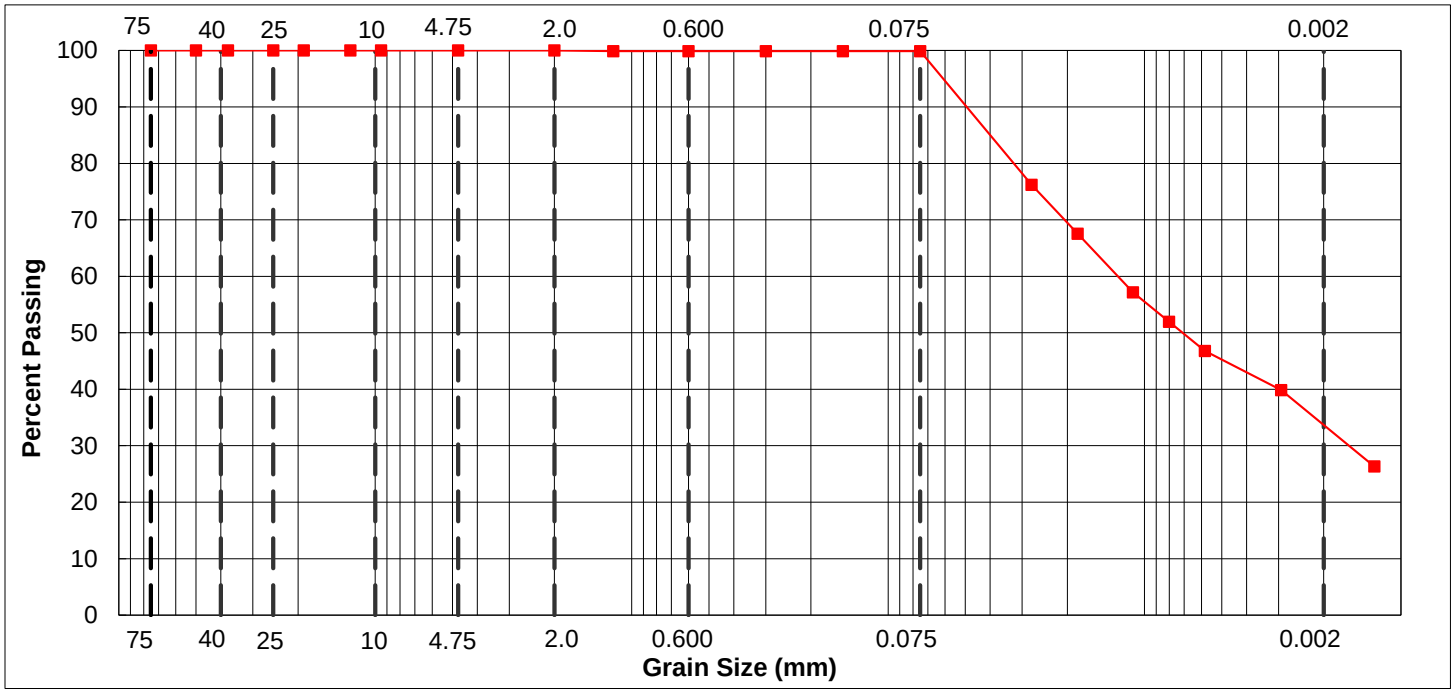
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	201RC3
Project No.:	1560-193-00	**Source:**	22CH201
Owner:	EID	**Sample Depth:**	7.3m
File No.:	GSA - 201RC3	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.9
25.0	100.0	0.0276	76.2
19.0	100.0	0.0182	67.6
12.5	100.0	0.0111	57.2
9.5	100.0	0.0080	52.0
4.75	100.0	0.0058	46.8
2.00	100.0	0.0029	39.8
1.180	99.9	0.0013	26.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.0	425 µm to 75 µm
Silt	66.2	75 µm to 2 µm
Clay	33.7	<2 µm



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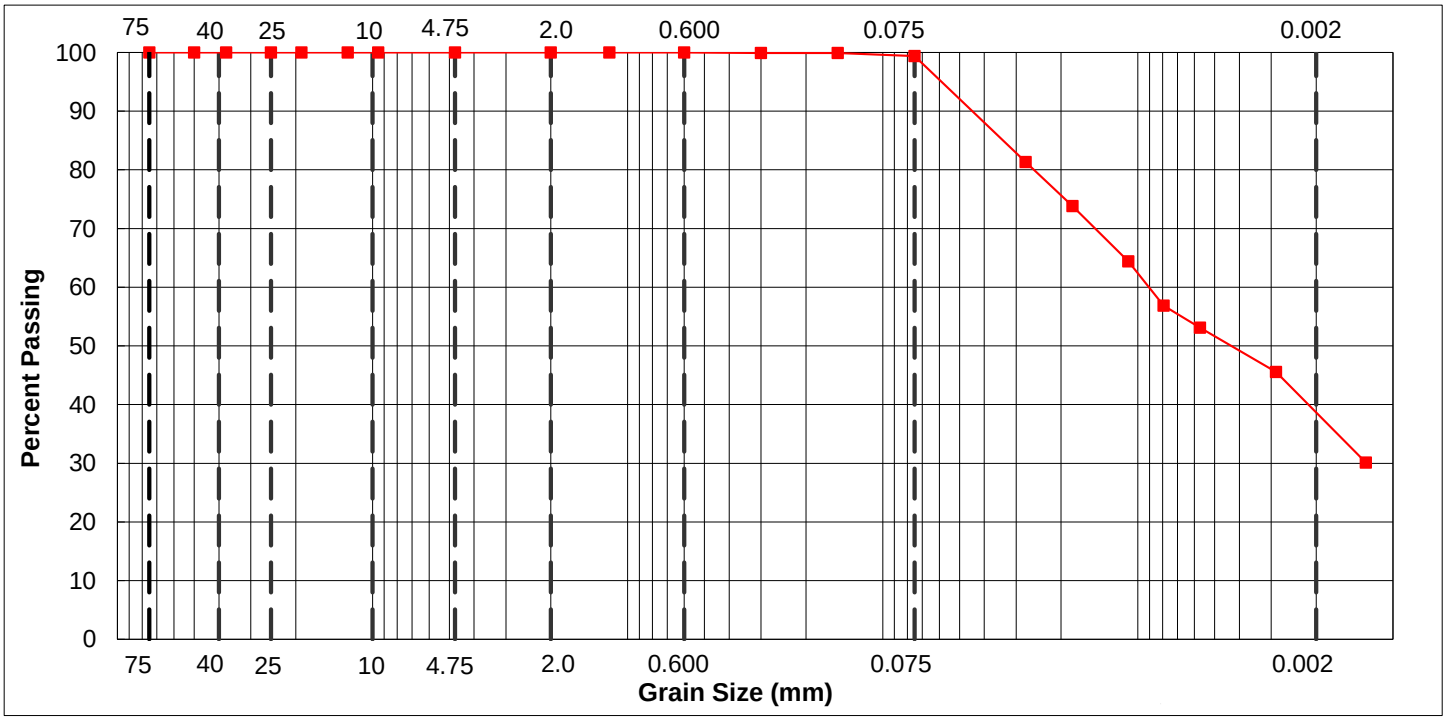
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	201RC7
Project No.:	1560-193-00	**Source:**	22CH201
Owner:	EID	**Sample Depth:**	7.0m
File No.:	GSA - 201RC7	**Test Date:**	25-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.4
25.0	100.0	0.0275	81.3
19.0	100.0	0.0180	73.8
12.5	100.0	0.0109	64.4
9.5	100.0	0.0079	56.9
4.75	100.0	0.0057	53.1
2.00	100.0	0.0029	45.6
1.180	100.0	0.0013	30.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.6	425 µm to 75 µm
Silt	60.7	75 µm to 2 µm
Clay	38.7	<2 µm



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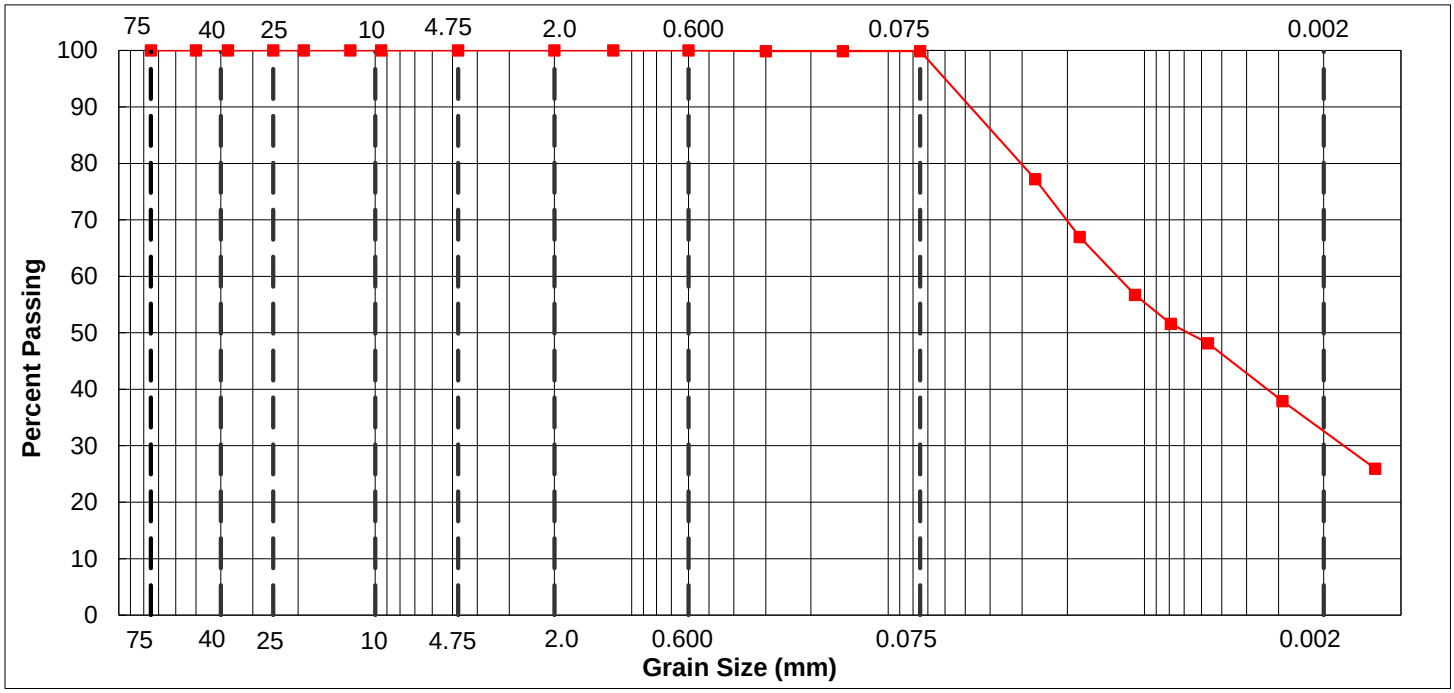
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	201RC8
Project No.:	1560-193-00	**Source:**	22CH201
Owner:	EID	**Sample Depth:**	14.3m
File No.:	GSA - 201RC8	**Test Date:**	16-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.9
25.0	100.0	0.0267	77.2
19.0	100.0	0.0179	67.0
12.5	100.0	0.0109	56.7
9.5	100.0	0.0079	51.6
4.75	100.0	0.0057	48.2
2.00	100.0	0.0029	37.9
1.180	100.0	0.0013	26.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	67.3	75 µm to 2 µm
Clay	32.6	<2 µm



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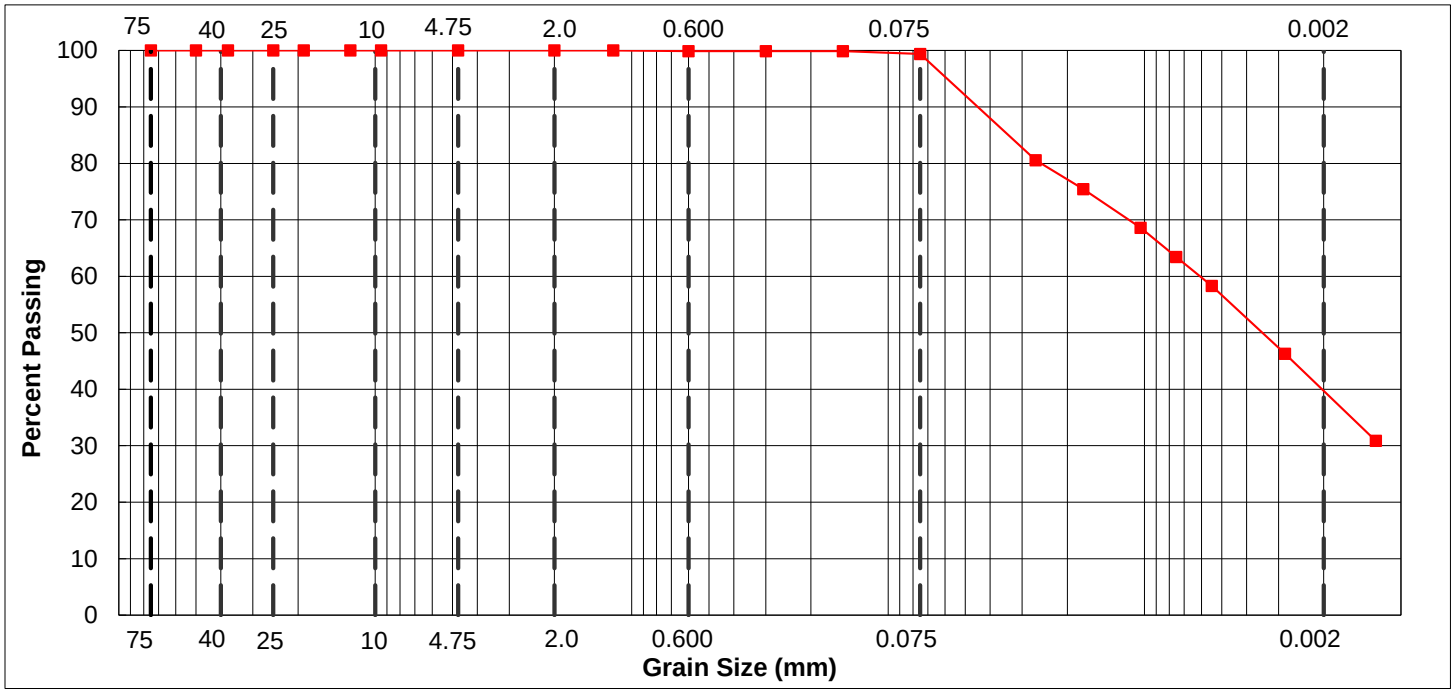
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	201RC18
Project No.:	1560-193-00	**Source:**	22CH201
Owner:	EID	**Sample Depth:**	30.4m
File No.:	GSA - 201RC18	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.4
25.0	100.0	0.0266	80.6
19.0	100.0	0.0173	75.4
12.5	100.0	0.0104	68.6
9.5	100.0	0.0075	63.4
4.75	100.0	0.0055	58.3
2.00	100.0	0.0028	46.3
1.180	100.0	0.0013	30.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.5	425 µm to 75 µm
Silt	59.7	75 µm to 2 µm
Clay	39.7	<2 µm



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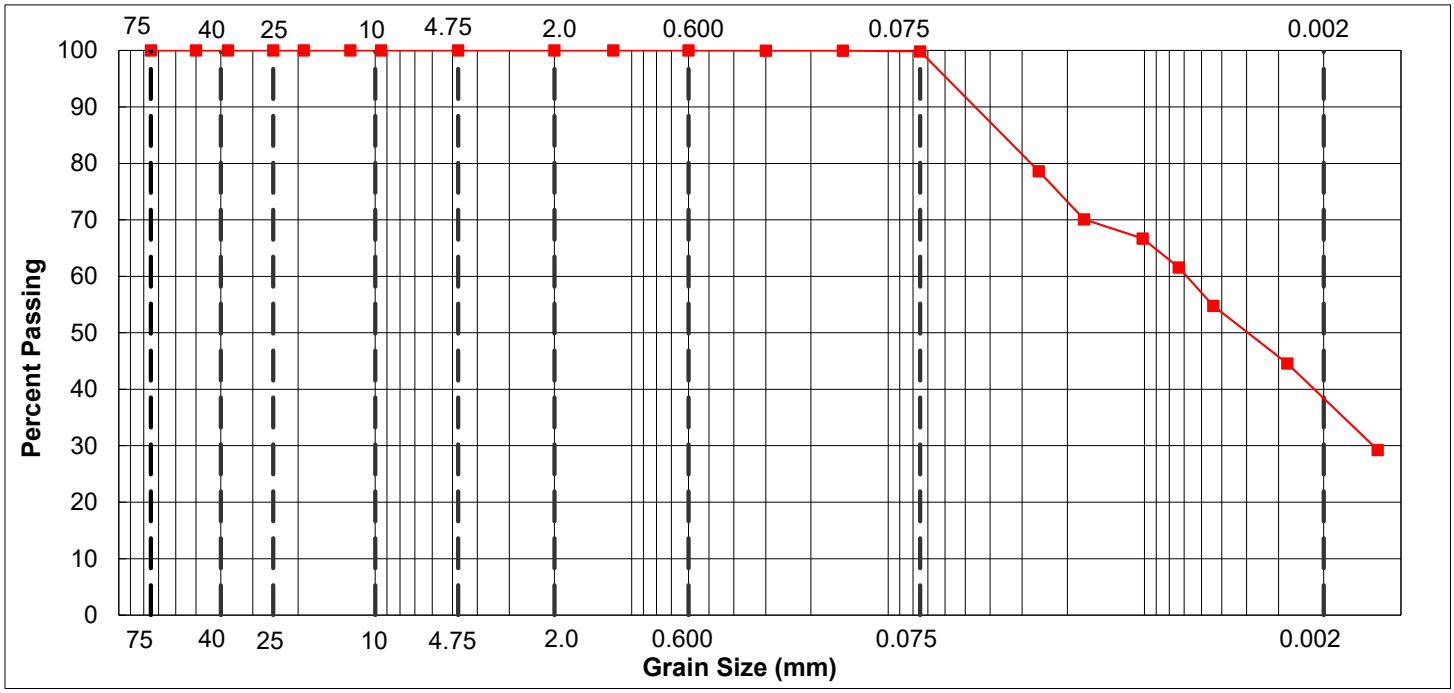
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	201UD3
Project No.:	1560-193-00	**Source:**	22CH201
Owner:	EID	**Sample Depth:**	12.5m
File No.:	GSA - 201UD3	**Test Date:**	11-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.8
25.0	100.0	0.0259	78.6
19.0	100.0	0.0172	70.1
12.5	100.0	0.0102	66.7
9.5	100.0	0.0074	61.6
4.75	100.0	0.0054	54.8
2.00	100.0	0.0028	44.6
1.180	100.0	0.0012	29.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	61.4	75 µm to 2 µm
Clay	38.4	<2 µm



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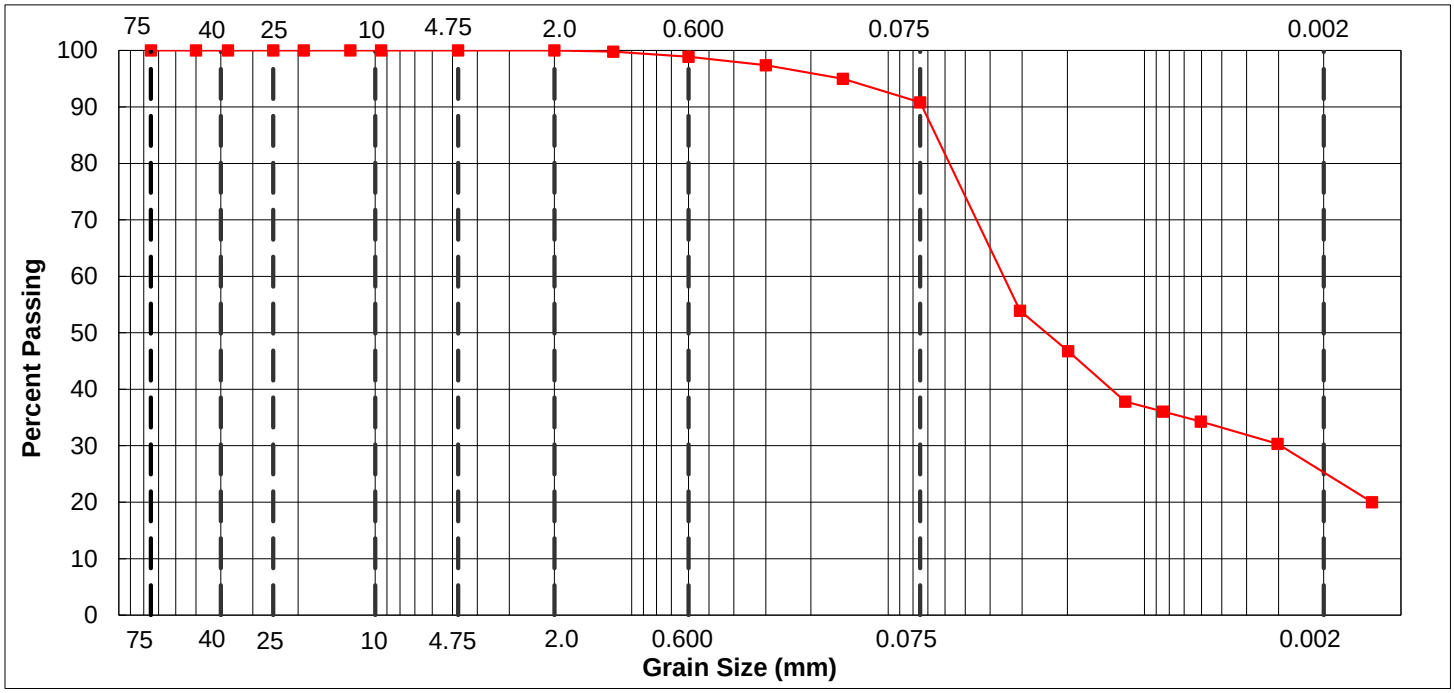
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	202RC3
Project No.:	1560-193-00	**Source:**	22CH202
Owner:	EID	**Sample Depth:**	6.4m
File No.:	GSA - 202RC3	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.9
75.0	100.0	0.300	97.4
50.0	100.0	0.150	95.0
37.5	100.0	0.075	90.8
25.0	100.0	0.0306	53.9
19.0	100.0	0.0199	46.8
12.5	100.0	0.0119	37.8
9.5	100.0	0.0085	36.1
4.75	100.0	0.0060	34.3
2.00	100.0	0.0030	30.3
1.180	99.8	0.0013	20.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.1	2.00 mm to 425 µm
Fine Sand	8.1	425 µm to 75 µm
Silt	65.5	75 µm to 2 µm
Clay	25.3	<2 µm



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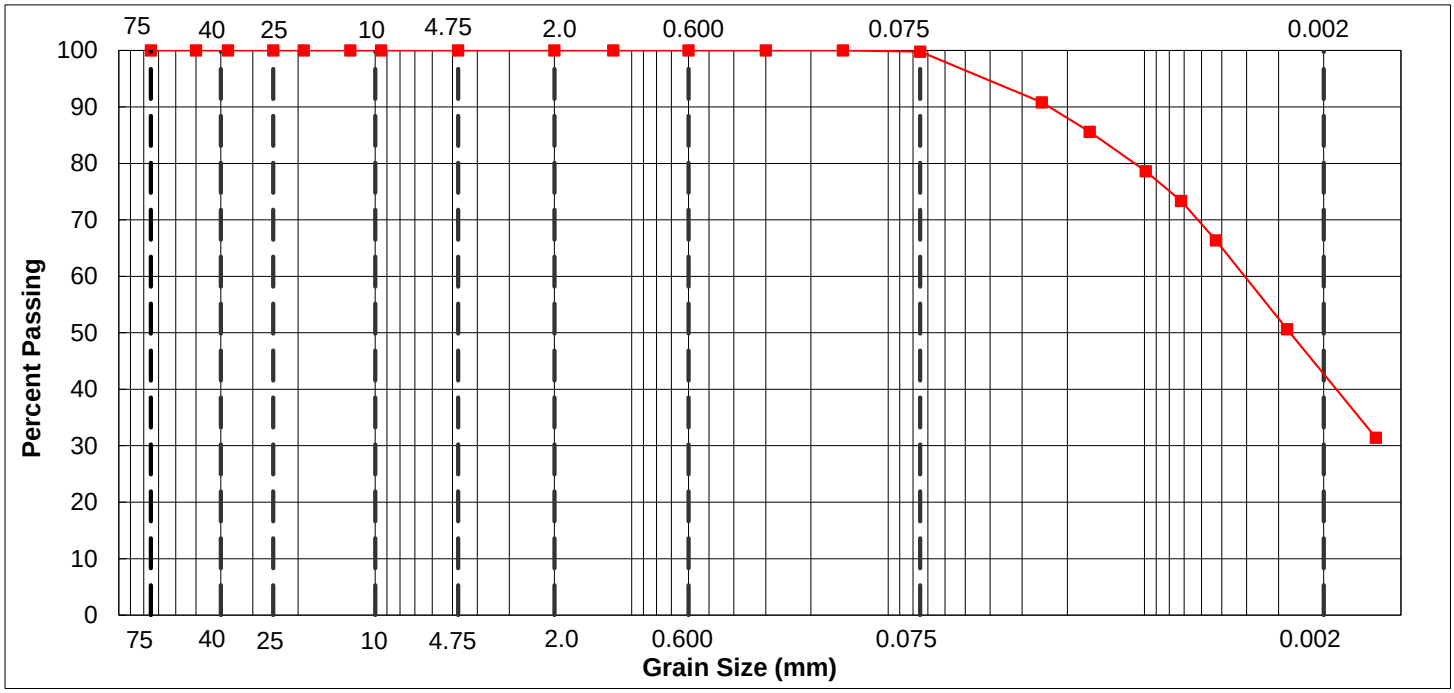
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	202RC12
Project No.:	1560-193-00	**Source:**	22CH202
Owner:	EID	**Sample Depth:**	21.0m
File No.:	GSA - 202RC12	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.8
25.0	100.0	0.0252	90.8
19.0	100.0	0.0164	85.6
12.5	100.0	0.0099	78.6
9.5	100.0	0.0072	73.4
4.75	100.0	0.0053	66.4
2.00	100.0	0.0028	50.7
1.180	100.0	0.0013	31.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	57.1	75 µm to 2 µm
Clay	42.7	<2 µm



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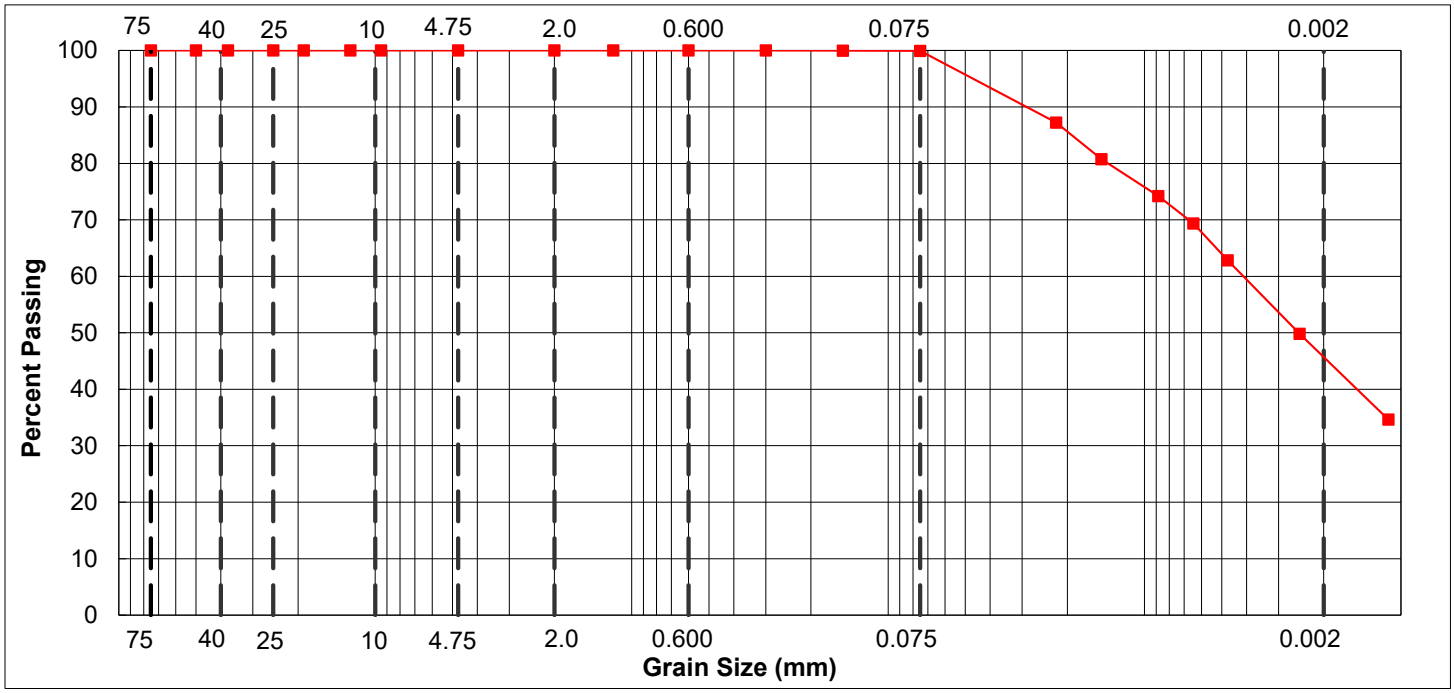
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	203RC13
Project No.:	1560-193-00	**Source:**	22CH203
Owner:	EID	**Sample Depth:**	25.0m
File No.:	GSA - 203RC13	**Test Date:**	13-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.9
25.0	100.0	0.0221	87.2
19.0	100.0	0.0147	80.7
12.5	100.0	0.0088	74.2
9.5	100.0	0.0064	69.4
4.75	100.0	0.0047	62.9
2.00	100.0	0.0025	49.8
1.180	100.0	0.0011	34.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	54.2	75 µm to 2 µm
Clay	45.7	<2 µm



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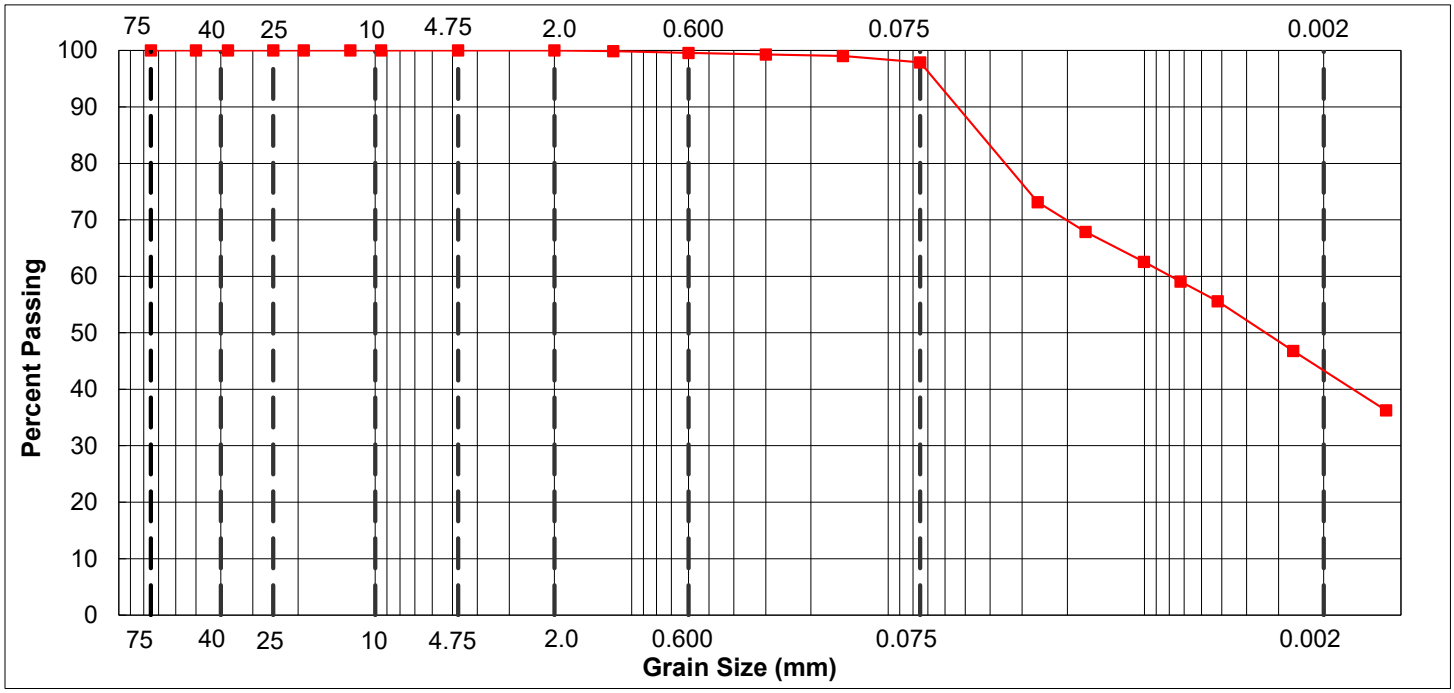
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	203UD2
Project No.:	1560-193-00	**Source:**	22CH203
Owner:	EID	**Sample Depth:**	11.5m
File No.:	GSA - 203UD2	**Test Date:**	16-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.3
50.0	100.0	0.150	99.0
37.5	100.0	0.075	97.9
25.0	100.0	0.0261	73.1
19.0	100.0	0.0170	67.9
12.5	100.0	0.0100	62.6
9.5	100.0	0.0072	59.1
4.75	100.0	0.0052	55.6
2.00	100.0	0.0026	46.8
1.180	99.9	0.0011	36.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	1.6	425 µm to 75 µm
Silt	54.6	75 µm to 2 µm
Clay	43.3	<2 µm



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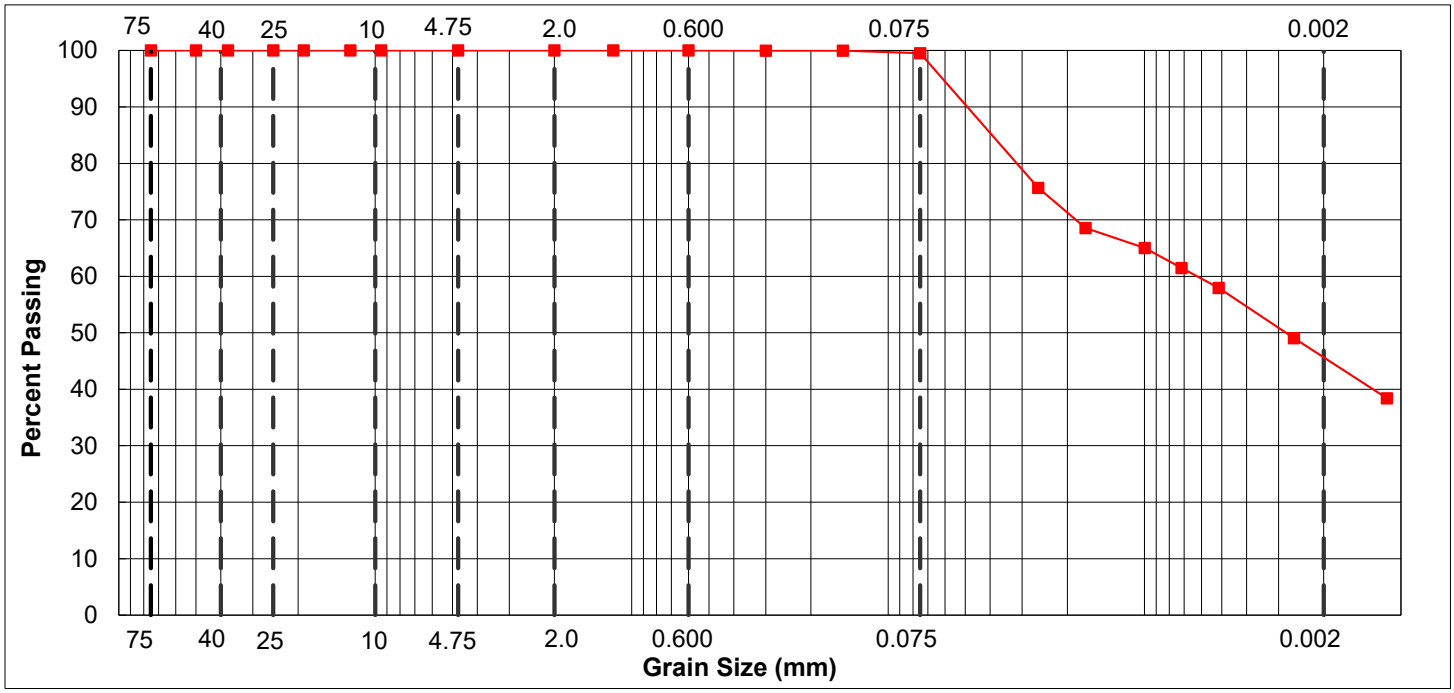
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	203UD5
Project No.:	1560-193-00	**Source:**	22CH203
Owner:	EID	**Sample Depth:**	21.5m
File No.:	GSA - 203UD5	**Test Date:**	16-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.5
25.0	100.0	0.0260	75.7
19.0	100.0	0.0170	68.6
12.5	100.0	0.0100	65.0
9.5	100.0	0.0072	61.5
4.75	100.0	0.0051	57.9
2.00	100.0	0.0026	49.1
1.180	100.0	0.0011	38.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.5	425 µm to 75 µm
Silt	53.9	75 µm to 2 µm
Clay	45.6	<2 µm



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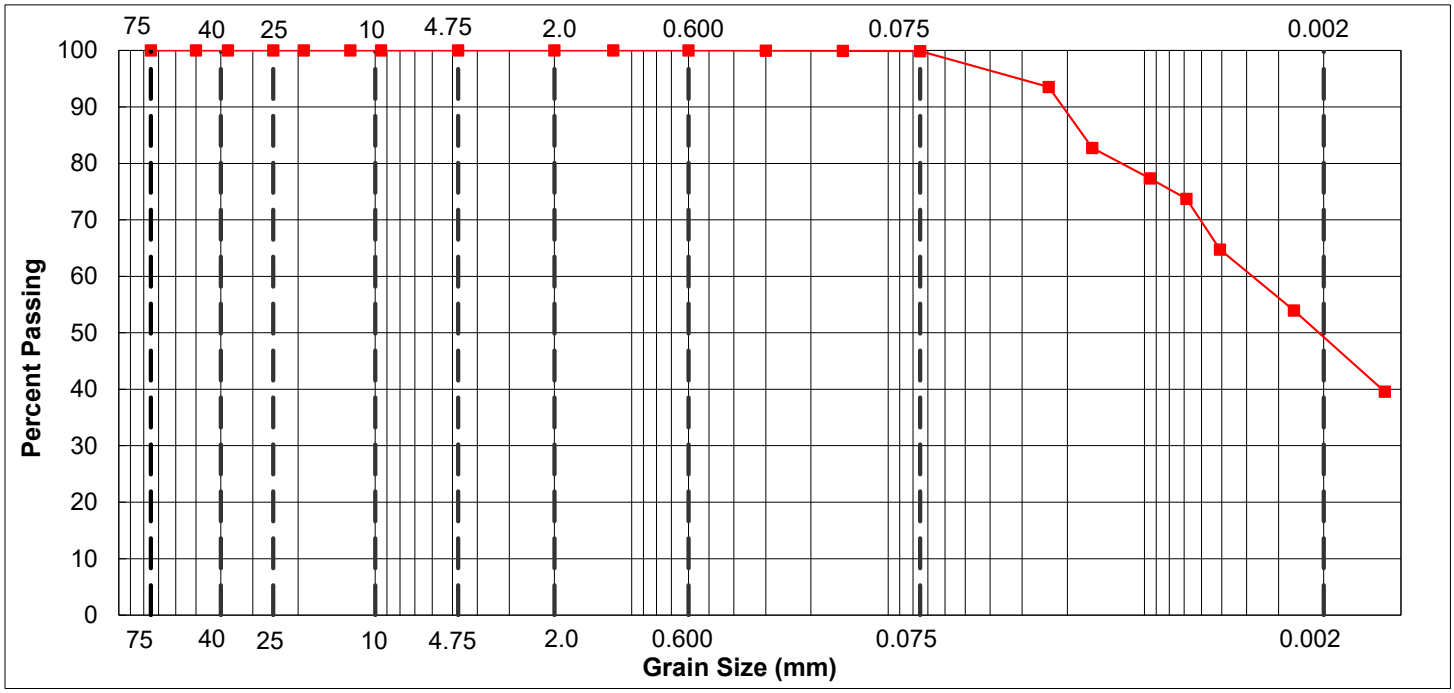
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	204RC1
Project No.:	1560-193-00	**Source:**	22CH204
Owner:	EID	**Sample Depth:**	5.2m
File No.:	GSA - 204RC1	**Test Date:**	2-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.9
25.0	100.0	0.0236	93.5
19.0	100.0	0.0160	82.7
12.5	100.0	0.0095	77.3
9.5	100.0	0.0069	73.7
4.75	100.0	0.0051	64.7
2.00	100.0	0.0026	54.0
1.180	100.0	0.0012	39.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	50.7	75 µm to 2 µm
Clay	49.2	<2 µm



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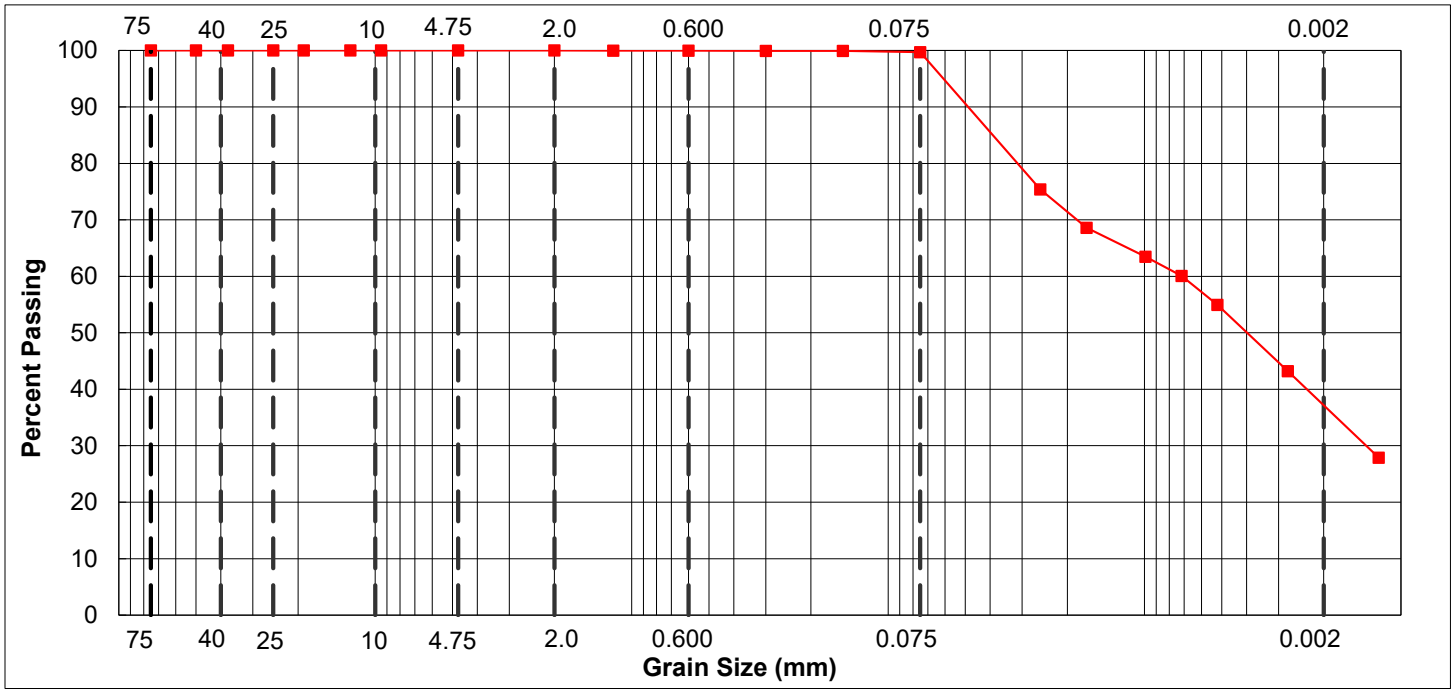
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	204RC6
Project No.:	1560-193-00	**Source:**	22CH204
Owner:	EID	**Sample Depth:**	13.0m
File No.:	GSA - 204RC6	**Date:**	18-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.7
25.0	100.0	0.0255	75.4
19.0	100.0	0.0168	68.6
12.5	100.0	0.0099	63.5
9.5	100.0	0.0072	60.1
4.75	100.0	0.0052	55.0
2.00	100.0	0.0028	43.2
1.180	100.0	0.0012	27.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	62.5	75 µm to 2 µm
Clay	37.2	<2 µm



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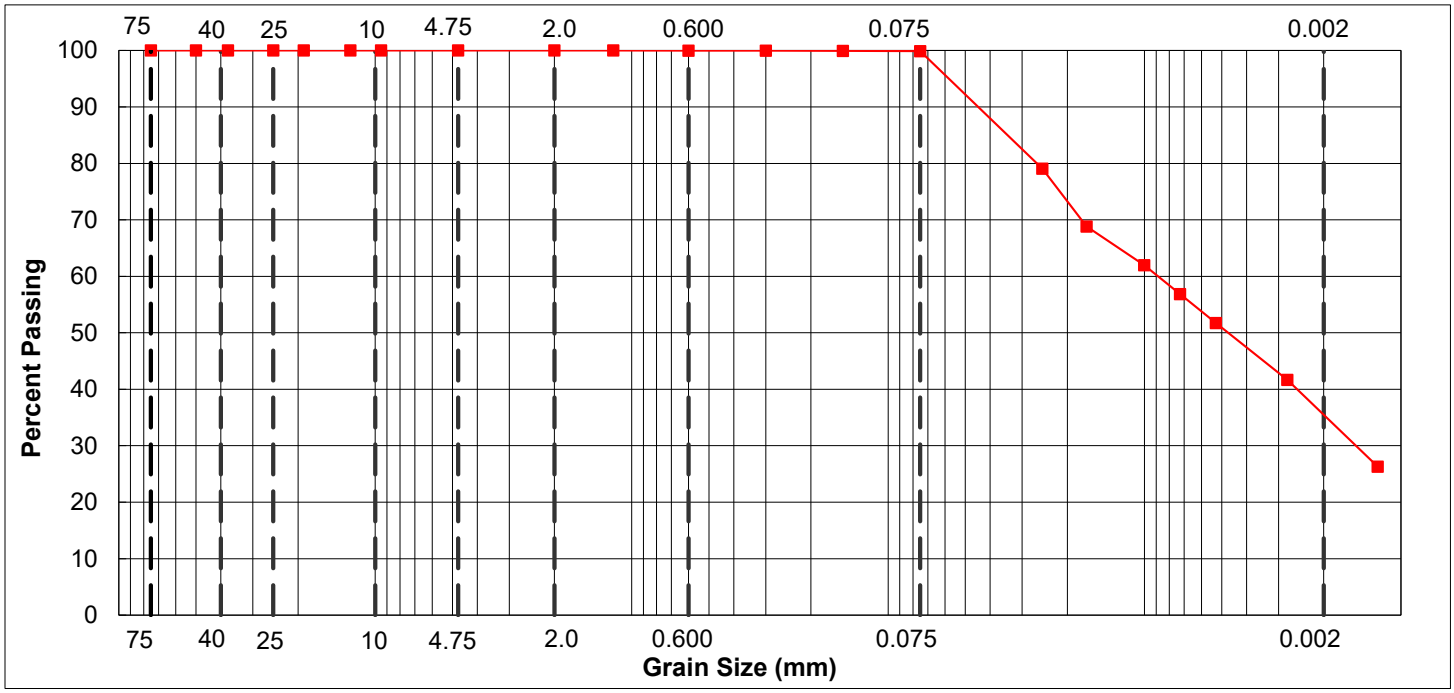
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	204UD4
Project No.:	1560-193-00	**Source:**	22CH204
Owner:	EID	**Sample Depth:**	15.4m
File No.:	GSA - 204UD4	**Date:**	18-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.9
25.0	100.0	0.0250	79.1
19.0	100.0	0.0168	68.8
12.5	100.0	0.0100	62.0
9.5	100.0	0.0073	56.9
4.75	100.0	0.0053	51.7
2.00	100.0	0.0028	41.7
1.180	100.0	0.0012	26.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	64.4	75 µm to 2 µm
Clay	35.5	<2 µm



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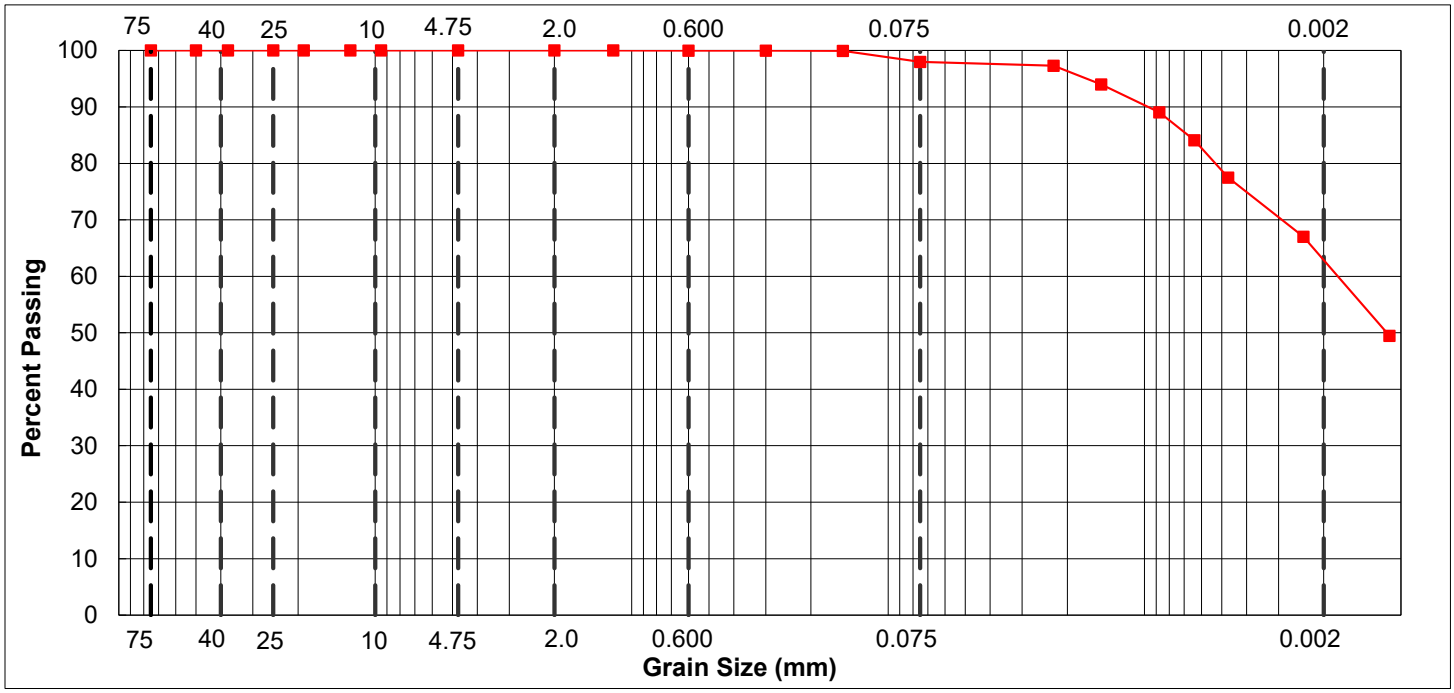
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	204UD10
Project No.:	1560-193-00	**Source:**	22CH204
Owner:	EID	**Sample Depth:**	30.5m
File No.:	GSA - 204UD10	**Test Date:**	21-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	98.0
25.0	100.0	0.0226	97.3
19.0	100.0	0.0147	94.0
12.5	100.0	0.0088	89.0
9.5	100.0	0.0064	84.1
4.75	100.0	0.0047	77.5
2.00	100.0	0.0024	67.0
1.180	100.0	0.0011	49.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	2.0	425 µm to 75 µm
Silt	35.1	75 µm to 2 µm
Clay	62.9	<2 µm



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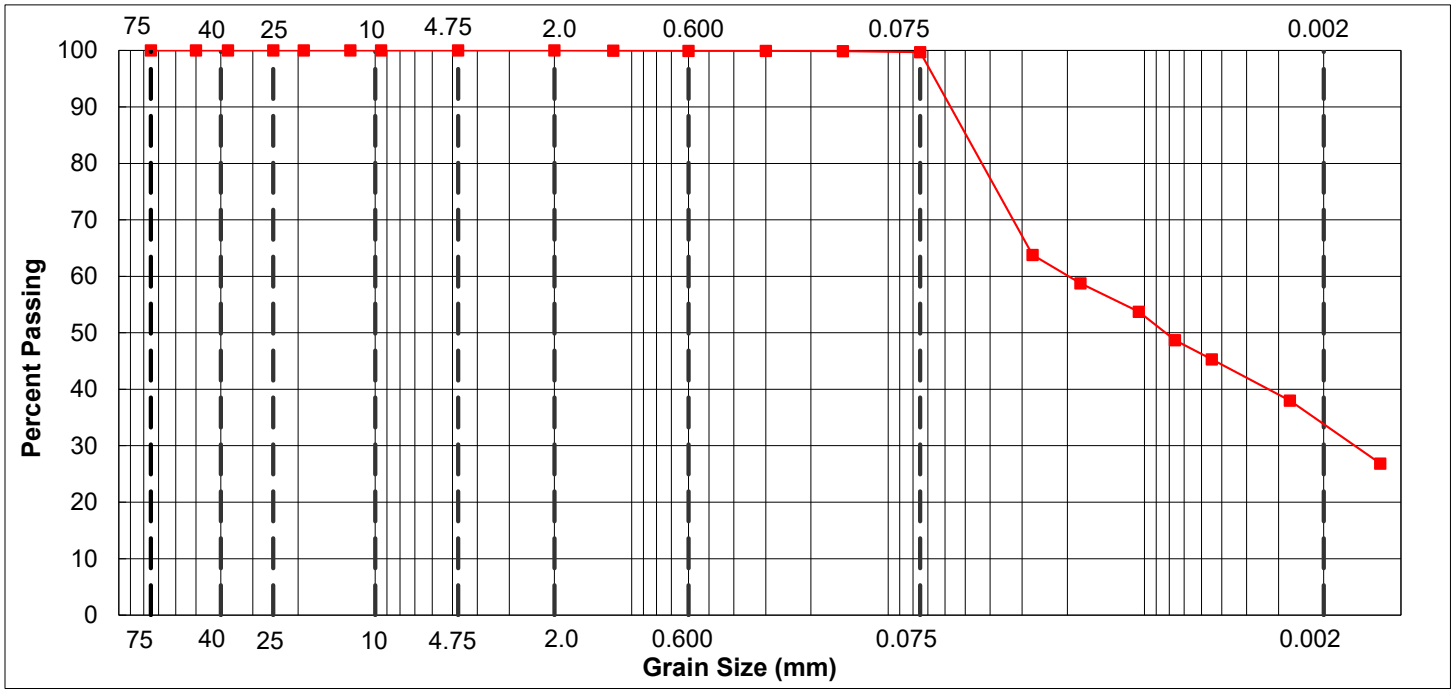
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	205RC3
Project No.:	1560-193-00	**Source:**	22CH205
Owner:	EID	**Sample Depth:**	6.0m
File No.:	GSA - 205RC3	**Test Date:**	21-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.7
25.0	100.0	0.0273	63.8
19.0	100.0	0.0178	58.8
12.5	100.0	0.0105	53.7
9.5	100.0	0.0076	48.7
4.75	100.0	0.0055	45.3
2.00	100.0	0.0027	38.0
1.180	100.0	0.0012	26.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	65.8	75 µm to 2 µm
Clay	33.8	<2 µm



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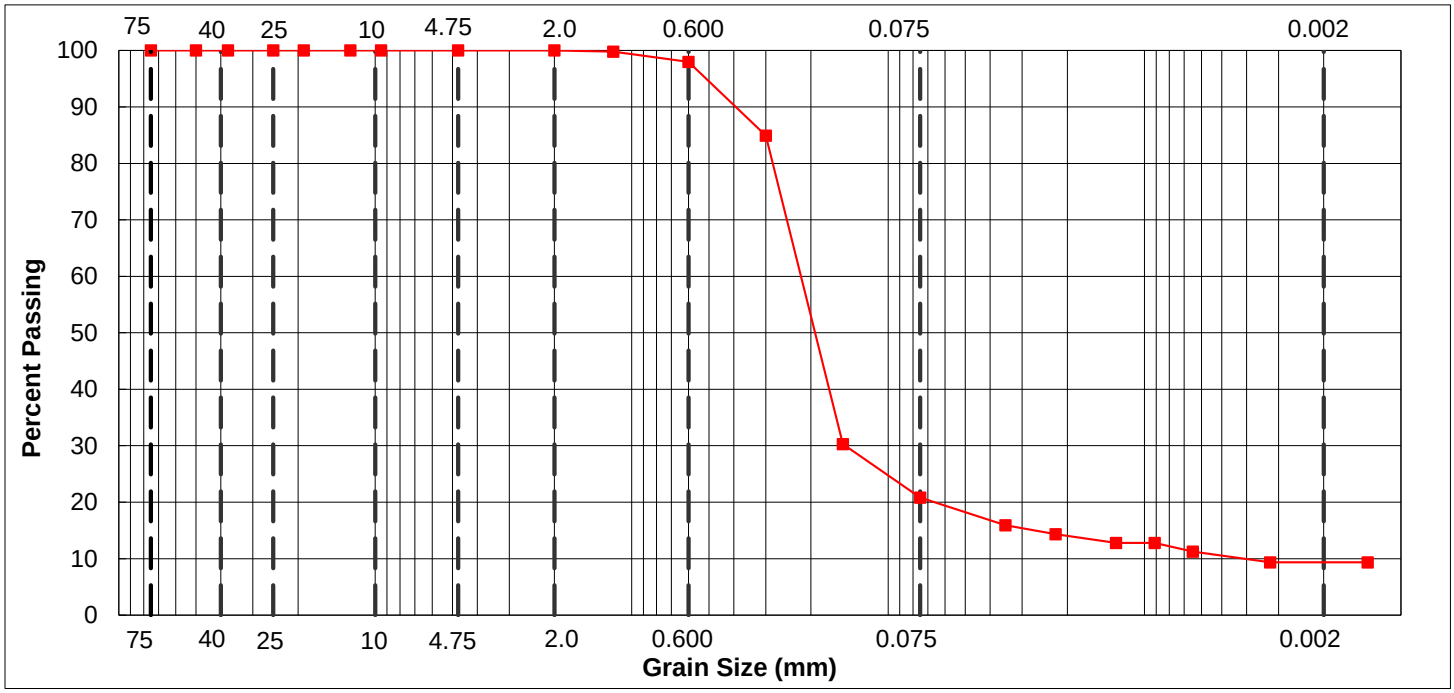
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	22BH205
Project No.:	1560-193-00	**Source:**	205SPT1
Owner:	EID	**Sample Depth:**	1.5m
File No.:	GSA - 22BH205	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.0
75.0	100.0	0.300	84.9
50.0	100.0	0.150	30.3
37.5	100.0	0.075	20.8
25.0	100.0	0.0349	15.9
19.0	100.0	0.0222	14.4
12.5	100.0	0.0129	12.8
9.5	100.0	0.0091	12.8
4.75	100.0	0.0065	11.2
2.00	100.0	0.0032	9.4
1.180	99.8	0.0013	9.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.0	2.00 mm to 425 µm
Fine Sand	77.2	425 µm to 75 µm
Silt	11.4	75 µm to 2 µm
Clay	9.4	<2 µm



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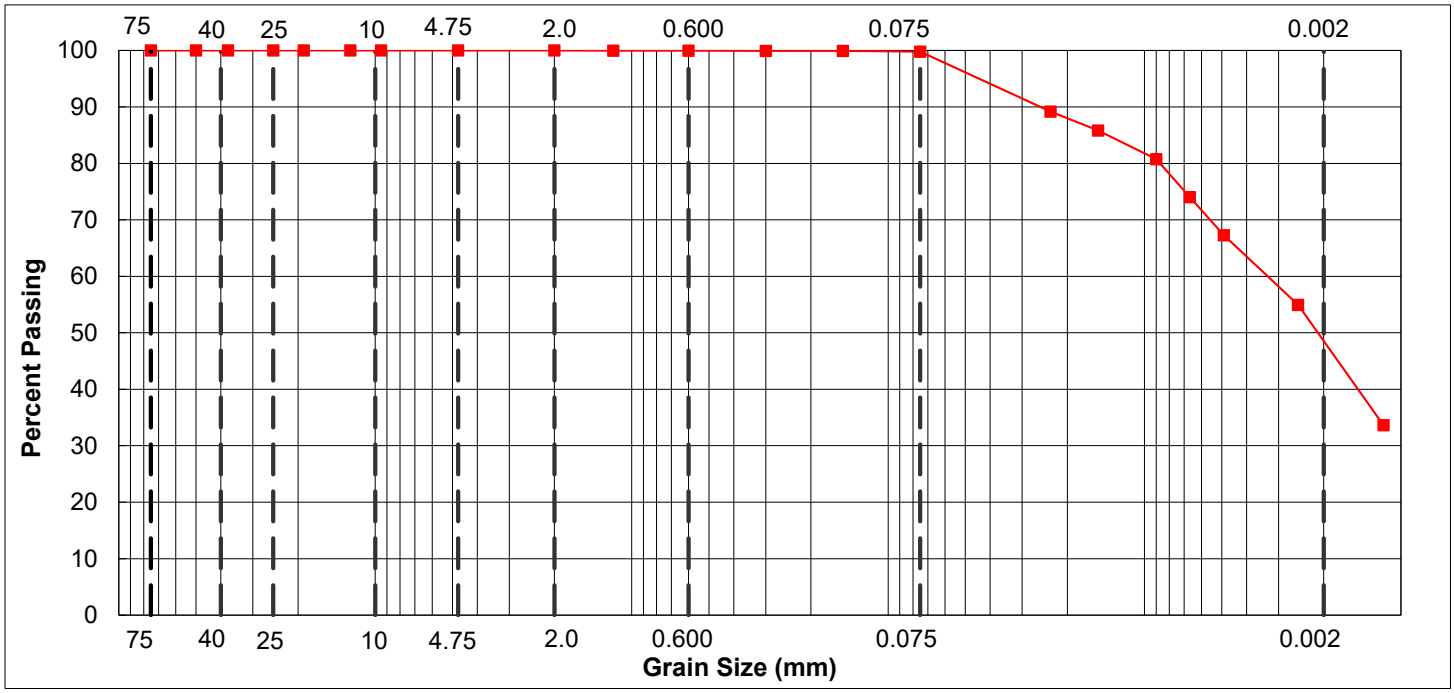
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	205UD8
Project No.:	1560-193-00	**Source:**	22CH205
Owner:	EID	**Sample Depth:**	25.0m
File No.:	GSA - 205UD8	**Test Date:**	22-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0233	89.2
19.0	100.0	0.0152	85.8
12.5	100.0	0.0090	80.8
9.5	100.0	0.0067	74.0
4.75	100.0	0.0049	67.3
2.00	100.0	0.0025	54.9
1.180	100.0	0.0012	33.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	51.3	75 µm to 2 µm
Clay	48.5	<2 µm



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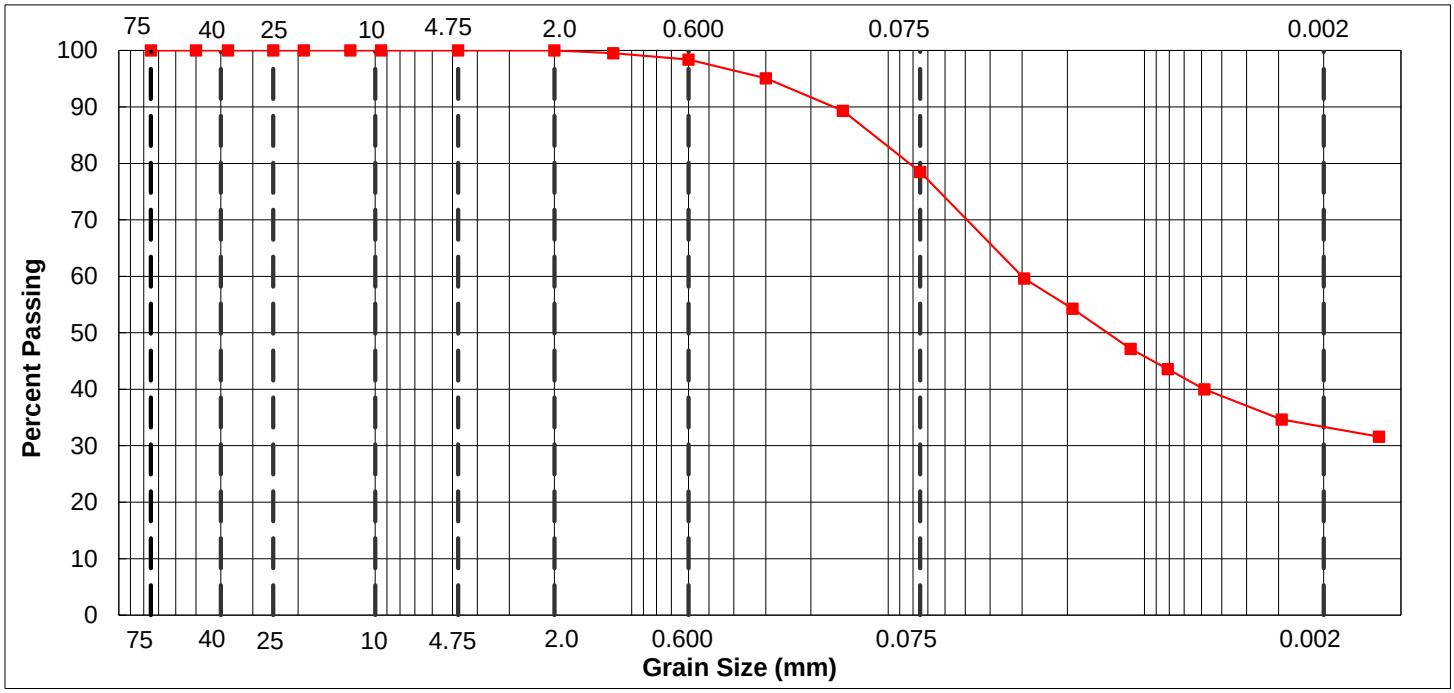
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	206AU1
Project No.:	1560-193-00	**Source:**	22BH206
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 206AU1	**Test Date:**	9-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.4
75.0	100.0	0.300	95.1
50.0	100.0	0.150	89.3
37.5	100.0	0.075	78.5
25.0	100.0	0.0295	59.6
19.0	100.0	0.0191	54.3
12.5	100.0	0.0113	47.1
9.5	100.0	0.0081	43.6
4.75	100.0	0.0058	40.0
2.00	100.0	0.0029	34.6
1.180	99.5	0.0012	31.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.6	2.00 mm to 425 µm
Fine Sand	19.9	425 µm to 75 µm
Silt	45.2	75 µm to 2 µm
Clay	33.3	<2 µm



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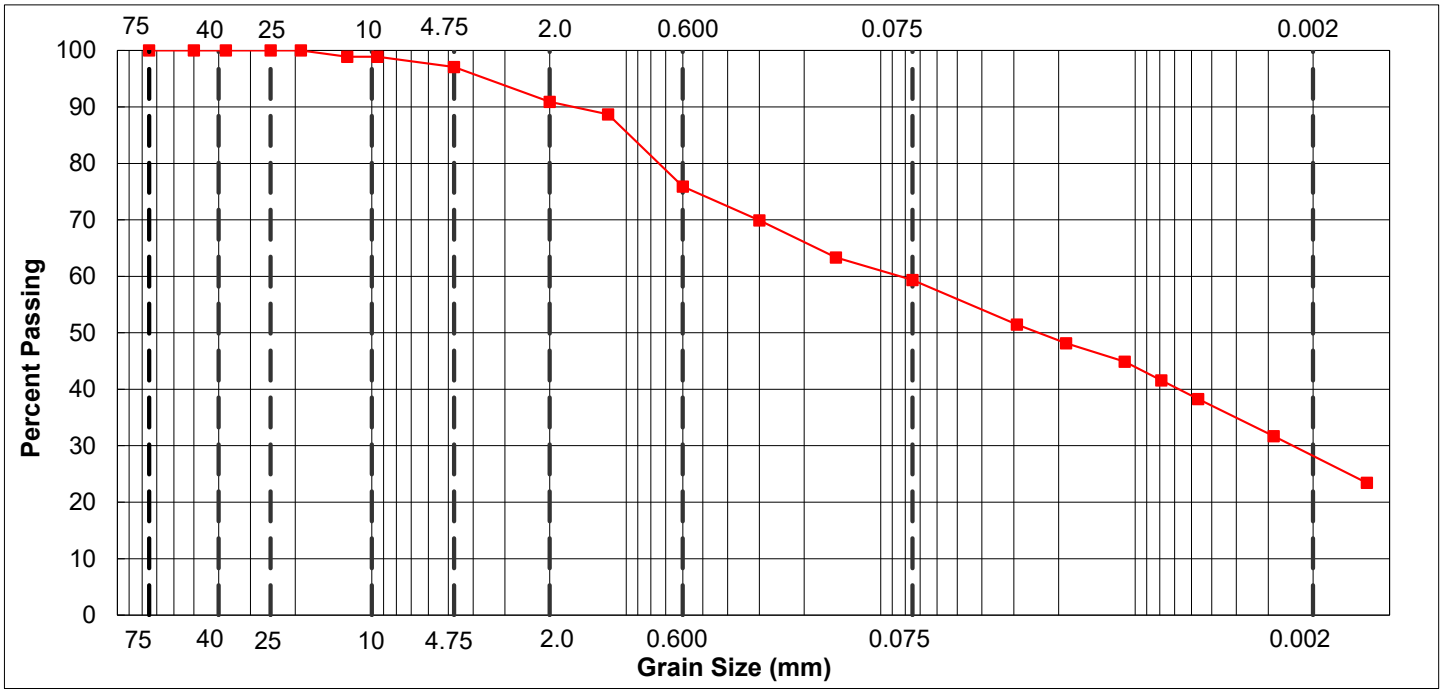
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	206AU3
Project No.:	1560-193-00	**Source:**	22BH206
Owner:	EID	**Sample Depth:**	2.1m
File No.:	GSA - 206AU3	**Date:**	29-Apr-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	75.9
75.0	100.0	0.300	69.9
50.0	100.0	0.150	63.3
37.5	100.0	0.075	59.4
25.0	100.0	0.0291	51.5
19.0	100.0	0.0187	48.2
12.5	98.9	0.0110	44.9
9.5	98.9	0.0079	41.6
4.75	97.1	0.0057	38.3
2.00	90.9	0.0029	31.7
1.180	88.7	0.0012	23.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	2.9	20 mm to 4.75 mm
Coarse Sand	6.1	4.75 mm to 2.00 mm
Medium Sand	15.0	2.00 mm to 425 µm
Fine Sand	16.6	425 µm to 75 µm
Silt	31.2	75 µm to 2 µm
Clay	28.2	<2 µm



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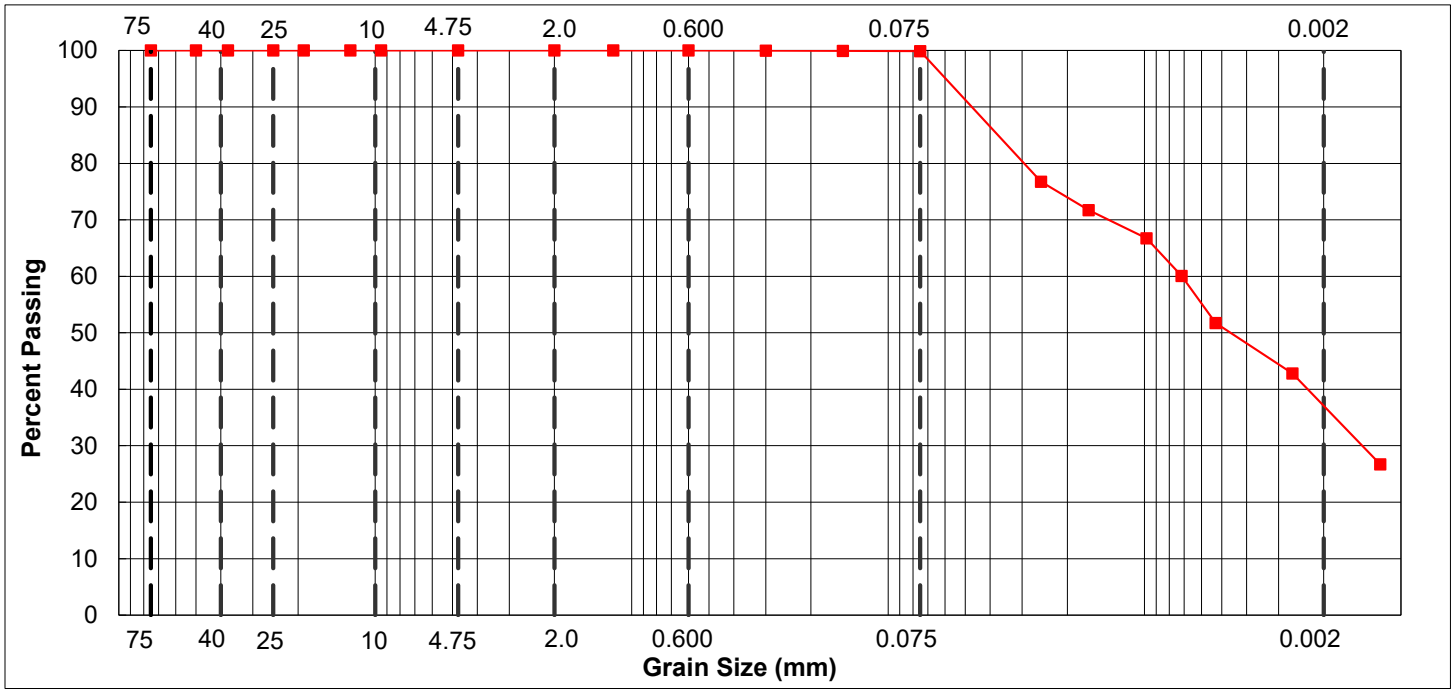
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	206RC11
Project No.:	1560-193-00	**Source:**	22CH206
Owner:	EID	**Sample Depth:**	17.8m
File No.:	GSA - 206RC11	**Test Date:**	22-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.9
25.0	100.0	0.0253	76.7
19.0	100.0	0.0165	71.7
12.5	100.0	0.0098	66.7
9.5	100.0	0.0072	60.1
4.75	100.0	0.0053	51.7
2.00	100.0	0.0027	42.8
1.180	100.0	0.0012	26.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	62.9	75 µm to 2 µm
Clay	37.0	<2 µm



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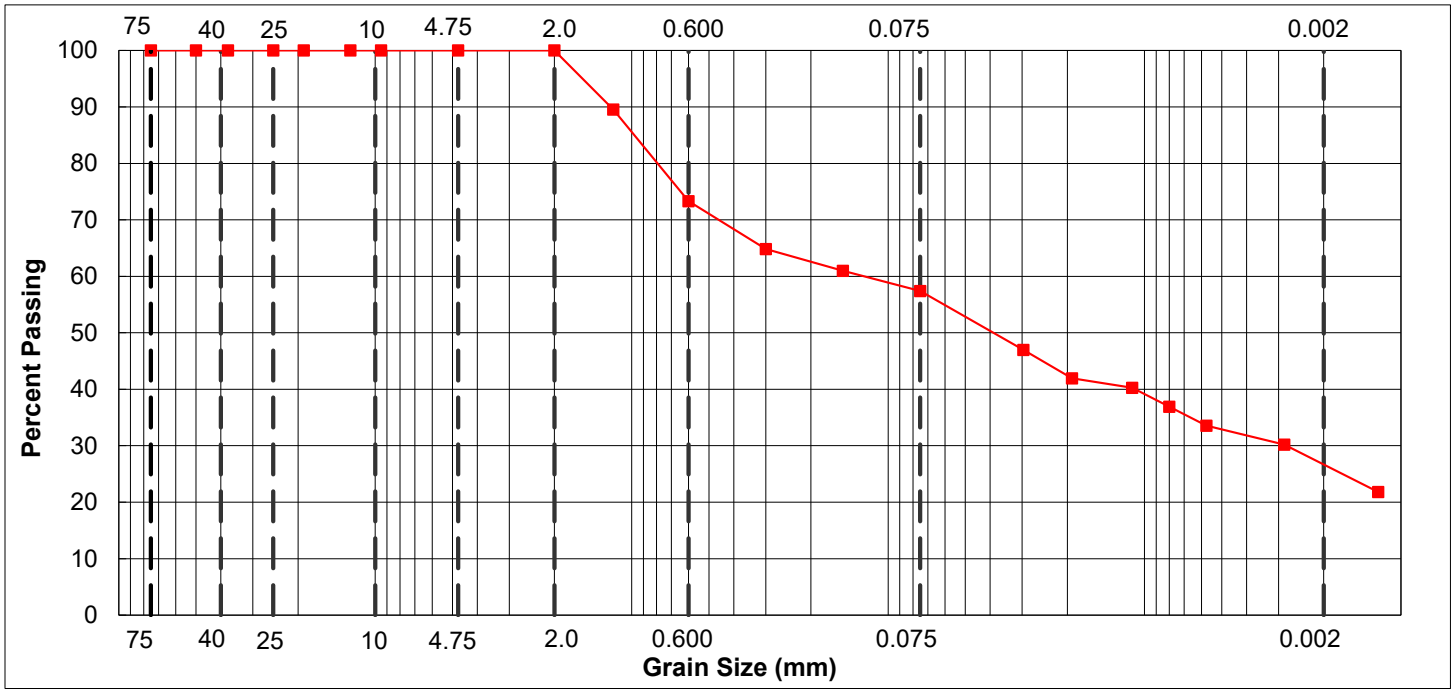
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	206RC19
Project No.:	1560-193-00	**Source:**	22CH206
Owner:	EID	**Sample Depth:**	29.0m
File No.:	GSA - 206RC19	**Test Date:**	28-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	73.3
75.0	100.0	0.300	64.8
50.0	100.0	0.150	61.0
37.5	100.0	0.075	57.4
25.0	100.0	0.0297	47.0
19.0	100.0	0.0192	42.0
12.5	100.0	0.0112	40.3
9.5	100.0	0.0080	36.9
4.75	100.0	0.0057	33.6
2.00	100.0	0.0029	30.2
1.180	89.6	0.0012	21.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	26.7	2.00 mm to 425 µm
Fine Sand	15.9	425 µm to 75 µm
Silt	30.7	75 µm to 2 µm
Clay	26.7	<2 µm



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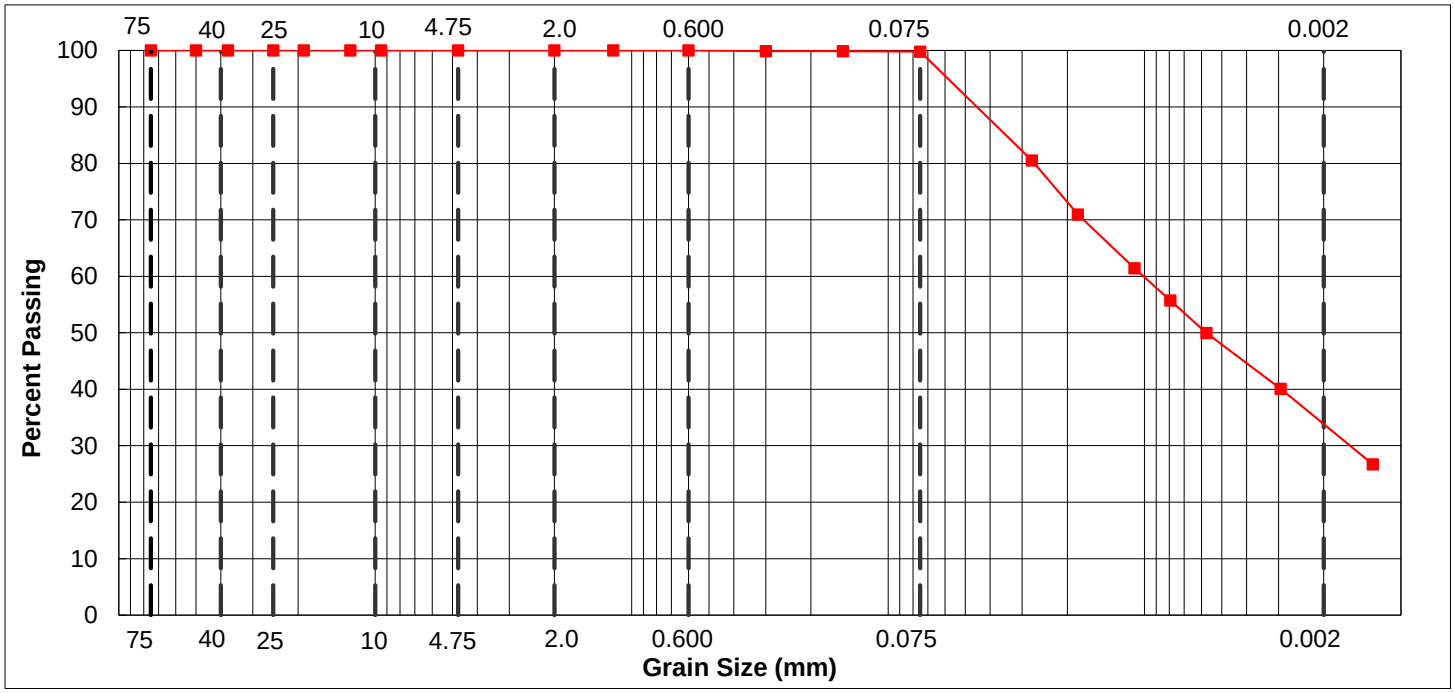
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	22CH207
Project No.:	1560-193-00	**Source:**	207RC12
Owner:	EID	**Sample Depth:**	21.4m
File No.:	GSA - 22CH207	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0275	80.5
19.0	100.0	0.0182	71.0
12.5	100.0	0.0110	61.4
9.5	100.0	0.0079	55.7
4.75	100.0	0.0057	50.0
2.00	100.0	0.0029	40.1
1.180	100.0	0.0013	26.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	66.0	75 µm to 2 µm
Clay	33.8	<2 µm



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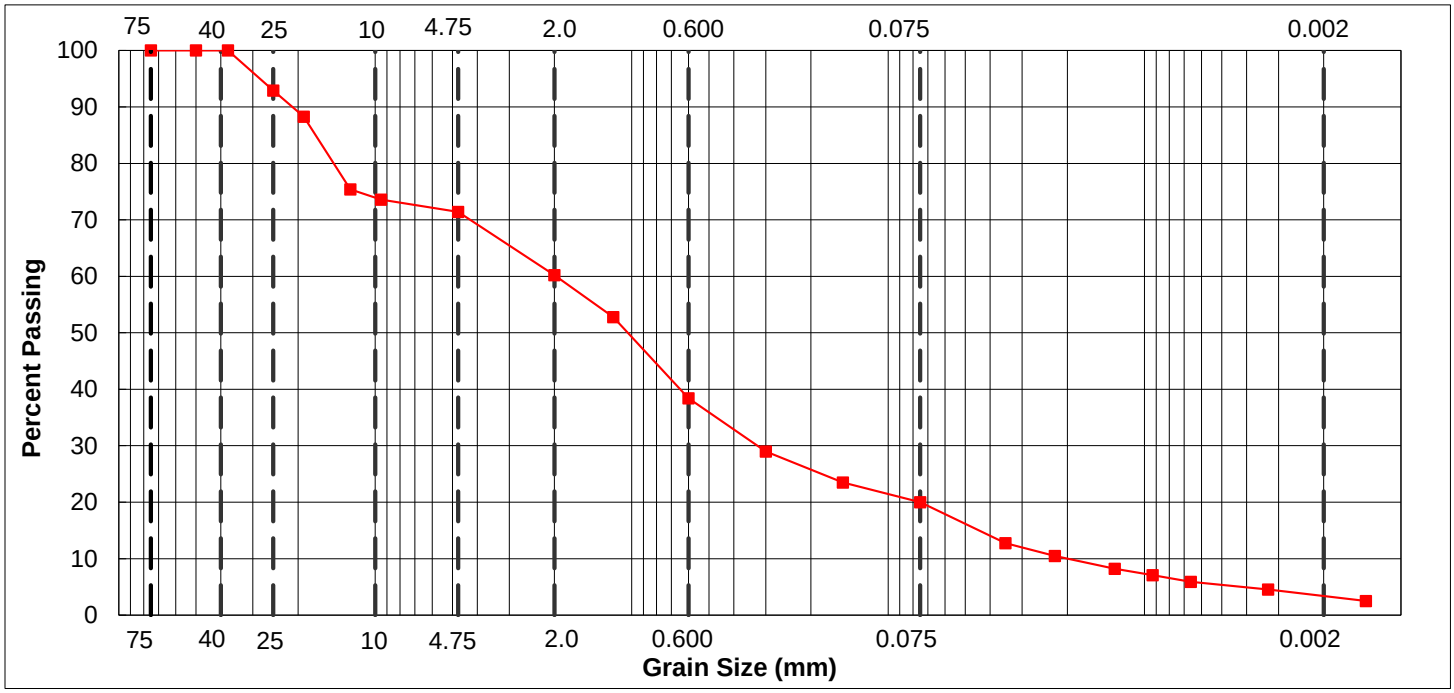
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	207RC16
Project No.:	1560-193-00	**Source:**	22CH207
Owner:	EID	**Sample Depth:**	27.0m
File No.:	GSA - 207RC16	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	38.4
75.0	100.0	0.300	29.0
50.0	100.0	0.150	23.5
37.5	100.0	0.075	20.0
25.0	92.9	0.0349	12.8
19.0	88.3	0.0224	10.5
12.5	75.4	0.0131	8.2
9.5	73.6	0.0093	7.1
4.75	71.4	0.0066	5.9
2.00	60.2	0.0033	4.6
1.180	52.8	0.0014	2.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	7.1	80 mm to 20 mm
Fine Gravel	21.5	20 mm to 4.75 mm
Coarse Sand	11.2	4.75 mm to 2.00 mm
Medium Sand	21.8	2.00 mm to 425 µm
Fine Sand	18.4	425 µm to 75 µm
Silt	16.6	75 µm to 2 µm
Clay	3.4	<2 µm



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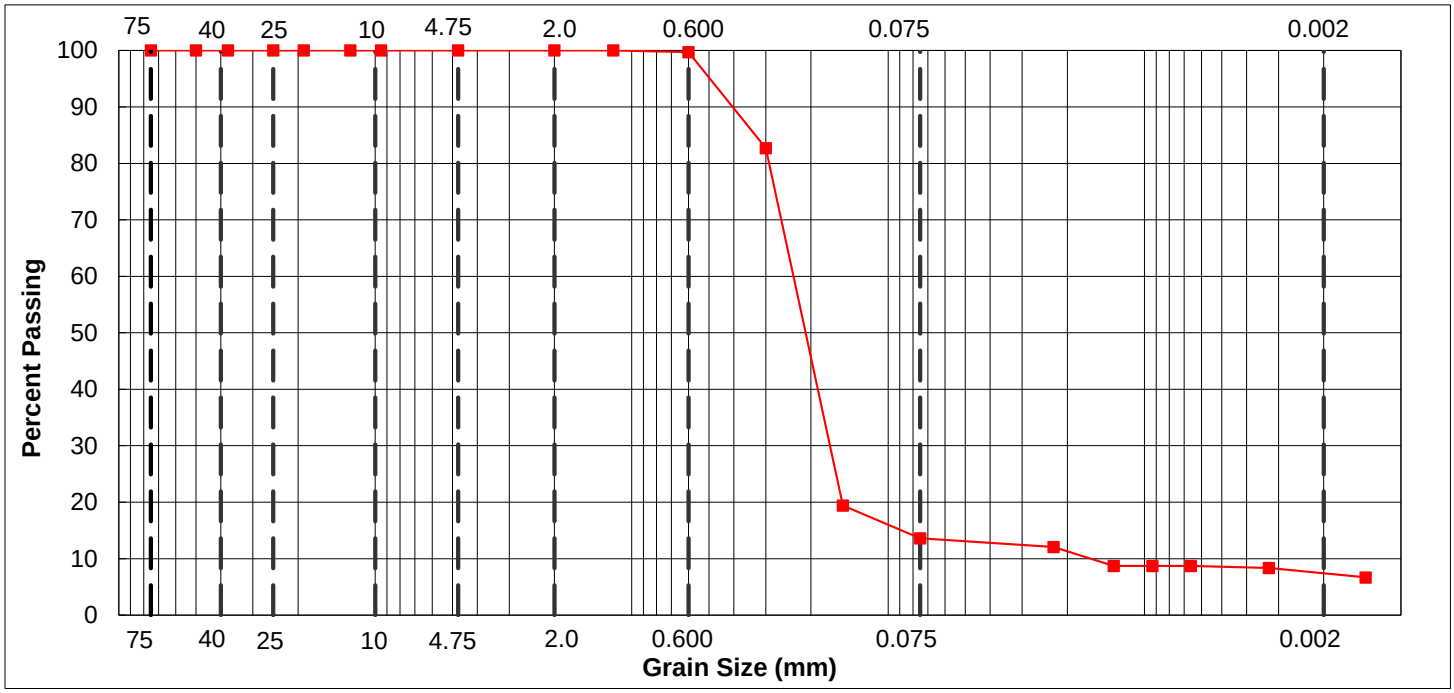
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	208AU2
Project No.:	1560-193-00	**Source:**	22BH208
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 208AU2	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	82.7
50.0	100.0	0.150	19.4
37.5	100.0	0.075	13.6
25.0	100.0	0.0226	12.0
19.0	100.0	0.0132	8.7
12.5	100.0	0.0093	8.7
9.5	100.0	0.0066	8.7
4.75	100.0	0.0033	8.4
2.00	100.0	0.0014	6.7
1.180	100.0		

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	75 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	86.1	425 µm to 75 µm
Silt	6.2	75 µm to 2 µm
Clay	7.4	<2 µm



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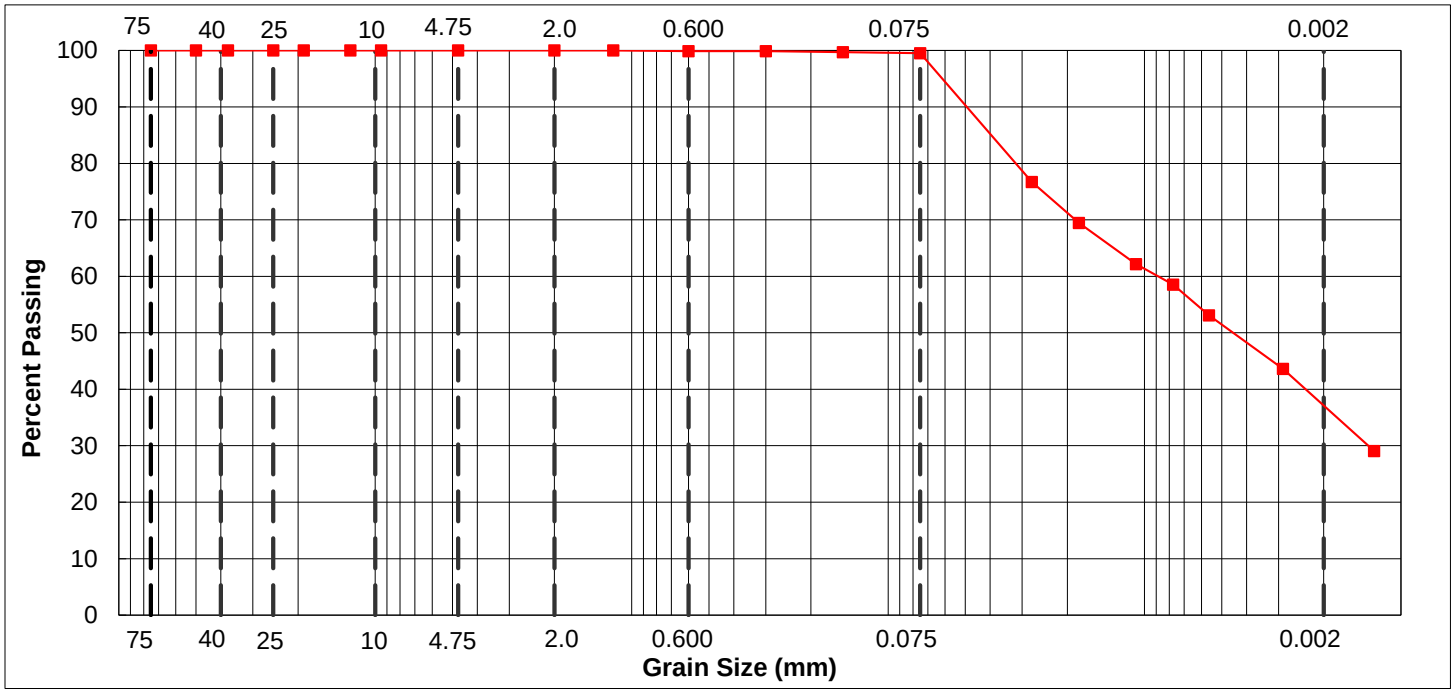
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	209RC8
Project No.:	1560-193-00	**Source:**	22CH209
Owner:	EID	**Sample Depth:**	15.6m
File No.:	GSA - 209RC8	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.5
25.0	100.0	0.0275	76.7
19.0	100.0	0.0180	69.4
12.5	100.0	0.0108	62.2
9.5	100.0	0.0077	58.5
4.75	100.0	0.0056	53.1
2.00	100.0	0.0029	43.6
1.180	100.0	0.0013	29.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	62.4	75 µm to 2 µm
Clay	37.1	<2 µm



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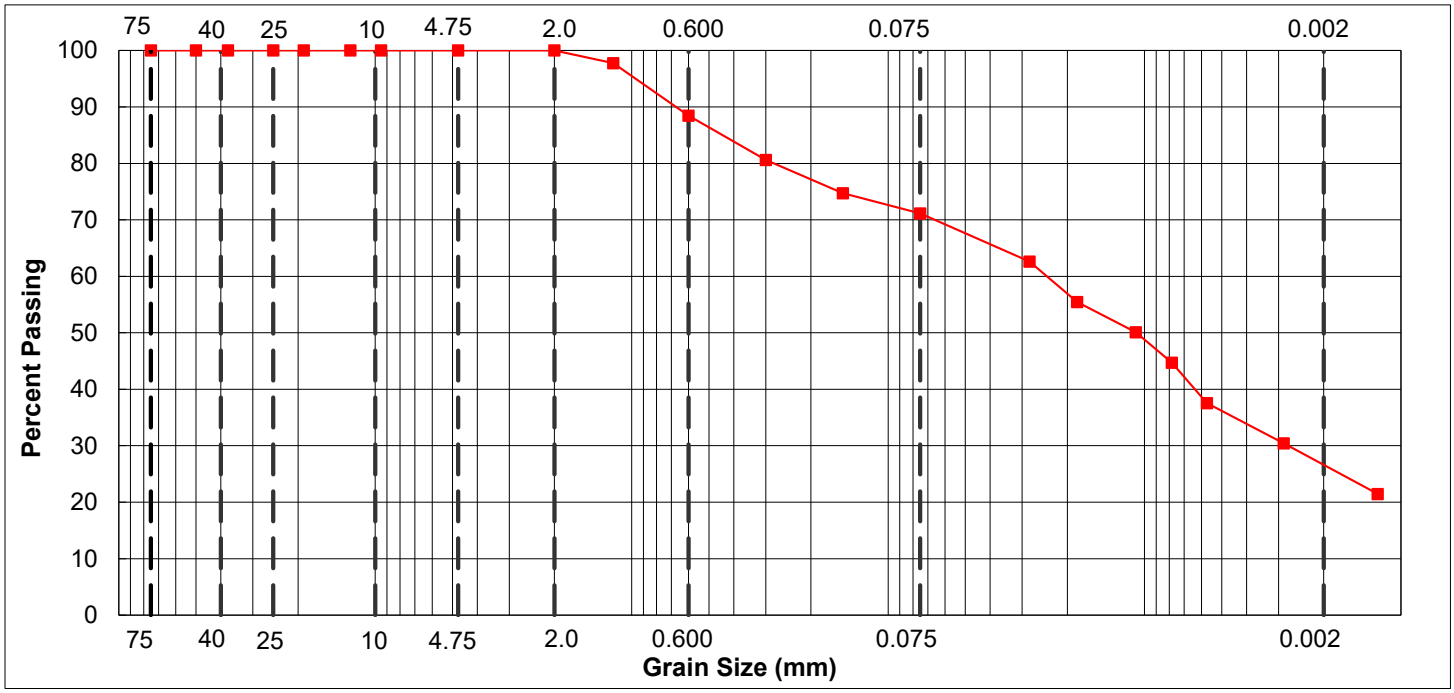
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	209UD7
Project No.:	1560-193-00	**Source:**	22CH209
Owner:	EID	**Sample Depth:**	24.5m
File No.:	GSA - 209UD7	**Test Date:**	4-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	88.5
75.0	100.0	0.300	80.6
50.0	100.0	0.150	74.7
37.5	100.0	0.075	71.1
25.0	100.0	0.0281	62.6
19.0	100.0	0.0183	55.5
12.5	100.0	0.0108	50.1
9.5	100.0	0.0078	44.7
4.75	100.0	0.0057	37.6
2.00	100.0	0.0029	30.4
1.180	97.8	0.0012	21.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	11.5	2.00 mm to 425 µm
Fine Sand	17.3	425 µm to 75 µm
Silt	44.6	75 µm to 2 µm
Clay	26.6	<2 µm



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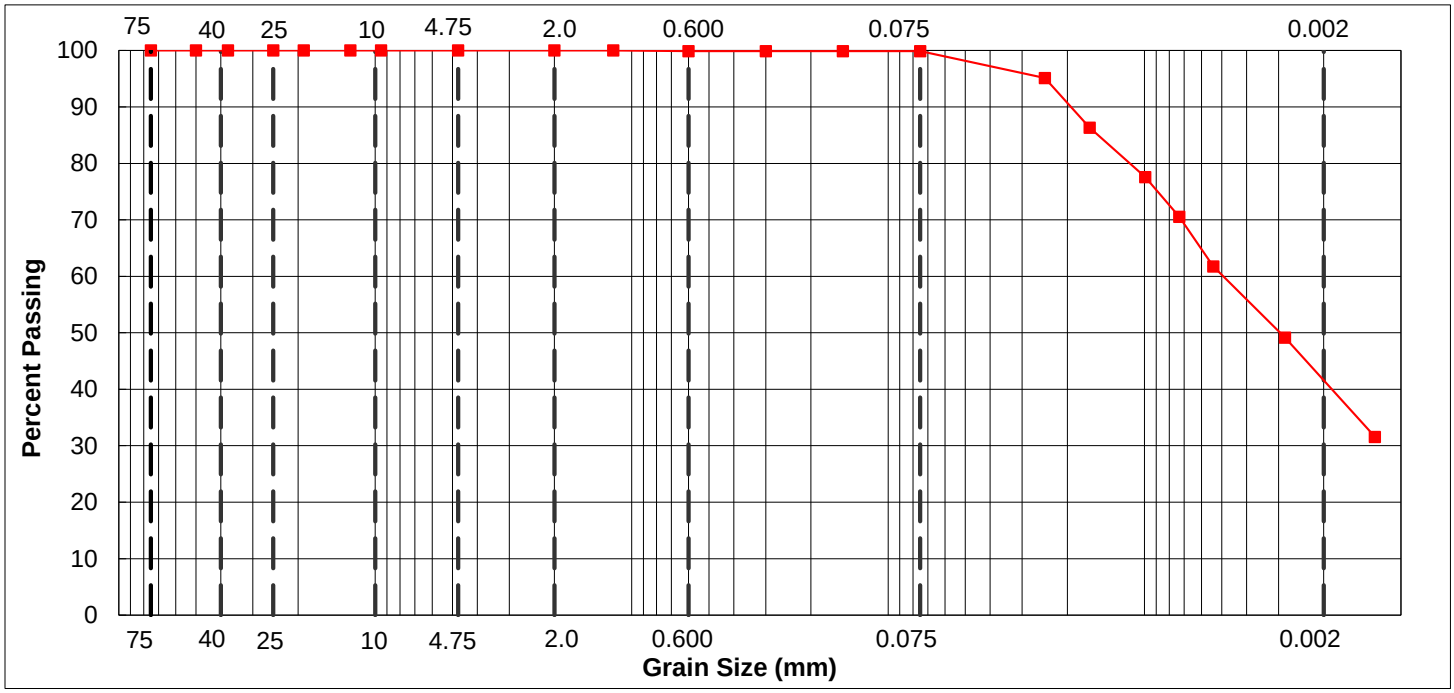
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	210RC3
Project No.:	1560-193-00	**Source:**	22CH210
Owner:	EID	**Sample Depth:**	6.4m
File No.:	GSA - 210RC3	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.9
25.0	100.0	0.0245	95.1
19.0	100.0	0.0164	86.3
12.5	100.0	0.0099	77.6
9.5	100.0	0.0073	70.5
4.75	100.0	0.0054	61.8
2.00	100.0	0.0028	49.1
1.180	100.0	0.0013	31.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.0	425 µm to 75 µm
Silt	58.3	75 µm to 2 µm
Clay	41.6	<2 µm



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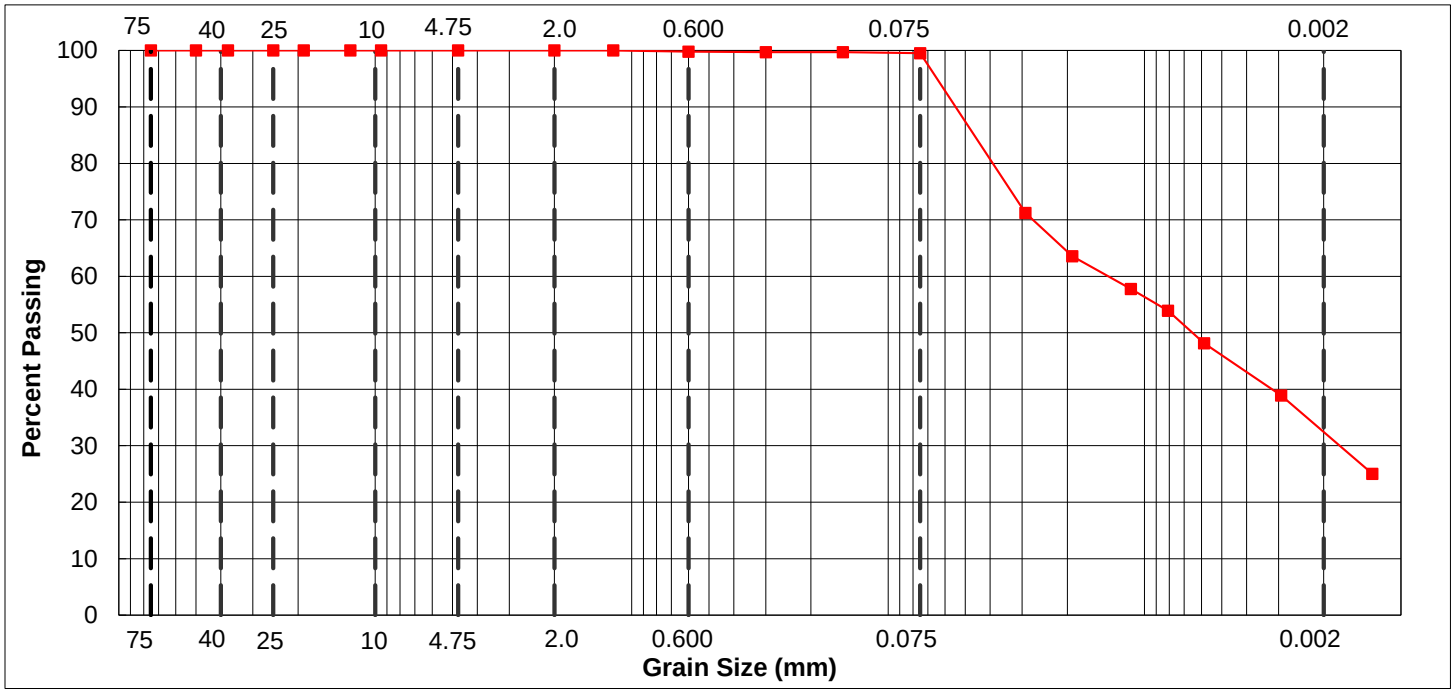
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	22CH210
Project No.:	1560-193-00	**Source:**	210RC8
Owner:	EID	**Sample Depth:**	14.9m
File No.:	GSA - 22CH210	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.7
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.5
25.0	100.0	0.0292	71.3
19.0	100.0	0.0191	63.5
12.5	100.0	0.0113	57.8
9.5	100.0	0.0081	53.9
4.75	100.0	0.0059	48.1
2.00	100.0	0.0029	38.9
1.180	100.0	0.0013	25.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	67.1	75 µm to 2 µm
Clay	32.4	<2 µm



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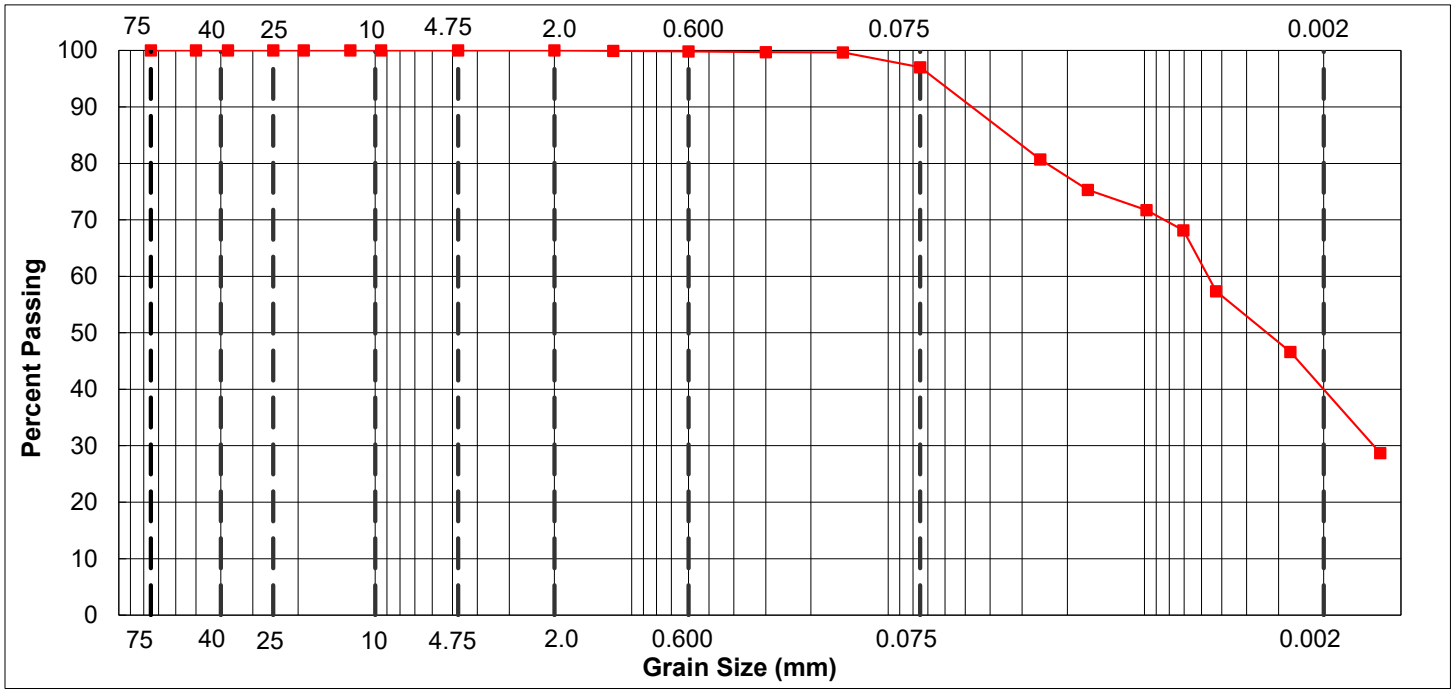
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	210RC18
Project No.:	1560-193-00	**Source:**	22CH210
Owner:	EID	**Sample Depth:**	29.0m
File No.:	GSA - 210RC18	**Test Date:**	3-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.7
50.0	100.0	0.150	99.7
37.5	100.0	0.075	97.0
25.0	100.0	0.0255	80.7
19.0	100.0	0.0166	75.3
12.5	100.0	0.0098	71.7
9.5	100.0	0.0071	68.1
4.75	100.0	0.0053	57.4
2.00	100.0	0.0027	46.6
1.180	99.9	0.0012	28.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	2.8	425 µm to 75 µm
Silt	57.0	75 µm to 2 µm
Clay	40.0	<2 µm



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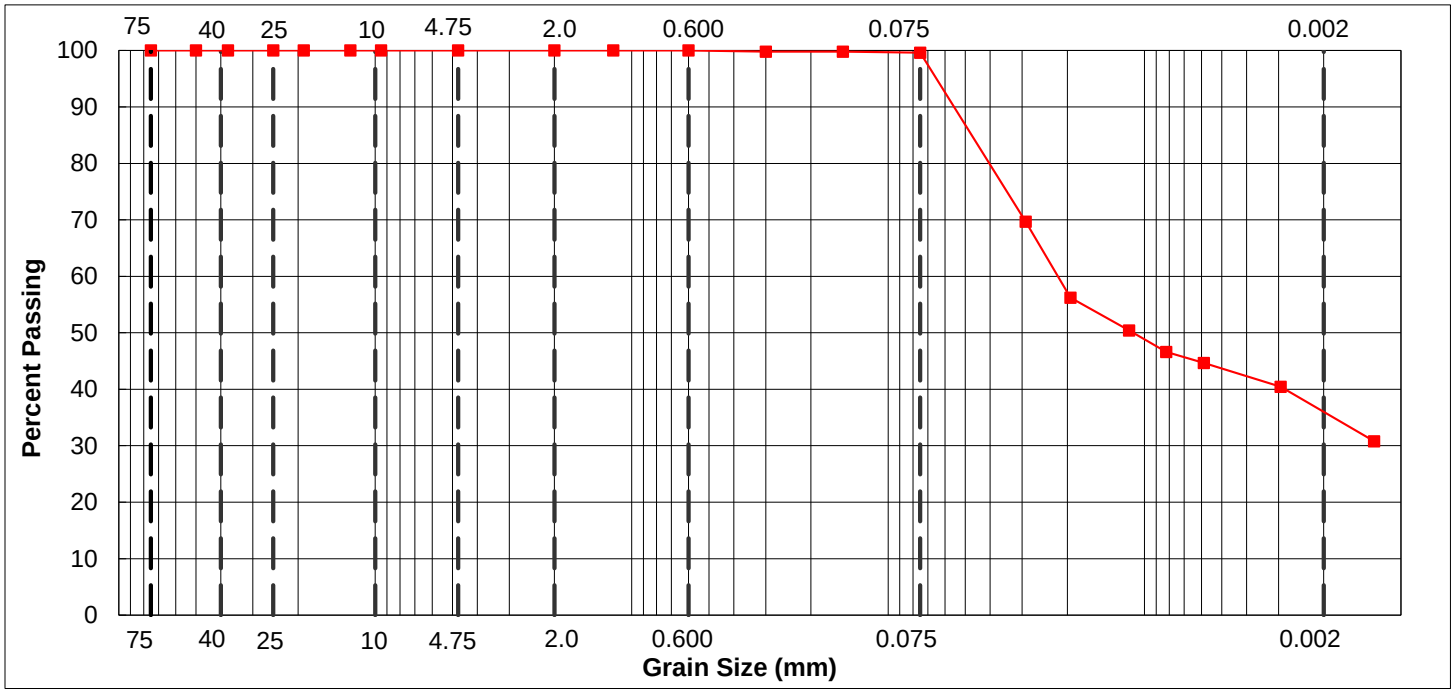
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	211AU7
Project No.:	1560-193-00	**Source:**	22BH211
Owner:	EID	**Sample Depth:**	5.2m
File No.:	GSA - 211AU7	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.6
25.0	100.0	0.0291	69.7
19.0	100.0	0.0194	56.2
12.5	100.0	0.0115	50.4
9.5	100.0	0.0082	46.6
4.75	100.0	0.0059	44.7
2.00	100.0	0.0029	40.4
1.180	100.0	0.0013	30.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	63.6	75 µm to 2 µm
Clay	36.0	<2 µm



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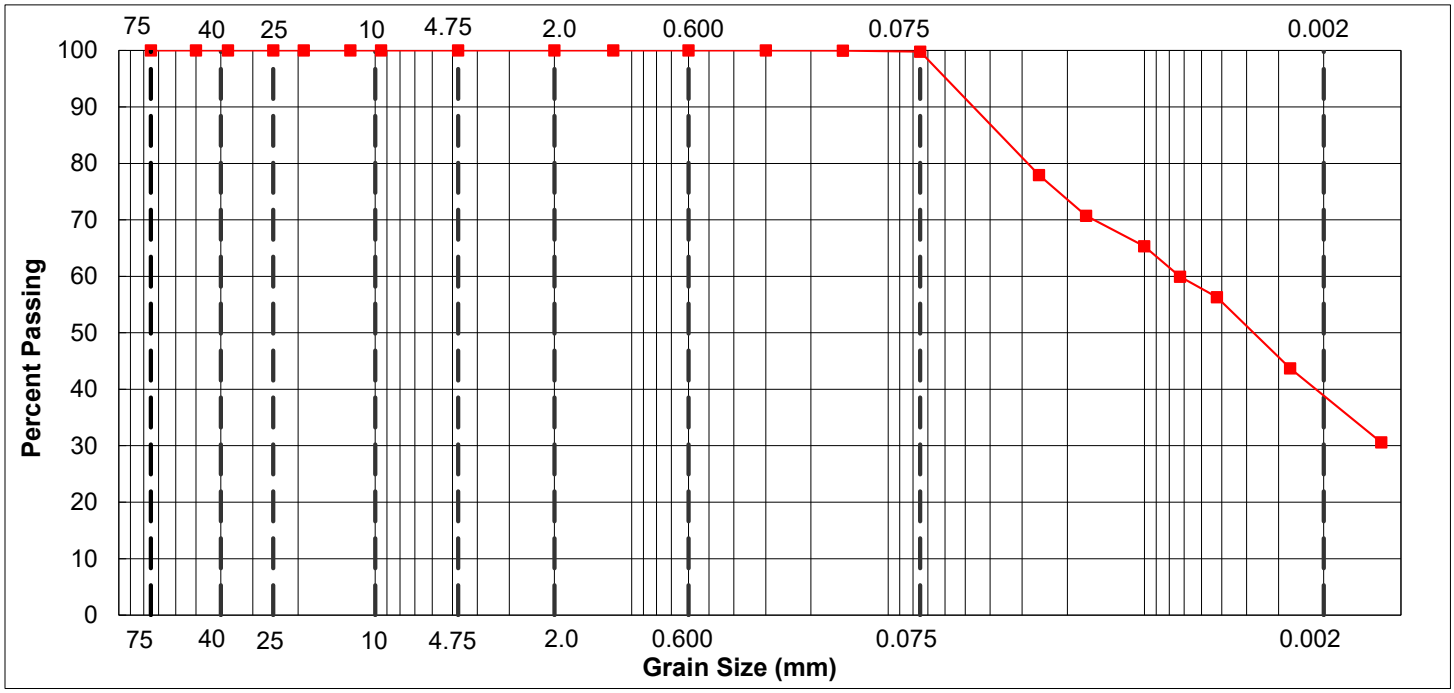
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	211RC6
Project No.:	1560-193-00	**Source:**	22CH211
Owner:	EID	**Sample Depth:**	11.7m
File No.:	GSA - 211RC6	**Test Date:**	27-Jul-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.8
25.0	100.0	0.0258	77.9
19.0	100.0	0.0169	70.7
12.5	100.0	0.0100	65.3
9.5	100.0	0.0073	59.9
4.75	100.0	0.0052	56.3
2.00	100.0	0.0027	43.7
1.180	100.0	0.0012	30.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	60.9	75 µm to 2 µm
Clay	38.9	<2 µm



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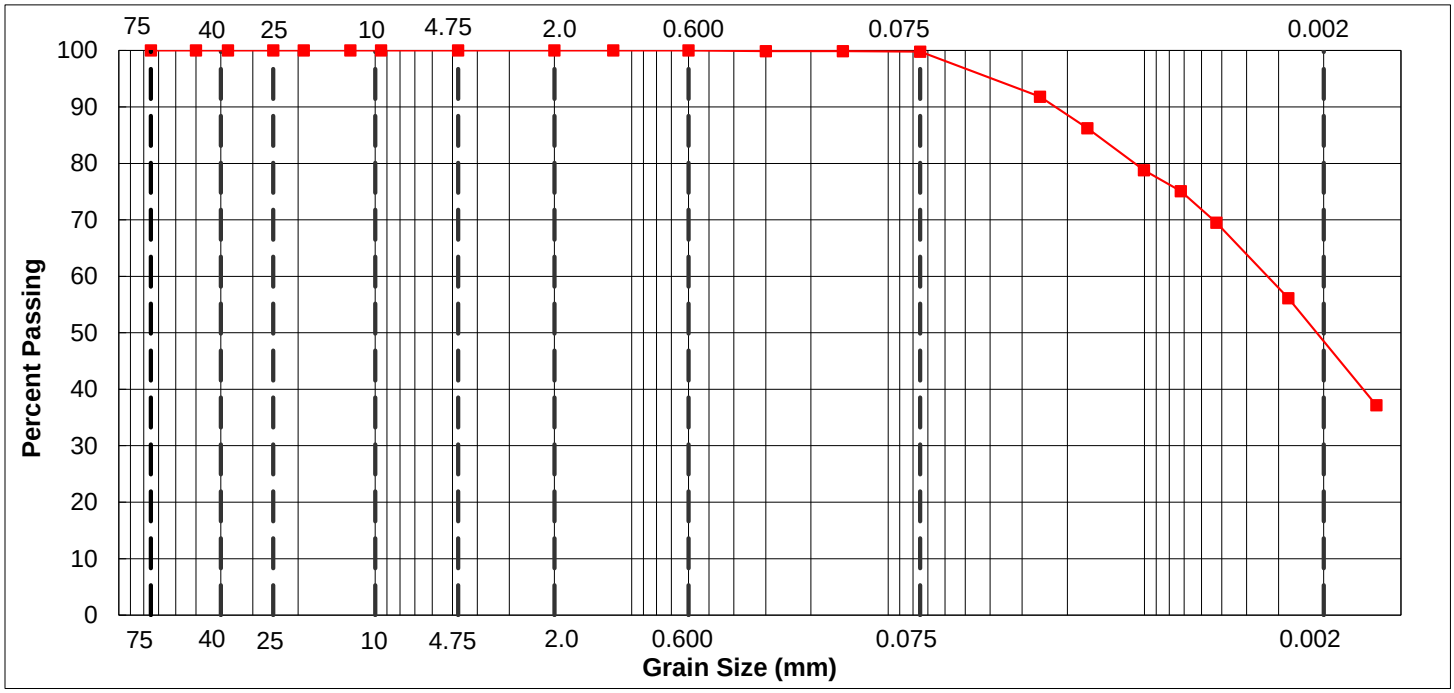
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	22CH211
Project No.:	1560-193-00	**Source:**	211RC14
Owner:	EID	**Sample Depth:**	23.2m
File No.:	GSA - 22CH211	**Test Date:**	28-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0256	91.8
19.0	100.0	0.0167	86.2
12.5	100.0	0.0100	78.8
9.5	100.0	0.0072	75.1
4.75	100.0	0.0052	69.5
2.00	100.0	0.0027	56.1
1.180	100.0	0.0012	37.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	51.3	75 µm to 2 µm
Clay	48.5	<2 µm



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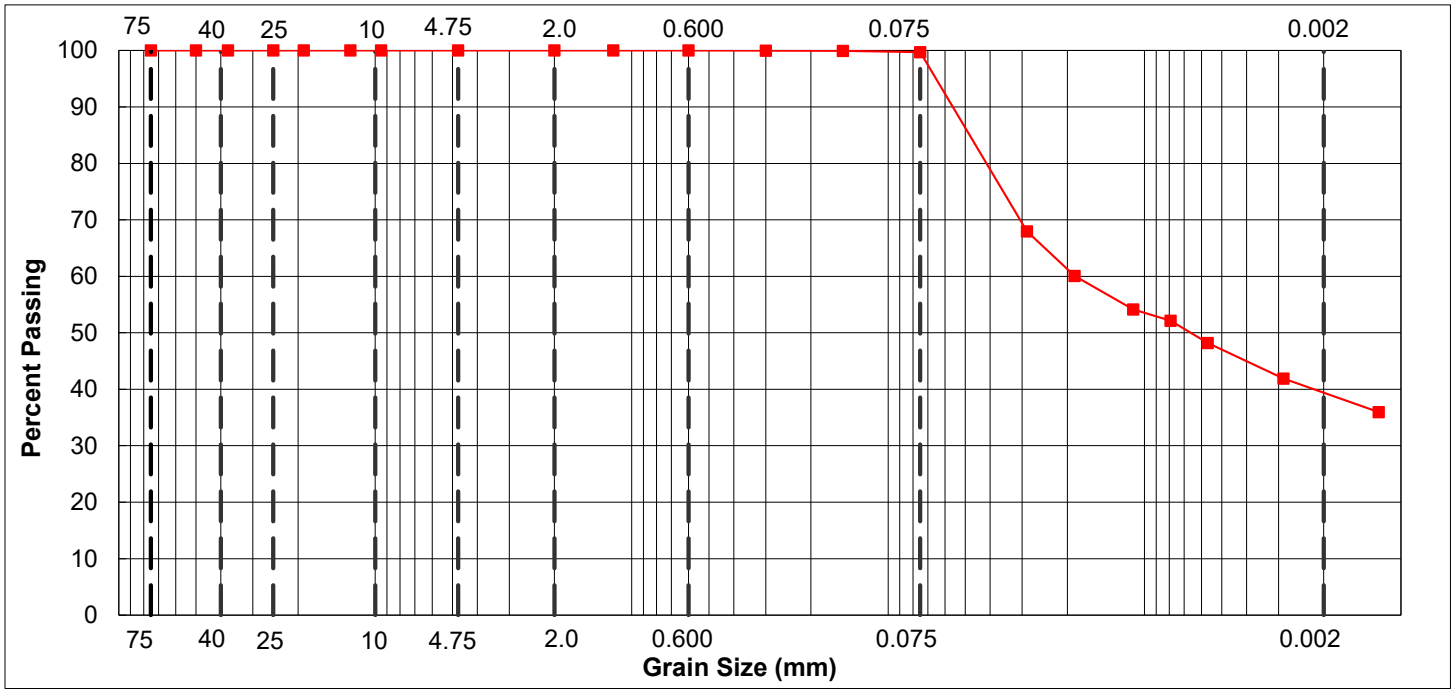
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	212AU6
Project No.:	1560-193-00	**Source:**	22BH212
Owner:	EID	**Sample Depth:**	4.3m
File No.:	GSA - 212AU6	**Date:**	7-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.7
25.0	100.0	0.0287	68.0
19.0	100.0	0.0187	60.1
12.5	100.0	0.0111	54.1
9.5	100.0	0.0079	52.2
4.75	100.0	0.0057	48.2
2.00	100.0	0.0029	41.9
1.180	100.0	0.0012	36.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	60.3	75 µm to 2 µm
Clay	39.4	<2 µm



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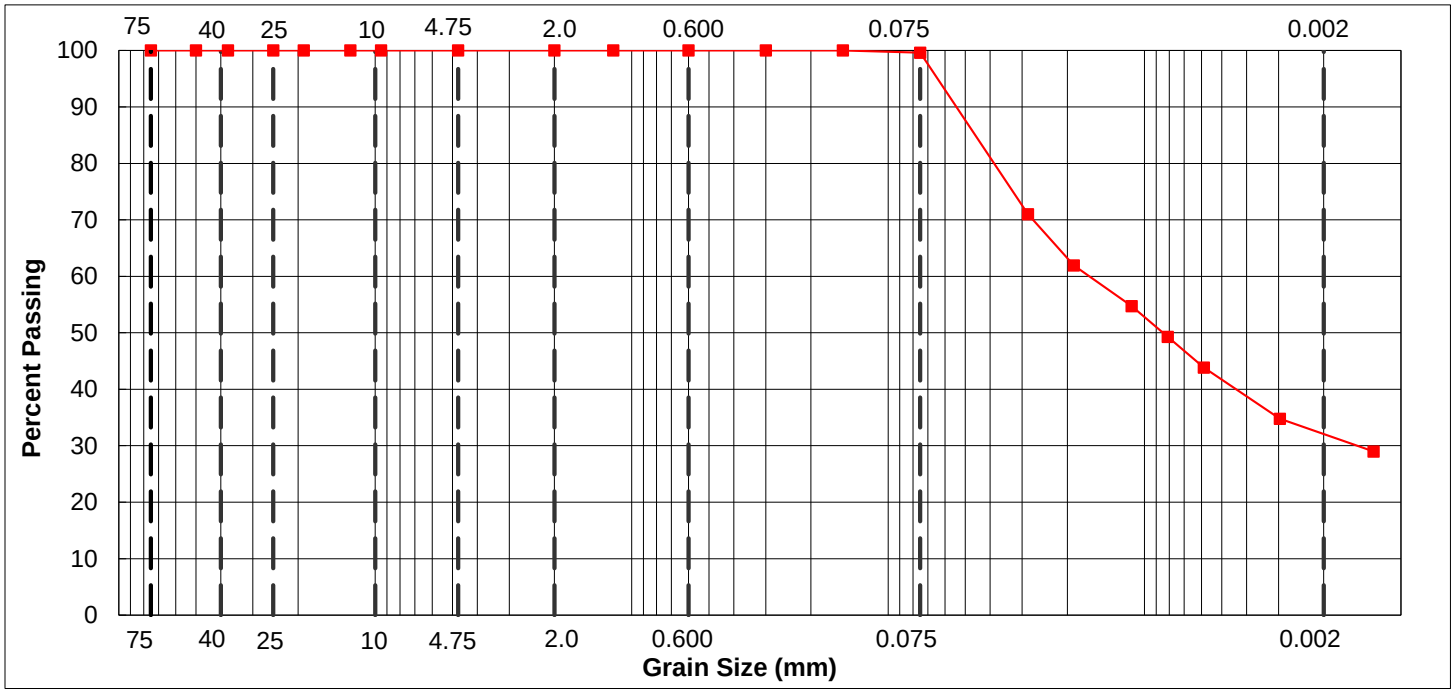
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	212RC1
Project No.:	1560-193-00	**Source:**	22CH212
Owner:	EID	**Sample Depth:**	5.3m
File No.:	GSA - 212RC1	**Test Date:**	16-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.6
25.0	100.0	0.0285	71.0
19.0	100.0	0.0189	62.0
12.5	100.0	0.0112	54.7
9.5	100.0	0.0081	49.3
4.75	100.0	0.0059	43.8
2.00	100.0	0.0030	34.8
1.180	100.0	0.0013	29.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	67.5	75 µm to 2 µm
Clay	32.1	<2 µm



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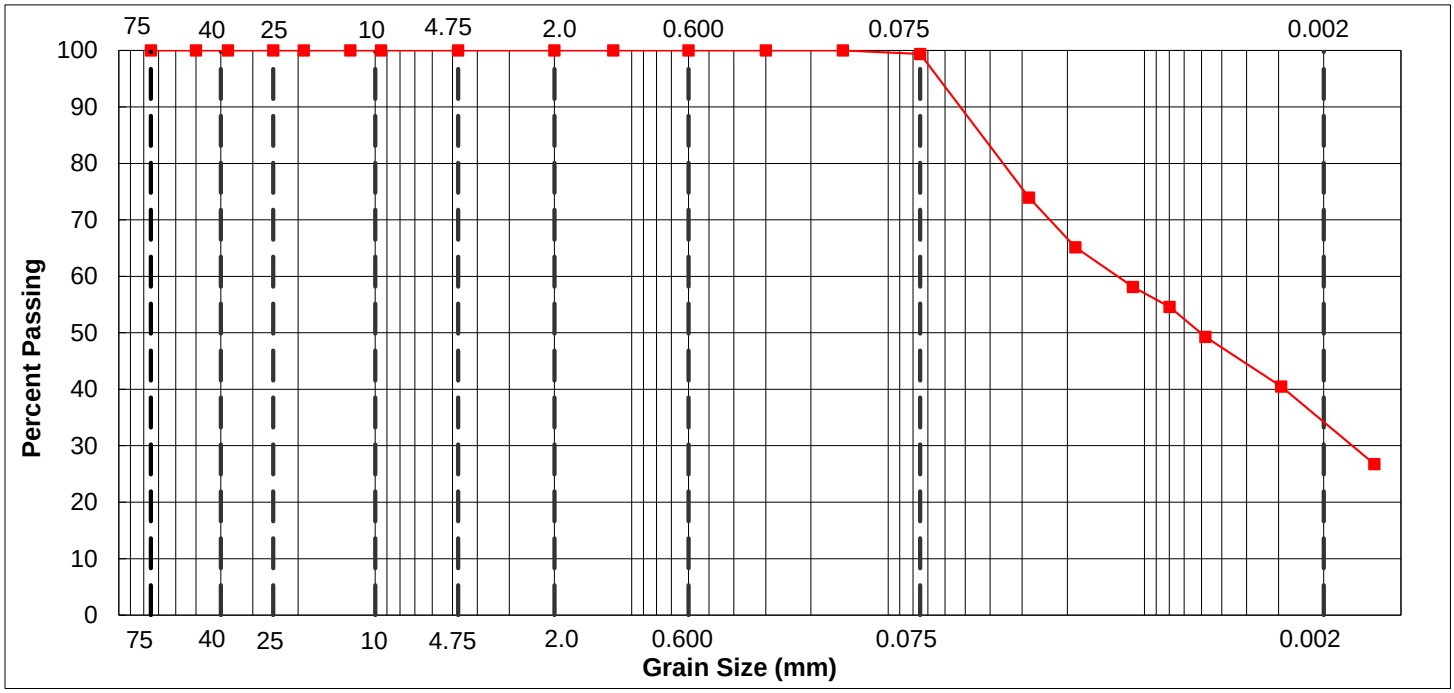
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	212RC9
Project No.:	1560-193-00	**Source:**	22CH212
Owner:	EID	**Sample Depth:**	17.2m
File No.:	GSA - 212RC9	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.4
25.0	100.0	0.0282	74.0
19.0	100.0	0.0186	65.2
12.5	100.0	0.0111	58.1
9.5	100.0	0.0080	54.6
4.75	100.0	0.0058	49.3
2.00	100.0	0.0029	40.5
1.180	100.0	0.0013	26.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.6	425 µm to 75 µm
Silt	65.2	75 µm to 2 µm
Clay	34.2	<2 µm



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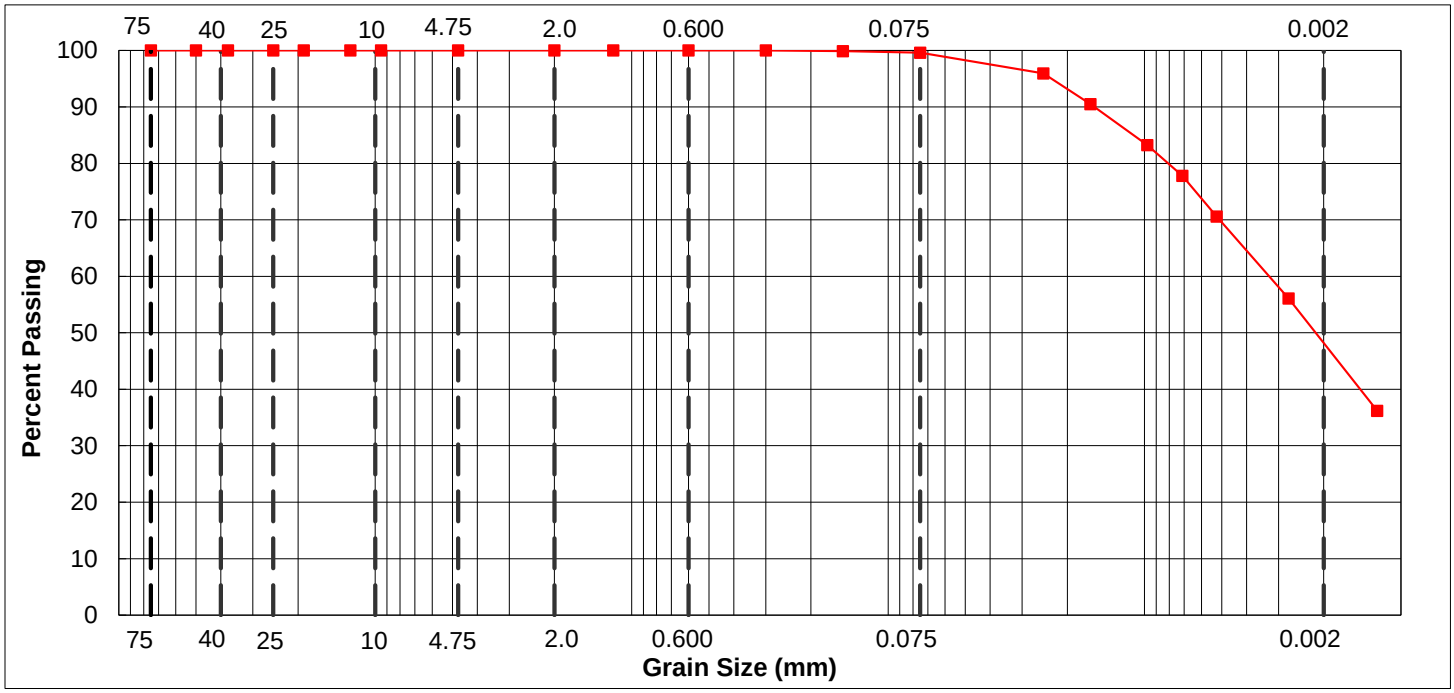
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	212RC12
Project No.:	1560-193-00	**Source:**	22BH212
Owner:	EID	**Sample Depth:**	22.0m
File No.:	GSA - 212RC12	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.6
25.0	100.0	0.0248	95.9
19.0	100.0	0.0163	90.5
12.5	100.0	0.0098	83.3
9.5	100.0	0.0071	77.8
4.75	100.0	0.0052	70.6
2.00	100.0	0.0027	56.1
1.180	100.0	0.0012	36.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	51.4	75 µm to 2 µm
Clay	48.2	<2 µm



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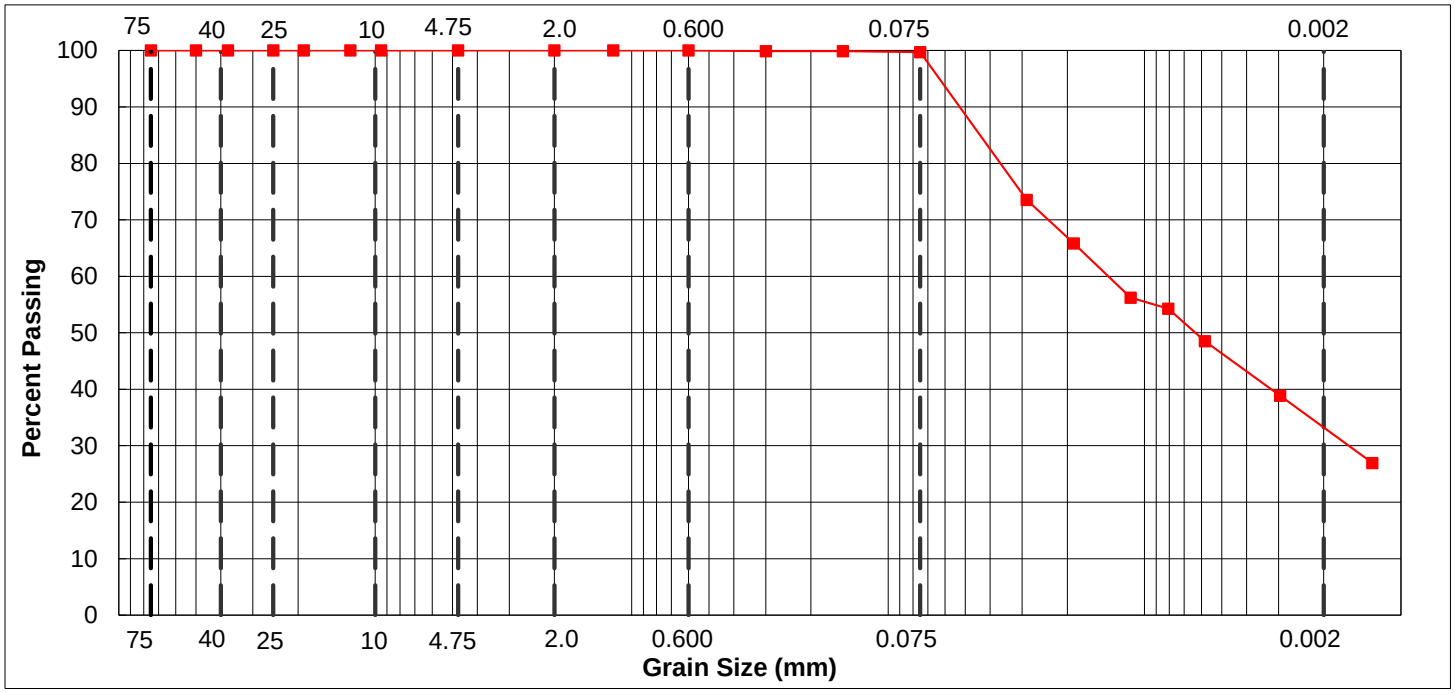
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	212RC21
Project No.:	1560-193-00	**Source:**	22CH212
Owner:	EID	**Sample Depth:**	35.7m
File No.:	GSA - 212RC21	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.7
25.0	100.0	0.0288	73.5
19.0	100.0	0.0189	65.8
12.5	100.0	0.0113	56.2
9.5	100.0	0.0081	54.3
4.75	100.0	0.0058	48.5
2.00	100.0	0.0030	38.9
1.180	100.0	0.0013	26.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	66.5	75 µm to 2 µm
Clay	33.2	<2 µm



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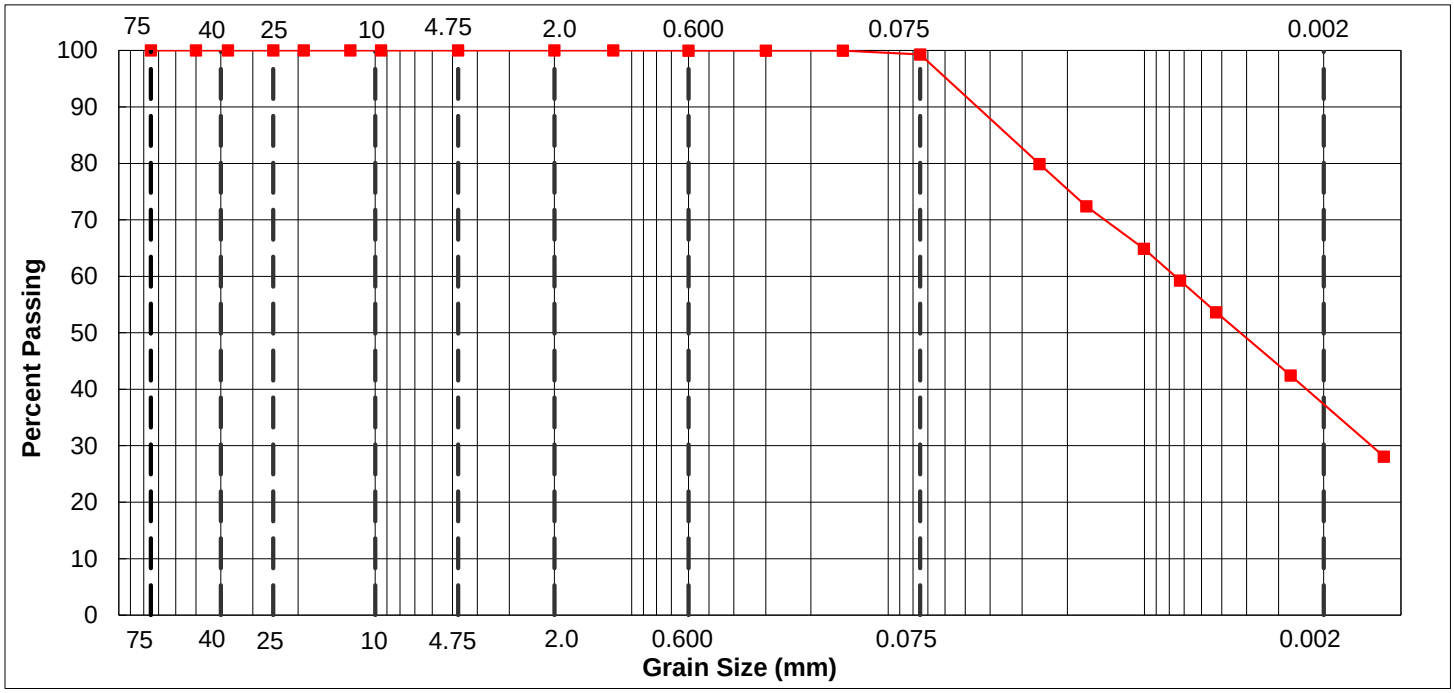
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	213UD1
Project No.:	1560-193-00	**Source:**	22CH213
Owner:	EID	**Sample Depth:**	5.0m
File No.:	GSA - 213UD1	**Test Date:**	30-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.3
25.0	100.0	0.0257	79.9
19.0	100.0	0.0169	72.4
12.5	100.0	0.0100	64.9
9.5	100.0	0.0073	59.3
4.75	100.0	0.0053	53.7
2.00	100.0	0.0027	42.4
1.180	100.0	0.0012	28.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.7	425 µm to 75 µm
Silt	62.0	75 µm to 2 µm
Clay	37.3	<2 µm



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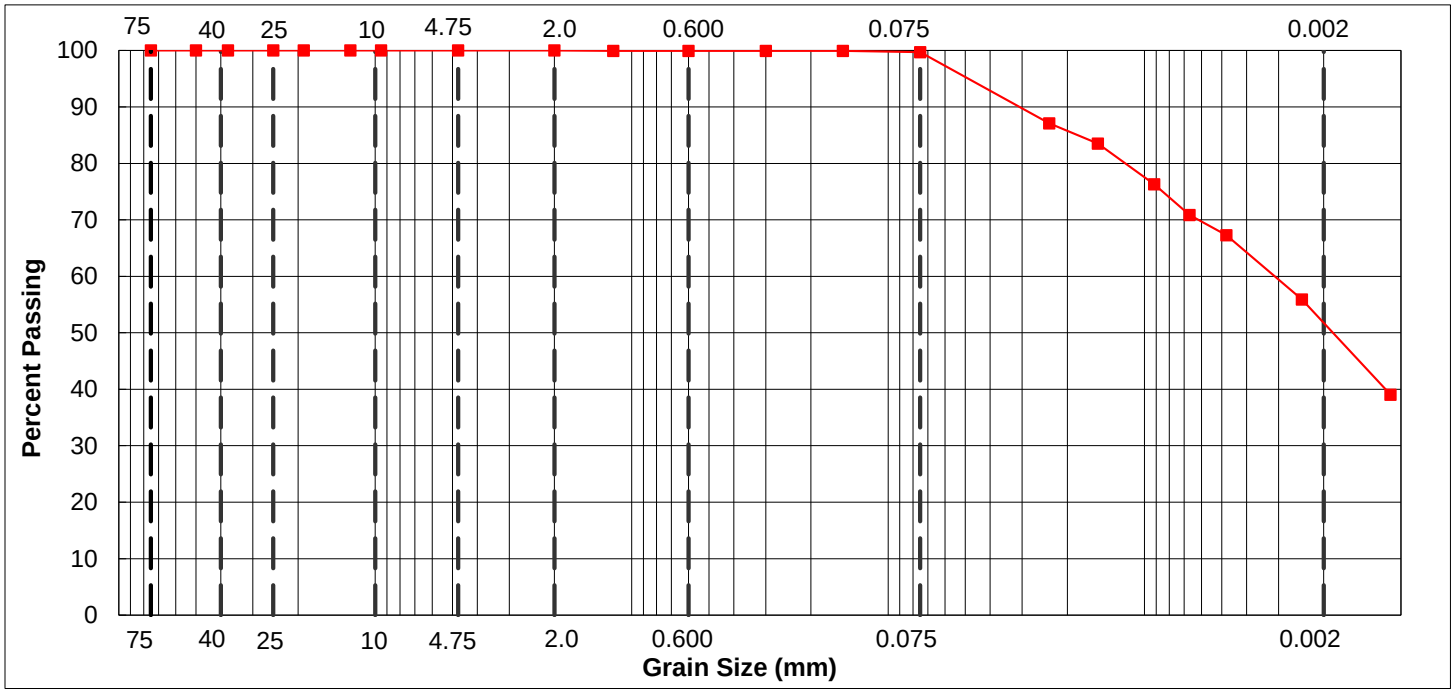
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	213UD5
Project No.:	1560-193-00	**Source:**	22CH213
Owner:	EID	**Sample Depth:**	22.34m
File No.:	GSA - 213UD5	**Test Date:**	31-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.7
25.0	100.0	0.0235	87.1
19.0	100.0	0.0152	83.5
12.5	100.0	0.0092	76.3
9.5	100.0	0.0067	70.9
4.75	100.0	0.0048	67.3
2.00	100.0	0.0024	55.9
1.180	99.9	0.0011	39.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	47.9	75 µm to 2 µm
Clay	51.8	<2 µm



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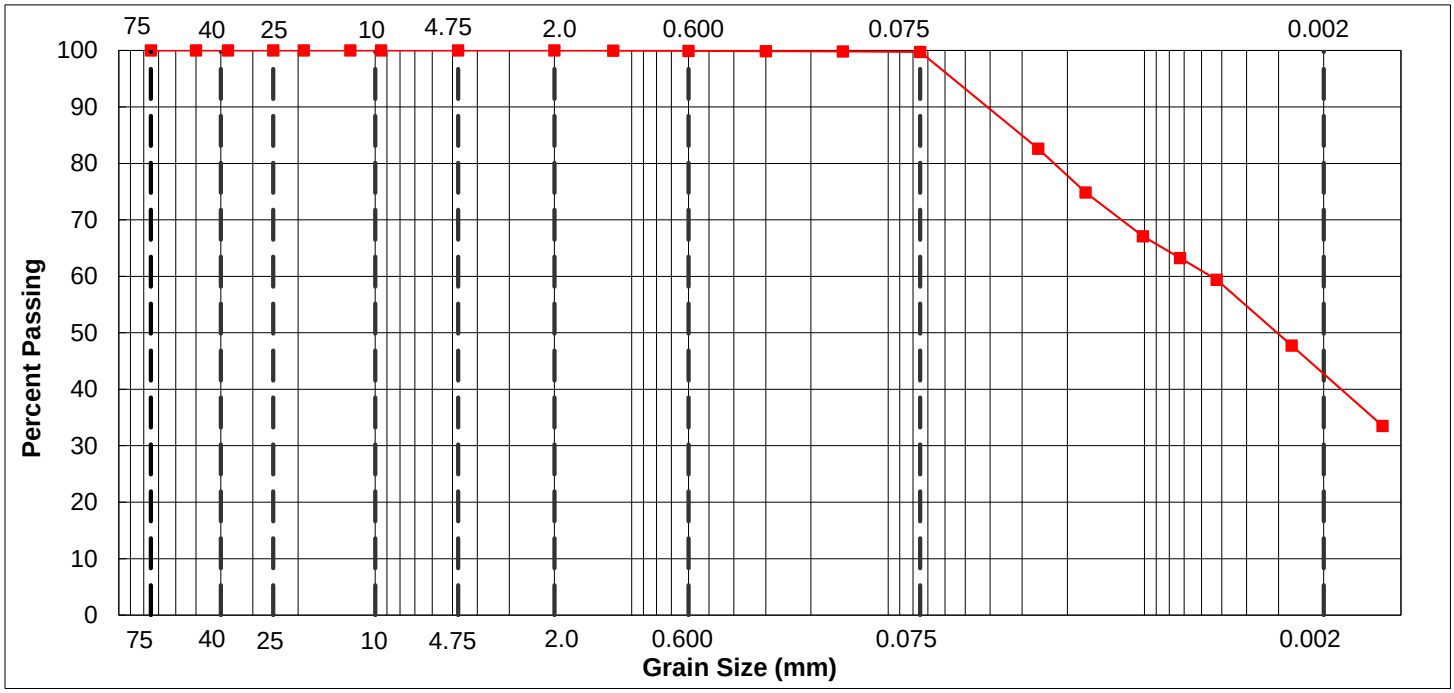
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	213UD9
Project No.:	1560-193-00	**Source:**	22CH213
Owner:	EID	**Sample Depth:**	35.75m
File No.:	GSA - 213UD9	**Test Date:**	23-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.7
25.0	100.0	0.0260	82.6
19.0	100.0	0.0170	74.9
12.5	100.0	0.0101	67.1
9.5	100.0	0.0073	63.3
4.75	100.0	0.0052	59.4
2.00	100.0	0.0027	47.8
1.180	100.0	0.0012	33.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	57.0	75 µm to 2 µm
Clay	42.7	<2 µm



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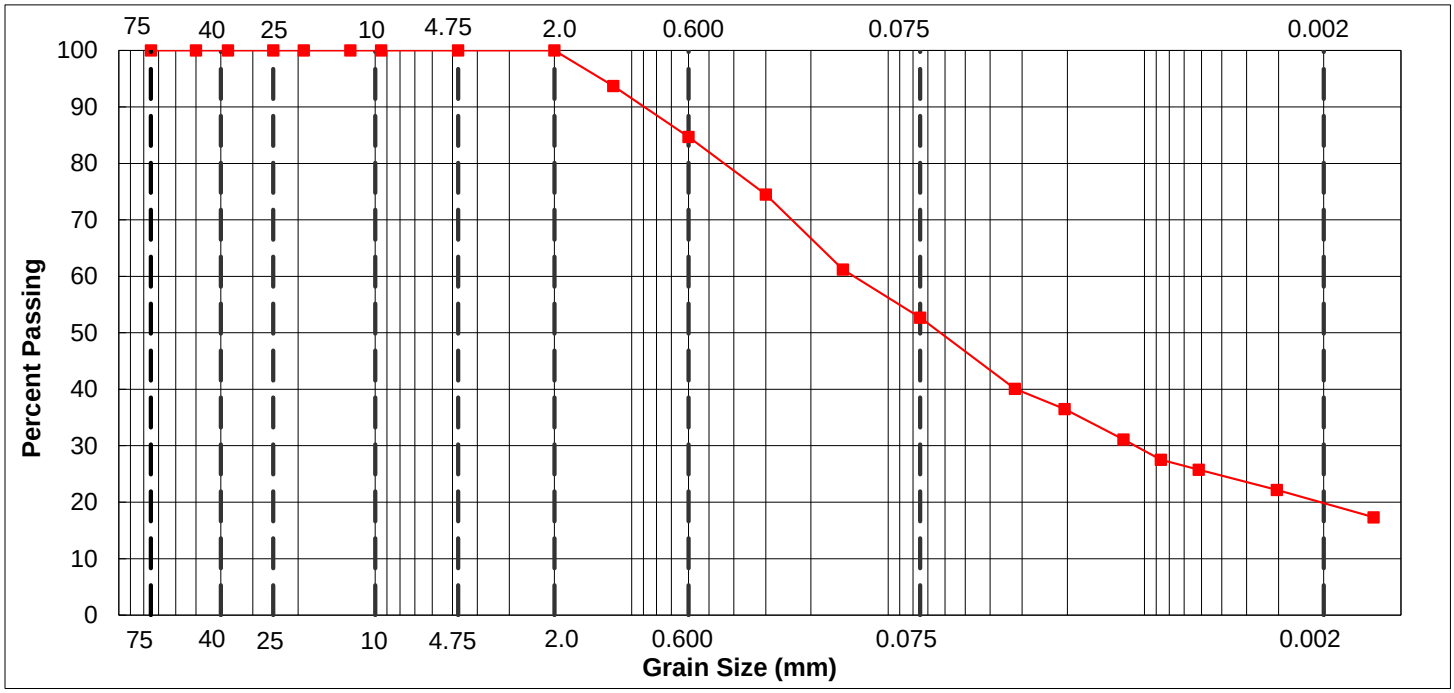
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	214AU1
Project No.:	1560-193-00	**Source:**	22BH214
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 214AU1	**Test Date:**	9-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	84.7
75.0	100.0	0.300	74.5
50.0	100.0	0.150	61.2
37.5	100.0	0.075	52.7
25.0	100.0	0.0320	40.1
19.0	100.0	0.0205	36.5
12.5	100.0	0.0121	31.1
9.5	100.0	0.0086	27.5
4.75	100.0	0.0062	25.8
2.00	100.0	0.0030	22.2
1.180	93.7	0.0013	17.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	15.3	2.00 mm to 425 µm
Fine Sand	32.0	425 µm to 75 µm
Silt	32.9	75 µm to 2 µm
Clay	19.8	<2 µm



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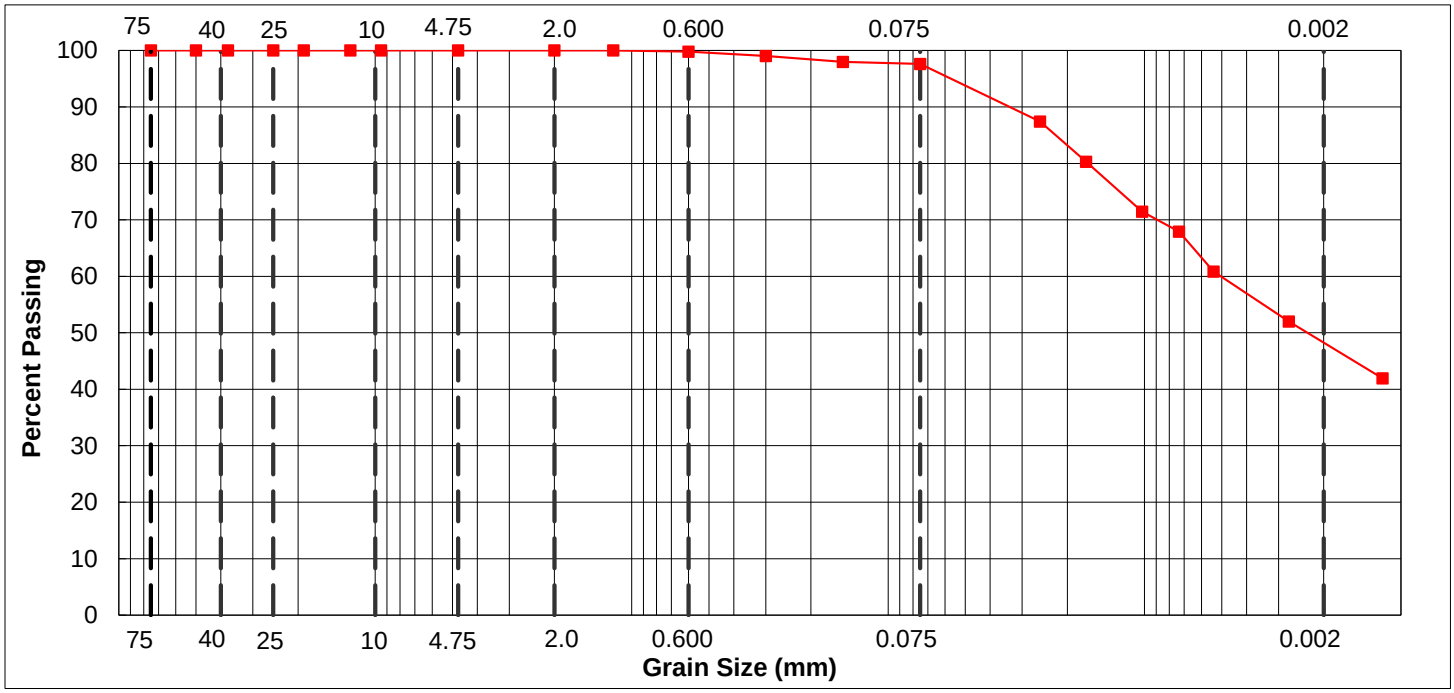
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	214AU5
Project No.:	1560-193-00	**Source:**	22BH214
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 214AU5	**Test Date:**	9-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.0
50.0	100.0	0.150	98.0
37.5	100.0	0.075	97.6
25.0	100.0	0.0256	87.4
19.0	100.0	0.0169	80.3
12.5	100.0	0.0102	71.5
9.5	100.0	0.0073	67.9
4.75	100.0	0.0054	60.9
2.00	100.0	0.0027	52.0
1.180	100.0	0.0012	41.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	2.2	425 µm to 75 µm
Silt	49.4	75 µm to 2 µm
Clay	48.2	<2 µm



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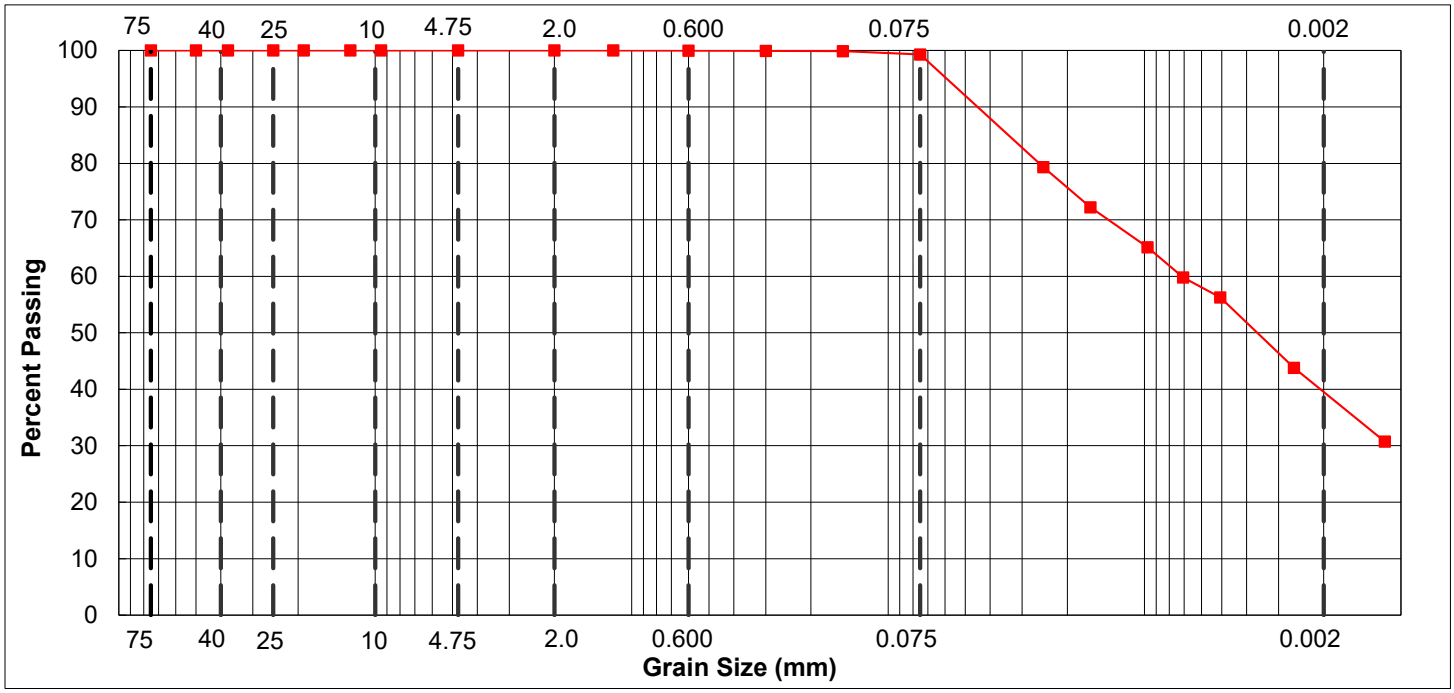
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	214RC3
Project No.:	1560-193-00	**Source:**	22CH214
Owner:	EID	**Sample Depth:**	10.1m
File No.:	GSA - 214RC3	**Test Date:**	15-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.3
25.0	100.0	0.0248	79.4
19.0	100.0	0.0163	72.2
12.5	100.0	0.0097	65.1
9.5	100.0	0.0071	59.8
4.75	100.0	0.0051	56.3
2.00	100.0	0.0026	43.8
1.180	100.0	0.0012	30.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.7	425 µm to 75 µm
Silt	59.8	75 µm to 2 µm
Clay	39.5	<2 µm



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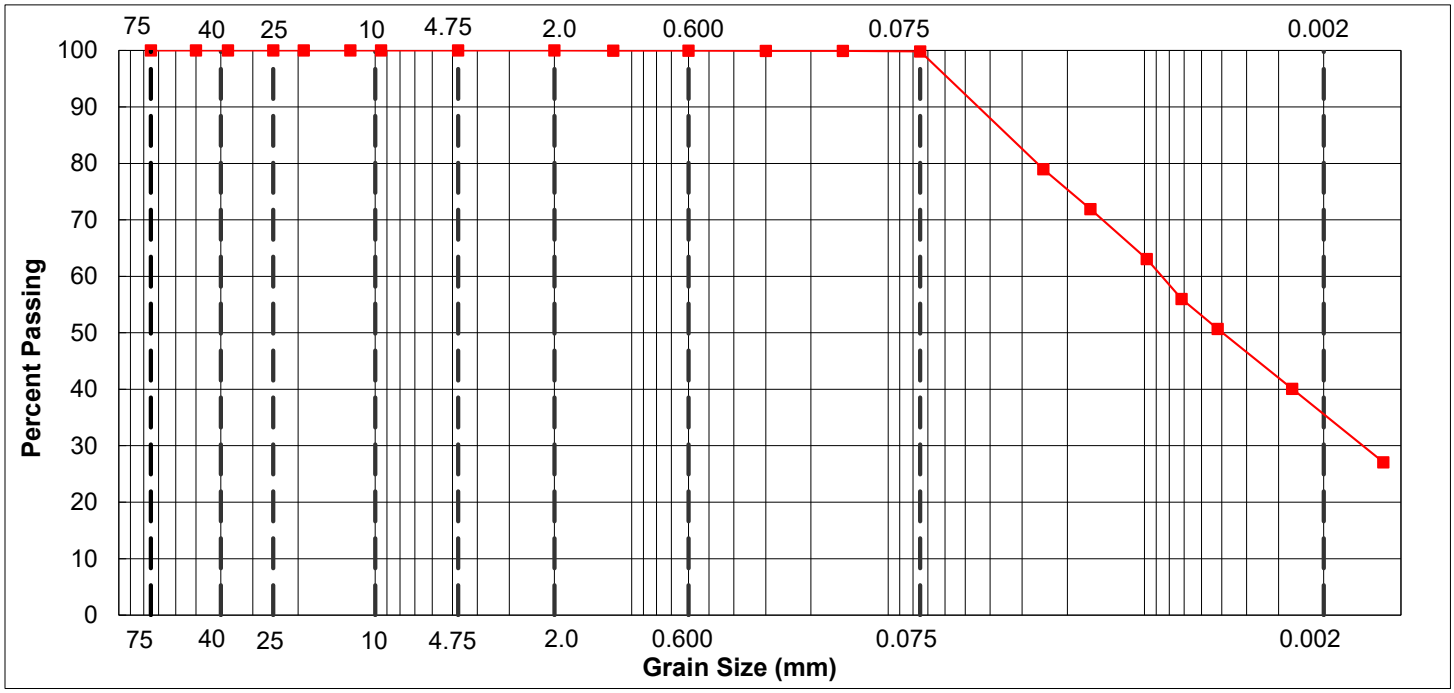
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	214RC8
Project No.:	1560-193-00	**Source:**	22CH214
Owner:	EID	**Sample Depth:**	16.3m
File No.:	GSA - 214RC8	**Test Date:**	15-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0248	79.0
19.0	100.0	0.0163	71.9
12.5	100.0	0.0098	63.1
9.5	100.0	0.0072	56.0
4.75	100.0	0.0052	50.7
2.00	100.0	0.0027	40.1
1.180	100.0	0.0012	27.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	64.2	75 µm to 2 µm
Clay	35.6	<2 µm



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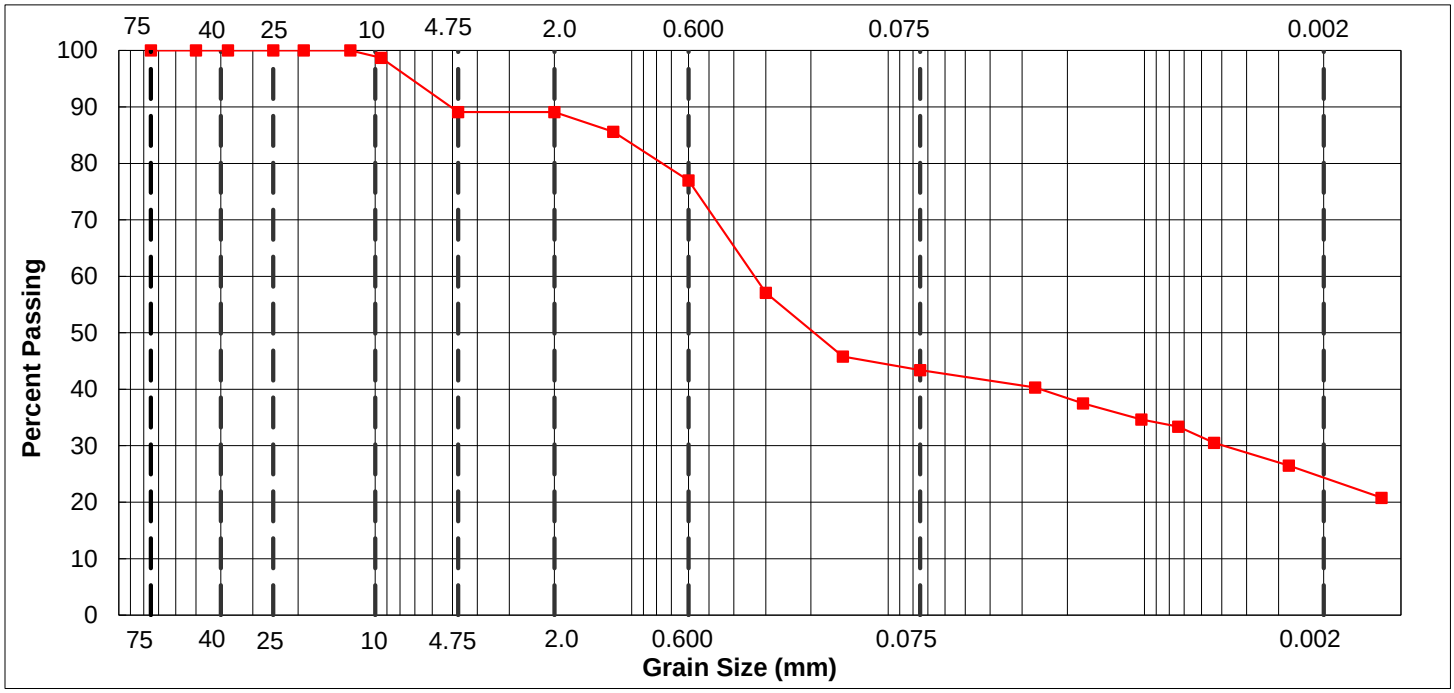
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	215SPT1
Project No.:	1560-193-00	**Source:**	22BH215
Owner:	EID	**Sample Depth:**	1.5m
File No.:	GSA - 215SPT1	**Test Date:**	16-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	77.0
75.0	100.0	0.300	57.1
50.0	100.0	0.150	45.8
37.5	100.0	0.075	43.4
25.0	100.0	0.0267	40.3
19.0	100.0	0.0174	37.5
12.5	100.0	0.0103	34.6
9.5	98.7	0.0074	33.4
4.75	89.1	0.0054	30.5
2.00	89.1	0.0027	26.5
1.180	85.6	0.0012	20.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	10.9	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	12.1	2.00 mm to 425 µm
Fine Sand	33.6	425 µm to 75 µm
Silt	19.1	75 µm to 2 µm
Clay	24.3	<2 µm



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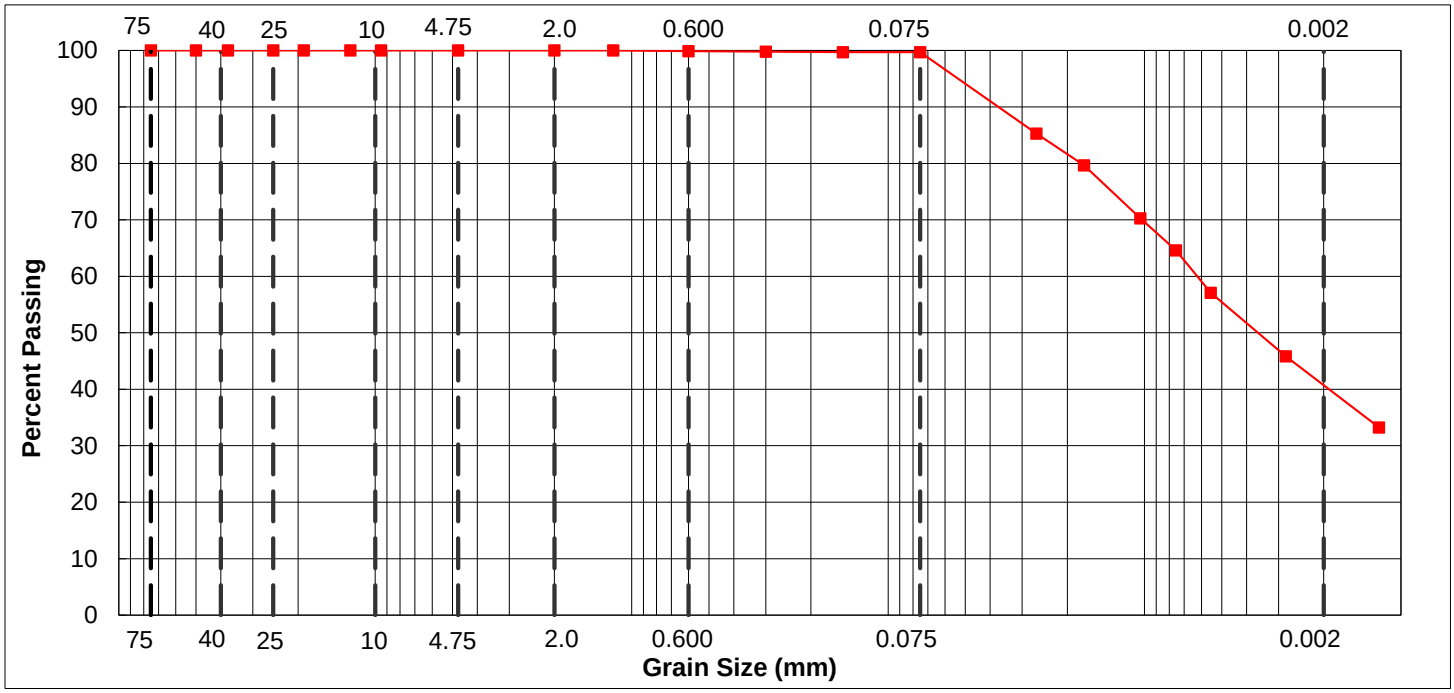
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	215SPT2
Project No.:	1560-193-00	**Source:**	22BH215
Owner:	EID	**Sample Depth:**	1.5m
File No.:	GSA - 215SPT2	**Test Date:**	9-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.7
25.0	100.0	0.0264	85.3
19.0	100.0	0.0172	79.7
12.5	100.0	0.0104	70.3
9.5	100.0	0.0075	64.6
4.75	100.0	0.0055	57.1
2.00	100.0	0.0028	45.8
1.180	100.0	0.0012	33.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	59.0	75 µm to 2 µm
Clay	40.7	<2 µm



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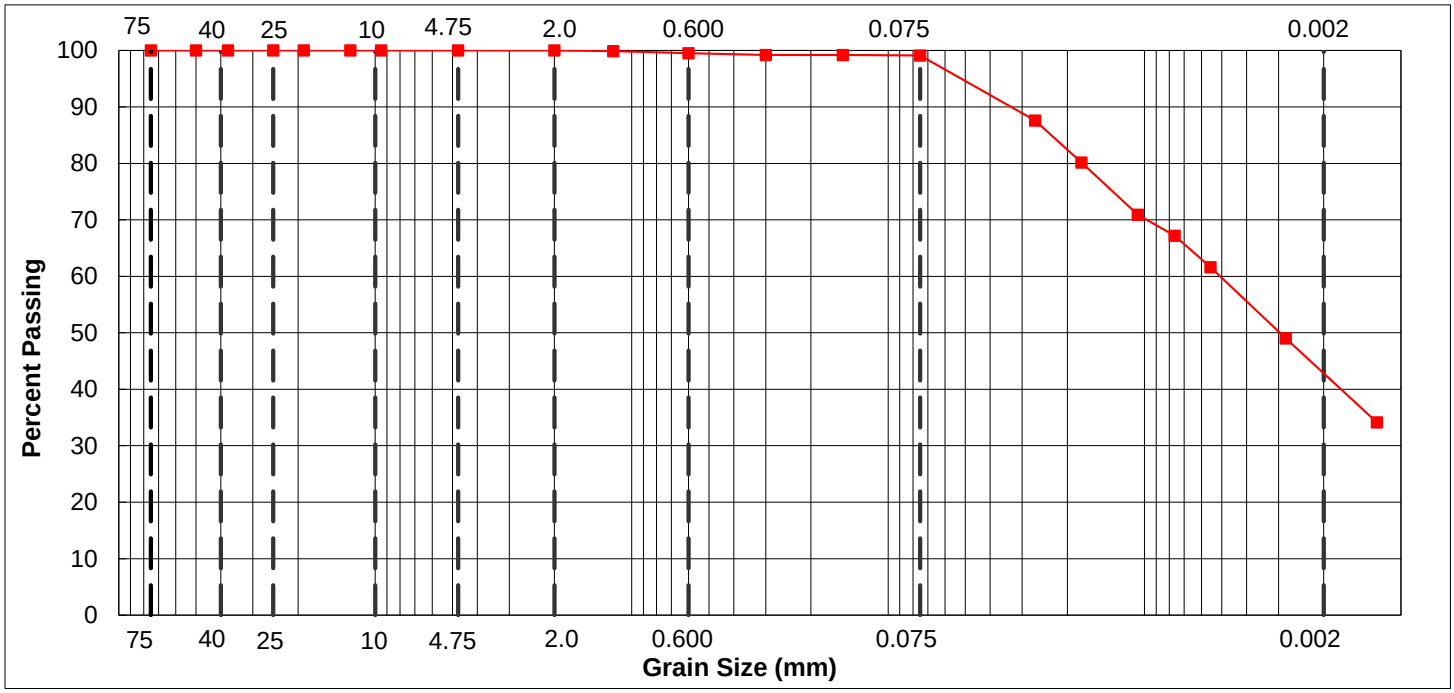
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	215RC7
Project No.:	1560-193-00	**Source:**	22CH215
Owner:	EID	**Sample Depth:**	15.6m
File No.:	GSA - 215RC7	**Test Date:**	21-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.2
50.0	100.0	0.150	99.2
37.5	100.0	0.075	99.1
25.0	100.0	0.0267	87.6
19.0	100.0	0.0176	80.2
12.5	100.0	0.0106	70.9
9.5	100.0	0.0076	67.2
4.75	100.0	0.0055	61.6
2.00	100.0	0.0028	49.0
1.180	99.9	0.0012	34.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	56.3	75 µm to 2 µm
Clay	42.8	<2 µm



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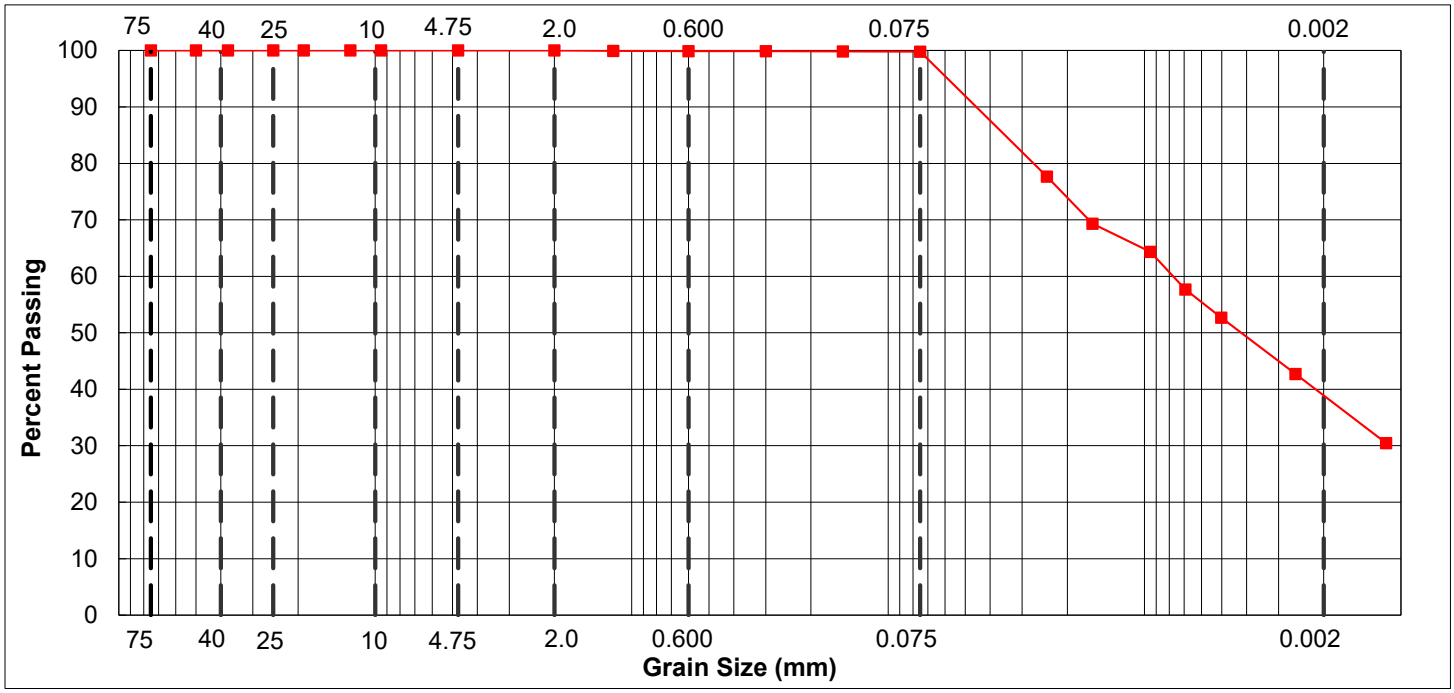
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	215RC8
Project No.:	1560-193-00	**Source:**	22CH215
Owner:	EID	**Sample Depth:**	17.2m
File No.:	GSA - 215RC8	**Test Date:**	13-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.8
25.0	100.0	0.0241	77.7
19.0	100.0	0.0160	69.3
12.5	100.0	0.0095	64.4
9.5	100.0	0.0069	57.7
4.75	100.0	0.0050	52.7
2.00	100.0	0.0026	42.7
1.180	99.9	0.0011	30.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	60.9	75 µm to 2 µm
Clay	38.9	<2 µm



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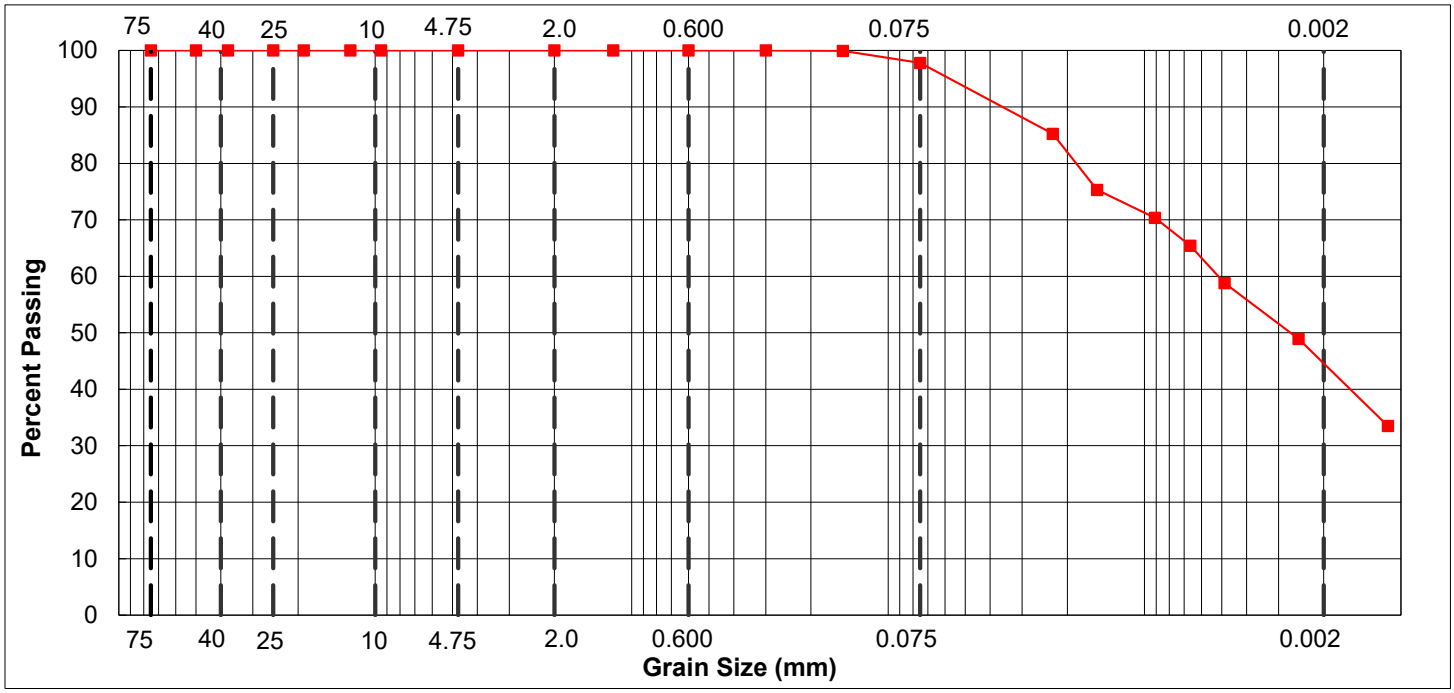
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	215RC15
Project No.:	1560-193-00	**Source:**	22CH215
Owner:	EID	**Sample Depth:**	28.0m
File No.:	GSA - 215RC15	**Test Date:**	13-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	97.8
25.0	100.0	0.0228	85.2
19.0	100.0	0.0153	75.3
12.5	100.0	0.0091	70.4
9.5	100.0	0.0066	65.4
4.75	100.0	0.0049	58.8
2.00	100.0	0.0025	48.9
1.180	100.0	0.0011	33.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	2.2	425 µm to 75 µm
Silt	53.2	75 µm to 2 µm
Clay	44.6	<2 µm



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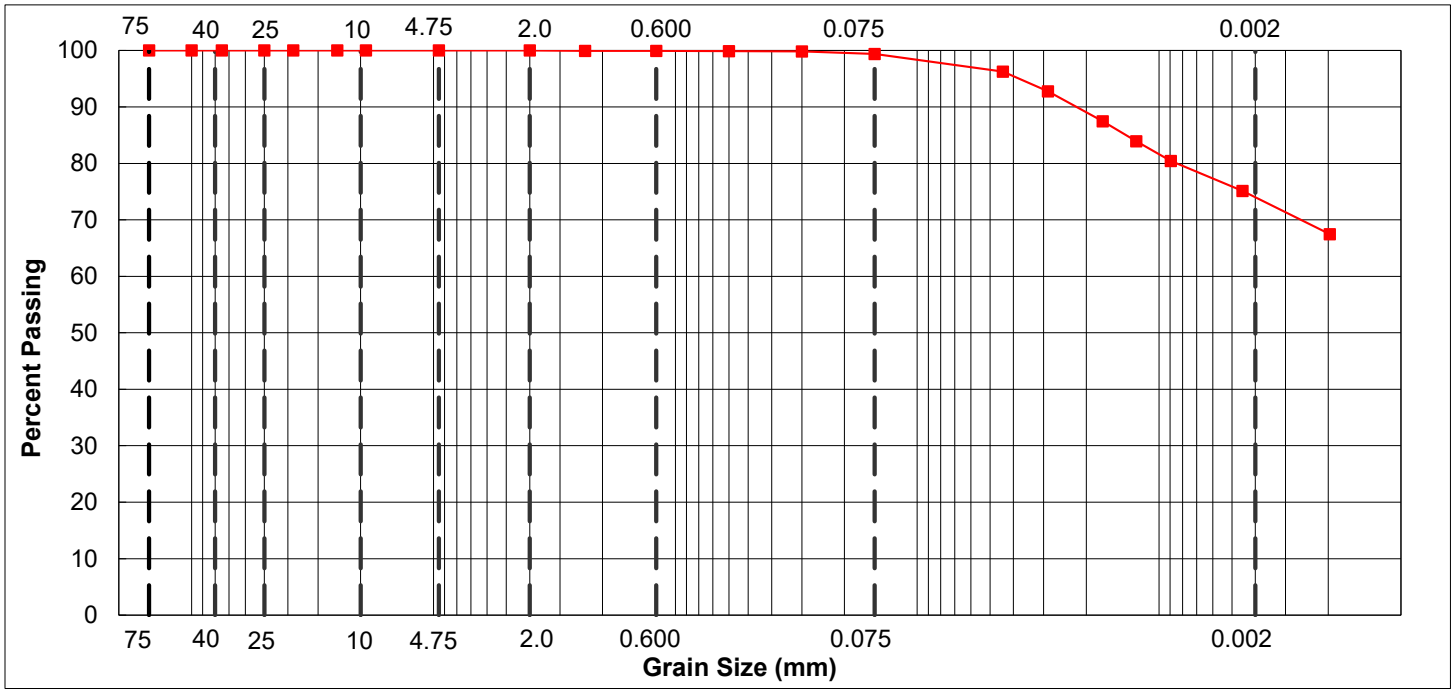
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	216RC5
Project No.:	1560-193-00	**Source:**	22CH216
Owner:	EID	**Sample Depth:**	12.1m
File No.:	GSA - 216RC5	**Test Date:**	17-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.4
25.0	100.0	0.0221	96.3
19.0	100.0	0.0144	92.8
12.5	100.0	0.0086	87.5
9.5	100.0	0.0062	83.9
4.75	100.0	0.0045	80.4
2.00	100.0	0.0023	75.1
1.180	99.9	0.0010	67.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.5	425 µm to 75 µm
Silt	25.4	75 µm to 2 µm
Clay	74.0	<2 µm



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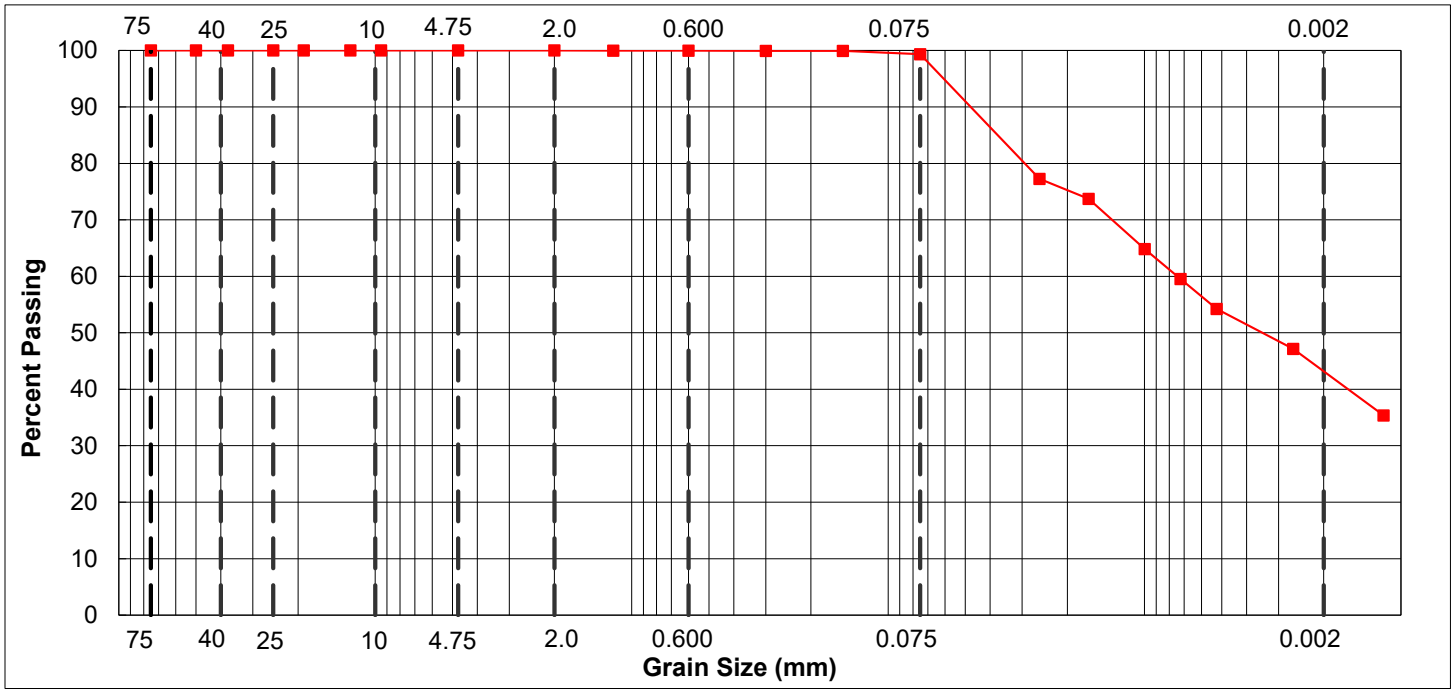
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	216RC16
Project No.:	1560-193-00	**Source:**	22CH216
Owner:	EID	**Sample Depth:**	28.3m
File No.:	GSA - 216RC16	**Test Date:**	17-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.4
25.0	100.0	0.0257	77.2
19.0	100.0	0.0165	73.7
12.5	100.0	0.0100	64.9
9.5	100.0	0.0072	59.5
4.75	100.0	0.0052	54.2
2.00	100.0	0.0026	47.2
1.180	100.0	0.0012	35.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.6	425 µm to 75 µm
Silt	56.2	75 µm to 2 µm
Clay	43.2	<2 µm



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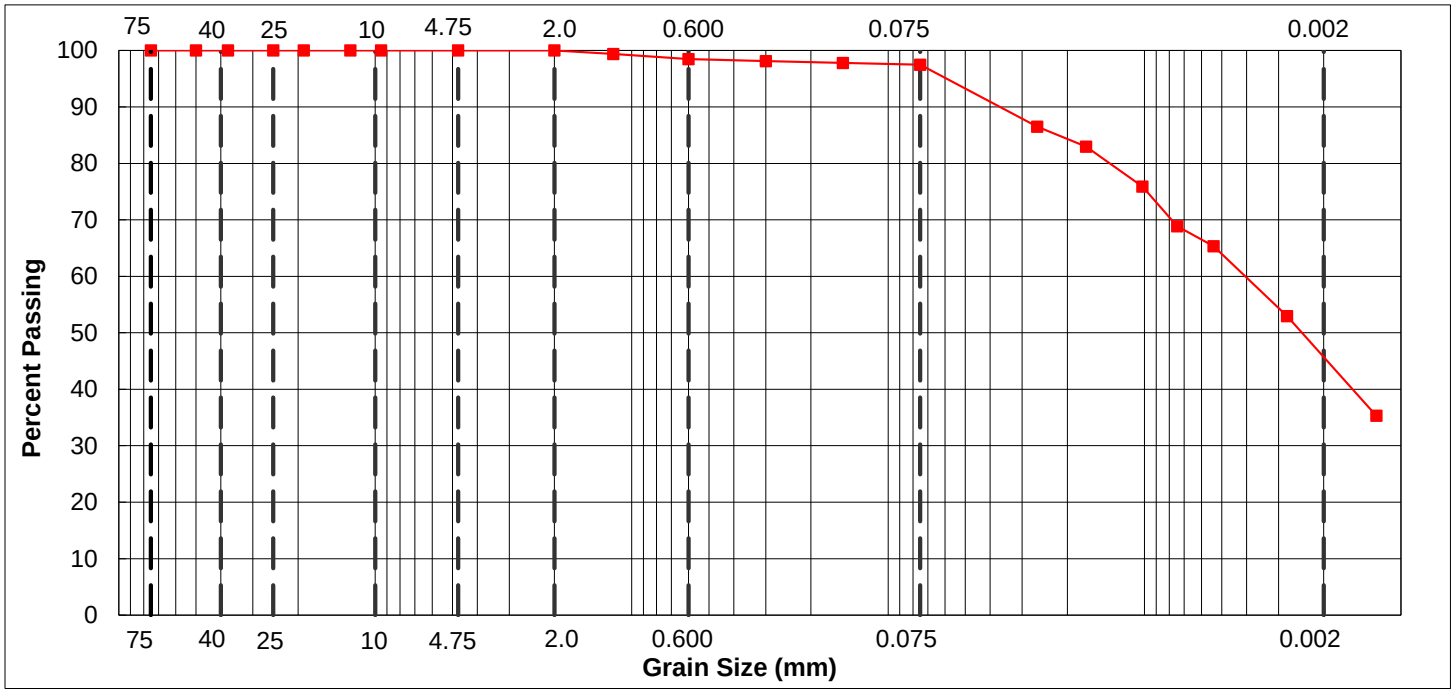
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	216UD2
Project No.:	1560-193-00	**Source:**	22CH216
Owner:	EID	**Sample Depth:**	19.01m
File No.:	GSA - 216UD2	**Test Date:**	8-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.5
75.0	100.0	0.300	98.1
50.0	100.0	0.150	97.8
37.5	100.0	0.075	97.5
25.0	100.0	0.0262	86.5
19.0	100.0	0.0169	83.0
12.5	100.0	0.0102	75.9
9.5	100.0	0.0074	68.9
4.75	100.0	0.0054	65.3
2.00	100.0	0.0028	53.0
1.180	99.4	0.0012	35.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.5	2.00 mm to 425 µm
Fine Sand	1.0	425 µm to 75 µm
Silt	51.8	75 µm to 2 µm
Clay	45.7	<2 µm



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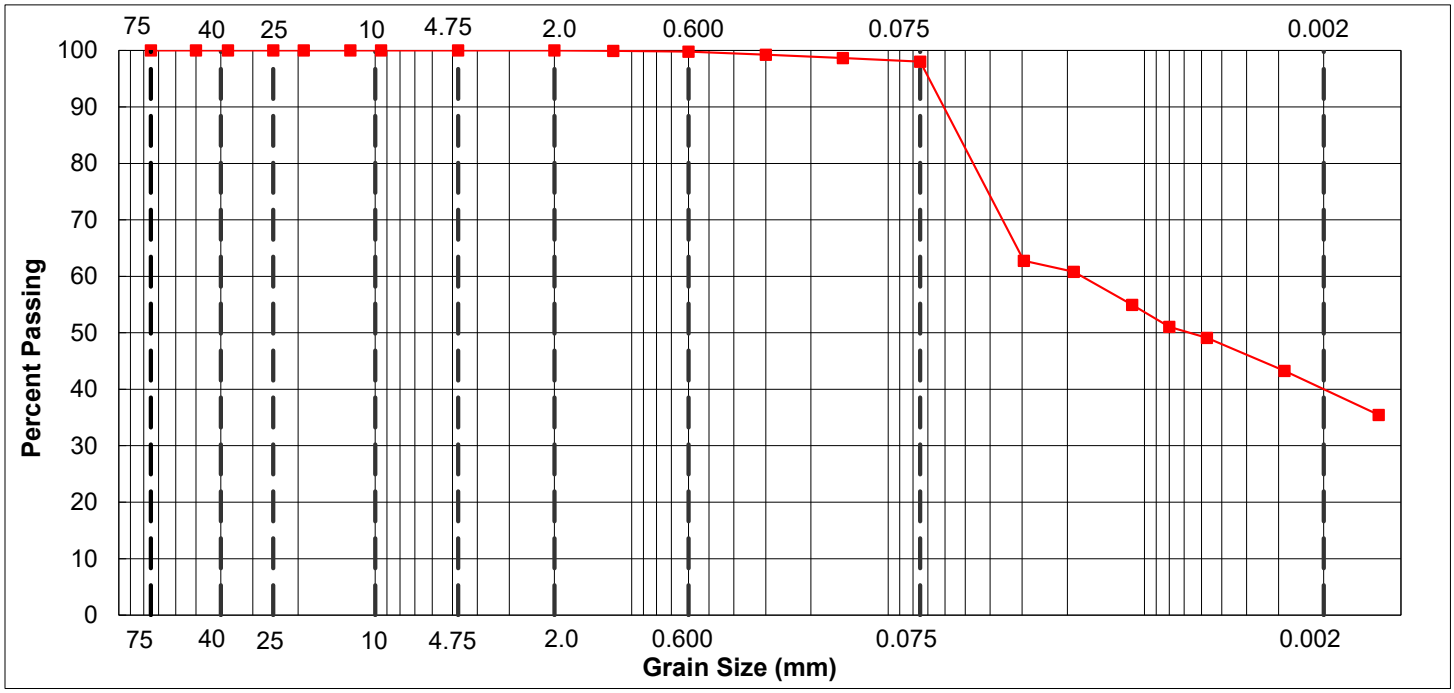
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	217AU7
Project No.:	1560-193-00	**Source:**	22BH217
Owner:	EID	**Sample Depth:**	5.2m
File No.:	GSA - 217AU7	**Date:**	7-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.3
50.0	100.0	0.150	98.7
37.5	100.0	0.075	98.0
25.0	100.0	0.0295	62.8
19.0	100.0	0.0189	60.8
12.5	100.0	0.0112	55.0
9.5	100.0	0.0080	51.1
4.75	100.0	0.0057	49.1
2.00	100.0	0.0028	43.3
1.180	99.9	0.0012	35.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	1.8	425 µm to 75 µm
Silt	58.0	75 µm to 2 µm
Clay	40.0	<2 µm



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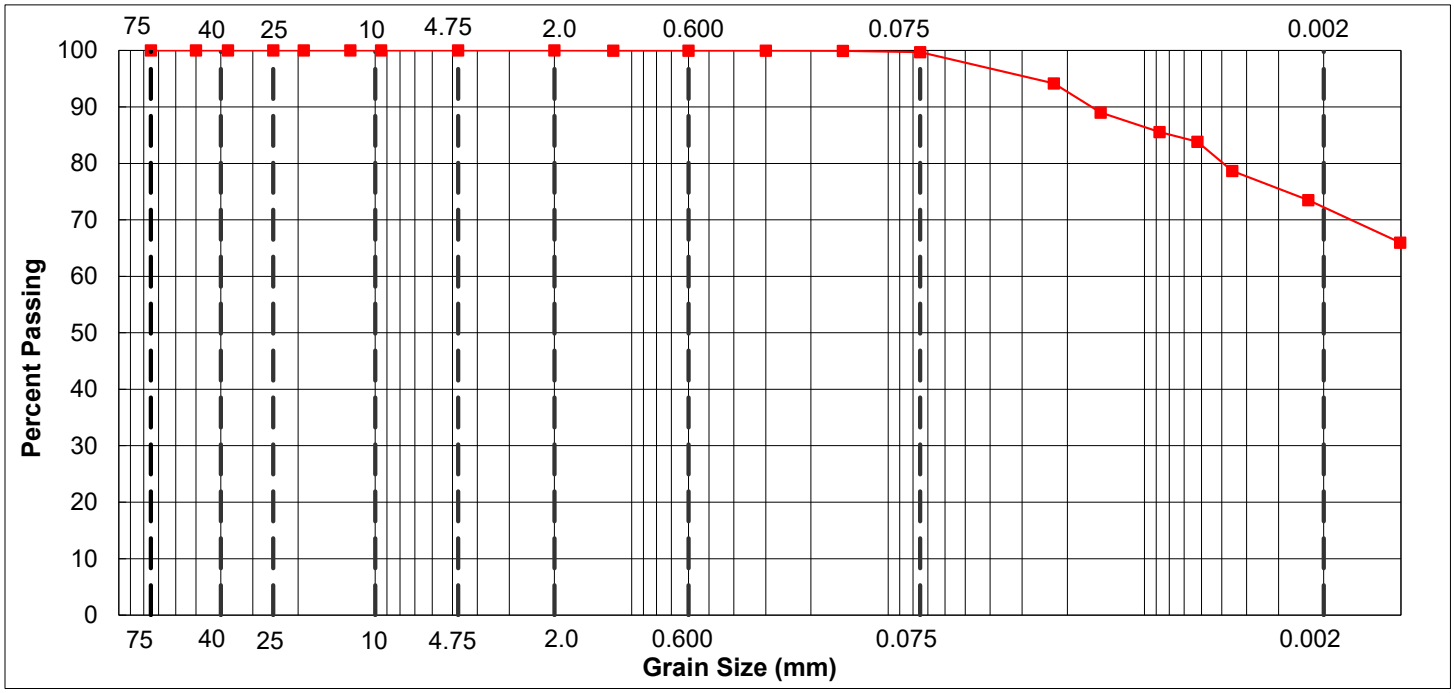
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	217RC6
Project No.:	1560-193-00	**Source:**	22CH217
Owner:	EID	**Sample Depth:**	14.6m
File No.:	GSA - 217RC6	**Test Date:**	13-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.7
25.0	100.0	0.0226	94.2
19.0	100.0	0.0148	89.0
12.5	100.0	0.0087	85.5
9.5	100.0	0.0062	83.8
4.75	100.0	0.0045	78.6
2.00	100.0	0.0023	73.5
1.180	100.0	0.0010	66.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	27.5	75 µm to 2 µm
Clay	72.2	<2 µm



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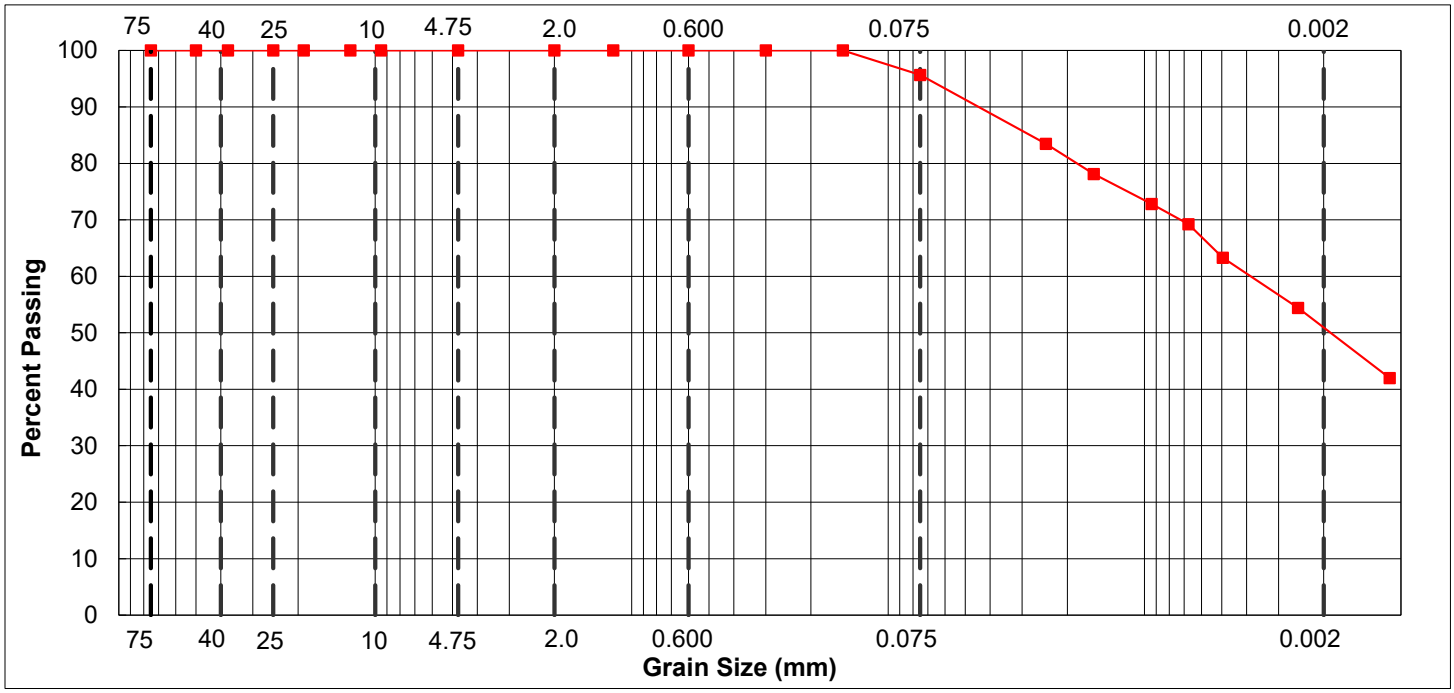
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	217RC15
Project No.:	1560-193-00	**Source:**	22CH217
Owner:	EID	**Sample Depth:**	28.1m
File No.:	GSA - 217RC15	**Test Date:**	17-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	95.7
25.0	100.0	0.0242	83.5
19.0	100.0	0.0158	78.1
12.5	100.0	0.0094	72.8
9.5	100.0	0.0067	69.3
4.75	100.0	0.0049	63.3
2.00	100.0	0.0025	54.4
1.180	100.0	0.0011	42.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	4.3	425 µm to 75 µm
Silt	44.8	75 µm to 2 µm
Clay	50.9	<2 µm



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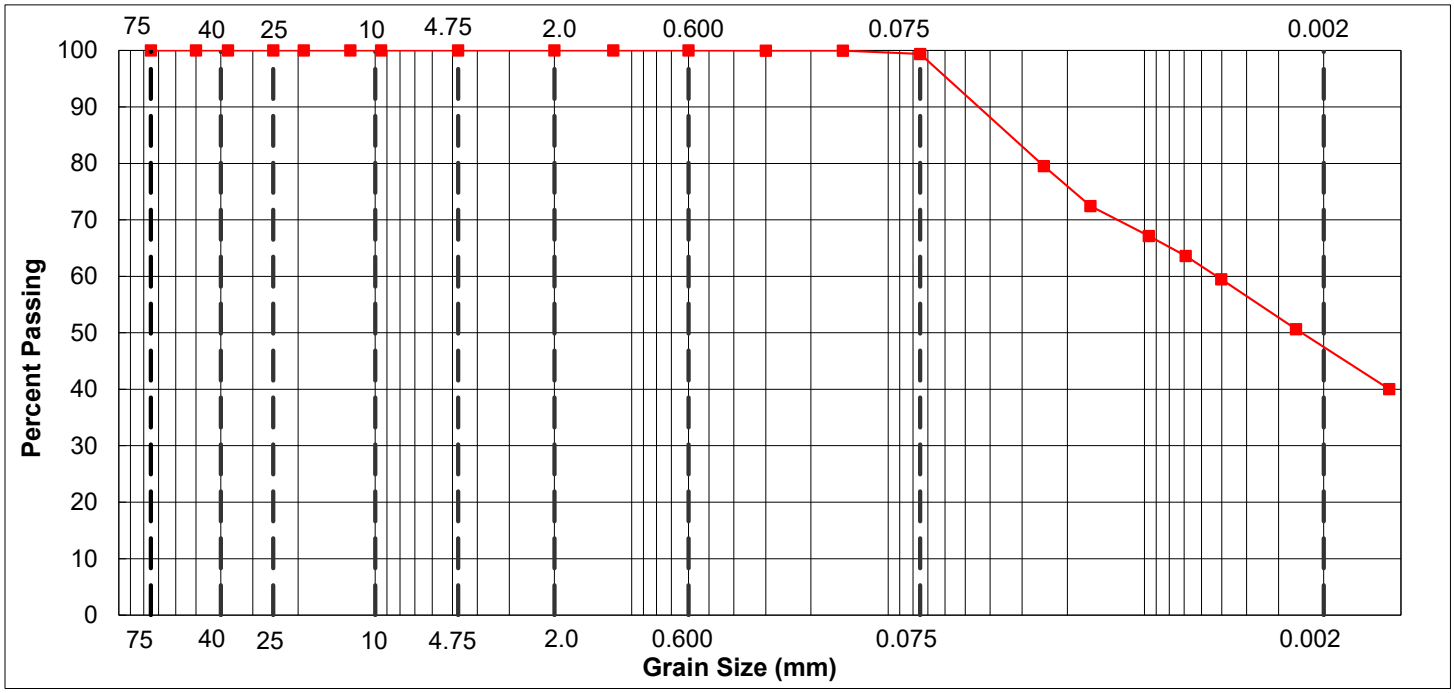
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	217RC17
Project No.:	1560-193-00	**Source:**	22CH217
Owner:	EID	**Sample Depth:**	31.0m
File No.:	GSA - 217RC17	**Test Date:**	17-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.4
25.0	100.0	0.0247	79.5
19.0	100.0	0.0162	72.5
12.5	100.0	0.0096	67.2
9.5	100.0	0.0069	63.6
4.75	100.0	0.0050	59.5
2.00	100.0	0.0026	50.6
1.180	100.0	0.0011	40.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.6	425 µm to 75 µm
Silt	51.9	75 µm to 2 µm
Clay	47.5	<2 µm



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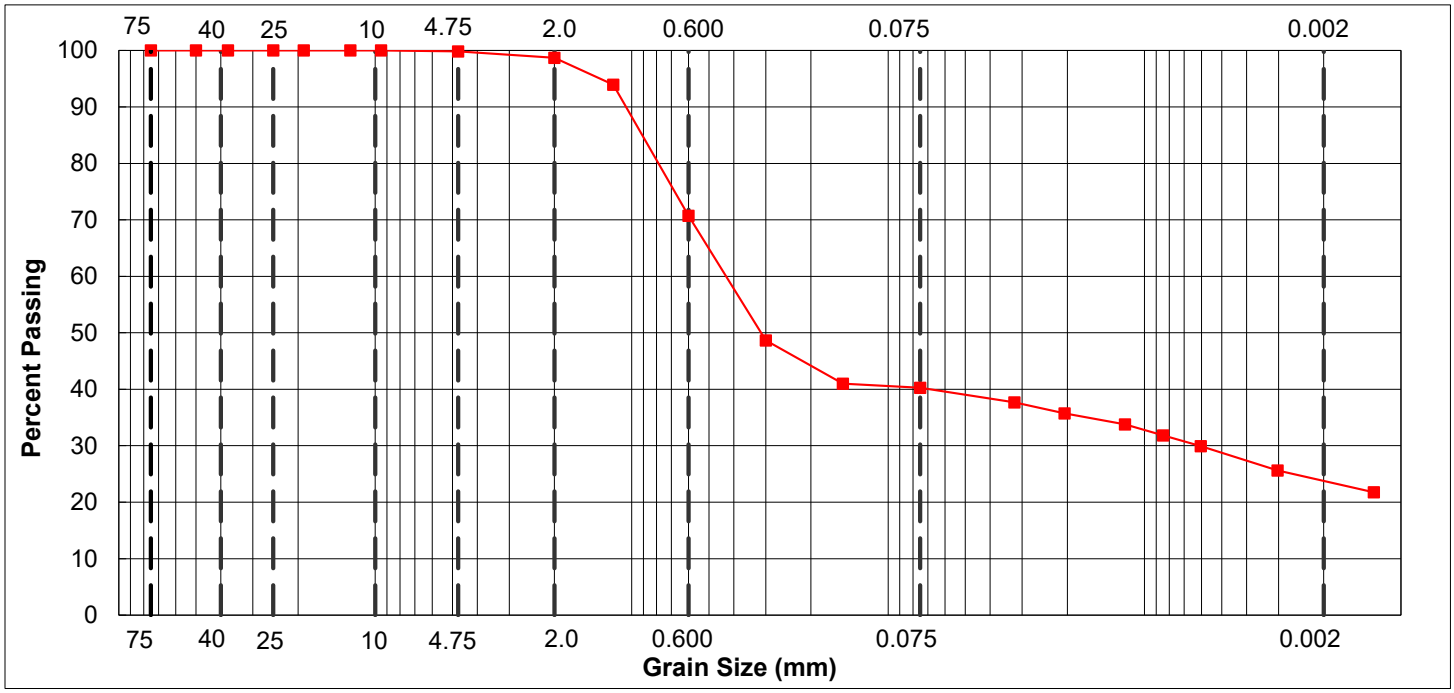
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	218AU3
Project No.:	1560-193-00	**Source:**	22BH218
Owner:	EID	**Sample Depth:**	2.1m
File No.:	GSA - 218AU3	**Date:**	5-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	70.7
75.0	100.0	0.300	48.7
50.0	100.0	0.150	41.0
37.5	100.0	0.075	40.3
25.0	100.0	0.0321	37.7
19.0	100.0	0.0205	35.7
12.5	100.0	0.0119	33.8
9.5	100.0	0.0085	31.9
4.75	99.8	0.0060	29.9
2.00	98.7	0.0030	25.6
1.180	94.0	0.0013	21.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.2	20 mm to 4.75 mm
Coarse Sand	1.1	4.75 mm to 2.00 mm
Medium Sand	27.9	2.00 mm to 425 µm
Fine Sand	30.5	425 µm to 75 µm
Silt	16.5	75 µm to 2 µm
Clay	23.8	<2 µm



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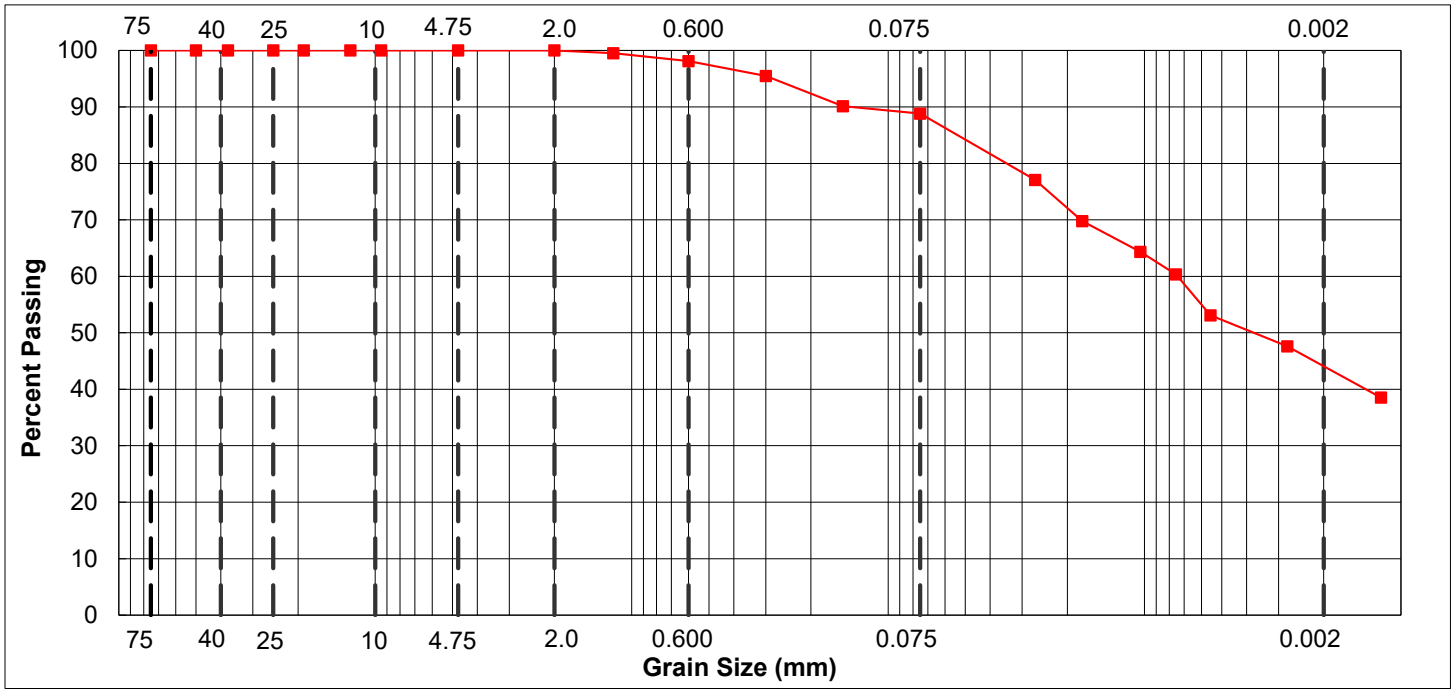
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	218AU4
Project No.:	1560-193-00	**Source:**	22BH218
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 218AU4	**Date:**	7-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.1
75.0	100.0	0.300	95.5
50.0	100.0	0.150	90.1
37.5	100.0	0.075	88.8
25.0	100.0	0.0267	77.1
19.0	100.0	0.0175	69.8
12.5	100.0	0.0104	64.3
9.5	100.0	0.0076	60.3
4.75	100.0	0.0055	53.1
2.00	100.0	0.0028	47.6
1.180	99.5	0.0012	38.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.9	2.00 mm to 425 µm
Fine Sand	9.3	425 µm to 75 µm
Silt	44.7	75 µm to 2 µm
Clay	44.1	<2 µm



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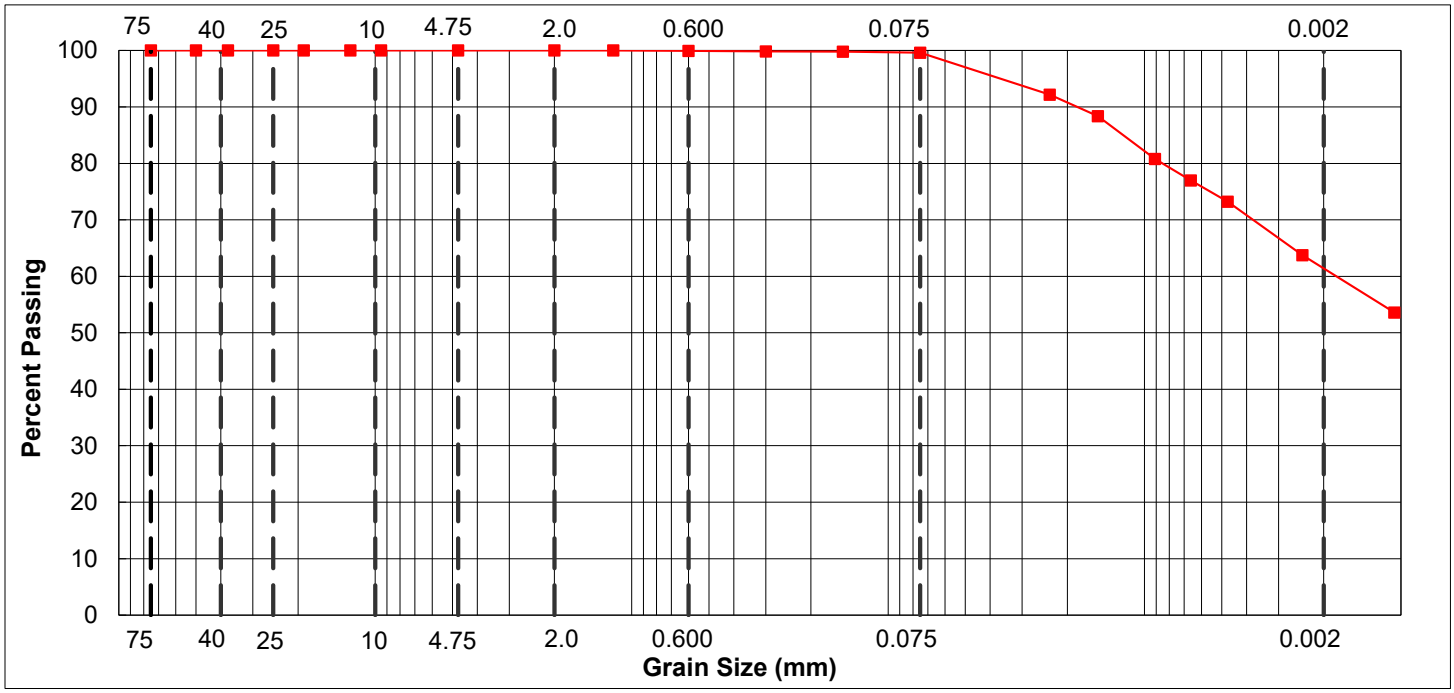
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	218RC7
Project No.:	1560-193-00	**Source:**	22CH218
Owner:	EID	**Sample Depth:**	15.9m
File No.:	GSA - 218RC7	**Test Date:**	13-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.6
25.0	100.0	0.0234	92.2
19.0	100.0	0.0152	88.4
12.5	100.0	0.0091	80.8
9.5	100.0	0.0066	77.0
4.75	100.0	0.0047	73.2
2.00	100.0	0.0024	63.7
1.180	100.0	0.0011	53.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	38.2	75 µm to 2 µm
Clay	61.4	<2 µm



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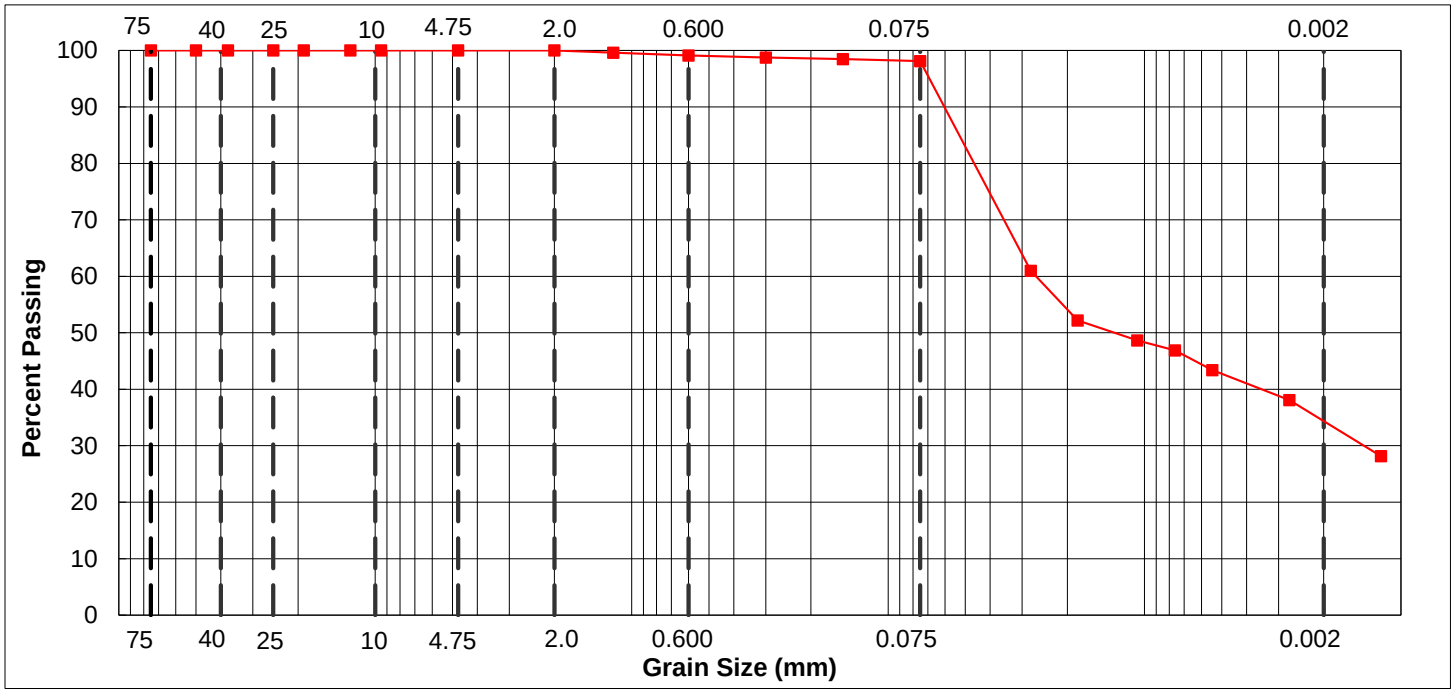
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	218UD1
Project No.:	1560-193-00	**Source:**	22CH218
Owner:	EID	**Sample Depth:**	7.5m
File No.:	GSA - 218UD1	**Test Date:**	21-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.1
75.0	100.0	0.300	98.8
50.0	100.0	0.150	98.5
37.5	100.0	0.075	98.1
25.0	100.0	0.0278	61.0
19.0	100.0	0.0182	52.2
12.5	100.0	0.0107	48.7
9.5	100.0	0.0076	46.9
4.75	100.0	0.0054	43.4
2.00	100.0	0.0027	38.1
1.180	99.6	0.0012	28.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.9	2.00 mm to 425 µm
Fine Sand	1.0	425 µm to 75 µm
Silt	63.7	75 µm to 2 µm
Clay	34.4	<2 µm



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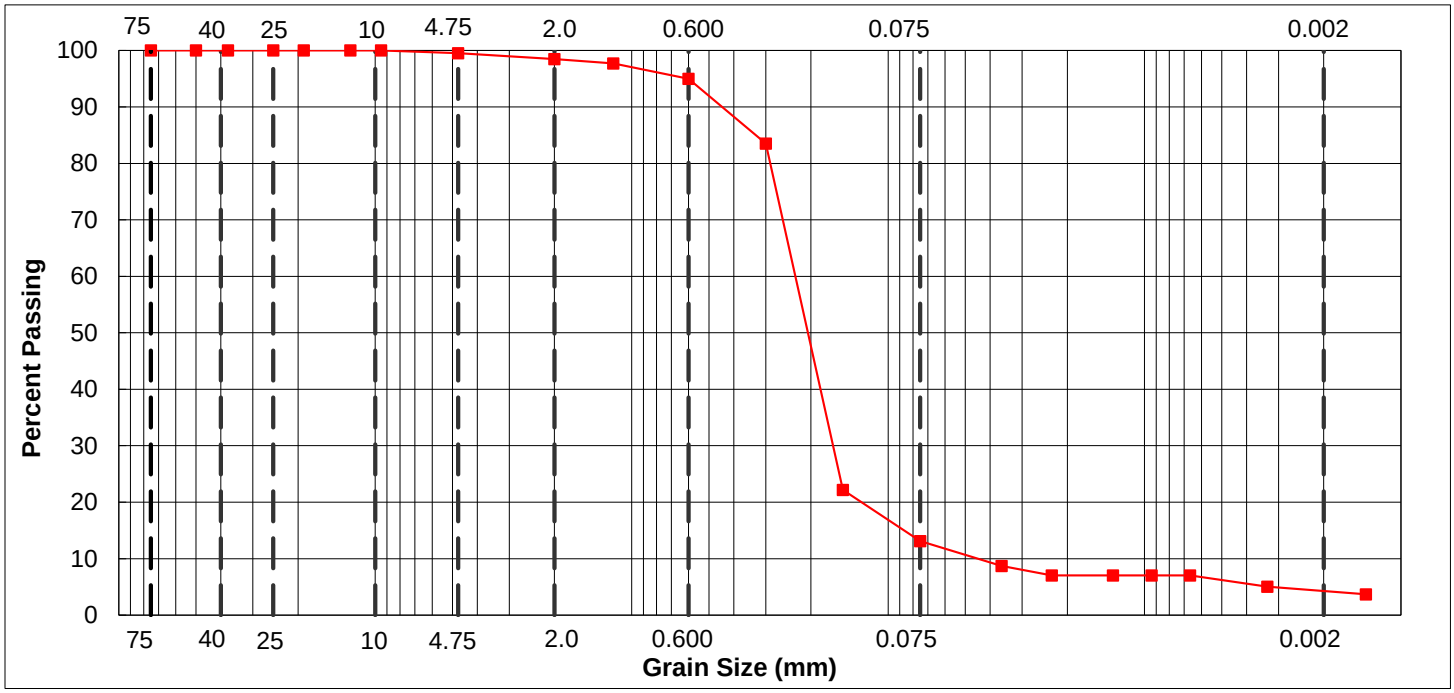
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	219AU3
Project No.:	1560-193-00	**Source:**	22BH219
Owner:	EID	**Sample Depth:**	2.1m
File No.:	GSA - 219AU3	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	95.0
75.0	100.0	0.300	83.5
50.0	100.0	0.150	22.2
37.5	100.0	0.075	13.1
25.0	100.0	0.0361	8.7
19.0	100.0	0.0230	7.1
12.5	100.0	0.0133	7.1
9.5	100.0	0.0094	7.1
4.75	99.5	0.0066	7.1
2.00	98.5	0.0033	5.0
1.180	97.7	0.0014	3.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.5	20 mm to 4.75 mm
Coarse Sand	1.0	4.75 mm to 2.00 mm
Medium Sand	3.5	2.00 mm to 425 µm
Fine Sand	81.9	425 µm to 75 µm
Silt	8.8	75 µm to 2 µm
Clay	4.3	<2 µm



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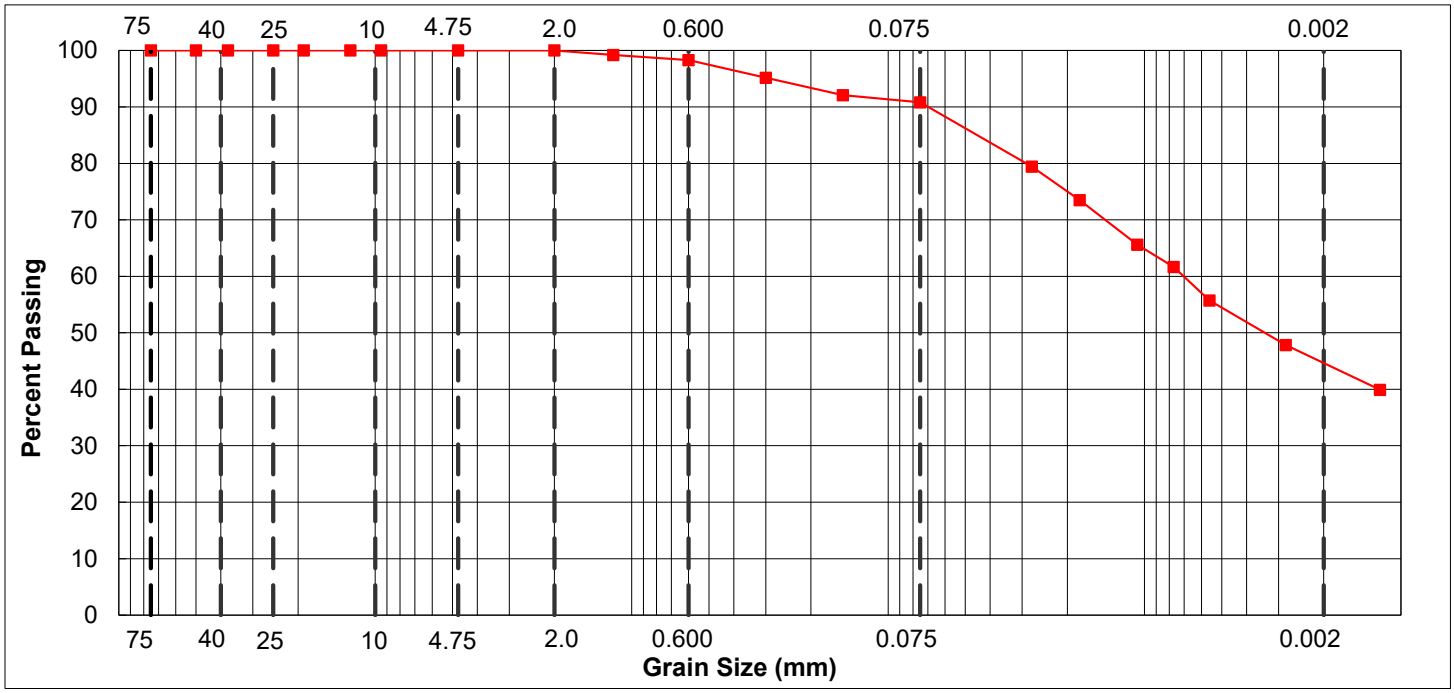
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	219AU5
Project No.:	1560-193-00	**Source:**	22BH219
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 219AU5	**Date:**	7-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.3
75.0	100.0	0.300	95.1
50.0	100.0	0.150	92.1
37.5	100.0	0.075	90.8
25.0	100.0	0.0275	79.4
19.0	100.0	0.0179	73.5
12.5	100.0	0.0107	65.6
9.5	100.0	0.0077	61.7
4.75	100.0	0.0056	55.7
2.00	100.0	0.0028	47.8
1.180	99.2	0.0012	39.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.7	2.00 mm to 425 µm
Fine Sand	7.5	425 µm to 75 µm
Silt	46.2	75 µm to 2 µm
Clay	44.6	<2 µm



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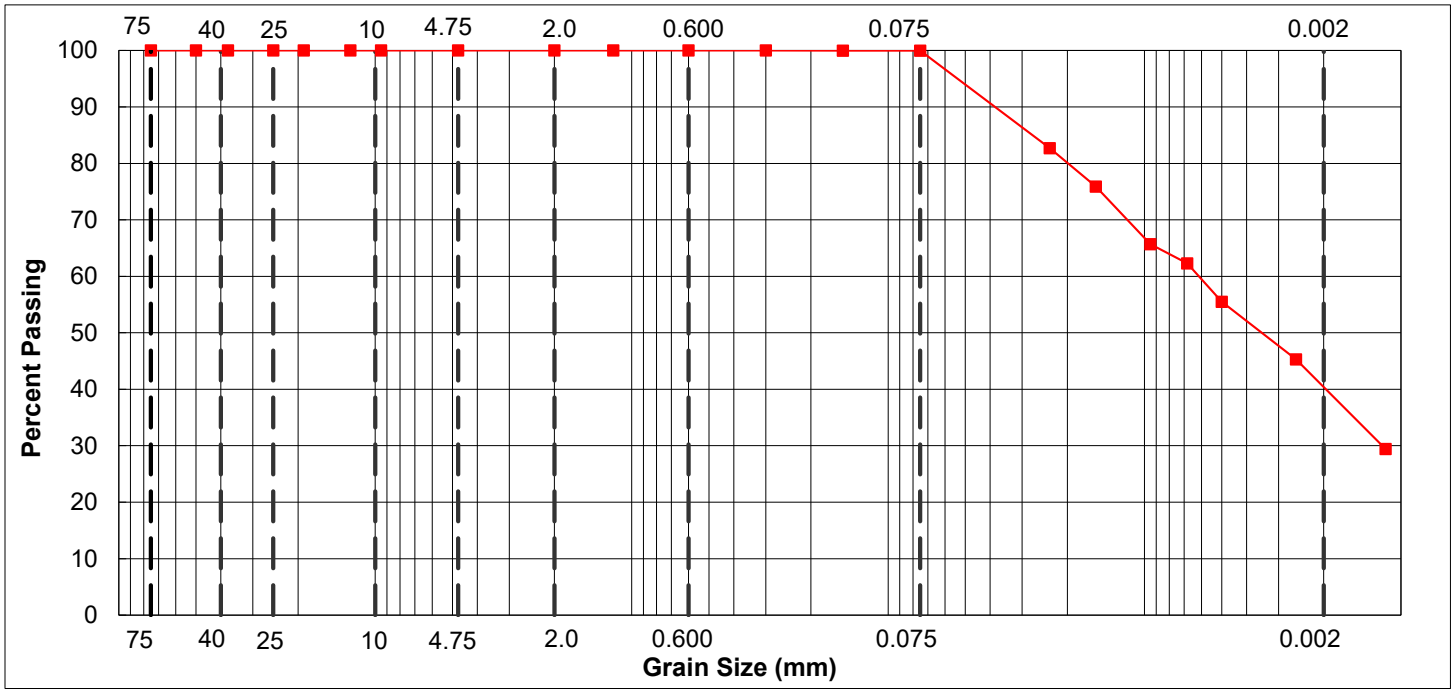
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	219RC9
Project No.:	1560-193-00	**Source:**	22CH219
Owner:	EID	**Sample Depth:**	18.9m
File No.:	GSA - 219RC9	**Test Date:**	13-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	100.0
25.0	100.0	0.0234	82.7
19.0	100.0	0.0155	75.9
12.5	100.0	0.0095	65.7
9.5	100.0	0.0068	62.3
4.75	100.0	0.0050	55.5
2.00	100.0	0.0026	45.3
1.180	100.0	0.0011	29.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.0	425 µm to 75 µm
Silt	59.6	75 µm to 2 µm
Clay	40.4	<2 µm



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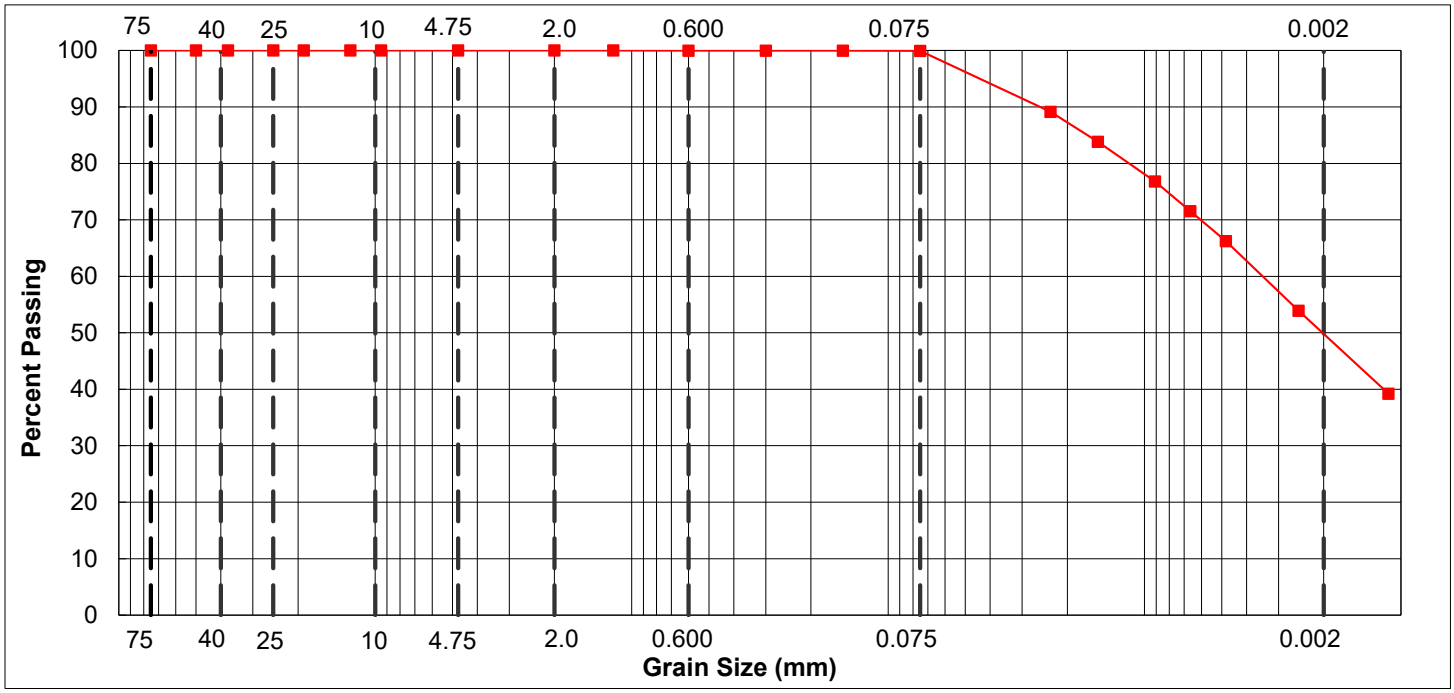
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	219RC12
Project No.:	1560-193-00	**Source:**	22CH219
Owner:	EID	**Sample Depth:**	23.3m
File No.:	GSA - 219RC12	**Test Date:**	15-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.9
25.0	100.0	0.0233	89.1
19.0	100.0	0.0152	83.8
12.5	100.0	0.0091	76.8
9.5	100.0	0.0066	71.5
4.75	100.0	0.0048	66.3
2.00	100.0	0.0025	53.9
1.180	100.0	0.0011	39.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	50.1	75 µm to 2 µm
Clay	49.8	<2 µm



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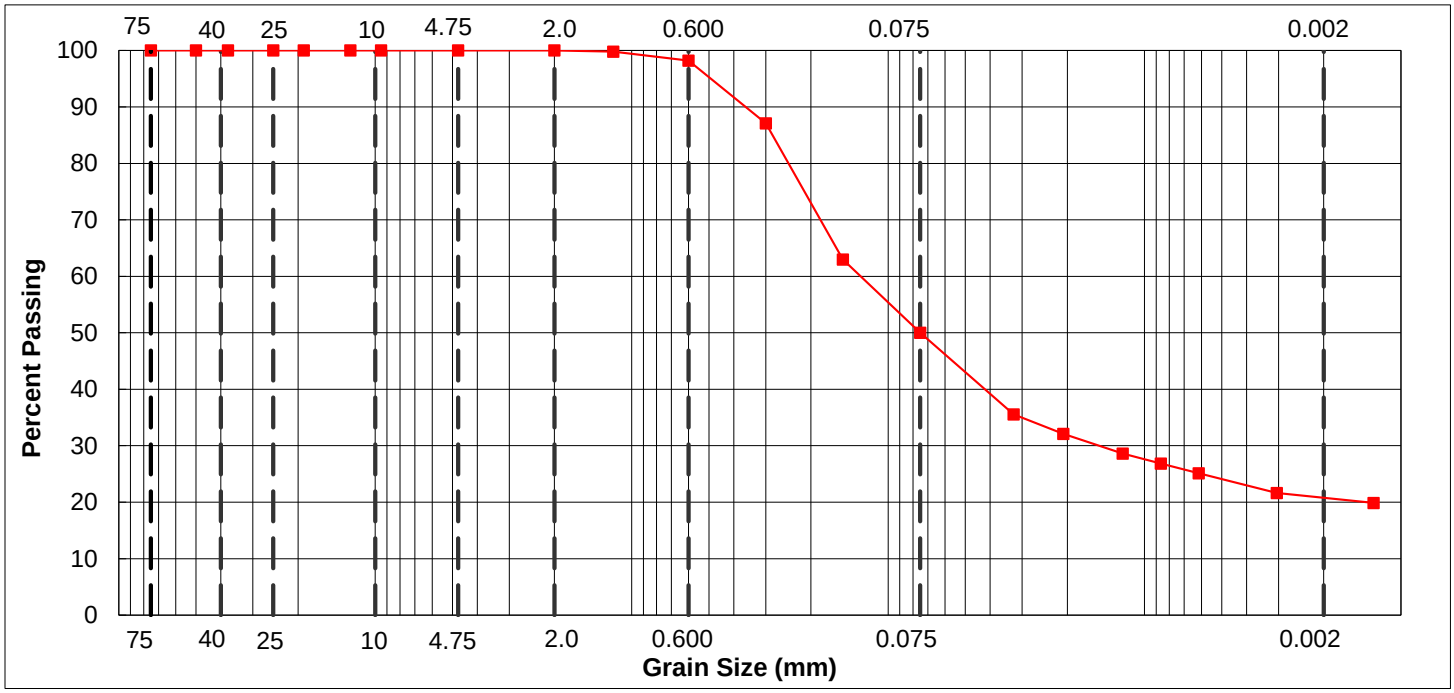
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	220AU1
Project No.:	1560-193-00	**Source:**	22BH220
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 220AU1	**Test Date:**	15-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.2
75.0	100.0	0.300	87.1
50.0	100.0	0.150	63.0
37.5	100.0	0.075	50.0
25.0	100.0	0.0324	35.6
19.0	100.0	0.0207	32.1
12.5	100.0	0.0122	28.6
9.5	100.0	0.0086	26.9
4.75	100.0	0.0062	25.1
2.00	100.0	0.0030	21.6
1.180	99.8	0.0013	19.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.8	2.00 mm to 425 µm
Fine Sand	48.2	425 µm to 75 µm
Silt	29.2	75 µm to 2 µm
Clay	20.8	<2 µm



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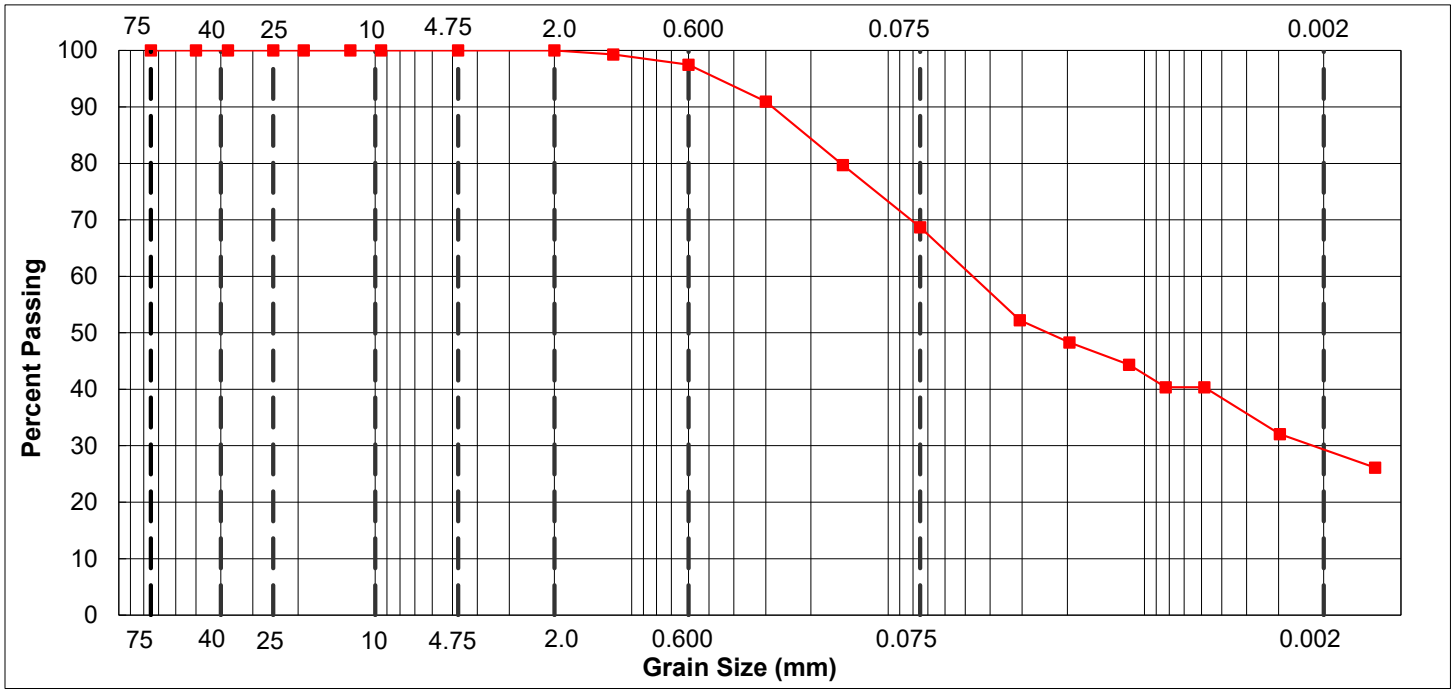
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	220AU5
Project No.:	1560-193-00	**Source:**	22BH220
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 220AU5	**Date:**	5-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.5
75.0	100.0	0.300	91.0
50.0	100.0	0.150	79.7
37.5	100.0	0.075	68.7
25.0	100.0	0.0306	52.3
19.0	100.0	0.0196	48.3
12.5	100.0	0.0115	44.3
9.5	100.0	0.0083	40.4
4.75	100.0	0.0058	40.4
2.00	100.0	0.0030	32.1
1.180	99.3	0.0013	26.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.5	2.00 mm to 425 µm
Fine Sand	28.8	425 µm to 75 µm
Silt	39.4	75 µm to 2 µm
Clay	29.3	<2 µm



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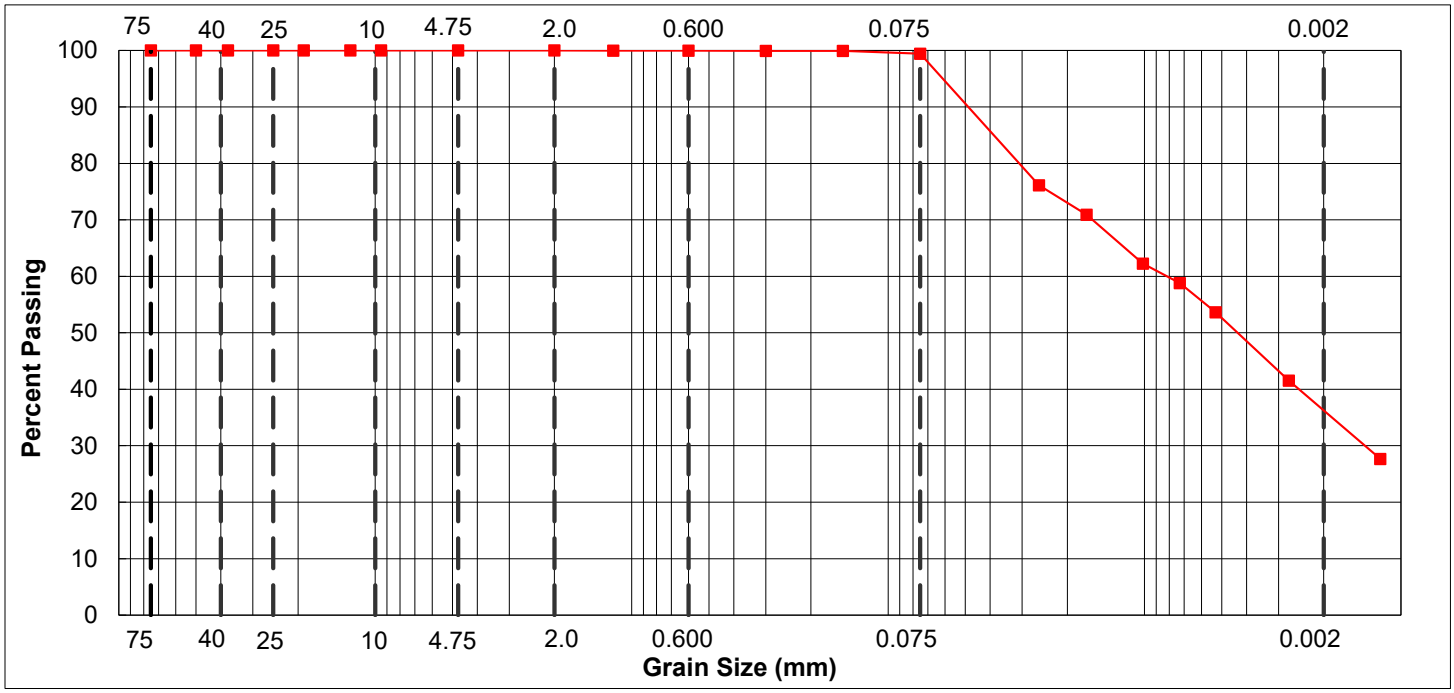
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	220UD2
Project No.:	1560-193-00	**Source:**	22CH220
Owner:	EID	**Sample Depth:**	11.0m
File No.:	GSA - 220UD2	**Test Date:**	10-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.4
25.0	100.0	0.0258	76.1
19.0	100.0	0.0168	70.9
12.5	100.0	0.0101	62.3
9.5	100.0	0.0073	58.8
4.75	100.0	0.0053	53.6
2.00	100.0	0.0027	41.5
1.180	100.0	0.0012	27.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.6	425 µm to 75 µm
Silt	63.2	75 µm to 2 µm
Clay	36.2	<2 µm



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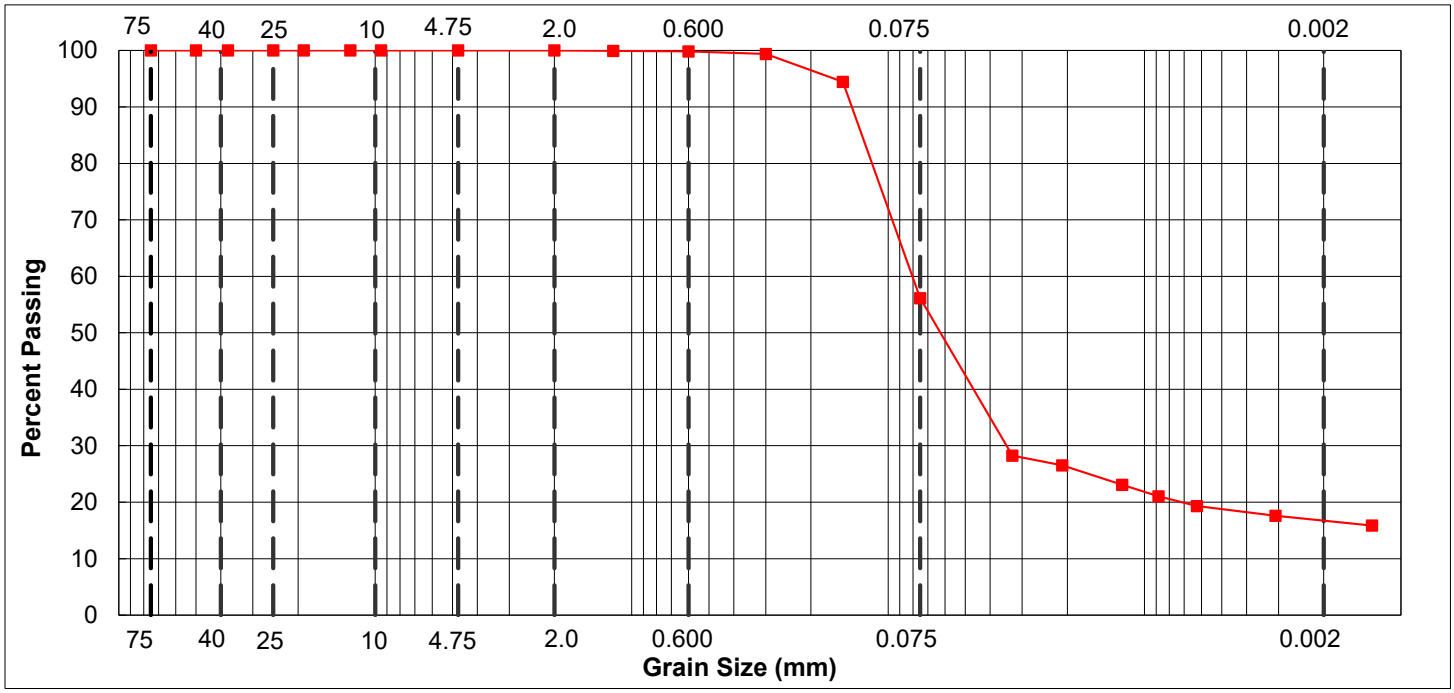
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	221AU3
Project No.:	1560-193-00	**Source:**	22BH221
Owner:	EID	**Sample Depth:**	2.1m
File No.:	GSA - 221AU3	**Date:**	7-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.4
50.0	100.0	0.150	94.5
37.5	100.0	0.075	56.2
25.0	100.0	0.0328	28.3
19.0	100.0	0.0209	26.5
12.5	100.0	0.0122	23.1
9.5	100.0	0.0088	21.0
4.75	100.0	0.0063	19.3
2.00	100.0	0.0031	17.6
1.180	99.9	0.0013	15.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	43.7	425 µm to 75 µm
Silt	39.4	75 µm to 2 µm
Clay	16.7	<2 µm



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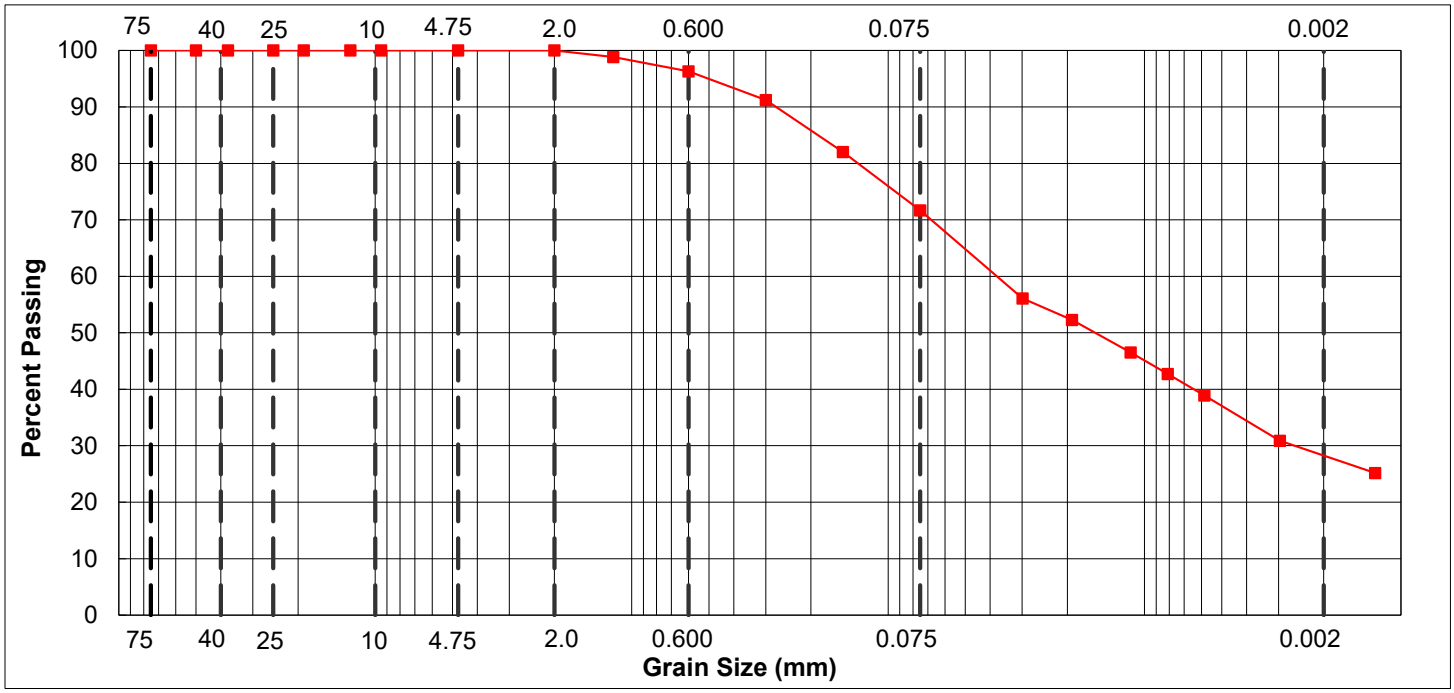
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	221AU6
Project No.:	1560-193-00	**Source:**	22BH221
Owner:	EID	**Sample Depth:**	4.3m
File No.:	GSA - 221AU6	**Date:**	7-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	96.3
75.0	100.0	0.300	91.2
50.0	100.0	0.150	82.0
37.5	100.0	0.075	71.7
25.0	100.0	0.0299	56.1
19.0	100.0	0.0192	52.3
12.5	100.0	0.0113	46.5
9.5	100.0	0.0081	42.7
4.75	100.0	0.0058	38.9
2.00	100.0	0.0030	30.9
1.180	98.8	0.0013	25.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	3.7	2.00 mm to 425 µm
Fine Sand	24.6	425 µm to 75 µm
Silt	43.4	75 µm to 2 µm
Clay	28.3	<2 µm



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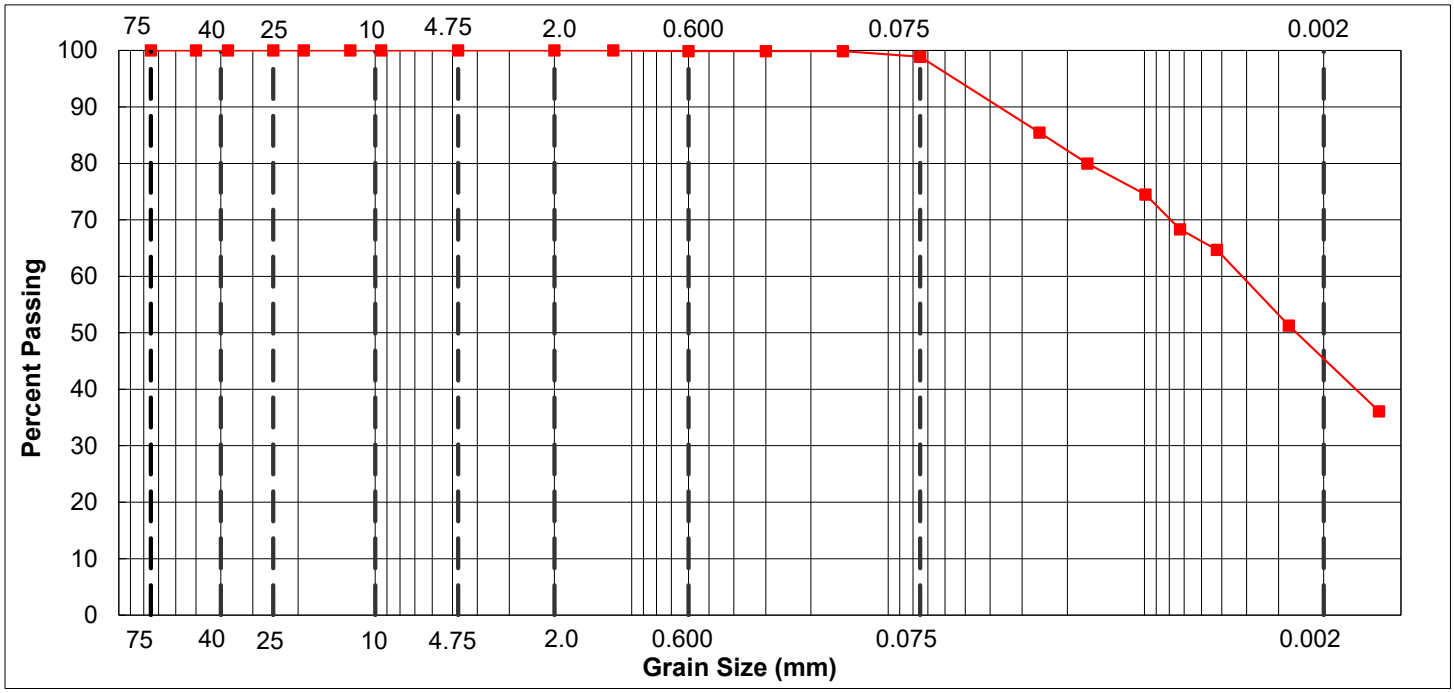
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	221RC14
Project No.:	1560-193-00	**Source:**	22CH221
Owner:	EID	**Sample Depth:**	26.2m
File No.:	GSA - 221RC14	**Test Date:**	17-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	98.9
25.0	100.0	0.0257	85.5
19.0	100.0	0.0167	80.0
12.5	100.0	0.0099	74.5
9.5	100.0	0.0073	68.3
4.75	100.0	0.0052	64.7
2.00	100.0	0.0027	51.3
1.180	100.0	0.0012	36.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	1.0	425 µm to 75 µm
Silt	53.5	75 µm to 2 µm
Clay	45.4	<2 µm



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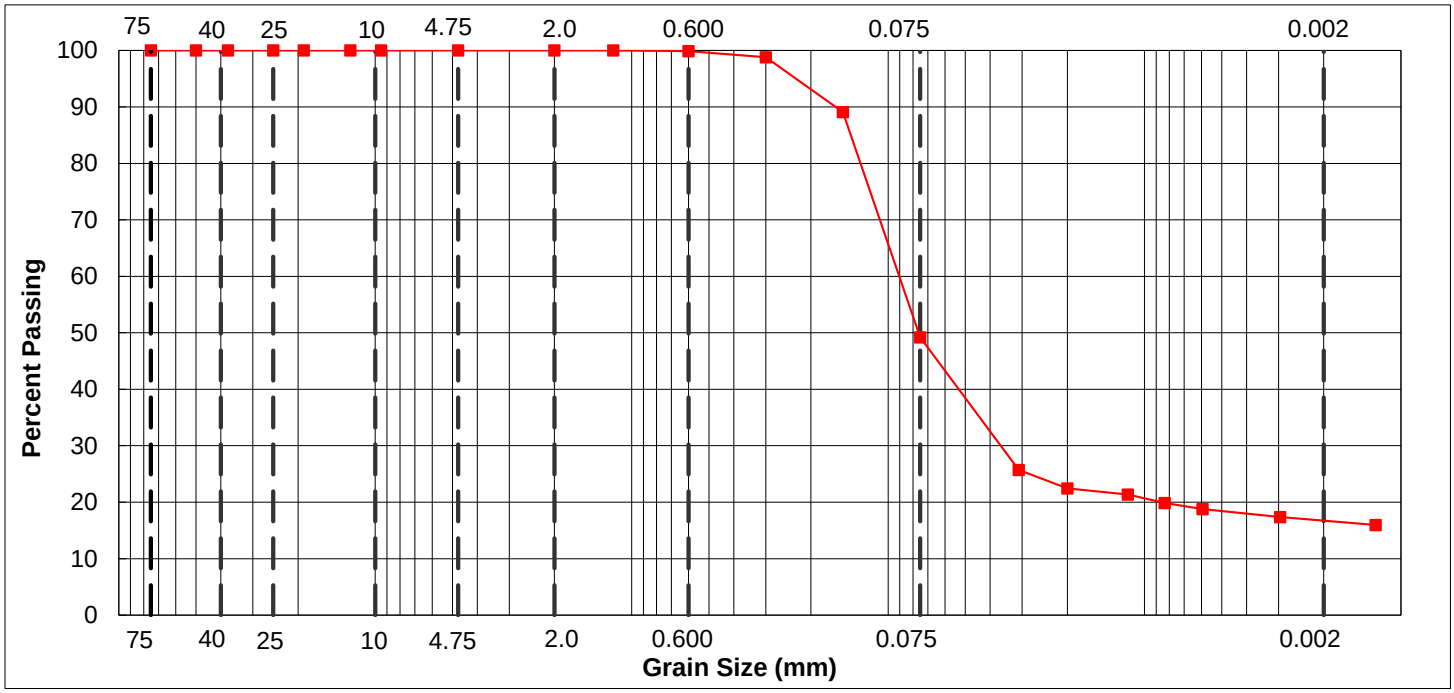
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	222AU3
Project No.:	1560-193-00	**Source:**	22BH222
Owner:	EID	**Sample Depth:**	2.1m
File No.:	GSA - 222AU3	**Test Date:**	17-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	98.8
50.0	100.0	0.150	89.1
37.5	100.0	0.075	49.2
25.0	100.0	0.0309	25.7
19.0	100.0	0.0200	22.4
12.5	100.0	0.0116	21.3
9.5	100.0	0.0083	19.9
4.75	100.0	0.0059	18.8
2.00	100.0	0.0030	17.4
1.180	100.0	0.0013	16.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	50.7	425 µm to 75 µm
Silt	32.5	75 µm to 2 µm
Clay	16.7	<2 µm



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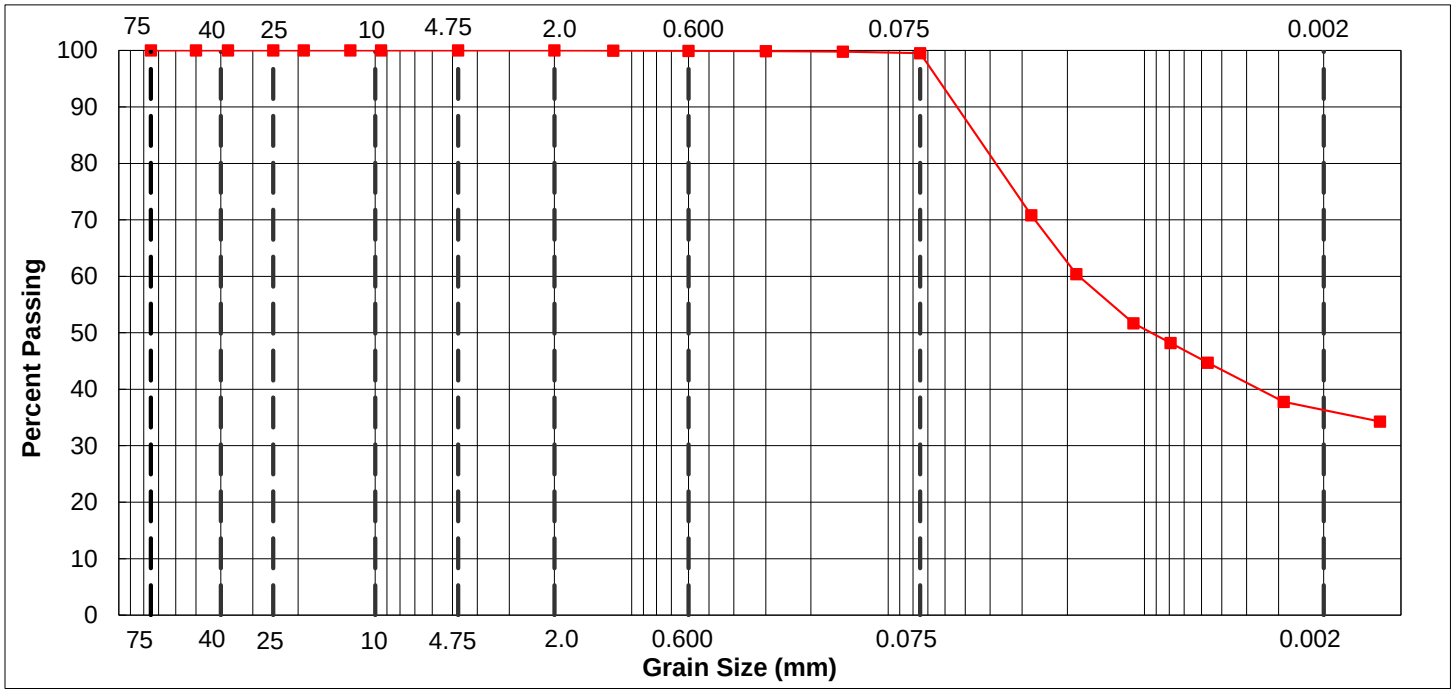
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	228AU8
Project No.:	1560-193-00	**Source:**	22BH228
Owner:	EID	**Sample Depth:**	5.8m
File No.:	GSA - 228AU8	**Test Date:**	17-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.5
25.0	100.0	0.0277	70.8
19.0	100.0	0.0184	60.4
12.5	100.0	0.0111	51.7
9.5	100.0	0.0079	48.2
4.75	100.0	0.0057	44.7
2.00	100.0	0.0029	37.8
1.180	100.0	0.0012	34.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	63.2	75 µm to 2 µm
Clay	36.3	<2 µm



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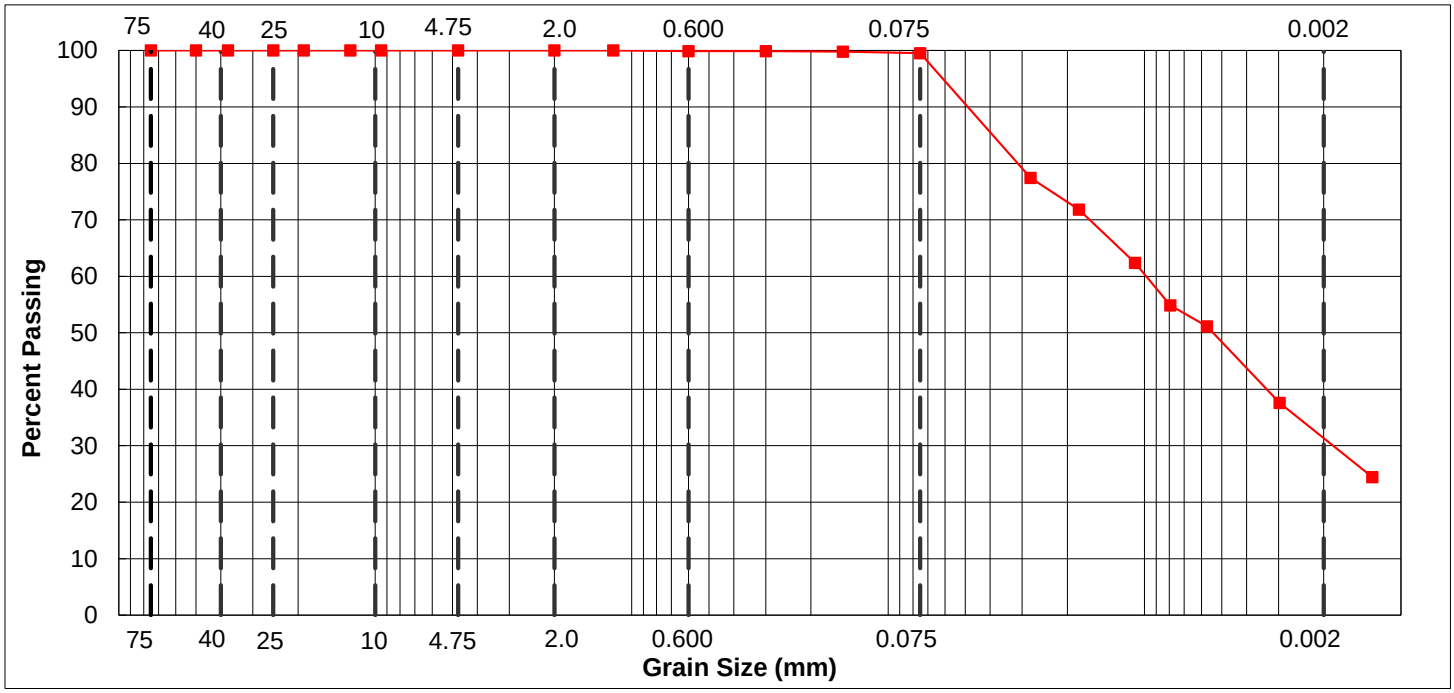
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	22CH222
Project No.:	1560-193-00	**Source:**	222RC2
Owner:	EID	**Sample Depth:**	8.1m
File No.:	GSA - 22CH222	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.5
25.0	100.0	0.0279	77.4
19.0	100.0	0.0180	71.8
12.5	100.0	0.0109	62.4
9.5	100.0	0.0079	54.9
4.75	100.0	0.0057	51.1
2.00	100.0	0.0030	37.6
1.180	100.0	0.0013	24.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	68.2	75 µm to 2 µm
Clay	31.3	<2 µm



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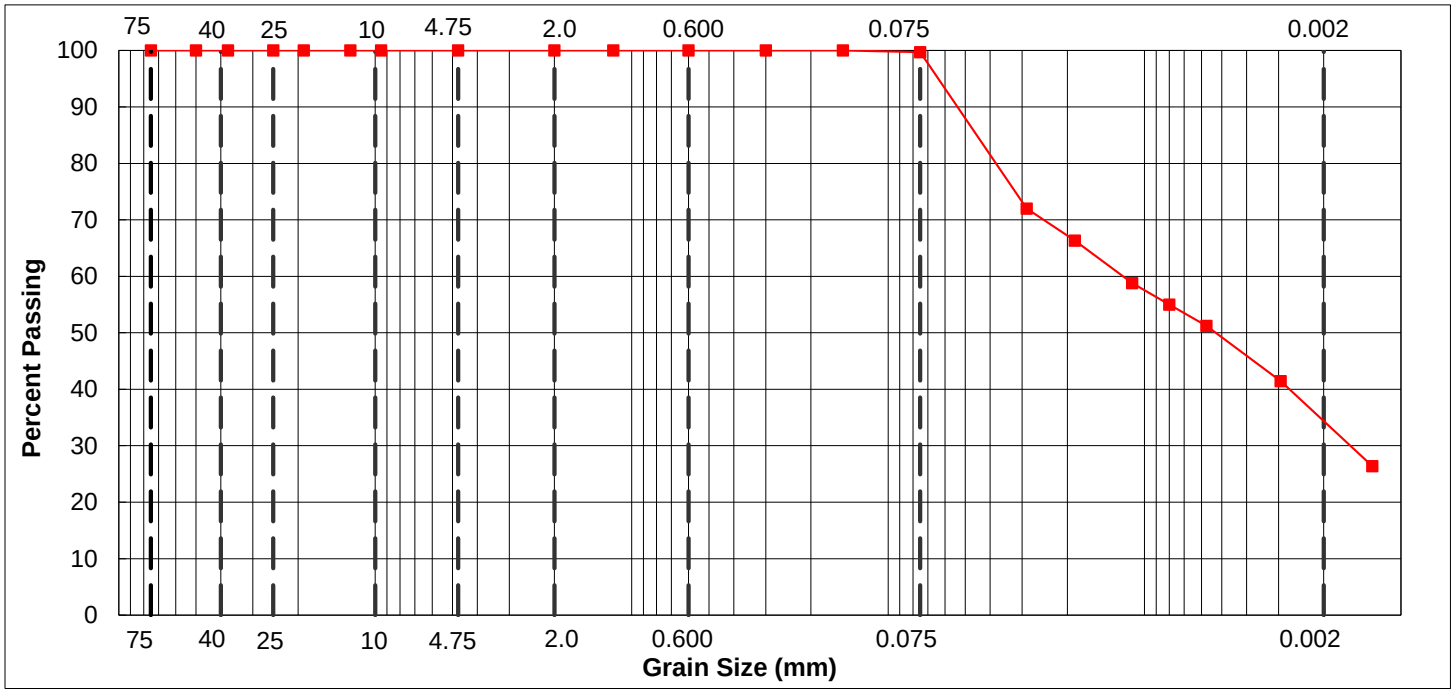
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	222RC5
Project No.:	1560-193-00	**Source:**	22CH222
Owner:	EID	**Sample Depth:**	12.5m
File No.:	GSA - 222RC5	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.7
25.0	100.0	0.0288	72.0
19.0	100.0	0.0187	66.3
12.5	100.0	0.0112	58.8
9.5	100.0	0.0080	55.0
4.75	100.0	0.0057	51.3
2.00	100.0	0.0029	41.5
1.180	100.0	0.0013	26.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	65.3	75 µm to 2 µm
Clay	34.4	<2 µm



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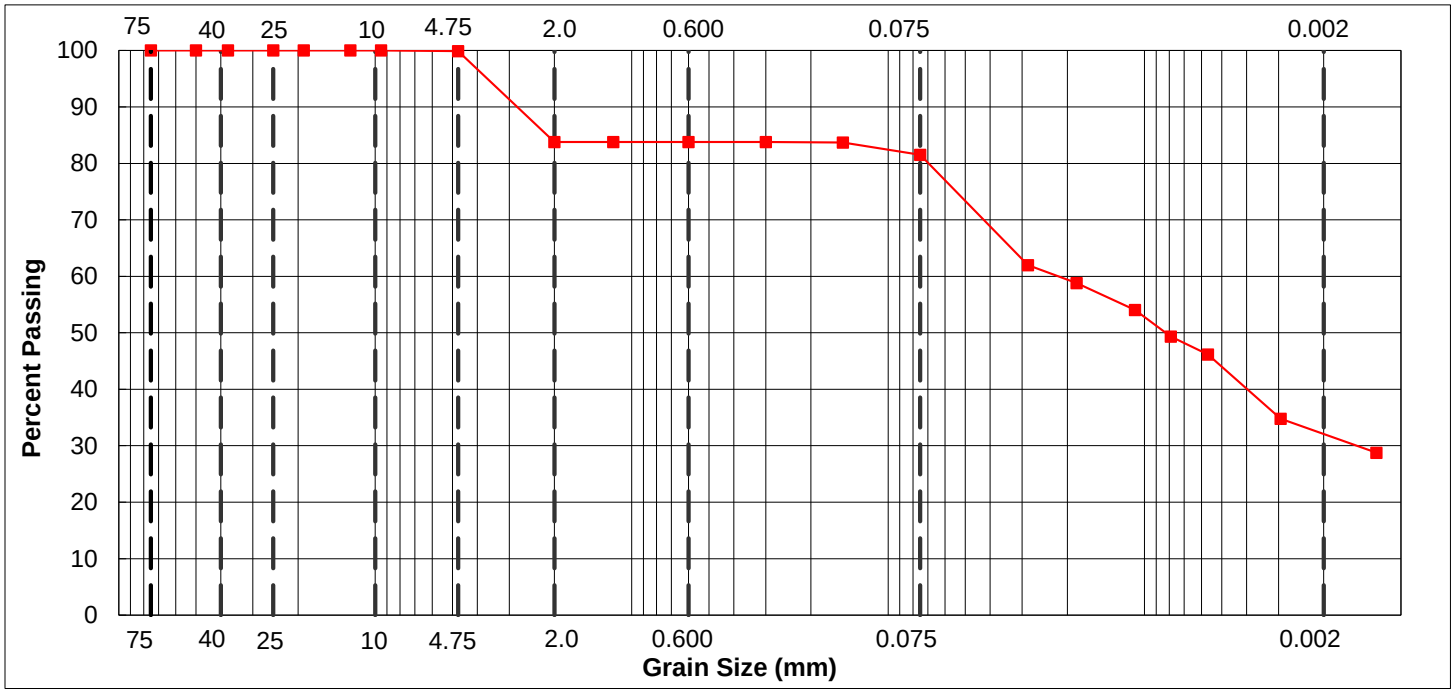
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	222RC15
Project No.:	1560-193-00	**Source:**	22CH222
Owner:	EID	**Sample Depth:**	28.3m
File No.:	GSA - 222RC15	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	83.8
75.0	100.0	0.300	83.8
50.0	100.0	0.150	83.7
37.5	100.0	0.075	81.5
25.0	100.0	0.0285	62.0
19.0	100.0	0.0184	58.8
12.5	100.0	0.0109	54.1
9.5	100.0	0.0079	49.3
4.75	99.9	0.0057	46.2
2.00	83.8	0.0029	34.8
1.180	83.8	0.0012	28.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.1	20 mm to 4.75 mm
Coarse Sand	16.1	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	2.3	425 µm to 75 µm
Silt	49.4	75 µm to 2 µm
Clay	32.1	<2 µm



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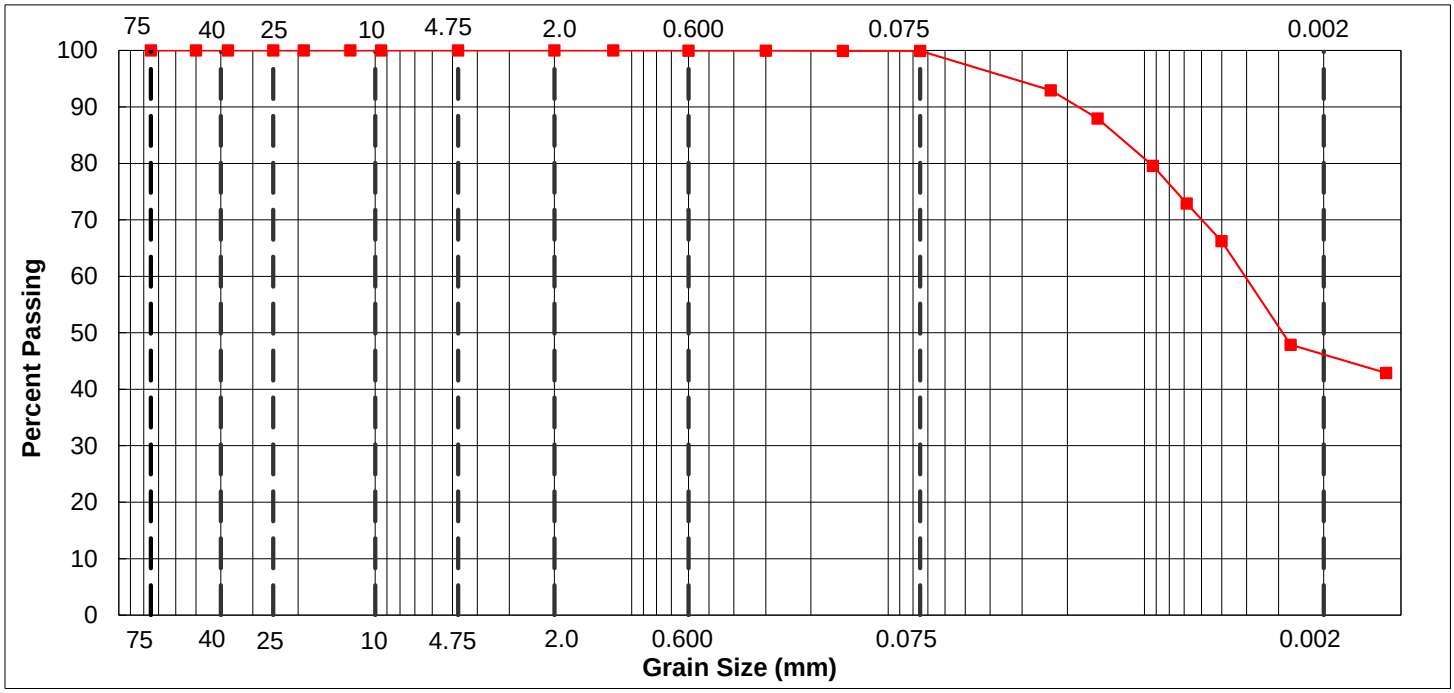
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	223AU4
Project No.:	1560-193-00	**Source:**	22BH223
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 223AU4	**Test Date:**	17-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.9
25.0	100.0	0.0232	92.9
19.0	100.0	0.0152	87.9
12.5	100.0	0.0093	79.6
9.5	100.0	0.0068	72.9
4.75	100.0	0.0050	66.2
2.00	100.0	0.0027	47.9
1.180	100.0	0.0011	42.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	53.7	75 µm to 2 µm
Clay	46.2	<2 µm



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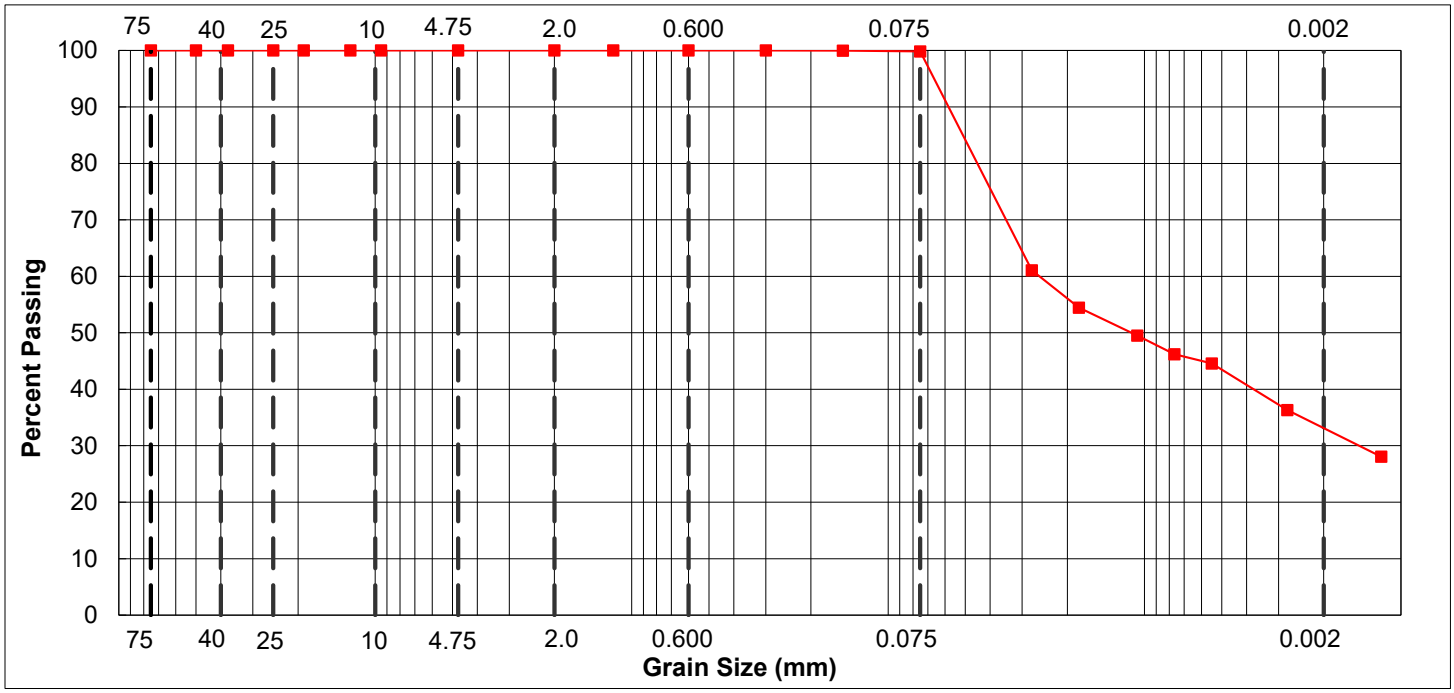
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	223RC2
Project No.:	1560-193-00	**Source:**	22CH223
Owner:	EID	**Sample Depth:**	5.0m
File No.:	GSA - 223RC2	**Test Date:**	10-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.8
25.0	100.0	0.0275	61.1
19.0	100.0	0.0180	54.5
12.5	100.0	0.0107	49.5
9.5	100.0	0.0077	46.2
4.75	100.0	0.0055	44.6
2.00	100.0	0.0028	36.3
1.180	100.0	0.0012	28.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	66.7	75 µm to 2 µm
Clay	33.1	<2 µm



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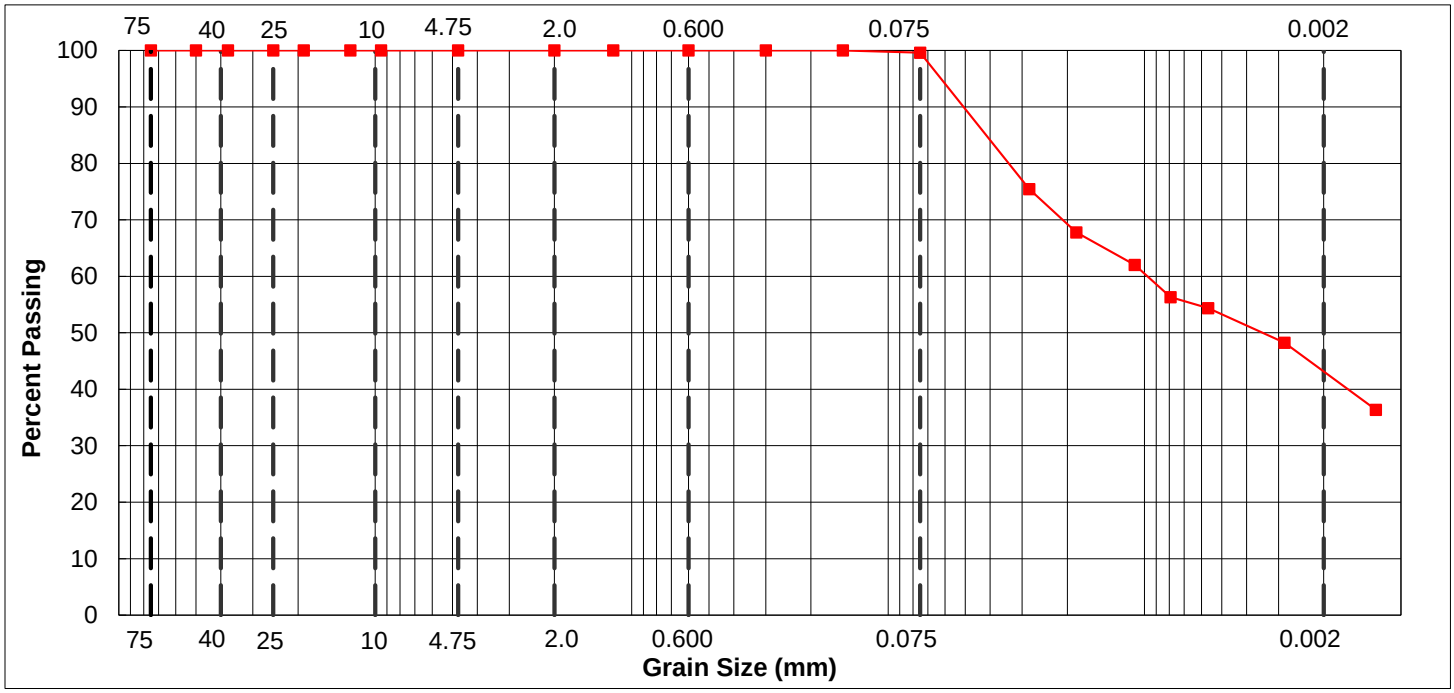
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	22BH224
Project No.:	1560-193-00	**Source:**	224AU5
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 22BH224	**Test Date:**	28-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.6
25.0	100.0	0.0281	75.4
19.0	100.0	0.0185	67.8
12.5	100.0	0.0109	62.0
9.5	100.0	0.0079	56.3
4.75	100.0	0.0056	54.4
2.00	100.0	0.0028	48.3
1.180	100.0	0.0013	36.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	56.5	75 µm to 2 µm
Clay	43.1	<2 µm



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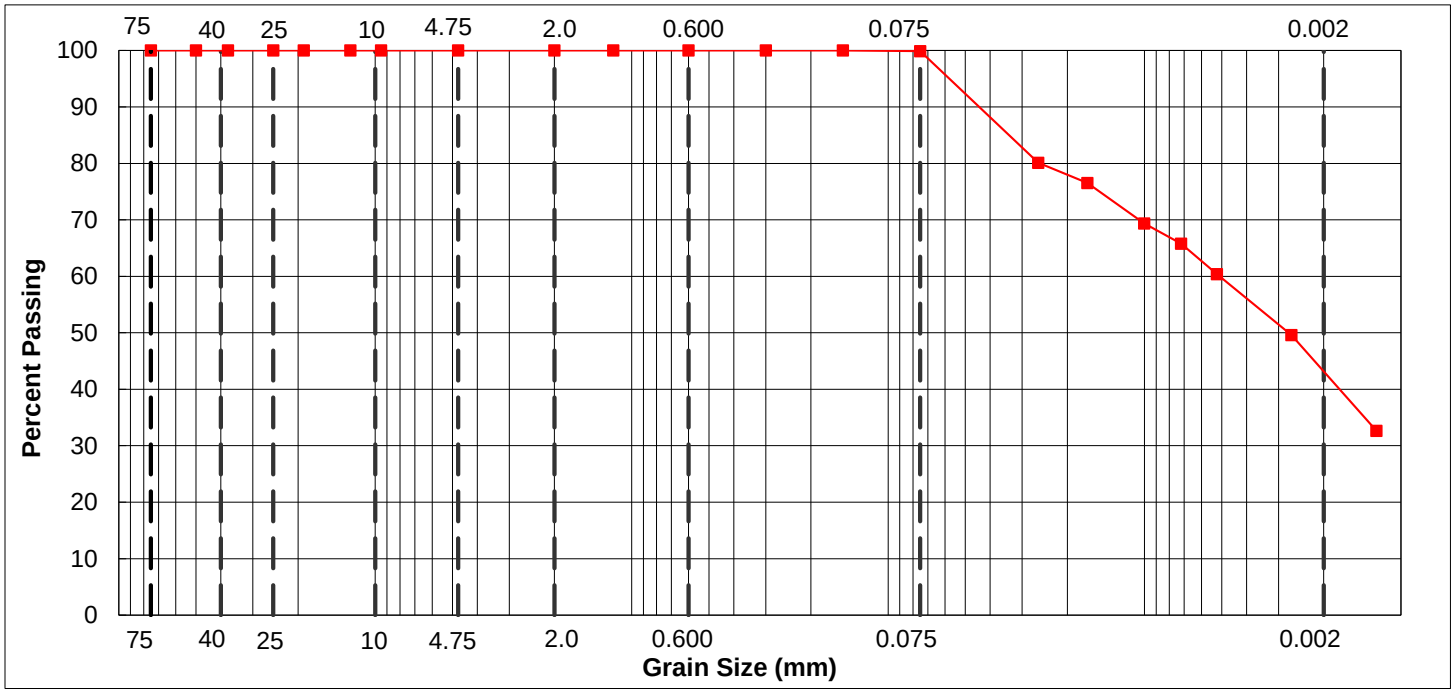
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	224RC4
Project No.:	1560-193-00	**Source:**	22CH224
Owner:	EID	**Sample Depth:**	8.5m
File No.:	GSA - 224RC4	**Test Date:**	5-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.9
25.0	100.0	0.0260	80.1
19.0	100.0	0.0167	76.5
12.5	100.0	0.0100	69.4
9.5	100.0	0.0072	65.8
4.75	100.0	0.0052	60.4
2.00	100.0	0.0027	49.6
1.180	100.0	0.0012	32.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	56.7	75 µm to 2 µm
Clay	43.2	<2 µm



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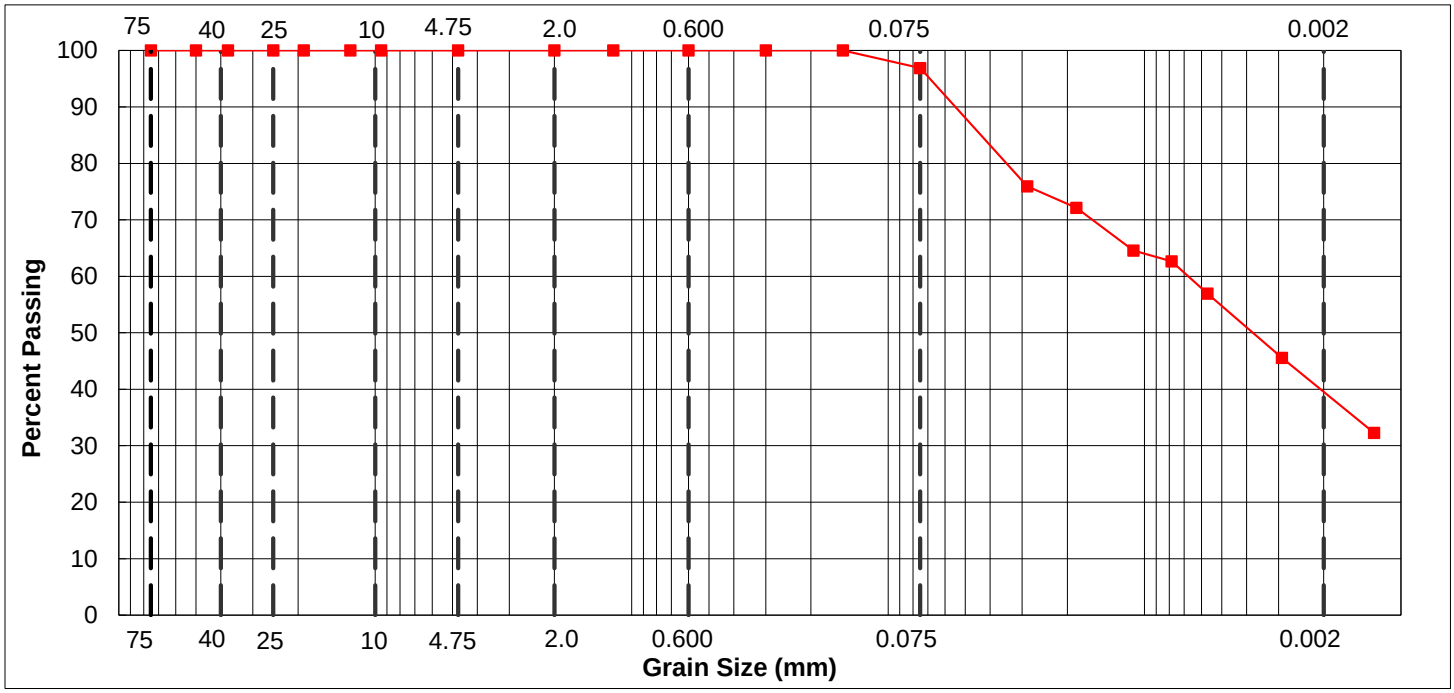
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	224RC16
Project No.:	1560-193-00	**Source:**	22CH224
Owner:	EID	**Sample Depth:**	26.3m
File No.:	GSA - 224RC16	**Test Date:**	8-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	96.9
25.0	100.0	0.0287	75.9
19.0	100.0	0.0184	72.2
12.5	100.0	0.0110	64.6
9.5	100.0	0.0078	62.7
4.75	100.0	0.0057	57.0
2.00	100.0	0.0029	45.6
1.180	100.0	0.0013	32.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	3.1	425 µm to 75 µm
Silt	57.4	75 µm to 2 µm
Clay	39.5	<2 µm



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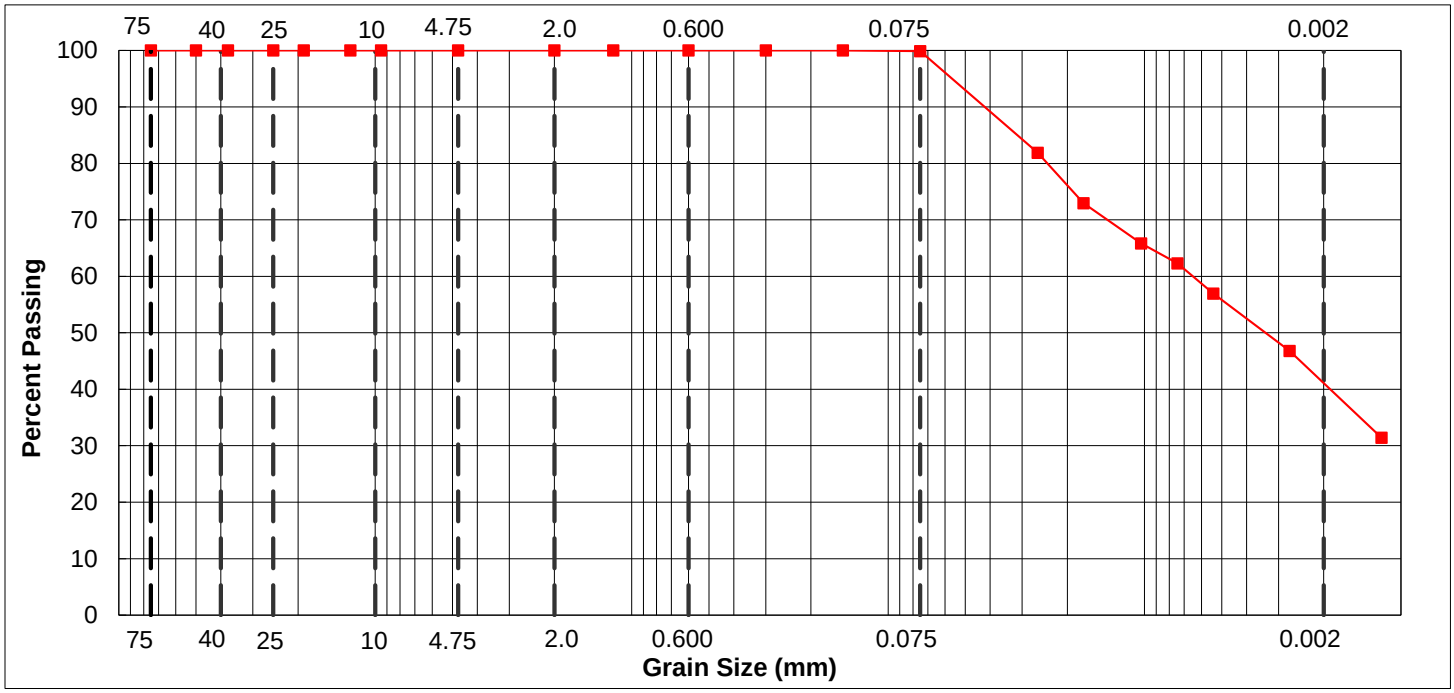
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	224RC19
Project No.:	1560-193-00	**Source:**	22CH224
Owner:	EID	**Sample Depth:**	31.0m
File No.:	GSA - 224RC19	**Test Date:**	8-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.9
25.0	100.0	0.0261	81.9
19.0	100.0	0.0173	73.0
12.5	100.0	0.0103	65.8
9.5	100.0	0.0074	62.3
4.75	100.0	0.0054	57.0
2.00	100.0	0.0027	46.8
1.180	100.0	0.0012	31.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	58.8	75 µm to 2 µm
Clay	41.1	<2 µm



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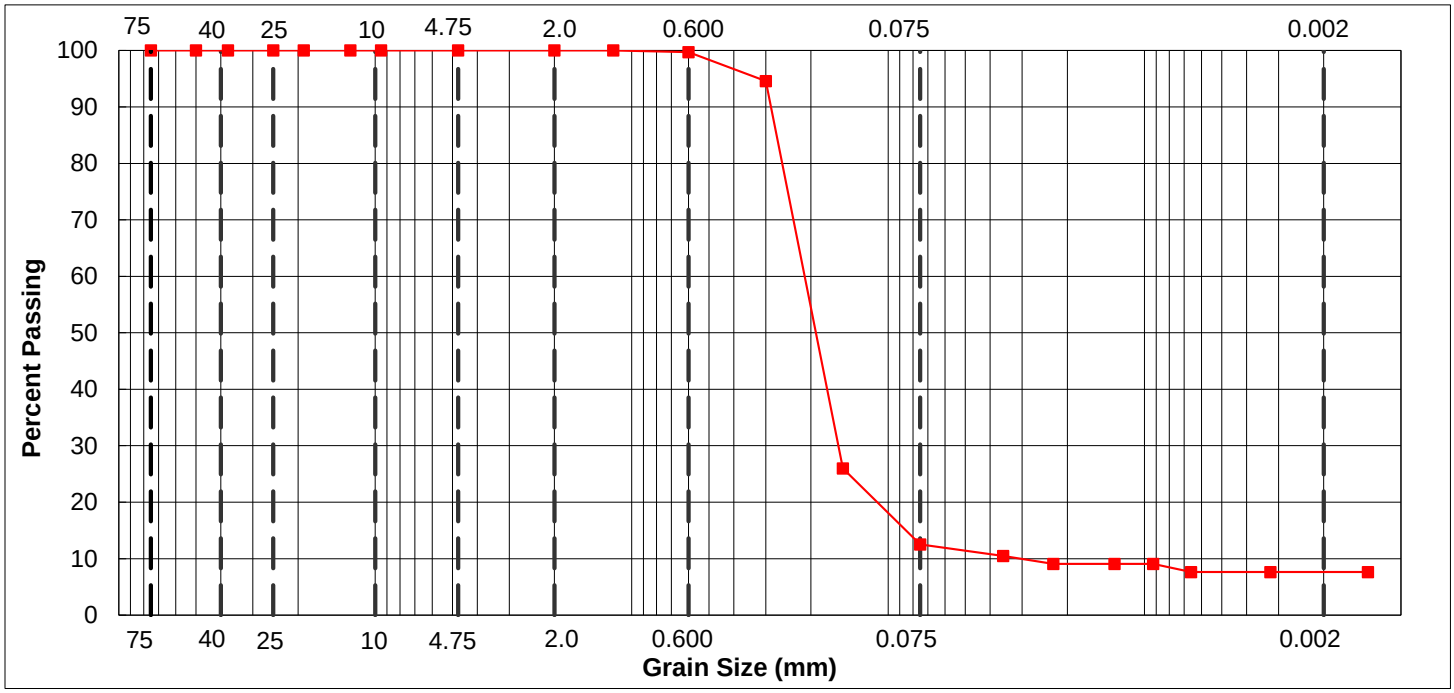
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	225AU3
Project No.:	1560-193-00	**Source:**	22BH225
Owner:	EID	**Sample Depth:**	2.1m
File No.:	GSA - 225AU3	**Test Date:**	15-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	94.6
50.0	100.0	0.150	26.0
37.5	100.0	0.075	12.5
25.0	100.0	0.0356	10.5
19.0	100.0	0.0227	9.1
12.5	100.0	0.0131	9.1
9.5	100.0	0.0093	9.1
4.75	100.0	0.0066	7.6
2.00	100.0	0.0032	7.6
1.180	100.0	0.0013	7.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	87.2	425 µm to 75 µm
Silt	4.9	75 µm to 2 µm
Clay	7.6	<2 µm



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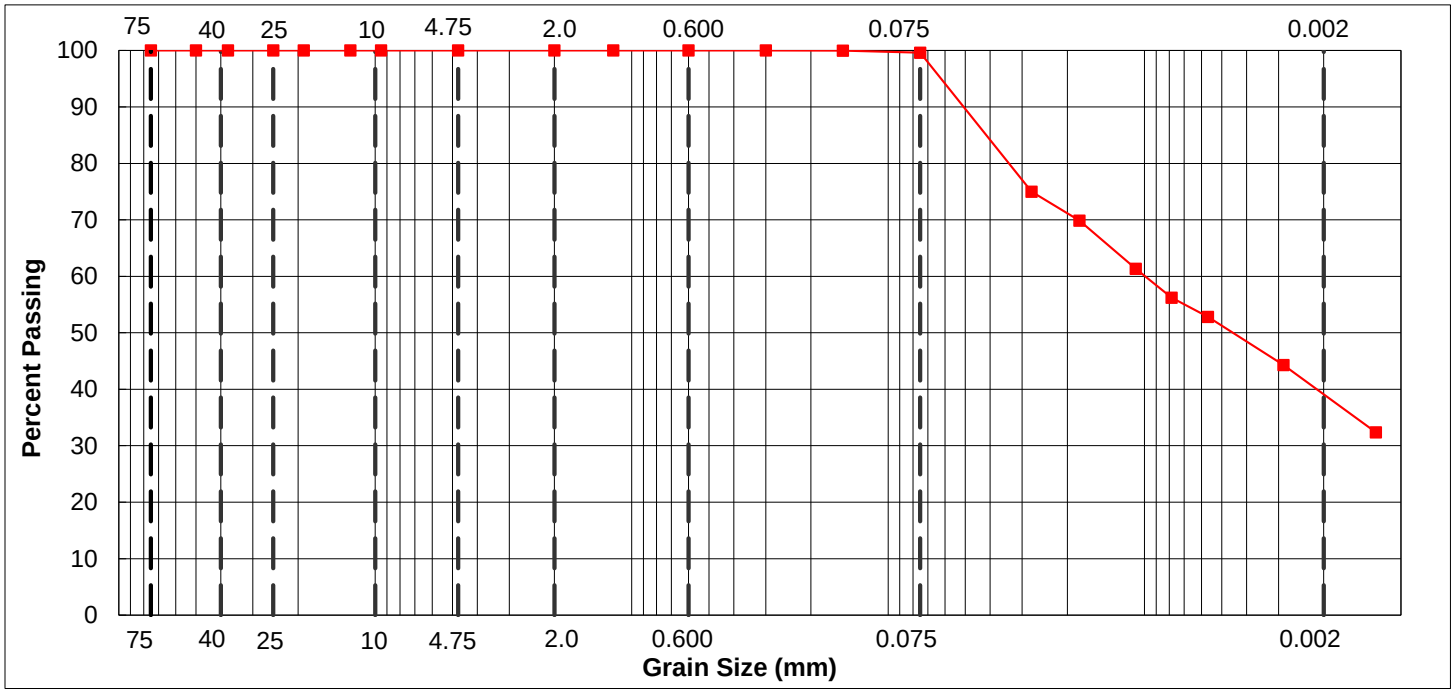
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	225RC7
Project No.:	1560-193-00	**Source:**	22CH225
Owner:	EID	**Sample Depth:**	12.12m
File No.:	GSA - 225RC7	**Test Date:**	8-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.6
25.0	100.0	0.0276	75.0
19.0	100.0	0.0179	69.9
12.5	100.0	0.0108	61.4
9.5	100.0	0.0078	56.2
4.75	100.0	0.0057	52.8
2.00	100.0	0.0029	44.3
1.180	100.0	0.0013	32.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	60.5	75 µm to 2 µm
Clay	39.1	<2 µm



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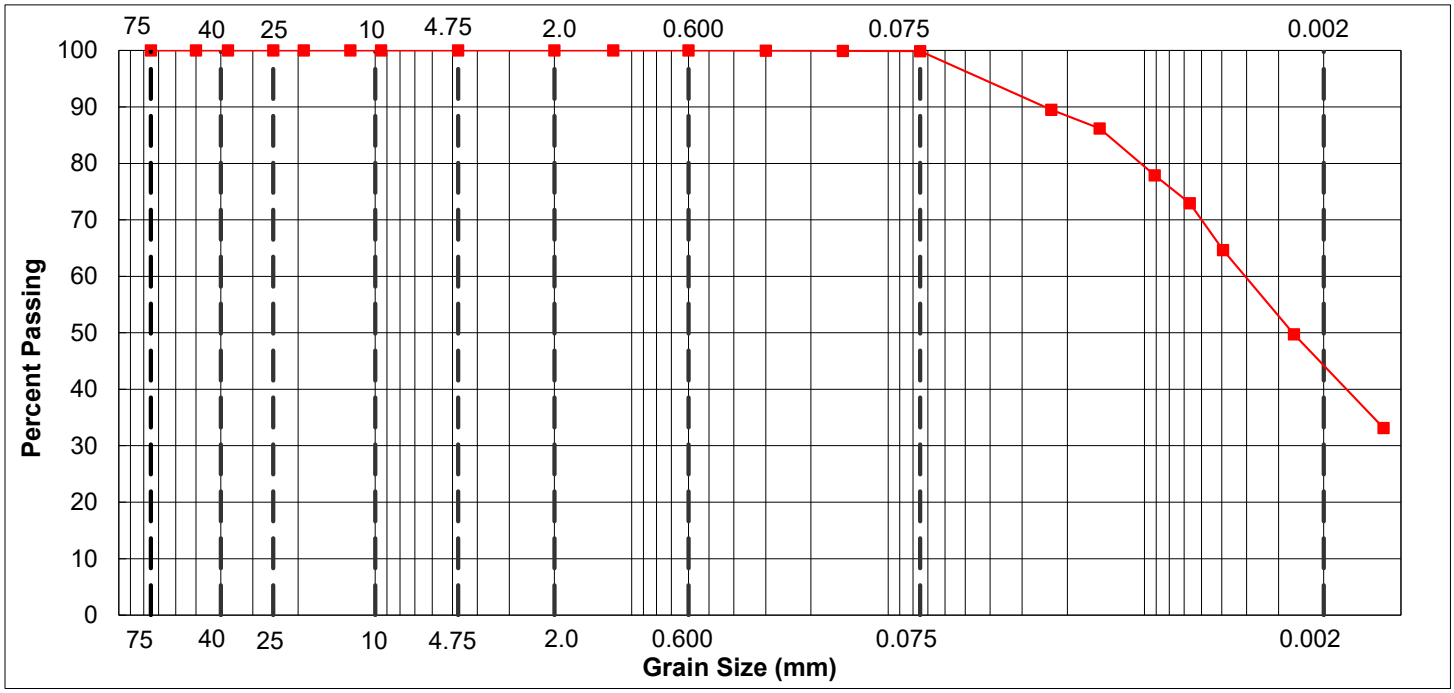
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	225UD5
Project No.:	1560-193-00	**Source:**	22CH225
Owner:	EID	**Sample Depth:**	24.0m
File No.:	GSA - 225UD5	**Test Date:**	10-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.9
25.0	100.0	0.0231	89.5
19.0	100.0	0.0150	86.2
12.5	100.0	0.0091	77.9
9.5	100.0	0.0067	72.9
4.75	100.0	0.0049	64.7
2.00	100.0	0.0026	49.7
1.180	100.0	0.0012	33.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	55.7	75 µm to 2 µm
Clay	44.2	<2 µm



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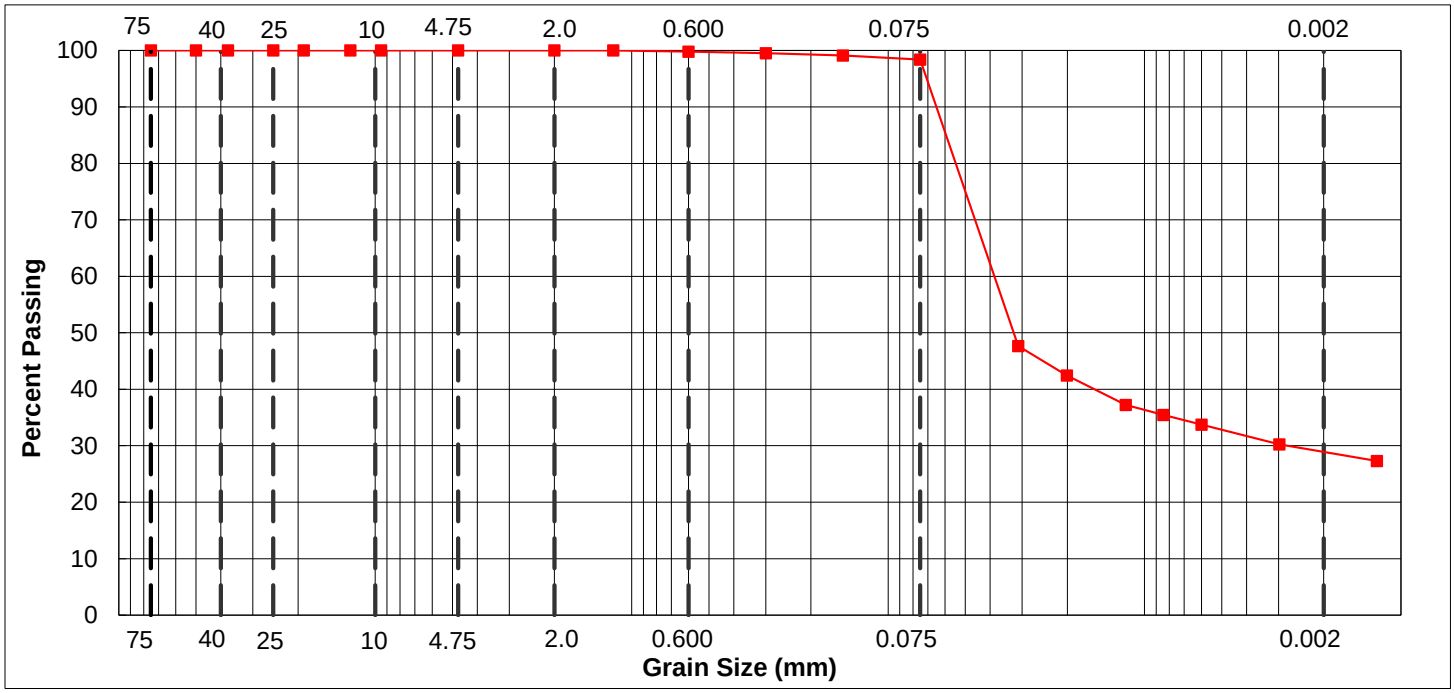
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	226AU1
Project No.:	1560-193-00	**Source:**	22BH226
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 226AU1	**Test Date:**	8-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.1
37.5	100.0	0.075	98.4
25.0	100.0	0.0310	47.6
19.0	100.0	0.0201	42.4
12.5	100.0	0.0118	37.2
9.5	100.0	0.0084	35.5
4.75	100.0	0.0060	33.7
2.00	100.0	0.0030	30.3
1.180	100.0	0.0012	27.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	1.4	425 µm to 75 µm
Silt	69.5	75 µm to 2 µm
Clay	28.9	<2 µm



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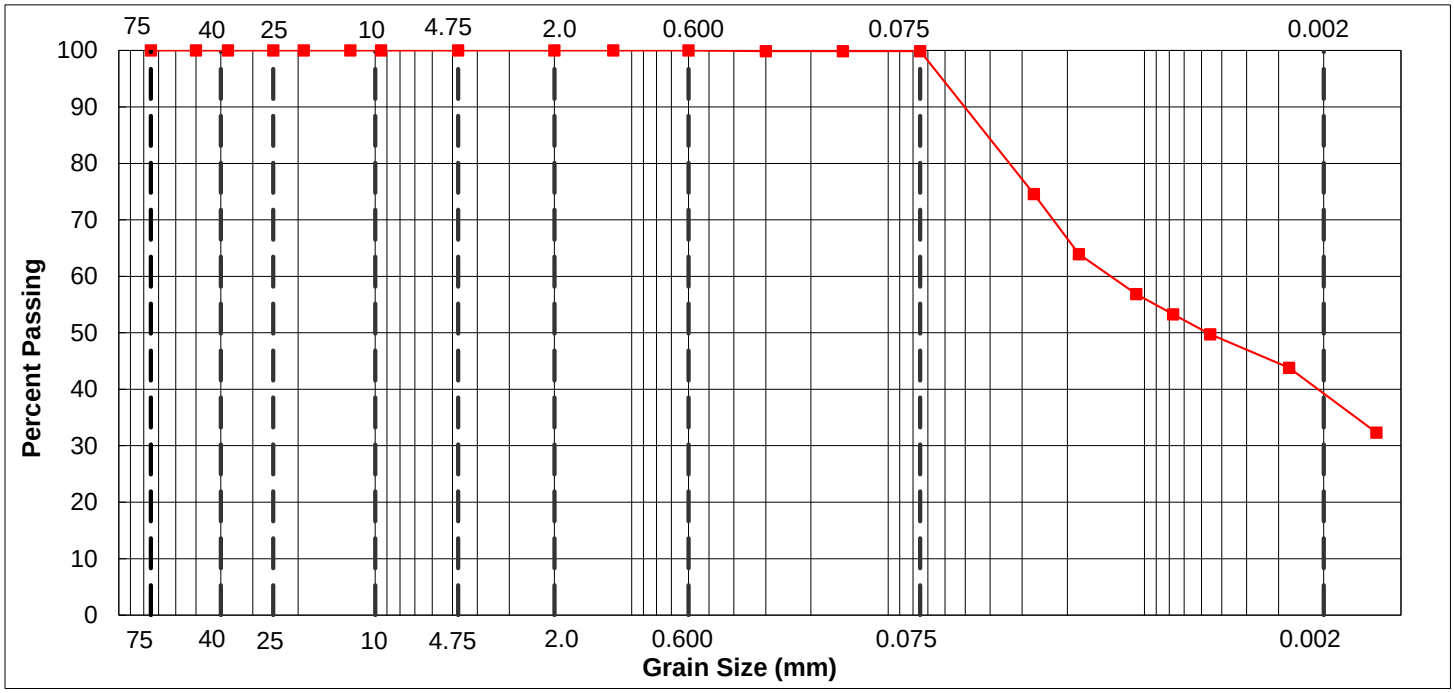
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	226RC1
Project No.:	1560-193-00	**Source:**	22CH226
Owner:	EID	**Sample Depth:**	6.5m
File No.:	GSA - 226RC1	**Test Date:**	7-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.9
25.0	100.0	0.0270	74.6
19.0	100.0	0.0180	63.9
12.5	100.0	0.0108	56.8
9.5	100.0	0.0077	53.3
4.75	100.0	0.0055	49.7
2.00	100.0	0.0027	43.8
1.180	100.0	0.0012	32.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	60.7	75 µm to 2 µm
Clay	39.2	<2 µm



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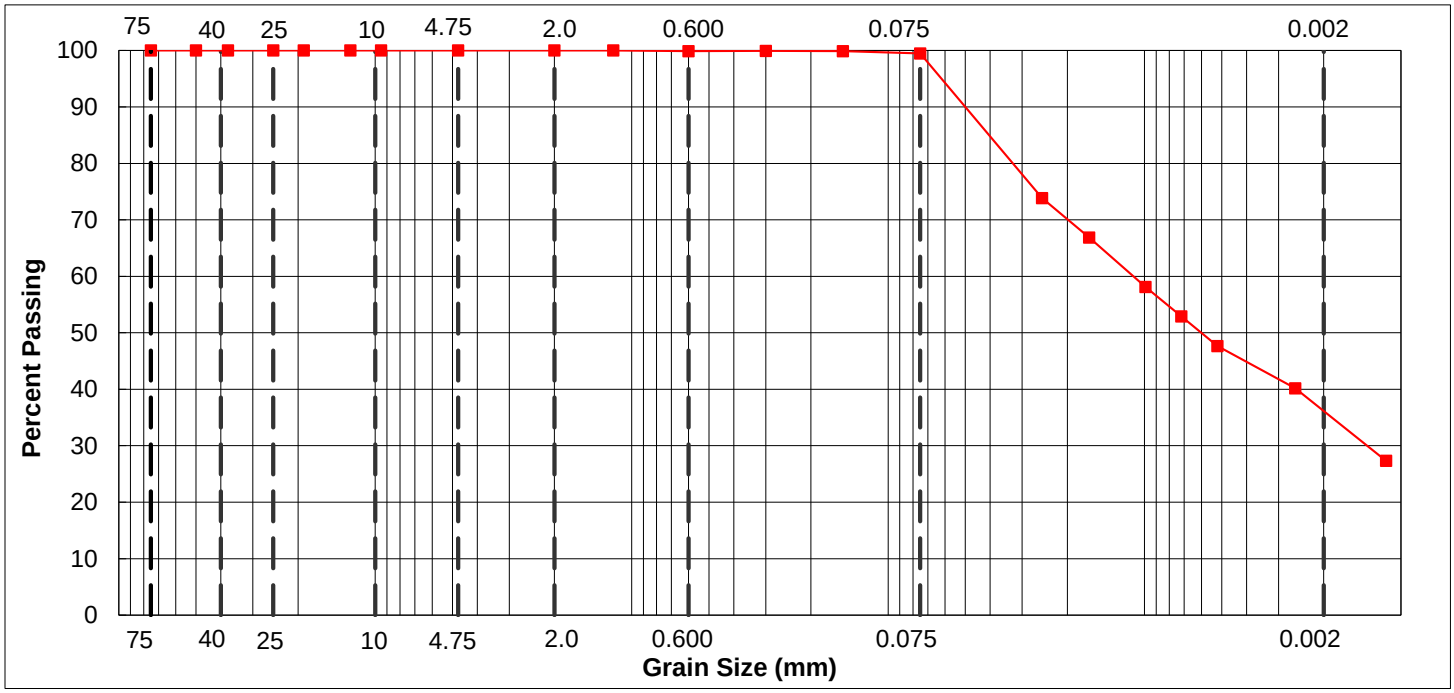
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	226UD4
Project No.:	1560-193-00	**Source:**	22CH226
Owner:	EID	**Sample Depth:**	21.2m
File No.:	GSA - 226UD4	**Test Date:**	31-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.5
25.0	100.0	0.0251	73.9
19.0	100.0	0.0164	66.9
12.5	100.0	0.0099	58.1
9.5	100.0	0.0072	52.9
4.75	100.0	0.0052	47.7
2.00	100.0	0.0026	40.2
1.180	100.0	0.0011	27.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	63.4	75 µm to 2 µm
Clay	36.1	<2 µm



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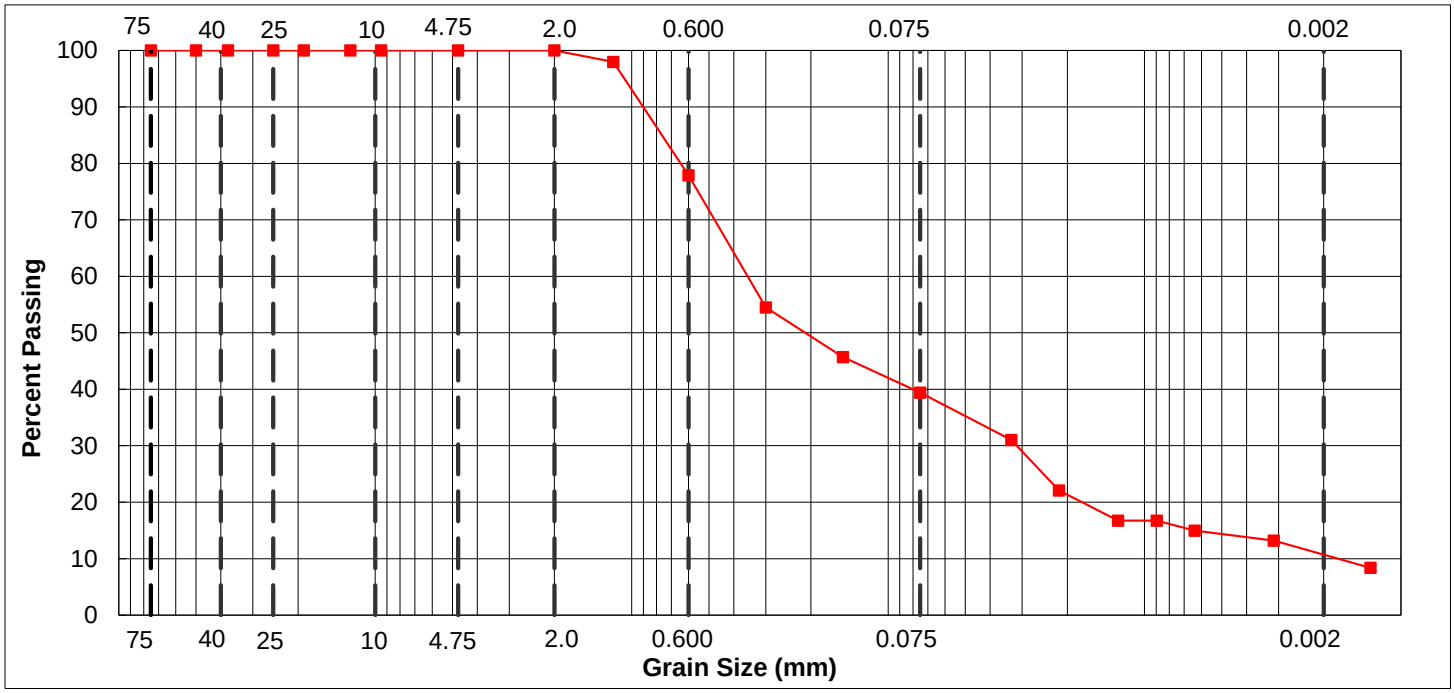
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	226UD6
Project No.:	1560-193-00	**Source:**	22CH226
Owner:	EID	**Sample Depth:**	30.05m
File No.:	GSA - 226UD6	**Test Date:**	8-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	77.9
75.0	100.0	0.300	54.5
50.0	100.0	0.150	45.7
37.5	100.0	0.075	39.4
25.0	100.0	0.0331	31.0
19.0	100.0	0.0216	22.1
12.5	100.0	0.0127	16.8
9.5	100.0	0.0090	16.8
4.75	100.0	0.0064	15.0
2.00	100.0	0.0031	13.2
1.180	98.0	0.0013	8.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	22.1	2.00 mm to 425 µm
Fine Sand	38.5	425 µm to 75 µm
Silt	28.7	75 µm to 2 µm
Clay	10.7	<2 µm



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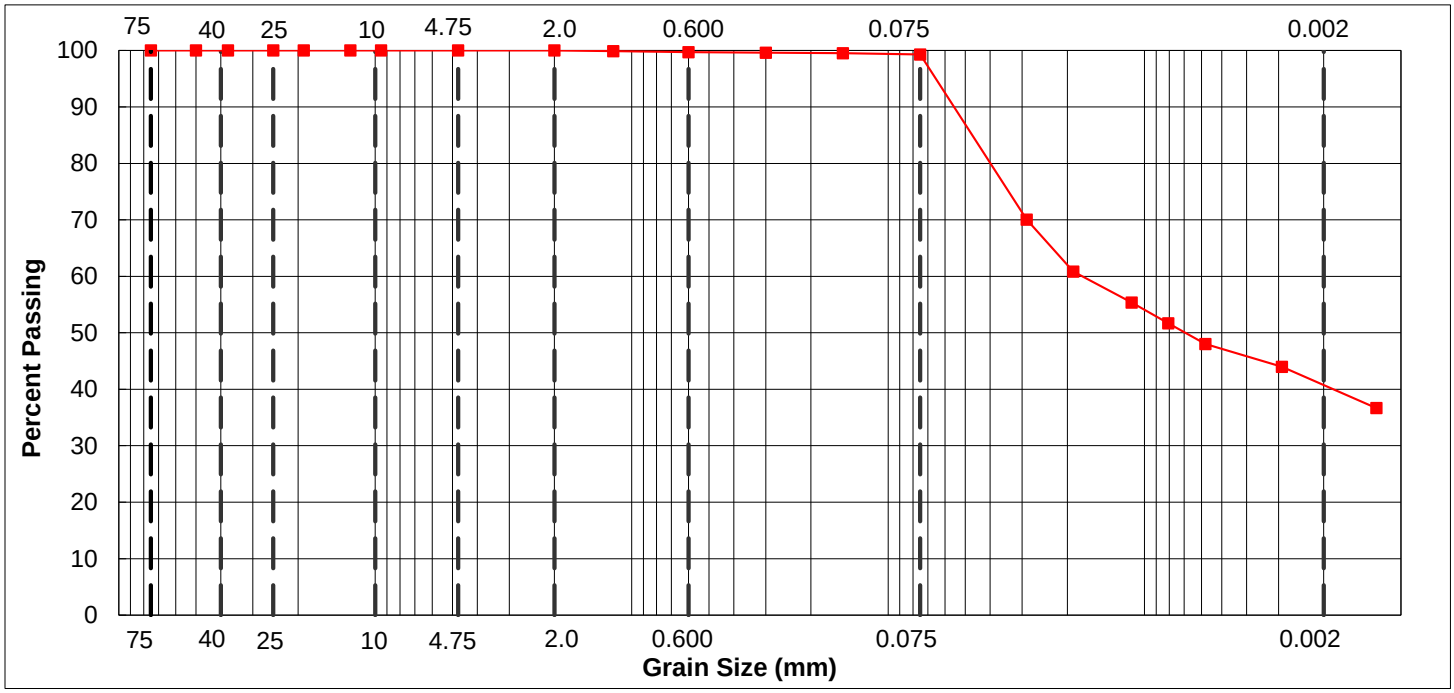
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	227AU6
Project No.:	1560-193-00	**Source:**	22BH227
Owner:	EID	**Sample Depth:**	4.3m
File No.:	GSA - 227AU6	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.6
50.0	100.0	0.150	99.5
37.5	100.0	0.075	99.3
25.0	100.0	0.0288	70.0
19.0	100.0	0.0190	60.9
12.5	100.0	0.0112	55.4
9.5	100.0	0.0081	51.7
4.75	100.0	0.0058	48.0
2.00	100.0	0.0029	44.0
1.180	99.9	0.0012	36.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	58.5	75 µm to 2 µm
Clay	40.8	<2 µm



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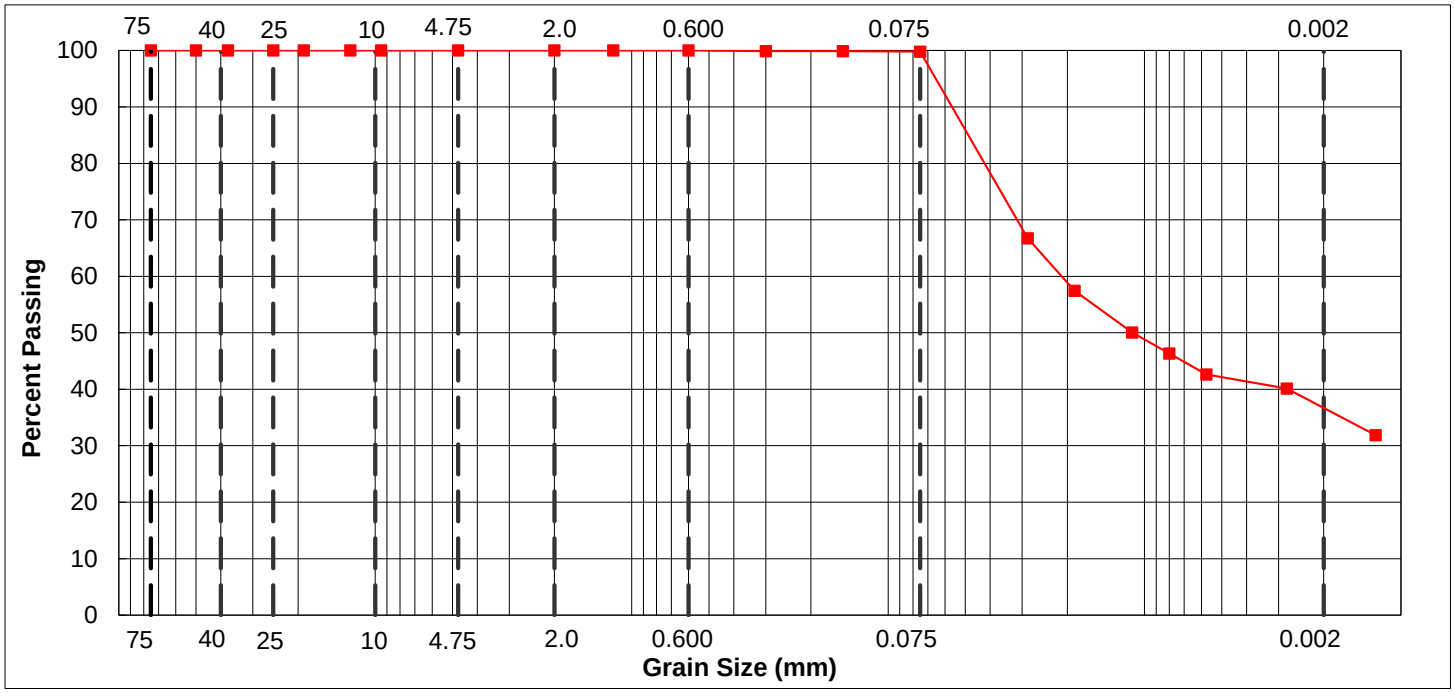
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	227RC1
Project No.:	1560-193-00	**Source:**	22CH227
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 227RC1	**Test Date:**	8-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0285	66.7
19.0	100.0	0.0188	57.5
12.5	100.0	0.0112	50.0
9.5	100.0	0.0080	46.3
4.75	100.0	0.0057	42.6
2.00	100.0	0.0028	40.1
1.180	100.0	0.0013	31.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	63.1	75 µm to 2 µm
Clay	36.7	<2 µm



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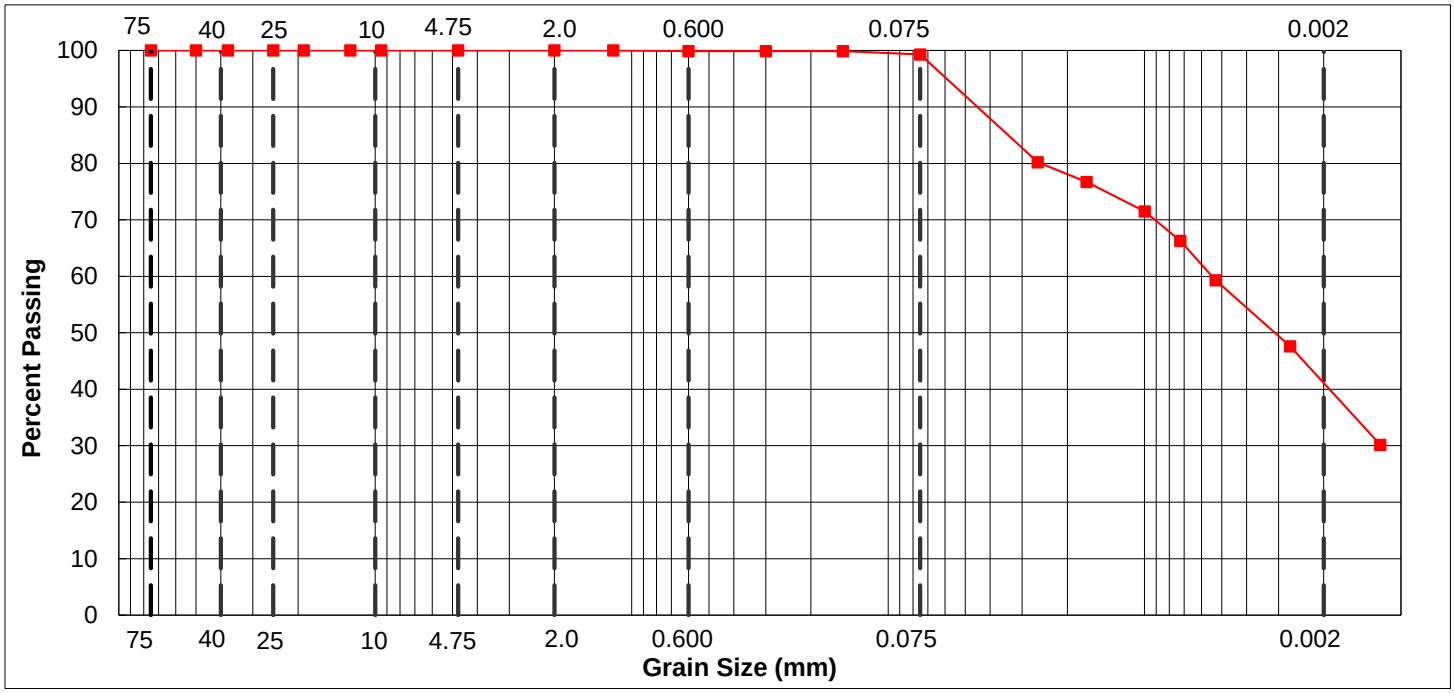
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	227RC16
Project No.:	1560-193-00	**Source:**	22CH227
Owner:	EID	**Sample Depth:**	27.4m
File No.:	GSA - 227RC16	**Test Date:**	8-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.3
25.0	100.0	0.0261	80.2
19.0	100.0	0.0168	76.7
12.5	100.0	0.0100	71.5
9.5	100.0	0.0073	66.3
4.75	100.0	0.0053	59.3
2.00	100.0	0.0027	47.6
1.180	100.0	0.0012	30.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.6	425 µm to 75 µm
Silt	58.2	75 µm to 2 µm
Clay	41.1	<2 µm



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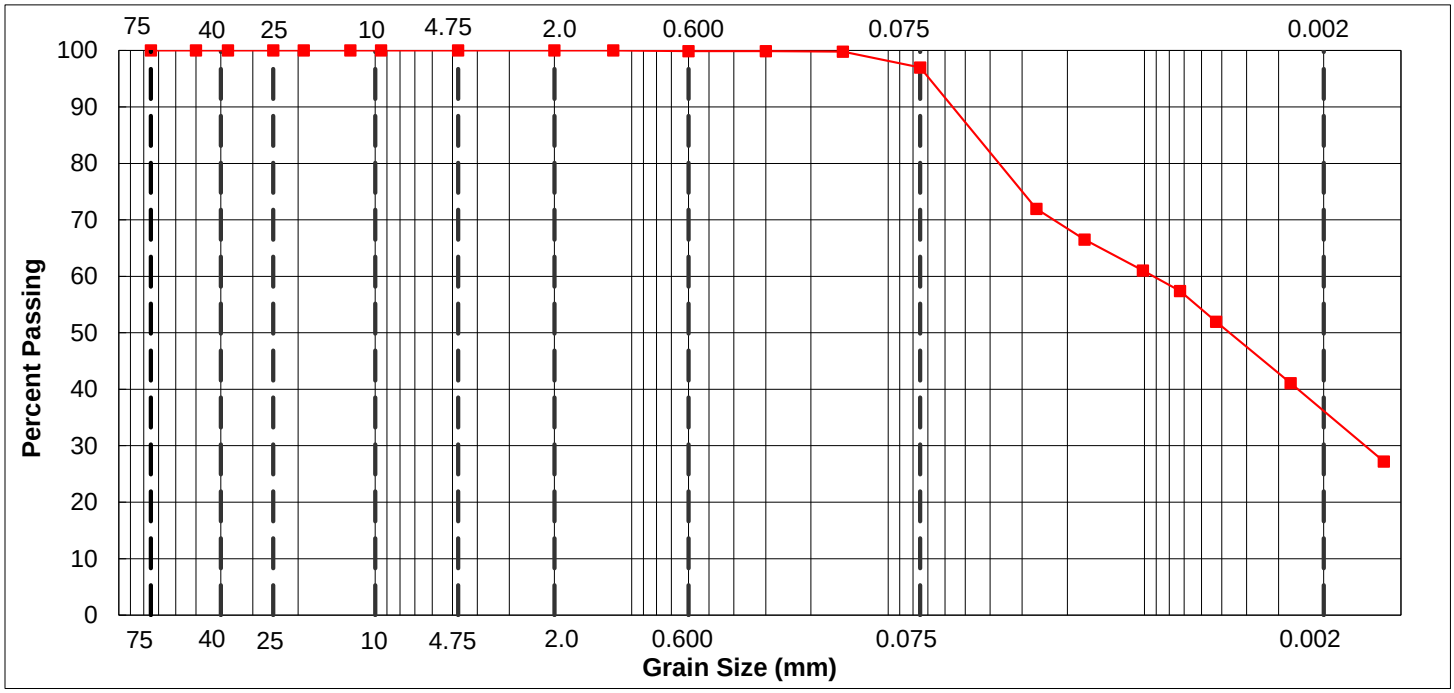
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	227UD1
Project No.:	1560-193-00	**Source:**	22CH227
Owner:	EID	**Sample Depth:**	8.4m
File No.:	GSA - 227UD1	**Test Date:**	30-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.8
37.5	100.0	0.075	97.0
25.0	100.0	0.0264	71.9
19.0	100.0	0.0171	66.5
12.5	100.0	0.0101	61.1
9.5	100.0	0.0073	57.4
4.75	100.0	0.0053	52.0
2.00	100.0	0.0027	41.1
1.180	100.0	0.0012	27.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	2.9	425 µm to 75 µm
Silt	60.8	75 µm to 2 µm
Clay	36.2	<2 µm



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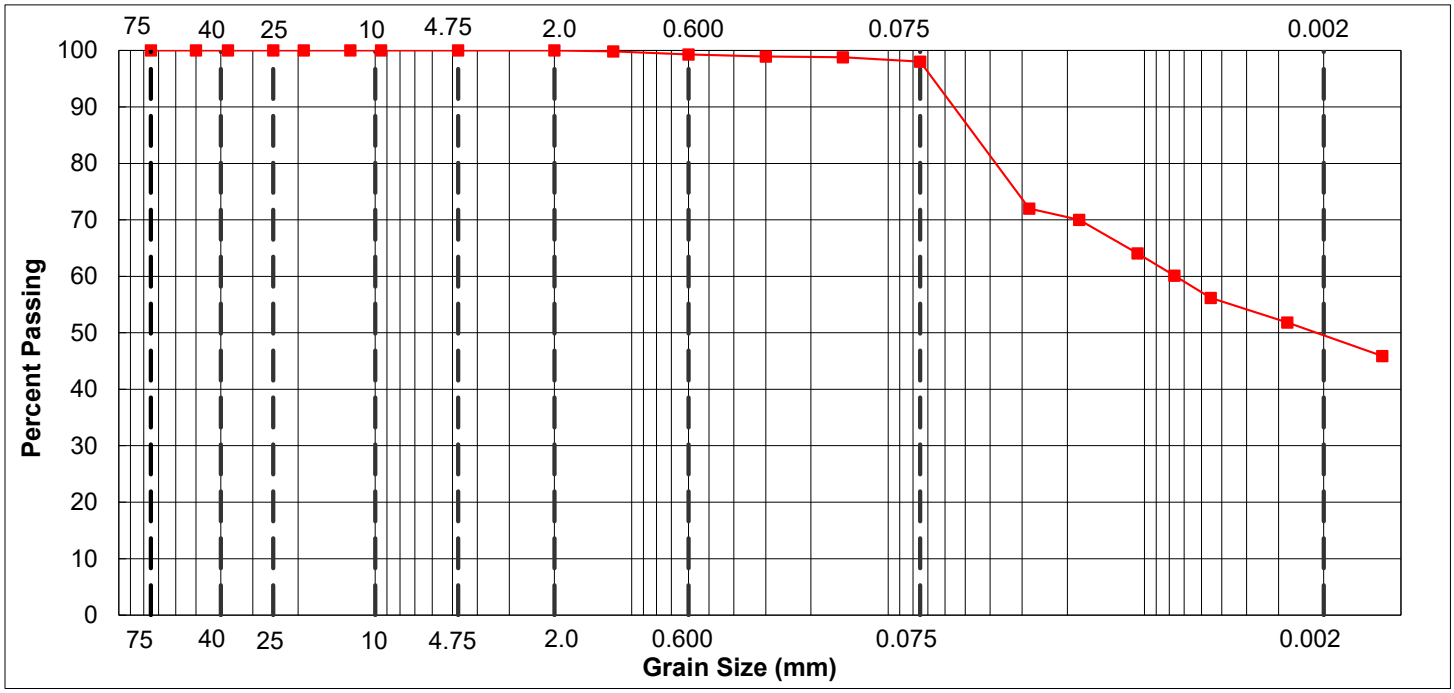
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	228AU4
Project No.:	1560-193-00	**Source:**	22BH228
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 228AU4	**Date:**	6-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.3
75.0	100.0	0.300	98.9
50.0	100.0	0.150	98.8
37.5	100.0	0.075	98.0
25.0	100.0	0.0281	72.0
19.0	100.0	0.0180	70.0
12.5	100.0	0.0107	64.1
9.5	100.0	0.0077	60.1
4.75	100.0	0.0055	56.2
2.00	100.0	0.0028	51.8
1.180	99.8	0.0012	45.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.7	2.00 mm to 425 µm
Fine Sand	1.3	425 µm to 75 µm
Silt	48.5	75 µm to 2 µm
Clay	49.5	<2 µm



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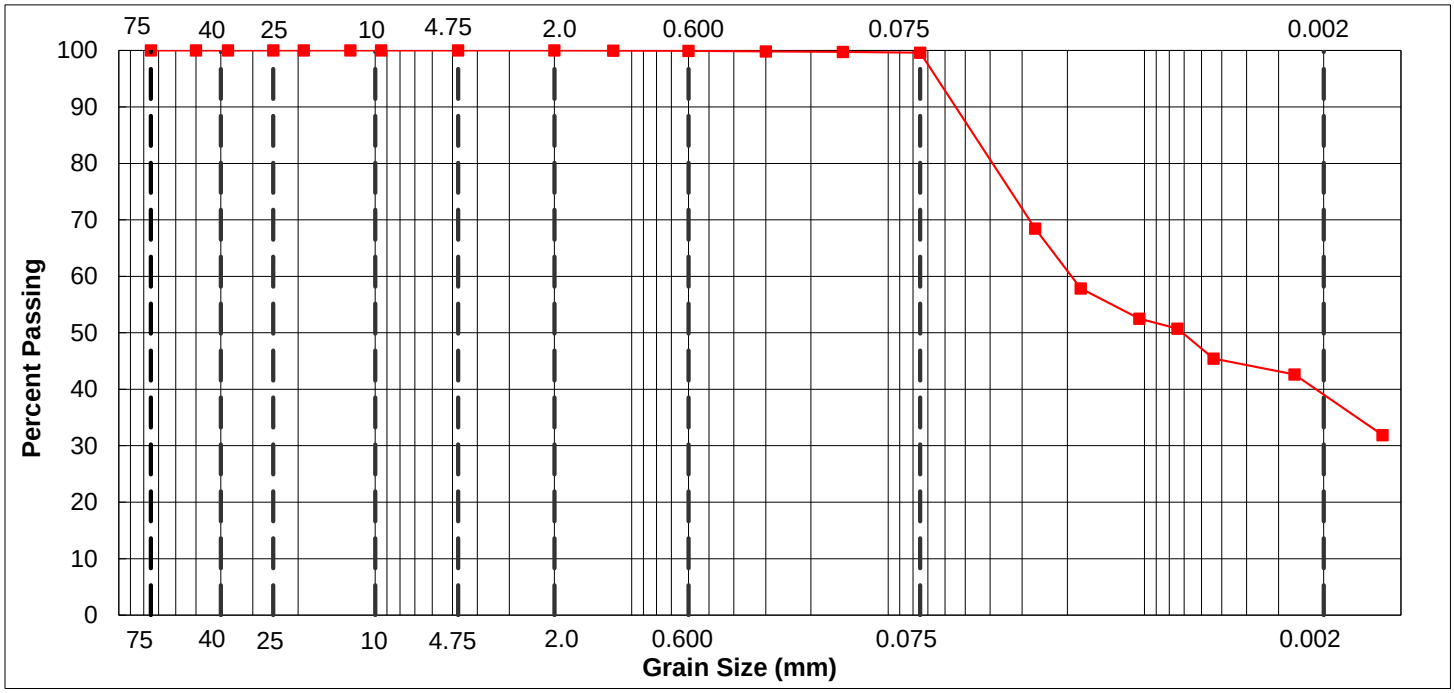
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	228UD1
Project No.:	1560-193-00	**Source:**	22CH228
Owner:	EID	**Sample Depth:**	8.70m
File No.:	GSA - 228UD1	**Test Date:**	1-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.6
25.0	100.0	0.0267	68.5
19.0	100.0	0.0177	57.8
12.5	100.0	0.0105	52.5
9.5	100.0	0.0074	50.8
4.75	100.0	0.0054	45.4
2.00	100.0	0.0026	42.6
1.180	100.0	0.0012	31.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	60.6	75 µm to 2 µm
Clay	39.0	<2 µm



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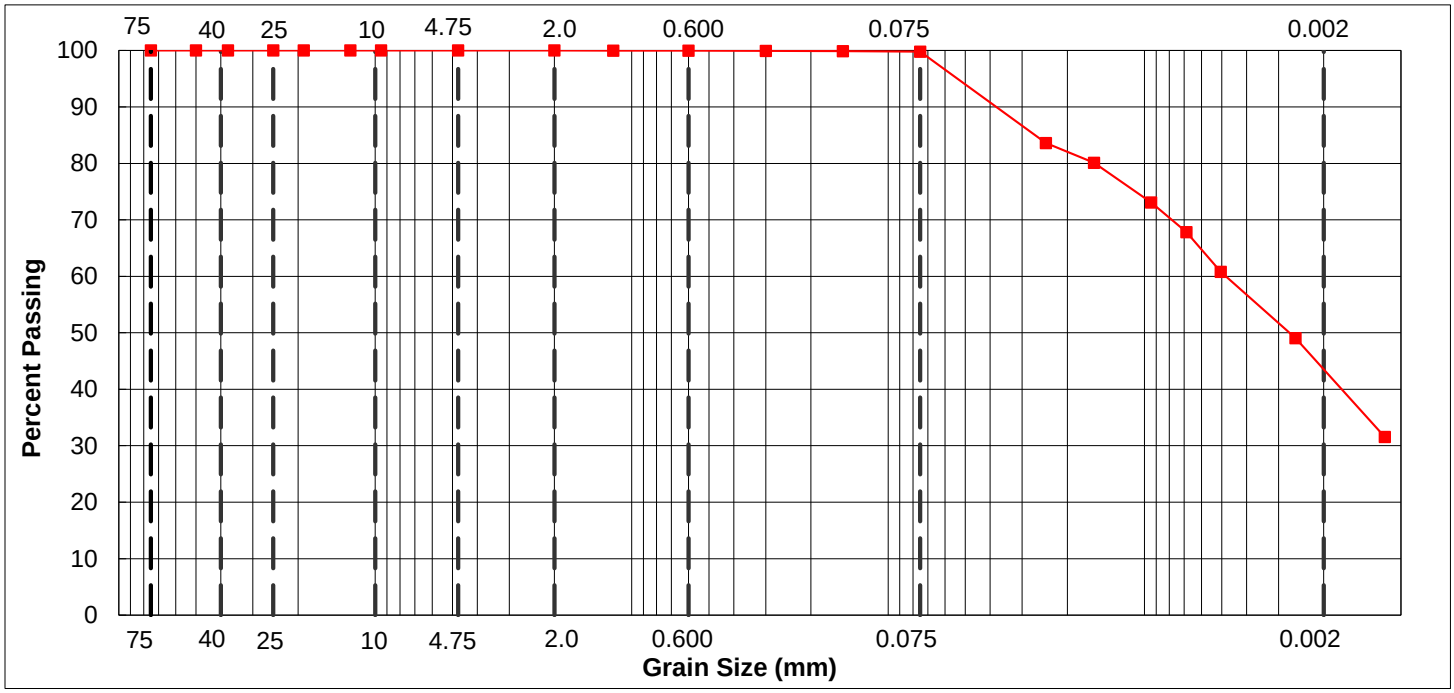
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	228UD6
Project No.:	1560-193-00	**Source:**	22CH228
Owner:	EID	**Sample Depth:**	25.5m
File No.:	GSA - 228UD6	**Test Date:**	2-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0242	83.6
19.0	100.0	0.0157	80.1
12.5	100.0	0.0094	73.1
9.5	100.0	0.0069	67.8
4.75	100.0	0.0050	60.8
2.00	100.0	0.0026	49.1
1.180	100.0	0.0012	31.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	56.3	75 µm to 2 µm
Clay	43.5	<2 µm



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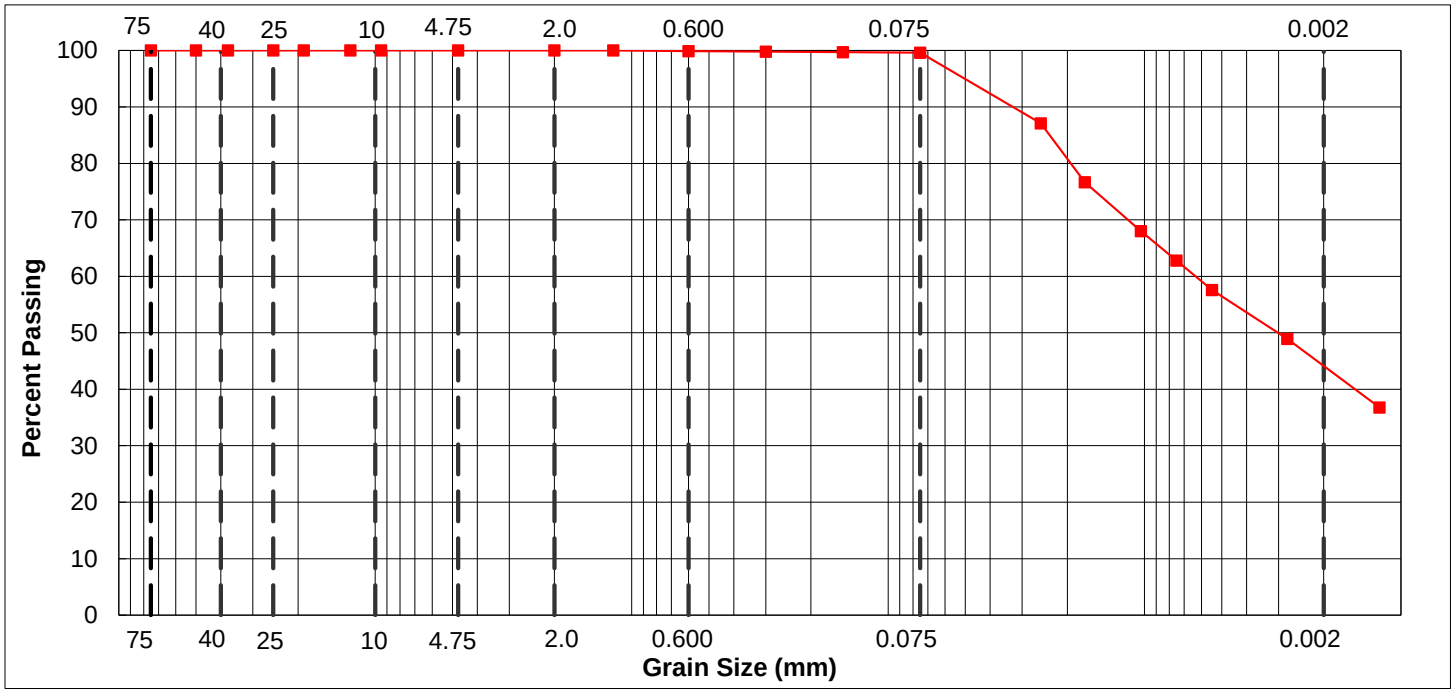
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	229RC1
Project No.:	1560-193-00	**Source:**	22CH229
Owner:	EID	**Sample Depth:**	3.2m
File No.:	GSA - 229RC1	**Test Date:**	16-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.6
25.0	100.0	0.0254	87.1
19.0	100.0	0.0171	76.7
12.5	100.0	0.0103	68.0
9.5	100.0	0.0075	62.8
4.75	100.0	0.0054	57.6
2.00	100.0	0.0028	48.9
1.180	100.0	0.0012	36.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	55.5	75 µm to 2 µm
Clay	44.1	<2 µm



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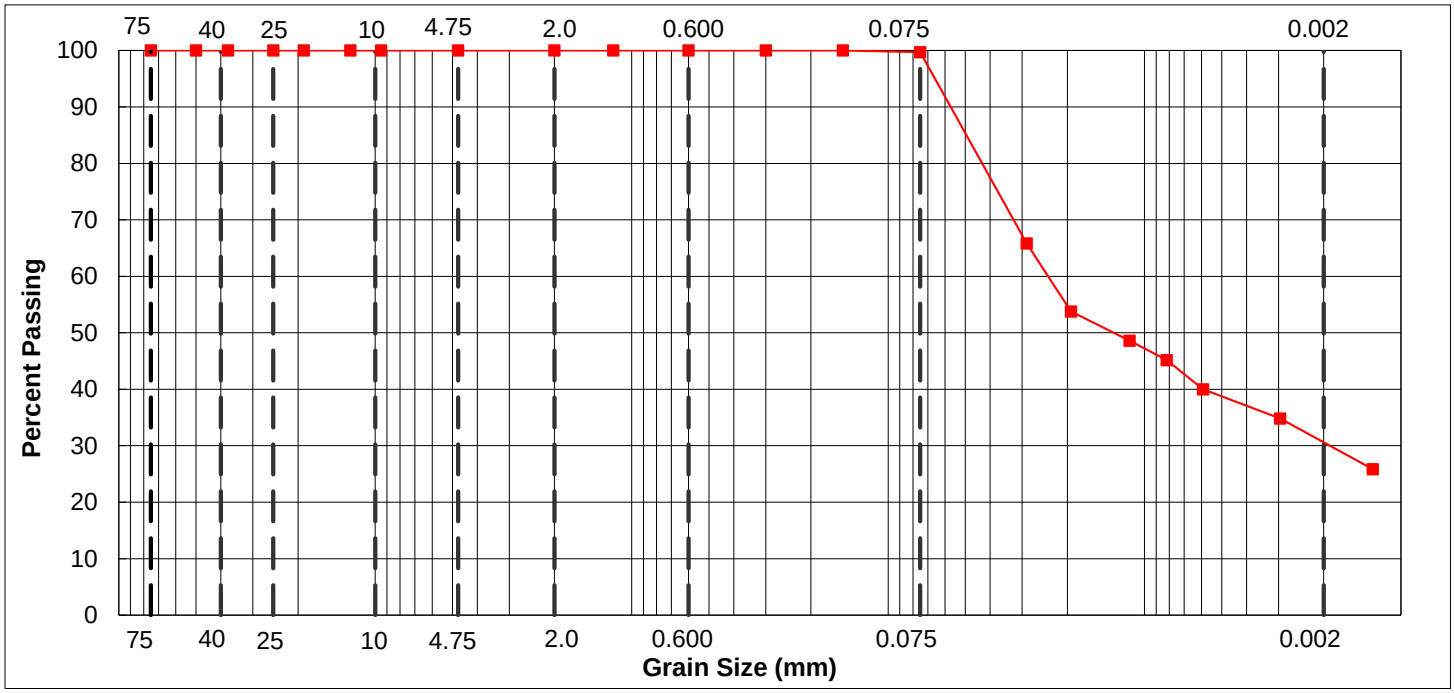
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	229RC2
Project No.:	1560-193-00	**Source:**	22CH229
Owner:	EID	**Sample Depth:**	5.9m
File No.:	GSA - 229RC2	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.7
25.0	100.0	0.0288	65.8
19.0	100.0	0.0193	53.8
12.5	100.0	0.0114	48.6
9.5	100.0	0.0082	45.1
4.75	100.0	0.0059	40.0
2.00	100.0	0.0030	34.8
1.180	100.0	0.0013	25.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	69.1	75 µm to 2 µm
Clay	30.6	<2 µm



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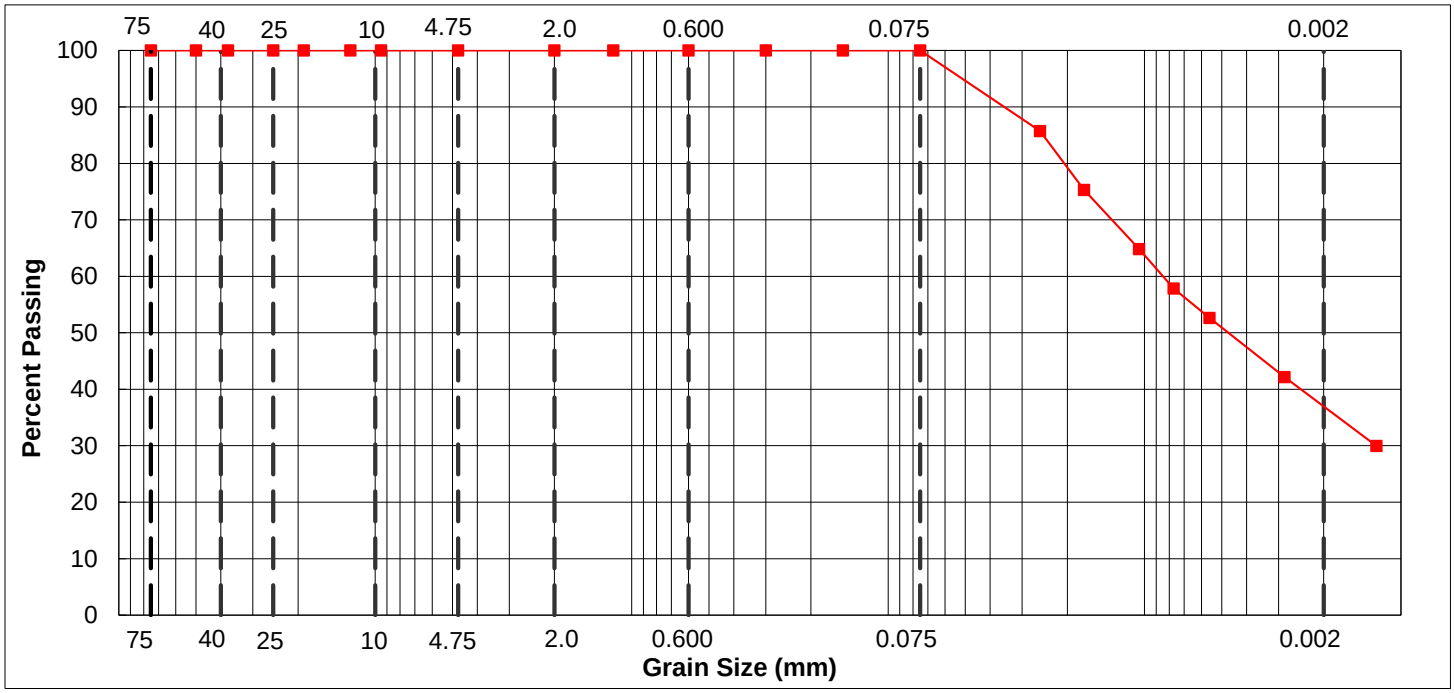
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	229RC10
Project No.:	1560-193-00	**Source:**	22CH229
Owner:	EID	**Sample Depth:**	17.4m
File No.:	GSA - 229RC10	**Test Date:**	16-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	100.0
25.0	100.0	0.0255	85.8
19.0	100.0	0.0172	75.3
12.5	100.0	0.0105	64.8
9.5	100.0	0.0077	57.9
4.75	100.0	0.0056	52.6
2.00	100.0	0.0028	42.2
1.180	100.0	0.0012	30.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.0	425 µm to 75 µm
Silt	63.0	75 µm to 2 µm
Clay	37.0	<2 µm



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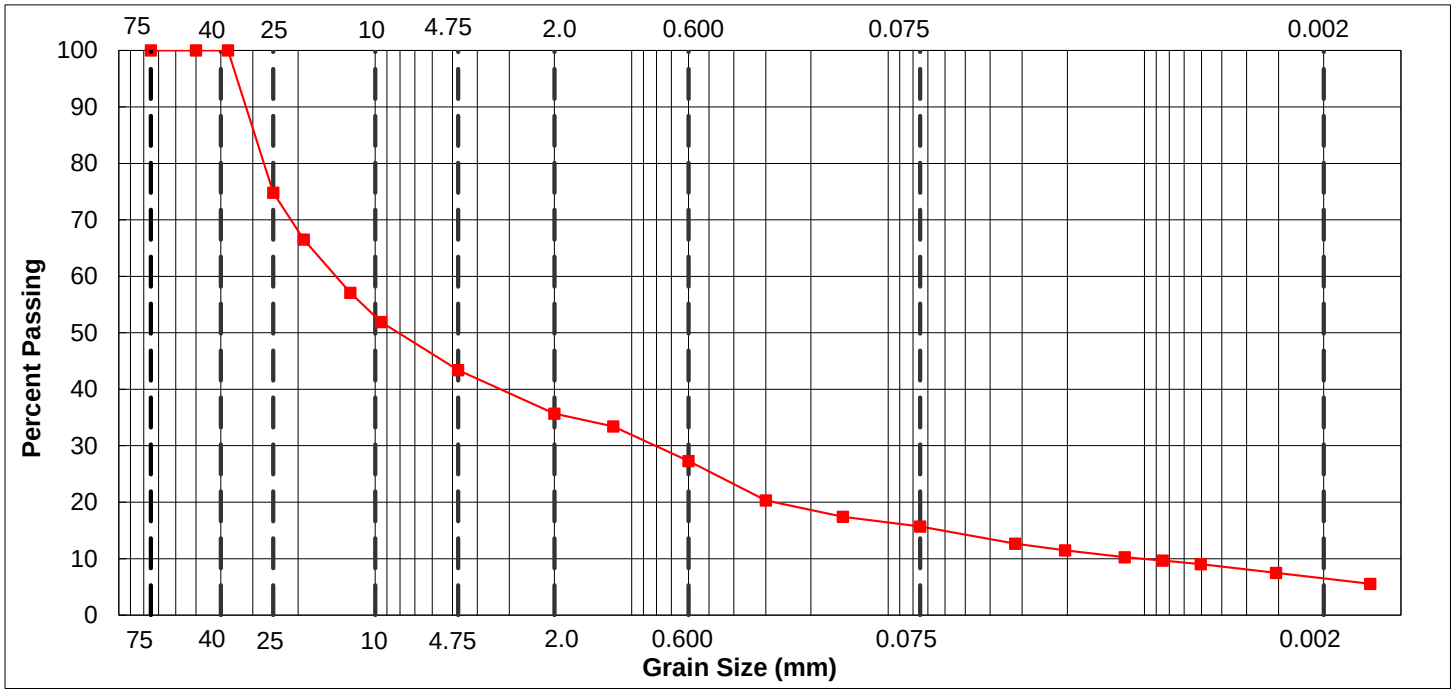
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	230AU1
Project No.:	1560-193-00	**Source:**	22CH230
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 230AU1	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	27.3
75.0	100.0	0.300	20.3
50.0	100.0	0.150	17.4
37.5	100.0	0.075	15.7
25.0	74.8	0.0319	12.7
19.0	66.5	0.0204	11.5
12.5	57.1	0.0119	10.3
9.5	51.9	0.0085	9.7
4.75	43.4	0.0060	9.1
2.00	35.7	0.0031	7.5
1.180	33.4	0.0013	5.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	25.2	80 mm to 20 mm
Fine Gravel	31.4	20 mm to 4.75 mm
Coarse Sand	7.7	4.75 mm to 2.00 mm
Medium Sand	8.4	2.00 mm to 425 µm
Fine Sand	11.6	425 µm to 75 µm
Silt	9.2	75 µm to 2 µm
Clay	6.5	<2 µm



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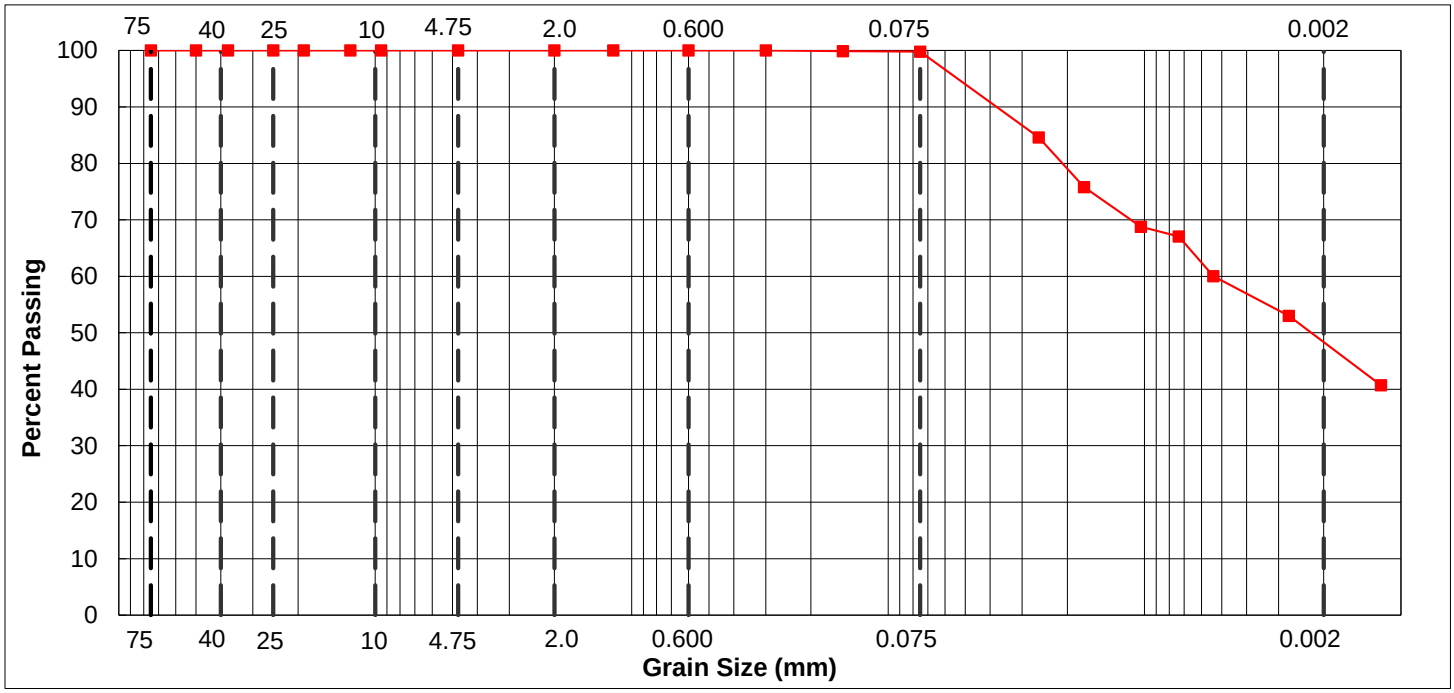
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	230RC1
Project No.:	1560-193-00	**Source:**	22CH230
Owner:	EID	**Sample Depth:**	3.6m
File No.:	GSA - 230RC1	**Test Date:**	16-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0259	84.6
19.0	100.0	0.0172	75.8
12.5	100.0	0.0103	68.8
9.5	100.0	0.0074	67.0
4.75	100.0	0.0054	60.0
2.00	100.0	0.0027	53.0
1.180	100.0	0.0012	40.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	51.5	75 µm to 2 µm
Clay	48.3	<2 µm



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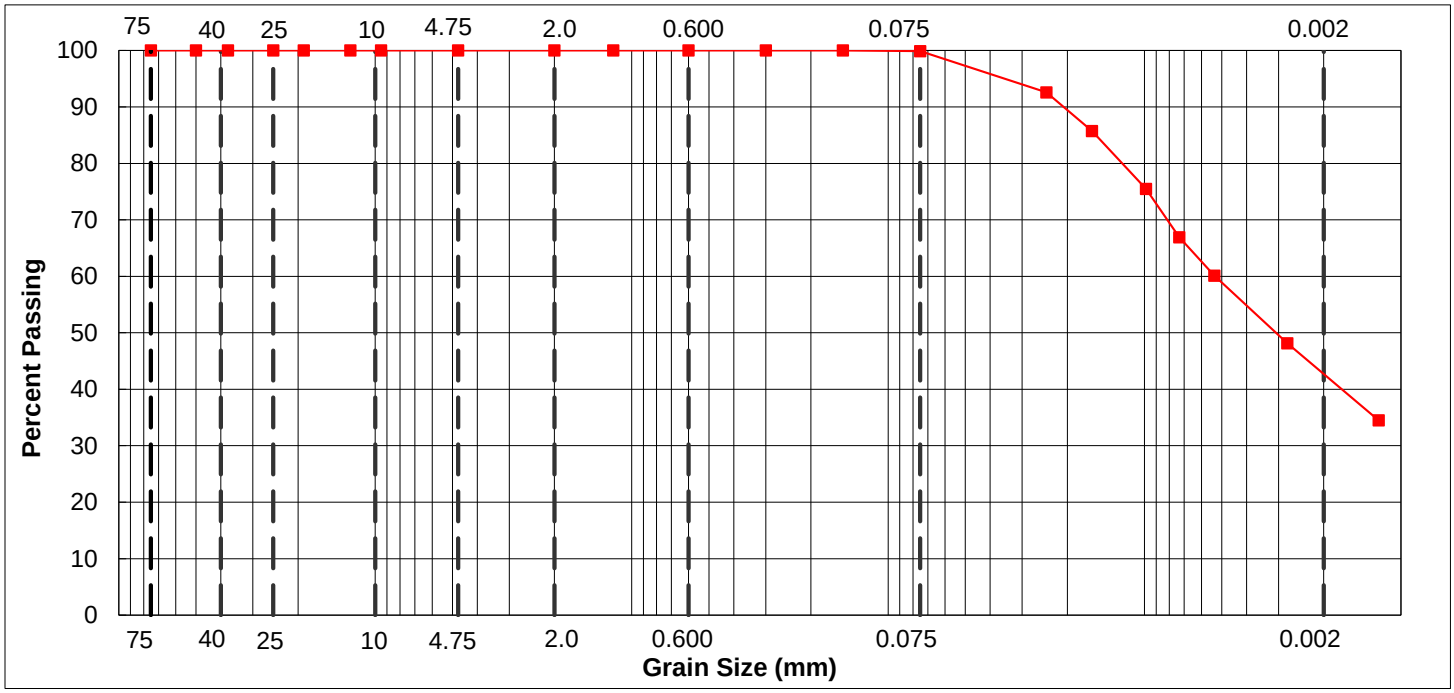
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	230RC2
Project No.:	1560-193-00	**Source:**	22CH230
Owner:	EID	**Sample Depth:**	5.3m
File No.:	GSA - 230RC2	**Test Date:**	16-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.9
25.0	100.0	0.0241	92.6
19.0	100.0	0.0160	85.7
12.5	100.0	0.0099	75.5
9.5	100.0	0.0073	66.9
4.75	100.0	0.0053	60.1
2.00	100.0	0.0028	48.2
1.180	100.0	0.0012	34.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	57.2	75 µm to 2 µm
Clay	42.7	<2 µm



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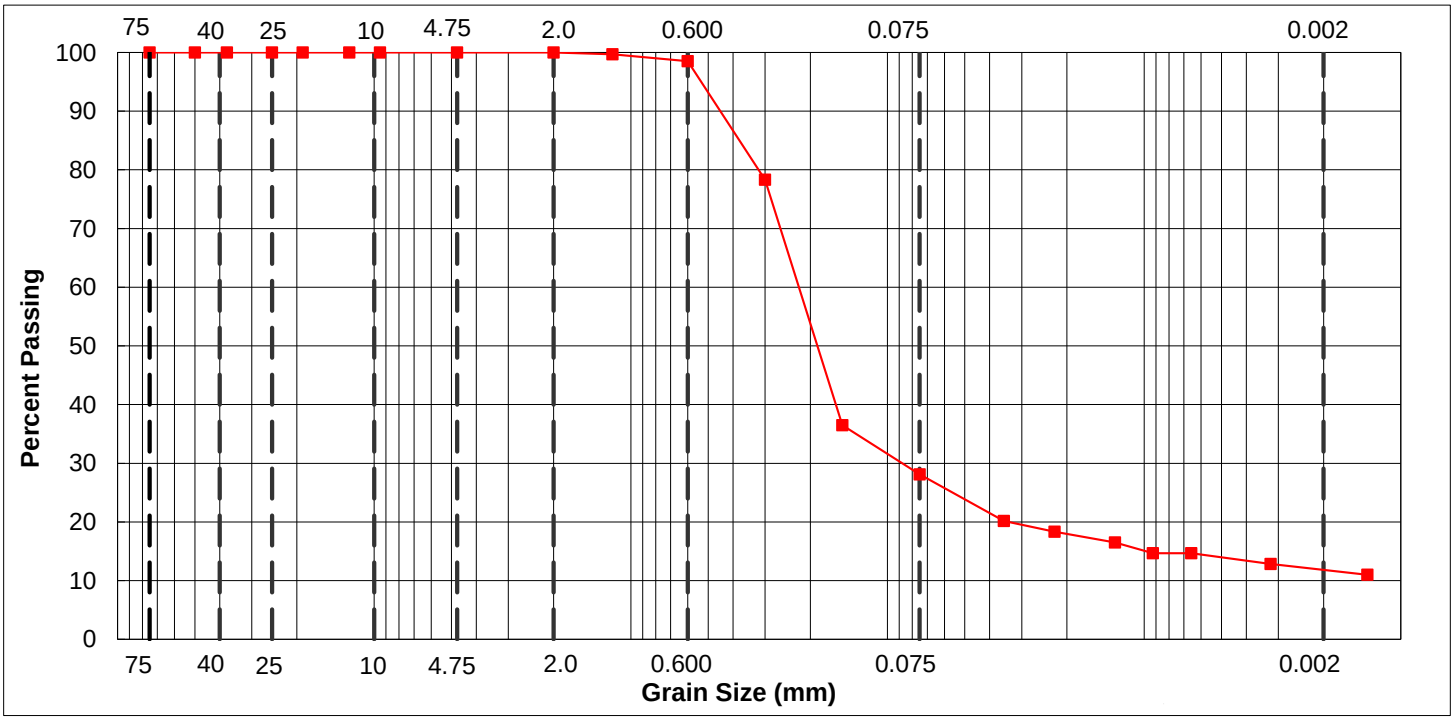
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	231AU1
Project No.:	1560-193-00	**Source:**	22BH231
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 231AU1	**Test Date:**	24-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.5
75.0	100.0	0.300	78.3
50.0	100.0	0.150	36.5
37.5	100.0	0.075	28.1
25.0	100.0	0.0352	20.2
19.0	100.0	0.0223	18.3
12.5	100.0	0.0130	16.5
9.5	100.0	0.0093	14.7
4.75	100.0	0.0065	14.7
2.00	100.0	0.0032	12.8
1.180	99.7	0.0013	11.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.5	2.00 mm to 425 µm
Fine Sand	70.4	425 µm to 75 µm
Silt	16.3	75 µm to 2 µm
Clay	11.8	<2 µm



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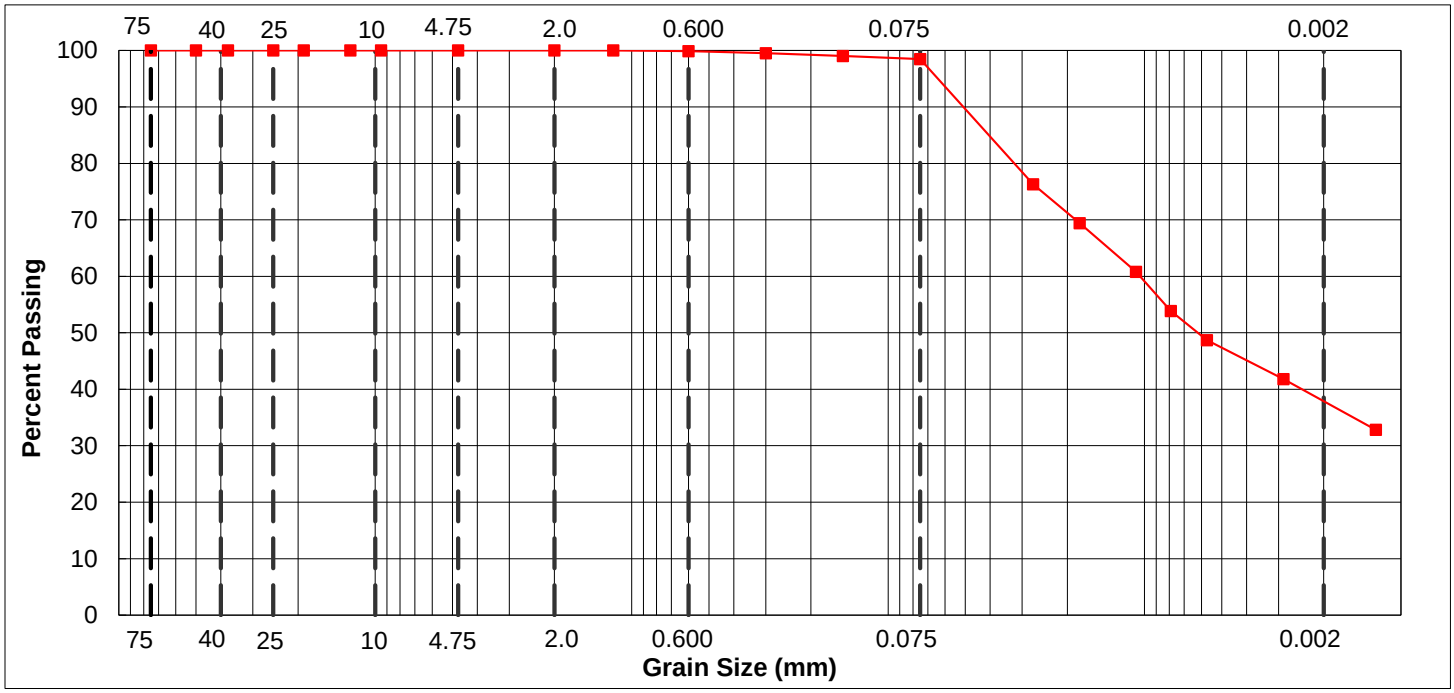
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	231RC1
Project No.:	1560-193-00	**Source:**	22CH231
Owner:	EID	**Sample Depth:**	3.6m
File No.:	GSA - 231RC1	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.0
37.5	100.0	0.075	98.5
25.0	100.0	0.0272	76.3
19.0	100.0	0.0179	69.4
12.5	100.0	0.0108	60.8
9.5	100.0	0.0079	53.9
4.75	100.0	0.0057	48.7
2.00	100.0	0.0029	41.8
1.180	100.0	0.0013	32.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	1.4	425 µm to 75 µm
Silt	60.6	75 µm to 2 µm
Clay	37.9	<2 µm



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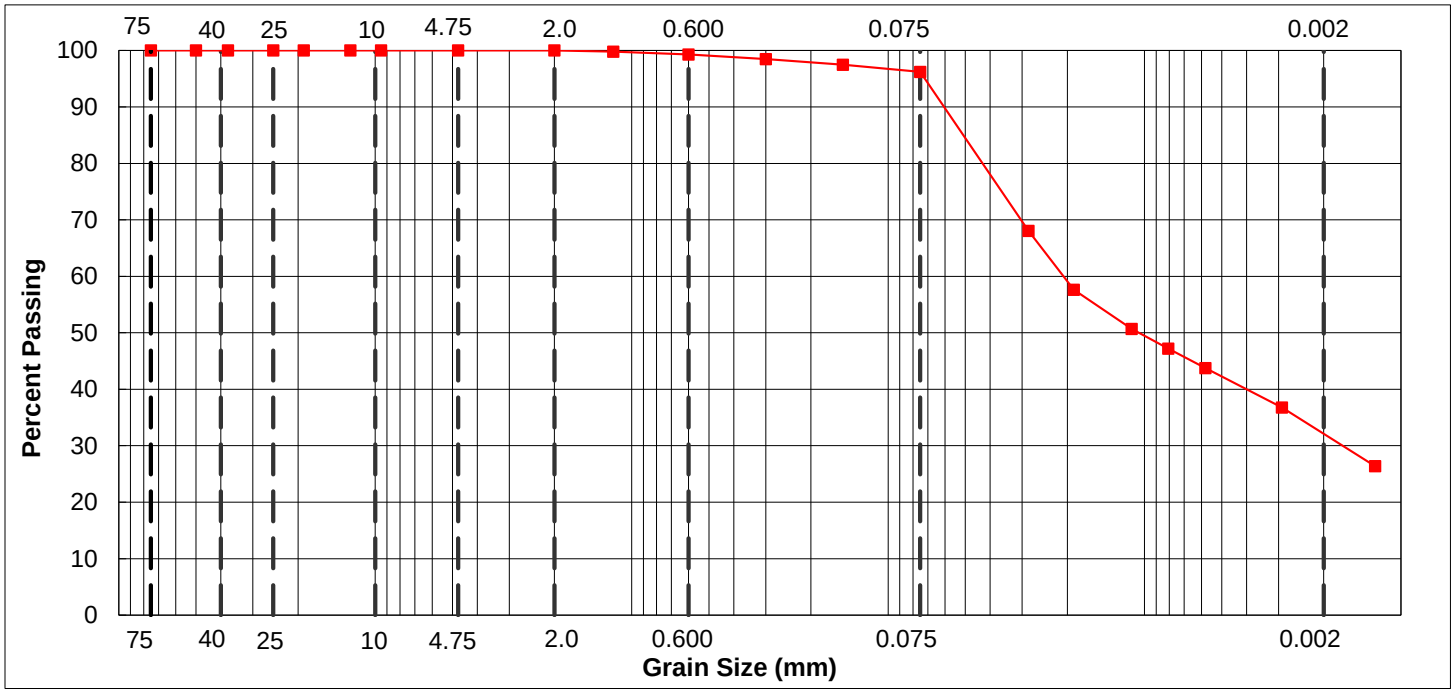
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	231RC2
Project No.:	1560-193-00	**Source:**	22CH231
Owner:	EID	**Sample Depth:**	5.9m
File No.:	GSA - 231RC2	**Test Date:**	16-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.3
75.0	100.0	0.300	98.5
50.0	100.0	0.150	97.5
37.5	100.0	0.075	96.2
25.0	100.0	0.0283	68.0
19.0	100.0	0.0189	57.6
12.5	100.0	0.0112	50.7
9.5	100.0	0.0081	47.2
4.75	100.0	0.0058	43.7
2.00	100.0	0.0029	36.8
1.180	99.8	0.0013	26.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.7	2.00 mm to 425 µm
Fine Sand	3.1	425 µm to 75 µm
Silt	64.1	75 µm to 2 µm
Clay	32.1	<2 µm



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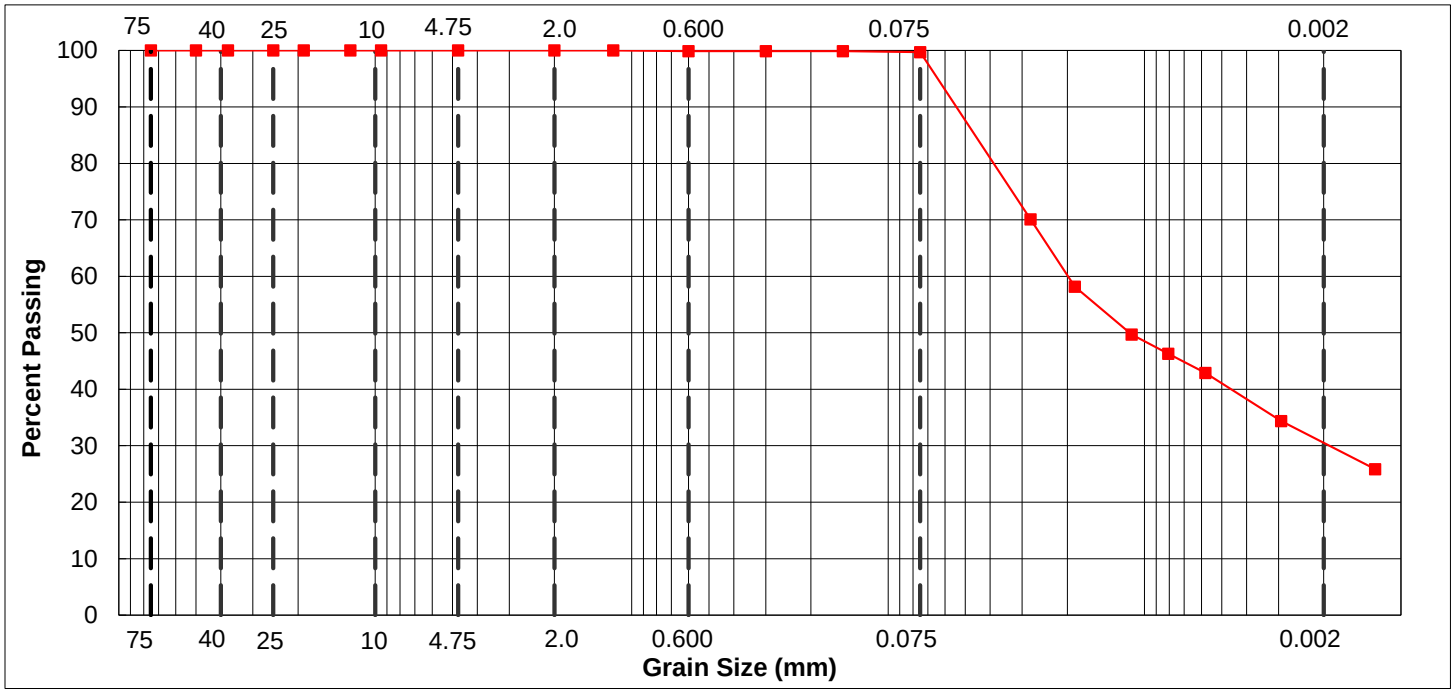
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	231RC4
Project No.:	1560-193-00	**Source:**	22CH231
Owner:	EID	**Sample Depth:**	7.9m
File No.:	GSA - 231RC4	**Test Date:**	16-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.7
25.0	100.0	0.0279	70.1
19.0	100.0	0.0187	58.2
12.5	100.0	0.0112	49.7
9.5	100.0	0.0081	46.3
4.75	100.0	0.0058	42.9
2.00	100.0	0.0029	34.4
1.180	100.0	0.0013	25.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	69.2	75 µm to 2 µm
Clay	30.5	<2 µm



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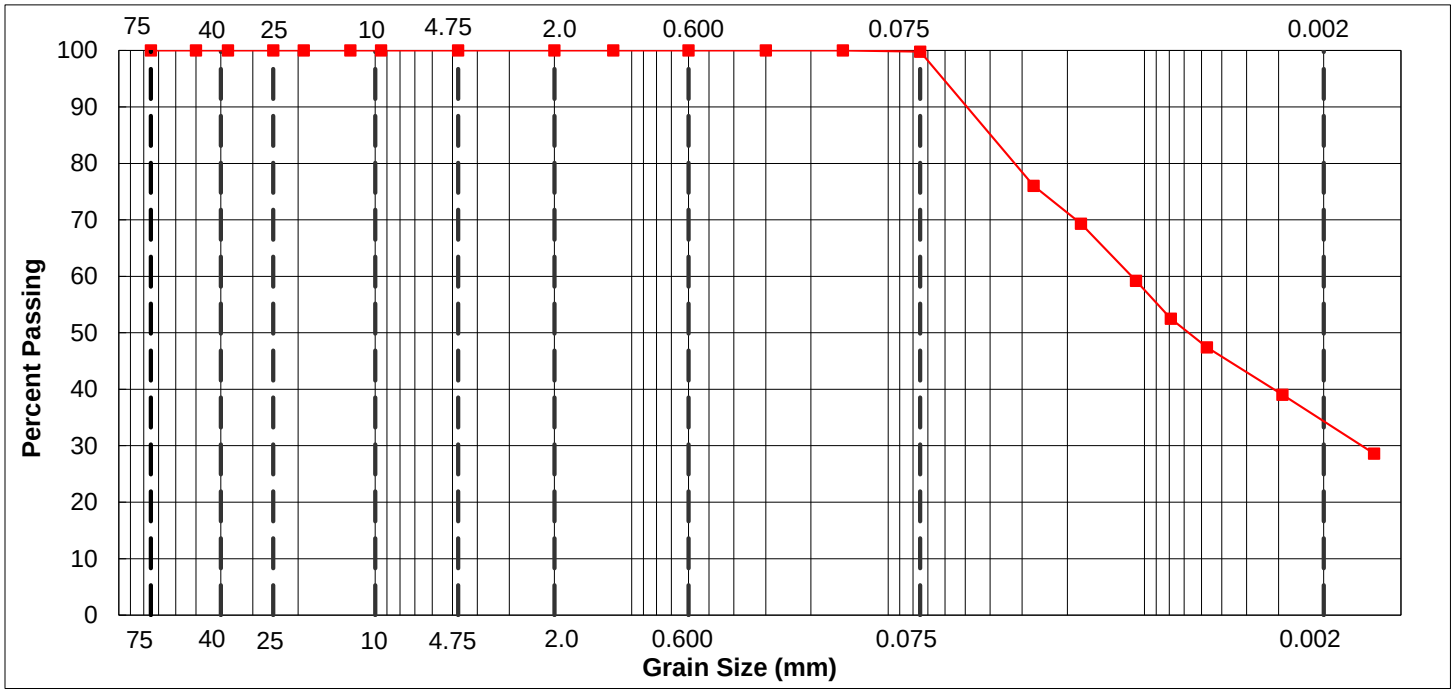
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	232RC3
Project No.:	1560-193-00	**Source:**	22CH232
Owner:	EID	**Sample Depth:**	6.9m
File No.:	GSA - 232RC3	**Test Date:**	16-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.8
25.0	100.0	0.0271	76.1
19.0	100.0	0.0177	69.3
12.5	100.0	0.0108	59.2
9.5	100.0	0.0079	52.5
4.75	100.0	0.0057	47.4
2.00	100.0	0.0029	39.0
1.180	100.0	0.0013	28.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	65.5	75 µm to 2 µm
Clay	34.3	<2 µm



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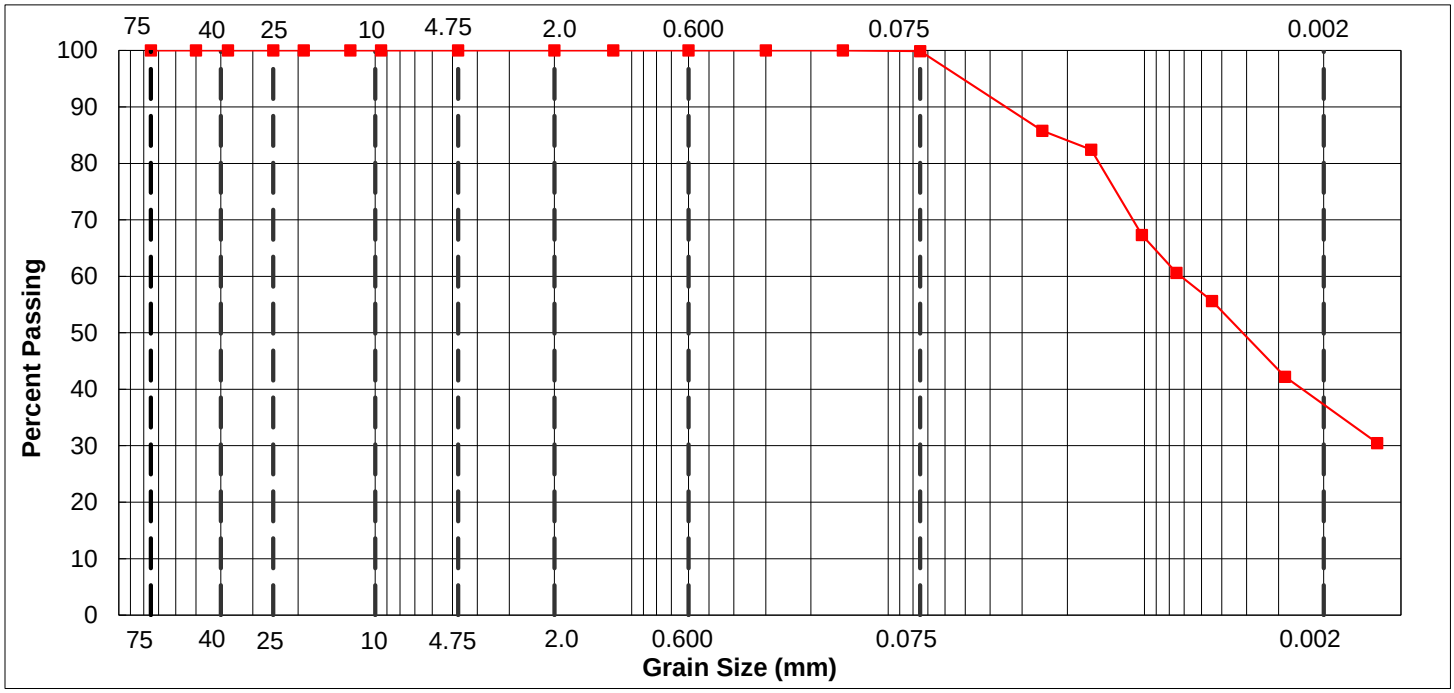
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	232RC9
Project No.:	1560-193-00	**Source:**	232RC9
Owner:	EID	**Sample Depth:**	16.5m
File No.:	GSA - 232RC9	**Test Date:**	16-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.9
25.0	100.0	0.0250	85.8
19.0	100.0	0.0162	82.4
12.5	100.0	0.0102	67.3
9.5	100.0	0.0075	60.6
4.75	100.0	0.0054	55.6
2.00	100.0	0.0028	42.2
1.180	100.0	0.0012	30.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	62.6	75 µm to 2 µm
Clay	37.3	<2 µm



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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	203UD1
Project No.:	1560-193-00	**Source:**	22CH203
Owner:	EID	**Sample Depth:**	7.3m
File No.:	DT - 203UD1	**Date:**	28-Jul-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CH — Inorganic clays of high plasticity, fat clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1839.1	kg/m^3	**Classification:**	ND4	
Moisture Content (before):	11.1	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	12.8	%	**Flow Rate:**	0.98	ml/s
Length of Sample:	39.4	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	204SPT3
Project No.:	1560-193-00	**Source:**	22BH204
Owner:	Eastern irrigation District	**Sample Depth:**	4.6m
File No.:	DT - 204SPT3	**Date:**	9-May-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI — Inorganic clays of medium plasticity, silty clays
Sample Type: SPT

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1695	kg/m^3	**Classification:**	D2	
Moisture Content (before):	20.9	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	23.4	%	**Flow Rate:**	1.16	ml/s
Length of Sample:	39.7	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	204RC1
Project No.:	1560-193-00	**Source:**	22BH204
Owner:	EID	**Sample Depth:**	5.2m
File No.:	DT - 204RC1	**Date:**	16-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI — Inorganic clays of medium plasticity, silty clays
Sample Type: Core

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1637.5	kg/m^3	**Classification:**	D2	
Moisture Content (before):	17.1	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	18.5	%	**Flow Rate:**	1.95	ml/s
Length of Sample:	38.7	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	204UD7
Project No.:	1560-193-00	**Source:**	22CH204
Owner:	EID	**Sample Depth:**	22.1m
File No.:	DT - 204UD7	**Date:**	16-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Remolded	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1636.5	kg/m^3	**Classification:**	D2	
Moisture Content (before):	10.6	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	13.8	%	**Flow Rate:**	1.38	ml/s
Length of Sample:	38.8	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	206RC4
Project No.:	1560-193-00	**Source:**	22CH206
Owner:	EID	**Sample Depth:**	6.5m
File No.:	DT - 206RC4	**Date:**	18-Mar-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Remolded	Shale was ground up from core and compacted in mold with additional moisture added

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1439.9	kg/m^3	**Classification:**	D2	
Moisture Content (before):	32.0	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	32.5	%	**Flow Rate:**	1.34	ml/s

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	206RC4
Project No.:	1560-193-00	**Source:**	22CH206
Owner:	EID	**Sample Depth:**	6.5m
File No.:	DT - 206RC4	**Date:**	18-Mar-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Remolded	Shale was ground up from core and compacted in mold at the existing moisture content

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1739.8	kg/m^3	**Classification:**	D2	
Moisture Content (before):	14.5	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	13.8	%	**Flow Rate:**	1.08	ml/s

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	207UD1
Project No.:	1560-193-00	**Source:**	22CH207
Owner:	EID	**Sample Depth:**	8.2m
File No.:	DT - 207UD1	**Date:**	15-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI — Inorganic clays of medium plasticity, silty clays
Sample Type: Core

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1764.4	kg/m^3	**Classification:**	ND4	
Moisture Content (before):	12.3	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	13.0	%	**Flow Rate:**	0.89	ml/s
Length of Sample:	39.1	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	208SPT4
Project No.:	1560-193-00	**Source:**	22BH208
Owner:	Eastern irrigation District	**Sample Depth:**	6.1m
File No.:	DT - 208SPT4	**Date:**	9-May-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CL — Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays
Sample Type: SPT

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1751	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	14.8	%	**Hydraulic Head:**	180	mm
Moisture Content (After):	15.9	%	**Flow Rate:**	2.15	ml/s
Length of Sample:	39.5	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	209RC10
Project No.:	1560-193-00	**Source:**	22CH209
Owner:	EID	**Sample Depth:**	18.2m
File No.:	DT - 209RC10	**Date:**	20-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Remolded	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1650.5	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	10.9	%	**Hydraulic Head:**	180	mm
Moisture Content (After):	13.2	%	**Flow Rate:**	2.53	ml/s
Length of Sample:	39.2	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	211RC1
Project No.:	1560-193-00	**Source:**	22CH211
Owner:	EID	**Sample Depth:**	3.7m
File No.:	DT - 211RC1	**Date:**	15-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Remolded	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1642.2	kg/m^3	**Classification:**	ND4	
Moisture Content (before):	20.8	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	22.6	%	**Flow Rate:**	0.88	ml/s
Length of Sample:	38.1	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	212SPT3
Project No.:	1560-193-00	**Source:**	22BH212
Owner:	Eastern irrigation District	**Sample Depth:**	4.6m
File No.:	DT - 212SPT3	**Date:**	9-May-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CH — Inorganic clays of high plasticity, fat clays
DT - SPT

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1771	kg/m^3	**Classification:**	D2	
Moisture Content (before):	13.1	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	15.5	%	**Flow Rate:**	1.62	ml/s
Length of Sample:	39.6	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	217SPT3
Project No.:	1560-193-00	**Source:**	22BH217
Owner:	Eastern irrigation District	**Sample Depth:**	4.6m
File No.:	DT - 217SPT3	**Date:**	9-May-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	SPT	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1799	kg/m^3	**Classification:**	D2	
Moisture Content (before):	13.6	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	14.4	%	**Flow Rate:**	1.27	ml/s
Length of Sample:	38.5	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	219SPT2
Project No.:	1560-193-00	**Source:**	22BH219
Owner:	EID	**Sample Depth:**	3.0m
File No.:	DT - 219SPT2	**Date:**	9-May-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	SPT	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1574	kg/m^3	**Classification:**	ND4	
Moisture Content (before):	21.2	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	21.9	%	**Flow Rate:**	0.96	ml/s
Length of Sample:	38.4	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	221SPT3
Project No.:	1560-193-00	**Source:**	22BH221
Owner:	EID	**Sample Depth:**	4.6m
File No.:	DT - 221SPT3	**Date:**	9-May-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI — Inorganic clays of medium plasticity, silty clays
Sample Type: SPT

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1615	kg/m^3	**Classification:**	ND1	
Moisture Content (before):	14.6	%	**Hydraulic Head:**	1020	mm
Moisture Content (After):	23.2	%	**Flow Rate:**	2.73	ml/s
Length of Sample:	38.0	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	221RC2
Project No.:	1560-193-00	**Source:**	22CH221
Owner:	EID	**Sample Depth:**	8.8m
File No.:	DT - 221RC2	**Date:**	20-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CH — Inorganic clays of high plasticity, fat clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1568.9	kg/m^3	**Classification:**	D2	
Moisture Content (before):	12.3	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	13.0	%	**Flow Rate:**	1.96	ml/s
Length of Sample:	37.9	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	222SPT3
Project No.:	1560-193-00	**Source:**	22BH222
Owner:	EID	**Sample Depth:**	4.5m
File No.:	DT - 222SPT3	**Date:**	16-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	SPT	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1754.9	kg/m^3	**Classification:**	D2	
Moisture Content (before):	11.0	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	13.0	%	**Flow Rate:**	1.14	ml/s
Length of Sample:	39.9	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	223AU3
Project No.:	1560-193-00	**Source:**	22BH223
Owner:	EID	**Sample Depth:**	2.4m
File No.:	DT - 223AU3	**Date:**	20-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CH — Inorganic clays of high plasticity, fat clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1653.7	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	20.7	%	**Hydraulic Head:**	180	mm
Moisture Content (After):	22.0	%	**Flow Rate:**	2.95	ml/s
Length of Sample:	38.9	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	226SPT2
Project No.:	1560-193-00	**Source:**	22BH226
Owner:	EID	**Sample Depth:**	3.0m
File No.:	DT - 226SPT2	**Date:**	9-May-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	SPT	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1641	kg/m^3	**Classification:**	D2	
Moisture Content (before):	17.3	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	23.7	%	**Flow Rate:**	1.22	ml/s
Length of Sample:	39.7	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	225RC1
Project No.:	1560-193-00	**Source:**	22CH225
Owner:	EID	**Sample Depth:**	3.7m
File No.:	DT - 225RC1	**Date:**	15-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CH Inorganic clays of high plasticity, fat clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1614.9	kg/m^3	**Classification:**	D2	
Moisture Content (before):	23.9	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	25.0	%	**Flow Rate:**	1.37	ml/s
Length of Sample:	38.0	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	226RC2
Project No.:	1560-193-00	**Source:**	22CH226
Owner:	EID	**Sample Depth:**	9.0m
File No.:	DT - 226RC2	**Date:**	20-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Remolded	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1678.6	kg/m^3	**Classification:**	D2	
Moisture Content (before):	22.6	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	23.9	%	**Flow Rate:**	1.86	ml/s
Length of Sample:	38.0	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	228UD1
Project No.:	1560-193-00	**Source:**	22CH228
Owner:	EID	**Sample Depth:**	8.70m
File No.:	DT - 228UD1	**Date:**	23-Aug-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CH — Inorganic clays of high plasticity, fat clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1718.7	kg/m^3	**Classification:**	ND4	
Moisture Content (before):	12.9	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	14.4	%	**Flow Rate:**	0.87	ml/s
Length of Sample:	41.5	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	228UD2
Project No.:	1560-193-00	**Source:**	22CH228
Owner:	EID	**Sample Depth:**	11.2m
File No.:	DT - 228UD2	**Date:**	13-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CH — Inorganic clays of high plasticity, fat clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1502.2	kg/m^3	**Classification:**	D2	
Moisture Content (before):	28.0	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	28.9	%	**Flow Rate:**	1.34	ml/s
Length of Sample:	41.1	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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ATTERBERG LIMITS

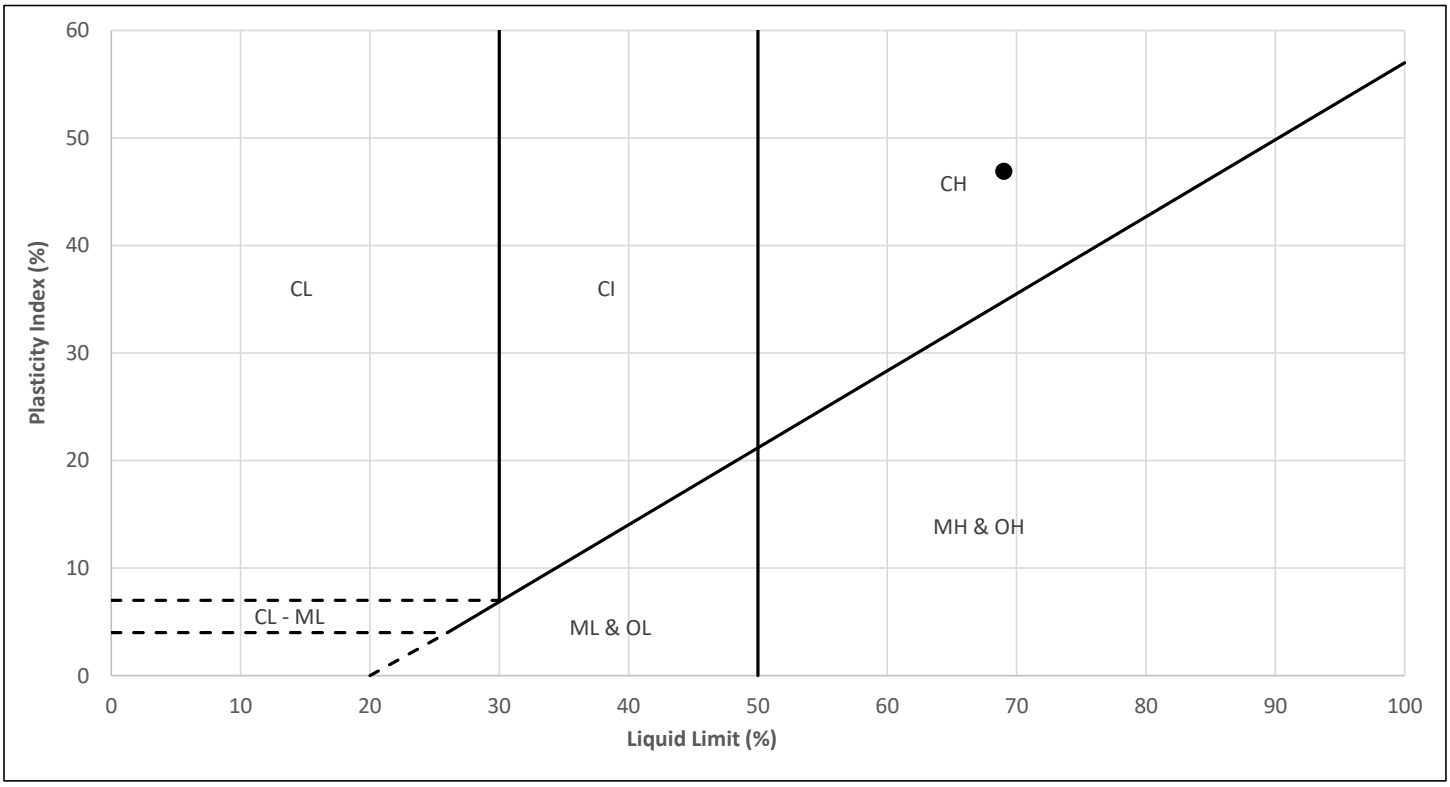
Project:	Snake Lake Reservoir Expansion	**Sample #:**	300AU5
Project No.:	1560-193-00	**Source:**	22BH300
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 300AU5	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	69.0
Plastic Limit (PL)	22.1
Plasticity Index (PI)	46.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

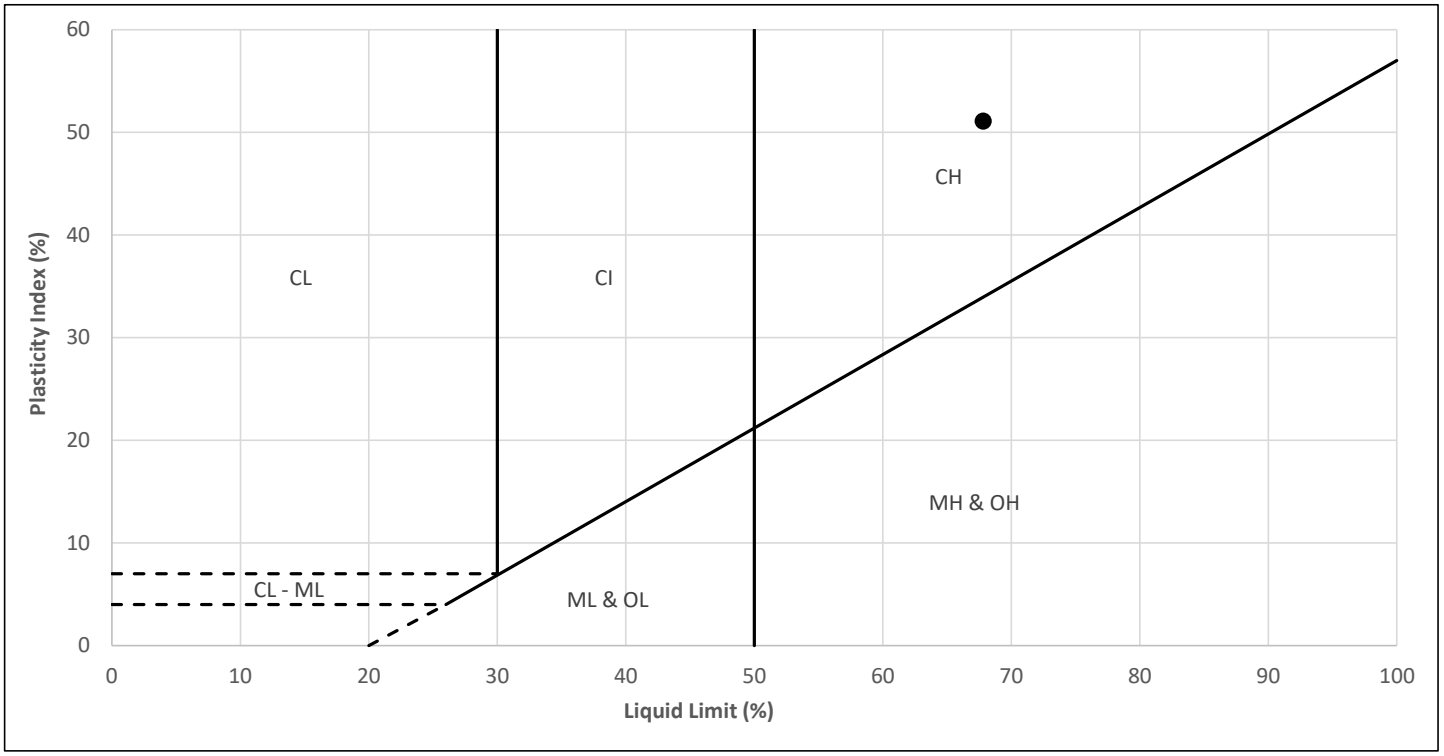
Project:	Snake Lake Reservoir Expansion	**Sample #:**	300AU11
Project No.:	1560-193-00	**Source:**	22BH300
Owner:	EID	**Sample Depth:**	8.2m
File No.:	AL - 300AU11	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	67.8
Plastic Limit (PL)	16.7
Plasticity Index (PI)	51.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

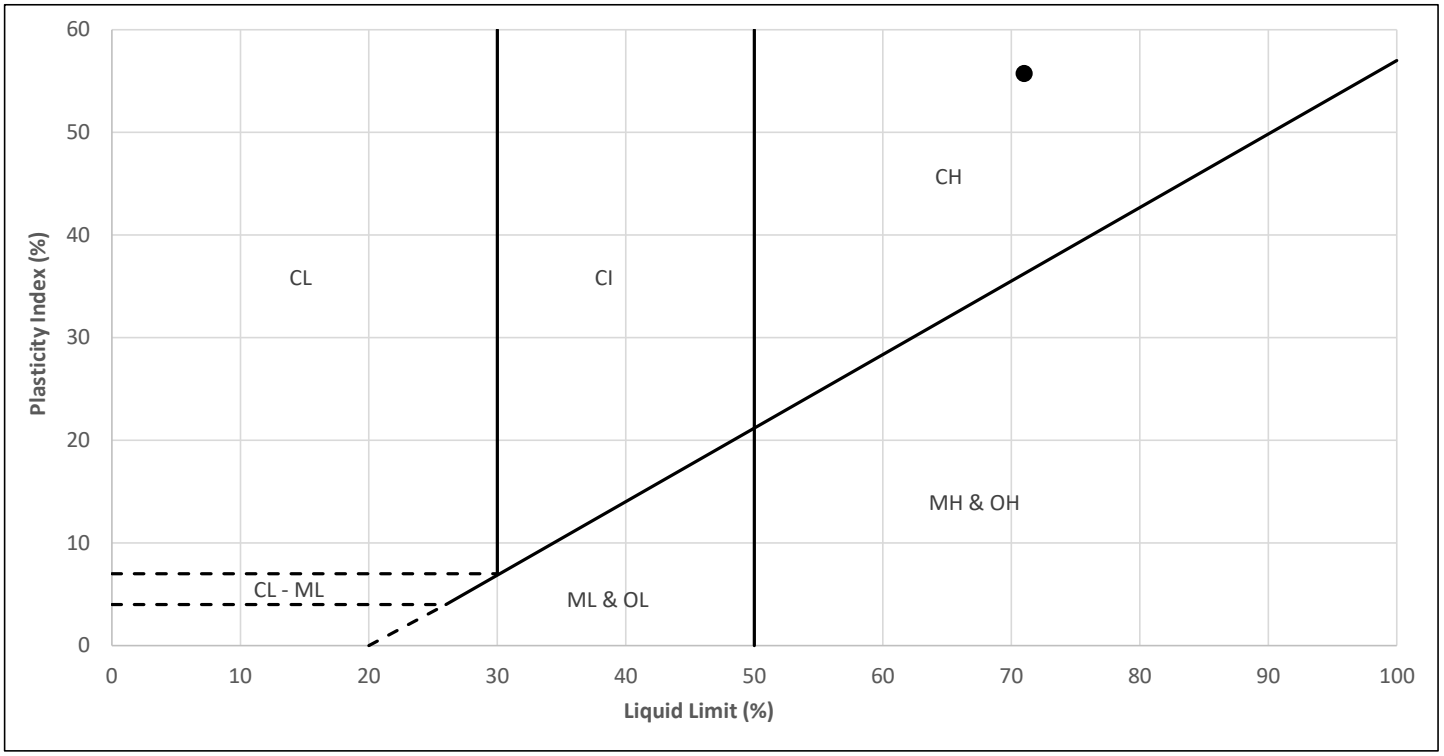
Project:	Snake Lake Reservoir Expansion	**Sample #:**	300RC2
Project No.:	1560-193-00	**Source:**	22CH300
Owner:	EID	**Sample Depth:**	6.6m
File No.:	AL - 300RC2	**Test Date:**	12-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	71.0
Plastic Limit (PL)	15.3
Plasticity Index (PI)	55.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

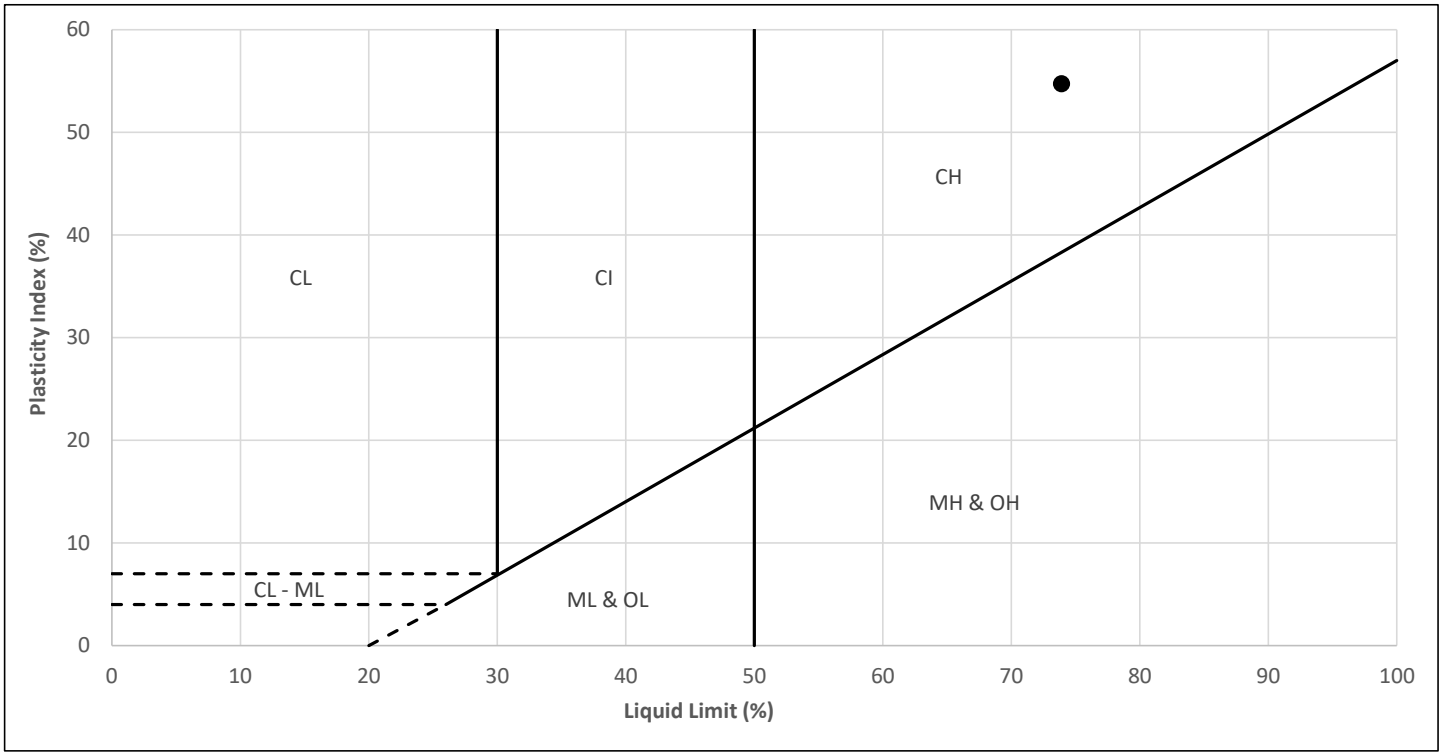
Project:	Snake Lake Reservoir Expansion	**Sample #:**	300RC5
Project No.:	1560-193-00	**Source:**	22CH300
Owner:	EID	**Sample Depth:**	11.1m
File No.:	AL - 300RC5	**Test Date:**	1-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	73.9
Plastic Limit (PL)	19.1
Plasticity Index (PI)	54.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

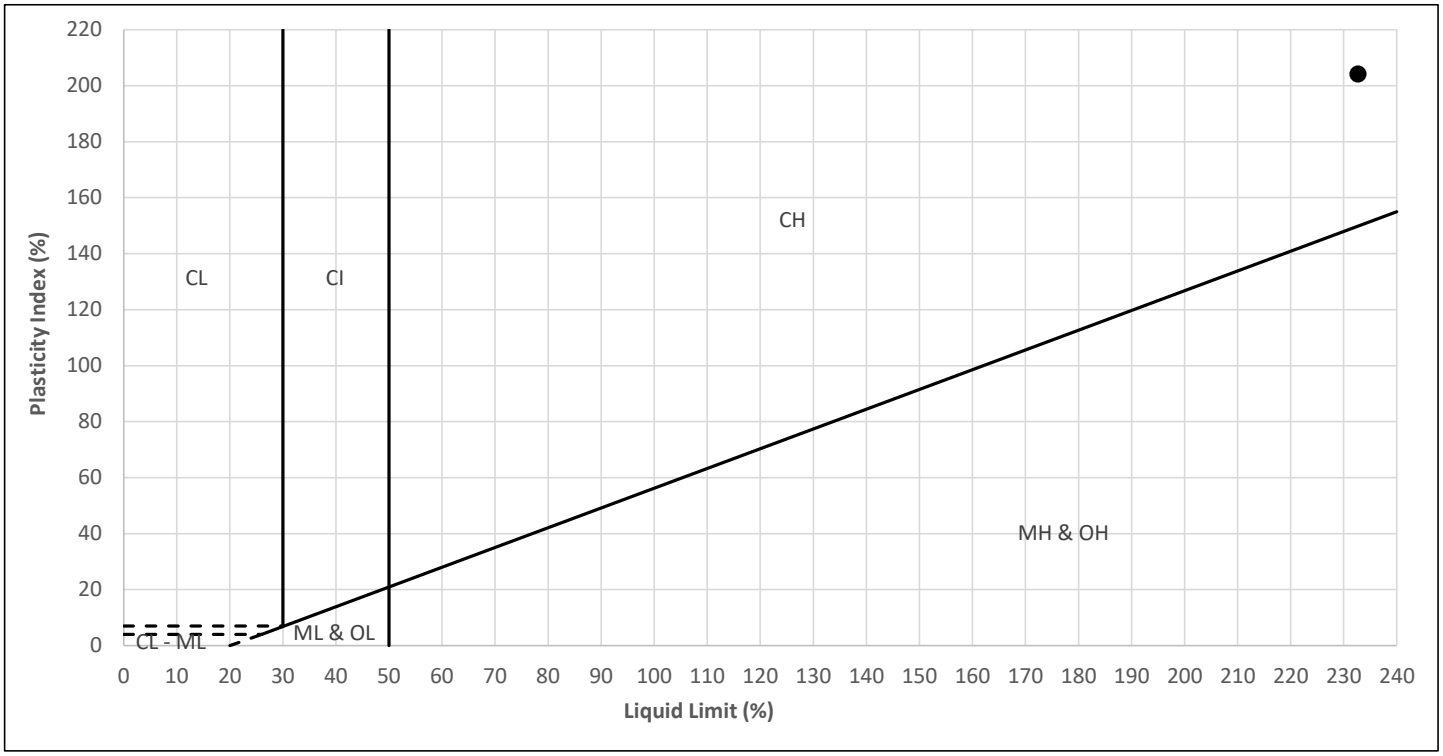
Project:	Snake Lake Reservoir Expansion	**Sample #:**	300RC8
Project No.:	1560-193-00	**Source:**	22CH300
Owner:	EID	**Sample Depth:**	16.0m
File No.:	AL - 300RC8	**Test Date:**	7-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	232.7
Plastic Limit (PL)	28.5
Plasticity Index (PI)	204.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

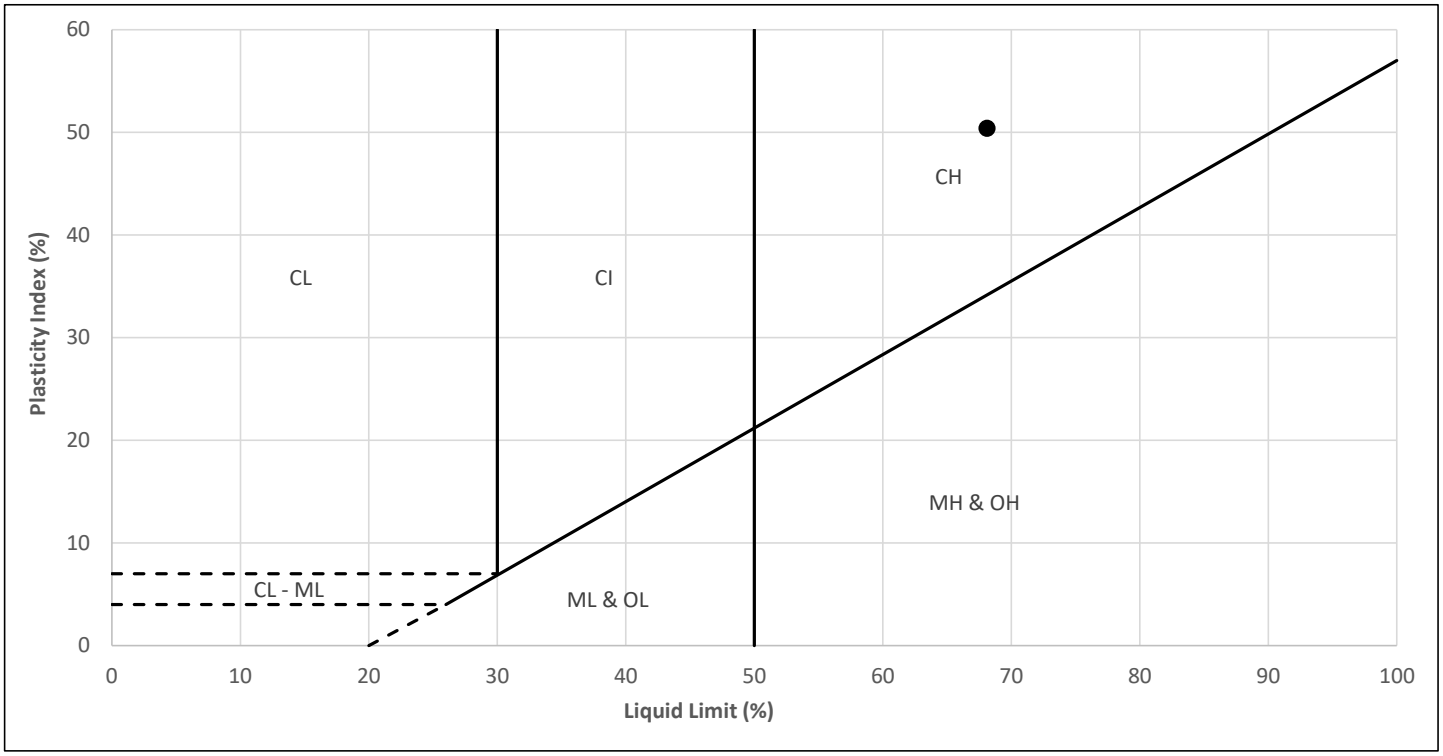
Project:	Snake Lake Reservoir Expansion	**Sample #:**	300RC16
Project No.:	1560-193-00	**Source:**	22CH300
Owner:	EID	**Sample Depth:**	27.6m
File No.:	AL - 300RC16	**Test Date:**	6-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	68.1
Plastic Limit (PL)	17.7
Plasticity Index (PI)	50.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

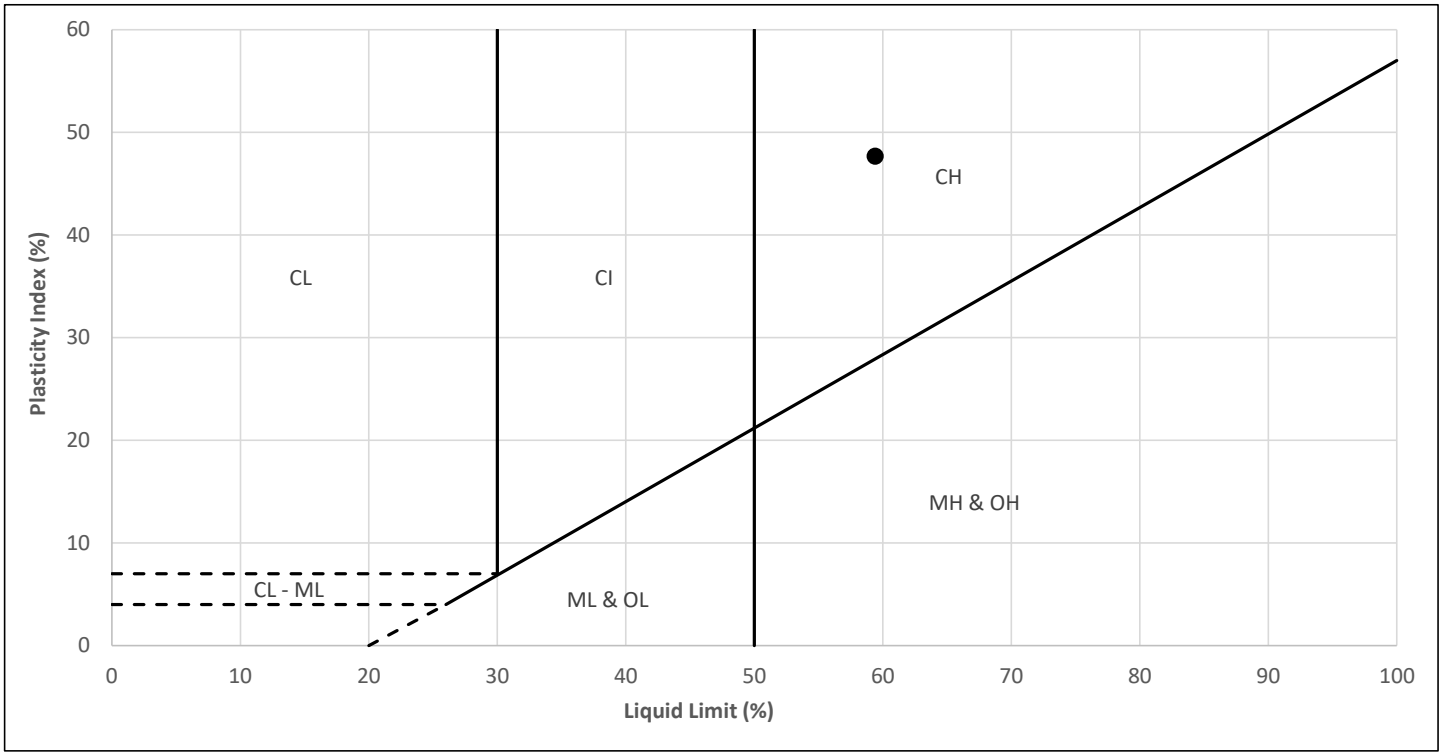
Project:	Snake Lake Reservoir Expansion	**Sample #:**	301AU2
Project No.:	1560-193-00	**Source:**	22BH301
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 301AU2	**Date:**	17-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information avalible upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	59.4
Plastic Limit (PL)	11.7
Plasticity Index (PI)	47.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

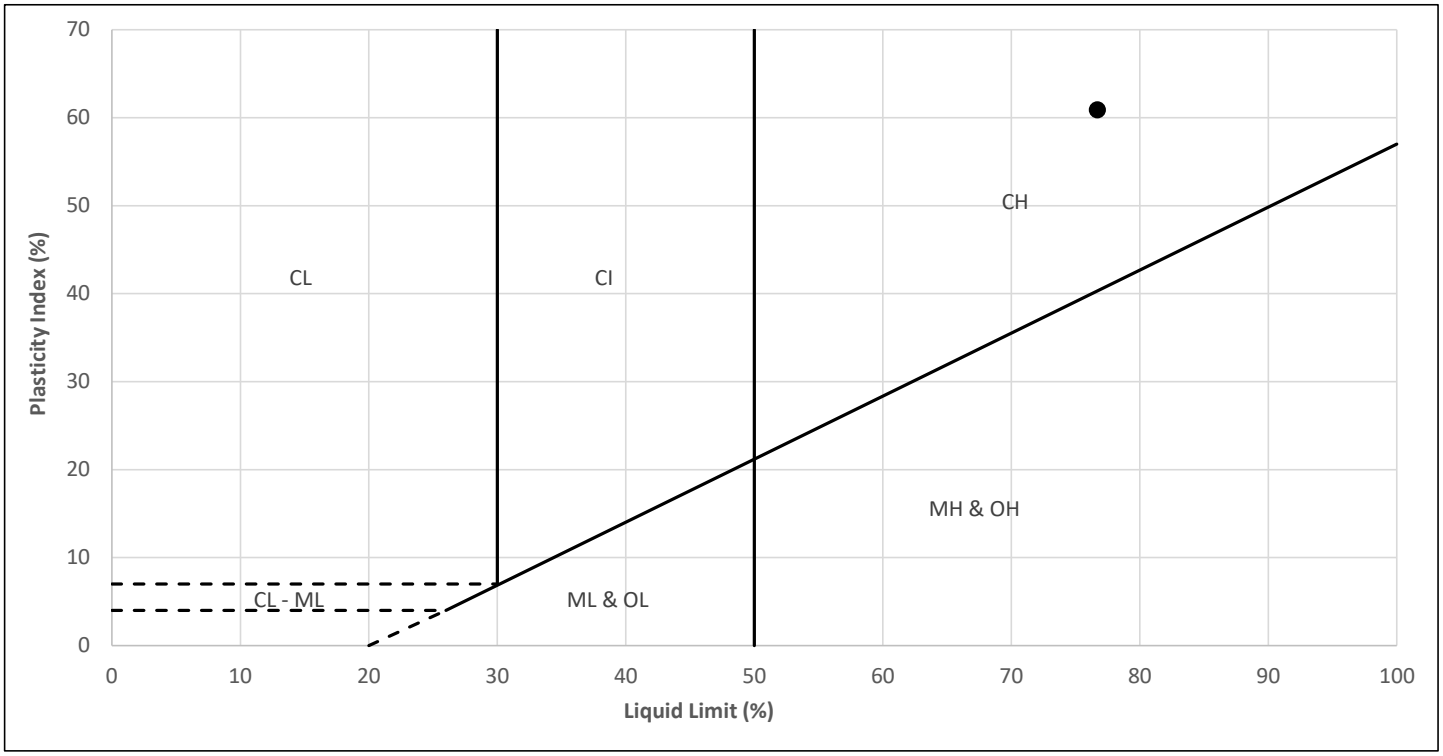
Project:	Snake Lake Reservoir Expansion	**Sample #:**	301RC1
Project No.:	1560-193-00	**Source:**	22CH301
Owner:	EID	**Sample Depth:**	8.0m
File No.:	AL - 301RC1	**Test Date:**	8-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	76.7
Plastic Limit (PL)	15.8
Plasticity Index (PI)	60.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

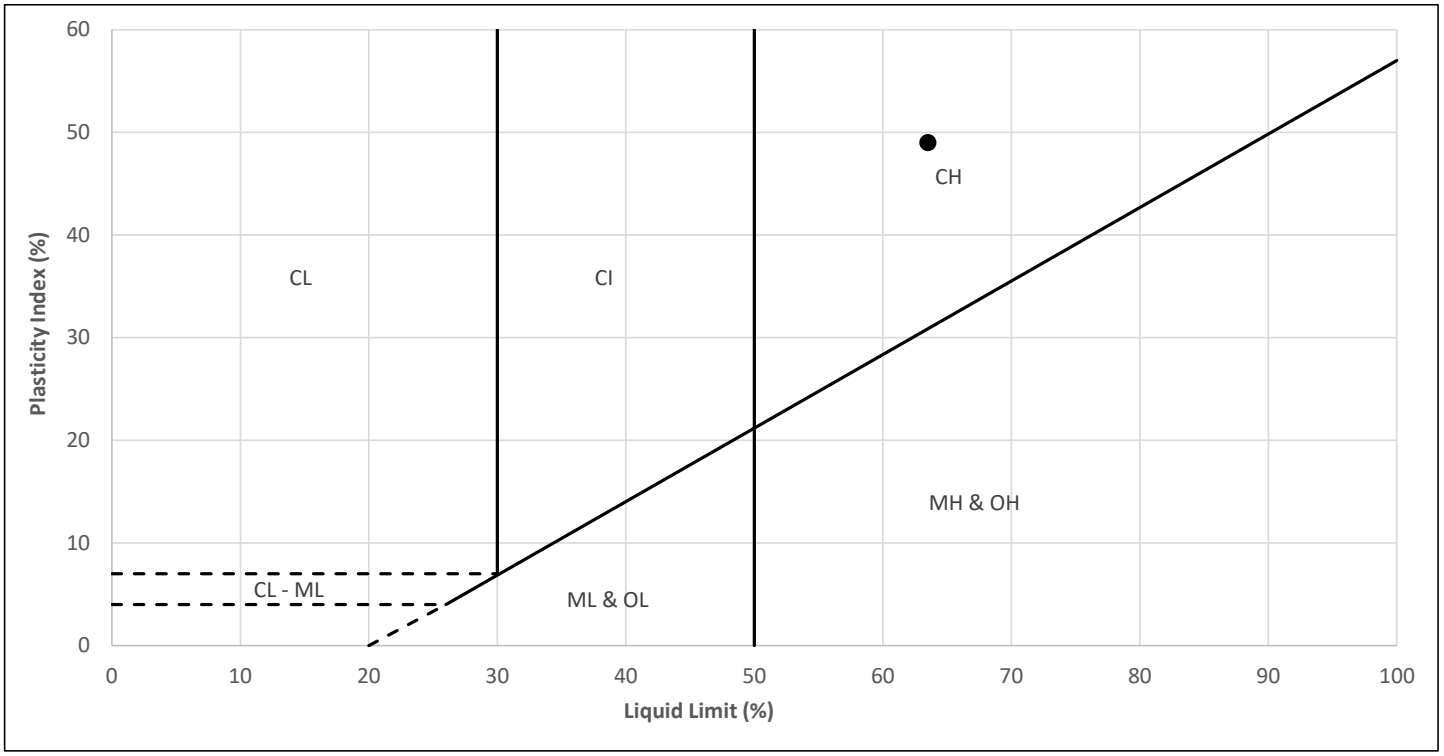
Project:	Snake Lake Reservoir Expansion	**Sample #:**	301RC9
Project No.:	1560-193-00	**Source:**	22CH301
Owner:	EID	**Sample Depth:**	20.9m
File No.:	AL - 301RC9	**Test Date:**	13-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	63.5
Plastic Limit (PL)	14.5
Plasticity Index (PI)	49.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

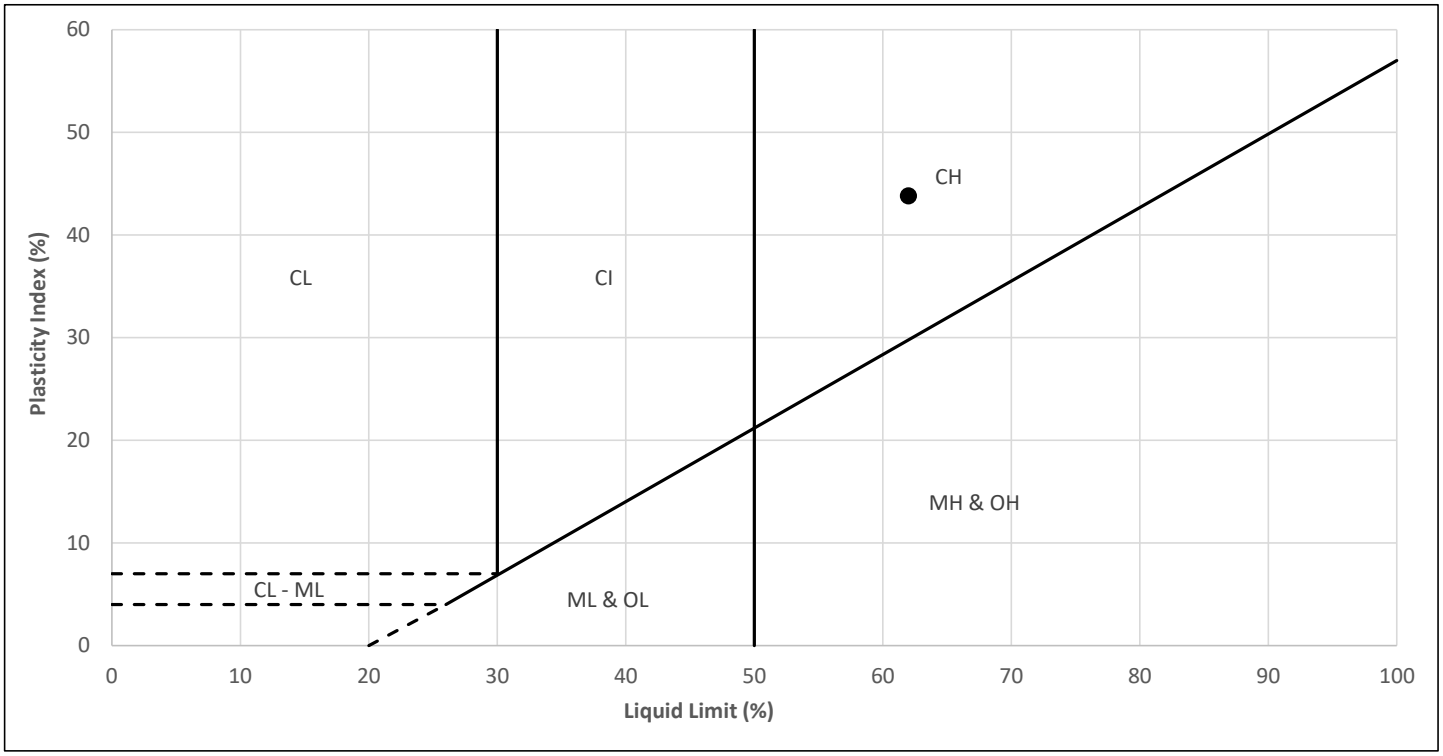
Project:	Snake Lake Reservoir Expansion	**Sample #:**	301RC14
Project No.:	1560-193-00	**Source:**	22CH301
Owner:	EID	**Sample Depth:**	28.0m
File No.:	AL - 301RC14	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	62.0
Plastic Limit (PL)	18.2
Plasticity Index (PI)	43.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

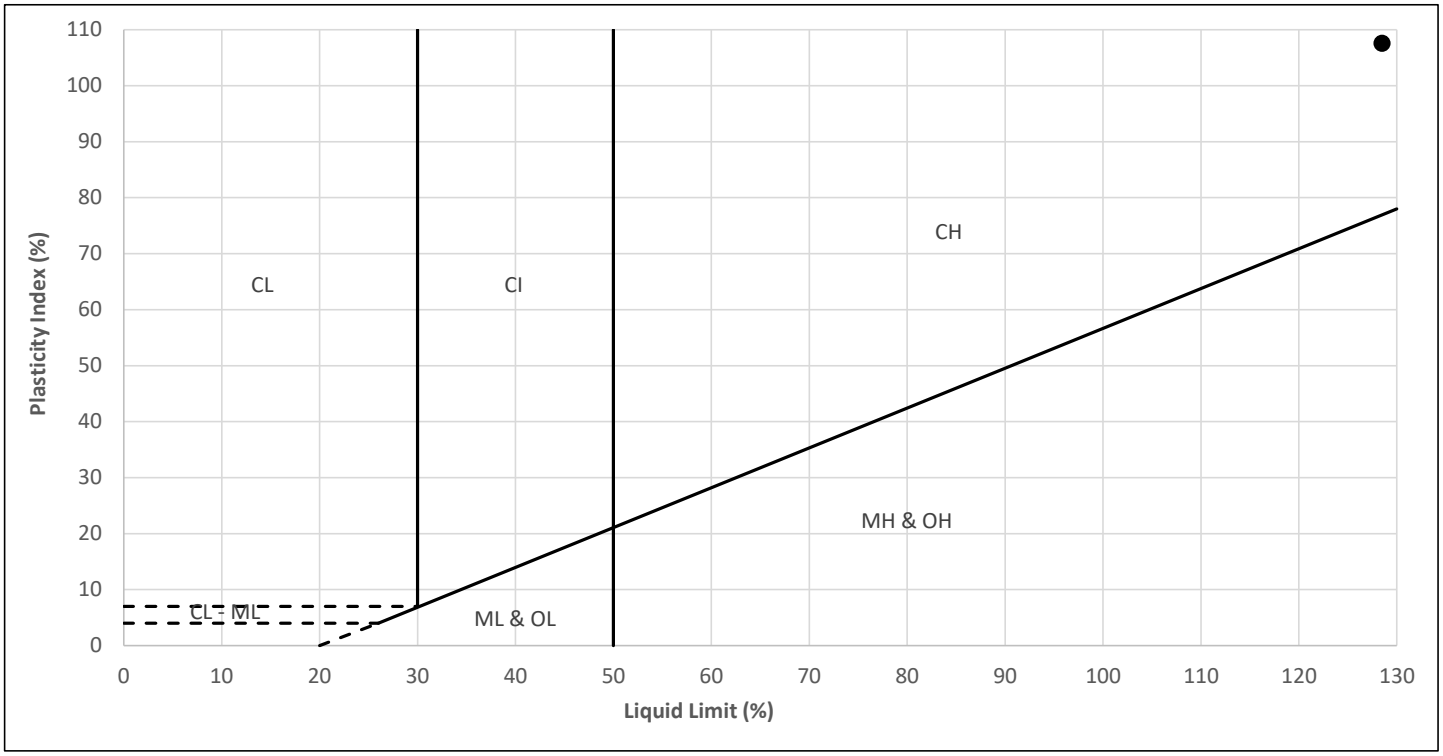
Project:	Snake Lake Reservoir Expansion	**Sample #:**	301UD3
Project No.:	1560-193-00	**Source:**	22CH301
Owner:	EID	**Sample Depth:**	16.1m
File No.:	AL - 301UD3	**Test Date:**	8-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	128.5
Plastic Limit (PL)	20.9
Plasticity Index (PI)	107.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

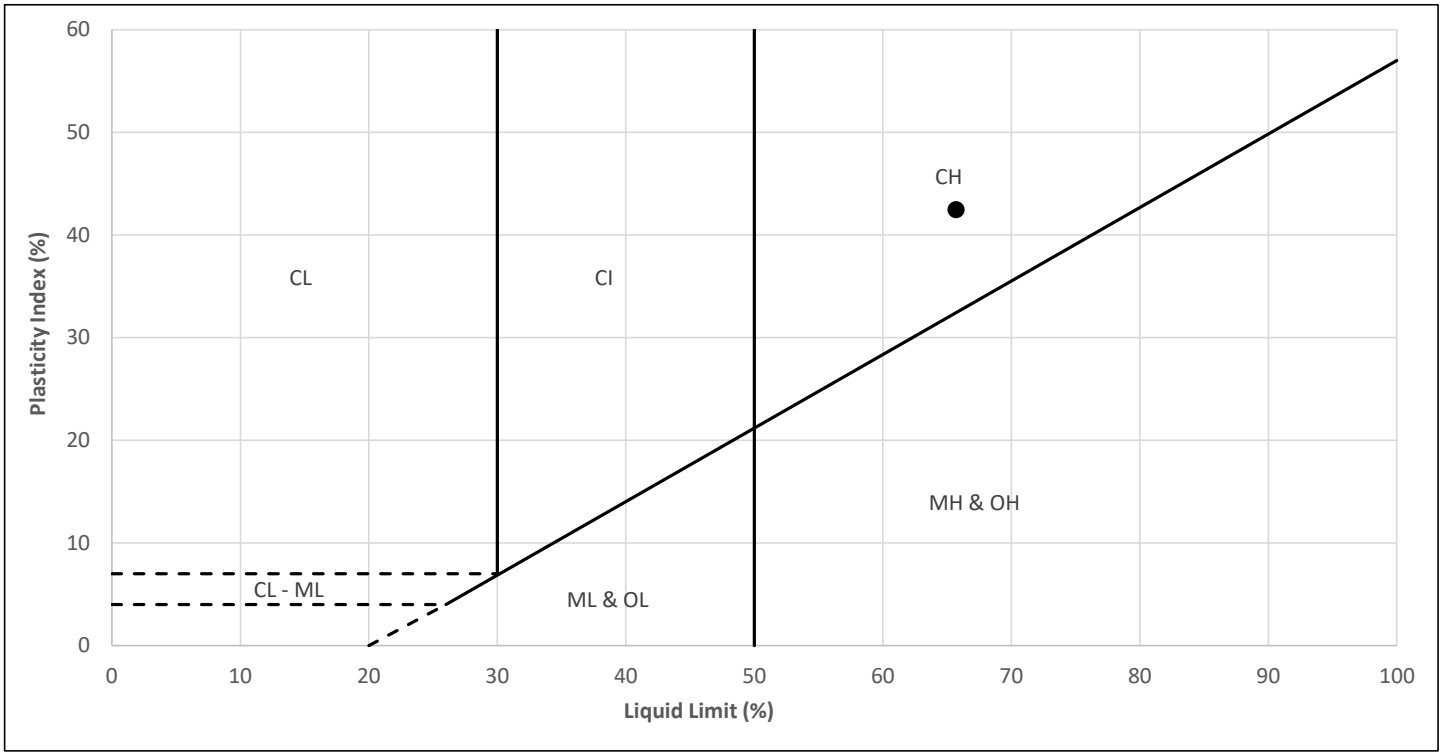
Project:	Snake Lake Reservoir Expansion	**Sample #:**	302RC2
Project No.:	1560-193-00	**Source:**	22CH302
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 302RC2	**Test Date:**	5-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	65.7
Plastic Limit (PL)	23.2
Plasticity Index (PI)	42.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

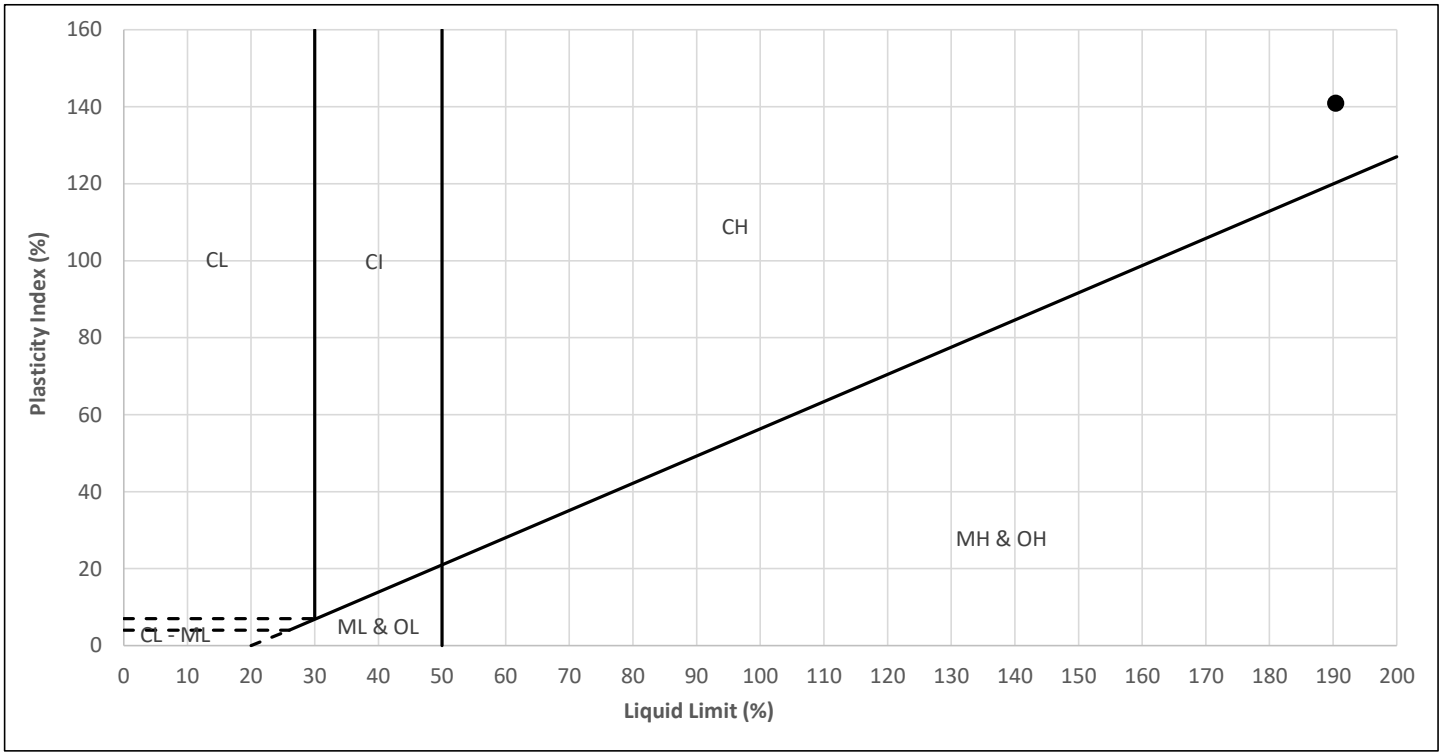
Project:	Snake Lake Reservoir Expansion	**Sample #:**	302RC10
Project No.:	1560-193-00	**Source:**	22CH302
Owner:	EID	**Sample Depth:**	15.9m
File No.:	AL - 302RC10	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	190.4
Plastic Limit (PL)	49.5
Plasticity Index (PI)	140.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

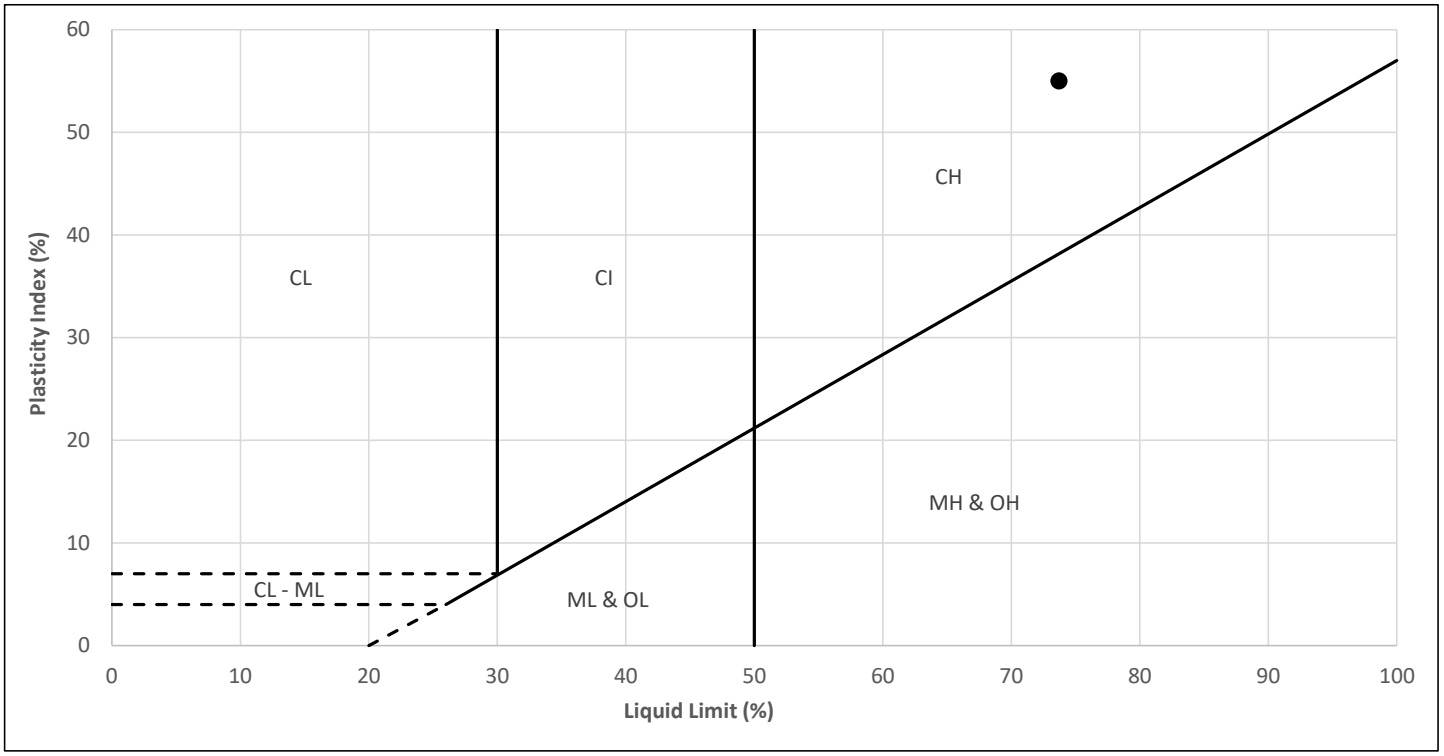
Project:	Snake Lake Reservoir Expansion	**Sample #:**	302RC13
Project No.:	1560-193-00	**Source:**	22CH309
Owner:	EID	**Sample Depth:**	20.5m
File No.:	AL - 302RC13	**Test Date:**	7-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	73.7
Plastic Limit (PL)	18.7
Plasticity Index (PI)	55.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

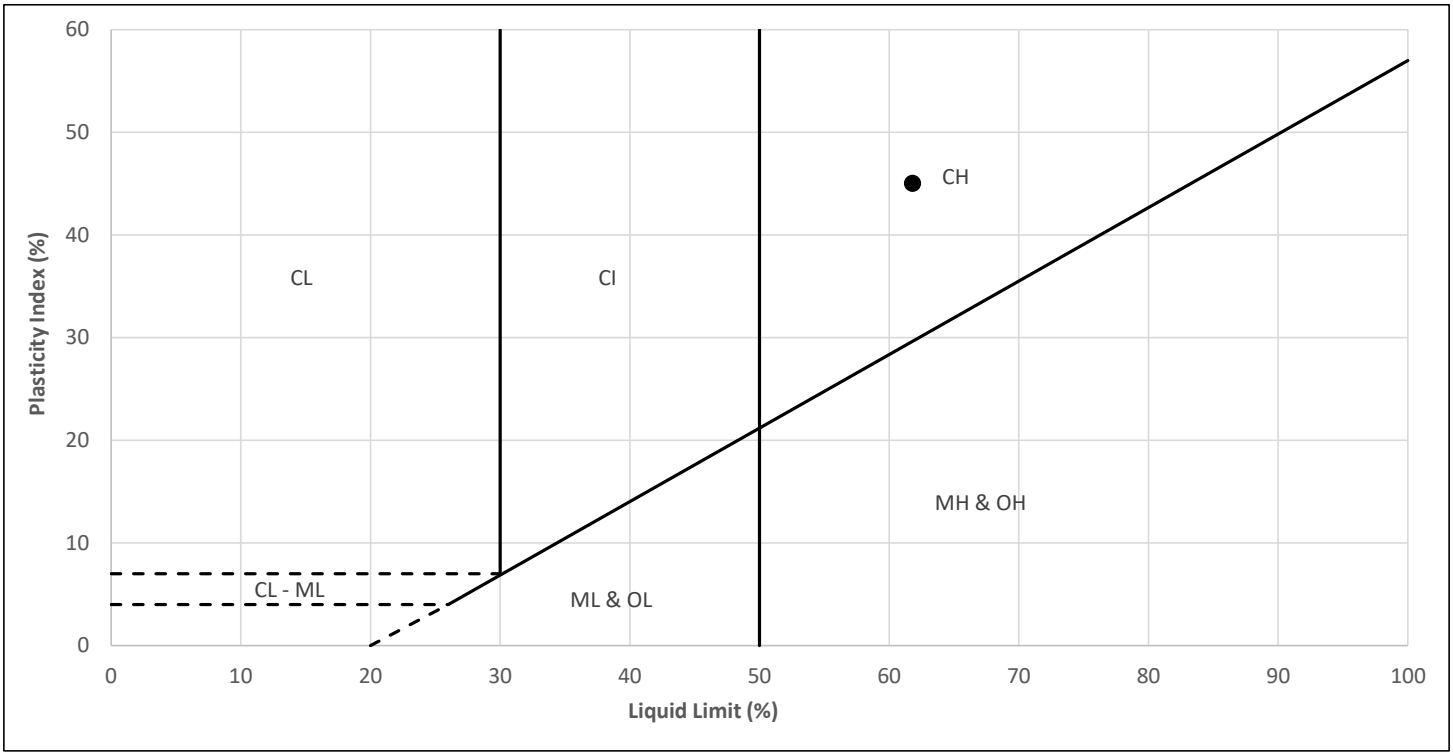
Project:	Snake Lake Reservoir Expansion	**Sample #:**	302UD8
Project No.:	1560-193-00	**Source:**	22CH302
Owner:	EID	**Sample Depth:**	28.34m
File No.:	AL - 302UD8	**Test Date:**	3-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	61.8
Plastic Limit (PL)	16.7
Plasticity Index (PI)	45.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

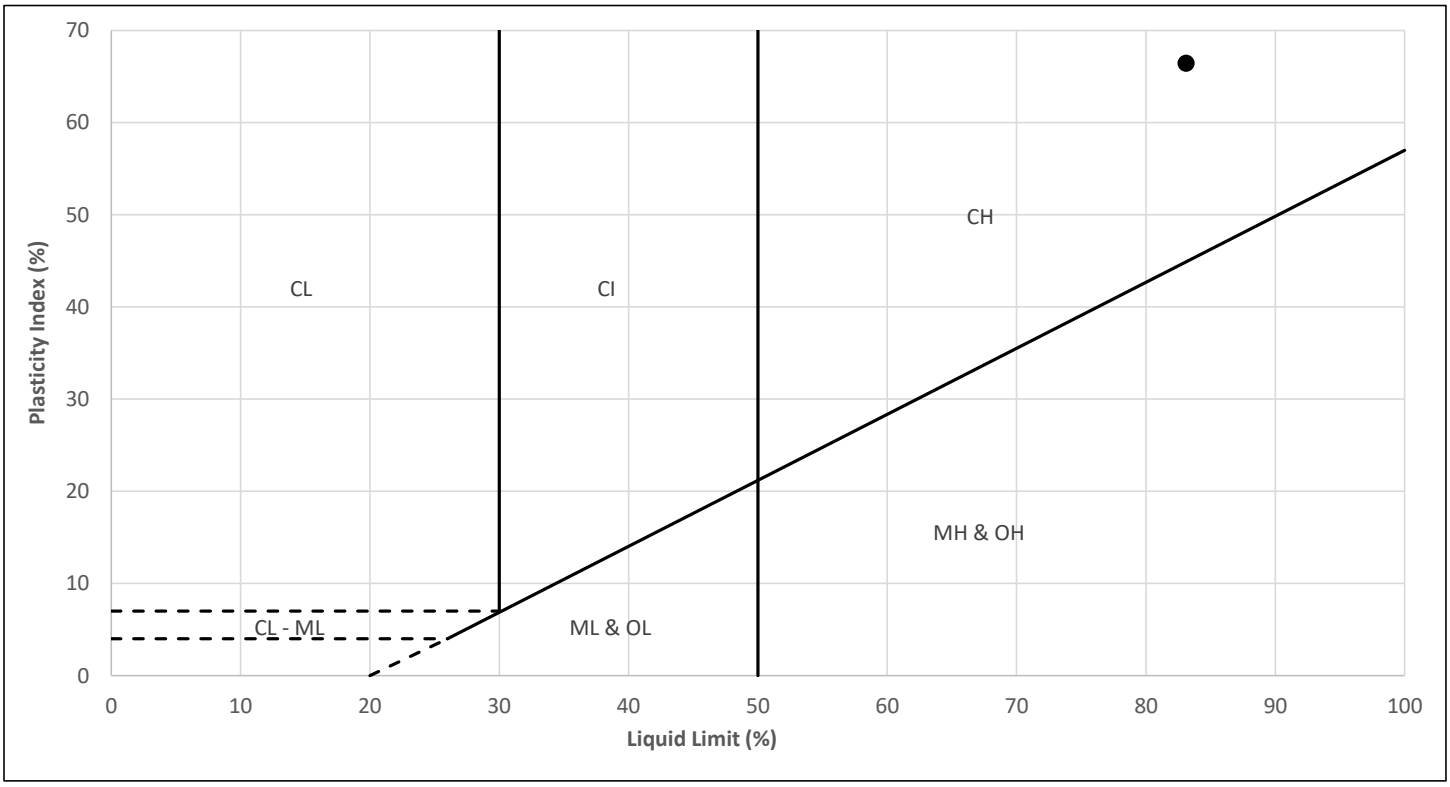
Project:	Snake Lake Reservoir Expansion	**Sample #:**	303AU3
Project No.:	1560-193-00	**Source:**	22BH303
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 303AU3	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	83.1
Plastic Limit (PL)	16.6
Plasticity Index (PI)	66.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

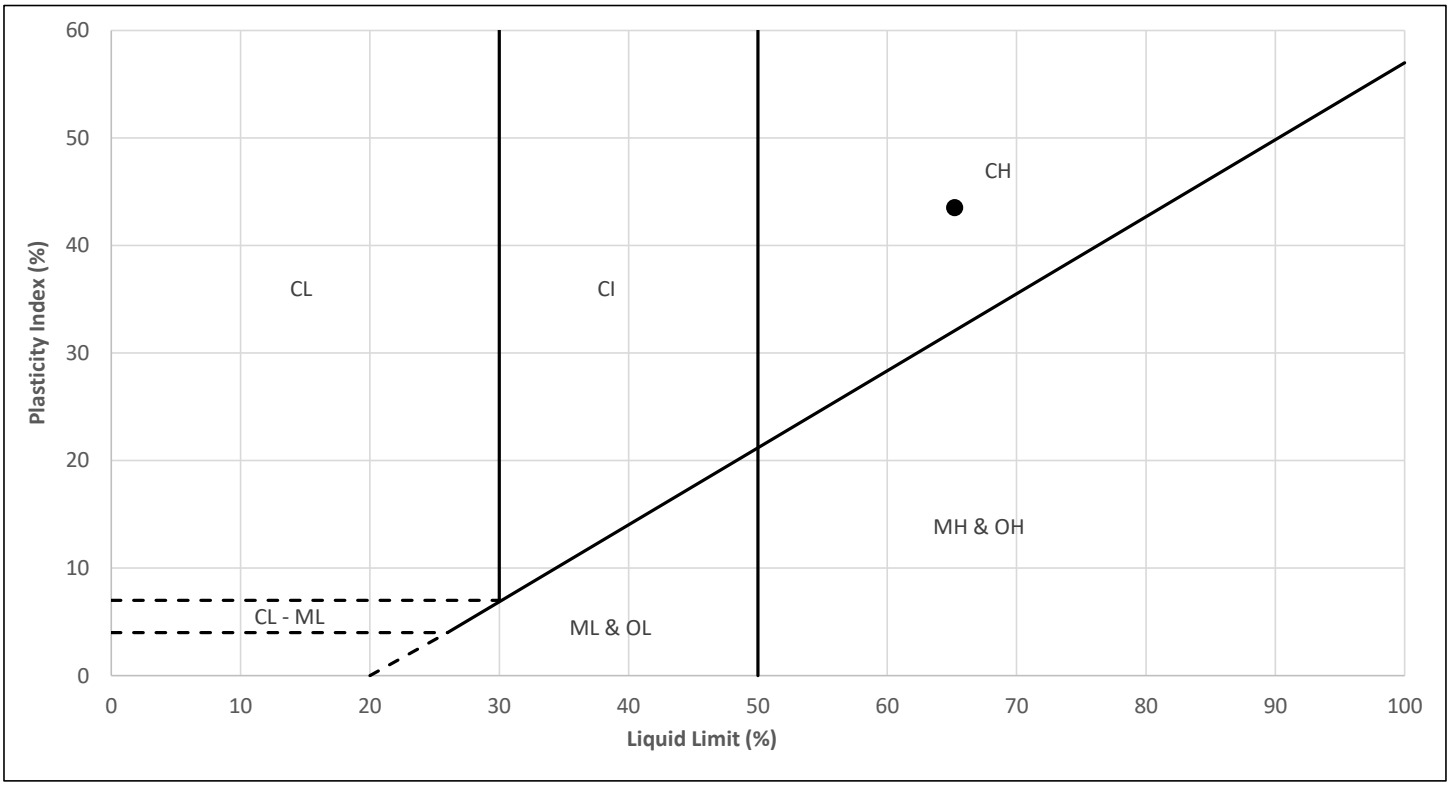
Project:	Snake Lake Reservoir Expansion	**Sample #:**	303AU5
Project No.:	1560-193-00	**Source:**	22BH303
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 303AU5	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	65.2
Plastic Limit (PL)	21.7
Plasticity Index (PI)	43.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

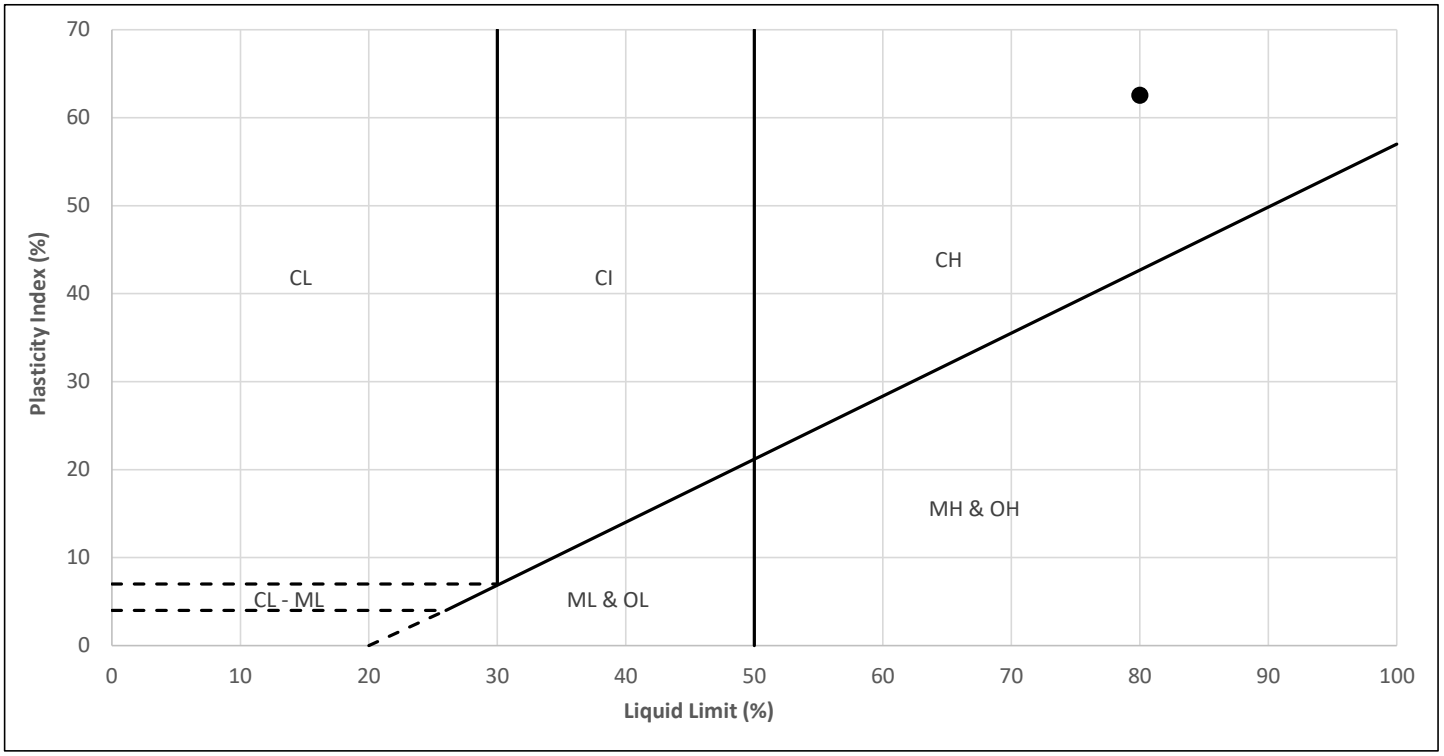
Project:	Snake Lake Reservoir Expansion	**Sample #:**	303RC1
Project No.:	1560-193-00	**Source:**	22CH303
Owner:	EID	**Sample Depth:**	8.0m
File No.:	AL - 303RC1	**Test Date:**	4-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	80.0
Plastic Limit (PL)	17.4
Plasticity Index (PI)	62.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

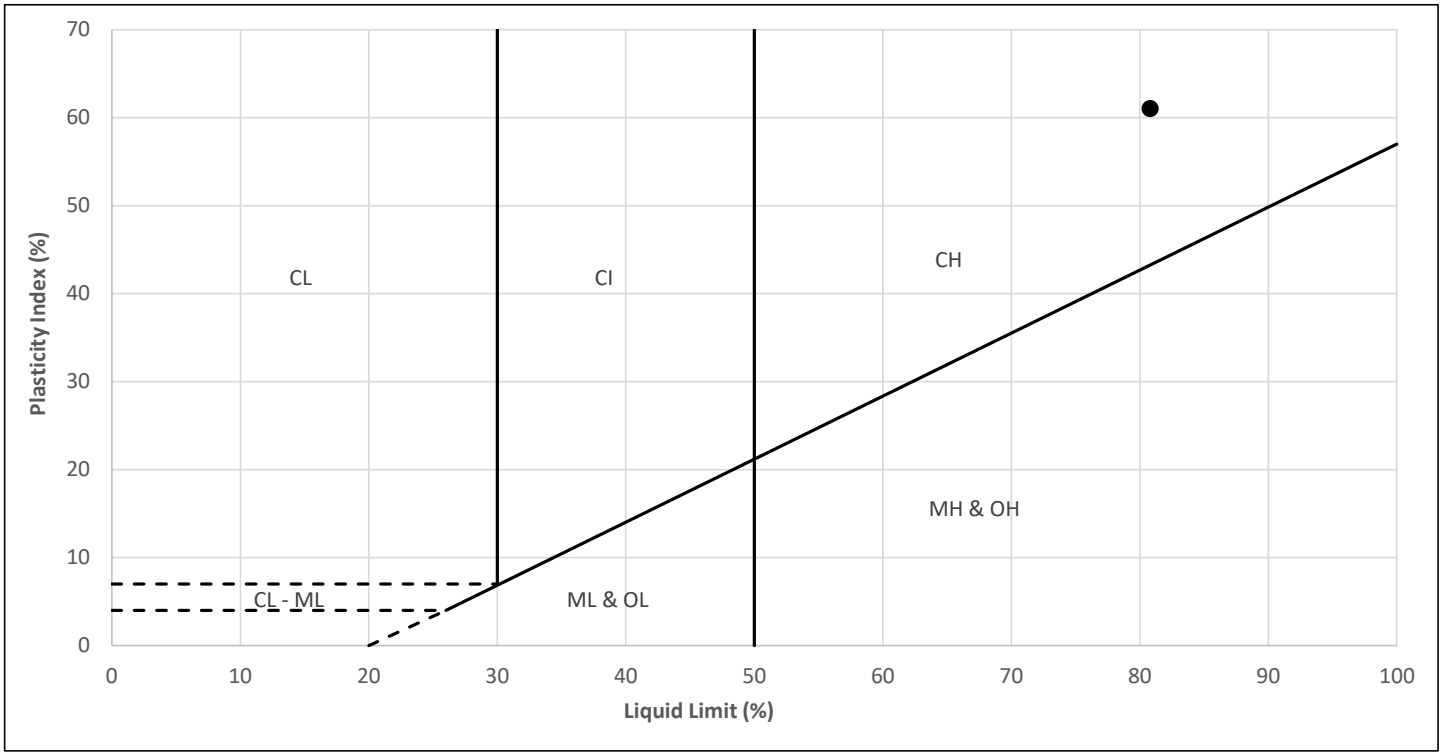
Project:	Snake Lake Reservoir Expansion	**Sample #:**	303RC4
Project No.:	1560-193-00	**Source:**	22CH309
Owner:	EID	**Sample Depth:**	12.7m
File No.:	AL - 303RC4	**Test Date:**	7-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	80.8
Plastic Limit (PL)	19.7
Plasticity Index (PI)	61.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

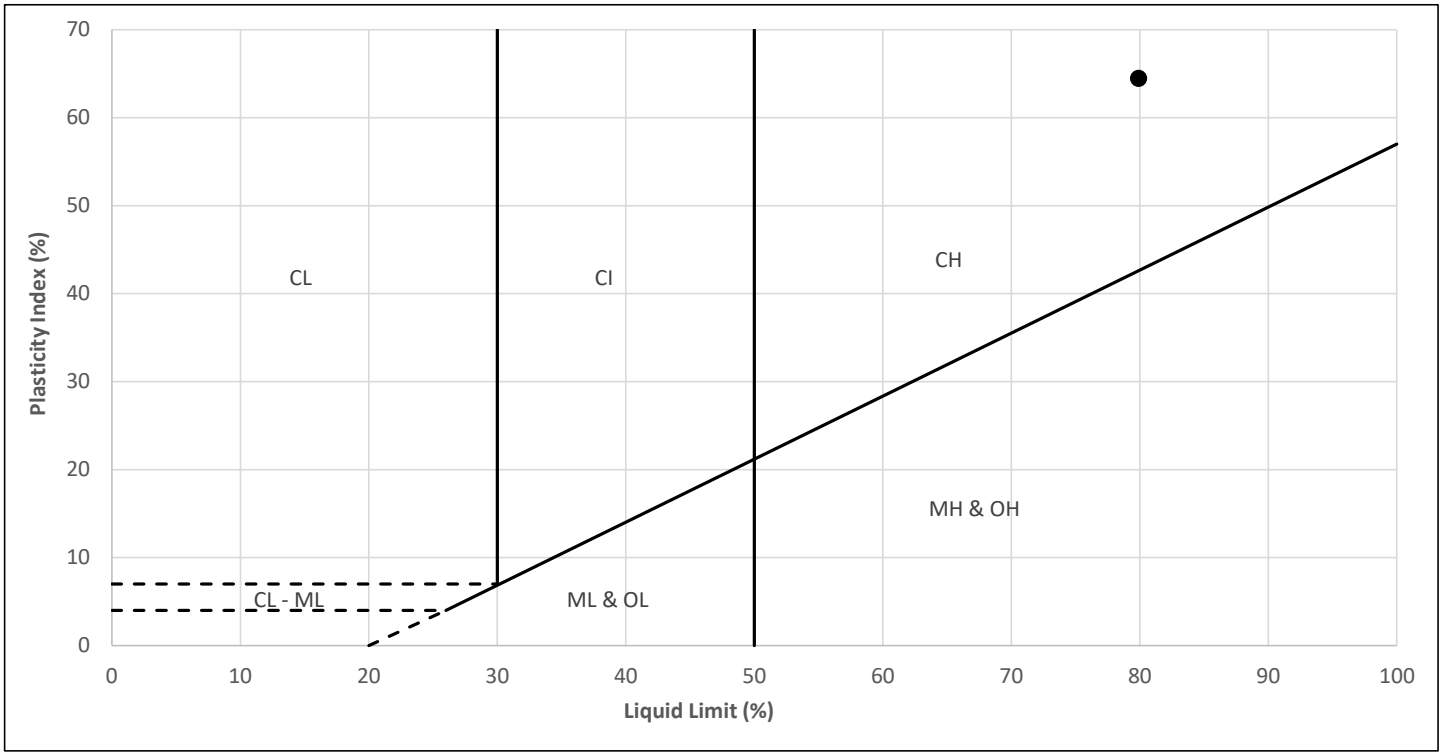
Project:	Snake Lake Reservoir Expansion	**Sample #:**	303UD5
Project No.:	1560-193-00	**Source:**	22CH303
Owner:	EID	**Sample Depth:**	21.15m
File No.:	AL - 303UD5	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	79.9
Plastic Limit (PL)	15.4
Plasticity Index (PI)	64.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

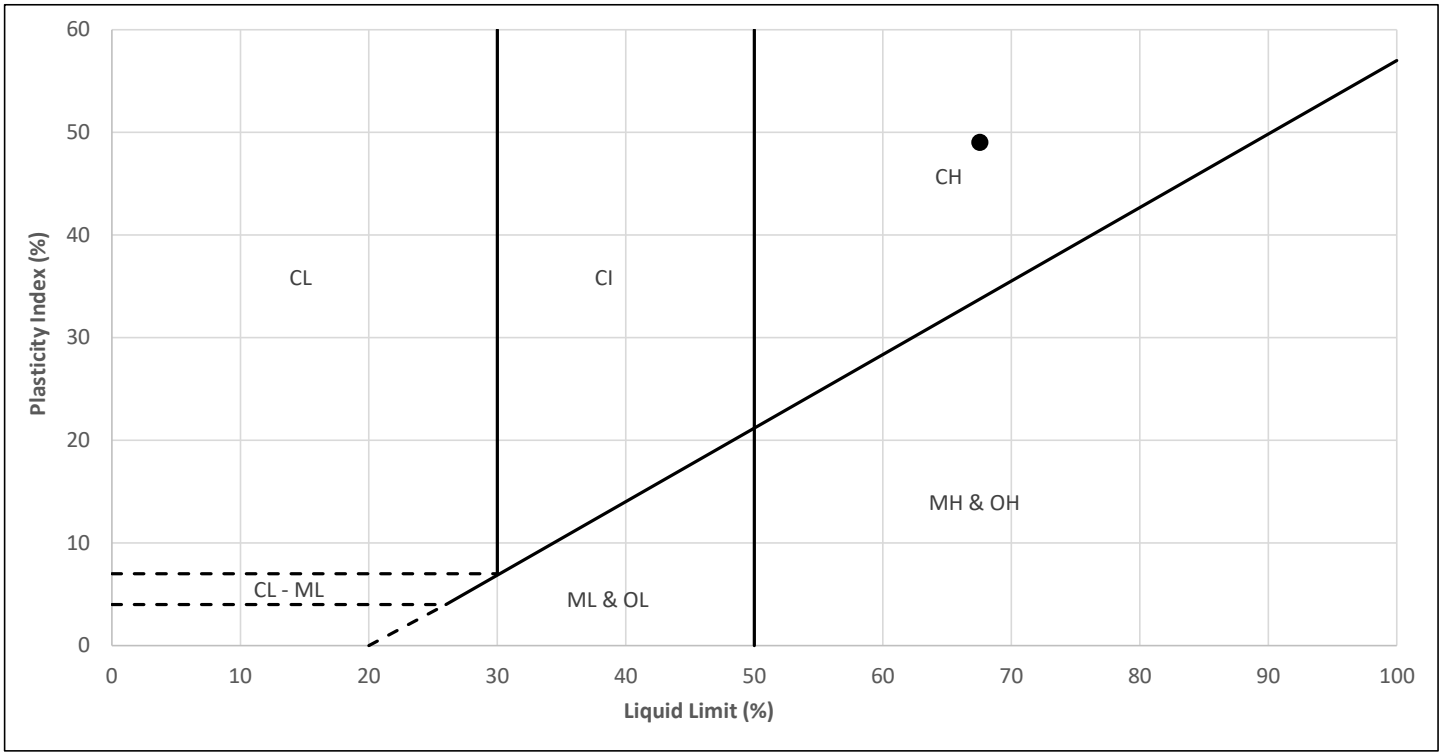
Project:	Snake Lake Reservoir Expansion	**Sample #:**	303UD6
Project No.:	1560-193-00	**Source:**	22CH303
Owner:	EID	**Sample Depth:**	24.6m
File No.:	AL - 303UD6	**Test Date:**	22-08-29

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	67.5
Plastic Limit (PL)	18.5
Plasticity Index (PI)	49.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

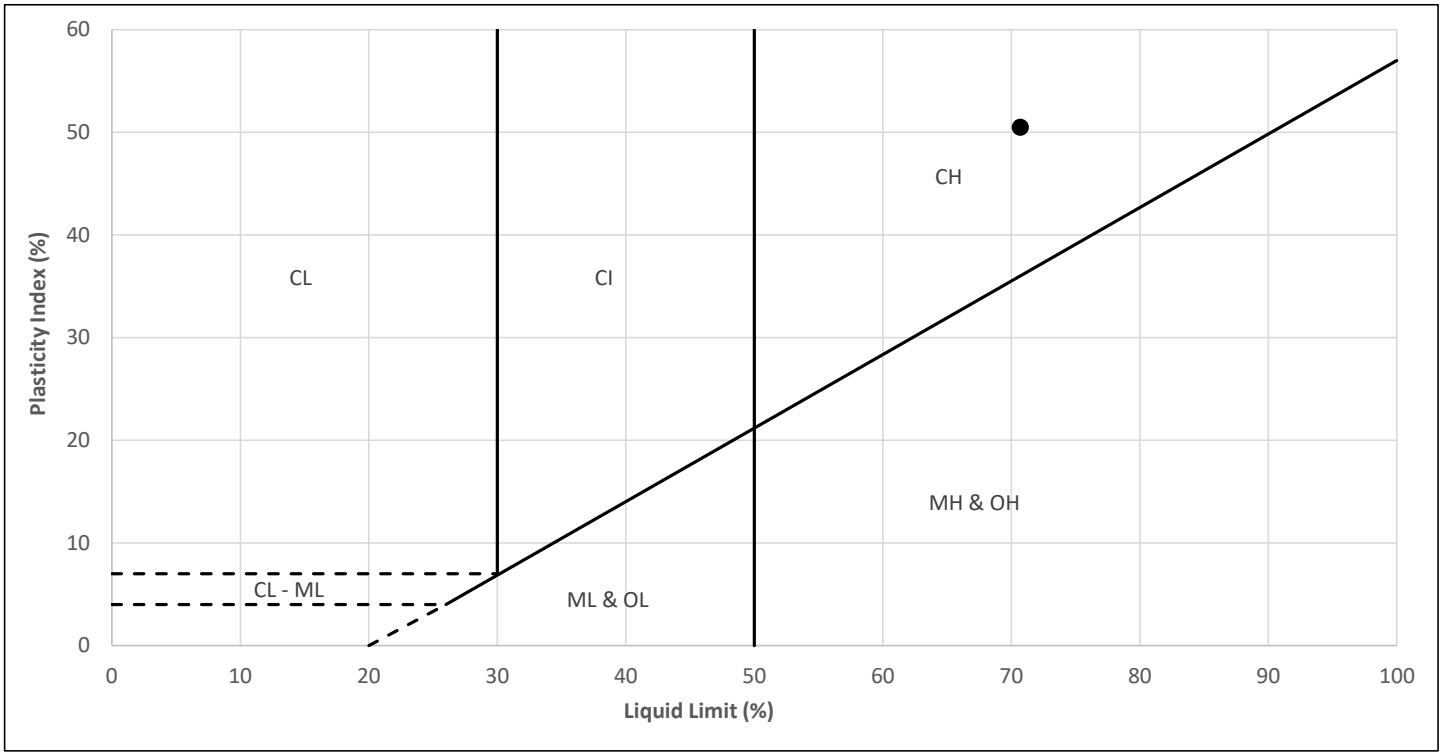
Project:	Snake Lake Reservoir Expansion	**Sample #:**	304AU3
Project No.:	1560-193-00	**Source:**	22BH304
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 304AU3	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	70.7
Plastic Limit (PL)	20.2
Plasticity Index (PI)	50.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

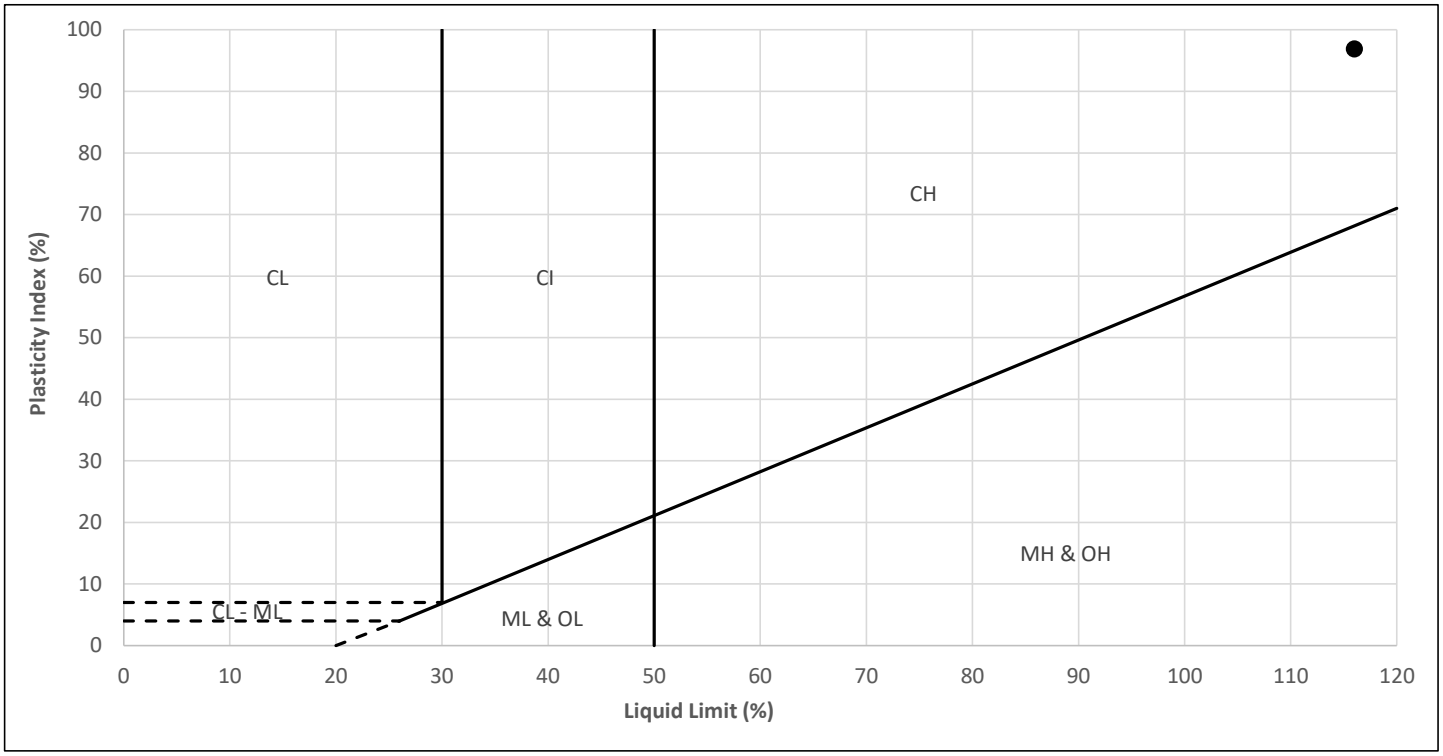
Project:	Snake Lake Reservoir Expansion	**Sample #:**	304RC9
Project No.:	1560-193-00	**Source:**	22CH304
Owner:	EID	**Sample Depth:**	20.4m
File No.:	AL - 304RC9	**Test Date:**	5-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	116.0
Plastic Limit (PL)	19.1
Plasticity Index (PI)	96.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

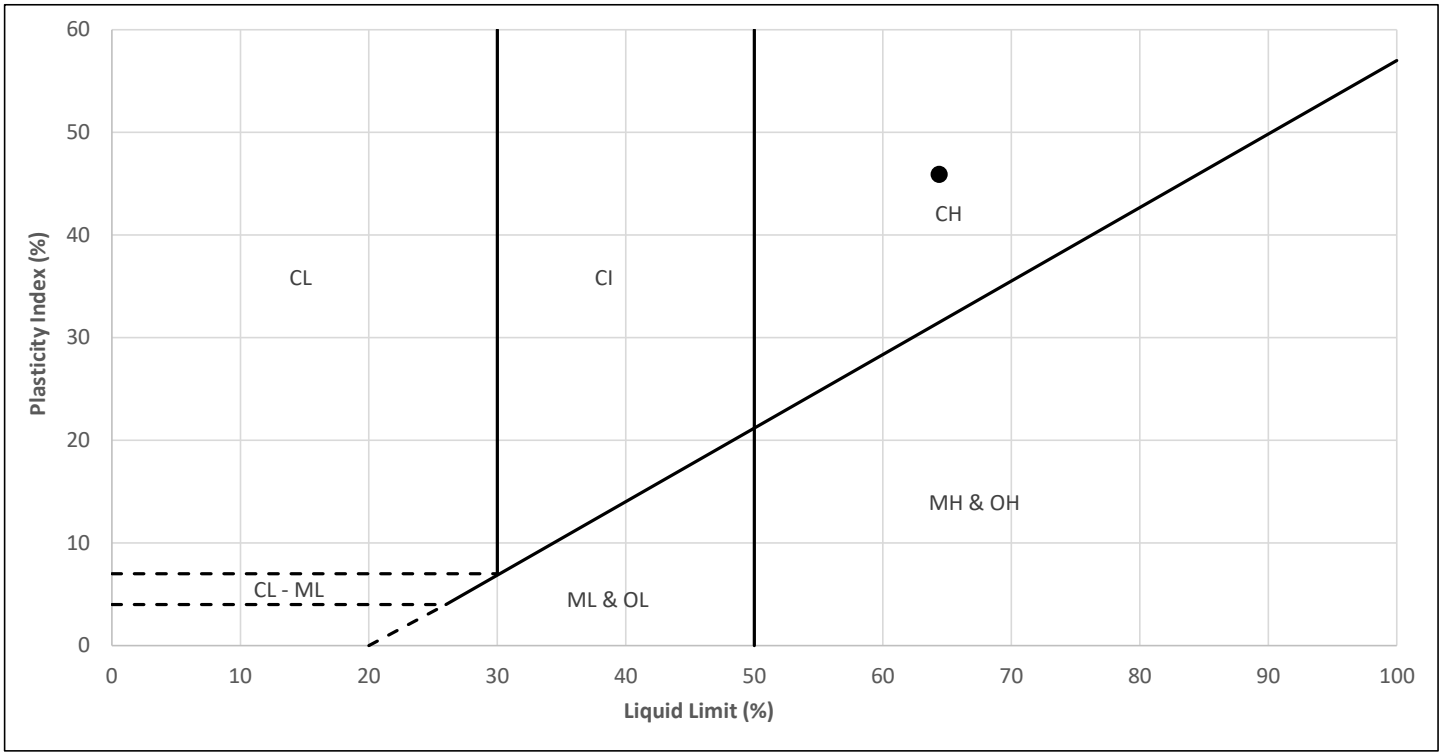
Project:	Snake Lake Reservoir Expansion	**Sample #:**	304RC13
Project No.:	1560-193-00	**Source:**	22CH304
Owner:	EID	**Sample Depth:**	26.0m
File No.:	AL - 304RC13	**Test Date:**	30-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	64.4
Plastic Limit (PL)	18.5
Plasticity Index (PI)	45.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

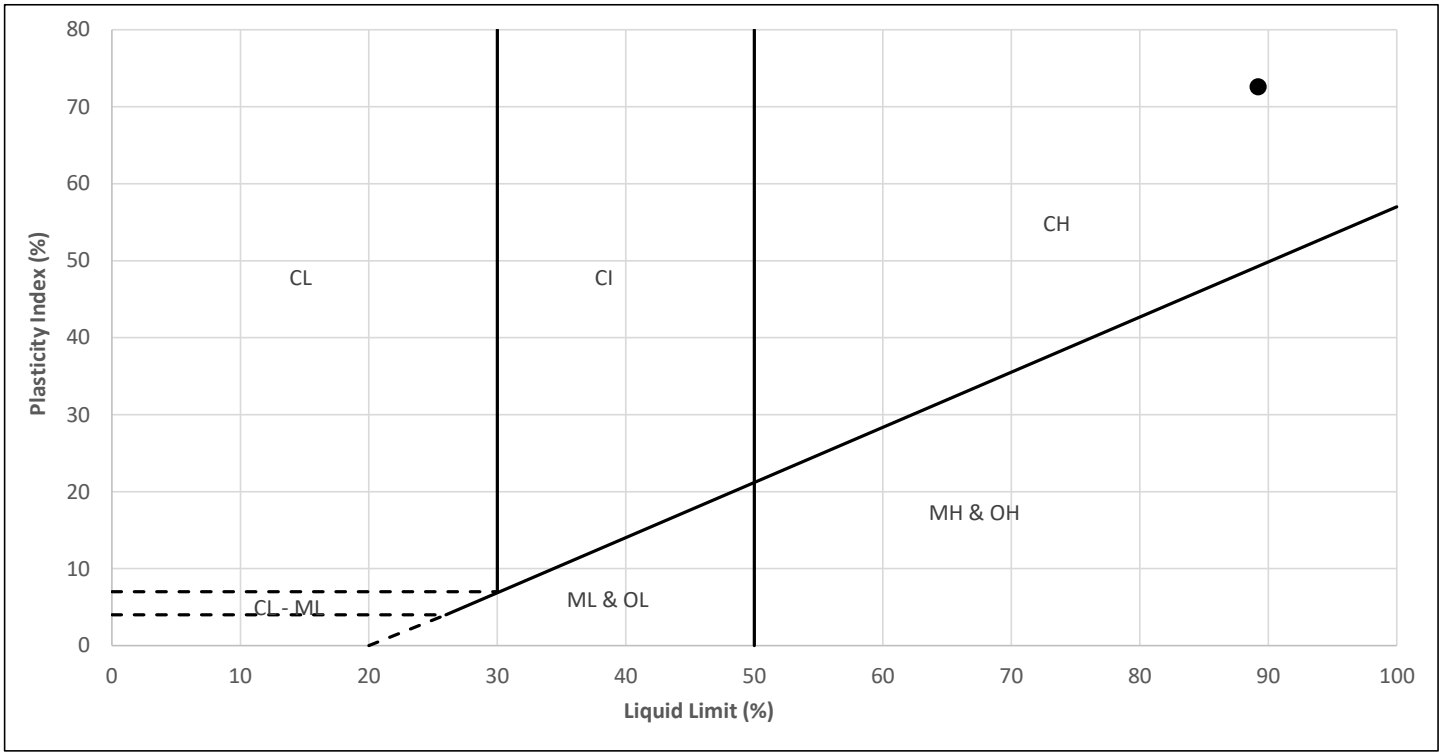
Project:	Snake Lake Reservoir Expansion	**Sample #:**	304UD3
Project No.:	1560-193-00	**Source:**	22CH304
Owner:	EID	**Sample Depth:**	15.07m
File No.:	AL - 304UD3	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	89.2
Plastic Limit (PL)	16.6
Plasticity Index (PI)	72.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

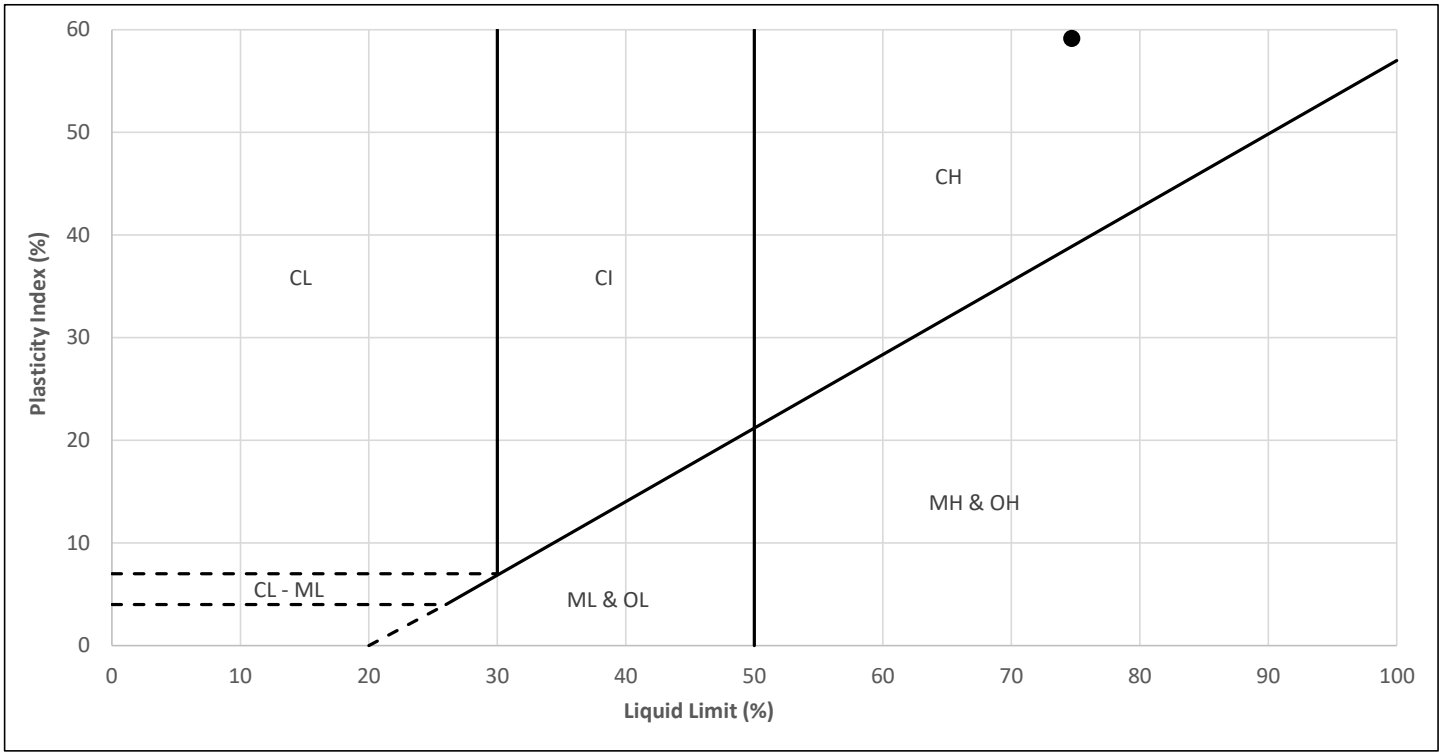
Project:	Snake Lake Reservoir Expansion	**Sample #:**	304UD6
Project No.:	1560-193-00	**Source:**	22CH304
Owner:	EID	**Sample Depth:**	23.64m
File No.:	AL - 304UD6	**Test Date:**	8-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	74.7
Plastic Limit (PL)	15.5
Plasticity Index (PI)	59.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

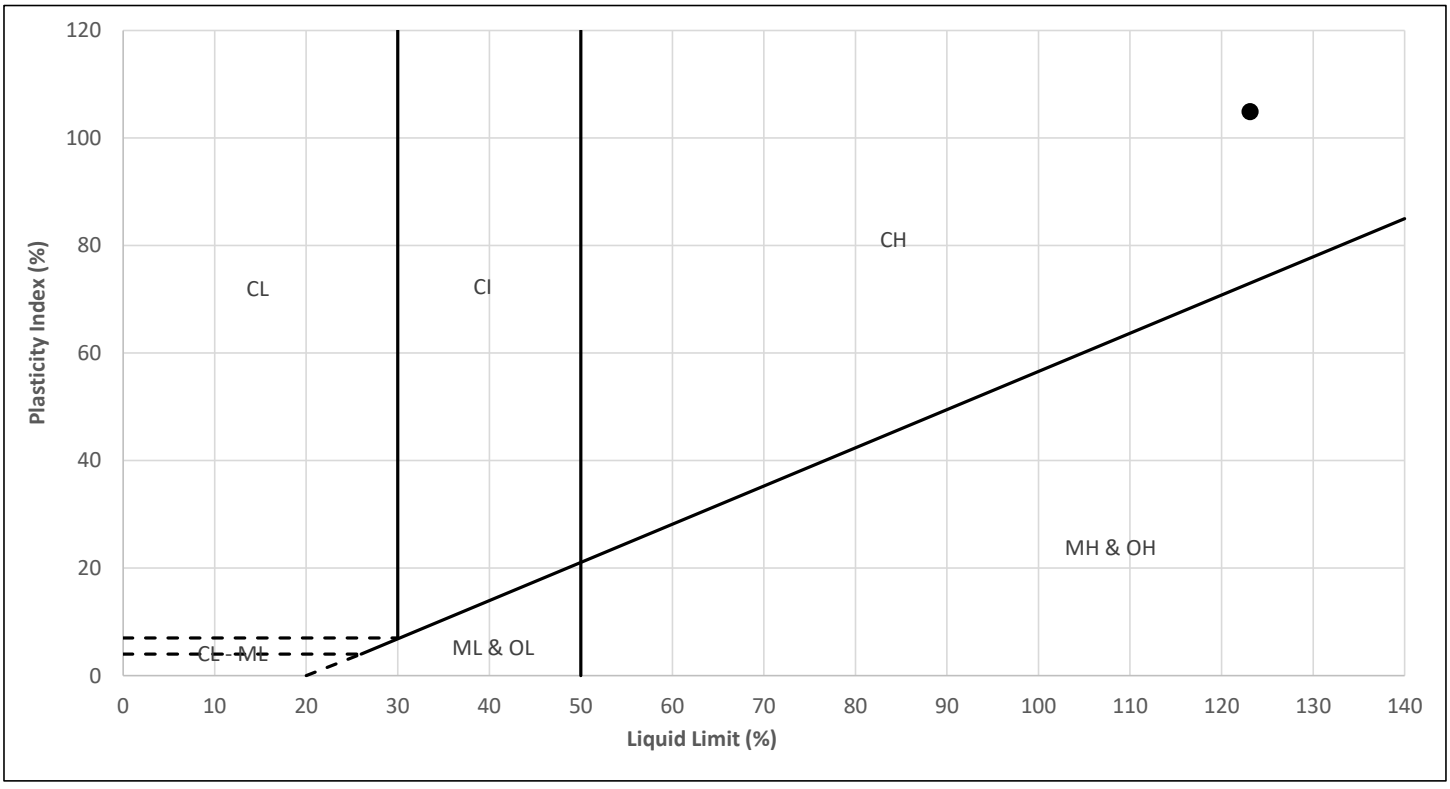
Project:	Snake Lake Reservoir Expansion	**Sample #:**	305AU4
Project No.:	1560-193-00	**Source:**	22BH305
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 305AU4	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	123.1
Plastic Limit (PL)	18.2
Plasticity Index (PI)	104.9

Soil Plasticity	High
Soil Classification	CH



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Tel: (403)892-6036

ATTERBERG LIMITS

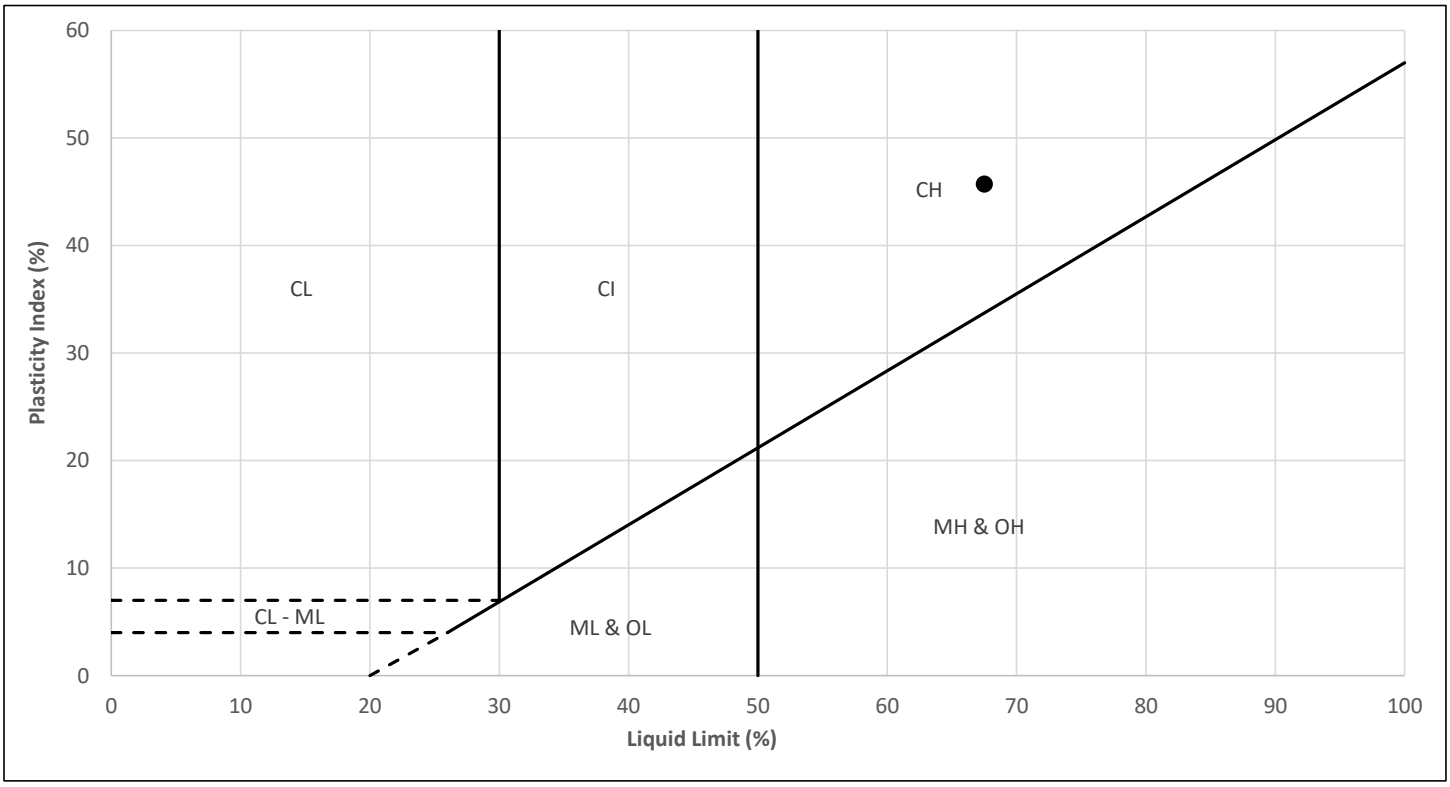
Project:	Snake Lake Reservoir Expansion	**Sample #:**	305AU10
Project No.:	1560-193-00	**Source:**	22BH305
Owner:	EID	**Sample Depth:**	7.3m
File No.:	AL - 305AU10	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	67.5
Plastic Limit (PL)	21.8
Plasticity Index (PI)	45.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

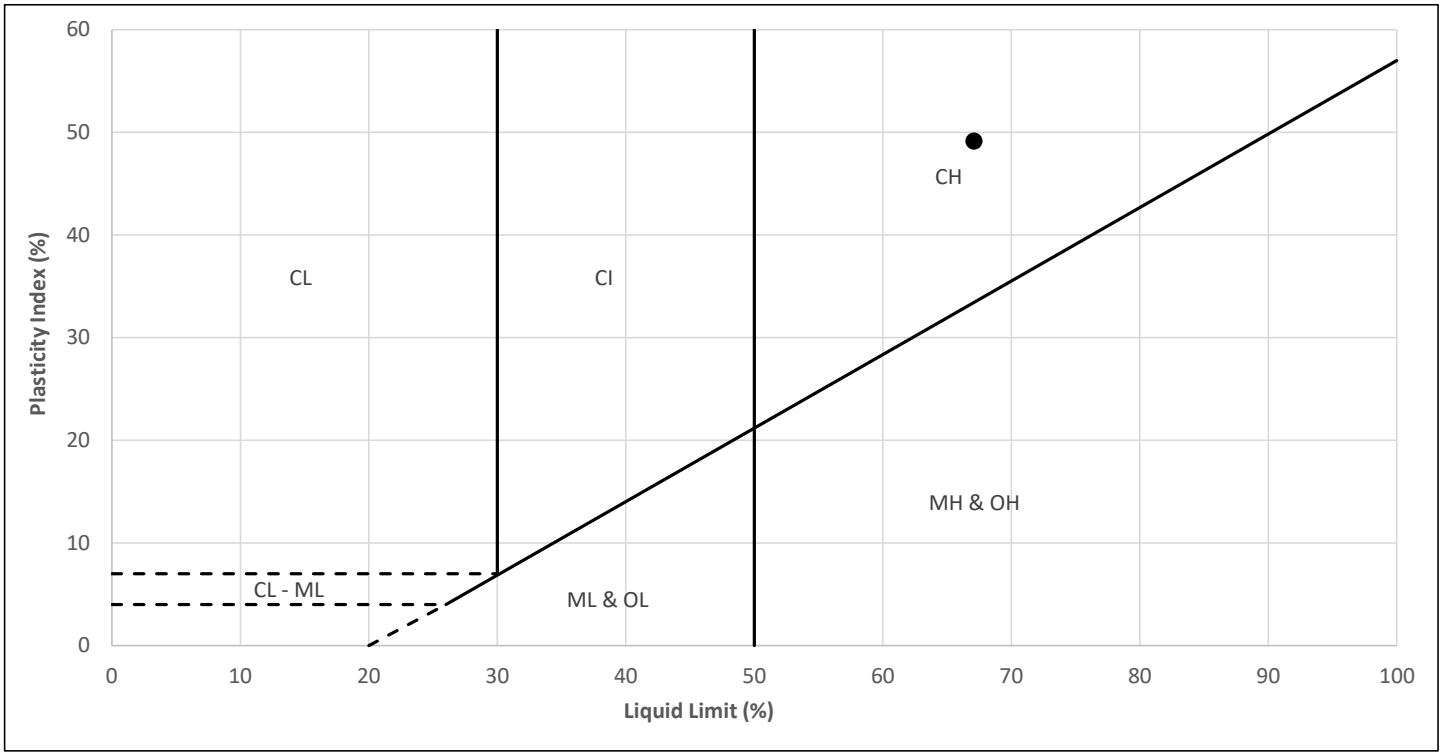
Project:	Snake Lake Reservoir Expansion	**Sample #:**	305AU15
Project No.:	1560-193-00	**Source:**	22BH305
Owner:	EID	**Sample Depth:**	11.3m
File No.:	AL - 305AU15	**Date:**	16-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information avalible upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	67.1
Plastic Limit (PL)	17.9
Plasticity Index (PI)	49.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

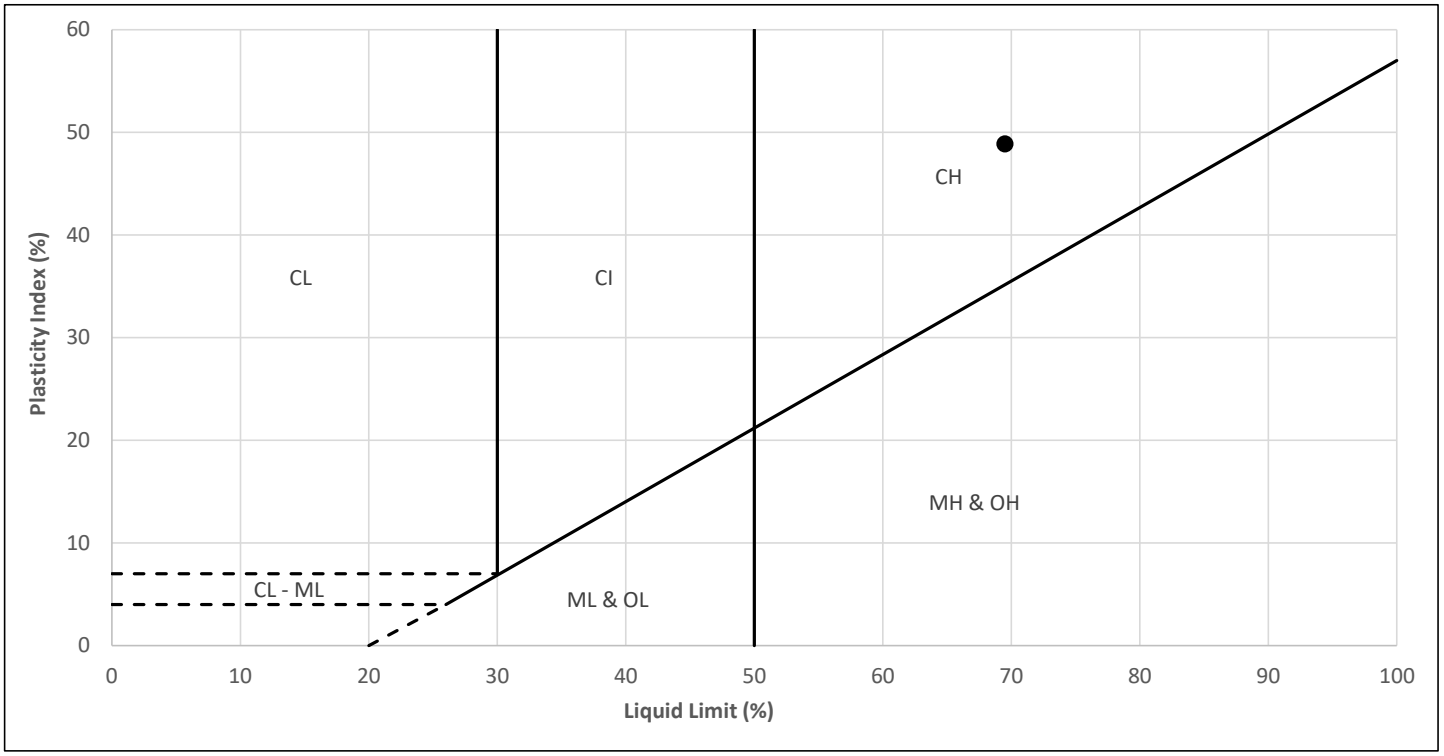
Project:	Snake Lake Reservoir Expansion	**Sample #:**	305RC11
Project No.:	1560-193-00	**Source:**	22CH305
Owner:	EID	**Sample Depth:**	21.0m
File No.:	AL - 305RC11	**Test Date:**	6-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	69.5
Plastic Limit (PL)	20.6
Plasticity Index (PI)	48.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

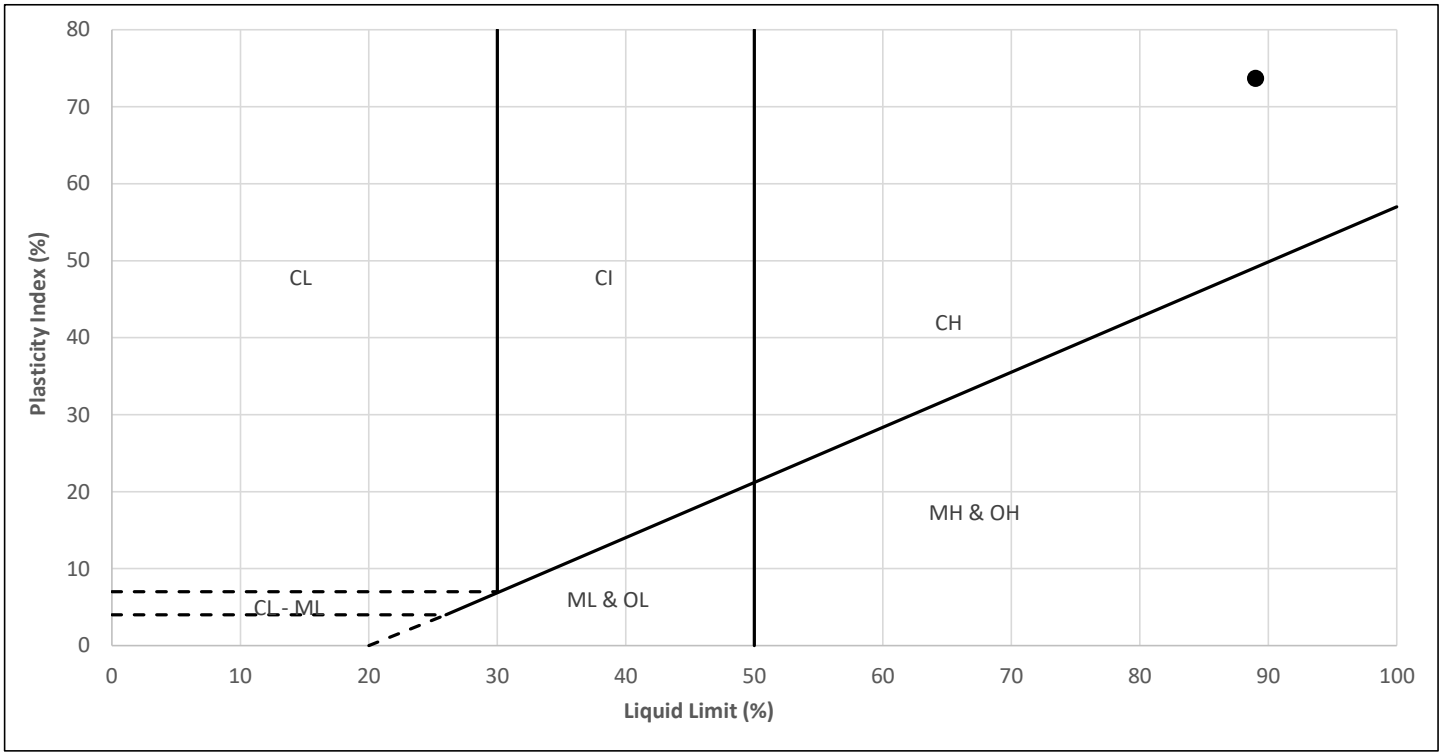
Project:	Snake Lake Reservoir Expansion	**Sample #:**	305UD2
Project No.:	1560-193-00	**Source:**	22CH305
Owner:	EID	**Sample Depth:**	12.95m
File No.:	AL - 305UD2	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	89.0
Plastic Limit (PL)	15.3
Plasticity Index (PI)	73.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

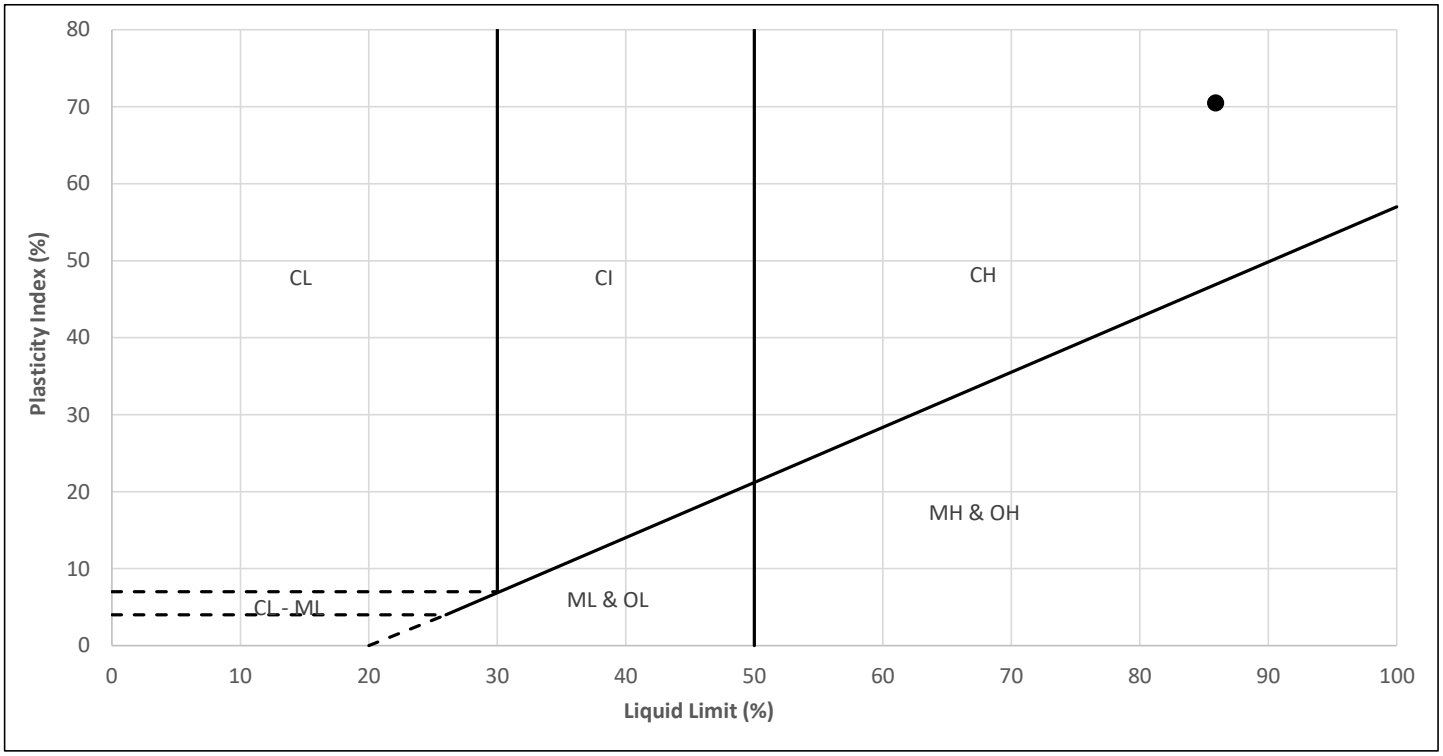
Project:	Snake Lake Reservoir Expansion	**Sample #:**	305UD3
Project No.:	1560-193-00	**Source:**	22CH305
Owner:	EID	**Sample Depth:**	14.96m
File No.:	AL - 305UD3	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	85.9
Plastic Limit (PL)	15.4
Plasticity Index (PI)	70.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

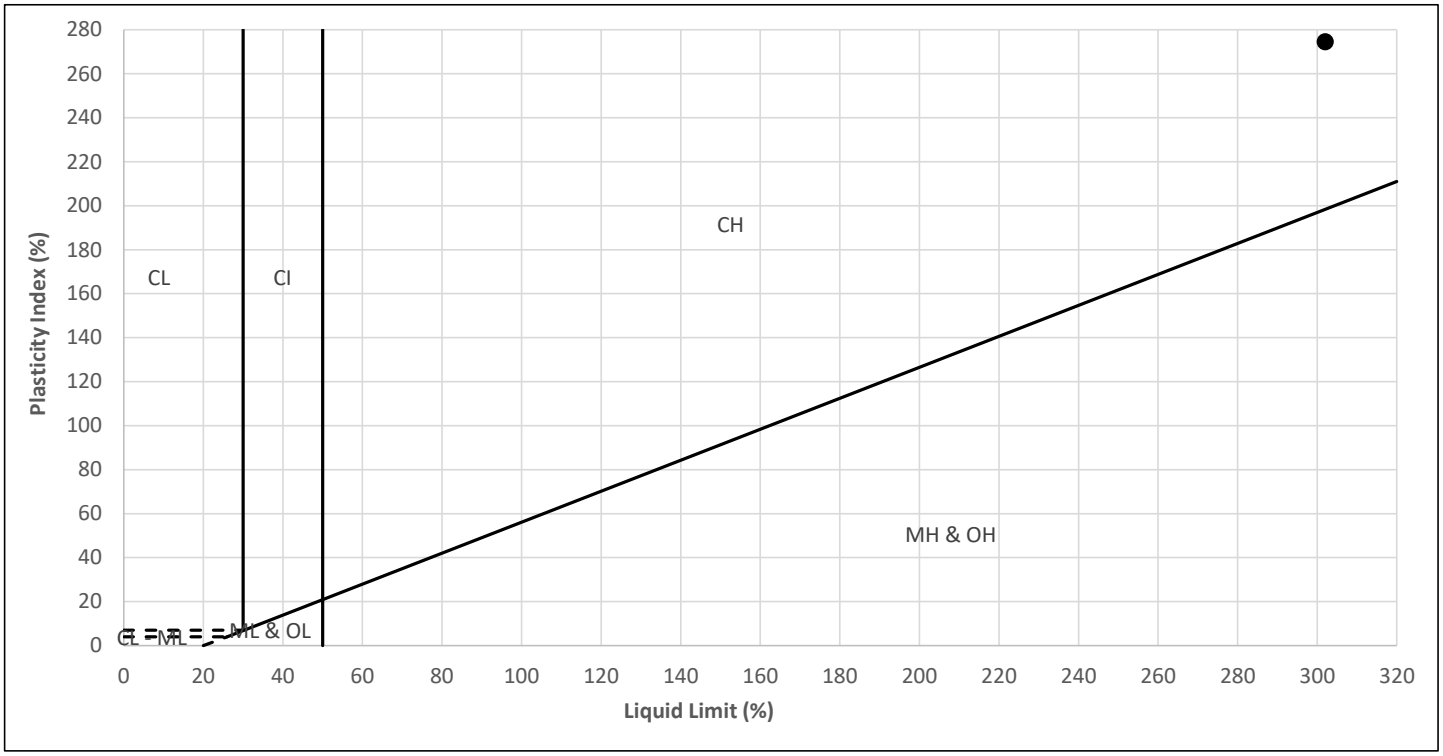
Project:	Snake Lake Reservoir Expansion	**Sample #:**	305UD4
Project No.:	1560-193-00	**Source:**	22CH305
Owner:	EID	**Sample Depth:**	18.22m
File No.:	AL - 305UD4	**Test Date:**	13-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	302.0
Plastic Limit (PL)	27.4
Plasticity Index (PI)	274.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

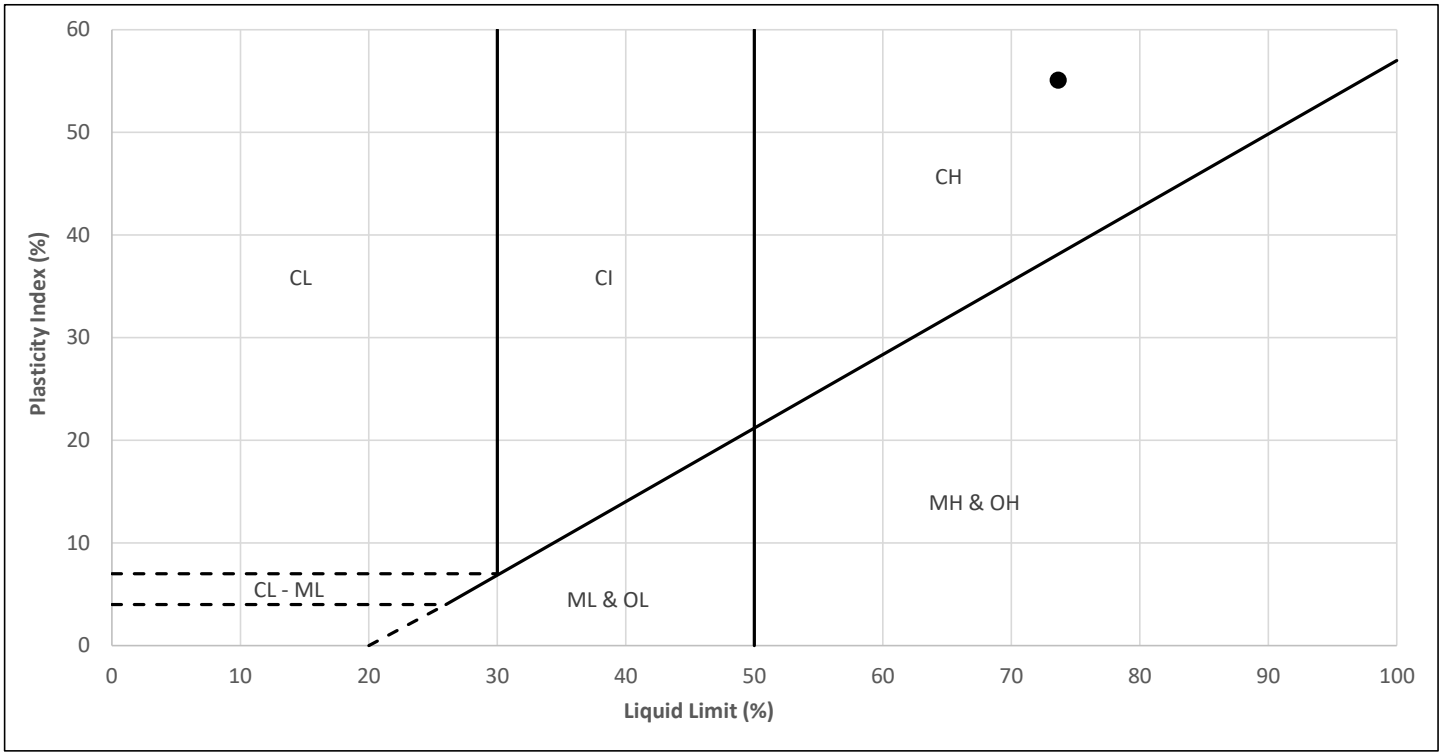
Project:	Snake Lake Reservoir Expansion	**Sample #:**	306RC1
Project No.:	1560-193-00	**Source:**	22CH306
Owner:	EID	**Sample Depth:**	3.04m
File No.:	AL - 306RC1	**Test Date:**	23-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	73.6
Plastic Limit (PL)	18.5
Plasticity Index (PI)	55.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

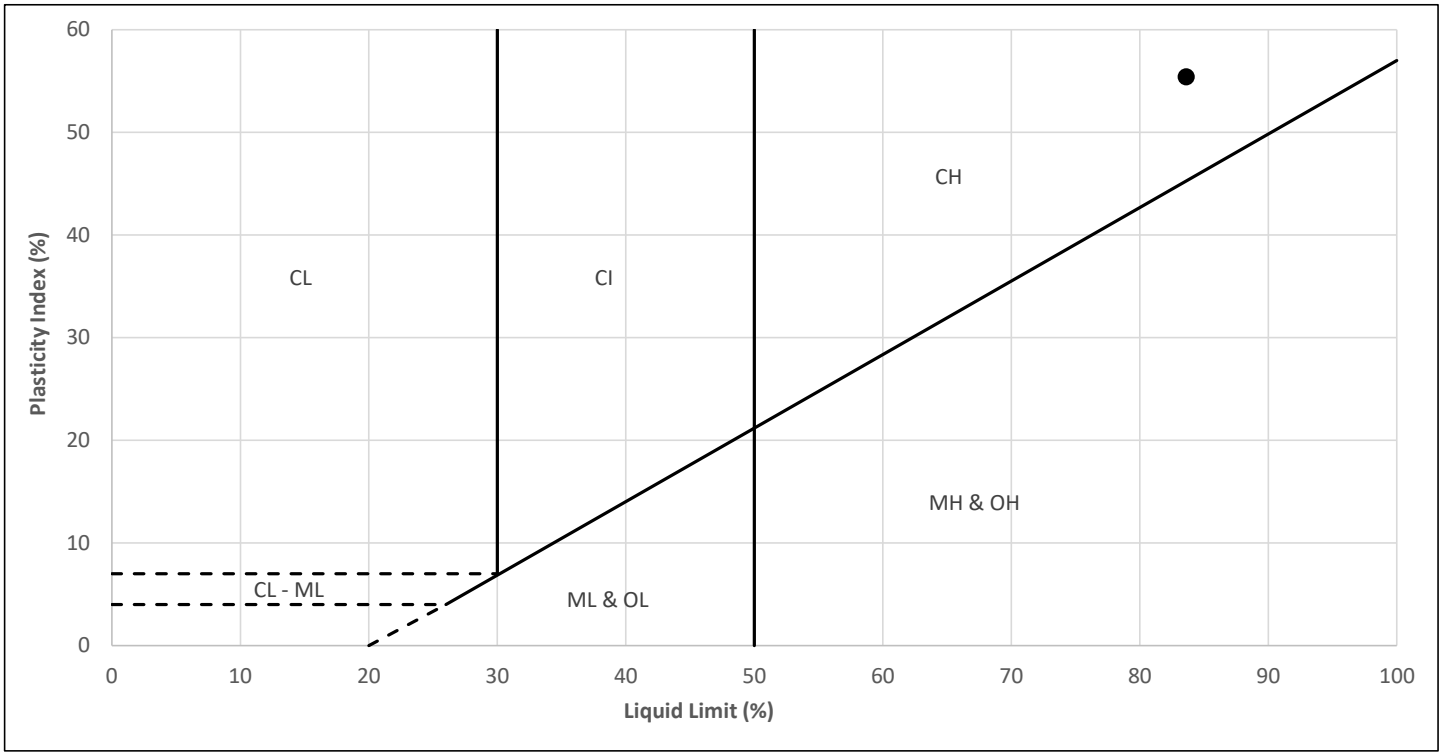
Project:	Snake Lake Reservoir Expansion	**Sample #:**	306RC4
Project No.:	1560-193-00	**Source:**	22CH306
Owner:	EID	**Sample Depth:**	8.8m
File No.:	AL - 306RC4	**Test Date:**	1-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	83.6
Plastic Limit (PL)	28.2
Plasticity Index (PI)	55.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

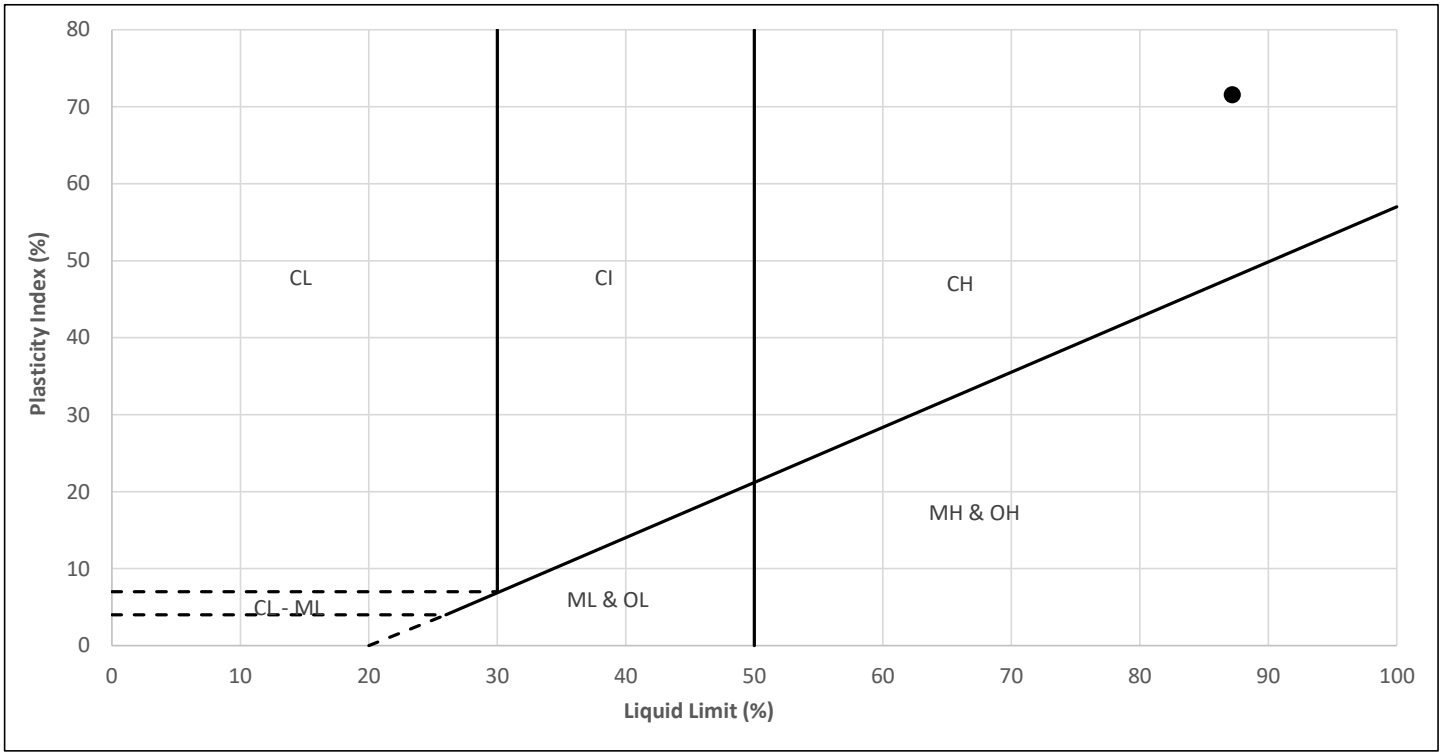
Project:	Snake Lake Reservoir Expansion	**Sample #:**	306RC6
Project No.:	1560-193-00	**Source:**	22CH306
Owner:	EID	**Sample Depth:**	10.9m
File No.:	AL - 306RC6	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	87.2
Plastic Limit (PL)	15.6
Plasticity Index (PI)	71.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

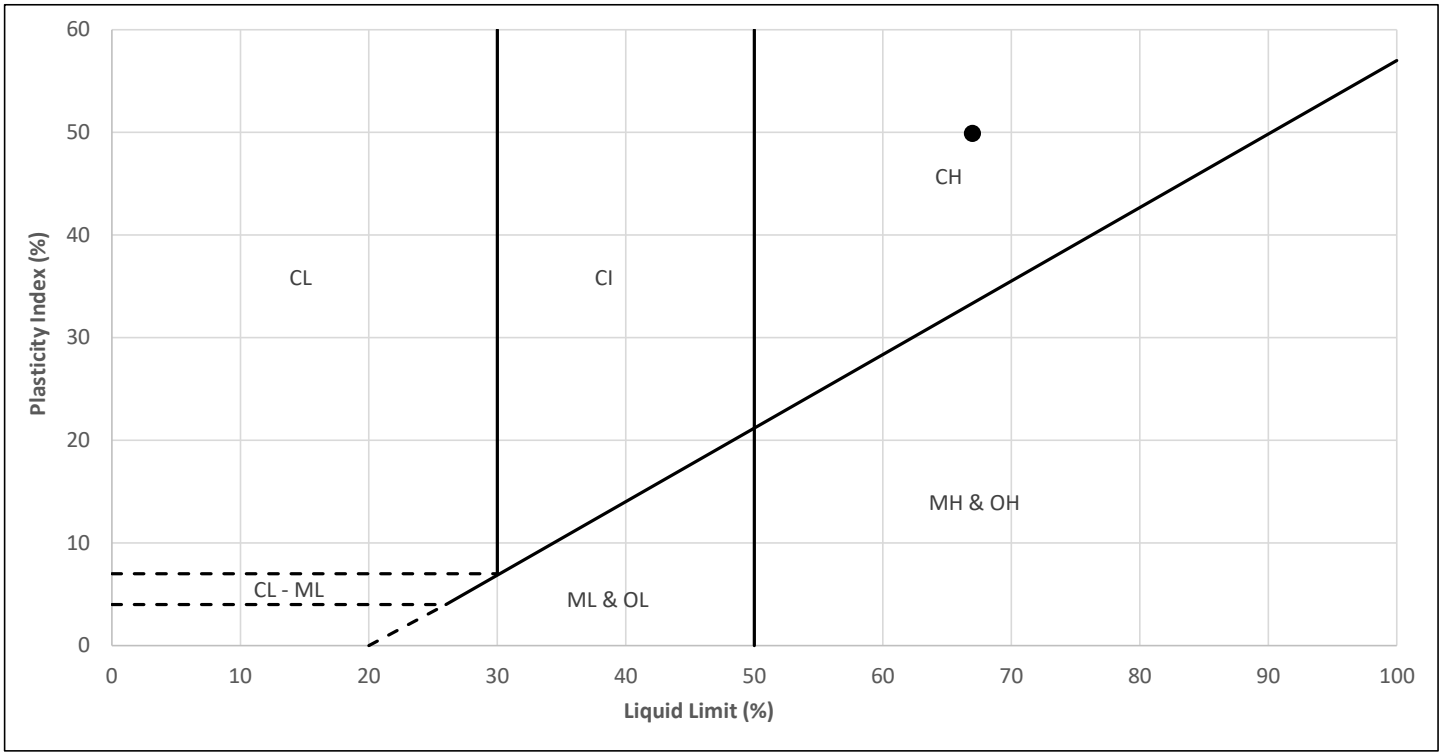
Project:	Snake Lake Reservoir Expansion	**Sample #:**	306RC8
Project No.:	1560-193-00	**Source:**	22CH306
Owner:	EID	**Sample Depth:**	14.2m
File No.:	AL - 306RC8	**Test Date:**	17-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	67.0
Plastic Limit (PL)	17.1
Plasticity Index (PI)	49.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

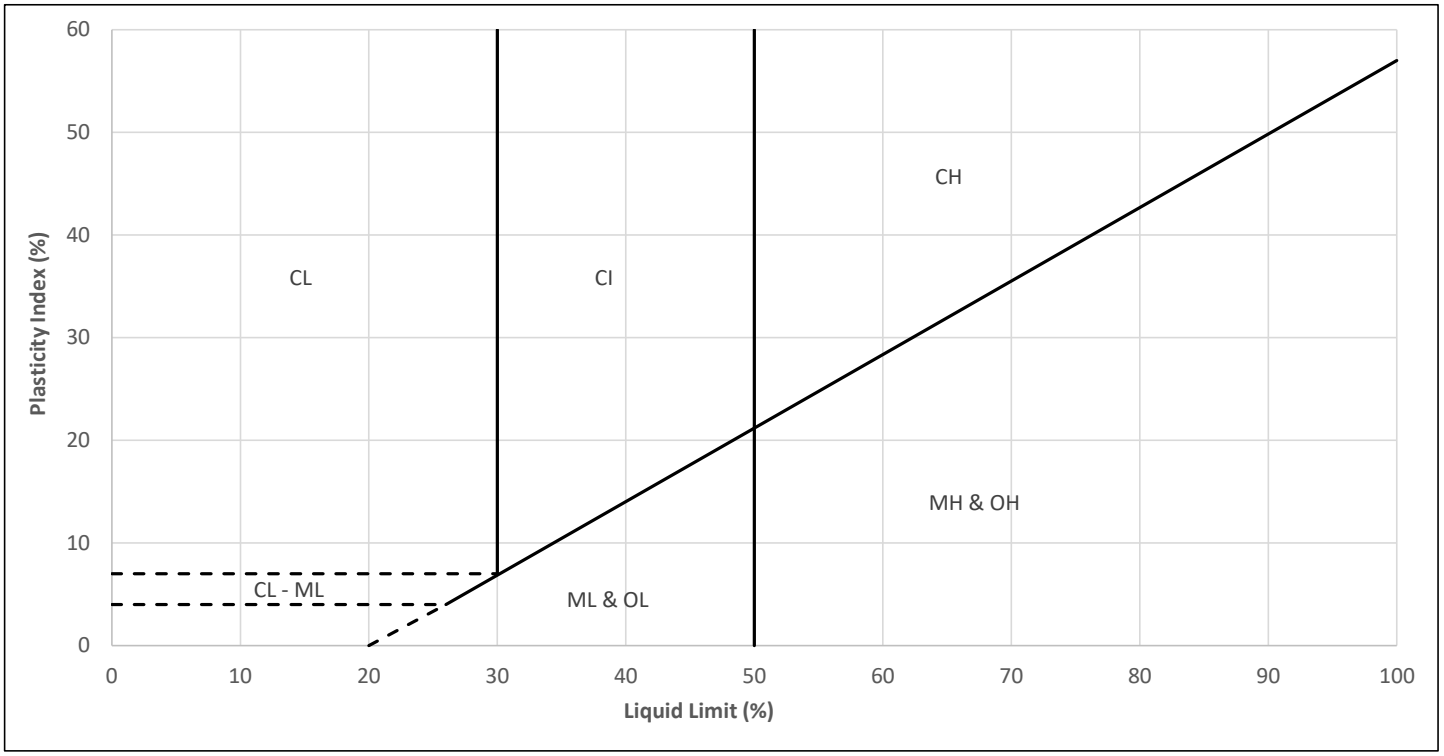
Project:	Snake Lake Reservoir Expansion	**Sample #:**	306RC11
Project No.:	1560-193-00	**Source:**	22CH306
Owner:	EID	**Sample Depth:**	18.24m
File No.:	AL - 306RC11	**Test Date:**	5-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	99.5
Plastic Limit (PL)	21.7
Plasticity Index (PI)	77.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

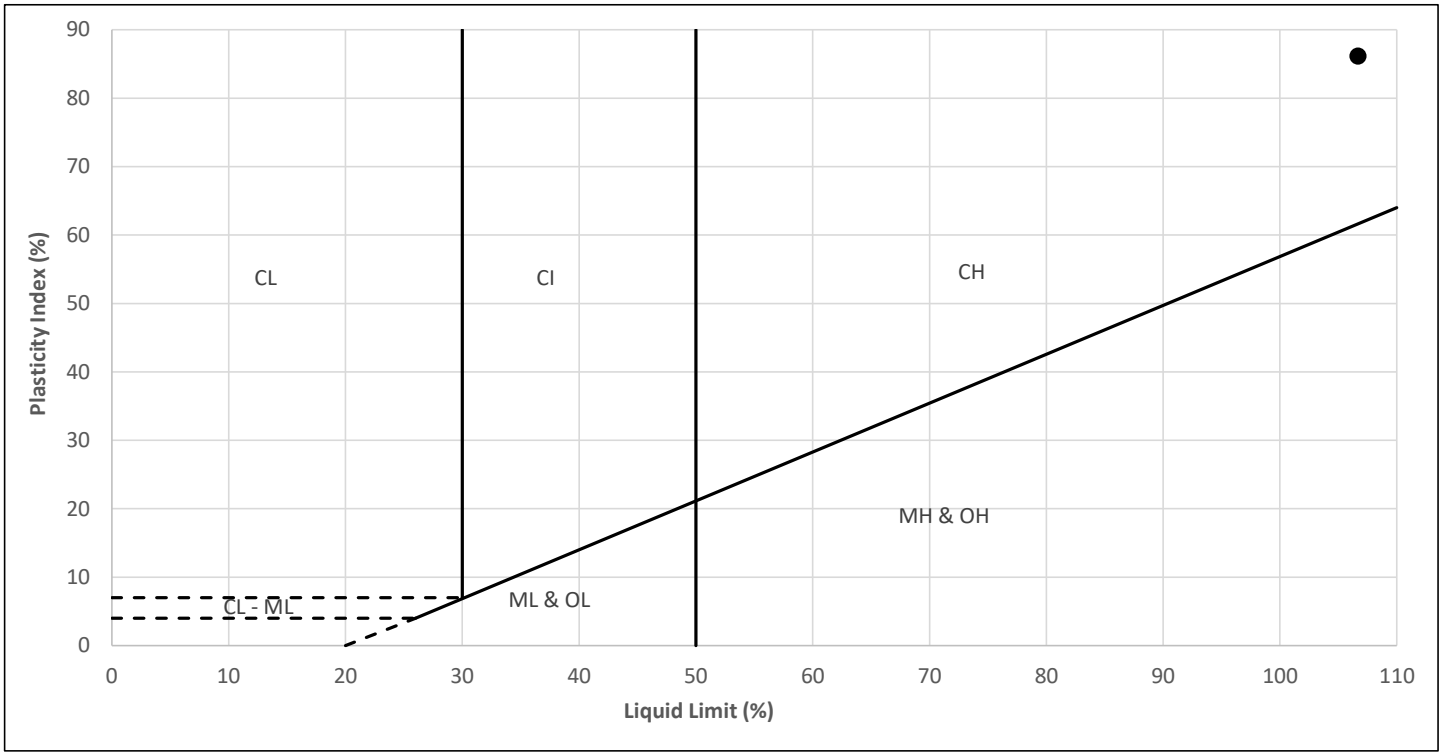
Project:	Snake Lake Reservoir Expansion	**Sample #:**	306RC13
Project No.:	1560-193-00	**Source:**	22CH306
Owner:	EID	**Sample Depth:**	20.2m
File No.:	AL - 306RC13	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	106.7
Plastic Limit (PL)	20.5
Plasticity Index (PI)	86.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

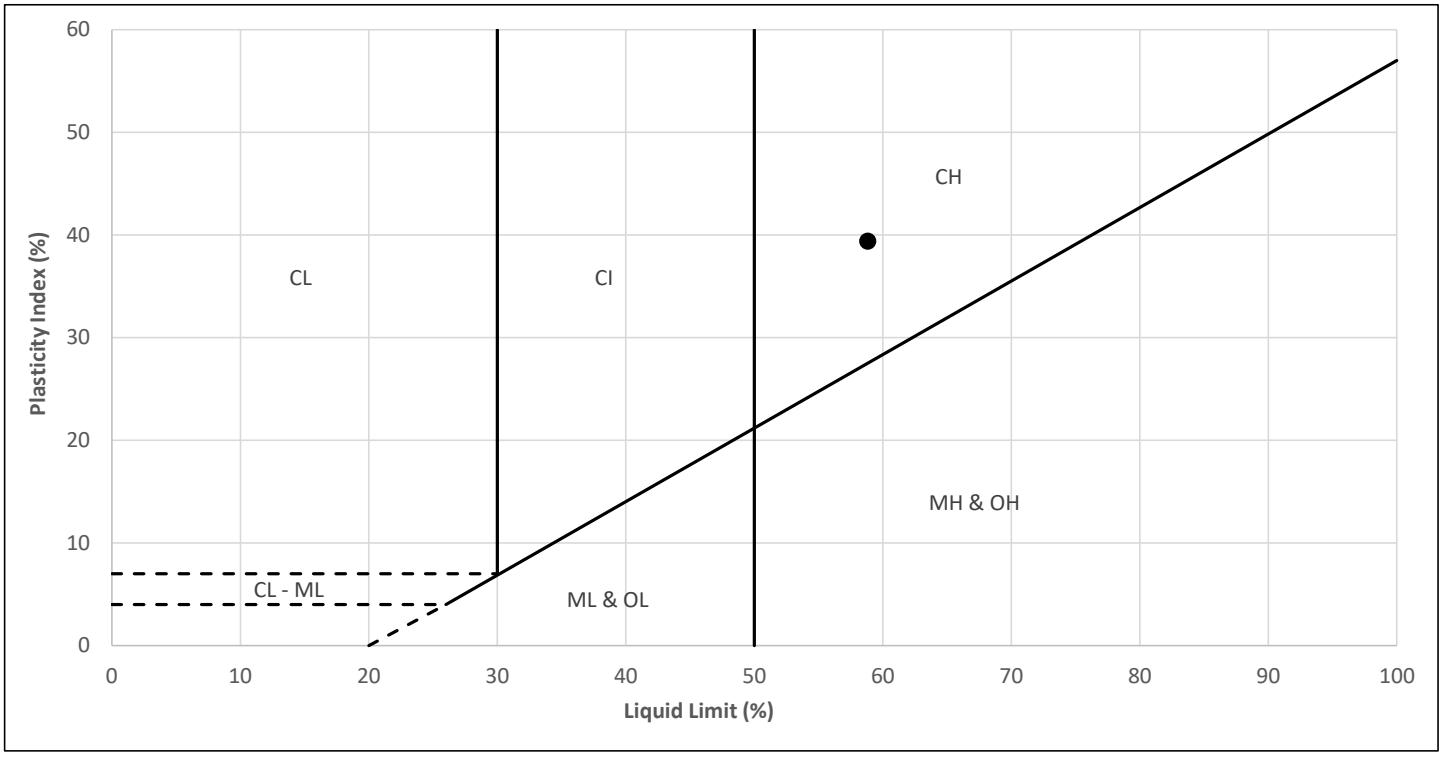
Project:	Snake Lake Reservoir Expansion	**Sample #:**	307AU10
Project No.:	1560-193-00	**Source:**	22BH307
Owner:	EID	**Sample Depth:**	7.3m
File No.:	AL - 307AU10	**Date:**	16-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information avalible upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	58.8
Plastic Limit (PL)	19.4
Plasticity Index (PI)	39.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

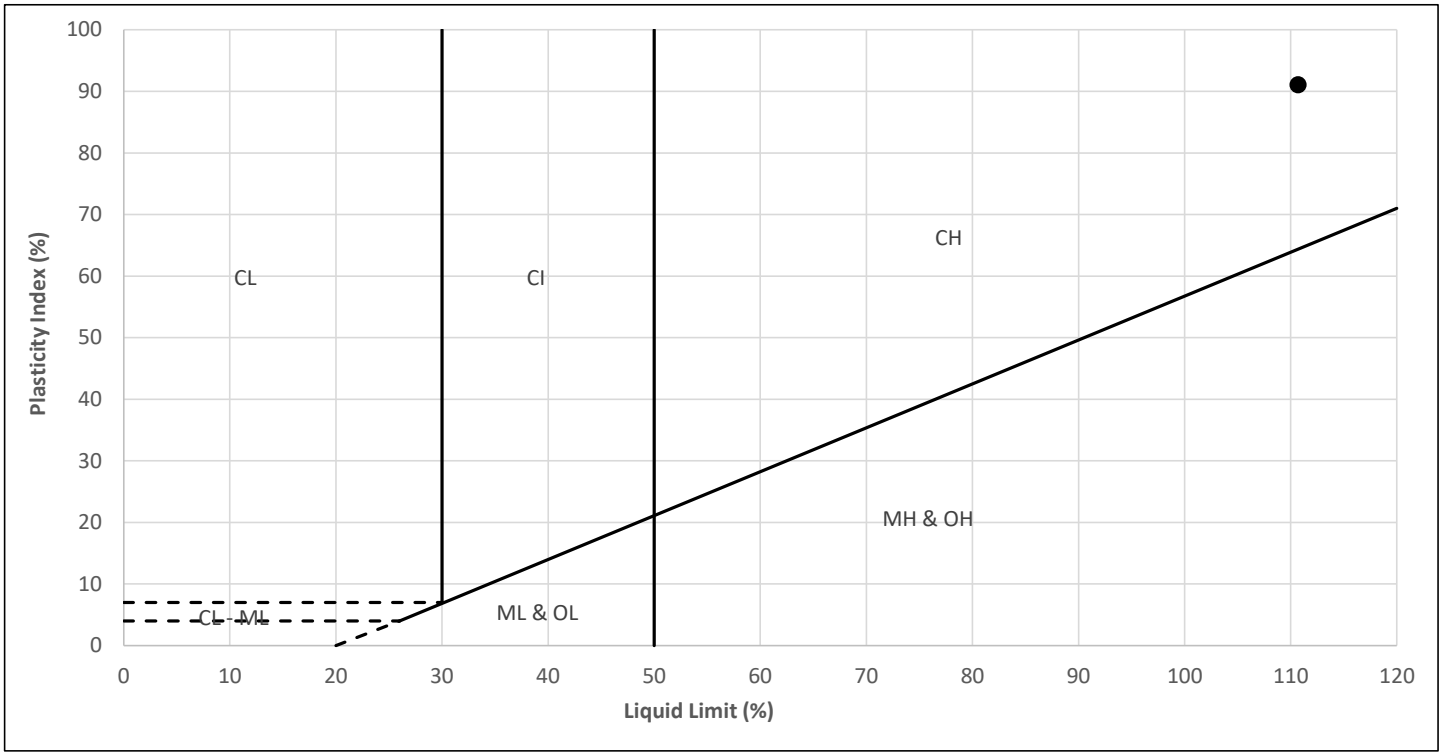
Project:	Snake Lake Reservoir Expansion	**Sample #:**	307RC1
Project No.:	1560-193-00	**Source:**	22CH307
Owner:	EID	**Sample Depth:**	5.0m
File No.:	AL - 307RC1	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	110.7
Plastic Limit (PL)	19.6
Plasticity Index (PI)	91.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

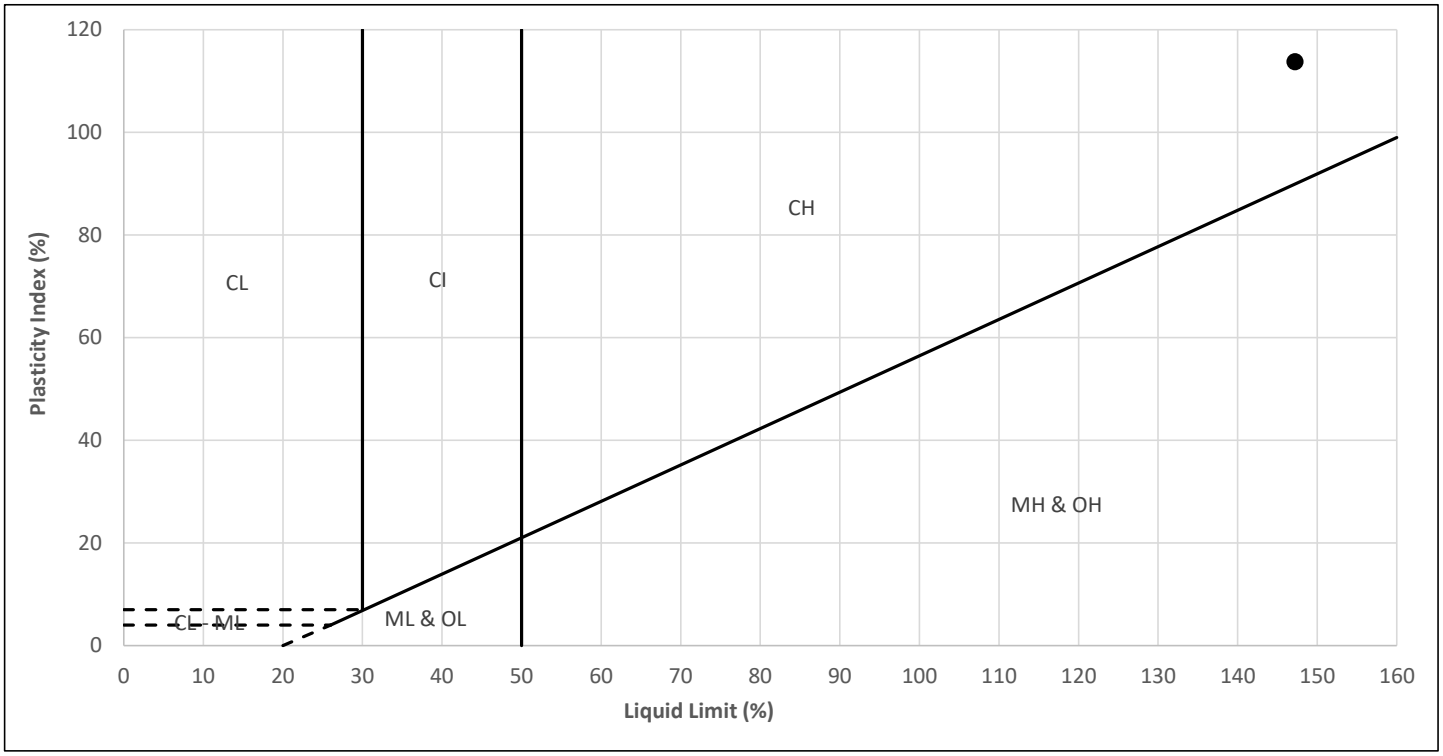
Project:	Snake Lake Reservoir Expansion	**Sample #:**	307RC10
Project No.:	1560-193-00	**Source:**	22CH307
Owner:	EID	**Sample Depth:**	19.5m
File No.:	AL - 307RC10	**Test Date:**	15-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	147.2
Plastic Limit (PL)	33.4
Plasticity Index (PI)	113.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

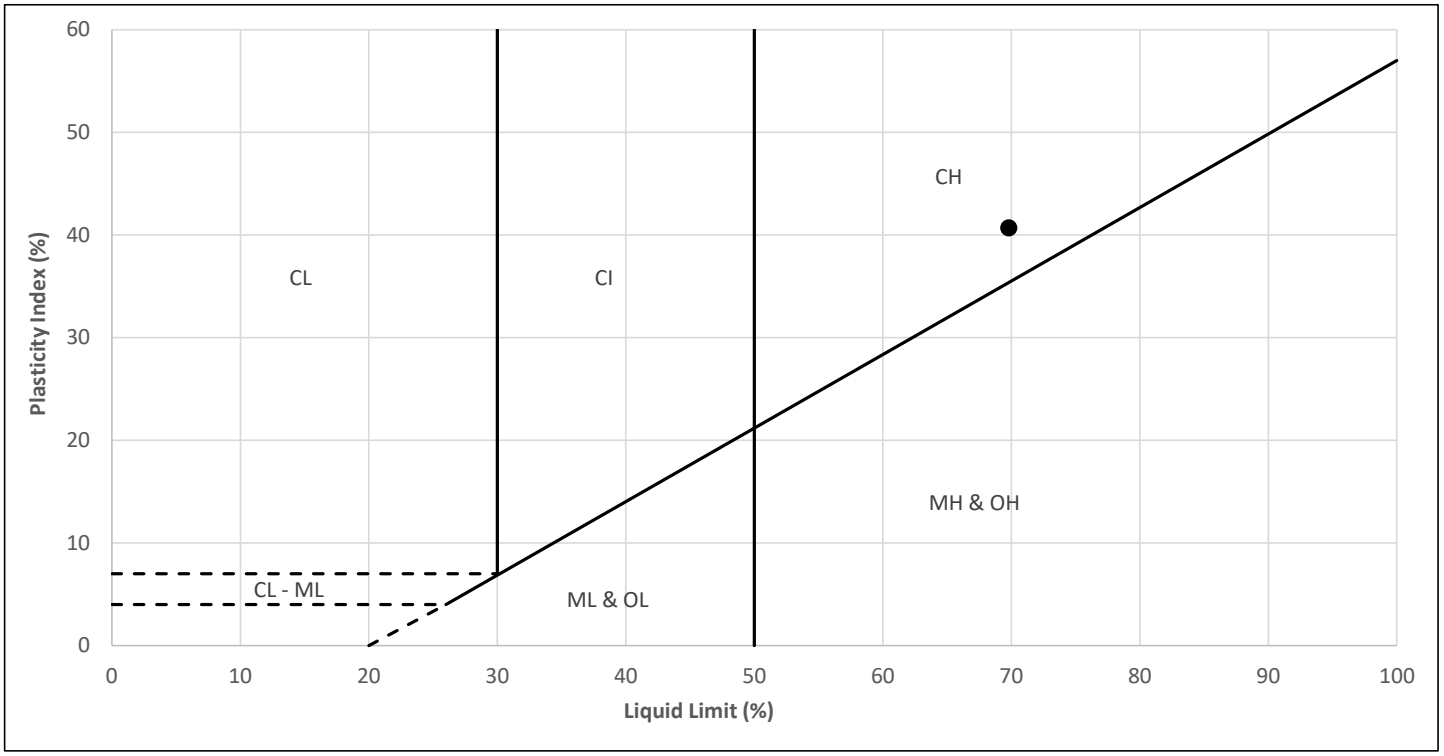
Project:	Snake Lake Reservoir Expansion	**Sample #:**	307UD2
Project No.:	1560-193-00	**Source:**	22CH307
Owner:	EID	**Sample Depth:**	13.81m
File No.:	AL - 307UD2	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	69.8
Plastic Limit (PL)	29.1
Plasticity Index (PI)	40.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

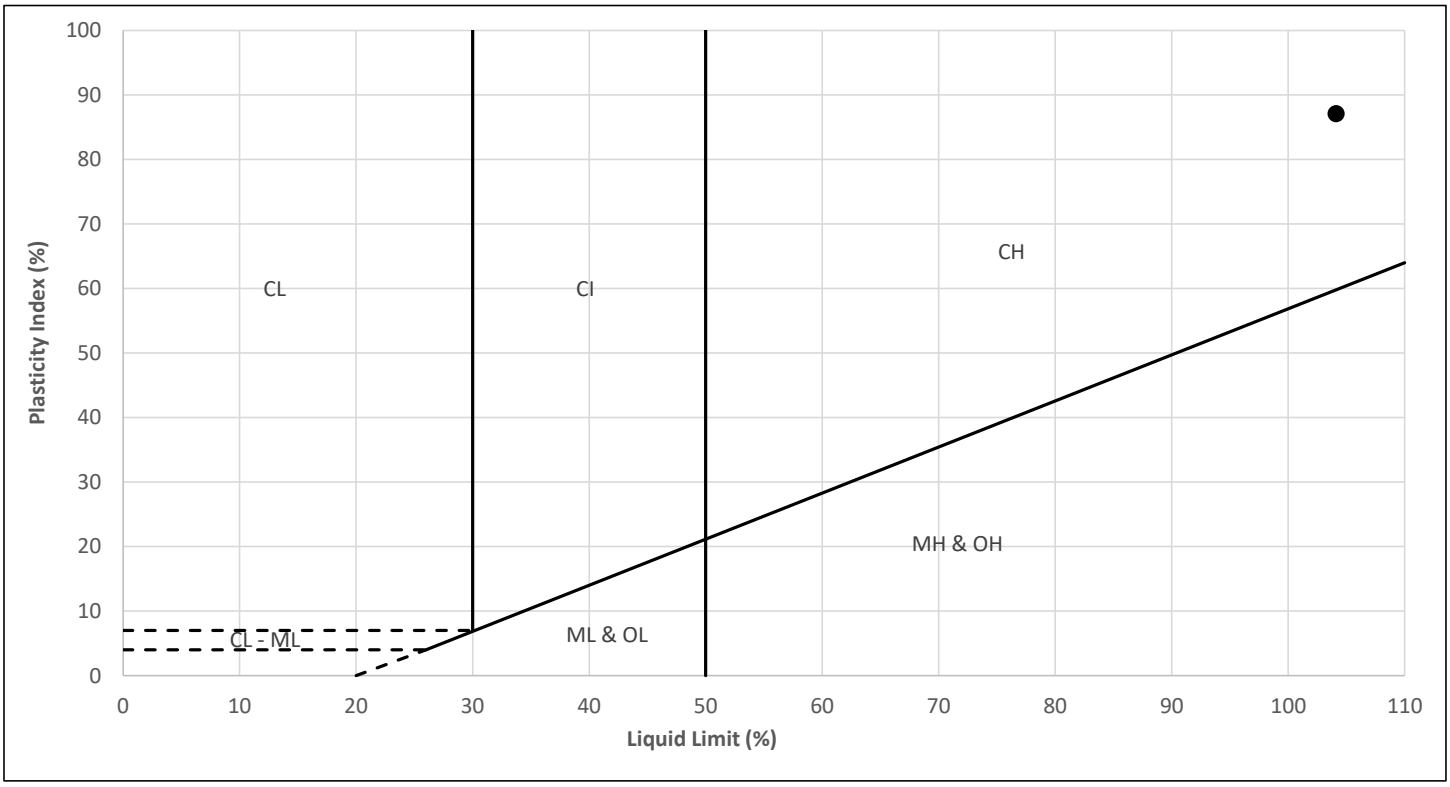
Project:	Snake Lake Reservoir Expansion	**Sample #:**	308AU4
Project No.:	1560-193-00	**Source:**	22BH308
Owner:	EID	**Sample Depth:**	2.8m
File No.:	AL - 308AU4	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	104.1
Plastic Limit (PL)	17.0
Plasticity Index (PI)	87.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

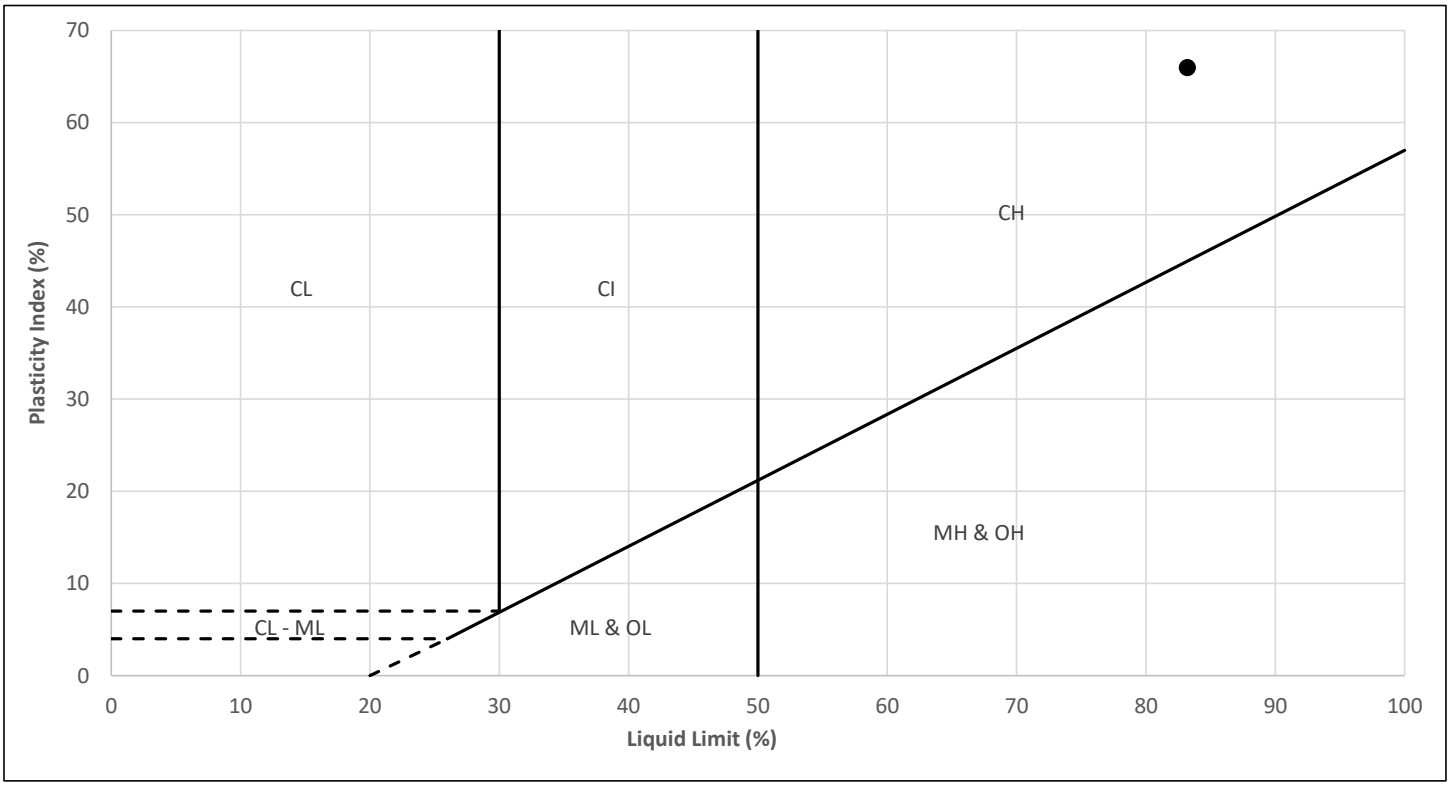
Project:	Snake Lake Reservoir Expansion	**Sample #:**	308AU13
Project No.:	1560-193-00	**Source:**	22BH308
Owner:	EID	**Sample Depth:**	9.8m
File No.:	AL - 308AU13	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	83.2
Plastic Limit (PL)	17.2
Plasticity Index (PI)	66.0

Soil Plasticity	High
Soil Classification	CH



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MPE Engineering Ltd.
1, 3320 18 Avenue North
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Tel: (403)892-6036

ATTERBERG LIMITS

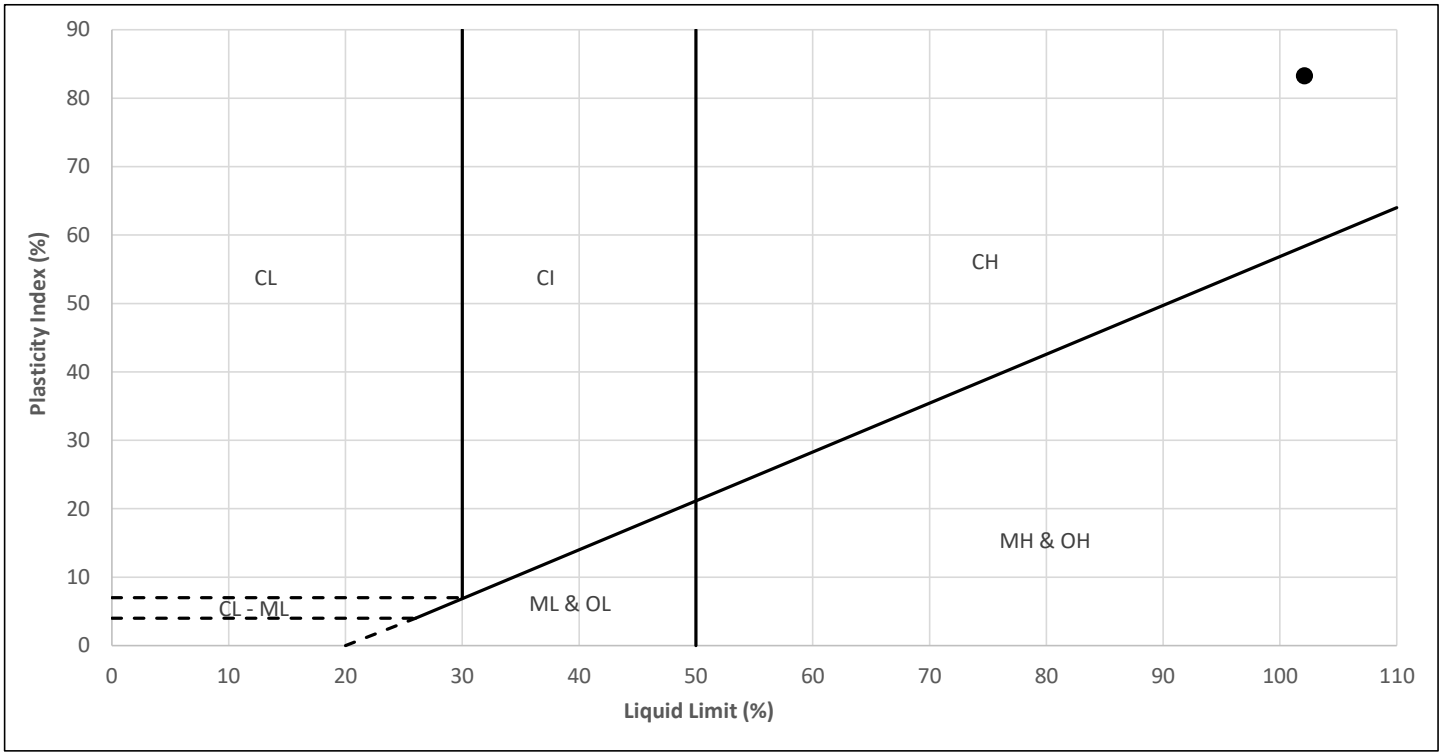
Project:	Snake Lake Reservoir Expansion	**Sample #:**	308RC1
Project No.:	1560-193-00	**Source:**	22CH308
Owner:	EID	**Sample Depth:**	5.1m
File No.:	AL - 308RC1	**Test Date:**	29-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	102.1
Plastic Limit (PL)	18.8
Plasticity Index (PI)	83.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

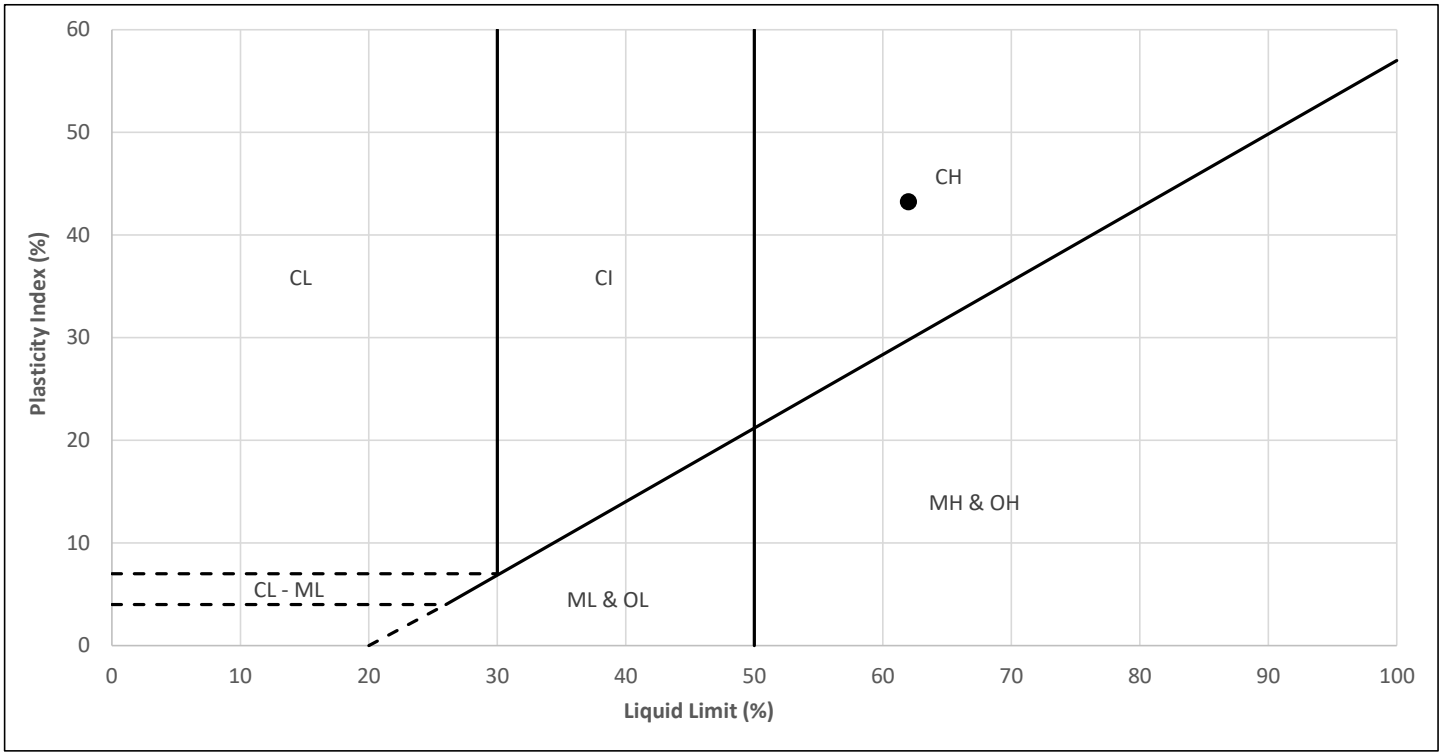
Project:	Snake Lake Reservoir Expansion	**Sample #:**	308RC2
Project No.:	1560-193-00	**Source:**	22CH308
Owner:	EID	**Sample Depth:**	6.0m
File No.:	AL - 308RC2	**Test Date:**	8-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	62.0
Plastic Limit (PL)	18.7
Plasticity Index (PI)	43.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

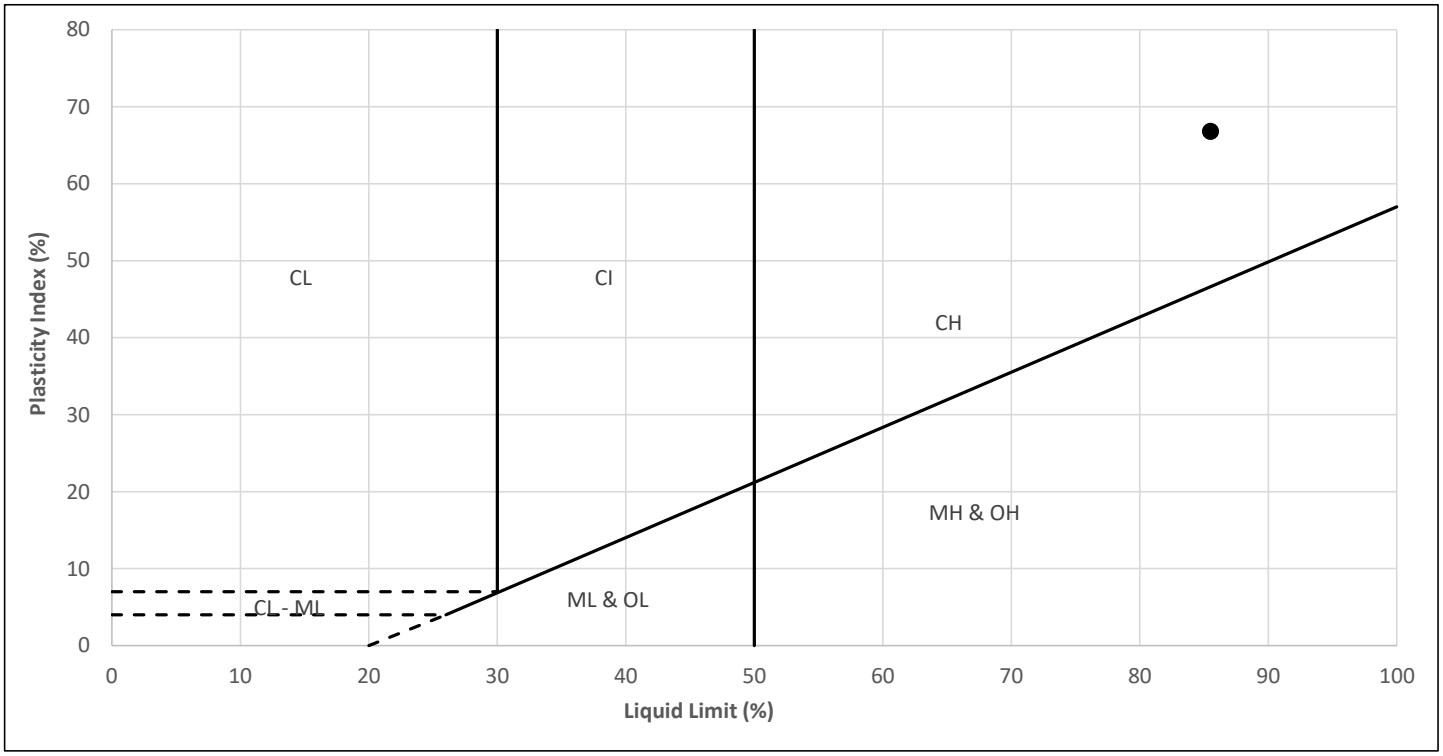
Project:	Snake Lake Reservoir Expansion	**Sample #:**	308UD2
Project No.:	1560-193-00	**Source:**	22CH308
Owner:	EID	**Sample Depth:**	14.95m
File No.:	AL - 308UD2	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	85.5
Plastic Limit (PL)	18.7
Plasticity Index (PI)	66.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

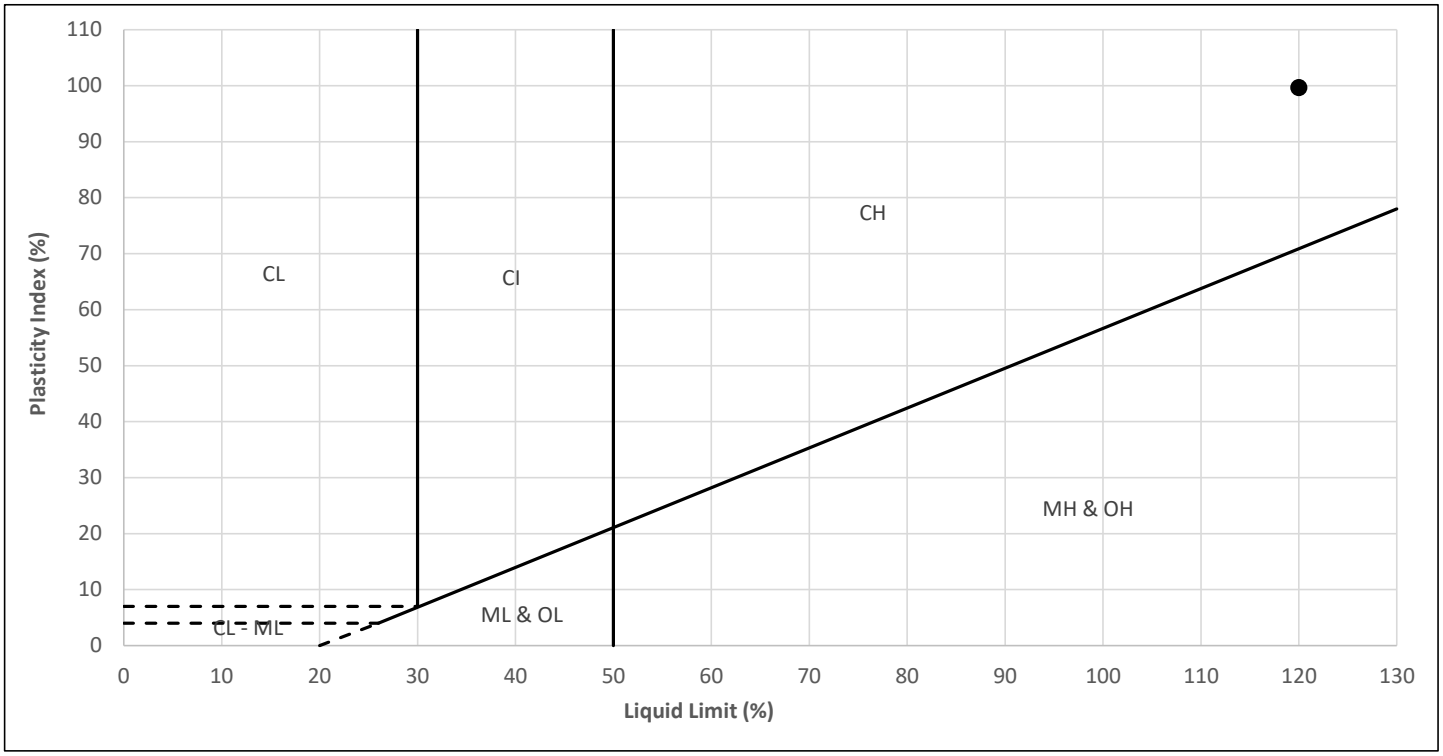
Project:	Snake Lake Reservoir Expansion	**Sample #:**	308UD3
Project No.:	1560-193-00	**Source:**	22CH308
Owner:	EID	**Sample Depth:**	18.8m
File No.:	AL - 308UD3	**Test Date:**	2-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	120.0
Plastic Limit (PL)	20.3
Plasticity Index (PI)	99.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

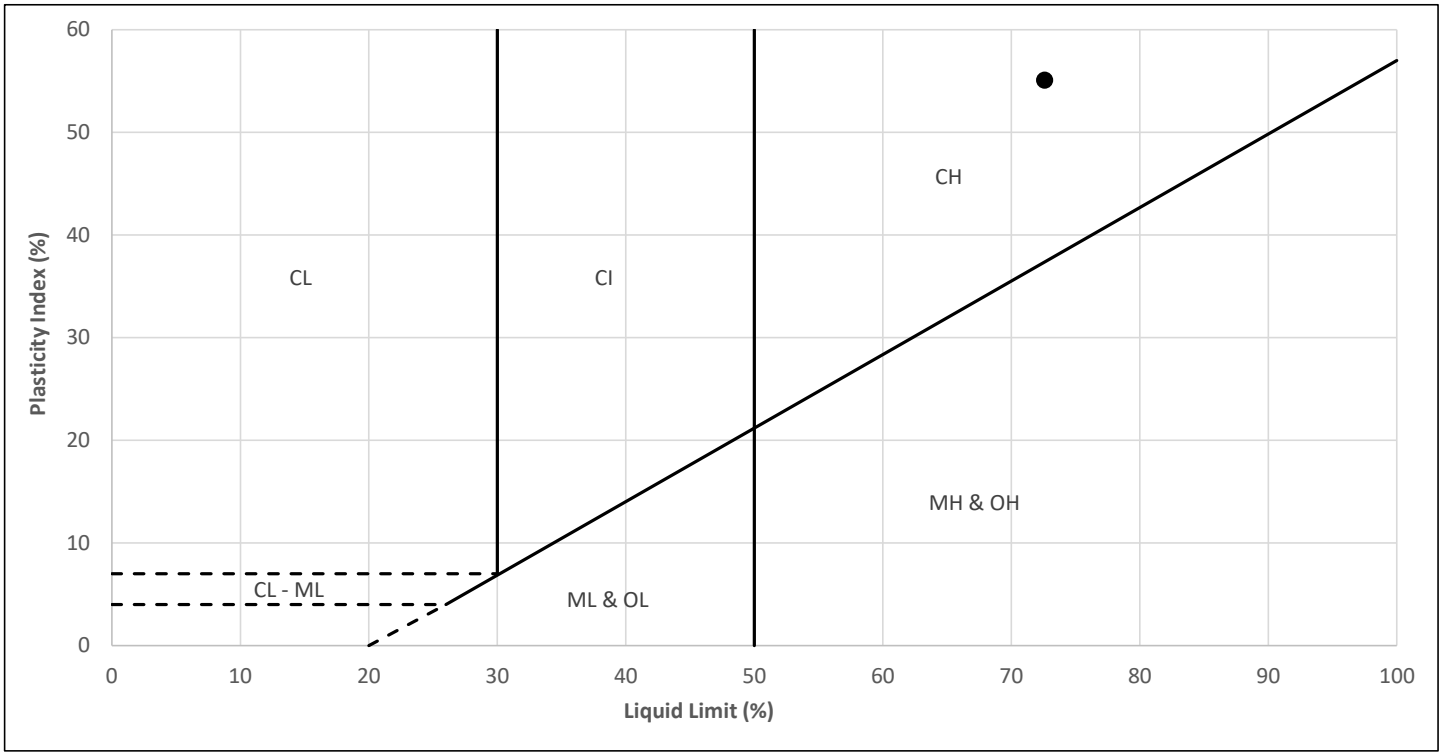
Project:	Snake Lake Reservoir Expansion	**Sample #:**	309AU3
Project No.:	1560-193-00	**Source:**	22BH309
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 309AU3	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	72.6
Plastic Limit (PL)	17.5
Plasticity Index (PI)	55.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

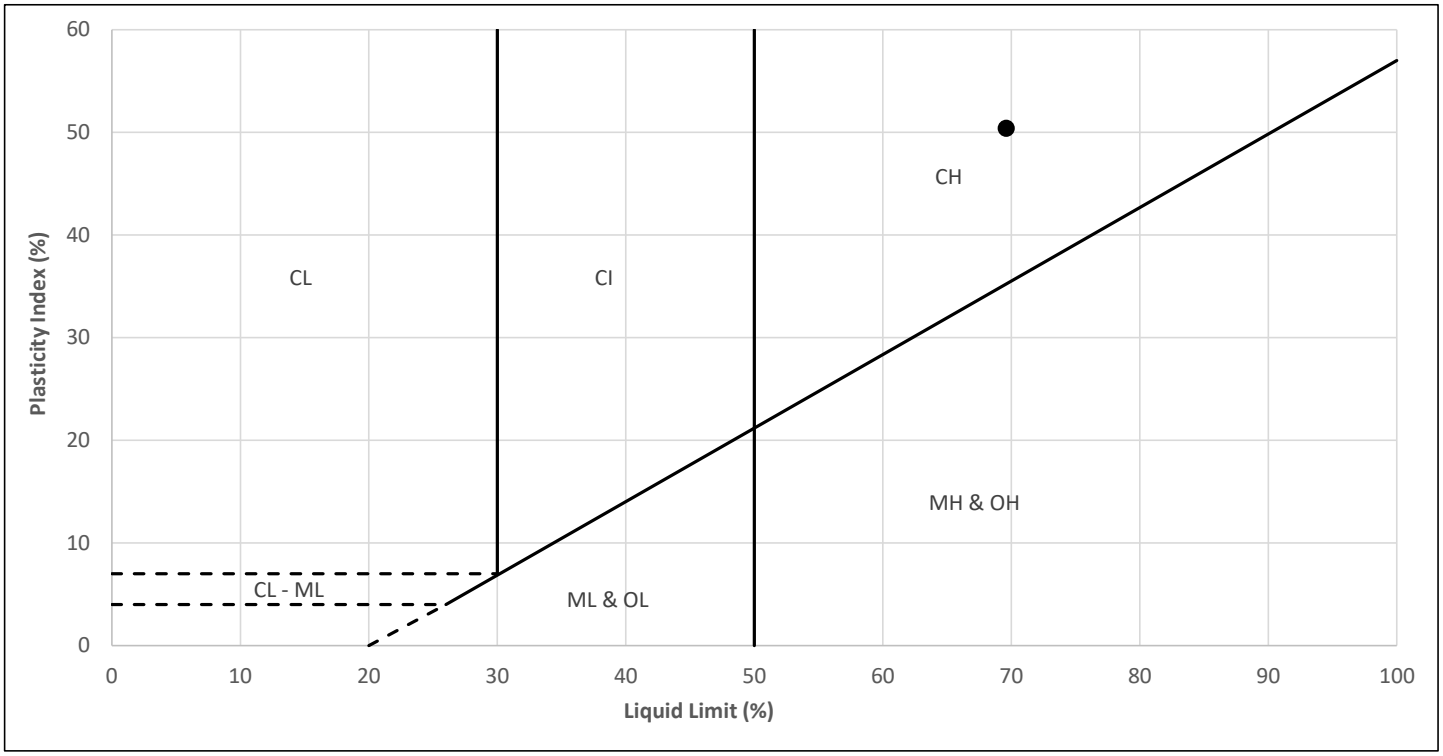
Project:	Snake Lake Reservoir Expansion	**Sample #:**	309RC1
Project No.:	1560-193-00	**Source:**	22CH309
Owner:	EID	**Sample Depth:**	4.2m
File No.:	AL - 309RC1	**Test Date:**	2-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	69.6
Plastic Limit (PL)	19.2
Plasticity Index (PI)	50.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

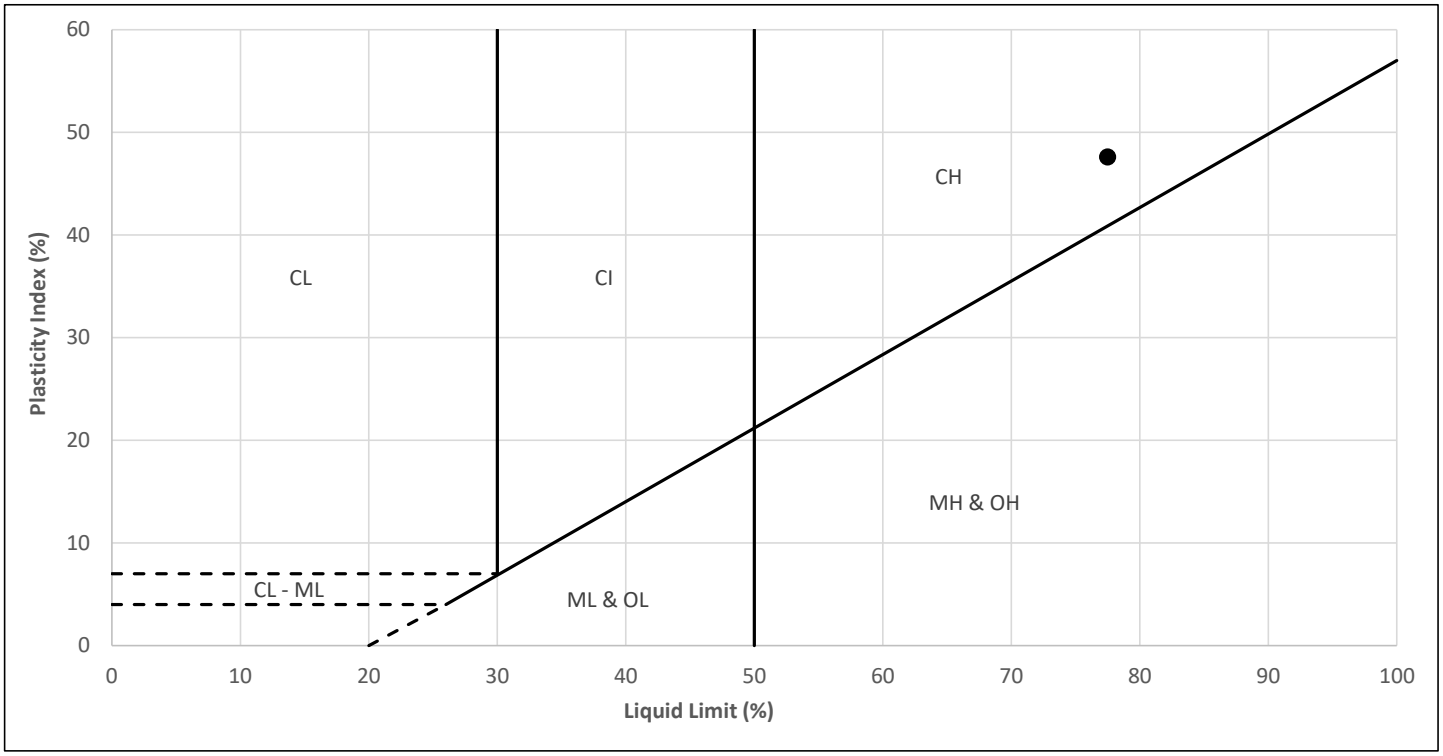
Project:	Snake Lake Reservoir Expansion	**Sample #:**	309UD2
Project No.:	1560-193-00	**Source:**	22CH309
Owner:	EID	**Sample Depth:**	8.73m
File No.:	AL - 309UD2	**Test Date:**	2-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	77.5
Plastic Limit (PL)	29.9
Plasticity Index (PI)	47.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

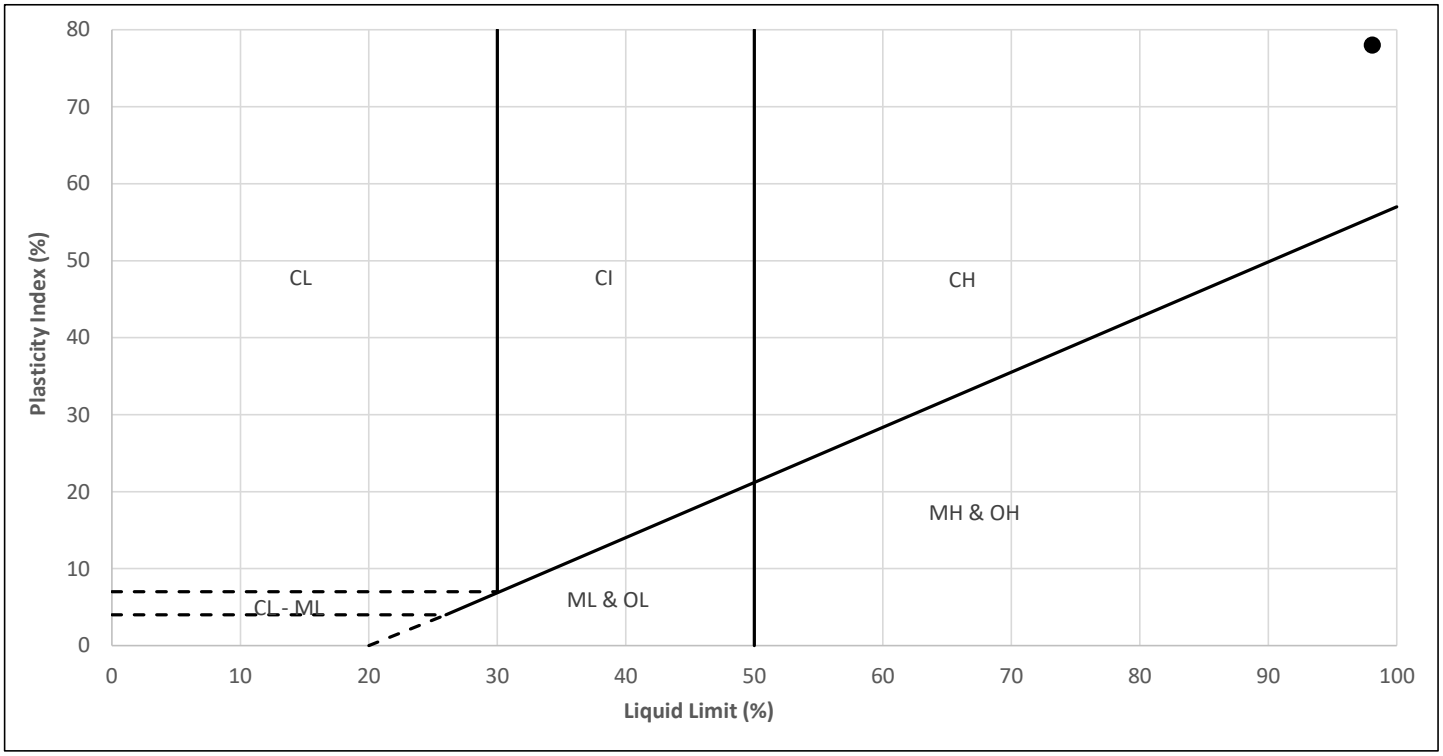
Project:	Snake Lake Reservoir Expansion	**Sample #:**	309UD4
Project No.:	1560-193-00	**Source:**	22CH309
Owner:	EID	**Sample Depth:**	13.4m
File No.:	AL - 309UD4	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	98.1
Plastic Limit (PL)	20.1
Plasticity Index (PI)	78.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

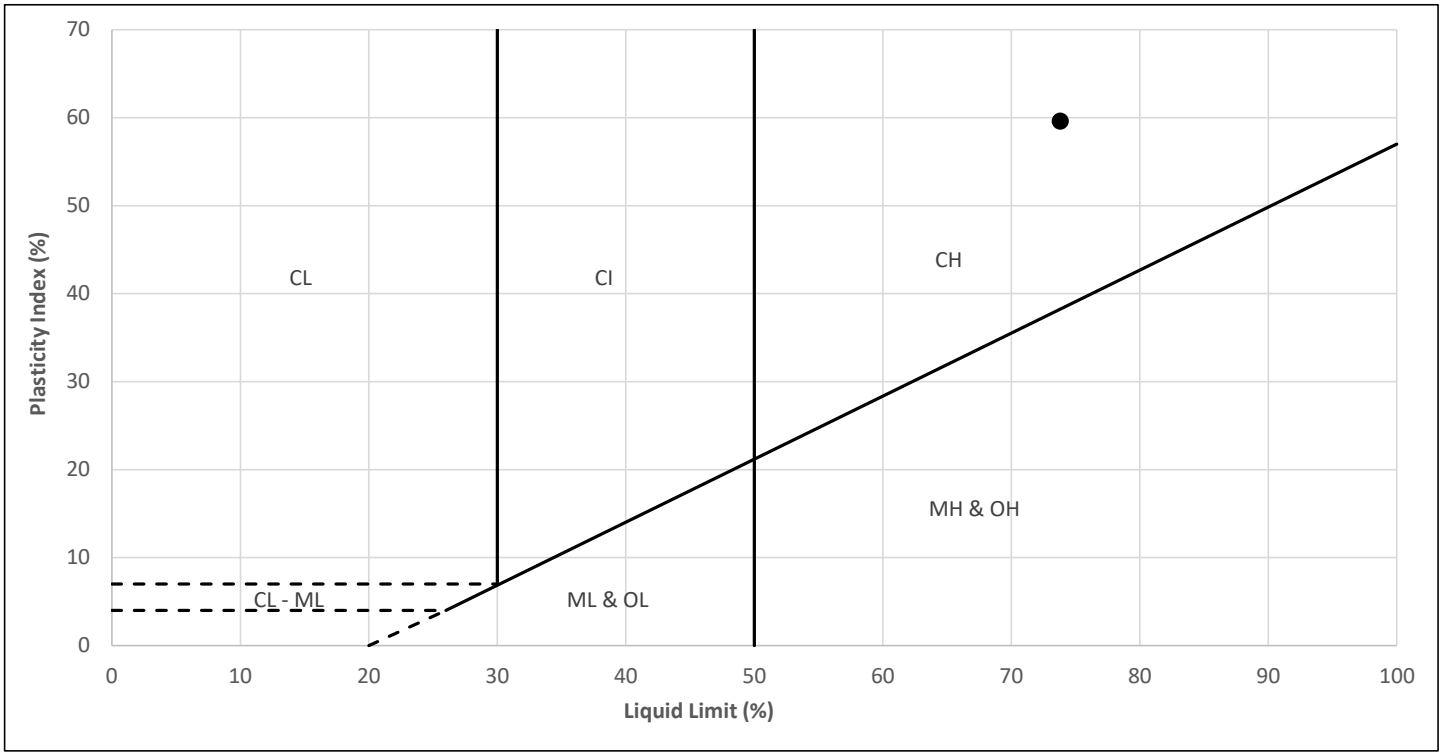
Project:	Snake Lake Reservoir Expansion	**Sample #:**	309UD5
Project No.:	1560-193-00	**Source:**	22CH309
Owner:	EID	**Sample Depth:**	18.2m
File No.:	AL - 309UD5	**Test Date:**	1-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	73.8
Plastic Limit (PL)	14.2
Plasticity Index (PI)	59.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

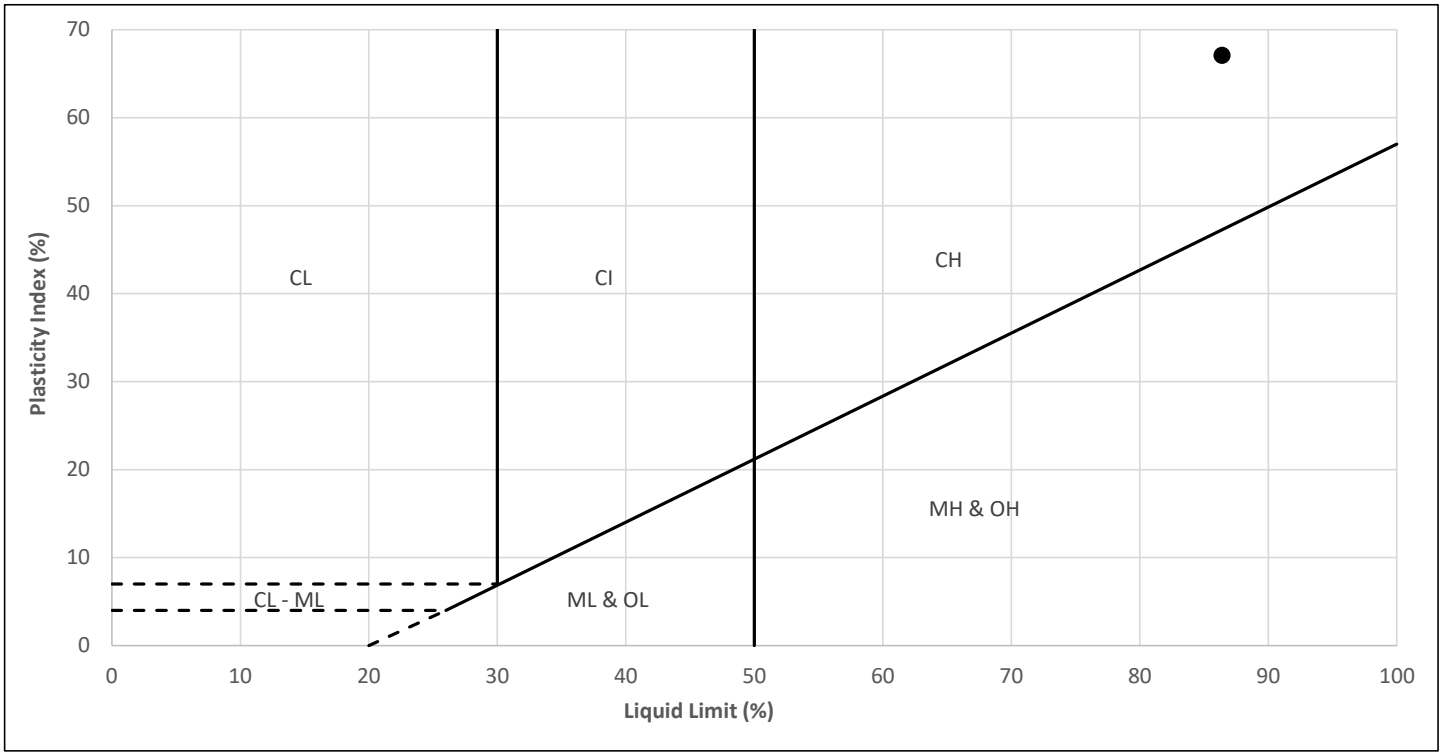
Project:	Snake Lake Reservoir Expansion	**Sample #:**	310AU9
Project No.:	1560-193-00	**Source:**	22BH310
Owner:	EID	**Sample Depth:**	6.1m
File No.:	AL - 310AU9	**Date:**	17-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information avalible upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	86.4
Plastic Limit (PL)	19.3
Plasticity Index (PI)	67.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

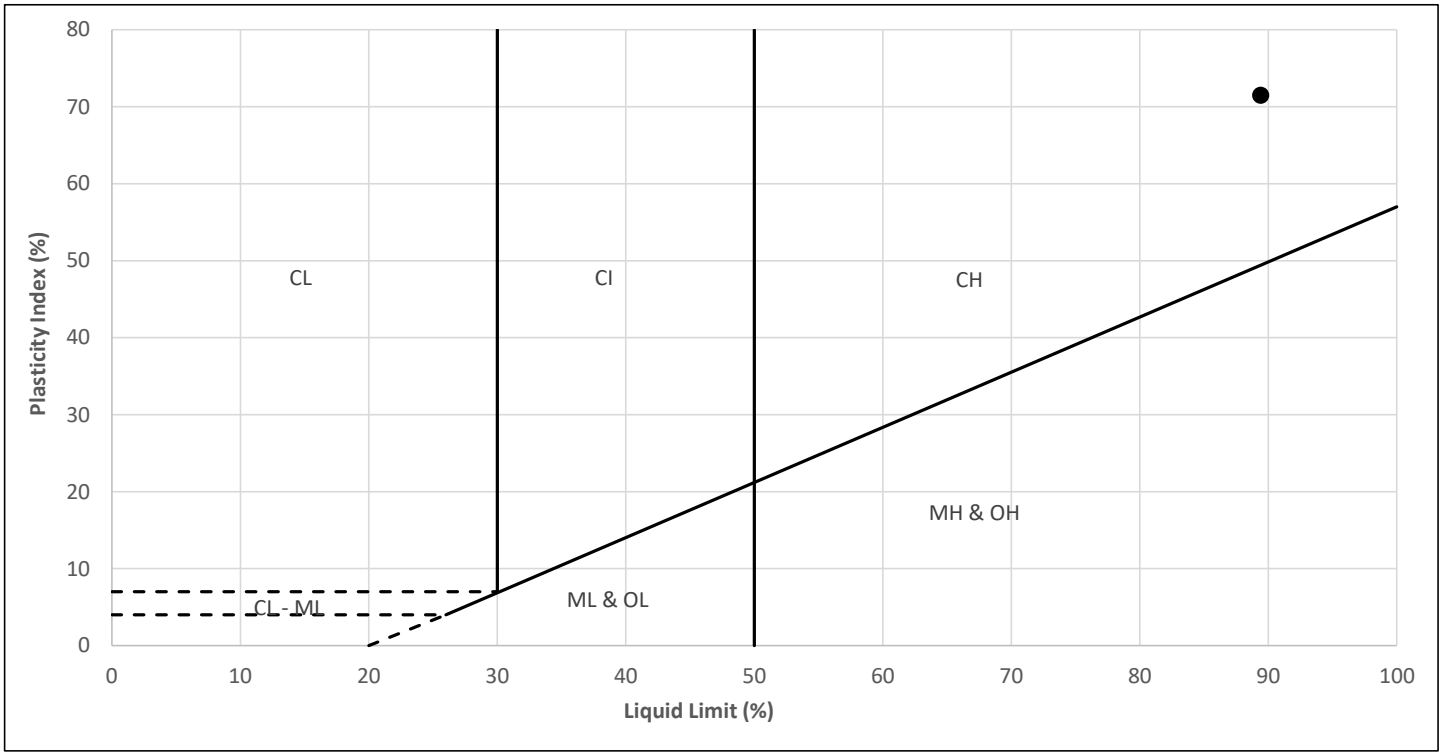
Project:	Snake Lake Reservoir Expansion	**Sample #:**	310UD2
Project No.:	1560-193-00	**Source:**	22CH310
Owner:	EID	**Sample Depth:**	11.62m
File No.:	AL - 310UD2	**Test Date:**	29-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	89.4
Plastic Limit (PL)	17.9
Plasticity Index (PI)	71.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

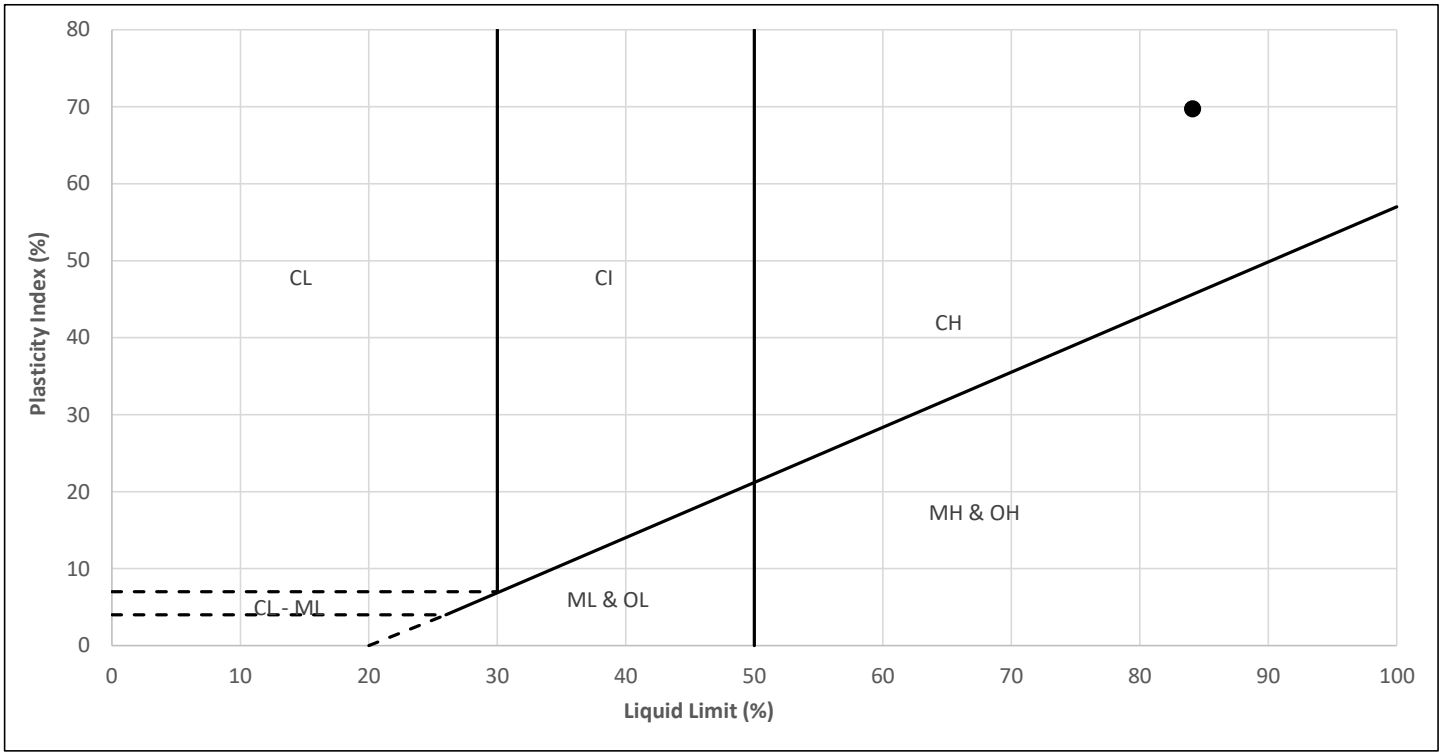
Project:	Snake Lake Reservoir Expansion	**Sample #:**	310UD3
Project No.:	1560-193-00	**Source:**	22CH310
Owner:	EID	**Sample Depth:**	14.8m
File No.:	AL - 310UD3	**Test Date:**	19-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	84.1
Plastic Limit (PL)	14.4
Plasticity Index (PI)	69.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

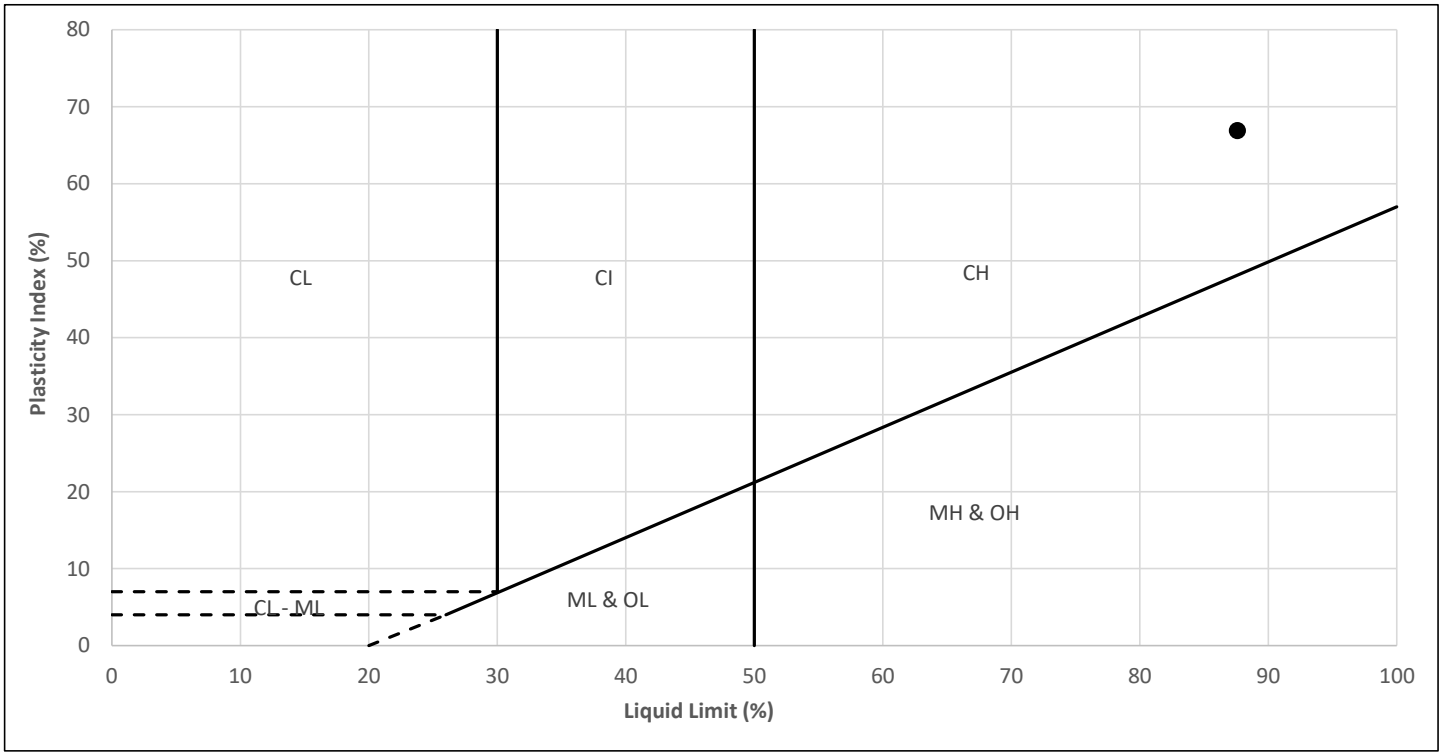
Project:	Snake Lake Reservoir Expansion	**Sample #:**	310UD5
Project No.:	1560-193-00	**Source:**	22CH310
Owner:	EID	**Sample Depth:**	20.84m
File No.:	AL - 310UD5	**Test Date:**	29-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	87.6
Plastic Limit (PL)	20.7
Plasticity Index (PI)	66.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

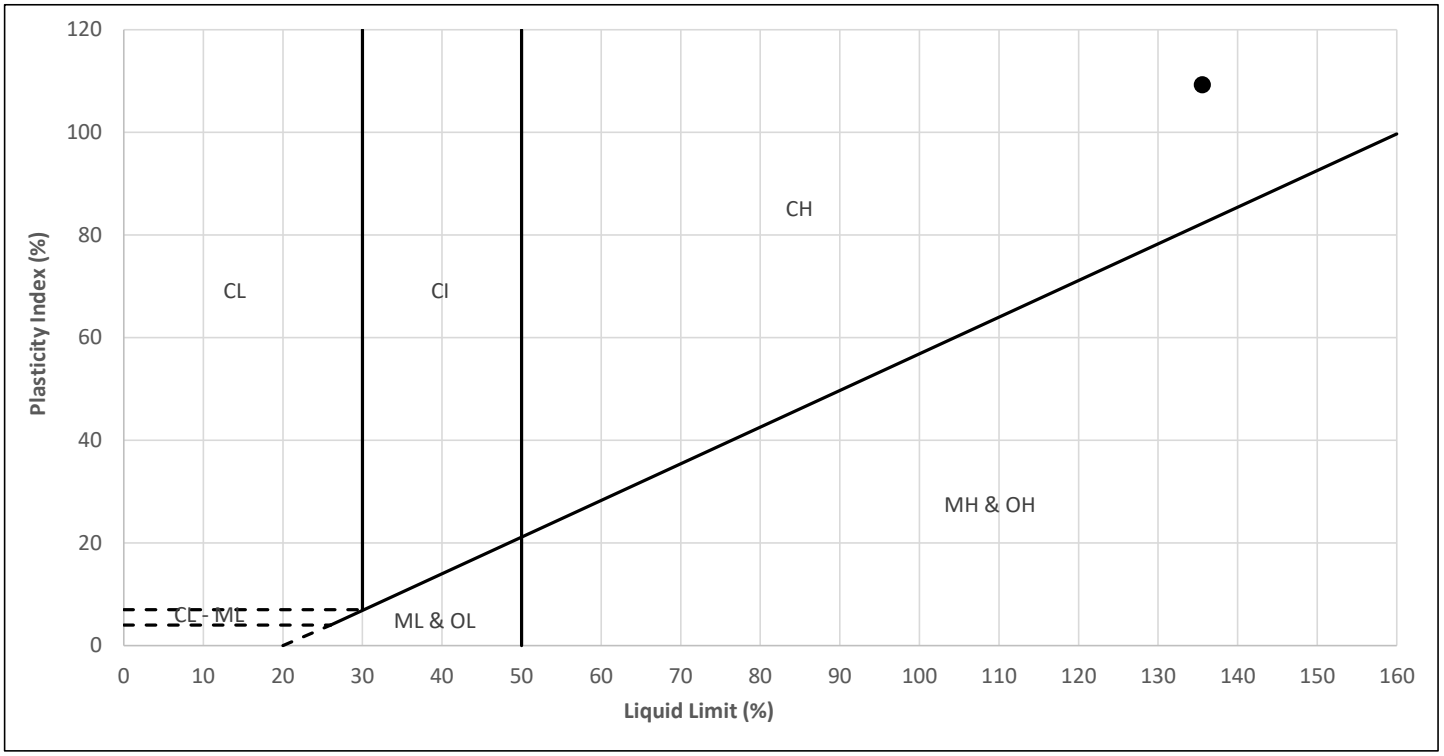
Project:	Snake Lake Reservoir Expansion	**Sample #:**	311AU2
Project No.:	1560-193-00	**Source:**	22BH311
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 311AU2	**Date:**	20-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information avalible upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	135.5
Plastic Limit (PL)	26.3
Plasticity Index (PI)	109.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

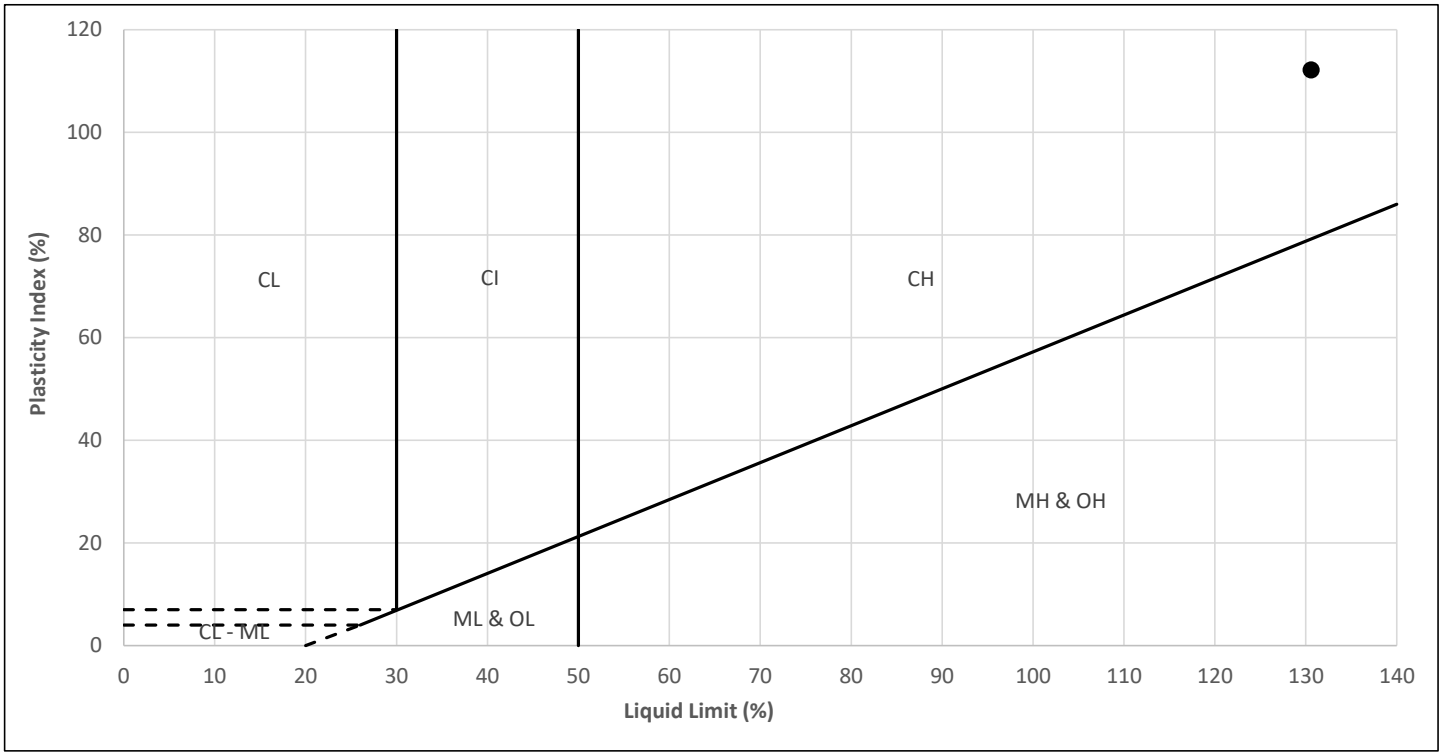
Project:	Snake Lake Reservoir Expansion	**Sample #:**	311RC5
Project No.:	1560-193-00	**Source:**	22CH311
Owner:	EID	**Sample Depth:**	9.0m
File No.:	AL - 311RC5	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	130.6
Plastic Limit (PL)	18.4
Plasticity Index (PI)	112.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

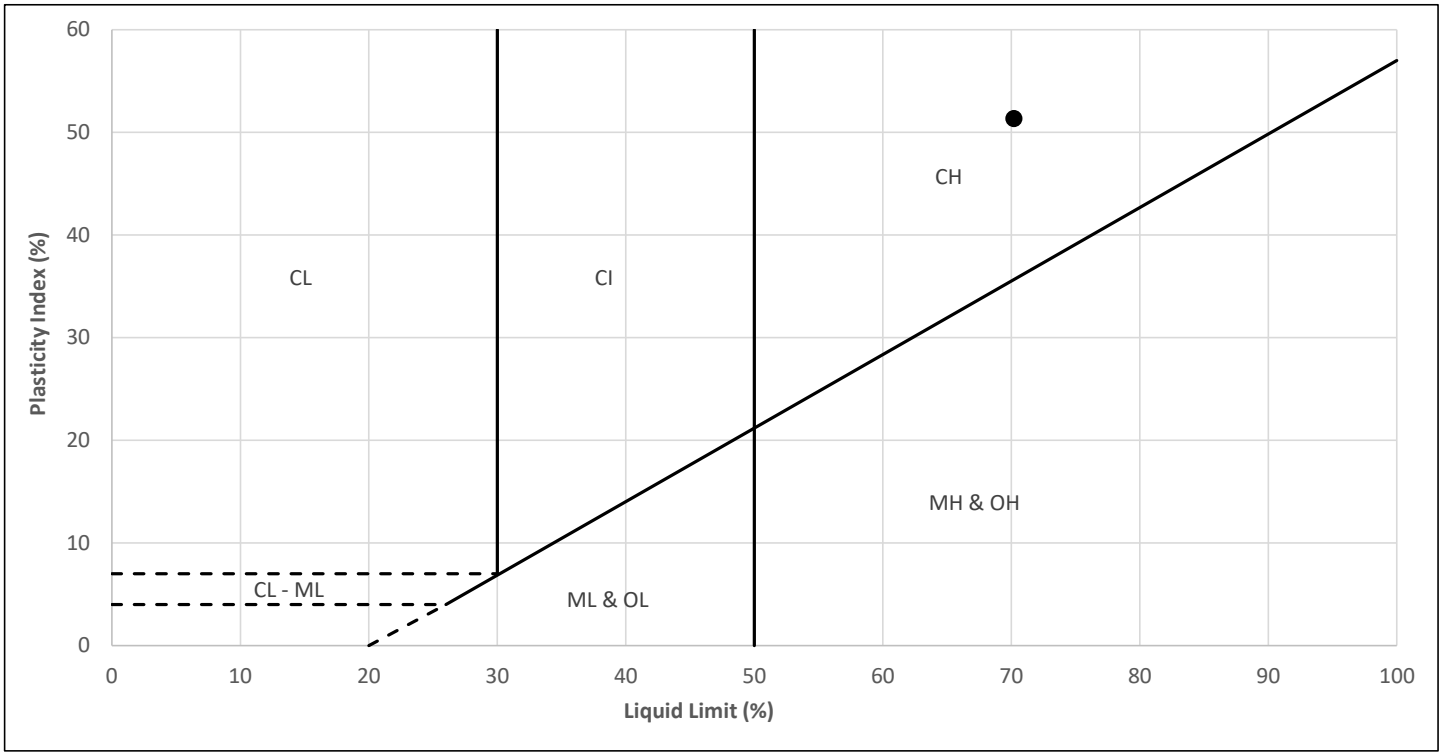
Project:	Snake Lake Reservoir Expansion	**Sample #:**	311RC10
Project No.:	1560-193-00	**Source:**	22CH311
Owner:	EID	**Sample Depth:**	16.0m
File No.:	AL - 311RC10	**Test Date:**	18-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	70.2
Plastic Limit (PL)	18.8
Plasticity Index (PI)	51.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

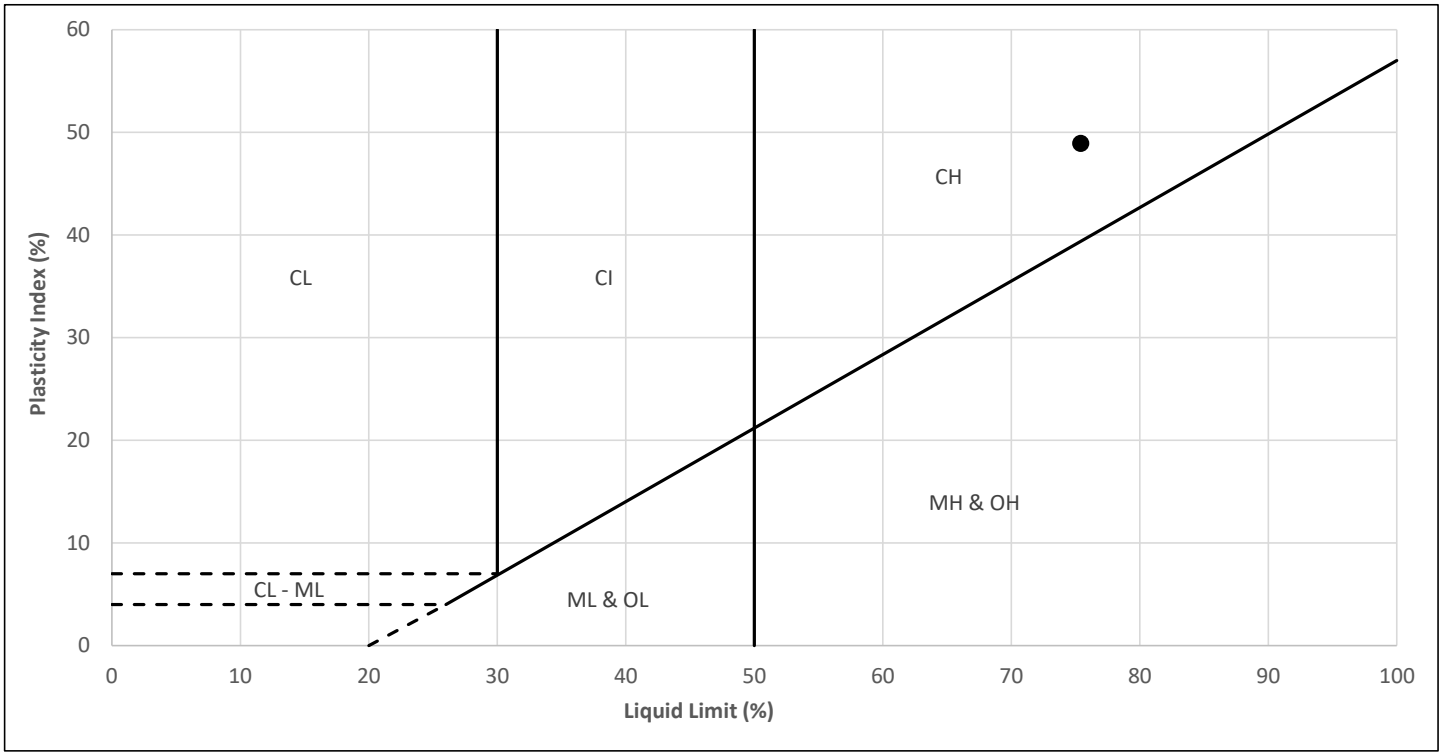
Project:	Snake Lake Reservoir Expansion	**Sample #:**	311RC11
Project No.:	1560-193-00	**Source:**	22CH311
Owner:	EID	**Sample Depth:**	19.1m
File No.:	AL - 311RC11	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	75.4
Plastic Limit (PL)	26.5
Plasticity Index (PI)	48.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

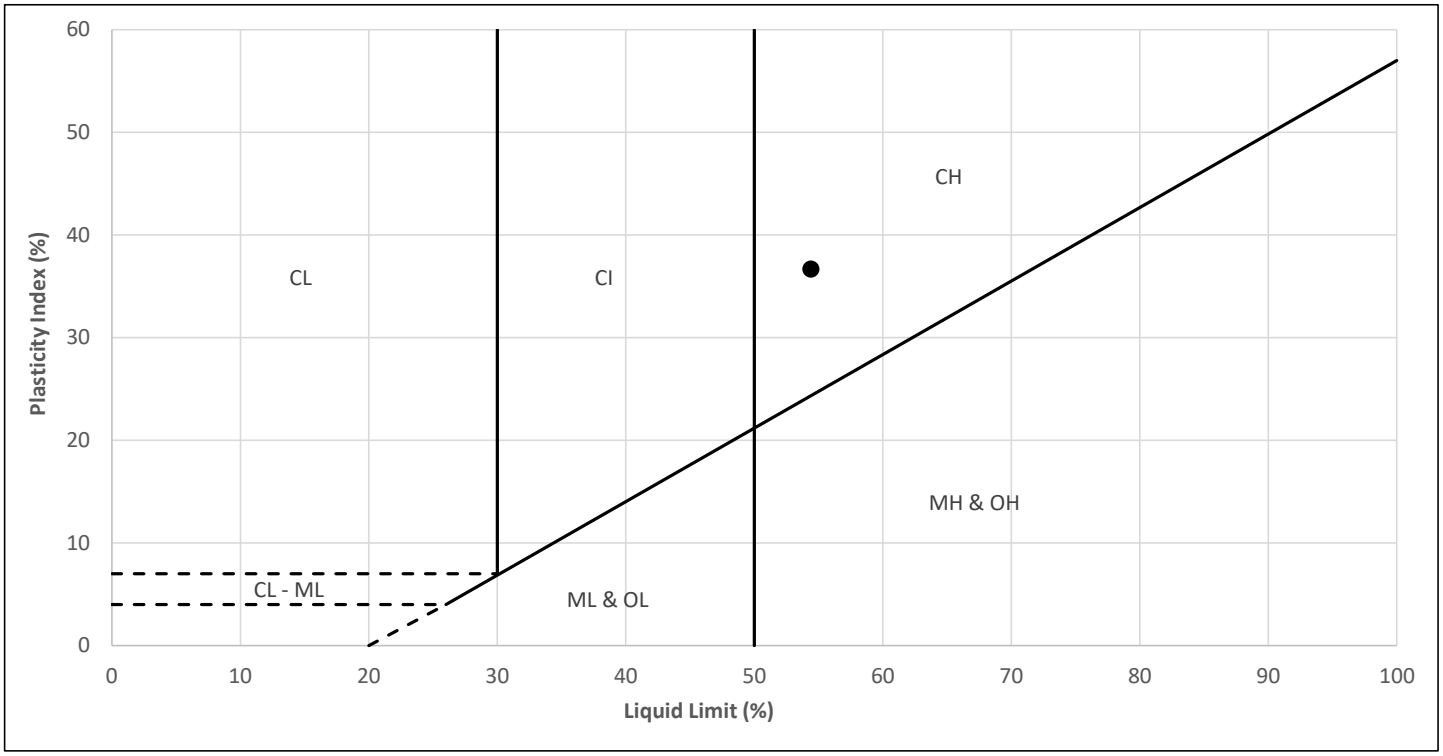
Project:	Snake Lake Reservoir Expansion	**Sample #:**	312AU4
Project No.:	1560-193-00	**Source:**	22BH312
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 312AU4	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.4
Plastic Limit (PL)	17.7
Plasticity Index (PI)	36.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

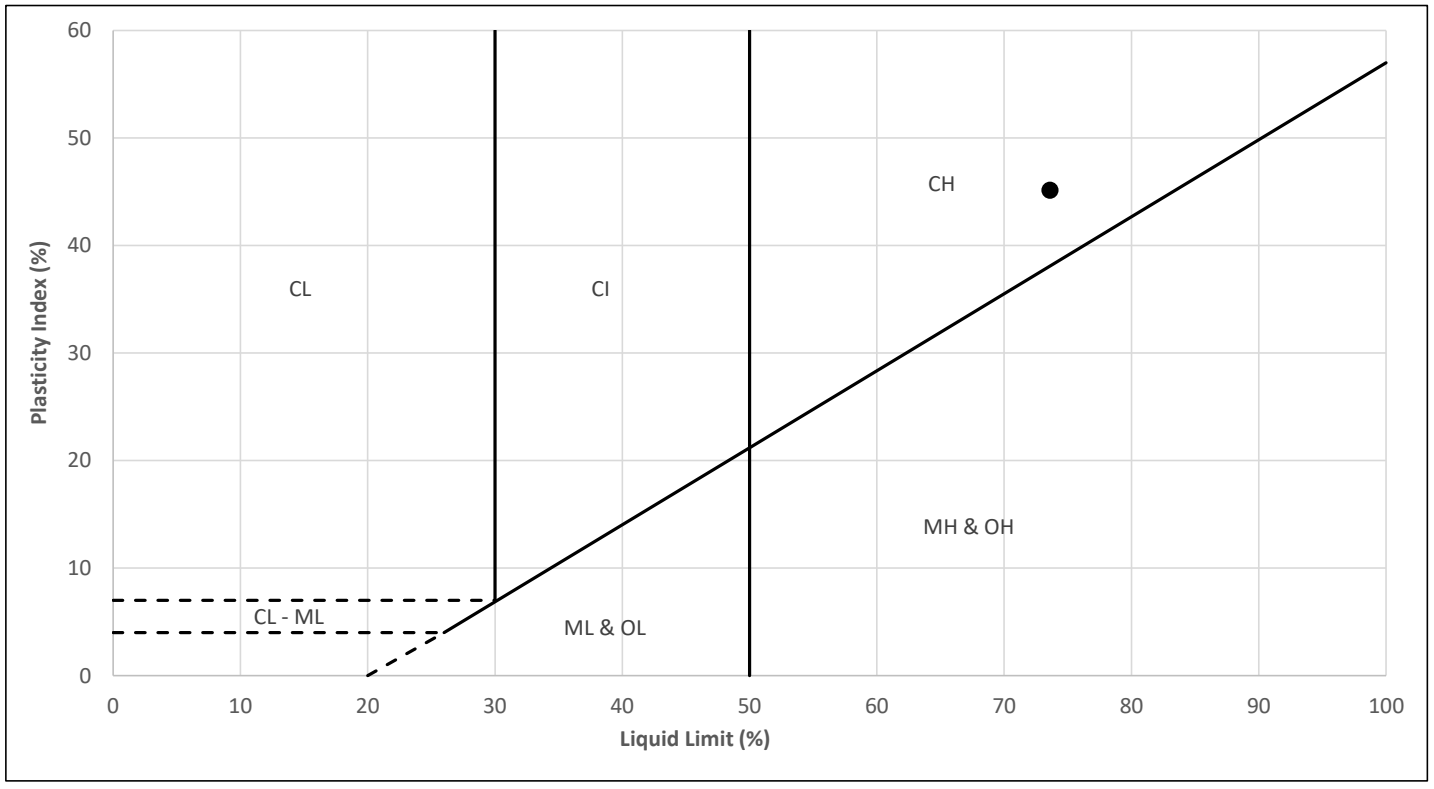
Project:	Snake Lake Reservoir Expansion	**Sample #:**	312RC1
Project No.:	1560-193-00	**Source:**	22CH312
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 312RC1	**Test Date:**	1-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	73.6
Plastic Limit (PL)	28.5
Plasticity Index (PI)	45.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

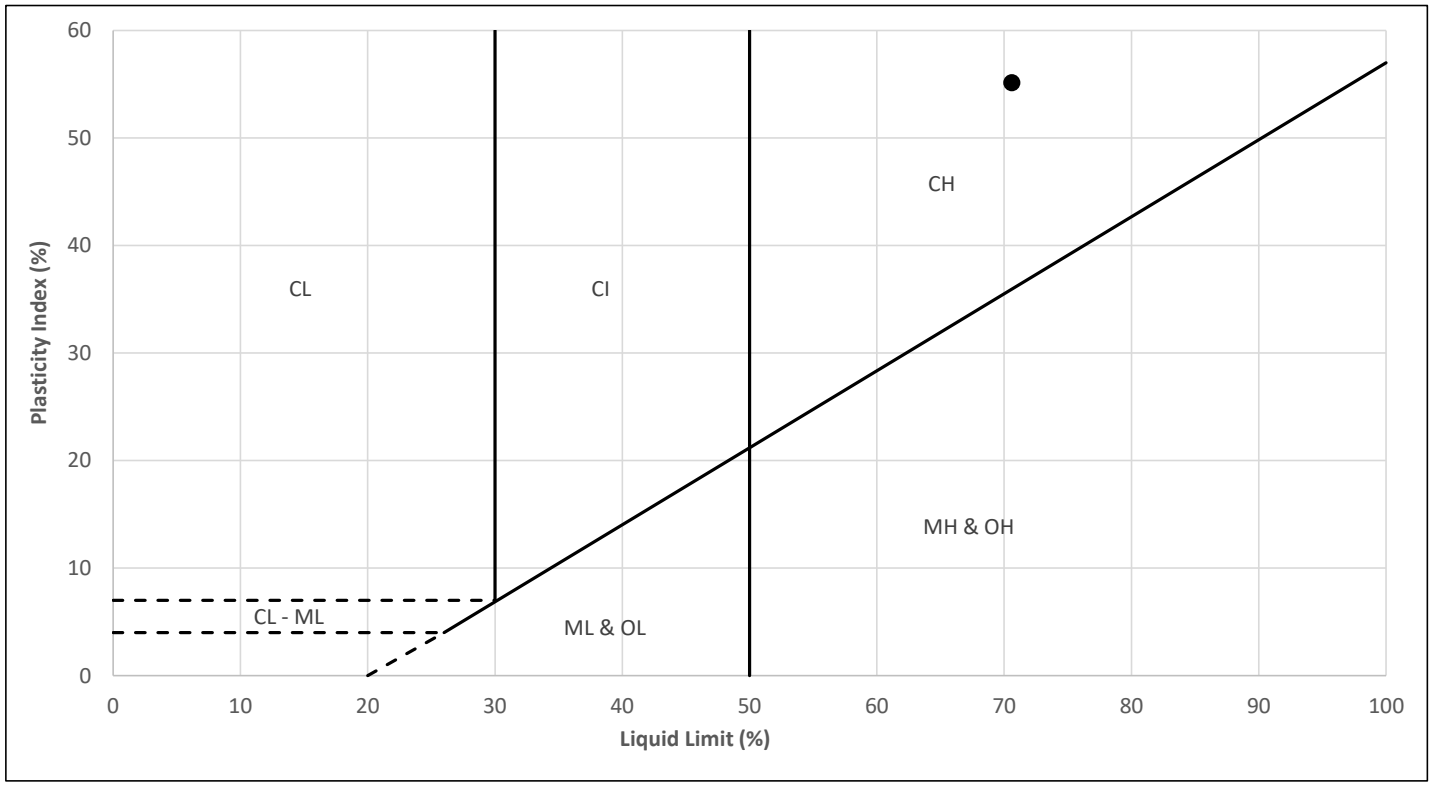
Project:	Snake Lake Reservoir Expansion	**Sample #:**	312RC1 GW
Project No.:	1560-193-00	**Source:**	22BH312
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 312RC1 GW	**Test Date:**	8-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	70.6
Plastic Limit (PL)	15.4
Plasticity Index (PI)	55.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

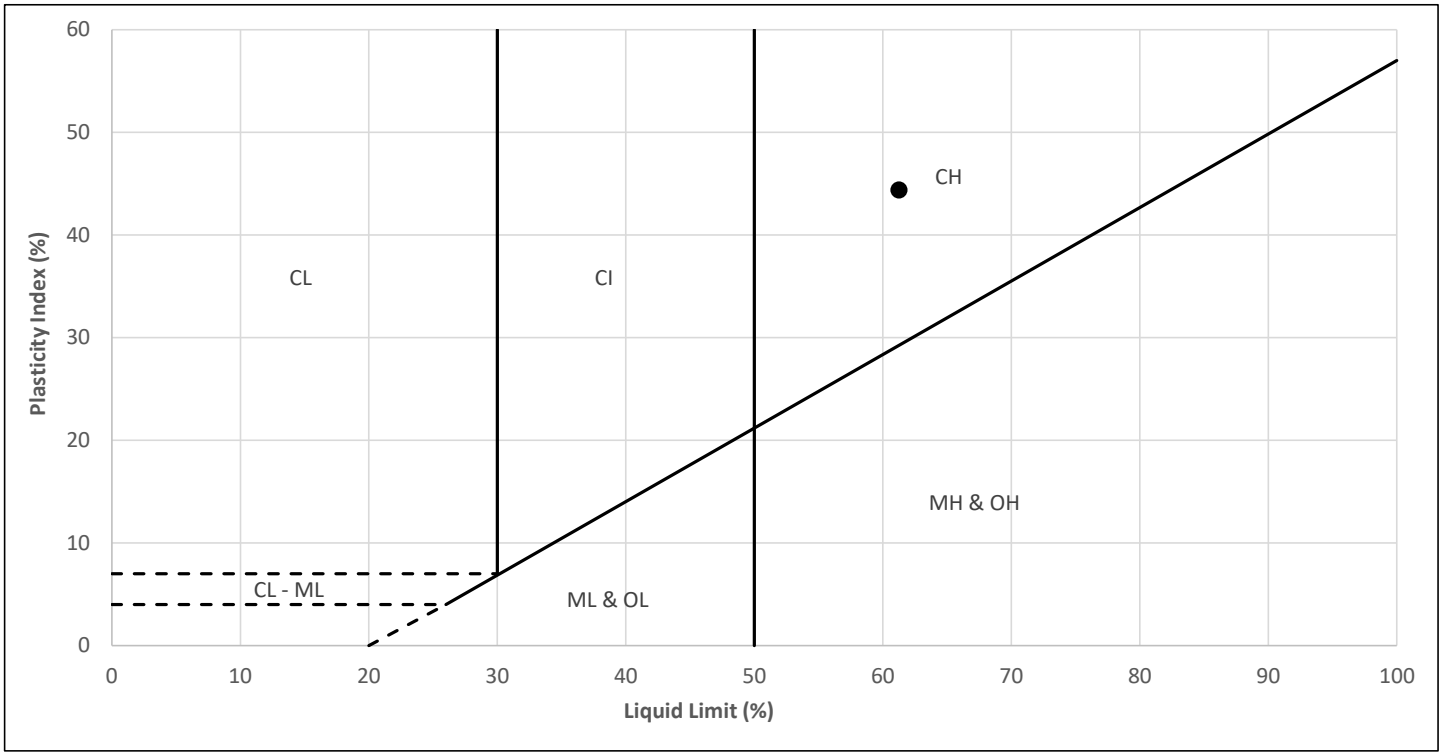
Project:	Snake Lake Reservoir Expansion	**Sample #:**	312RC1
Project No.:	1560-193-00	**Source:**	22CH312
Owner:	EID	**Sample Depth:**	5.3m
File No.:	AL - 312RC1	**Test Date:**	17-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	61.3
Plastic Limit (PL)	16.9
Plasticity Index (PI)	44.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

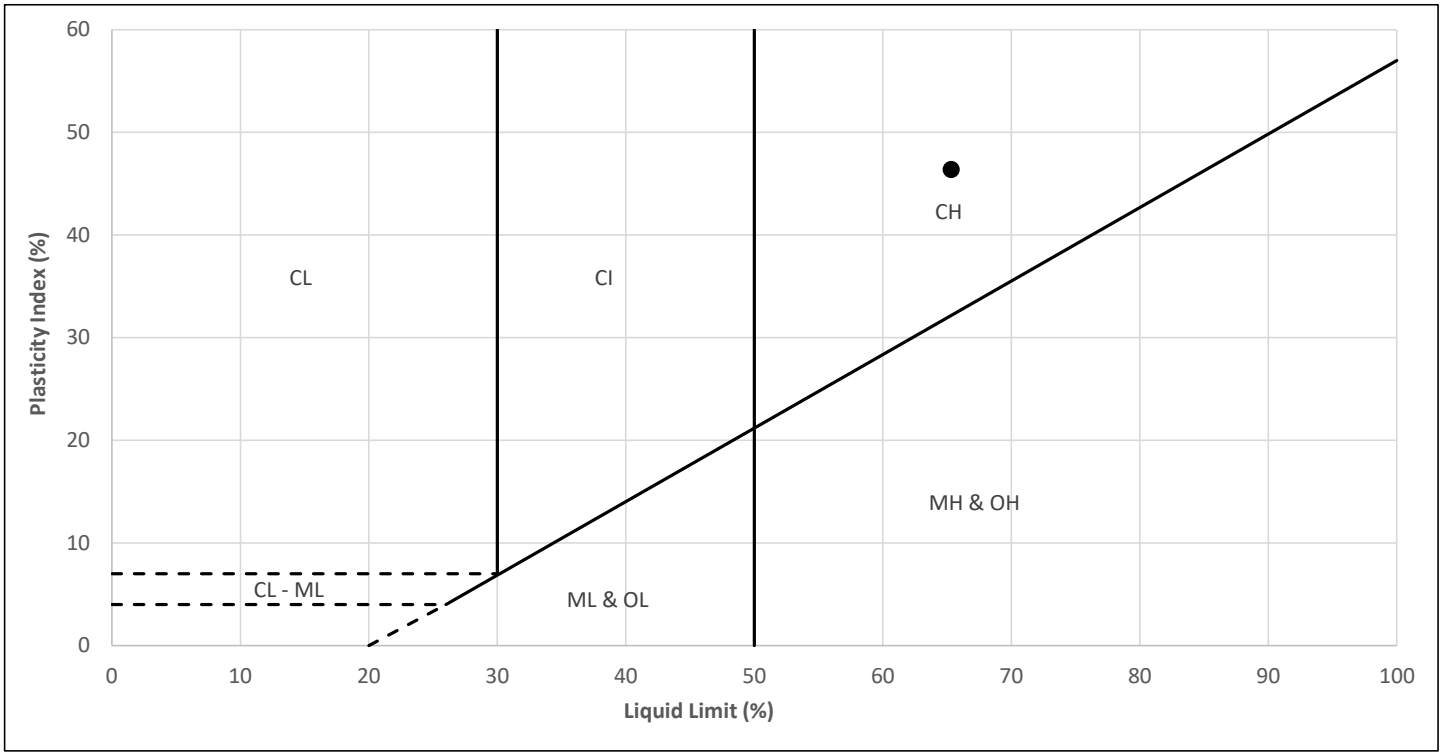
Project:	Snake Lake Reservoir Expansion	**Sample #:**	312RC3
Project No.:	1560-193-00	**Source:**	22CH312
Owner:	EID	**Sample Depth:**	8.0m
File No.:	AL - 312RC3	**Test Date:**	18-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	65.3
Plastic Limit (PL)	18.9
Plasticity Index (PI)	46.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

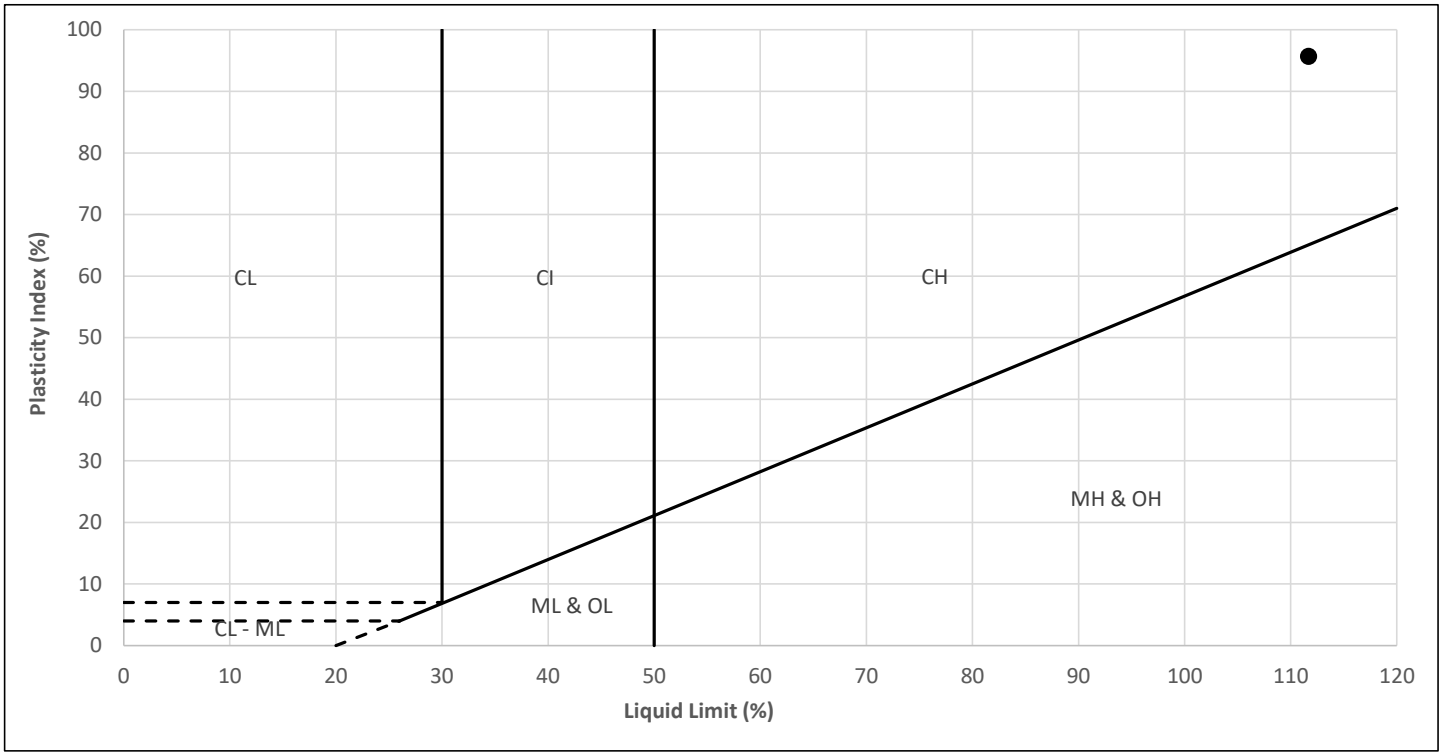
Project:	Snake Lake Reservoir Expansion	**Sample #:**	312RC6
Project No.:	1560-193-00	**Source:**	22CH312
Owner:	EID	**Sample Depth:**	13.0m
File No.:	AL - 312RC6	**Test Date:**	18-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	111.7
Plastic Limit (PL)	16.0
Plasticity Index (PI)	95.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

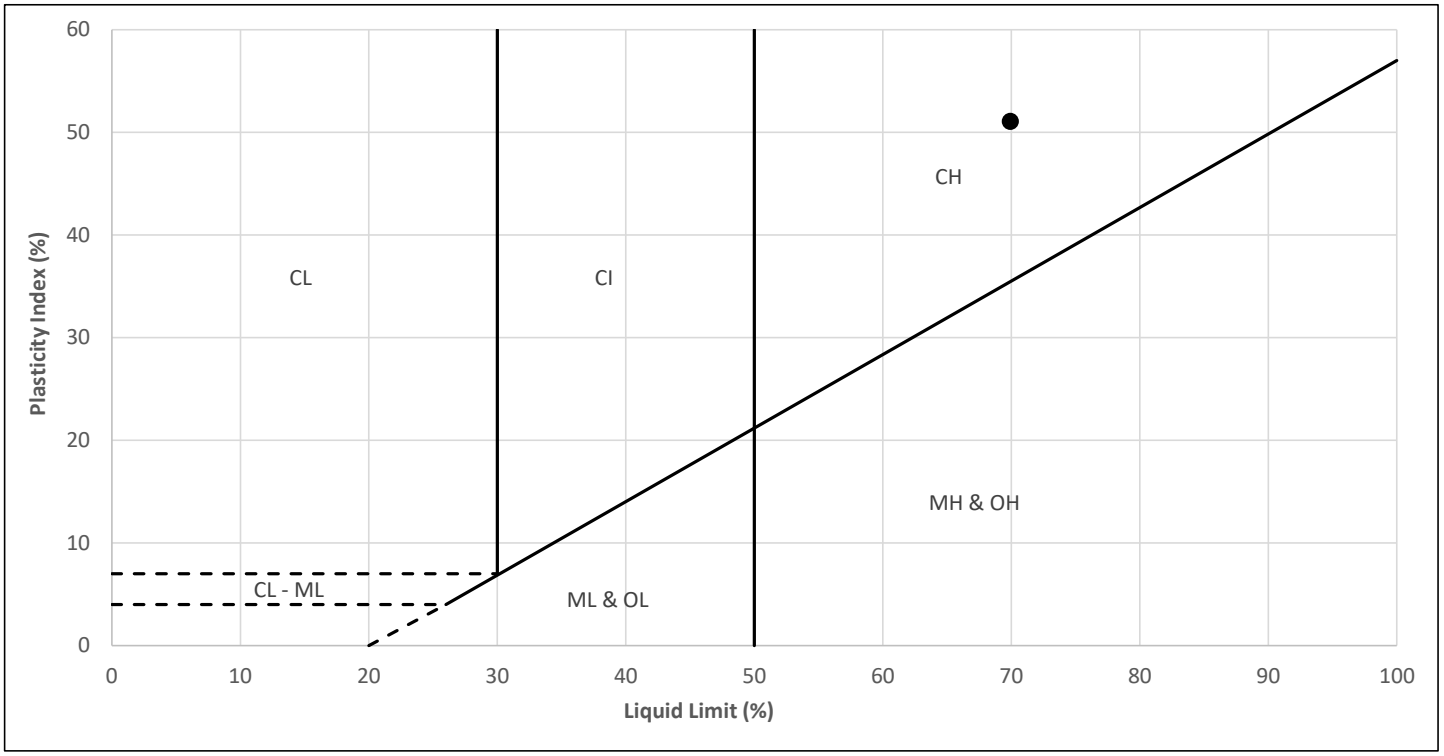
Project:	Snake Lake Reservoir Expansion	**Sample #:**	312RC9
Project No.:	1560-193-00	**Source:**	22CH312
Owner:	EID	**Sample Depth:**	16.7m
File No.:	AL - 312RC9	**Test Date:**	23-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	69.9
Plastic Limit (PL)	18.8
Plasticity Index (PI)	51.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

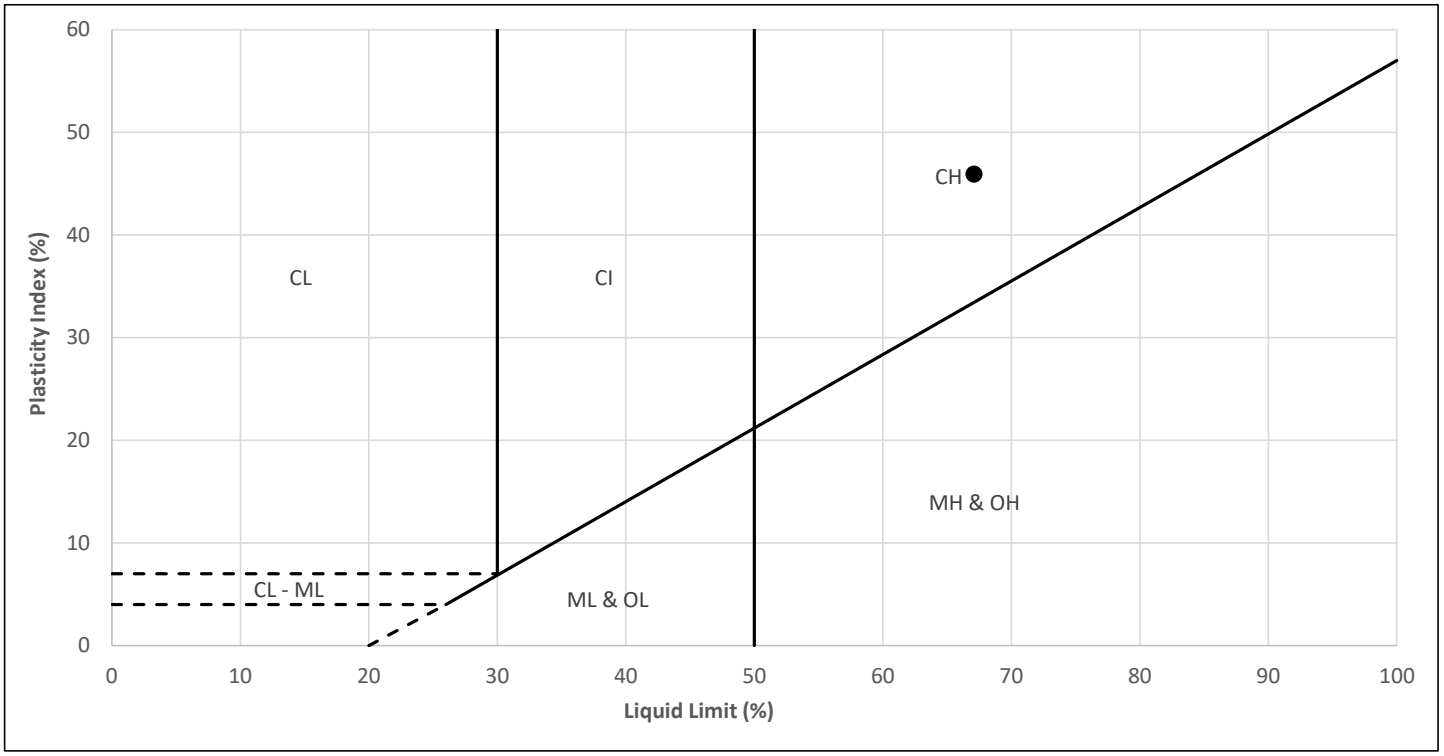
Project:	Snake Lake Reservoir Expansion	**Sample #:**	313AU4
Project No.:	1560-193-00	**Source:**	22BH313
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 313AU4	**Date:**	20-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information avalible upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	67.1
Plastic Limit (PL)	21.1
Plasticity Index (PI)	46.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

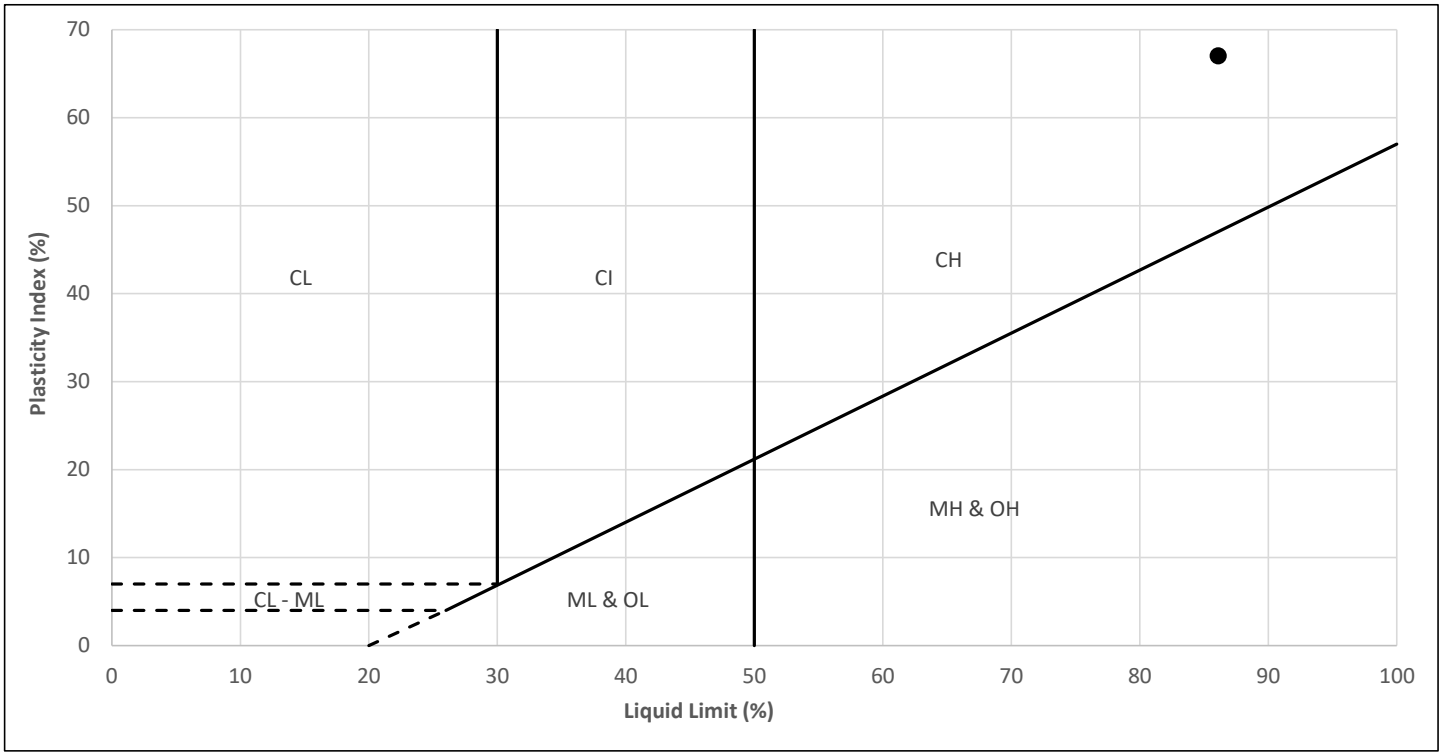
Project:	Snake Lake Reservoir Expansion	**Sample #:**	313AU6
Project No.:	1560-193-00	**Source:**	22BH313
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 313AU6	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	86.1
Plastic Limit (PL)	19.1
Plasticity Index (PI)	67.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

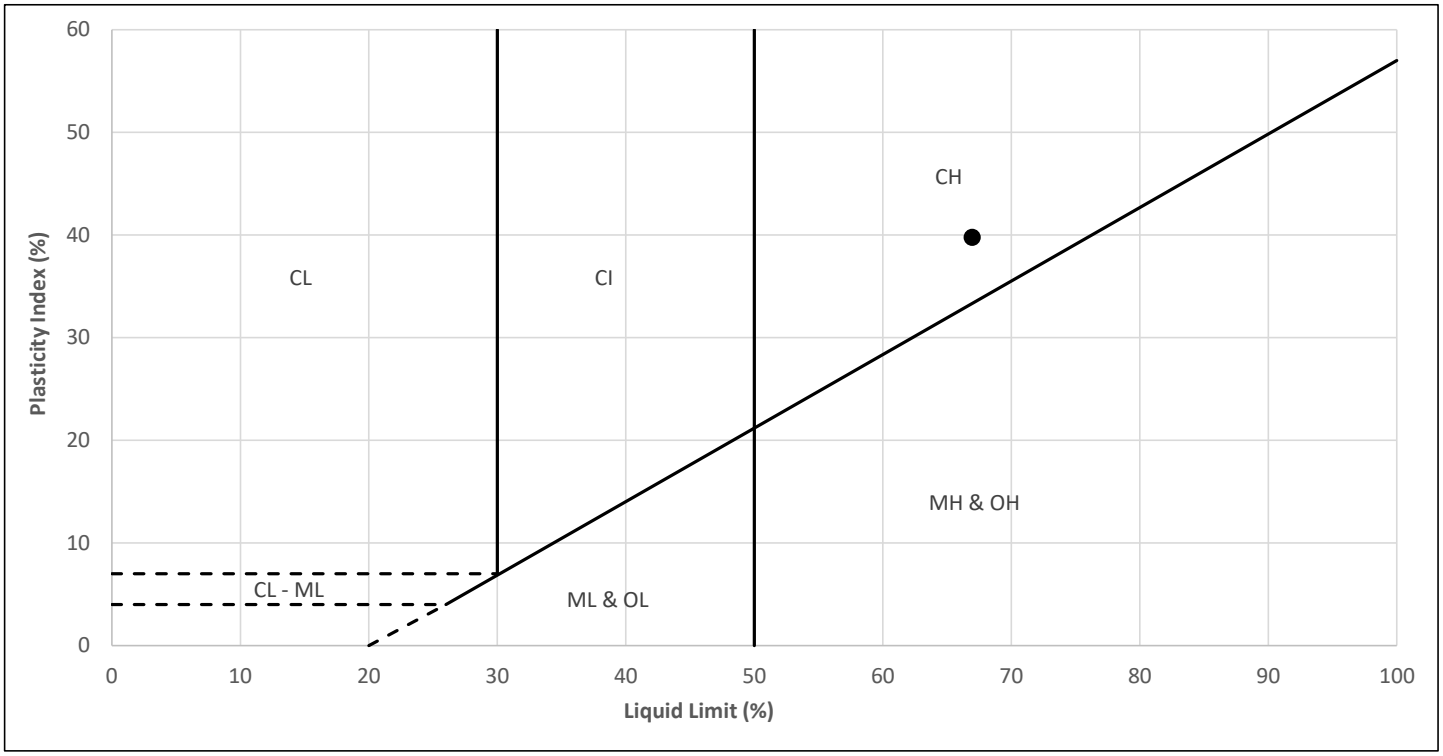
Project:	Snake Lake Reservoir Expansion	**Sample #:**	313RC2
Project No.:	1560-193-00	**Source:**	22CH313
Owner:	EID	**Sample Depth:**	7.0m
File No.:	AL - 313RC2	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	67.0
Plastic Limit (PL)	27.2
Plasticity Index (PI)	39.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

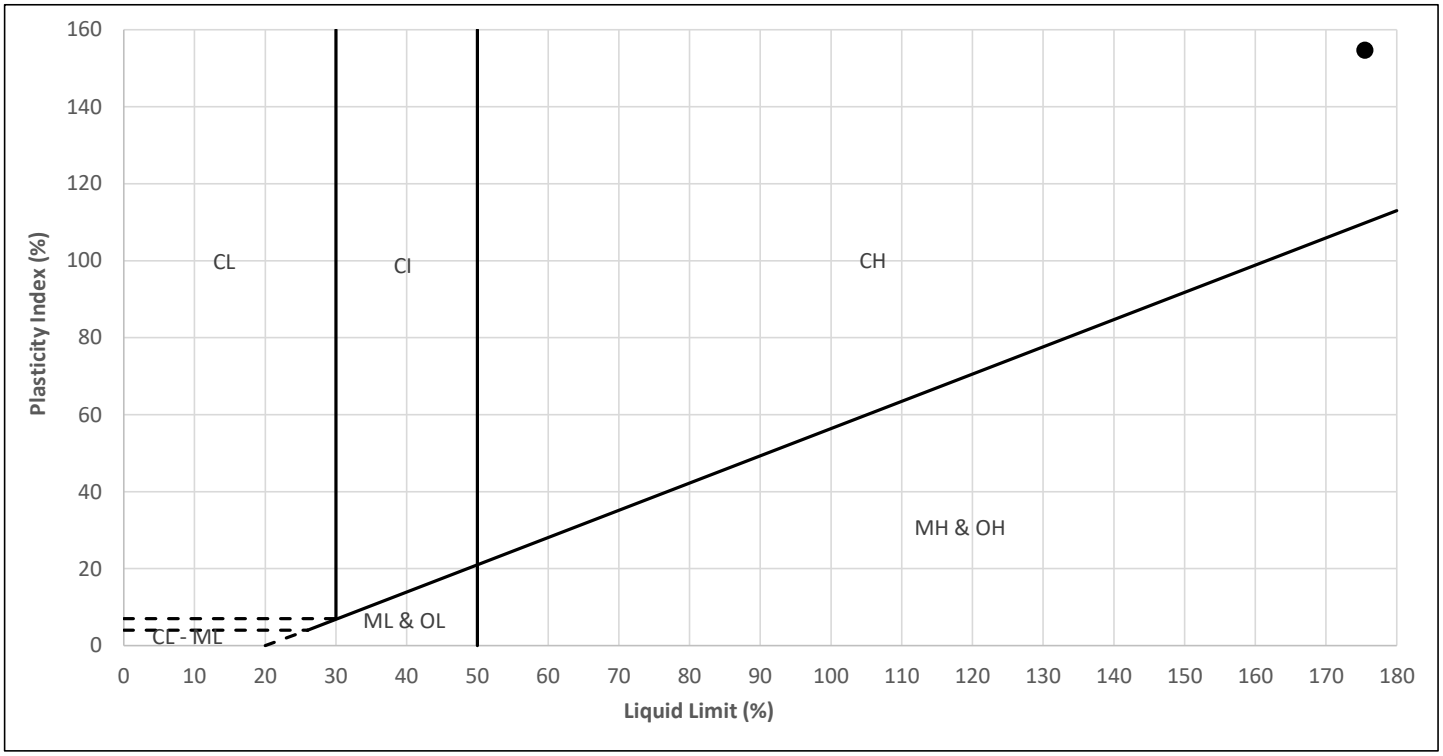
Project:	Snake Lake Reservoir Expansion	**Sample #:**	313RC3
Project No.:	1560-193-00	**Source:**	22CH313
Owner:	EID	**Sample Depth:**	8.3m
File No.:	AL - 313RC3	**Test Date:**	4-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	175.5
Plastic Limit (PL)	20.8
Plasticity Index (PI)	154.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

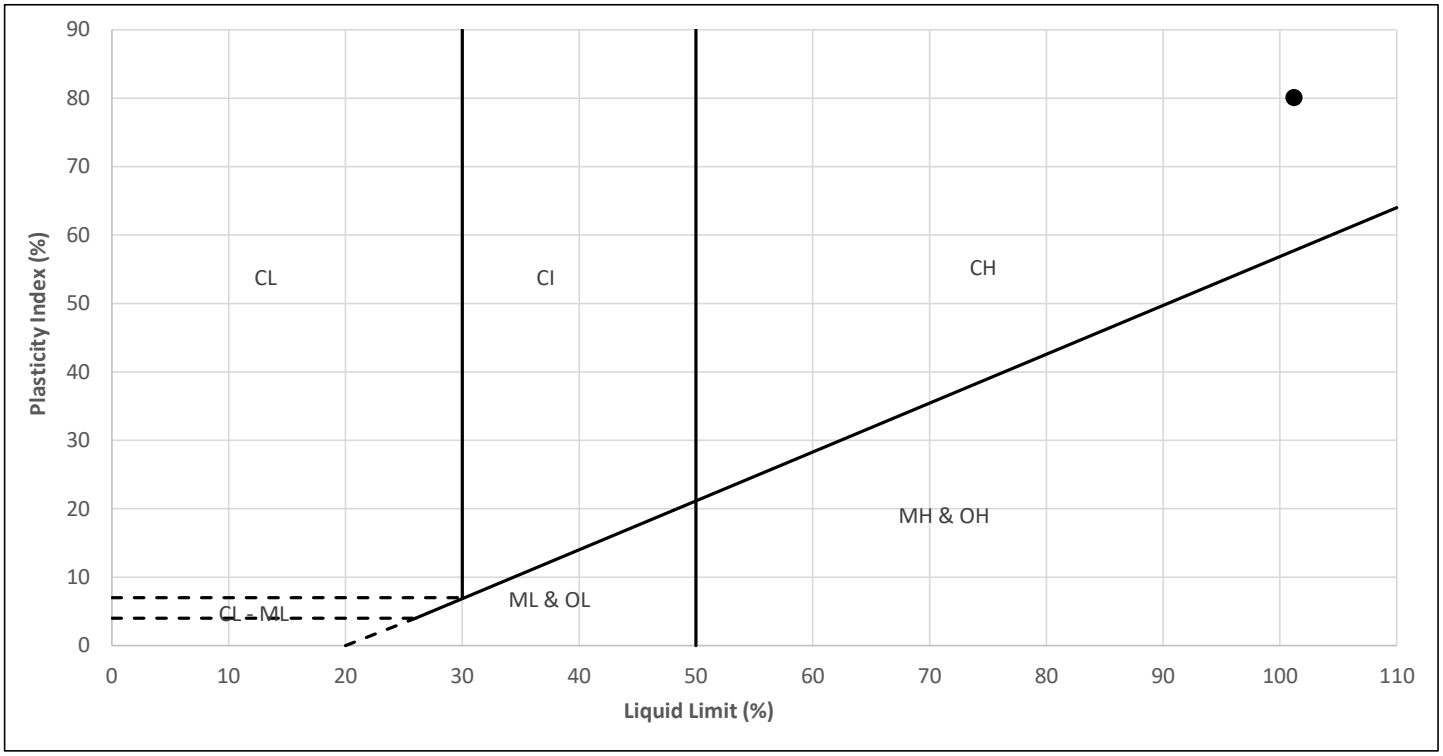
Project:	Snake Lake Reservoir Expansion	**Sample #:**	313RC5
Project No.:	1560-193-00	**Source:**	22CH313
Owner:	EID	**Sample Depth:**	11.2m
File No.:	AL - 313RC5	**Test Date:**	22-Aug-23

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	101.2
Plastic Limit (PL)	21.1
Plasticity Index (PI)	80.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

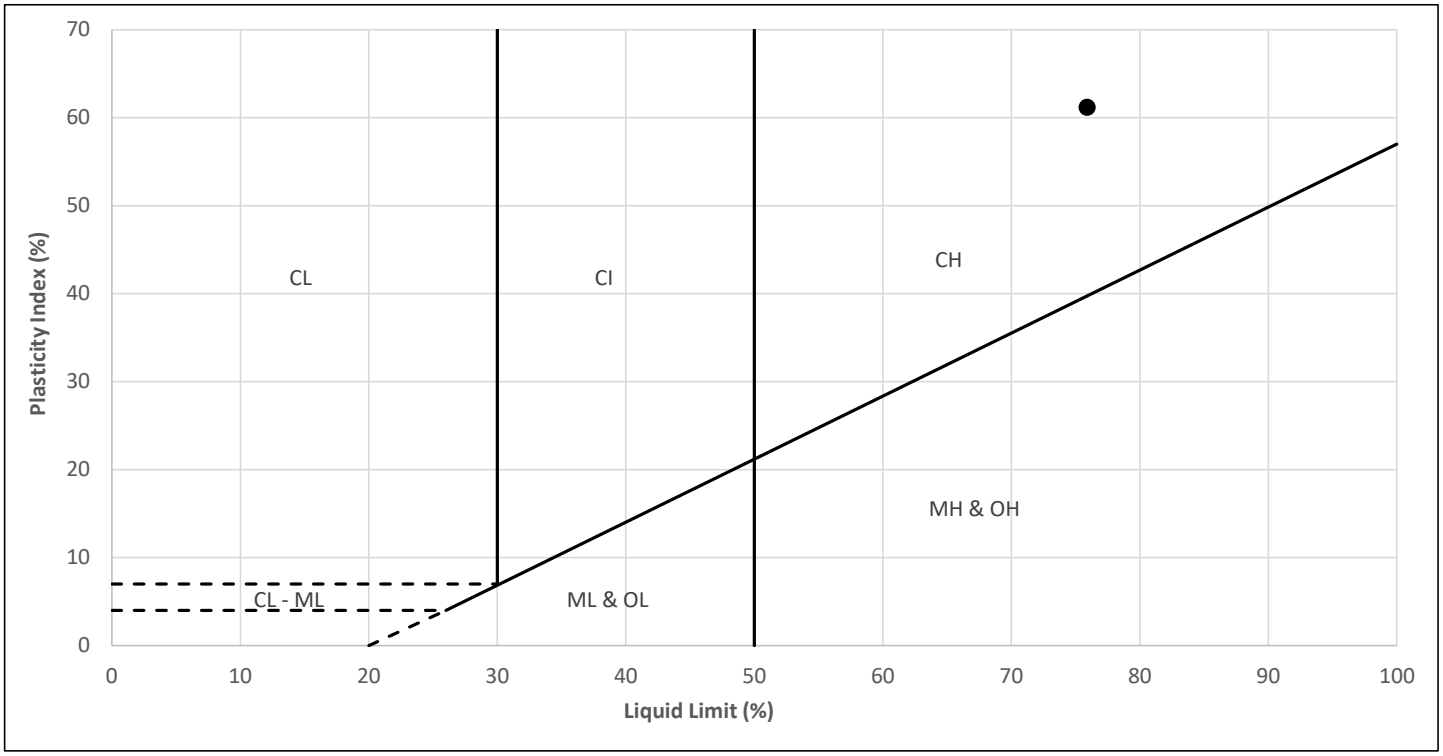
Project:	Snake Lake Reservoir Expansion	**Sample #:**	313RC8
Project No.:	1560-193-00	**Source:**	22CH313
Owner:	EID	**Sample Depth:**	15.7m
File No.:	AL - 313RC8	**Test Date:**	18-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	75.9
Plastic Limit (PL)	14.7
Plasticity Index (PI)	61.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

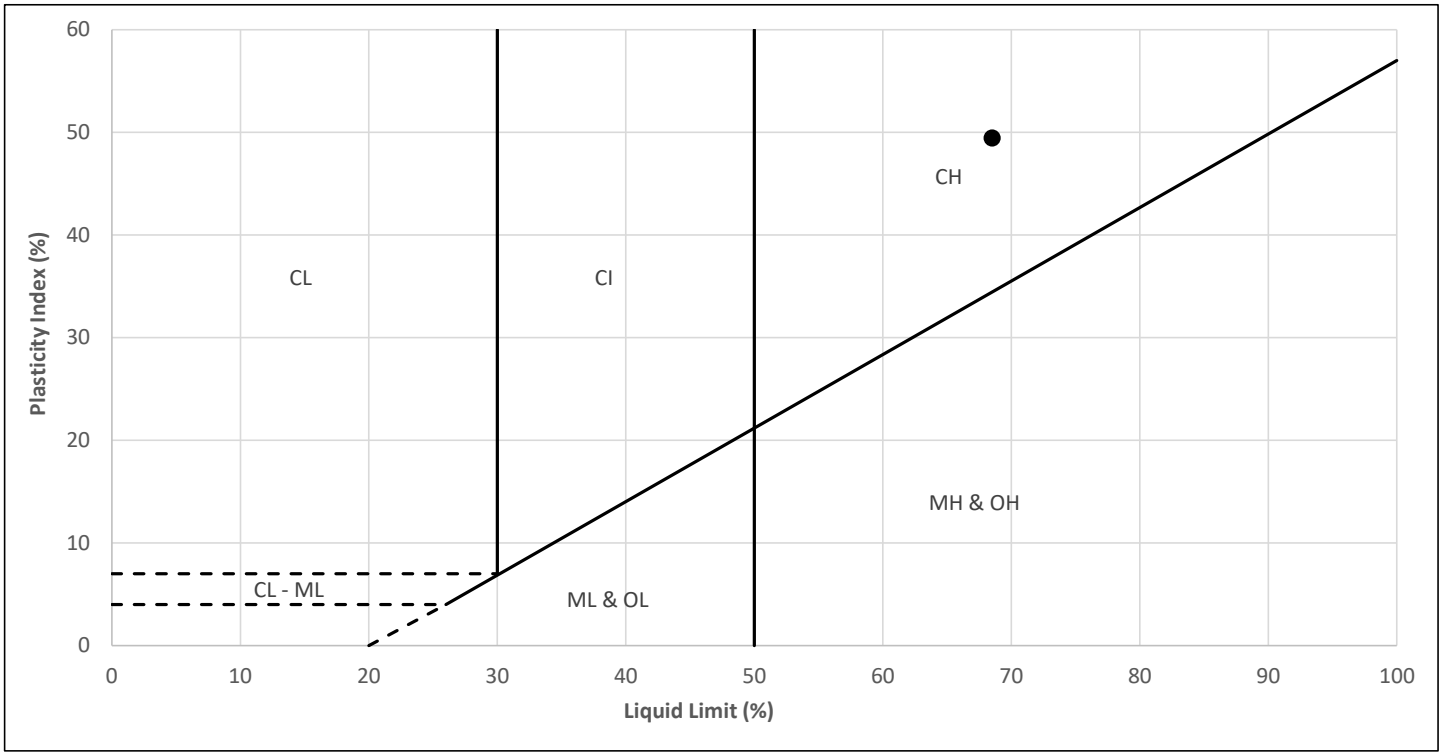
Project:	Snake Lake Reservoir Expansion	**Sample #:**	314AU6
Project No.:	1560-193-00	**Source:**	22BH314
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 314AU6	**Date:**	20-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information avalible upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	68.5
Plastic Limit (PL)	19.0
Plasticity Index (PI)	49.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

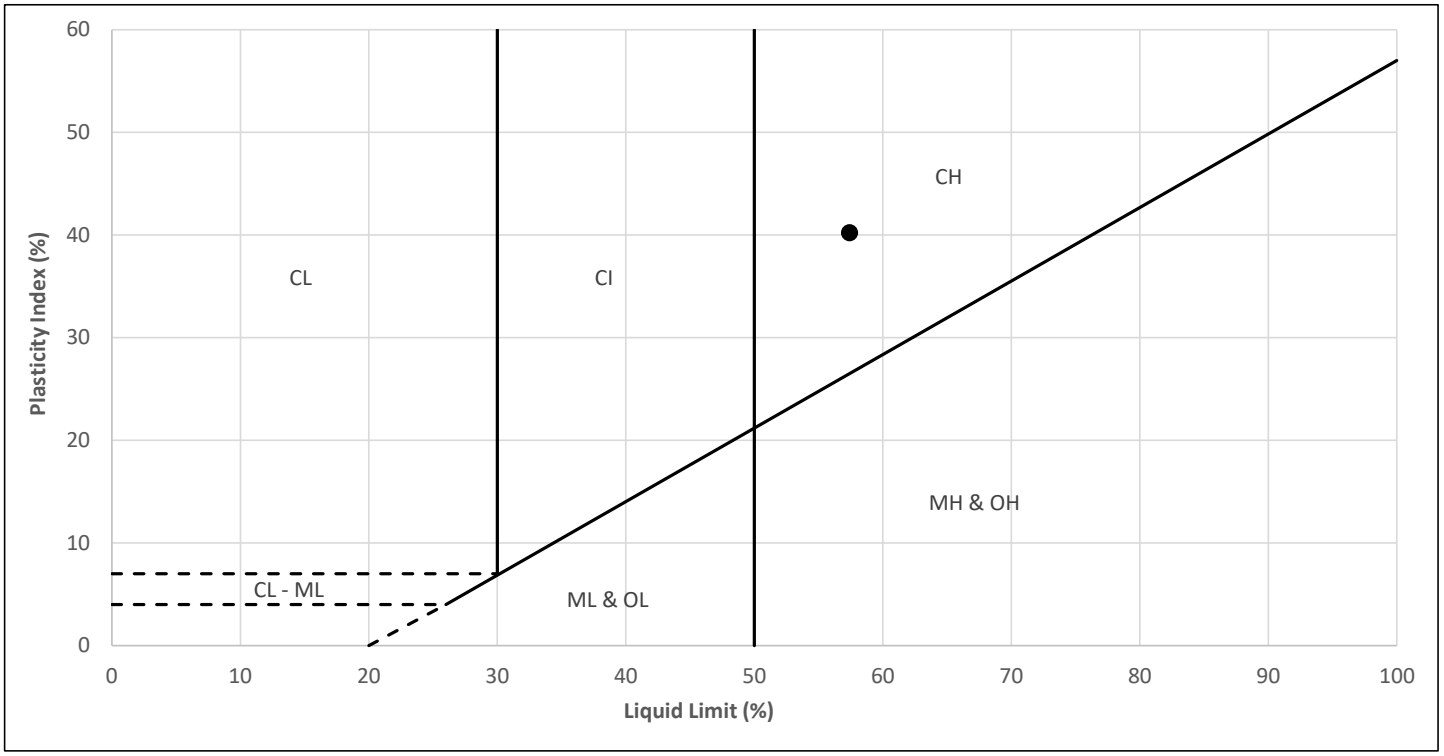
Project:	Snake Lake Reservoir Expansion	**Sample #:**	314RC1
Project No.:	1560-193-00	**Source:**	22CH314
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 314RC1	**Test Date:**	2-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	57.4
Plastic Limit (PL)	17.2
Plasticity Index (PI)	40.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

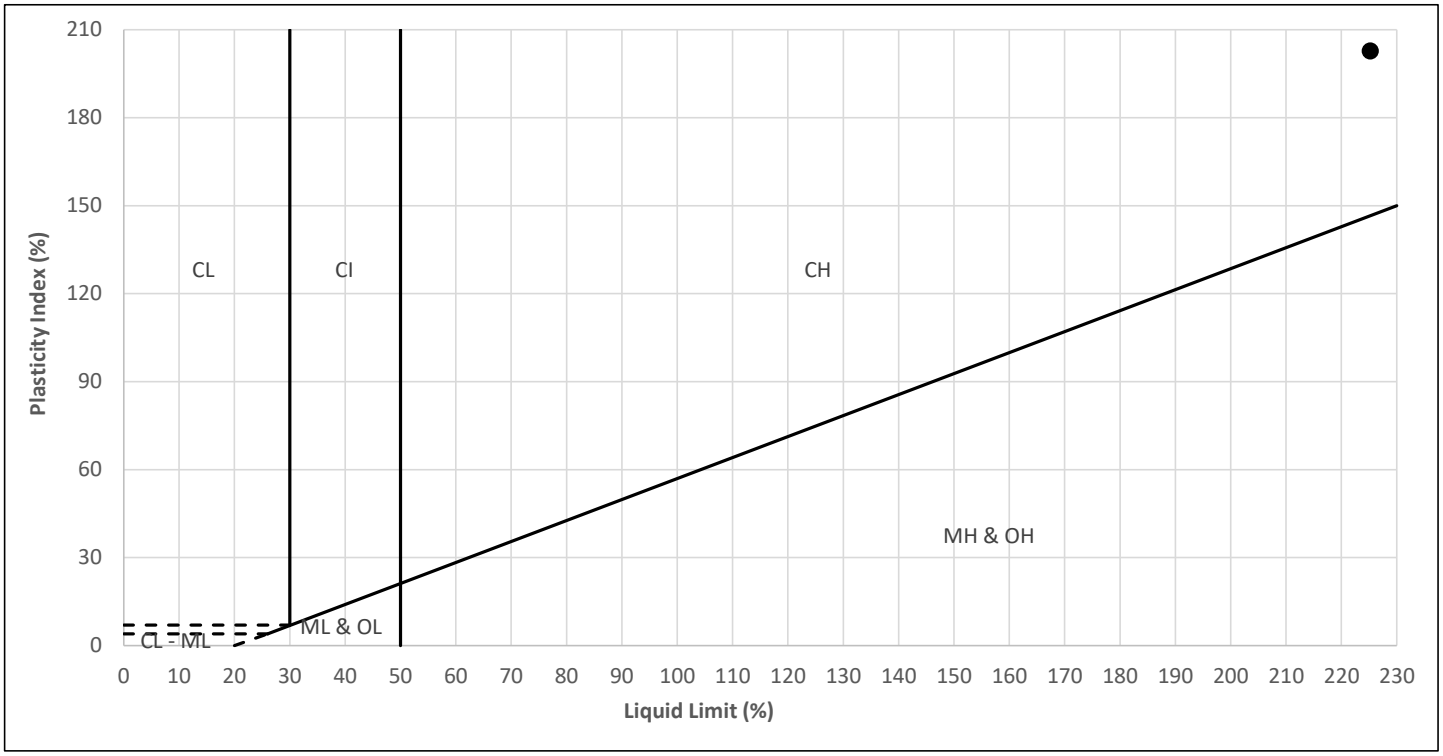
Project:	Snake Lake Reservoir Expansion	**Sample #:**	314RC4
Project No.:	1560-193-00	**Source:**	22CH314
Owner:	EID	**Sample Depth:**	7.6m
File No.:	AL - 314RC4	**Test Date:**	17-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	225.2
Plastic Limit (PL)	22.4
Plasticity Index (PI)	202.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

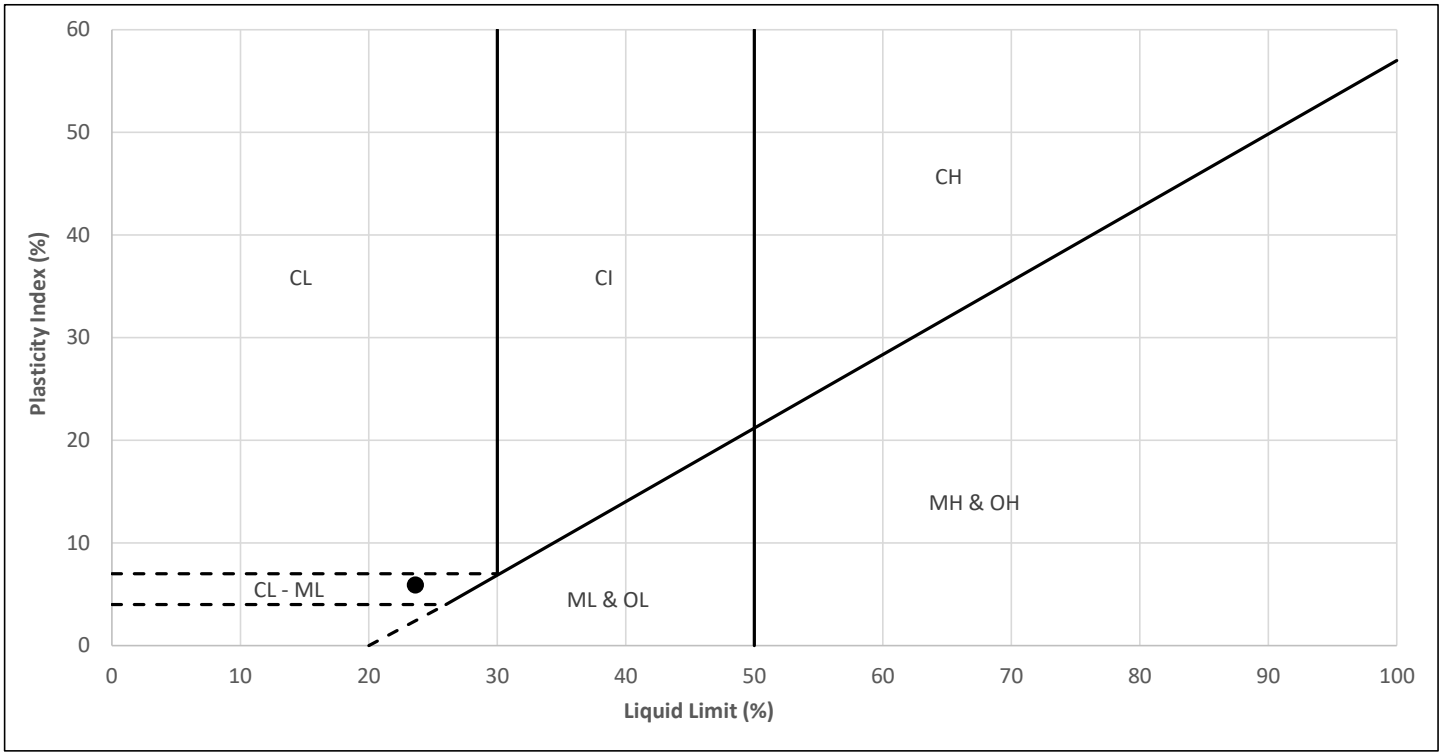
Project:	Snake Lake Reservoir Expansion	**Sample #:**	314RC9
Project No.:	1560-193-00	**Source:**	22CH314
Owner:	EID	**Sample Depth:**	16.0m
File No.:	AL - 314RC9	**Test Date:**	29-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays

Liquid Limit (LL)	23.6
Plastic Limit (PL)	17.7
Plasticity Index (PI)	5.9

Soil Plasticity	Low
Soil Classification	CL



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ATTERBERG LIMITS

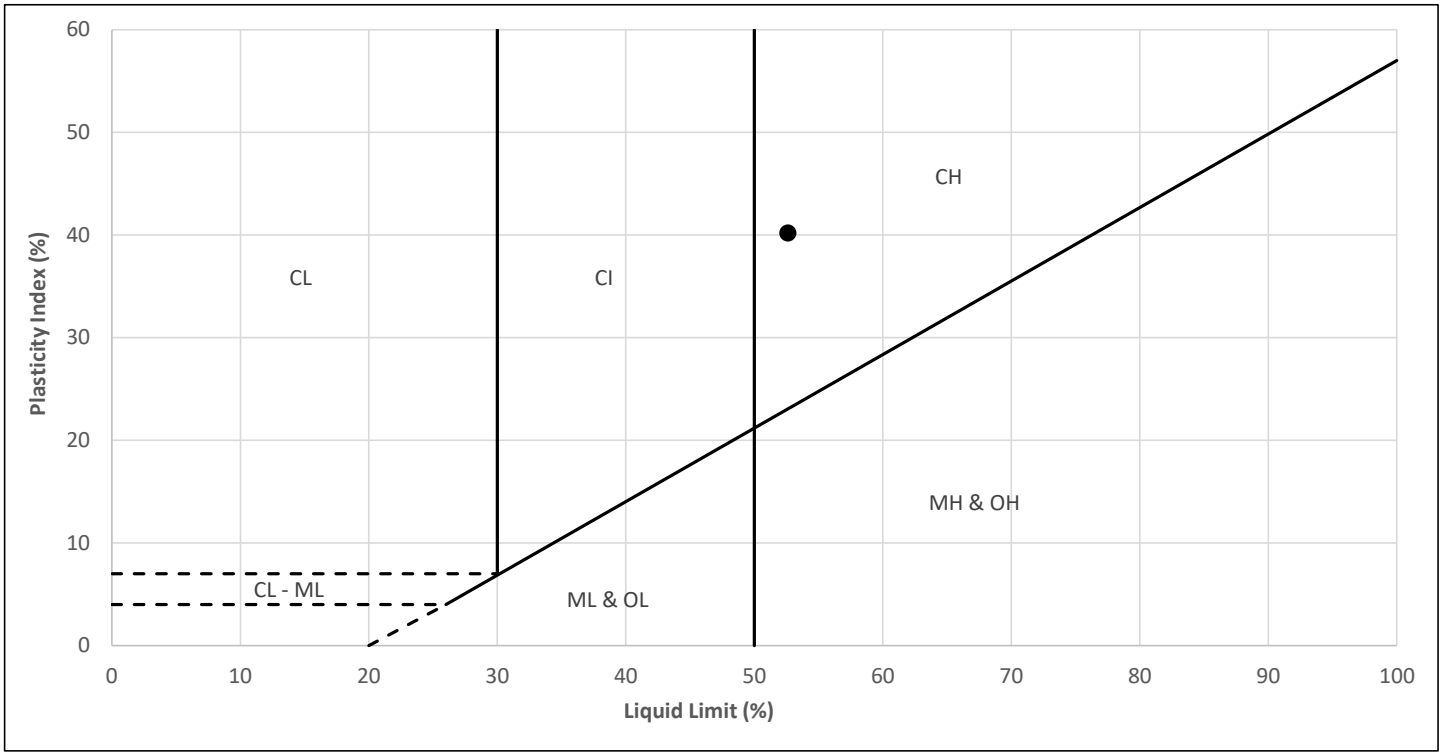
Project:	Snake Lake Reservoir Expansion	**Sample #:**	315AU1
Project No.:	1560-193-00	**Source:**	22BH315
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 315AU1	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.6
Plastic Limit (PL)	12.4
Plasticity Index (PI)	40.2

Soil Plasticity	High
Soil Classification	CH



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Tel: (403)892-6036

ATTERBERG LIMITS

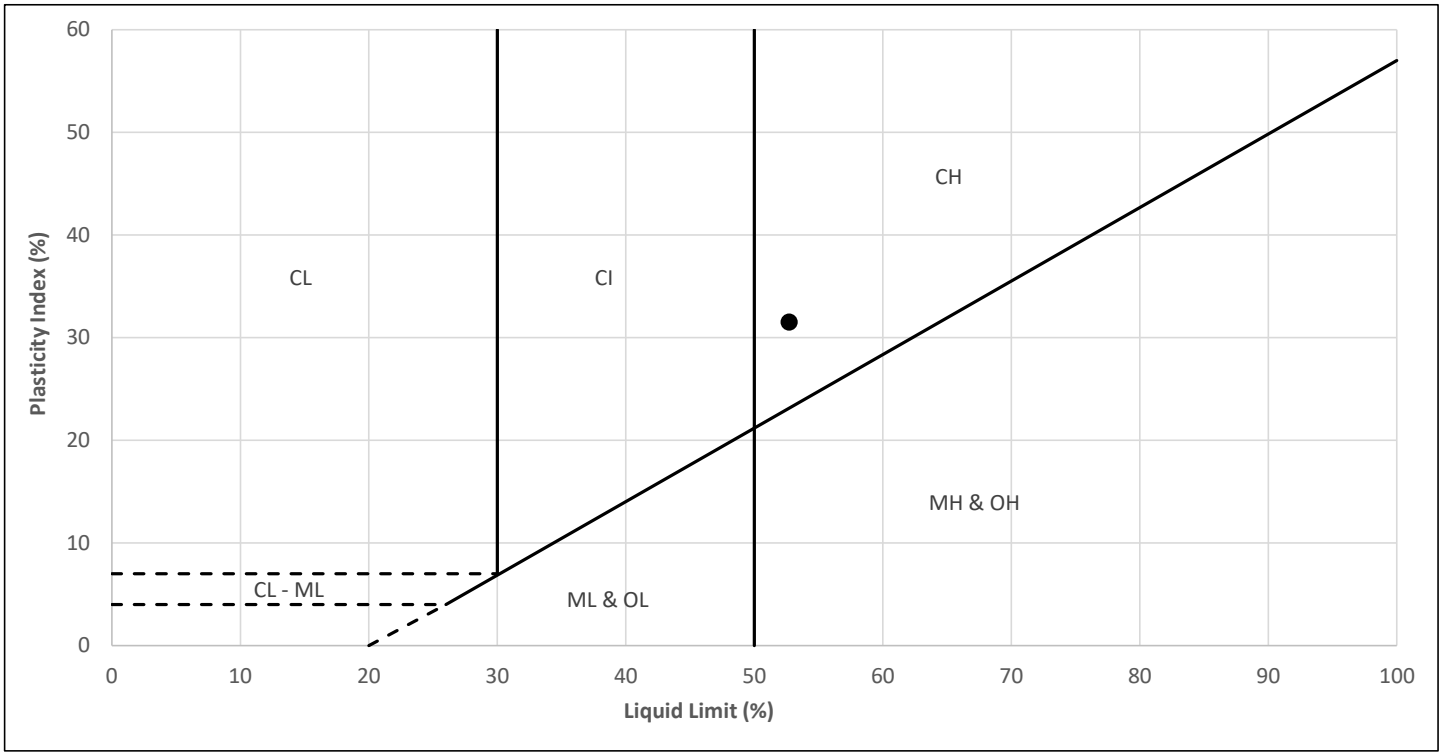
Project:	Snake Lake Reservoir Expansion	**Sample #:**	315AU5
Project No.:	1560-193-00	**Source:**	22BH315
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 315AU5	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.7
Plastic Limit (PL)	21.2
Plasticity Index (PI)	31.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

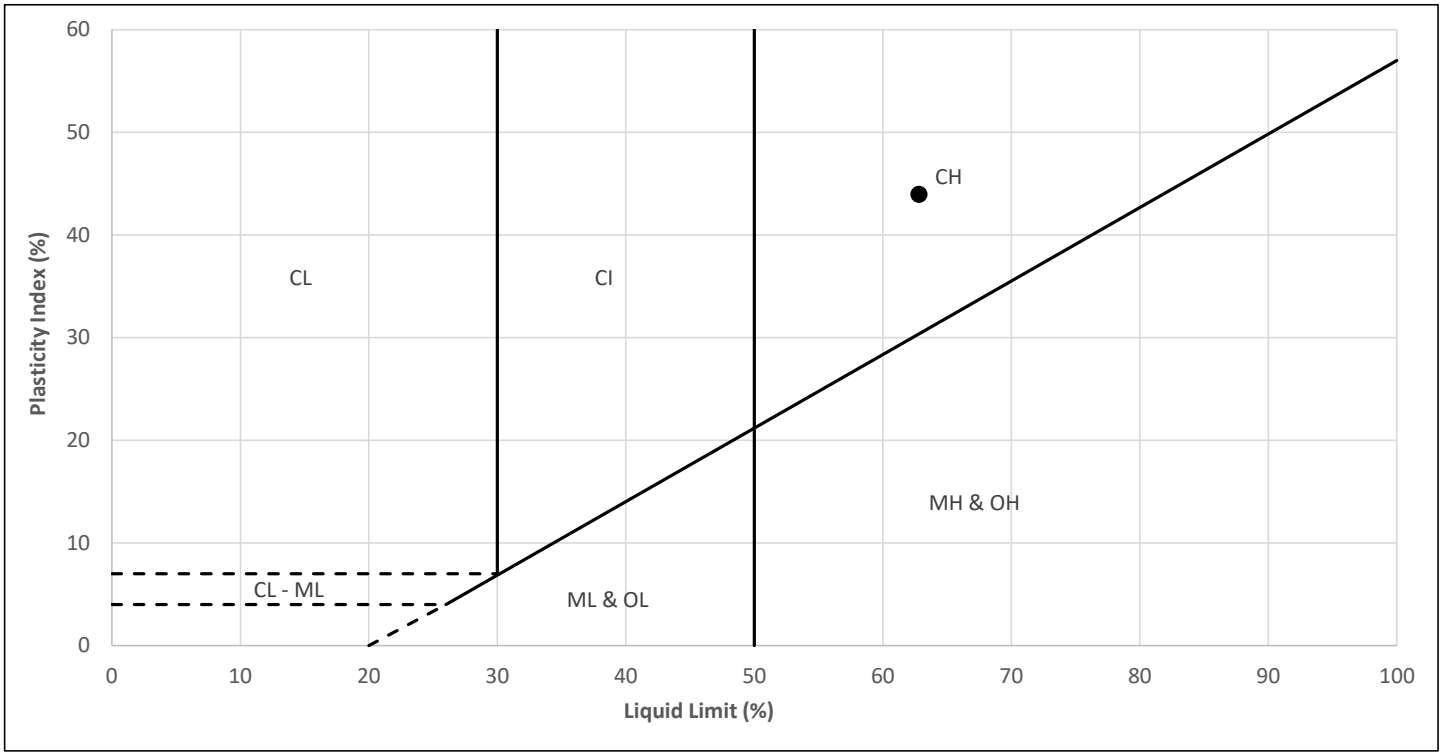
Project:	Snake Lake Reservoir Expansion	**Sample #:**	315UD1
Project No.:	1560-193-00	**Source:**	22CH315
Owner:	EID	**Sample Depth:**	5.7m
File No.:	AL - 315UD1	**Test Date:**	8-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	62.8
Plastic Limit (PL)	18.8
Plasticity Index (PI)	44.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

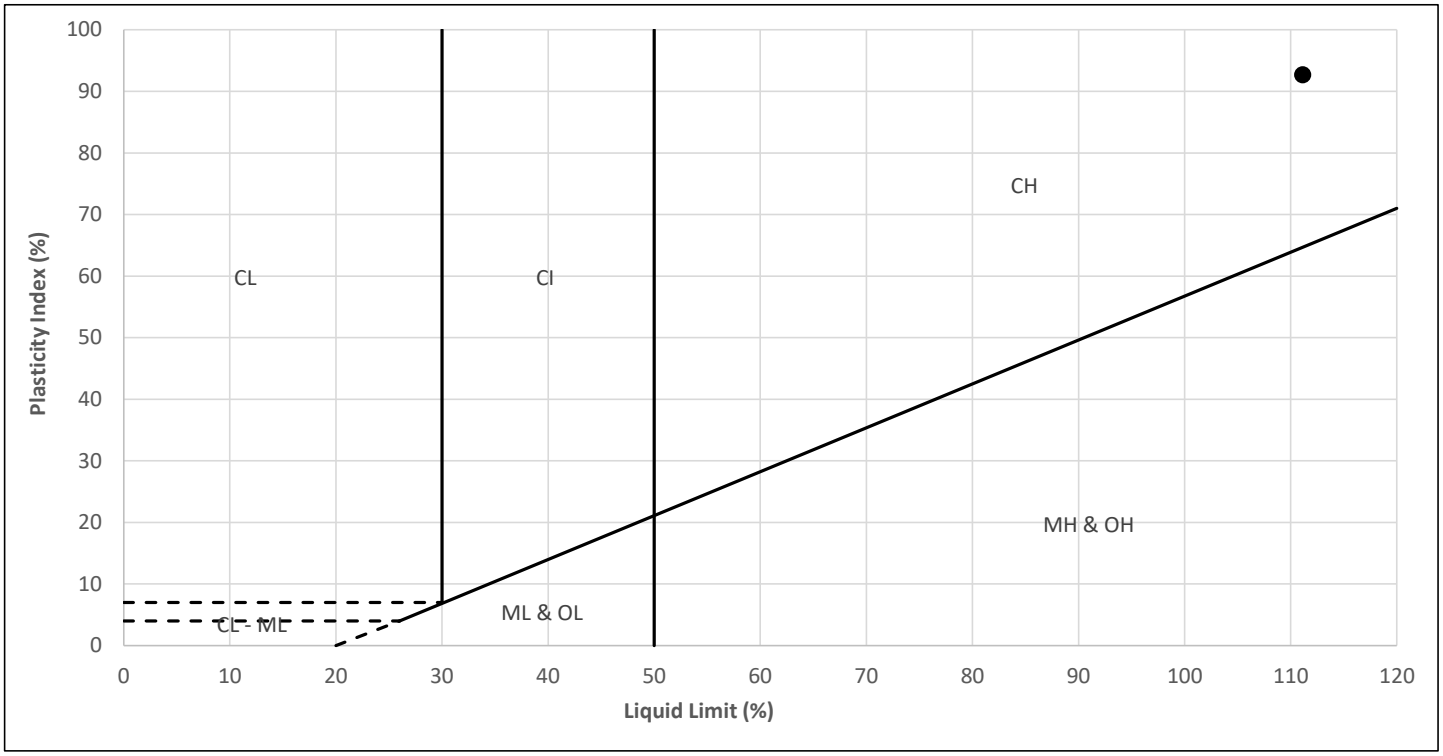
Project:	Snake Lake Reservoir Expansion	**Sample #:**	315UD4
Project No.:	1560-193-00	**Source:**	22CH315
Owner:	EID	**Sample Depth:**	12.68m
File No.:	AL - 315UD4	**Test Date:**	29-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	111.1
Plastic Limit (PL)	18.4
Plasticity Index (PI)	92.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

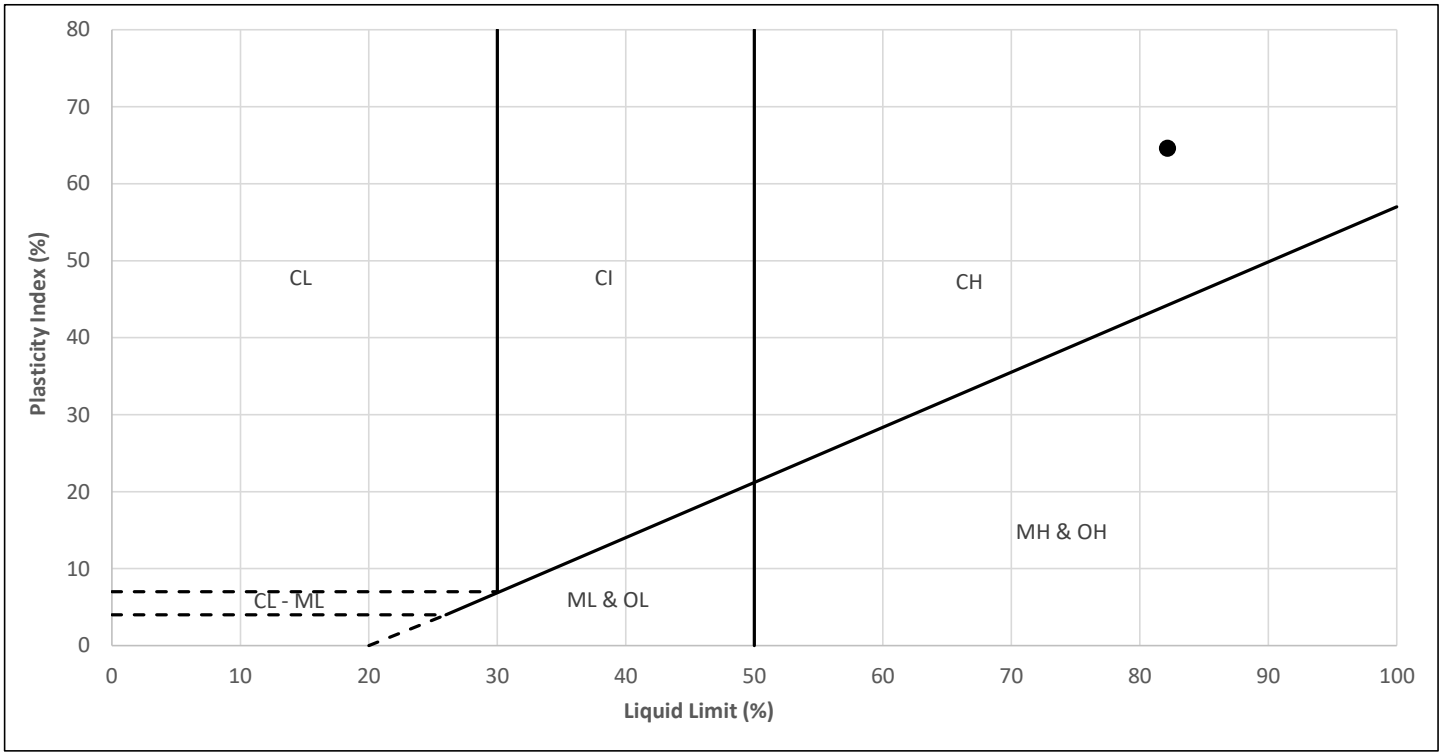
Project:	Snake Lake Reservoir Expansion	**Sample #:**	315UD5
Project No.:	1560-193-00	**Source:**	22CH315
Owner:	EID	**Sample Depth:**	15.6m
File No.:	AL - 315UD5	**Test Date:**	8-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	82.2
Plastic Limit (PL)	17.6
Plasticity Index (PI)	64.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

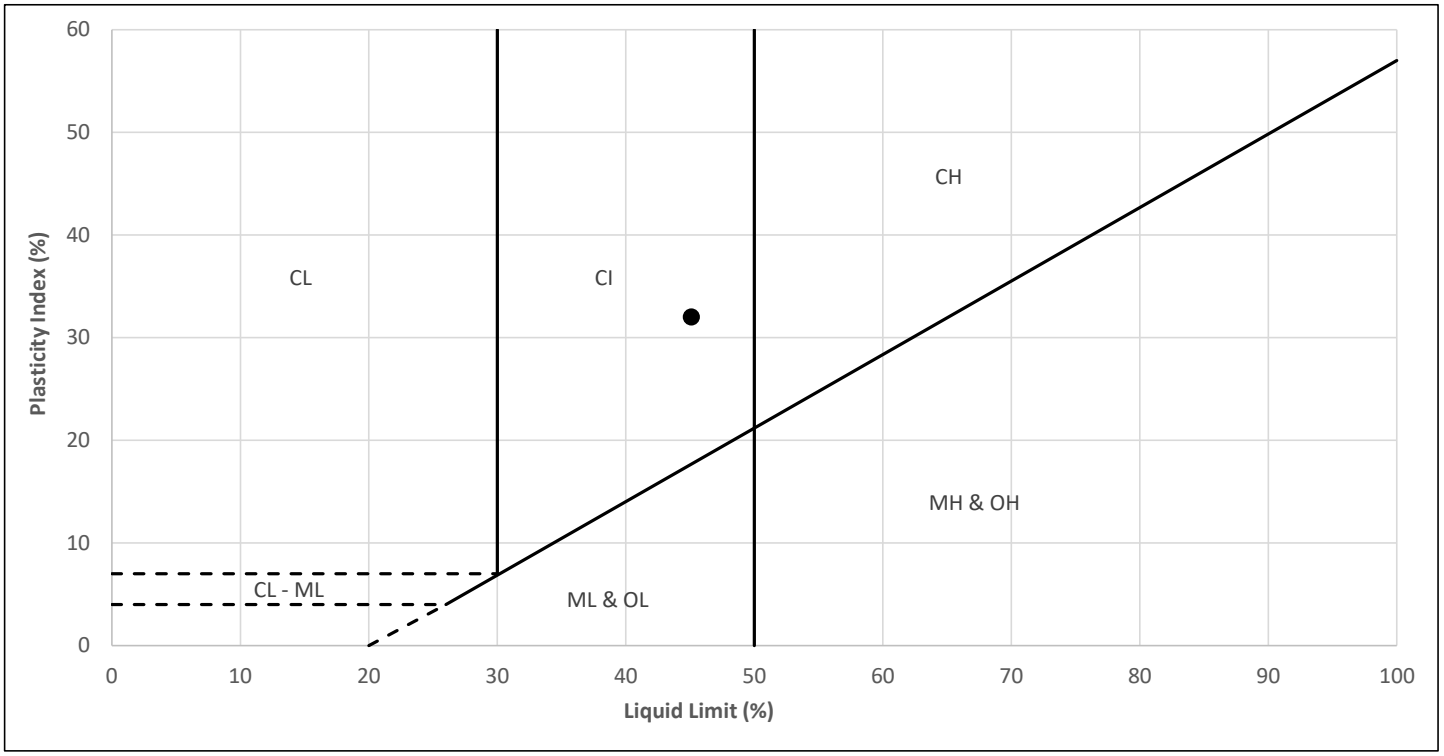
Project:	Snake Lake Reservoir Expansion	**Sample #:**	316AU2
Project No.:	1560-193-00	**Source:**	22BH316
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 316AU2	**Date:**	25-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information avalible upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	45.1
Plastic Limit (PL)	13.1
Plasticity Index (PI)	32.0

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

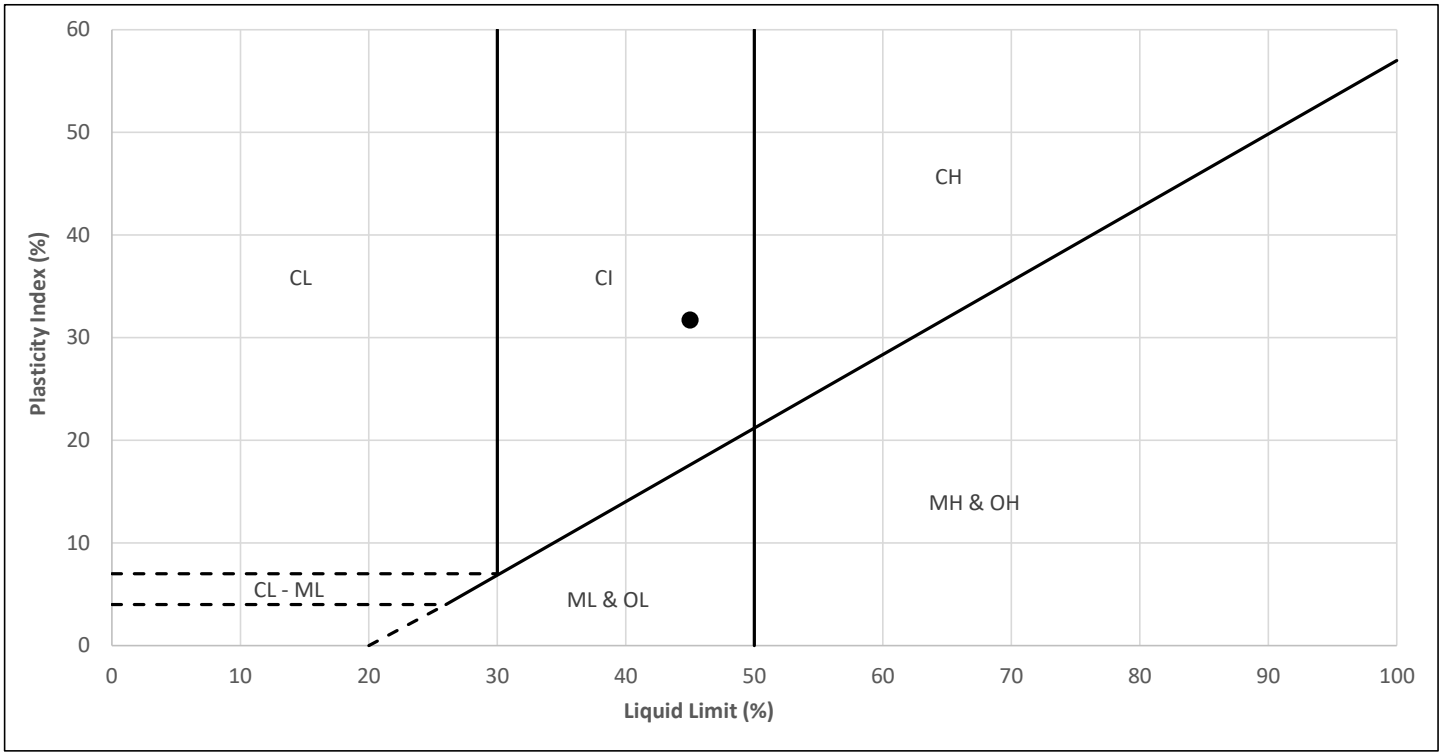
Project:	Snake Lake Reservoir Expansion	**Sample #:**	316AU9
Project No.:	1560-193-00	**Source:**	22BH316
Owner:	EID	**Sample Depth:**	6.7m
File No.:	AL - 316AU9	**Date:**	18-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information avalible upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	45.0
Plastic Limit (PL)	13.3
Plasticity Index (PI)	31.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

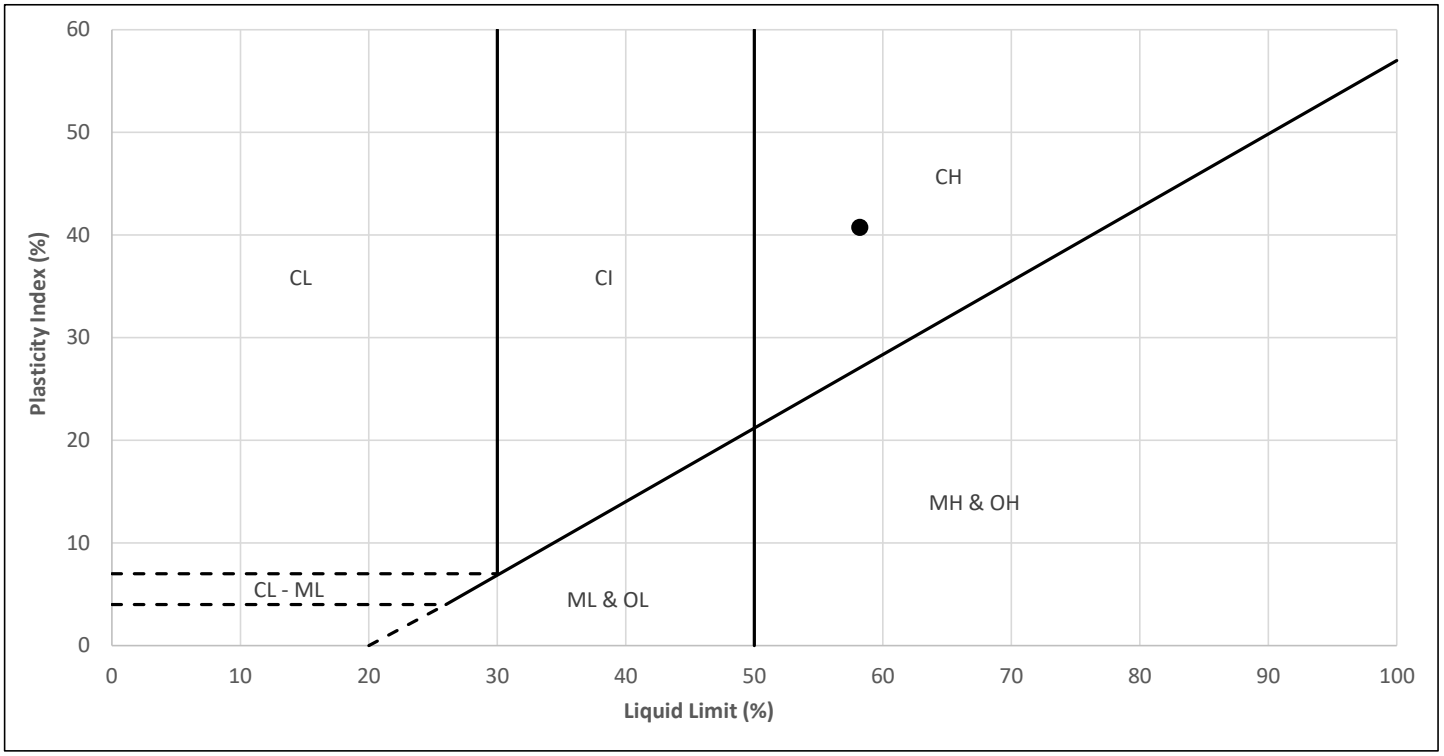
Project:	Snake Lake Reservoir Expansion	**Sample #:**	317AU2
Project No.:	1560-193-00	**Source:**	22BH317
Owner:	EID	**Sample Depth:**	1.1m
File No.:	AL - 317AU2	**Test Date:**	9-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	58.2
Plastic Limit (PL)	17.5
Plasticity Index (PI)	40.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

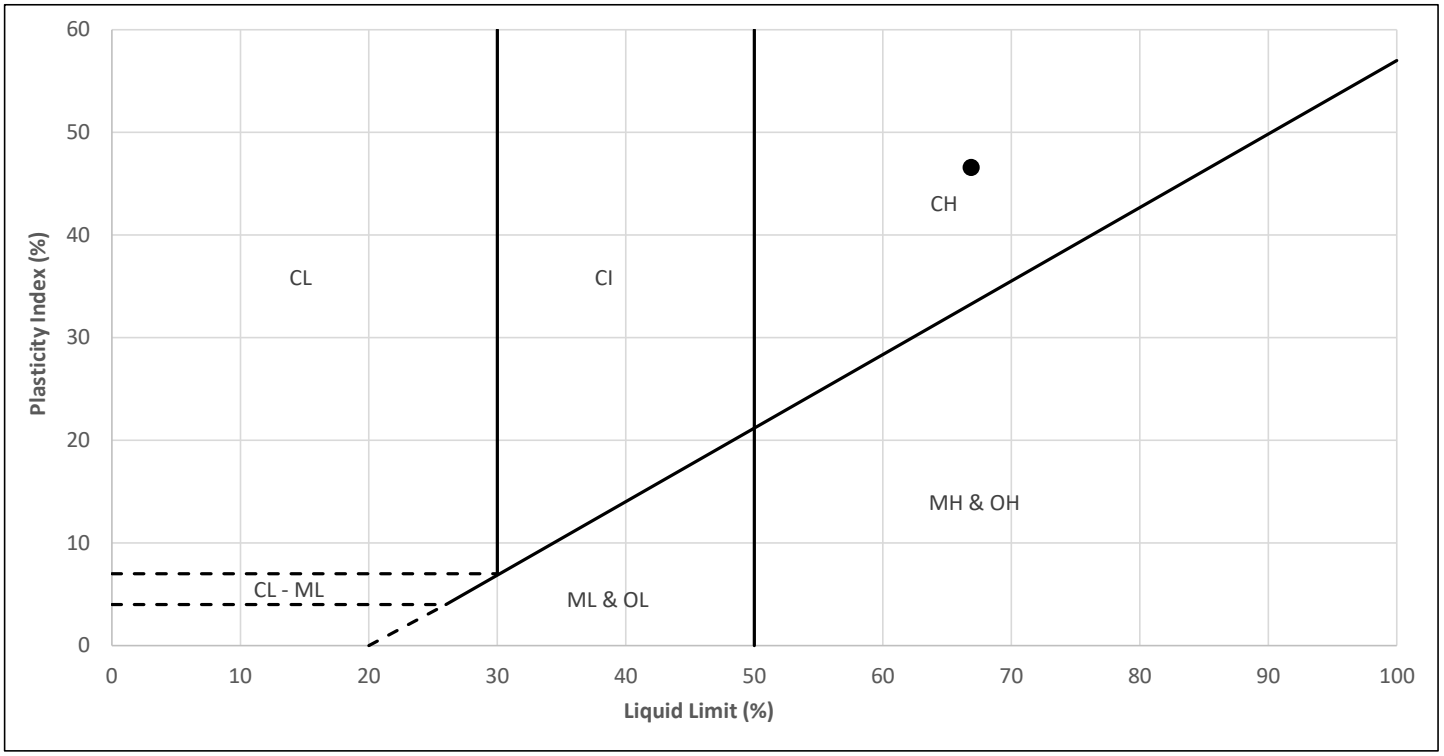
Project:	Snake Lake Reservoir Expansion	**Sample #:**	317RC1
Project No.:	1560-193-00	**Source:**	22CH317
Owner:	EID	**Sample Depth:**	5.1m
File No.:	AL - 317RC1	**Test Date:**	17-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	66.9
Plastic Limit (PL)	20.3
Plasticity Index (PI)	46.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

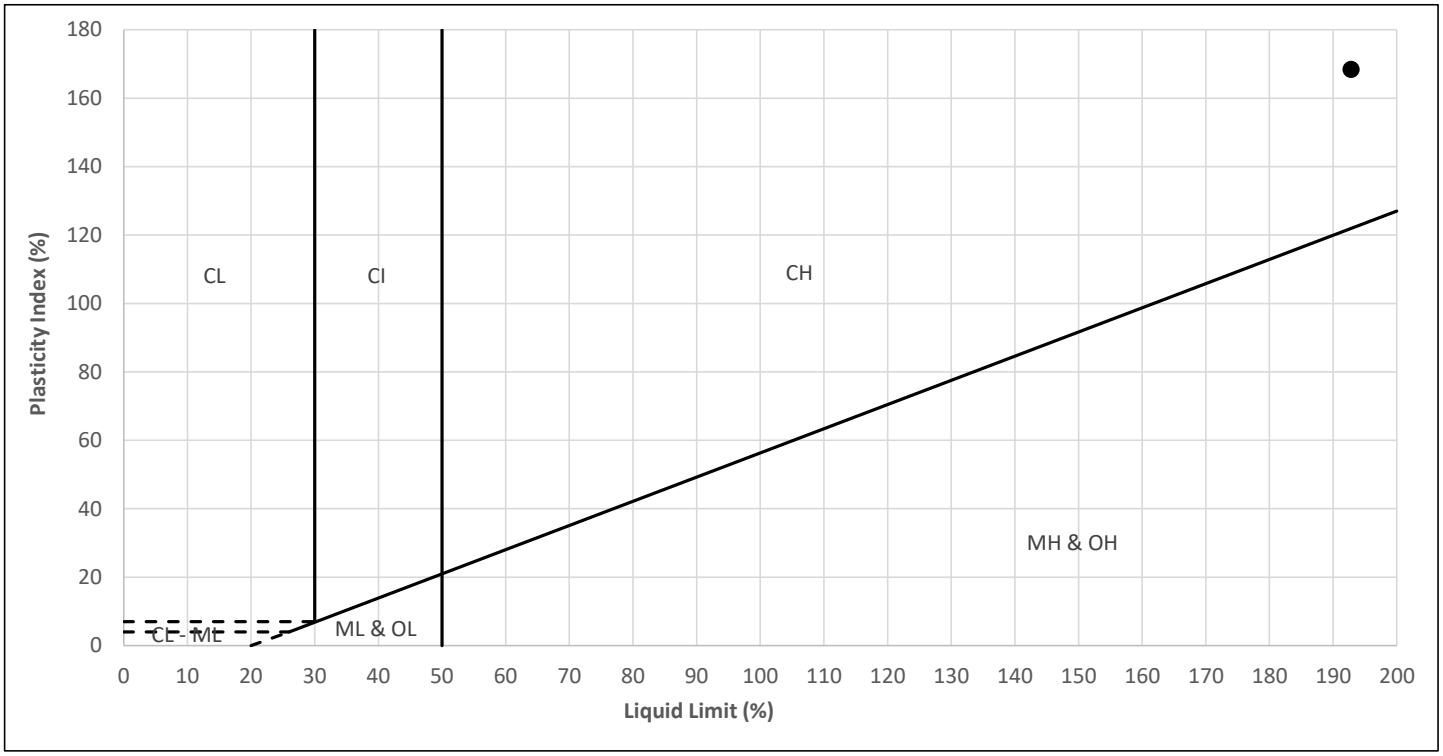
Project:	Snake Lake Reservoir Expansion	**Sample #:**	317RC4
Project No.:	1560-193-00	**Source:**	22CH317
Owner:	EID	**Sample Depth:**	9.4m
File No.:	AL - 317RC4	**Test Date:**	22-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	192.8
Plastic Limit (PL)	24.3
Plasticity Index (PI)	168.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

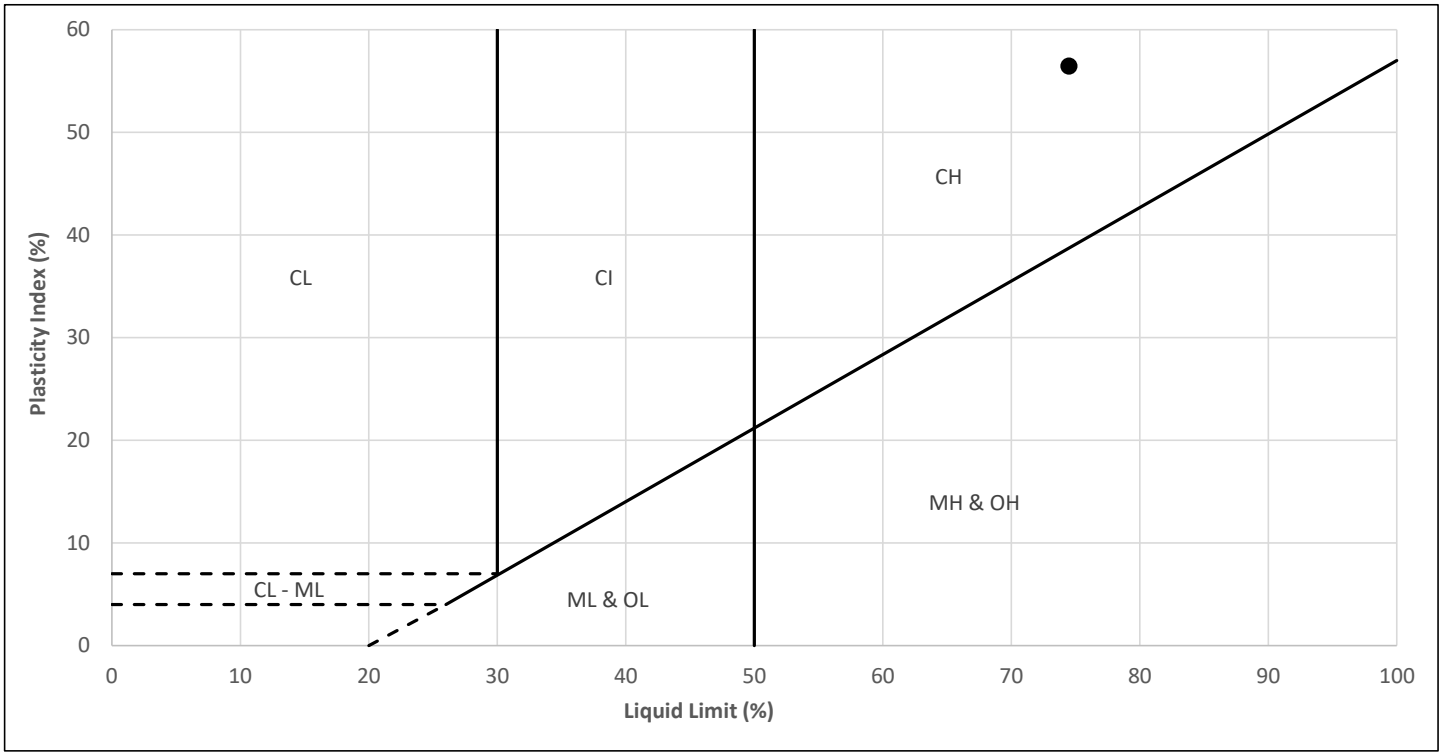
Project:	Snake Lake Reservoir Expansion	**Sample #:**	317RC5
Project No.:	1560-193-00	**Source:**	22CH317
Owner:	EID	**Sample Depth:**	10.8m
File No.:	AL - 317RC5	**Test Date:**	18-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	74.5
Plastic Limit (PL)	18.0
Plasticity Index (PI)	56.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

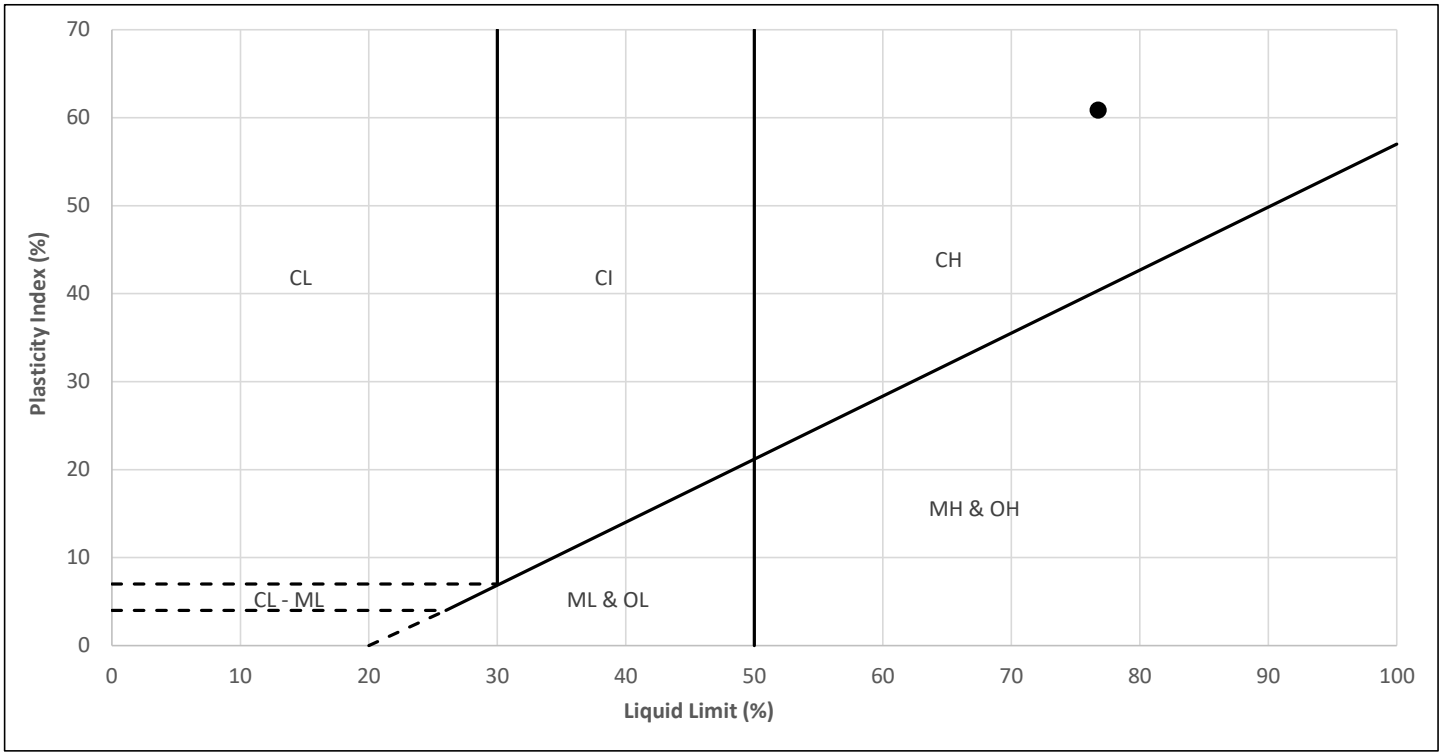
Project:	Snake Lake Reservoir Expansion	**Sample #:**	317RC8
Project No.:	1560-193-00	**Source:**	22CH317
Owner:	EID	**Sample Depth:**	16.0m
File No.:	AL - 317RC8	**Test Date:**	22-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	76.8
Plastic Limit (PL)	15.9
Plasticity Index (PI)	60.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

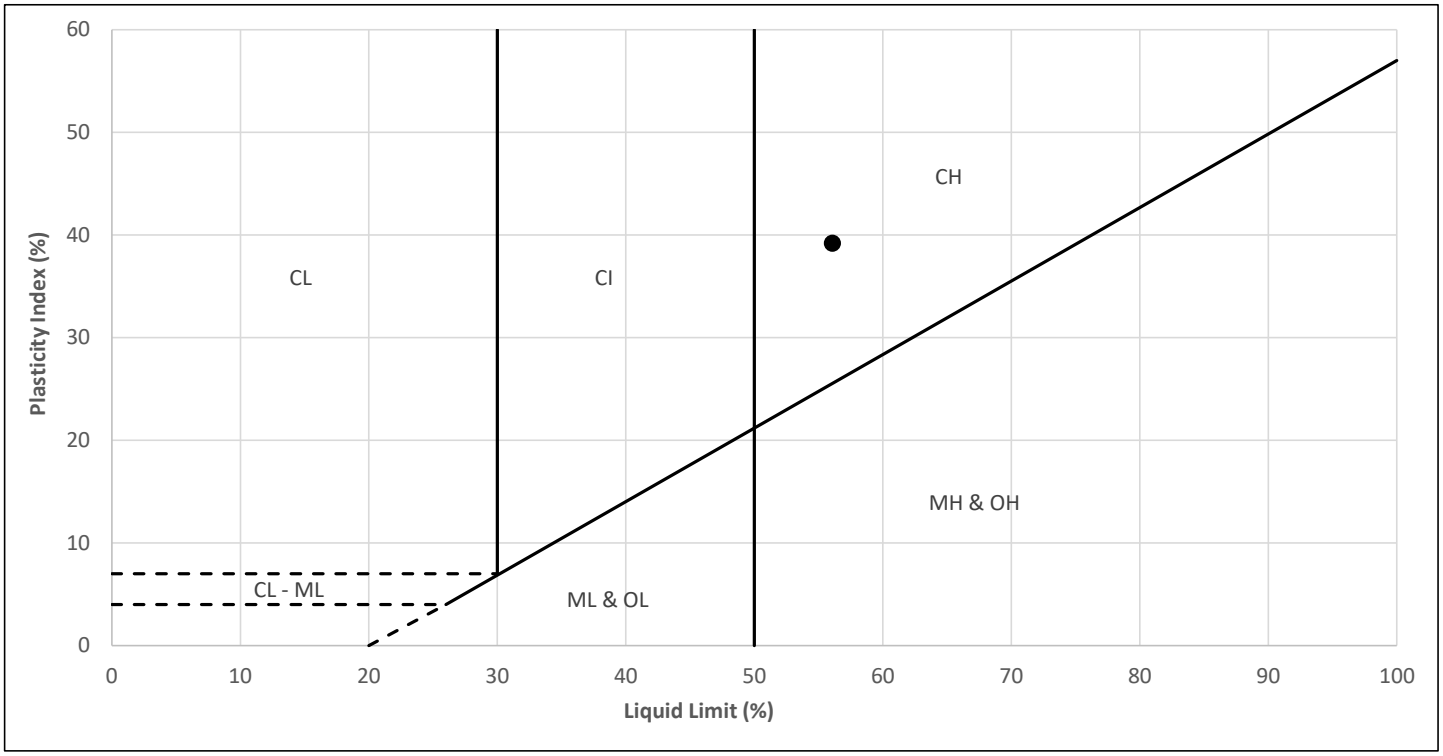
Project:	Snake Lake Reservoir Expansion	**Sample #:**	318AU2
Project No.:	1560-193-00	**Source:**	22BH318
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 318AU2	**Date:**	19-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information avalible upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	56.1
Plastic Limit (PL)	16.9
Plasticity Index (PI)	39.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

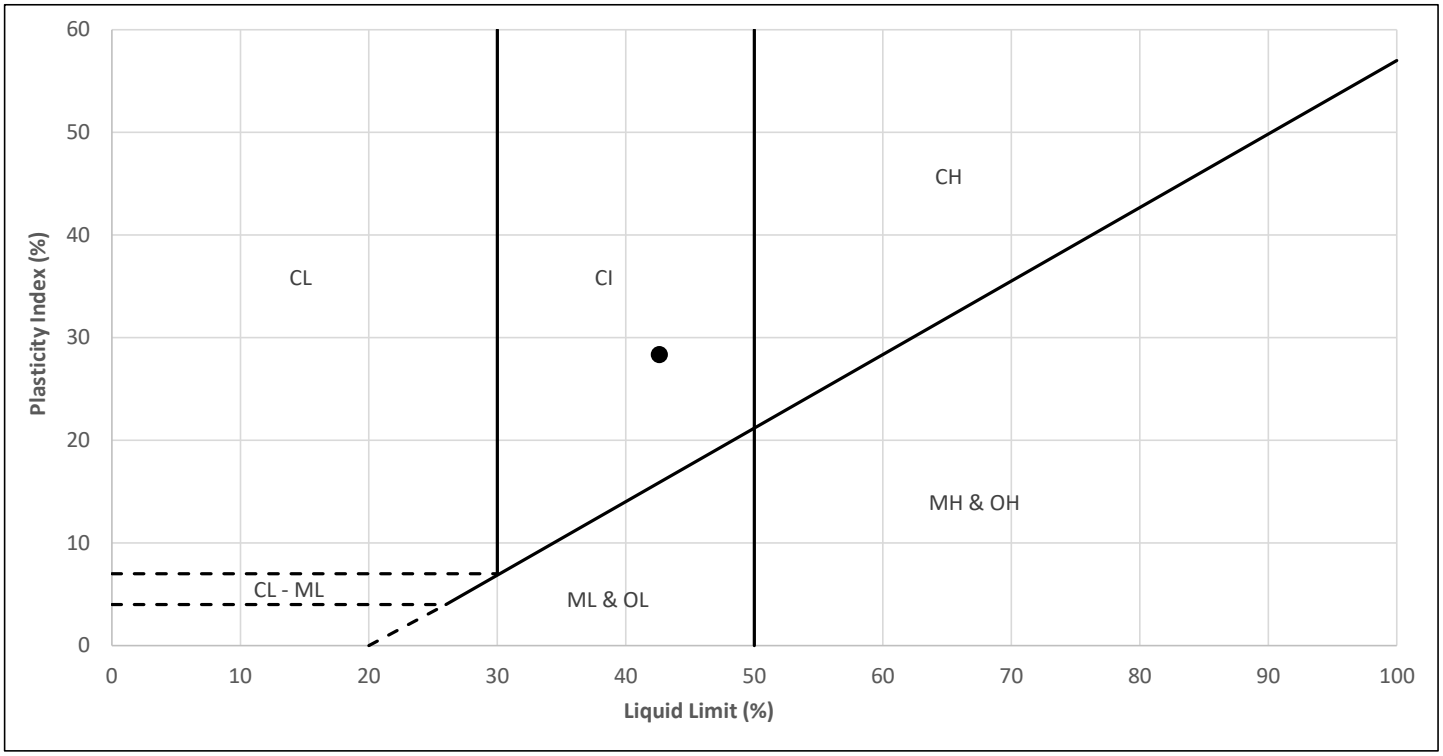
Project:	Snake Lake Reservoir Expansion	**Sample #:**	318SPT2
Project No.:	1560-193-00	**Source:**	22BH318
Owner:	EID	**Sample Depth:**	2.80m
File No.:	AL - 318SPT2	**Test Date:**	13-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	42.6
Plastic Limit (PL)	14.2
Plasticity Index (PI)	28.4

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

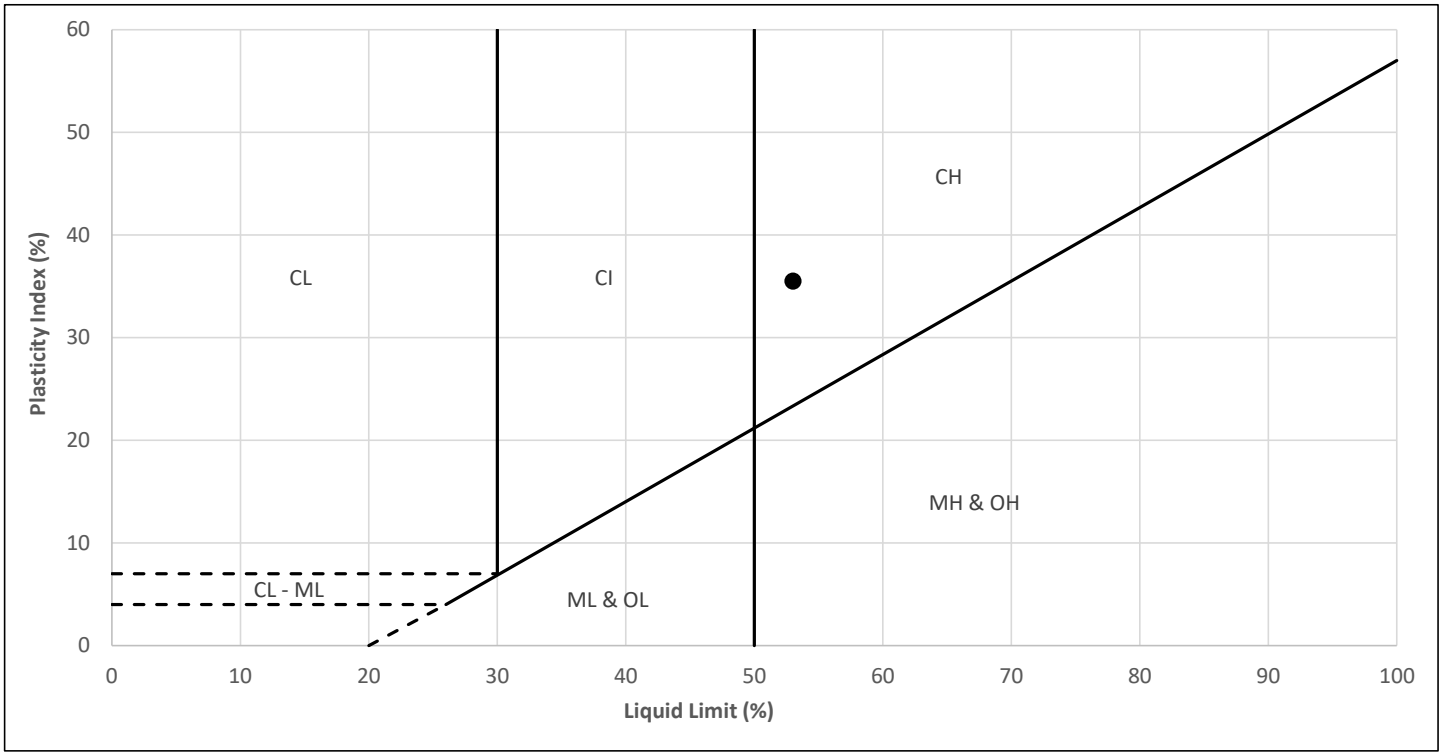
Project:	Snake Lake Reservoir Expansion	**Sample #:**	318UD1
Project No.:	1560-193-00	**Source:**	22CH318
Owner:	EID	**Sample Depth:**	4.9m
File No.:	AL - 318UD1	**Test Date:**	30-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.0
Plastic Limit (PL)	17.5
Plasticity Index (PI)	35.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

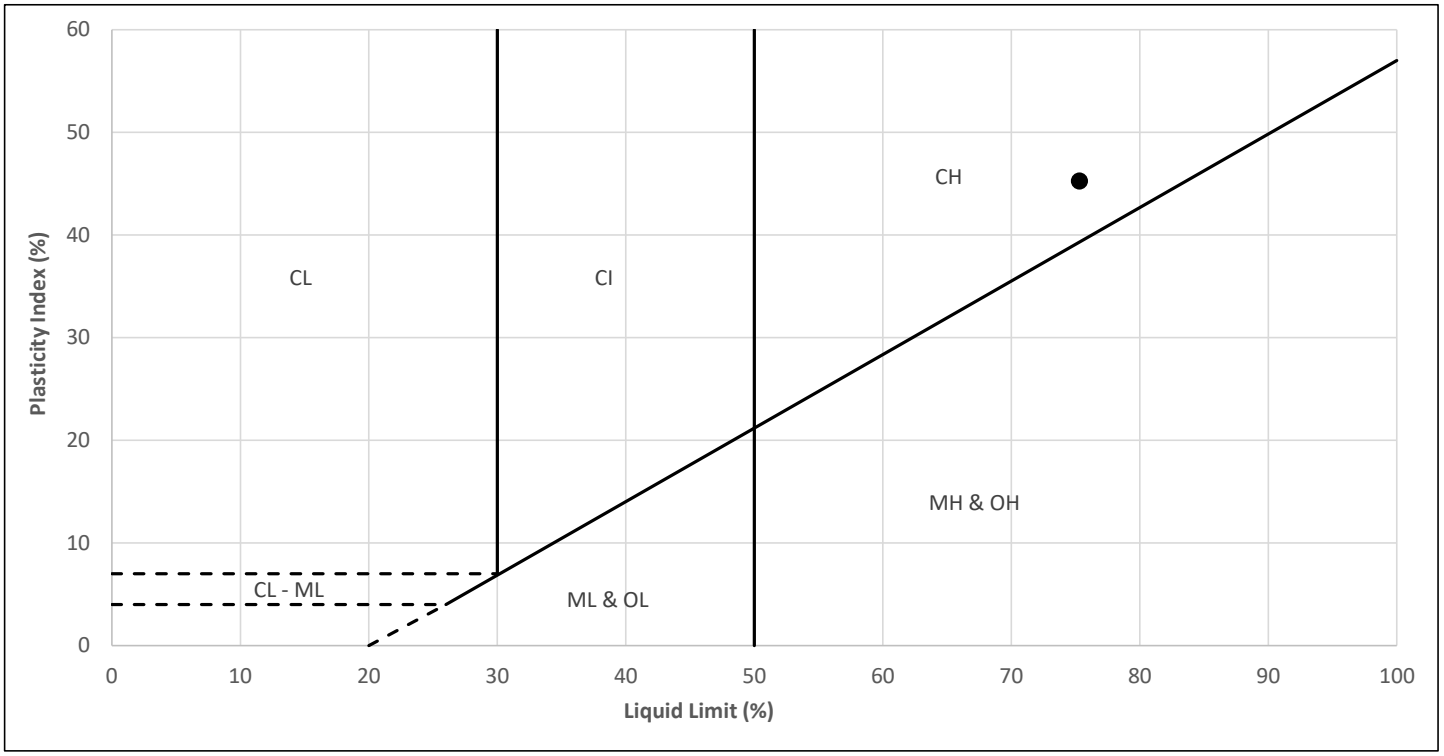
Project:	Snake Lake Reservoir Expansion	**Sample #:**	318UD2
Project No.:	1560-193-00	**Source:**	22CH318
Owner:	EID	**Sample Depth:**	8.95m
File No.:	AL - 318UD2	**Test Date:**	31-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	75.3
Plastic Limit (PL)	30.0
Plasticity Index (PI)	45.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

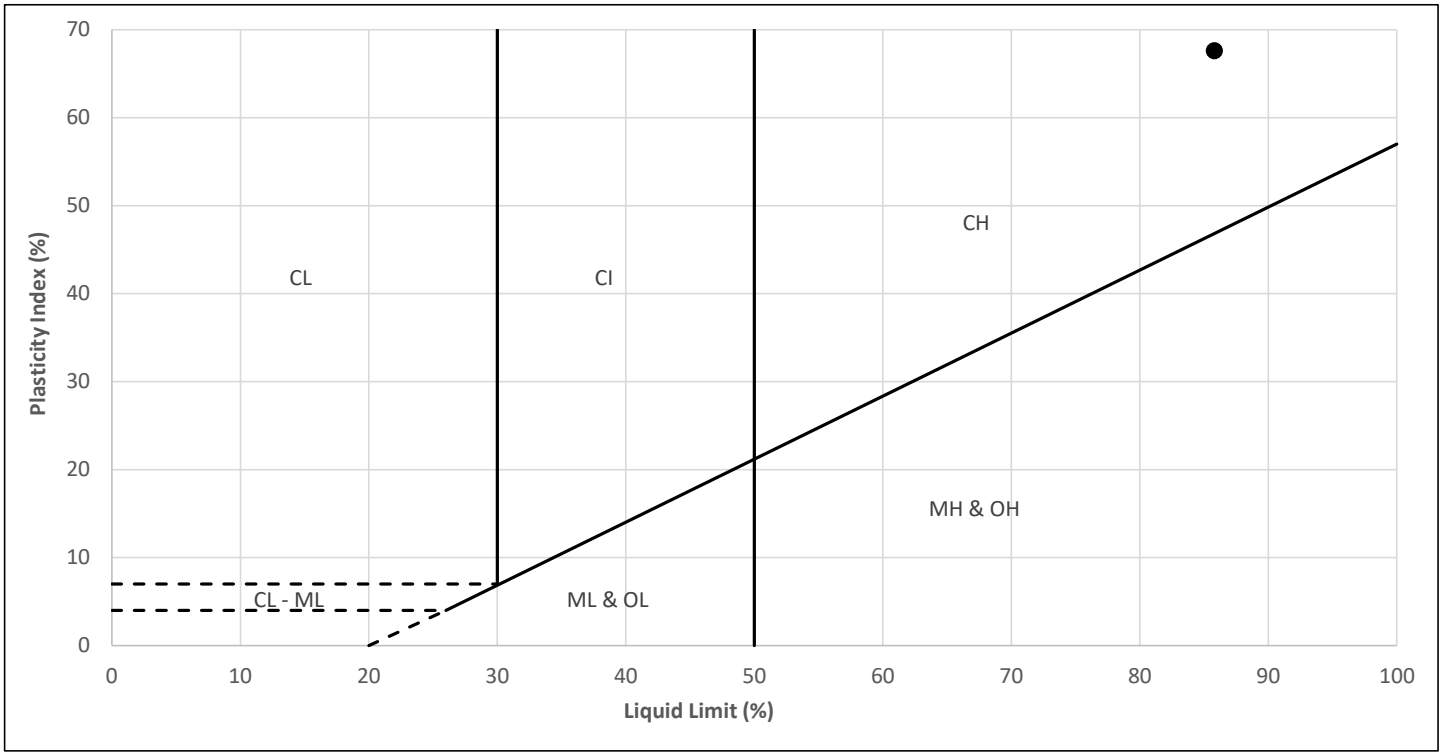
Project:	Snake Lake Reservoir Expansion	**Sample #:**	318UD4
Project No.:	1560-193-00	**Source:**	22CH318
Owner:	EID	**Sample Depth:**	14.4m
File No.:	AL - 318UD4	**Test Date:**	22-08-29

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	85.8
Plastic Limit (PL)	18.2
Plasticity Index (PI)	67.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

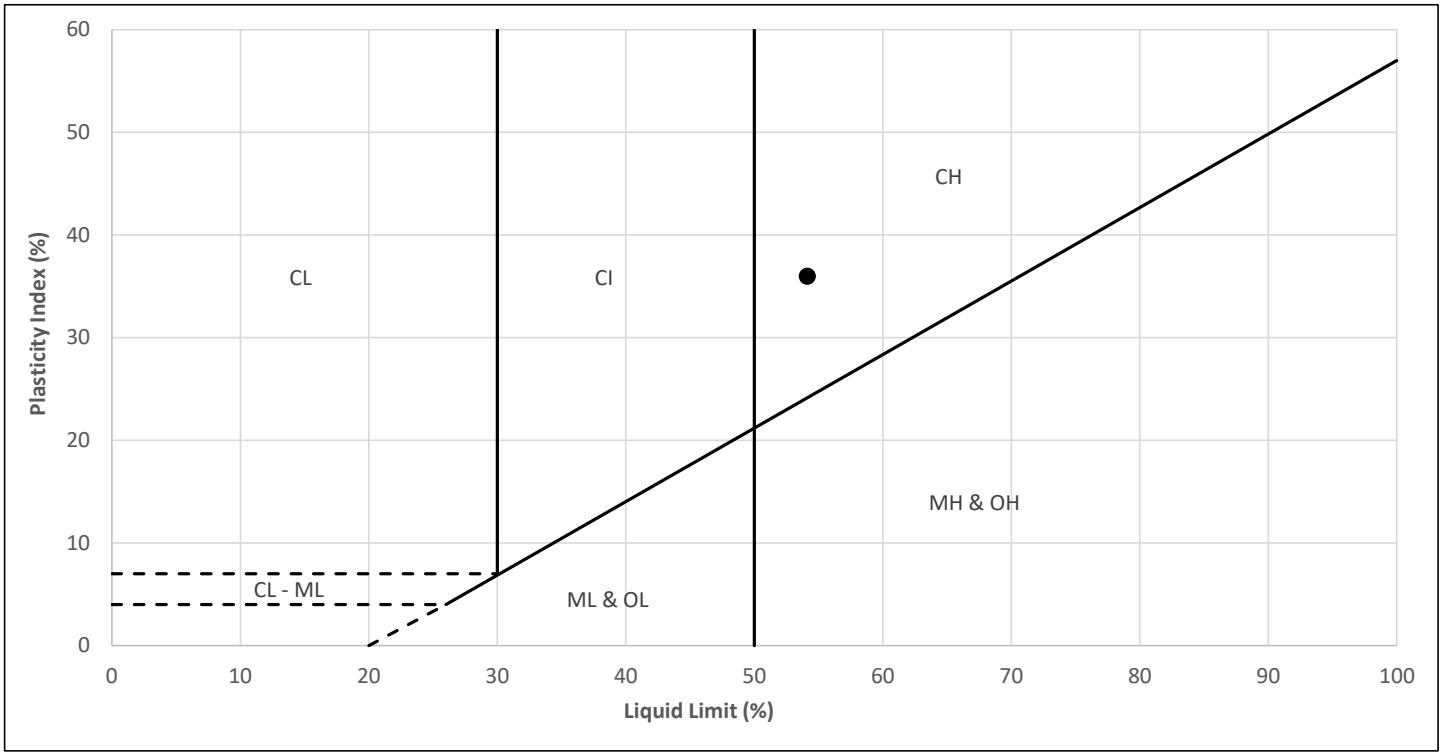
Project:	Snake Lake Reservoir Expansion	**Sample #:**	319AU5
Project No.:	1560-193-00	**Source:**	22BH319
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 319AU5	**Date:**	19-May-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information avalible upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.1
Plastic Limit (PL)	18.1
Plasticity Index (PI)	36.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

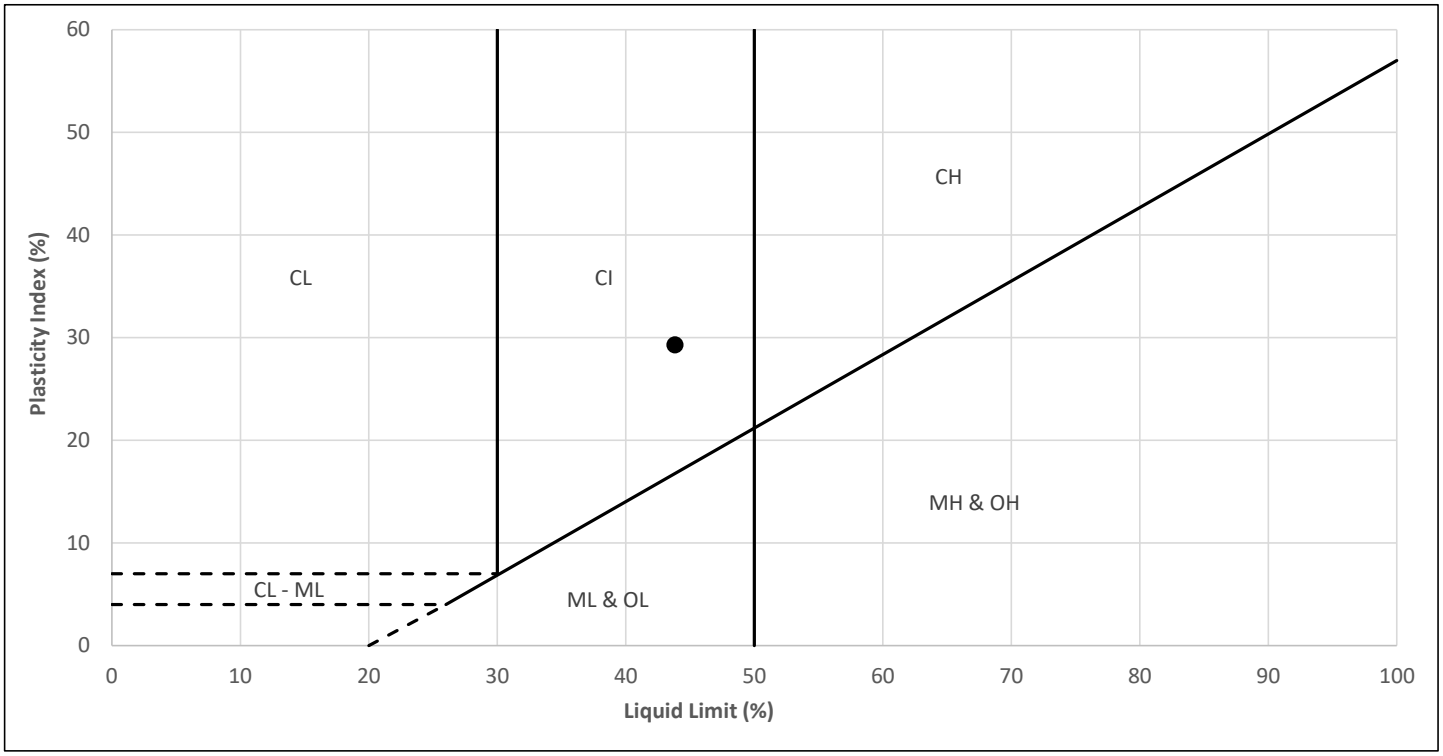
Project:	Snake Lake Reservoir Expansion	**Sample #:**	319RC1
Project No.:	1560-193-00	**Source:**	22CH319
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 319RC1	**Test Date:**	18-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	43.8
Plastic Limit (PL)	14.5
Plasticity Index (PI)	29.3

Soil Plasticity	Medium
Soil Classification	CI



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Tel: (403)892-6036

ATTERBERG LIMITS

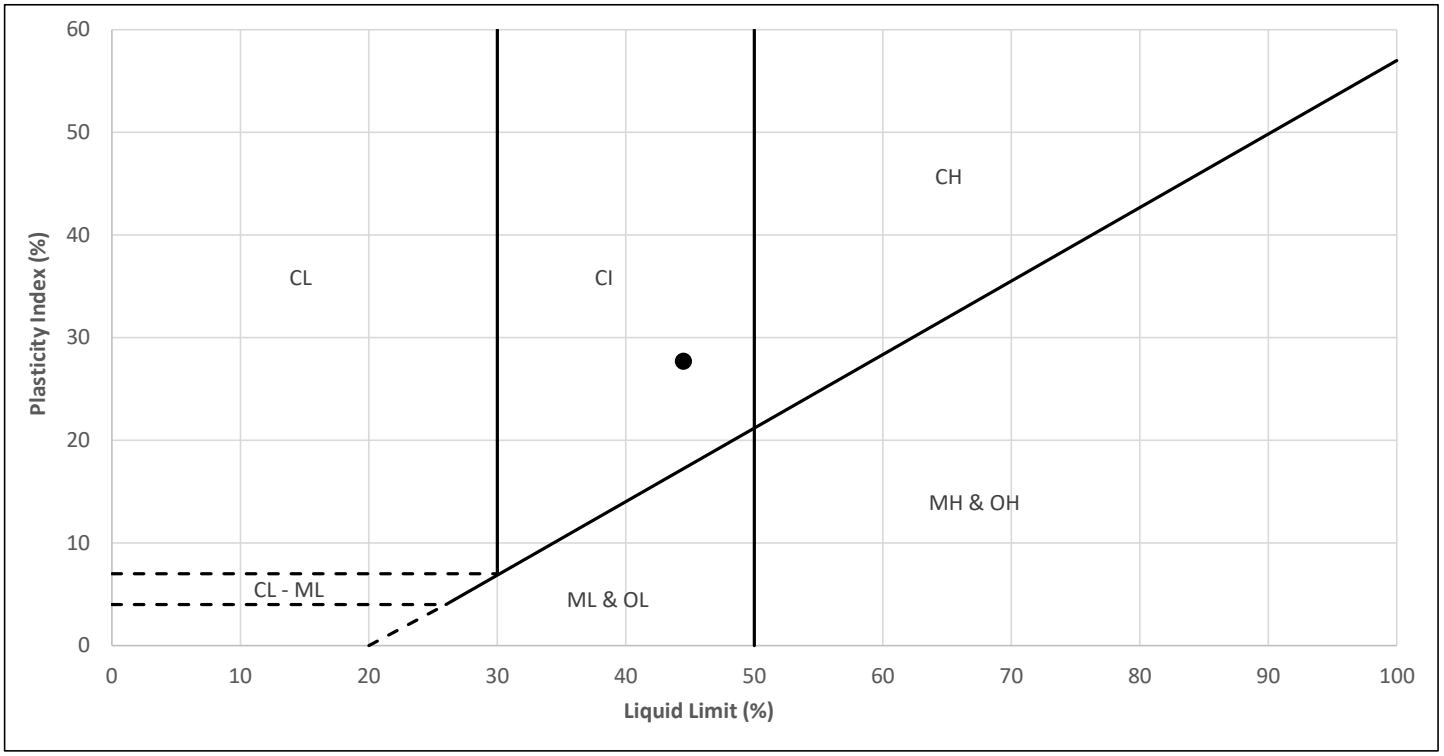
Project:	Snake Lake Reservoir Expansion	**Sample #:**	319RC2
Project No.:	1560-193-00	**Source:**	22CH319
Owner:	EID	**Sample Depth:**	6.2m
File No.:	AL - 319RC2	**Test Date:**	22-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.5
Plastic Limit (PL)	16.8
Plasticity Index (PI)	27.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

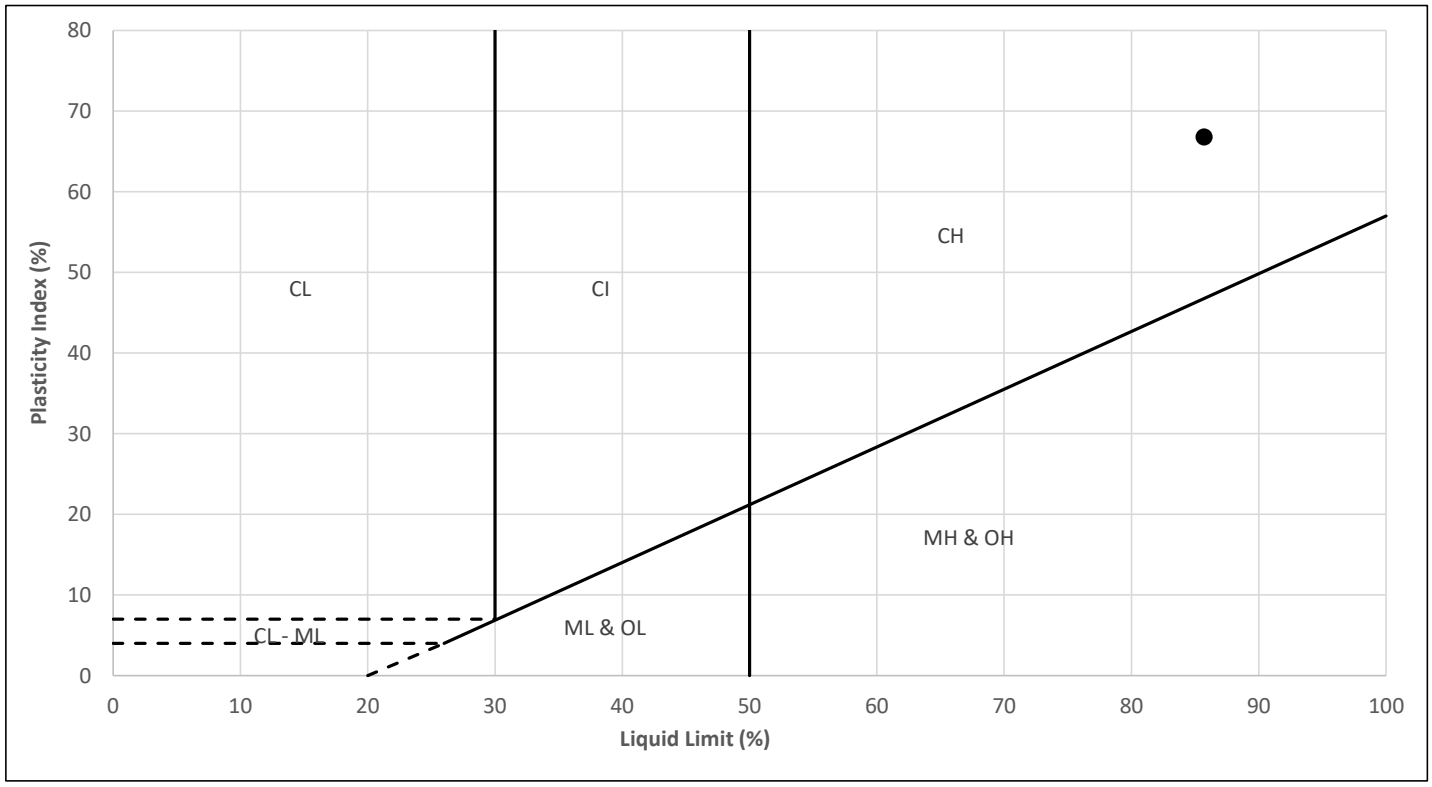
Project:	Snake Lake Reservoir Expansion	**Sample #:**	319RC3 GW
Project No.:	1560-193-00	**Source:**	22CH319
Owner:	EID	**Sample Depth:**	8.6m
File No.:	AL - 319RC3 GW	**Test Date:**	19-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	85.7
Plastic Limit (PL)	18.9
Plasticity Index (PI)	66.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

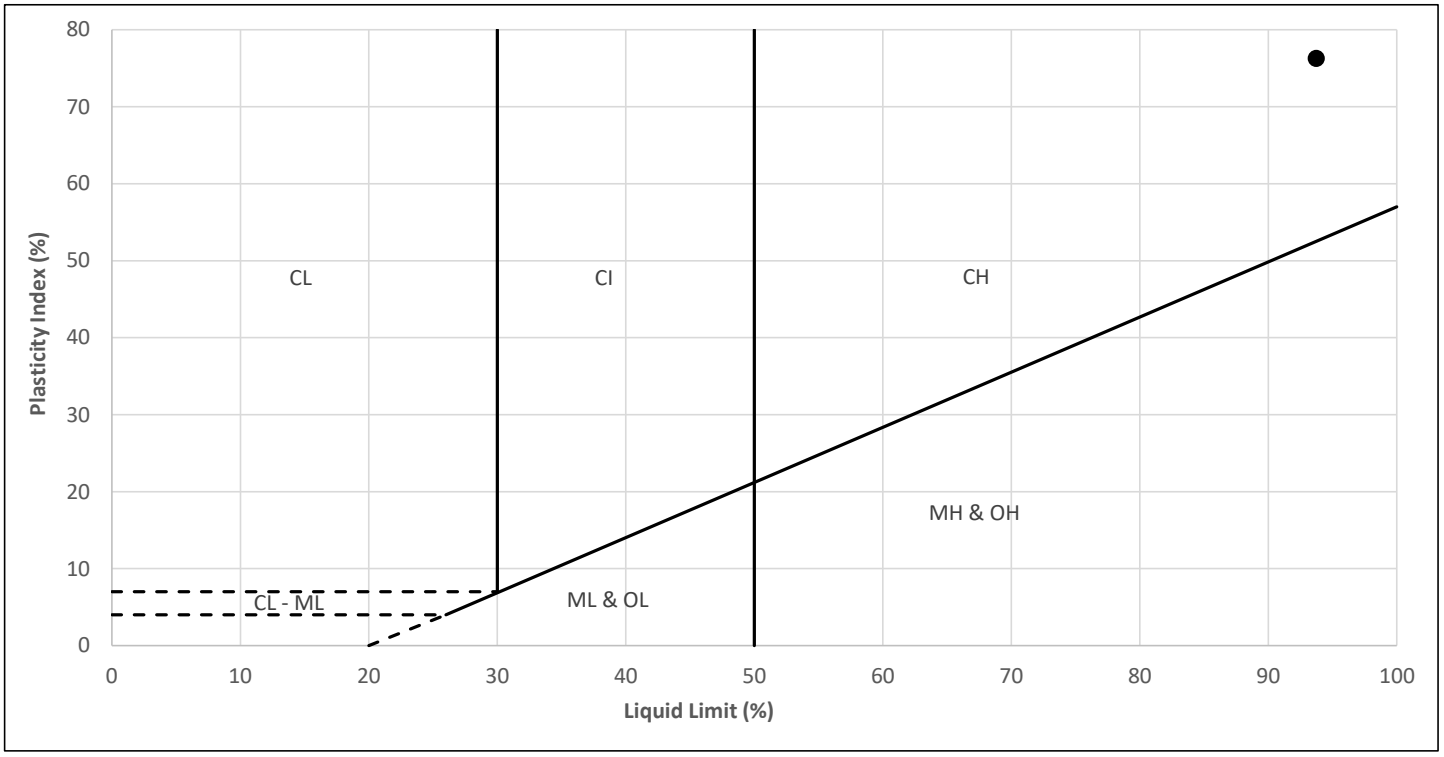
Project:	Snake Lake Reservoir Expansion	**Sample #:**	319RC3
Project No.:	1560-193-00	**Source:**	22CH319
Owner:	EID	**Sample Depth:**	8.6m
File No.:	AL - 319RC3	**Test Date:**	15-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	93.7
Plastic Limit (PL)	17.4
Plasticity Index (PI)	76.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

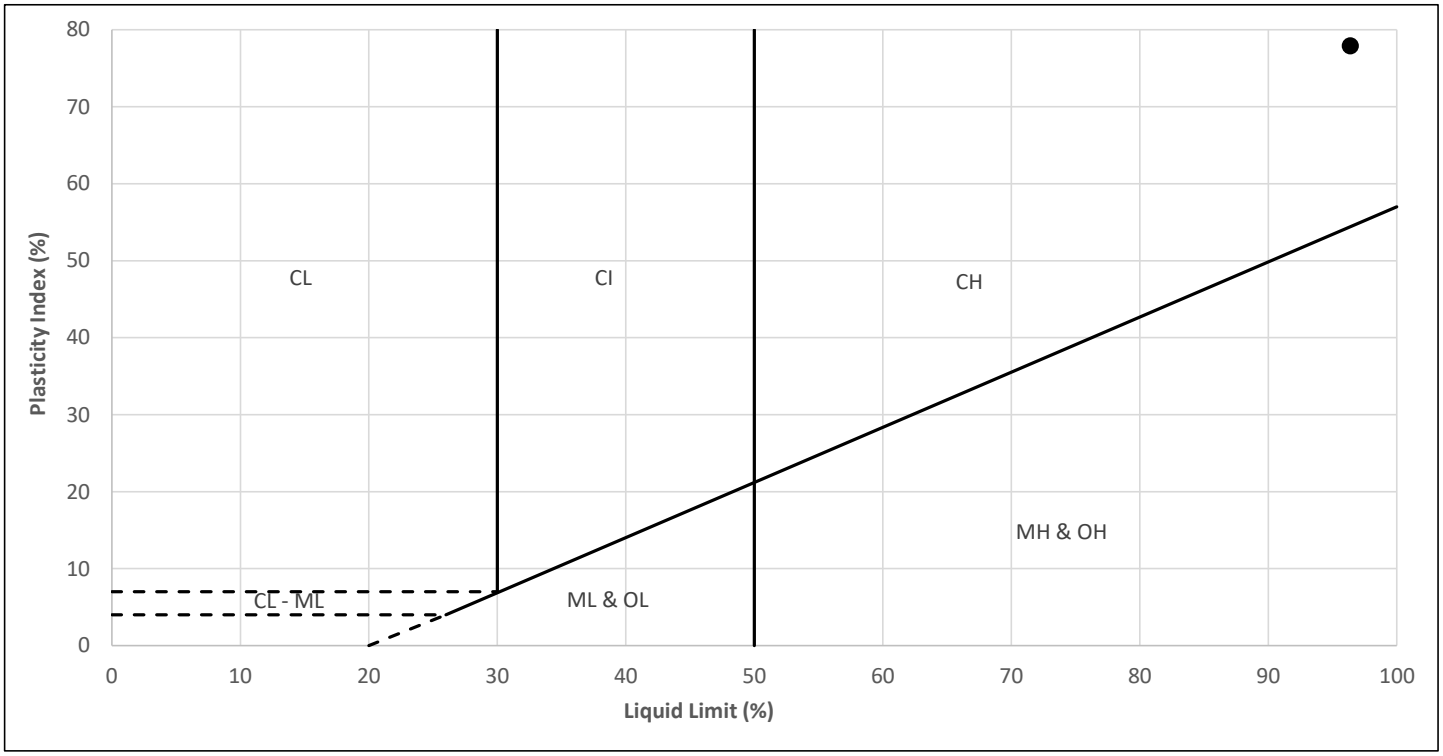
Project:	Snake Lake Reservoir Expansion	**Sample #:**	319RC7
Project No.:	1560-193-00	**Source:**	22CH319
Owner:	EID	**Sample Depth:**	14.4m
File No.:	AL - 319RC7	**Test Date:**	17-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	96.4
Plastic Limit (PL)	18.5
Plasticity Index (PI)	77.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

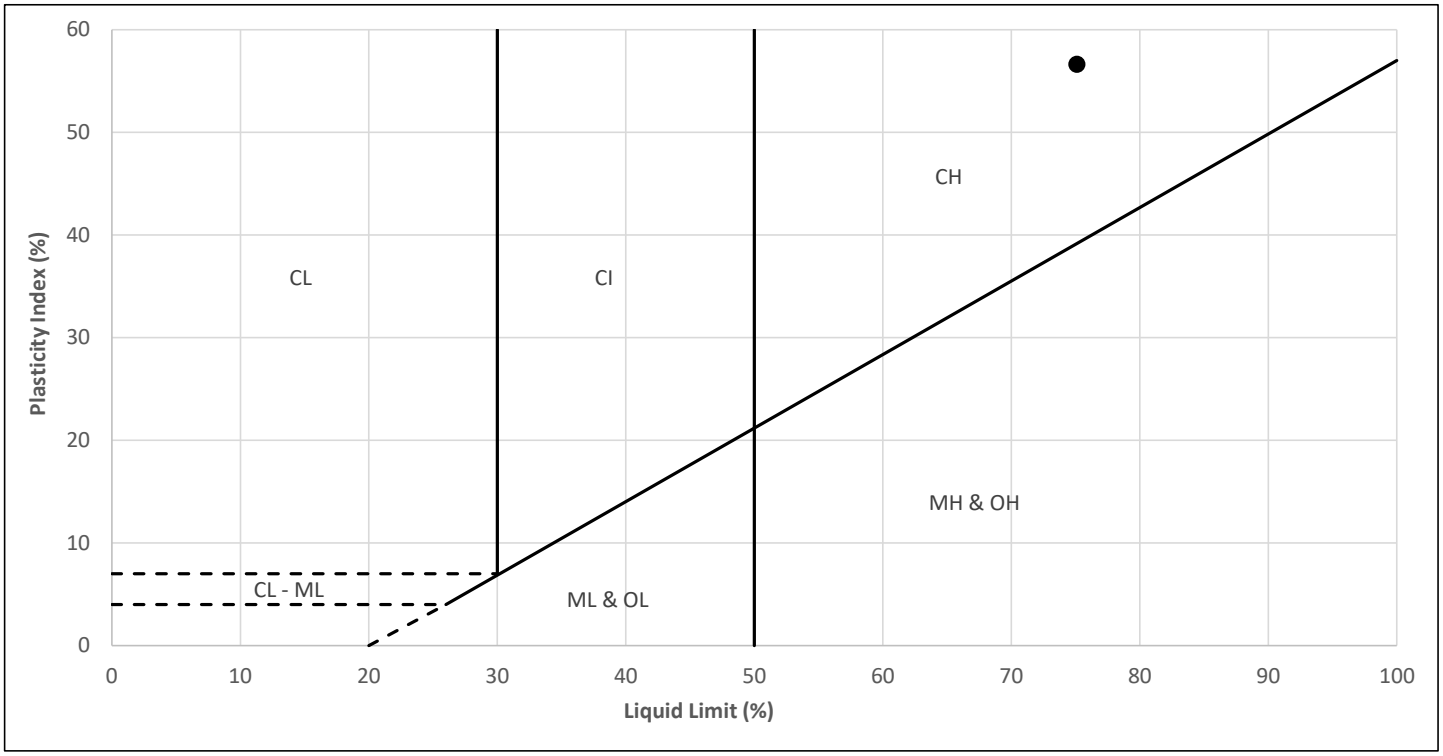
Project:	Snake Lake Reservoir Expansion	**Sample #:**	320AU1
Project No.:	1560-193-00	**Source:**	22CH320
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 320AU1	**Test Date:**	21-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	75.1
Plastic Limit (PL)	18.5
Plasticity Index (PI)	56.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

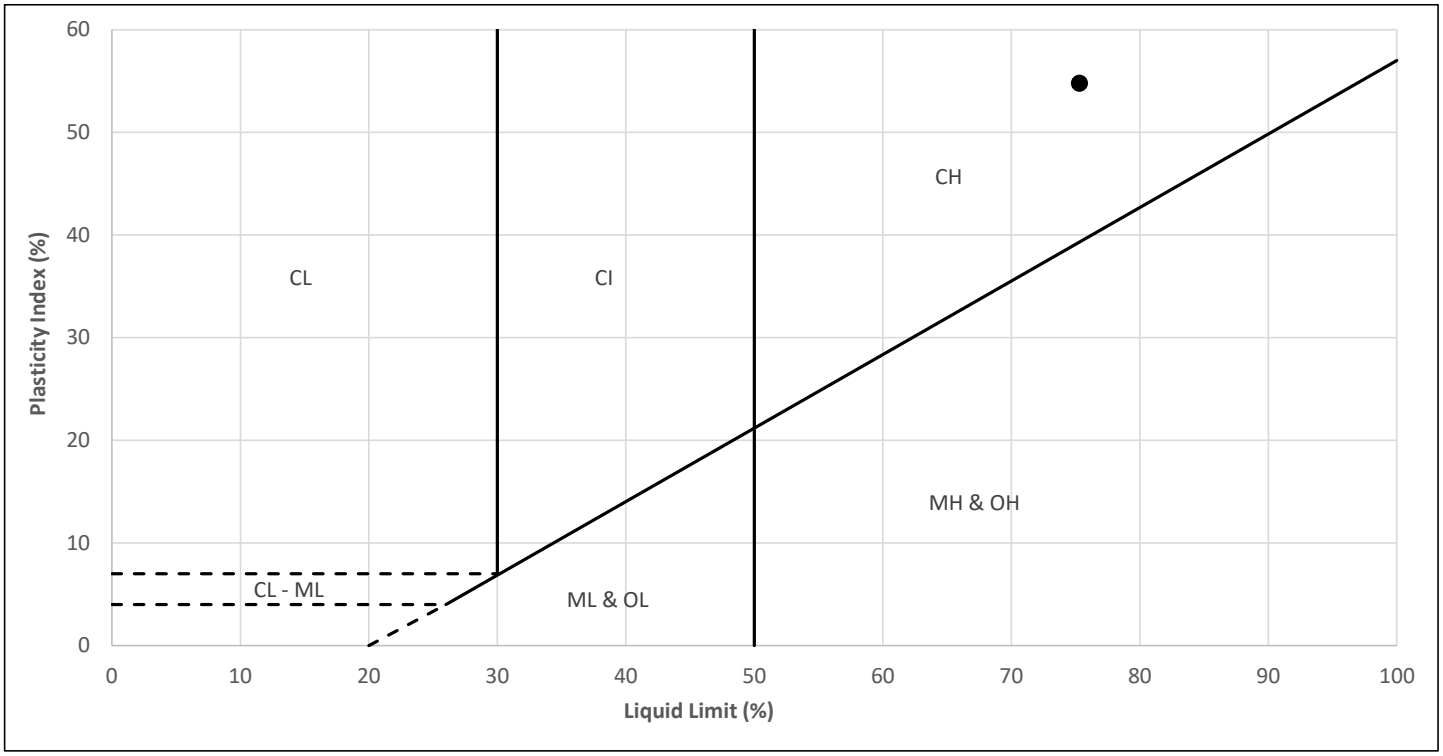
Project:	Snake Lake Reservoir Expansion	**Sample #:**	320AU4
Project No.:	1560-193-00	**Source:**	22BH320
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 320AU4	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	75.3
Plastic Limit (PL)	20.5
Plasticity Index (PI)	54.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

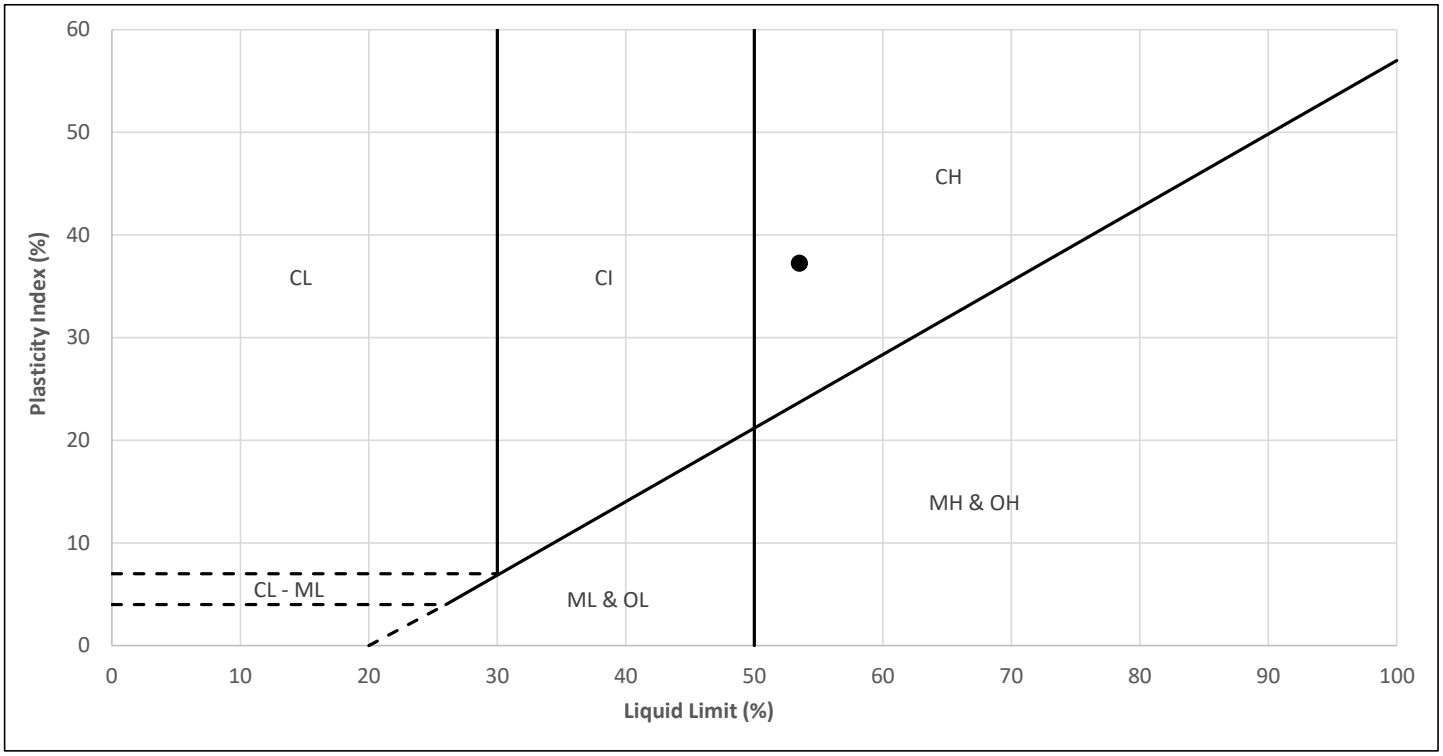
Project:	Snake Lake Reservoir Expansion	**Sample #:**	320AU10
Project No.:	1560-193-00	**Source:**	22BH320
Owner:	EID	**Sample Depth:**	7.3m
File No.:	AL - 320AU10	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.5
Plastic Limit (PL)	16.2
Plasticity Index (PI)	37.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

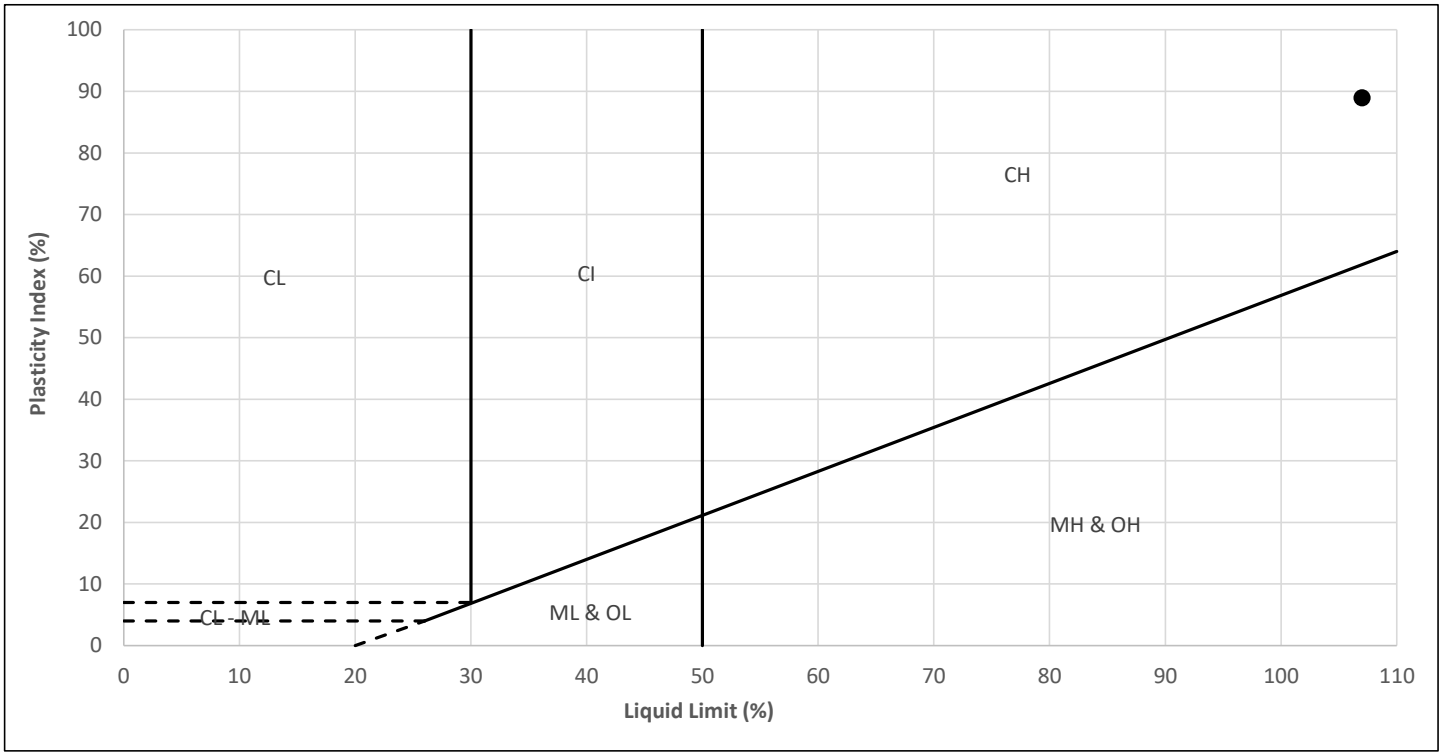
Project:	Snake Lake Reservoir Expansion	**Sample #:**	320RC1
Project No.:	1560-193-00	**Source:**	22CH320
Owner:	EID	**Sample Depth:**	4.2m
File No.:	AL - 320RC1	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	107.0
Plastic Limit (PL)	18.0
Plasticity Index (PI)	89.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

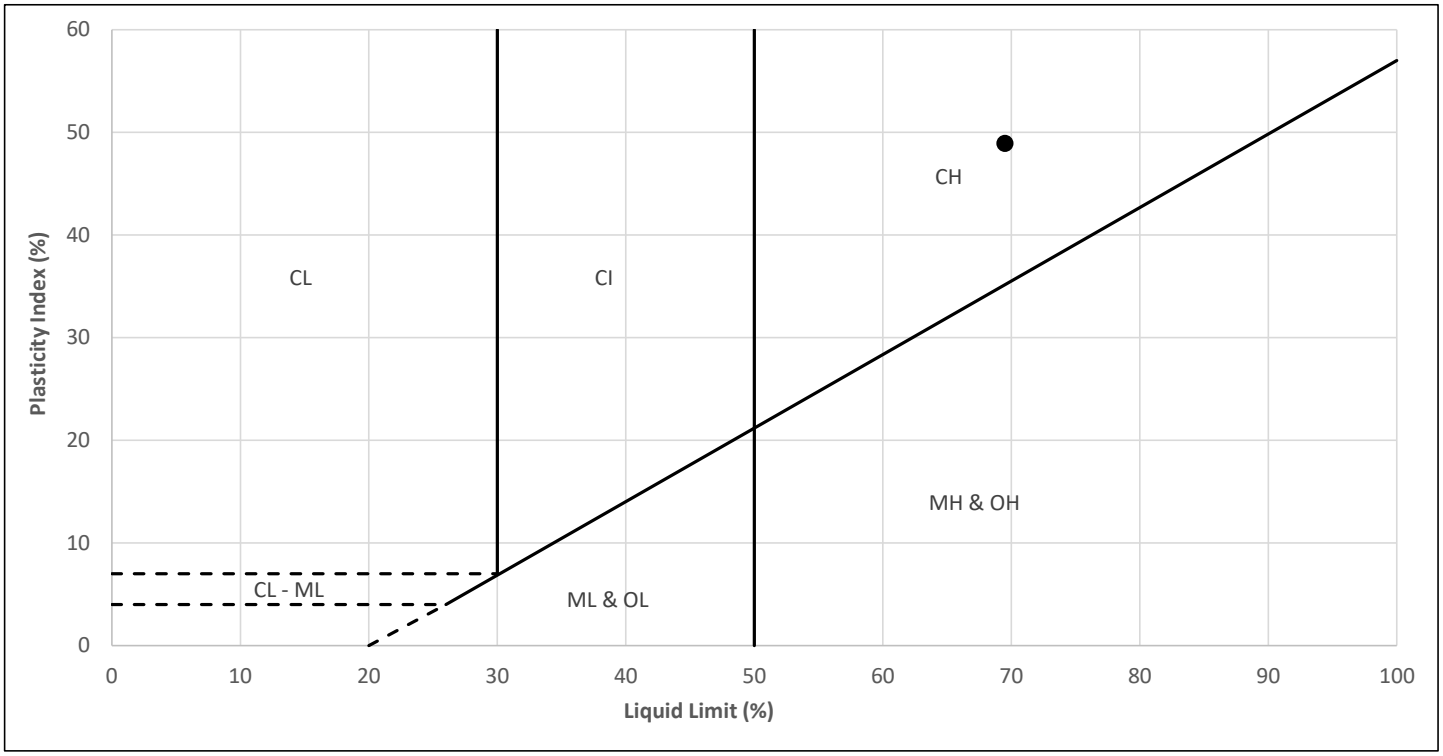
Project:	Snake Lake Reservoir Expansion	**Sample #:**	320RC4
Project No.:	1560-193-00	**Source:**	22CH320
Owner:	EID	**Sample Depth:**	7.7m
File No.:	AL - 320RC4	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	69.5
Plastic Limit (PL)	20.6
Plasticity Index (PI)	48.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

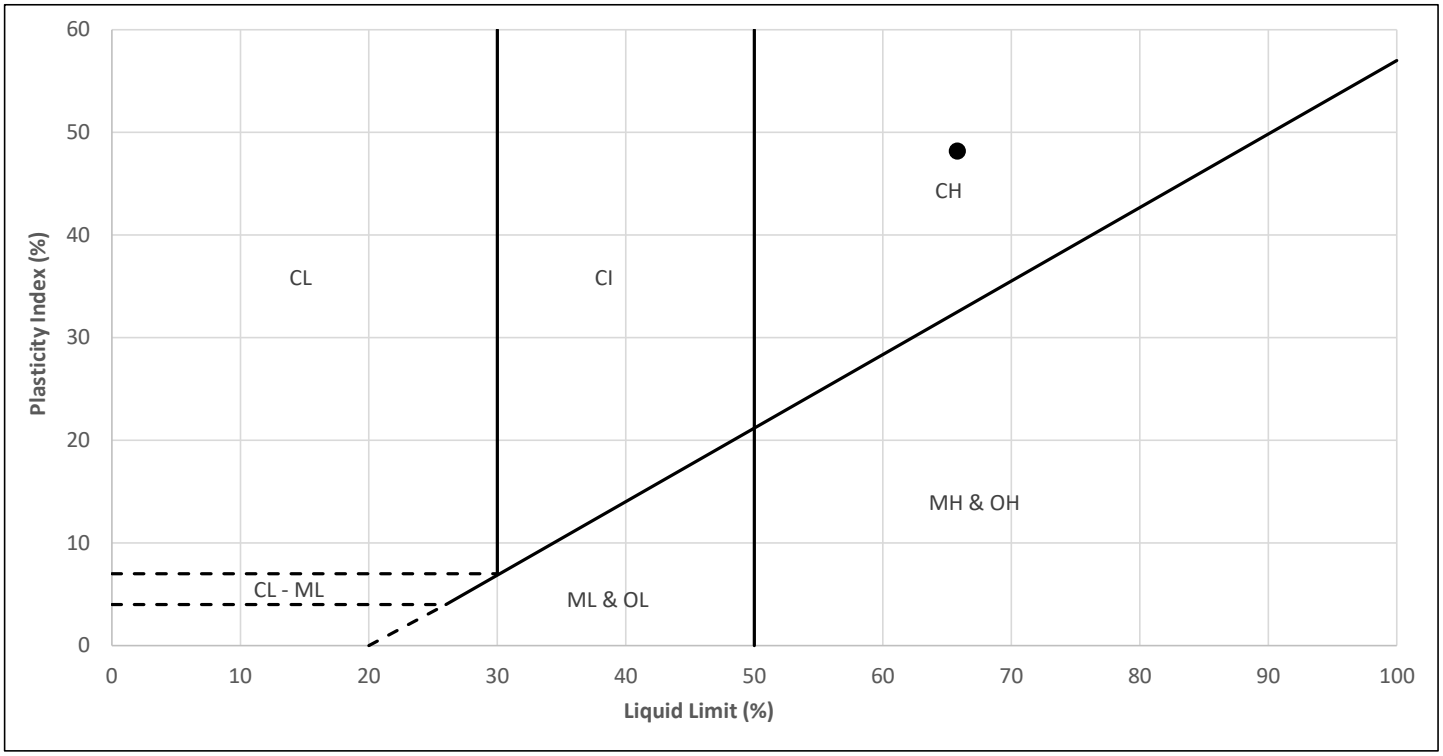
Project:	Snake Lake Reservoir Expansion	**Sample #:**	320RC7
Project No.:	1560-193-00	**Source:**	22CH320
Owner:	EID	**Sample Depth:**	12.3m
File No.:	AL - 320RC7	**Test Date:**	19-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	65.8
Plastic Limit (PL)	17.6
Plasticity Index (PI)	48.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

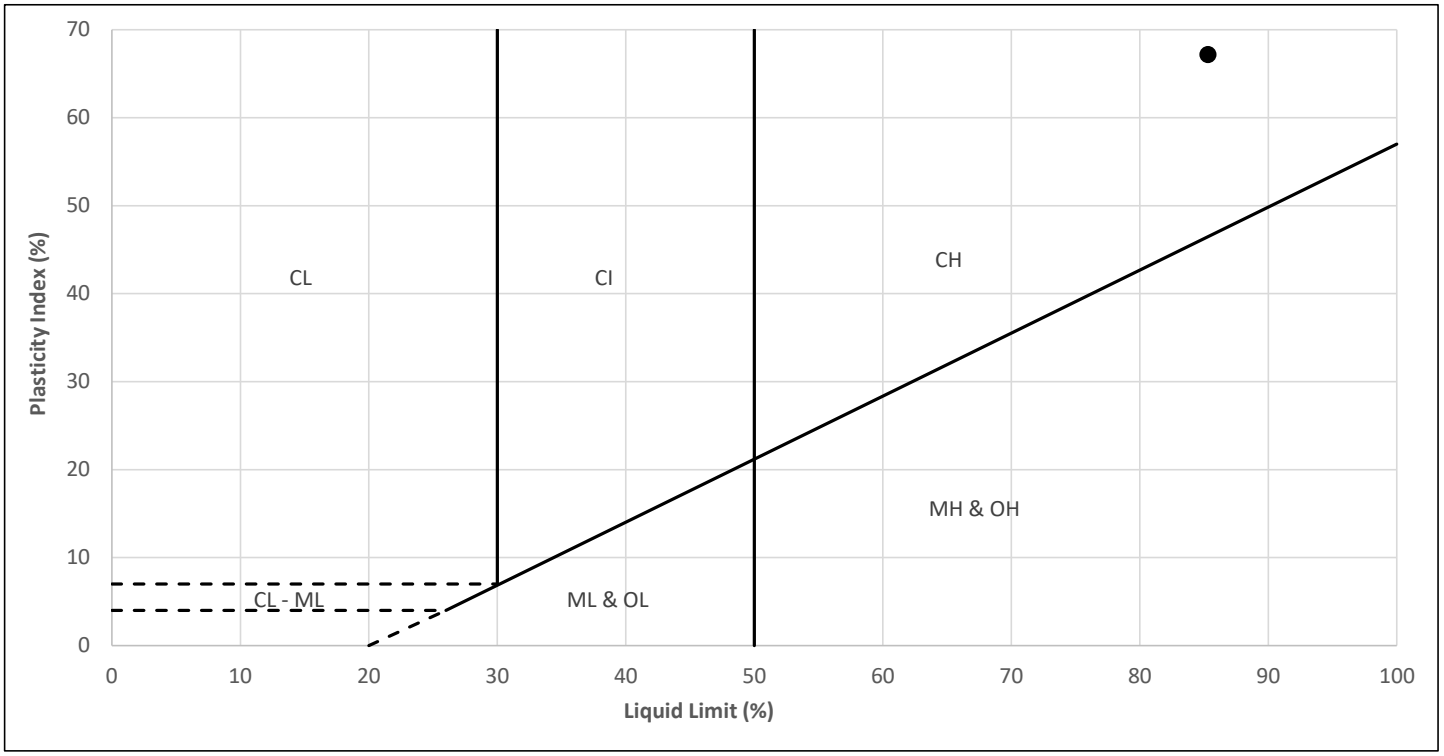
Project:	Snake Lake Reservoir Expansion	**Sample #:**	321AU3
Project No.:	1560-193-00	**Source:**	22CH321
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 321AU3	**Test Date:**	21-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	85.3
Plastic Limit (PL)	18.1
Plasticity Index (PI)	67.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

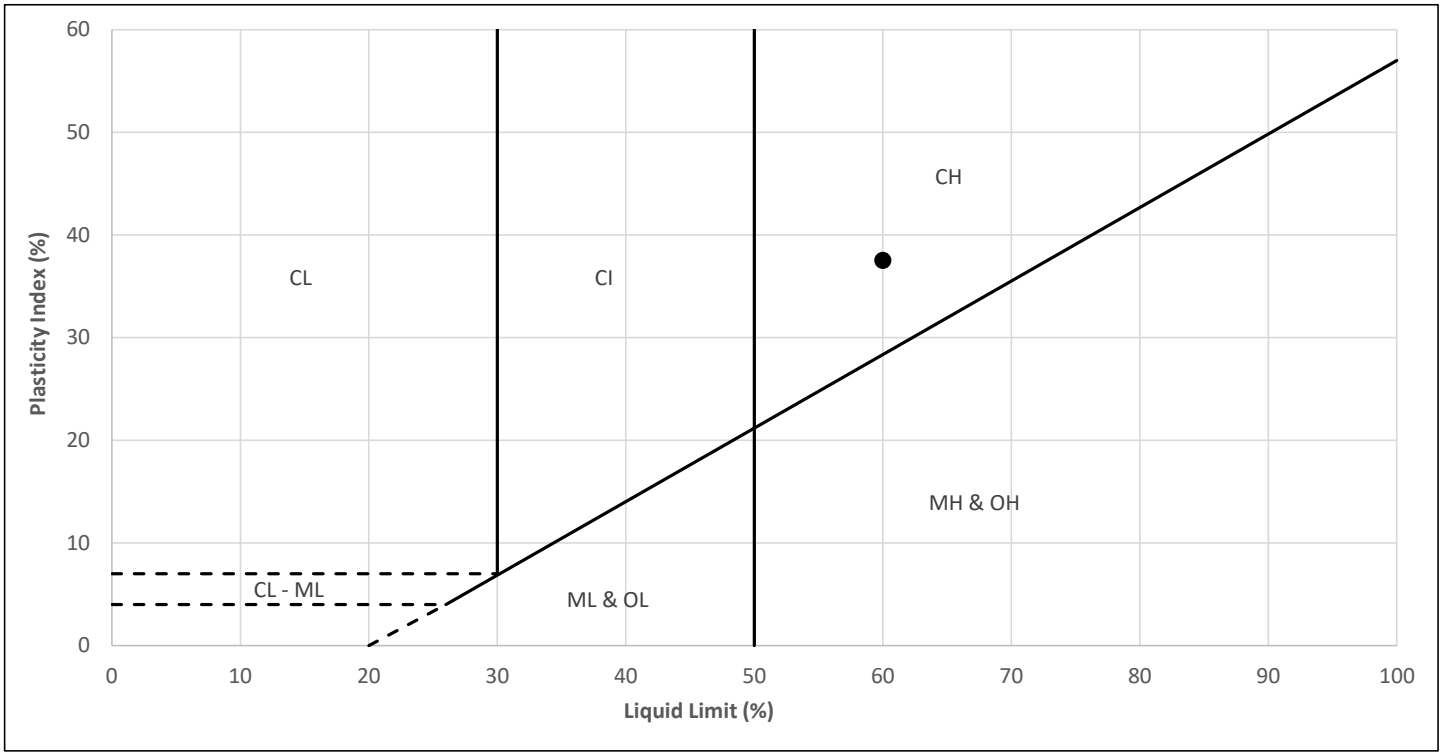
Project:	Snake Lake Reservoir Expansion	**Sample #:**	321RC2
Project No.:	1560-193-00	**Source:**	22CH321
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 321RC2	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	60.0
Plastic Limit (PL)	22.5
Plasticity Index (PI)	37.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

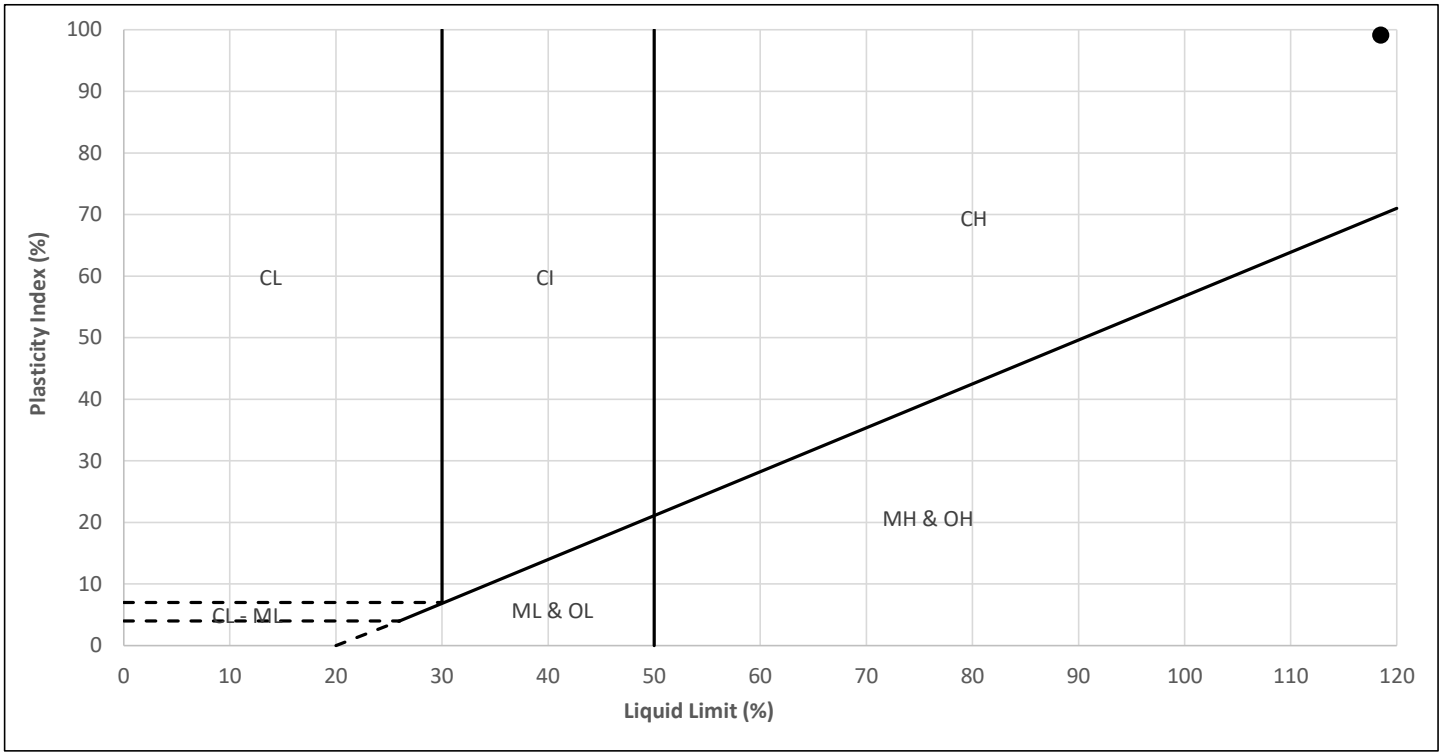
Project:	Snake Lake Reservoir Expansion	**Sample #:**	321RC4
Project No.:	1560-193-00	**Source:**	22CH321
Owner:	EID	**Sample Depth:**	7.8m
File No.:	AL - 321RC4	**Test Date:**	21-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	118.5
Plastic Limit (PL)	19.4
Plasticity Index (PI)	99.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

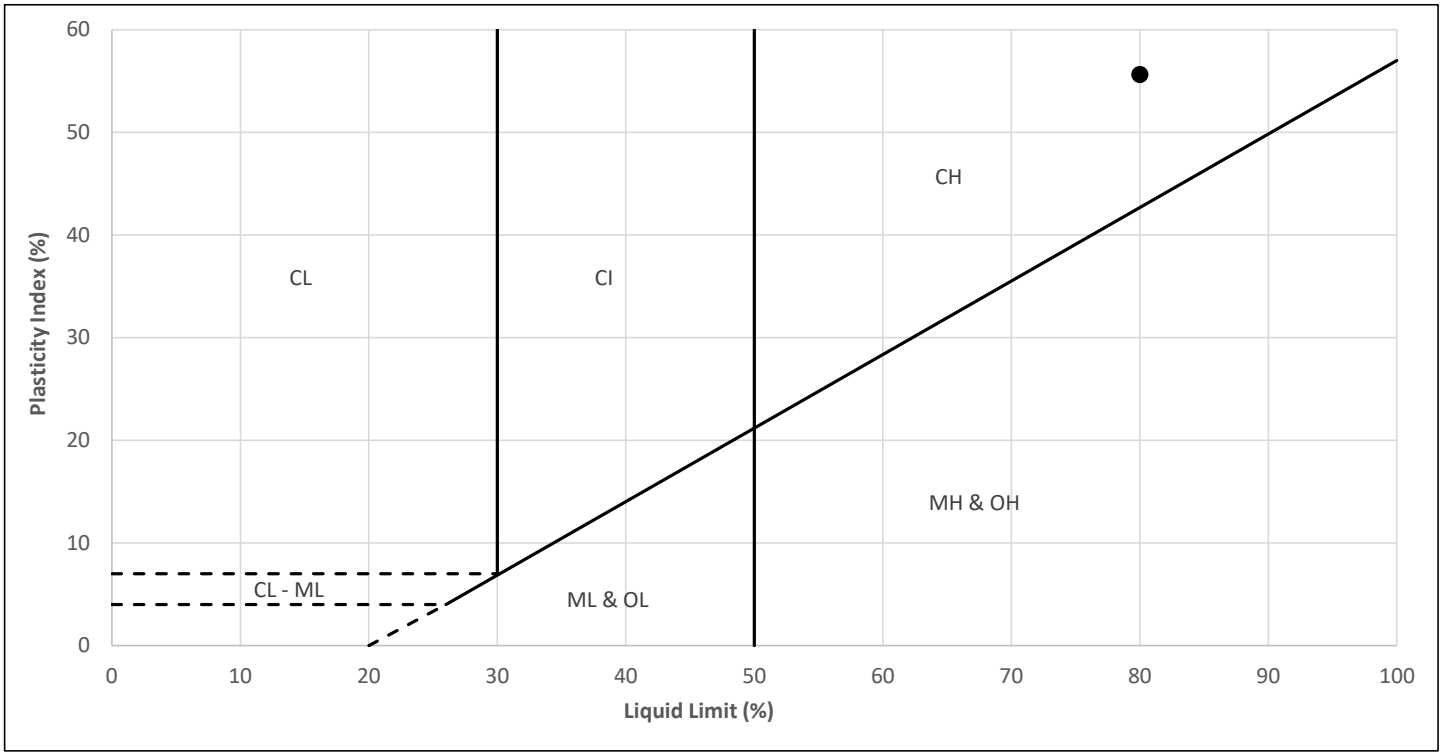
Project:	Snake Lake Reservoir Expansion	**Sample #:**	321RC6
Project No.:	1560-193-00	**Source:**	22CH321
Owner:	EID	**Sample Depth:**	11.7m
File No.:	AL - 321RC6	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	80.0
Plastic Limit (PL)	24.4
Plasticity Index (PI)	55.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

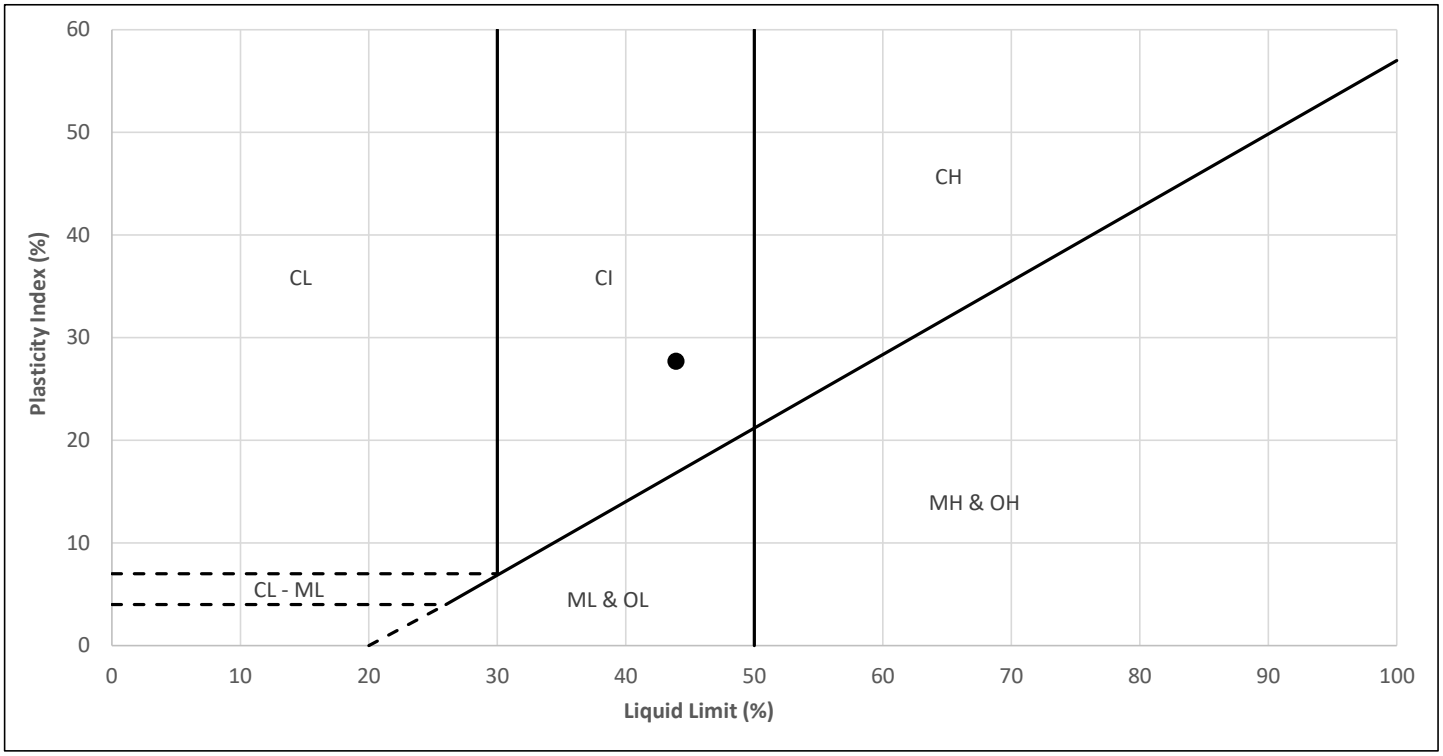
Project:	Snake Lake Reservoir Expansion	**Sample #:**	322AU2
Project No.:	1560-193-00	**Source:**	22CH322
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 322AU2	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	43.9
Plastic Limit (PL)	16.2
Plasticity Index (PI)	27.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

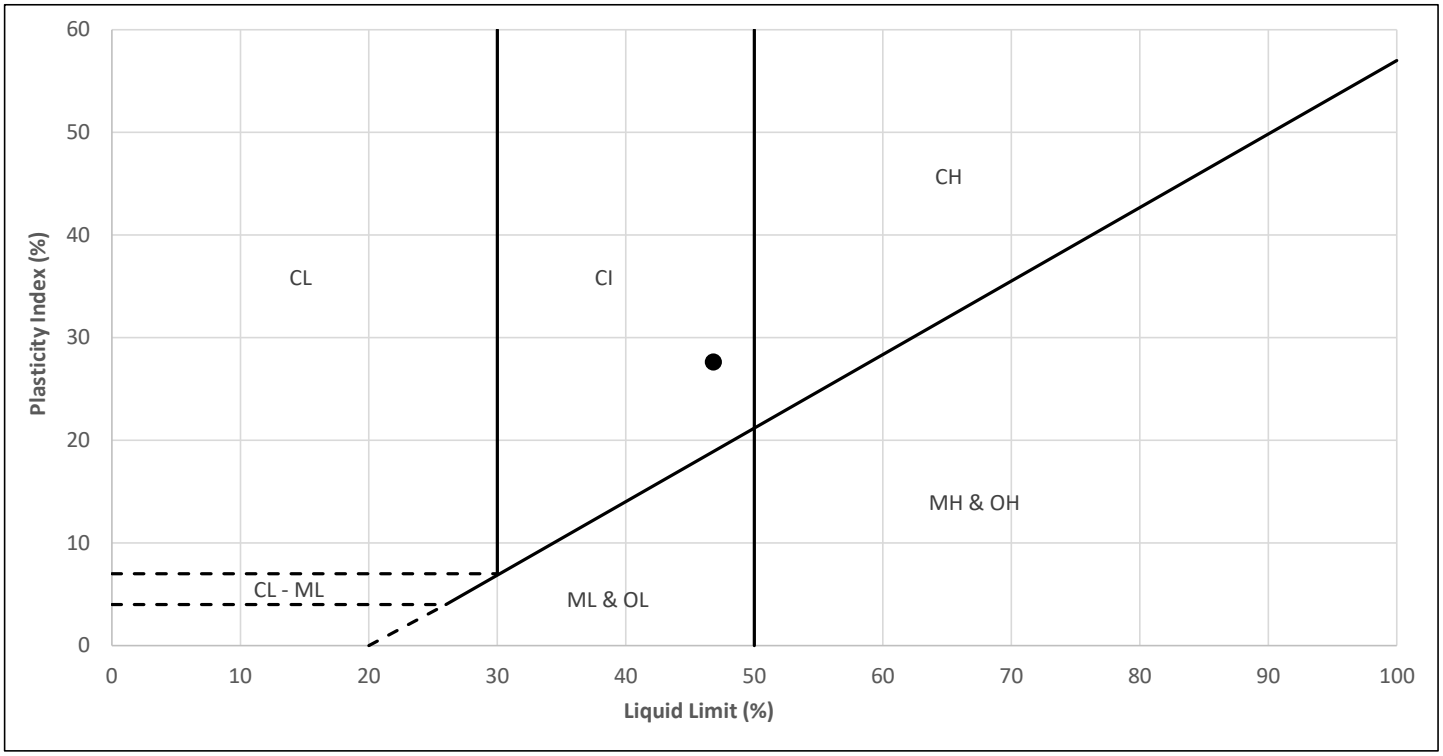
Project:	Snake Lake Reservoir Expansion	**Sample #:**	322RC1
Project No.:	1560-193-00	**Source:**	22CH322
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 322RC1	**Test Date:**	1-Nov-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	46.8
Plastic Limit (PL)	19.2
Plasticity Index (PI)	27.6

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

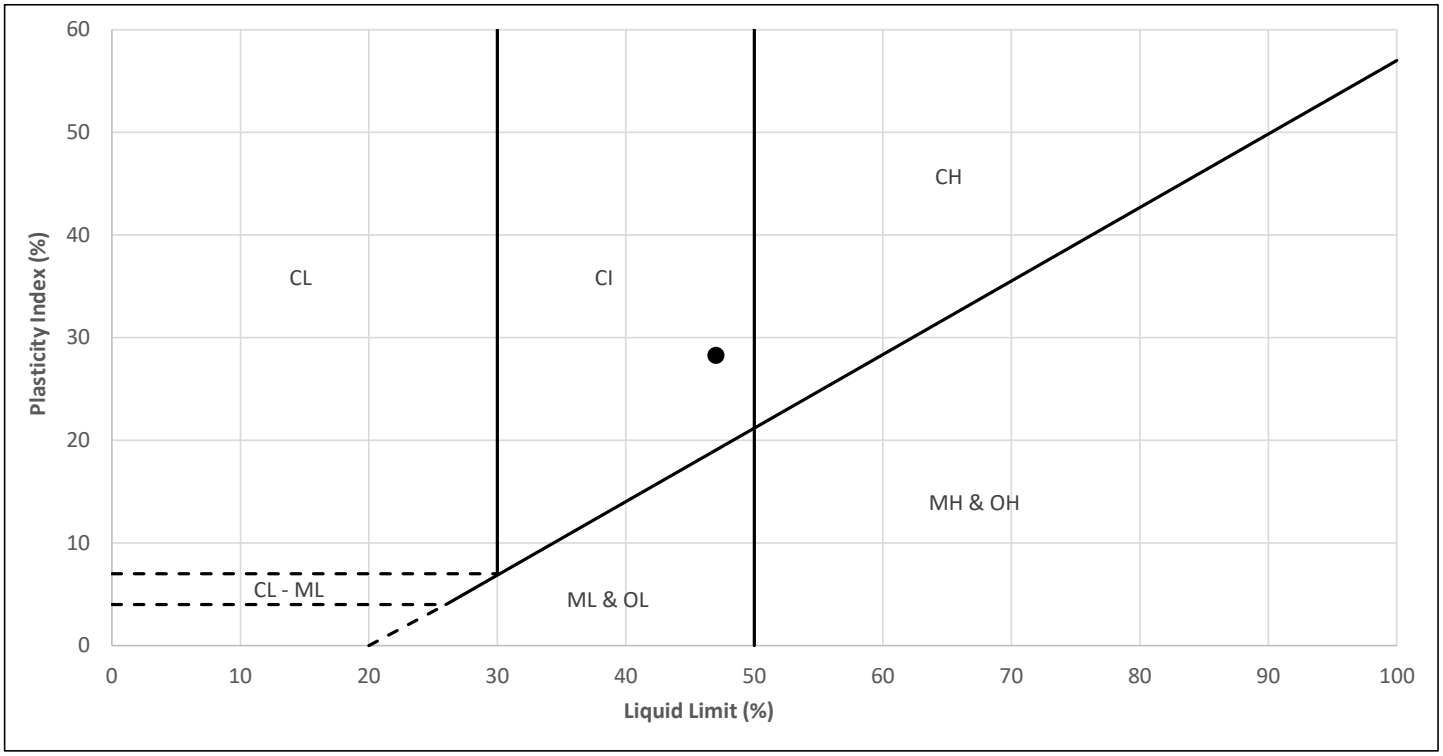
Project:	Snake Lake Reservoir Expansion	**Sample #:**	322RC2
Project No.:	1560-193-00	**Source:**	22CH322
Owner:	EID	**Sample Depth:**	5.8m
File No.:	AL - 322RC2	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	47.0
Plastic Limit (PL)	18.7
Plasticity Index (PI)	28.3

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

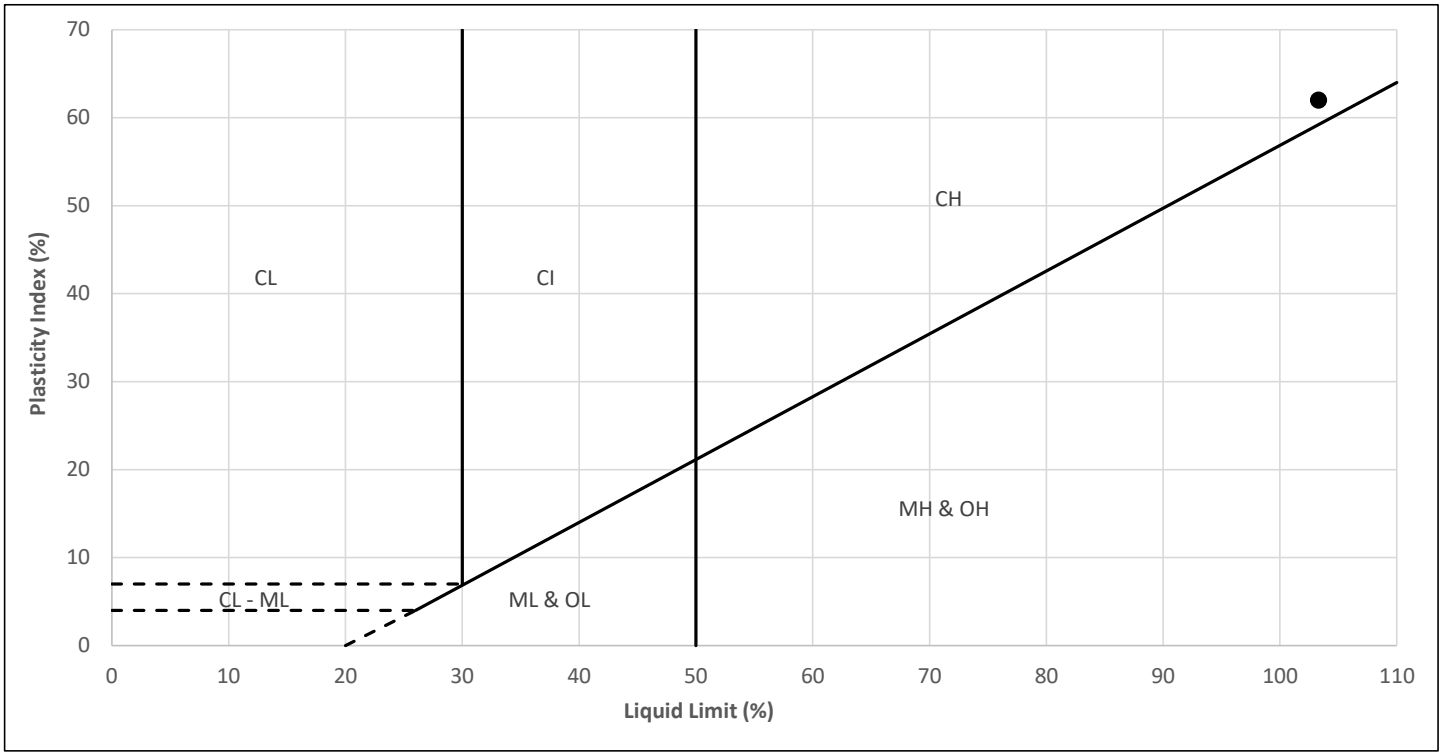
Project:	Snake Lake Reservoir Expansion	**Sample #:**	322RC2
Project No.:	1560-193-00	**Source:**	22CH322
Owner:	EID	**Sample Depth:**	6.8m
File No.:	AL - 322RC2	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	103.3
Plastic Limit (PL)	41.3
Plasticity Index (PI)	62.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

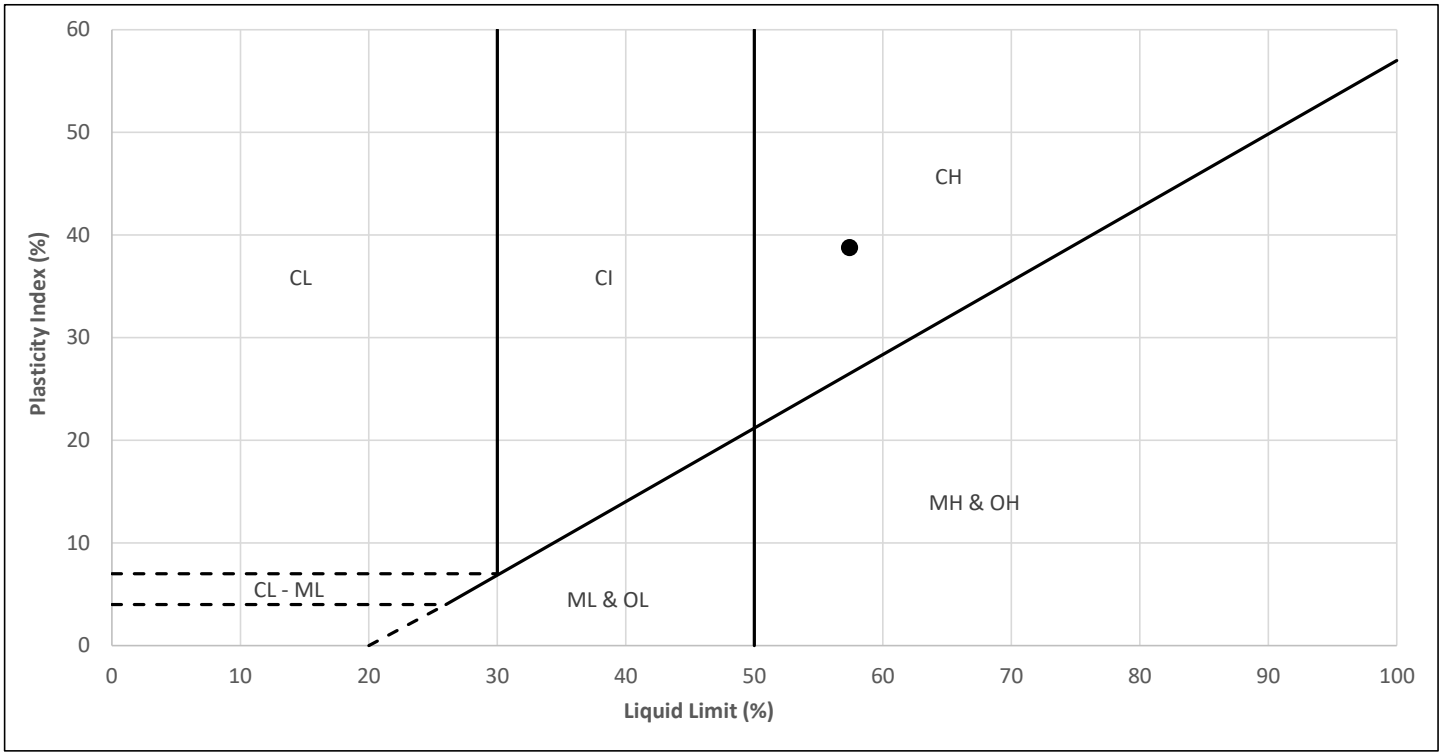
Project:	Snake Lake Reservoir Expansion	**Sample #:**	322RC4
Project No.:	1560-193-00	**Source:**	22CH322
Owner:	EID	**Sample Depth:**	9.4m
File No.:	AL - 322RC4	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	57.4
Plastic Limit (PL)	18.6
Plasticity Index (PI)	38.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

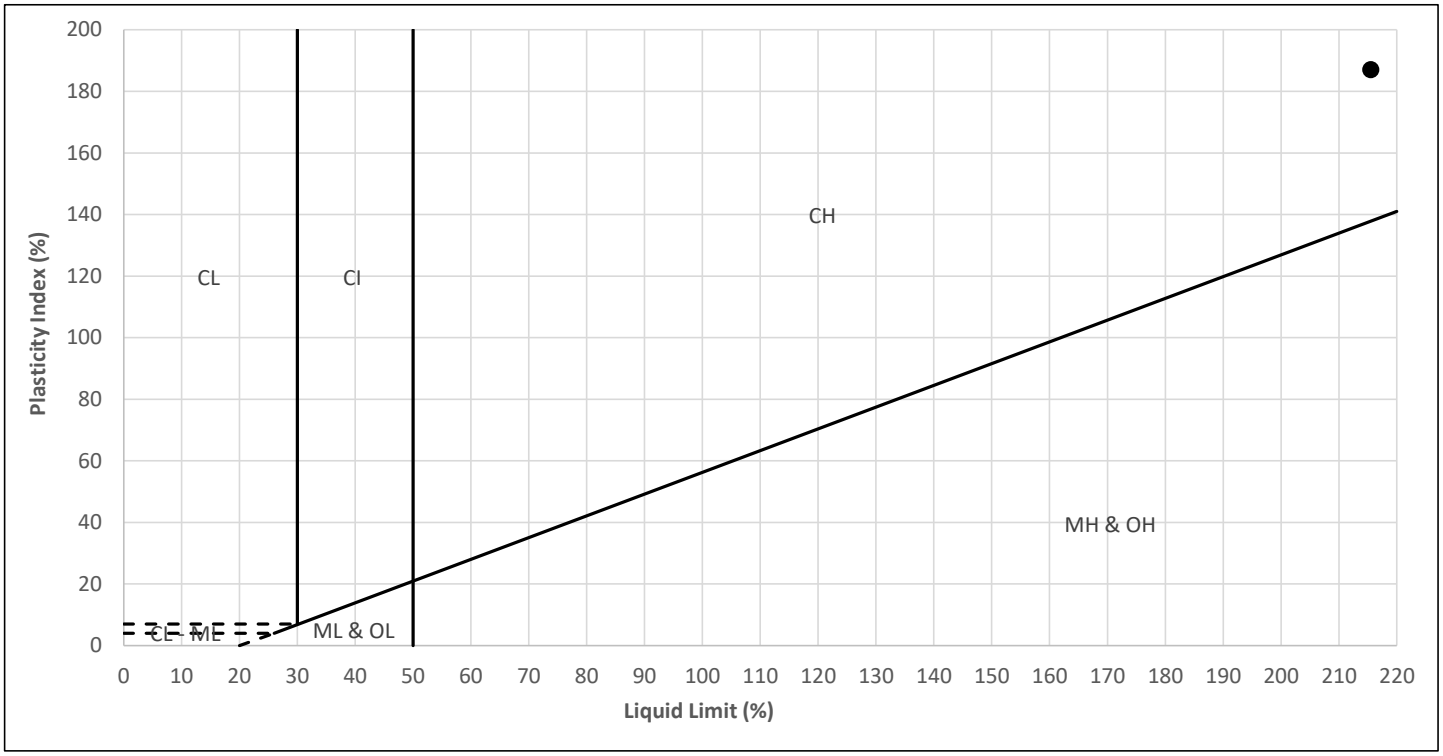
Project:	Snake Lake Reservoir Expansion	**Sample #:**	322RC8
Project No.:	1560-193-00	**Source:**	22BH322
Owner:	EID	**Sample Depth:**	14.5m
File No.:	AL - 322RC8	**Test Date:**	28-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	215.5
Plastic Limit (PL)	28.5
Plasticity Index (PI)	187.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

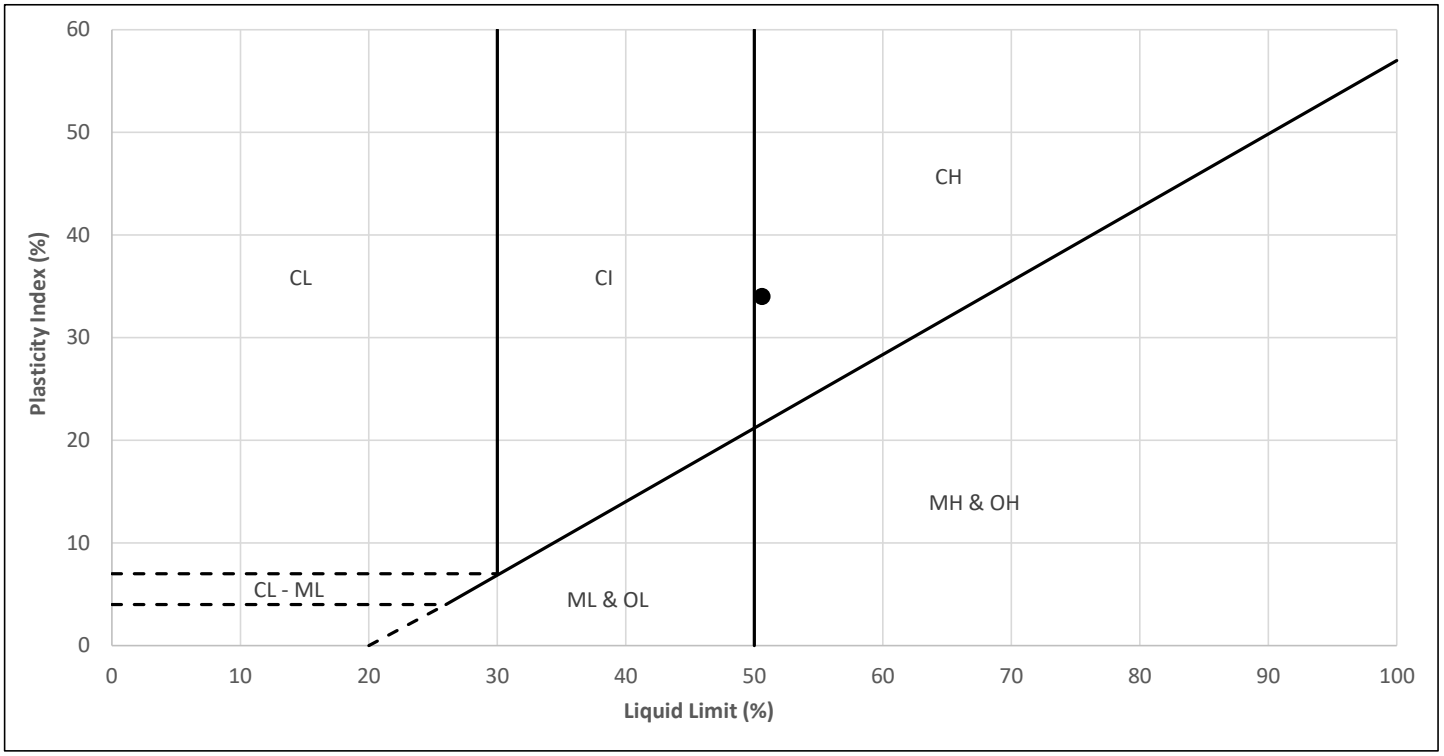
Project:	Snake Lake Reservoir Expansion	**Sample #:**	323AU3
Project No.:	1560-193-00	**Source:**	22CH323
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 323AU3	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.6
Plastic Limit (PL)	16.6
Plasticity Index (PI)	34.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

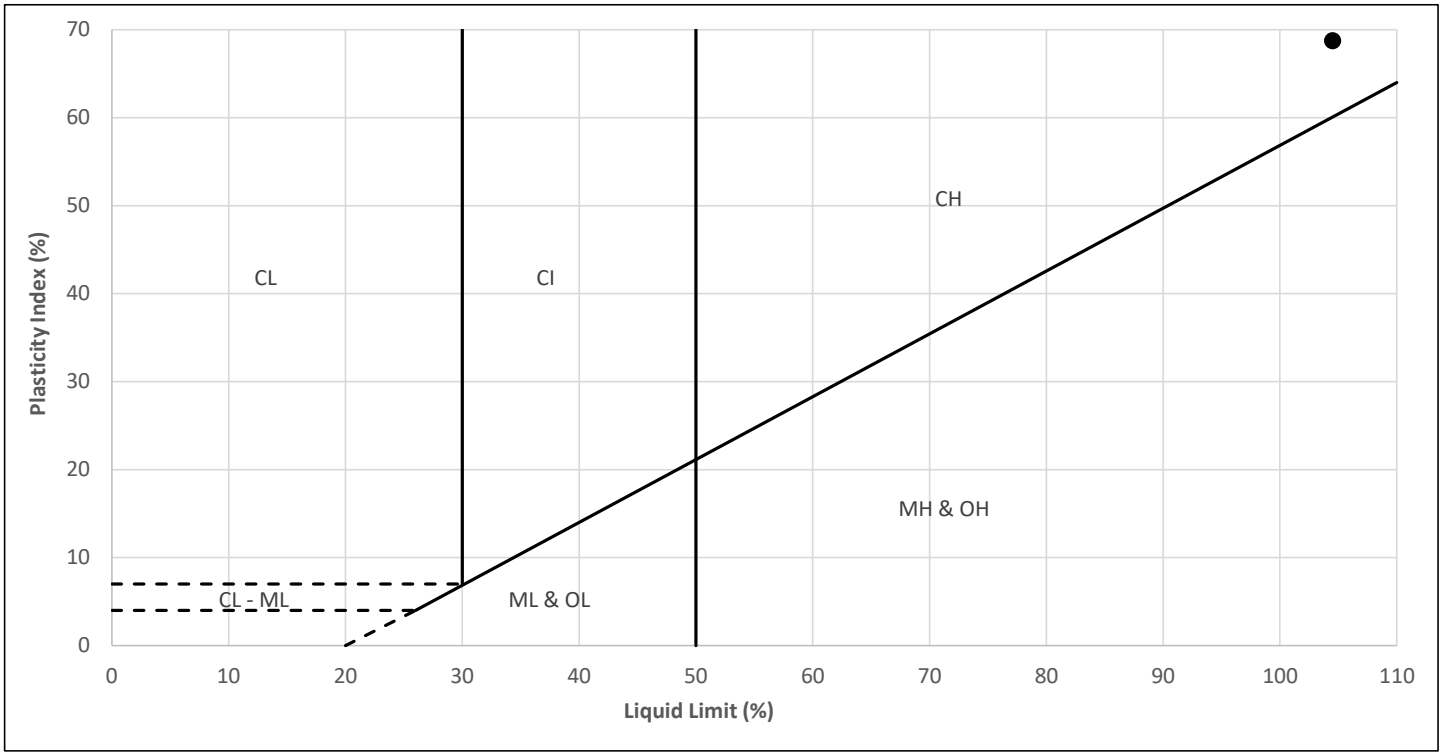
Project:	Snake Lake Reservoir Expansion	**Sample #:**	323RC1 (BENTONITE)
Project No.:	1560-193-00	**Source:**	22CH323
Owner:	EID	**Sample Depth:**	3.5m
File No.:	AL - 323RC1 (BENTONITE)	**Test Date:**	19-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	104.5
Plastic Limit (PL)	35.7
Plasticity Index (PI)	68.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

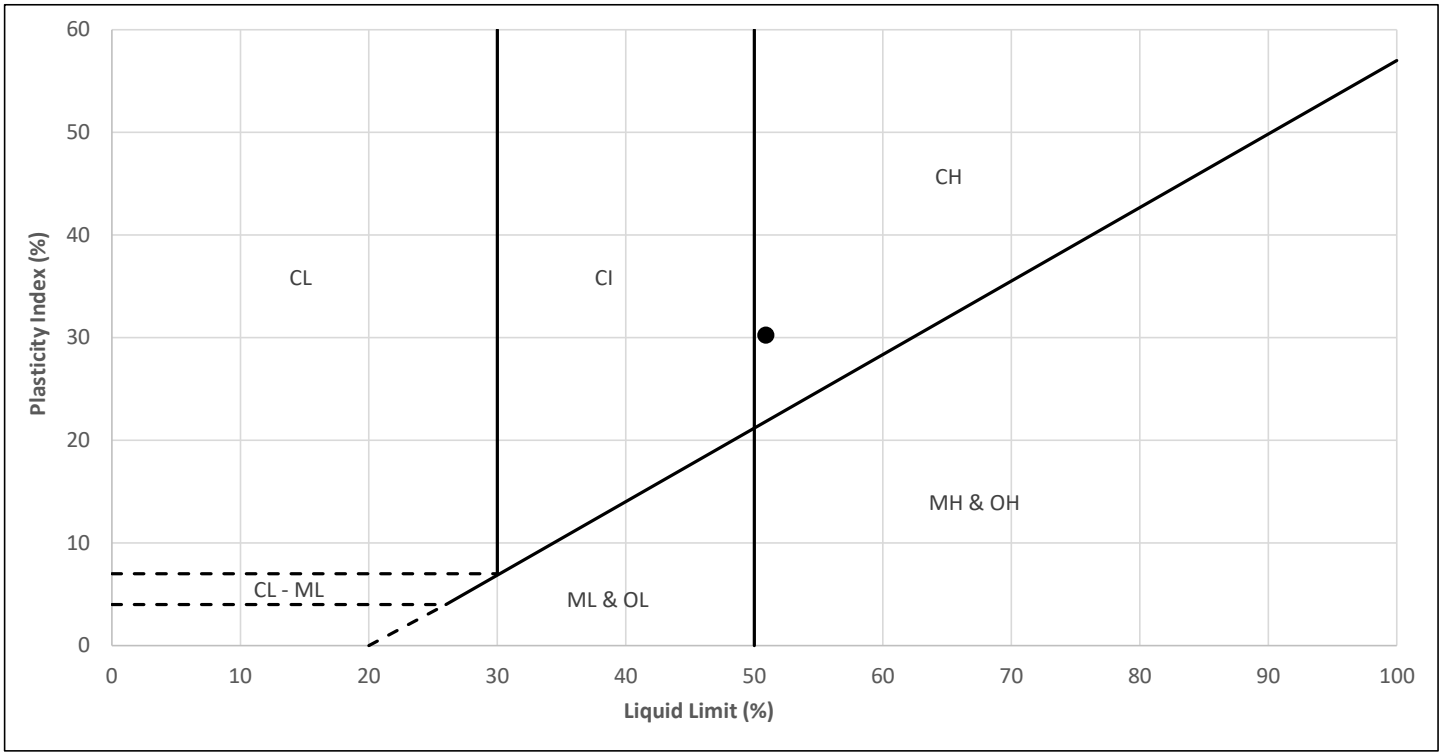
Project:	Snake Lake Reservoir Expansion	**Sample #:**	323RC1
Project No.:	1560-193-00	**Source:**	22CH323
Owner:	EID	**Sample Depth:**	3.5m
File No.:	AL - 323RC1	**Test Date:**	19-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.9
Plastic Limit (PL)	20.7
Plasticity Index (PI)	30.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

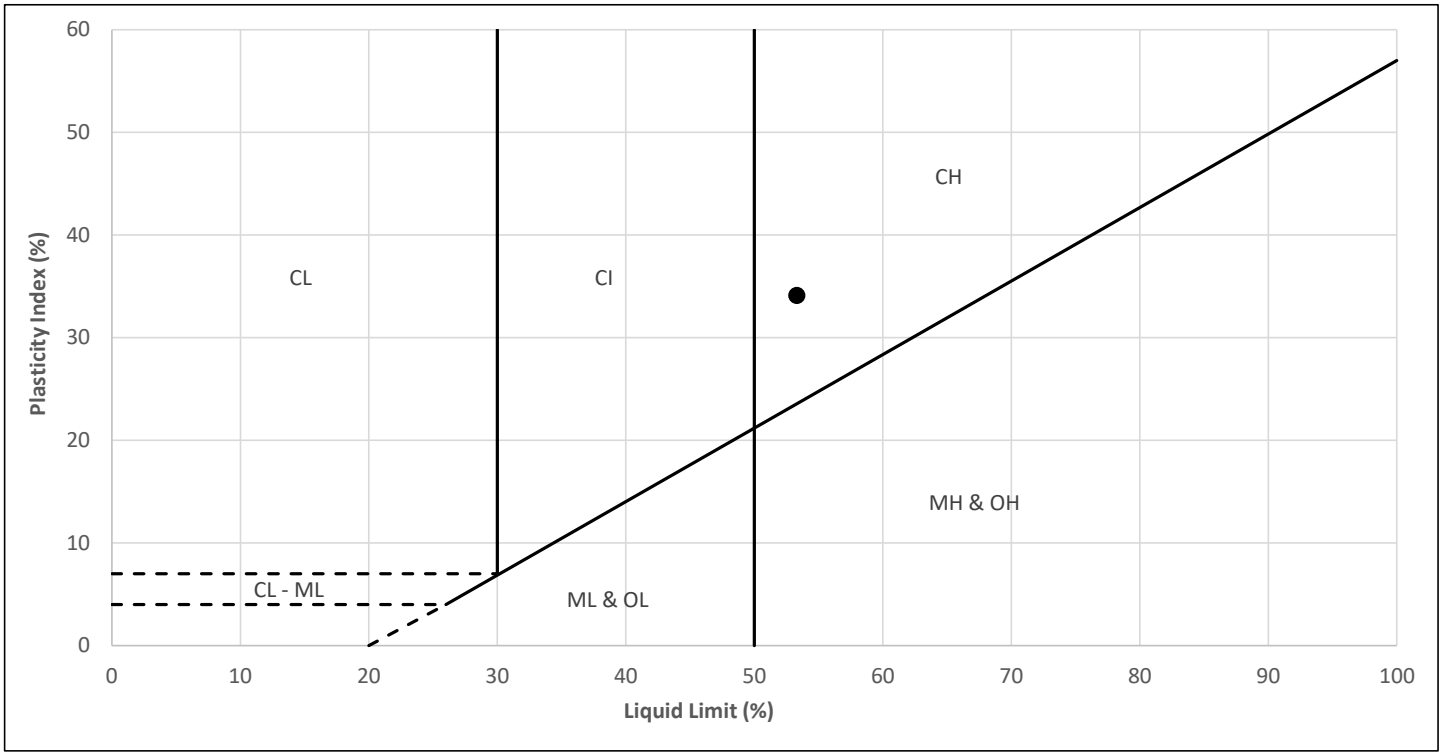
Project:	Snake Lake Reservoir Expansion	**Sample #:**	323RC2
Project No.:	1560-193-00	**Source:**	22CH323
Owner:	EID	**Sample Depth:**	6.2m
File No.:	AL - 323RC2	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.3
Plastic Limit (PL)	19.2
Plasticity Index (PI)	34.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

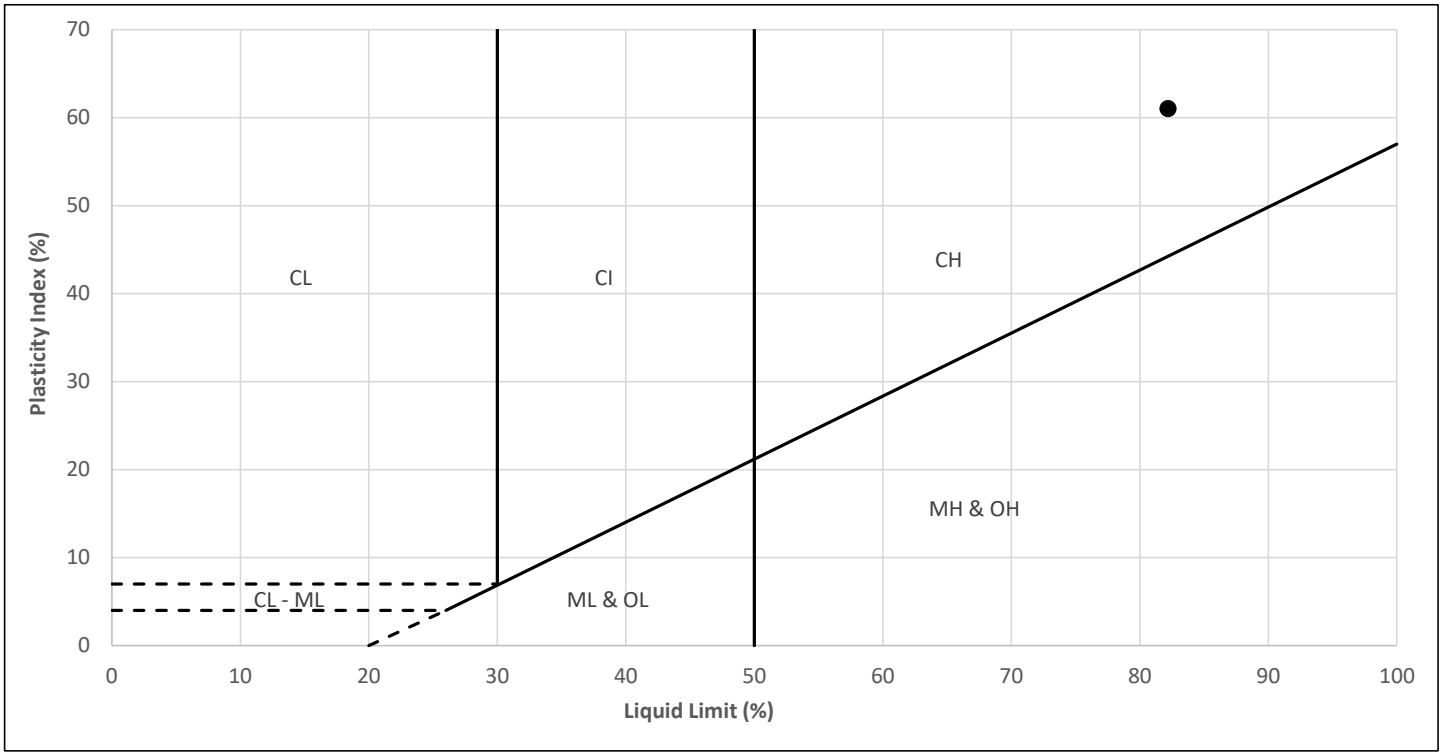
Project:	Snake Lake Reservoir Expansion	**Sample #:**	323RC6
Project No.:	1560-193-00	**Source:**	22CH323
Owner:	EID	**Sample Depth:**	11.1m
File No.:	AL - 323RC6	**Test Date:**	19-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	82.2
Plastic Limit (PL)	21.2
Plasticity Index (PI)	61.0

Soil Plasticity	High
Soil Classification	CH



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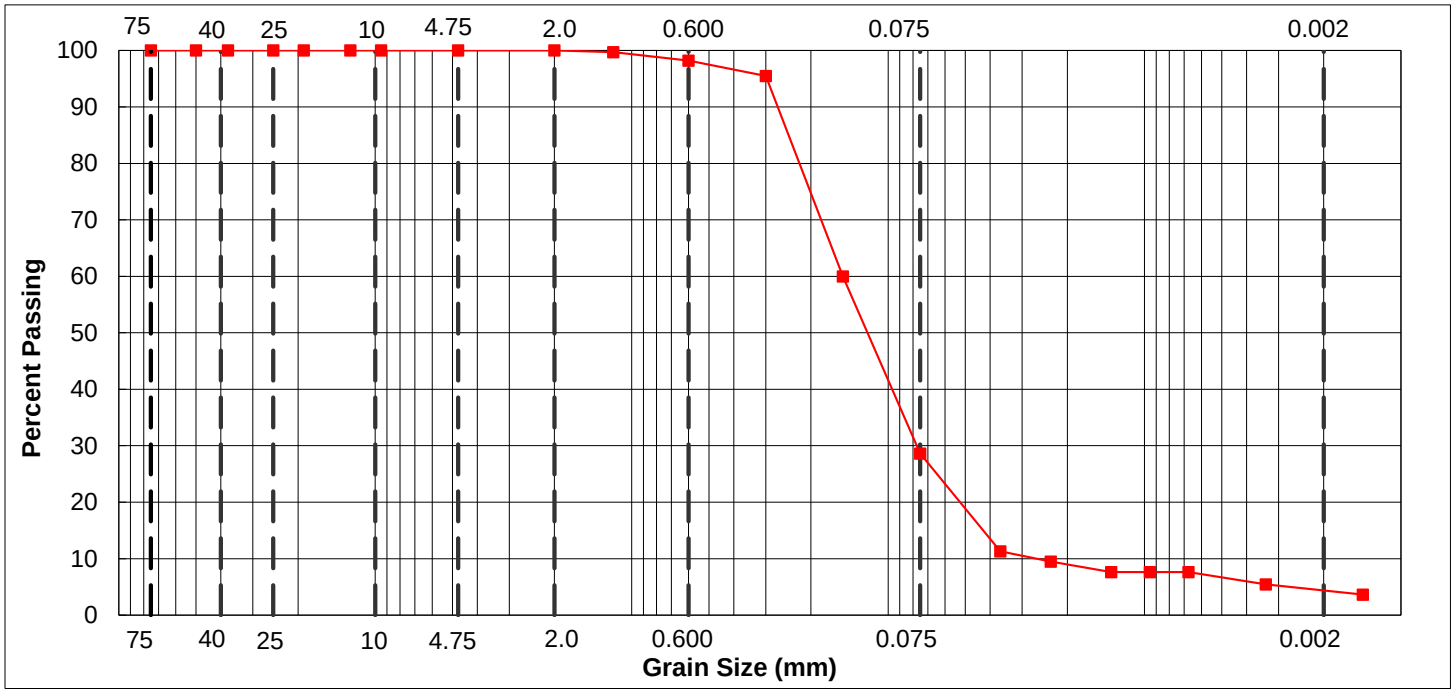
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	300AU1
Project No.:	1560-193-00	**Source:**	22BH300
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 300AU1	**Test Date:**	26-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.2
75.0	100.0	0.300	95.5
50.0	100.0	0.150	60.0
37.5	100.0	0.075	28.6
25.0	100.0	0.0365	11.3
19.0	100.0	0.0232	9.5
12.5	100.0	0.0135	7.6
9.5	100.0	0.0095	7.6
4.75	100.0	0.0067	7.6
2.00	100.0	0.0034	5.5
1.180	99.7	0.0014	3.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.8	2.00 mm to 425 µm
Fine Sand	69.6	425 µm to 75 µm
Silt	24.2	75 µm to 2 µm
Clay	4.4	<2 µm



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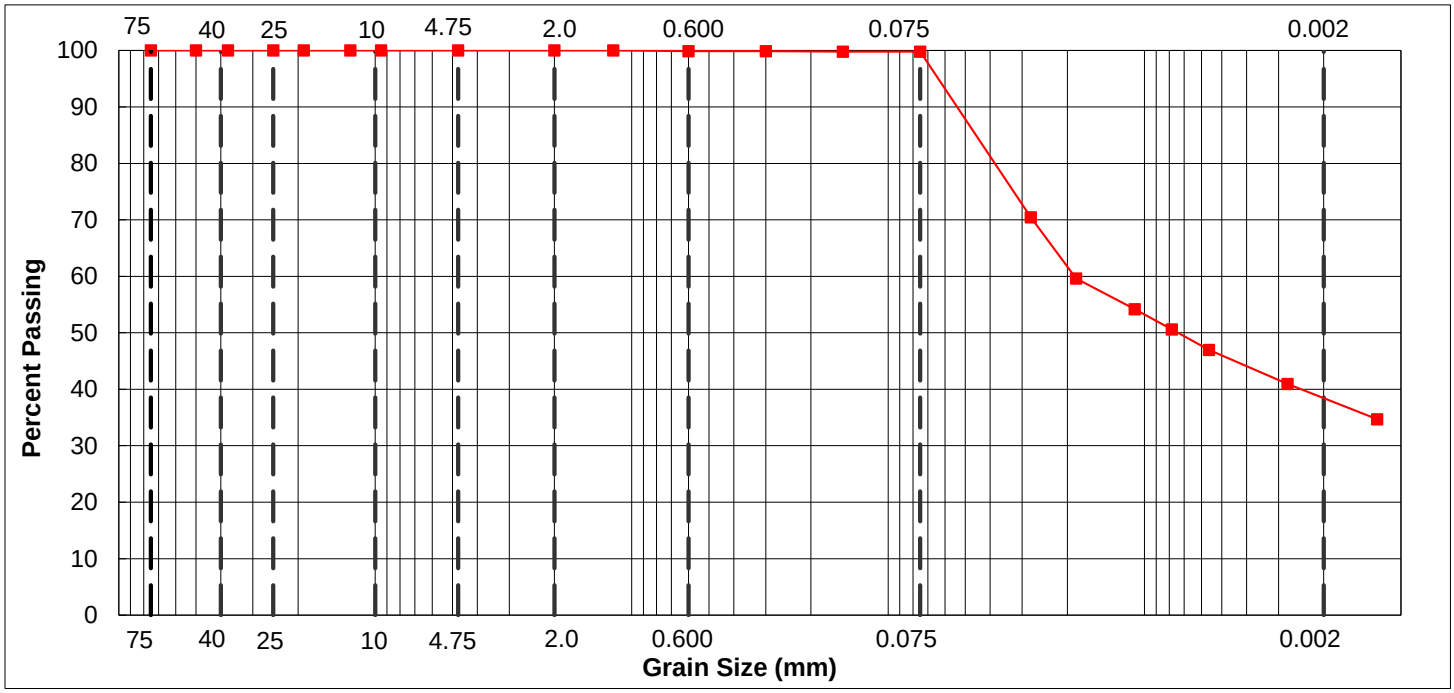
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	300RC2
Project No.:	1560-193-00	**Source:**	22CH300
Owner:	EID	**Sample Depth:**	6.6m
File No.:	GSA - 300RC2	**Test Date:**	7-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.8
25.0	100.0	0.0278	70.5
19.0	100.0	0.0185	59.6
12.5	100.0	0.0109	54.2
9.5	100.0	0.0078	50.6
4.75	100.0	0.0056	47.0
2.00	100.0	0.0028	40.9
1.180	100.0	0.0012	34.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	61.4	75 µm to 2 µm
Clay	38.4	<2 µm



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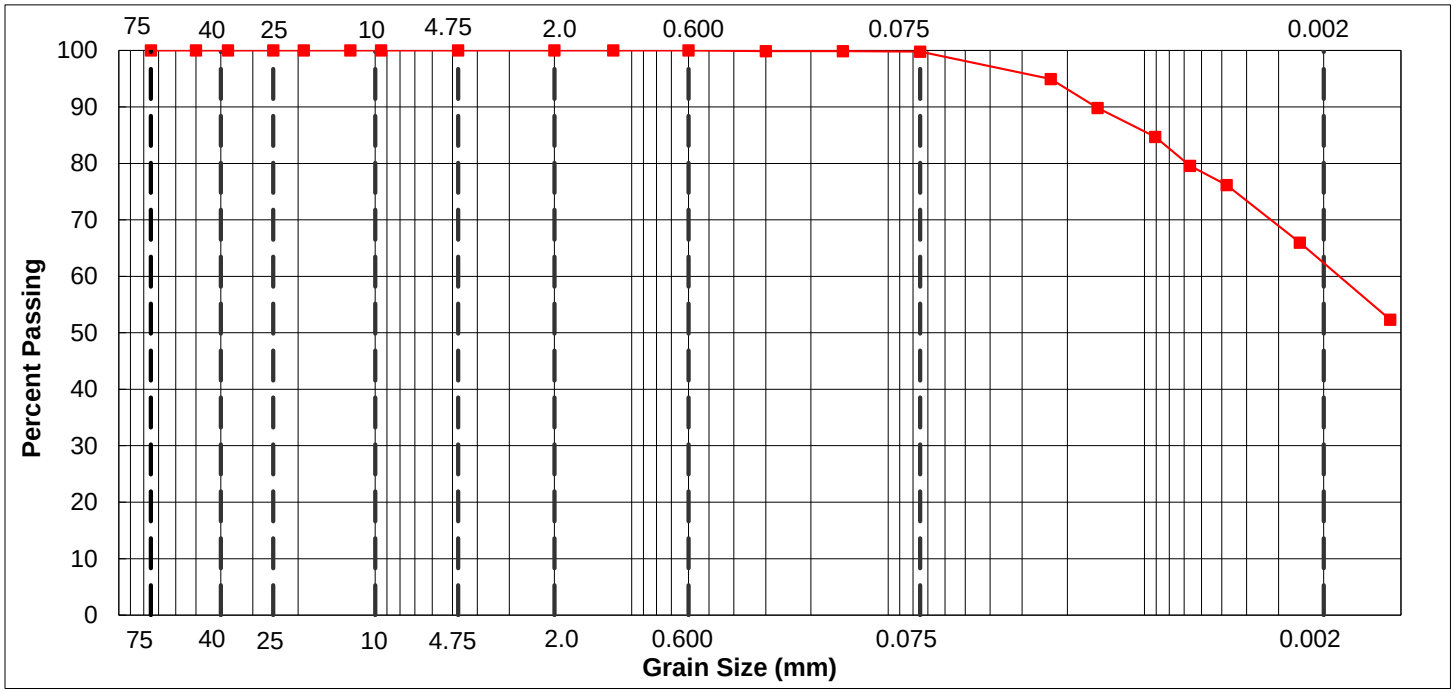
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	300RC8
Project No.:	1560-193-00	**Source:**	22CH300
Owner:	EID	**Sample Depth:**	16.0m
File No.:	GSA - 300RC8	**Test Date:**	17-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0232	94.9
19.0	100.0	0.0152	89.8
12.5	100.0	0.0091	84.7
9.5	100.0	0.0066	79.6
4.75	100.0	0.0048	76.2
2.00	100.0	0.0025	66.0
1.180	100.0	0.0011	52.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	37.4	75 µm to 2 µm
Clay	62.4	<2 µm



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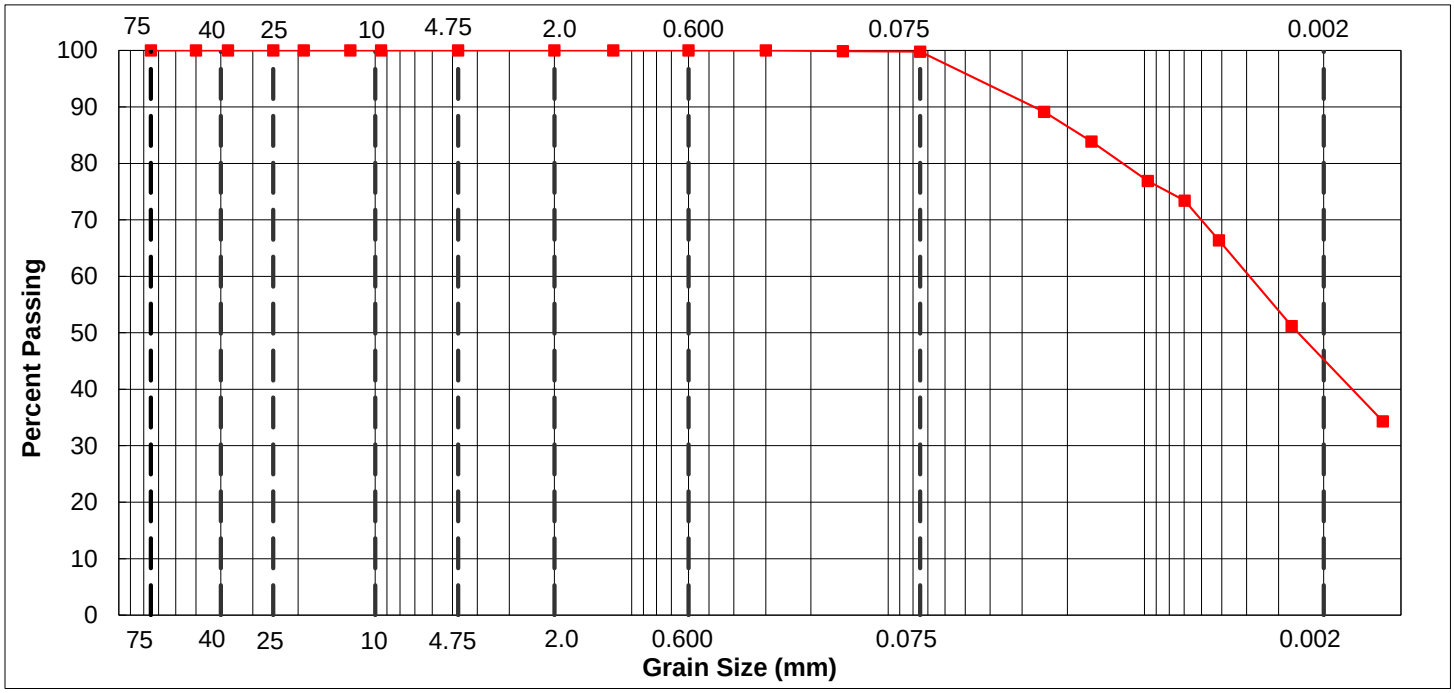
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	300RC13
Project No.:	1560-193-00	**Source:**	22CH300
Owner:	EID	**Sample Depth:**	23.0m
File No.:	GSA - 300RC13	**Test Date:**	6-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0247	89.1
19.0	100.0	0.0161	83.9
12.5	100.0	0.0097	76.9
9.5	100.0	0.0070	73.4
4.75	100.0	0.0051	66.4
2.00	100.0	0.0027	51.2
1.180	100.0	0.0012	34.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	54.5	75 µm to 2 µm
Clay	45.3	<2 µm



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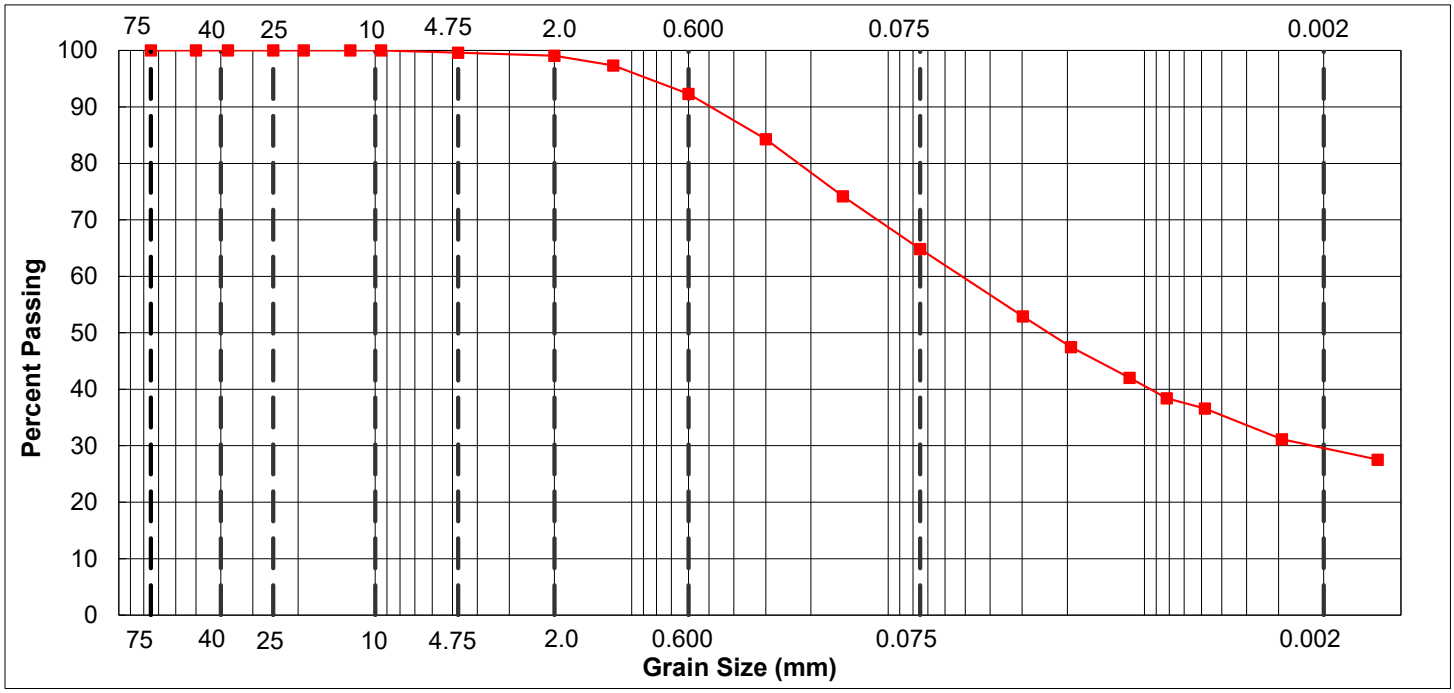
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	301AU2
Project No.:	1560-193-00	**Source:**	22BH301
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 301AU2	**Date:**	16-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	92.3
75.0	100.0	0.300	84.3
50.0	100.0	0.150	74.2
37.5	100.0	0.075	64.8
25.0	100.0	0.0298	52.9
19.0	100.0	0.0193	47.5
12.5	100.0	0.0114	42.1
9.5	100.0	0.0082	38.4
4.75	99.6	0.0058	36.6
2.00	99.1	0.0029	31.2
1.180	97.4	0.0012	27.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.4	20 mm to 4.75 mm
Coarse Sand	0.5	4.75 mm to 2.00 mm
Medium Sand	6.8	2.00 mm to 425 µm
Fine Sand	27.5	425 µm to 75 µm
Silt	35.2	75 µm to 2 µm
Clay	29.6	<2 µm



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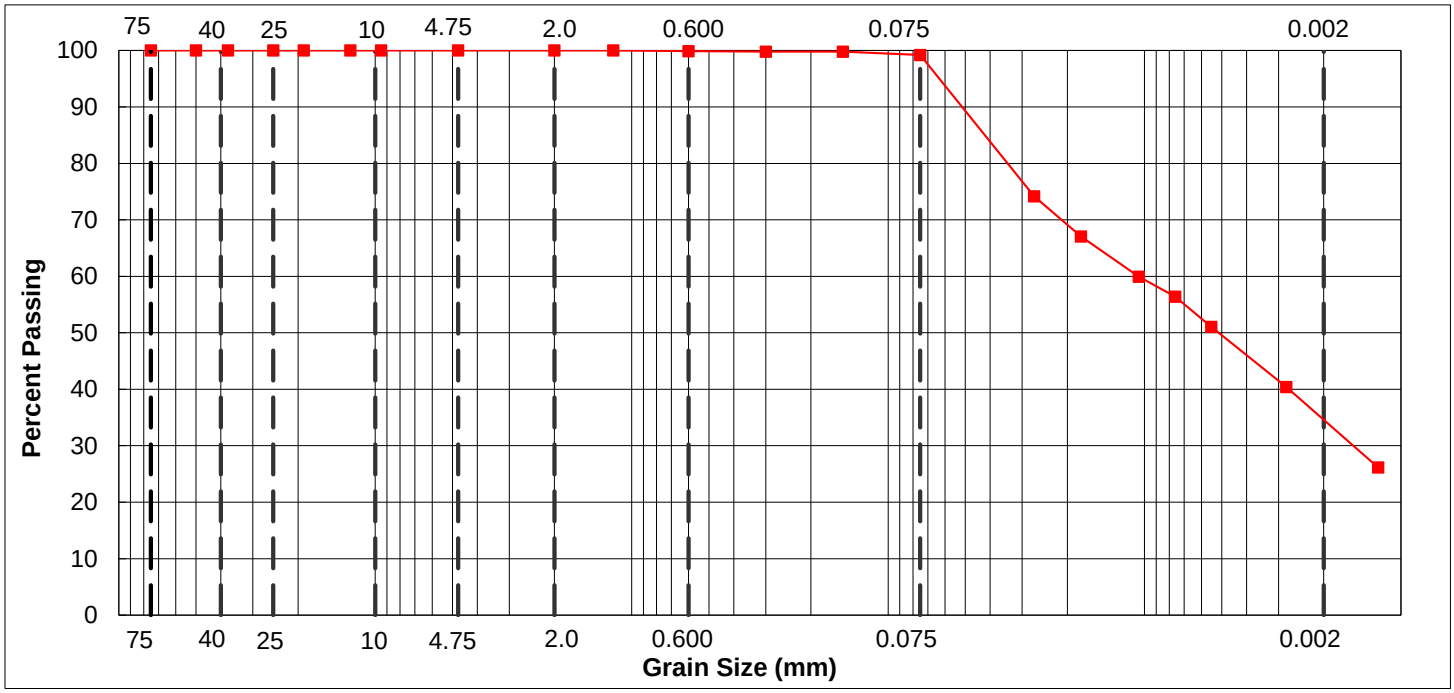
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	301RC9
Project No.:	1560-193-00	**Source:**	22CH301
Owner:	EID	**Sample Depth:**	19.76m
File No.:	GSA - 301RC9	**Test Date:**	17-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.2
25.0	100.0	0.0270	74.2
19.0	100.0	0.0177	67.1
12.5	100.0	0.0105	60.0
9.5	100.0	0.0076	56.4
4.75	100.0	0.0055	51.1
2.00	100.0	0.0028	40.4
1.180	100.0	0.0012	26.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.7	425 µm to 75 µm
Silt	64.6	75 µm to 2 µm
Clay	34.6	<2 µm



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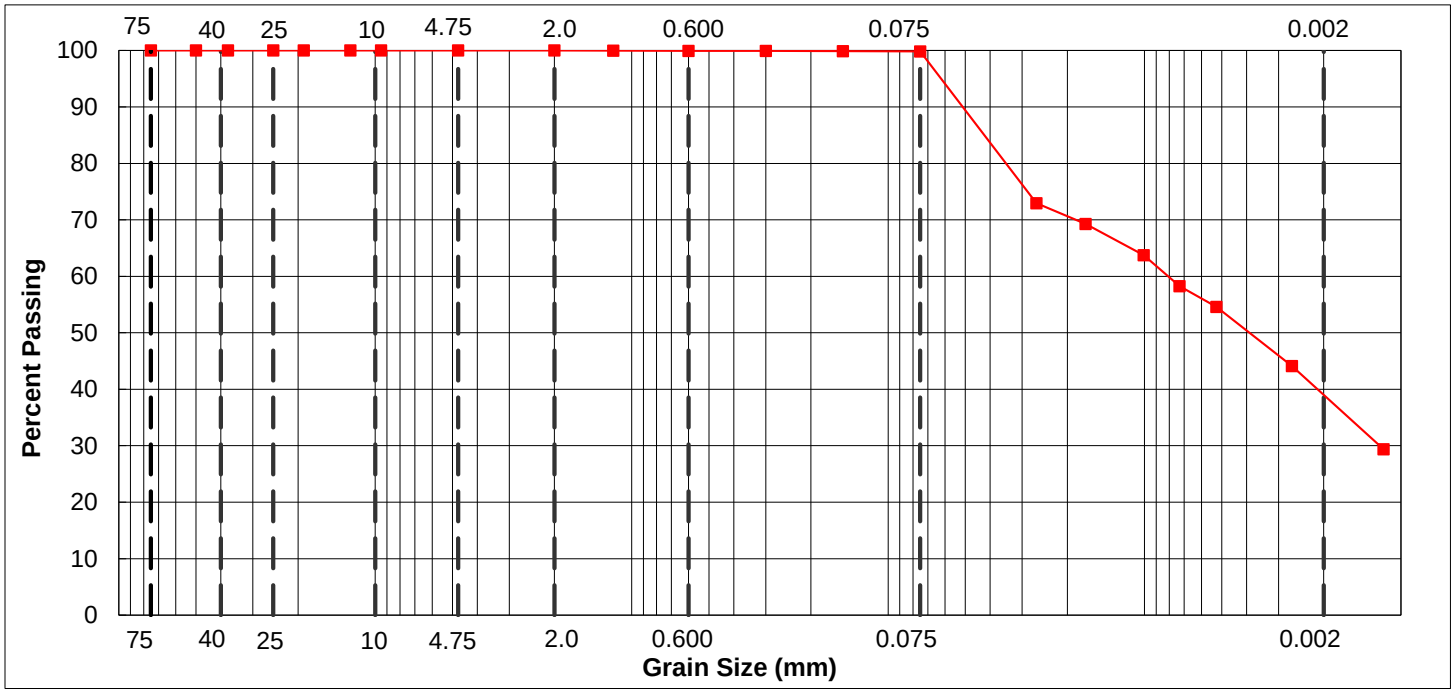
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	301UD2
Project No.:	1560-193-00	**Source:**	22CH301
Owner:	EID	**Sample Depth:**	14.37m
File No.:	GSA - 301UD2	**Test Date:**	2-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0264	72.9
19.0	100.0	0.0170	69.3
12.5	100.0	0.0101	63.8
9.5	100.0	0.0073	58.2
4.75	100.0	0.0052	54.6
2.00	100.0	0.0027	44.1
1.180	100.0	0.0012	29.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	60.8	75 µm to 2 µm
Clay	39.0	<2 µm



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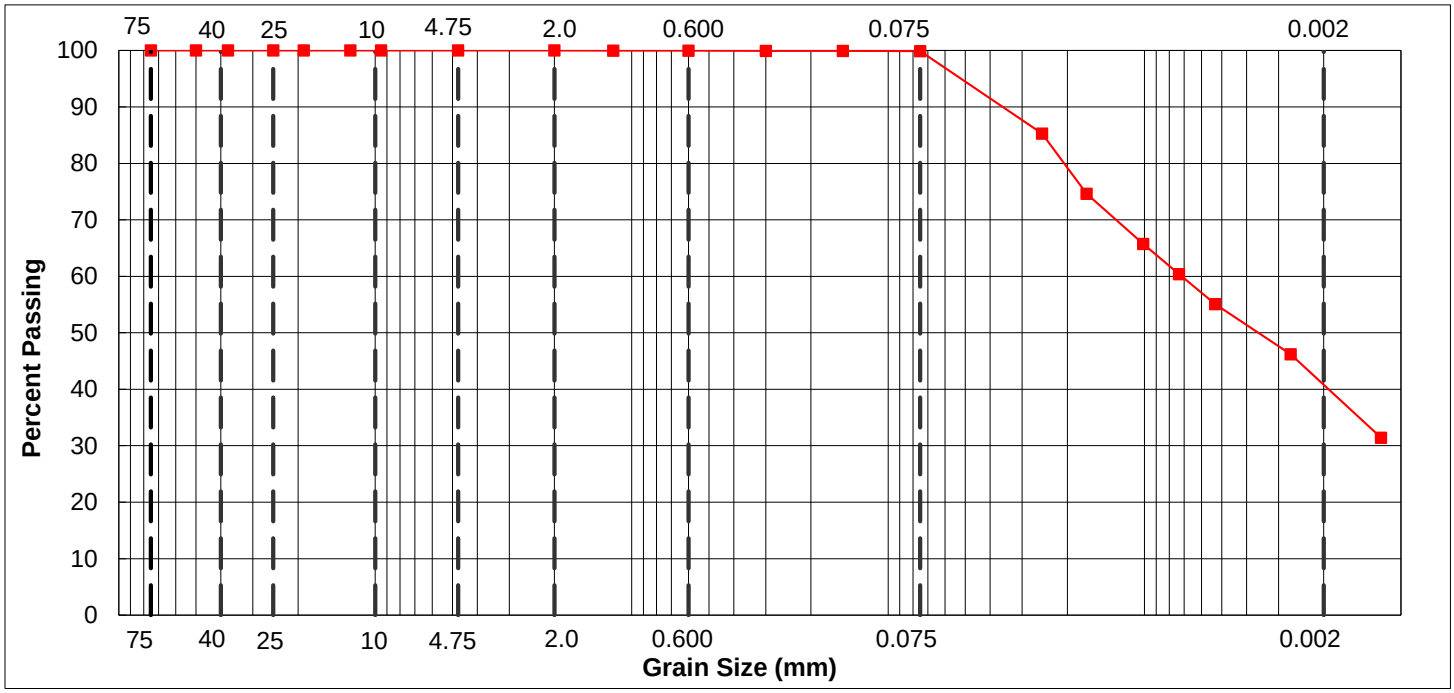
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	301UD4
Project No.:	1560-193-00	**Source:**	22CH301
Owner:	EID	**Sample Depth:**	18.2m
File No.:	GSA - 301UD4	**Test Date:**	28-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.9
25.0	100.0	0.0251	85.3
19.0	100.0	0.0168	74.6
12.5	100.0	0.0101	65.7
9.5	100.0	0.0073	60.4
4.75	100.0	0.0053	55.1
2.00	100.0	0.0027	46.2
1.180	100.0	0.0012	31.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	59.1	75 µm to 2 µm
Clay	40.8	<2 µm



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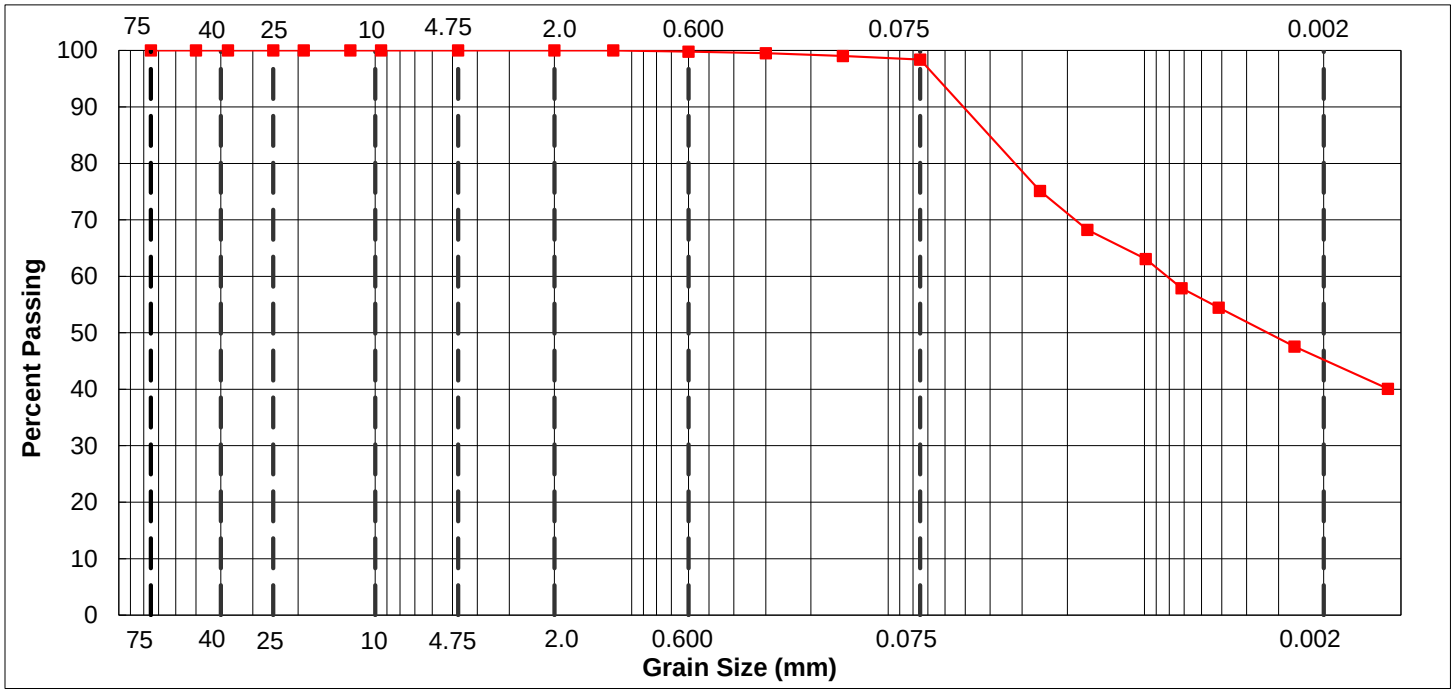
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	302RC1
Project No.:	1560-193-00	**Source:**	22CH302
Owner:	EID	**Sample Depth:**	2.0m
File No.:	GSA - 302RC1	**Test Date:**	5-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.0
37.5	100.0	0.075	98.4
25.0	100.0	0.0255	75.1
19.0	100.0	0.0167	68.2
12.5	100.0	0.0099	63.1
9.5	100.0	0.0072	57.9
4.75	100.0	0.0051	54.5
2.00	100.0	0.0026	47.6
1.180	100.0	0.0011	40.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	1.4	425 µm to 75 µm
Silt	53.2	75 µm to 2 µm
Clay	45.2	<2 µm



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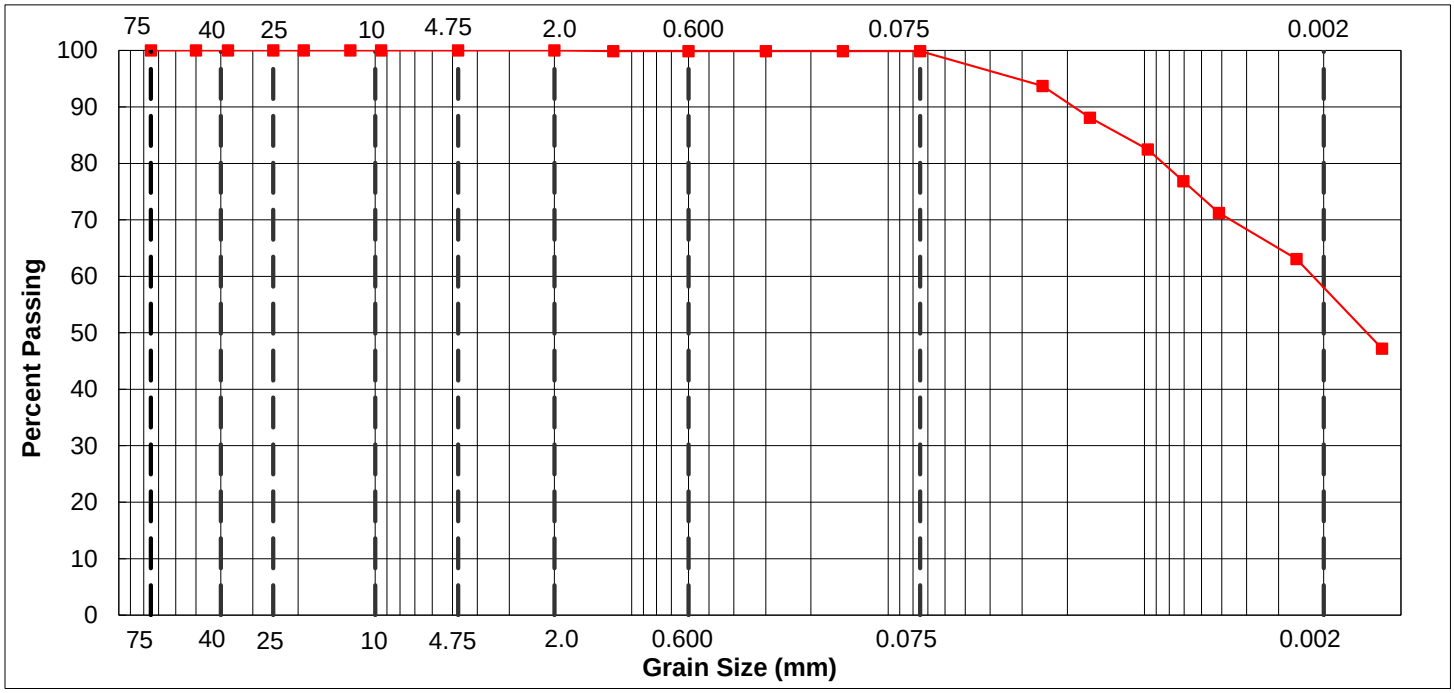
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	302RC10
Project No.:	1560-193-00	**Source:**	22CH302
Owner:	EID	**Sample Depth:**	15.9m
File No.:	GSA - 302RC10	**Test Date:**	7-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.9
25.0	100.0	0.0250	93.7
19.0	100.0	0.0163	88.1
12.5	100.0	0.0097	82.5
9.5	100.0	0.0071	76.8
4.75	100.0	0.0051	71.2
2.00	100.0	0.0026	63.1
1.180	99.9	0.0012	47.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.0	425 µm to 75 µm
Silt	41.9	75 µm to 2 µm
Clay	58.0	<2 µm



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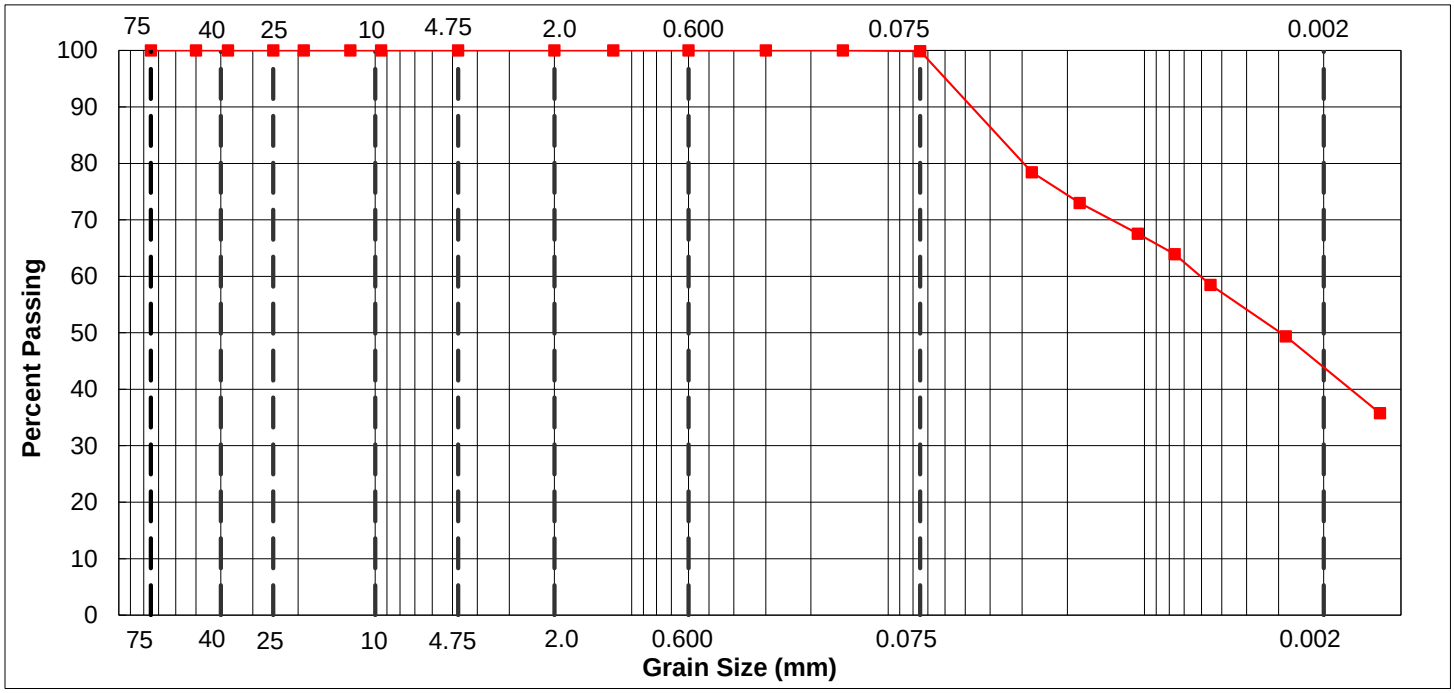
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	302RC16
Project No.:	1560-193-00	**Source:**	22CH302
Owner:	EID	**Sample Depth:**	25.0m
File No.:	GSA - 302RC16	**Test Date:**	6-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.9
25.0	100.0	0.0275	78.4
19.0	100.0	0.0179	73.0
12.5	100.0	0.0106	67.5
9.5	100.0	0.0076	63.9
4.75	100.0	0.0055	58.5
2.00	100.0	0.0028	49.4
1.180	100.0	0.0012	35.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	56.0	75 µm to 2 µm
Clay	43.9	<2 µm



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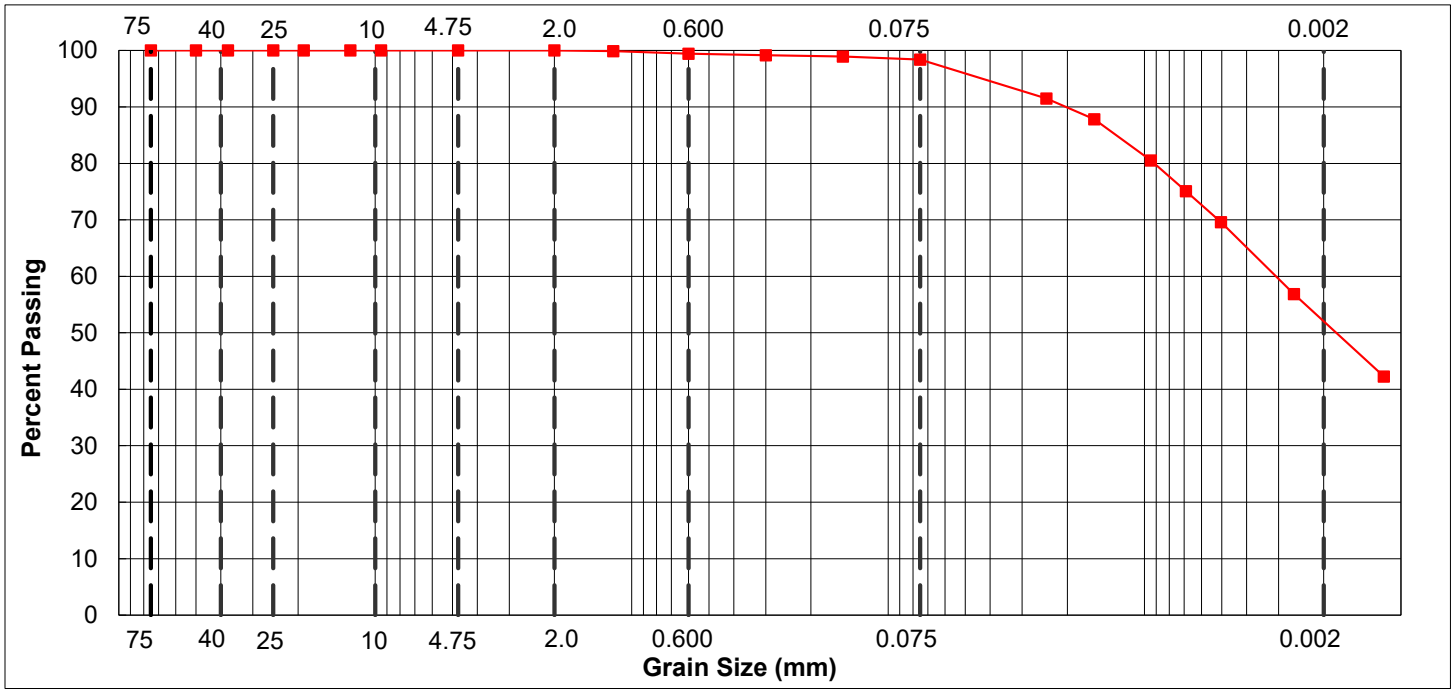
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	303AU7
Project No.:	1560-193-00	**Source:**	22BH303
Owner:	EID	**Sample Depth:**	5.2m
File No.:	GSA - 303AU7	**Date:**	16-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	99.2
50.0	100.0	0.150	98.9
37.5	100.0	0.075	98.4
25.0	100.0	0.0241	91.5
19.0	100.0	0.0157	87.8
12.5	100.0	0.0095	80.5
9.5	100.0	0.0069	75.1
4.75	100.0	0.0050	69.6
2.00	100.0	0.0026	56.9
1.180	99.9	0.0012	42.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	1.0	425 µm to 75 µm
Silt	46.4	75 µm to 2 µm
Clay	52.0	<2 µm



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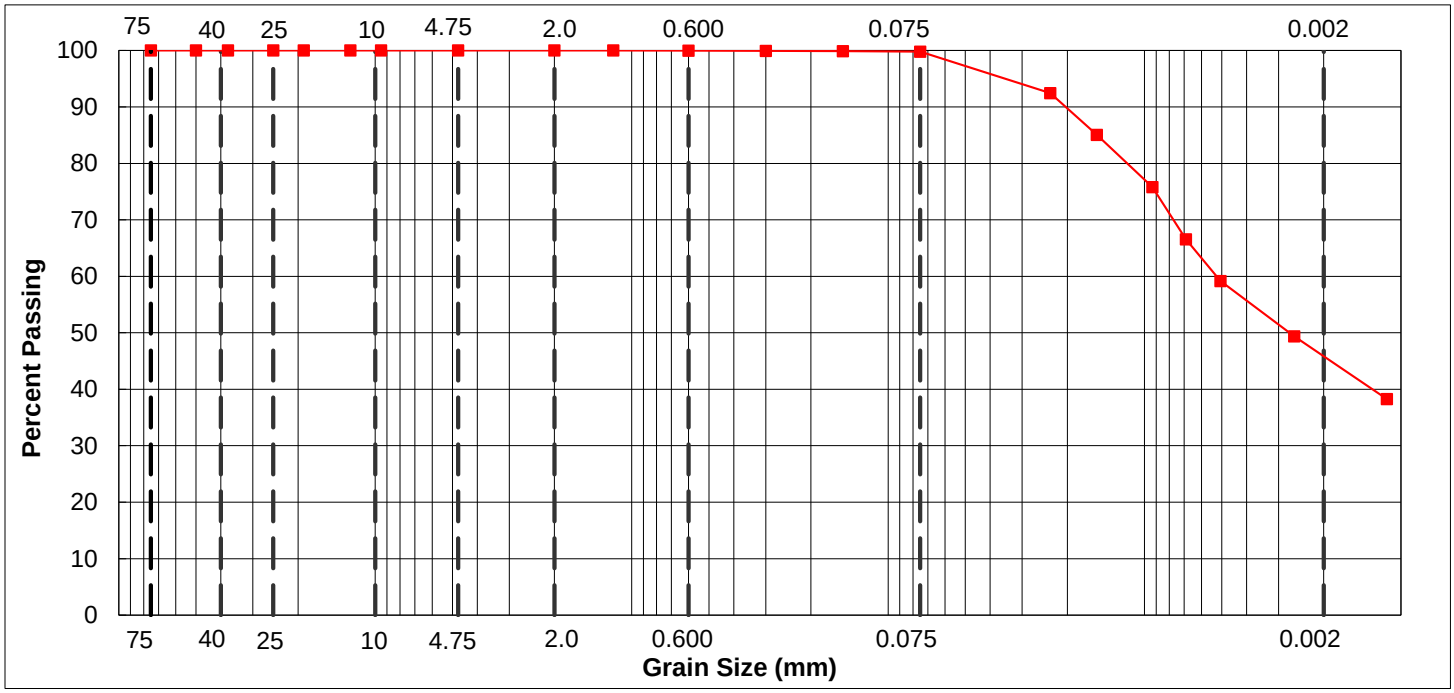
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	303UD1
Project No.:	1560-193-00	**Source:**	22CH303
Owner:	EID	**Sample Depth:**	11.3m
File No.:	GSA - 303UD1	**Test Date:**	29-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0233	92.5
19.0	100.0	0.0154	85.1
12.5	100.0	0.0093	75.8
9.5	100.0	0.0069	66.6
4.75	100.0	0.0051	59.2
2.00	100.0	0.0026	49.4
1.180	100.0	0.0011	38.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	54.0	75 µm to 2 µm
Clay	45.8	<2 µm



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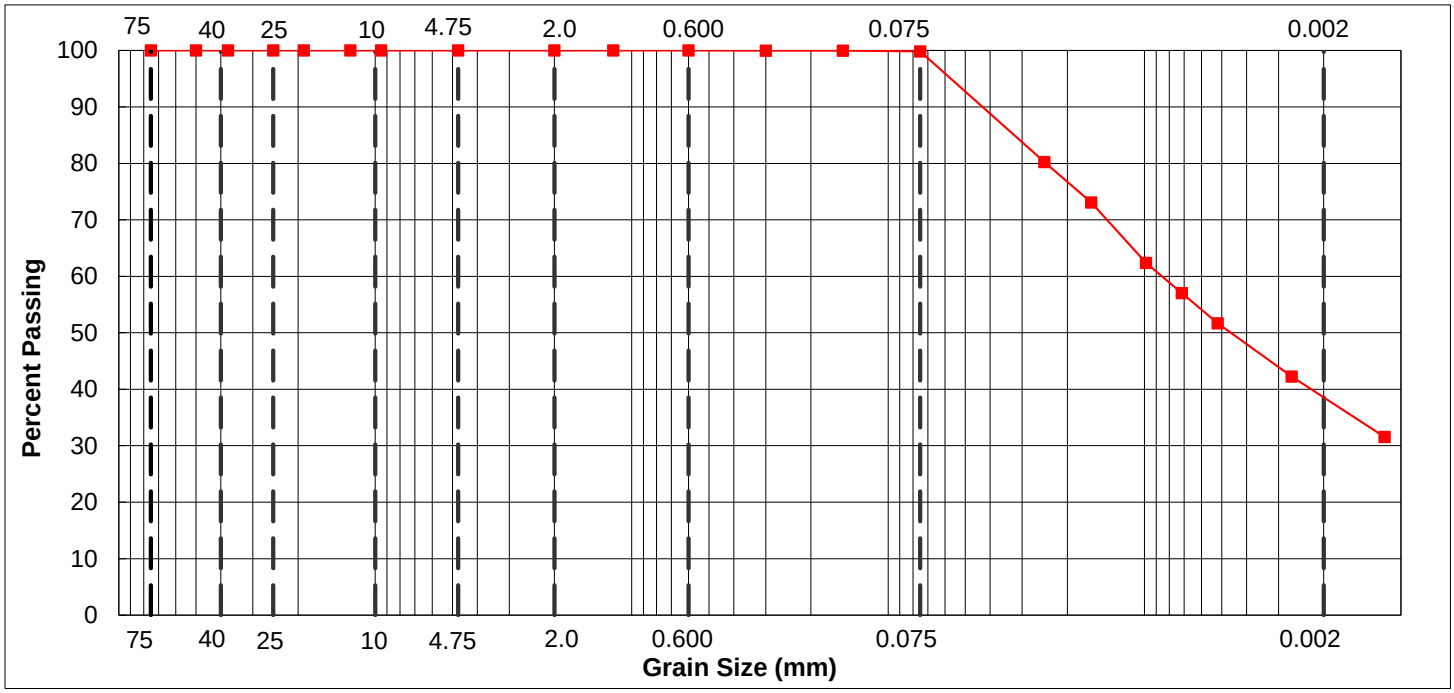
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	303UD4
Project No.:	1560-193-00	**Source:**	22CH303
Owner:	EID	**Sample Depth:**	19.5m
File No.:	GSA - 303UD4	**Test Date:**	29-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.8
25.0	100.0	0.0246	80.2
19.0	100.0	0.0162	73.1
12.5	100.0	0.0099	62.4
9.5	100.0	0.0072	57.1
4.75	100.0	0.0052	51.7
2.00	100.0	0.0027	42.3
1.180	100.0	0.0012	31.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	61.2	75 µm to 2 µm
Clay	38.6	<2 µm



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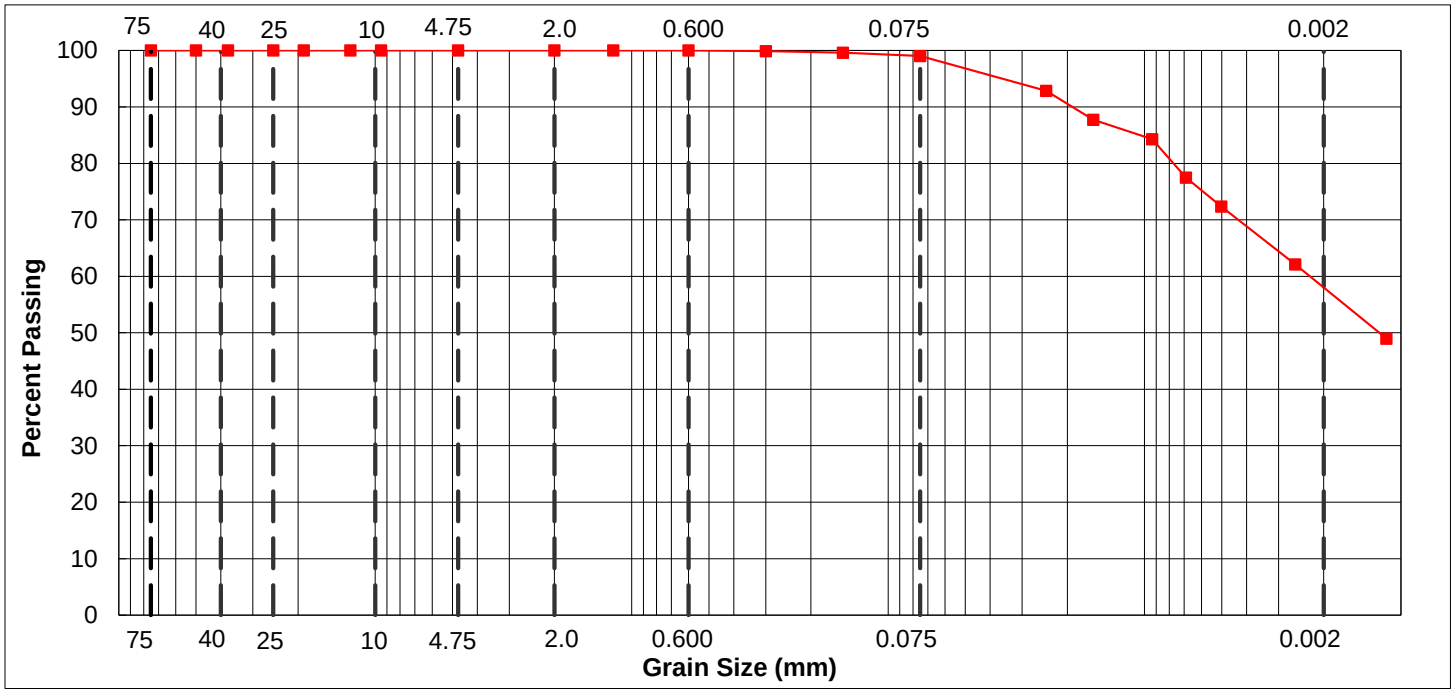
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	304AU1
Project No.:	1560-193-00	**Source:**	22BH304
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 304AU1	**Test Date:**	10-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.6
37.5	100.0	0.075	99.0
25.0	100.0	0.0242	92.8
19.0	100.0	0.0159	87.7
12.5	100.0	0.0093	84.3
9.5	100.0	0.0069	77.5
4.75	100.0	0.0050	72.4
2.00	100.0	0.0026	62.1
1.180	100.0	0.0011	49.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	1.0	425 µm to 75 µm
Silt	41.0	75 µm to 2 µm
Clay	58.0	<2 µm



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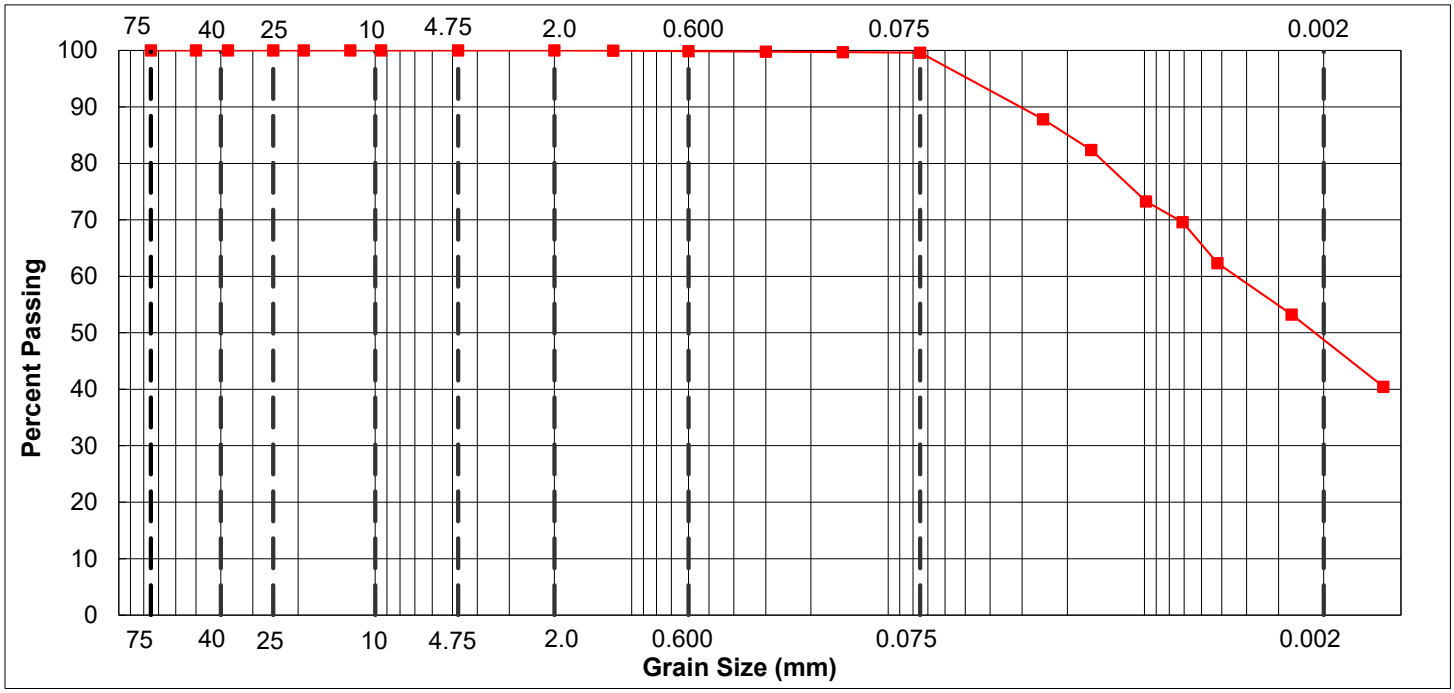
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	304AU9
Project No.:	1560-193-00	**Source:**	22BH304
Owner:	EID	**Sample Depth:**	6.7m
File No.:	GSA - 304AU9	**Date:**	16-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.6
25.0	100.0	0.0248	87.8
19.0	100.0	0.0162	82.4
12.5	100.0	0.0099	73.3
9.5	100.0	0.0071	69.6
4.75	100.0	0.0052	62.3
2.00	100.0	0.0027	53.2
1.180	100.0	0.0012	40.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	50.9	75 µm to 2 µm
Clay	48.7	<2 µm



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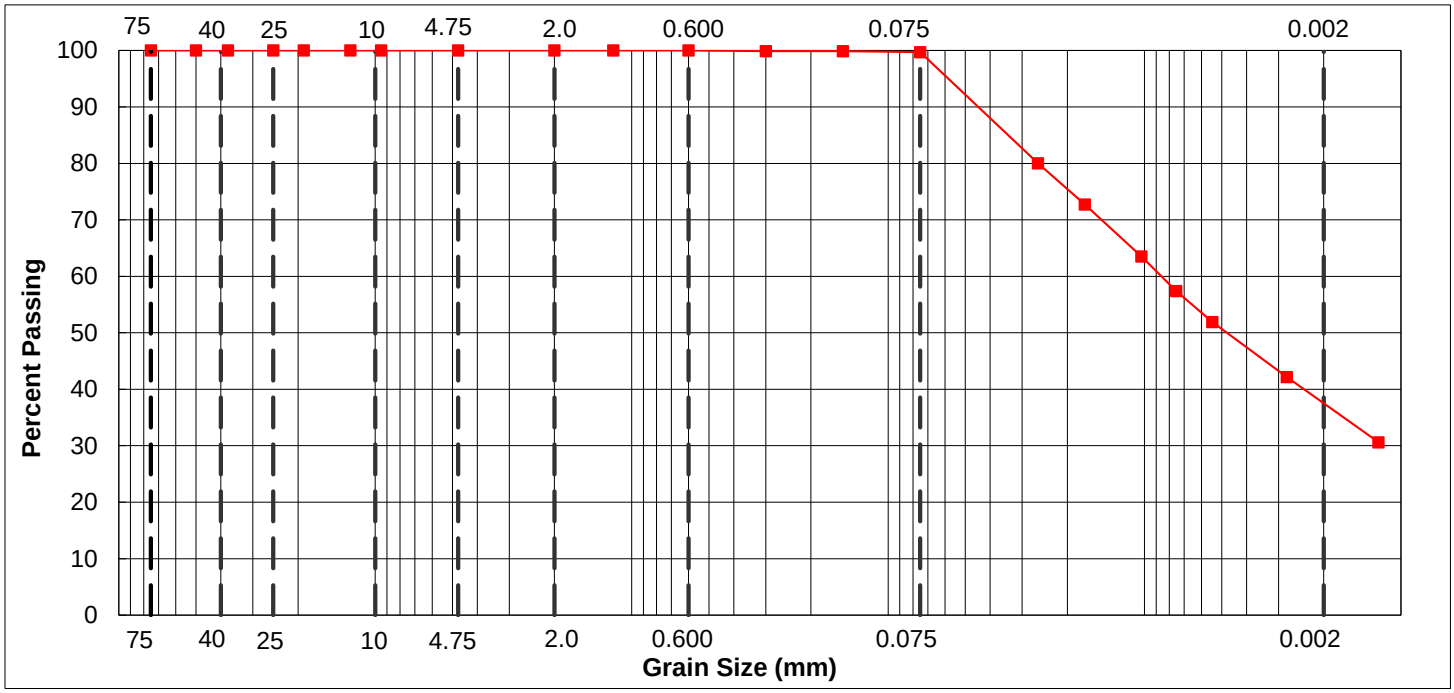
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	304UD5
Project No.:	1560-193-00	**Source:**	22CH305
Owner:	EID	**Sample Depth:**	18.4m
File No.:	GSA - 304UD5	**Test Date:**	17-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.7
25.0	100.0	0.0261	80.0
19.0	100.0	0.0171	72.7
12.5	100.0	0.0103	63.5
9.5	100.0	0.0075	57.4
4.75	100.0	0.0054	51.9
2.00	100.0	0.0028	42.2
1.180	100.0	0.0012	30.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	62.2	75 µm to 2 µm
Clay	37.5	<2 µm



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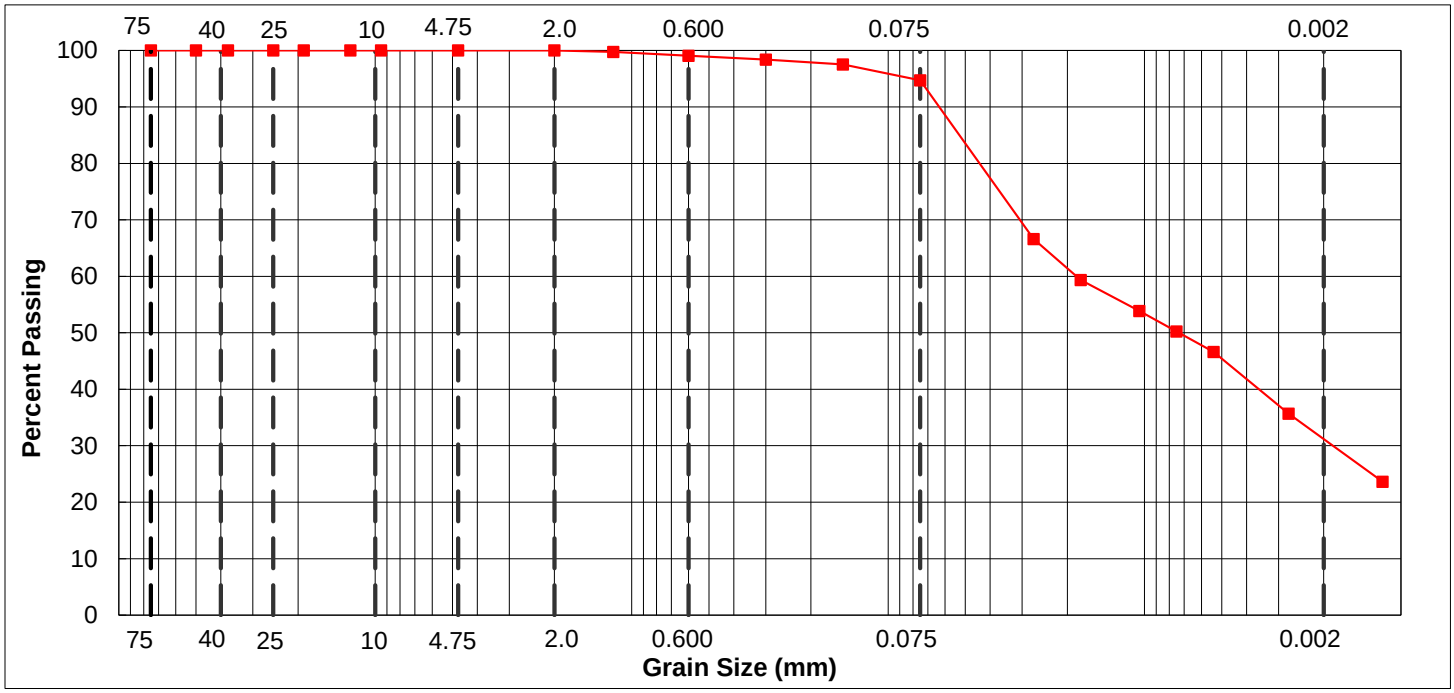
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	304UD6
Project No.:	1560-193-00	**Source:**	22CH304
Owner:	EID	**Sample Depth:**	23.64m
File No.:	GSA - 304UD6	**Test Date:**	30-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.1
75.0	100.0	0.300	98.4
50.0	100.0	0.150	97.5
37.5	100.0	0.075	94.7
25.0	100.0	0.0271	66.6
19.0	100.0	0.0177	59.3
12.5	100.0	0.0105	53.9
9.5	100.0	0.0075	50.2
4.75	100.0	0.0054	46.6
2.00	100.0	0.0027	35.7
1.180	99.7	0.0012	23.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.9	2.00 mm to 425 µm
Fine Sand	4.4	425 µm to 75 µm
Silt	63.5	75 µm to 2 µm
Clay	31.2	<2 µm



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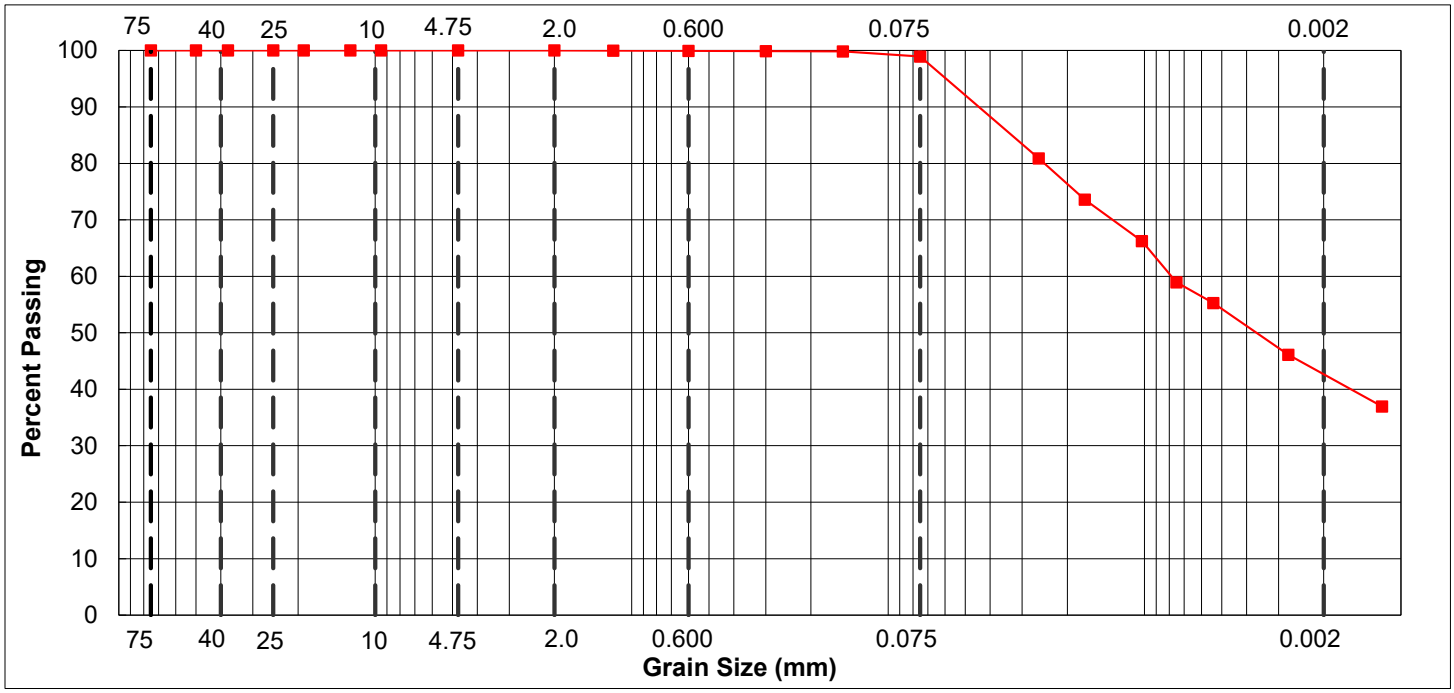
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	305AU15
Project No.:	1560-193-00	**Source:**	22BH305
Owner:	EID	**Sample Depth:**	11.3m
File No.:	GSA - 305AU15	**Date:**	16-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.8
37.5	100.0	0.075	98.9
25.0	100.0	0.0259	80.9
19.0	100.0	0.0171	73.6
12.5	100.0	0.0102	66.3
9.5	100.0	0.0075	58.9
4.75	100.0	0.0054	55.3
2.00	100.0	0.0027	46.1
1.180	100.0	0.0012	37.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	1.0	425 µm to 75 µm
Silt	56.2	75 µm to 2 µm
Clay	42.7	<2 µm



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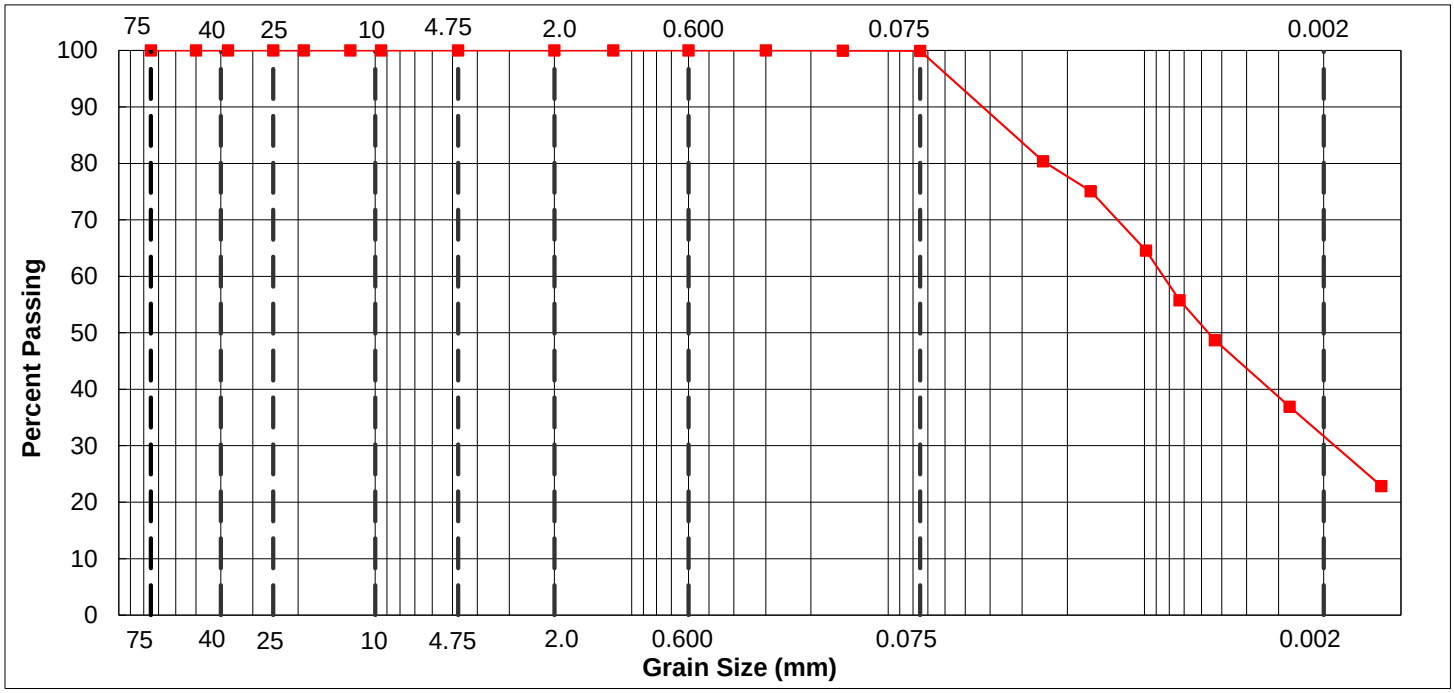
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	305RC2
Project No.:	1560-193-00	**Source:**	22CH305
Owner:	EID	**Sample Depth:**	6.21m
File No.:	GSA - 305RC2	**Test Date:**	2-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.9
25.0	100.0	0.0249	80.4
19.0	100.0	0.0162	75.1
12.5	100.0	0.0099	64.5
9.5	100.0	0.0073	55.8
4.75	100.0	0.0053	48.7
2.00	100.0	0.0027	36.9
1.180	100.0	0.0012	22.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	68.2	75 µm to 2 µm
Clay	31.7	<2 µm



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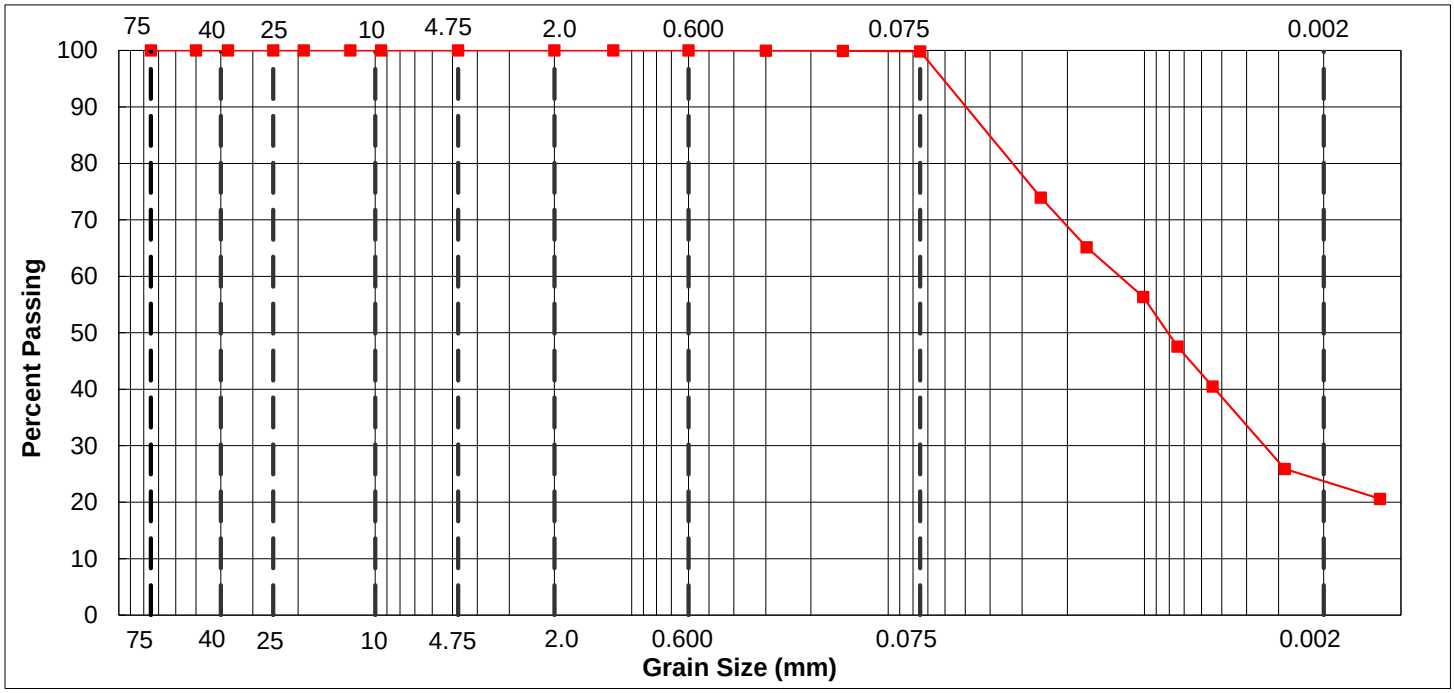
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	305RC11
Project No.:	1560-193-00	**Source:**	22CH305
Owner:	EID	**Sample Depth:**	21.0m
File No.:	GSA - 305RC11	**Test Date:**	29-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0254	74.0
19.0	100.0	0.0168	65.2
12.5	100.0	0.0101	56.4
9.5	100.0	0.0074	47.5
4.75	100.0	0.0054	40.5
2.00	100.0	0.0028	25.9
1.180	100.0	0.0012	20.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	76.1	75 µm to 2 µm
Clay	23.7	<2 µm



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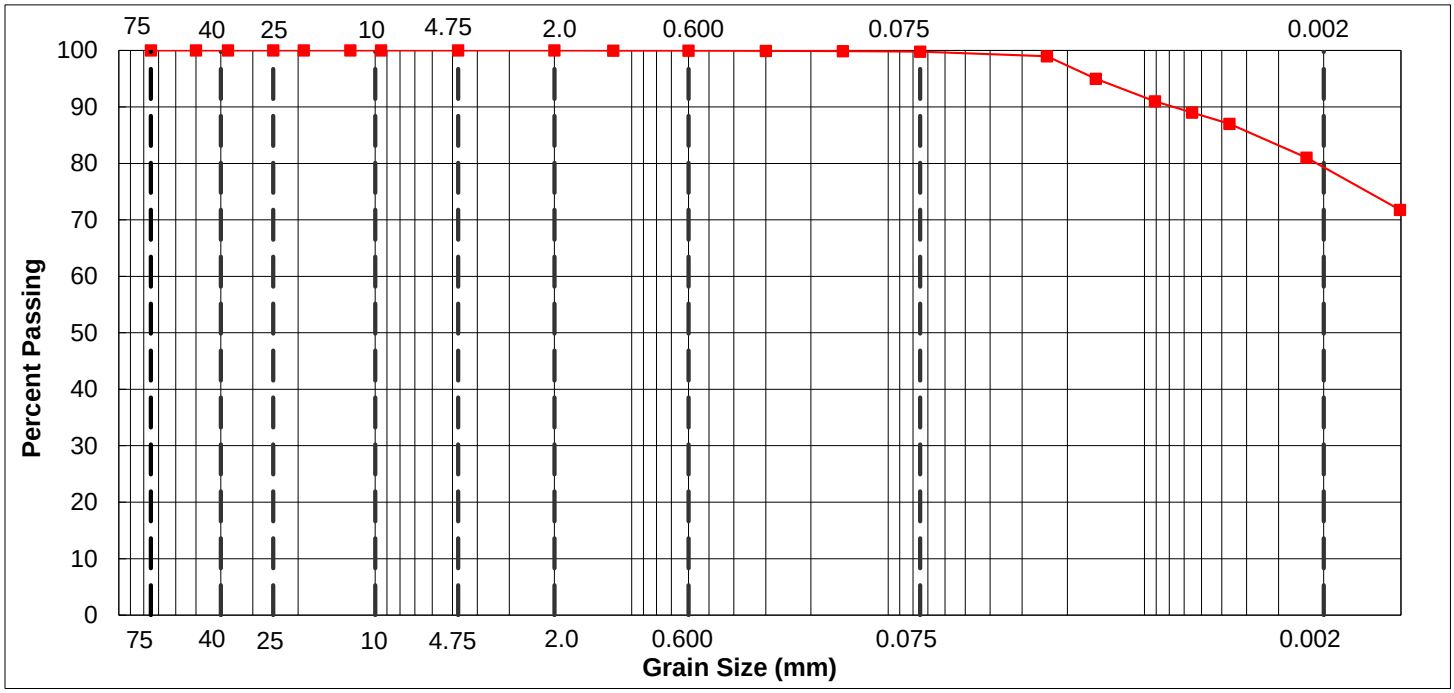
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	305UD4
Project No.:	1560-193-00	**Source:**	22CH305
Owner:	EID	**Sample Depth:**	18.22m
File No.:	GSA - 305UD4	**Test Date:**	30-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0241	99.0
19.0	100.0	0.0155	95.0
12.5	100.0	0.0091	91.0
9.5	100.0	0.0065	89.0
4.75	100.0	0.0047	87.0
2.00	100.0	0.0023	81.0
1.180	100.0	0.0010	71.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	20.5	75 µm to 2 µm
Clay	79.3	<2 µm



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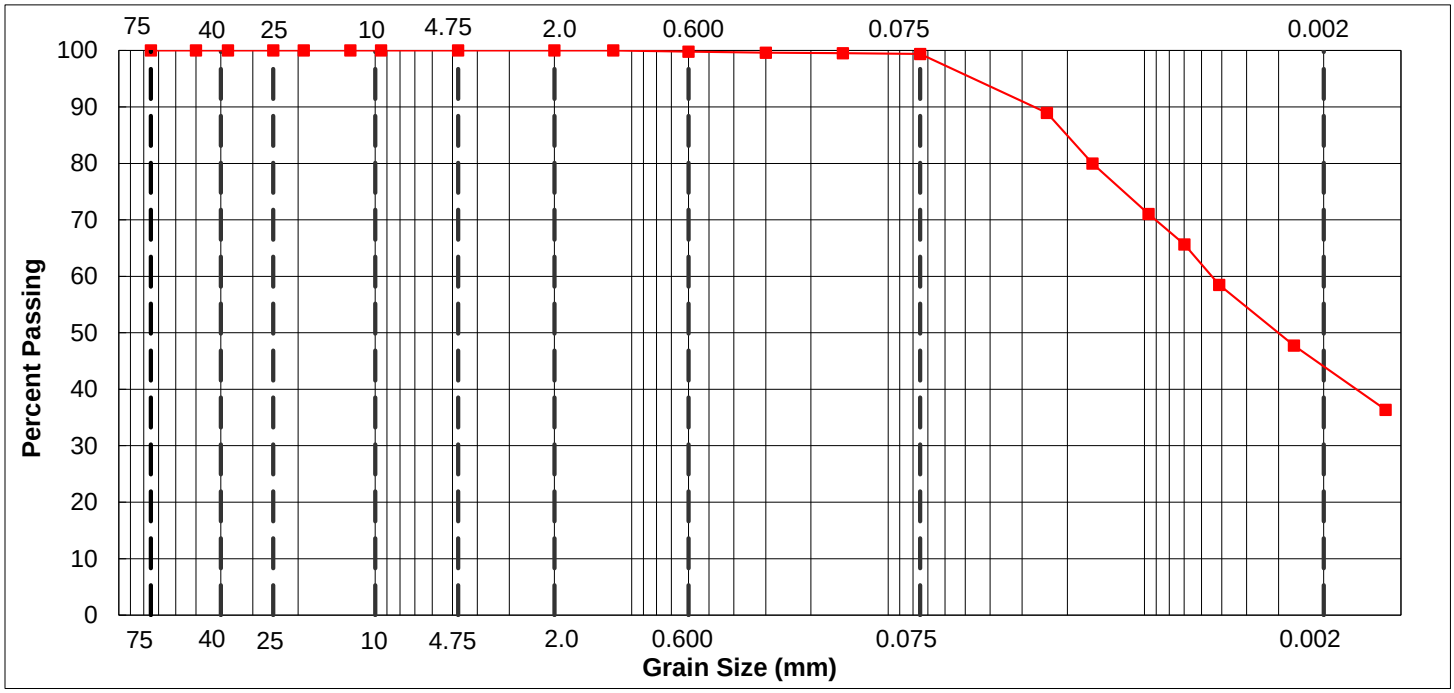
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	306RC4
Project No.:	1560-193-00	**Source:**	22CH306
Owner:	EID	**Sample Depth:**	8.8m
File No.:	GSA - 306RC4	**Test Date:**	5-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.6
50.0	100.0	0.150	99.5
37.5	100.0	0.075	99.4
25.0	100.0	0.0241	89.0
19.0	100.0	0.0160	80.0
12.5	100.0	0.0096	71.0
9.5	100.0	0.0070	65.7
4.75	100.0	0.0051	58.5
2.00	100.0	0.0026	47.7
1.180	100.0	0.0011	36.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	55.3	75 µm to 2 µm
Clay	44.1	<2 µm



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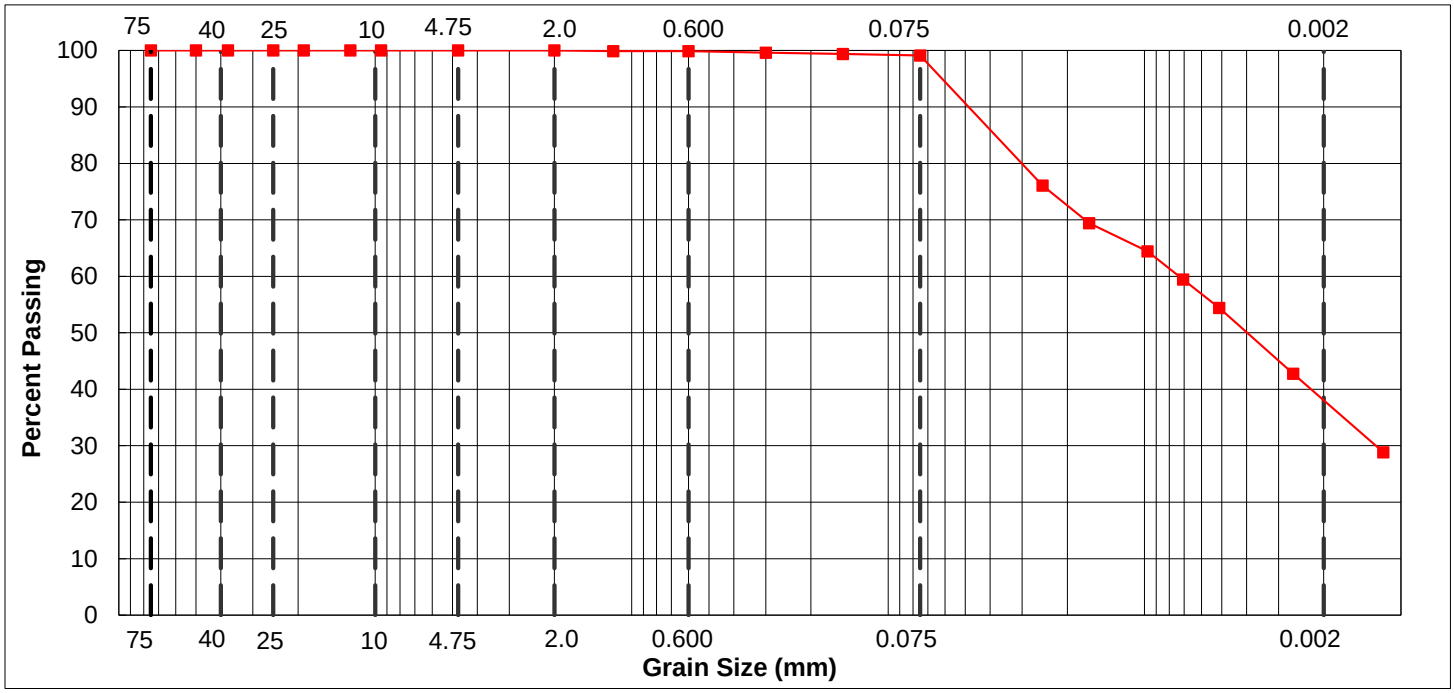
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	306RC11
Project No.:	1560-193-00	**Source:**	22CH306
Owner:	EID	**Sample Depth:**	19.0m
File No.:	GSA - 306RC11	**Test Date:**	4-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.6
50.0	100.0	0.150	99.4
37.5	100.0	0.075	99.1
25.0	100.0	0.0250	76.1
19.0	100.0	0.0164	69.4
12.5	100.0	0.0097	64.4
9.5	100.0	0.0071	59.4
4.75	100.0	0.0051	54.4
2.00	100.0	0.0026	42.8
1.180	99.9	0.0012	28.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.8	425 µm to 75 µm
Silt	61.1	75 µm to 2 µm
Clay	38.0	<2 µm



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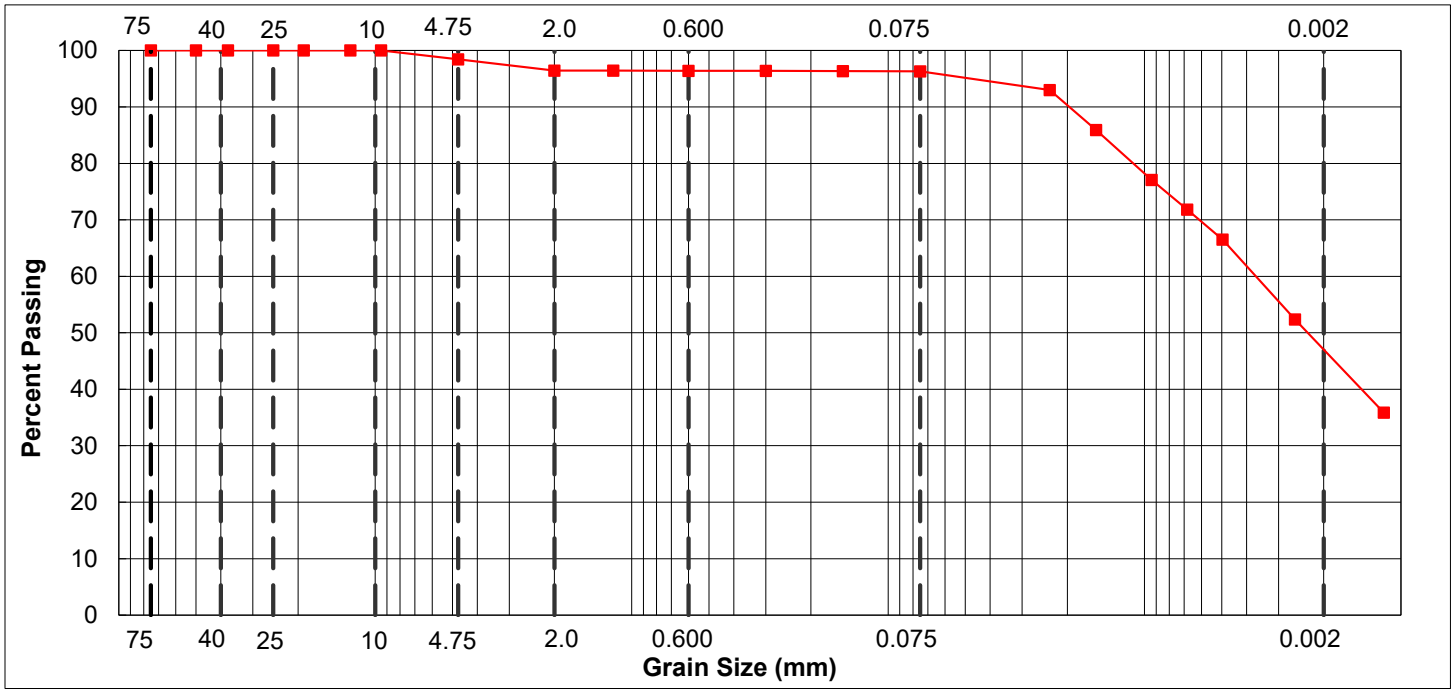
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	306RC13
Project No.:	1560-193-00	**Source:**	22CH306
Owner:	EID	**Sample Depth:**	20.2m
File No.:	GSA - 306RC13	**Date:**	15-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	96.4
75.0	100.0	0.300	96.4
50.0	100.0	0.150	96.4
37.5	100.0	0.075	96.3
25.0	100.0	0.0234	93.0
19.0	100.0	0.0154	85.9
12.5	100.0	0.0094	77.1
9.5	100.0	0.0068	71.8
4.75	98.4	0.0050	66.5
2.00	96.4	0.0026	52.4
1.180	96.4	0.0012	35.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	1.6	20 mm to 4.75 mm
Coarse Sand	2.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	35.3	75 µm to 2 µm
Clay	47.0	<2 µm



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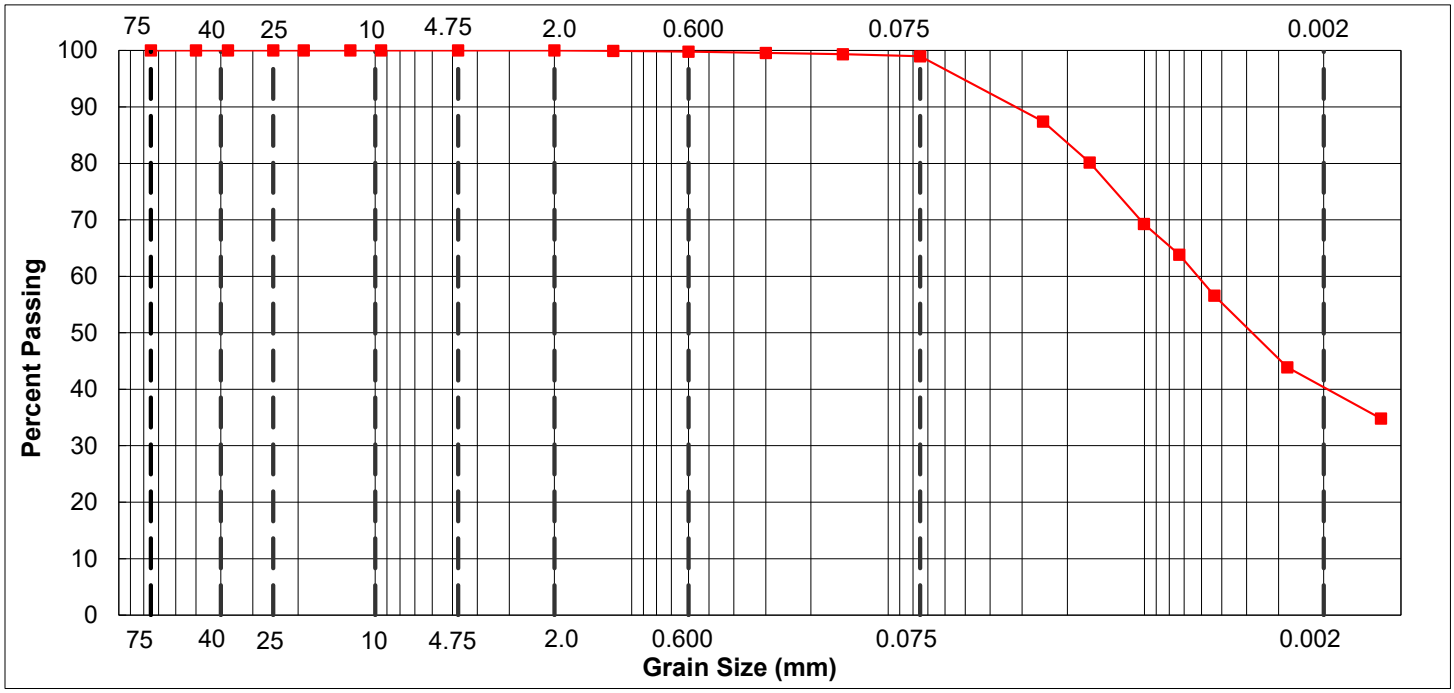
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	307AU10
Project No.:	1560-193-00	**Source:**	22BH307
Owner:	EID	**Sample Depth:**	7.3m
File No.:	GSA - 307AU10	**Date:**	16-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.6
50.0	100.0	0.150	99.4
37.5	100.0	0.075	99.0
25.0	100.0	0.0248	87.4
19.0	100.0	0.0164	80.1
12.5	100.0	0.0101	69.3
9.5	100.0	0.0073	63.8
4.75	100.0	0.0053	56.6
2.00	100.0	0.0028	43.9
1.180	99.9	0.0012	34.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	0.8	425 µm to 75 µm
Silt	58.6	75 µm to 2 µm
Clay	40.4	<2 µm



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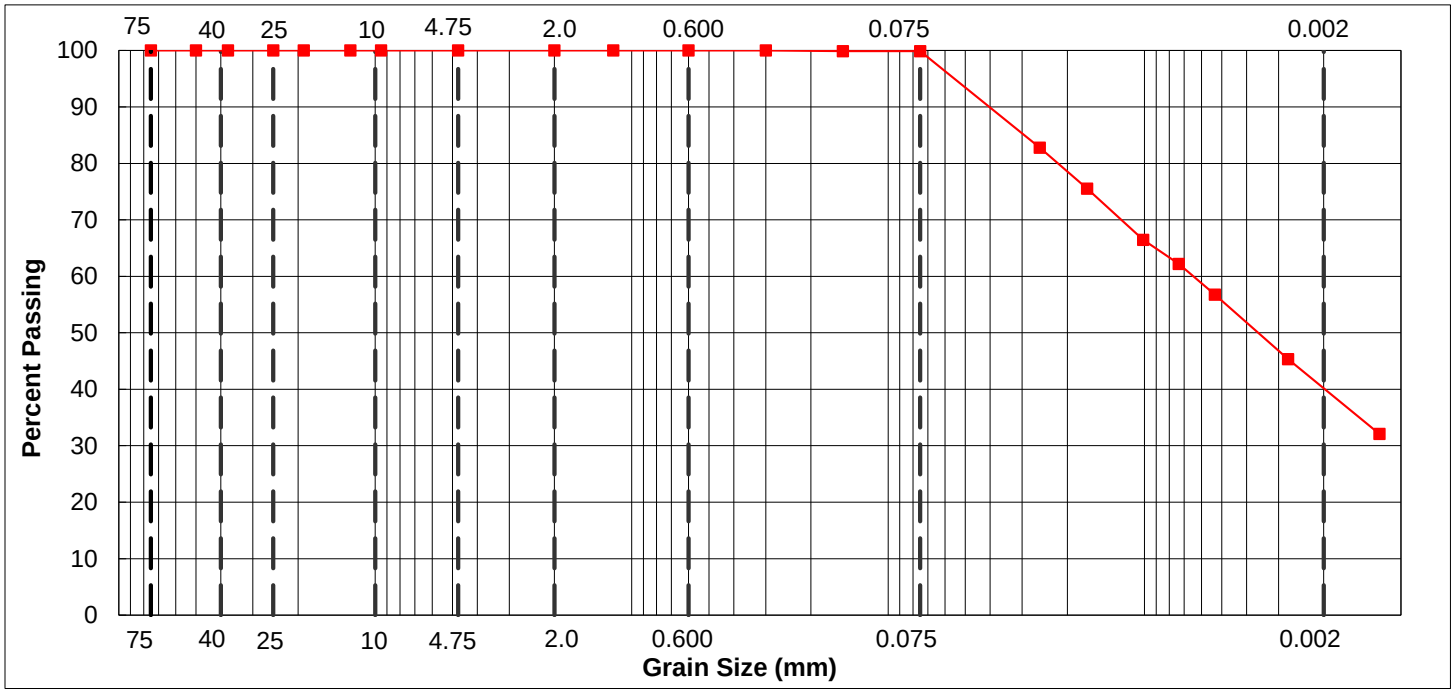
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	307UD4
Project No.:	1560-193-00	**Source:**	22CH307
Owner:	EID	**Sample Depth:**	18.8m
File No.:	GSA - 307UD4	**Test Date:**	17-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.9
25.0	100.0	0.0256	82.8
19.0	100.0	0.0168	75.5
12.5	100.0	0.0101	66.5
9.5	100.0	0.0074	62.2
4.75	100.0	0.0053	56.8
2.00	100.0	0.0028	45.3
1.180	100.0	0.0012	32.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	59.7	75 µm to 2 µm
Clay	40.2	<2 µm



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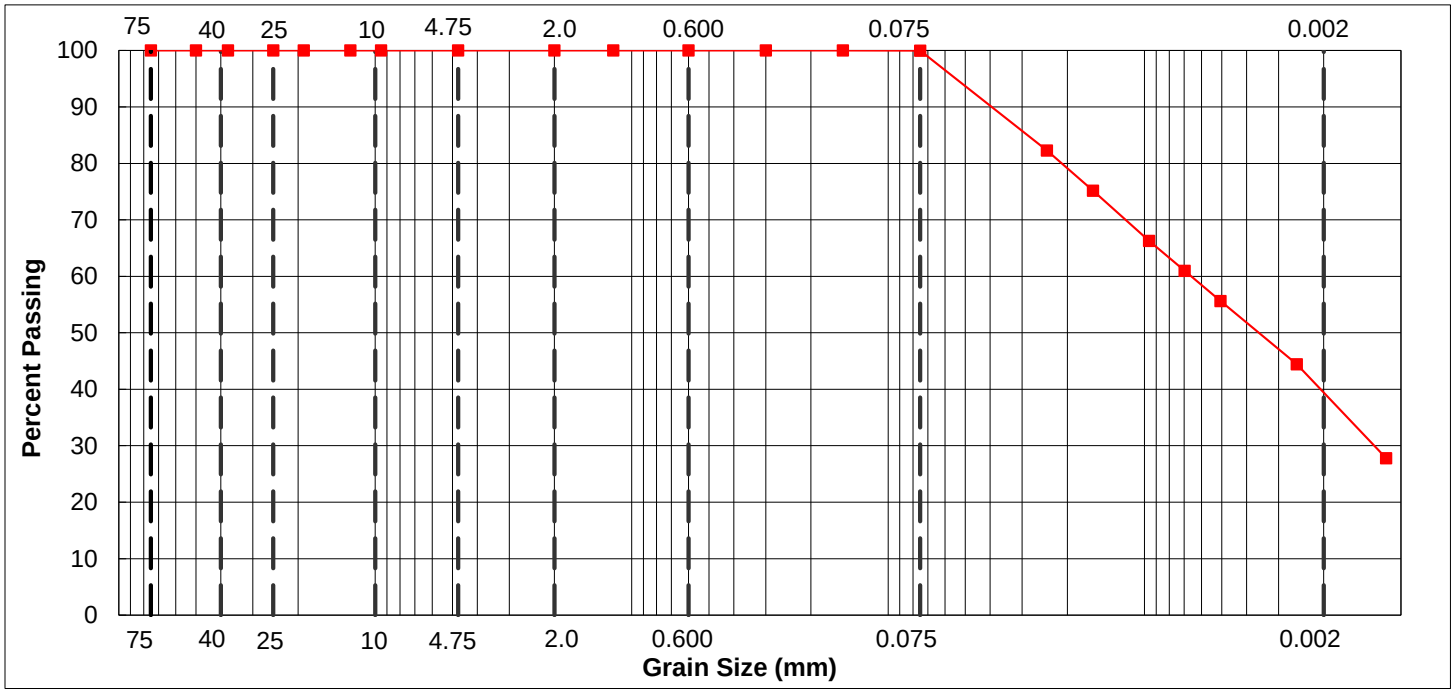
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	307UD5
Project No.:	1560-193-00	**Source:**	22CH307
Owner:	EID	**Sample Depth:**	23.1m
File No.:	GSA - 307UD5	**Test Date:**	31-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	100.0
25.0	100.0	0.0240	82.3
19.0	100.0	0.0159	75.2
12.5	100.0	0.0096	66.3
9.5	100.0	0.0070	61.0
4.75	100.0	0.0051	55.6
2.00	100.0	0.0025	44.4
1.180	100.0	0.0011	27.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.0	425 µm to 75 µm
Silt	60.6	75 µm to 2 µm
Clay	39.4	<2 µm



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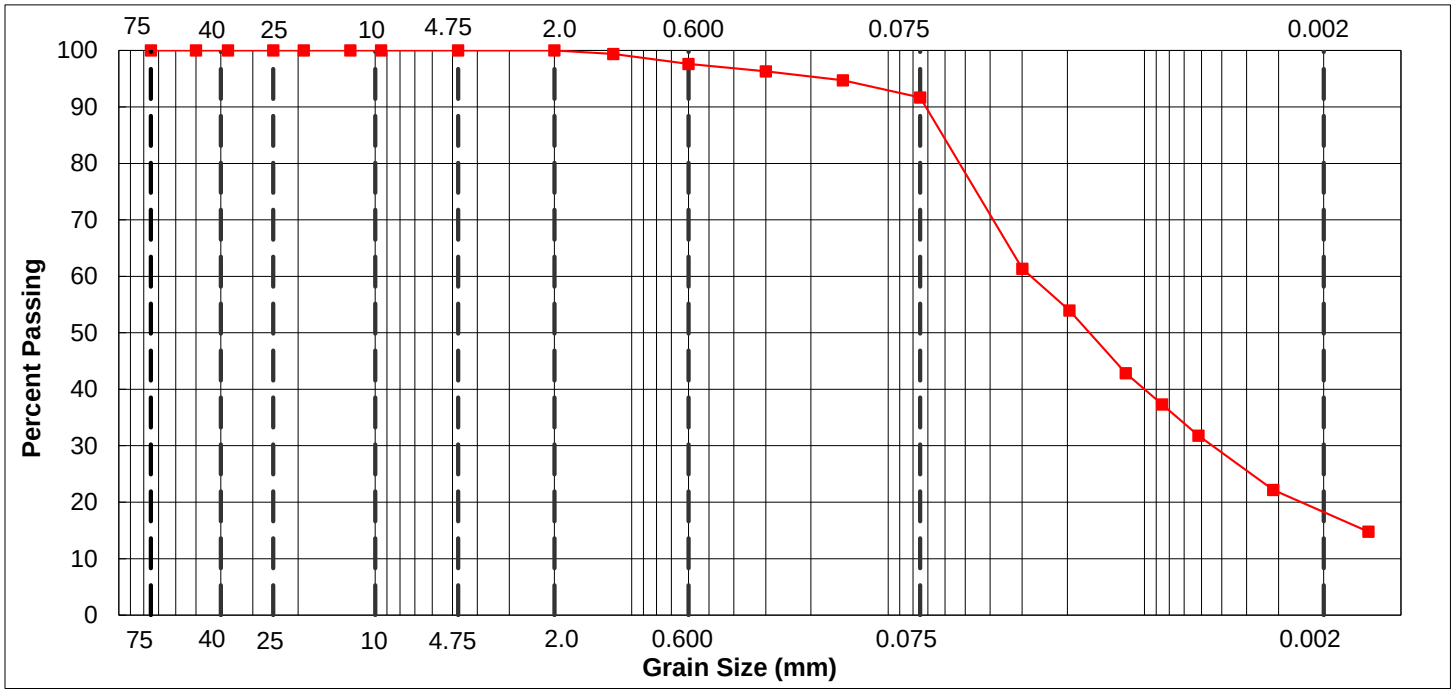
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	308AU10
Project No.:	1560-193-00	**Source:**	22BH308
Owner:	EID	**Sample Depth:**	7.3m
File No.:	GSA - 308AU10	**Test Date:**	26-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.6
75.0	100.0	0.300	96.3
50.0	100.0	0.150	94.7
37.5	100.0	0.075	91.7
25.0	100.0	0.0300	61.3
19.0	100.0	0.0196	54.0
12.5	100.0	0.0118	42.9
9.5	100.0	0.0085	37.3
4.75	100.0	0.0062	31.8
2.00	100.0	0.0031	22.2
1.180	99.4	0.0013	14.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.4	2.00 mm to 425 µm
Fine Sand	5.9	425 µm to 75 µm
Silt	73.5	75 µm to 2 µm
Clay	18.2	<2 µm



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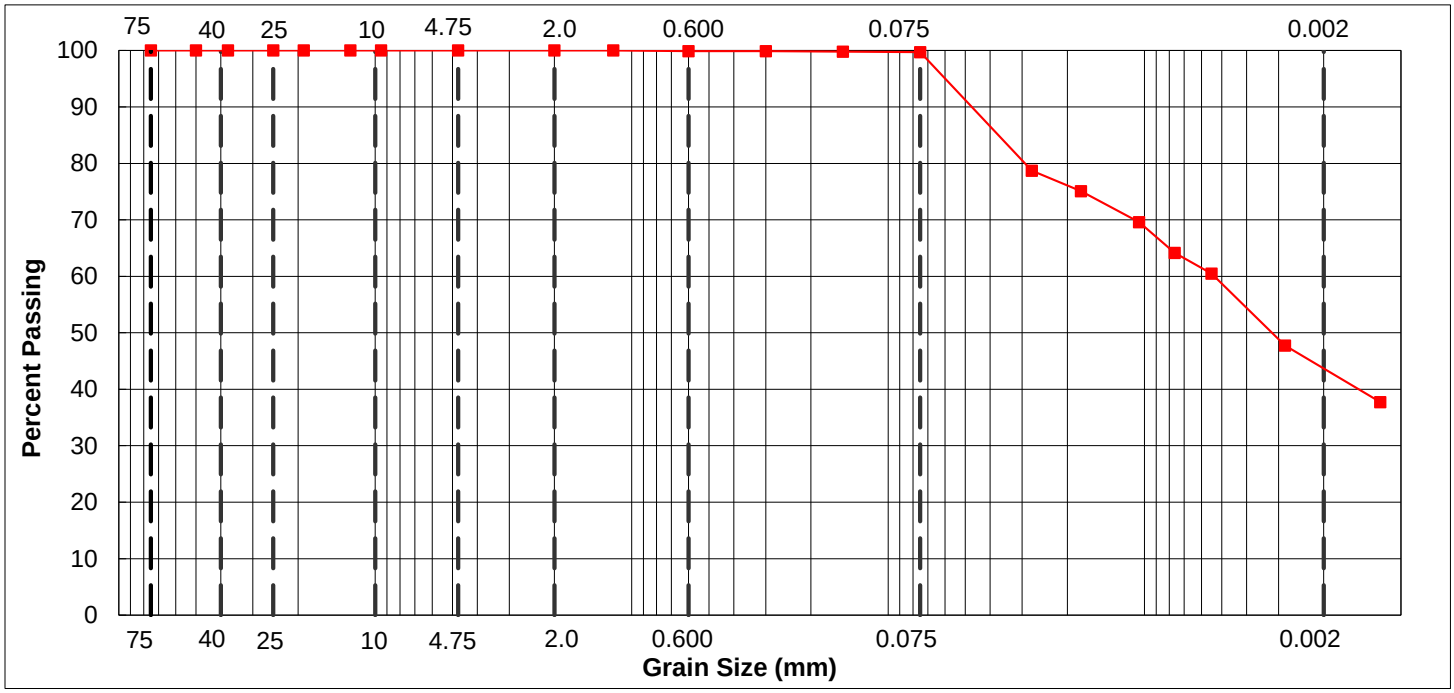
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	308RC2
Project No.:	1560-193-00	**Source:**	22CH308
Owner:	EID	**Sample Depth:**	6.05m
File No.:	GSA - 308RC2	**Test Date:**	5-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.7
25.0	100.0	0.0275	78.7
19.0	100.0	0.0177	75.1
12.5	100.0	0.0105	69.6
9.5	100.0	0.0076	64.2
4.75	100.0	0.0055	60.5
2.00	100.0	0.0028	47.8
1.180	100.0	0.0012	37.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	56.0	75 µm to 2 µm
Clay	43.7	<2 µm



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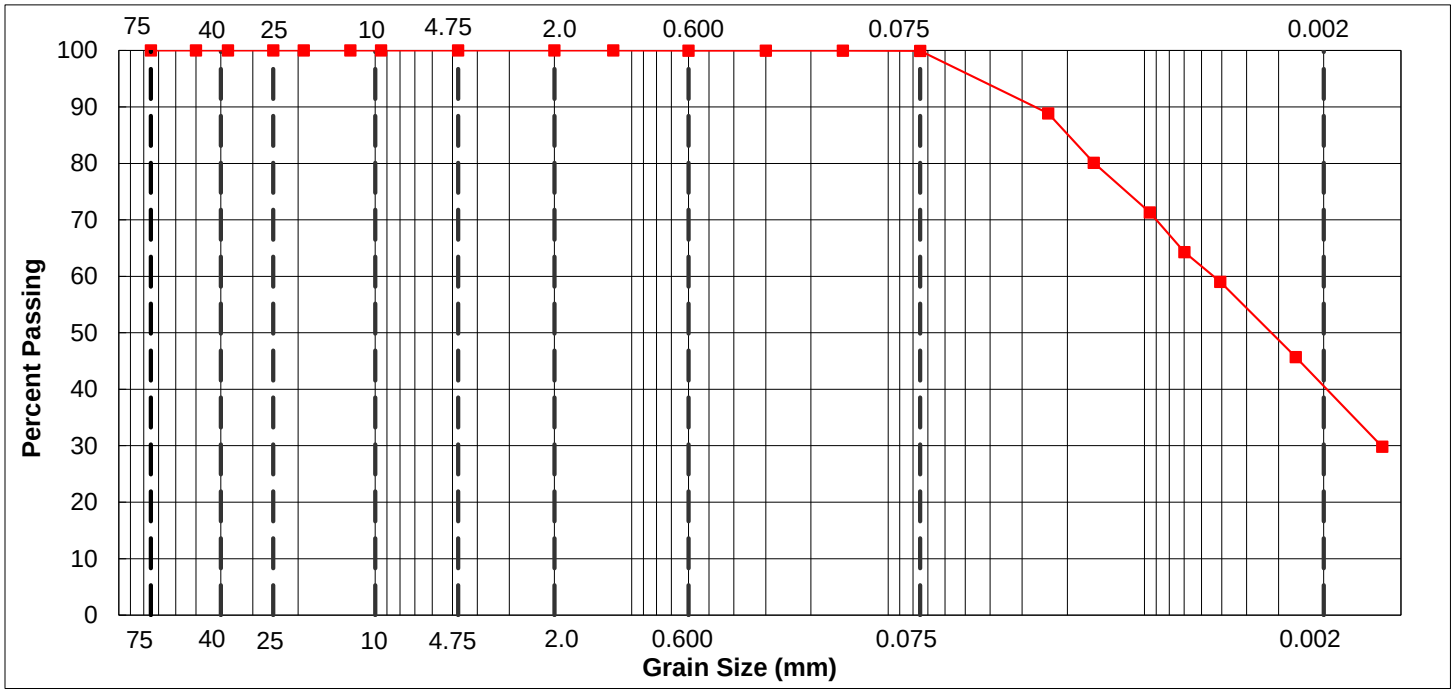
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	308UD4
Project No.:	1560-193-00	**Source:**	22CH308
Owner:	EID	**Sample Depth:**	23.0m
File No.:	GSA - 308UD4	**Test Date:**	1-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.9
25.0	100.0	0.0237	88.9
19.0	100.0	0.0158	80.1
12.5	100.0	0.0095	71.3
9.5	100.0	0.0070	64.3
4.75	100.0	0.0051	59.1
2.00	100.0	0.0026	45.7
1.180	100.0	0.0012	29.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	59.3	75 µm to 2 µm
Clay	40.6	<2 µm



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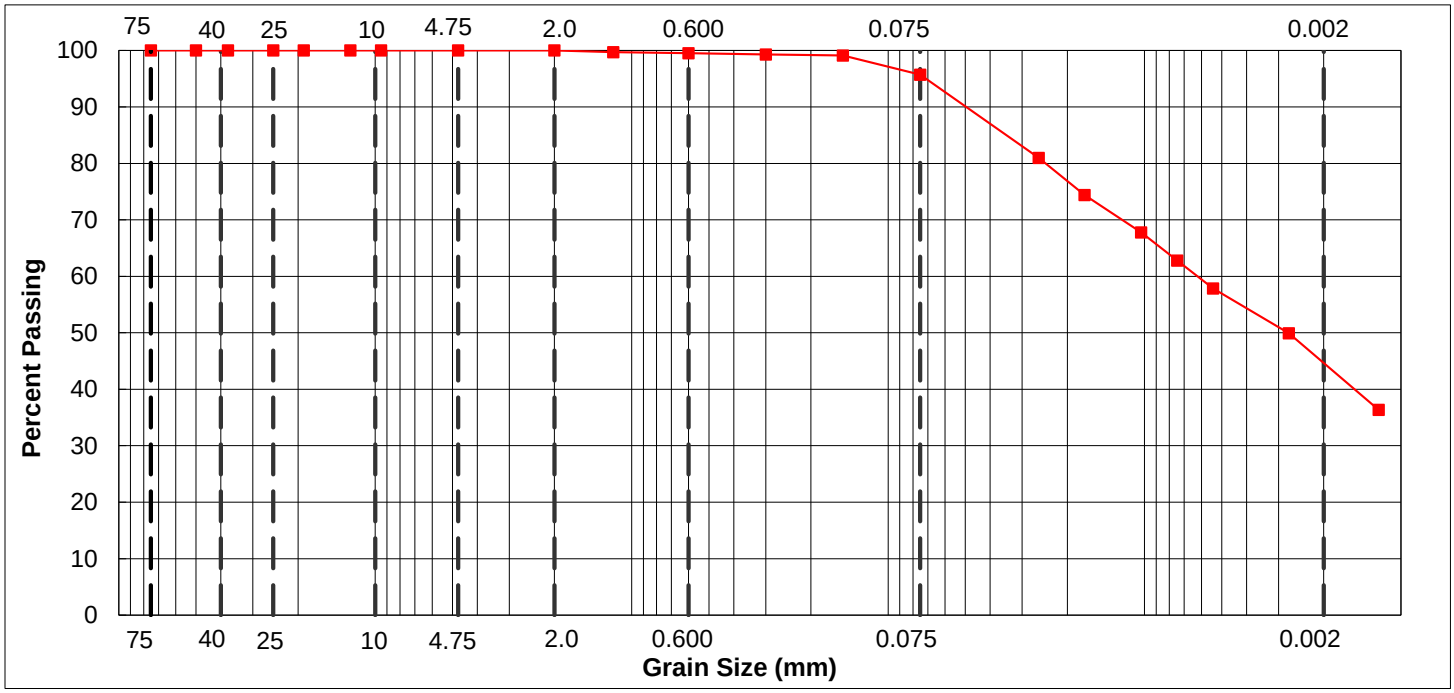
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	22BH309
Project No.:	1560-193-00	**Source:**	309AU7
Owner:	EID	**Sample Depth:**	5.2m
File No.:	GSA - 22BH309	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.3
50.0	100.0	0.150	99.1
37.5	100.0	0.075	95.7
25.0	100.0	0.0259	81.0
19.0	100.0	0.0171	74.4
12.5	100.0	0.0103	67.8
9.5	100.0	0.0074	62.8
4.75	100.0	0.0054	57.9
2.00	100.0	0.0027	49.9
1.180	99.7	0.0012	36.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	3.8	425 µm to 75 µm
Silt	51.0	75 µm to 2 µm
Clay	44.7	<2 µm



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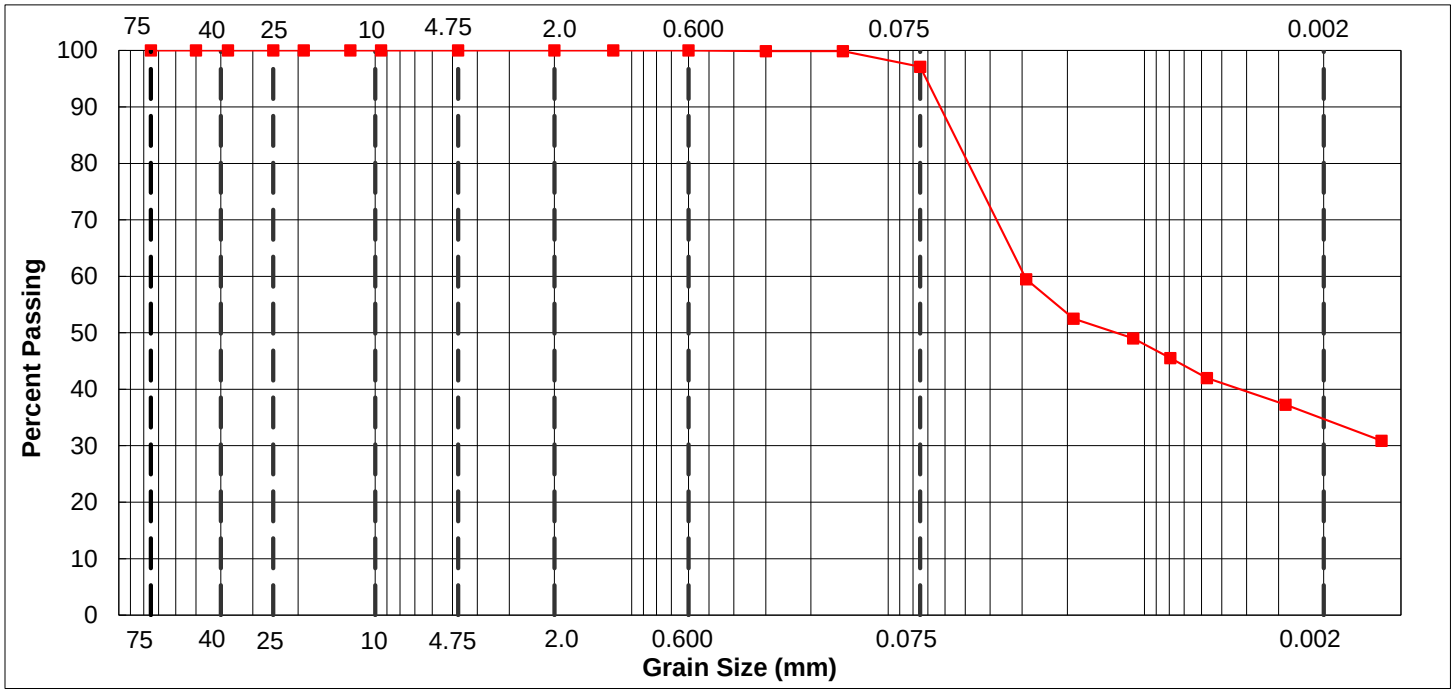
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	309RC6
Project No.:	1560-193-00	**Source:**	22CH309
Owner:	EID	**Sample Depth:**	10.9m
File No.:	GSA - 309RC6	**Test Date:**	7-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	97.1
25.0	100.0	0.0290	59.5
19.0	100.0	0.0189	52.5
12.5	100.0	0.0111	49.0
9.5	100.0	0.0079	45.5
4.75	100.0	0.0057	42.0
2.00	100.0	0.0028	37.3
1.180	100.0	0.0012	30.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	2.9	425 µm to 75 µm
Silt	62.4	75 µm to 2 µm
Clay	34.7	<2 µm



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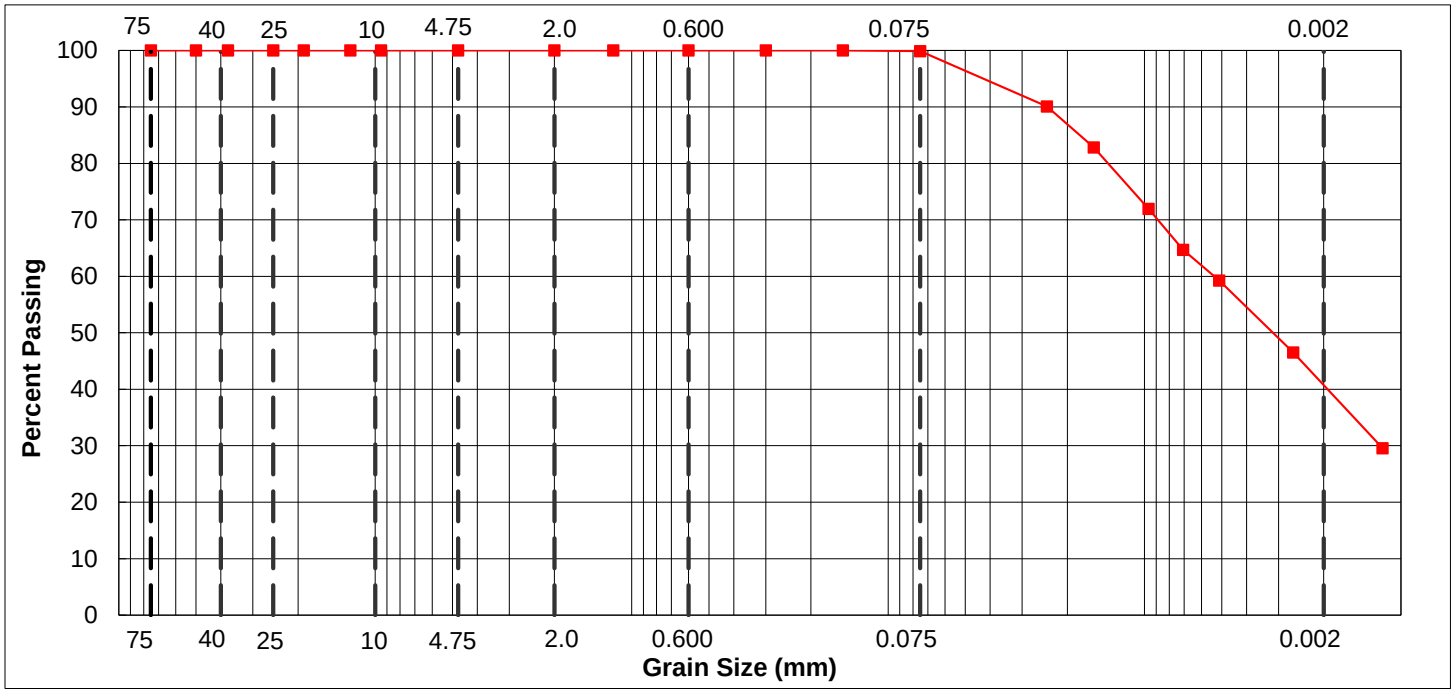
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	309RC9
Project No.:	1560-193-00	**Source:**	22CH309
Owner:	EID	**Sample Depth:**	15.6m
File No.:	GSA - 309RC9	**Test Date:**	5-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.9
25.0	100.0	0.0241	90.1
19.0	100.0	0.0158	82.8
12.5	100.0	0.0096	71.9
9.5	100.0	0.0071	64.7
4.75	100.0	0.0051	59.2
2.00	100.0	0.0026	46.5
1.180	100.0	0.0012	29.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	59.2	75 µm to 2 µm
Clay	40.7	<2 µm



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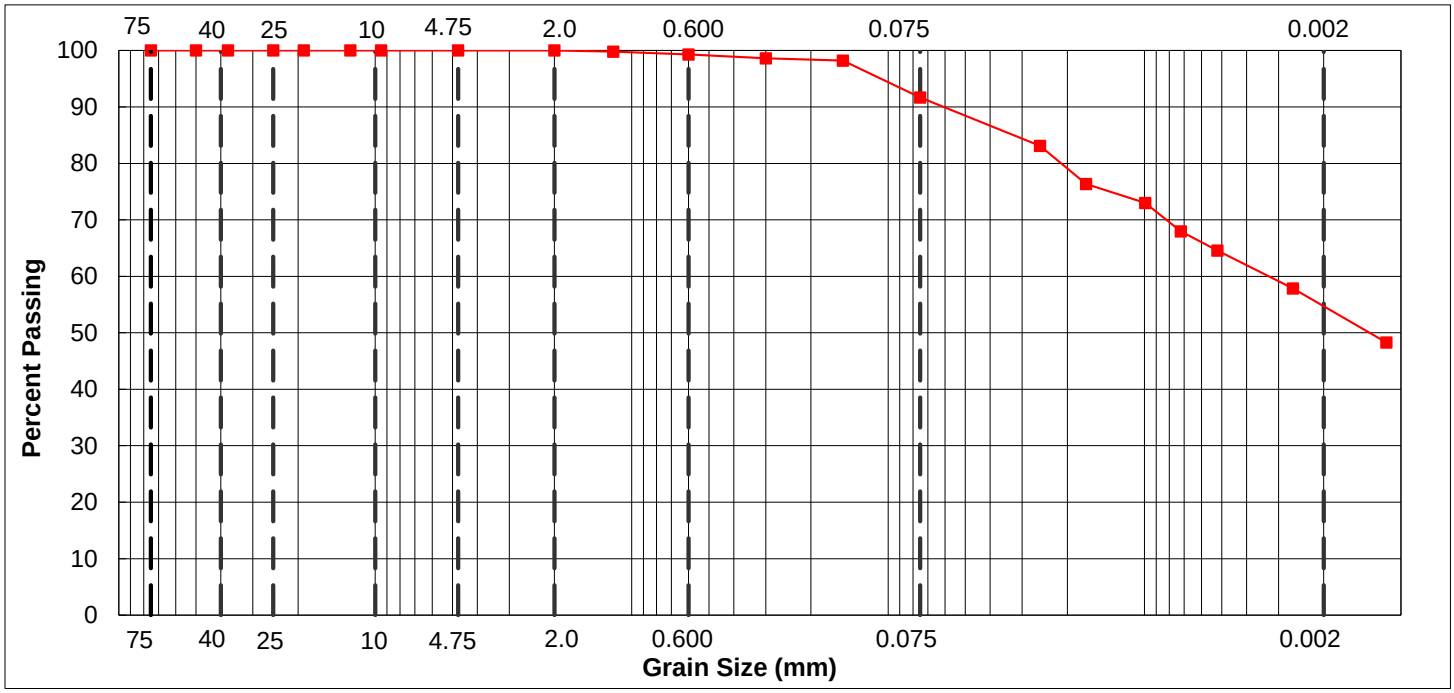
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	310AU1
Project No.:	1560-193-00	**Source:**	22BH310
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 310AU1	**Test Date:**	10-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.3
75.0	100.0	0.300	98.6
50.0	100.0	0.150	98.2
37.5	100.0	0.075	91.7
25.0	100.0	0.0256	83.1
19.0	100.0	0.0169	76.4
12.5	100.0	0.0099	73.0
9.5	100.0	0.0072	68.0
4.75	100.0	0.0052	64.6
2.00	100.0	0.0026	57.9
1.180	99.8	0.0011	48.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.7	2.00 mm to 425 µm
Fine Sand	7.6	425 µm to 75 µm
Silt	37.0	75 µm to 2 µm
Clay	54.7	<2 µm



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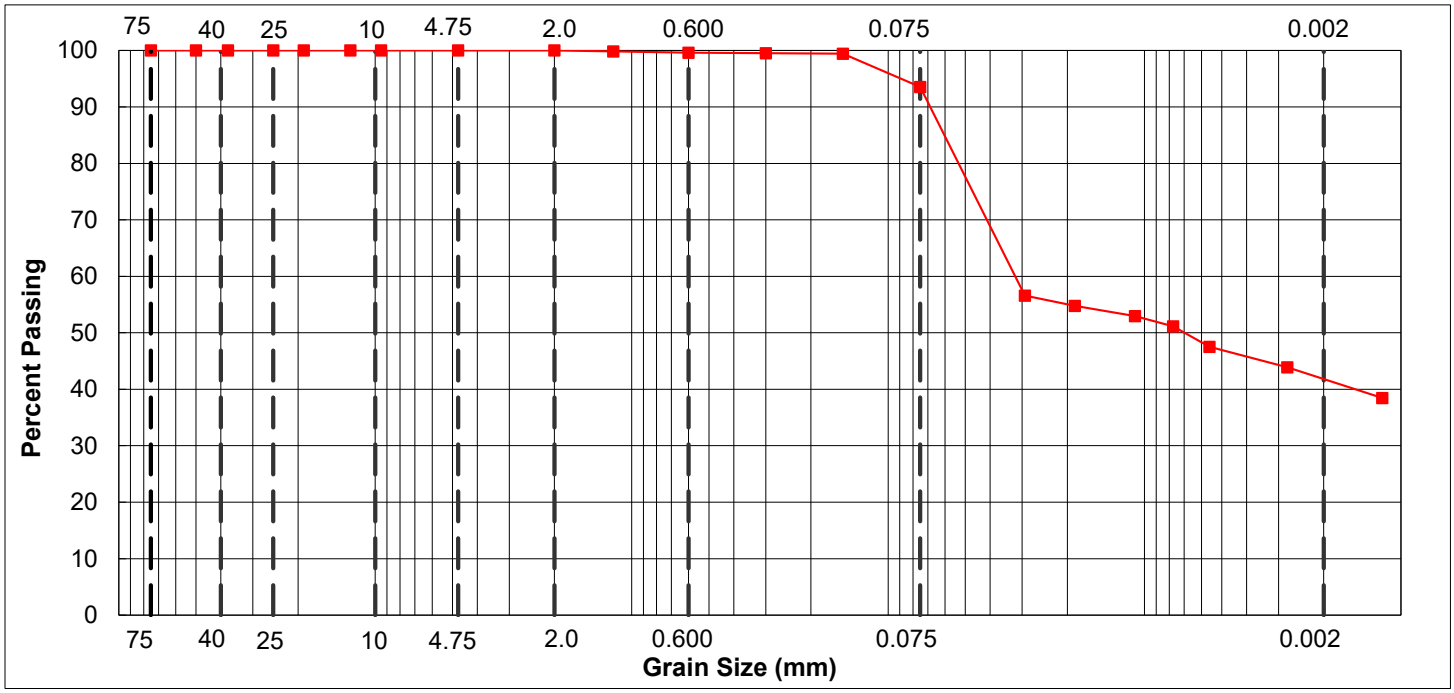
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	310AU9
Project No.:	1560-193-00	**Source:**	22BH310
Owner:	EID	**Sample Depth:**	6.7m
File No.:	GSA - 310AU9	**Date:**	17-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.5
37.5	100.0	0.075	93.6
25.0	100.0	0.0292	56.6
19.0	100.0	0.0187	54.8
12.5	100.0	0.0109	53.0
9.5	100.0	0.0077	51.2
4.75	100.0	0.0056	47.5
2.00	100.0	0.0028	43.9
1.180	99.9	0.0012	38.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	6.1	425 µm to 75 µm
Silt	51.7	75 µm to 2 µm
Clay	41.8	<2 µm



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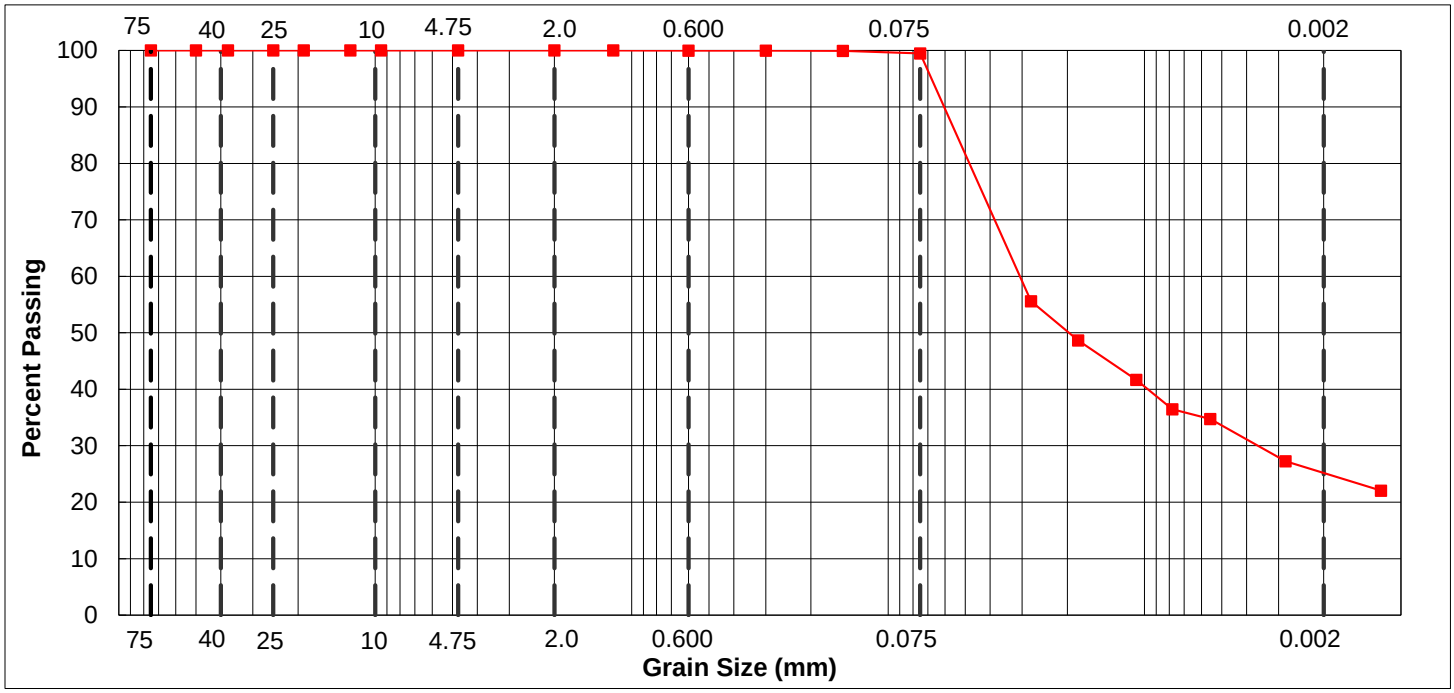
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	310UD3
Project No.:	1560-193-00	**Source:**	22CH310
Owner:	EID	**Sample Depth:**	14.8m
File No.:	GSA - 310UD3	**Test Date:**	29-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.5
25.0	100.0	0.0277	55.6
19.0	100.0	0.0181	48.6
12.5	100.0	0.0108	41.7
9.5	100.0	0.0078	36.5
4.75	100.0	0.0055	34.7
2.00	100.0	0.0028	27.3
1.180	100.0	0.0012	22.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.5	425 µm to 75 µm
Silt	74.3	75 µm to 2 µm
Clay	25.2	<2 µm



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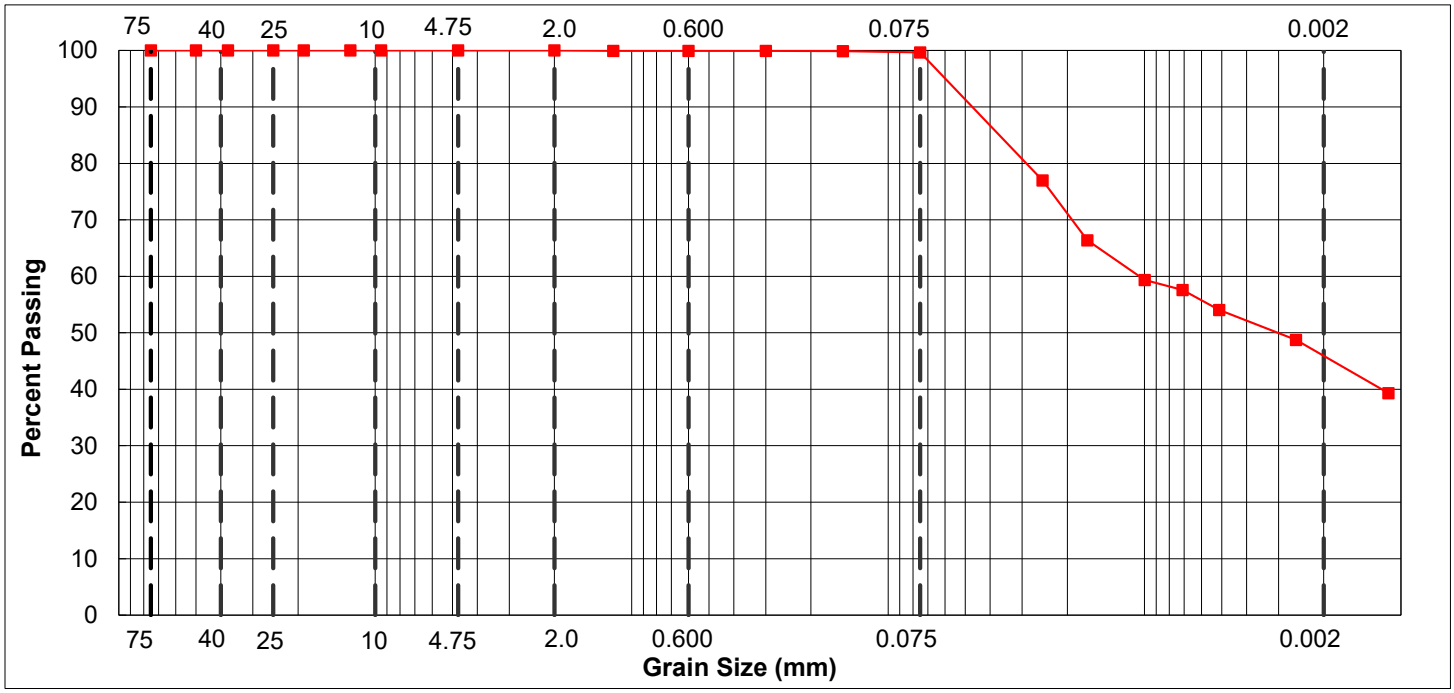
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	311RC4
Project No.:	1560-193-00	**Source:**	22CH311
Owner:	EID	**Sample Depth:**	9.0m
File No.:	GSA - 311RC4	**Test Date:**	15-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.7
25.0	100.0	0.0250	77.0
19.0	100.0	0.0167	66.4
12.5	100.0	0.0100	59.3
9.5	100.0	0.0071	57.6
4.75	100.0	0.0051	54.1
2.00	100.0	0.0026	48.8
1.180	99.9	0.0011	39.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	53.7	75 µm to 2 µm
Clay	45.9	<2 µm



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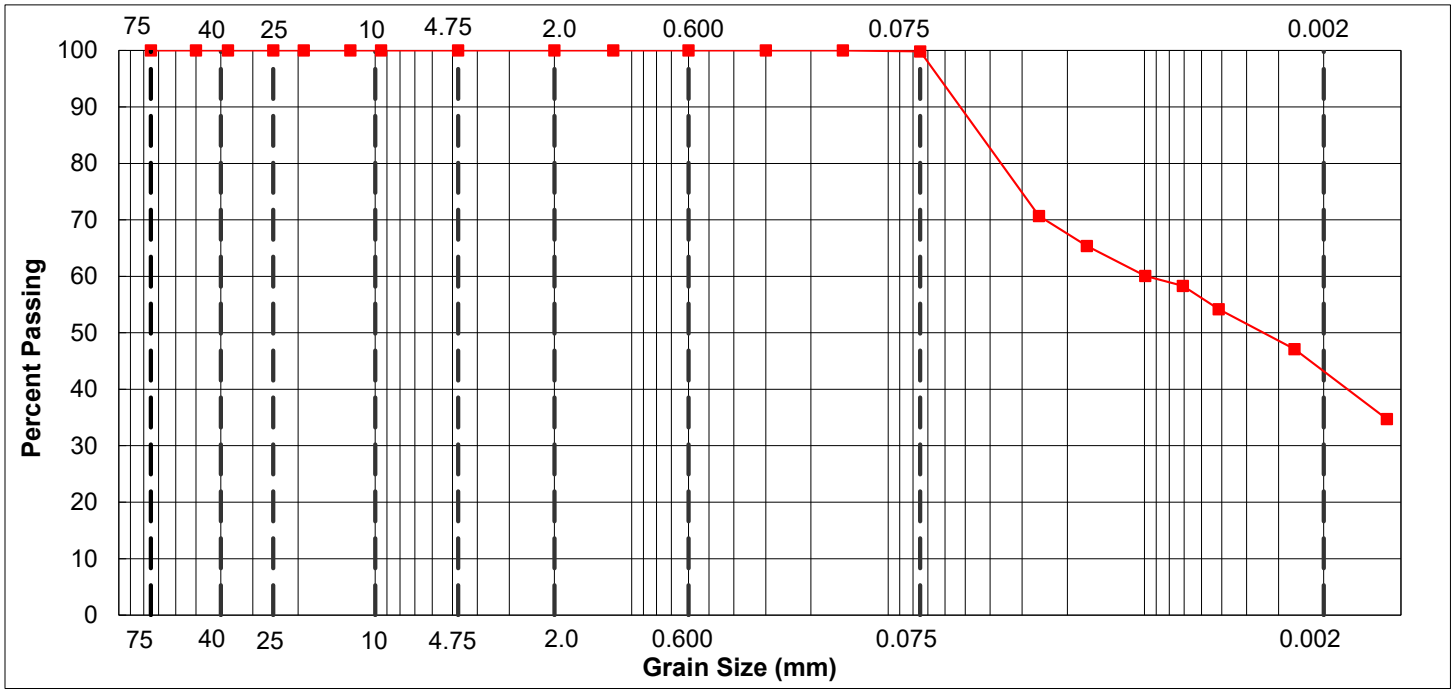
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	311RC8
Project No.:	1560-193-00	**Source:**	22CH311
Owner:	EID	**Sample Depth:**	14.0m
File No.:	GSA - 311RC8	**Test Date:**	16-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.8
25.0	100.0	0.0258	70.7
19.0	100.0	0.0168	65.4
12.5	100.0	0.0099	60.1
9.5	100.0	0.0071	58.3
4.75	100.0	0.0051	54.2
2.00	100.0	0.0026	47.1
1.180	100.0	0.0011	34.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	56.6	75 µm to 2 µm
Clay	43.2	<2 µm



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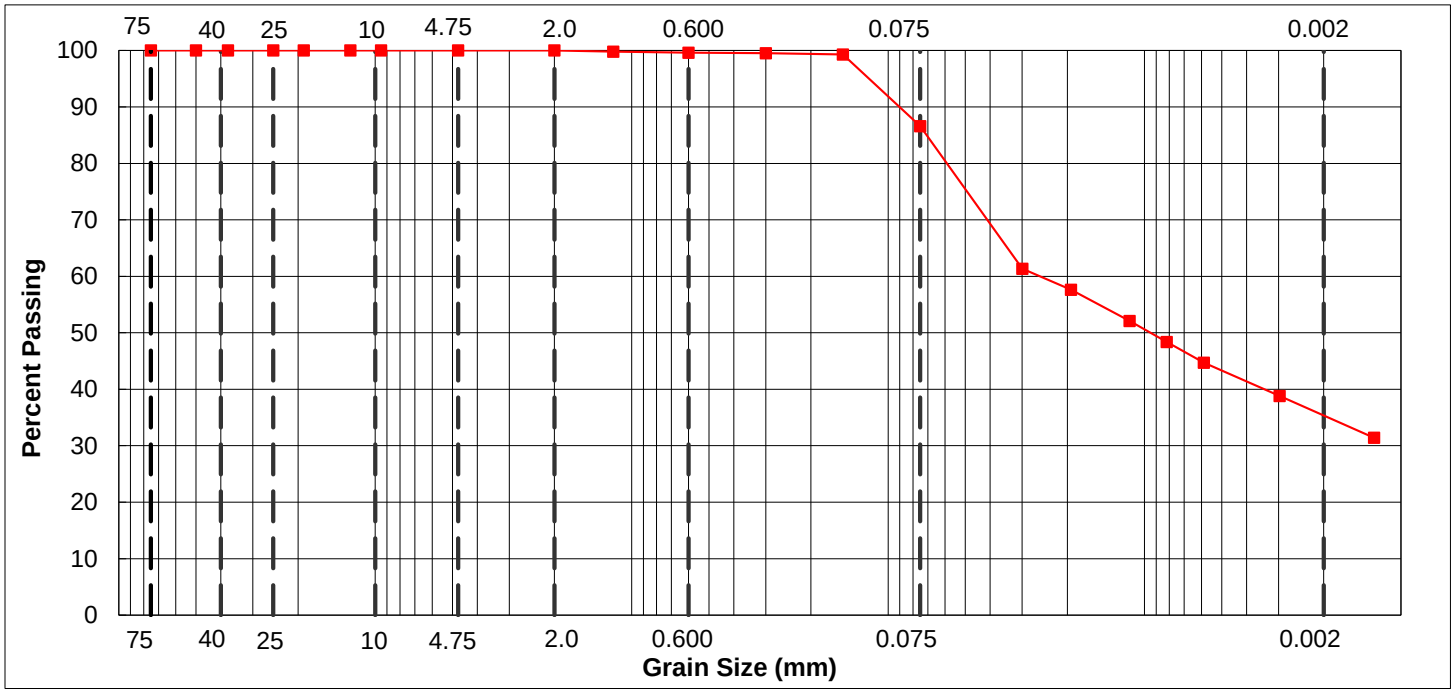
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	22BH312
Project No.:	1560-193-00	**Source:**	312AU6
Owner:	EID	**Sample Depth:**	4.3m
File No.:	GSA - 22BH312	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.3
37.5	100.0	0.075	86.6
25.0	100.0	0.0300	61.3
19.0	100.0	0.0193	57.6
12.5	100.0	0.0114	52.1
9.5	100.0	0.0082	48.4
4.75	100.0	0.0059	44.7
2.00	100.0	0.0030	38.8
1.180	99.8	0.0013	31.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	13.0	425 µm to 75 µm
Silt	51.3	75 µm to 2 µm
Clay	35.3	<2 µm



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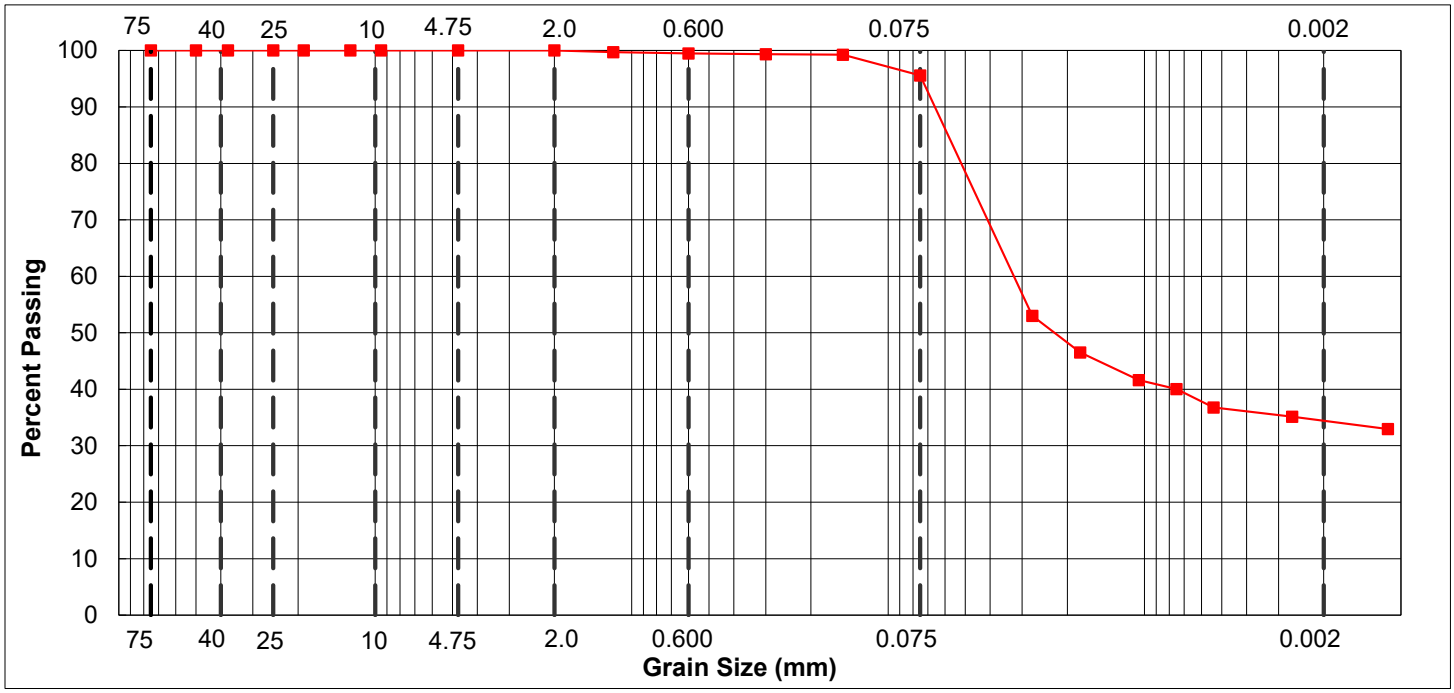
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	312RC1
Project No.:	1560-193-00	**Source:**	22CH312
Owner:	EID	**Sample Depth:**	5.2m
File No.:	GSA - 312RC1	**Test Date:**	13-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.3
50.0	100.0	0.150	99.3
37.5	100.0	0.075	95.6
25.0	100.0	0.0274	53.0
19.0	100.0	0.0178	46.5
12.5	100.0	0.0105	41.6
9.5	100.0	0.0075	40.0
4.75	100.0	0.0054	36.8
2.00	100.0	0.0027	35.2
1.180	99.7	0.0011	33.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	3.9	425 µm to 75 µm
Silt	61.2	75 µm to 2 µm
Clay	34.4	<2 µm



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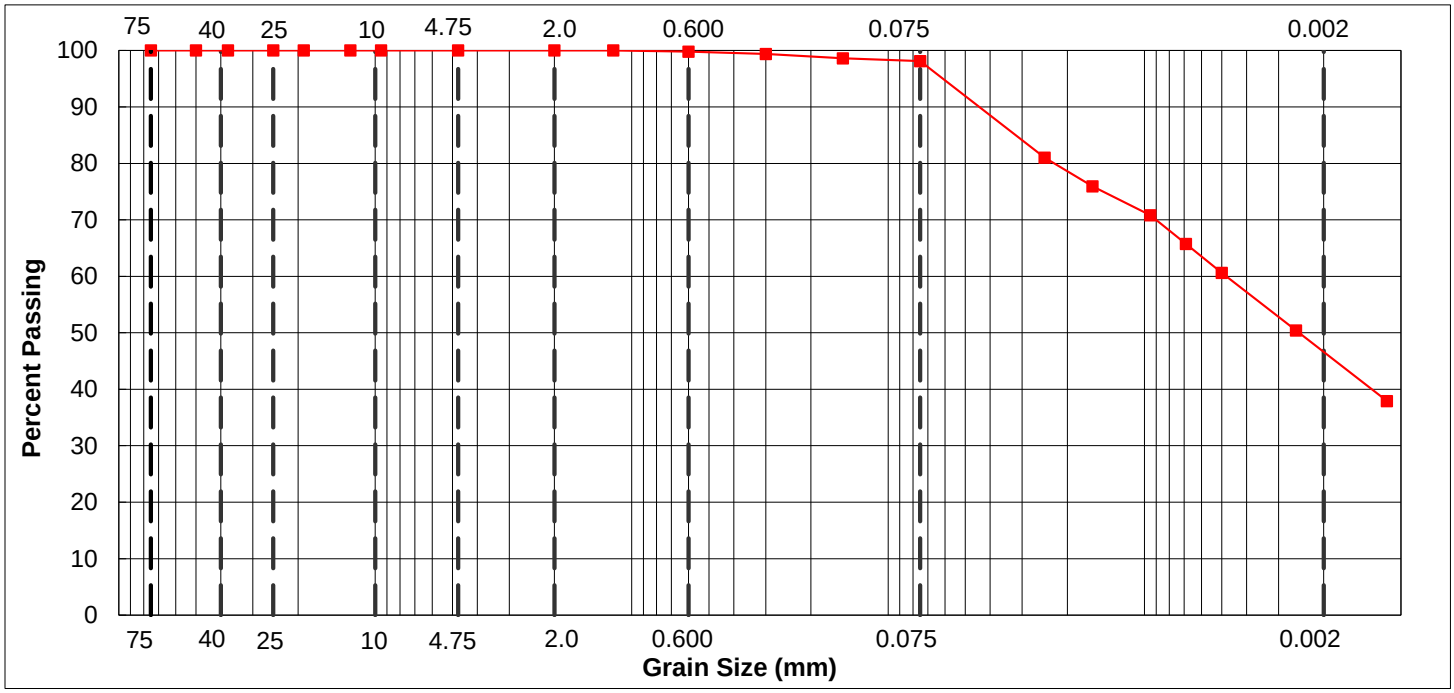
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	312RC2
Project No.:	1560-193-00	**Source:**	22CH312
Owner:	EID	**Sample Depth:**	7.0m
File No.:	GSA - 312RC2	**Test Date:**	5-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.4
50.0	100.0	0.150	98.6
37.5	100.0	0.075	98.1
25.0	100.0	0.0245	81.0
19.0	100.0	0.0160	75.9
12.5	100.0	0.0095	70.8
9.5	100.0	0.0069	65.7
4.75	100.0	0.0050	60.6
2.00	100.0	0.0026	50.4
1.180	100.0	0.0011	37.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	1.7	425 µm to 75 µm
Silt	51.5	75 µm to 2 µm
Clay	46.6	<2 µm



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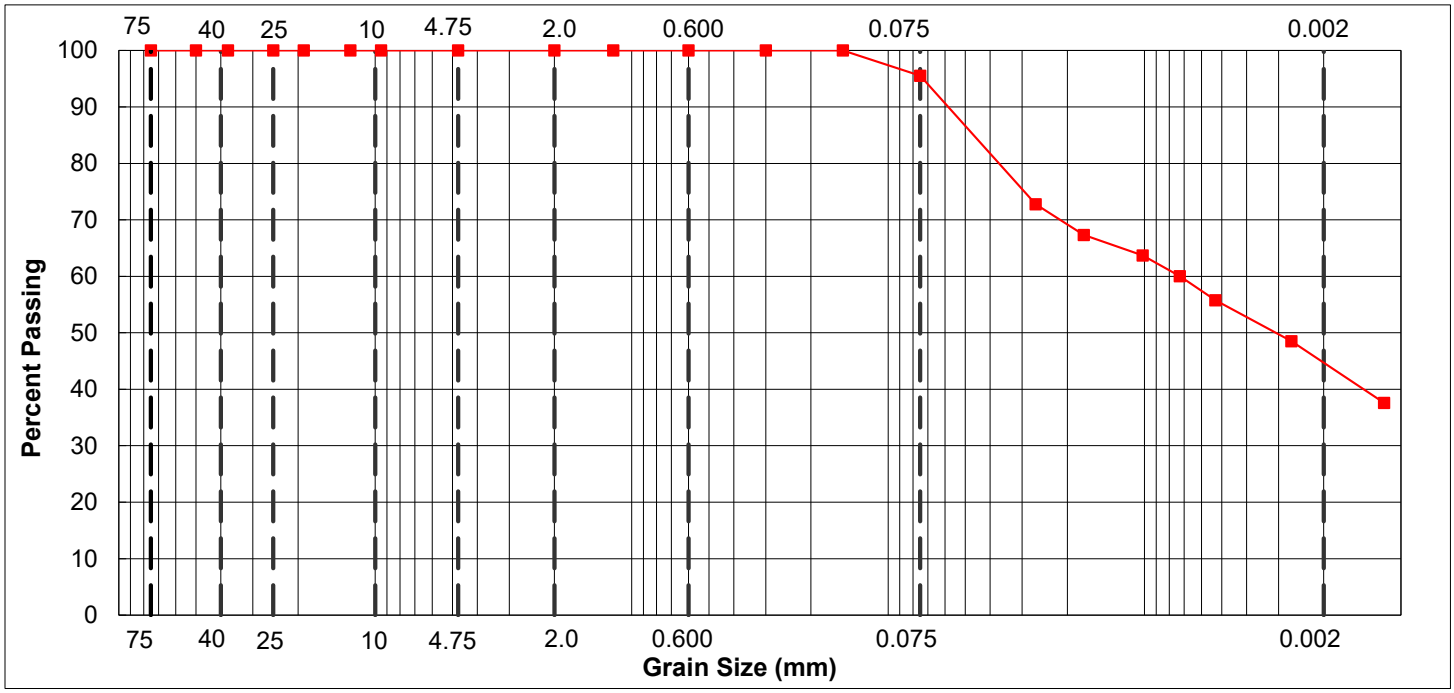
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	312RC5
Project No.:	1560-193-00	**Source:**	22CH312
Owner:	EID	**Sample Depth:**	10.5m
File No.:	GSA - 312RC5	**Test Date:**	16-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	95.6
25.0	100.0	0.0266	72.8
19.0	100.0	0.0173	67.3
12.5	100.0	0.0102	63.7
9.5	100.0	0.0073	60.1
4.75	100.0	0.0053	55.8
2.00	100.0	0.0027	48.5
1.180	100.0	0.0012	37.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	4.4	425 µm to 75 µm
Silt	50.9	75 µm to 2 µm
Clay	44.7	<2 µm



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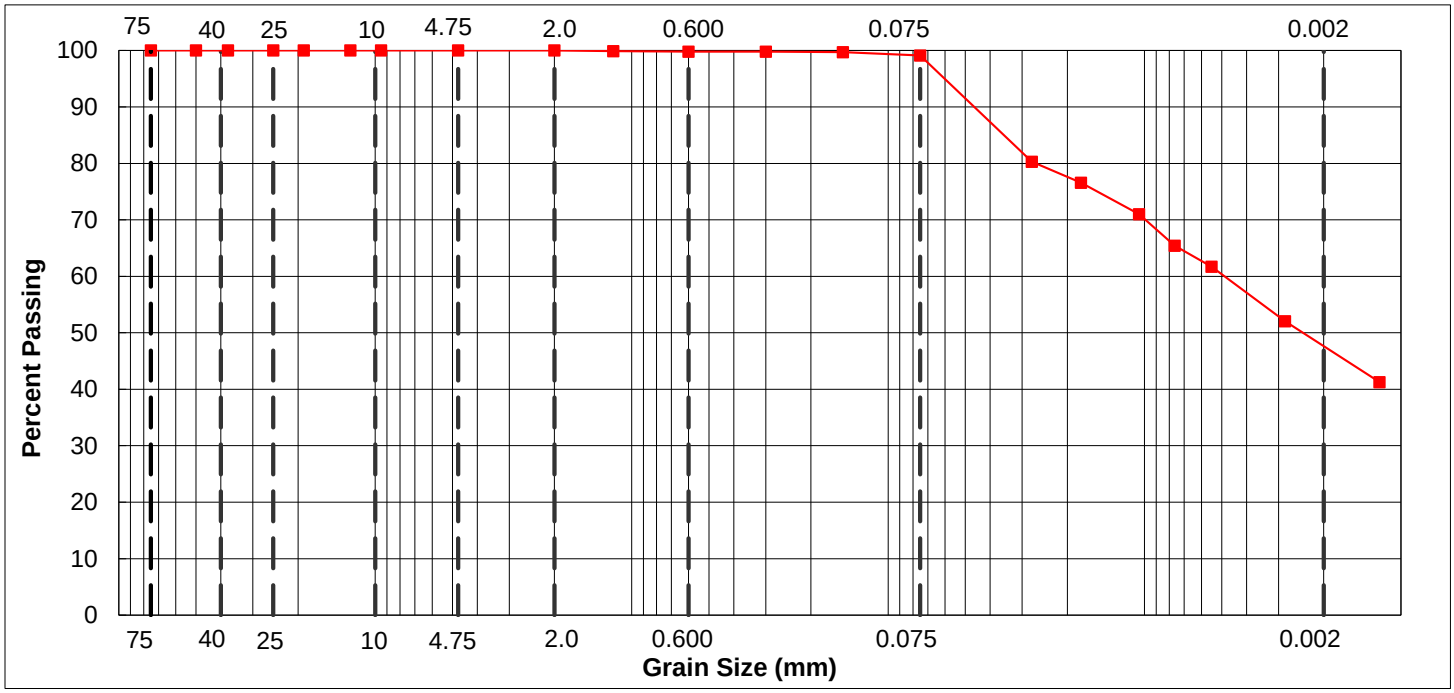
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	313AU7
Project No.:	1560-193-00	**Source:**	22BH313
Owner:	EID	**Sample Depth:**	5.2m
File No.:	GSA - 313AU7	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.1
25.0	100.0	0.0275	80.3
19.0	100.0	0.0177	76.6
12.5	100.0	0.0105	71.0
9.5	100.0	0.0076	65.4
4.75	100.0	0.0055	61.7
2.00	100.0	0.0028	52.1
1.180	99.9	0.0012	41.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	0.7	425 µm to 75 µm
Silt	51.5	75 µm to 2 µm
Clay	47.6	<2 µm



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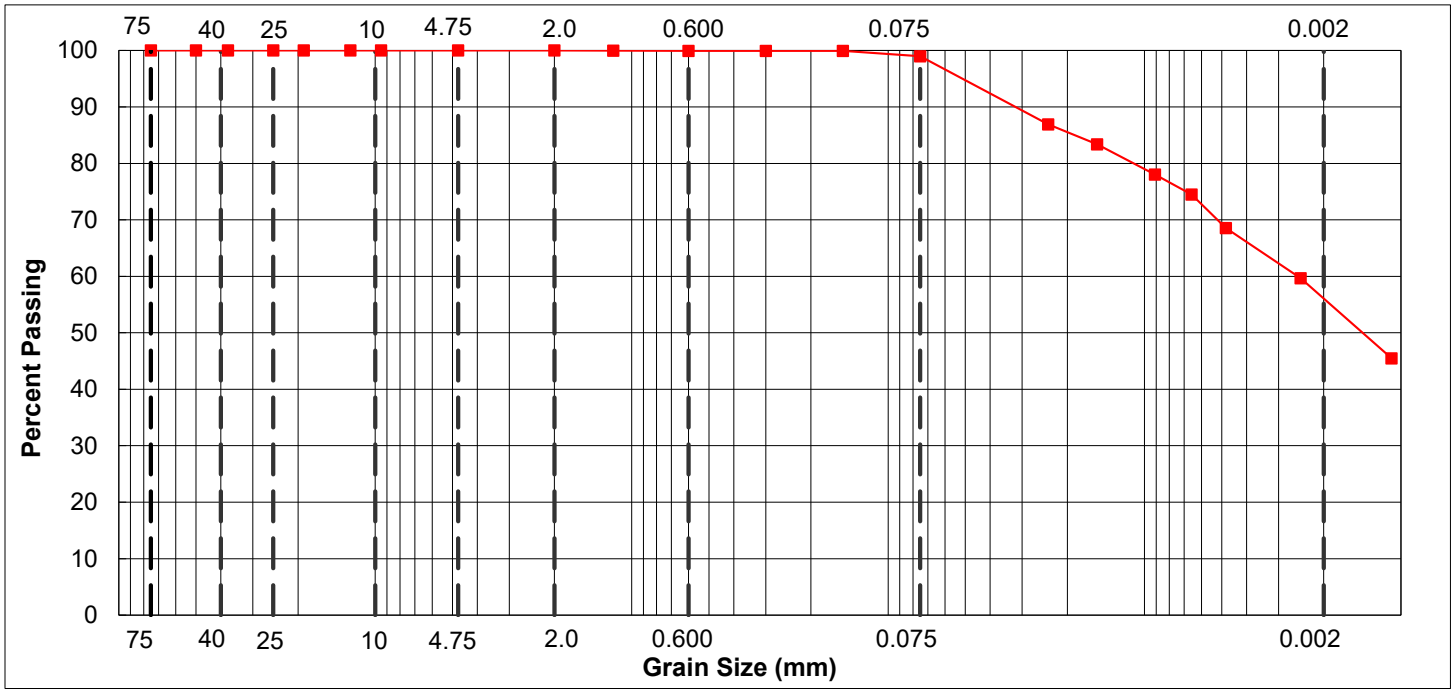
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	313RC1
Project No.:	1560-193-00	**Source:**	22CH313
Owner:	EID	**Sample Depth:**	5.0m
File No.:	GSA - 313RC1	**Test Date:**	16-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.0
25.0	100.0	0.0238	86.9
19.0	100.0	0.0153	83.4
12.5	100.0	0.0091	78.0
9.5	100.0	0.0066	74.5
4.75	100.0	0.0048	68.6
2.00	100.0	0.0025	59.7
1.180	100.0	0.0011	45.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	1.0	425 µm to 75 µm
Silt	42.8	75 µm to 2 µm
Clay	56.1	<2 µm



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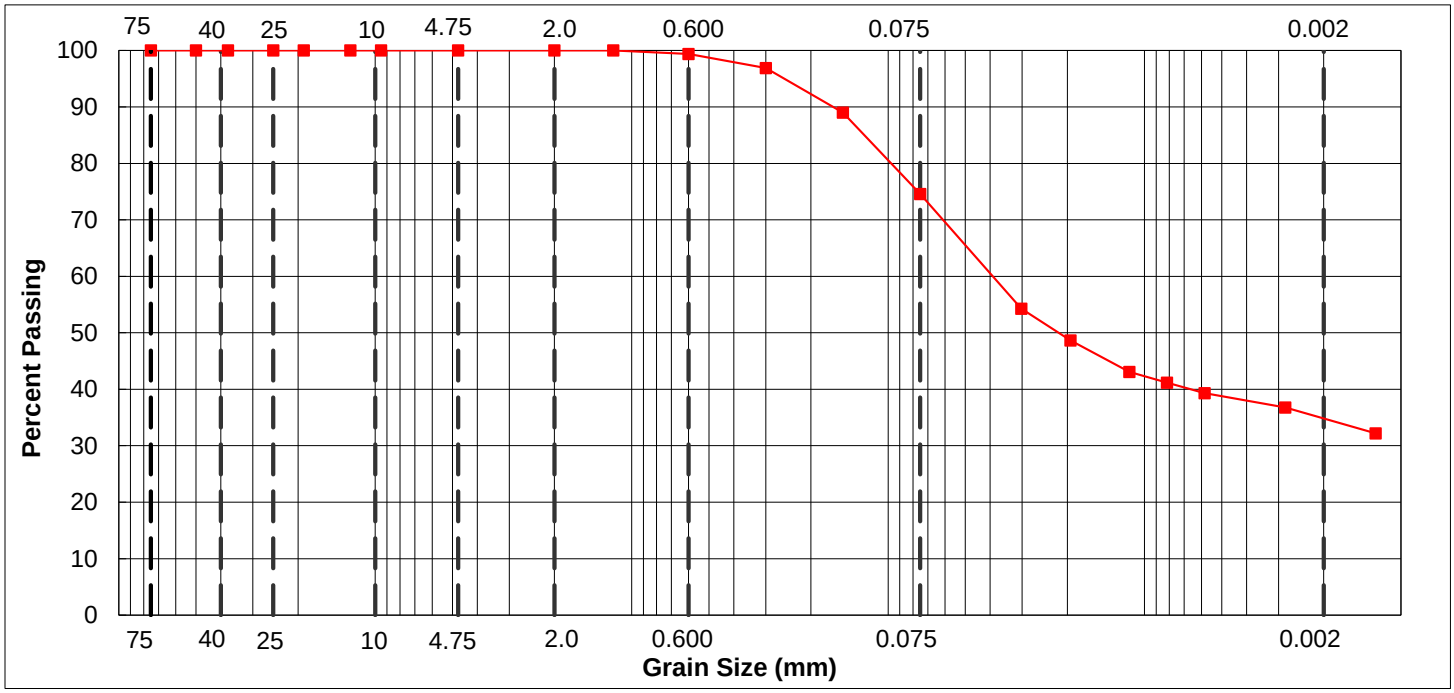
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	313RC3
Project No.:	1560-193-00	**Source:**	22CH313
Owner:	EID	**Sample Depth:**	8.3m
File No.:	GSA - 313RC3	**Test Date:**	8-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	96.9
50.0	100.0	0.150	89.0
37.5	100.0	0.075	74.6
25.0	100.0	0.0302	54.3
19.0	100.0	0.0194	48.7
12.5	100.0	0.0115	43.1
9.5	100.0	0.0082	41.2
4.75	100.0	0.0058	39.3
2.00	100.0	0.0028	36.8
1.180	100.0	0.0013	32.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	24.8	425 µm to 75 µm
Silt	39.8	75 µm to 2 µm
Clay	34.8	<2 µm



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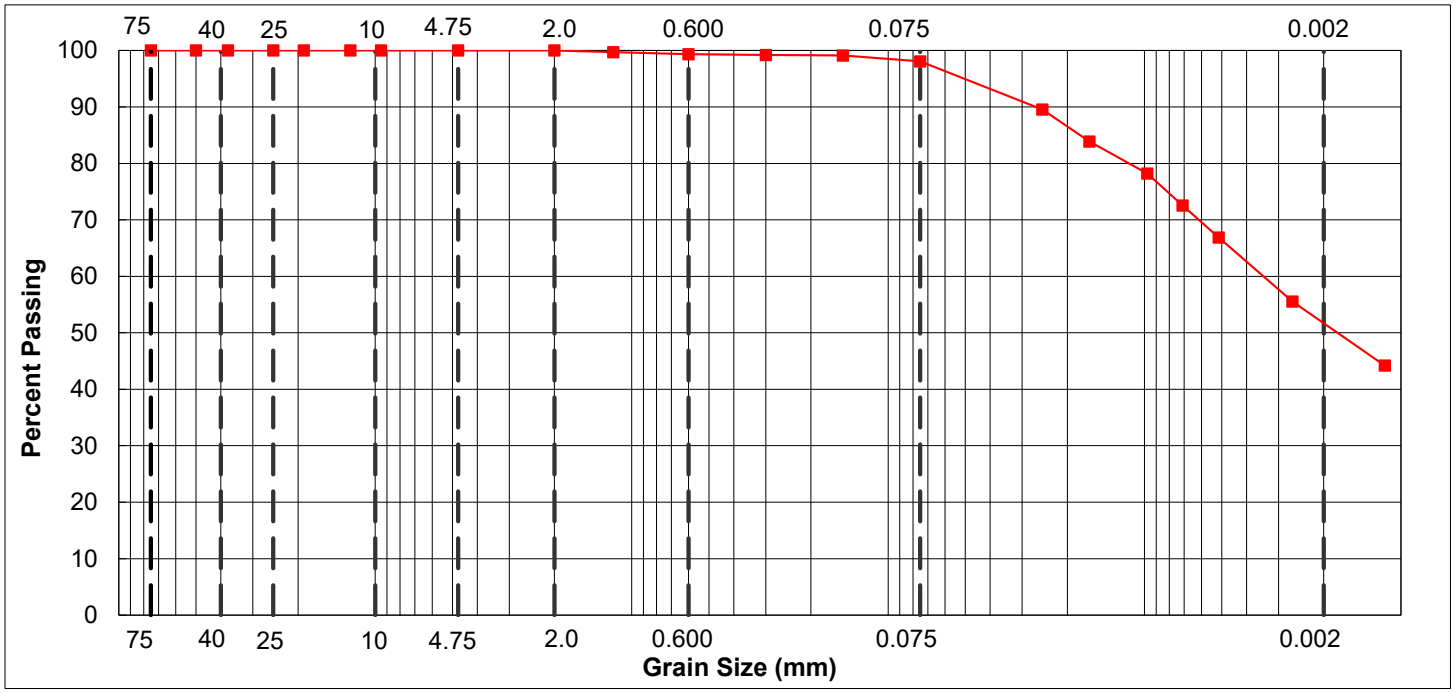
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	314AU6
Project No.:	1560-193-00	**Source:**	22BH314
Owner:	EID	**Sample Depth:**	4.3m
File No.:	GSA - 314AU6	**Date:**	20-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.3
75.0	100.0	0.300	99.2
50.0	100.0	0.150	99.1
37.5	100.0	0.075	98.1
25.0	100.0	0.0251	89.5
19.0	100.0	0.0164	83.9
12.5	100.0	0.0098	78.2
9.5	100.0	0.0071	72.5
4.75	100.0	0.0051	66.9
2.00	100.0	0.0027	55.5
1.180	99.7	0.0012	44.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.7	2.00 mm to 425 µm
Fine Sand	1.2	425 µm to 75 µm
Silt	46.4	75 µm to 2 µm
Clay	51.7	<2 µm



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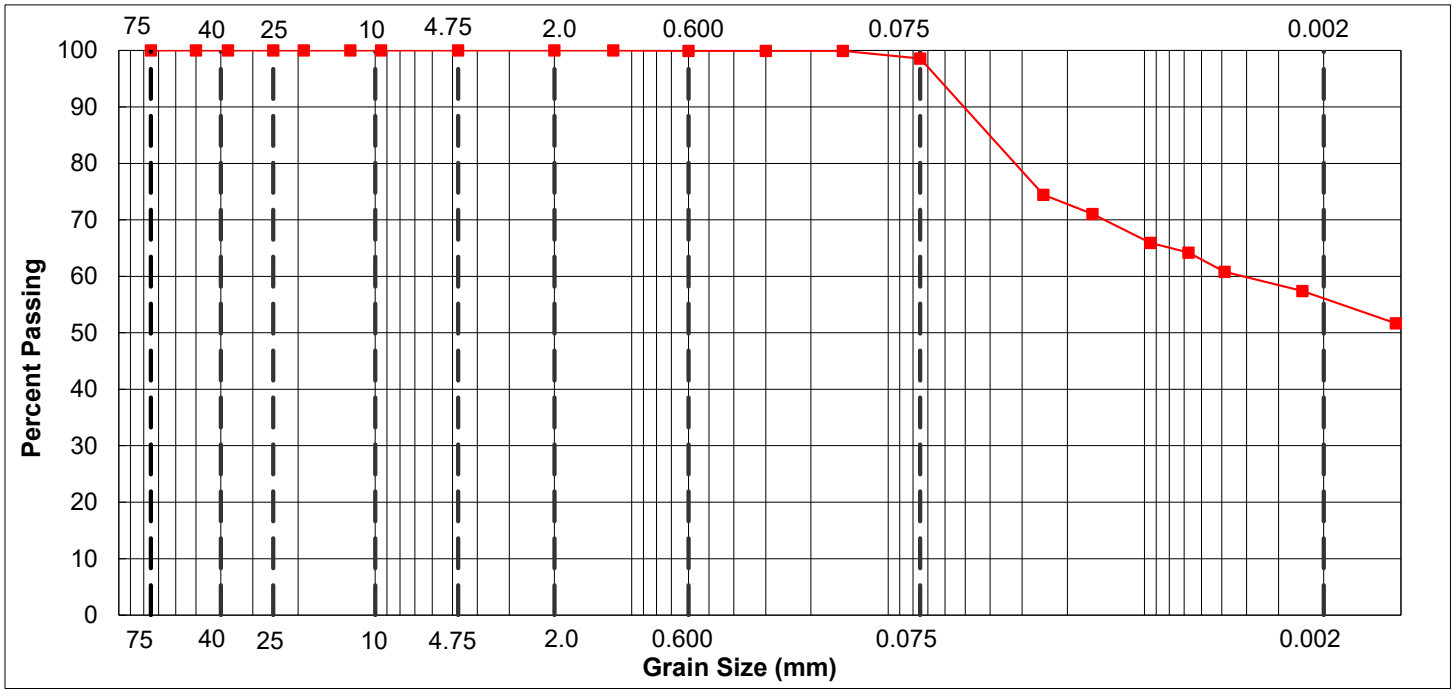
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	314RC4
Project No.:	1560-193-00	**Source:**	22CH314
Owner:	EID	**Sample Depth:**	7.6m
File No.:	GSA - 314RC4	**Date:**	13-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	98.6
25.0	100.0	0.0248	74.4
19.0	100.0	0.0160	71.0
12.5	100.0	0.0095	65.9
9.5	100.0	0.0067	64.2
4.75	100.0	0.0049	60.8
2.00	100.0	0.0024	57.4
1.180	100.0	0.0010	51.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	1.4	425 µm to 75 µm
Silt	42.5	75 µm to 2 µm
Clay	56.1	<2 µm



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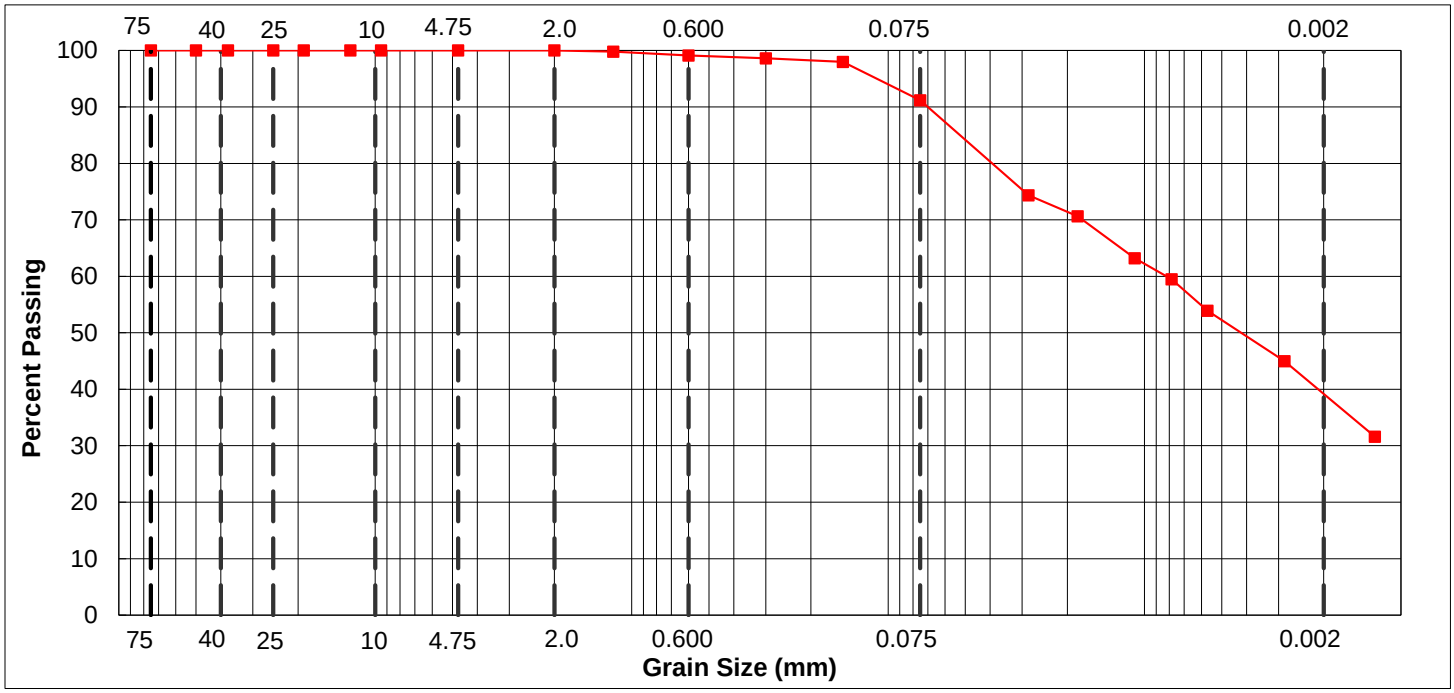
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	22BH315
Project No.:	1560-193-00	**Source:**	315AU6
Owner:	EID	**Sample Depth:**	4.3m
File No.:	GSA - 22BH315	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.1
75.0	100.0	0.300	98.6
50.0	100.0	0.150	98.0
37.5	100.0	0.075	91.2
25.0	100.0	0.0284	74.4
19.0	100.0	0.0182	70.6
12.5	100.0	0.0109	63.2
9.5	100.0	0.0078	59.5
4.75	100.0	0.0057	53.9
2.00	100.0	0.0028	45.0
1.180	99.8	0.0013	31.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.9	2.00 mm to 425 µm
Fine Sand	7.9	425 µm to 75 µm
Silt	52.0	75 µm to 2 µm
Clay	39.2	<2 µm



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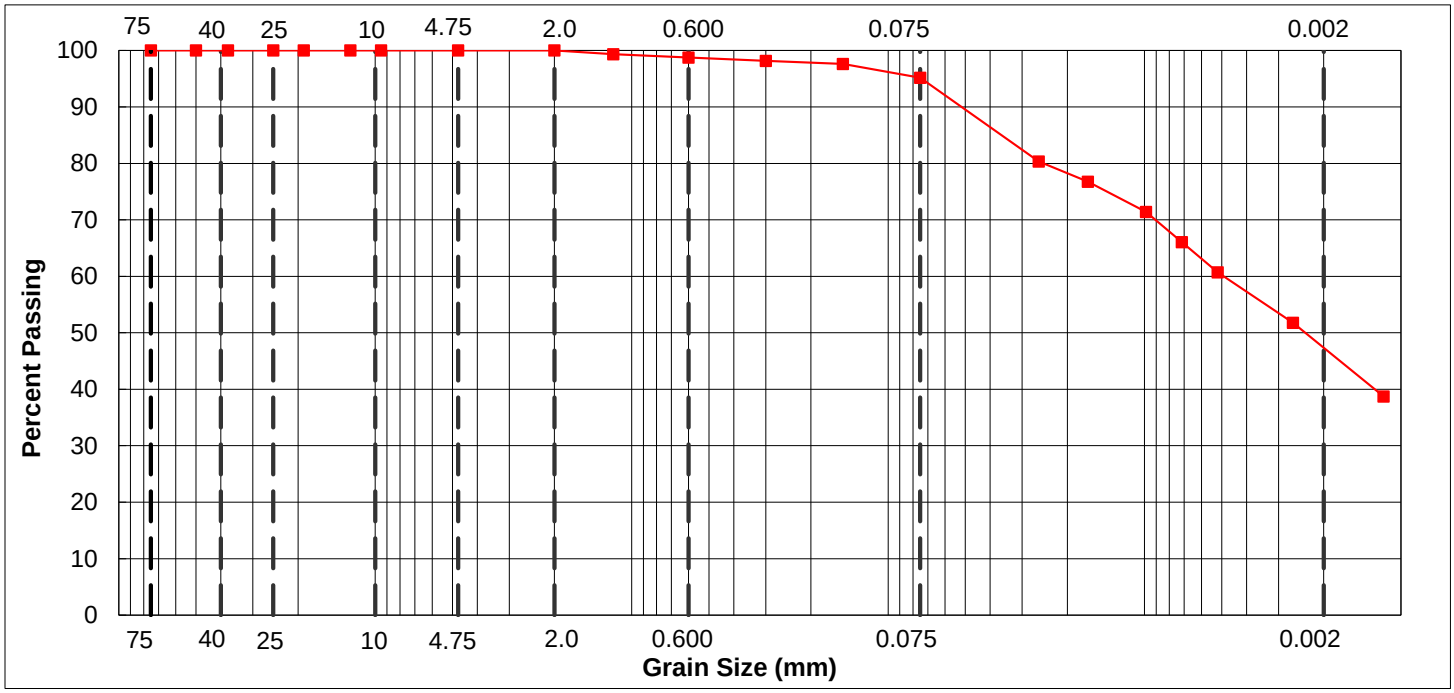
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	315UD1
Project No.:	1560-193-00	**Source:**	22CH315
Owner:	EID	**Sample Depth:**	5.7m
File No.:	GSA - 315UD1	**Test Date:**	23-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.7
75.0	100.0	0.300	98.1
50.0	100.0	0.150	97.6
37.5	100.0	0.075	95.2
25.0	100.0	0.0258	80.3
19.0	100.0	0.0166	76.8
12.5	100.0	0.0099	71.4
9.5	100.0	0.0072	66.1
4.75	100.0	0.0052	60.7
2.00	100.0	0.0026	51.8
1.180	99.4	0.0012	38.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.3	2.00 mm to 425 µm
Fine Sand	3.6	425 µm to 75 µm
Silt	47.8	75 µm to 2 µm
Clay	47.3	<2 µm



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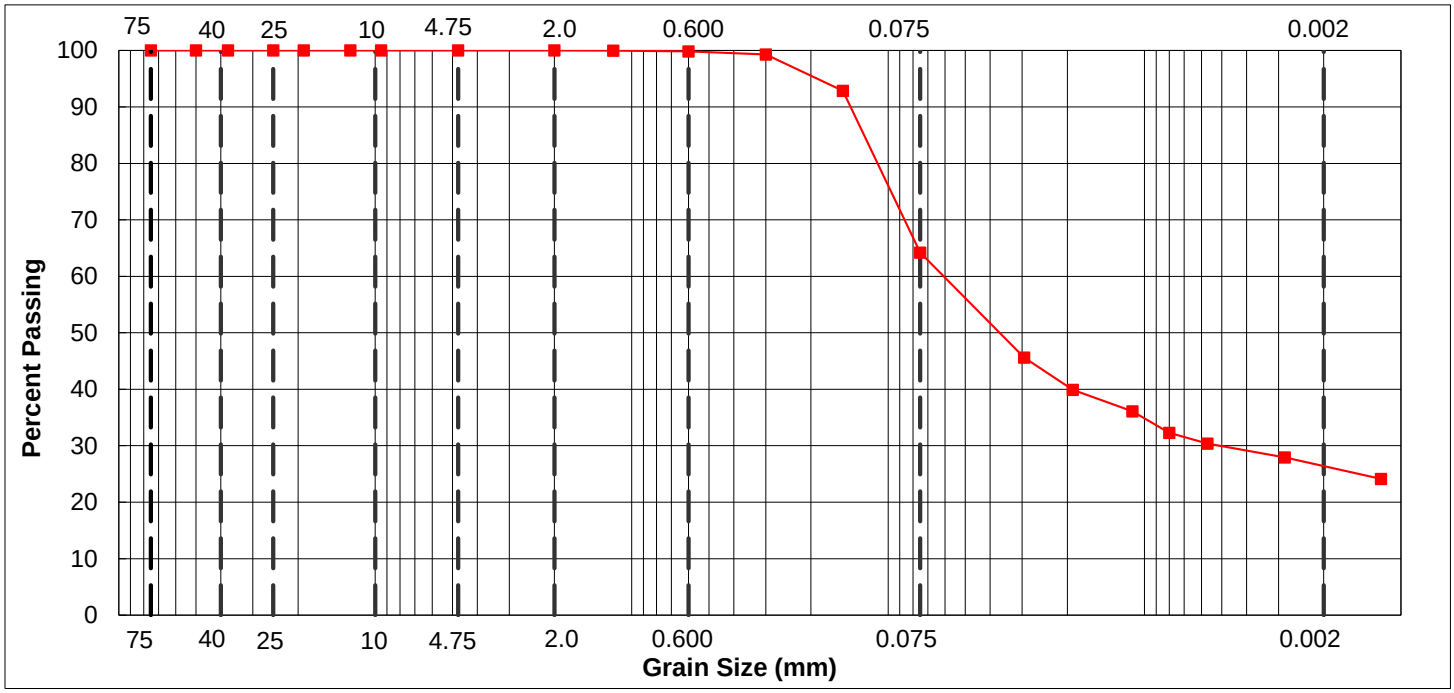
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	315UD3
Project No.:	1560-193-00	**Source:**	22CH315
Owner:	EID	**Sample Depth:**	9.7m
File No.:	GSA - 315UD3	**Test Date:**	29-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.3
50.0	100.0	0.150	92.9
37.5	100.0	0.075	64.2
25.0	100.0	0.0295	45.6
19.0	100.0	0.0191	39.9
12.5	100.0	0.0111	36.1
9.5	100.0	0.0080	32.3
4.75	100.0	0.0057	30.4
2.00	100.0	0.0028	27.9
1.180	100.0	0.0012	24.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	35.6	425 µm to 75 µm
Silt	37.8	75 µm to 2 µm
Clay	26.4	<2 µm



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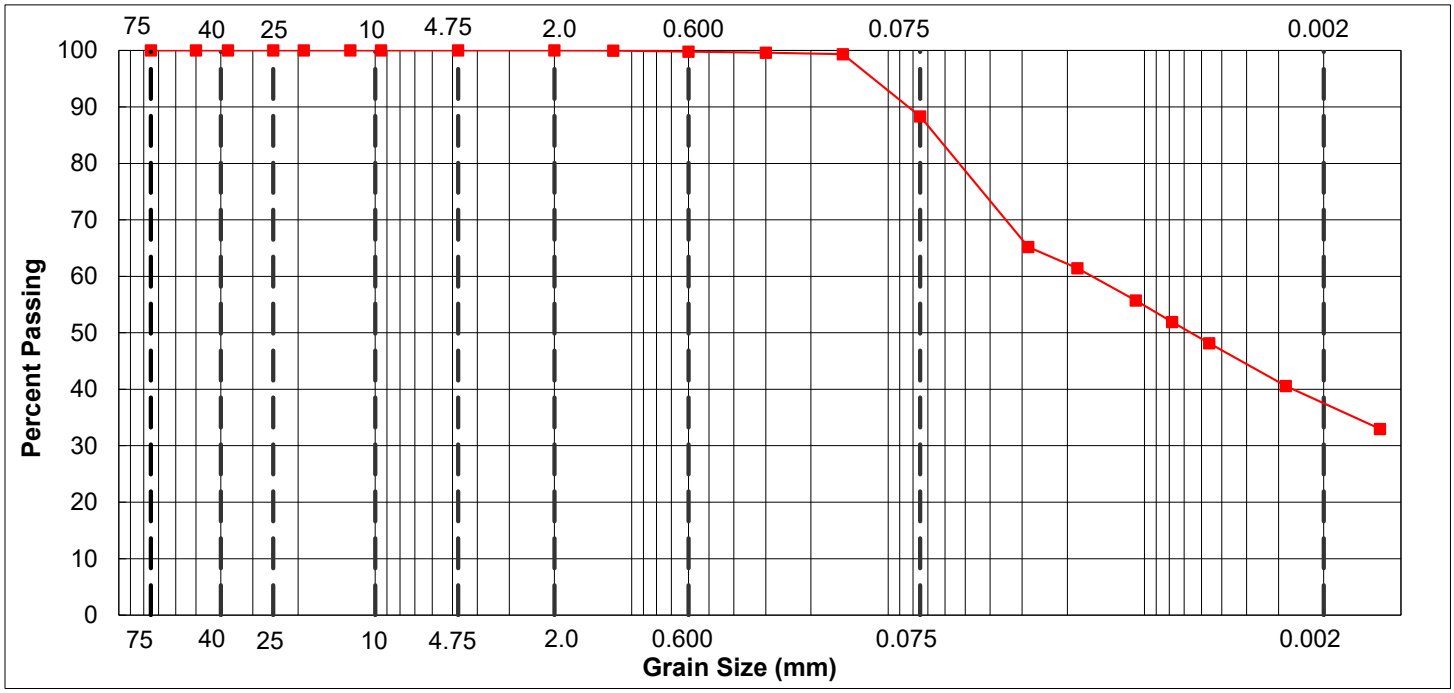
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	316AU9
Project No.:	1560-193-00	**Source:**	22BH316
Owner:	EID	**Sample Depth:**	6.1m
File No.:	GSA - 316AU9	**Date:**	20-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.6
50.0	100.0	0.150	99.3
37.5	100.0	0.075	88.3
25.0	100.0	0.0284	65.2
19.0	100.0	0.0183	61.4
12.5	100.0	0.0108	55.7
9.5	100.0	0.0078	51.9
4.75	100.0	0.0056	48.1
2.00	100.0	0.0028	40.6
1.180	100.0	0.0012	33.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	11.5	425 µm to 75 µm
Silt	50.8	75 µm to 2 µm
Clay	37.5	<2 µm



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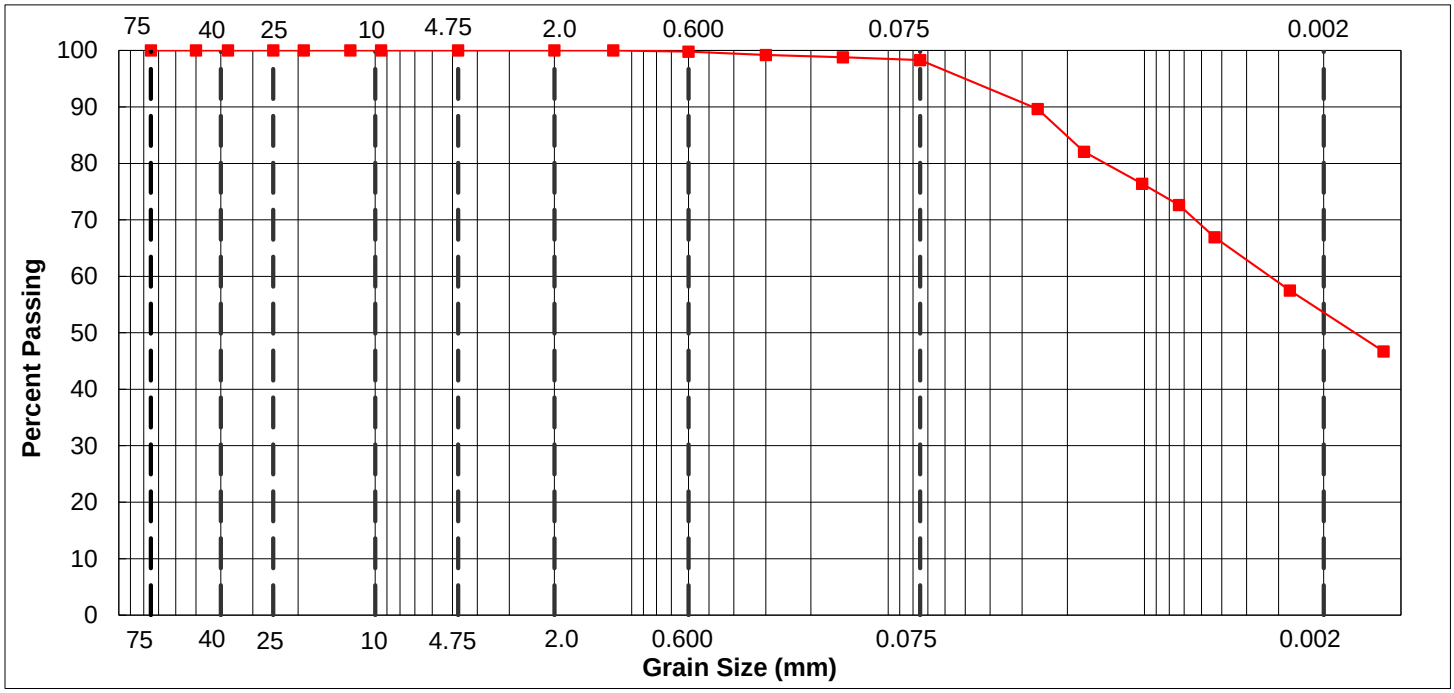
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	317AU1
Project No.:	1560-193-00	**Source:**	22BH317
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 317AU1	**Test Date:**	9-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.2
50.0	100.0	0.150	98.8
37.5	100.0	0.075	98.3
25.0	100.0	0.0261	89.6
19.0	100.0	0.0172	82.1
12.5	100.0	0.0102	76.4
9.5	100.0	0.0073	72.6
4.75	100.0	0.0053	66.9
2.00	100.0	0.0027	57.5
1.180	100.0	0.0012	46.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	1.5	425 µm to 75 µm
Silt	44.7	75 µm to 2 µm
Clay	53.6	<2 µm



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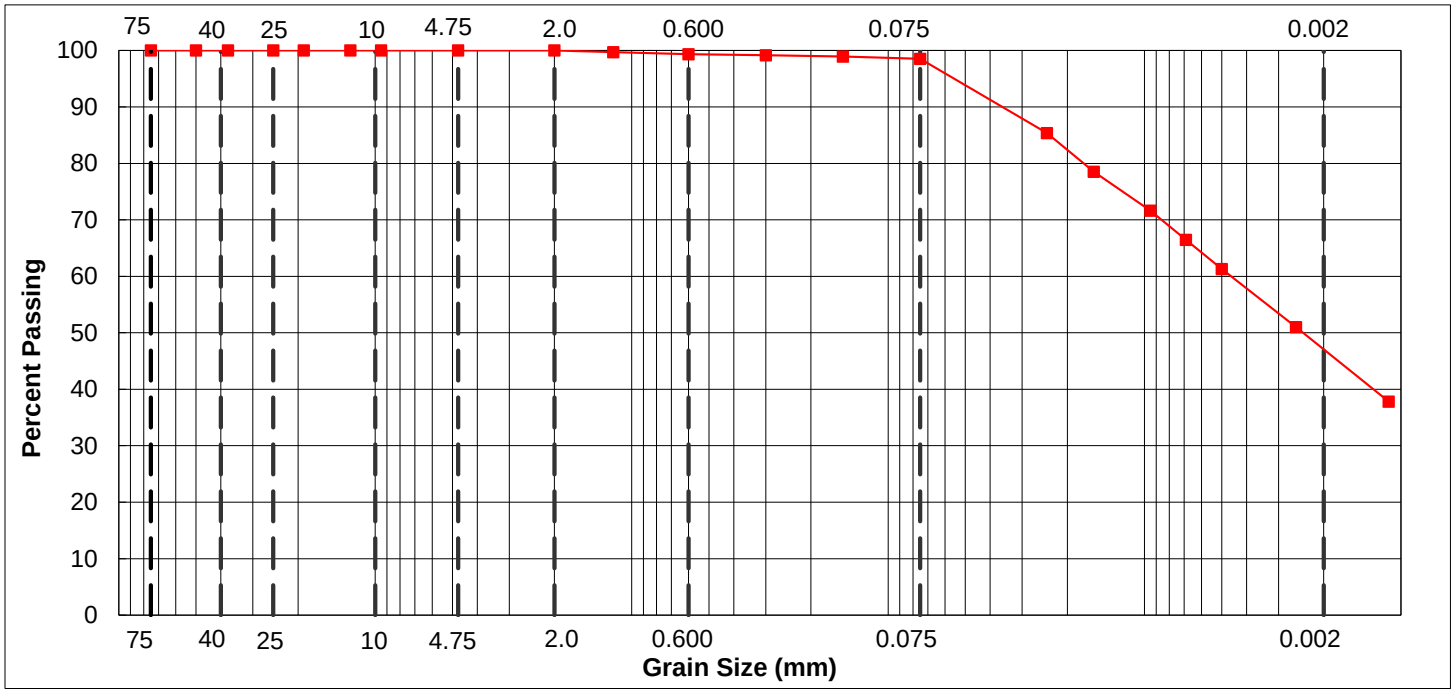
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	317AU2
Project No.:	1560-193-00	**Source:**	22CH317
Owner:	EID	**Sample Depth:**	1.1m
File No.:	GSA - 317AU2	**Test Date:**	30-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.3
75.0	100.0	0.300	99.2
50.0	100.0	0.150	98.9
37.5	100.0	0.075	98.5
25.0	100.0	0.0241	85.4
19.0	100.0	0.0158	78.5
12.5	100.0	0.0095	71.6
9.5	100.0	0.0069	66.5
4.75	100.0	0.0050	61.3
2.00	100.0	0.0026	51.0
1.180	99.7	0.0011	37.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.7	2.00 mm to 425 µm
Fine Sand	0.8	425 µm to 75 µm
Silt	51.5	75 µm to 2 µm
Clay	47.0	<2 µm



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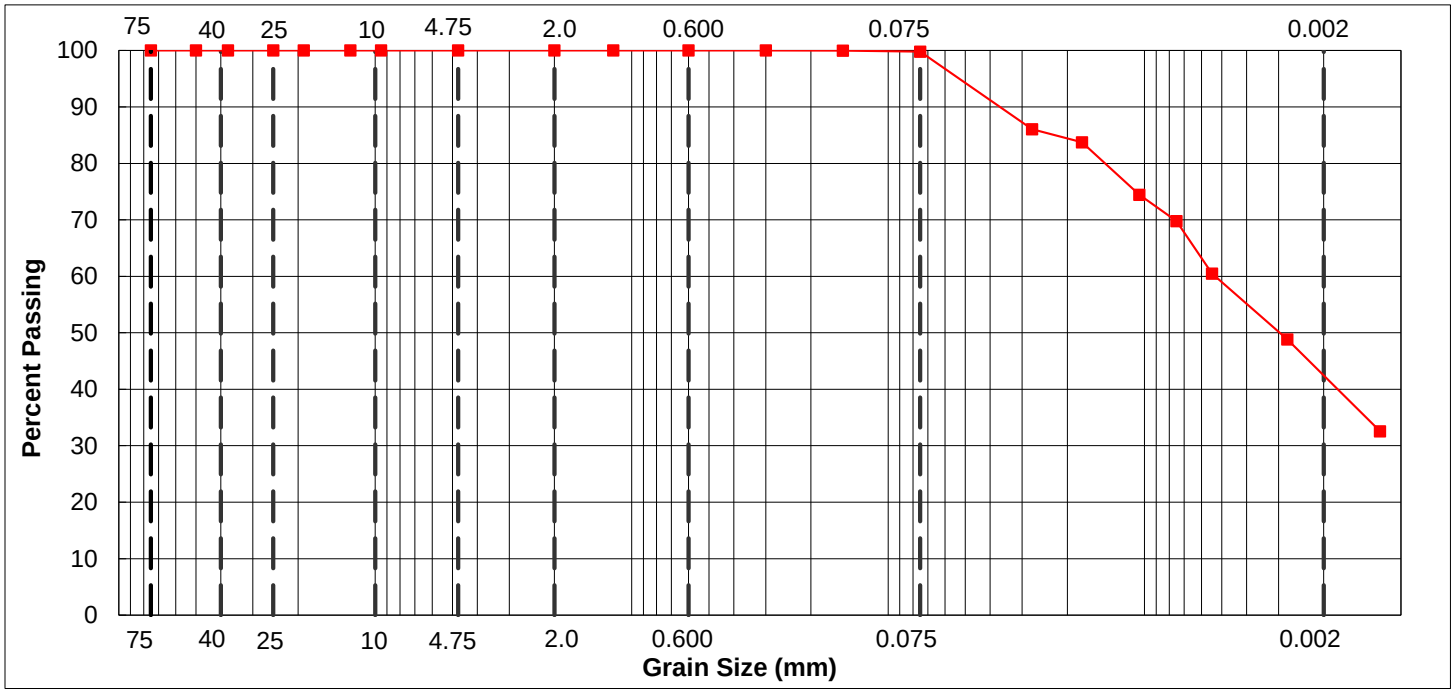
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	317RC5
Project No.:	1560-193-00	**Source:**	22CH317
Owner:	EID	**Sample Depth:**	10.8m
File No.:	GSA - 317RC5	**Test Date:**	2-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	100.0
37.5	100.0	0.075	99.8
25.0	100.0	0.0274	86.1
19.0	100.0	0.0175	83.8
12.5	100.0	0.0105	74.4
9.5	100.0	0.0075	69.8
4.75	100.0	0.0055	60.5
2.00	100.0	0.0028	48.9
1.180	100.0	0.0012	32.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	57.3	75 µm to 2 µm
Clay	42.5	<2 µm



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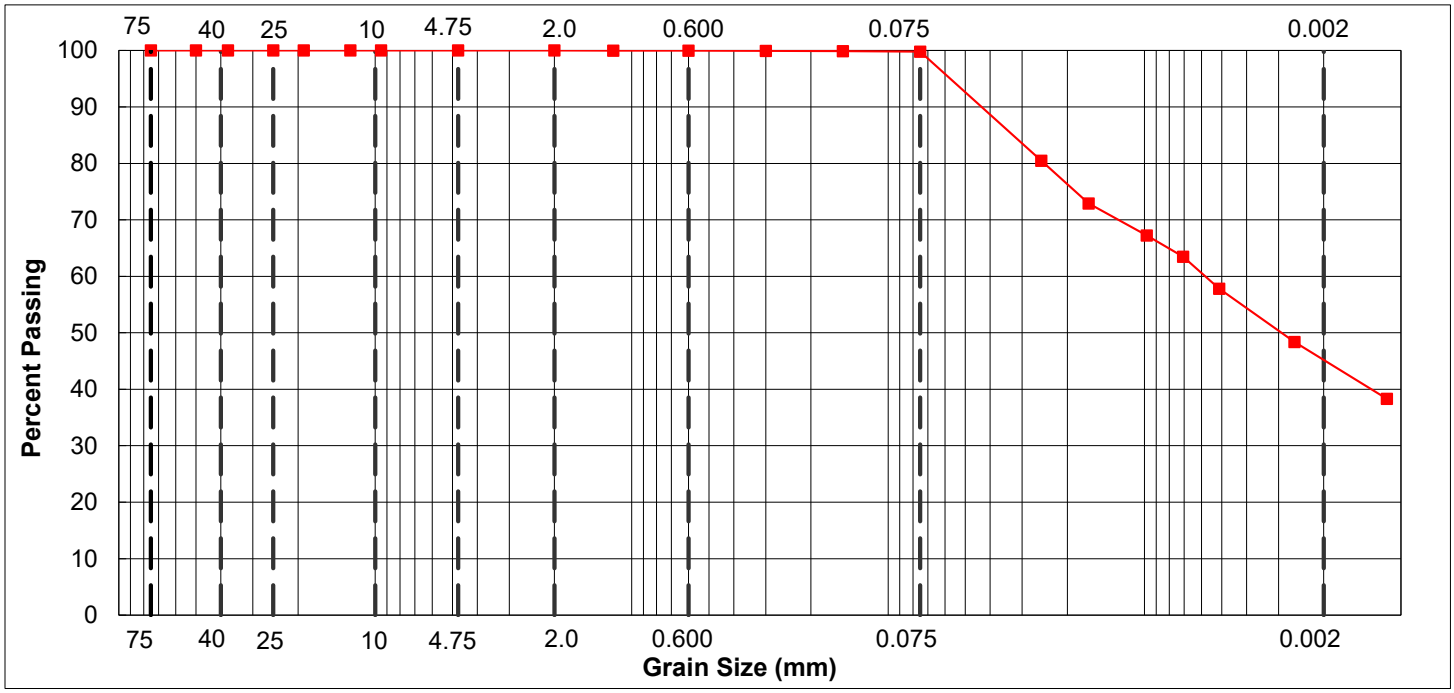
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	317RC6
Project No.:	1560-193-00	**Source:**	22CH317
Owner:	EID	**Sample Depth:**	12.3m
File No.:	GSA - 317RC6	**Test Date:**	17-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0253	80.5
19.0	100.0	0.0165	72.9
12.5	100.0	0.0098	67.3
9.5	100.0	0.0071	63.5
4.75	100.0	0.0051	57.8
2.00	100.0	0.0026	48.4
1.180	100.0	0.0011	38.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	54.6	75 µm to 2 µm
Clay	45.2	<2 µm



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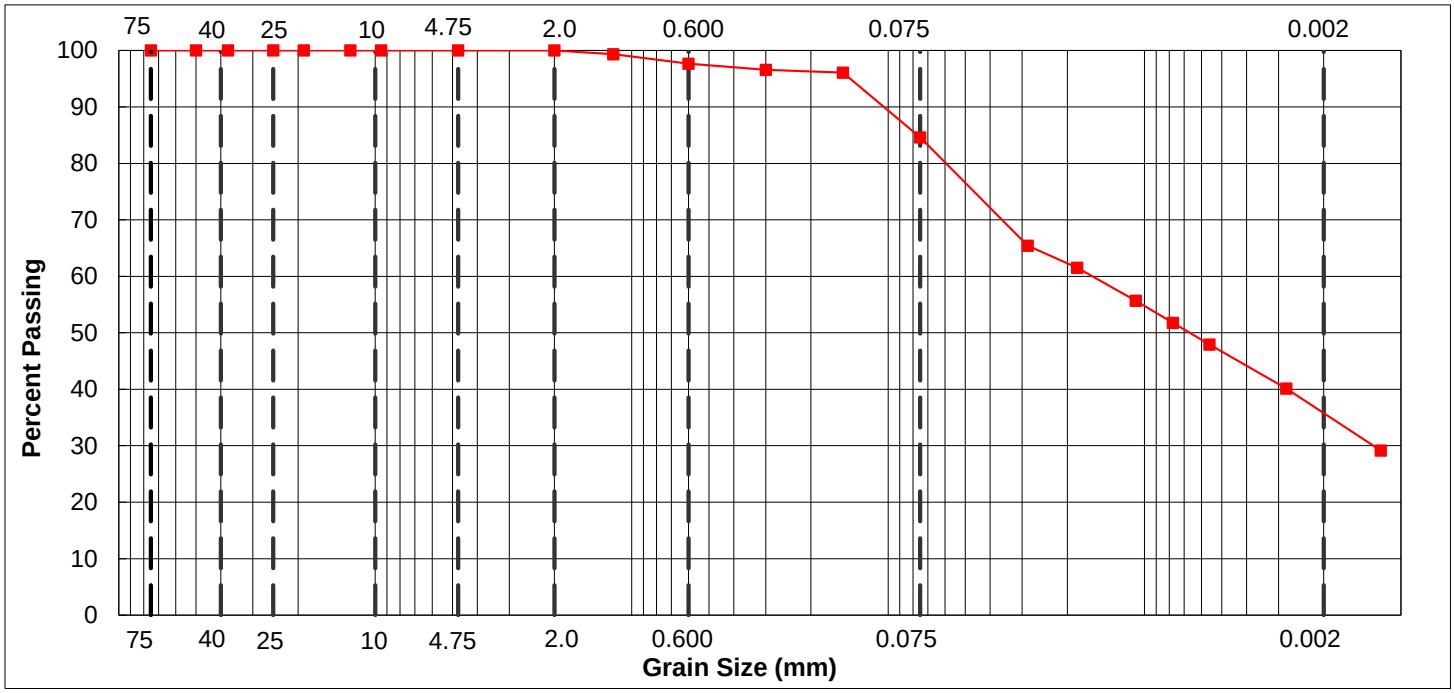
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	318SPT2
Project No.:	1560-193-00	**Source:**	22BH318
Owner:	EID	**Sample Depth:**	2.8m
File No.:	GSA - 318SPT2	**Test Date:**	30-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.6
75.0	100.0	0.300	96.6
50.0	100.0	0.150	96.1
37.5	100.0	0.075	84.6
25.0	100.0	0.0286	65.4
19.0	100.0	0.0183	61.5
12.5	100.0	0.0108	55.7
9.5	100.0	0.0078	51.8
4.75	100.0	0.0056	47.9
2.00	100.0	0.0028	40.1
1.180	99.4	0.0012	29.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.4	2.00 mm to 425 µm
Fine Sand	13.0	425 µm to 75 µm
Silt	48.8	75 µm to 2 µm
Clay	35.8	<2 µm



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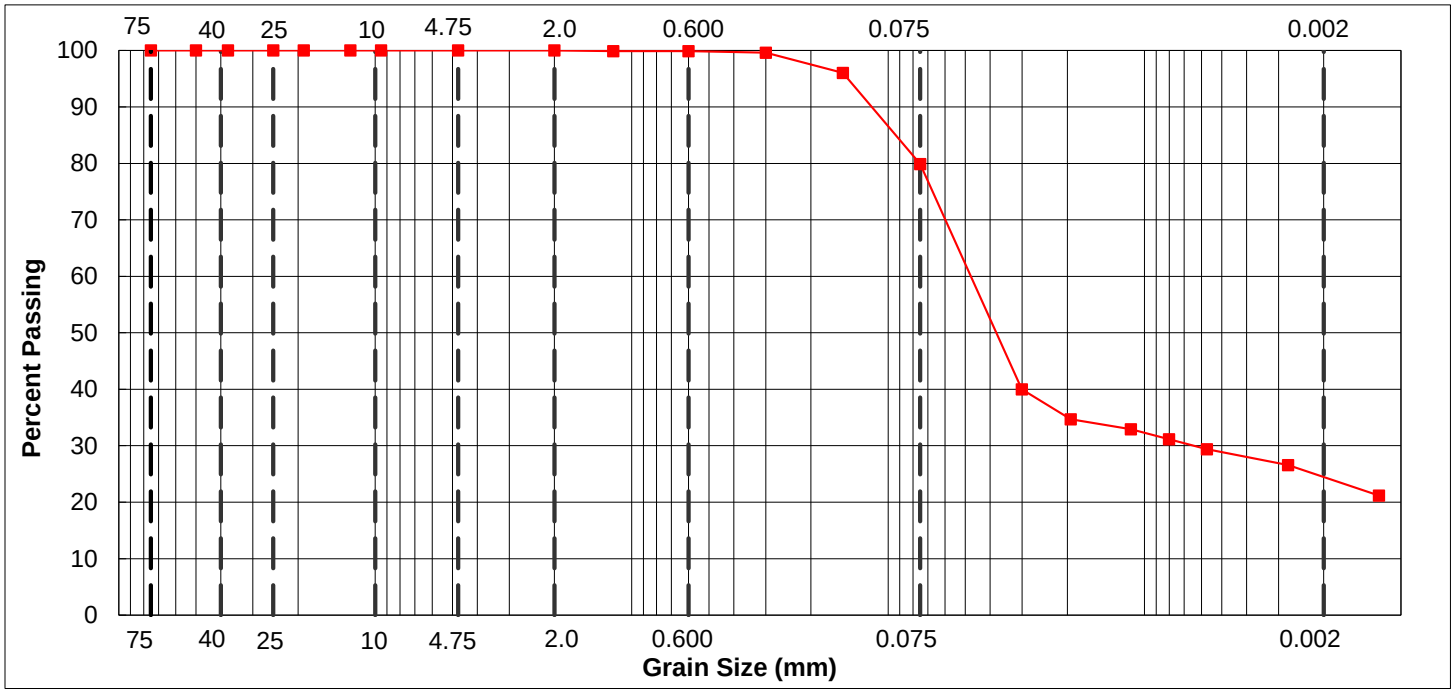
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	318UD3
Project No.:	1560-193-00	**Source:**	22CH318
Owner:	EID	**Sample Depth:**	11.78m
File No.:	GSA - 318UD3	**Test Date:**	1-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.6
50.0	100.0	0.150	96.0
37.5	100.0	0.075	79.9
25.0	100.0	0.0301	40.0
19.0	100.0	0.0194	34.7
12.5	100.0	0.0113	32.9
9.5	100.0	0.0080	31.2
4.75	100.0	0.0057	29.4
2.00	100.0	0.0028	26.6
1.180	99.9	0.0012	21.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	20.0	425 µm to 75 µm
Silt	55.5	75 µm to 2 µm
Clay	24.4	<2 µm



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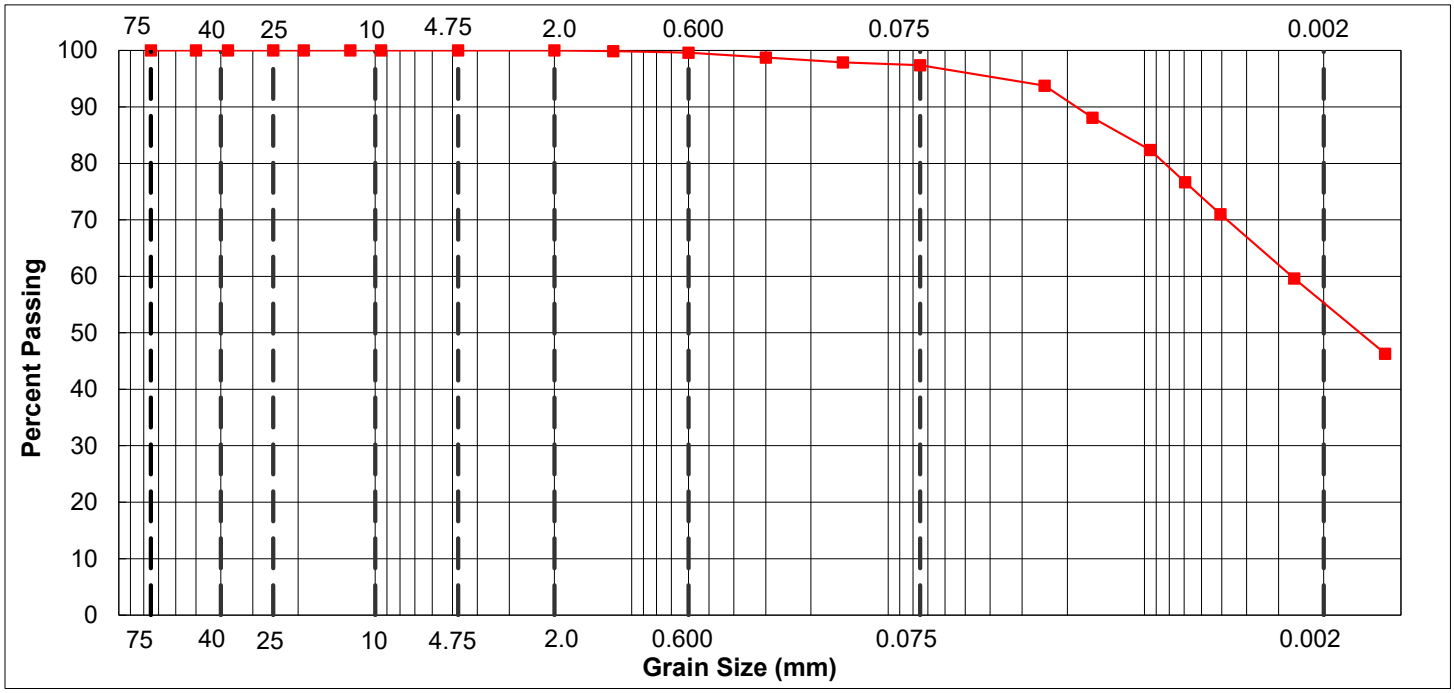
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	319AU5
Project No.:	1560-193-00	**Source:**	22BH319
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 319AU5	**Date:**	20-May-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	98.8
50.0	100.0	0.150	97.9
37.5	100.0	0.075	97.4
25.0	100.0	0.0245	93.8
19.0	100.0	0.0160	88.1
12.5	100.0	0.0095	82.4
9.5	100.0	0.0069	76.7
4.75	100.0	0.0051	71.0
2.00	100.0	0.0026	59.6
1.180	99.9	0.0012	46.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	2.2	425 µm to 75 µm
Silt	42.1	75 µm to 2 µm
Clay	55.3	<2 µm



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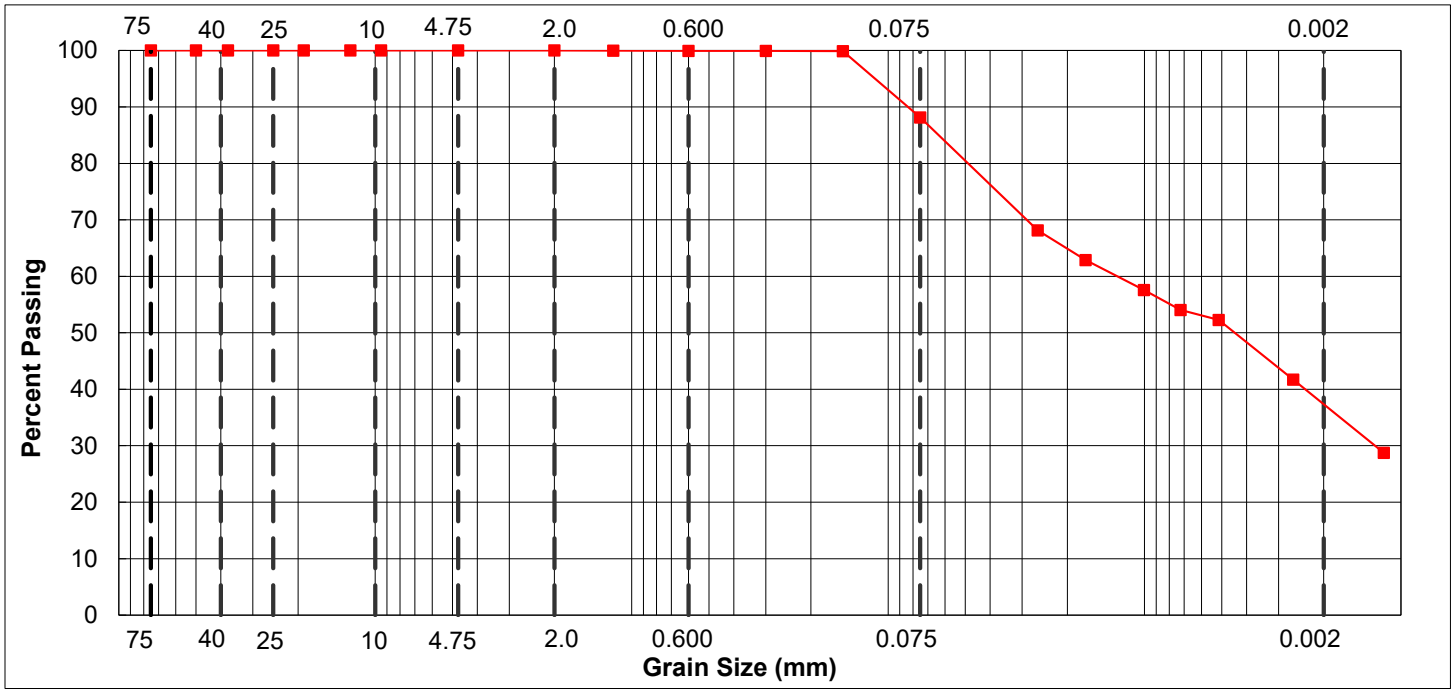
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	319RC1
Project No.:	1560-193-00	**Source:**	22CH319
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 319RC1	**Test Date:**	15-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	88.1
25.0	100.0	0.0261	68.2
19.0	100.0	0.0170	62.9
12.5	100.0	0.0100	57.6
9.5	100.0	0.0072	54.1
4.75	100.0	0.0051	52.3
2.00	100.0	0.0026	41.7
1.180	100.0	0.0012	28.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	11.8	425 µm to 75 µm
Silt	50.8	75 µm to 2 µm
Clay	37.3	<2 µm



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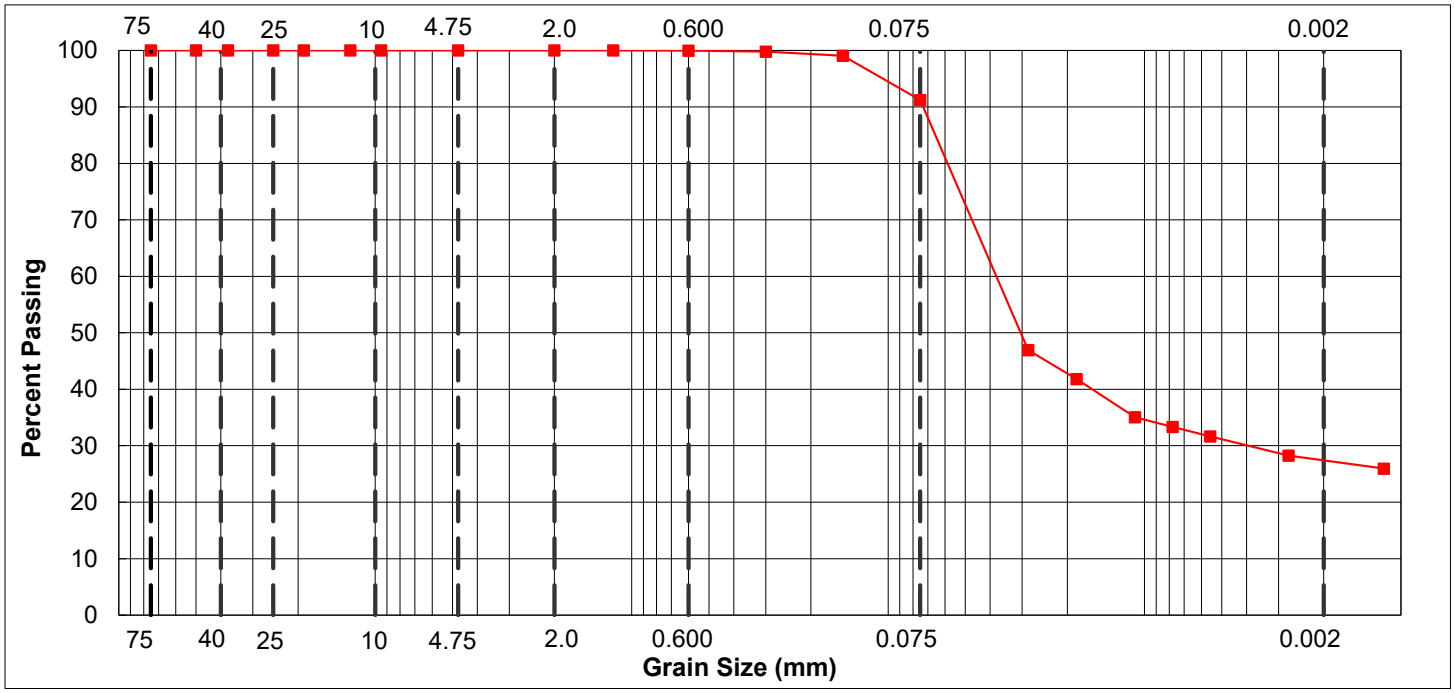
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	319RC6
Project No.:	1560-193-00	**Source:**	22CH319
Owner:	EID	**Sample Depth:**	13.2m
File No.:	GSA - 319RC6	**Test Date:**	13-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.1
37.5	100.0	0.075	91.2
25.0	100.0	0.0284	46.9
19.0	100.0	0.0184	41.8
12.5	100.0	0.0109	35.0
9.5	100.0	0.0078	33.3
4.75	100.0	0.0055	31.6
2.00	100.0	0.0027	28.3
1.180	100.0	0.0012	26.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	8.8	425 µm to 75 µm
Silt	63.8	75 µm to 2 µm
Clay	27.4	<2 µm



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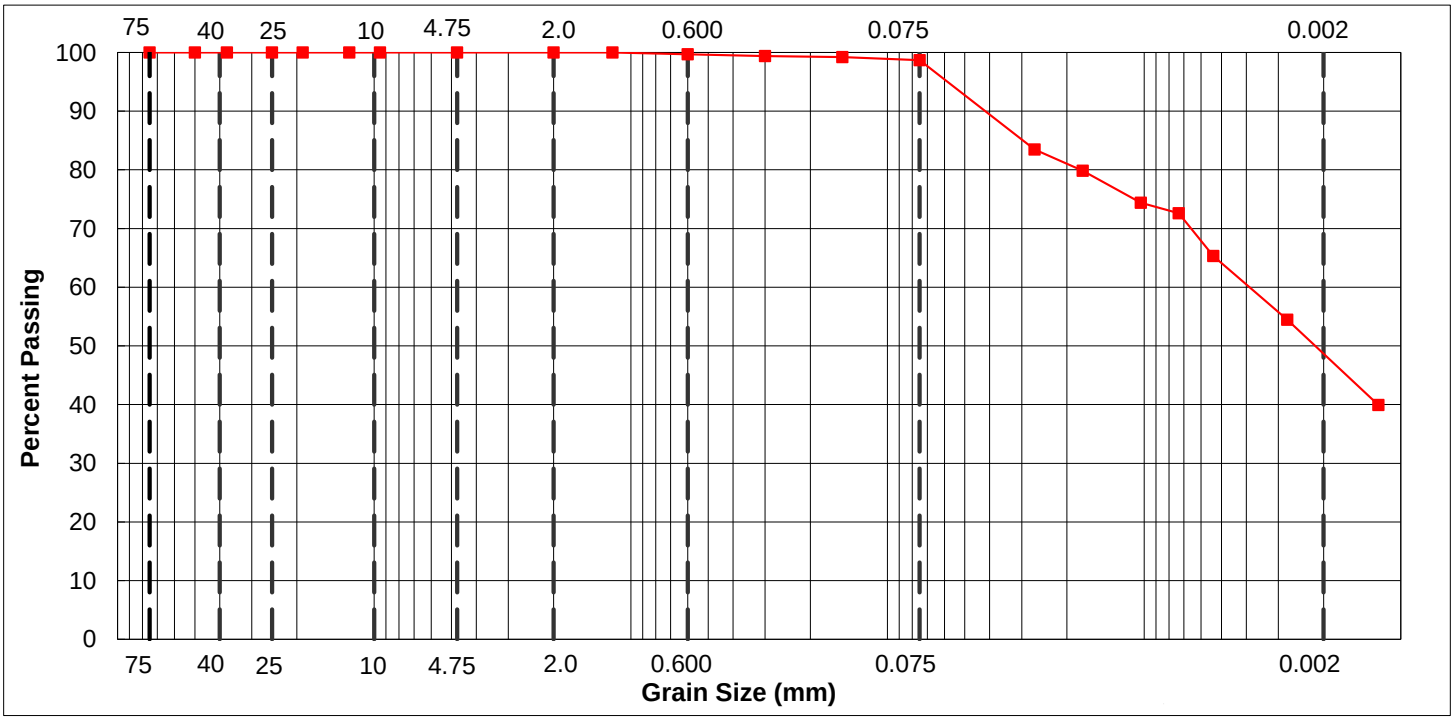
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	320AU3
Project No.:	1560-193-00	**Source:**	22BH320
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 320AU3	**Test Date:**	24-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.4
50.0	100.0	0.150	99.2
37.5	100.0	0.075	98.7
25.0	100.0	0.0267	83.5
19.0	100.0	0.0173	79.9
12.5	100.0	0.0103	74.4
9.5	100.0	0.0073	72.6
4.75	100.0	0.0054	65.3
2.00	100.0	0.0028	54.4
1.180	100.0	0.0012	39.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	1.0	425 µm to 75 µm
Silt	50.0	75 µm to 2 µm
Clay	48.7	<2 µm



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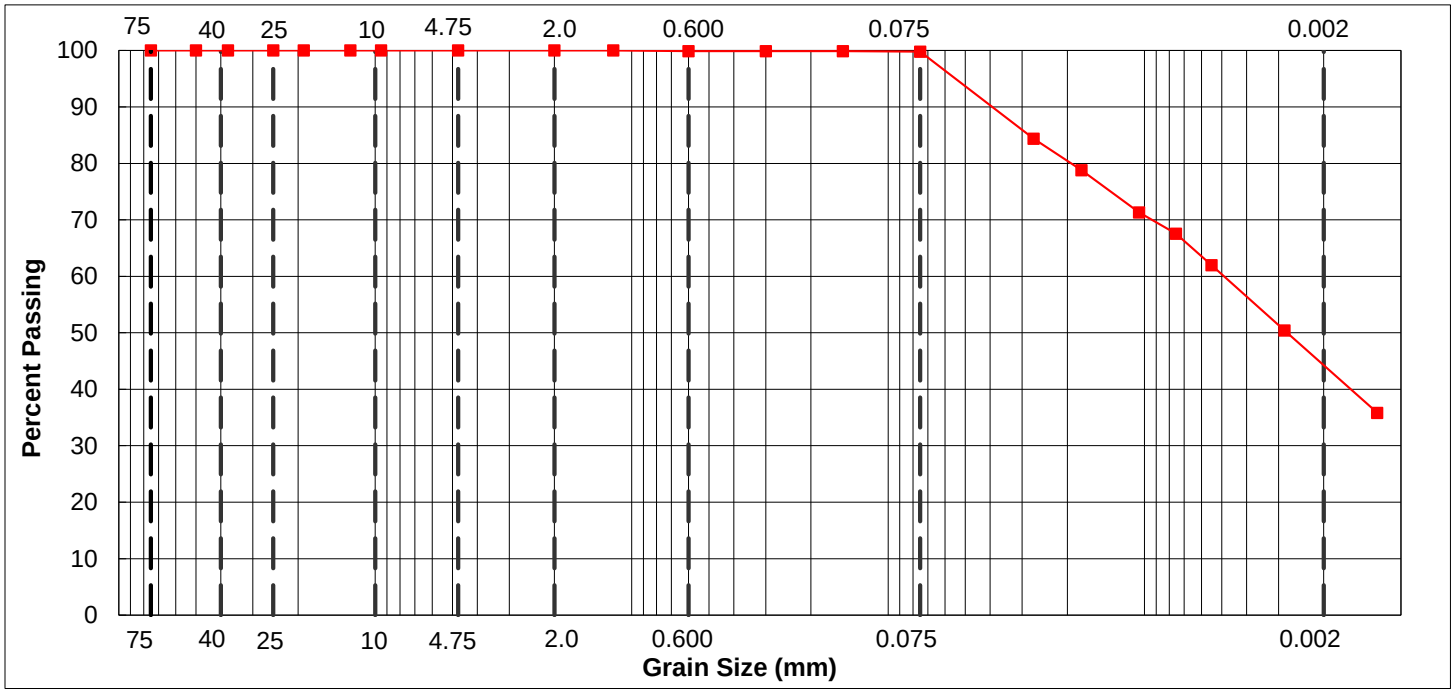
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	320AU9
Project No.:	1560-193-00	**Source:**	22BH320
Owner:	EID	**Sample Depth:**	6.7m
File No.:	GSA - 320AU9	**Test Date:**	27-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.8
25.0	100.0	0.0271	84.4
19.0	100.0	0.0176	78.8
12.5	100.0	0.0105	71.3
9.5	100.0	0.0076	67.6
4.75	100.0	0.0055	62.0
2.00	100.0	0.0028	50.4
1.180	100.0	0.0012	35.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	55.6	75 µm to 2 µm
Clay	44.2	<2 µm



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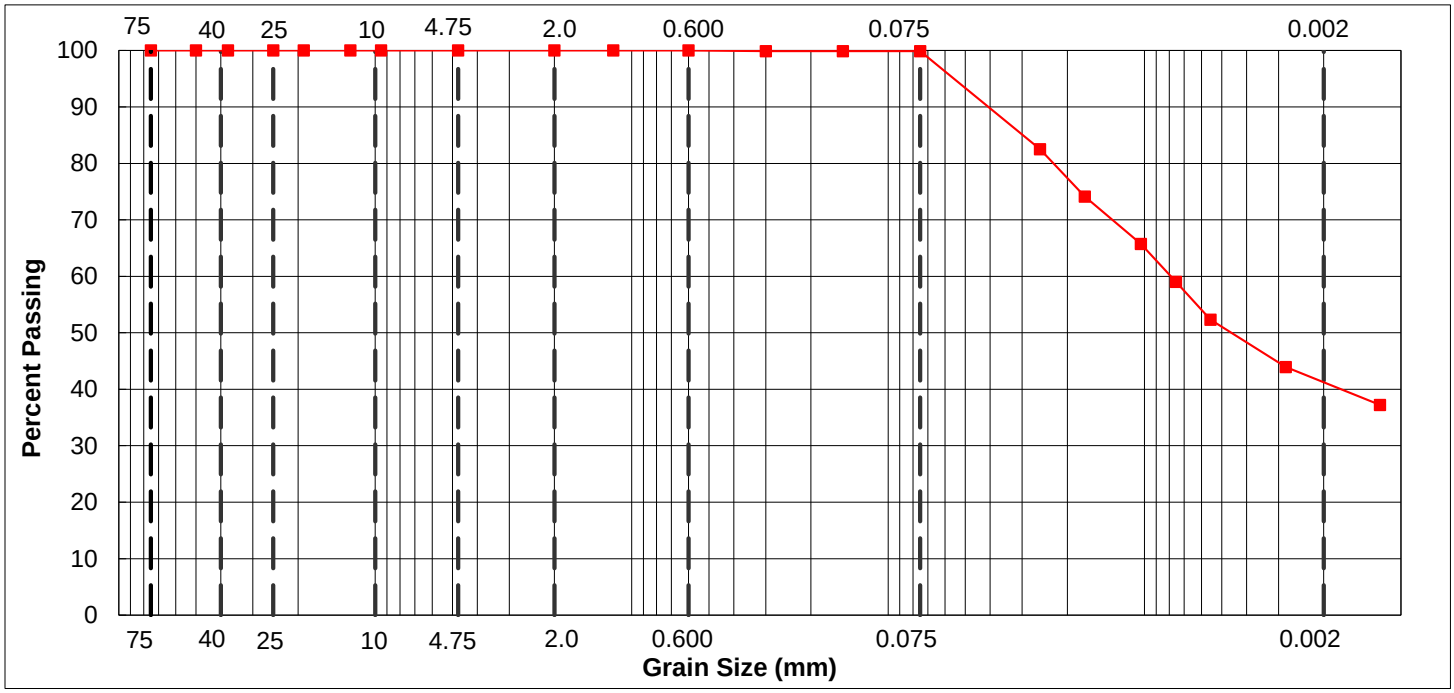
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	320RC4
Project No.:	1560-193-00	**Source:**	22CH320
Owner:	EID	**Sample Depth:**	8.5m
File No.:	GSA - 320RC4	**Test Date:**	16-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.9
25.0	100.0	0.0255	82.5
19.0	100.0	0.0171	74.1
12.5	100.0	0.0103	65.7
9.5	100.0	0.0076	59.0
4.75	100.0	0.0055	52.3
2.00	100.0	0.0028	43.9
1.180	100.0	0.0012	37.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.1	425 µm to 75 µm
Silt	58.7	75 µm to 2 µm
Clay	41.2	<2 µm



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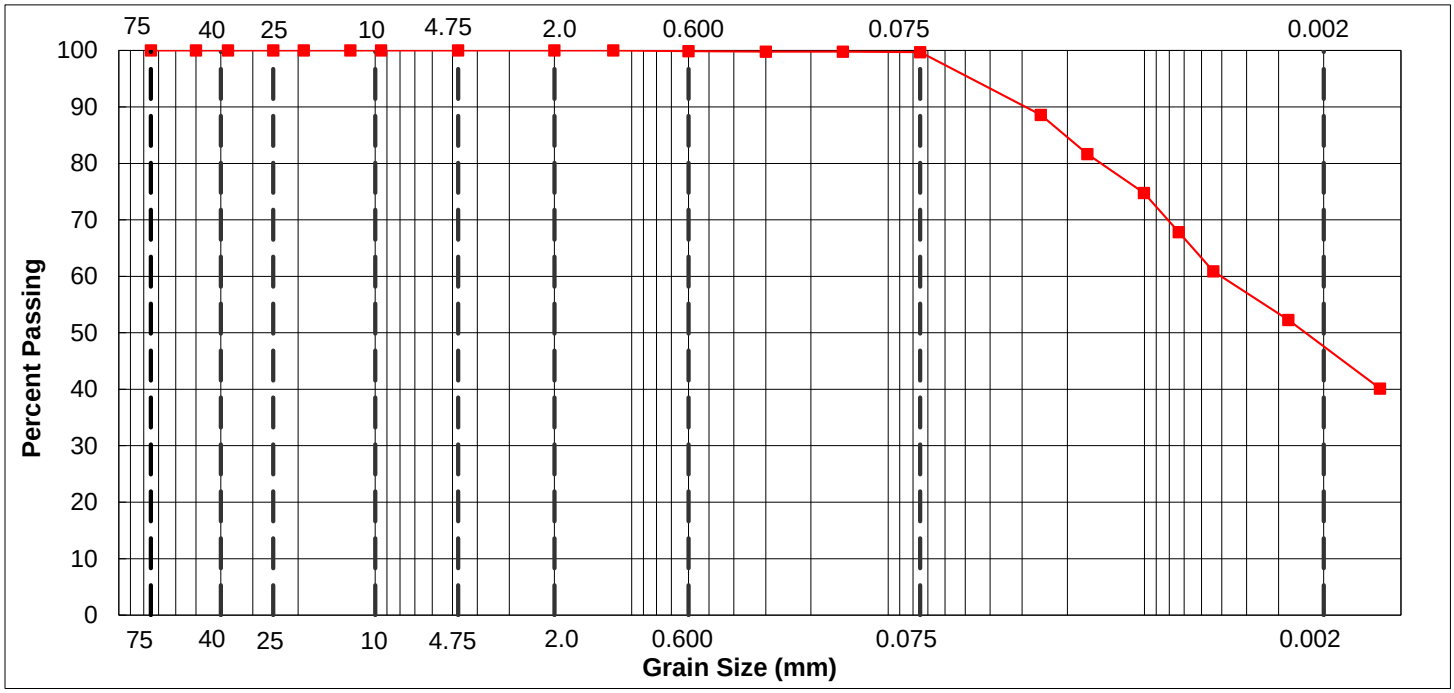
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	320RC12
Project No.:	1560-193-00	**Source:**	22CH320
Owner:	EID	**Sample Depth:**	20.0m
File No.:	GSA - 320RC12	**Test Date:**	14-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.7
25.0	100.0	0.0254	88.6
19.0	100.0	0.0167	81.7
12.5	100.0	0.0101	74.8
9.5	100.0	0.0074	67.8
4.75	100.0	0.0054	60.9
2.00	100.0	0.0027	52.3
1.180	100.0	0.0012	40.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	52.1	75 µm to 2 µm
Clay	47.6	<2 µm



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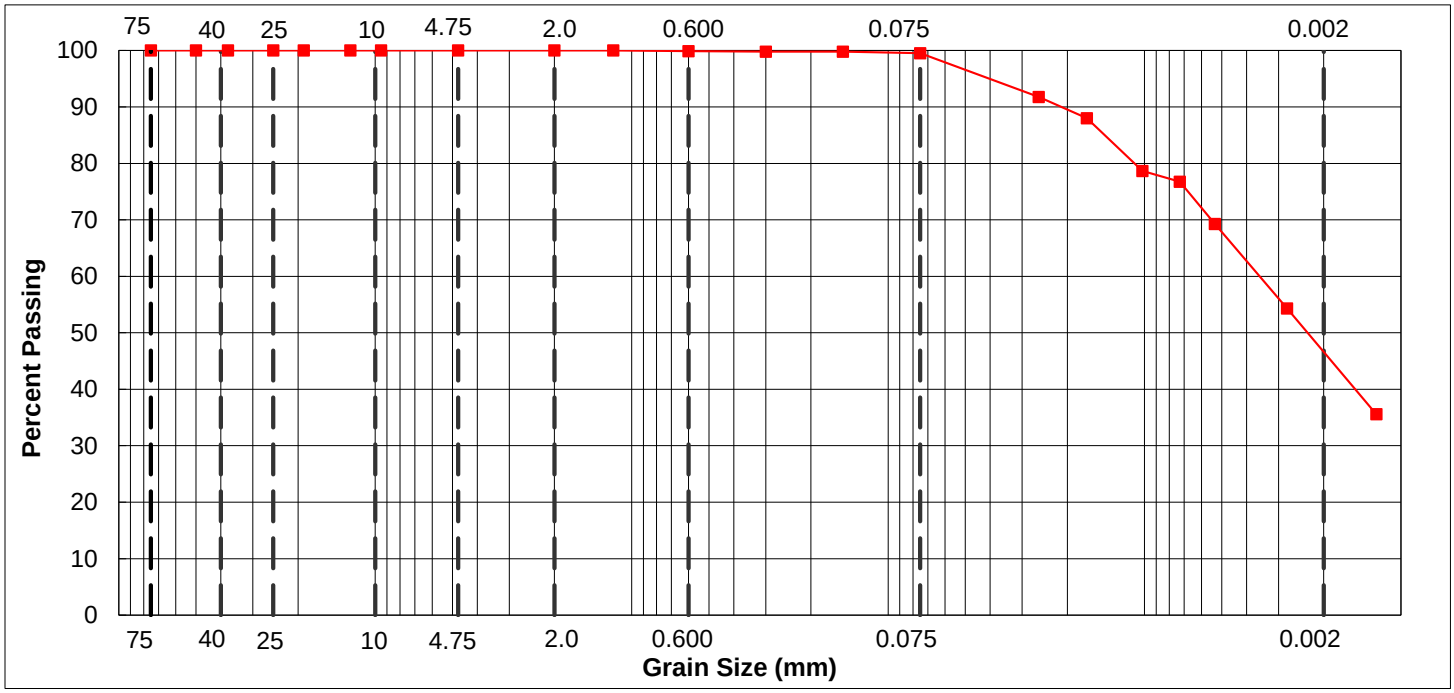
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	321RC3
Project No.:	1560-193-00	**Source:**	22CH321
Owner:	EID	**Sample Depth:**	6.1m
File No.:	GSA - 321RC3	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.5
25.0	100.0	0.0259	91.8
19.0	100.0	0.0168	88.0
12.5	100.0	0.0102	78.6
9.5	100.0	0.0073	76.8
4.75	100.0	0.0053	69.3
2.00	100.0	0.0028	54.3
1.180	100.0	0.0012	35.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	52.9	75 µm to 2 µm
Clay	46.6	<2 µm



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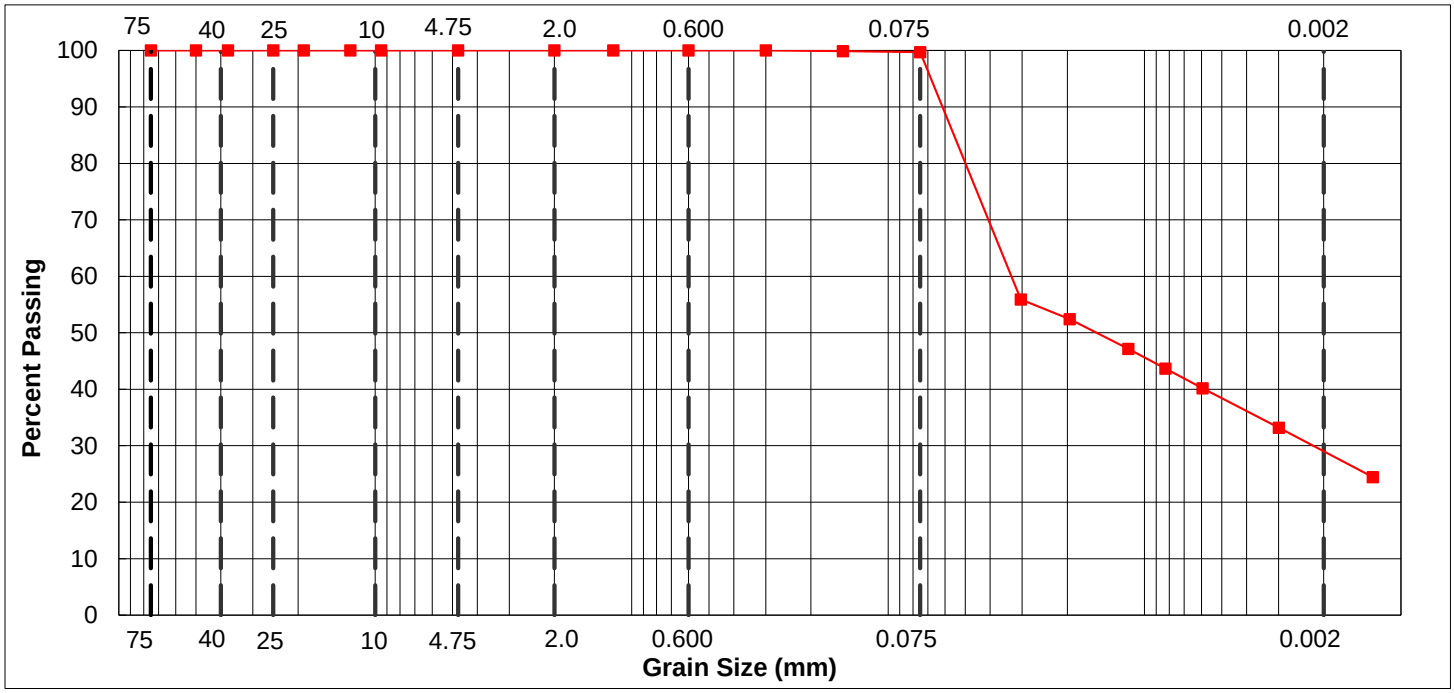
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	321RC7
Project No.:	1560-193-00	**Source:**	22CH321
Owner:	EID	**Sample Depth:**	13.1m
File No.:	GSA - 321RC7	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.7
25.0	100.0	0.0304	55.9
19.0	100.0	0.0196	52.4
12.5	100.0	0.0116	47.2
9.5	100.0	0.0083	43.7
4.75	100.0	0.0059	40.2
2.00	100.0	0.0030	33.2
1.180	100.0	0.0013	24.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	70.7	75 µm to 2 µm
Clay	29.0	<2 µm



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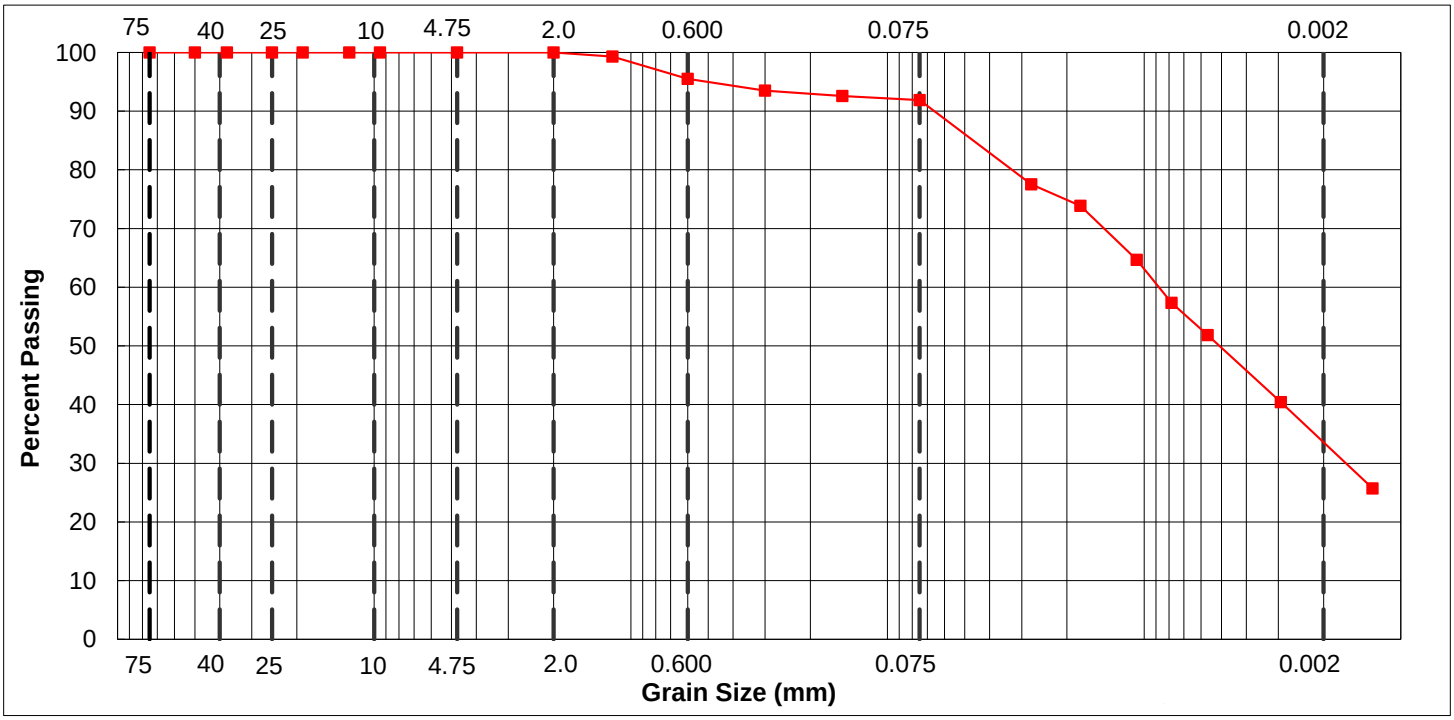
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	322RC2
Project No.:	1560-193-00	**Source:**	22CH322
Owner:	EID	**Sample Depth:**	4.9m
File No.:	GSA - 322RC2	**Test Date:**	25-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	95.5
75.0	100.0	0.300	93.5
50.0	100.0	0.150	92.6
37.5	100.0	0.075	91.9
25.0	100.0	0.0275	77.5
19.0	100.0	0.0177	73.9
12.5	100.0	0.0107	64.7
9.5	100.0	0.0078	57.3
4.75	100.0	0.0057	51.8
2.00	100.0	0.0029	40.4
1.180	99.3	0.0013	25.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	4.5	2.00 mm to 425 µm
Fine Sand	3.6	425 µm to 75 µm
Silt	58.3	75 µm to 2 µm
Clay	33.6	<2 µm



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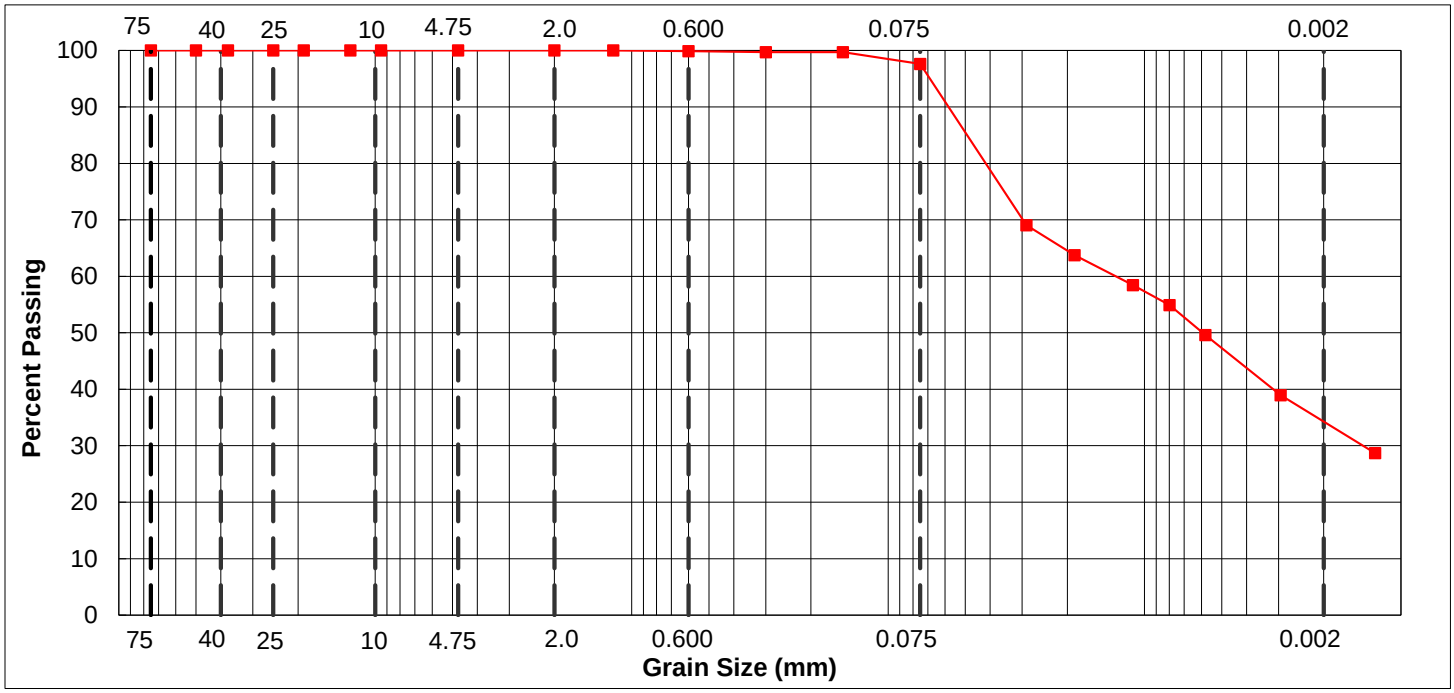
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	322RC8
Project No.:	1560-193-00	**Source:**	22BH322
Owner:	EID	**Sample Depth:**	14.0m
File No.:	GSA - 322RC8	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.7
50.0	100.0	0.150	99.7
37.5	100.0	0.075	97.6
25.0	100.0	0.0288	69.1
19.0	100.0	0.0187	63.8
12.5	100.0	0.0111	58.4
9.5	100.0	0.0080	54.9
4.75	100.0	0.0058	49.6
2.00	100.0	0.0029	39.0
1.180	100.0	0.0013	28.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	2.3	425 µm to 75 µm
Silt	63.3	75 µm to 2 µm
Clay	34.3	<2 µm



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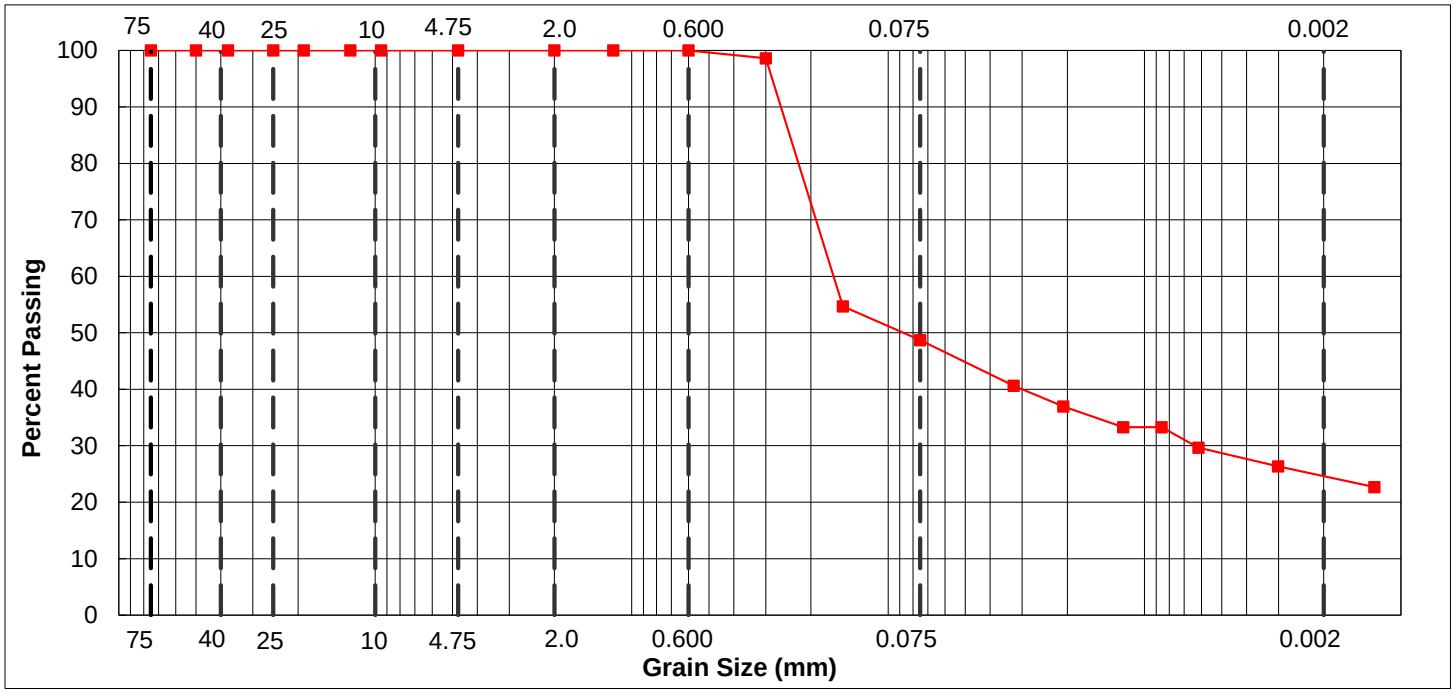
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	323AU2
Project No.:	1560-193-00	**Source:**	22CH323
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 323AU2	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	98.6
50.0	100.0	0.150	54.7
37.5	100.0	0.075	48.7
25.0	100.0	0.0324	40.6
19.0	100.0	0.0207	37.0
12.5	100.0	0.0121	33.3
9.5	100.0	0.0086	33.3
4.75	100.0	0.0062	29.6
2.00	100.0	0.0030	26.3
1.180	100.0	0.0013	22.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	51.3	425 µm to 75 µm
Silt	24.1	75 µm to 2 µm
Clay	24.6	<2 µm



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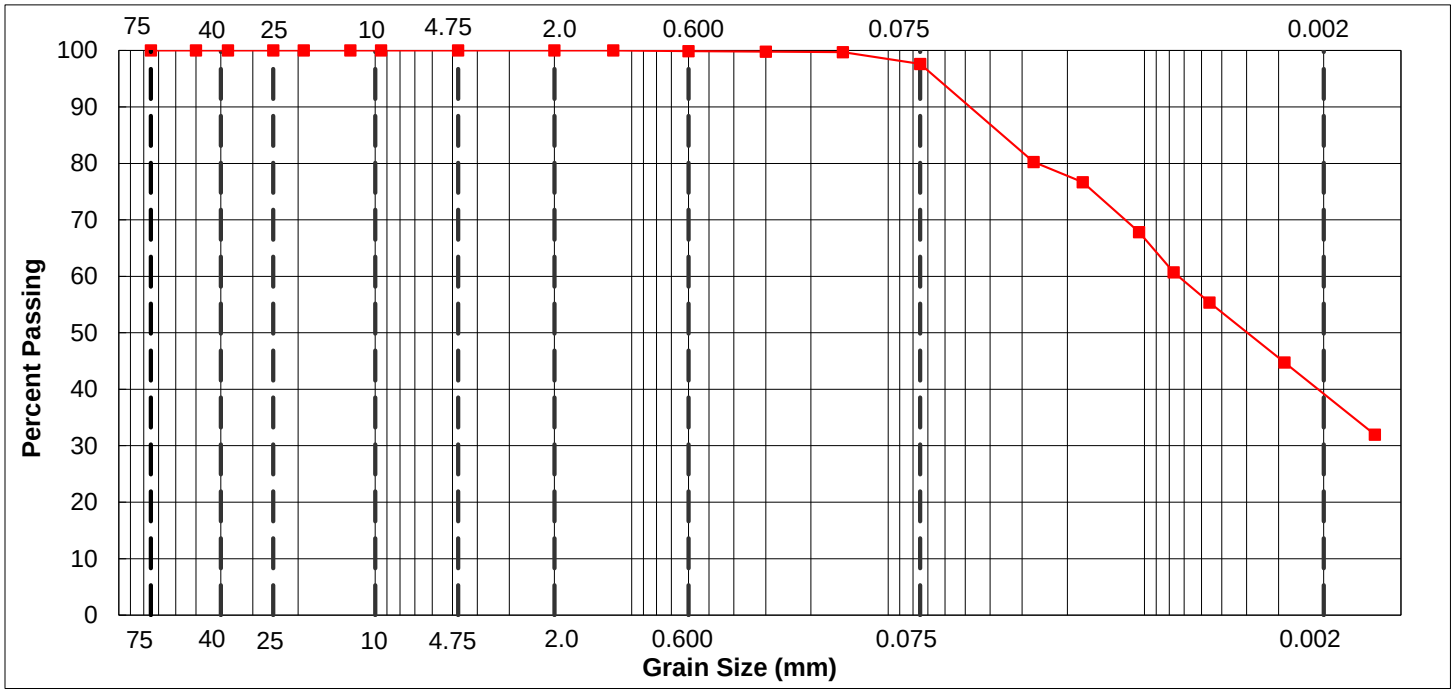
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	323RC3
Project No.:	1560-193-00	**Source:**	22CH323
Owner:	EID	**Sample Depth:**	7.3m
File No.:	GSA - 323RC3	**Test Date:**	16-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.7
37.5	100.0	0.075	97.6
25.0	100.0	0.0271	80.2
19.0	100.0	0.0174	76.7
12.5	100.0	0.0105	67.8
9.5	100.0	0.0077	60.7
4.75	100.0	0.0056	55.4
2.00	100.0	0.0028	44.7
1.180	100.0	0.0013	32.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	2.3	425 µm to 75 µm
Silt	58.4	75 µm to 2 µm
Clay	39.2	<2 µm



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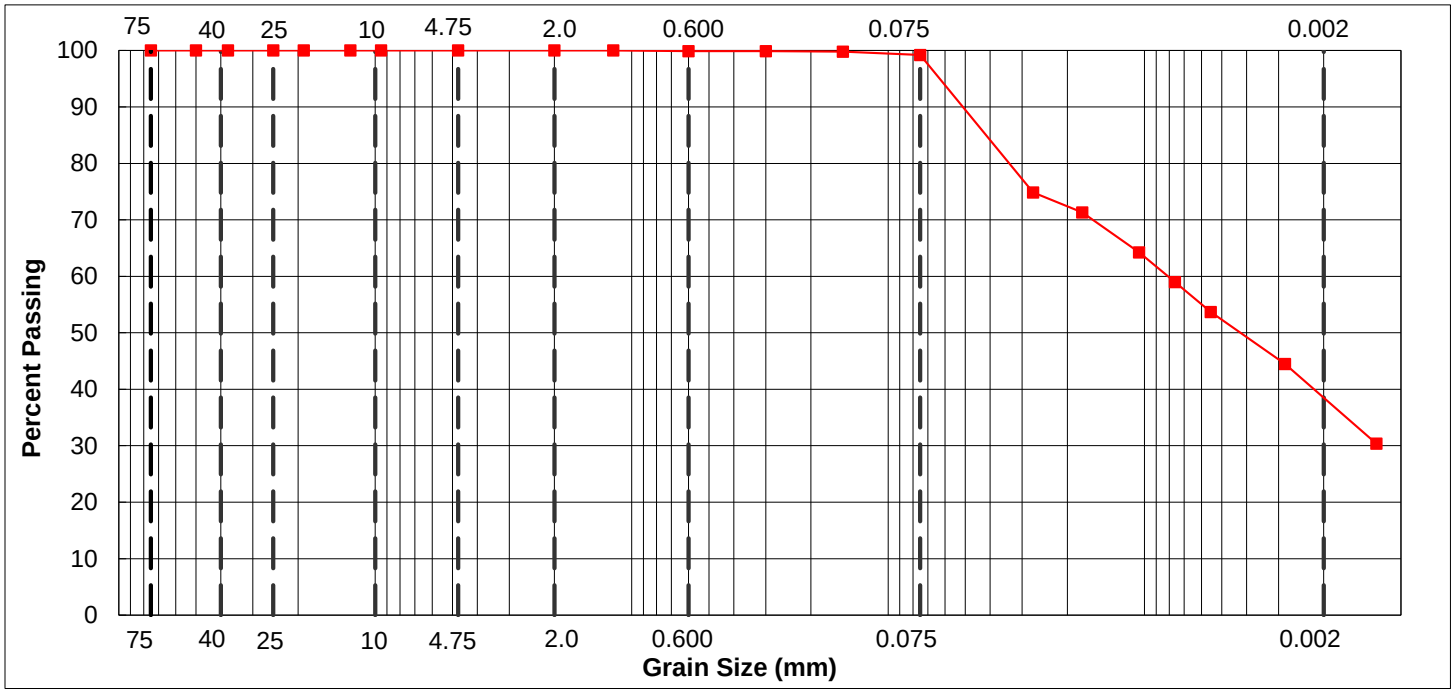
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	323RC8
Project No.:	1560-193-00	**Source:**	22CH323
Owner:	EID	**Sample Depth:**	13.9m
File No.:	GSA - 323RC8	**Test Date:**	14-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.2
25.0	100.0	0.0272	74.9
19.0	100.0	0.0175	71.3
12.5	100.0	0.0105	64.3
9.5	100.0	0.0076	59.0
4.75	100.0	0.0055	53.7
2.00	100.0	0.0028	44.5
1.180	100.0	0.0012	30.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.7	425 µm to 75 µm
Silt	60.7	75 µm to 2 µm
Clay	38.5	<2 µm



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SIEVE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	319AU2
Project No.:	1560-193-00	**Source:**	22BH319
Owner:	EID	**Sample By:**	Cody Braun
File No.:	SA - 01	**Date:**	26-May-22

Tested in accordance with ASTM C117, C136, C702, D5821(Size Analysis of Aggregates)

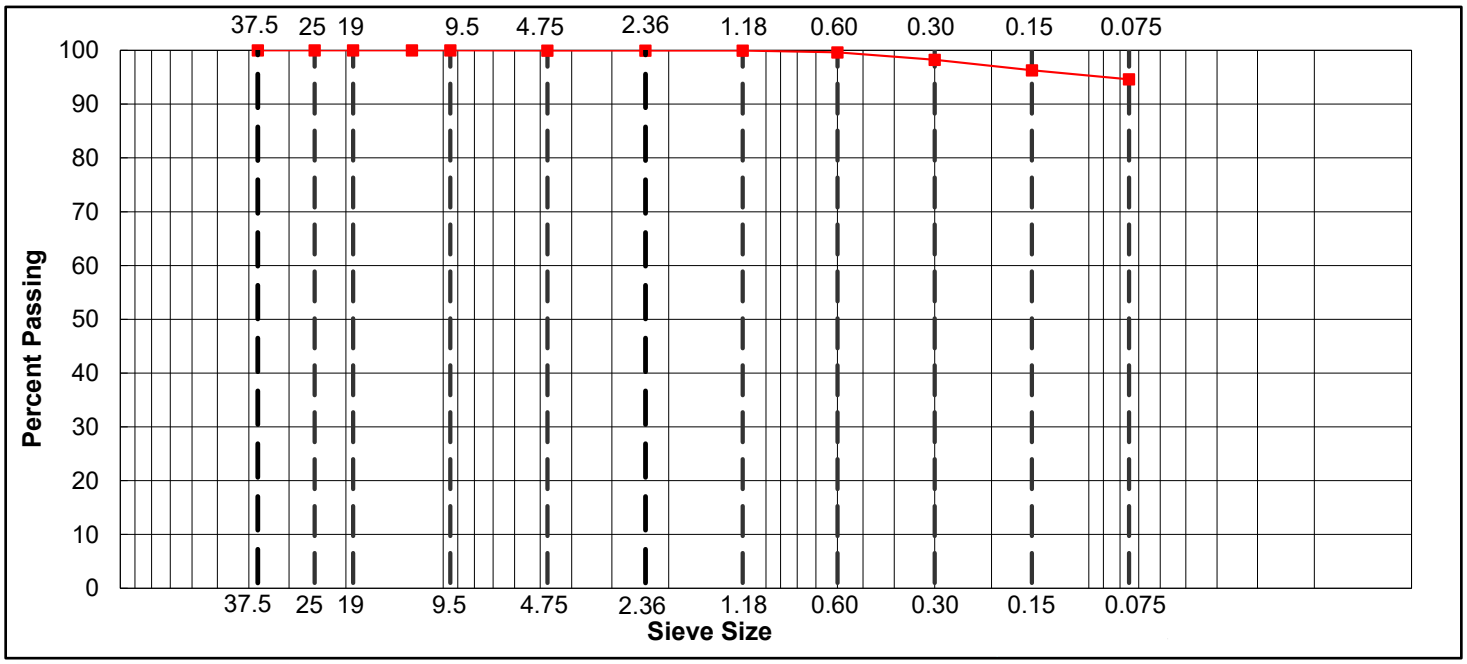
Aggregate Specification: Pit Run

SIEVE SIZE (mm)	PERCENT PASSING	Gradation Limits	
37.5	100		
25	100		
19	100		
12.5	100		
9.5	100		
4.75	100		
2.36	100		
1.18	100		
0.6	100		
0.3	98		
0.150	96.3		
0.075	94.6		

Additional Tests:

Moisture of material: 23.4%

Comments:



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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	300RC1
Project No.:	1560-193-00	**Source:**	22CH300
Owner:	EID	**Sample Depth:**	5.2m
File No.:	DT - 300RC1	**Date:**	16-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Core	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1556.1	kg/m^3	**Classification:**	D2	
Moisture Content (before):	23.3	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	24.3	%	**Flow Rate:**	1.83	ml/s
Length of Sample:	38.4	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	301RC1
Project No.:	1560-193-00	**Source:**	22CH301
Owner:	EID	**Sample Depth:**	8.6m
File No.:	DT - 301RC1	**Date:**	20-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CH — Inorganic clays of high plasticity, fat clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1690.0	kg/m^3	**Classification:**	D2	
Moisture Content (before):	12.6	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	13.2	%	**Flow Rate:**	1.40	ml/s
Length of Sample:	39.4	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	303SPT3
Project No.:	1560-193-00	**Source:**	22BH303
Owner:	Eastern irrigation District	**Sample Depth:**	4.6m
File No.:	DT - 303SPT3	**Date:**	31-May-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	SPT	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1595.5	kg/m^3	**Classification:**	ND4	
Moisture Content (before):	19.1	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	20.9	%	**Flow Rate:**	0.91	ml/s
Length of Sample:	40.0	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	304SPT3
Project No.:	1560-193-00	**Source:**	22BH304
Owner:	Eastern irrigation District	**Sample Depth:**	4.6m
File No.:	DT - 304SPT3	**Date:**	9-May-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	SPT	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1367.0	kg/m^3	**Classification:**	D2	
Moisture Content (before):	16.0	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	19.7	%	**Flow Rate:**	1.54	ml/s
Length of Sample:	40.5	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	305RC2
Project No.:	1560-193-00	**Source:**	22BH305
Owner:	EID	**Sample Depth:**	6.2m
File No.:	DT - 305RC2	**Date:**	23-Aug-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Remolded	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1439.3	kg/m^3	**Classification:**	D2	
Moisture Content (before):	33.2	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	34.7	%	**Flow Rate:**	1.33	ml/s
Length of Sample:	41.9	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	307SPT5
Project No.:	1560-193-00	**Source:**	22BH307
Owner:	Eastern irrigation District	**Sample Depth:**	7.6m
File No.:	DT - 307SPT5	**Date:**	31-May-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	SPT	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1786.5	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	16.1	%	**Hydraulic Head:**	380	mm
Moisture Content (After):	19.6	%	**Flow Rate:**	2.16	ml/s
Length of Sample:	40.0	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	309RC1
Project No.:	1560-193-00	**Source:**	22CH309
Owner:	EID	**Sample Depth:**	4.2m
File No.:	DT - 309RC1	**Date:**	13-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Remolded	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1513.7	kg/m^3	**Classification:**	D2	
Moisture Content (before):	26.3	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	26.7	%	**Flow Rate:**	1.27	ml/s
Length of Sample:	39.2	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	310SPT4
Project No.:	1560-193-00	**Source:**	22BH310
Owner:	Eastern irrigation District	**Sample Depth:**	6.1m
File No.:	DT - 310SPT4	**Date:**	1-Jun-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	SPT	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	2027.4	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	15.7	%	**Hydraulic Head:**	180	mm
Moisture Content (After):	20.3	%	**Flow Rate:**	1.92	ml/s
Length of Sample:	41.5	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
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Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	313RC1
Project No.:	1560-193-00	**Source:**	22CH313
Owner:	EID	**Sample Depth:**	5.0m
File No.:	DT - 313RC1	**Date:**	23-Aug-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Remolded	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1316.0	kg/m^3	**Classification:**	D2	
Moisture Content (before):	35.0	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	37.2	%	**Flow Rate:**	2.03	ml/s
Length of Sample:	37.9	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	314SPT3
Project No.:	1560-193-00	**Source:**	22BH314
Owner:	Eastern irrigation District	**Sample Depth:**	4.6m
File No.:	DT - 314SPT3	**Date:**	1-Jun-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	SPT	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1730.4	kg/m^3	**Classification:**	D2	
Moisture Content (before):	19.0	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	19.1	%	**Flow Rate:**	1.6	ml/s
Length of Sample:	39.9	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	316SPT4
Project No.:	1560-193-00	**Source:**	22BH316
Owner:	Eastern irrigation District	**Sample Depth:**	6.1m
File No.:	DT - 316SPT4	**Date:**	1-Jun-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CI	Inorganic clays of medium plasticity, silty clays
Sample Type:	SPT	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1937.1	kg/m^3	**Classification:**	ND2	
Moisture Content (before):	10.1	%	**Hydraulic Head:**	1020	mm
Moisture Content (After):	13.2	%	**Flow Rate:**	3.22	ml/s
Length of Sample:	40.4	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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ATTERBERG LIMITS

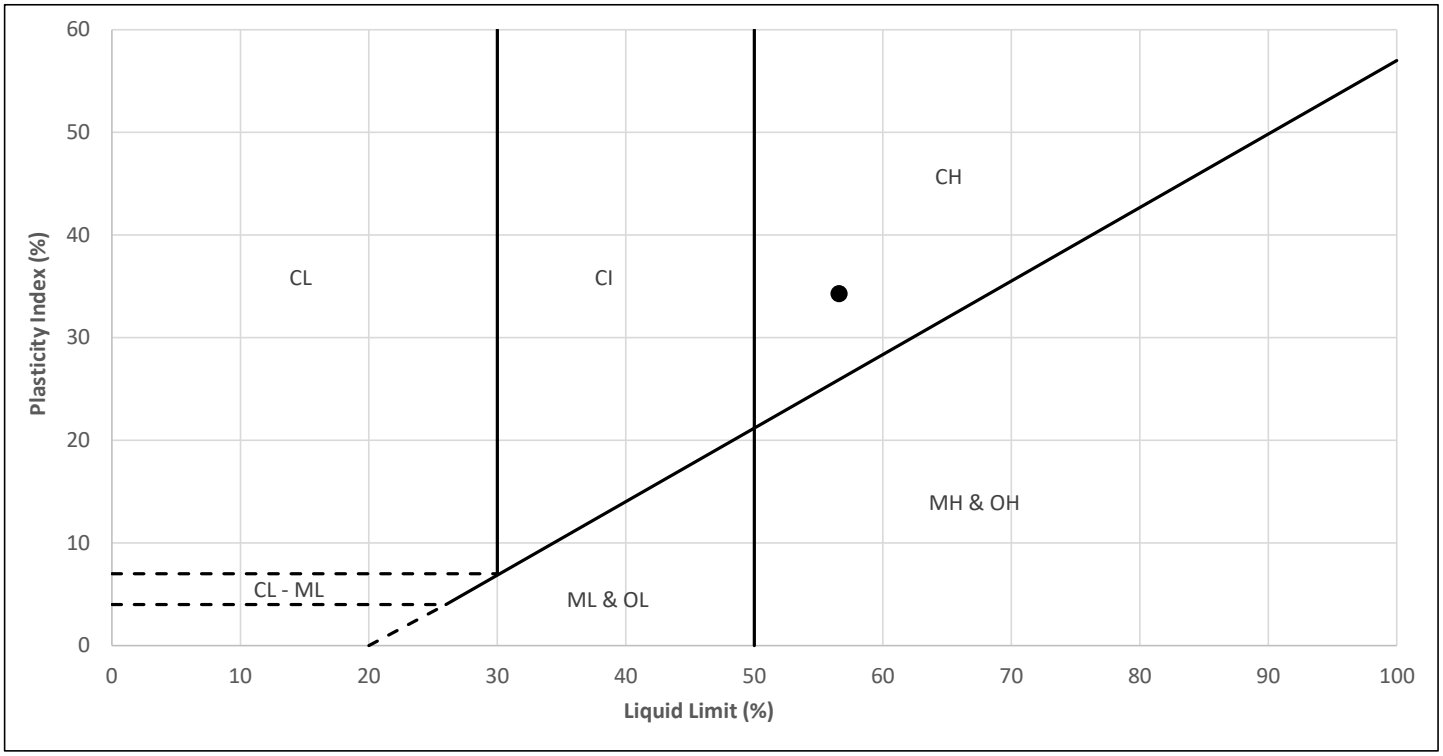
Project:	Snake Lake Reservoir Expansion	**Sample #:**	402AU2
Project No.:	1560-193-00	**Source:**	22BH402
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 402AU2	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	56.6
Plastic Limit (PL)	22.3
Plasticity Index (PI)	34.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

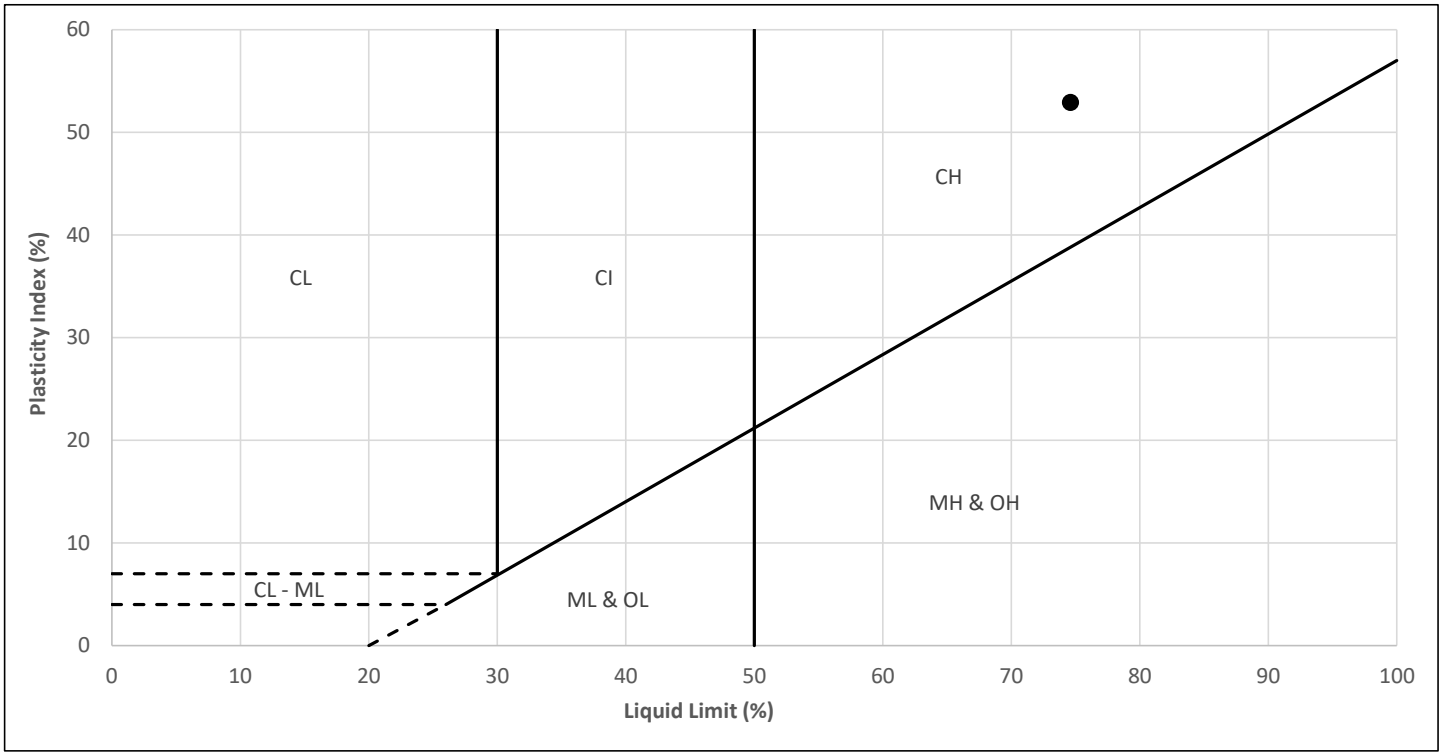
Project:	Snake Lake Reservoir Expansion	**Sample #:**	402AU4
Project No.:	1560-193-00	**Source:**	22BH402
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 402AU4	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	74.6
Plastic Limit (PL)	21.7
Plasticity Index (PI)	52.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

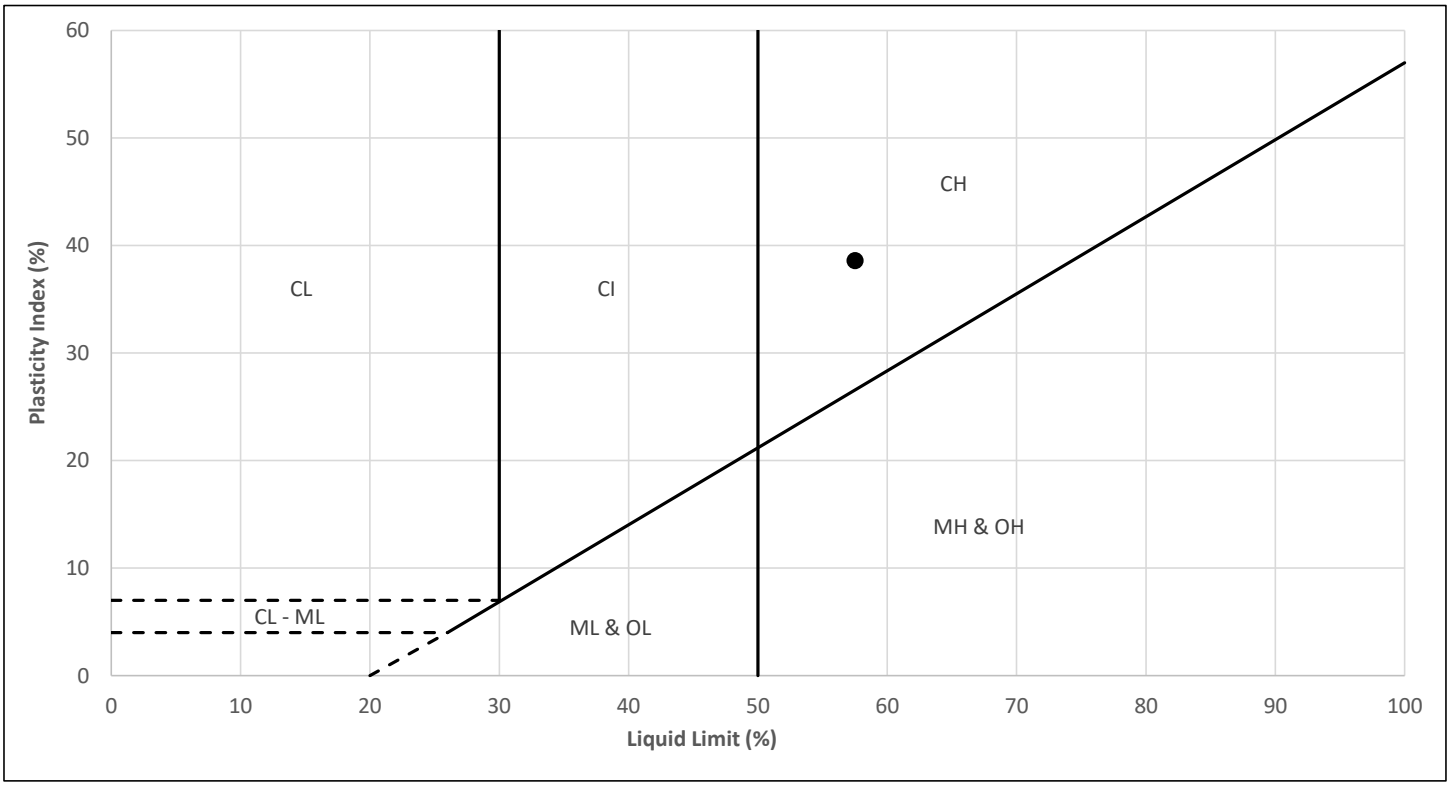
Project:	Snake Lake Reservoir Expansion	**Sample #:**	403AU2
Project No.:	1560-193-00	**Source:**	22BH403
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 403AU2	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	57.5
Plastic Limit (PL)	18.9
Plasticity Index (PI)	38.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

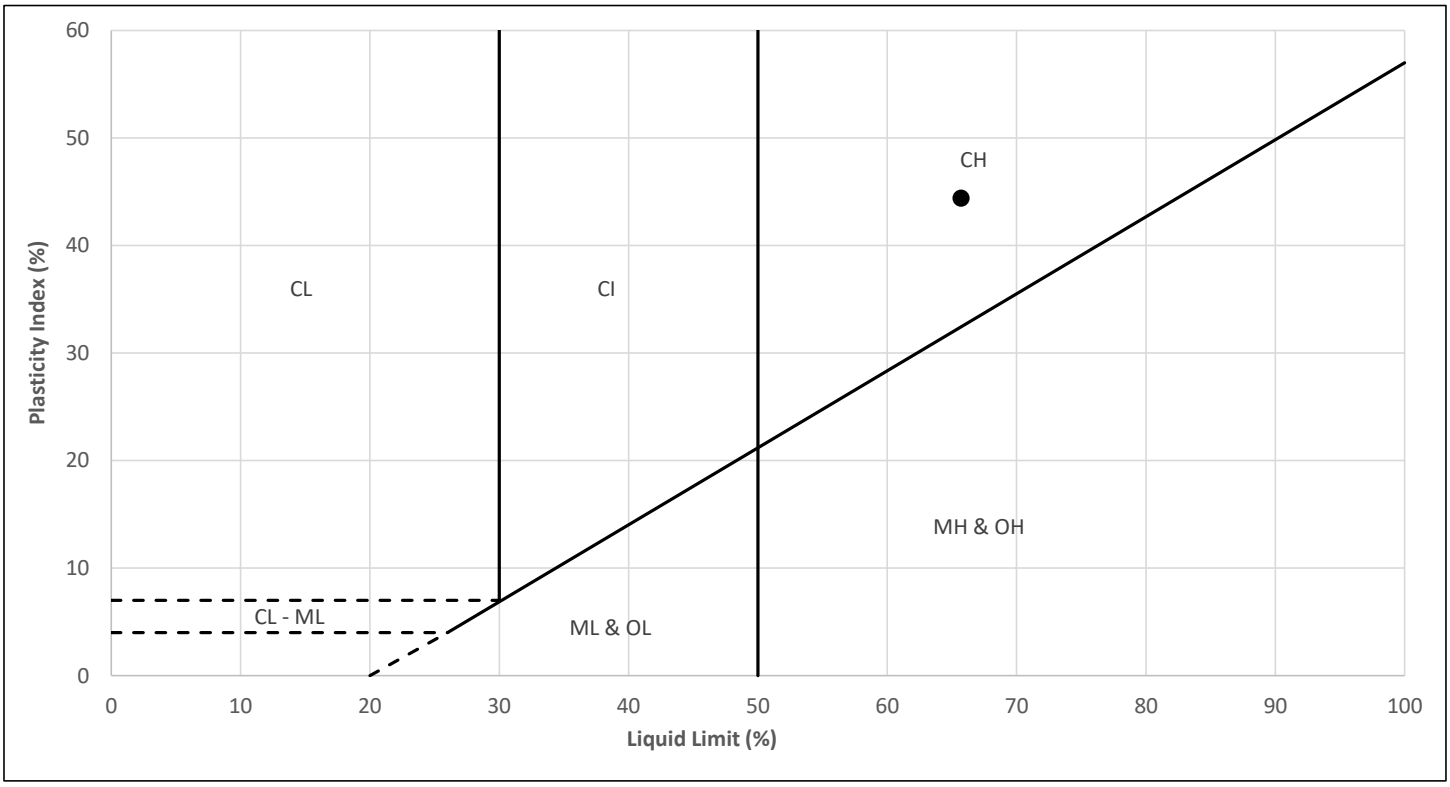
Project:	Snake Lake Reservoir Expansion	**Sample #:**	403AU3
Project No.:	1560-193-00	**Source:**	22BH403
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 403AU3	**Test Date:**	30-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	65.7
Plastic Limit (PL)	21.3
Plasticity Index (PI)	44.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

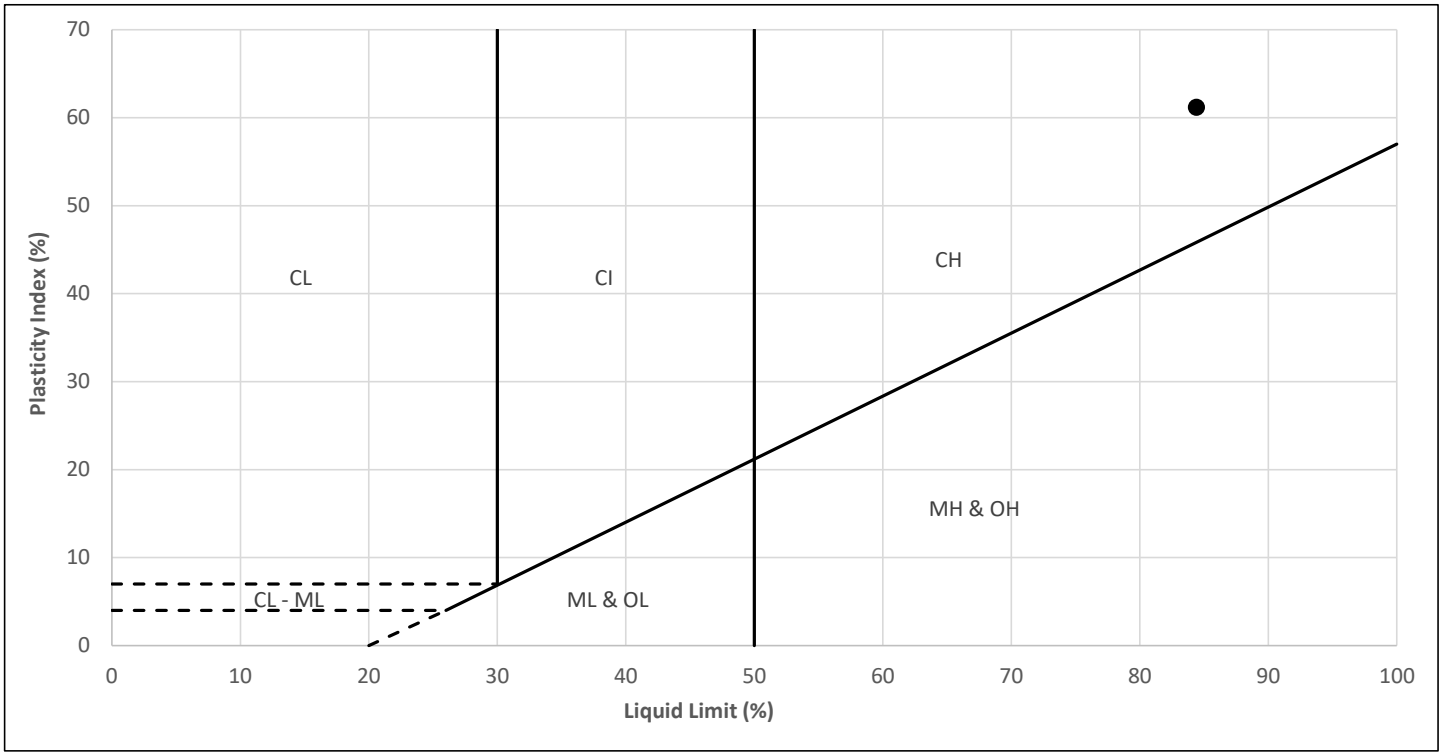
Project:	Snake Lake Reservoir Expansion	**Sample #:**	404AU4
Project No.:	1560-193-00	**Source:**	22BH404
Owner:	EID	**Sample Depth:**	3.2m
File No.:	AL - 404AU4	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	84.4
Plastic Limit (PL)	23.2
Plasticity Index (PI)	61.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

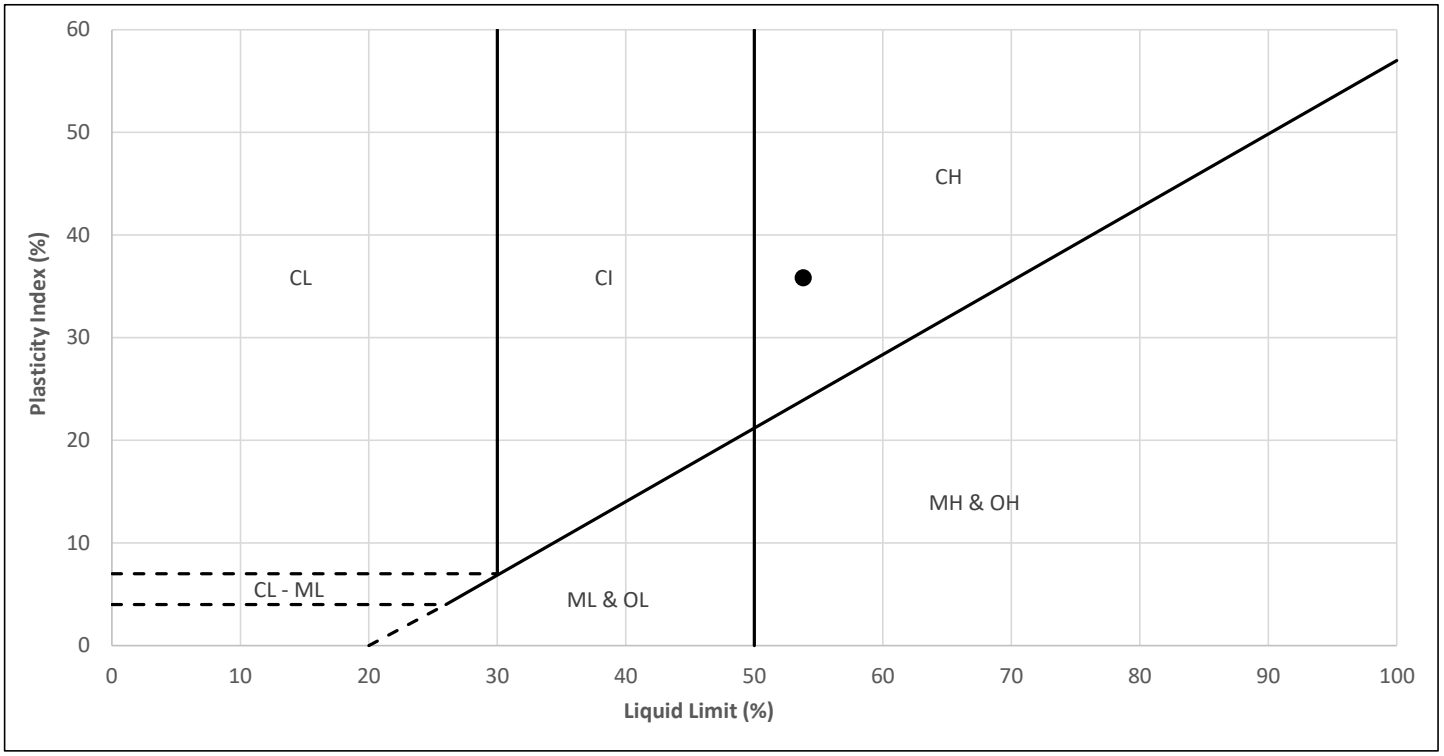
Project:	Snake Lake Reservoir Expansion	**Sample #:**	404AU5
Project No.:	1560-193-00	**Source:**	22BH404
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 404AU5	**Test Date:**	27-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.8
Plastic Limit (PL)	18.0
Plasticity Index (PI)	35.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

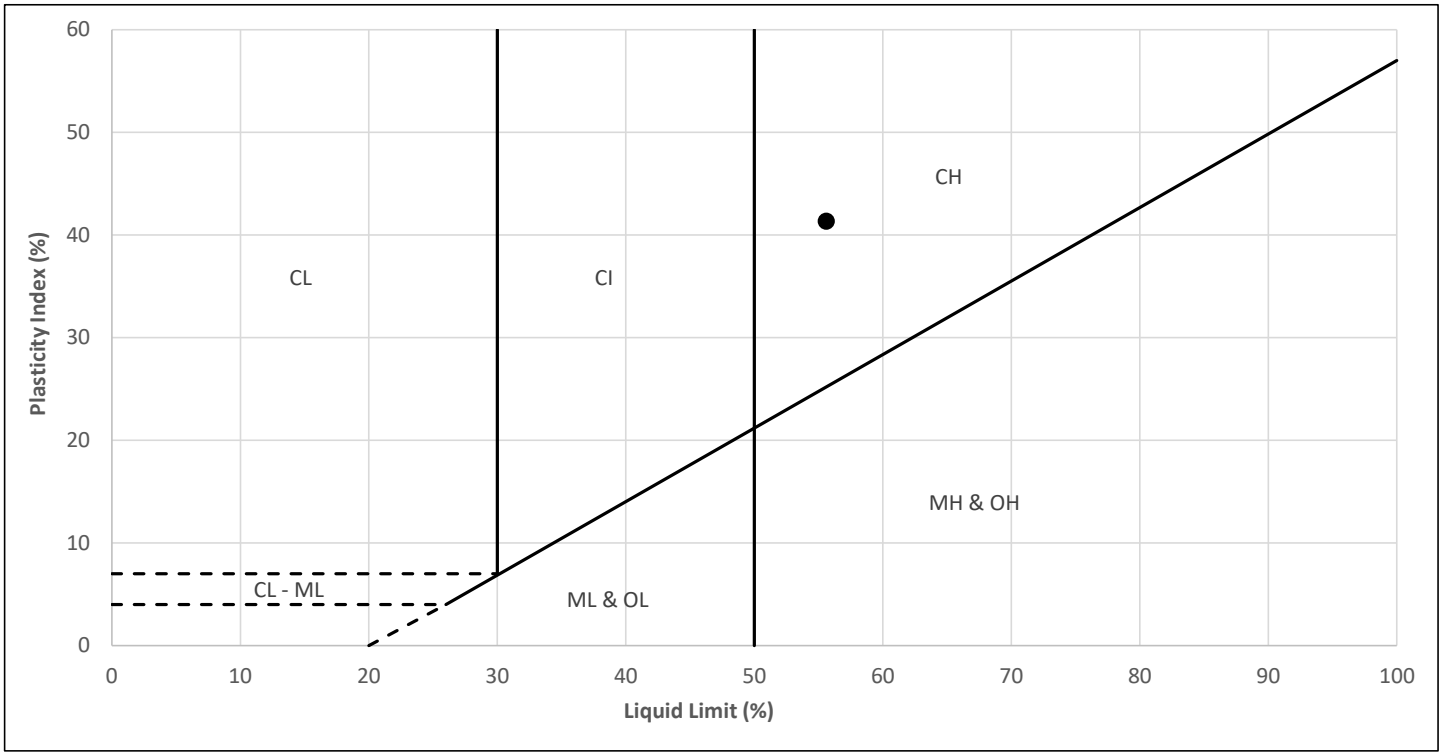
Project:	Snake Lake Reservoir Expansion	**Sample #:**	405AU1
Project No.:	1560-193-00	**Source:**	22BH405
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 405AU1	**Test Date:**	24-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.6
Plastic Limit (PL)	14.2
Plasticity Index (PI)	41.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

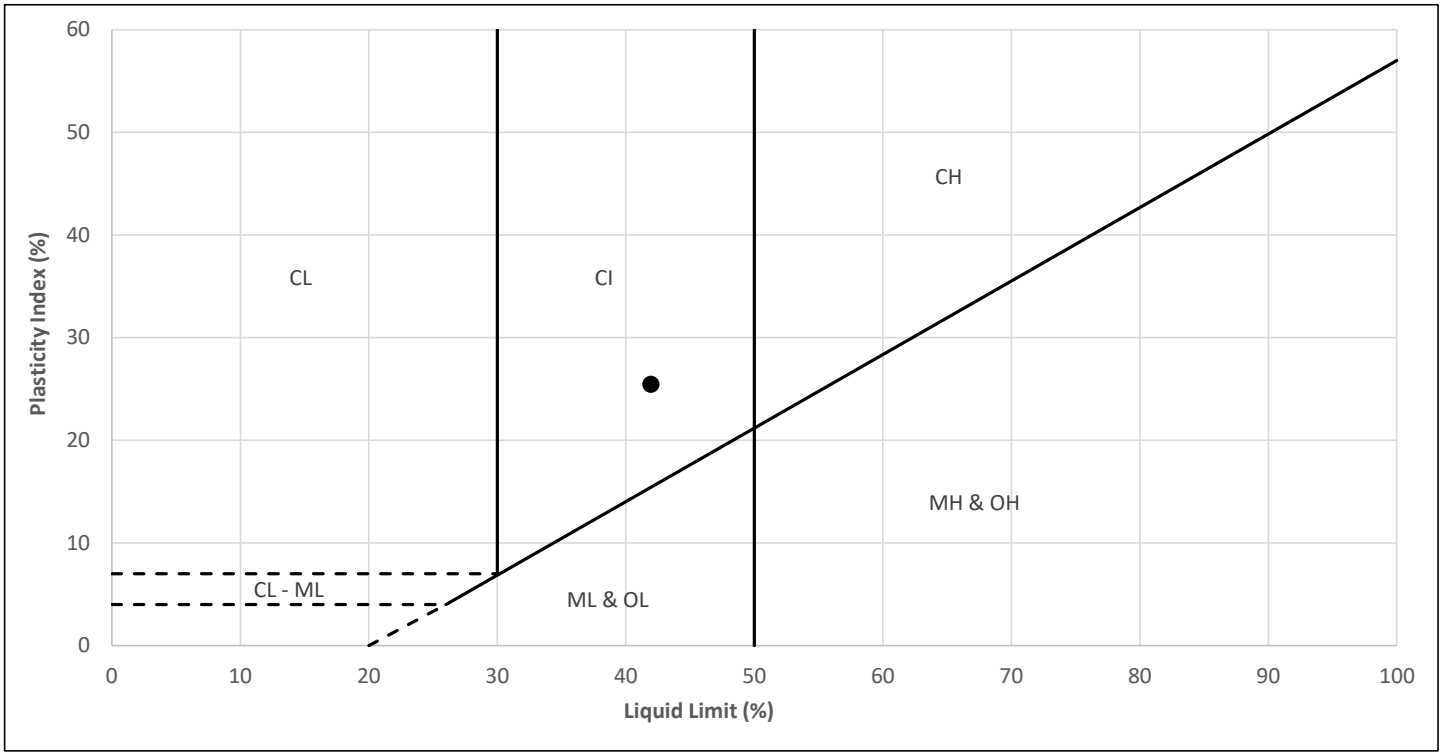
Project:	Snake Lake Reservoir Expansion	**Sample #:**	405AU3
Project No.:	1560-193-00	**Source:**	22BH405
Owner:	EID	**Sample Depth:**	4.5m
File No.:	AL - 405AU3	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	41.9
Plastic Limit (PL)	16.5
Plasticity Index (PI)	25.5

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

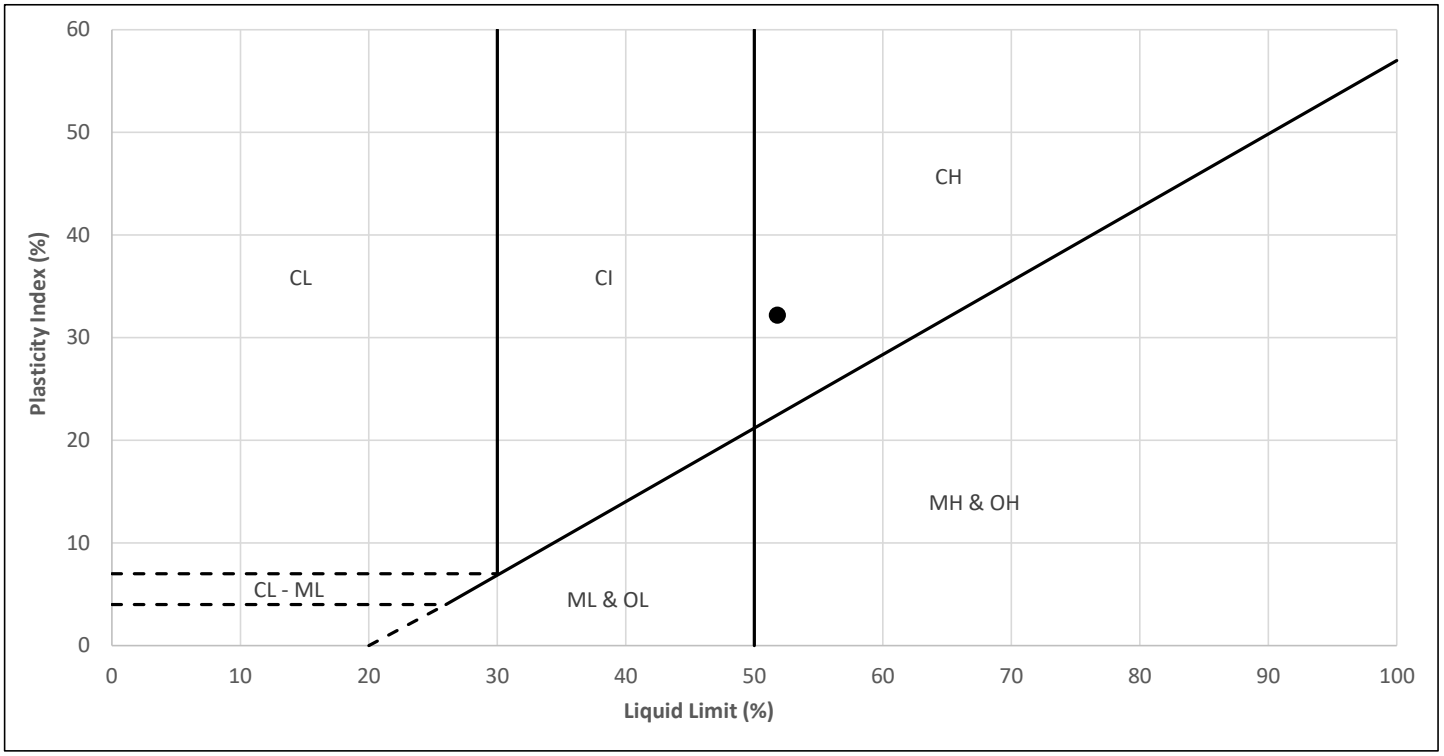
Project:	Snake Lake Reservoir Expansion	**Sample #:**	406AU1
Project No.:	1560-193-00	**Source:**	22BH406
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 406AU1	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.8
Plastic Limit (PL)	19.6
Plasticity Index (PI)	32.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

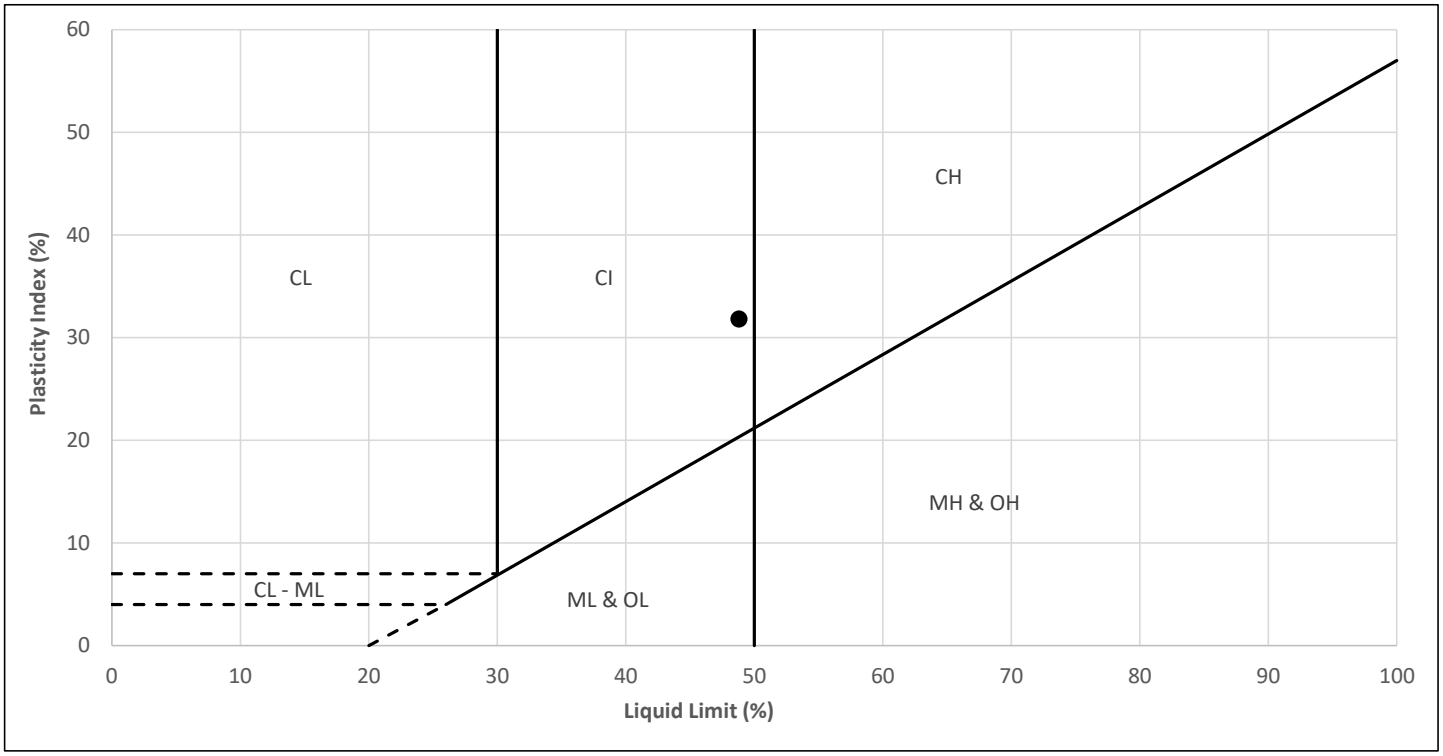
Project:	Snake Lake Reservoir Expansion	**Sample #:**	406AU3
Project No.:	1560-193-00	**Source:**	22BH406
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 406AU3	**Test Date:**	23-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	48.8
Plastic Limit (PL)	17.0
Plasticity Index (PI)	31.8

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

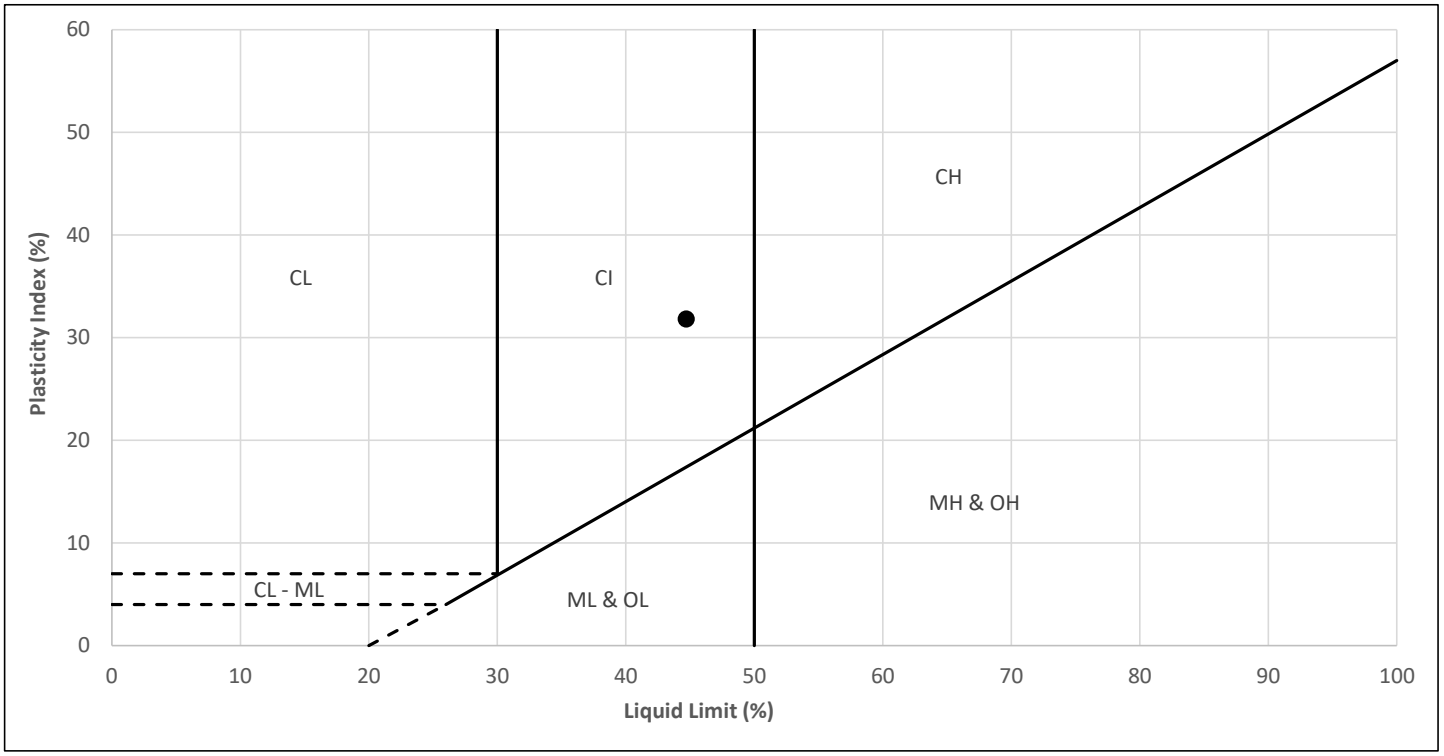
Project:	Snake Lake Reservoir Expansion	**Sample #:**	406AU4
Project No.:	1560-193-00	**Source:**	22BH406
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 406AU4	**Test Date:**	24-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.7
Plastic Limit (PL)	12.9
Plasticity Index (PI)	31.8

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

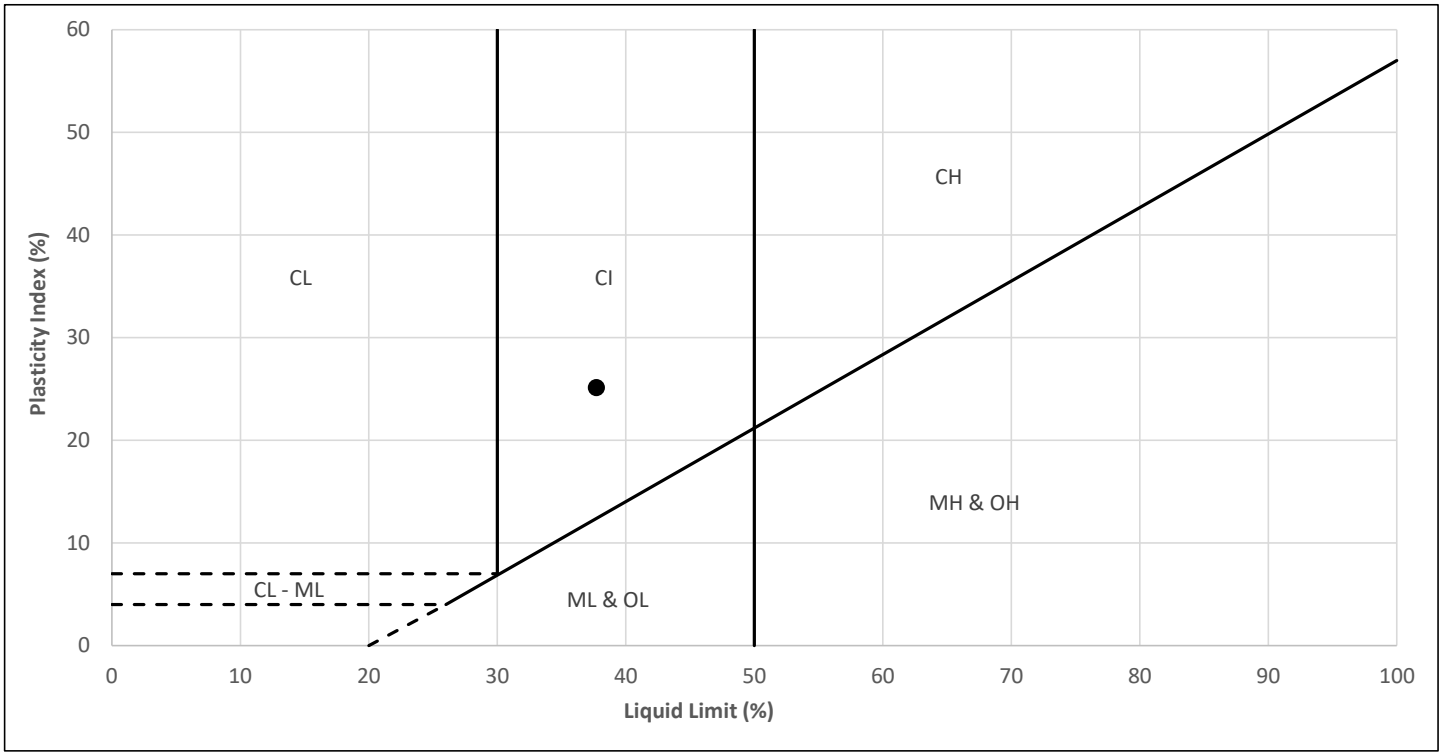
Project:	Snake Lake Reservoir Expansion	**Sample #:**	407AU1
Project No.:	1560-193-00	**Source:**	22BH407
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 407AU1	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	37.7
Plastic Limit (PL)	12.6
Plasticity Index (PI)	25.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

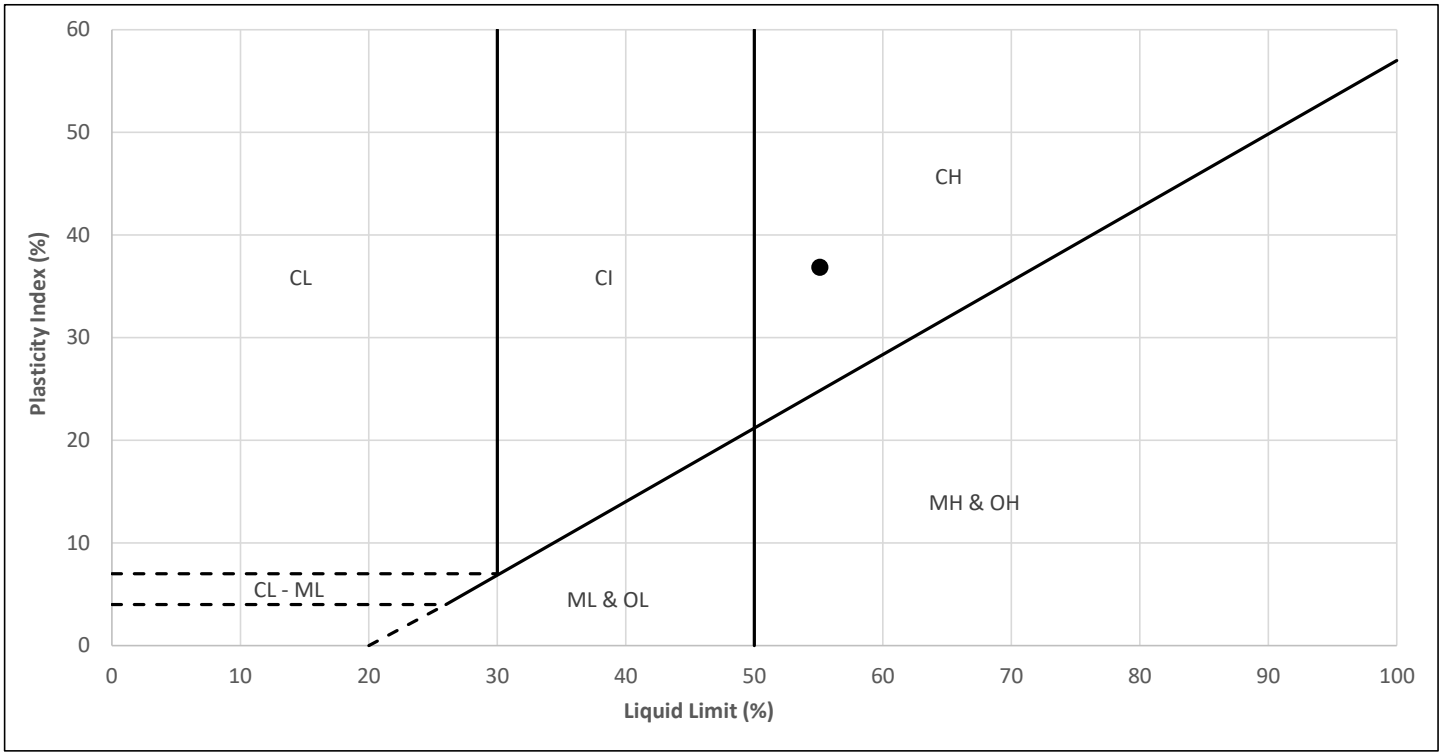
Project:	Snake Lake Reservoir Expansion	**Sample #:**	407AU4
Project No.:	1560-193-00	**Source:**	22BH407
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 407AU4	**Test Date:**	25-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.1
Plastic Limit (PL)	18.2
Plasticity Index (PI)	36.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

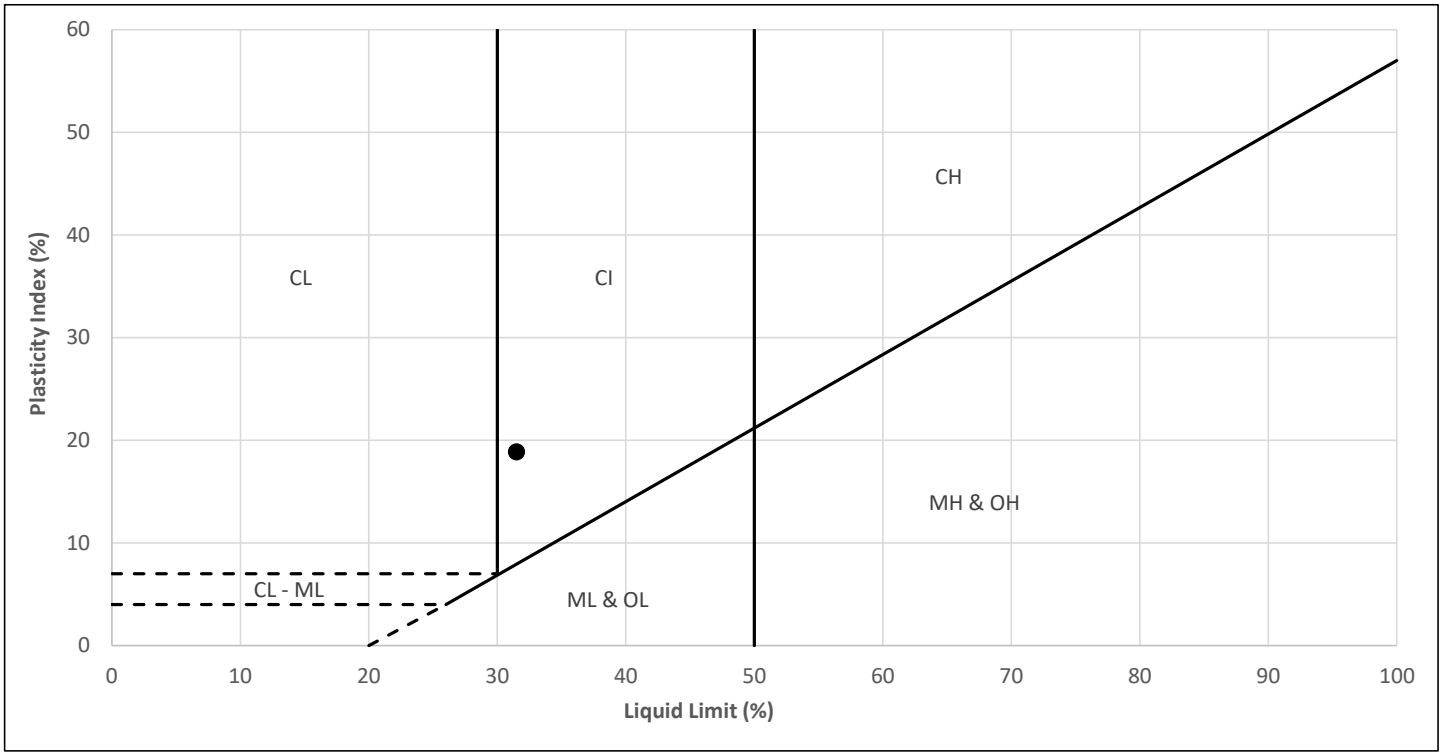
Project:	Snake Lake Reservoir Expansion	**Sample #:**	408AU1
Project No.:	1560-193-00	**Source:**	22BH408
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 408AU1	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	31.5
Plastic Limit (PL)	12.6
Plasticity Index (PI)	18.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

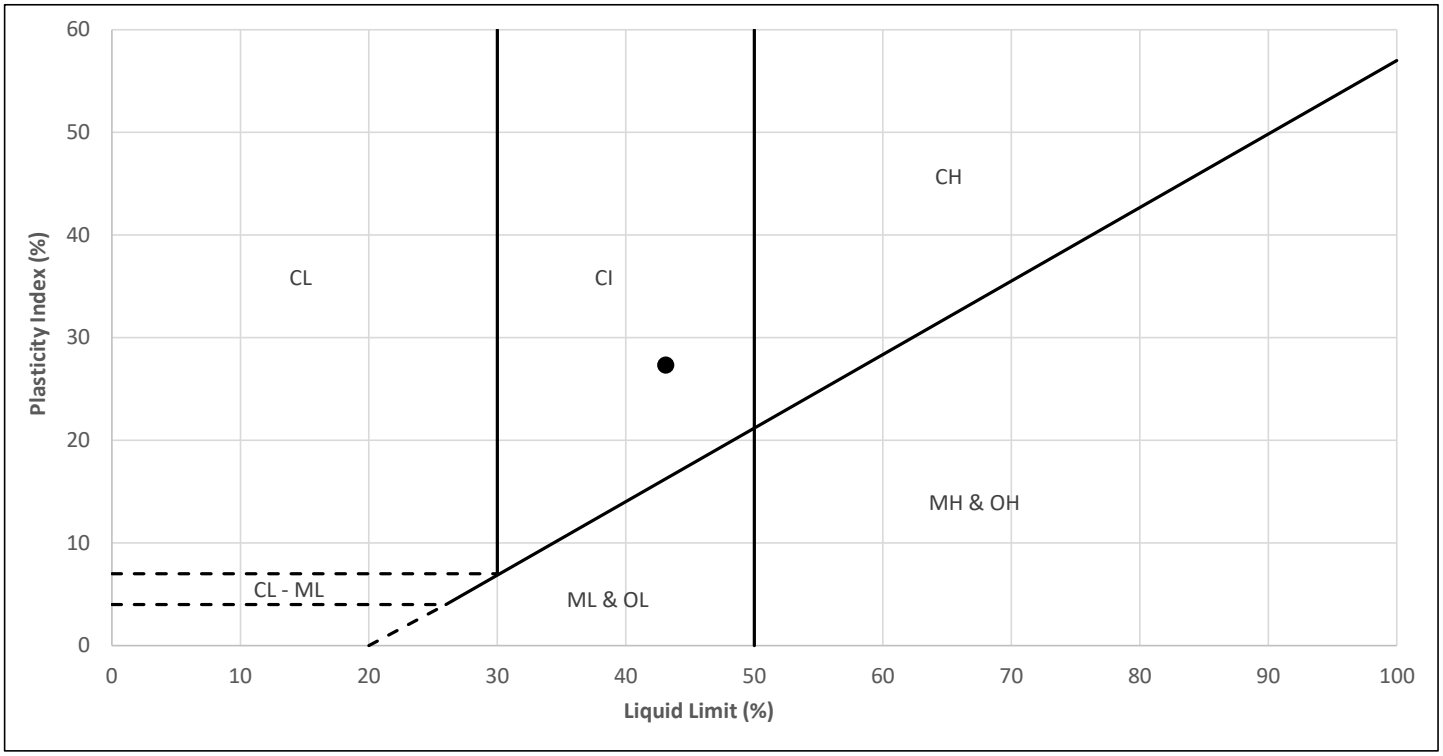
Project:	Snake Lake Reservoir Expansion	**Sample #:**	408AU3
Project No.:	1560-193-00	**Source:**	22BH408
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 408AU3	**Test Date:**	24-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	43.1
Plastic Limit (PL)	15.8
Plasticity Index (PI)	27.3

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

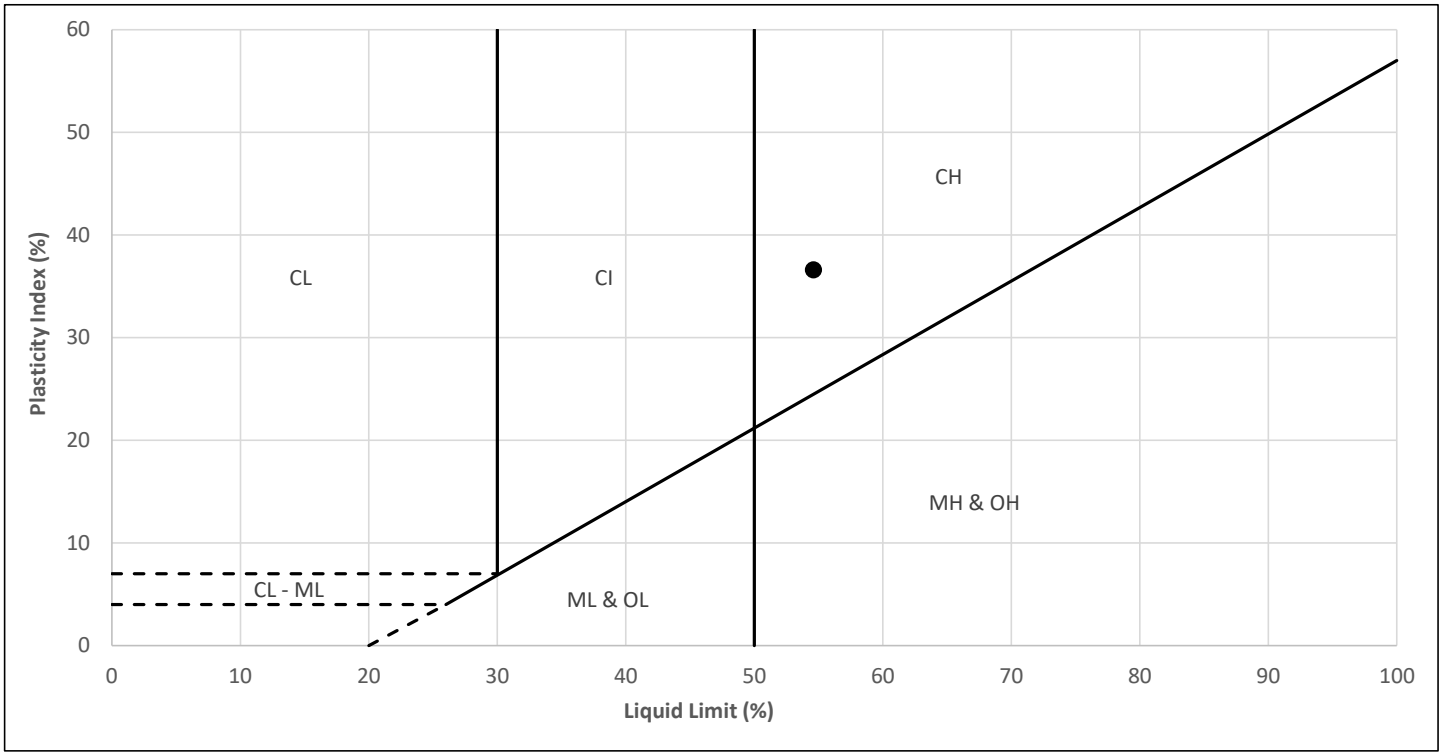
Project:	Snake Lake Reservoir Expansion	**Sample #:**	409AU2
Project No.:	1560-193-00	**Source:**	22BH409
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 409AU2	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.6
Plastic Limit (PL)	18.0
Plasticity Index (PI)	36.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

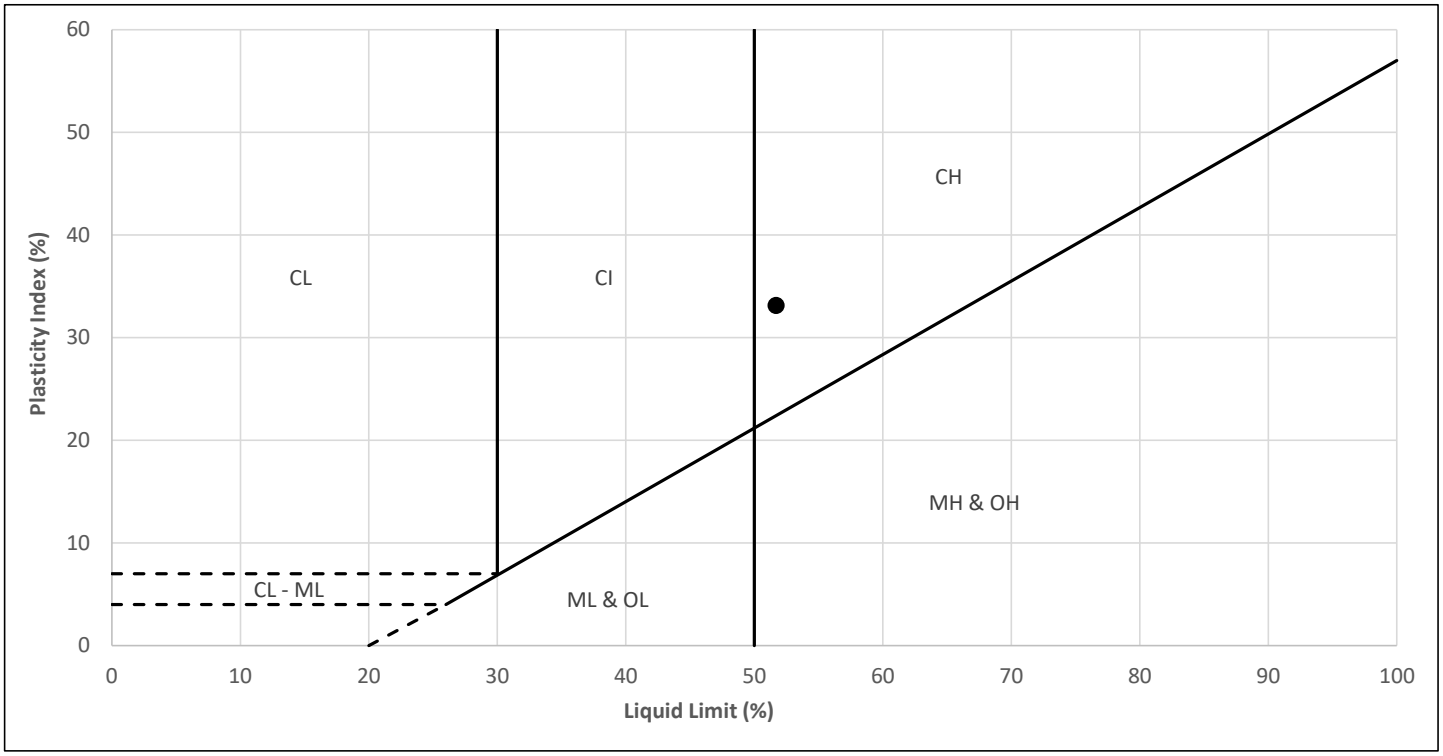
Project:	Snake Lake Reservoir Expansion	**Sample #:**	409AU4
Project No.:	1560-193-00	**Source:**	22BH409
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 409AU4	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.7
Plastic Limit (PL)	18.6
Plasticity Index (PI)	33.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

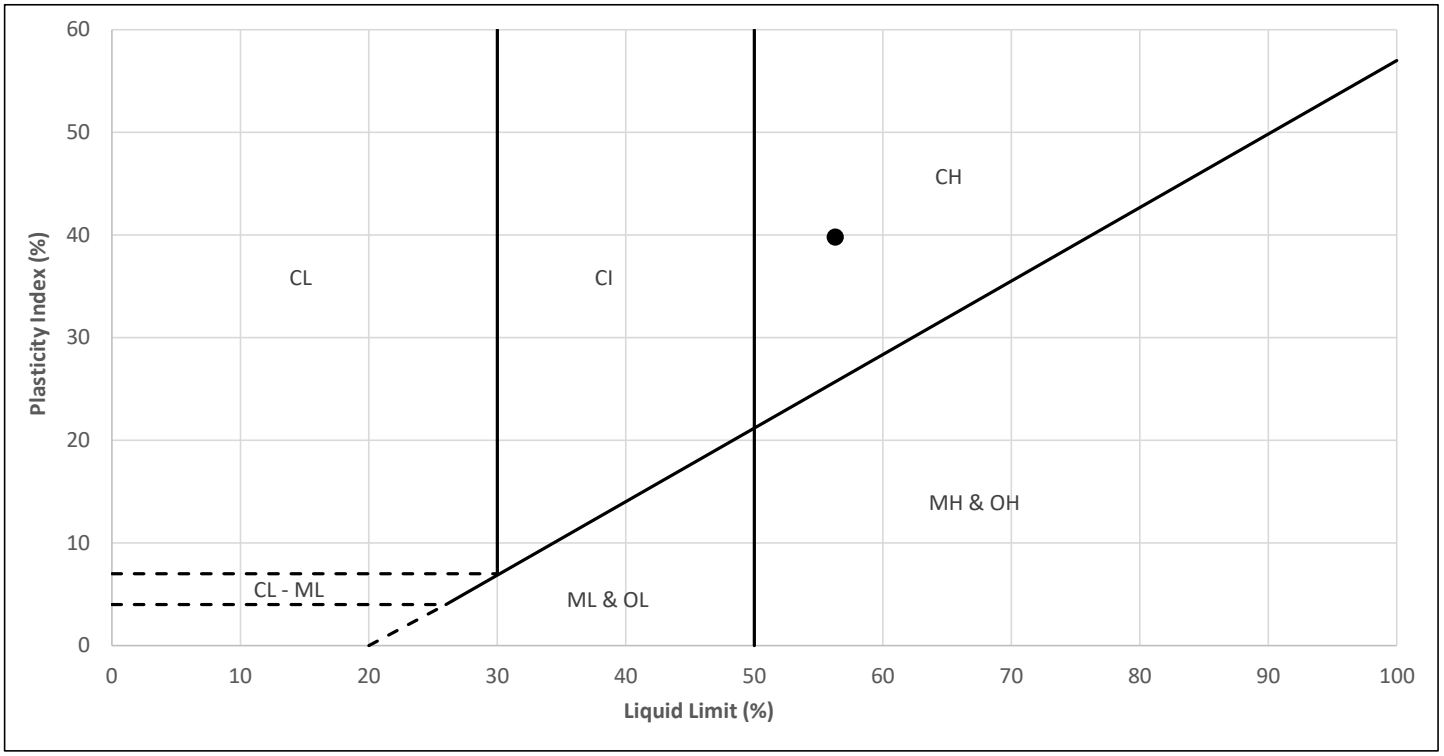
Project:	Snake Lake Reservoir Expansion	**Sample #:**	410AU1
Project No.:	1560-193-00	**Source:**	22BH410
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 410AU1	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	56.3
Plastic Limit (PL)	16.5
Plasticity Index (PI)	39.8

Soil Plasticity	High
Soil Classification	CH



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Lethbridge, Alberta T1H 5J3
Tel: (403)892-6036

ATTERBERG LIMITS

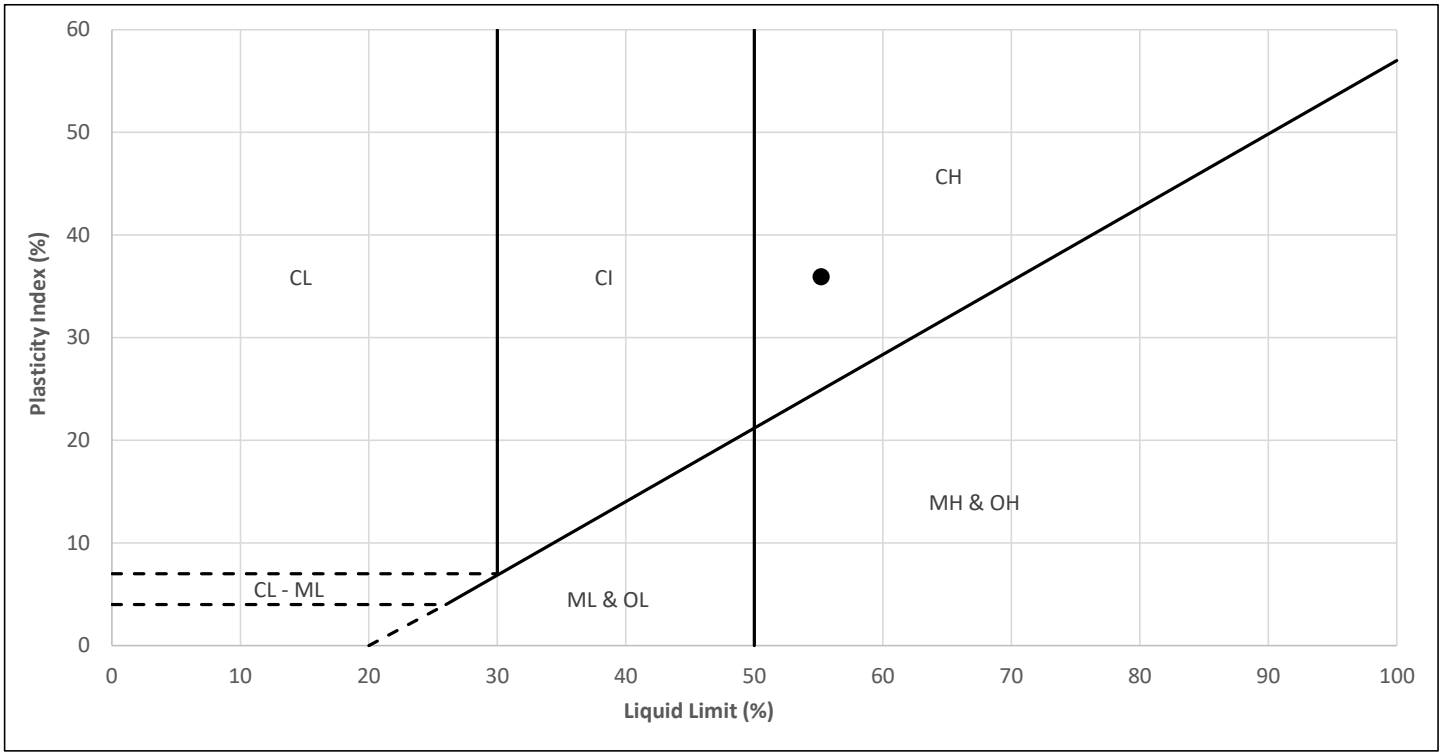
Project:	Snake Lake Reservoir Expansion	**Sample #:**	410AU2
Project No.:	1560-193-00	**Source:**	22BH410
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 410AU2	**Test Date:**	26-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.2
Plastic Limit (PL)	19.3
Plasticity Index (PI)	35.9

Soil Plasticity	High
Soil Classification	CH



Comments:

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ATTERBERG LIMITS

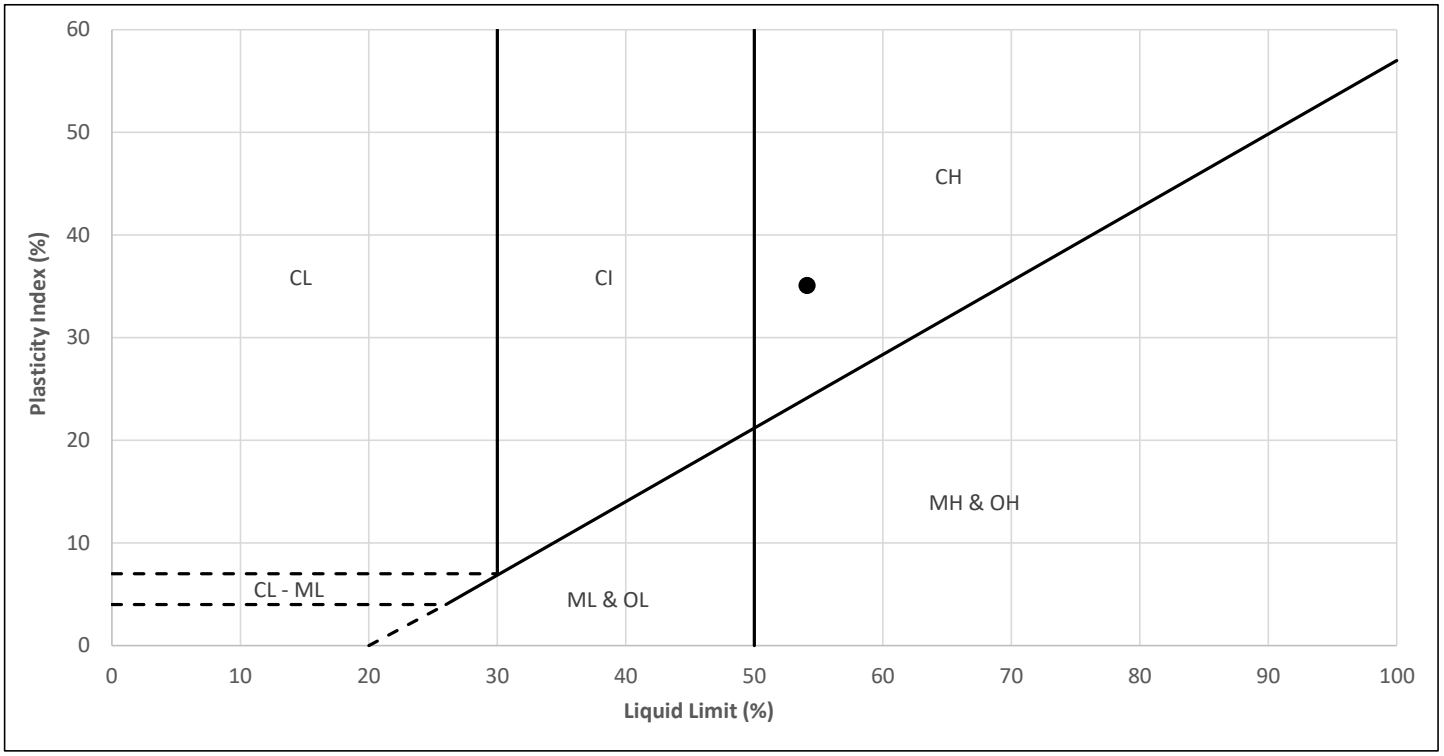
Project:	Snake Lake Reservoir Expansion	**Sample #:**	411AU1
Project No.:	1560-193-00	**Source:**	22BH411
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 411AU1	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.1
Plastic Limit (PL)	19.0
Plasticity Index (PI)	35.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

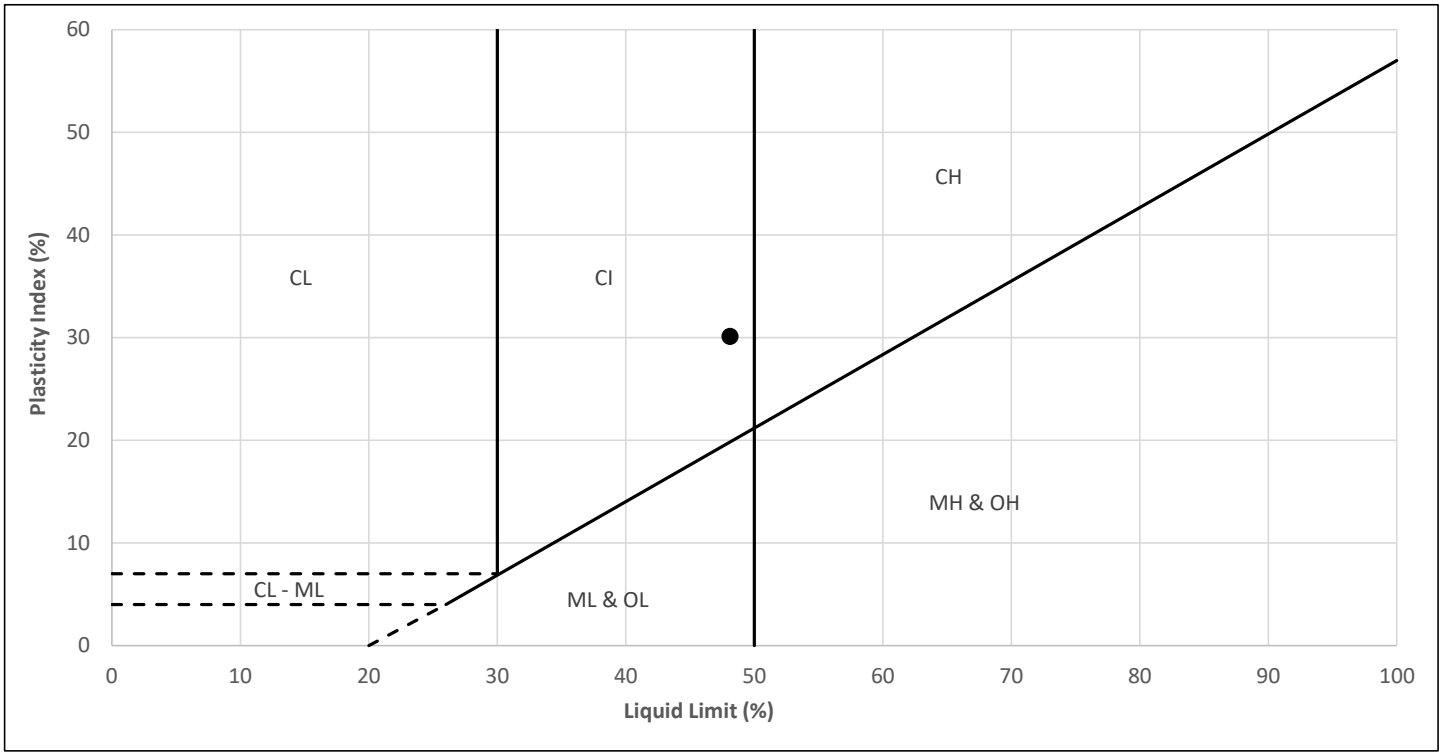
Project:	Snake Lake Reservoir Expansion	**Sample #:**	411AU2
Project No.:	1560-193-00	**Source:**	22BH411
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 411AU2	**Test Date:**	27-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	48.1
Plastic Limit (PL)	18.0
Plasticity Index (PI)	30.1

Soil Plasticity	Medum
Soil Classification	CI



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ATTERBERG LIMITS

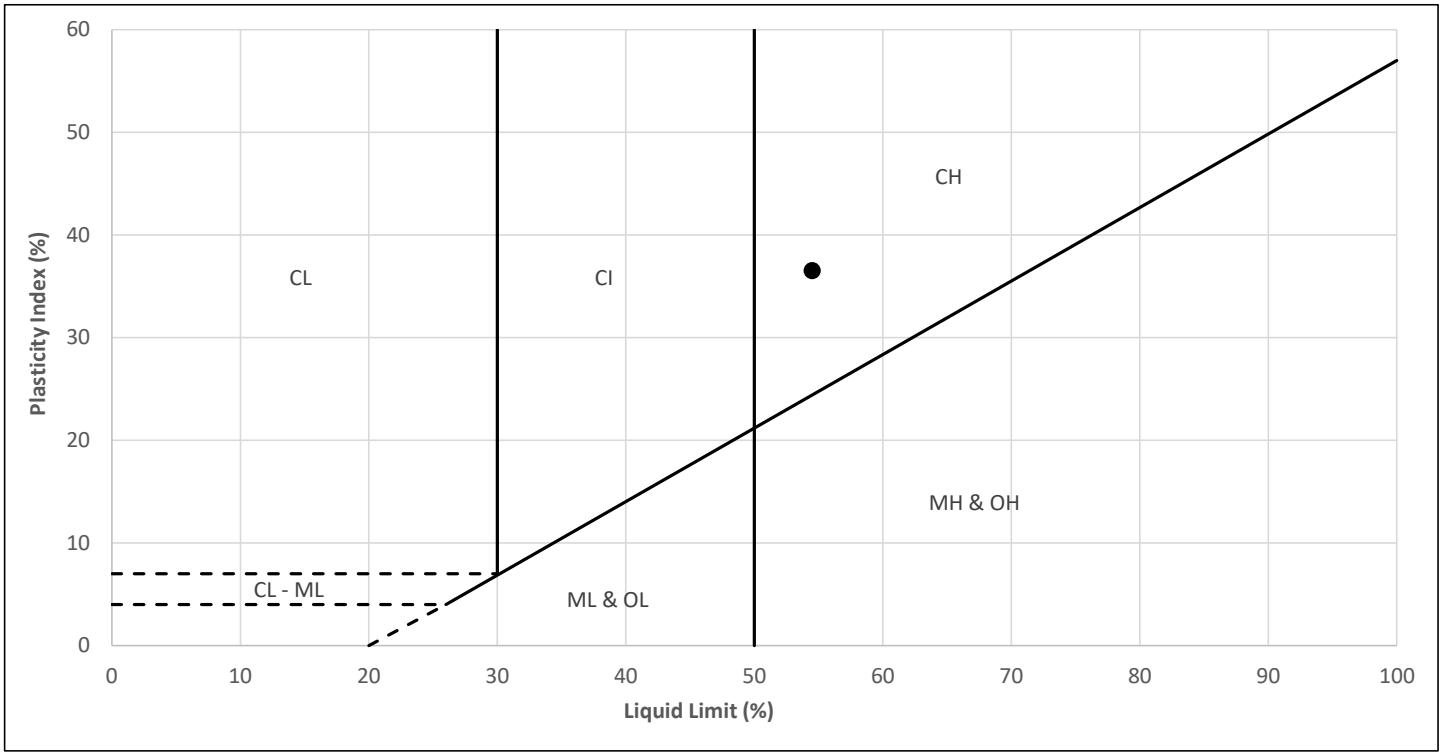
Project:	Snake Lake Reservoir Expansion	**Sample #:**	411AU4
Project No.:	1560-193-00	**Source:**	22BH411
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 411AU4	**Test Date:**	27-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.5
Plastic Limit (PL)	18.0
Plasticity Index (PI)	36.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

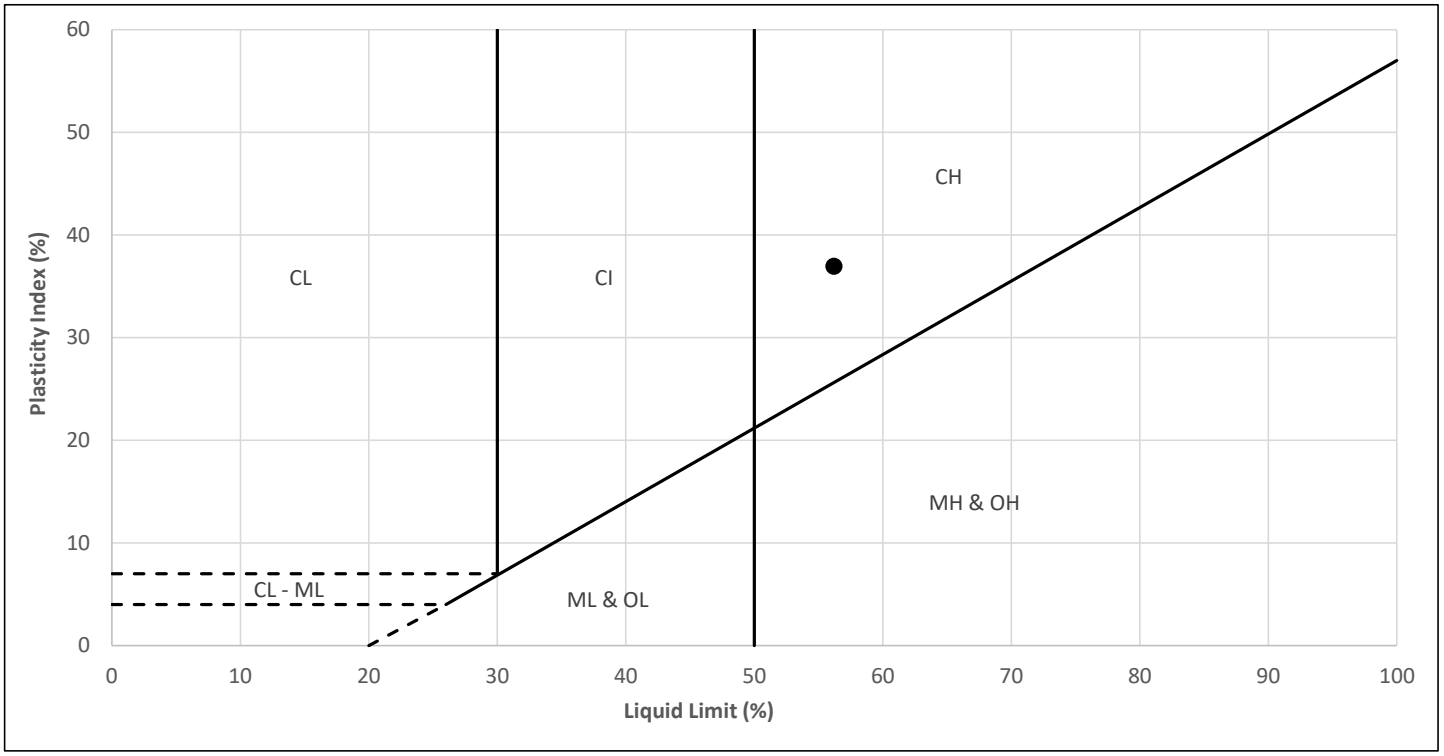
Project:	Snake Lake Reservoir Expansion	**Sample #:**	412AU2
Project No.:	1560-193-00	**Source:**	22BH412
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 412AU2	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	56.2
Plastic Limit (PL)	19.2
Plasticity Index (PI)	37.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

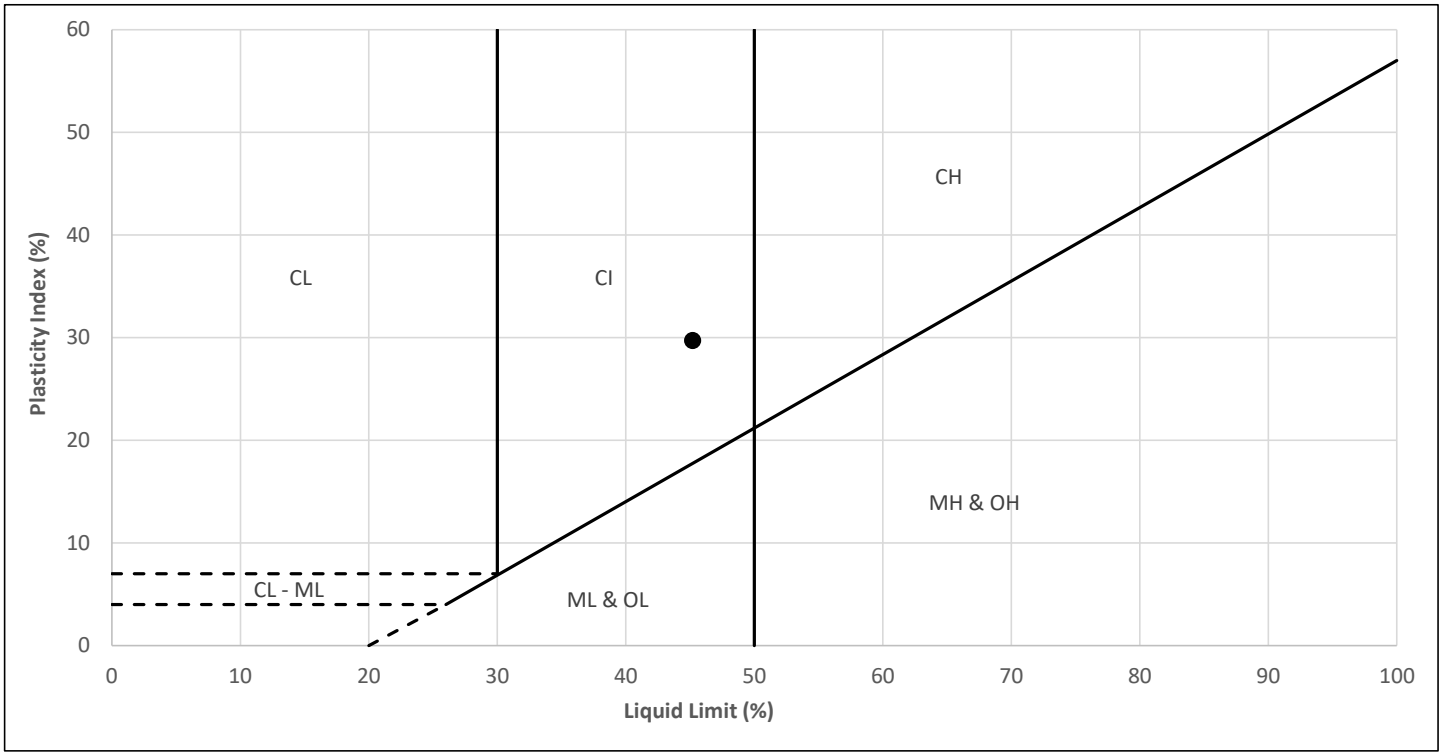
Project:	Snake Lake Reservoir Expansion	**Sample #:**	412AU3
Project No.:	1560-193-00	**Source:**	22BH412
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 412AU3	**Test Date:**	4-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	45.2
Plastic Limit (PL)	15.5
Plasticity Index (PI)	29.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

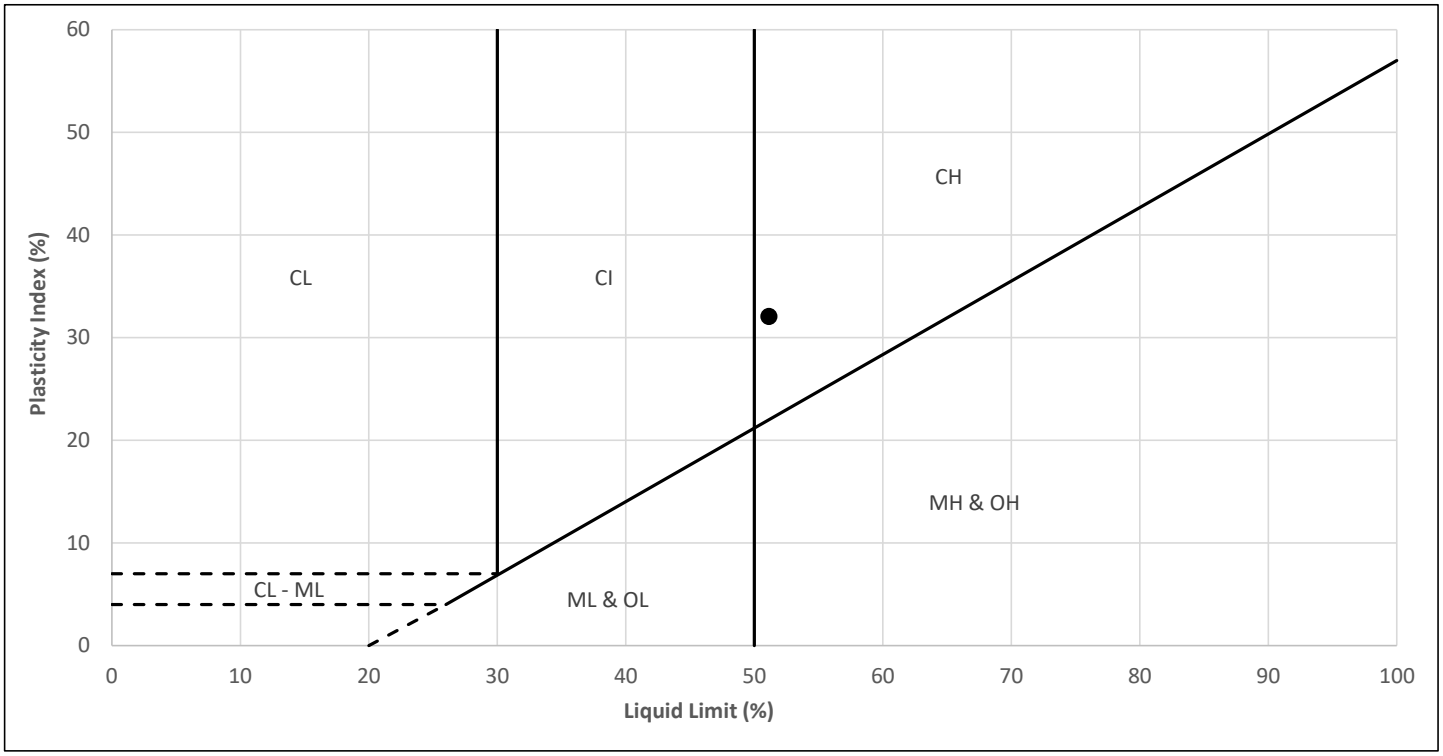
Project:	Snake Lake Reservoir Expansion	**Sample #:**	413AU1
Project No.:	1560-193-00	**Source:**	22BH413
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 413AU1	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.1
Plastic Limit (PL)	19.1
Plasticity Index (PI)	32.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

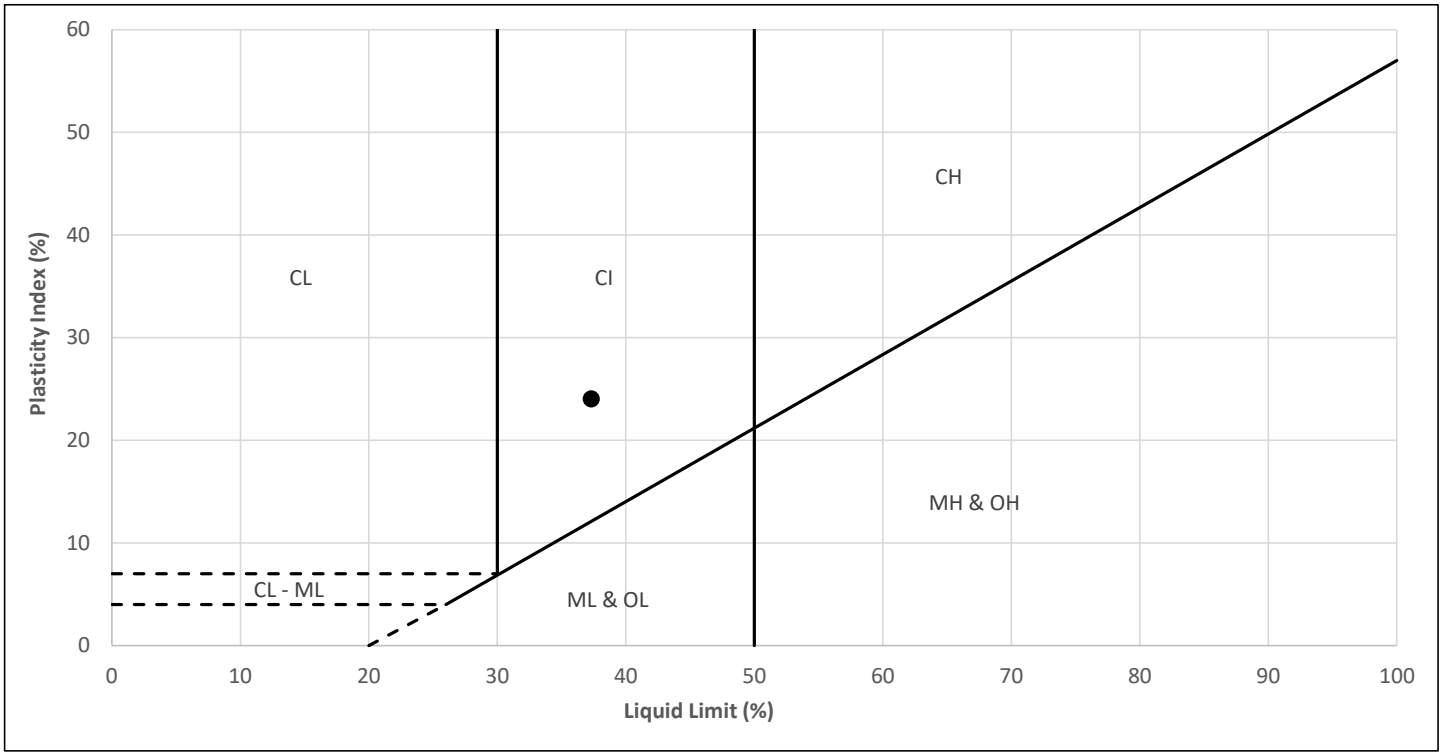
Project:	Snake Lake Reservoir Expansion	**Sample #:**	413AU3
Project No.:	1560-193-00	**Source:**	22BH413
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 413AU3	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	37.3
Plastic Limit (PL)	13.3
Plasticity Index (PI)	24.0

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

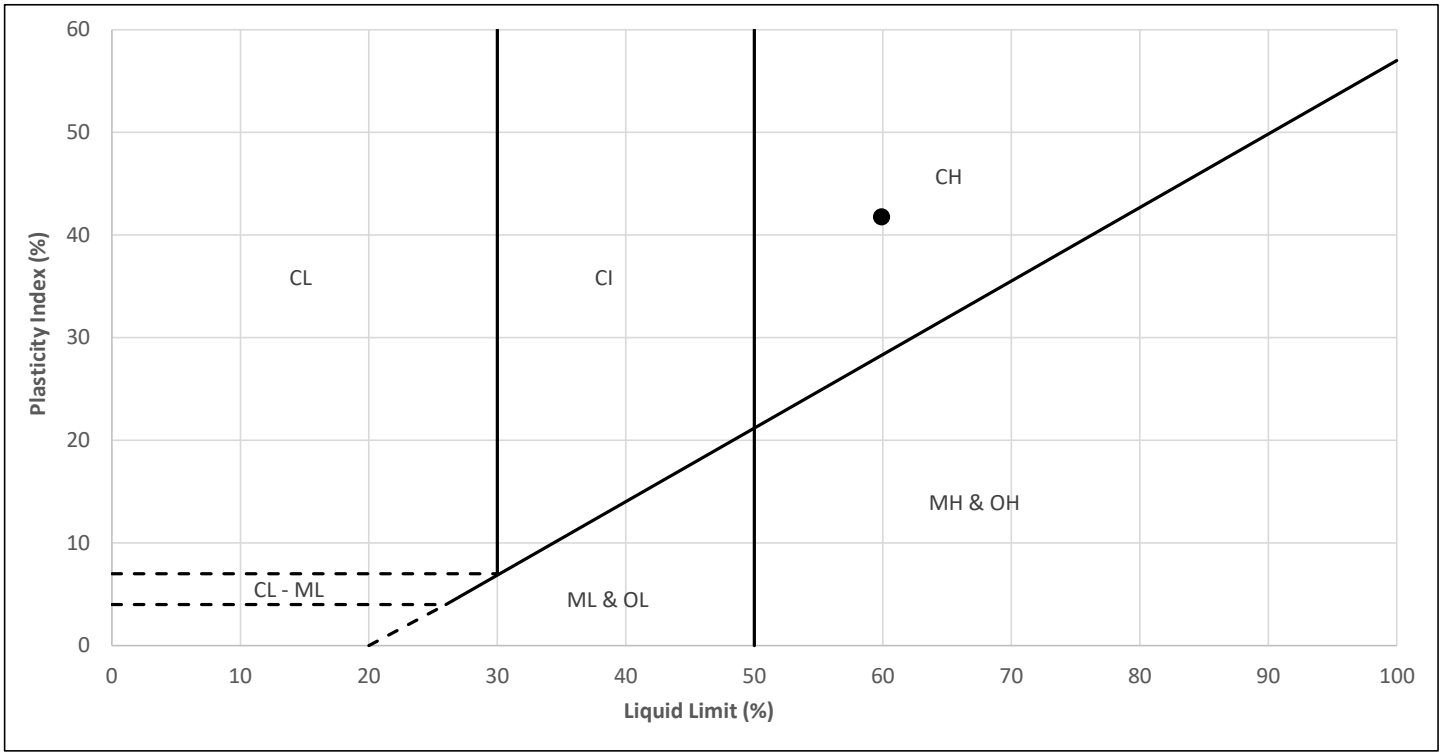
Project:	Snake Lake Reservoir Expansion	**Sample #:**	414AU1
Project No.:	1560-193-00	**Source:**	22BH414
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 414AU1	**Test Date:**	27-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	59.9
Plastic Limit (PL)	18.1
Plasticity Index (PI)	41.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

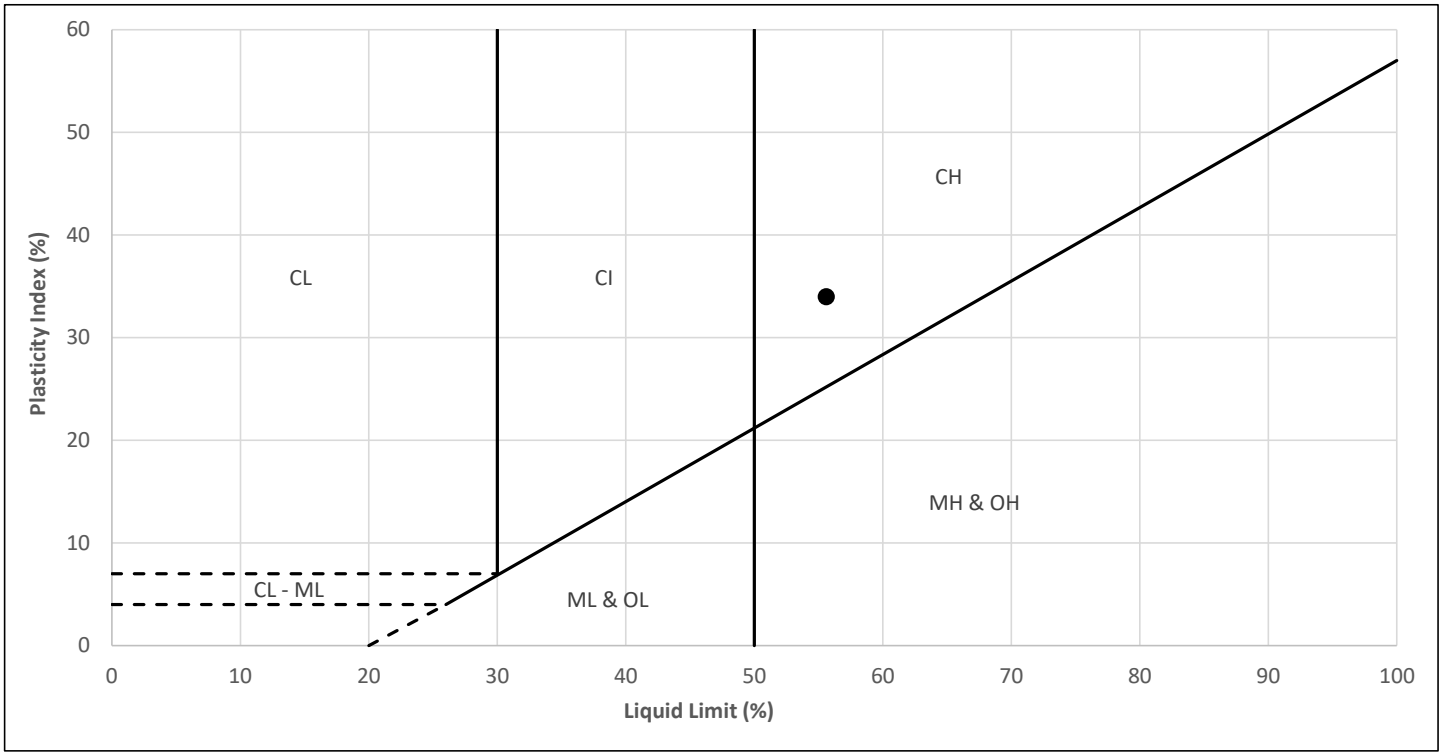
Project:	Snake Lake Reservoir Expansion	**Sample #:**	414AU2
Project No.:	1560-193-00	**Source:**	22BH414
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 414AU2	**Test Date:**	27-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.6
Plastic Limit (PL)	21.6
Plasticity Index (PI)	34.0

Soil Plasticity	High
Soil Classification	CH



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#122, 103 Marquis Court
Saskatoon, SK S7P 0C4
Tel: (306) 384-0071

ATTERBERG LIMITS

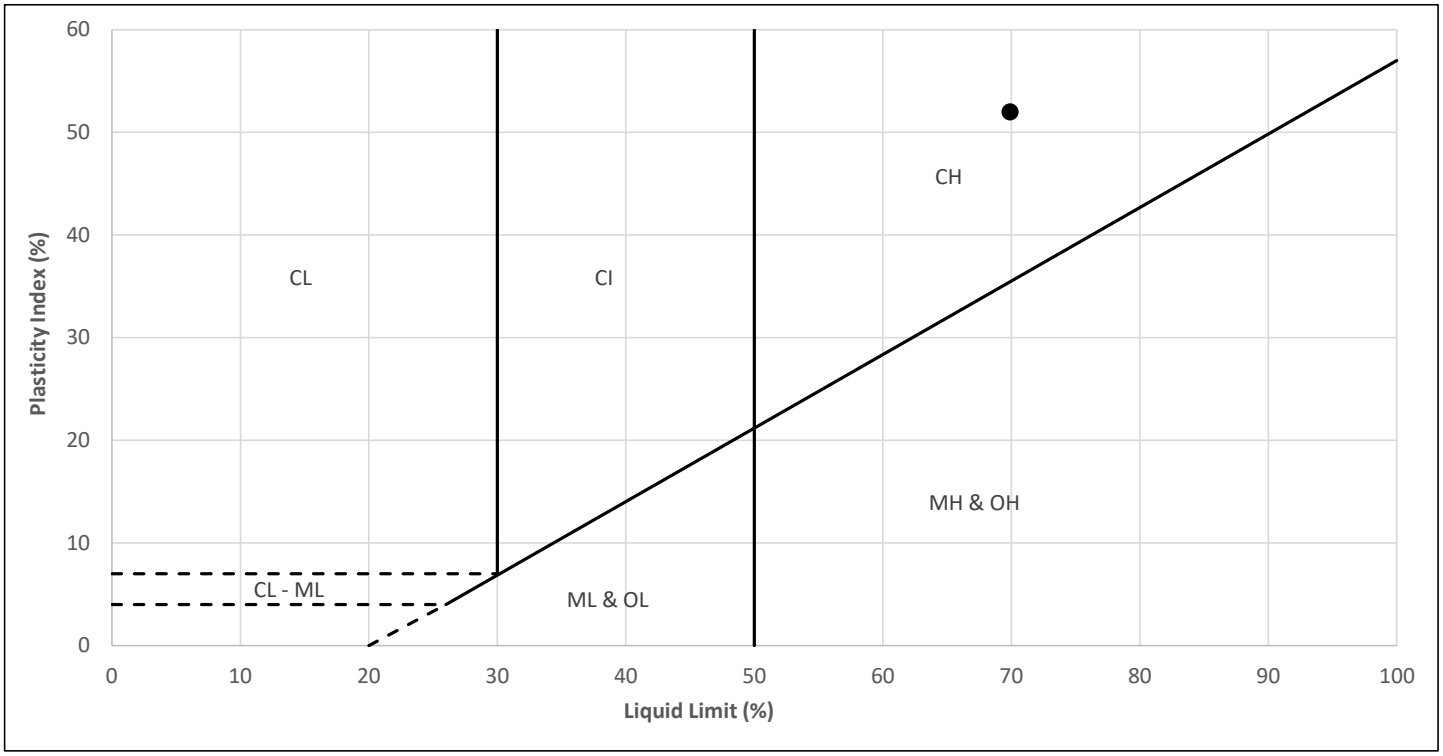
Project:	Snake Lake Reservoir Expansion	**Sample #:**	414B1
Project No.:	1560-193-00	**Source:**	22TP414
Owner:	EID	**Sample Depth:**	1.1m
File No.:	AL - 414B1	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	69.9
Plastic Limit (PL)	17.9
Plasticity Index (PI)	52.0

Soil Plasticity	High
Soil Classification	CH



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Saskatoon, SK S7P 0C4
Tel: (306) 384-0071

ATTERBERG LIMITS

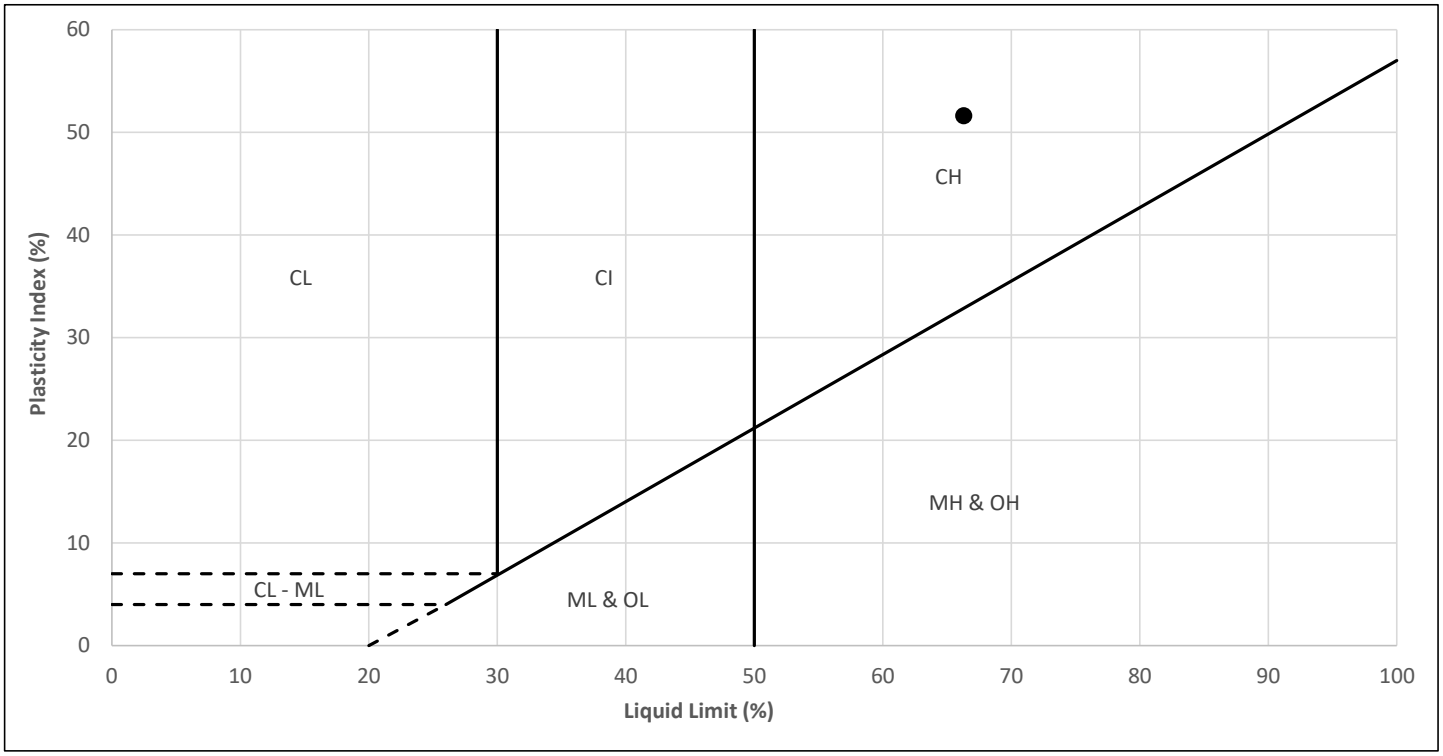
Project:	Snake Lake Reservoir Expansion	**Sample #:**	414B3
Project No.:	1560-193-00	**Source:**	22TP414
Owner:	EID	**Sample Depth:**	4.5m
File No.:	AL - 414B3	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	66.3
Plastic Limit (PL)	14.7
Plasticity Index (PI)	51.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

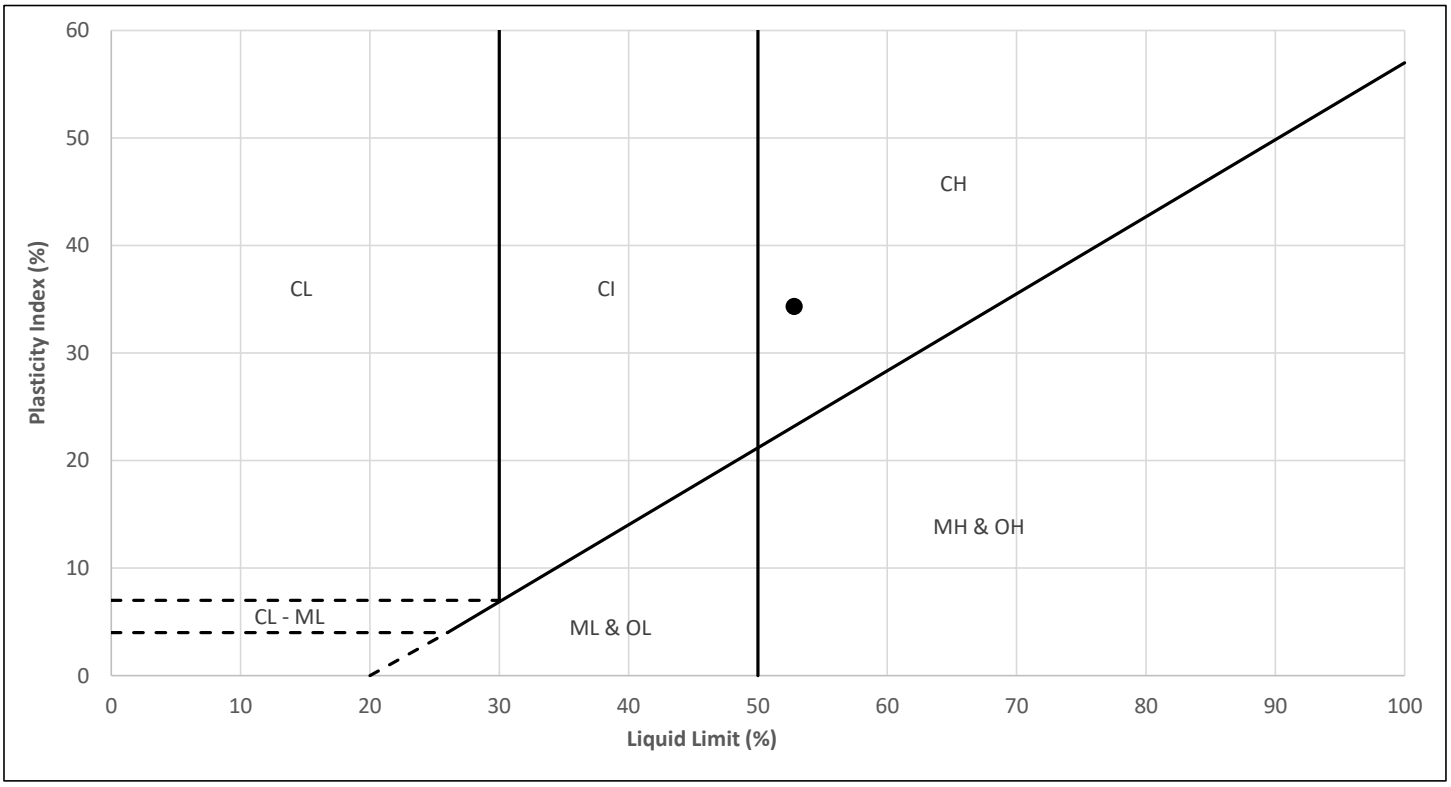
Project:	Snake Lake Reservoir Expansion	**Sample #:**	415AU1
Project No.:	1560-193-00	**Source:**	22BH415
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 415AU1	**Test Date:**	30-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.8
Plastic Limit (PL)	18.4
Plasticity Index (PI)	34.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

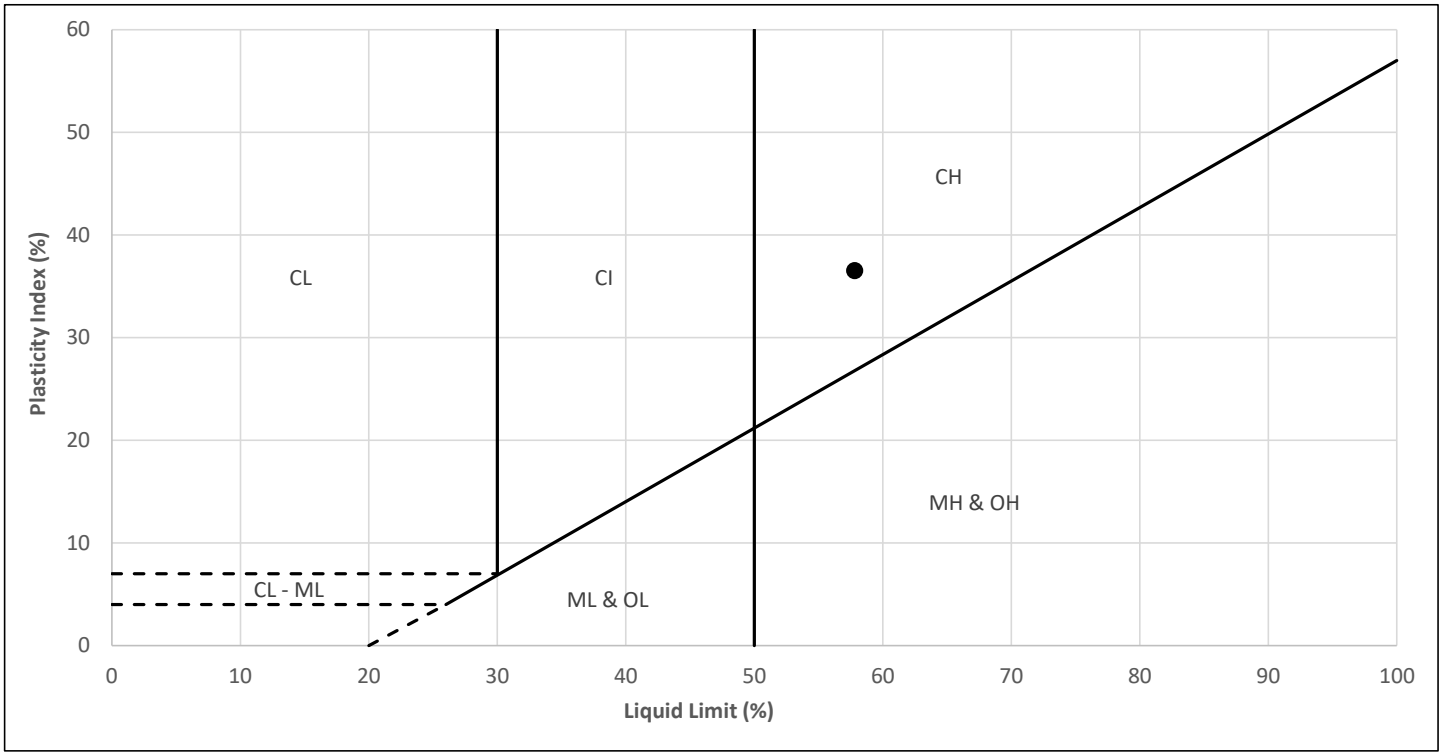
Project:	Snake Lake Reservoir Expansion	**Sample #:**	415AU3
Project No.:	1560-193-00	**Source:**	22BH415
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 415AU3	**Test Date:**	27-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	57.8
Plastic Limit (PL)	21.3
Plasticity Index (PI)	36.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

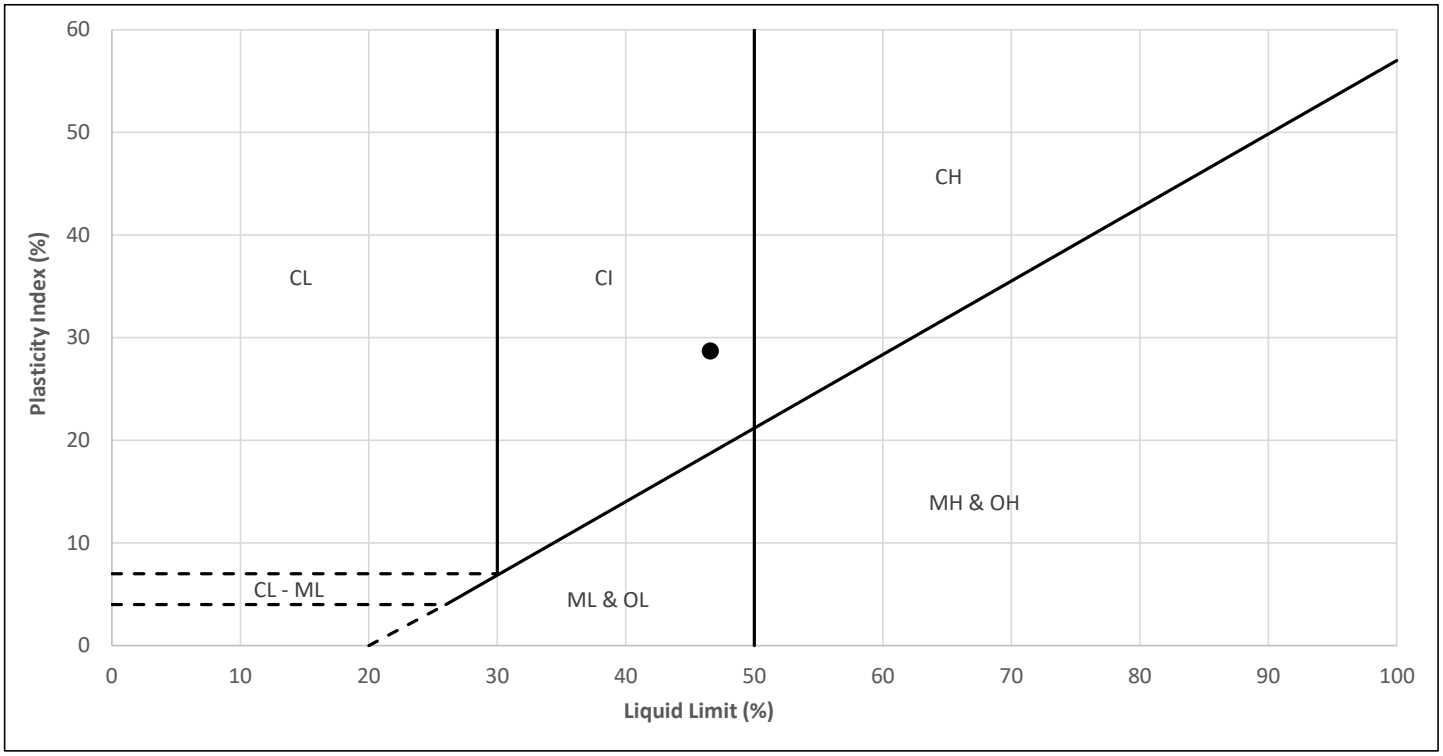
Project:	Snake Lake Reservoir Expansion	**Sample #:**	416AU1
Project No.:	1560-193-00	**Source:**	22BH416
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 416AU1	**Test Date:**	23-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	46.6
Plastic Limit (PL)	17.9
Plasticity Index (PI)	28.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

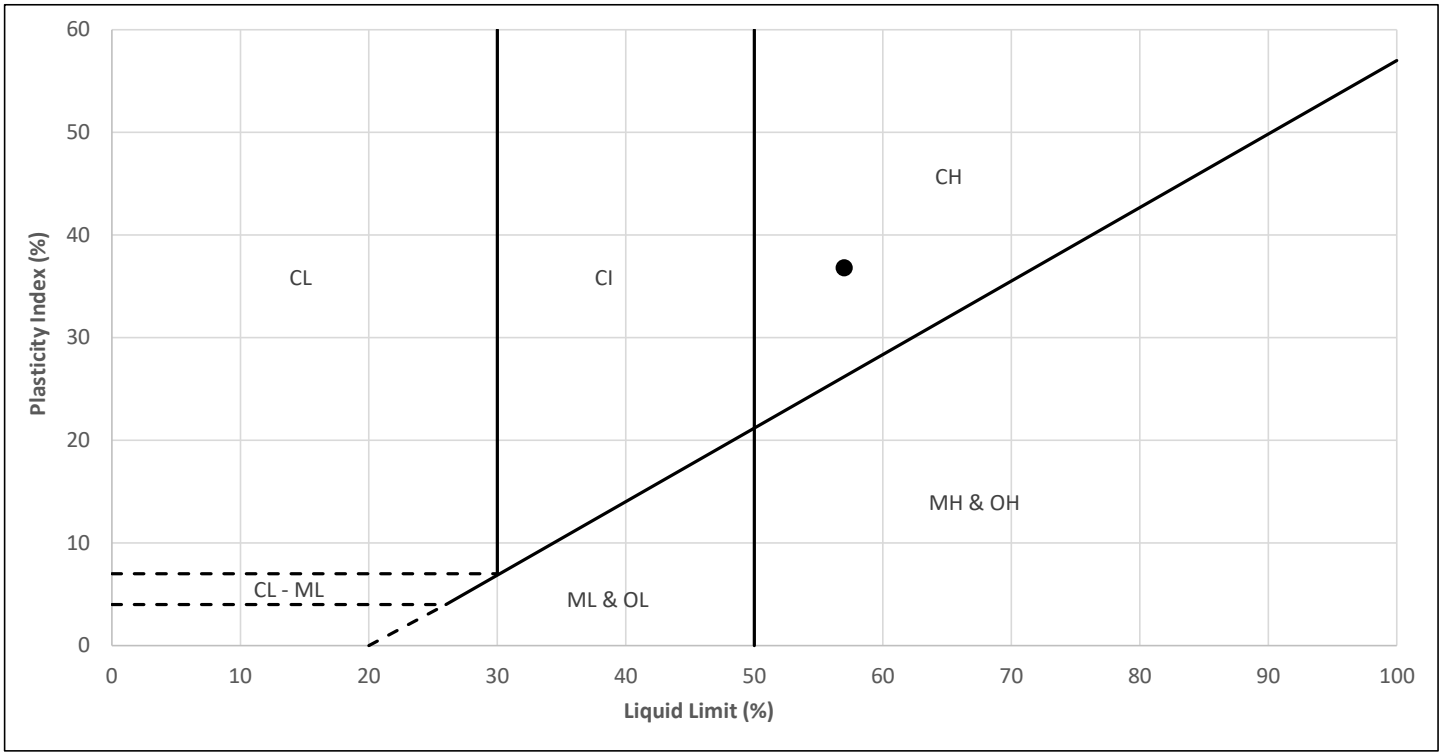
Project:	Snake Lake Reservoir Expansion	**Sample #:**	416AU2
Project No.:	1560-193-00	**Source:**	22BH416
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 416AU2	**Test Date:**	27-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	57.0
Plastic Limit (PL)	20.2
Plasticity Index (PI)	36.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

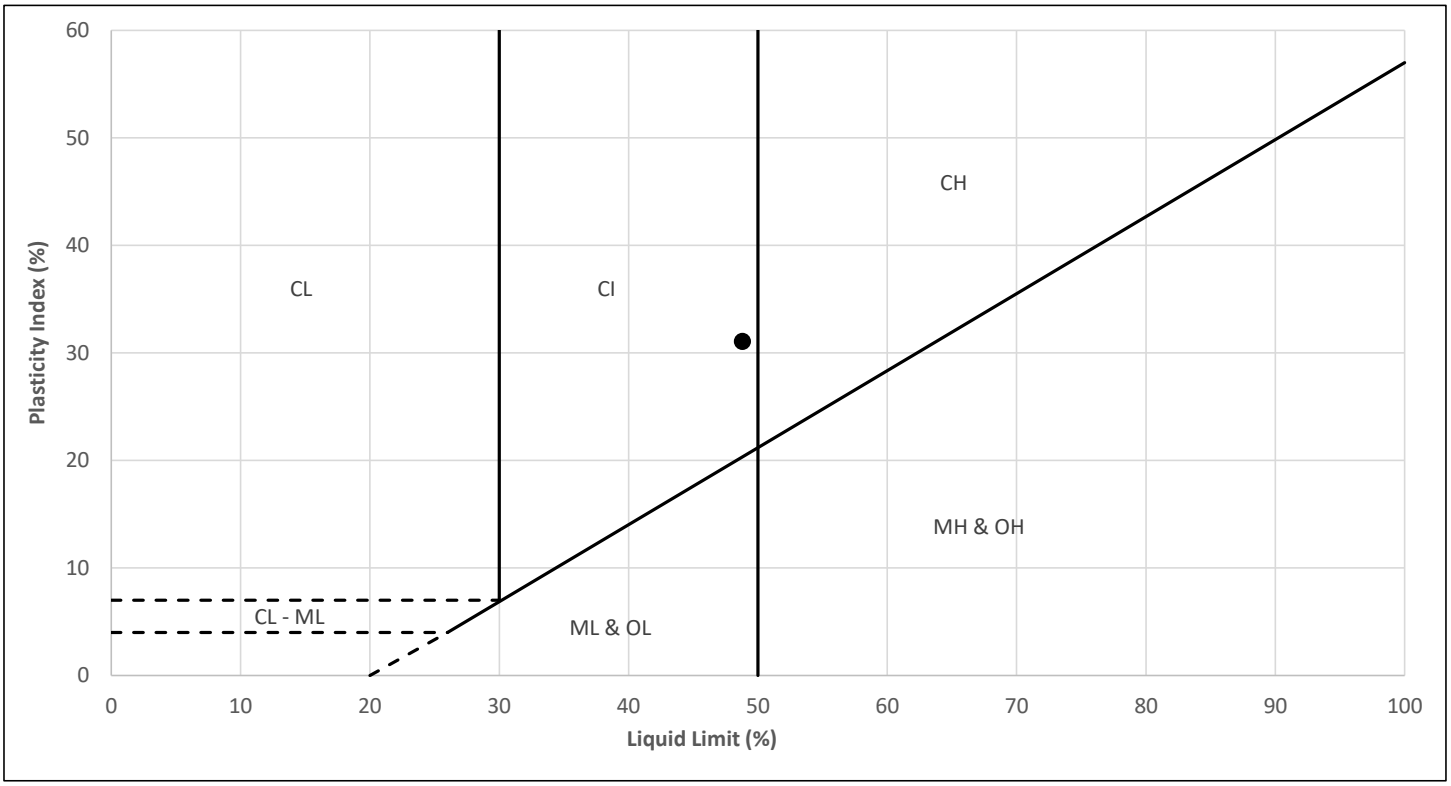
Project:	Snake Lake Reservoir Expansion	**Sample #:**	416AU4
Project No.:	1560-193-00	**Source:**	22BH416
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 416AU4	**Test Date:**	30-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	48.8
Plastic Limit (PL)	17.7
Plasticity Index (PI)	31.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

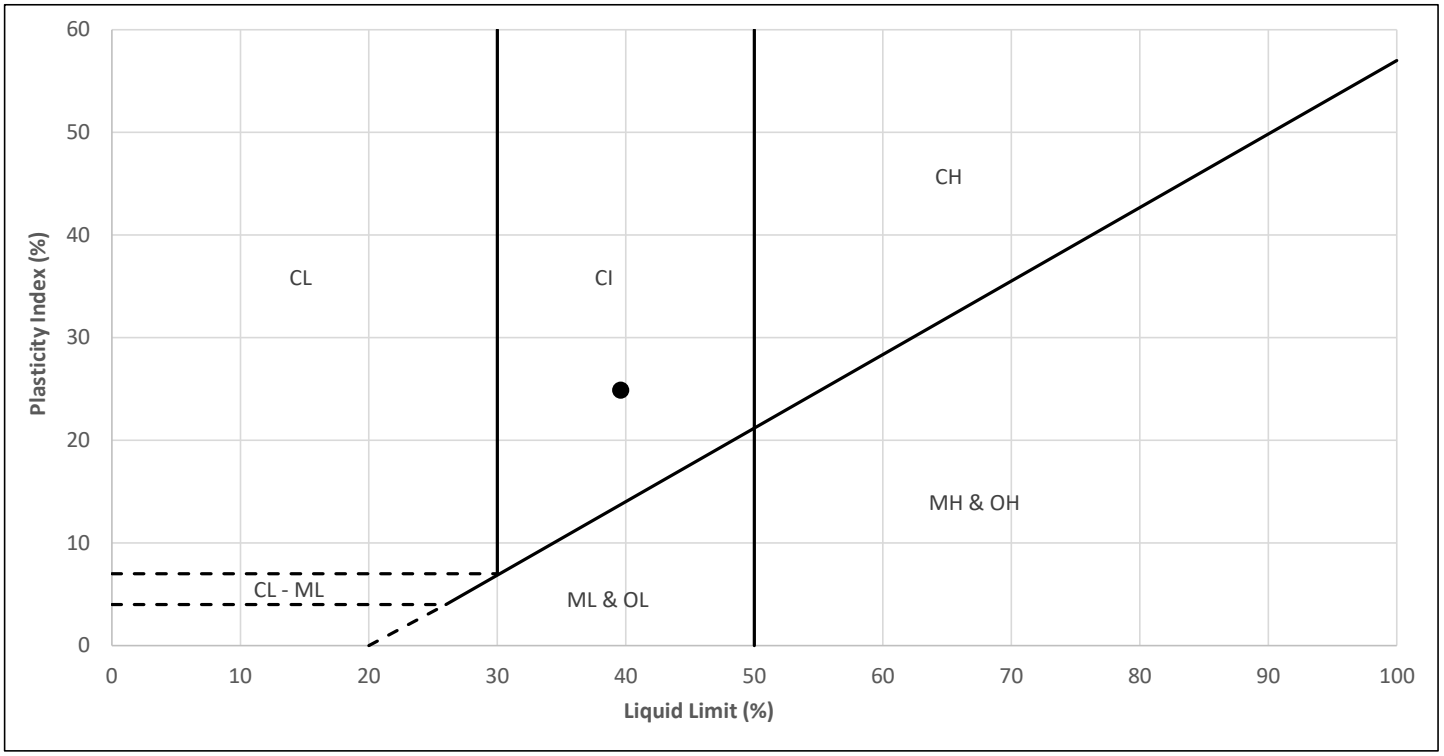
Project:	Snake Lake Reservoir Expansion	**Sample #:**	417AU1
Project No.:	1560-193-00	**Source:**	22BH417
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 417AU1	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	39.6
Plastic Limit (PL)	14.7
Plasticity Index (PI)	24.9

Soil Plasticity	Medium
Soil Classification	CI



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Reviewed By: Kasz Leavitt, P.Tech. (Eng.)

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MPE Engineering Ltd.
1, 3320 18 Avenue North
Lethbridge, Alberta T1H 5J3
Tel: (403)892-6036

ATTERBERG LIMITS

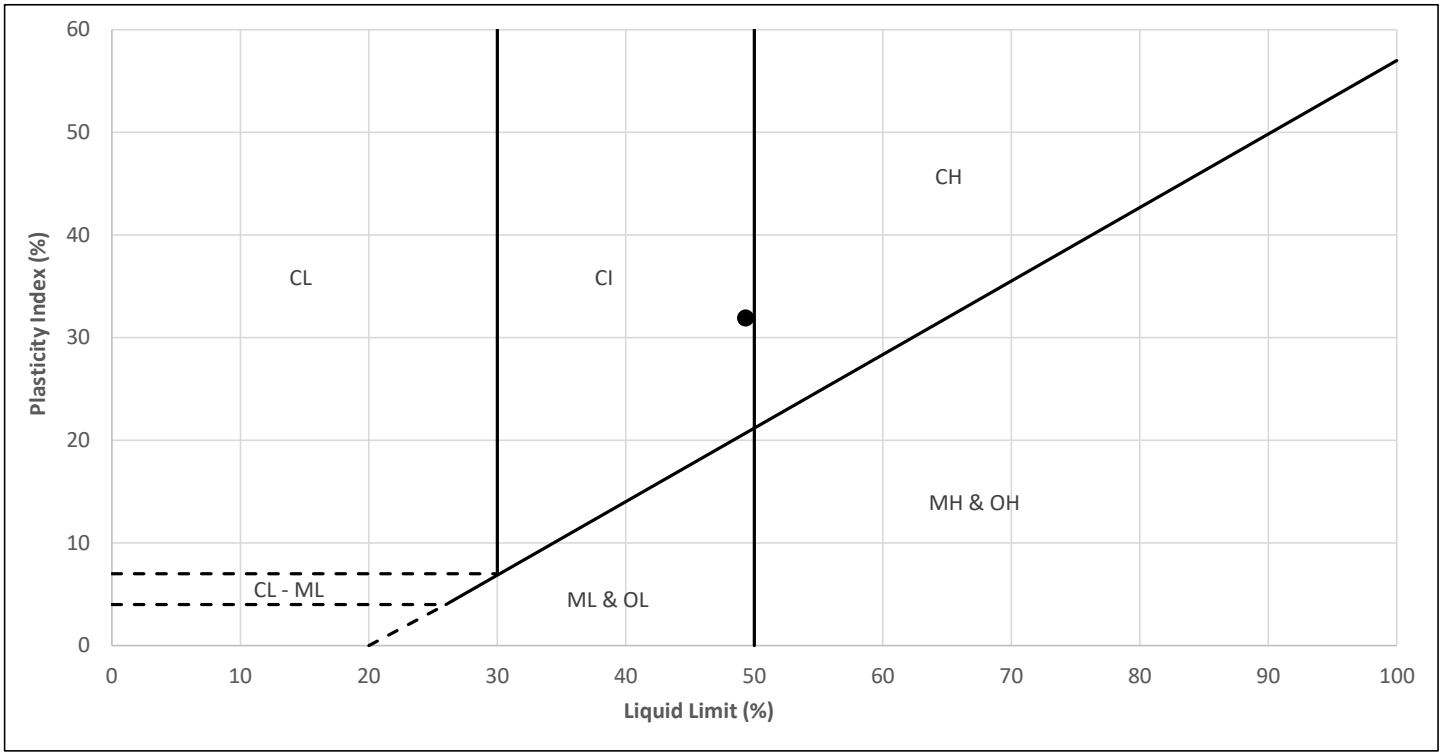
Project:	Snake Lake Reservoir Expansion	**Sample #:**	417AU2
Project No.:	1560-193-00	**Source:**	22BH417
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 417AU2	**Test Date:**	18-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.3
Plastic Limit (PL)	17.4
Plasticity Index (PI)	31.9

Soil Plasticity	Meduim
Soil Classification	CI



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ATTERBERG LIMITS

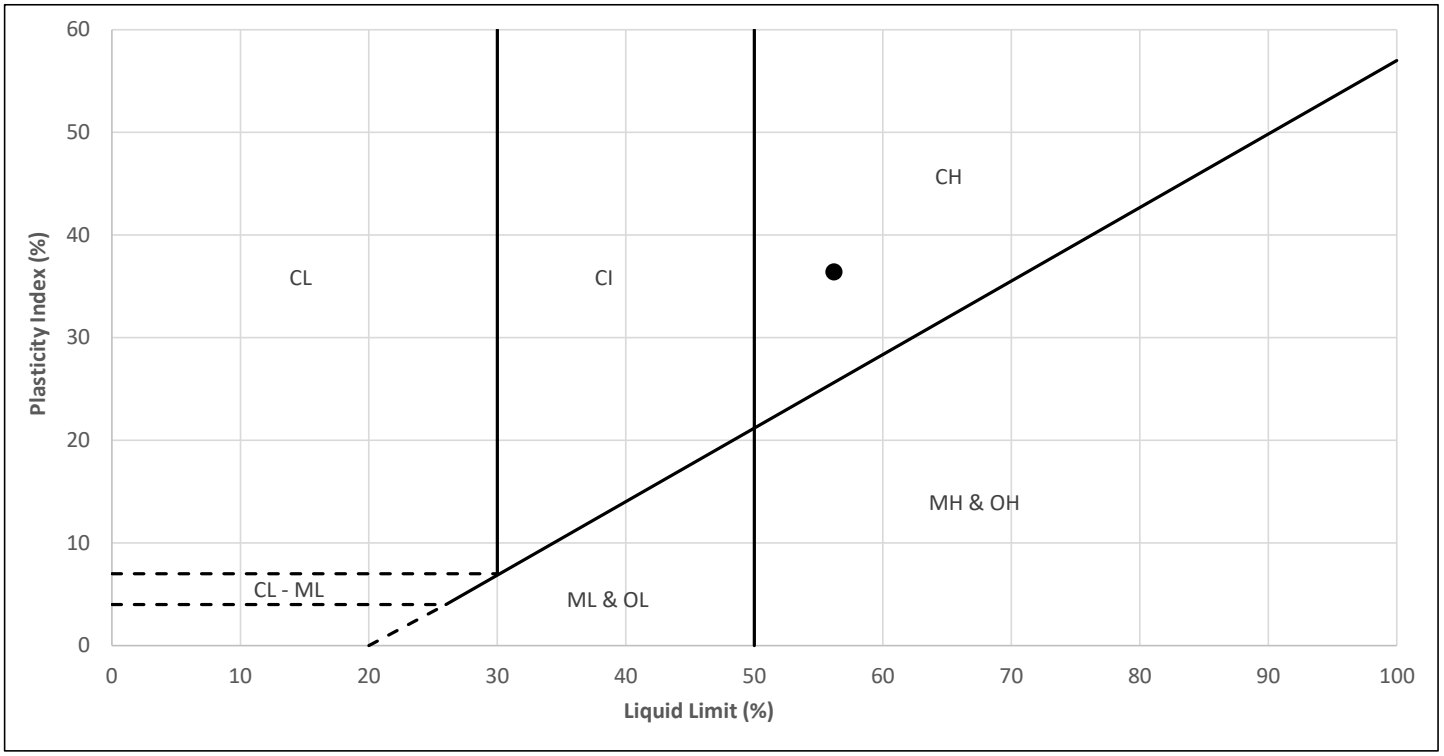
Project:	Snake Lake Reservoir Expansion	**Sample #:**	417AU3
Project No.:	1560-193-00	**Source:**	22BH417
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 417AU3	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	56.2
Plastic Limit (PL)	19.8
Plasticity Index (PI)	36.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

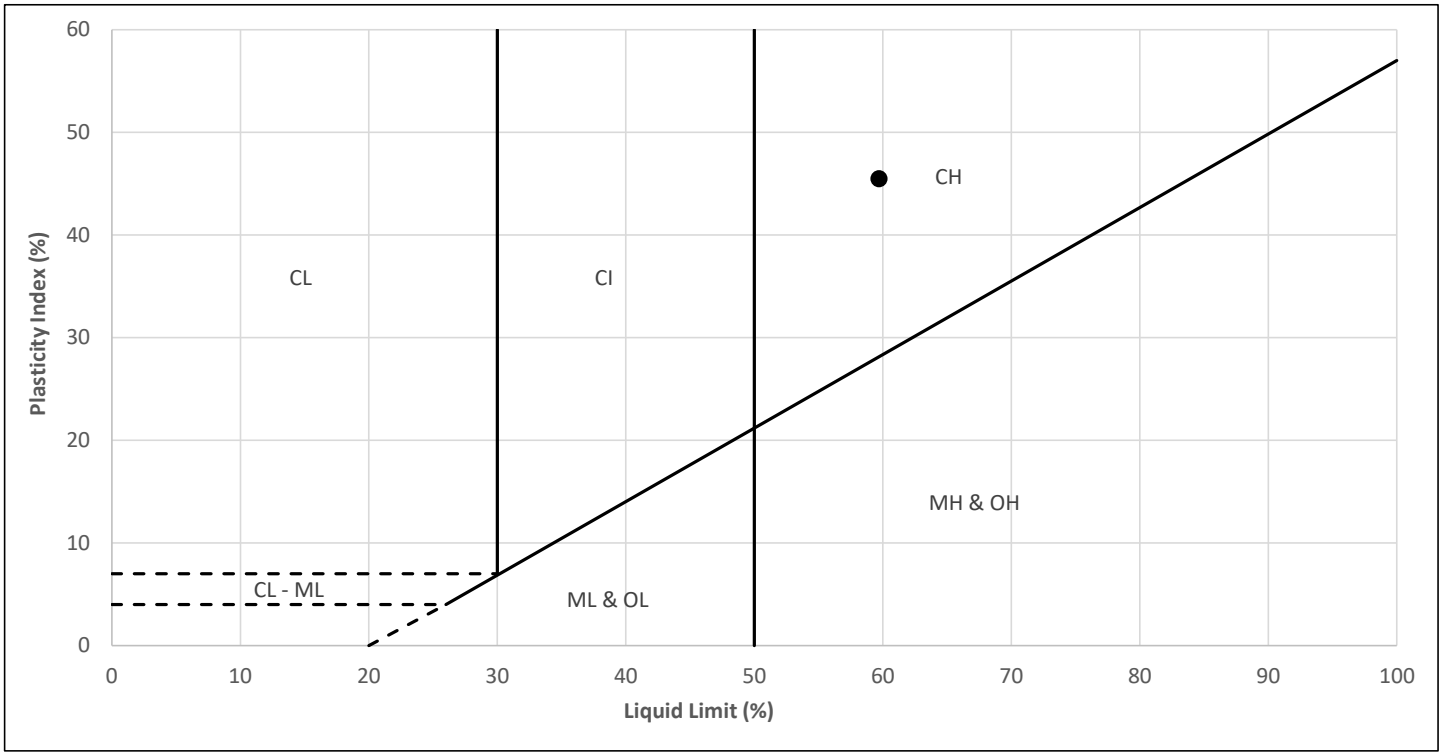
Project:	Snake Lake Reservoir Expansion	**Sample #:**	417B1
Project No.:	1560-193-00	**Source:**	22TP417
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 417B1	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	59.7
Plastic Limit (PL)	14.2
Plasticity Index (PI)	45.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

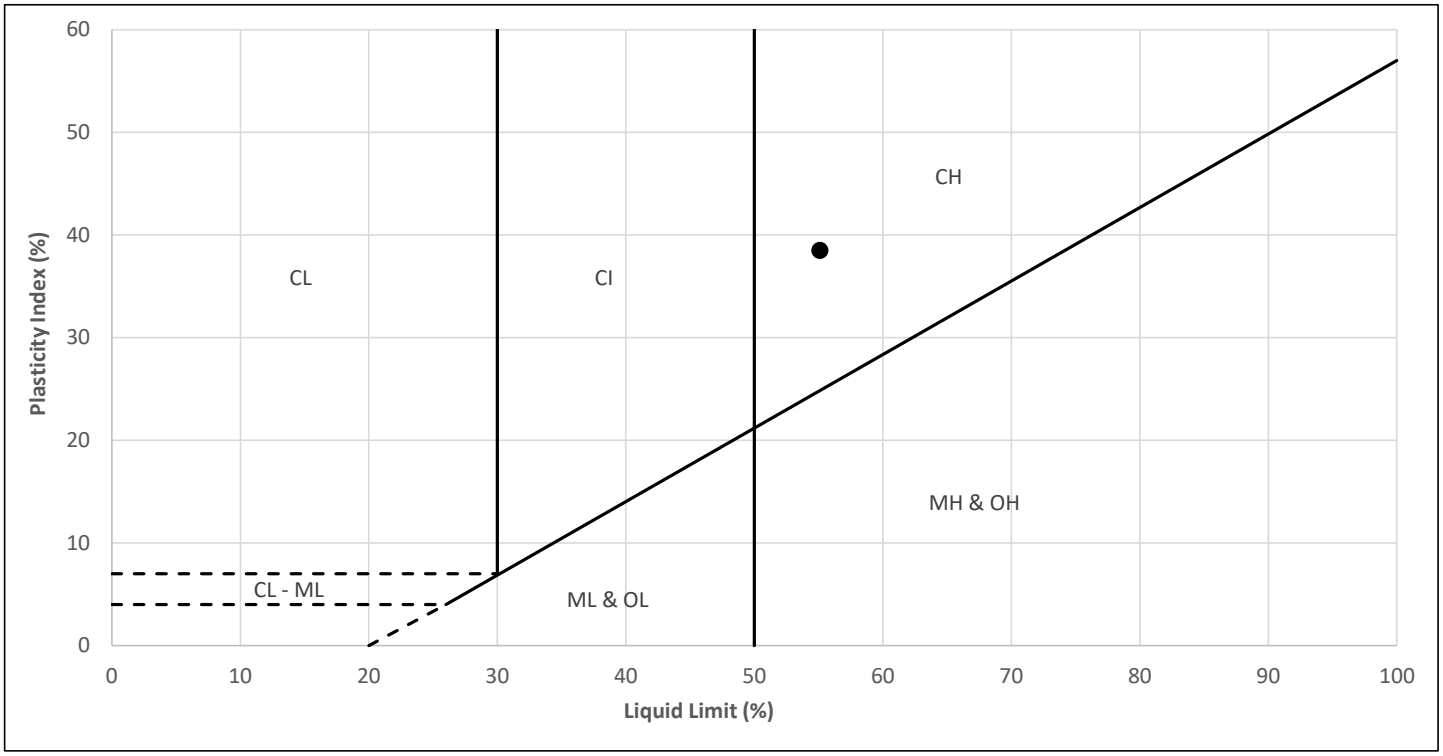
Project:	Snake Lake Reservoir Expansion	**Sample #:**	418AU1
Project No.:	1560-193-00	**Source:**	22BH418
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 418AU1	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.1
Plastic Limit (PL)	16.6
Plasticity Index (PI)	38.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

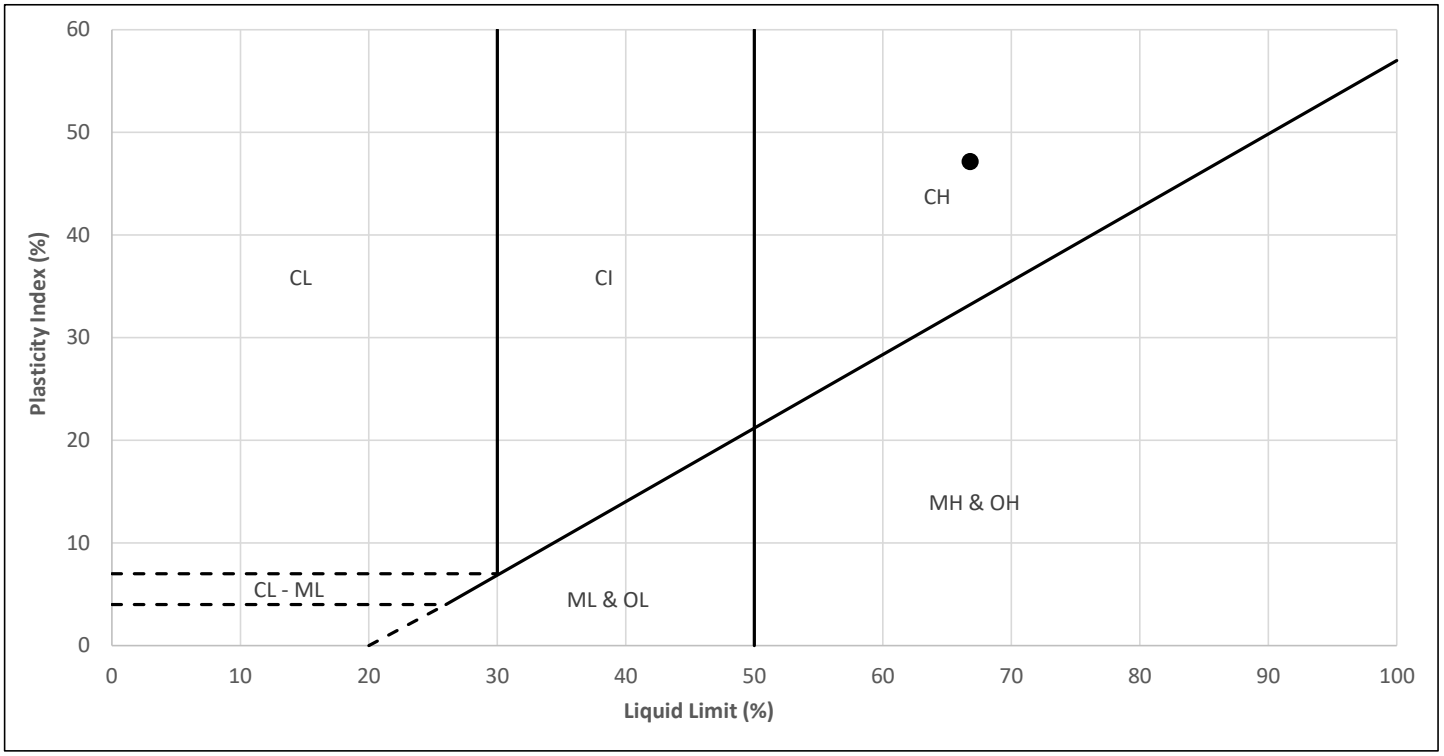
Project:	Snake Lake Reservoir Expansion	**Sample #:**	418AU3
Project No.:	1560-193-00	**Source:**	22BH418
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 418AU3	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	66.8
Plastic Limit (PL)	19.6
Plasticity Index (PI)	47.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

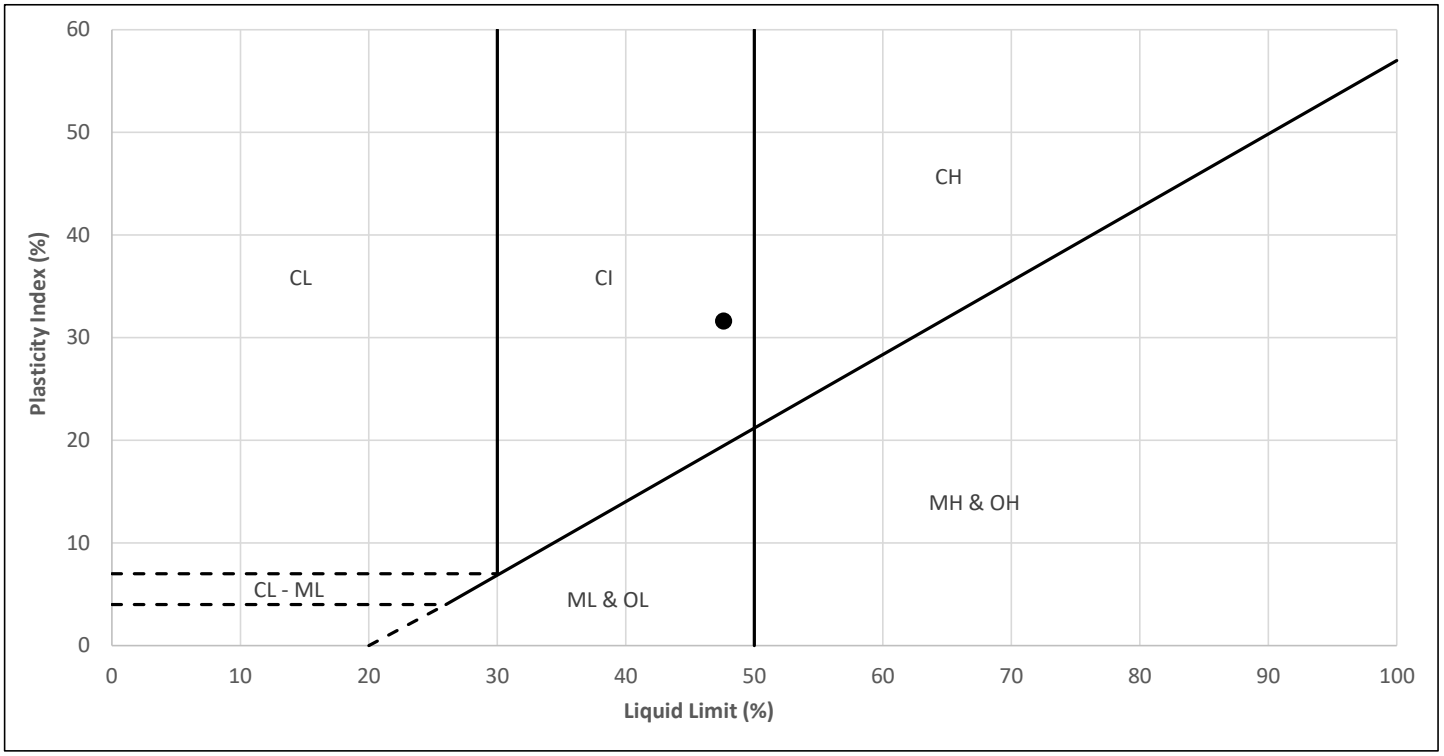
Project:	Snake Lake Reservoir Expansion	**Sample #:**	419AU1
Project No.:	1560-193-00	**Source:**	22BH419
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 419AU1	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	47.6
Plastic Limit (PL)	16.0
Plasticity Index (PI)	31.6

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

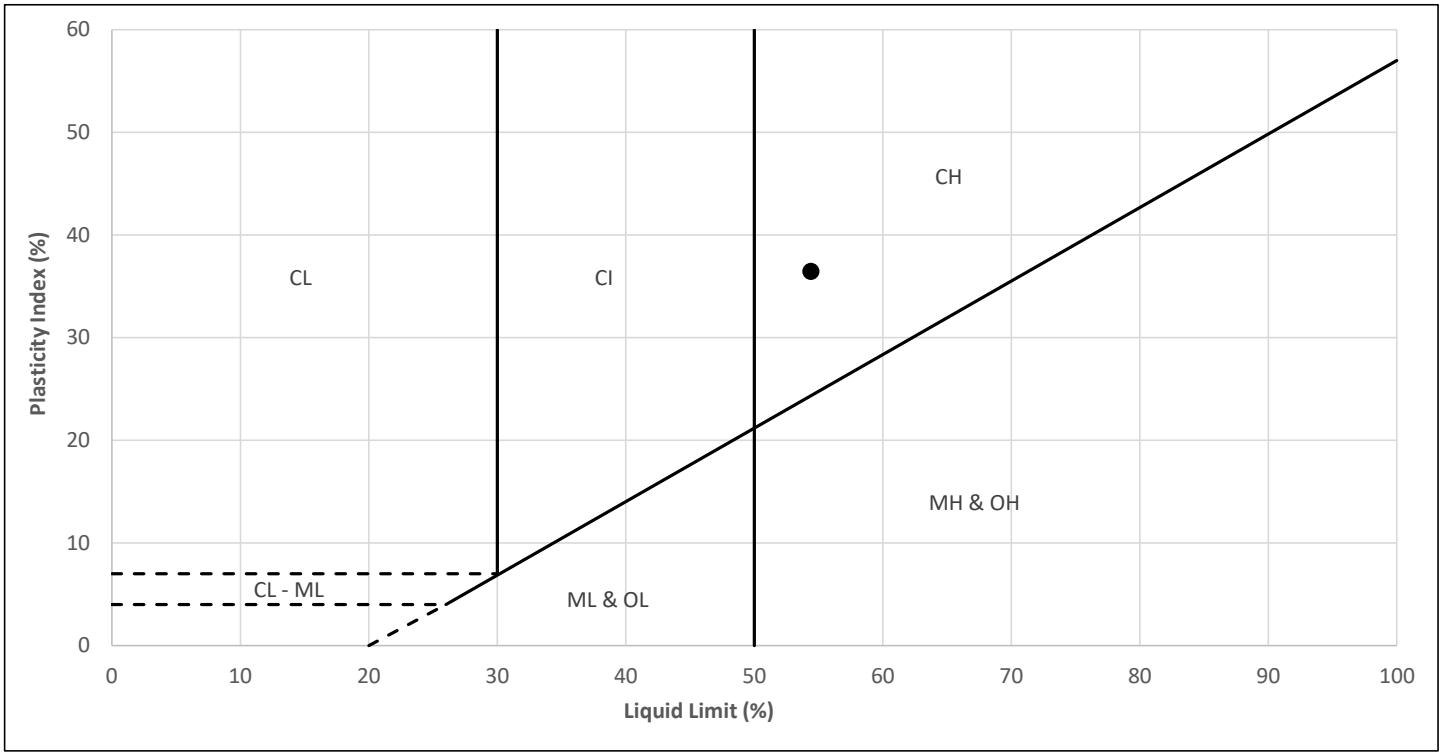
Project:	Snake Lake Reservoir Expansion	**Sample #:**	419AU4
Project No.:	1560-193-00	**Source:**	22BH419
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 419AU4	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.4
Plastic Limit (PL)	17.9
Plasticity Index (PI)	36.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

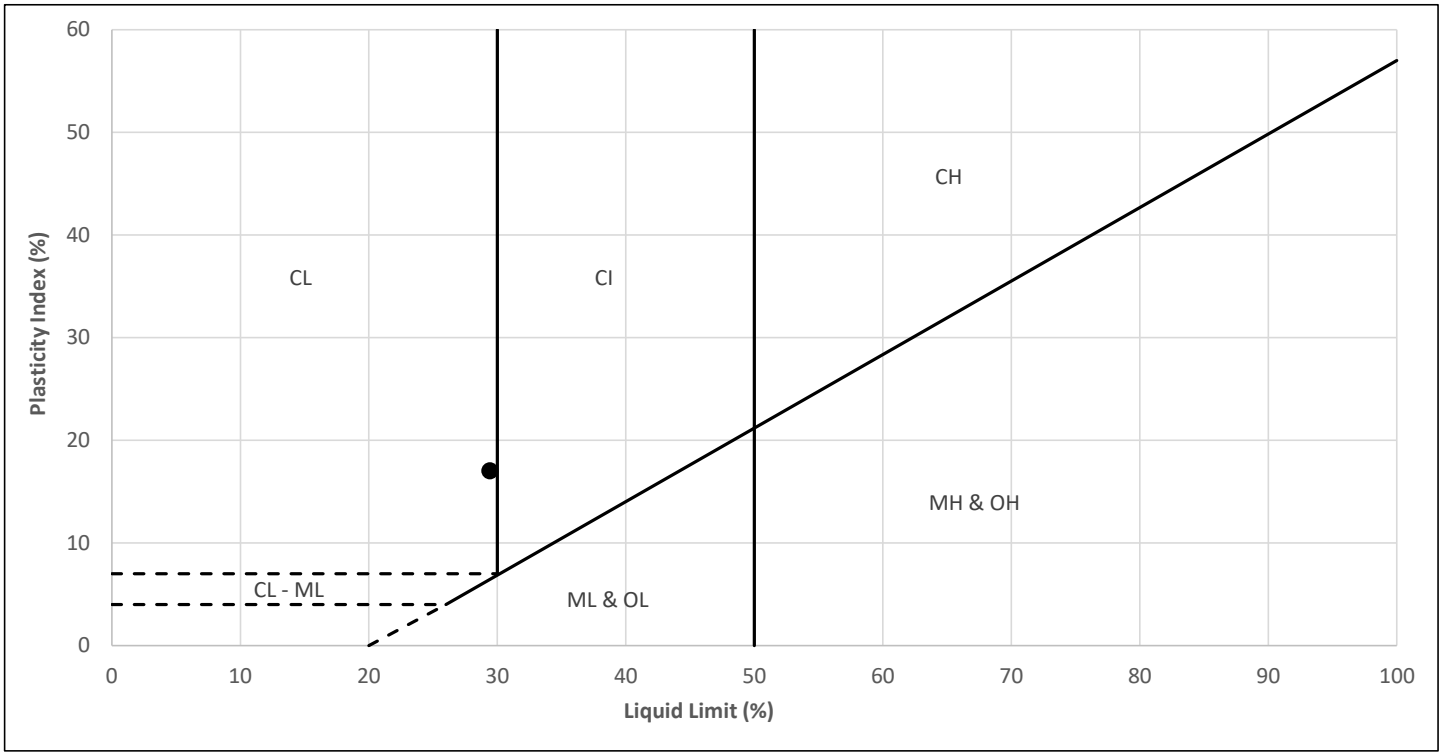
Project:	Snake Lake Reservoir Expansion	**Sample #:**	420AU1
Project No.:	1560-193-00	**Source:**	22BH420
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 420AU1	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays

Liquid Limit (LL)	29.4
Plastic Limit (PL)	12.4
Plasticity Index (PI)	17.0

Soil Plasticity	Low
Soil Classification	CL



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ATTERBERG LIMITS

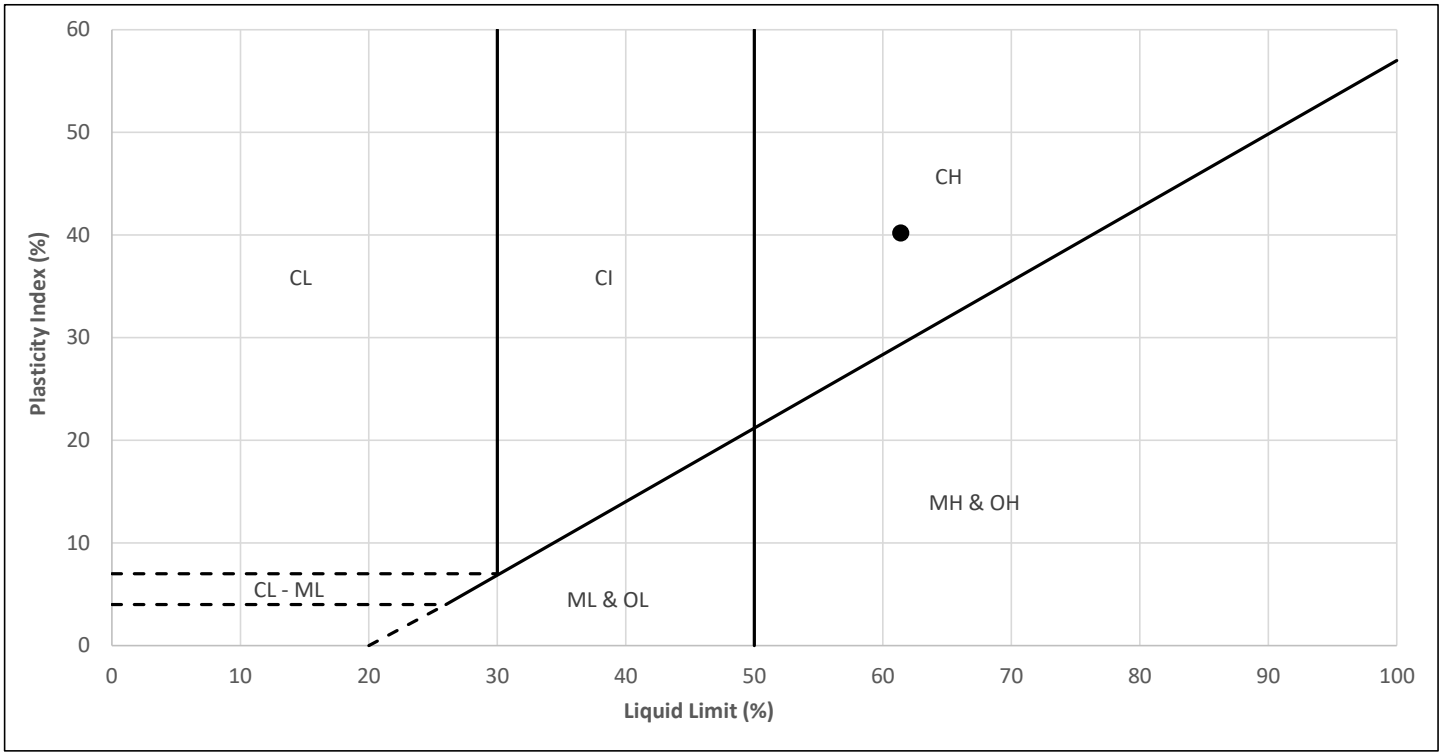
Project:	Snake Lake Reservoir Expansion	**Sample #:**	420AU3
Project No.:	1560-193-00	**Source:**	22BH420
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 420AU3	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	61.4
Plastic Limit (PL)	21.2
Plasticity Index (PI)	40.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

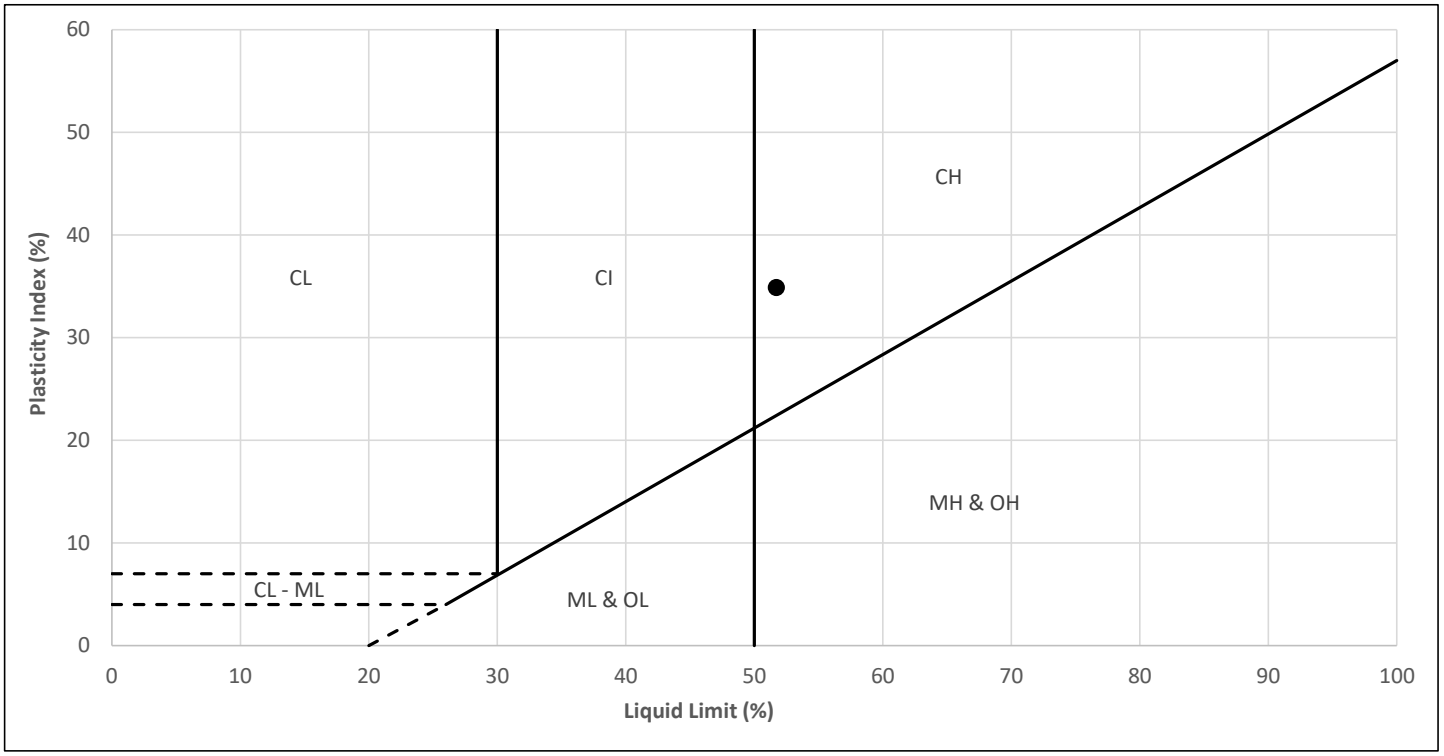
Project:	Snake Lake Reservoir Expansion	**Sample #:**	421AU1
Project No.:	1560-193-00	**Source:**	22BH421
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 421AU1	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.7
Plastic Limit (PL)	16.8
Plasticity Index (PI)	34.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

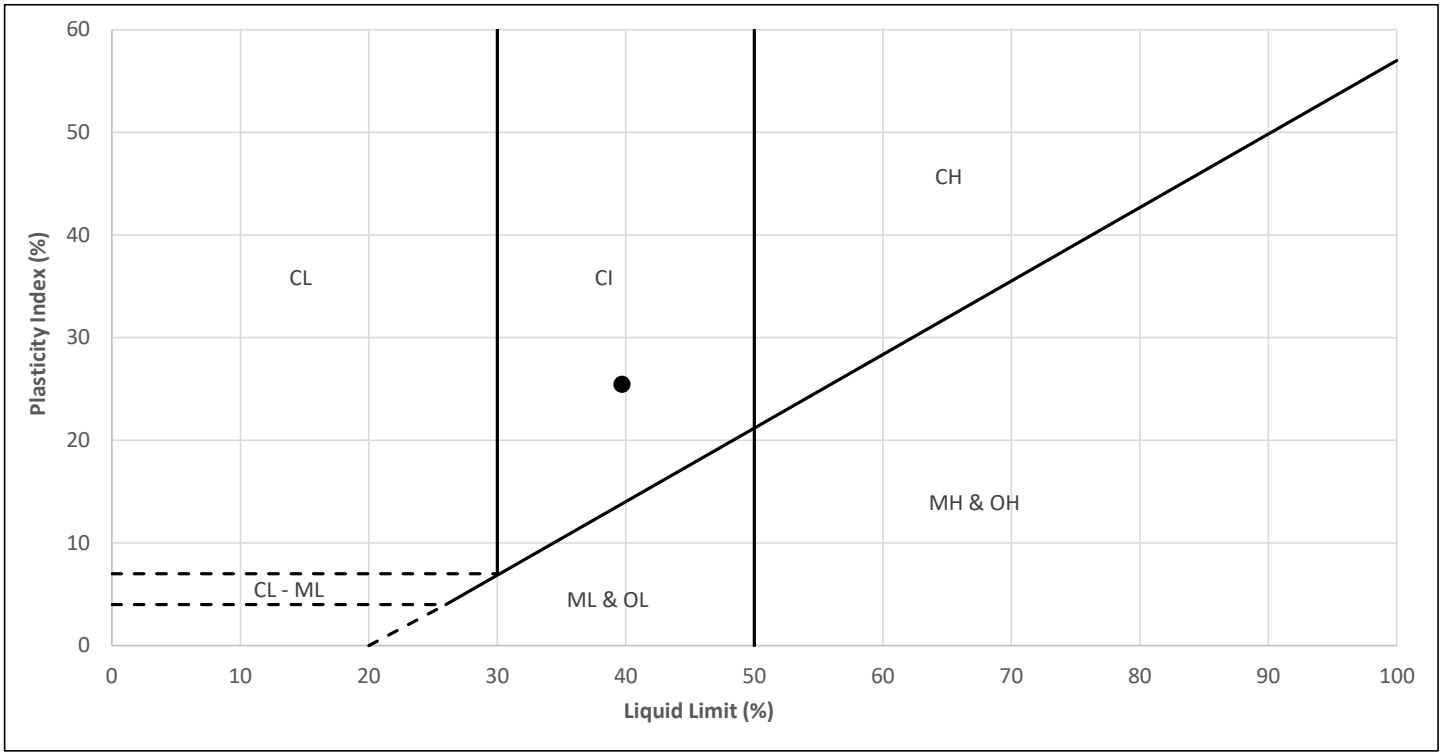
Project:	Snake Lake Reservoir Expansion	**Sample #:**	421AU3
Project No.:	1560-193-00	**Source:**	22BH421
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 421AU3	**Test Date:**	1-Nov-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	39.7
Plastic Limit (PL)	14.2
Plasticity Index (PI)	25.5

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

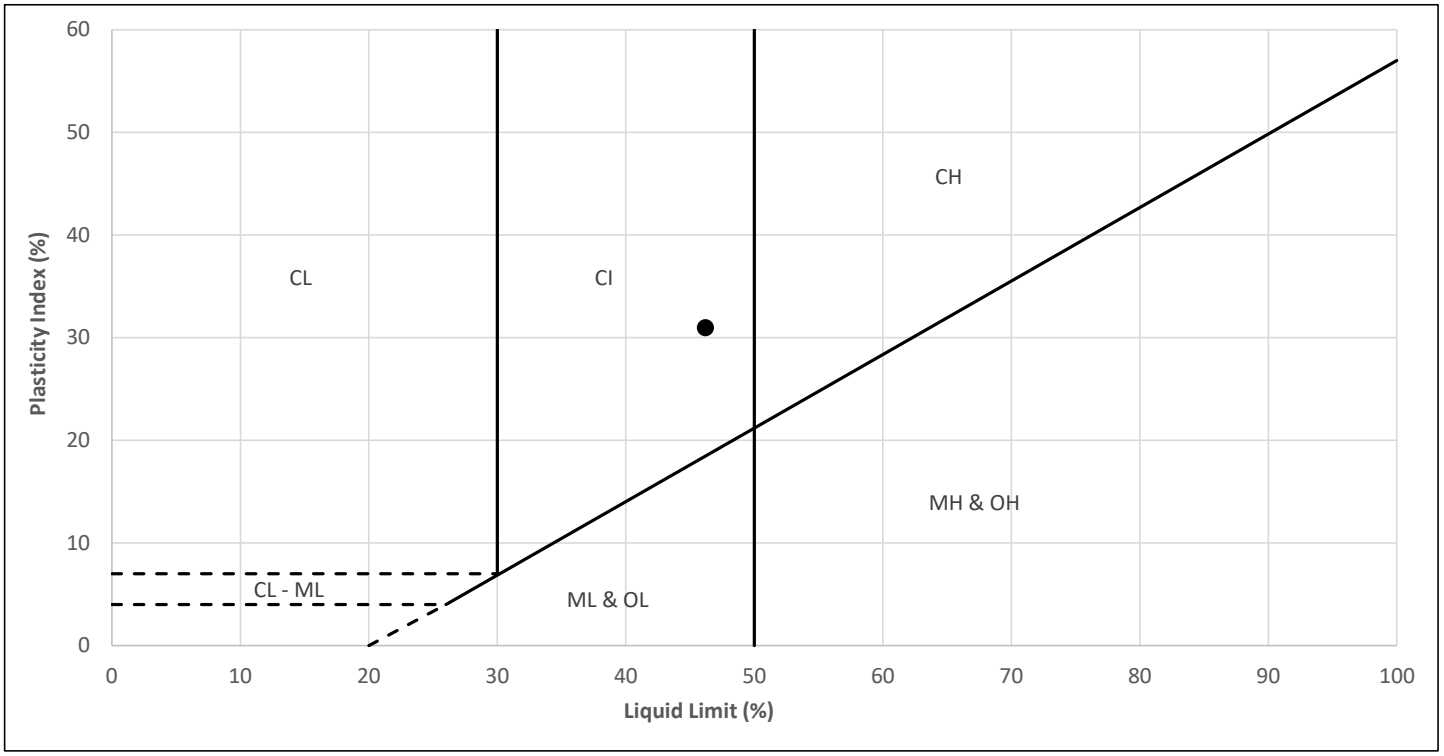
Project:	Snake Lake Reservoir Expansion	**Sample #:**	422AU1
Project No.:	1560-193-00	**Source:**	22BH421
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 422AU1	**Test Date:**	28-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	46.2
Plastic Limit (PL)	15.2
Plasticity Index (PI)	31.0

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

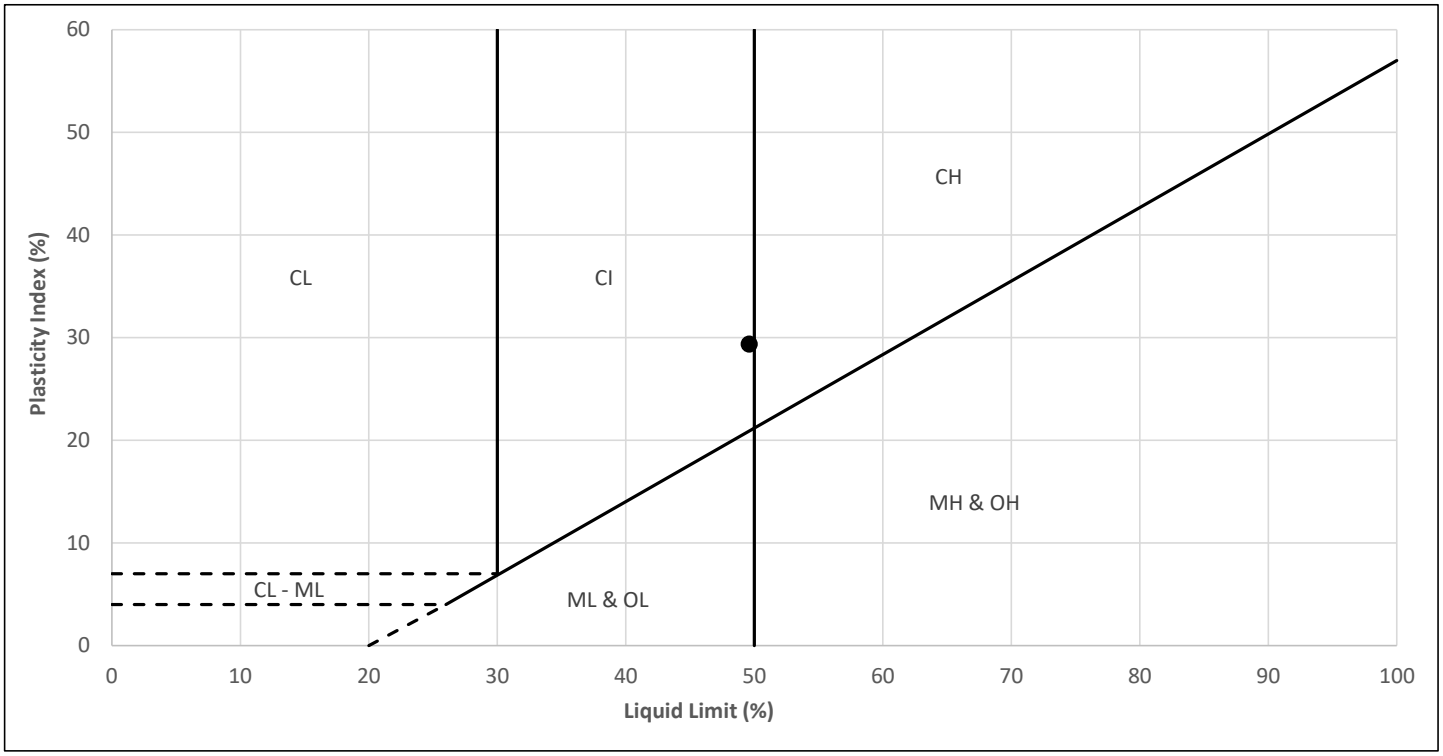
Project:	Snake Lake Reservoir Expansion	**Sample #:**	422AU2
Project No.:	1560-193-00	**Source:**	22BH422
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 422AU2	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.6
Plastic Limit (PL)	20.2
Plasticity Index (PI)	29.4

Soil Plasticity	Medium
Soil Classification	CI



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Saskatoon, SK S7P 0C4
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ATTERBERG LIMITS

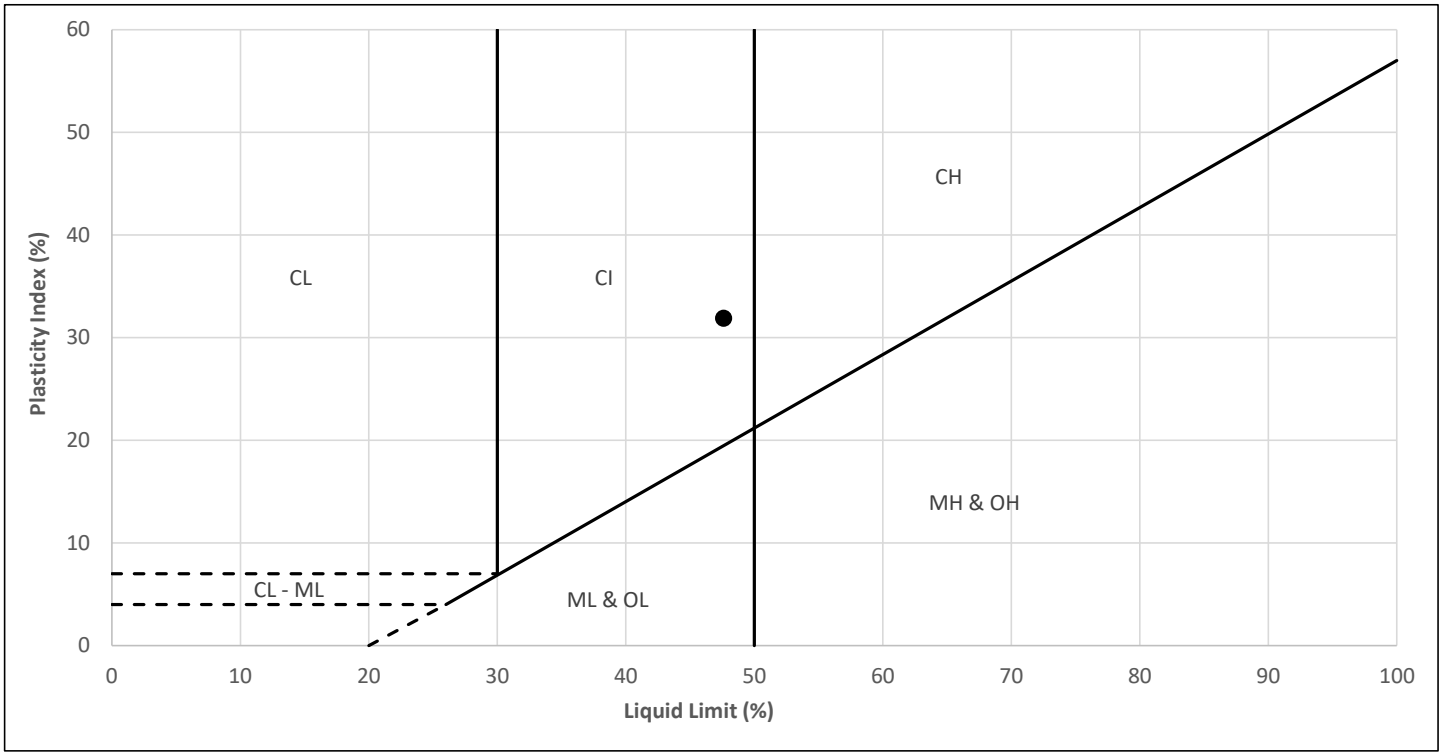
Project:	Snake Lake Reservoir Expansion	**Sample #:**	422B1
Project No.:	1560-193-00	**Source:**	22TP422
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 422B1	**Test Date:**	30-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	47.6
Plastic Limit (PL)	15.7
Plasticity Index (PI)	31.9

Soil Plasticity	Medium
Soil Classification	CI



Comments:

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ATTERBERG LIMITS

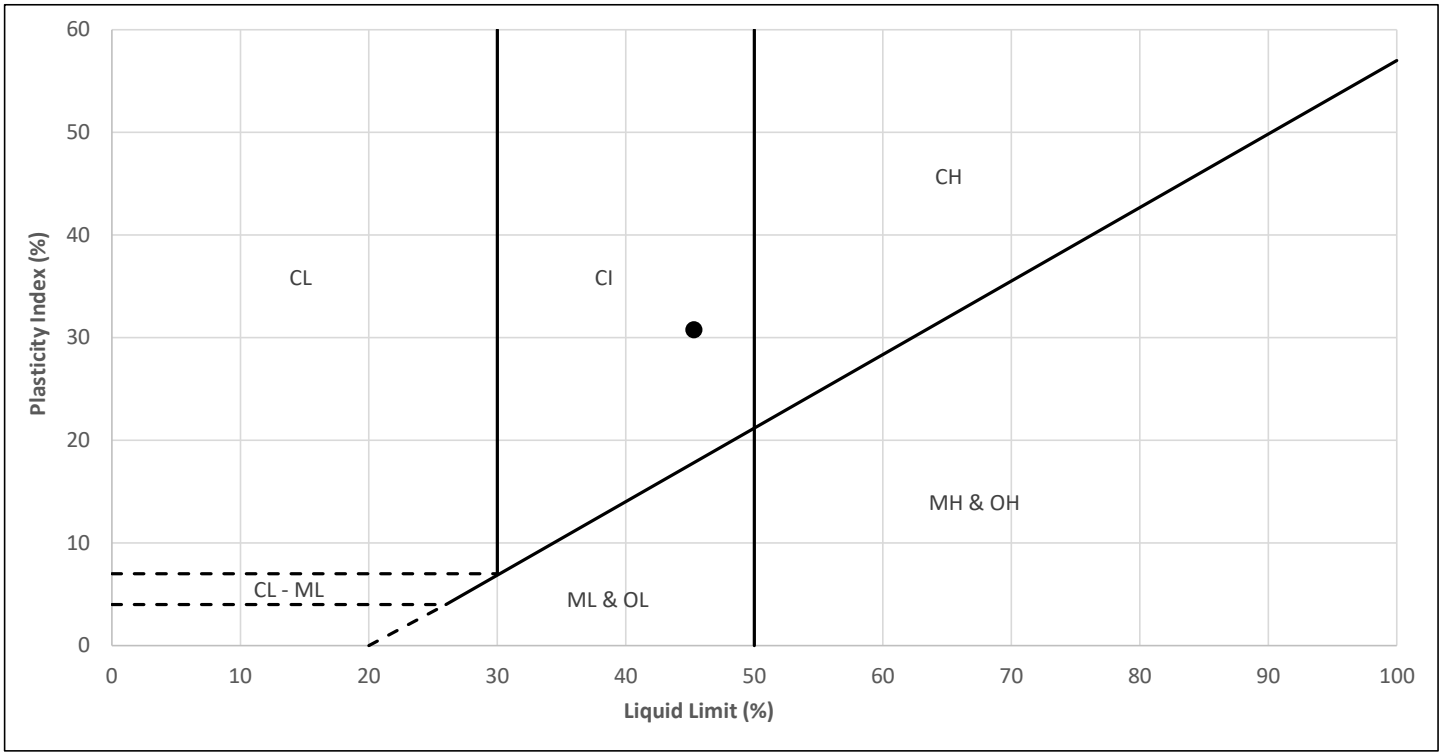
Project:	Snake Lake Reservoir Expansion	**Sample #:**	423AU1
Project No.:	1560-193-00	**Source:**	22BH423
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 423AU1	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	45.3
Plastic Limit (PL)	14.5
Plasticity Index (PI)	30.8

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

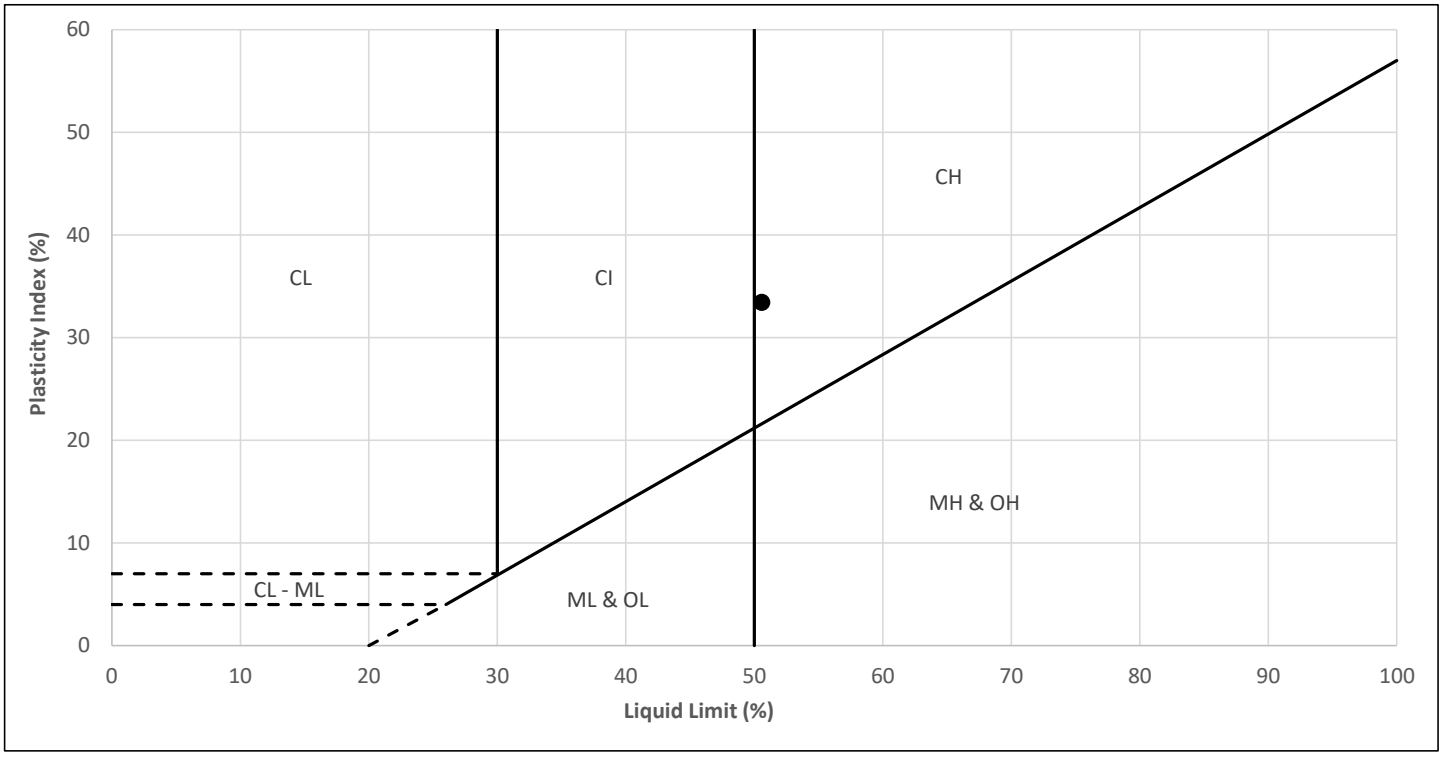
Project:	Snake Lake Reservoir Expansion	**Sample #:**	423AU2
Project No.:	1560-193-00	**Source:**	22BH423
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 423AU2	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	50.6
Plastic Limit (PL)	17.1
Plasticity Index (PI)	33.4

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

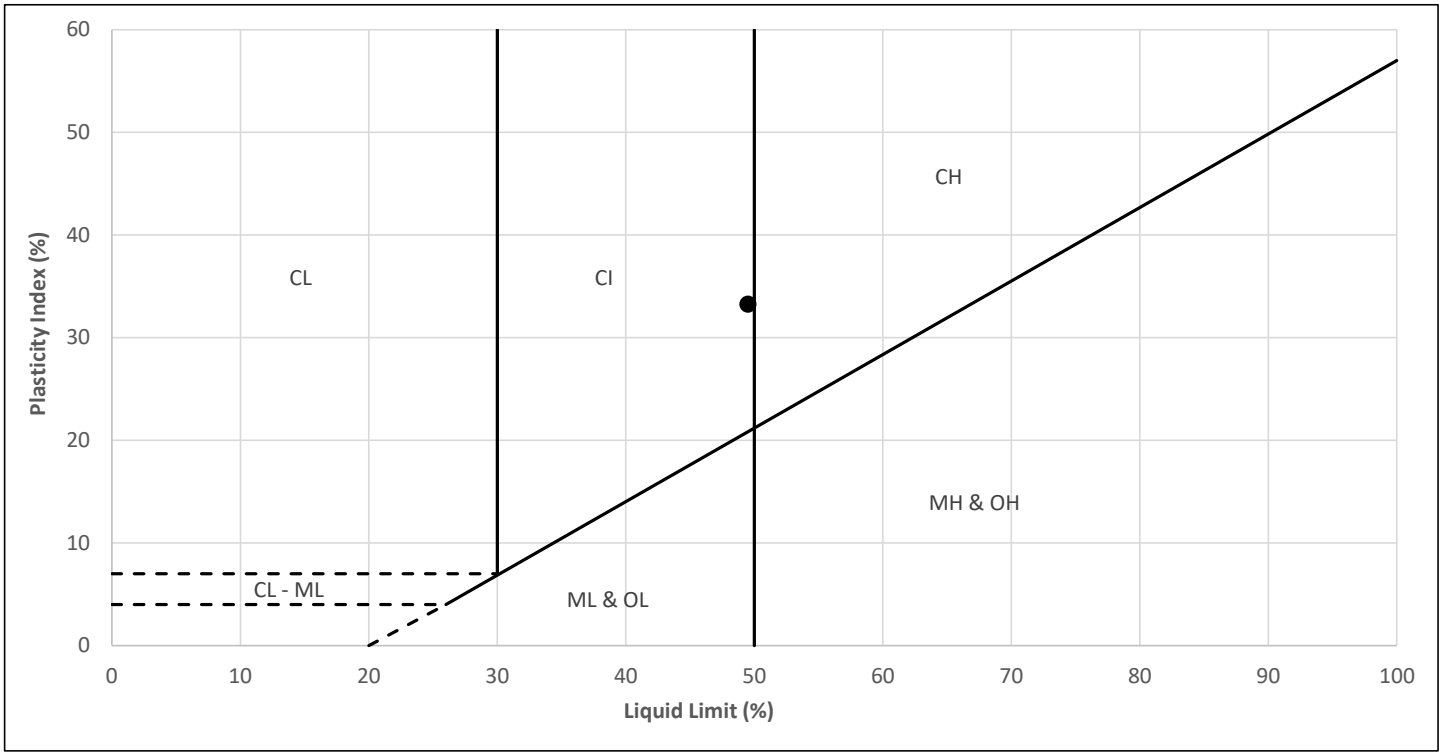
Project:	Snake Lake Reservoir Expansion	**Sample #:**	423AU3
Project No.:	1560-193-00	**Source:**	22BH423
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 423AU3	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.5
Plastic Limit (PL)	16.2
Plasticity Index (PI)	33.3

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

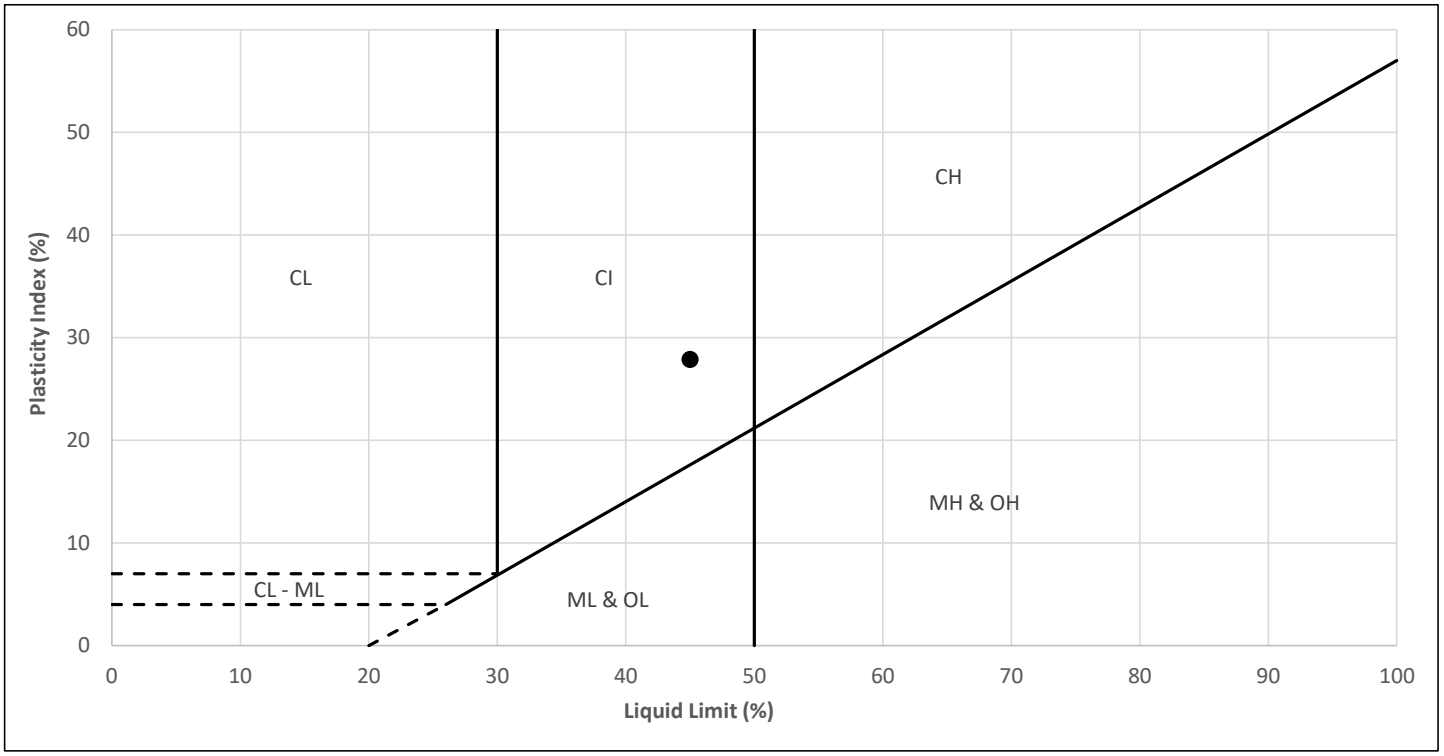
Project:	Snake Lake Reservoir Expansion	**Sample #:**	424AU1
Project No.:	1560-193-00	**Source:**	22BH424
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 424AU1	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	45.0
Plastic Limit (PL)	17.1
Plasticity Index (PI)	27.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

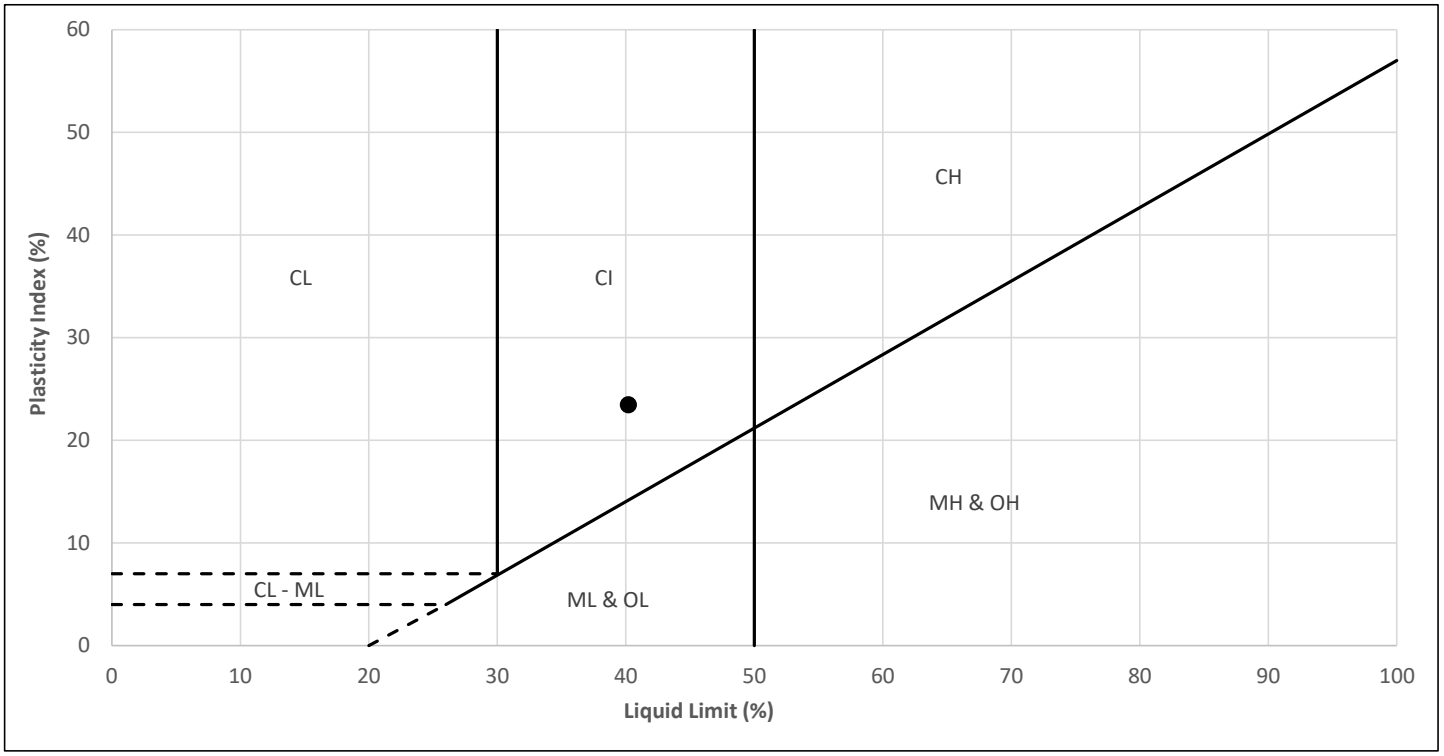
Project:	Snake Lake Reservoir Expansion	**Sample #:**	424AU2
Project No.:	1560-193-00	**Source:**	22BH424
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 424AU2	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	40.2
Plastic Limit (PL)	16.7
Plasticity Index (PI)	23.5

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

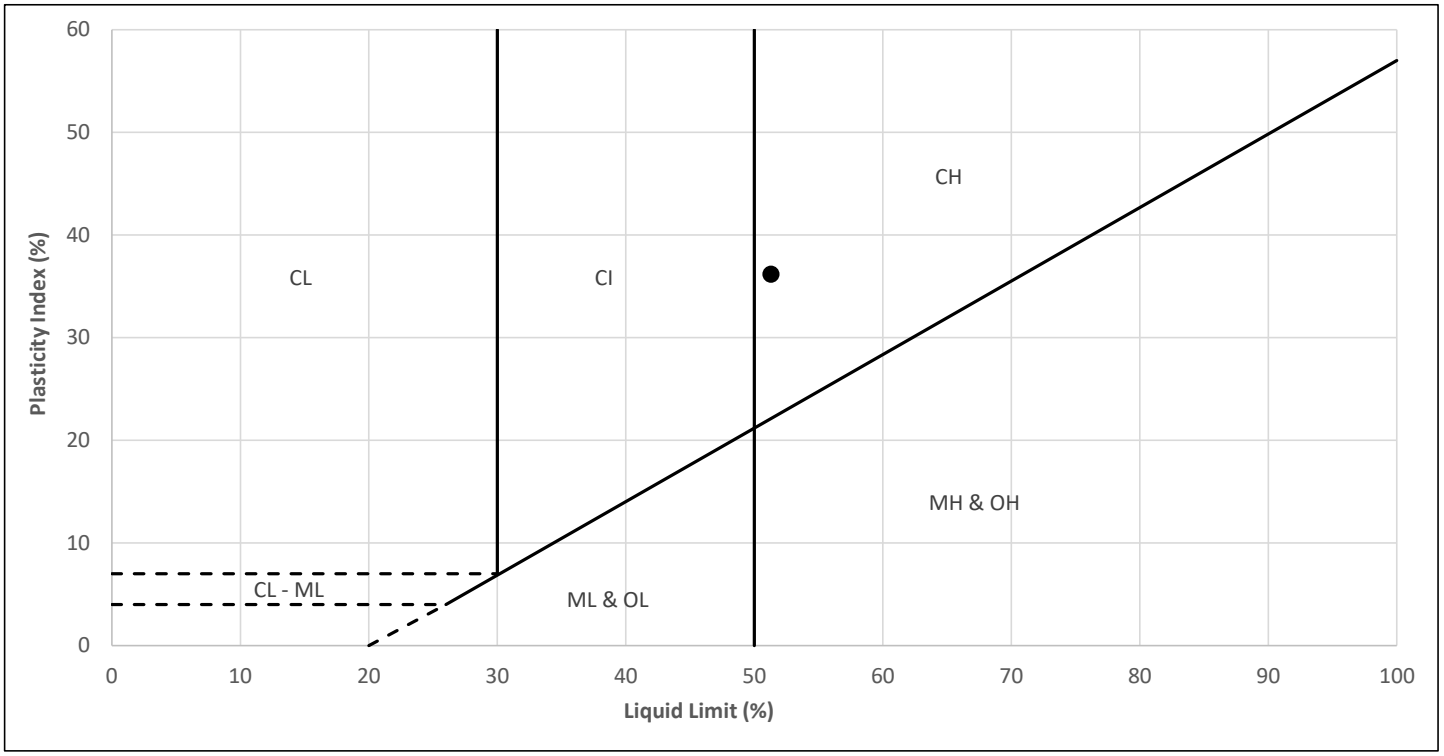
Project:	Snake Lake Reservoir Expansion	**Sample #:**	424B2
Project No.:	1560-193-00	**Source:**	22TP424
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 424B2	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.3
Plastic Limit (PL)	15.1
Plasticity Index (PI)	36.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

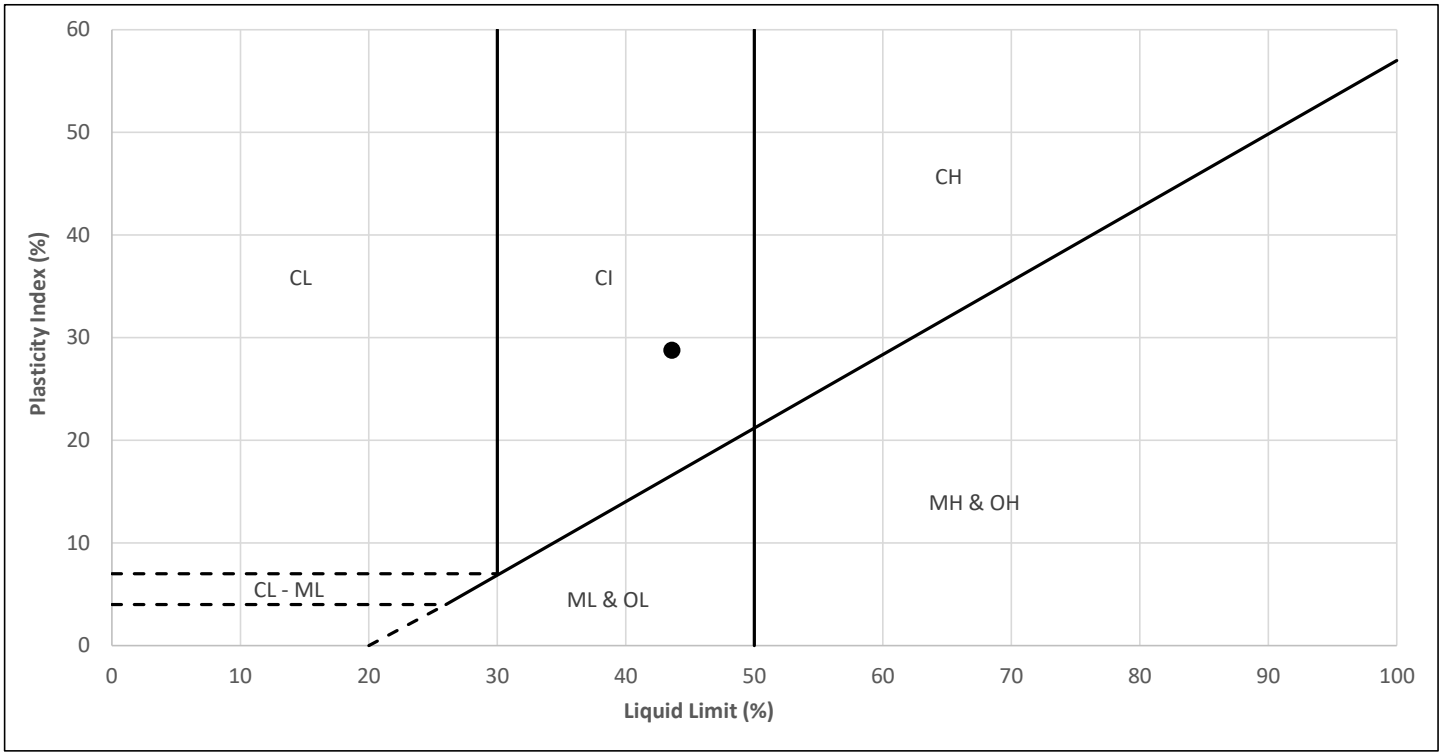
Project:	Snake Lake Reservoir Expansion	**Sample #:**	425AU1
Project No.:	1560-193-00	**Source:**	22BH425
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 425AU1	**Test Date:**	22-08-23

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	43.6
Plastic Limit (PL)	14.8
Plasticity Index (PI)	28.8

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

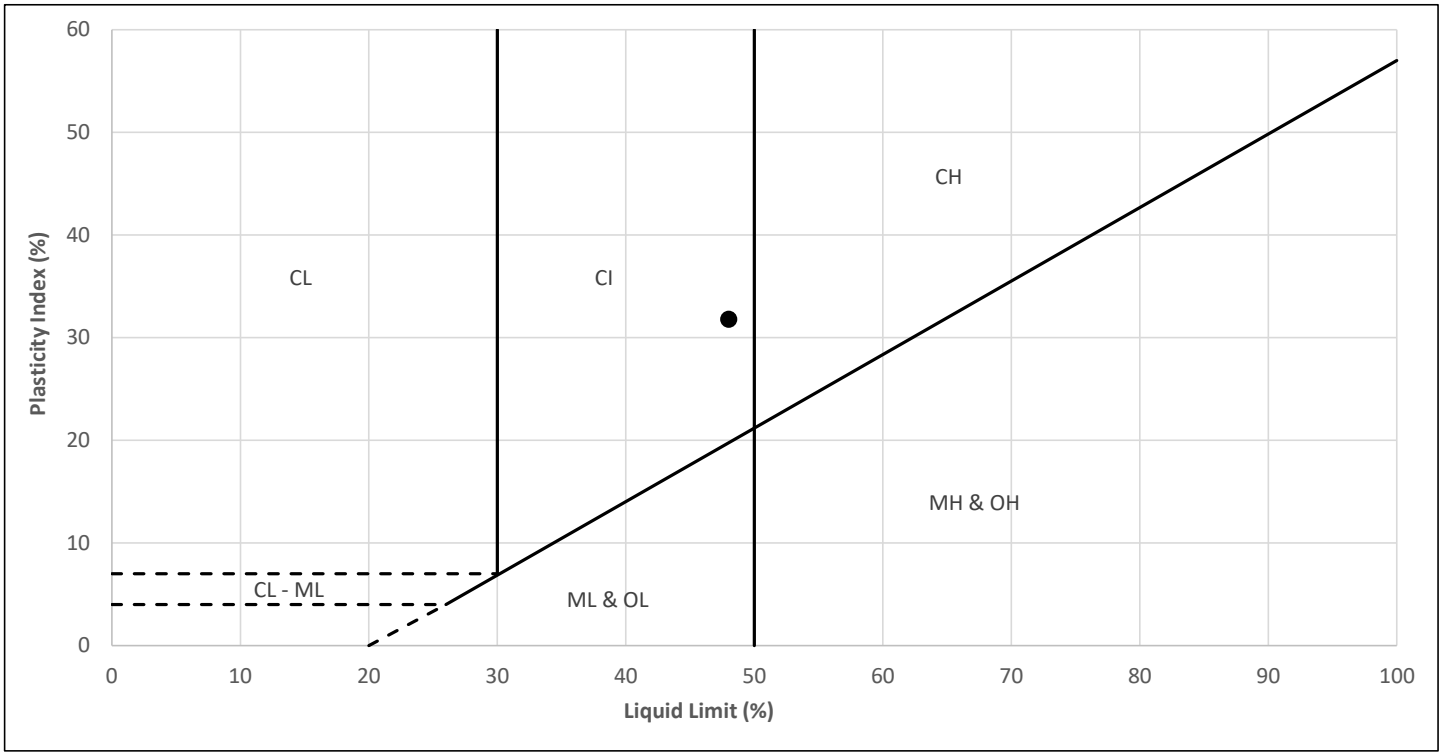
Project:	Snake Lake Reservoir Expansion	**Sample #:**	425AU2
Project No.:	1560-193-00	**Source:**	22BH425
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 425AU2	**Test Date:**	1-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	48.0
Plastic Limit (PL)	16.2
Plasticity Index (PI)	31.8

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

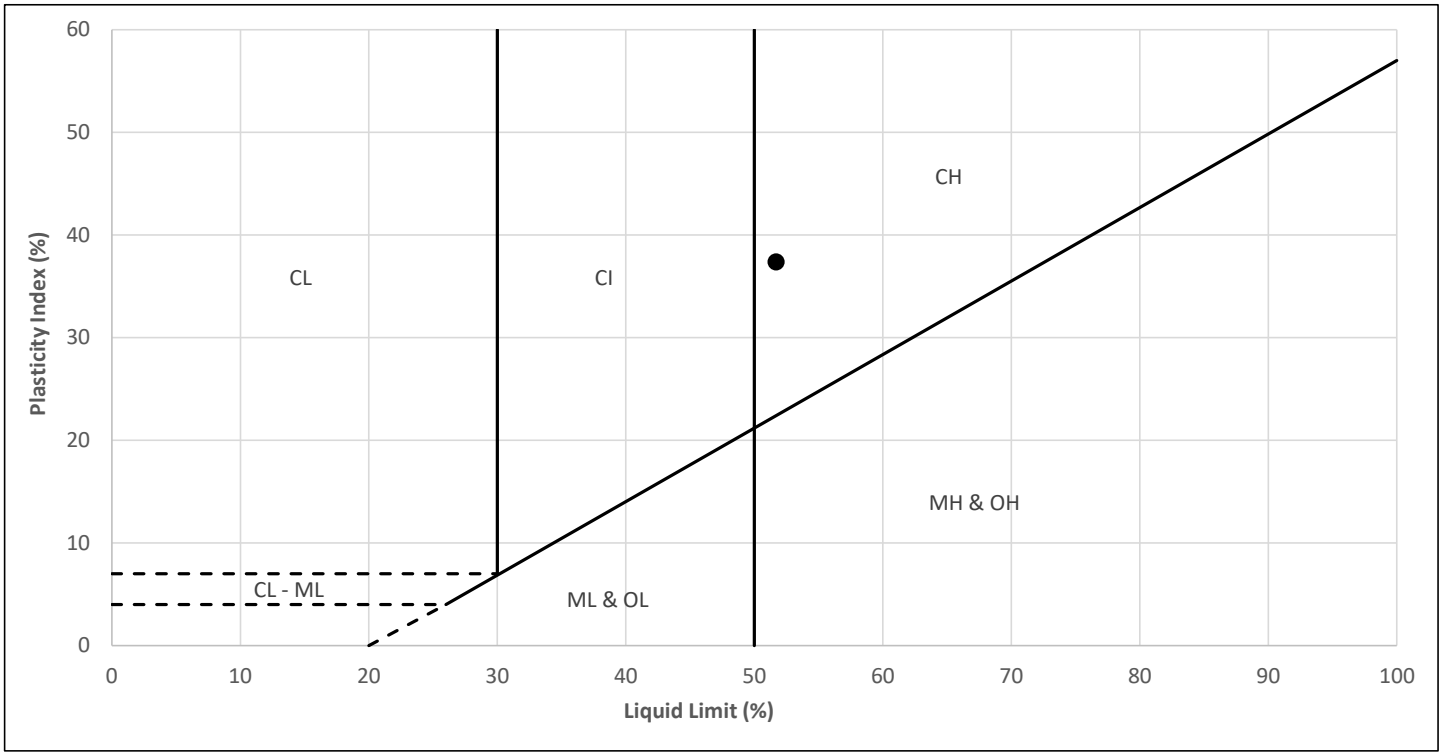
Project:	Snake Lake Reservoir Expansion	**Sample #:**	425B1
Project No.:	1560-193-00	**Source:**	22TP425
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 425B1	**Test Date:**	27-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.7
Plastic Limit (PL)	14.3
Plasticity Index (PI)	37.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

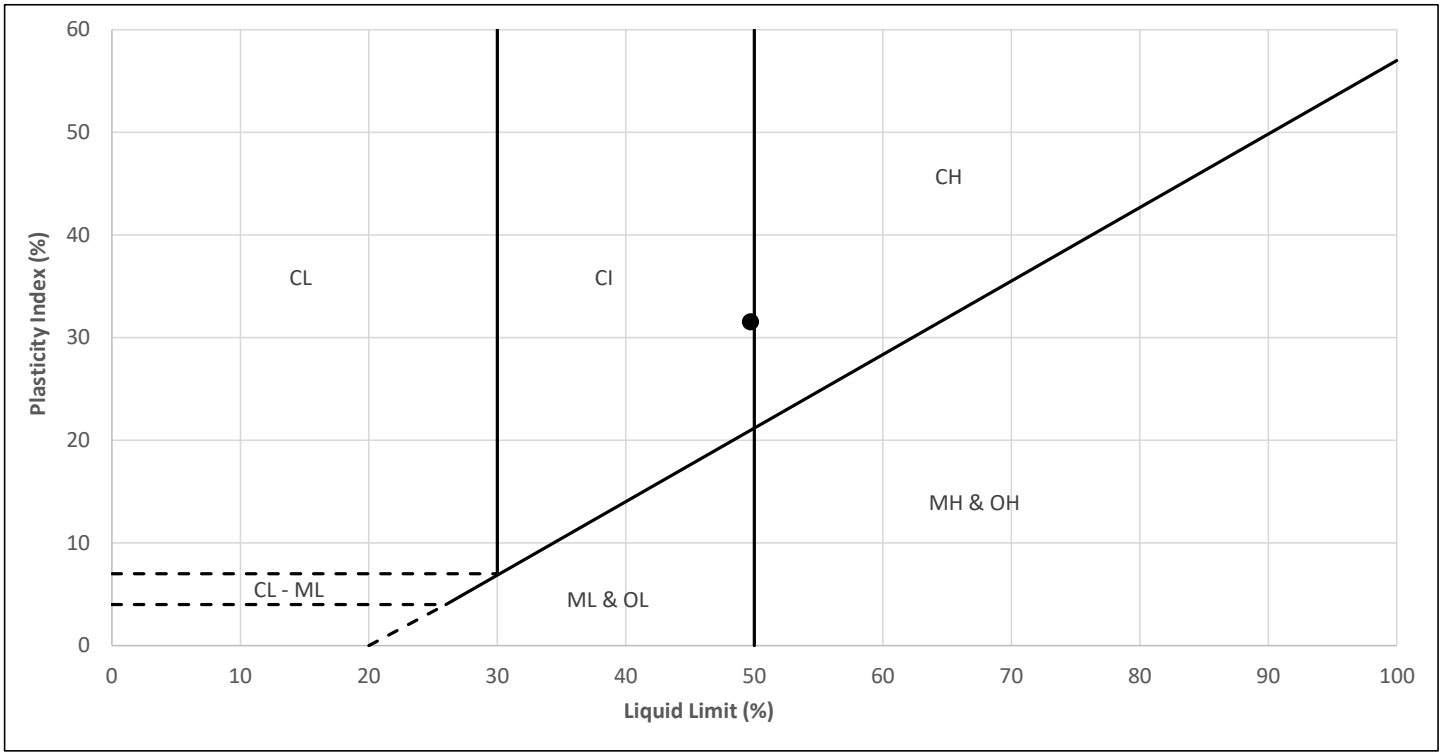
Project:	Snake Lake Reservoir Expansion	**Sample #:**	426AU1
Project No.:	1560-193-00	**Source:**	22BH426
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 426AU1	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.7
Plastic Limit (PL)	18.1
Plasticity Index (PI)	31.6

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

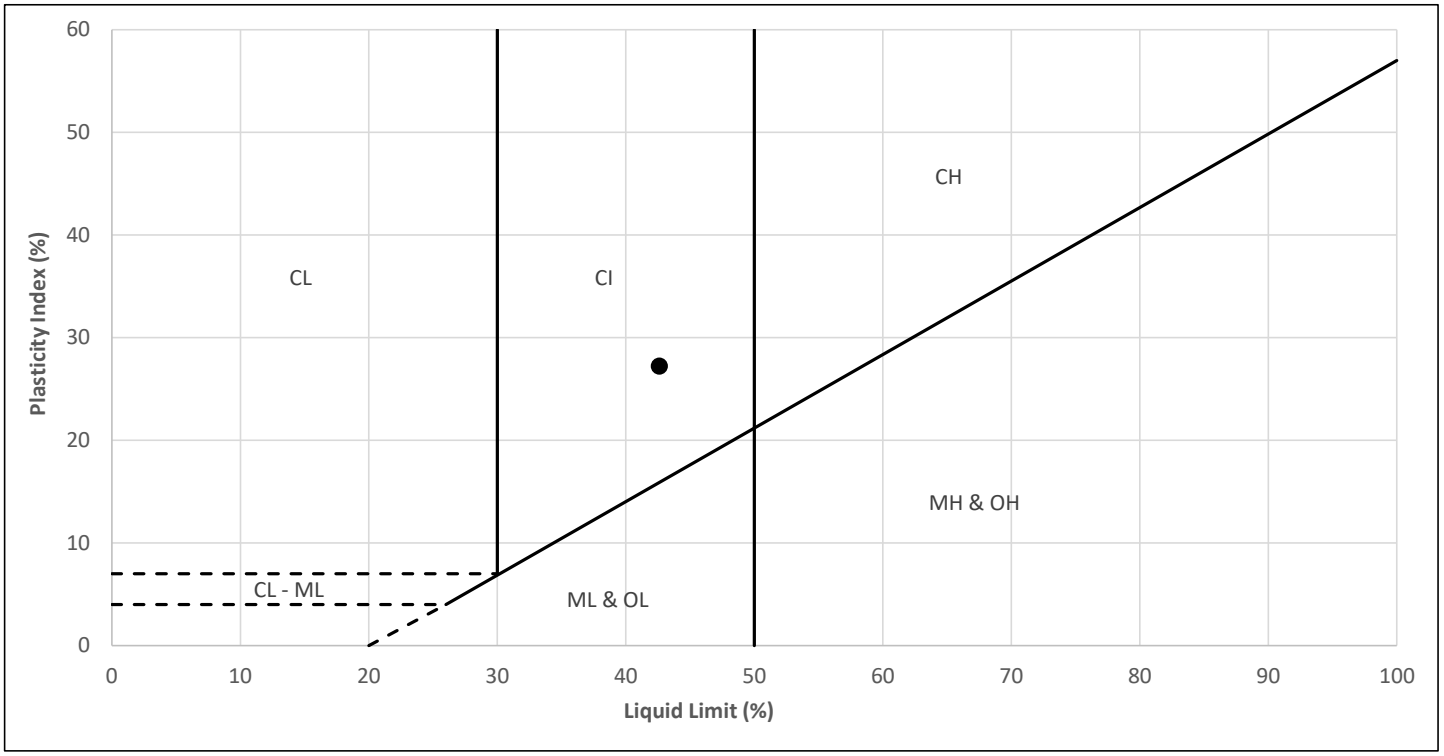
Project:	Snake Lake Reservoir Expansion	**Sample #:**	426AU2
Project No.:	1560-193-00	**Source:**	22BH426
Owner:	EID	**Sample Depth:**	2.0m
File No.:	AL - 426AU2	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	42.6
Plastic Limit (PL)	15.4
Plasticity Index (PI)	27.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

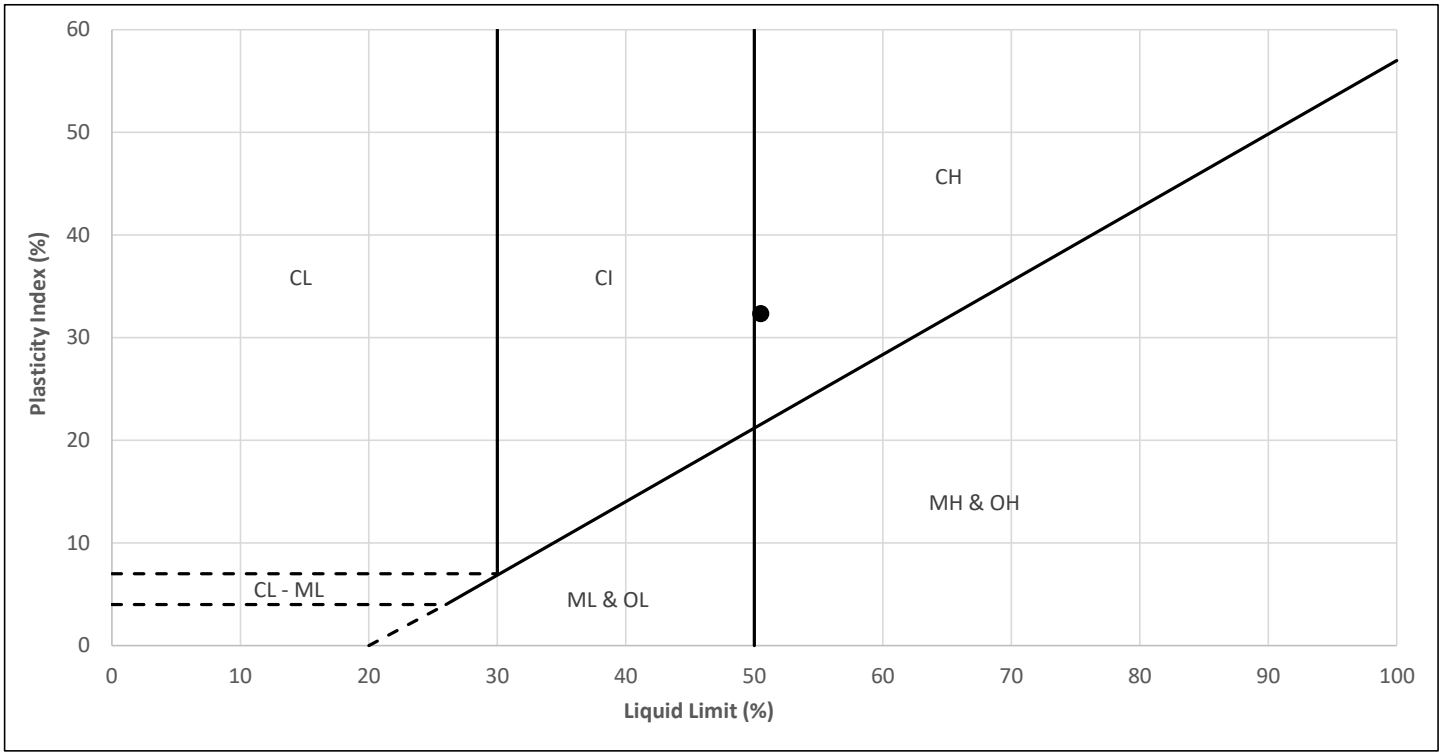
Project:	Snake Lake Reservoir Expansion	**Sample #:**	427AU2
Project No.:	1560-193-00	**Source:**	22BH427
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 427AU2	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.5
Plastic Limit (PL)	18.2
Plasticity Index (PI)	32.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

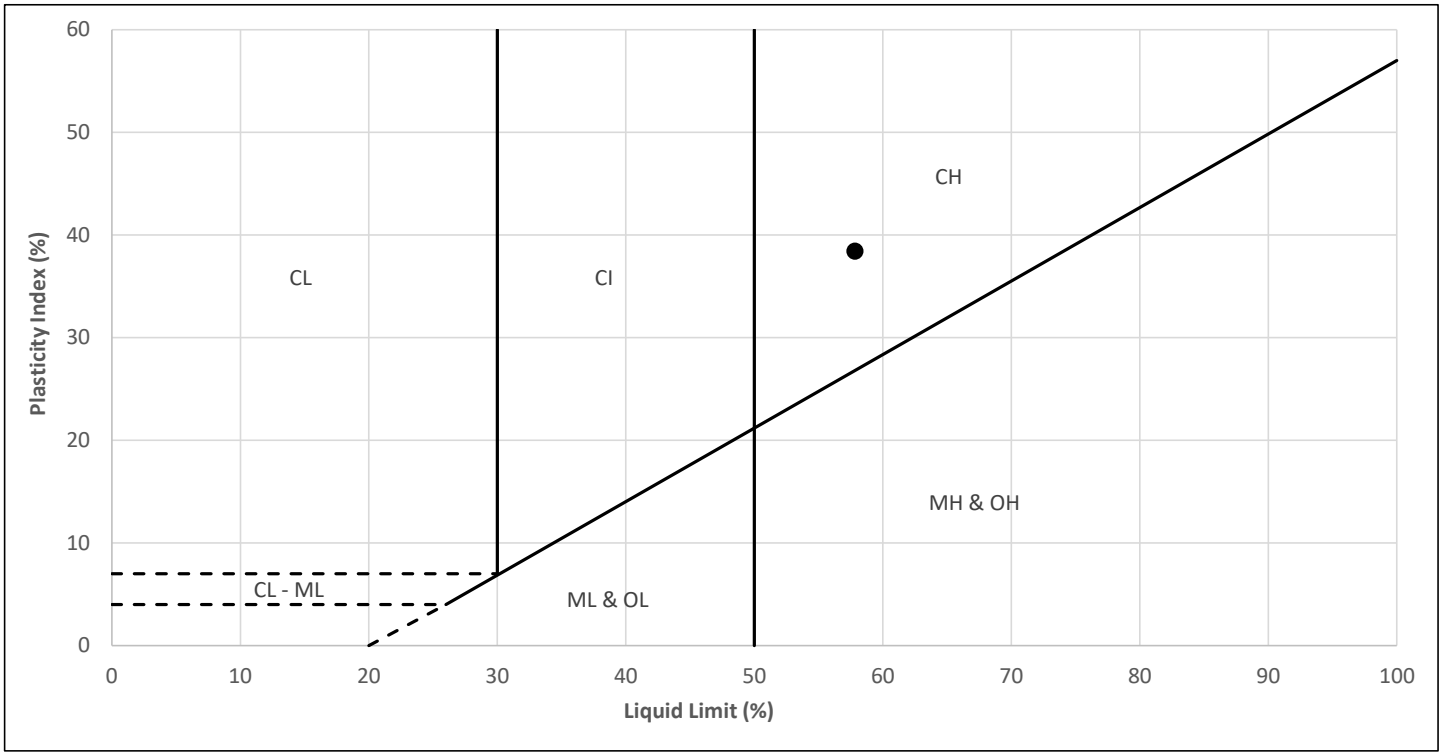
Project:	Snake Lake Reservoir Expansion	**Sample #:**	427AU3
Project No.:	1560-193-00	**Source:**	22BH427
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 427AU3	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	57.8
Plastic Limit (PL)	19.4
Plasticity Index (PI)	38.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

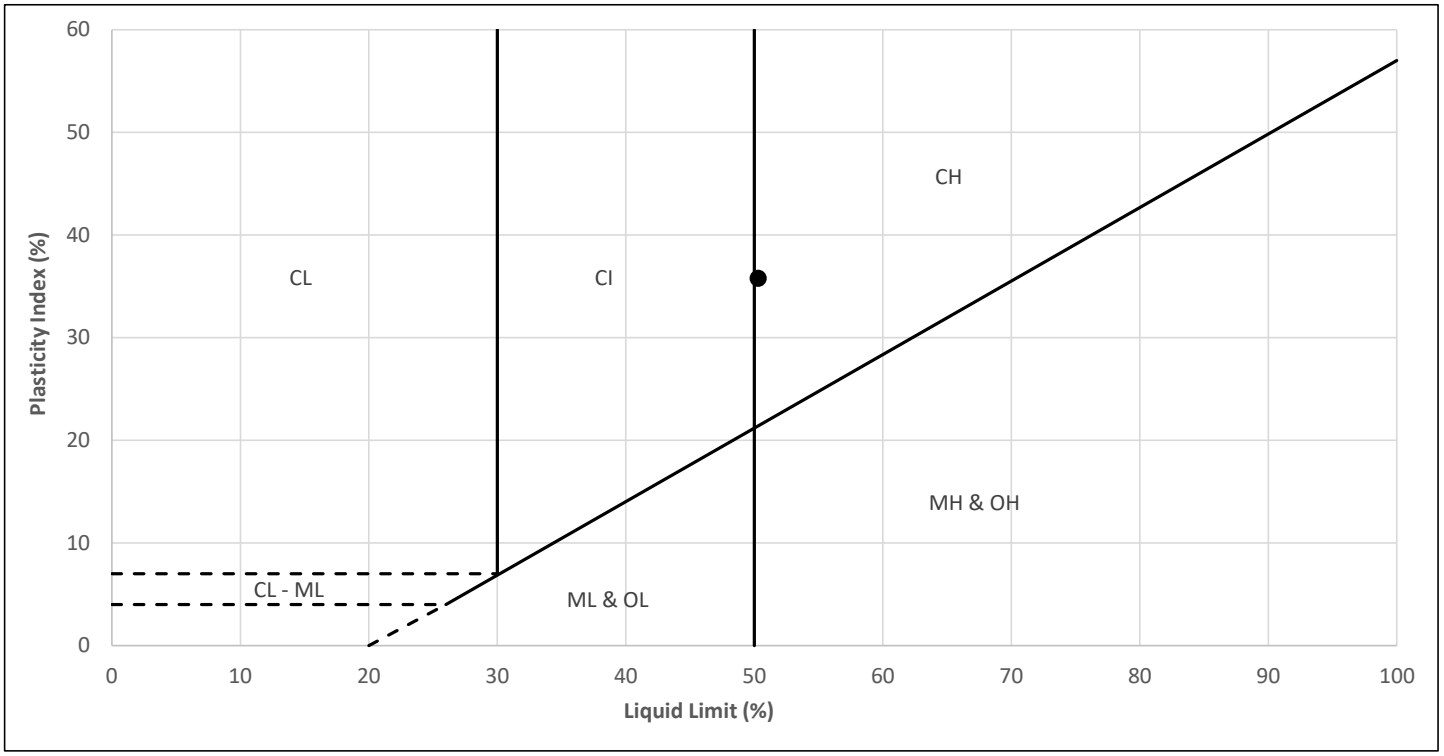
Project:	Snake Lake Reservoir Expansion	**Sample #:**	428AU1
Project No.:	1560-193-00	**Source:**	22BH428
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 428AU1	**Test Date:**	4-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.3
Plastic Limit (PL)	14.5
Plasticity Index (PI)	35.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

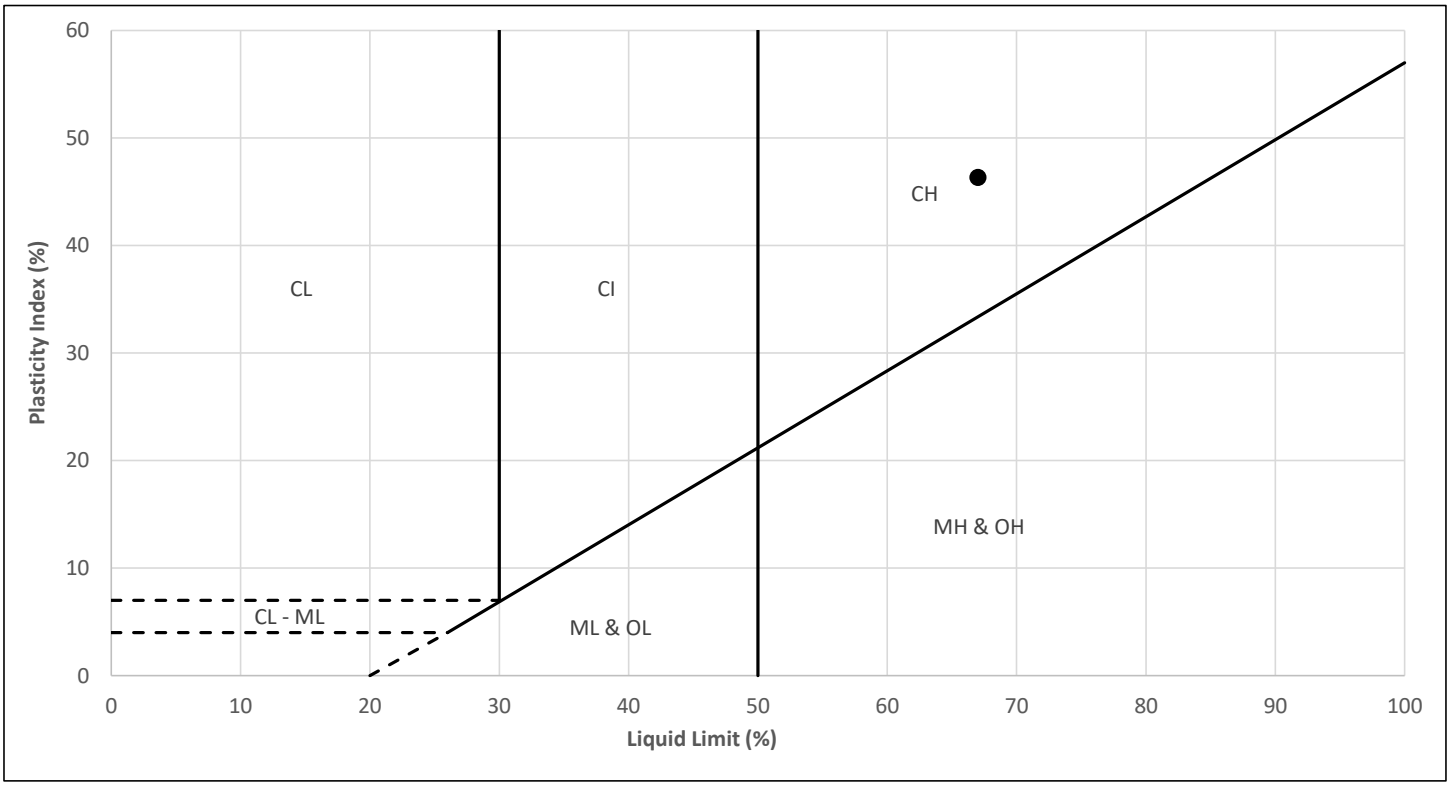
Project:	Snake Lake Reservoir Expansion	**Sample #:**	428AU2
Project No.:	1560-193-00	**Source:**	22BH428
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 428AU2	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	67.0
Plastic Limit (PL)	20.7
Plasticity Index (PI)	46.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

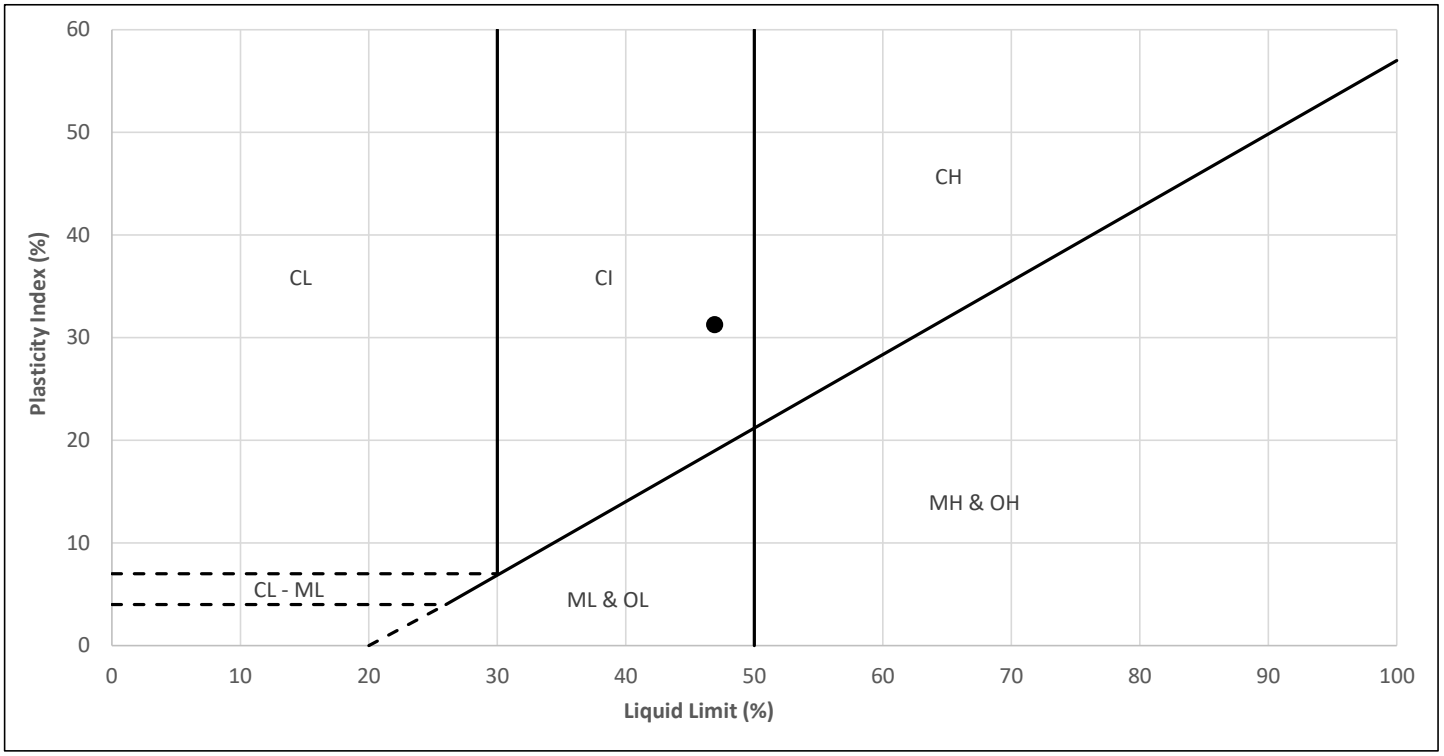
Project:	Snake Lake Reservoir Expansion	**Sample #:**	429AU1
Project No.:	1560-193-00	**Source:**	22BH429
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 429AU1	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	46.9
Plastic Limit (PL)	15.6
Plasticity Index (PI)	31.3

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

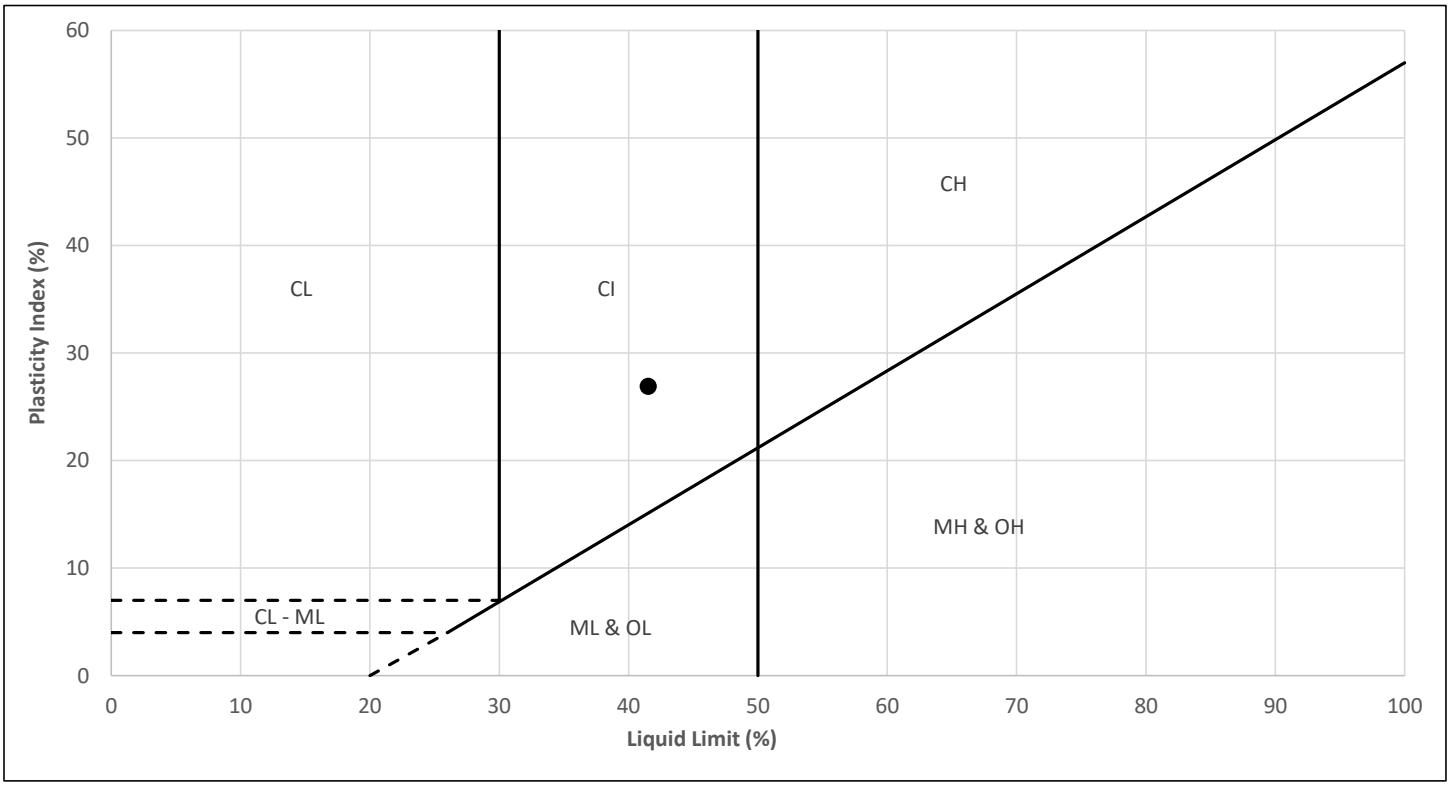
Project:	Snake Lake Reservoir Expansion	**Sample #:**	429AU2
Project No.:	1560-193-00	**Source:**	22BH429
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 429AU2	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	41.5
Plastic Limit (PL)	14.6
Plasticity Index (PI)	26.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

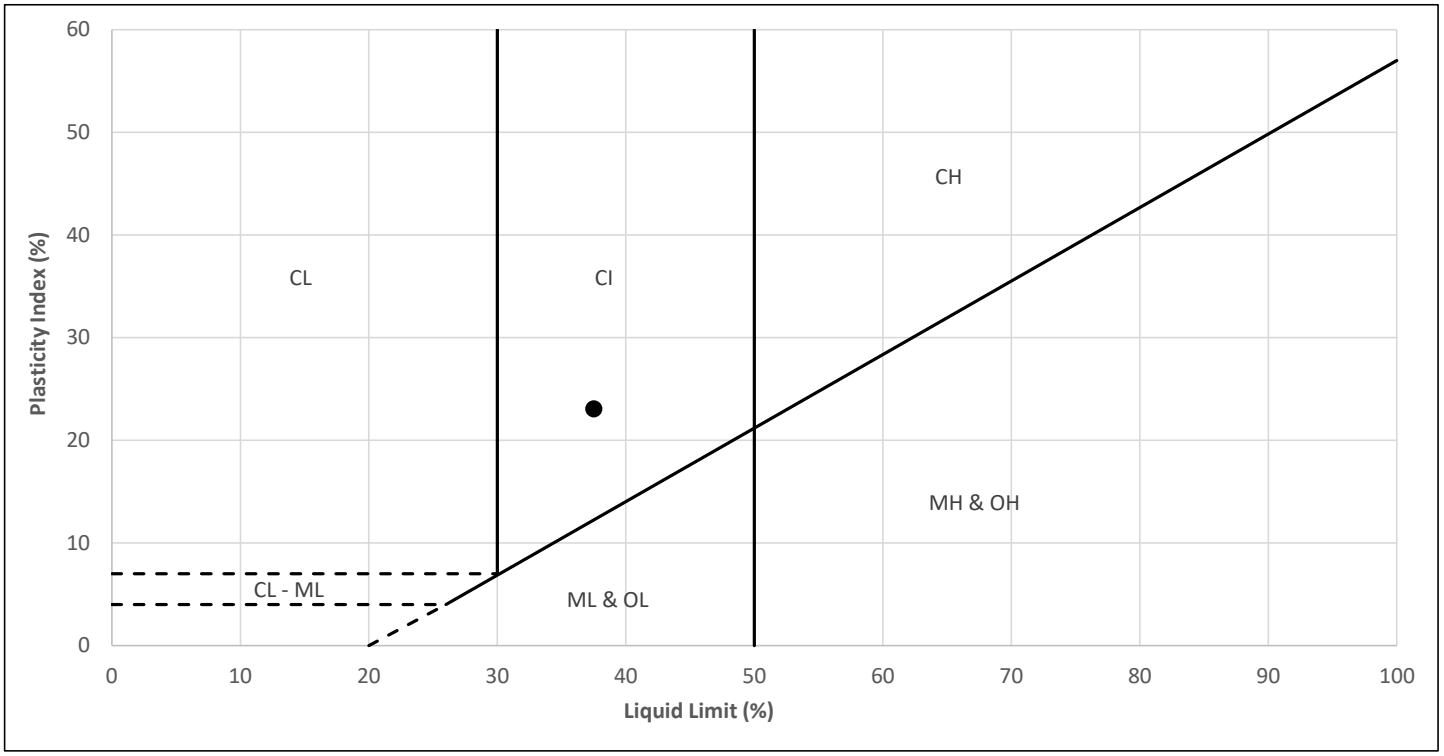
Project:	Snake Lake Reservoir Expansion	**Sample #:**	430AU1
Project No.:	1560-193-00	**Source:**	22BH430
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 430AU1	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	37.5
Plastic Limit (PL)	14.4
Plasticity Index (PI)	23.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

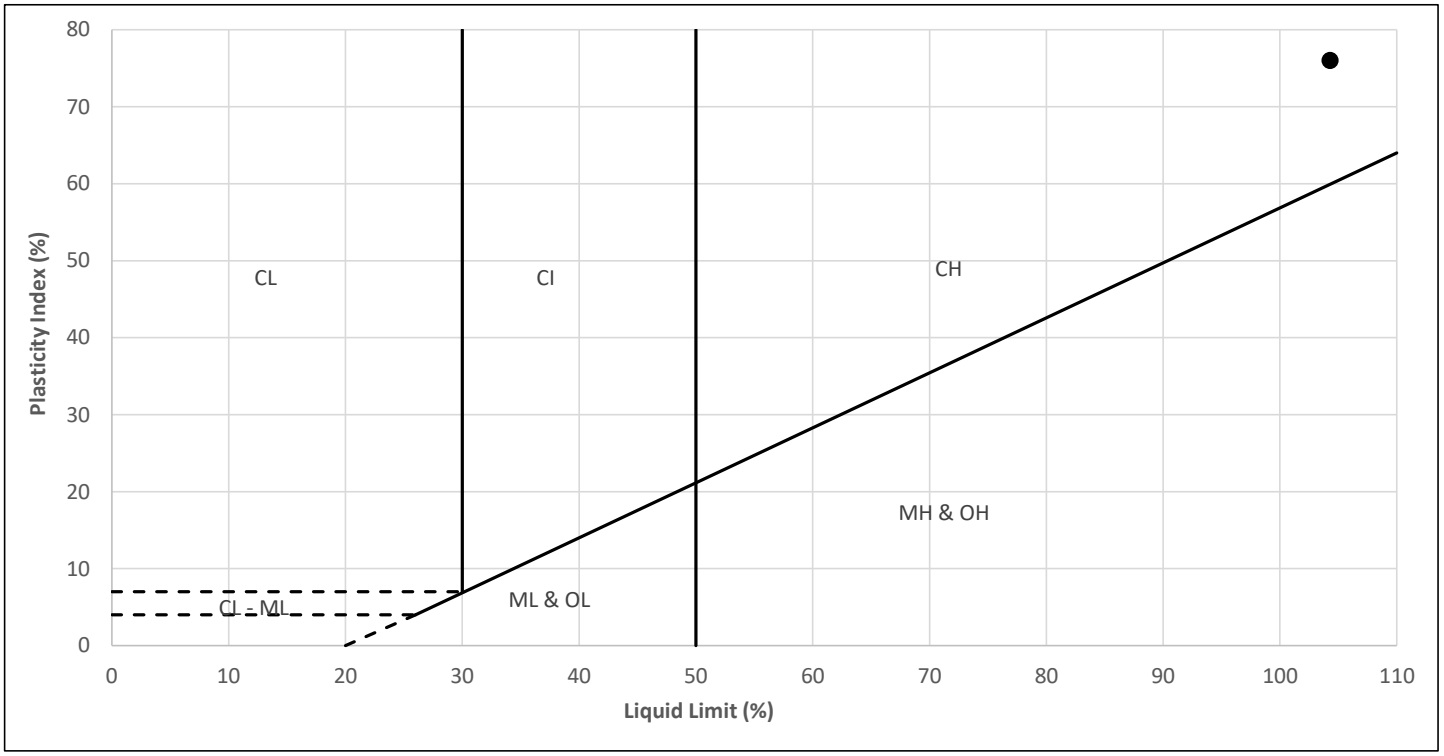
Project:	Snake Lake Reservoir Expansion	**Sample #:**	430AU2
Project No.:	1560-193-00	**Source:**	22BH430
Owner:	EID	**Sample Depth:**	2.2m
File No.:	AL - 430AU2	**Test Date:**	18-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	104.3
Plastic Limit (PL)	28.3
Plasticity Index (PI)	76.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

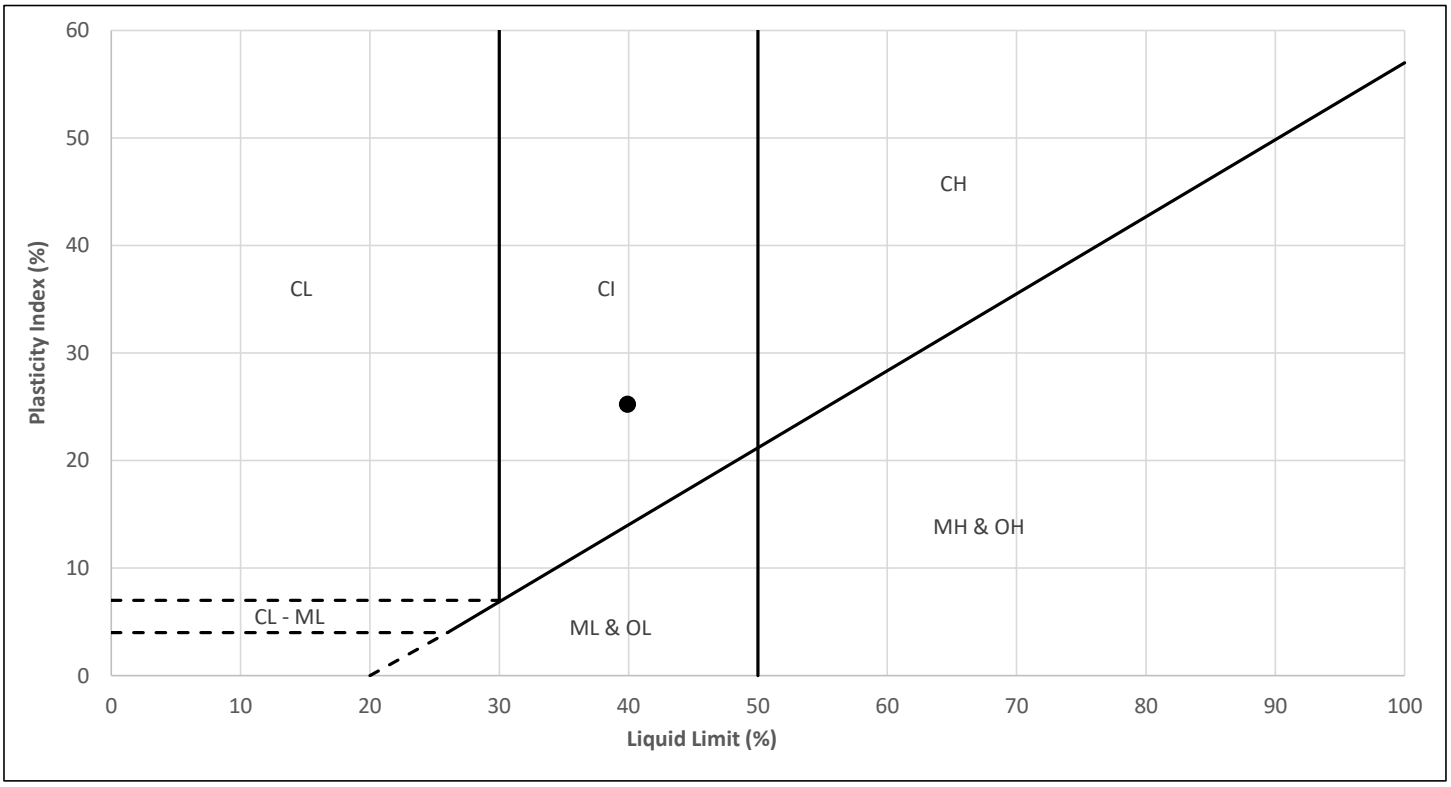
Project:	Snake Lake Reservoir Expansion	**Sample #:**	430AU3
Project No.:	1560-193-00	**Source:**	22BH430
Owner:	EID	**Sample Depth:**	2.8m
File No.:	AL - 430AU3	**Test Date:**	30-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	39.9
Plastic Limit (PL)	14.7
Plasticity Index (PI)	25.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

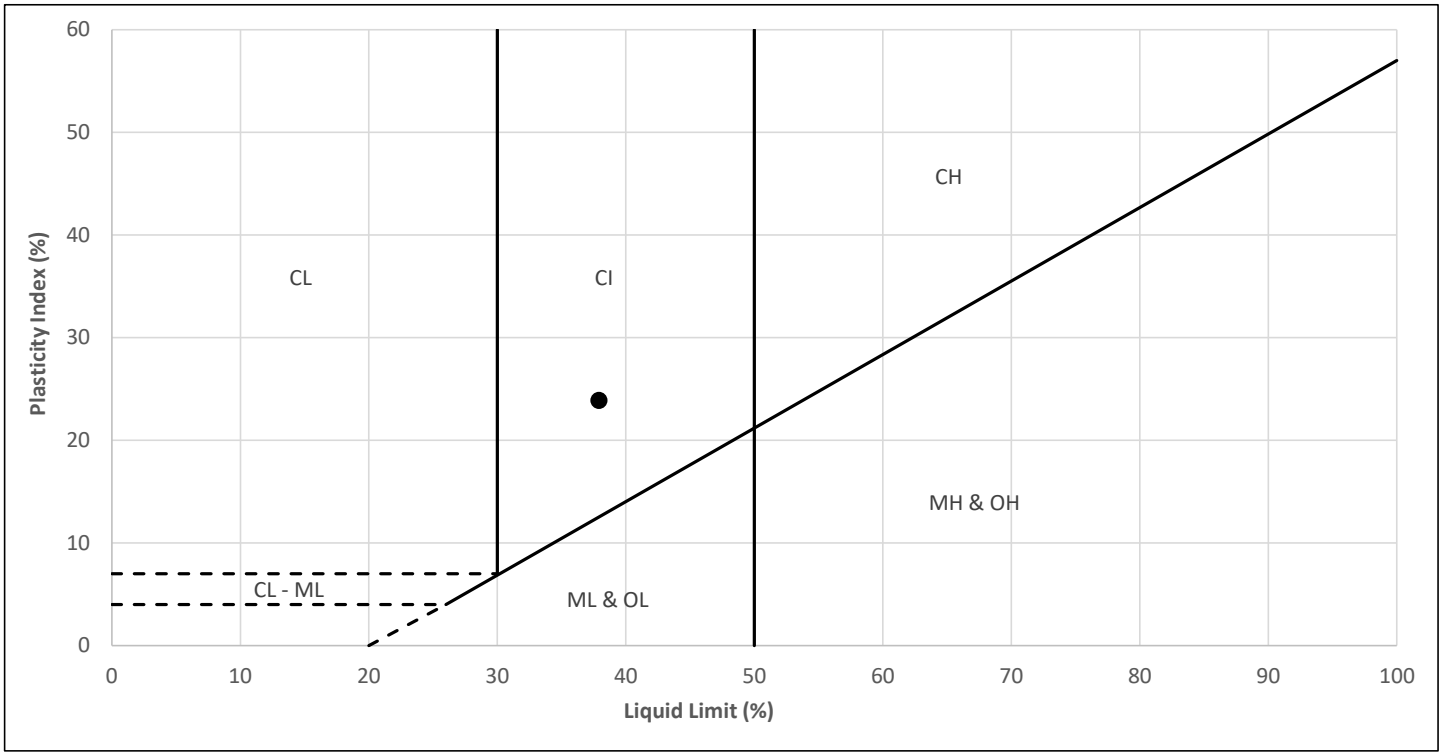
Project:	Snake Lake Reservoir Expansion	**Sample #:**	431AU1
Project No.:	1560-193-00	**Source:**	22BH431
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 431AU1	**Test Date:**	4-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	37.9
Plastic Limit (PL)	14.0
Plasticity Index (PI)	23.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

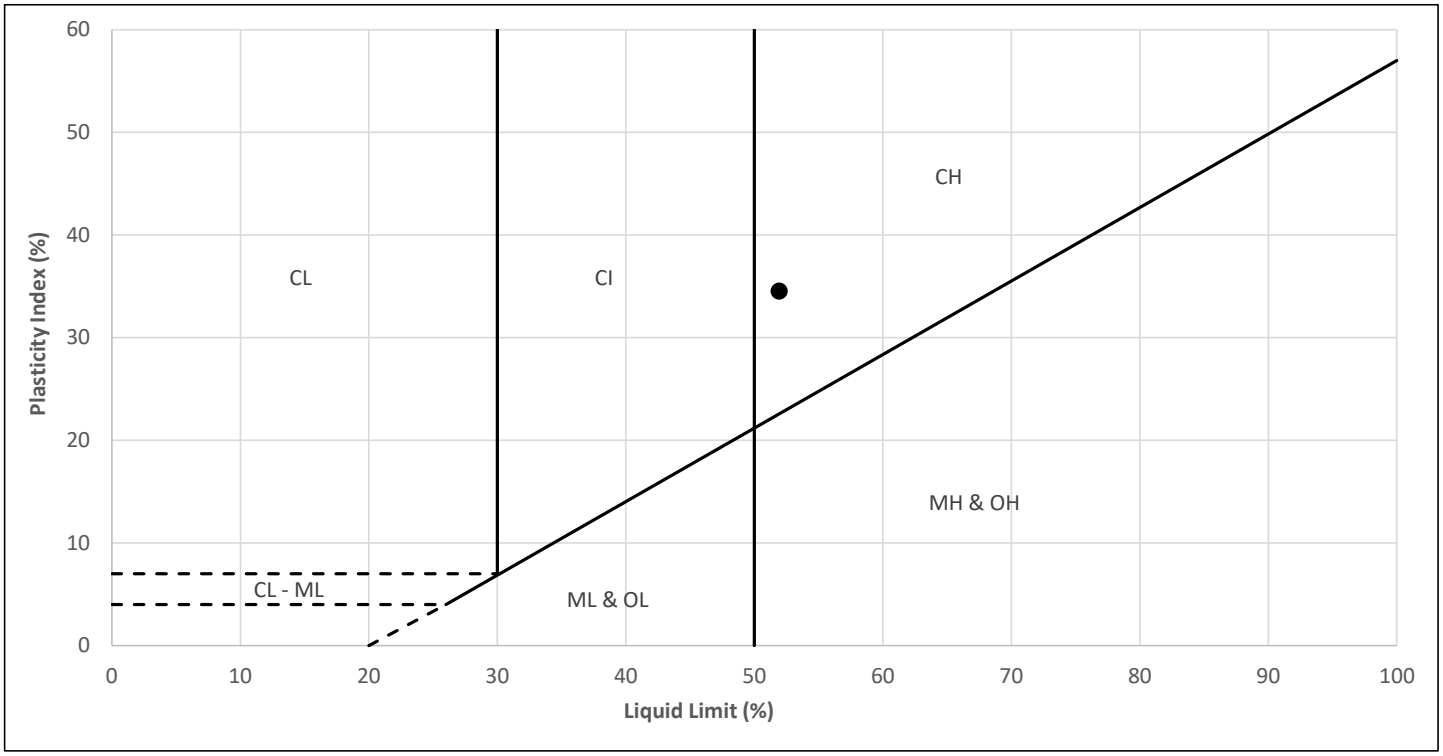
Project:	Snake Lake Reservoir Expansion	**Sample #:**	431AU2
Project No.:	1560-193-00	**Source:**	22BH431
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 431AU2	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.9
Plastic Limit (PL)	17.4
Plasticity Index (PI)	34.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

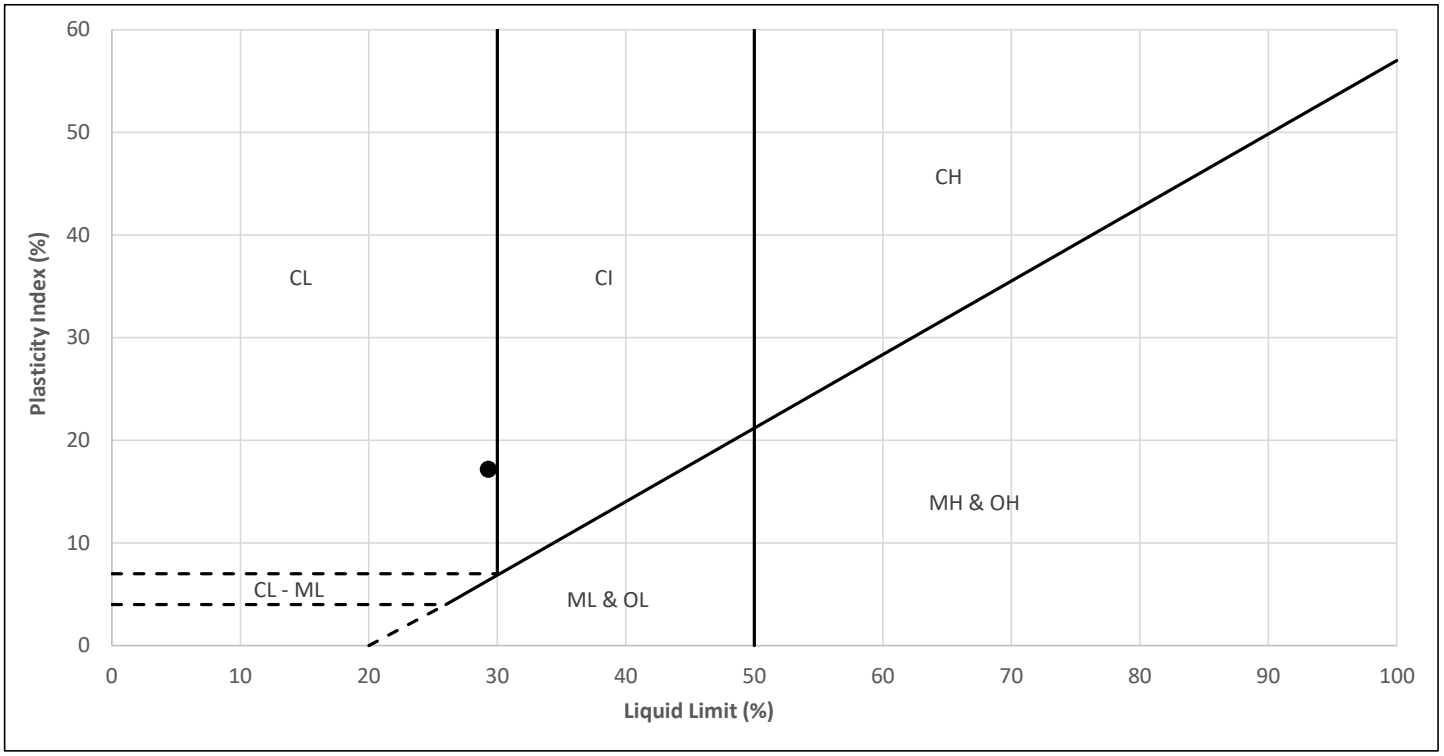
Project:	Snake Lake Reservoir Expansion	**Sample #:**	432AU1
Project No.:	1560-193-00	**Source:**	22BH432
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 432AU1	**Test Date:**	4-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays

Liquid Limit (LL)	29.3
Plastic Limit (PL)	12.1
Plasticity Index (PI)	17.2

Soil Plasticity	Low
Soil Classification	CL



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ATTERBERG LIMITS

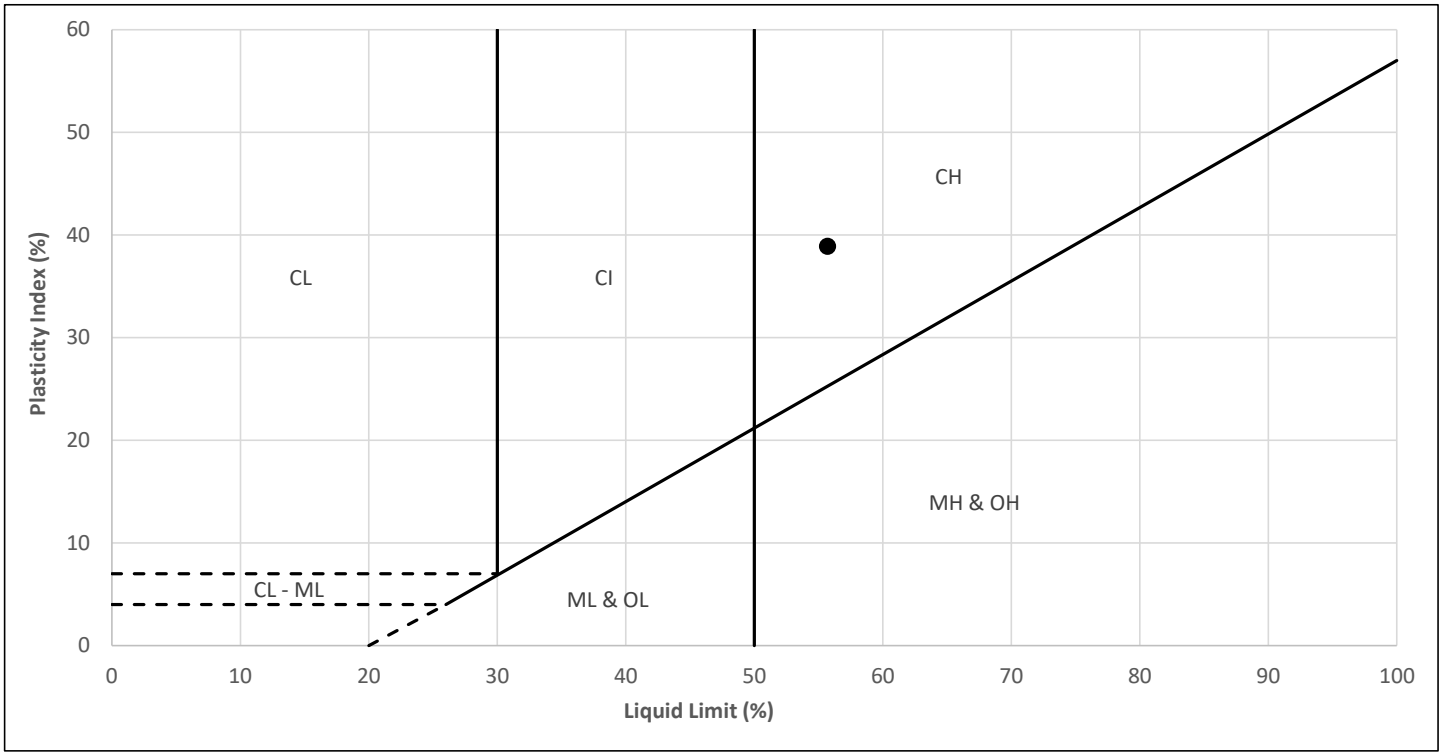
Project:	Snake Lake Reservoir Expansion	**Sample #:**	432AU2
Project No.:	1560-193-00	**Source:**	22BH432
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 432AU2	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.7
Plastic Limit (PL)	16.8
Plasticity Index (PI)	38.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

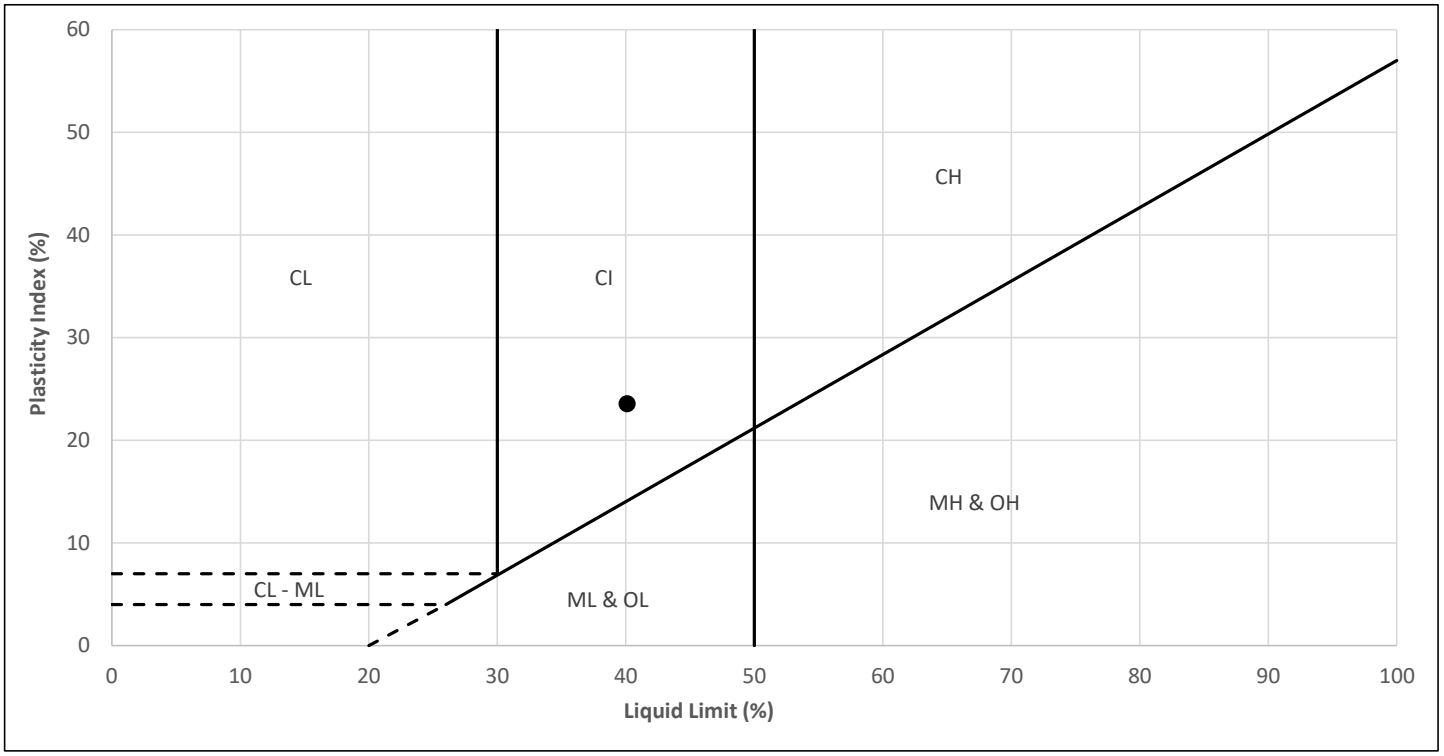
Project:	Snake Lake Reservoir Expansion	**Sample #:**	433AU1
Project No.:	1560-193-00	**Source:**	22BH433
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 433AU1	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	40.1
Plastic Limit (PL)	16.5
Plasticity Index (PI)	23.6

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

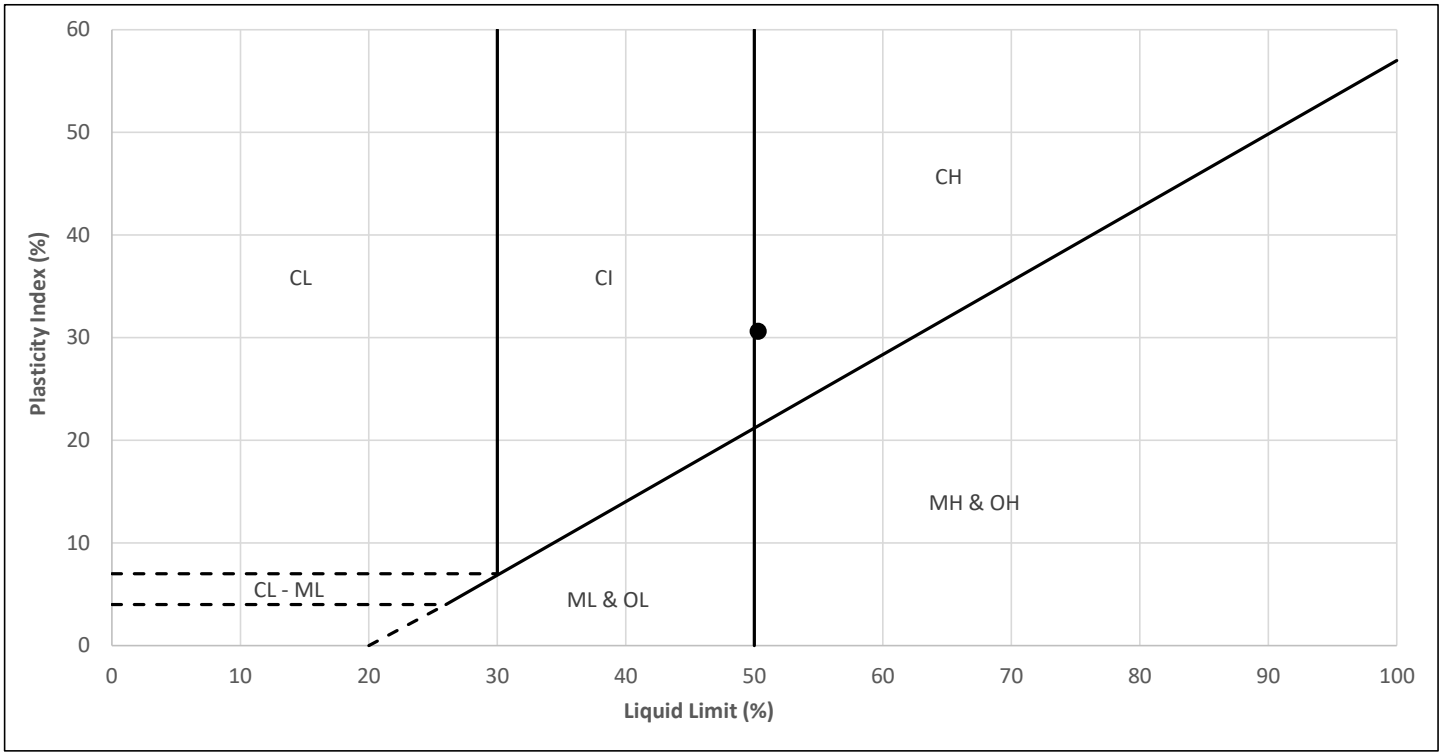
Project:	Snake Lake Reservoir Expansion	**Sample #:**	433AU3
Project No.:	1560-193-00	**Source:**	22BH433
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 433AU3	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.3
Plastic Limit (PL)	19.7
Plasticity Index (PI)	30.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

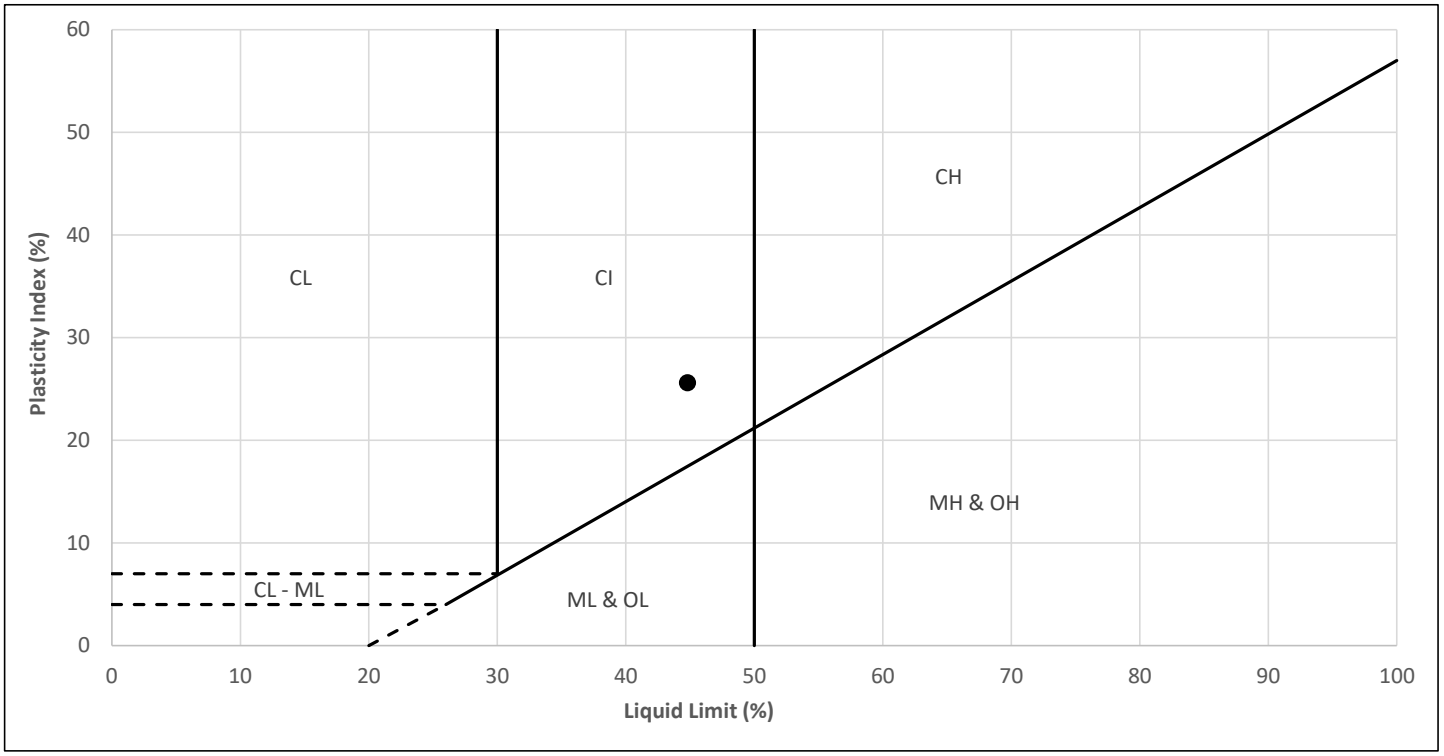
Project:	Snake Lake Reservoir Expansion	**Sample #:**	434AU1
Project No.:	1560-193-00	**Source:**	22BH434
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 434AU1	**Test Date:**	2-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.8
Plastic Limit (PL)	19.2
Plasticity Index (PI)	25.6

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

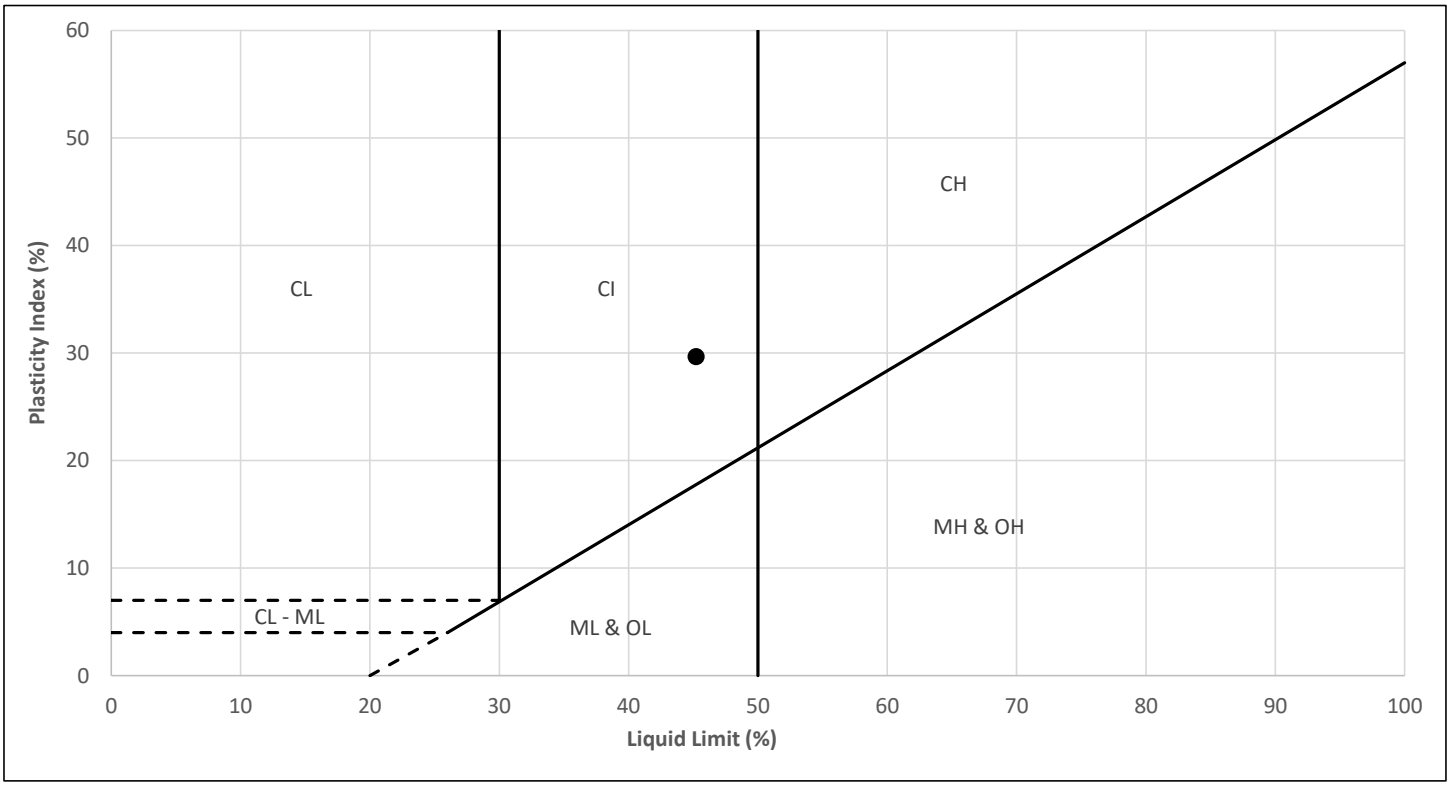
Project:	Snake Lake Reservoir Expansion	**Sample #:**	434AU3
Project No.:	1560-193-00	**Source:**	22BH434
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 434AU3	**Test Date:**	30-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	45.2
Plastic Limit (PL)	15.5
Plasticity Index (PI)	29.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

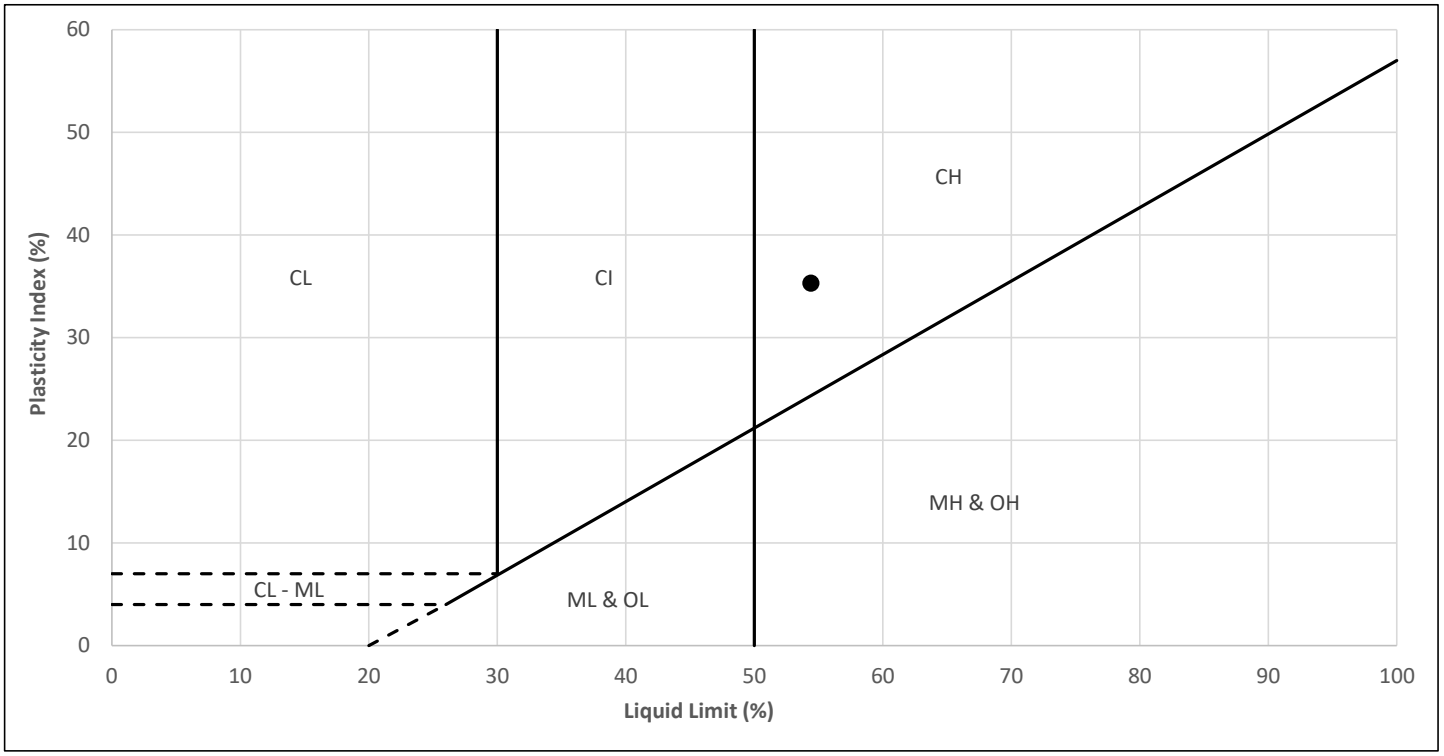
Project:	Snake Lake Reservoir Expansion	**Sample #:**	435AU1
Project No.:	1560-193-00	**Source:**	22BH435
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 435AU1	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.4
Plastic Limit (PL)	19.1
Plasticity Index (PI)	35.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

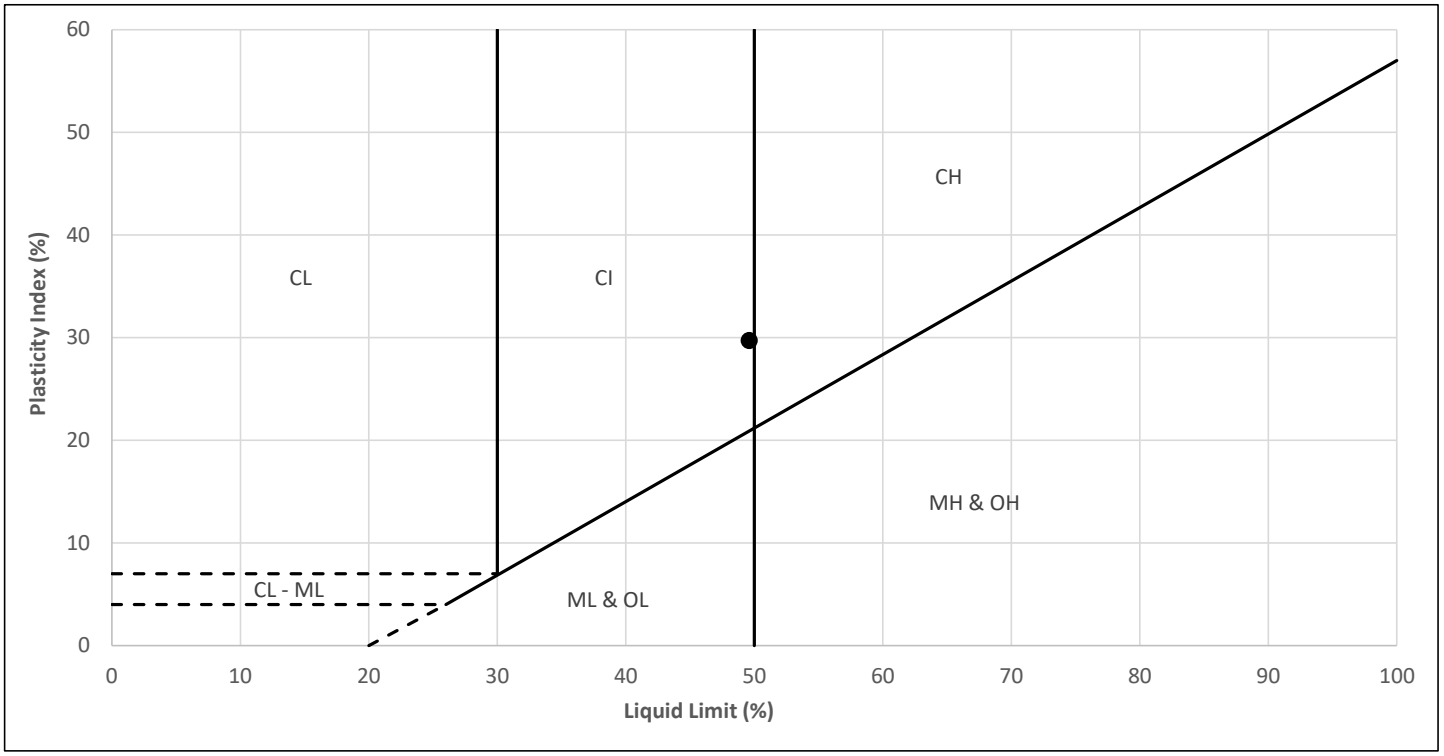
Project:	Snake Lake Reservoir Expansion	**Sample #:**	435AU3
Project No.:	1560-193-00	**Source:**	22BH435
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 435AU3	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.6
Plastic Limit (PL)	19.9
Plasticity Index (PI)	29.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

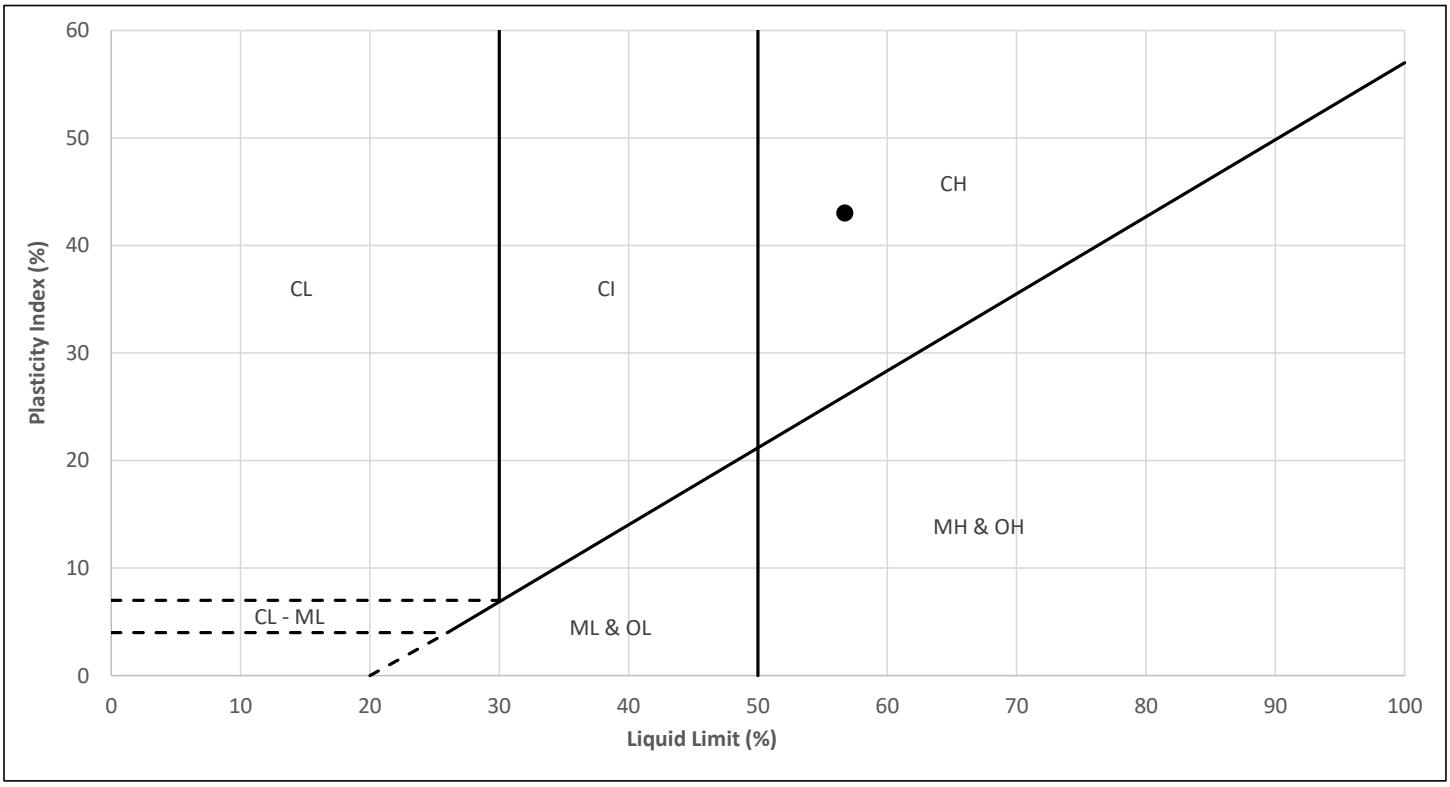
Project:	Snake Lake Reservoir Expansion	**Sample #:**	435BAU2
Project No.:	1560-193-00	**Source:**	22BH435B
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 435BAU2	**Test Date:**	30-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	56.7
Plastic Limit (PL)	13.7
Plasticity Index (PI)	43.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

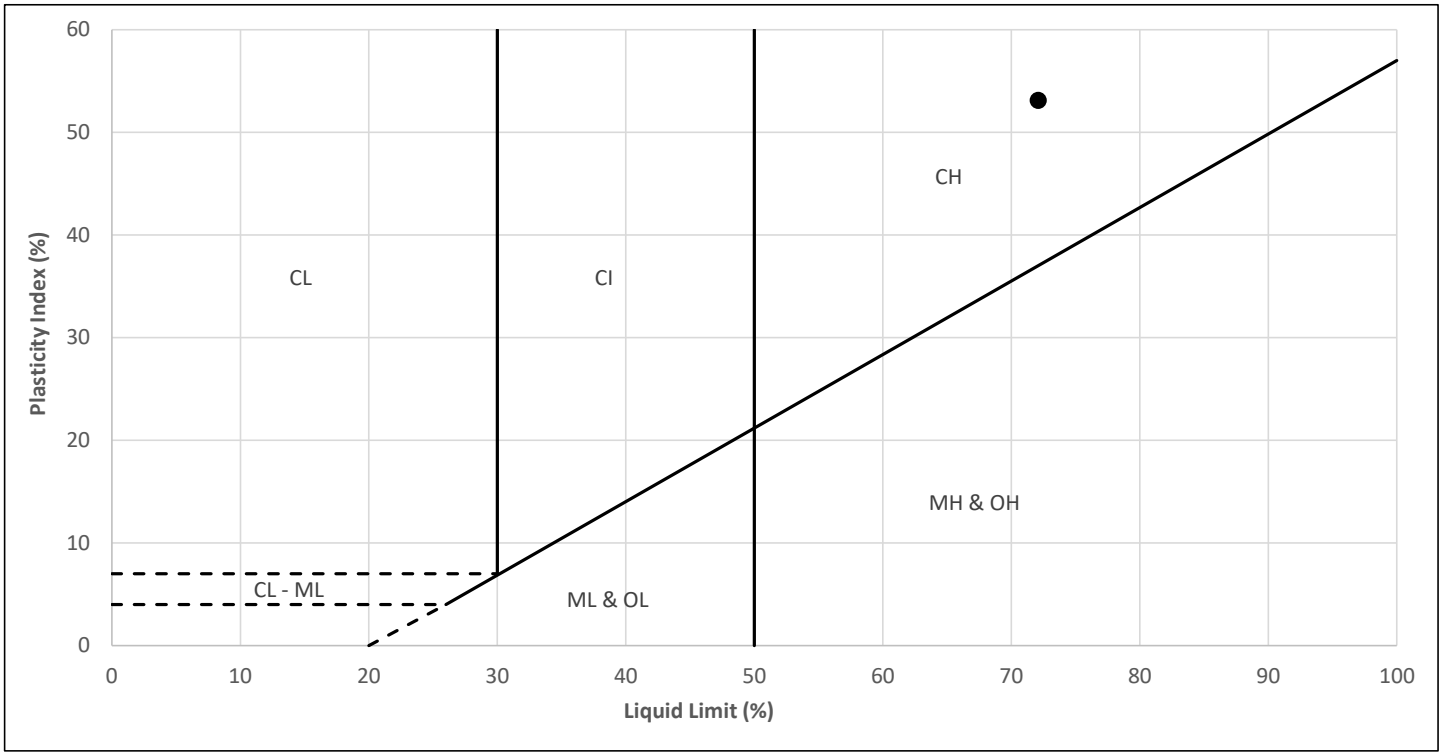
Project:	Snake Lake Reservoir Expansion	**Sample #:**	435BAU5
Project No.:	1560-193-00	**Source:**	22BH435B
Owner:	EID	**Sample Depth:**	3.6m
File No.:	AL - 435BAU5	**Test Date:**	27-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	72.1
Plastic Limit (PL)	19.0
Plasticity Index (PI)	53.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

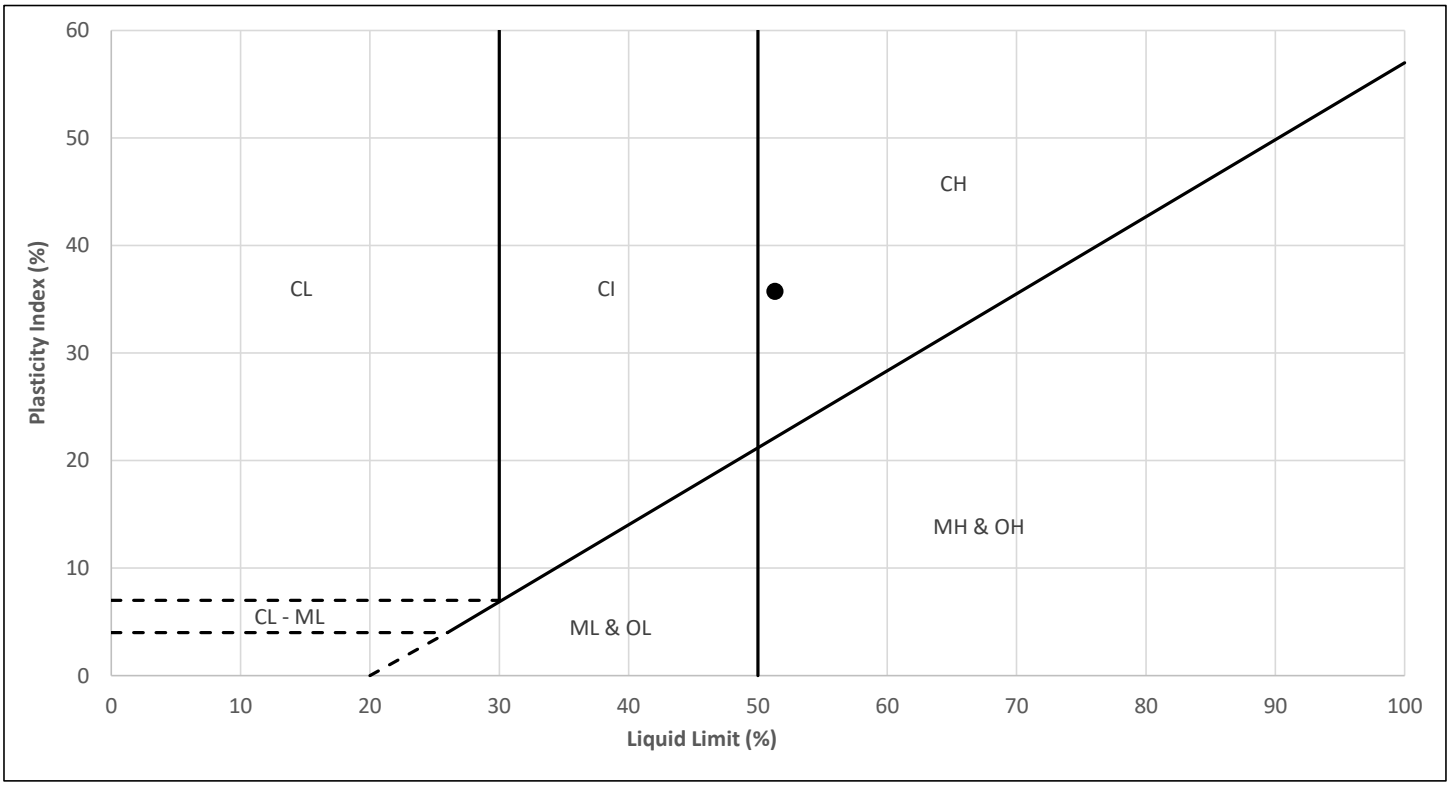
Project:	Snake Lake Reservoir Expansion	**Sample #:**	436AU1
Project No.:	1560-193-00	**Source:**	22BH436
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 436AU1	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.3
Plastic Limit (PL)	15.6
Plasticity Index (PI)	35.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

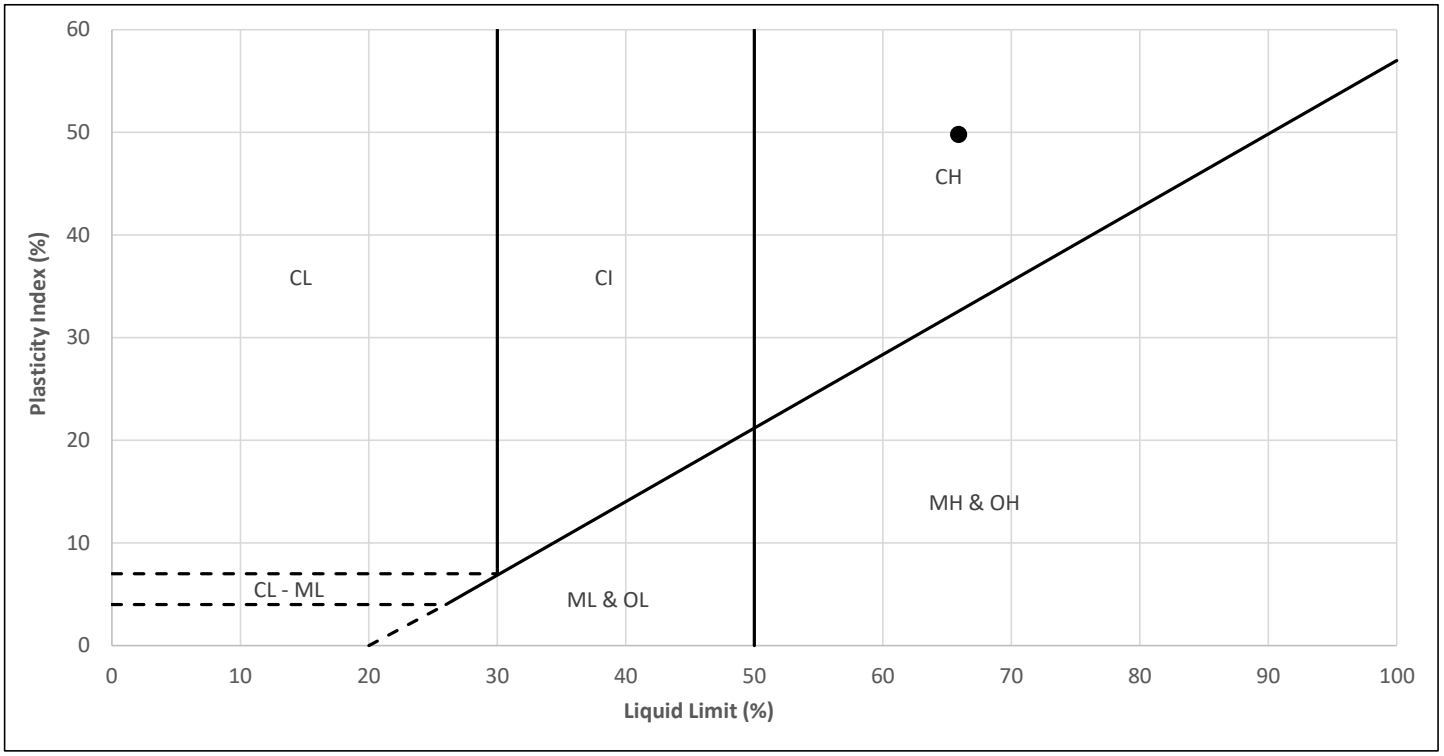
Project:	Snake Lake Reservoir Expansion	**Sample #:**	436BAU1
Project No.:	1560-193-00	**Source:**	22BH436B
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 436BAU1	**Test Date:**	27-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	65.9
Plastic Limit (PL)	16.1
Plasticity Index (PI)	49.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

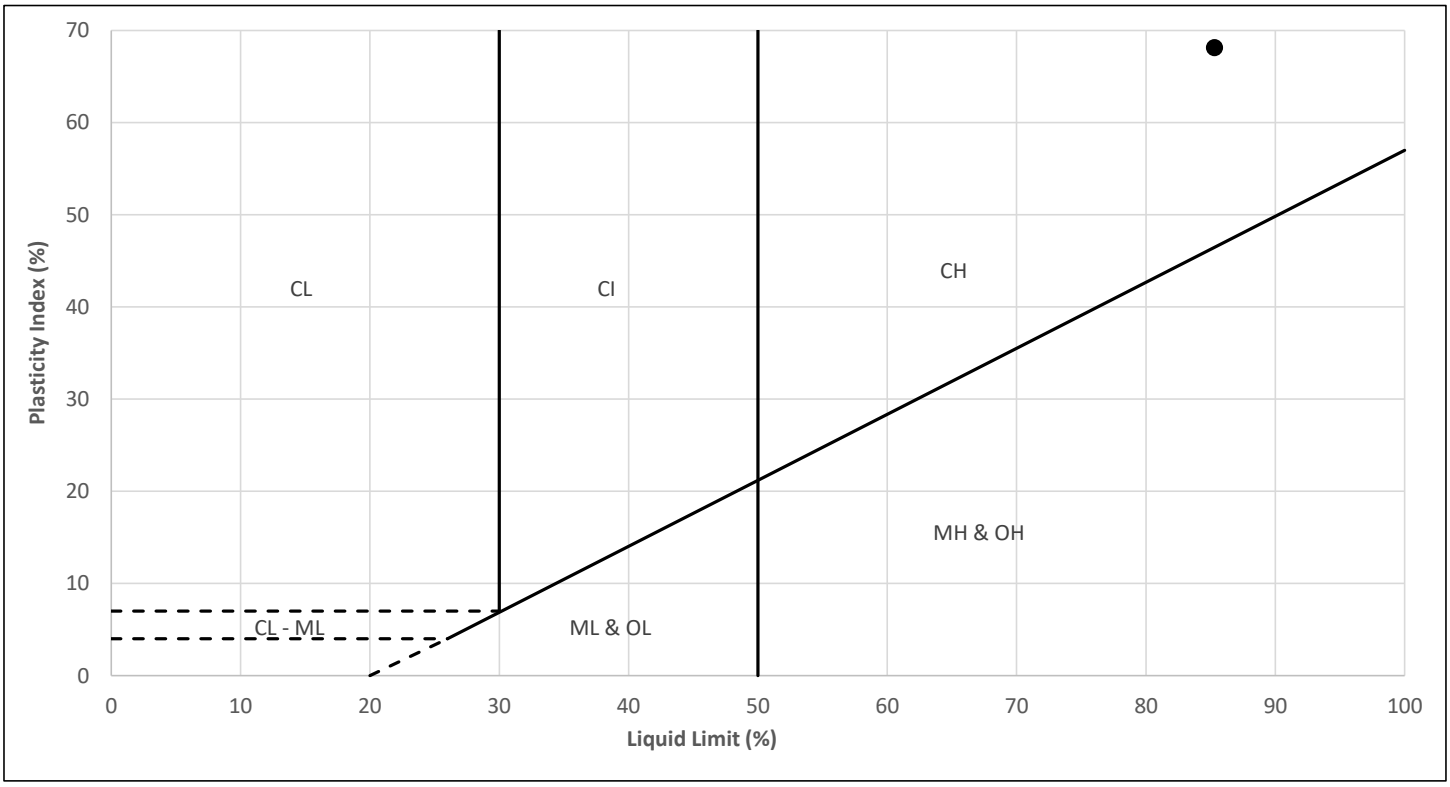
Project:	Snake Lake Reservoir Expansion	**Sample #:**	436BAU5
Project No.:	1560-193-00	**Source:**	22BH436B
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 436BAU5	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	85.3
Plastic Limit (PL)	17.1
Plasticity Index (PI)	68.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

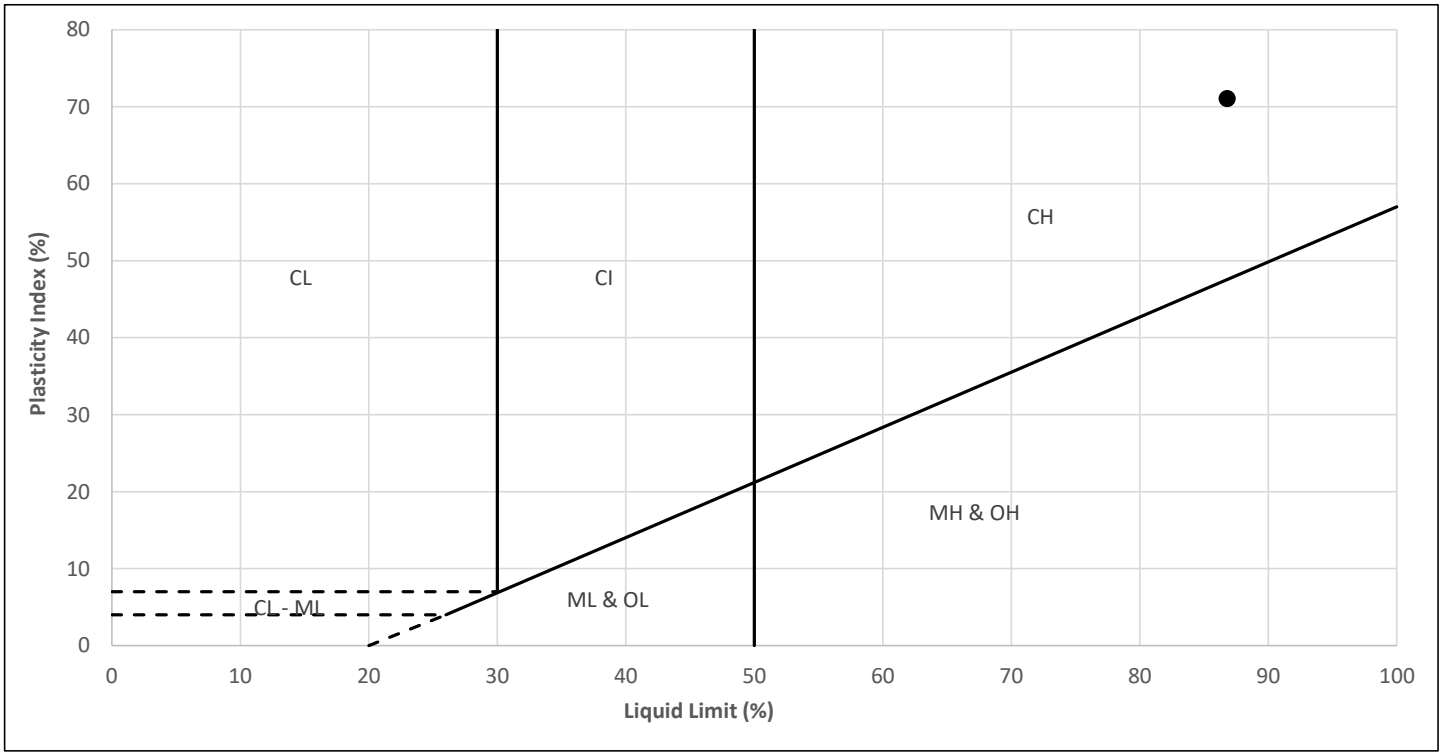
Project:	Snake Lake Reservoir Expansion	**Sample #:**	438AU1
Project No.:	1560-193-00	**Source:**	22BH438
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 438AU1	**Test Date:**	26-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	86.8
Plastic Limit (PL)	15.7
Plasticity Index (PI)	71.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

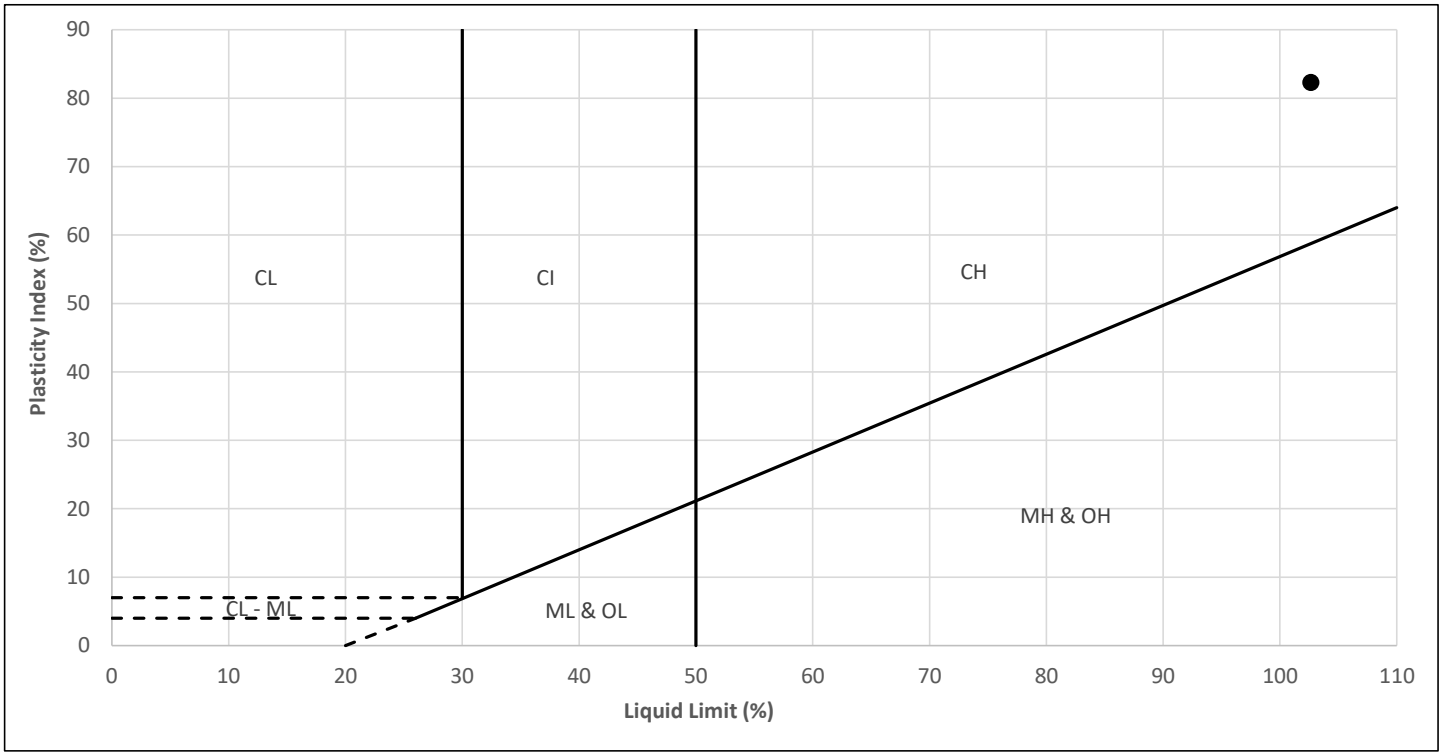
Project:	Snake Lake Reservoir Expansion	**Sample #:**	438AU4
Project No.:	1560-193-00	**Source:**	22BH438
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 438AU4	**Test Date:**	22-Aug-23

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	102.6
Plastic Limit (PL)	20.3
Plasticity Index (PI)	82.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

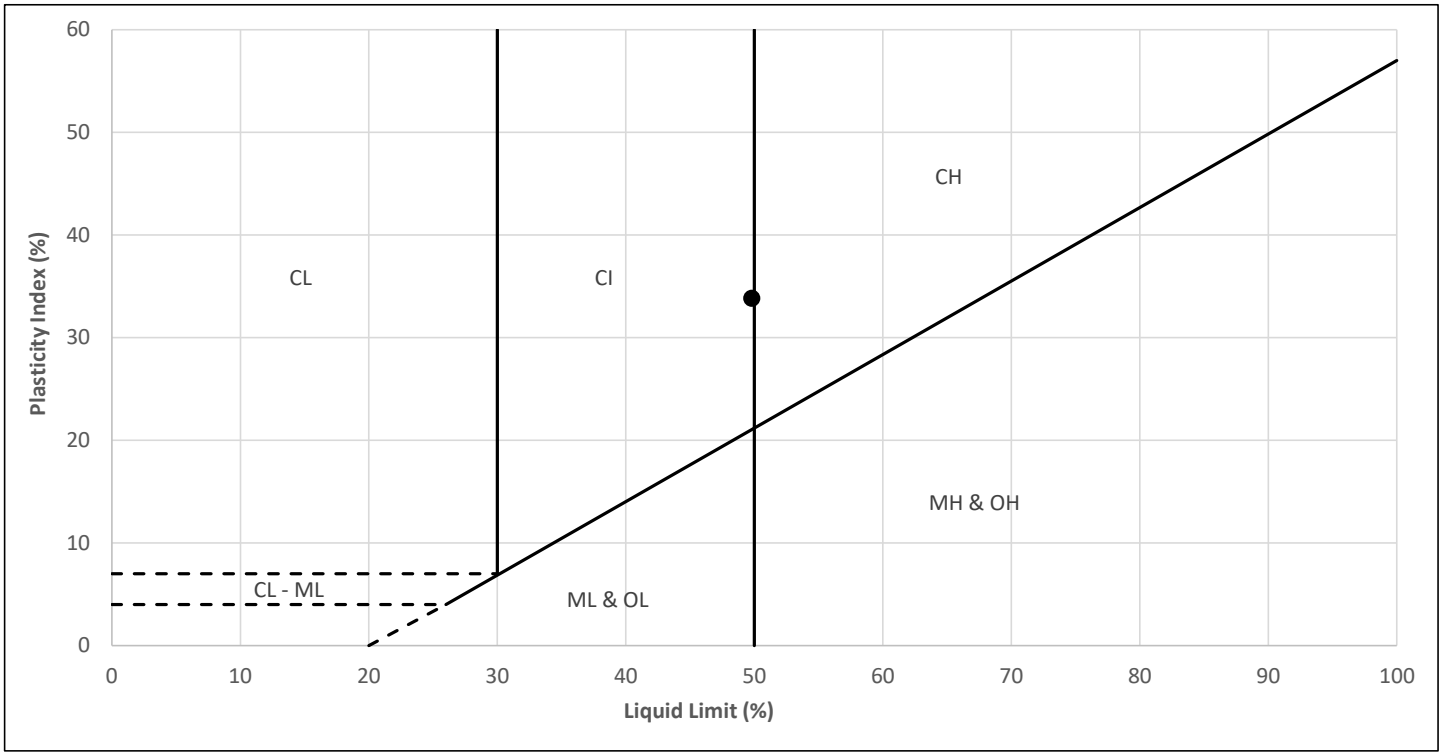
Project:	Snake Lake Reservoir Expansion	**Sample #:**	439AU2
Project No.:	1560-193-00	**Source:**	22BH439
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 439AU2	**Test Date:**	24-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.8
Plastic Limit (PL)	16.0
Plasticity Index (PI)	33.8

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

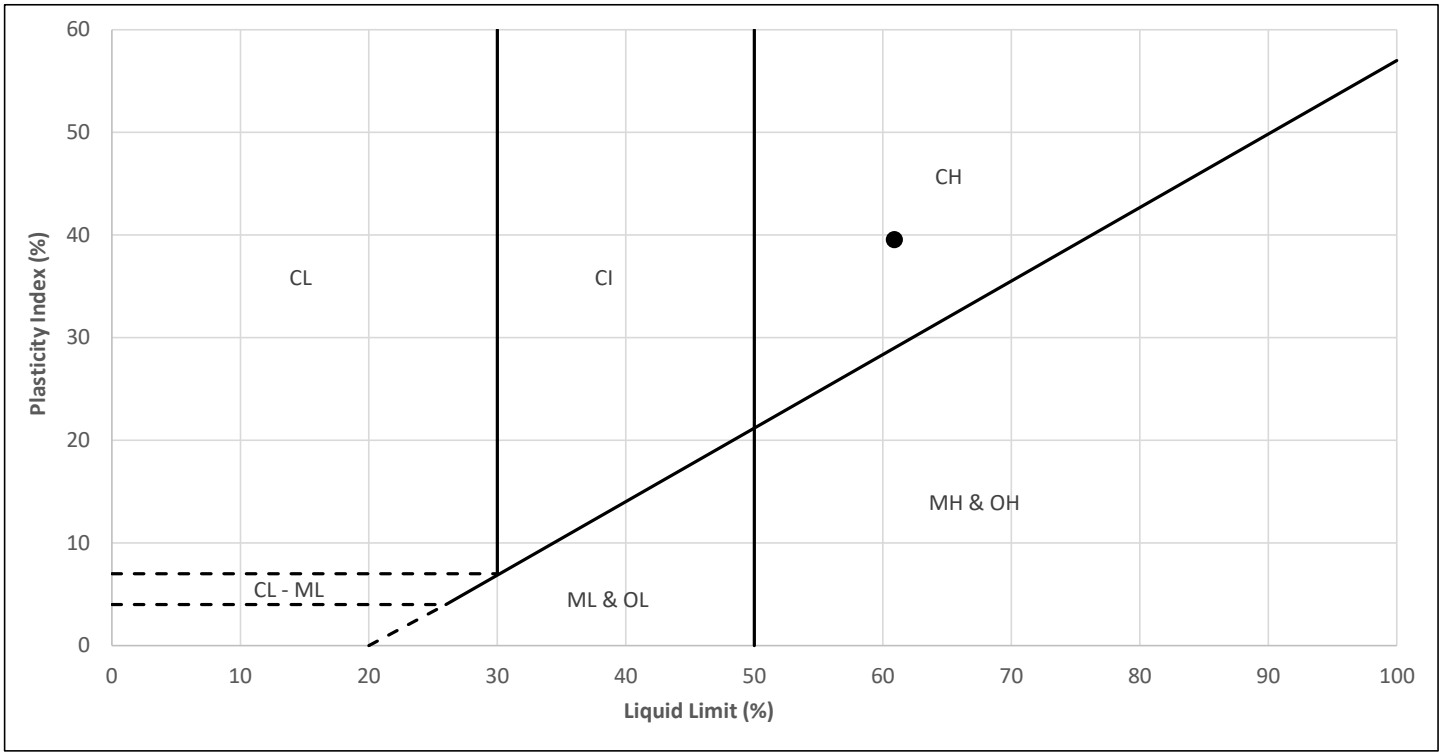
Project:	Snake Lake Reservoir Expansion	**Sample #:**	439AU5
Project No.:	1560-193-00	**Source:**	22BH439
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 439AU5	**Test Date:**	26-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	60.9
Plastic Limit (PL)	21.3
Plasticity Index (PI)	39.6

Soil Plasticity	High
Soil Classification	CH



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Tel: (403)892-6036

ATTERBERG LIMITS

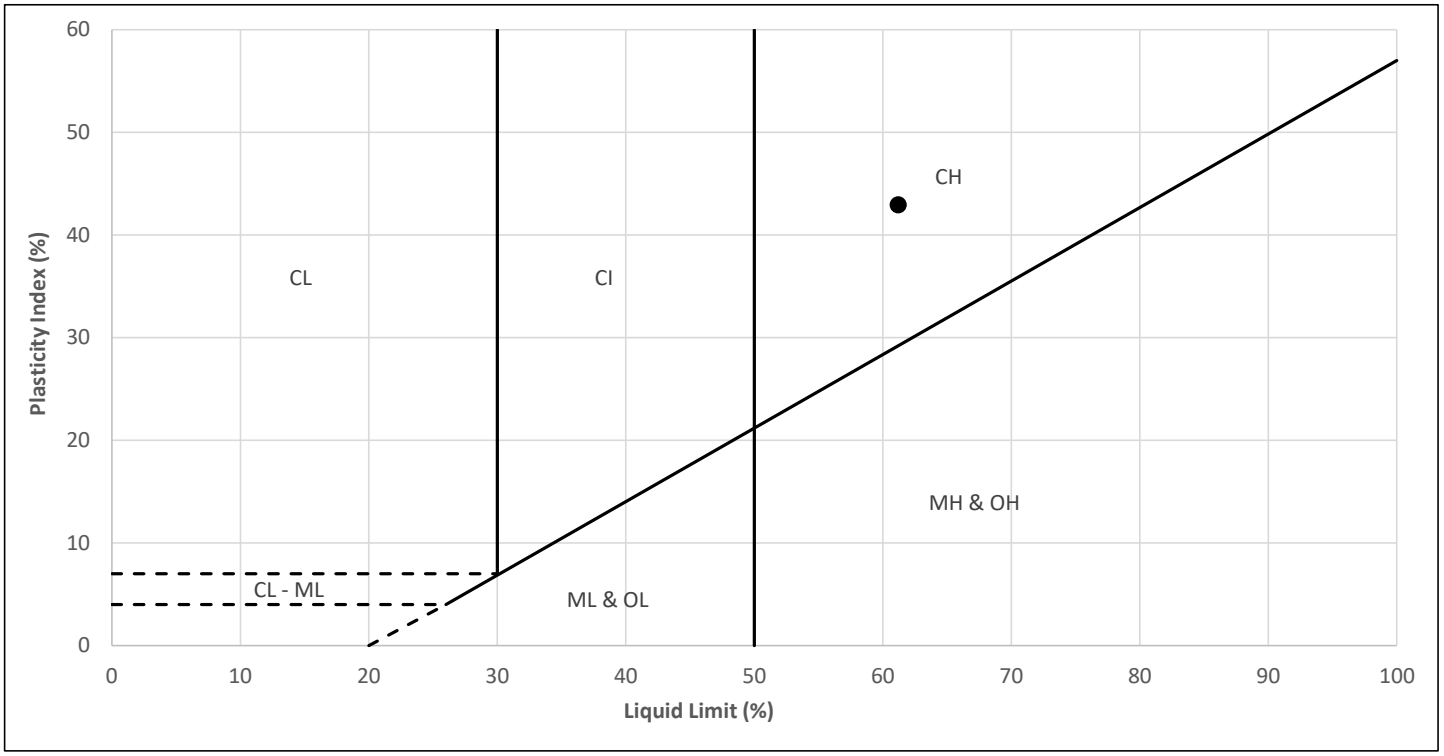
Project:	Snake Lake Reservoir Expansion	**Sample #:**	440AU4
Project No.:	1560-193-00	**Source:**	22BH440
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 440AU4	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	61.2
Plastic Limit (PL)	18.2
Plasticity Index (PI)	43.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

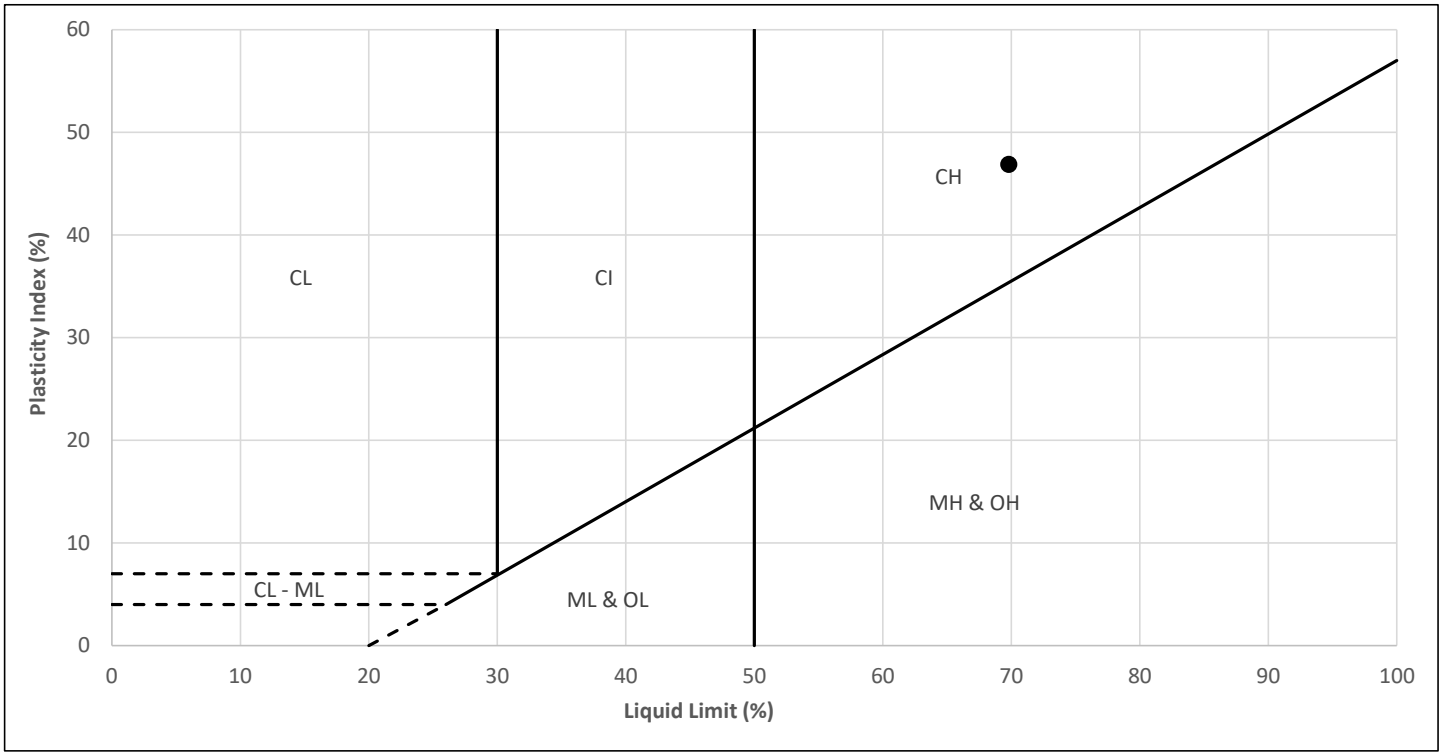
Project:	Snake Lake Reservoir Expansion	**Sample #:**	440AU8
Project No.:	1560-193-00	**Source:**	22BH440
Owner:	EID	**Sample Depth:**	5.8m
File No.:	AL - 440AU8	**Test Date:**	26-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	69.8
Plastic Limit (PL)	22.9
Plasticity Index (PI)	46.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

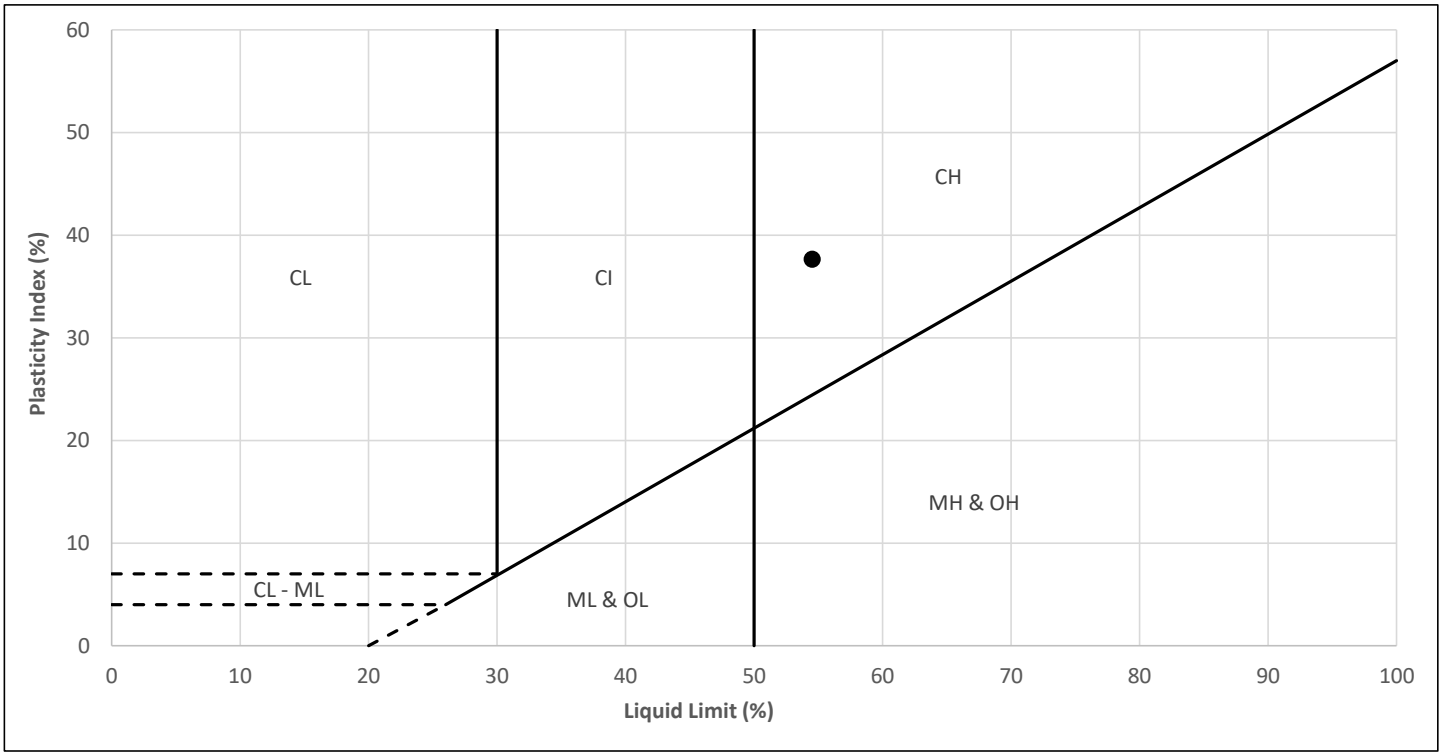
Project:	Snake Lake Reservoir Expansion	**Sample #:**	441AU2
Project No.:	1560-193-00	**Source:**	22BH441
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 441AU2	**Test Date:**	24-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.5
Plastic Limit (PL)	16.9
Plasticity Index (PI)	37.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

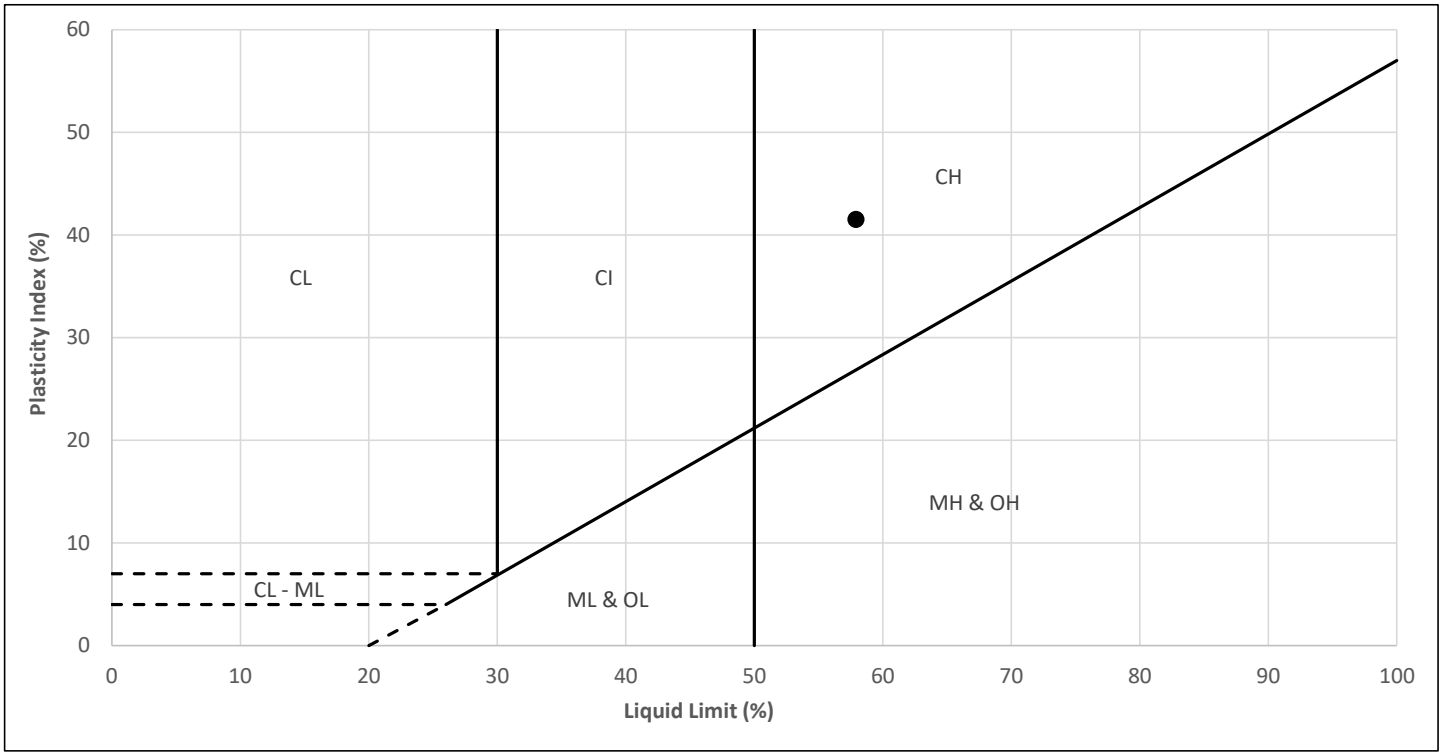
Project:	Snake Lake Reservoir Expansion	**Sample #:**	441AU3
Project No.:	1560-193-00	**Source:**	22BH441
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 441AU3	**Test Date:**	24-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	57.9
Plastic Limit (PL)	16.4
Plasticity Index (PI)	41.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

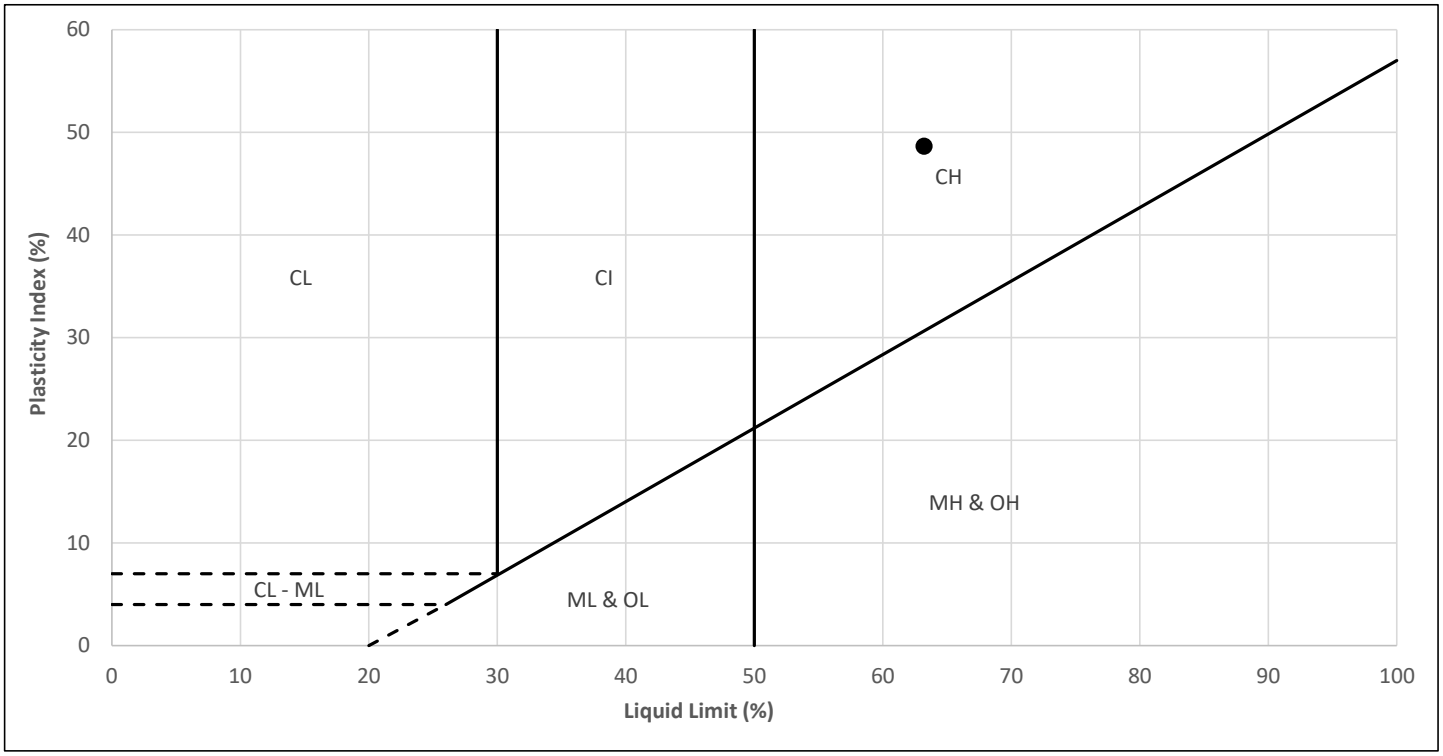
Project:	Snake Lake Reservoir Expansion	**Sample #:**	442AU1
Project No.:	1560-193-00	**Source:**	22BH442
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 442AU1	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	63.2
Plastic Limit (PL)	14.5
Plasticity Index (PI)	48.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

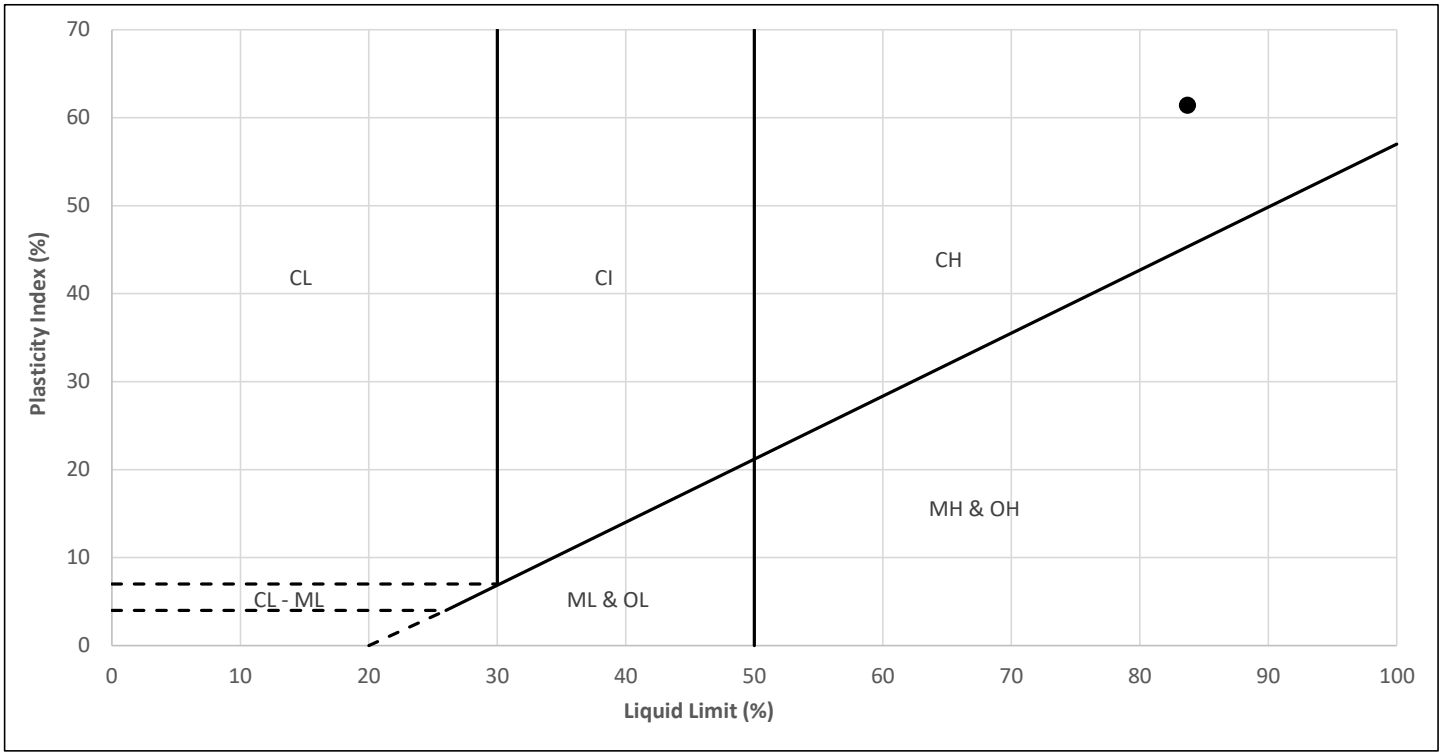
Project:	Snake Lake Reservoir Expansion	**Sample #:**	442AU3
Project No.:	1560-193-00	**Source:**	22BH442
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 442AU3	**Test Date:**	23-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	83.7
Plastic Limit (PL)	22.3
Plasticity Index (PI)	61.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

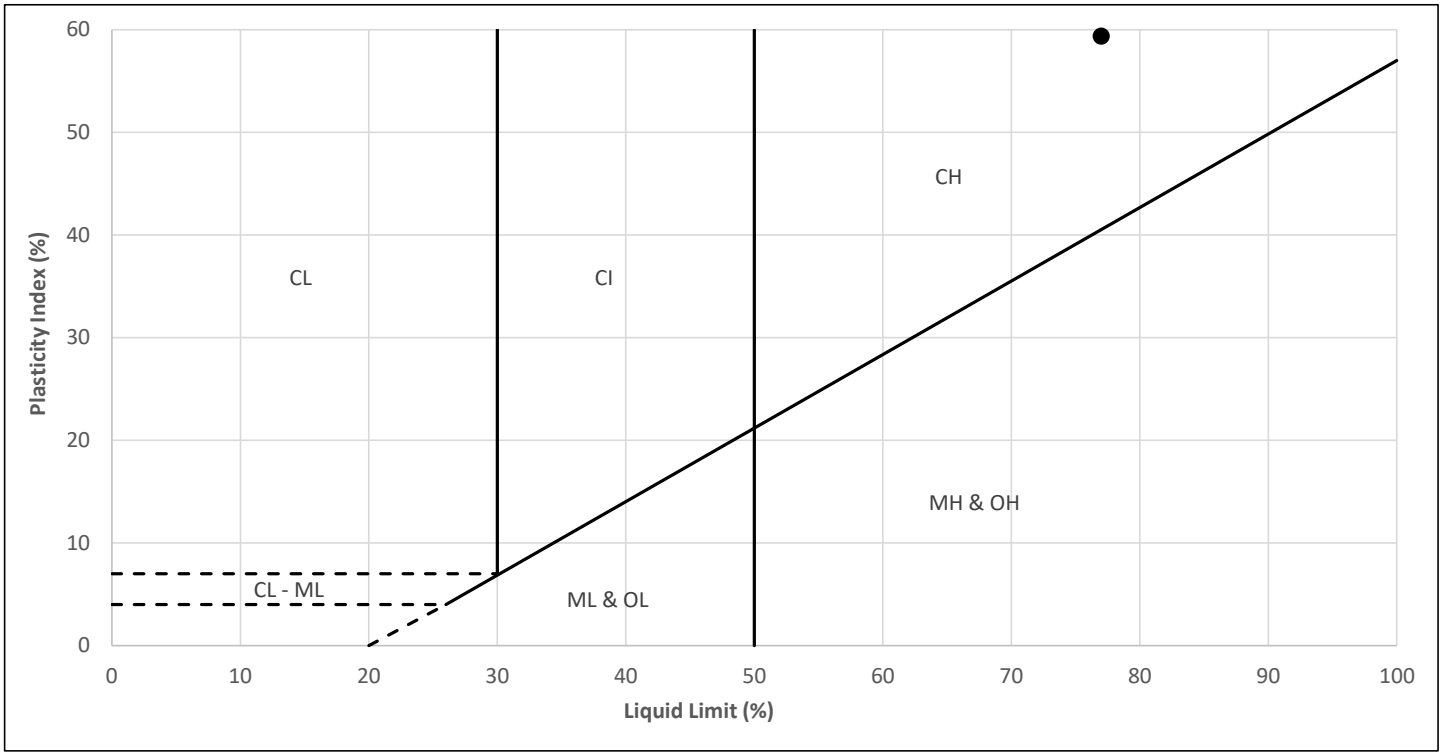
Project:	Snake Lake Reservoir Expansion	**Sample #:**	443AU1
Project No.:	1560-193-00	**Source:**	22BH443
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 443AU1	**Test Date:**	27-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	77.0
Plastic Limit (PL)	17.6
Plasticity Index (PI)	59.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

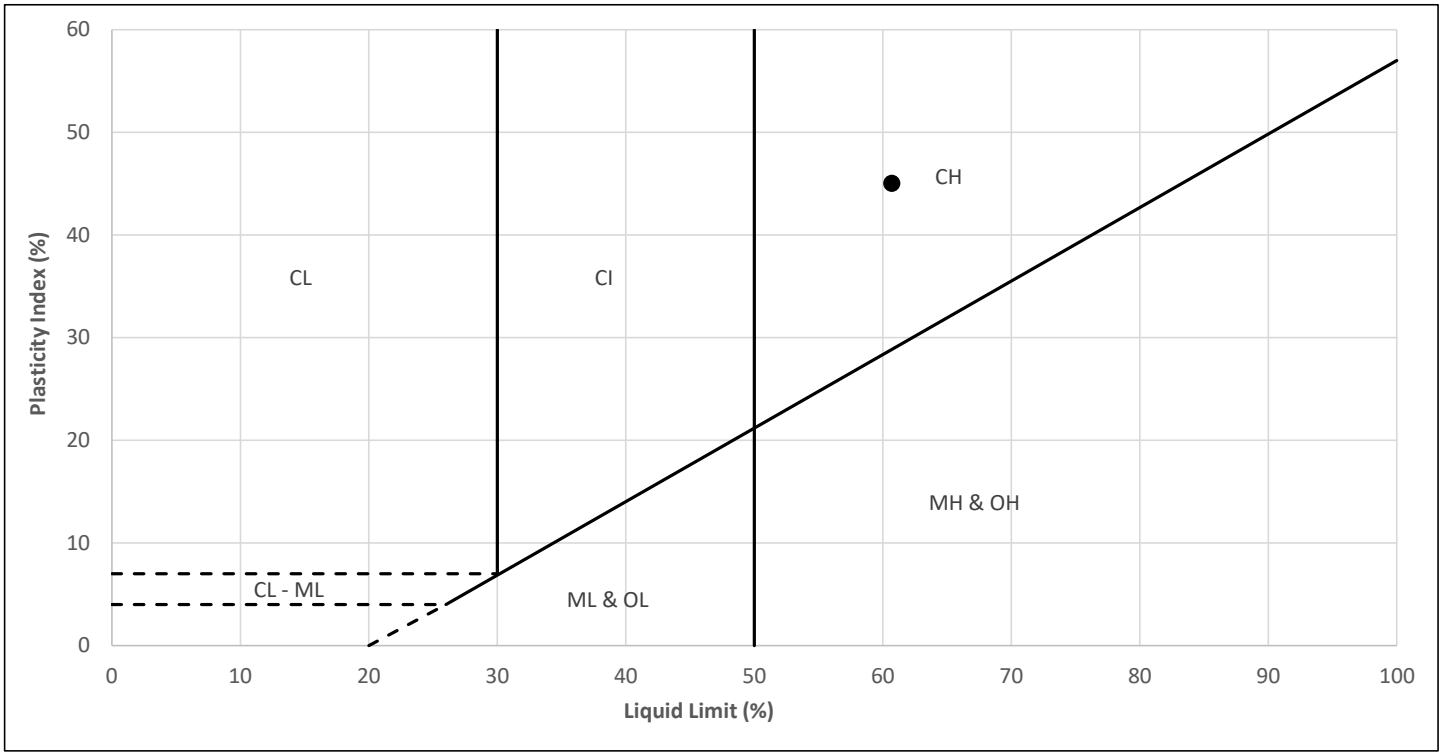
Project:	Snake Lake Reservoir Expansion	**Sample #:**	443AU4
Project No.:	1560-193-00	**Source:**	22BH443
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 443AU4	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	60.7
Plastic Limit (PL)	15.7
Plasticity Index (PI)	45.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

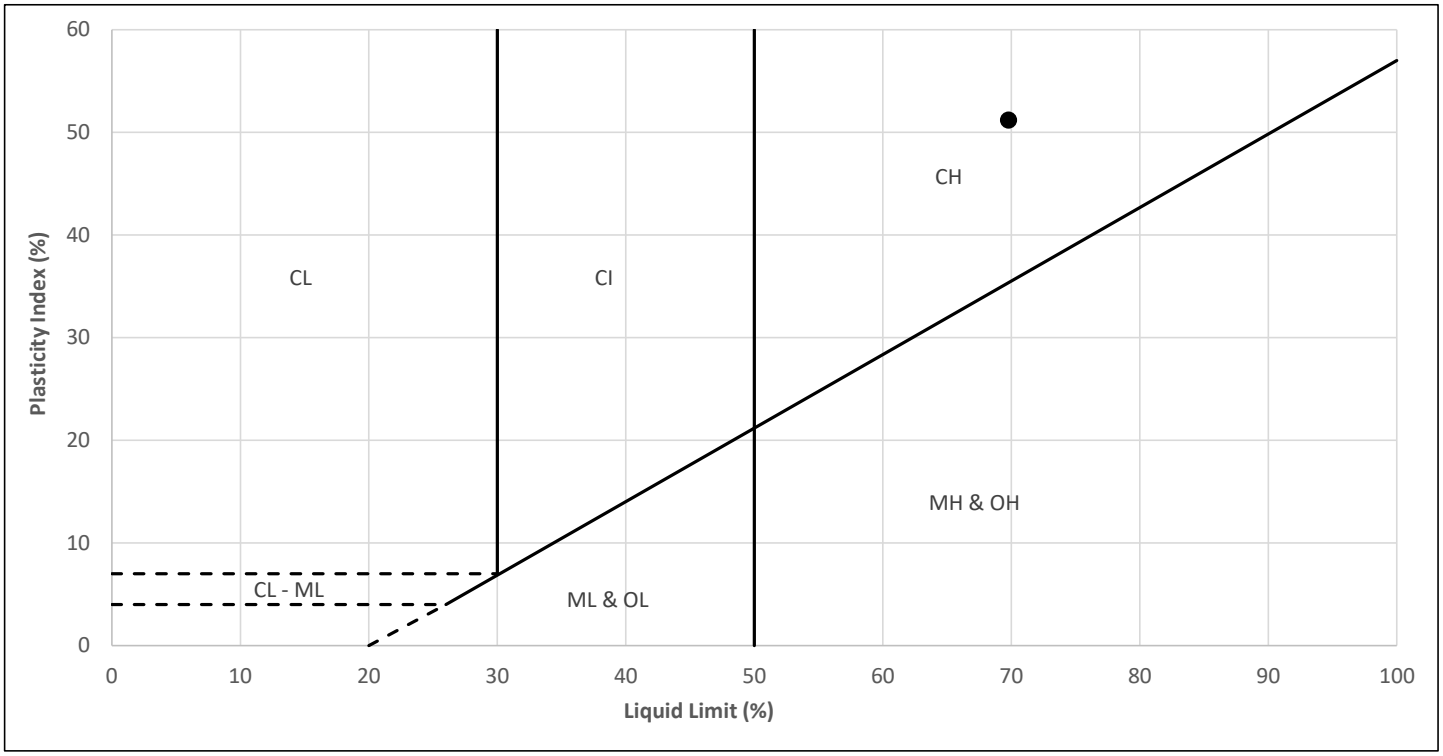
Project:	Snake Lake Reservoir Expansion	**Sample #:**	446AU2
Project No.:	1560-193-00	**Source:**	22BH446
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 446AU2	**Test Date:**	24-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	69.8
Plastic Limit (PL)	18.6
Plasticity Index (PI)	51.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

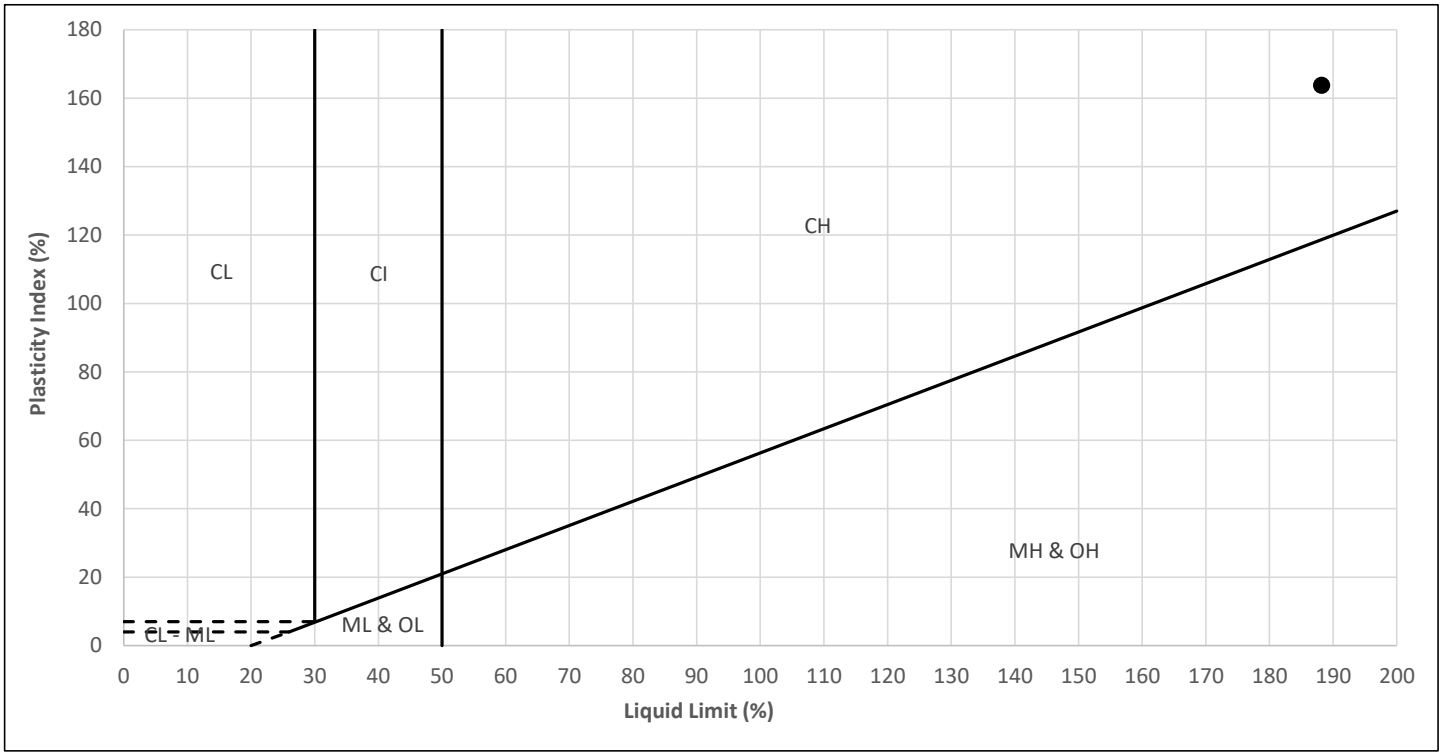
Project:	Snake Lake Reservoir Expansion	**Sample #:**	446AU5
Project No.:	1560-193-00	**Source:**	22BH446
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 446AU5	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	188.2
Plastic Limit (PL)	24.4
Plasticity Index (PI)	163.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

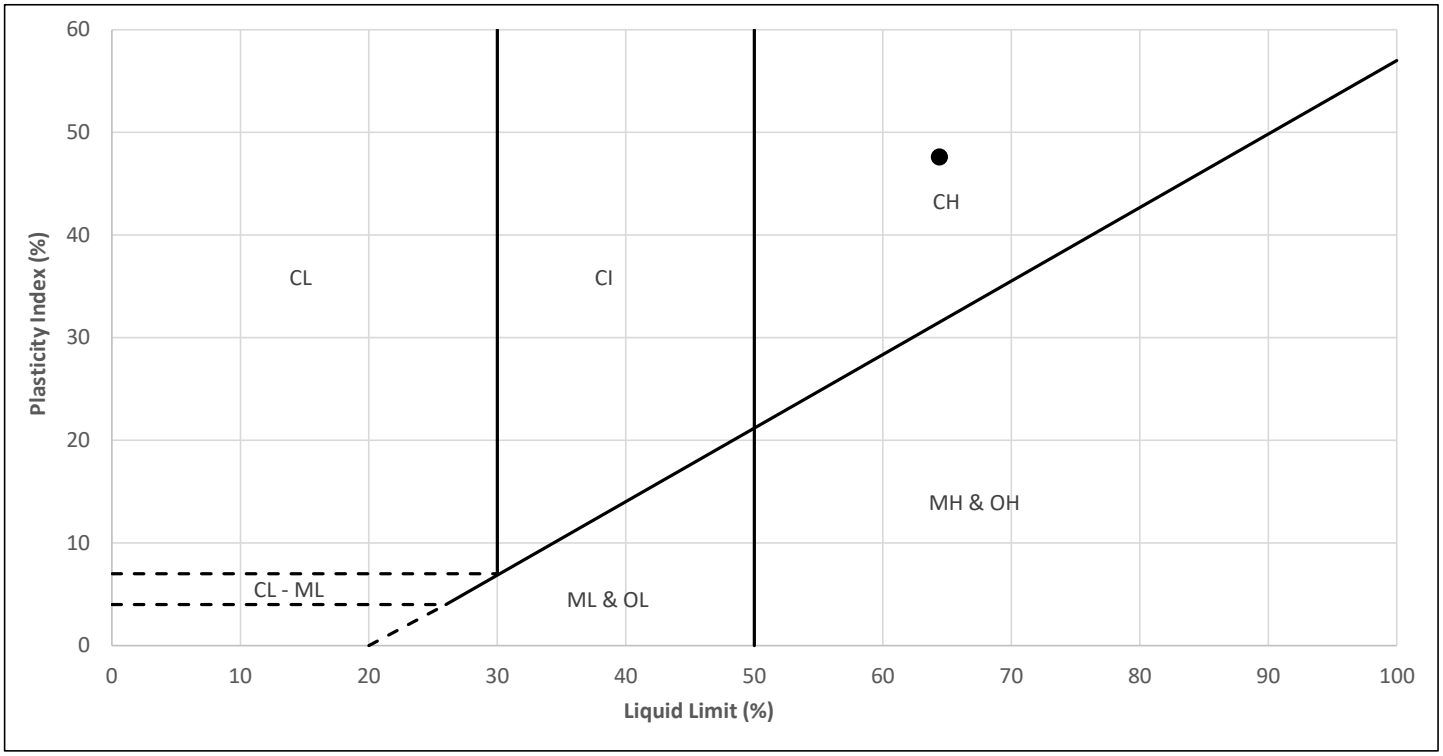
Project:	Snake Lake Reservoir Expansion	**Sample #:**	448AU2
Project No.:	1560-193-00	**Source:**	22BH448
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 448AU2	**Test Date:**	23-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	64.4
Plastic Limit (PL)	16.8
Plasticity Index (PI)	47.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

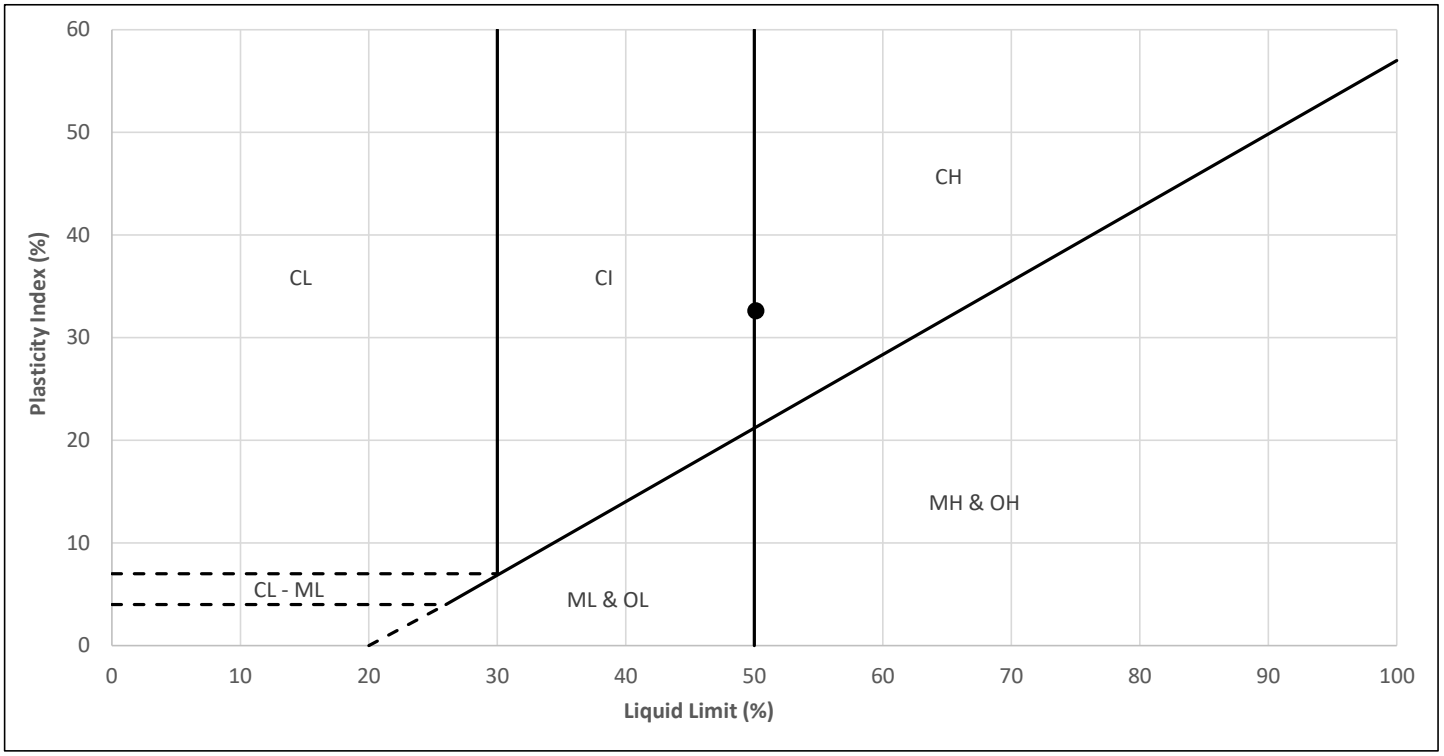
Project:	Snake Lake Reservoir Expansion	**Sample #:**	448AU4
Project No.:	1560-193-00	**Source:**	22BH448
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 448AU4	**Test Date:**	24-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.1
Plastic Limit (PL)	17.5
Plasticity Index (PI)	32.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

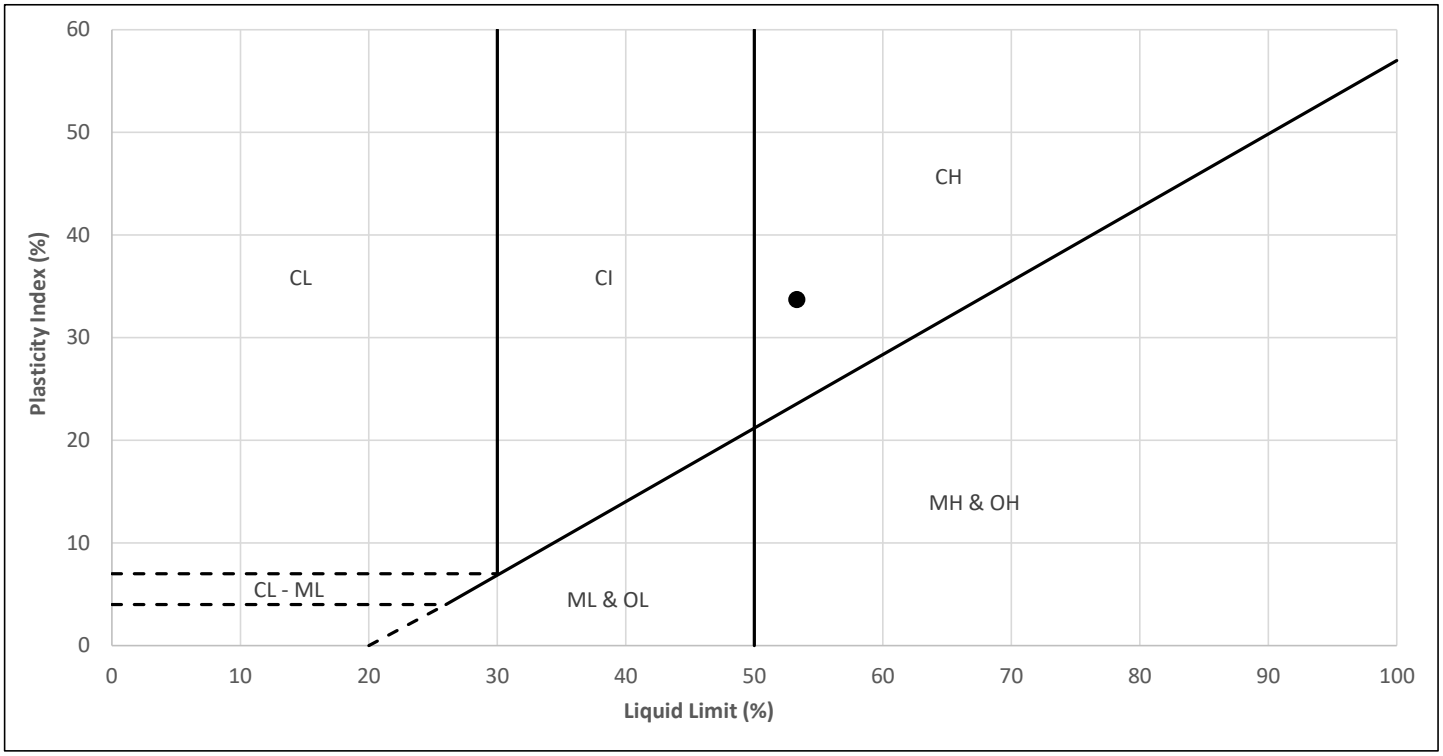
Project:	Snake Lake Reservoir Expansion	**Sample #:**	448AU5
Project No.:	1560-193-00	**Source:**	22BH448
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 448AU5	**Test Date:**	23-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.3
Plastic Limit (PL)	19.6
Plasticity Index (PI)	33.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

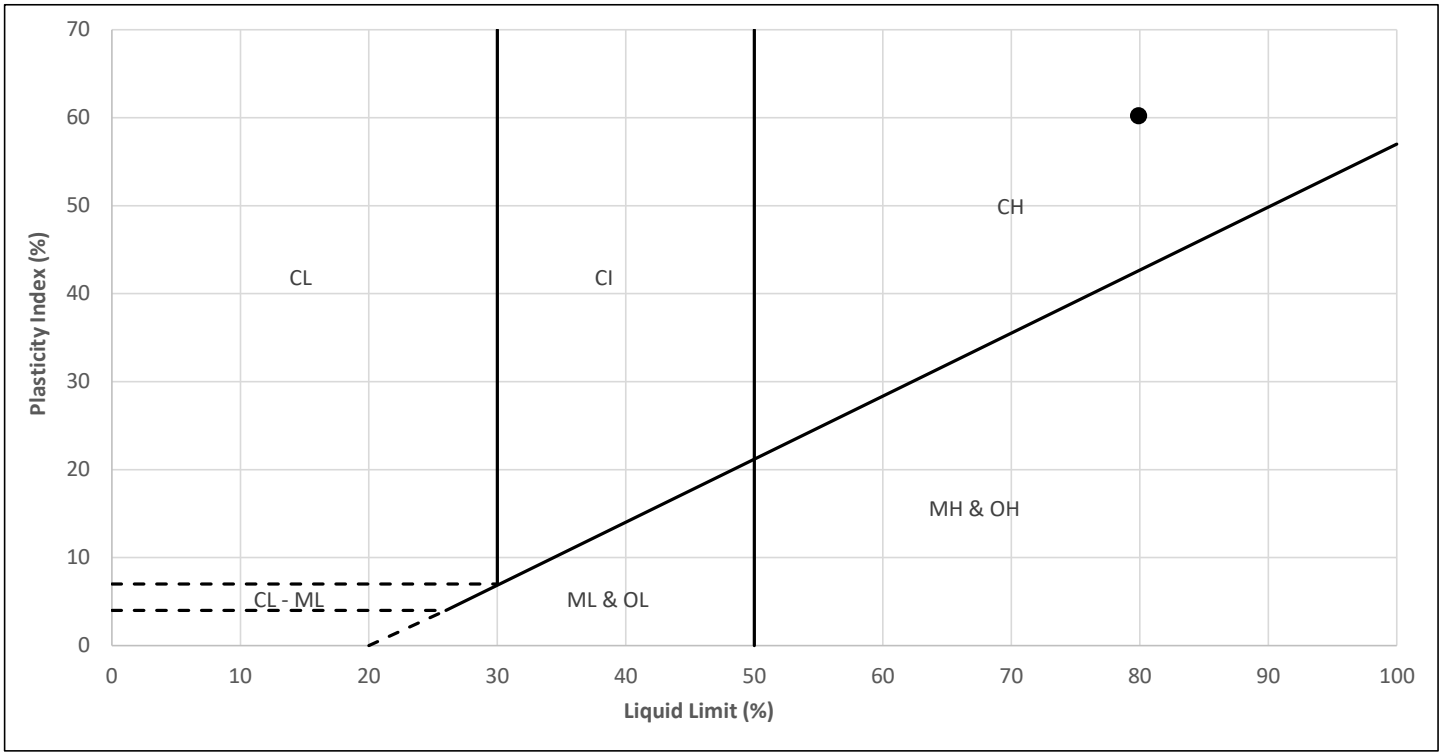
Project:	Snake Lake Reservoir Expansion	**Sample #:**	449AU1
Project No.:	1560-193-00	**Source:**	22BH449
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 449AU1	**Test Date:**	23-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	79.9
Plastic Limit (PL)	19.7
Plasticity Index (PI)	60.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

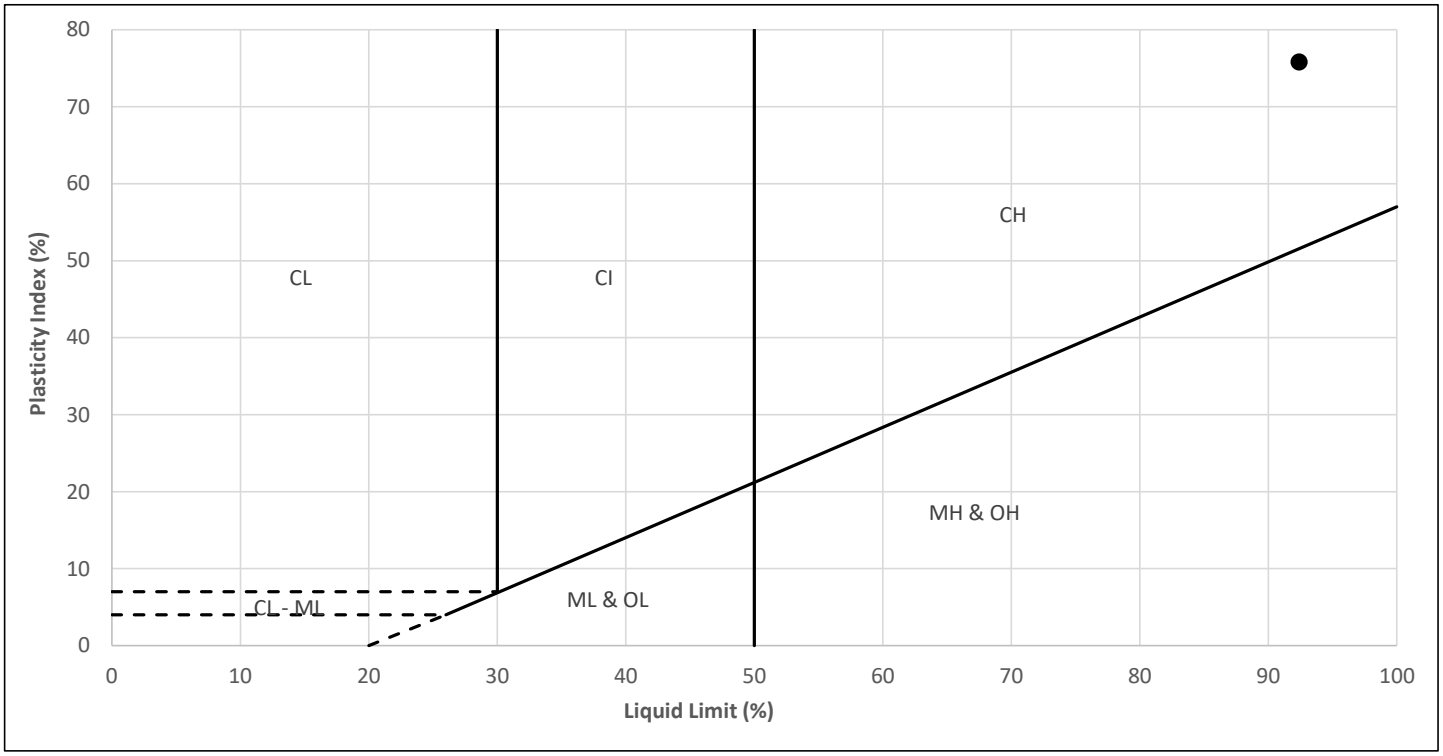
Project:	Snake Lake Reservoir Expansion	**Sample #:**	449AU3
Project No.:	1560-193-00	**Source:**	22BH449
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 449AU3	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	92.4
Plastic Limit (PL)	16.6
Plasticity Index (PI)	75.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

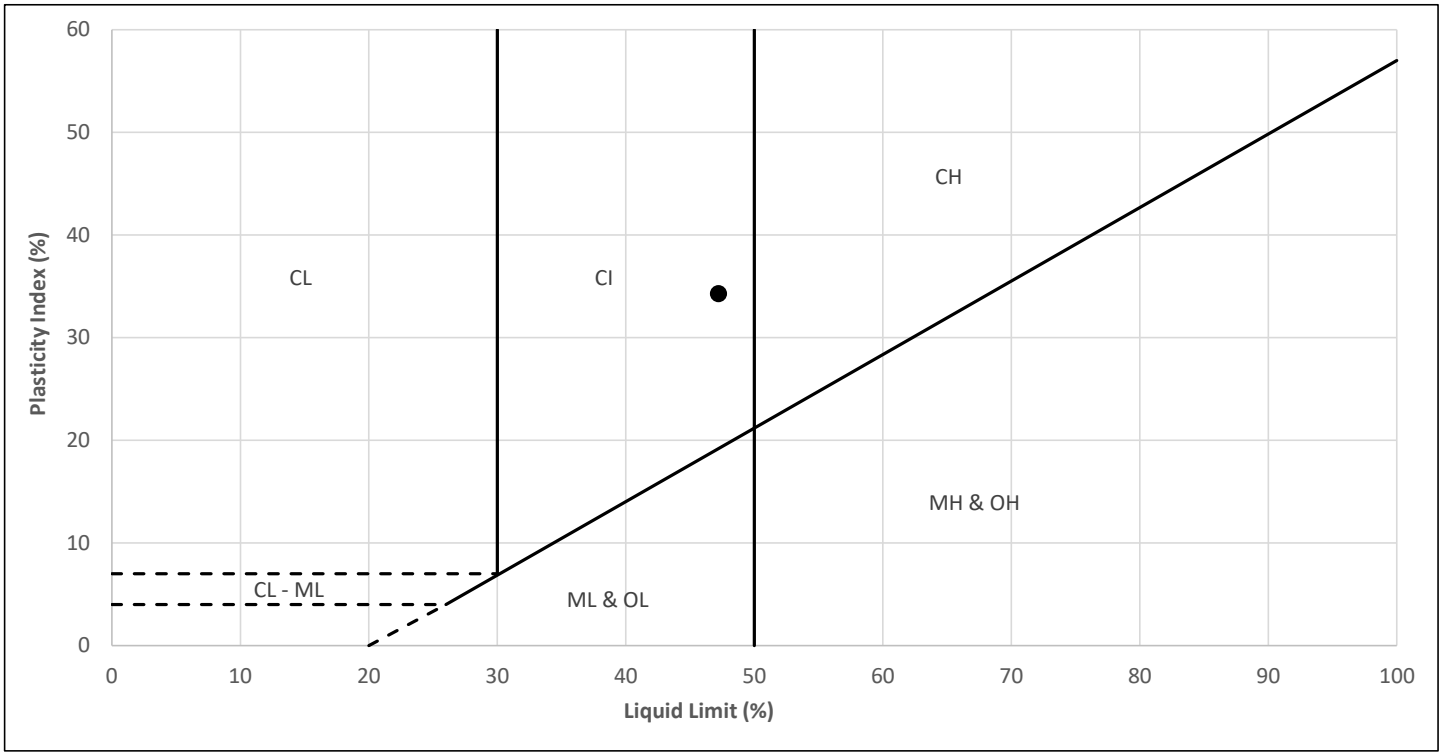
Project:	Snake Lake Reservoir Expansion	**Sample #:**	450AU2
Project No.:	1560-193-00	**Source:**	22BH450
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 450AU2	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	47.2
Plastic Limit (PL)	12.9
Plasticity Index (PI)	34.3

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

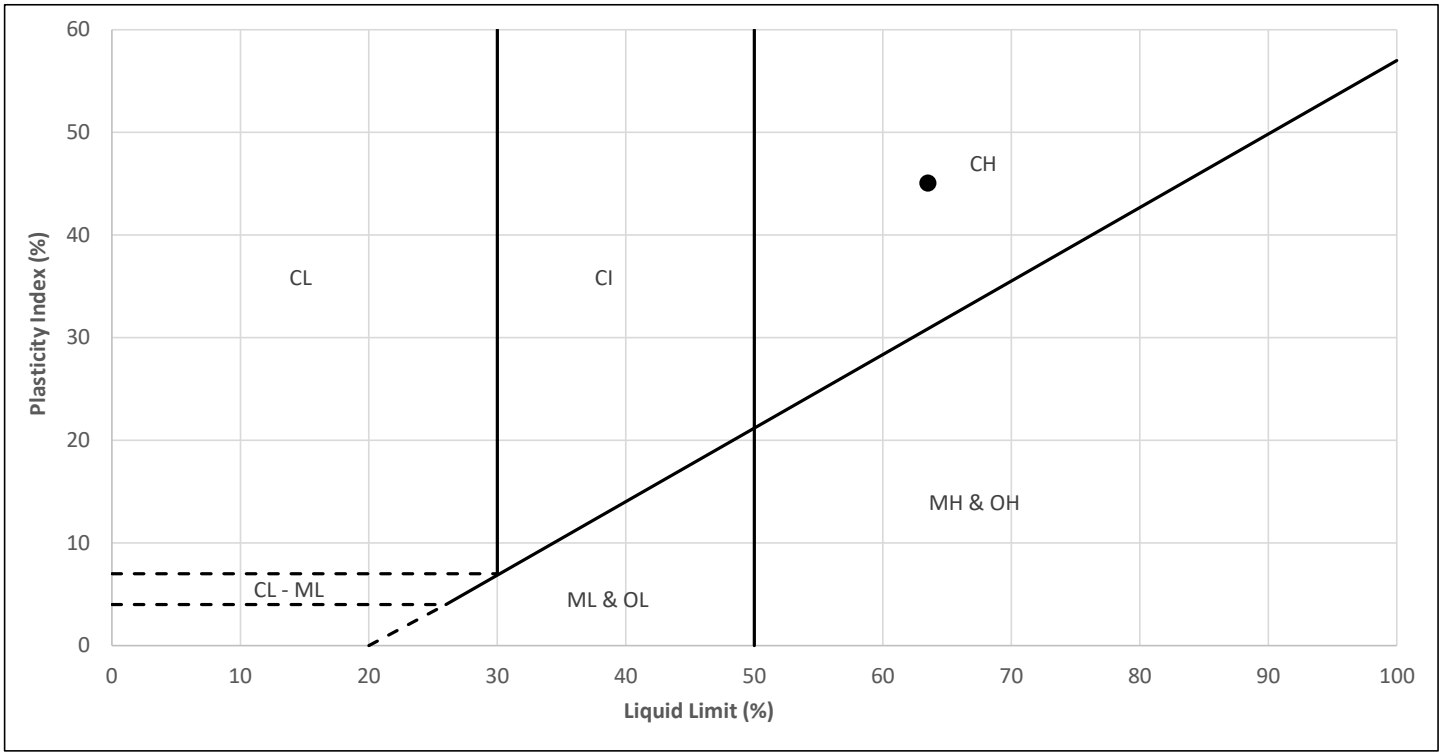
Project:	Snake Lake Reservoir Expansion	**Sample #:**	450AU5
Project No.:	1560-193-00	**Source:**	22BH450
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 450AU5	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	63.5
Plastic Limit (PL)	18.4
Plasticity Index (PI)	45.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

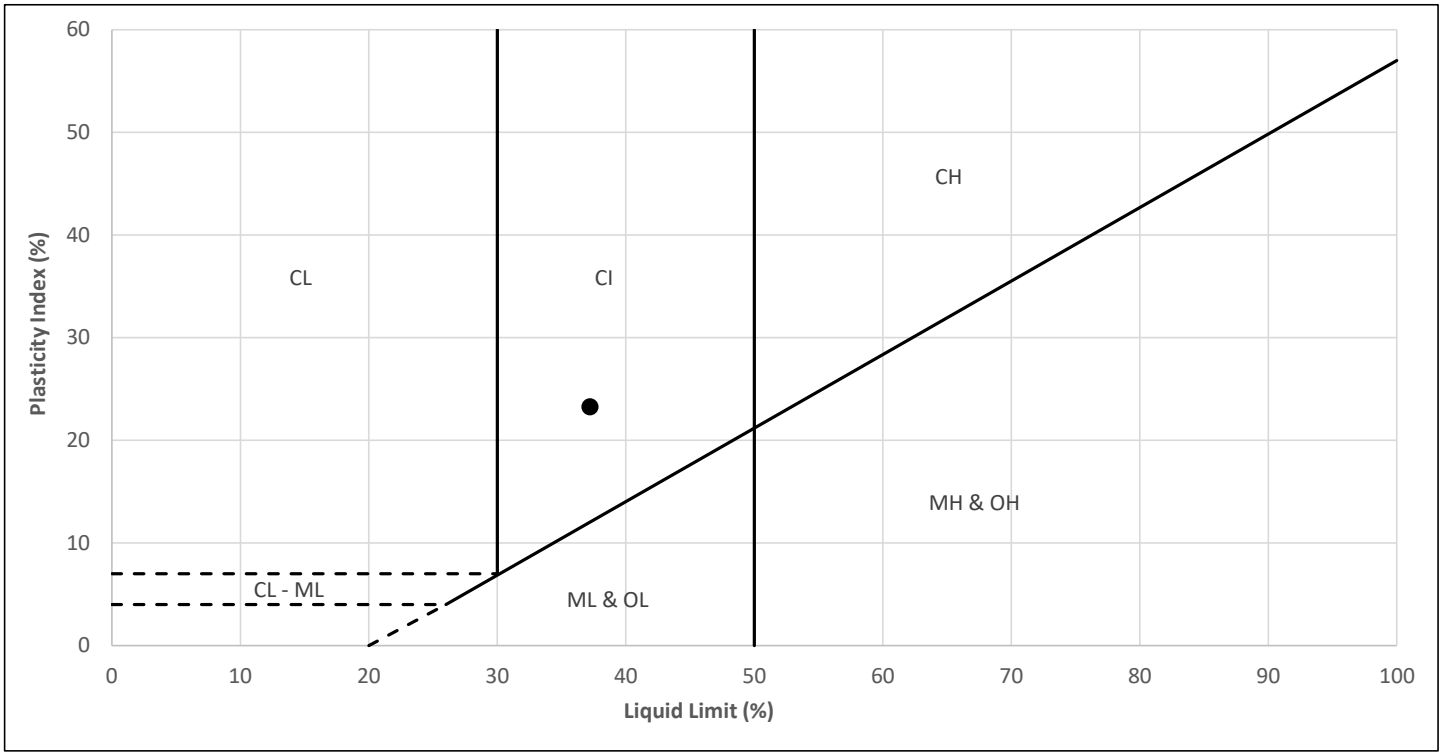
Project:	Snake Lake Reservoir Expansion	**Sample #:**	451AU1
Project No.:	1560-193-00	**Source:**	22BH451
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 451AU1	**Test Date:**	23-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	37.2
Plastic Limit (PL)	13.9
Plasticity Index (PI)	23.3

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

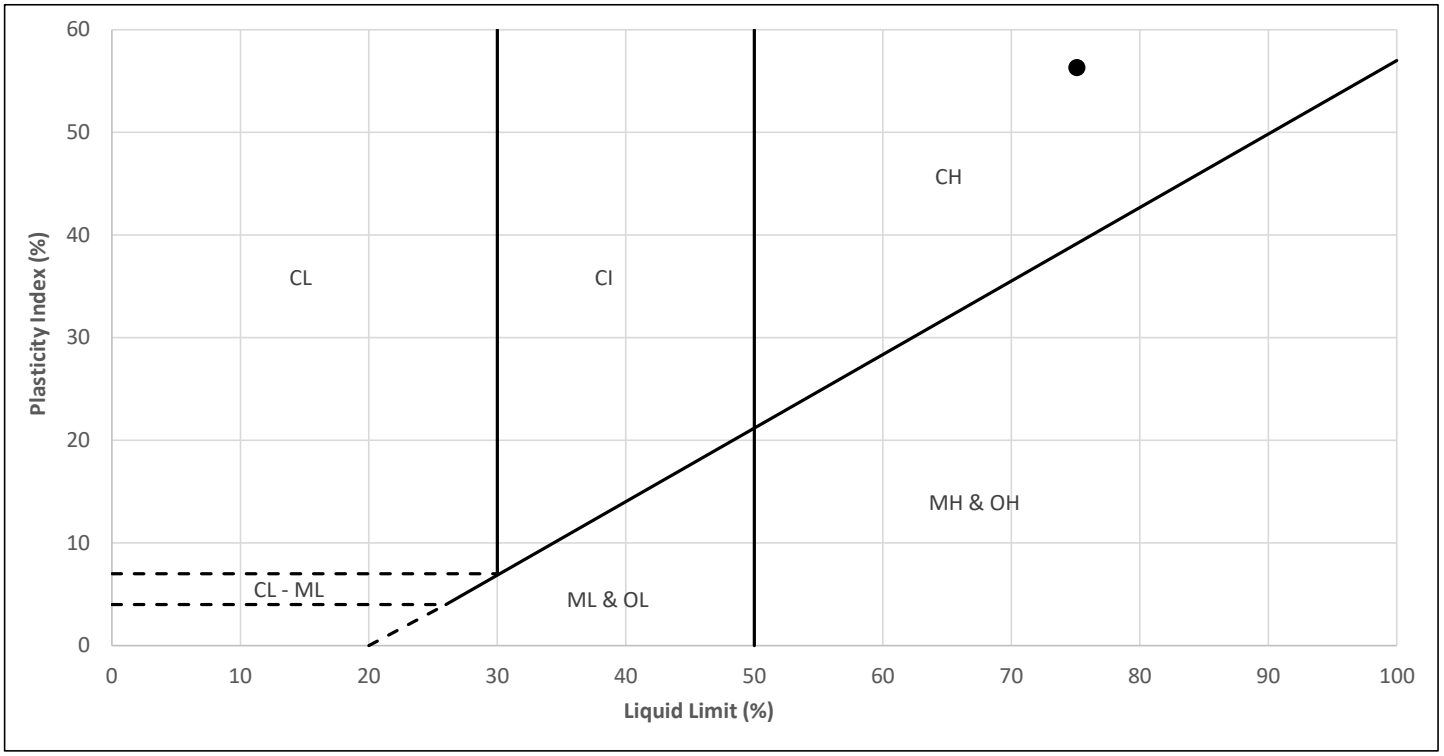
Project:	Snake Lake Reservoir Expansion	**Sample #:**	451AU3
Project No.:	1560-193-00	**Source:**	22BH451
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 451AU3	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	75.1
Plastic Limit (PL)	18.8
Plasticity Index (PI)	56.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

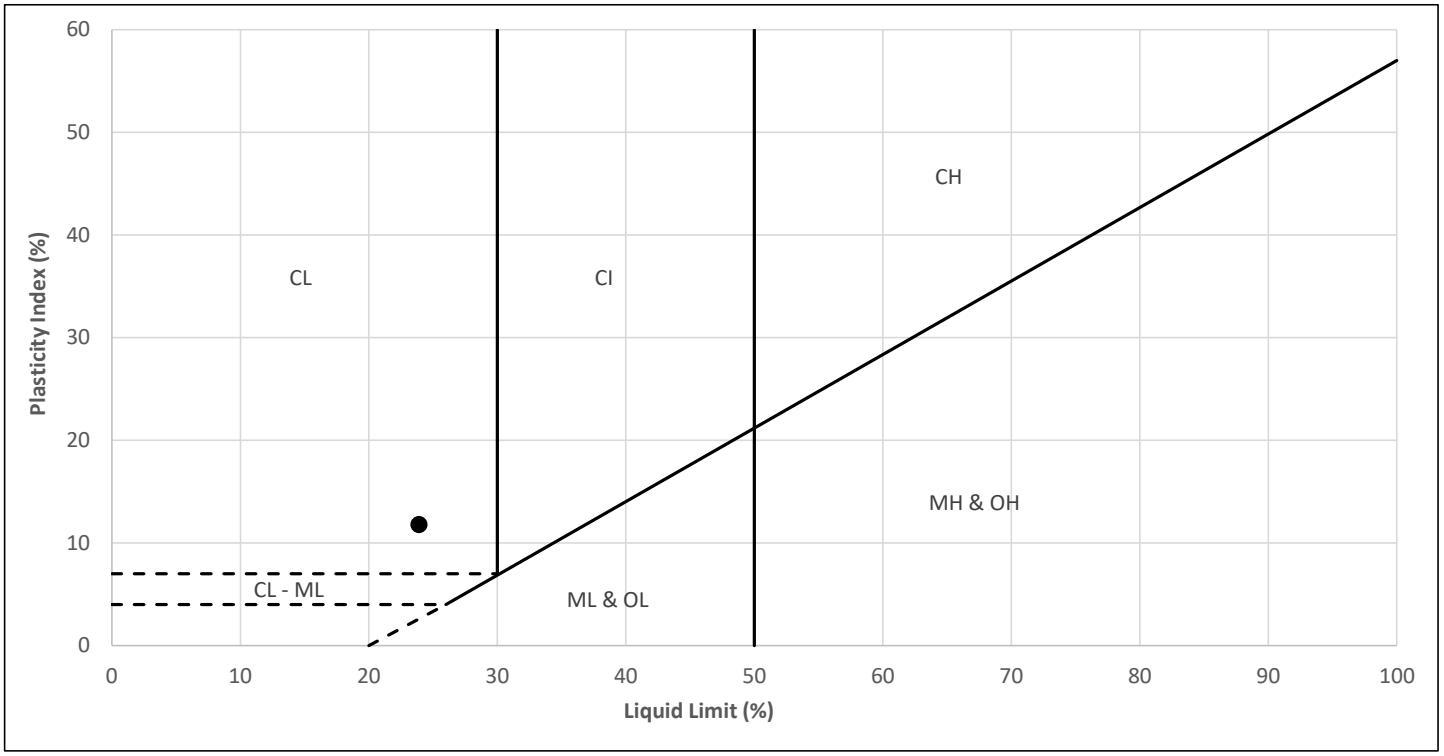
Project:	Snake Lake Reservoir Expansion	**Sample #:**	453AU1
Project No.:	1560-193-00	**Source:**	22BH453
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 453AU1	**Test Date:**	14-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays

Liquid Limit (LL)	23.9
Plastic Limit (PL)	12.1
Plasticity Index (PI)	11.8

Soil Plasticity	Low
Soil Classification	CL



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ATTERBERG LIMITS

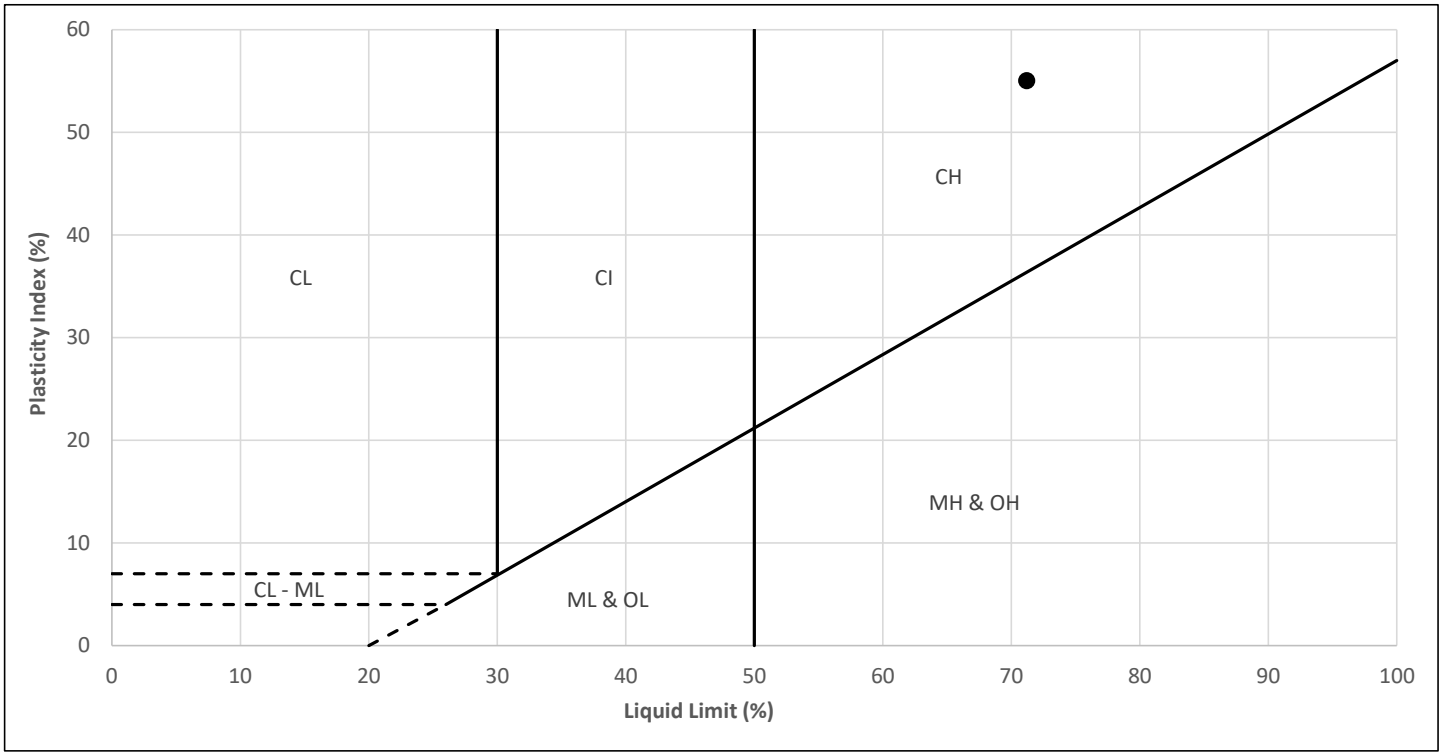
Project:	Snake Lake Reservoir Expansion	**Sample #:**	453AU3
Project No.:	1560-193-00	**Source:**	22BH453
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 453AU3	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	71.2
Plastic Limit (PL)	16.1
Plasticity Index (PI)	55.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

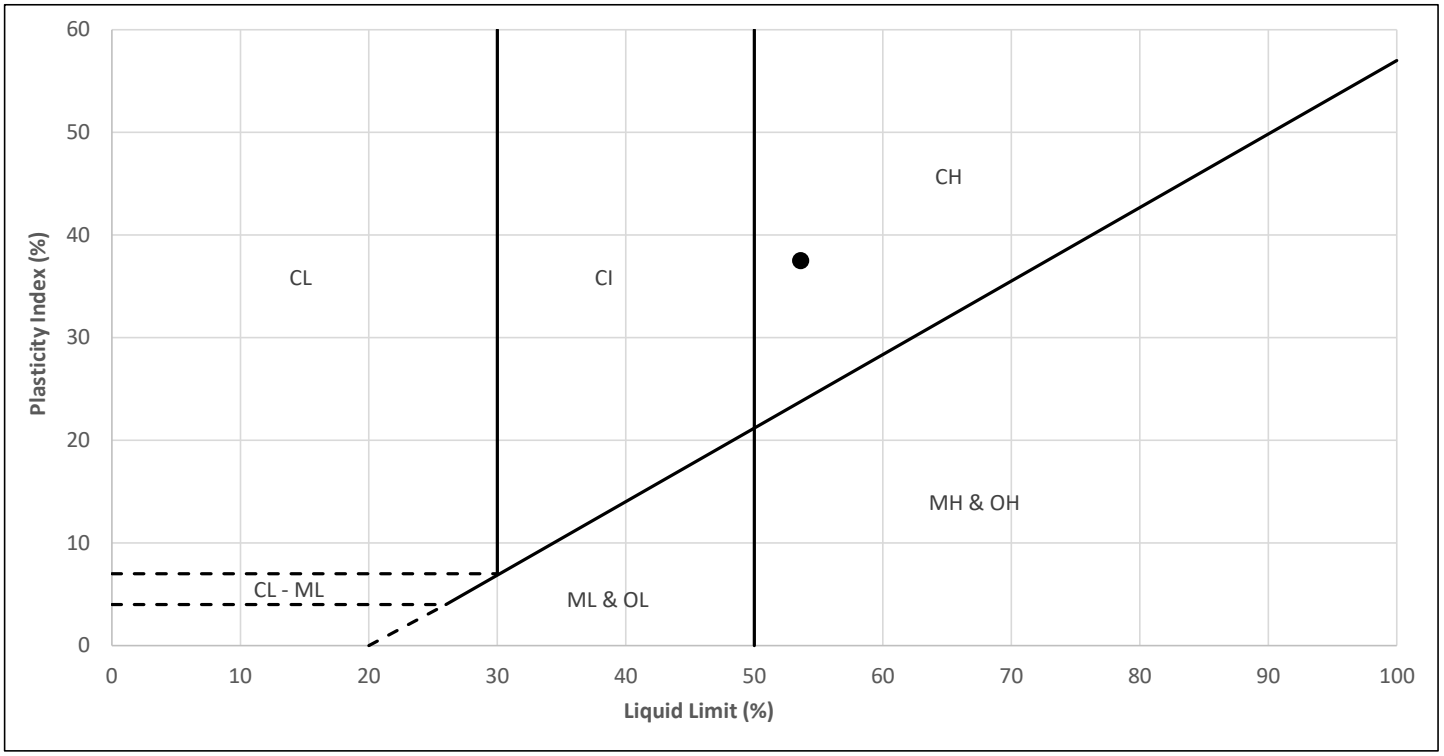
Project:	Snake Lake Reservoir Expansion	**Sample #:**	454AU1
Project No.:	1560-193-00	**Source:**	22BH454
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 454AU1	**Test Date:**	14-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.6
Plastic Limit (PL)	16.1
Plasticity Index (PI)	37.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

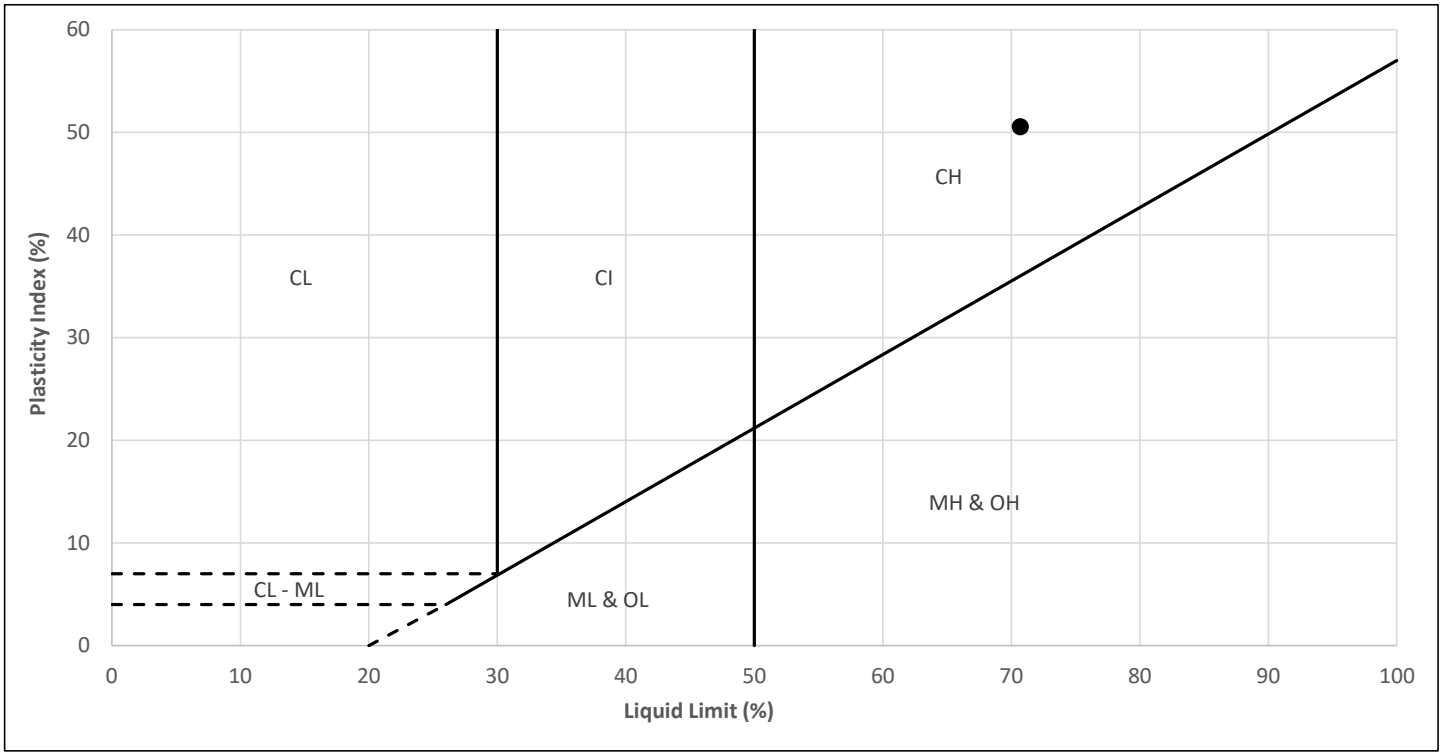
Project:	Snake Lake Reservoir Expansion	**Sample #:**	454AU4
Project No.:	1560-193-00	**Source:**	22BH454
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 454AU4	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	70.7
Plastic Limit (PL)	20.1
Plasticity Index (PI)	50.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

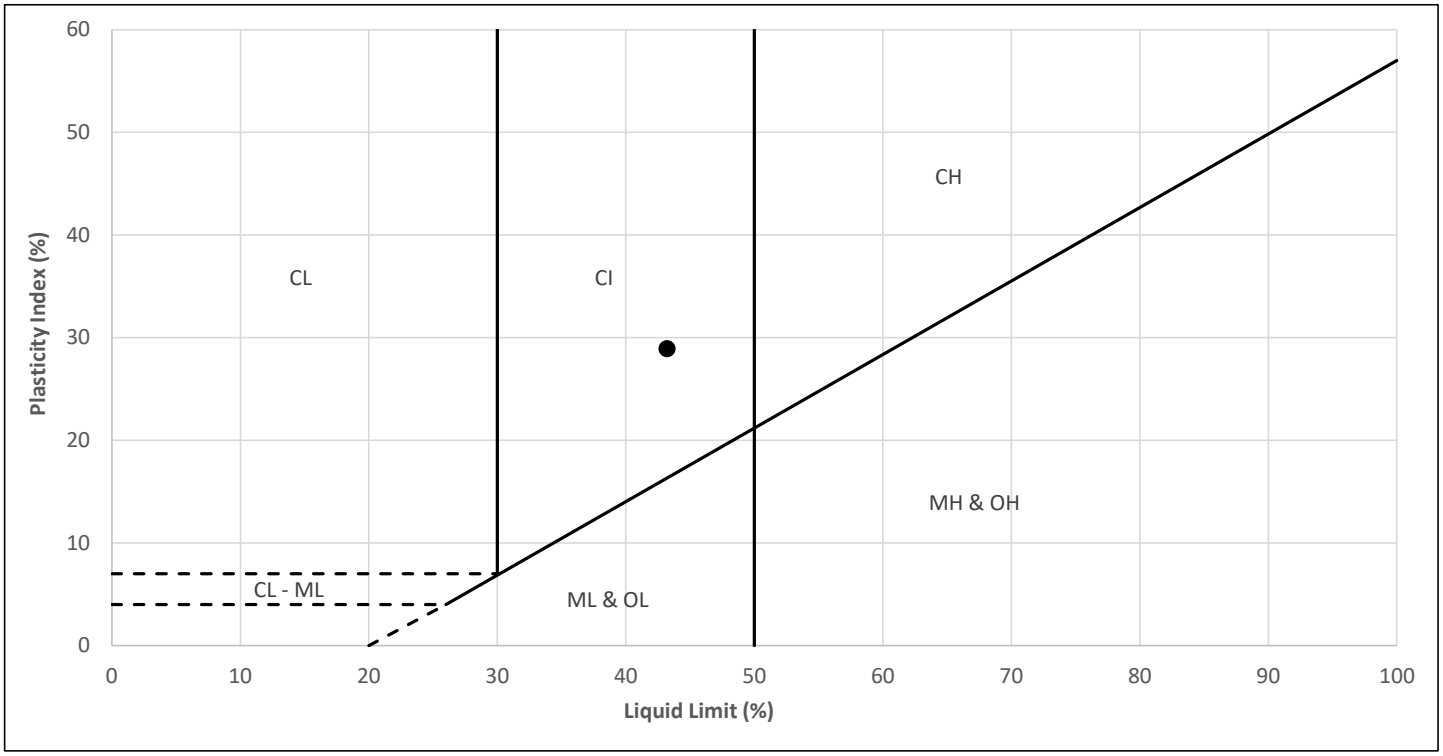
Project:	Snake Lake Reservoir Expansion	**Sample #:**	456AU2
Project No.:	1560-193-00	**Source:**	22BH456
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 456AU2	**Test Date:**	15-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	43.2
Plastic Limit (PL)	14.3
Plasticity Index (PI)	28.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

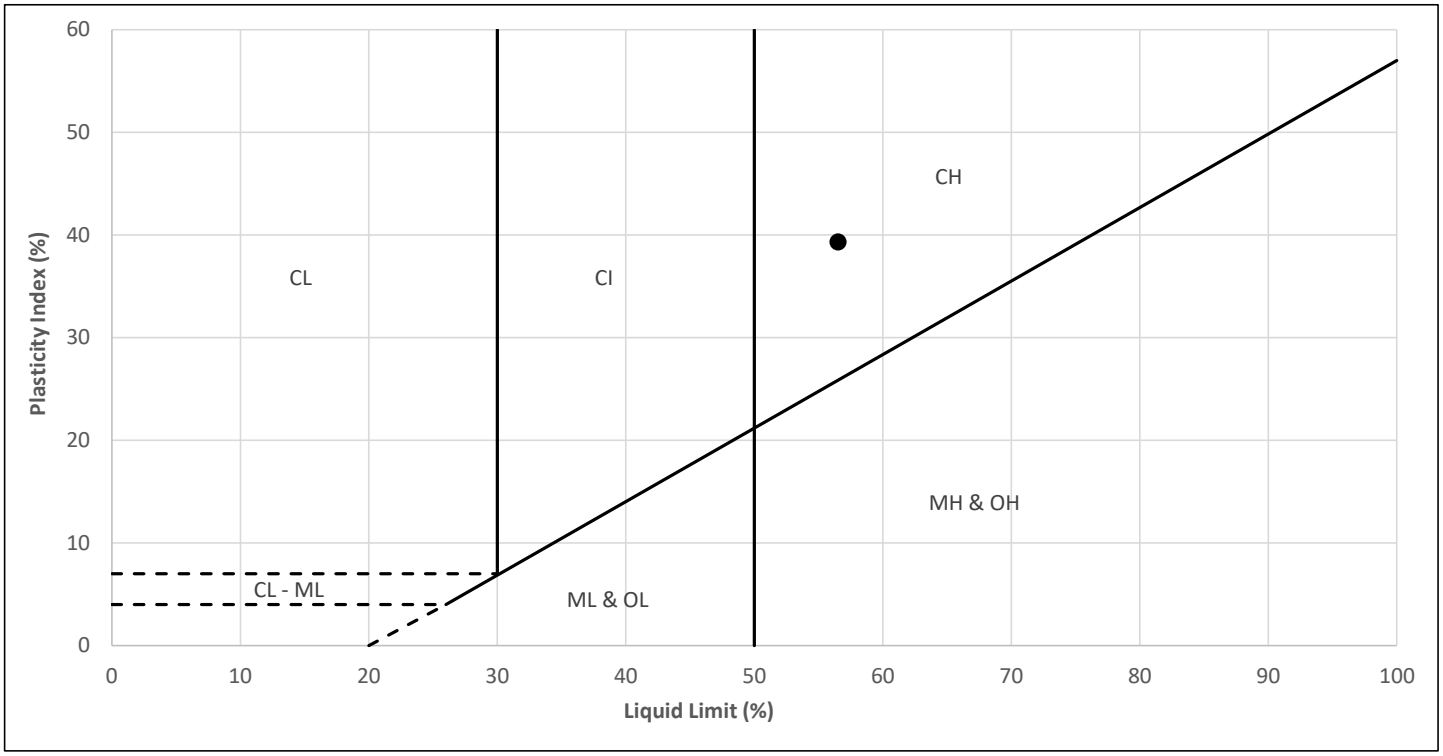
Project:	Snake Lake Reservoir Expansion	**Sample #:**	456AU3
Project No.:	1560-193-00	**Source:**	22BH456
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 456AU3	**Test Date:**	22-Aug-23

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	56.5
Plastic Limit (PL)	17.2
Plasticity Index (PI)	39.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

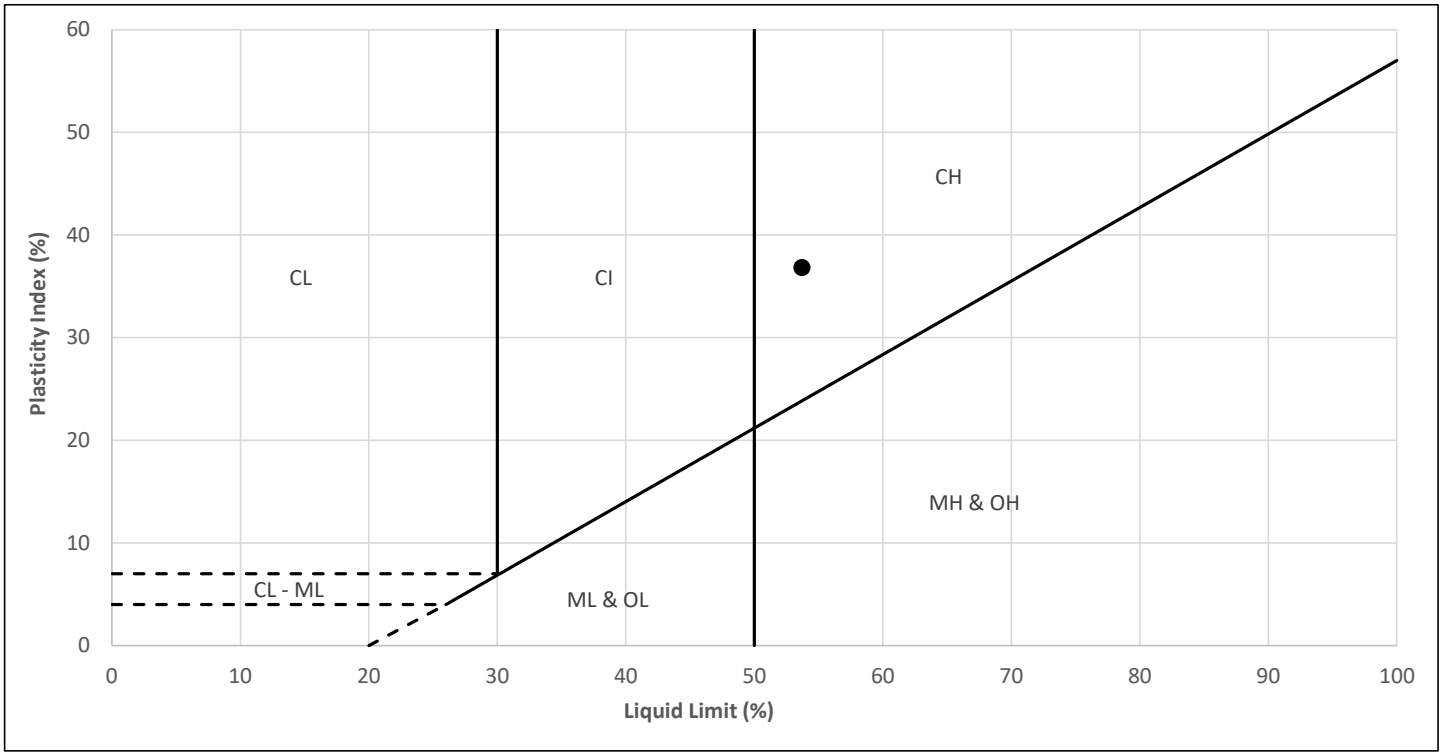
Project:	Snake Lake Reservoir Expansion	**Sample #:**	456AU5
Project No.:	1560-193-00	**Source:**	22BH456
Owner:	EID	**Sample Depth:**	3.70m
File No.:	AL - 456AU5	**Test Date:**	15-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.7
Plastic Limit (PL)	16.9
Plasticity Index (PI)	36.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

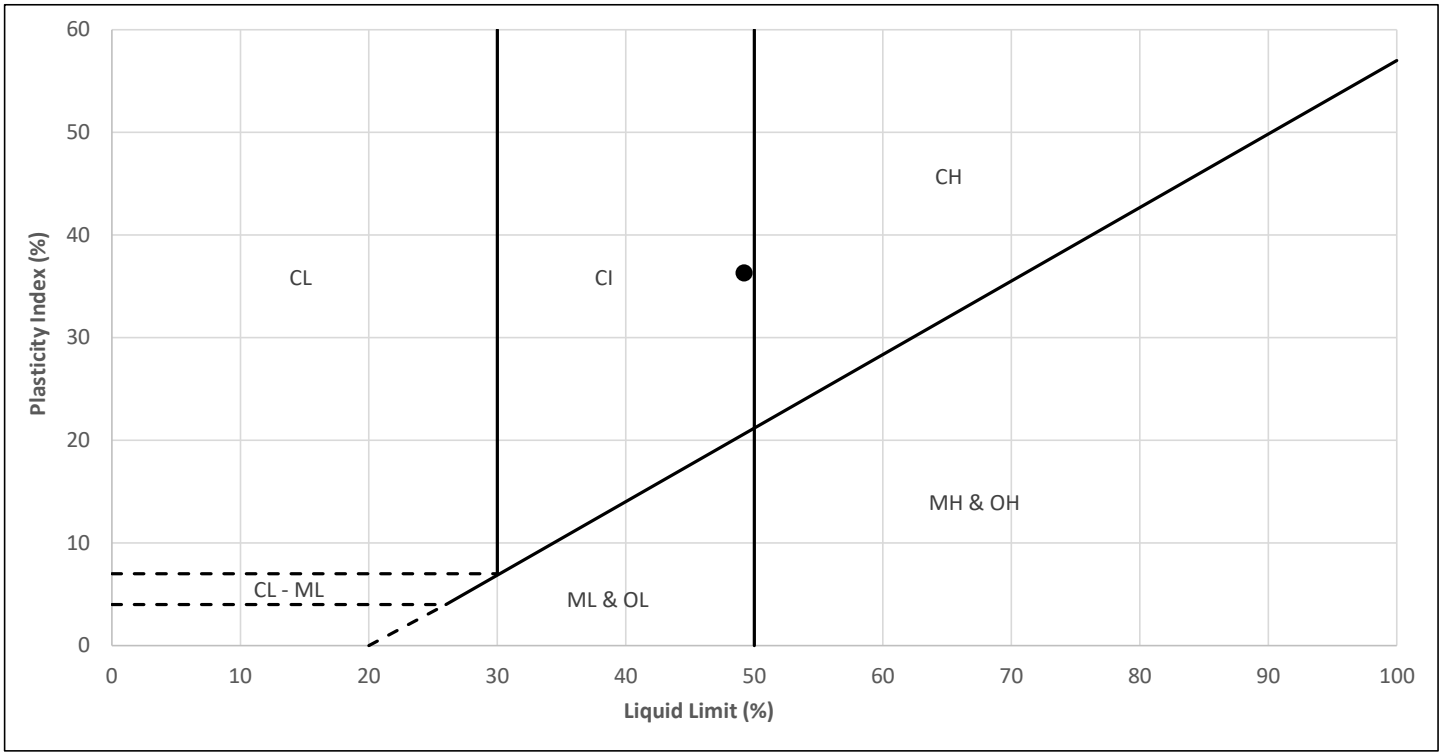
Project:	Snake Lake Reservoir Expansion	**Sample #:**	457AU1
Project No.:	1560-193-00	**Source:**	22BH457
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 457AU1	**Test Date:**	15-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.2
Plastic Limit (PL)	12.9
Plasticity Index (PI)	36.3

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

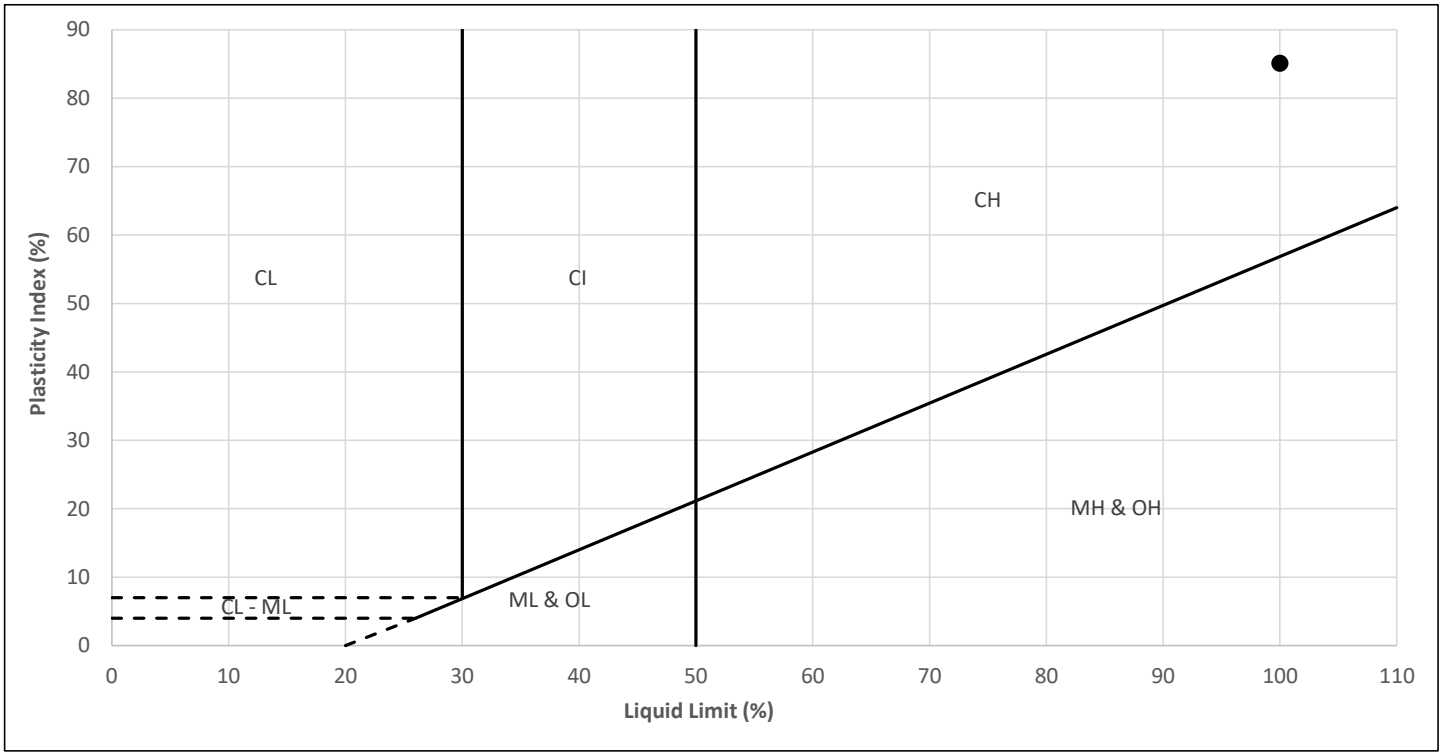
Project:	Snake Lake Reservoir Expansion	**Sample #:**	457AU3
Project No.:	1560-193-00	**Source:**	22BH457
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 457AU3	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	100.0
Plastic Limit (PL)	14.9
Plasticity Index (PI)	85.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

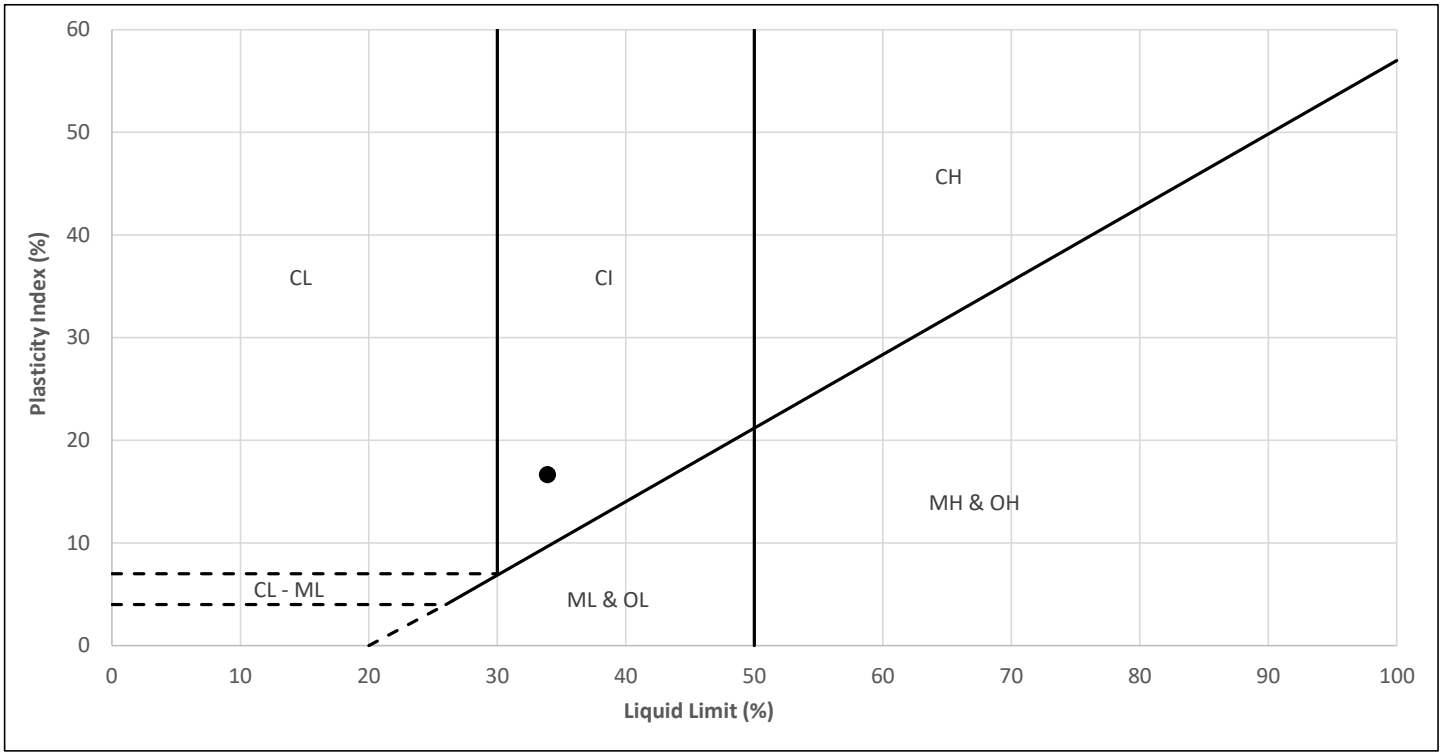
Project:	Snake Lake Reservoir Expansion	**Sample #:**	458AU2
Project No.:	1560-193-00	**Source:**	22BH458
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 458AU2	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	33.9
Plastic Limit (PL)	17.2
Plasticity Index (PI)	16.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

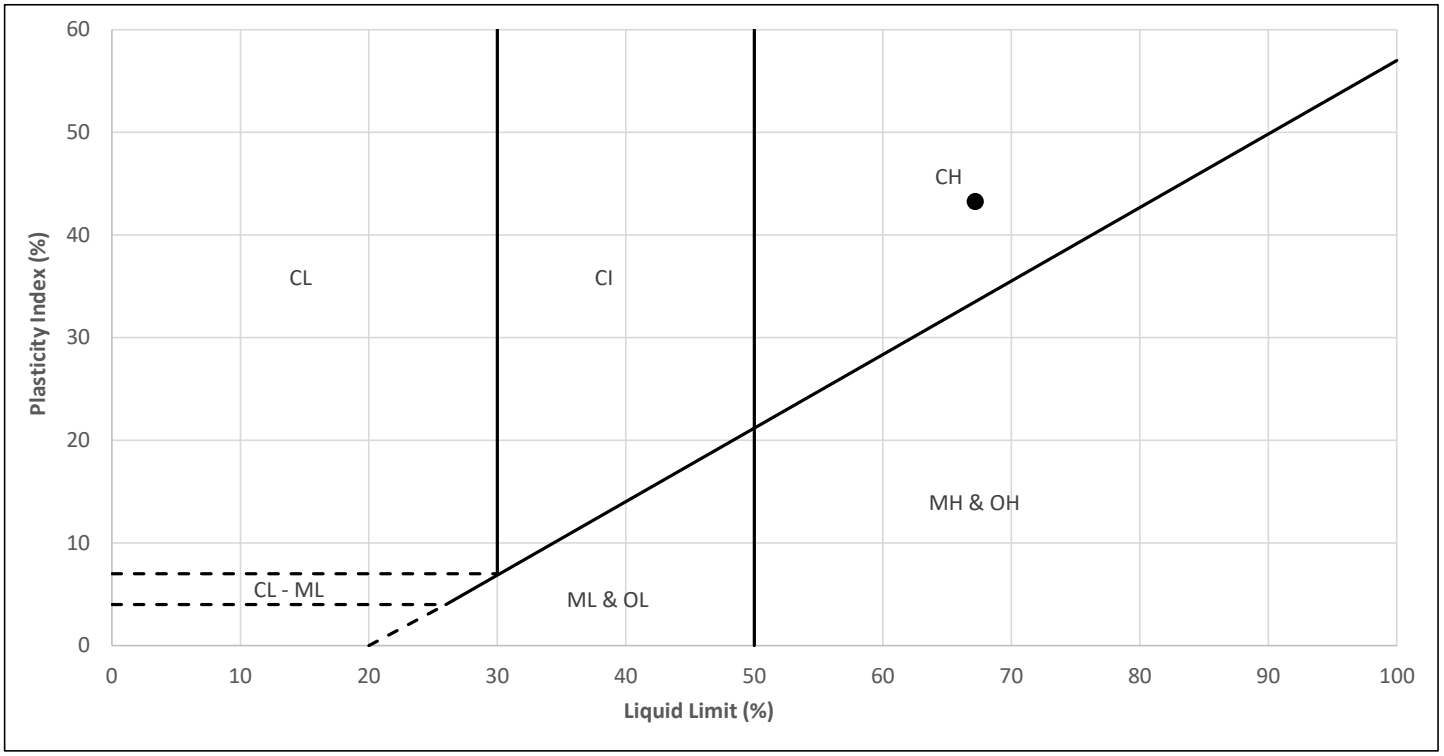
Project:	Snake Lake Reservoir Expansion	**Sample #:**	458AU5
Project No.:	1560-193-00	**Source:**	22BH458
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 458AU5	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	67.2
Plastic Limit (PL)	23.9
Plasticity Index (PI)	43.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

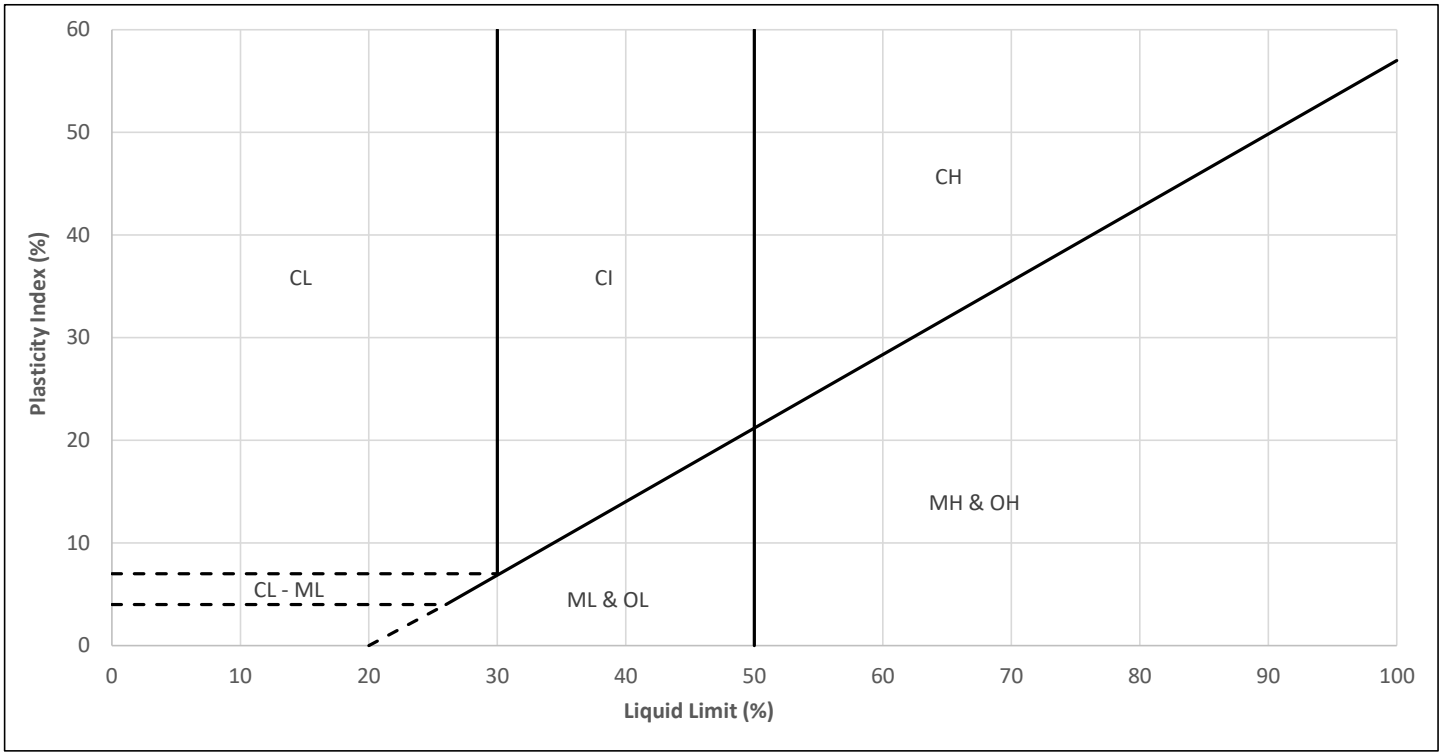
Project:	Snake Lake Reservoir Expansion	**Sample #:**	458AU7
Project No.:	1560-193-00	**Source:**	22BH458
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 458AU7	**Test Date:**	24-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	190.2
Plastic Limit (PL)	20.0
Plasticity Index (PI)	170.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

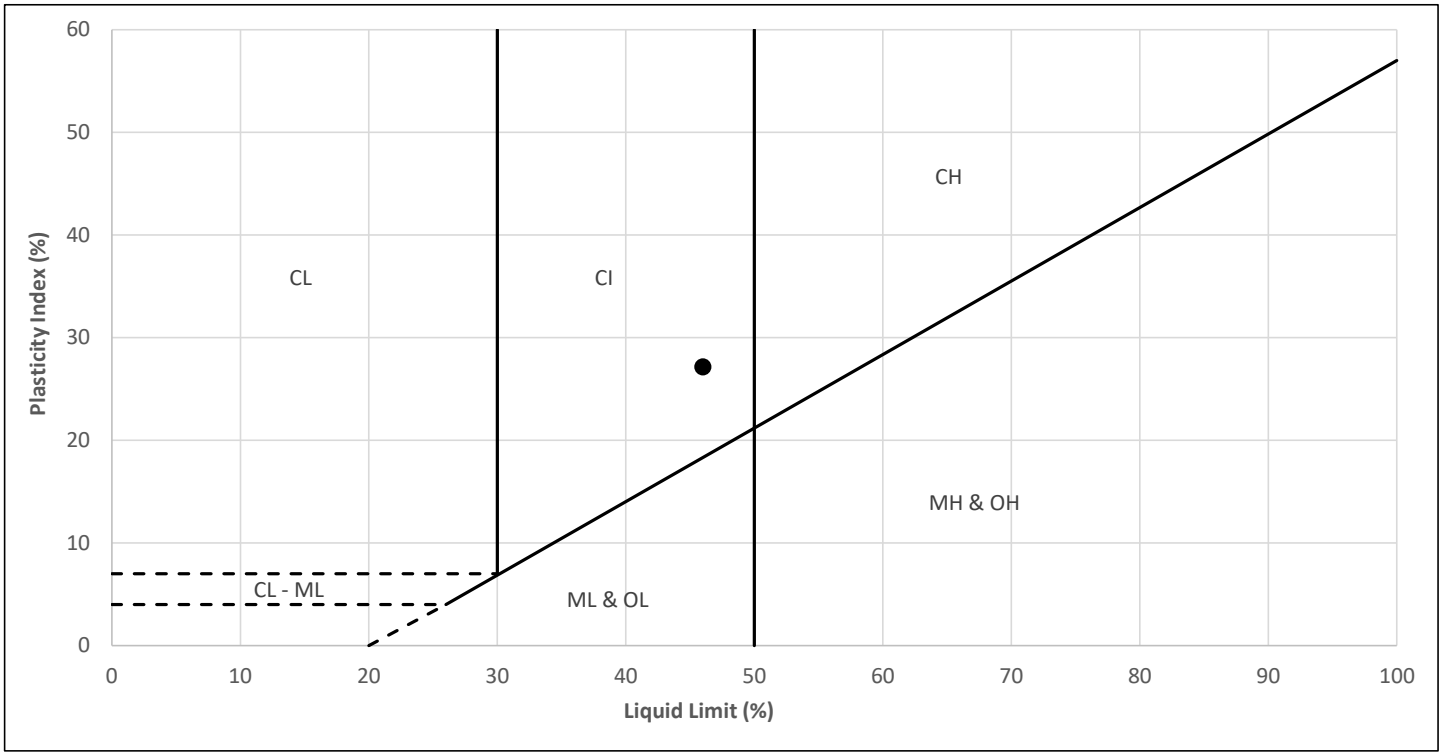
Project:	Snake Lake Reservoir Expansion	**Sample #:**	459AU1
Project No.:	1560-193-00	**Source:**	22BH459
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 459AU1	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	46.0
Plastic Limit (PL)	18.8
Plasticity Index (PI)	27.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

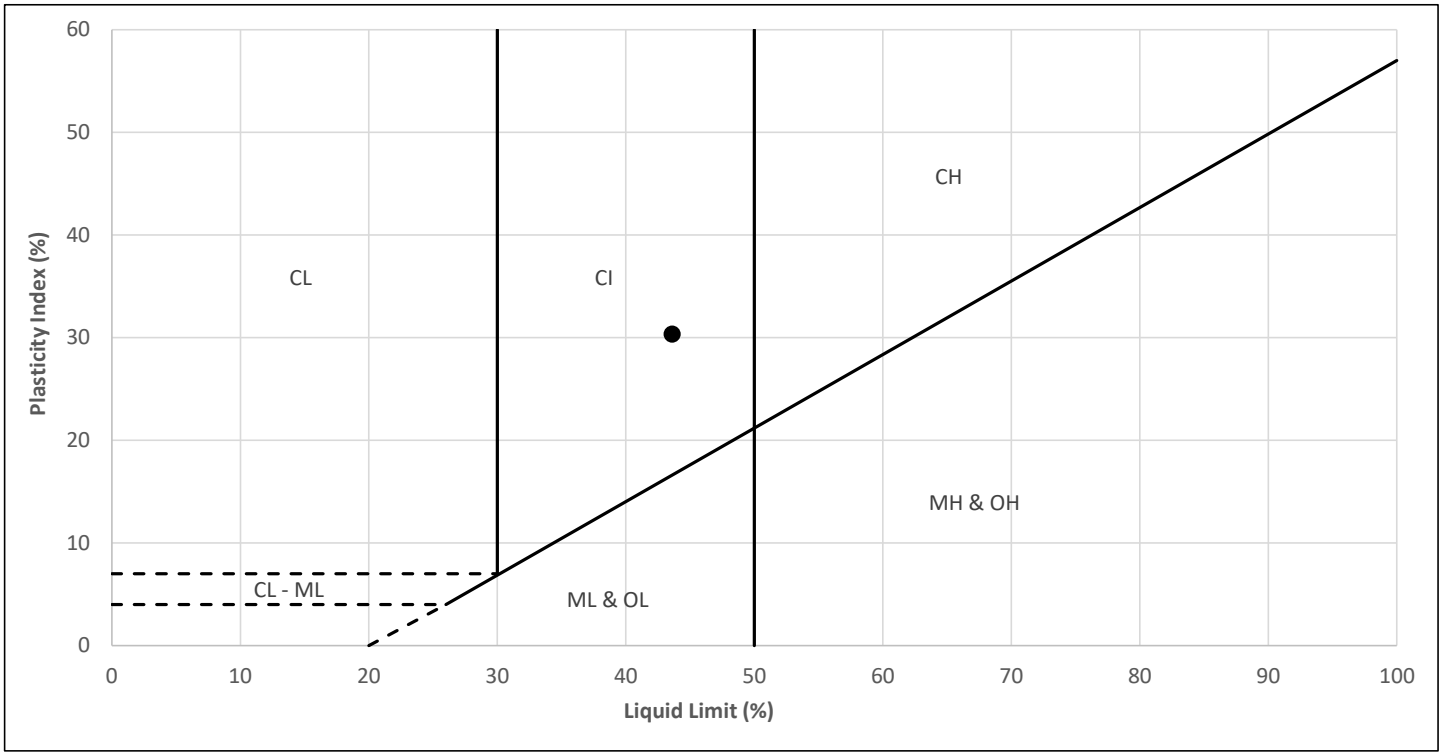
Project:	Snake Lake Reservoir Expansion	**Sample #:**	459AU3
Project No.:	1560-193-00	**Source:**	22BH459
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 459AU3	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	43.6
Plastic Limit (PL)	13.2
Plasticity Index (PI)	30.4

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

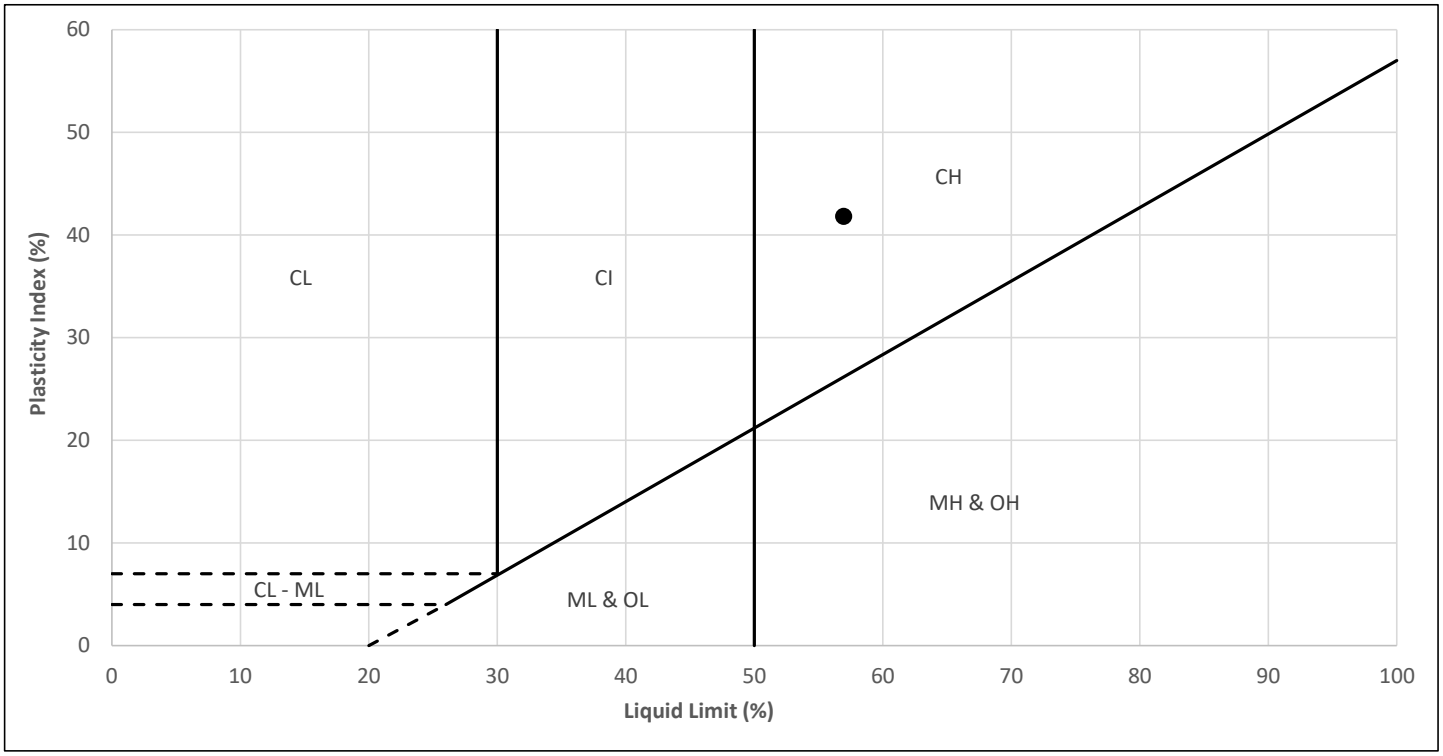
Project:	Snake Lake Reservoir Expansion	**Sample #:**	459AU5
Project No.:	1560-193-00	**Source:**	22BH459
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 459AU5	**Test Date:**	24-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	57.0
Plastic Limit (PL)	15.1
Plasticity Index (PI)	41.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

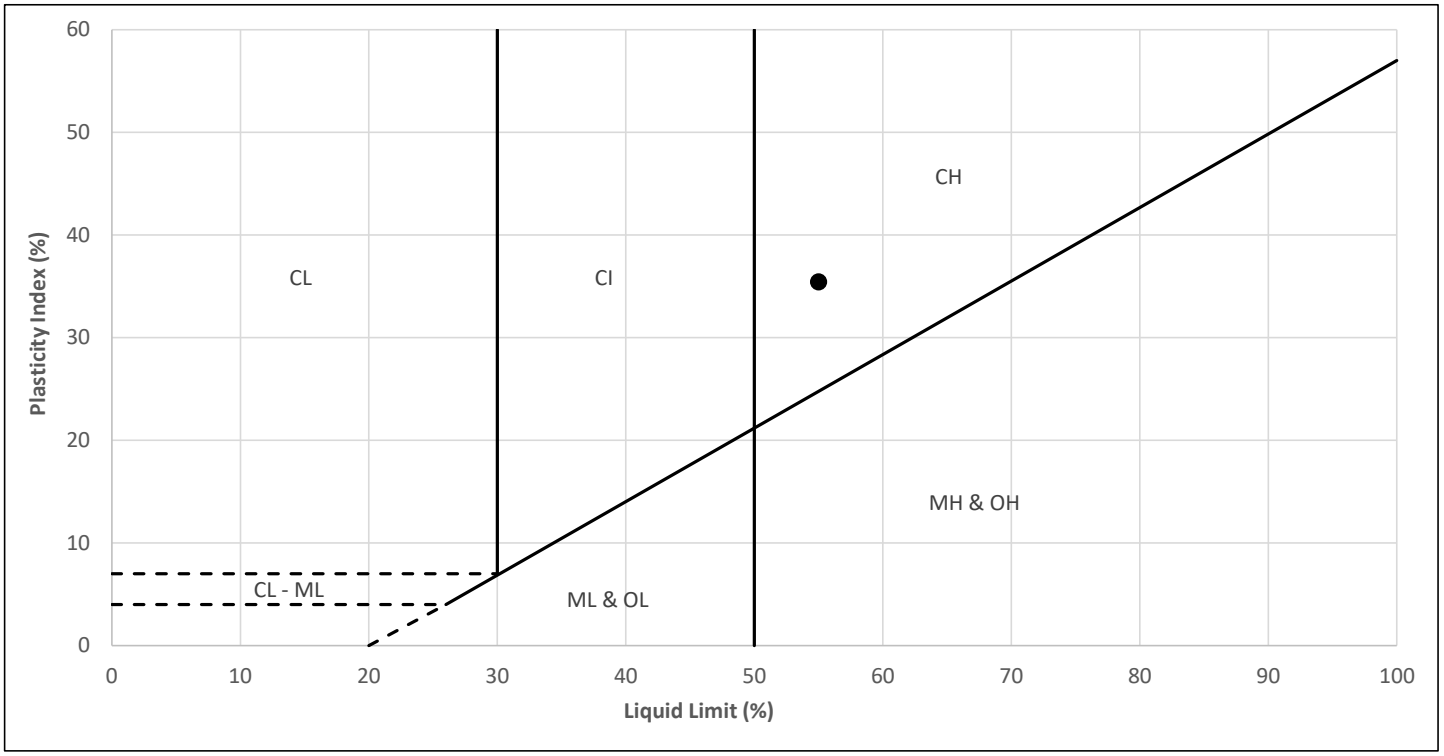
Project:	Snake Lake Reservoir Expansion	**Sample #:**	460AU2
Project No.:	1560-193-00	**Source:**	22BH460
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 460AU2	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.0
Plastic Limit (PL)	19.6
Plasticity Index (PI)	35.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

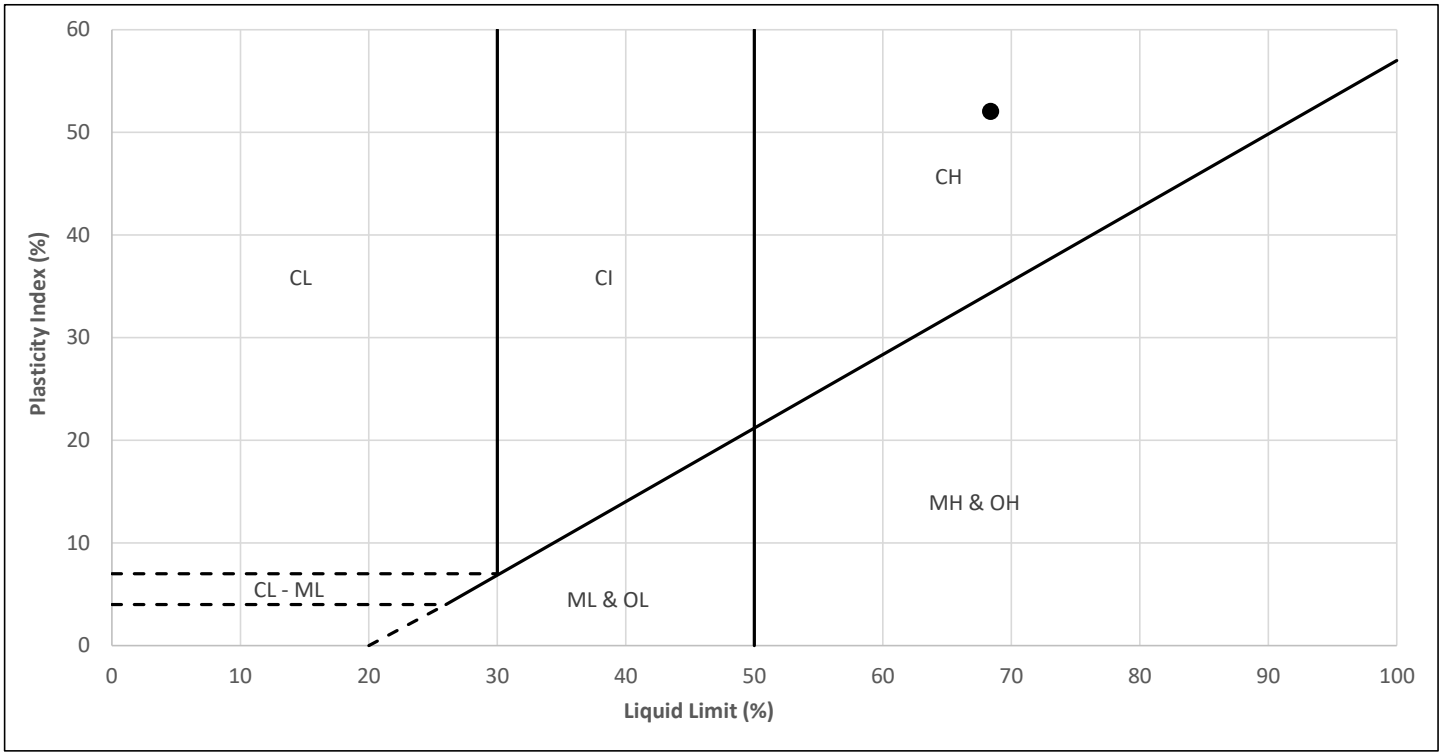
Project:	Snake Lake Reservoir Expansion	**Sample #:**	460AU3
Project No.:	1560-193-00	**Source:**	22BH460
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 460AU3	**Test Date:**	22-Aug-23

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	68.4
Plastic Limit (PL)	16.3
Plasticity Index (PI)	52.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

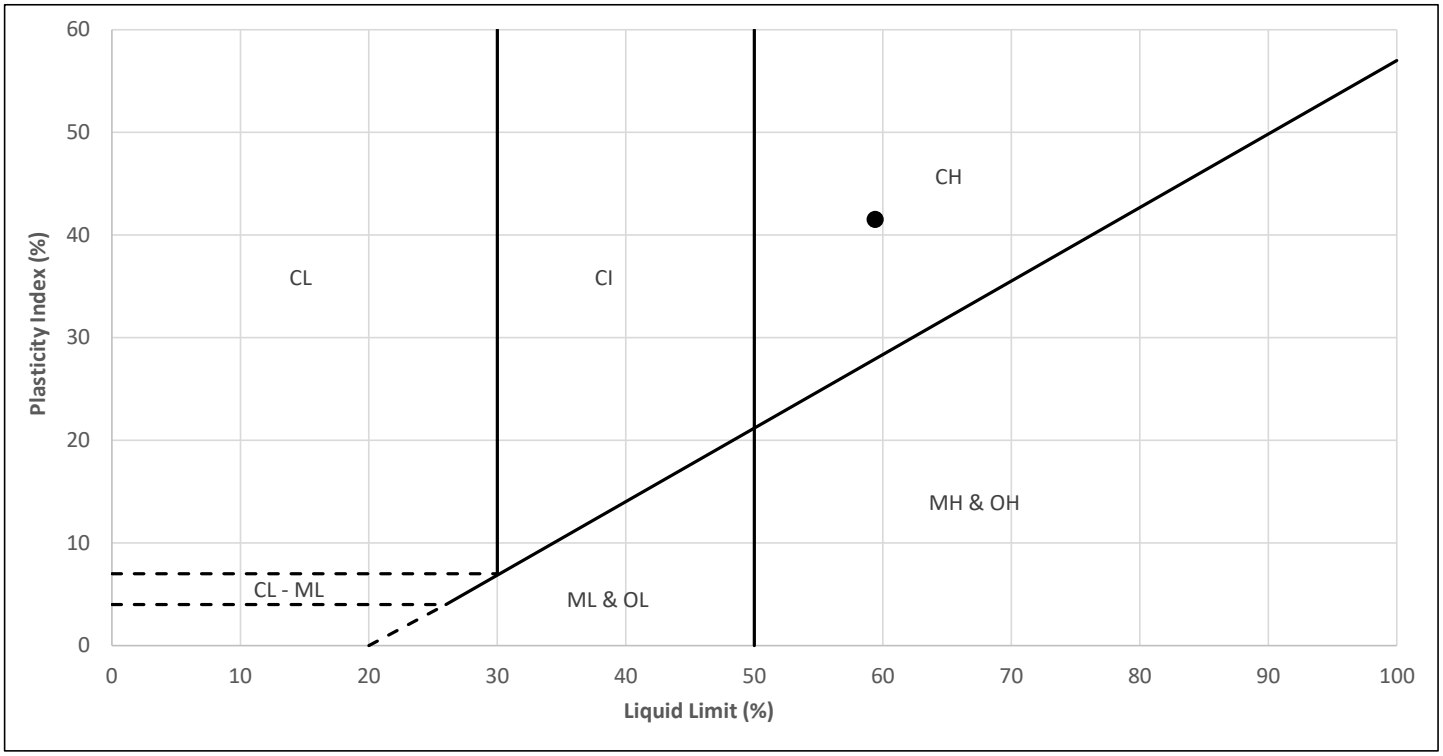
Project:	Snake Lake Reservoir Expansion	**Sample #:**	460AU5
Project No.:	1560-193-00	**Source:**	22BH460
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 460AU5	**Test Date:**	21-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	59.4
Plastic Limit (PL)	17.9
Plasticity Index (PI)	41.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

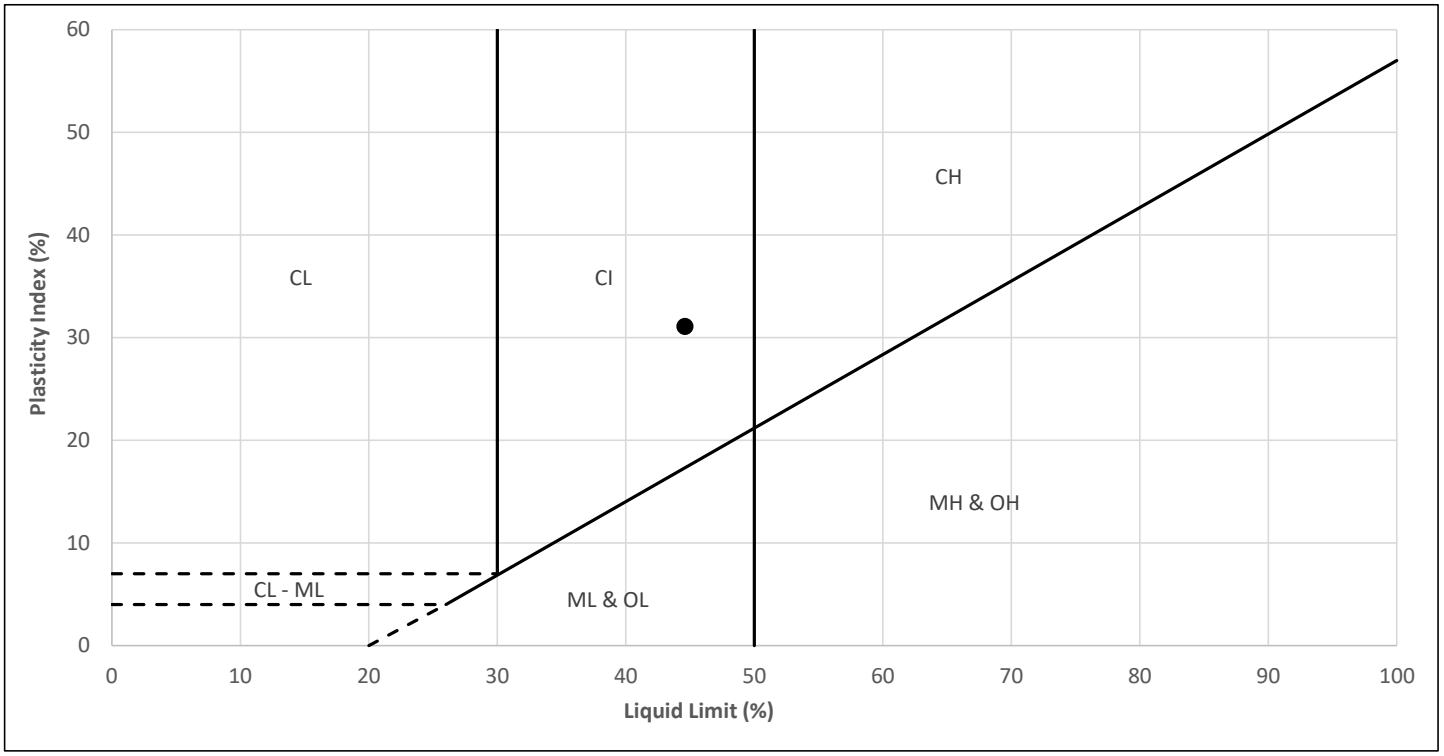
Project:	Snake Lake Reservoir Expansion	**Sample #:**	461AU1
Project No.:	1560-193-00	**Source:**	22BH461
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 461AU1	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.6
Plastic Limit (PL)	13.5
Plasticity Index (PI)	31.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

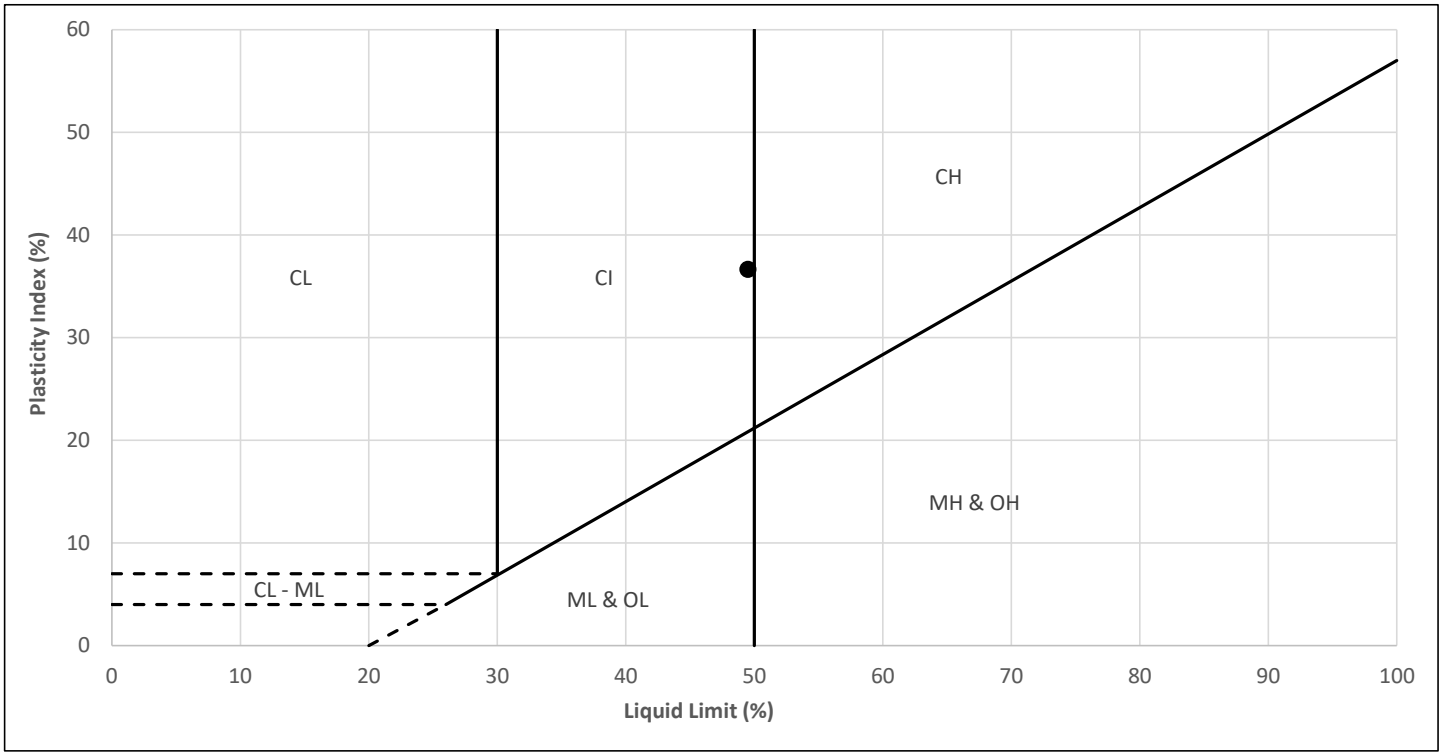
Project:	Snake Lake Reservoir Expansion	**Sample #:**	461AU2
Project No.:	1560-193-00	**Source:**	22BH461
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 461AU2	**Test Date:**	21-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.5
Plastic Limit (PL)	12.8
Plasticity Index (PI)	36.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

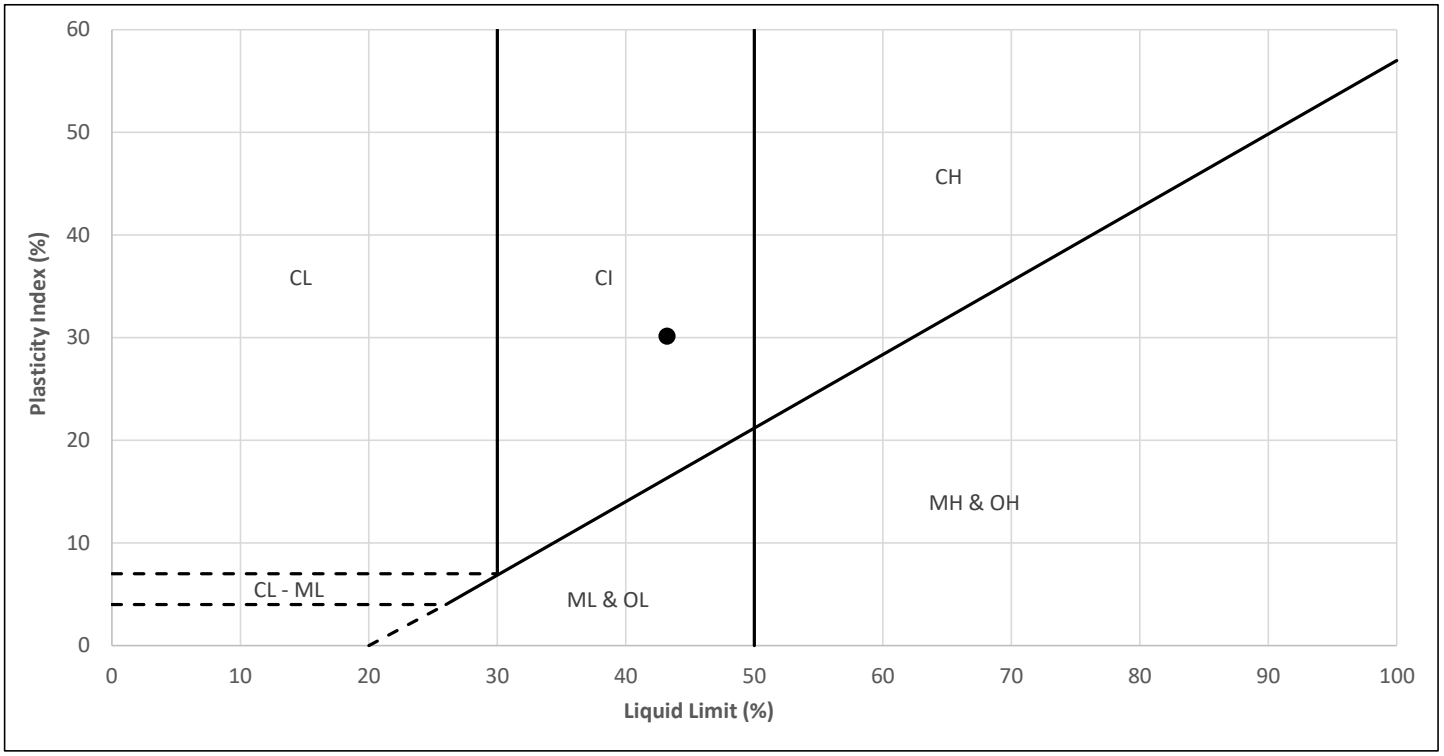
Project:	Snake Lake Reservoir Expansion	**Sample #:**	462AU2
Project No.:	1560-193-00	**Source:**	22BH462
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 462AU2	**Test Date:**	21-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	43.2
Plastic Limit (PL)	13.1
Plasticity Index (PI)	30.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

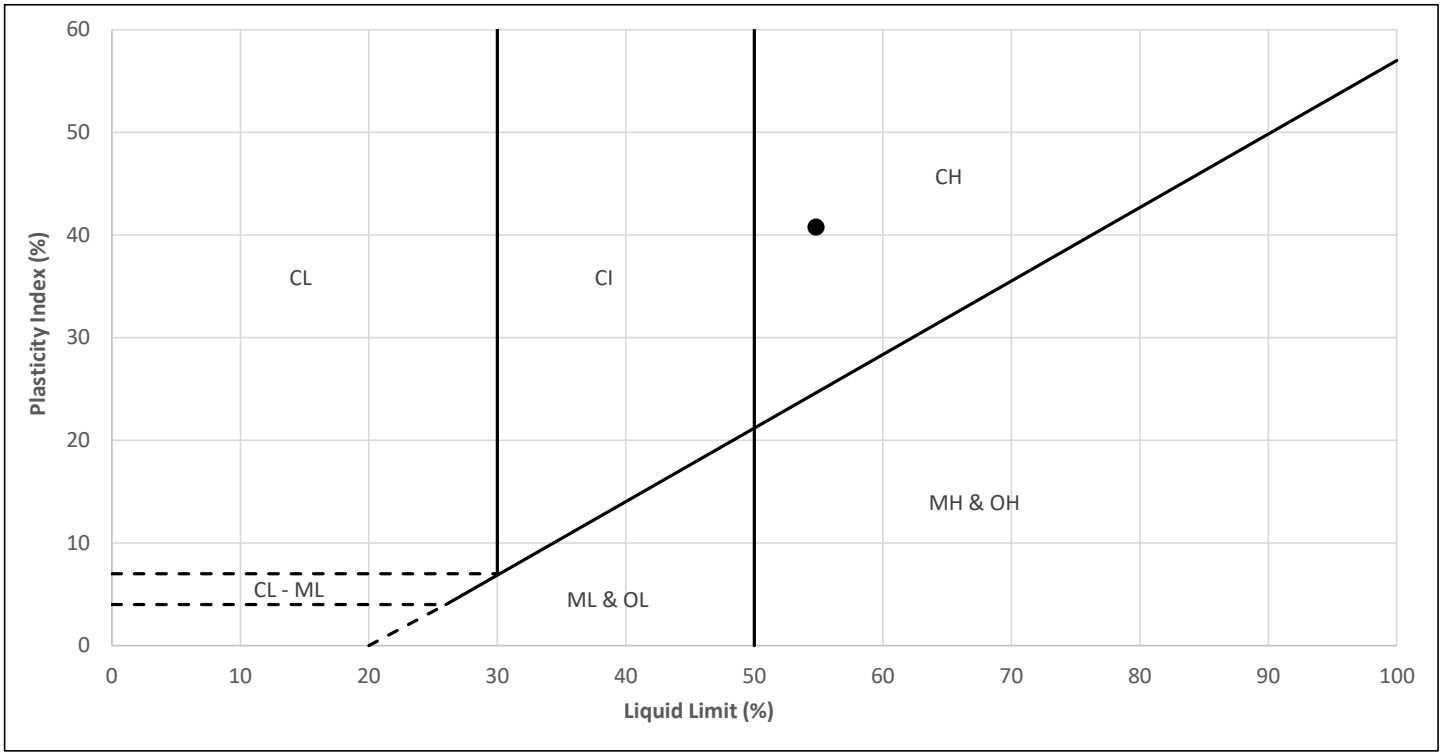
Project:	Snake Lake Reservoir Expansion	**Sample #:**	464AU1
Project No.:	1560-193-00	**Source:**	22BH464
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 464AU1	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.8
Plastic Limit (PL)	14.0
Plasticity Index (PI)	40.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

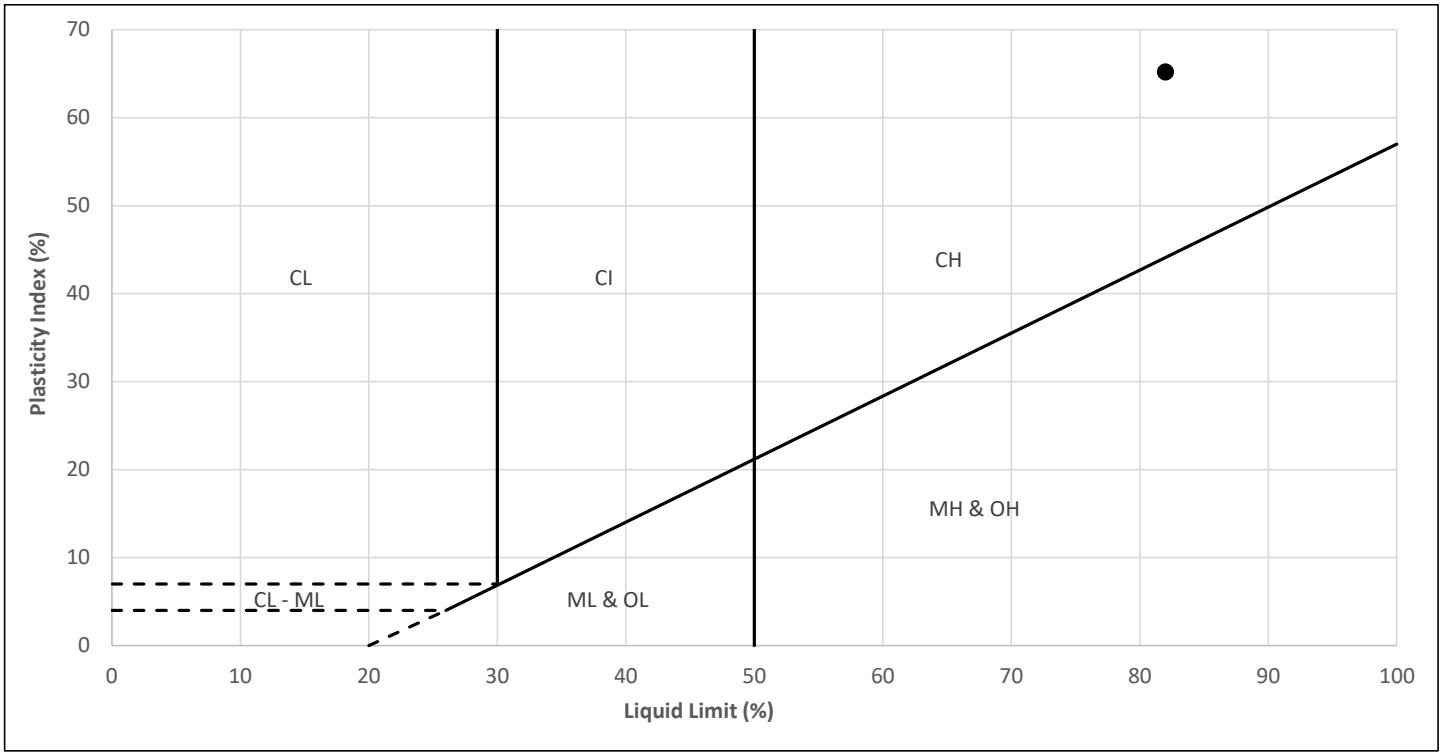
Project:	Snake Lake Reservoir Expansion	**Sample #:**	465AU2
Project No.:	1560-193-00	**Source:**	22BH465
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 465AU2	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	82.0
Plastic Limit (PL)	16.8
Plasticity Index (PI)	65.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

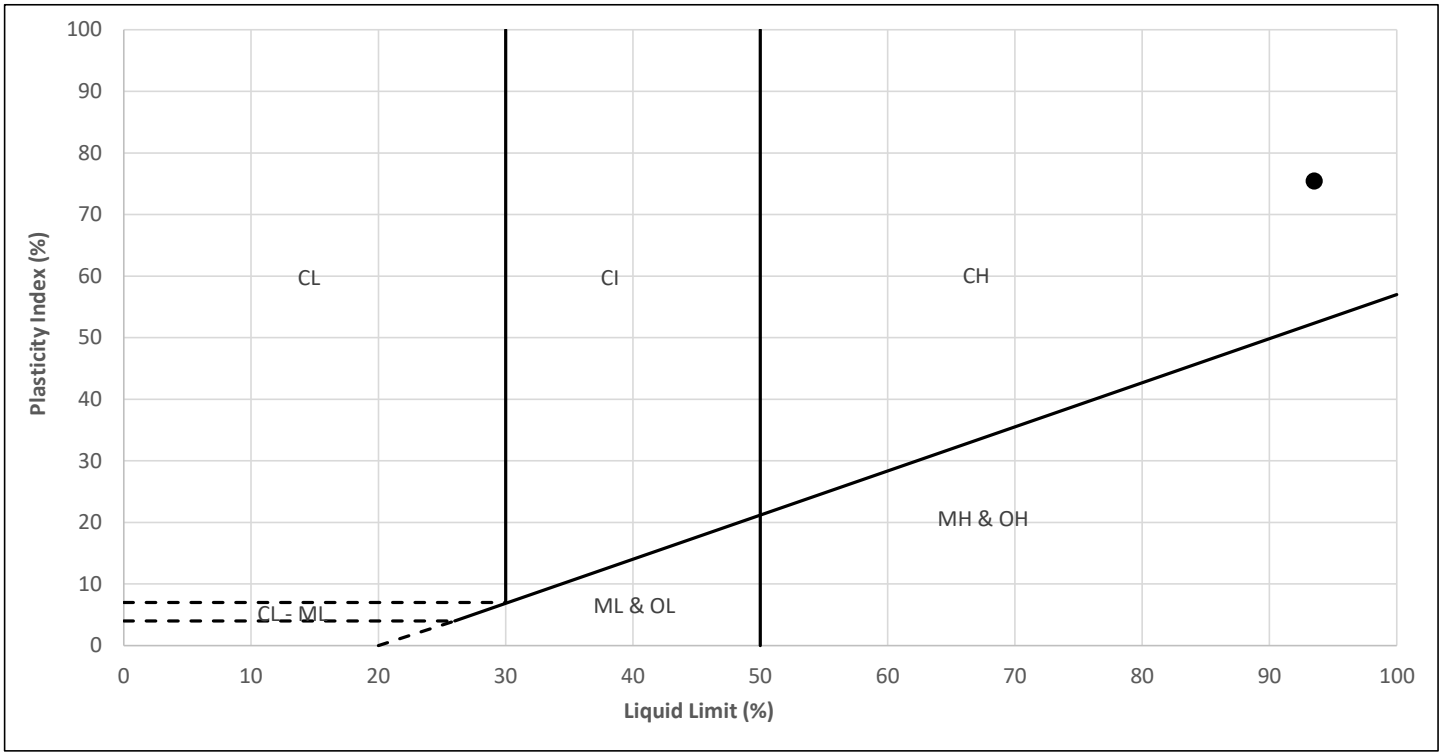
Project:	Snake Lake Reservoir Expansion	**Sample #:**	465AU5
Project No.:	1560-193-00	**Source:**	22BH465
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 465AU5	**Test Date:**	22-Aug-23

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	93.5
Plastic Limit (PL)	18.1
Plasticity Index (PI)	75.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

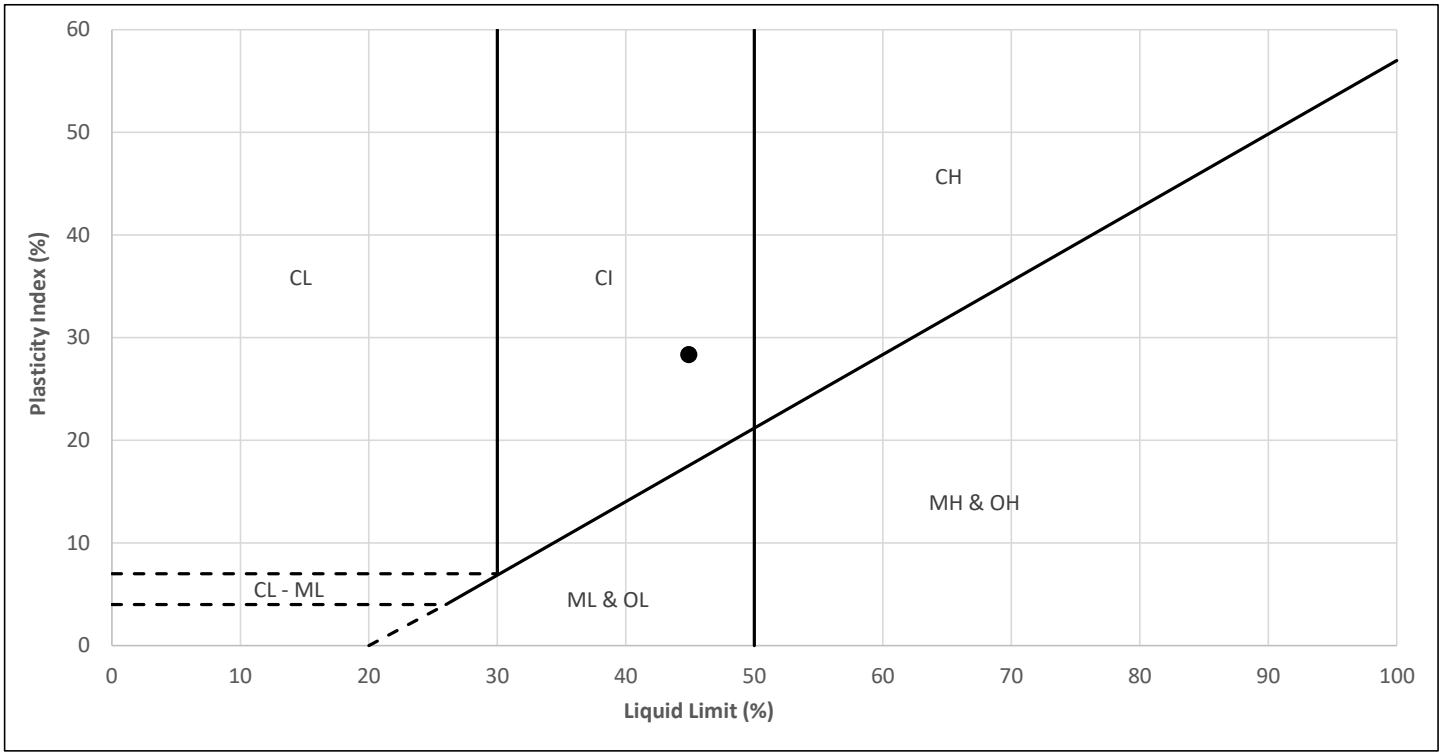
Project:	Snake Lake Reservoir Expansion	**Sample #:**	468AU1
Project No.:	1560-193-00	**Source:**	22BH468
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 468AU1	**Test Date:**	21-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.9
Plastic Limit (PL)	16.5
Plasticity Index (PI)	28.4

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

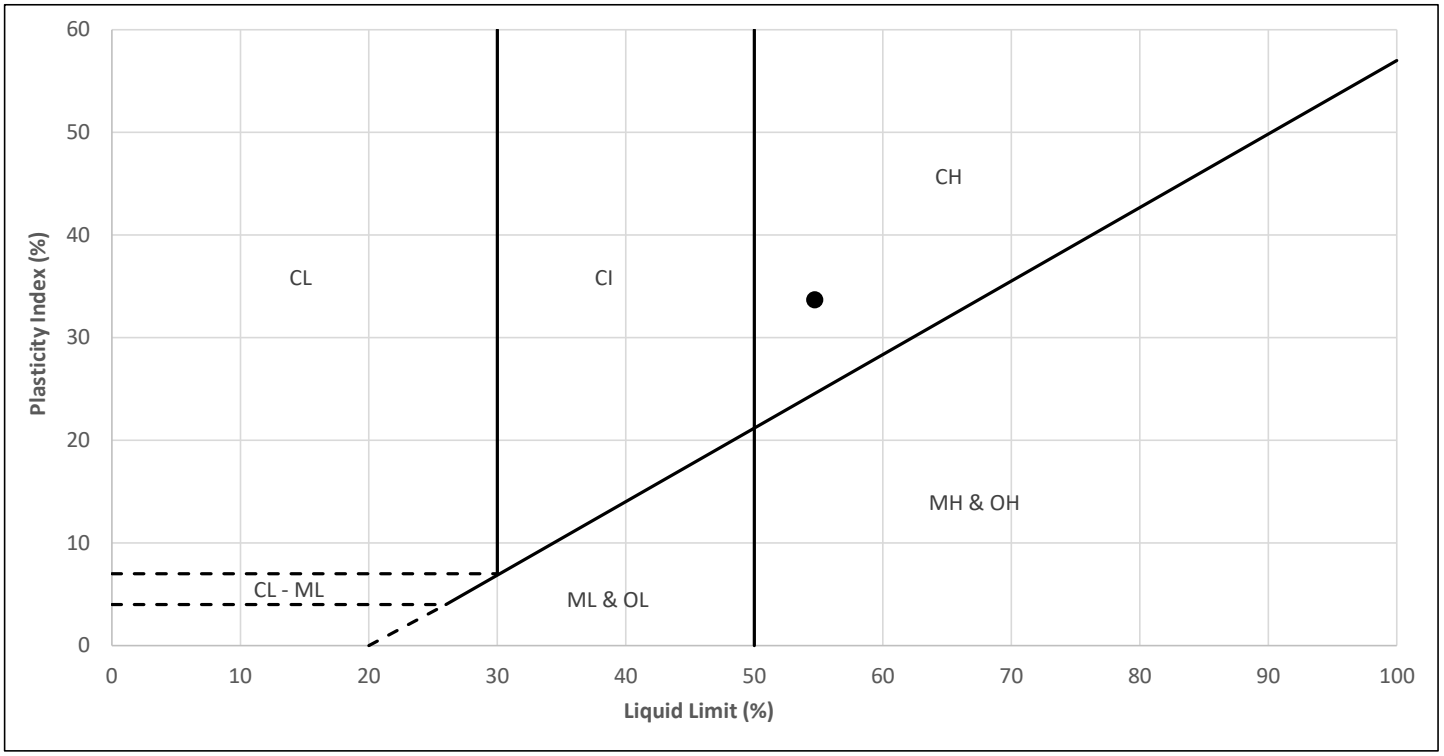
Project:	Snake Lake Reservoir Expansion	**Sample #:**	468AU2
Project No.:	1560-193-00	**Source:**	22BH468
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 468AU2	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.7
Plastic Limit (PL)	21.0
Plasticity Index (PI)	33.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

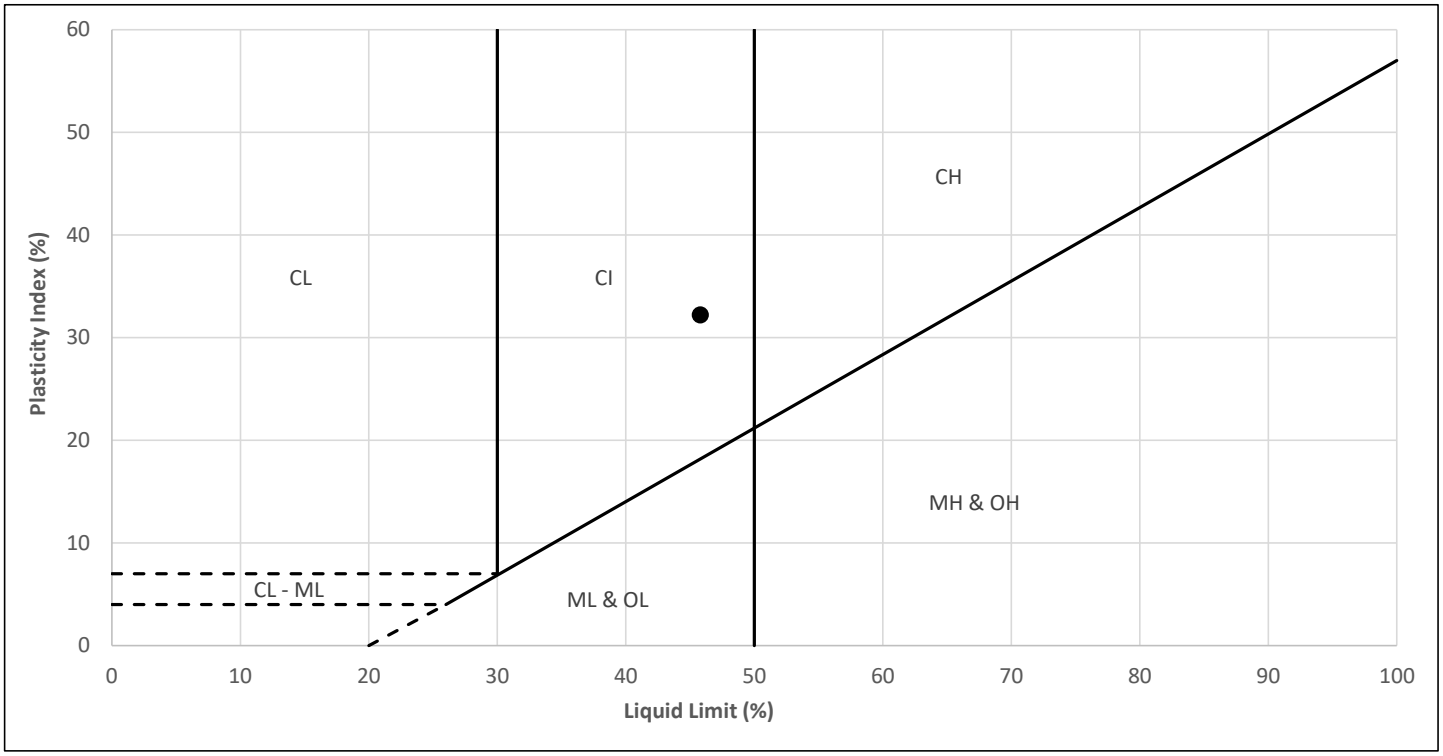
Project:	Snake Lake Reservoir Expansion	**Sample #:**	469AU1
Project No.:	1560-193-00	**Source:**	22BH469
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 469AU1	**Test Date:**	21-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	45.8
Plastic Limit (PL)	13.6
Plasticity Index (PI)	32.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

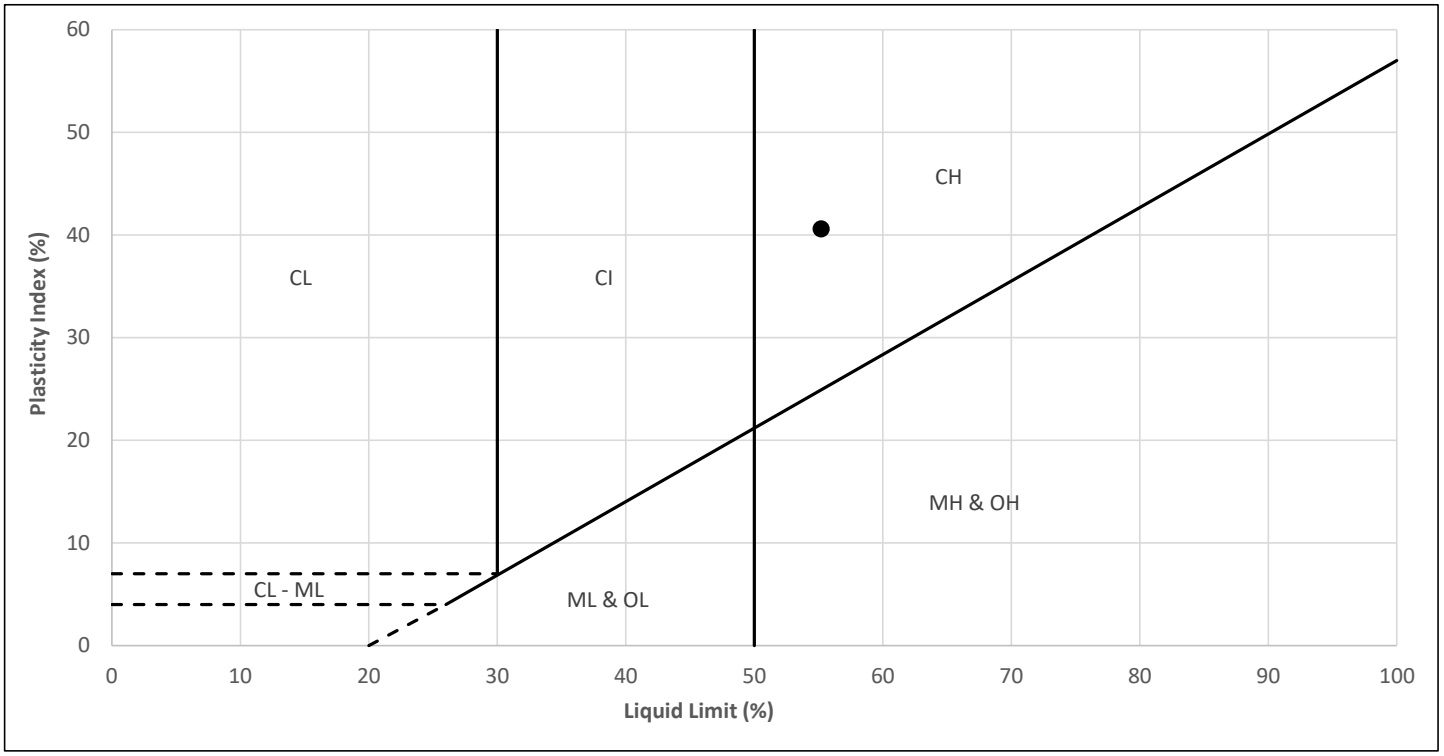
Project:	Snake Lake Reservoir Expansion	**Sample #:**	469AU2
Project No.:	1560-193-00	**Source:**	22BH469
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 469AU2	**Test Date:**	24-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.2
Plastic Limit (PL)	14.6
Plasticity Index (PI)	40.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

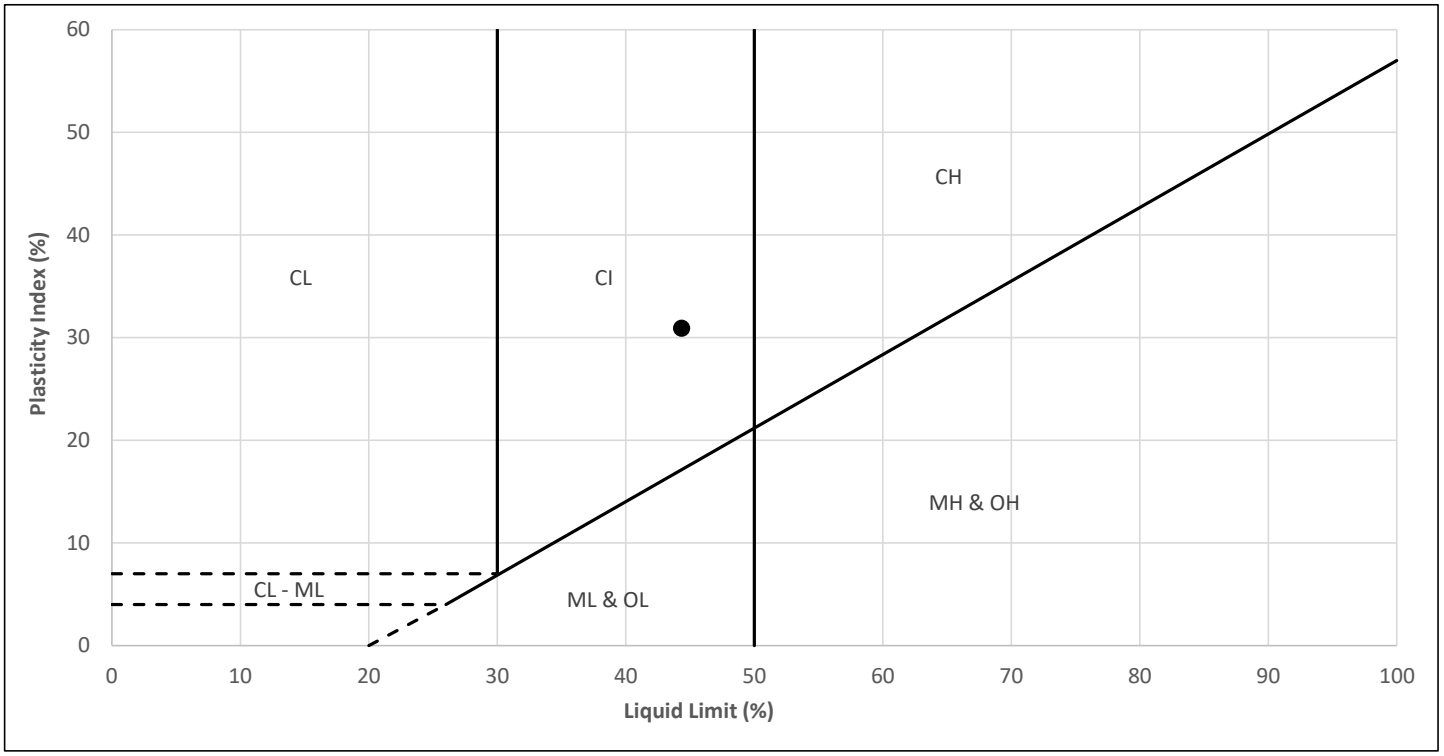
Project:	Snake Lake Reservoir Expansion	**Sample #:**	470AU2
Project No.:	1560-193-00	**Source:**	22BH470
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 470AU2	**Test Date:**	24-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.3
Plastic Limit (PL)	13.4
Plasticity Index (PI)	30.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

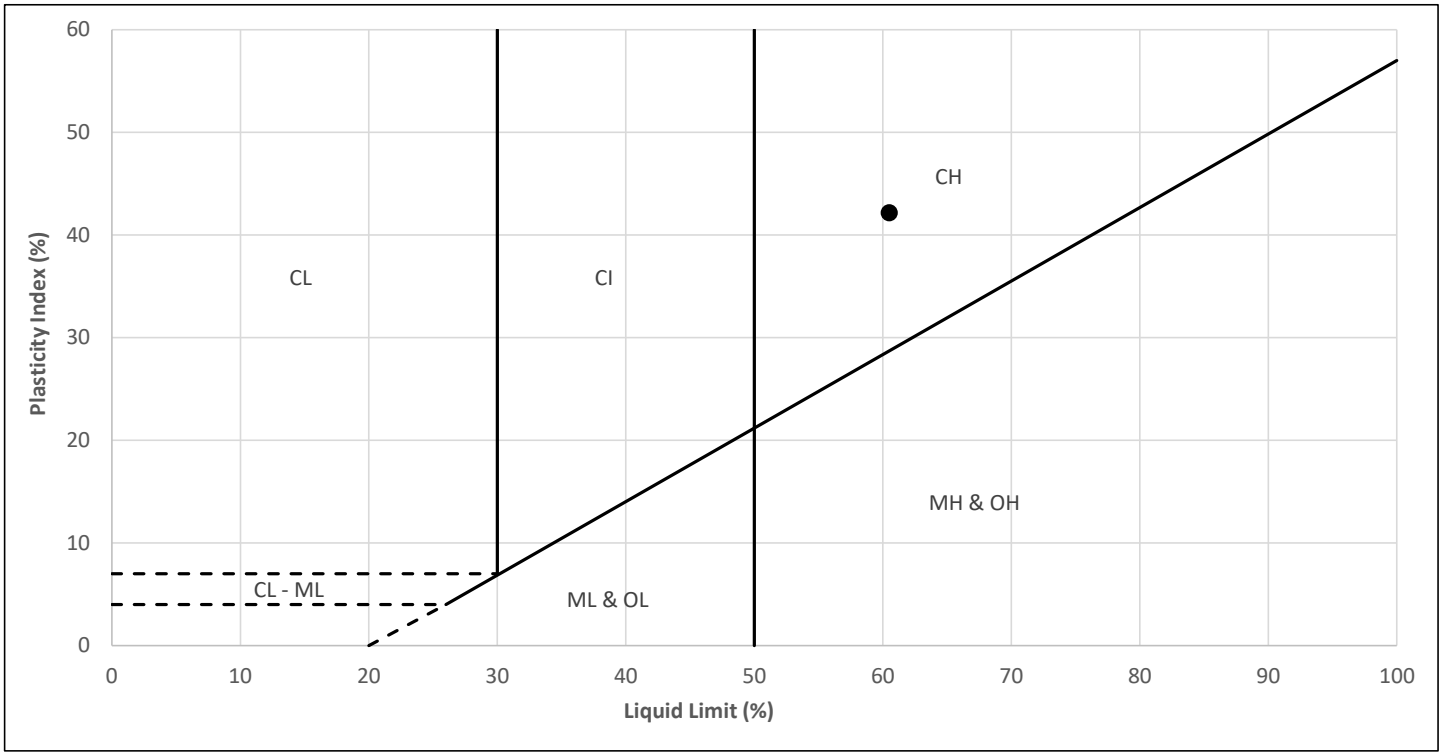
Project:	Snake Lake Reservoir Expansion	**Sample #:**	470AU4
Project No.:	1560-193-00	**Source:**	22BH470
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 470AU4	**Test Date:**	21-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	60.5
Plastic Limit (PL)	18.3
Plasticity Index (PI)	42.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

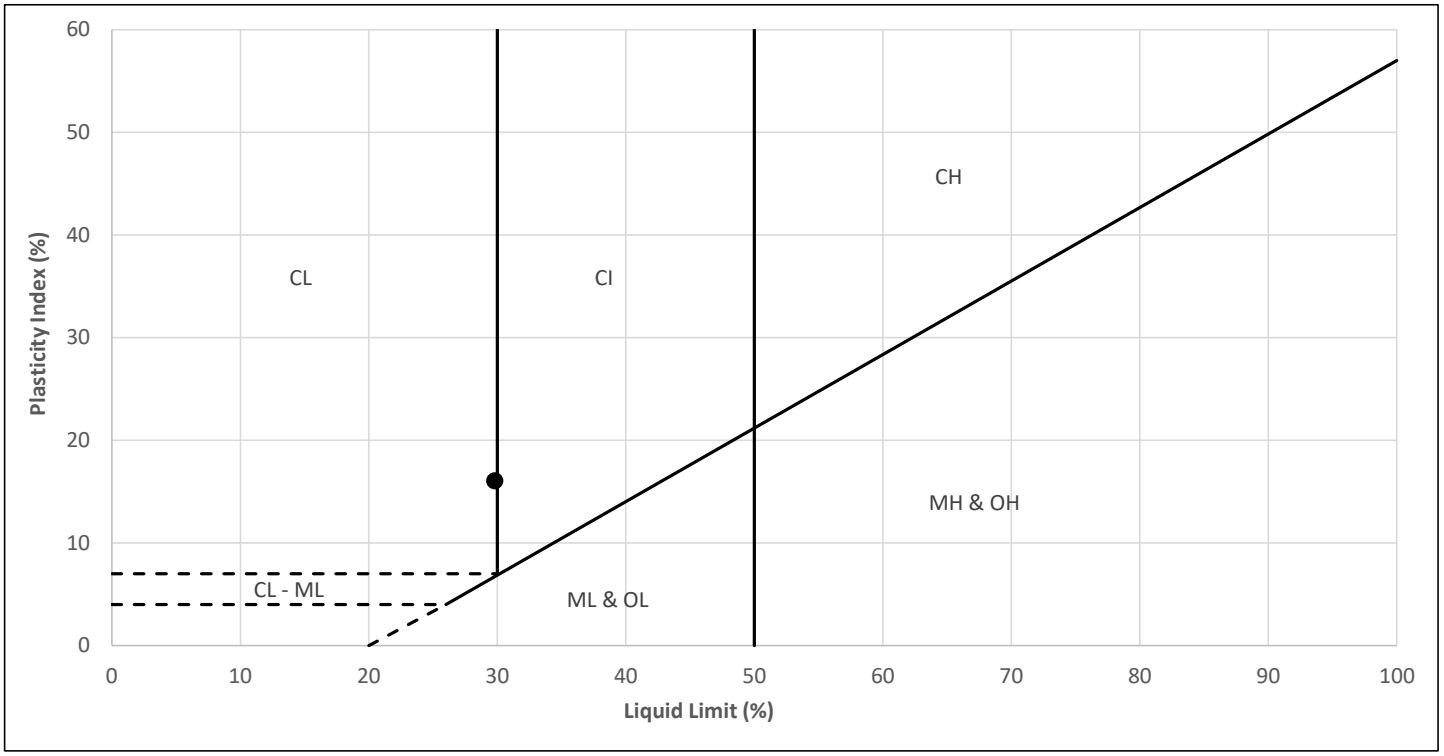
Project:	Snake Lake Reservoir Expansion	**Sample #:**	471AU2
Project No.:	1560-193-00	**Source:**	22BH471
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 471AU2	**Test Date:**	19-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays

Liquid Limit (LL)	29.8
Plastic Limit (PL)	13.7
Plasticity Index (PI)	16.1

Soil Plasticity	Low
Soil Classification	CL



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ATTERBERG LIMITS

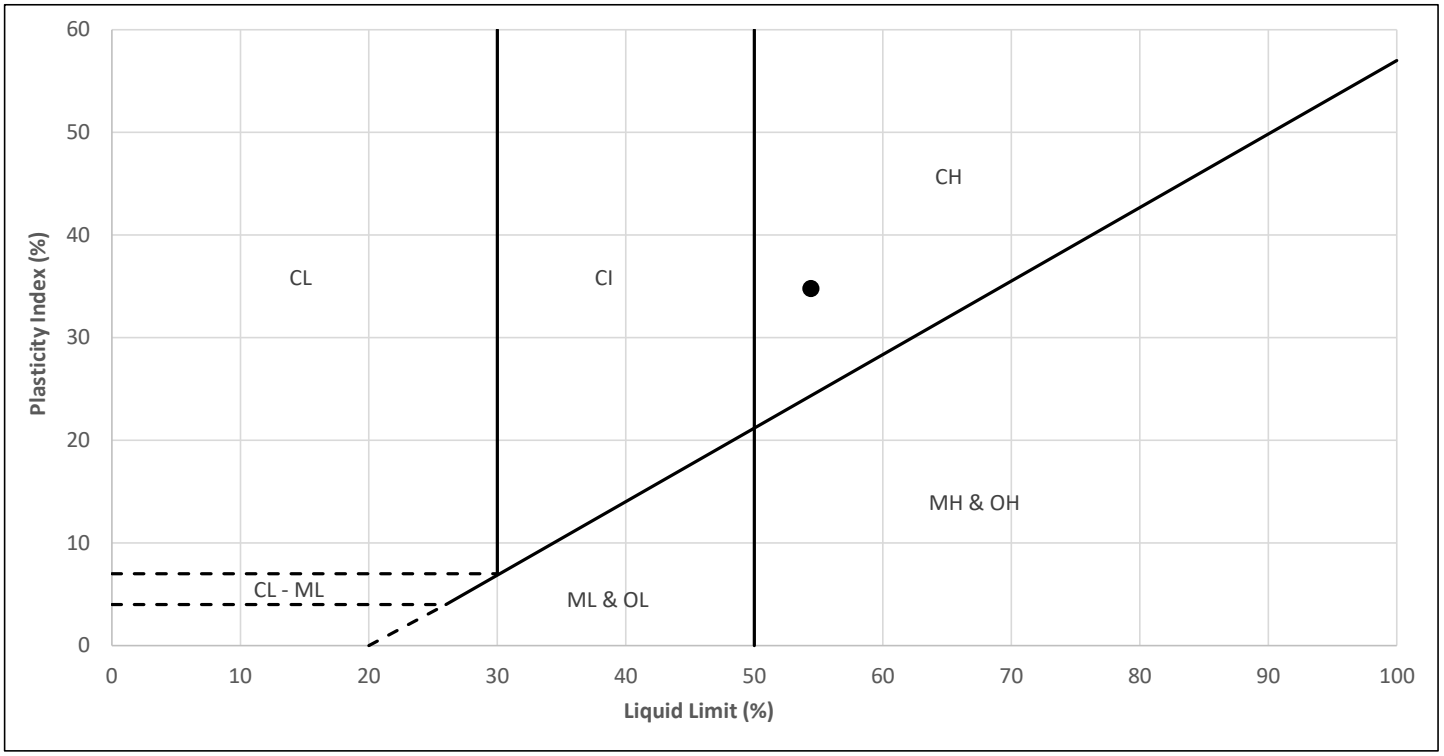
Project:	Snake Lake Reservoir Expansion	**Sample #:**	472AU3
Project No.:	1560-193-00	**Source:**	22BH472
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 472AU3	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.4
Plastic Limit (PL)	19.6
Plasticity Index (PI)	34.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

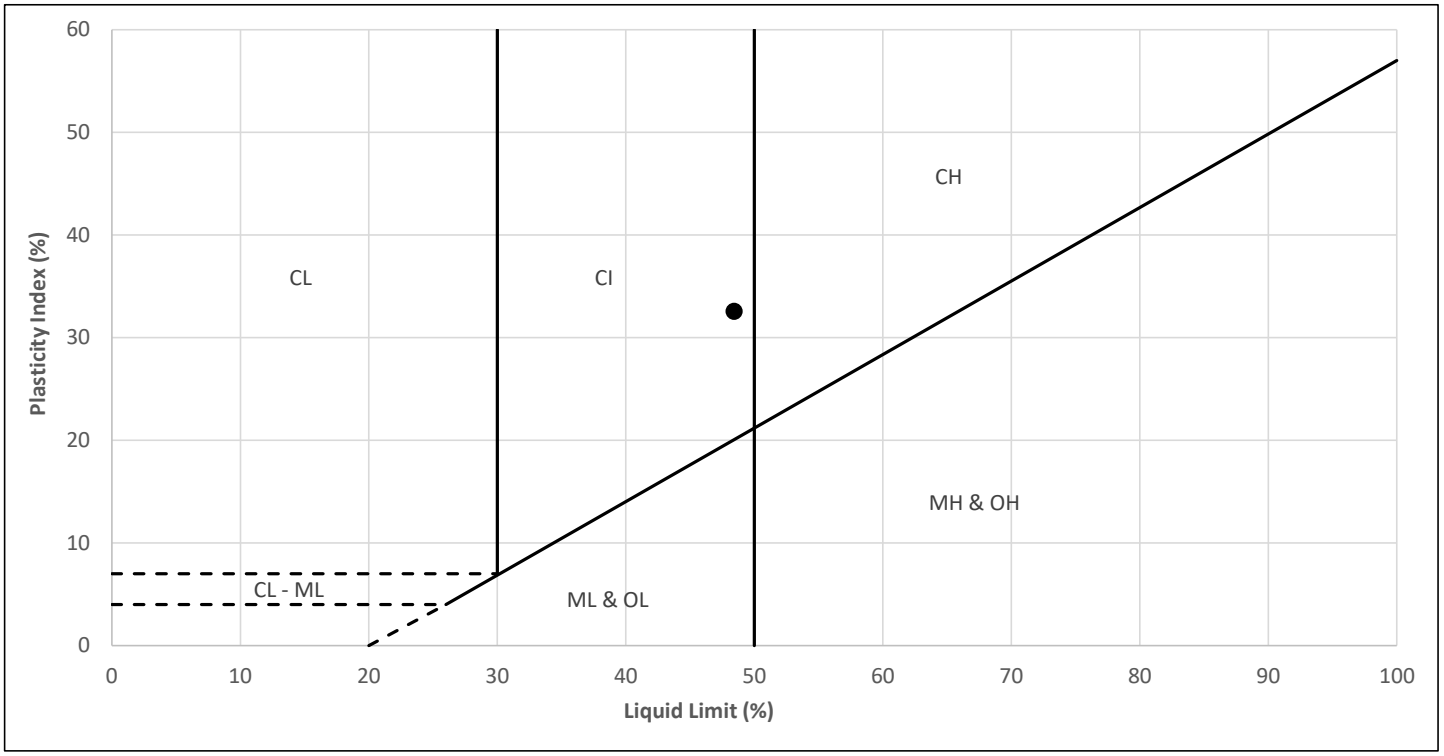
Project:	Snake Lake Reservoir Expansion	**Sample #:**	472AU5
Project No.:	1560-193-00	**Source:**	22CH472
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 472AU5	**Test Date:**	18-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	48.4
Plastic Limit (PL)	15.9
Plasticity Index (PI)	32.6

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

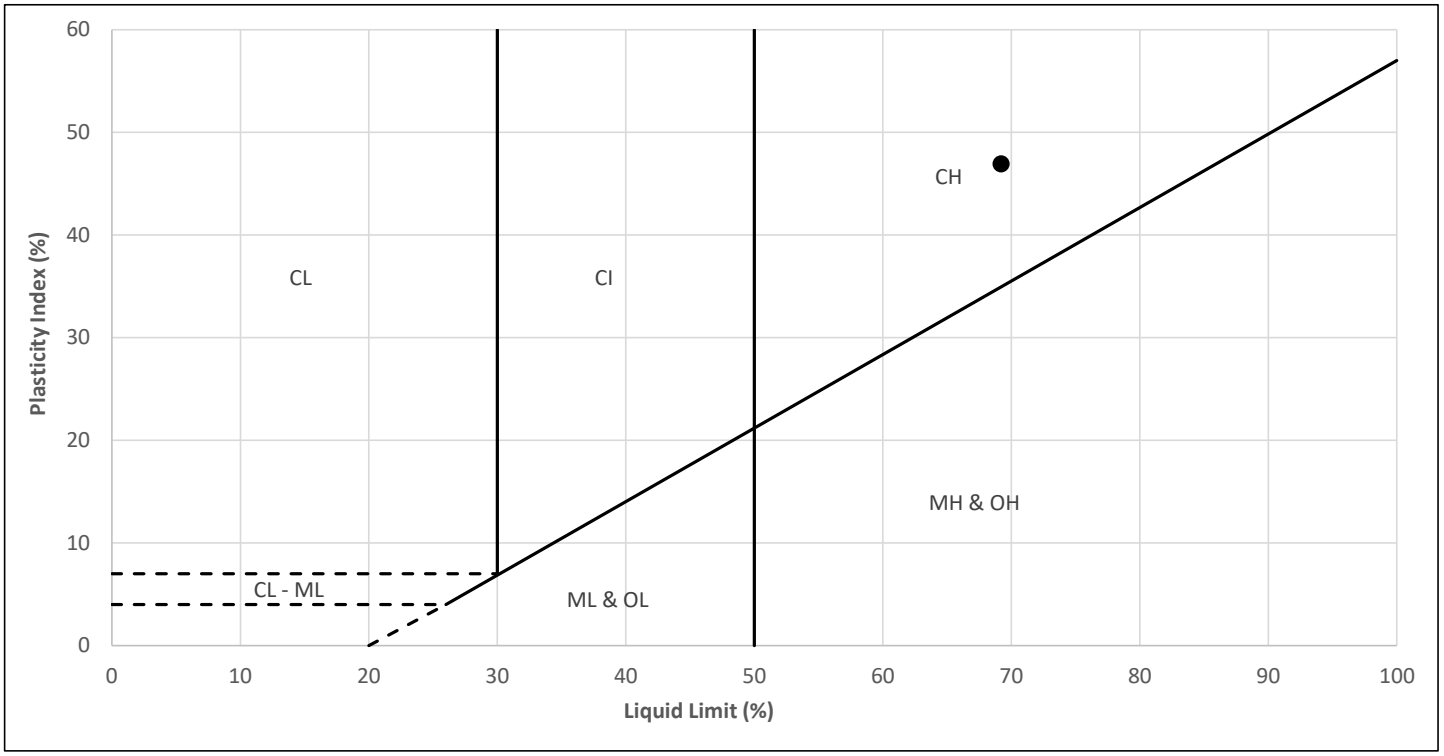
Project:	Snake Lake Reservoir Expansion	**Sample #:**	472AU7
Project No.:	1560-193-00	**Source:**	22BH472
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 472AU7	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	69.2
Plastic Limit (PL)	22.3
Plasticity Index (PI)	46.9

Soil Plasticity	High
Soil Classification	CH



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Tel: (403)892-6036

ATTERBERG LIMITS

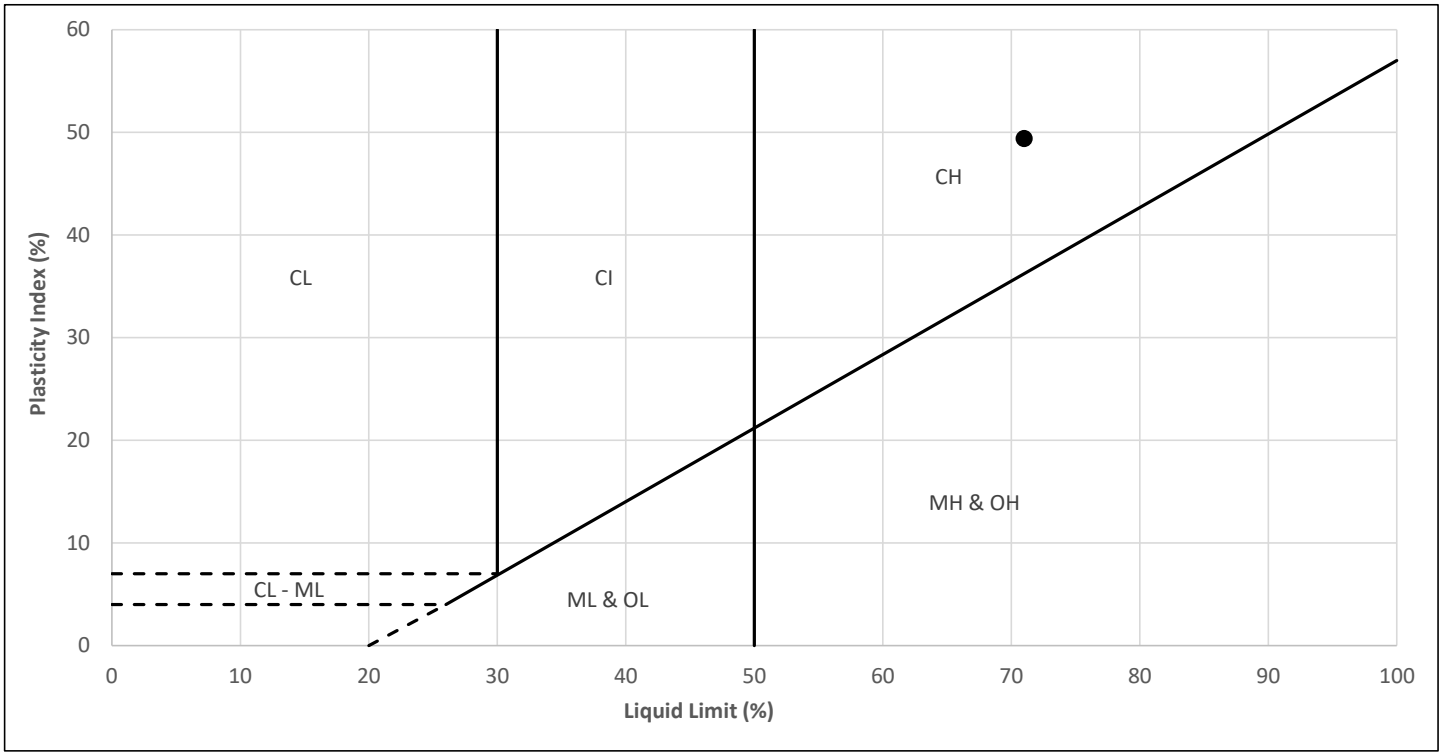
Project:	Snake Lake Reservoir Expansion	**Sample #:**	473AU3
Project No.:	1560-193-00	**Source:**	22BH473
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 473AU3	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	71.0
Plastic Limit (PL)	21.6
Plasticity Index (PI)	49.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

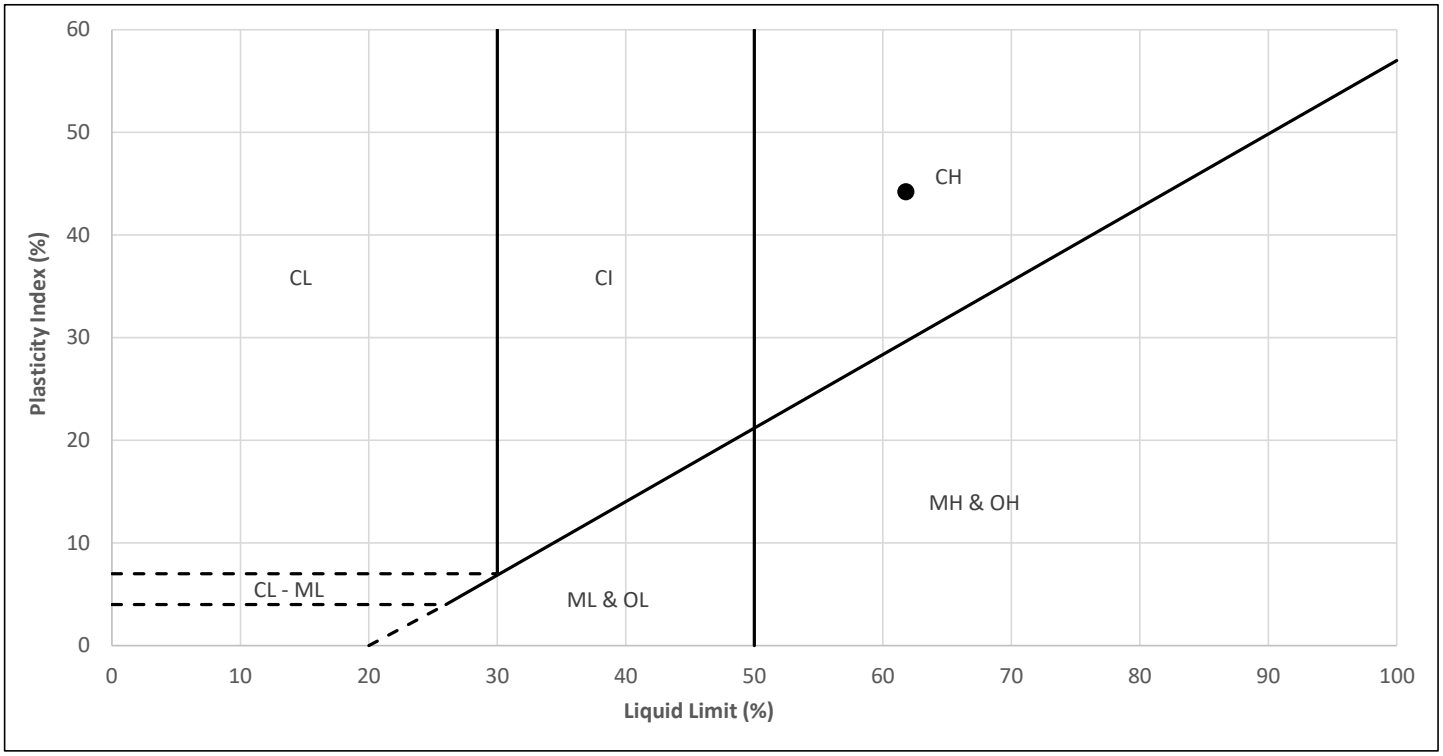
Project:	Snake Lake Reservoir Expansion	**Sample #:**	473AU5
Project No.:	1560-193-00	**Source:**	22BH473
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 473AU5	**Test Date:**	21-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	61.8
Plastic Limit (PL)	17.6
Plasticity Index (PI)	44.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

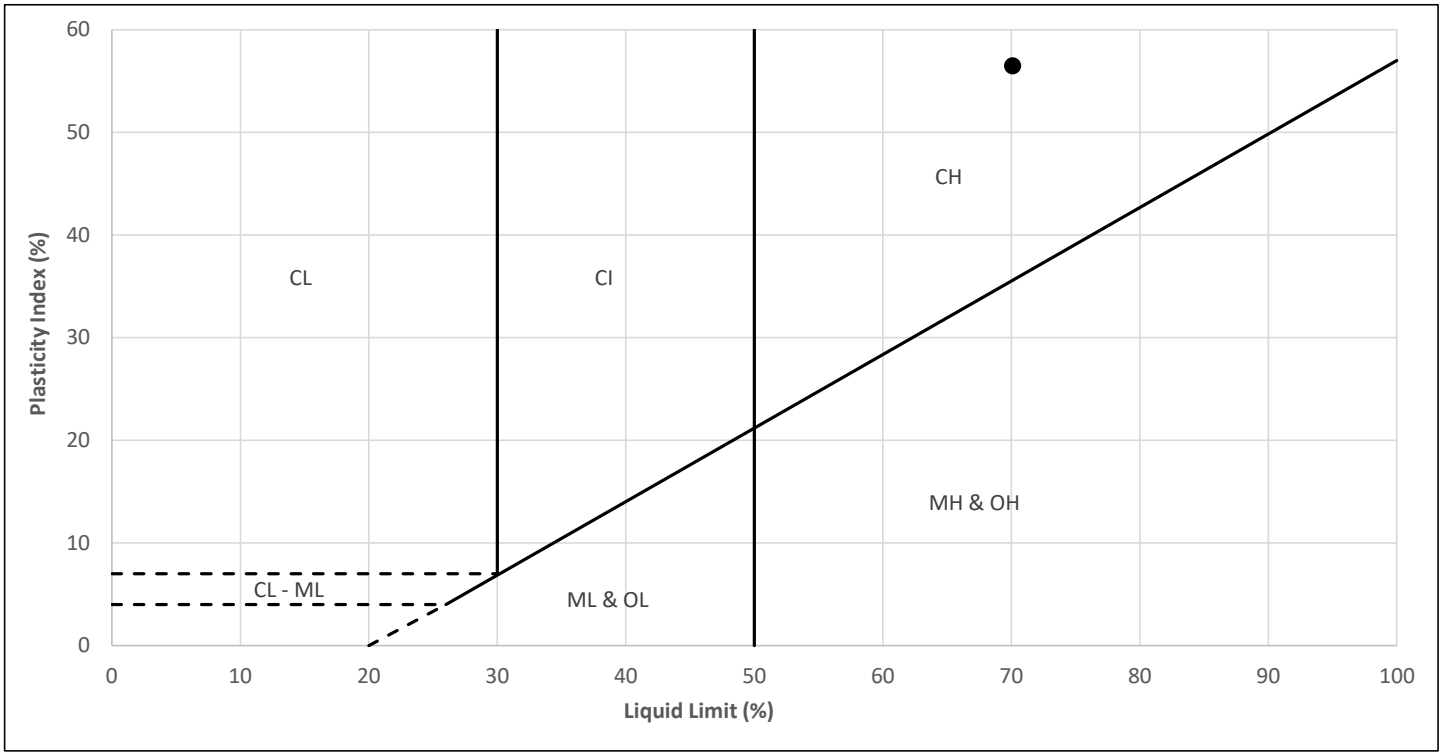
Project:	Snake Lake Reservoir Expansion	**Sample #:**	474AU1
Project No.:	1560-193-00	**Source:**	22BH474
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 474AU1	**Test Date:**	21-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	70.1
Plastic Limit (PL)	13.6
Plasticity Index (PI)	56.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

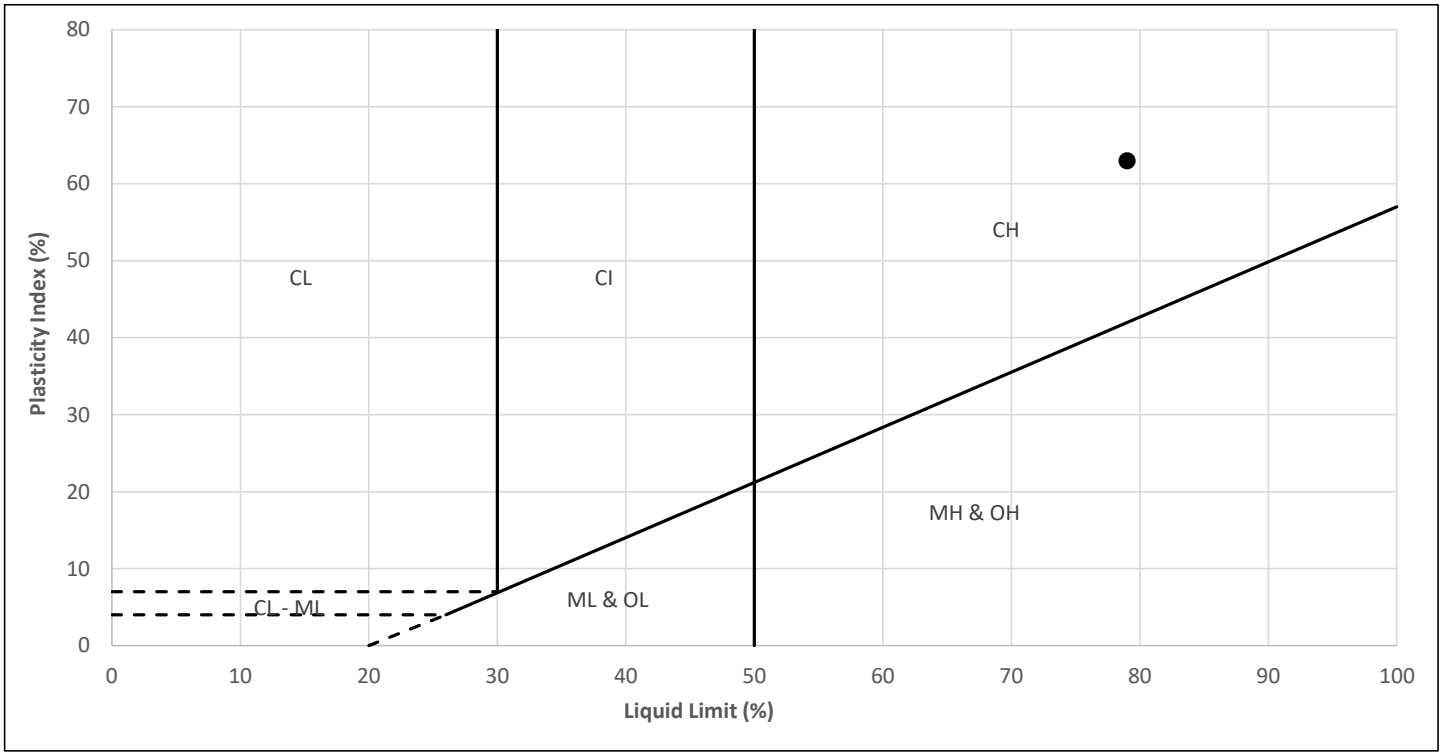
Project:	Snake Lake Reservoir Expansion	**Sample #:**	474AU7
Project No.:	1560-193-00	**Source:**	22BH474
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 474AU7	**Test Date:**	21-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	79.0
Plastic Limit (PL)	16.0
Plasticity Index (PI)	63.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

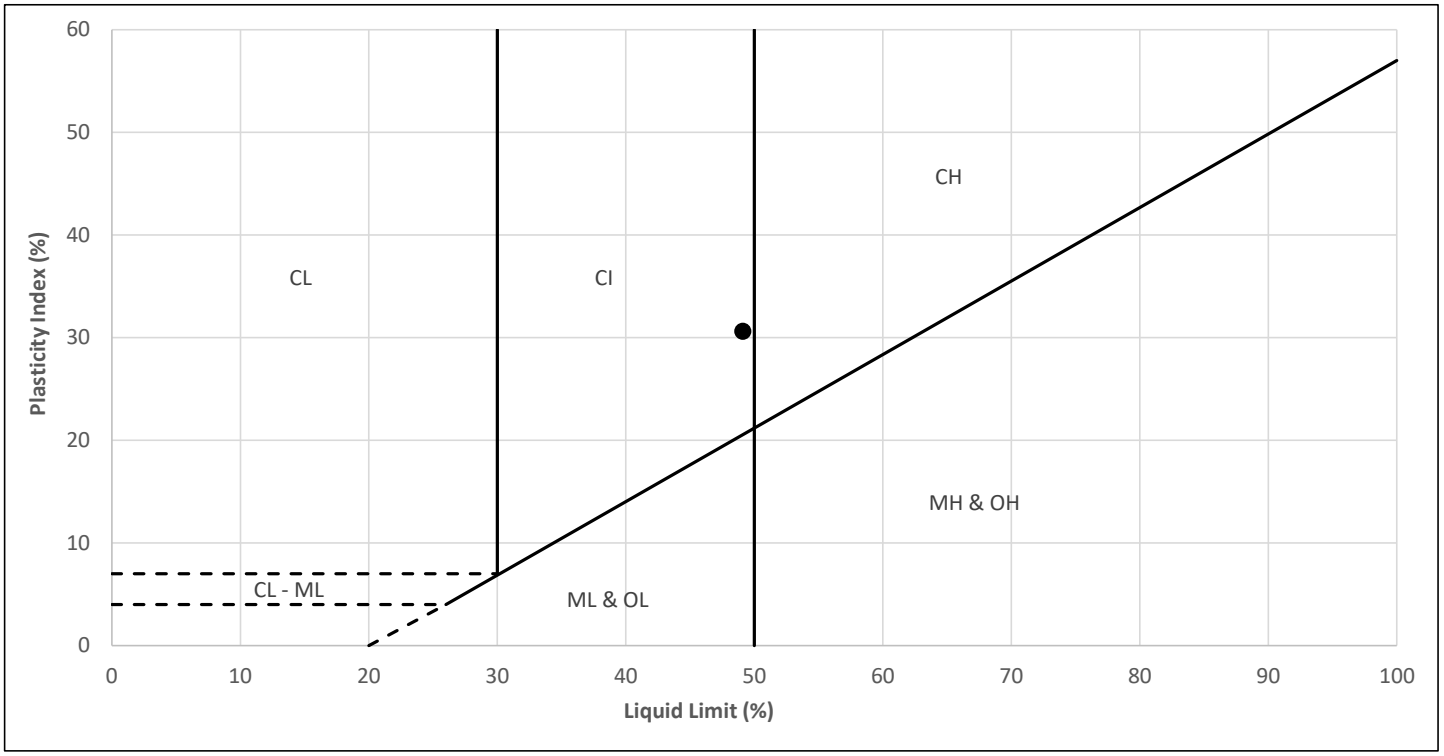
Project:	Snake Lake Reservoir Expansion	**Sample #:**	475AU1
Project No.:	1560-193-00	**Source:**	22BH475
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 475AU1	**Test Date:**	14-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.1
Plastic Limit (PL)	18.5
Plasticity Index (PI)	30.6

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

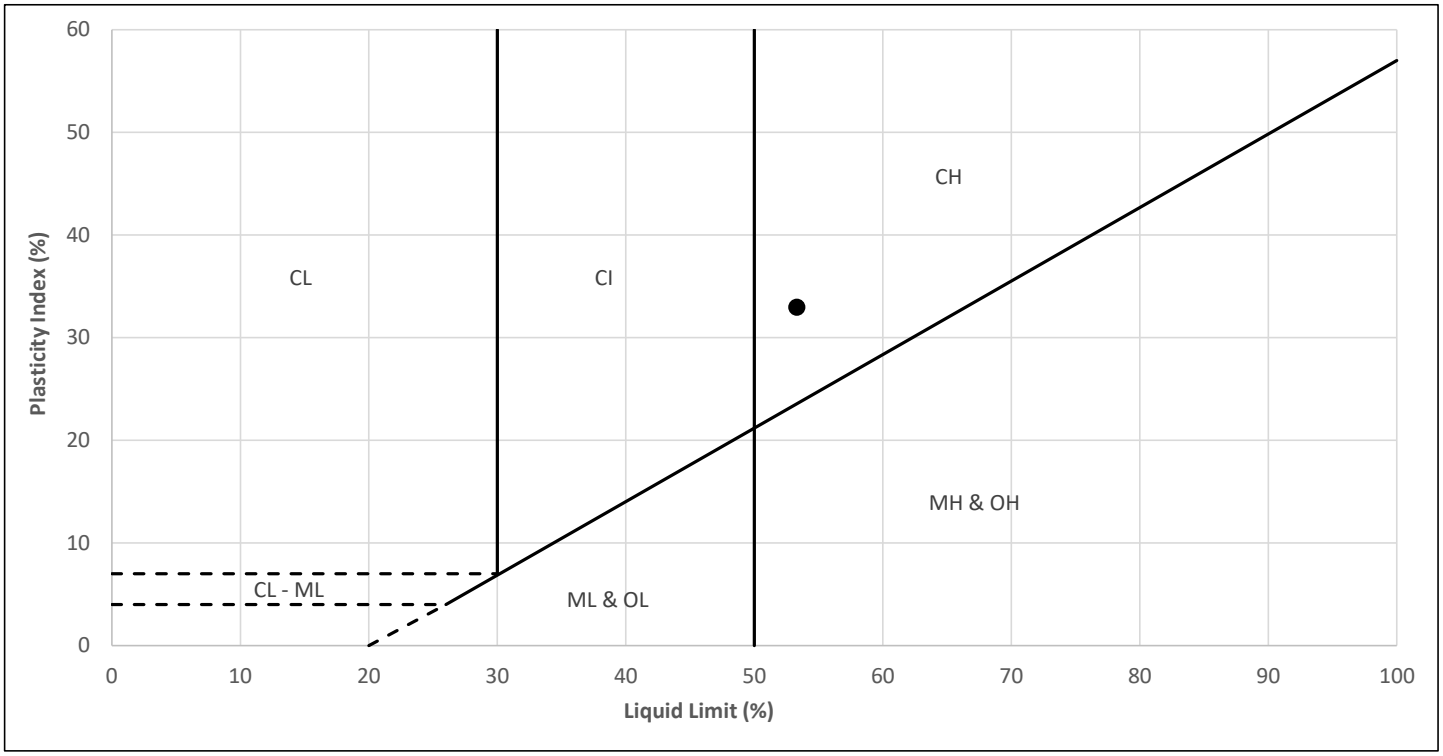
Project:	Snake Lake Reservoir Expansion	**Sample #:**	475AU2
Project No.:	1560-193-00	**Source:**	22BH475
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 475AU2	**Test Date:**	16-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.3
Plastic Limit (PL)	20.3
Plasticity Index (PI)	33.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

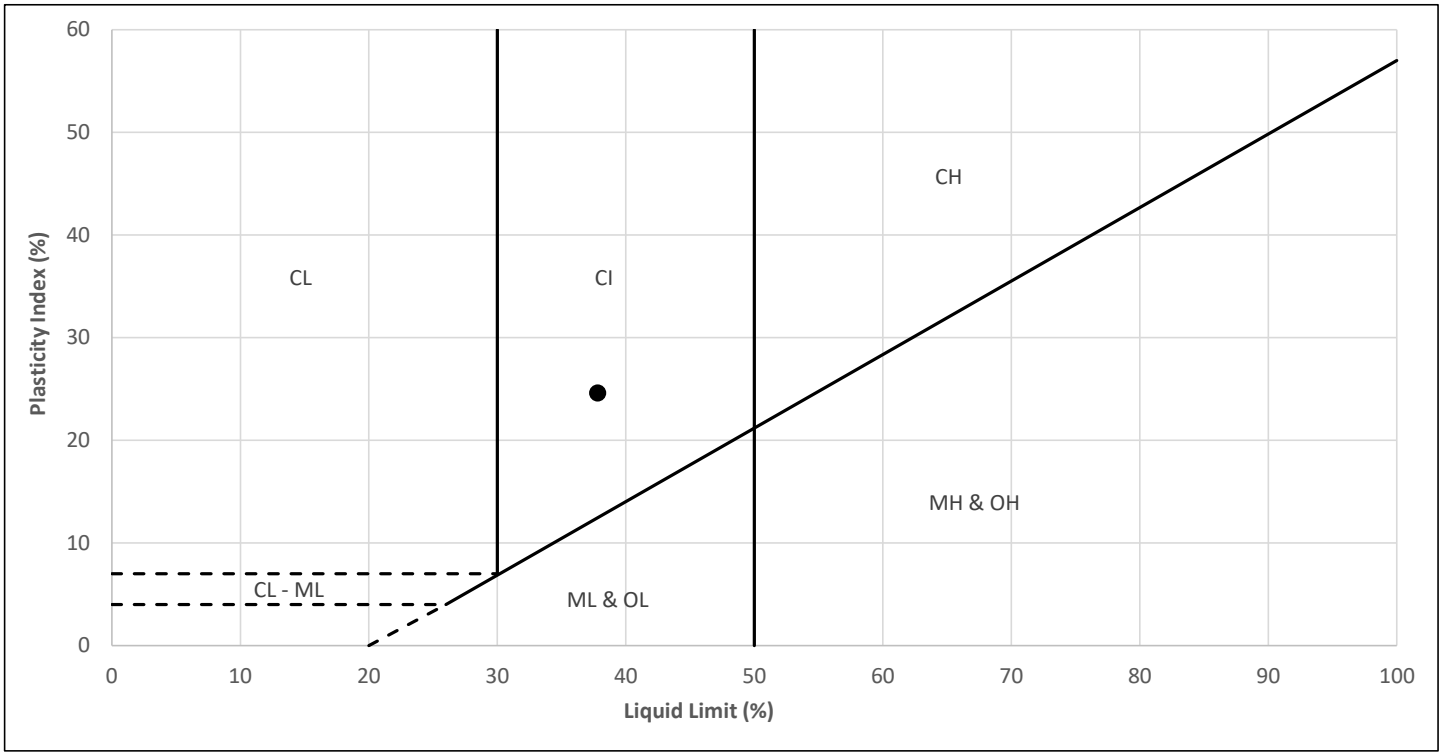
Project:	Snake Lake Reservoir Expansion	**Sample #:**	476AU1
Project No.:	1560-193-00	**Source:**	22BH476
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 476AU1	**Test Date:**	14-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	37.8
Plastic Limit (PL)	13.2
Plasticity Index (PI)	24.6

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

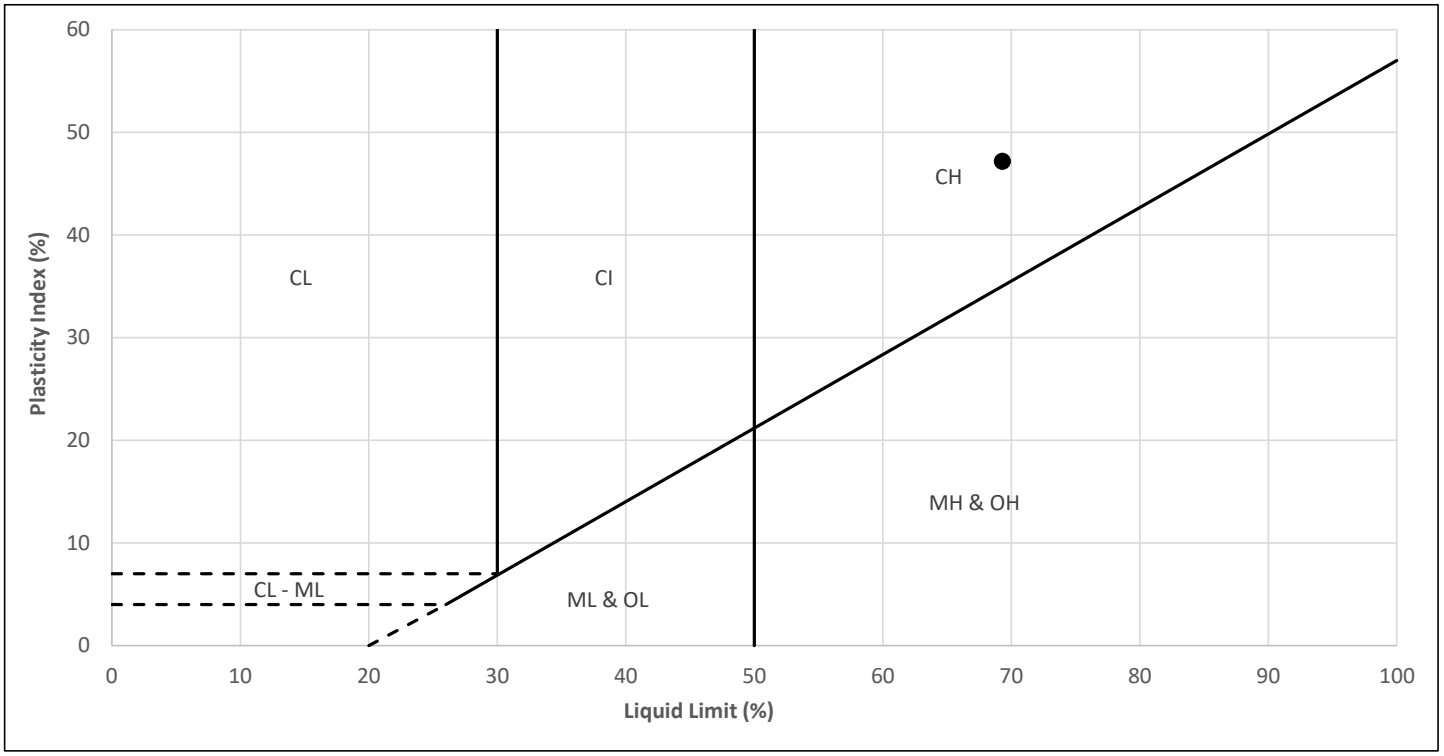
Project:	Snake Lake Reservoir Expansion	**Sample #:**	476AU3
Project No.:	1560-193-00	**Source:**	22BH476
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 476AU3	**Test Date:**	14-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	69.3
Plastic Limit (PL)	22.1
Plasticity Index (PI)	47.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

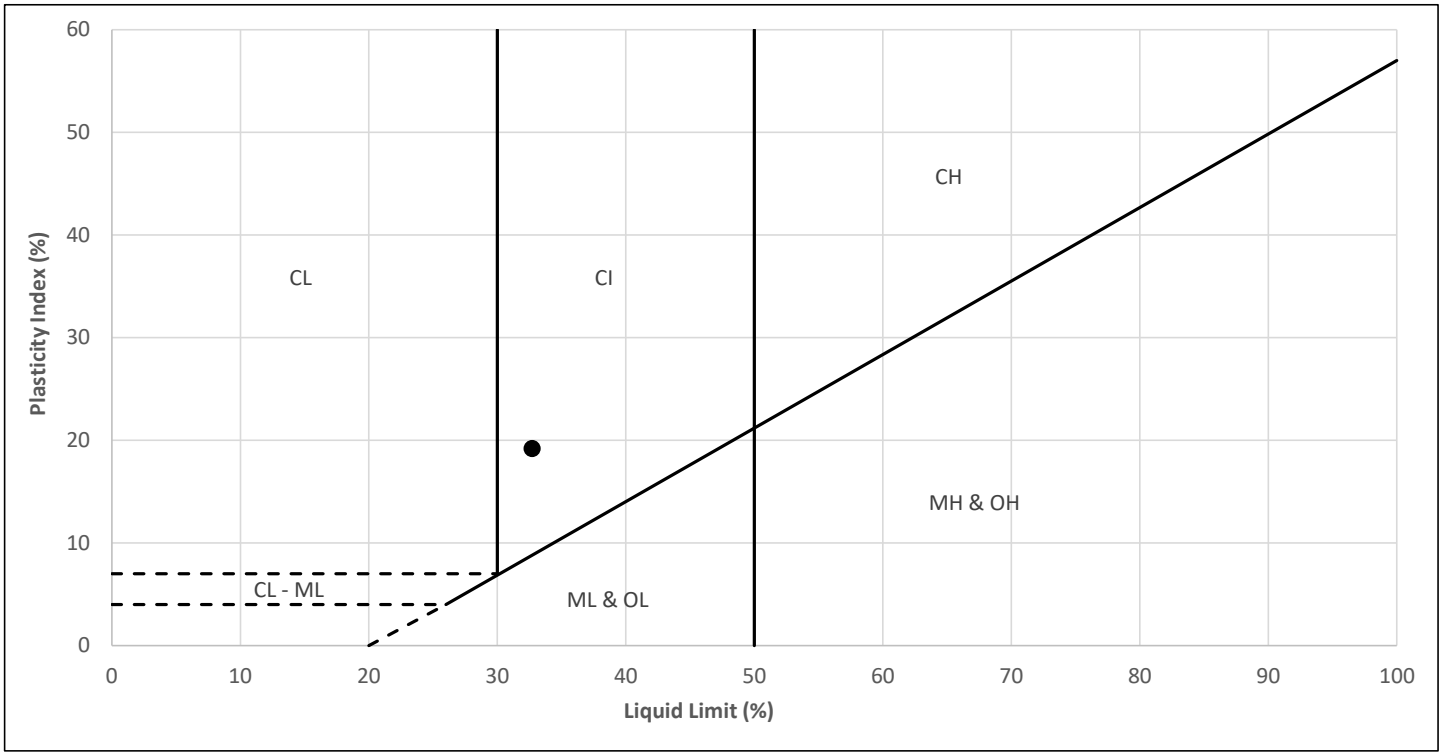
Project:	Snake Lake Reservoir Expansion	**Sample #:**	477AU1
Project No.:	1560-193-00	**Source:**	22BH477
Owner:	EID	**Sample Depth:**	0.5m
File No.:	AL - 477AU1	**Test Date:**	14-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	32.7
Plastic Limit (PL)	13.5
Plasticity Index (PI)	19.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

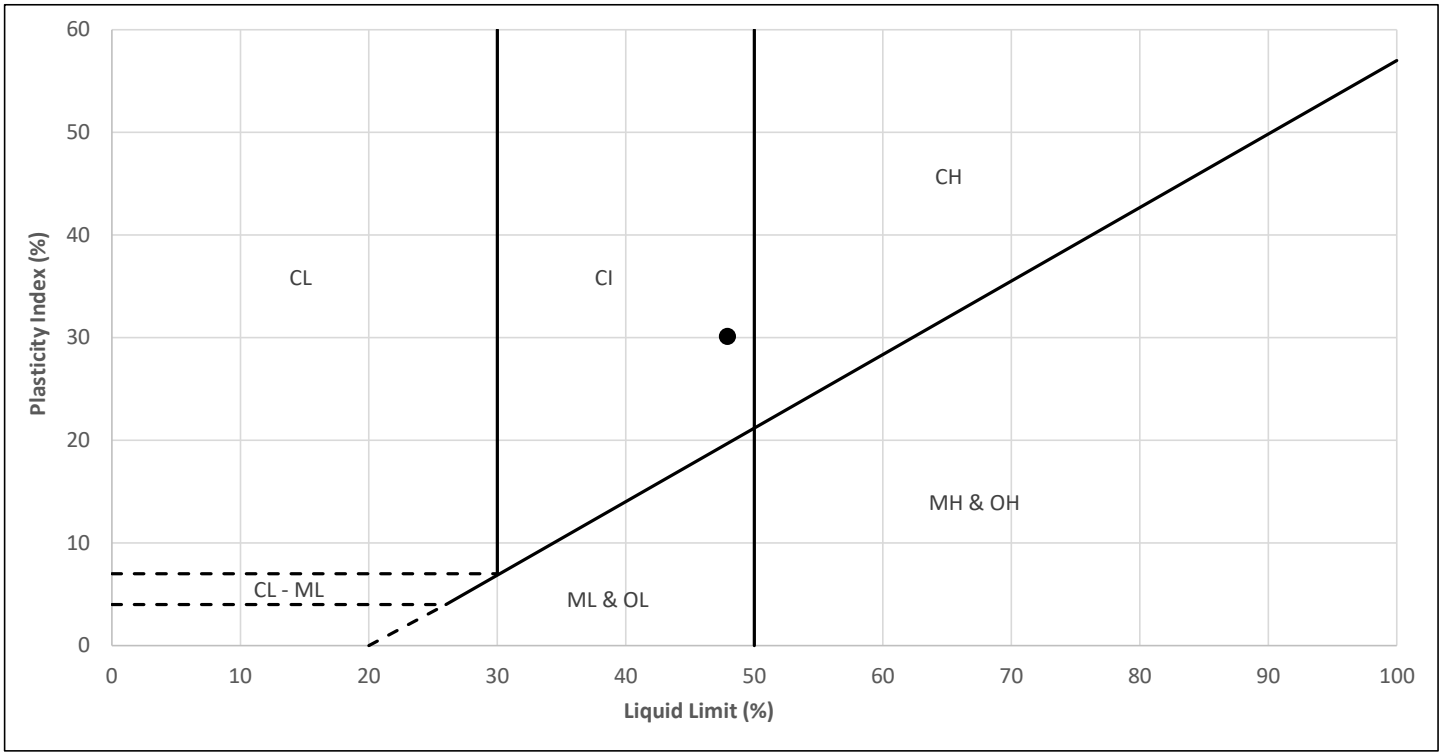
Project:	Snake Lake Reservoir Expansion	**Sample #:**	478AU1
Project No.:	1560-193-00	**Source:**	22BH478
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 478AU1	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	47.9
Plastic Limit (PL)	17.8
Plasticity Index (PI)	30.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

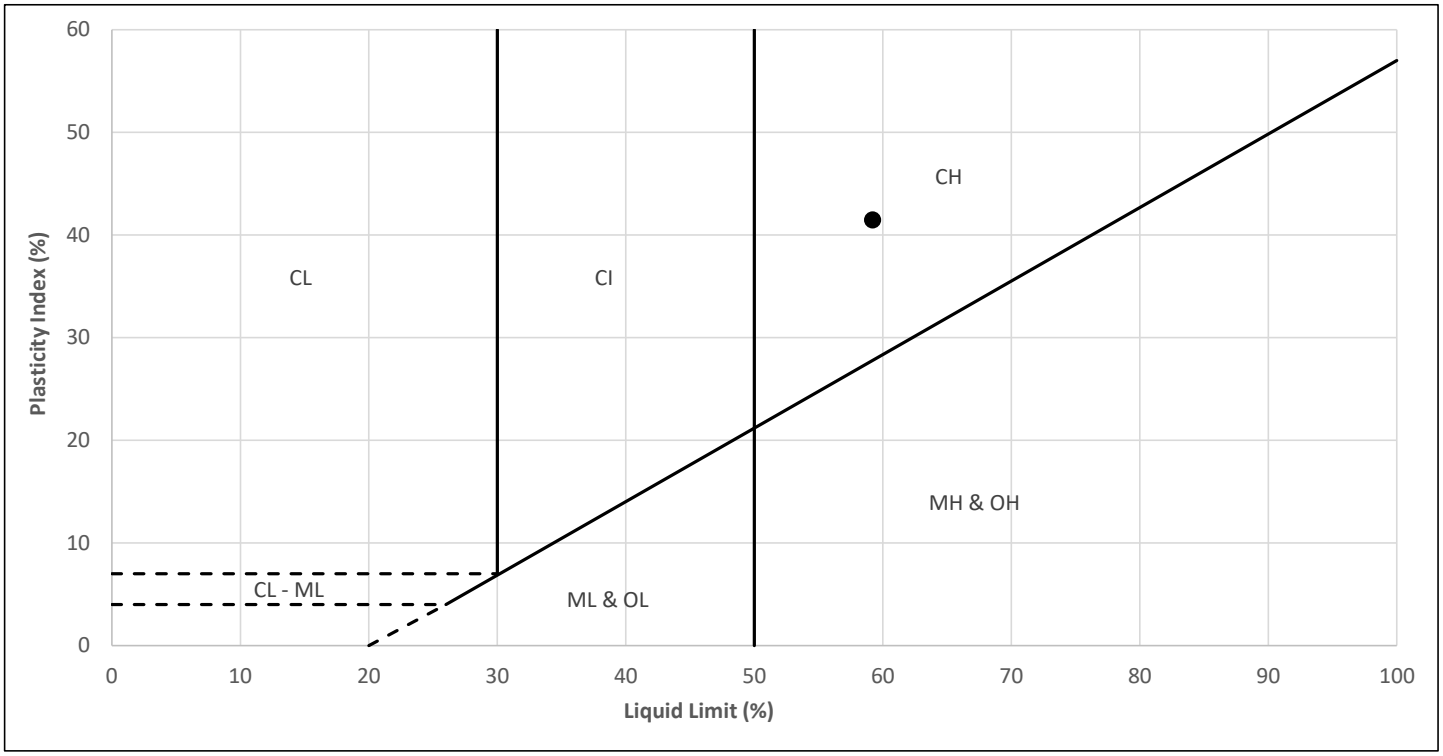
Project:	Snake Lake Reservoir Expansion	**Sample #:**	478AU7
Project No.:	1560-193-00	**Source:**	22BH478
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 478AU7	**Test Date:**	15-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	59.2
Plastic Limit (PL)	17.7
Plasticity Index (PI)	41.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

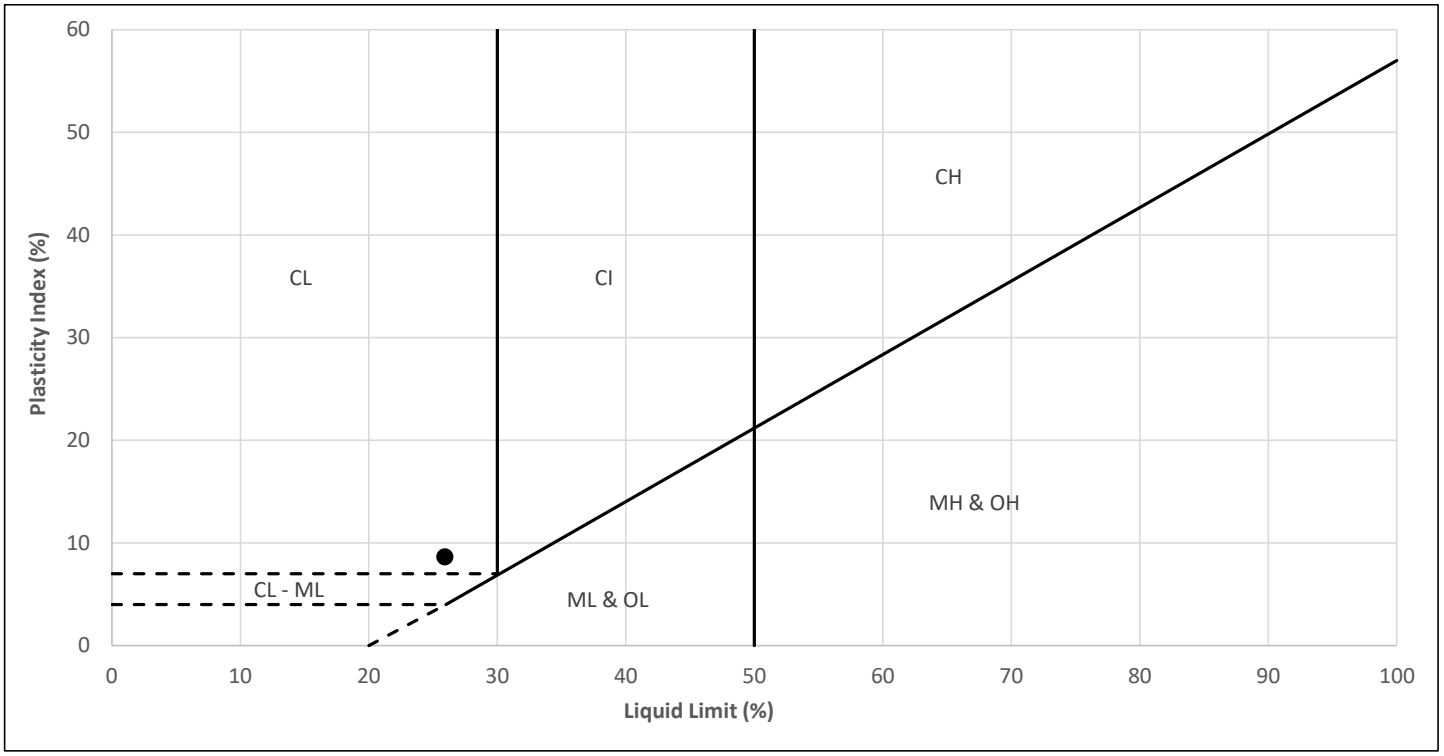
Project:	Snake Lake Reservoir Expansion	**Sample #:**	479AU2
Project No.:	1560-193-00	**Source:**	22BH479
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 479AU2	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays

Liquid Limit (LL)	25.9
Plastic Limit (PL)	17.3
Plasticity Index (PI)	8.6

Soil Plasticity	Low
Soil Classification	CL



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ATTERBERG LIMITS

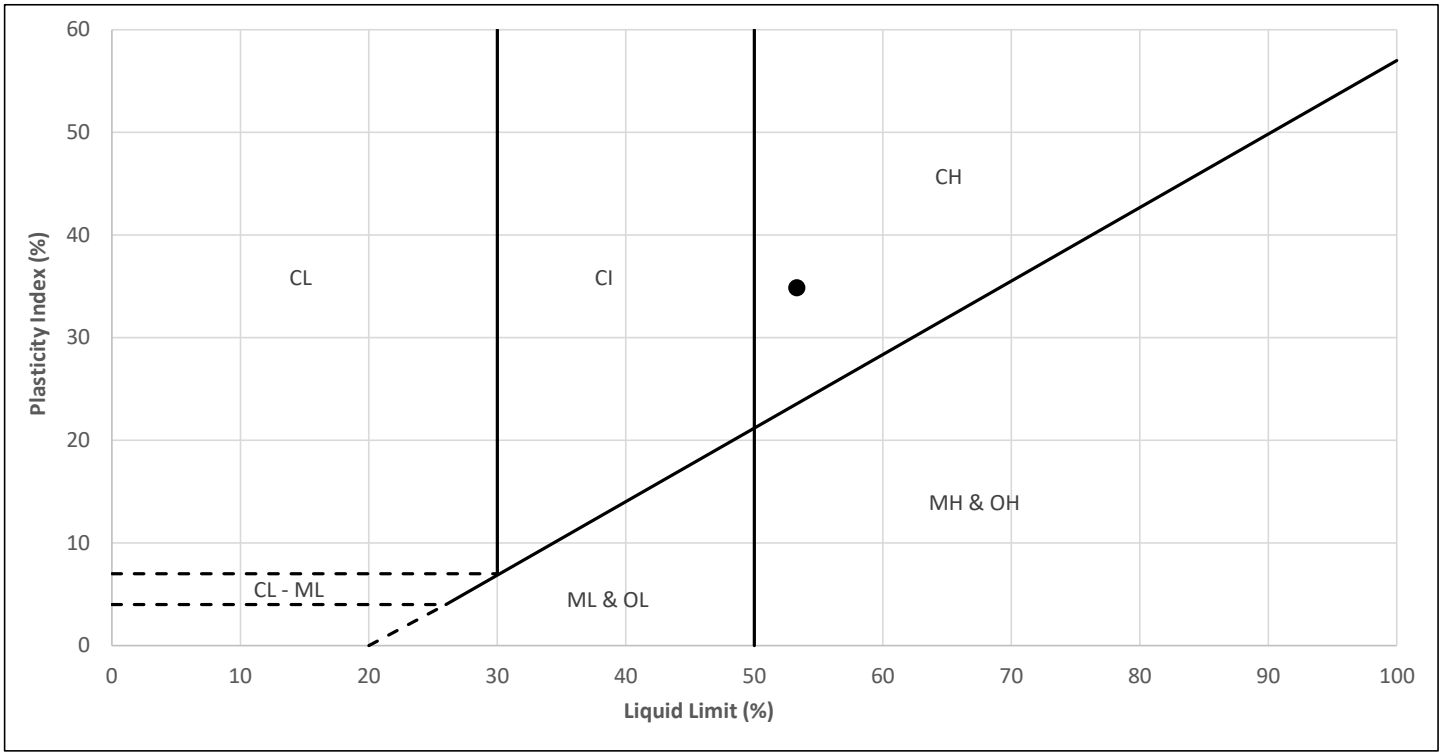
Project:	Snake Lake Reservoir Expansion	**Sample #:**	479AU3
Project No.:	1560-193-00	**Source:**	22BH479
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 479AU3	**Test Date:**	25-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.3
Plastic Limit (PL)	18.4
Plasticity Index (PI)	34.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

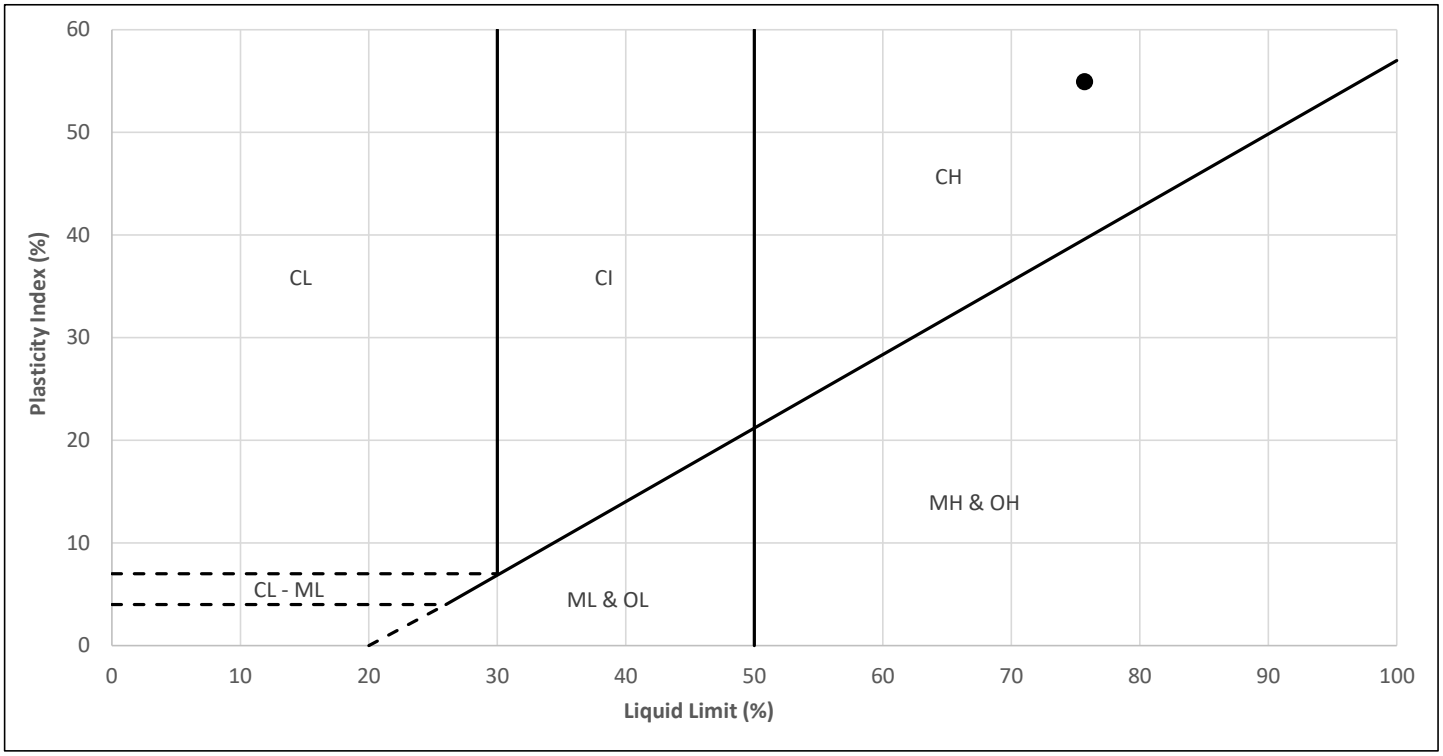
Project:	Snake Lake Reservoir Expansion	**Sample #:**	479AU6
Project No.:	1560-193-00	**Source:**	22BH479
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 479AU6	**Test Date:**	23-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	75.7
Plastic Limit (PL)	20.8
Plasticity Index (PI)	54.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

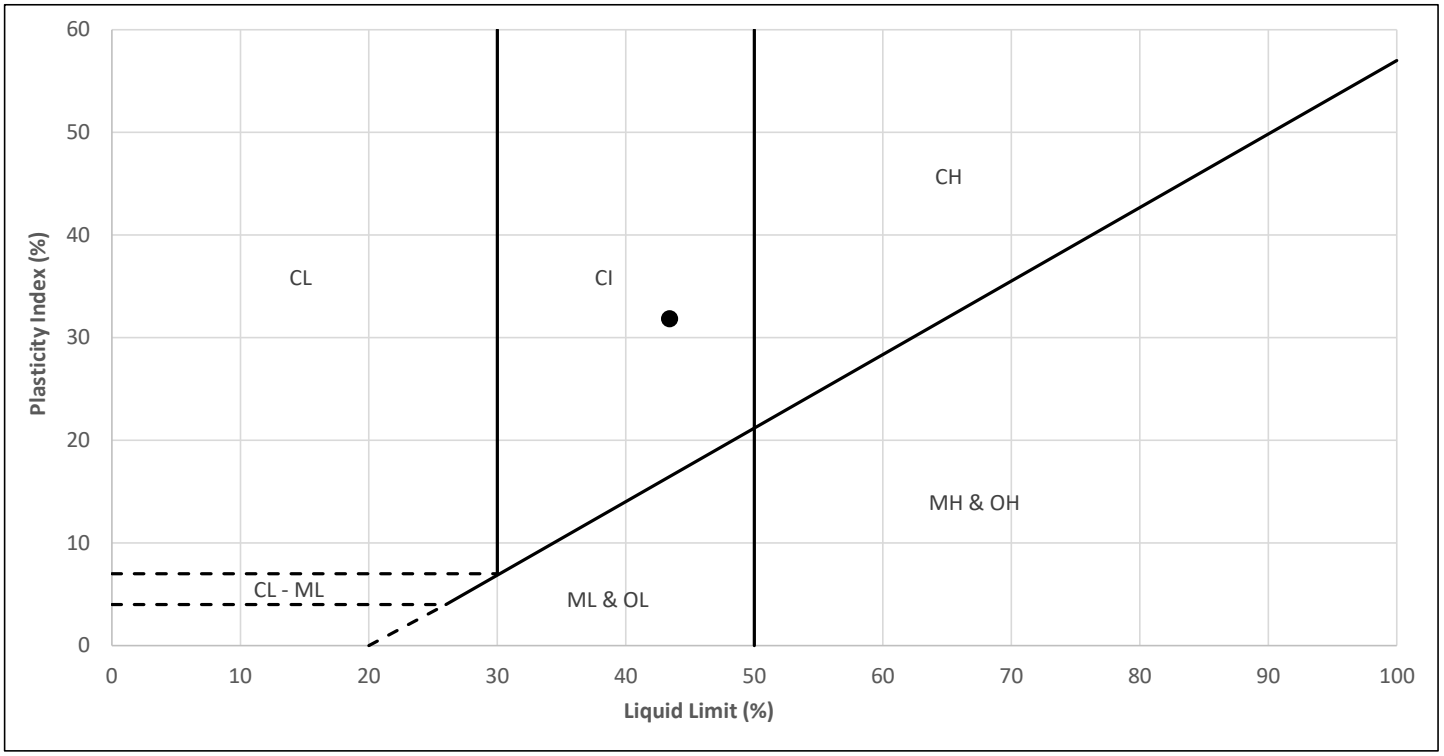
Project:	Snake Lake Reservoir Expansion	**Sample #:**	480AU1
Project No.:	1560-193-00	**Source:**	22BH480
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 480AU1	**Test Date:**	24-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	43.4
Plastic Limit (PL)	11.5
Plasticity Index (PI)	31.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

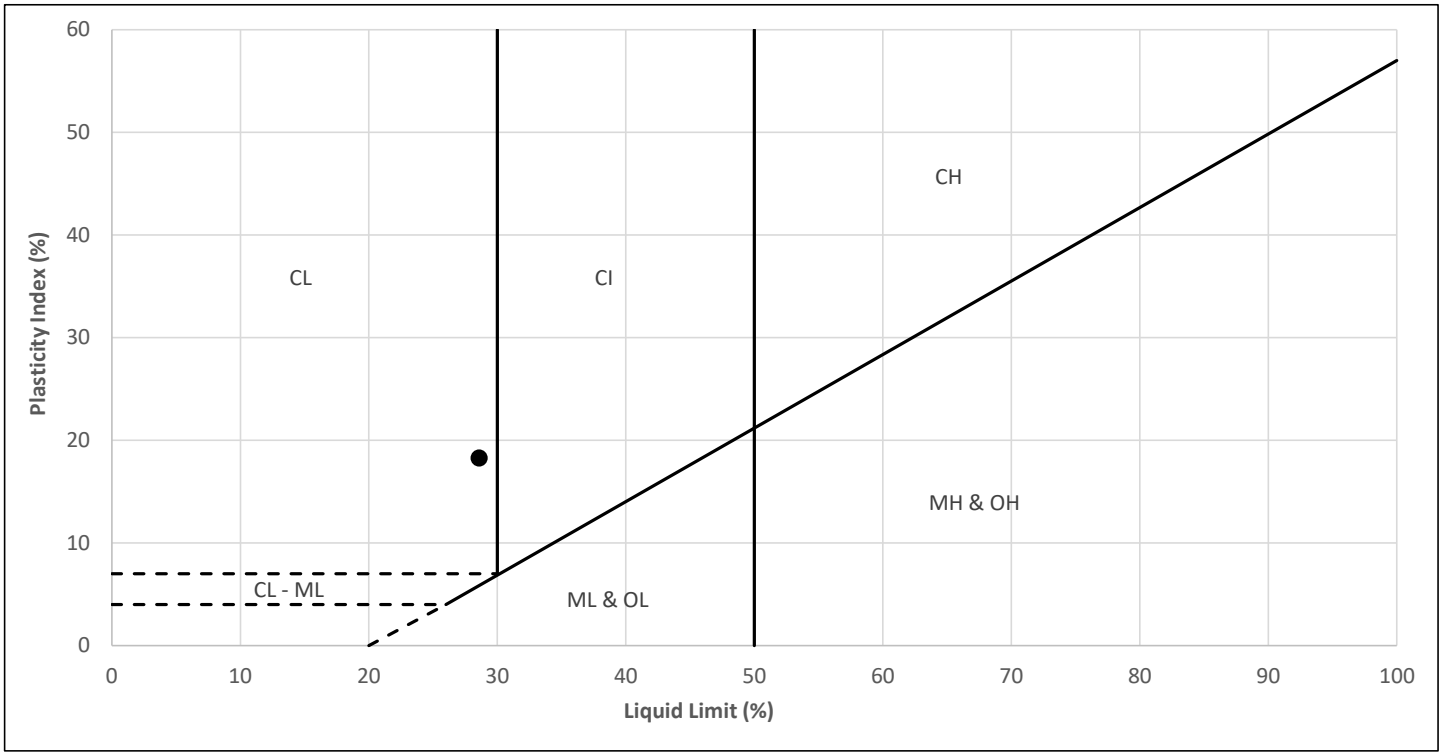
Project:	Snake Lake Reservoir Expansion	**Sample #:**	481AU3
Project No.:	1560-193-00	**Source:**	22BH481
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 481AU3	**Test Date:**	22-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays

Liquid Limit (LL)	28.6
Plastic Limit (PL)	10.3
Plasticity Index (PI)	18.3

Soil Plasticity	Low
Soil Classification	CL



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ATTERBERG LIMITS

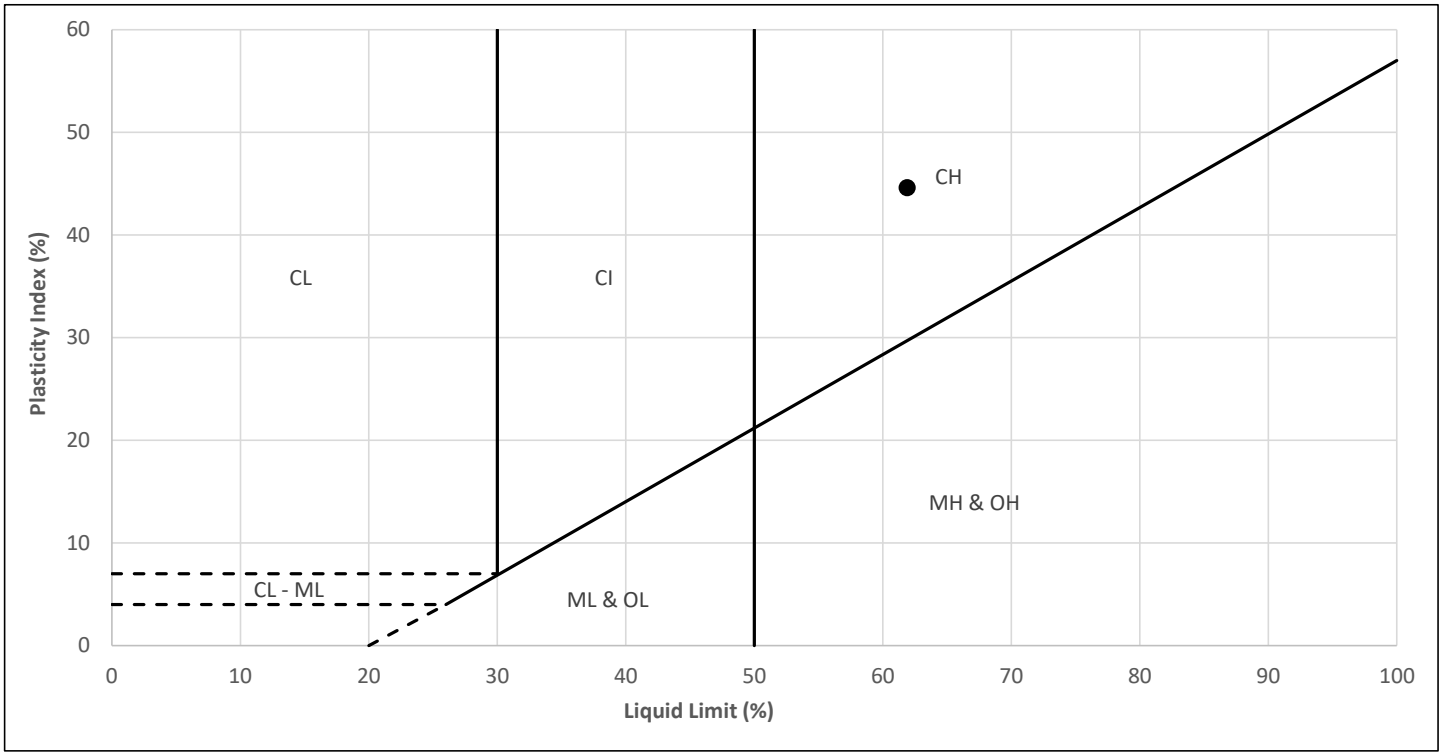
Project:	Snake Lake Reservoir Expansion	**Sample #:**	481AU5
Project No.:	1560-193-00	**Source:**	22BH481
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 481AU5	**Test Date:**	24-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	61.9
Plastic Limit (PL)	17.3
Plasticity Index (PI)	44.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

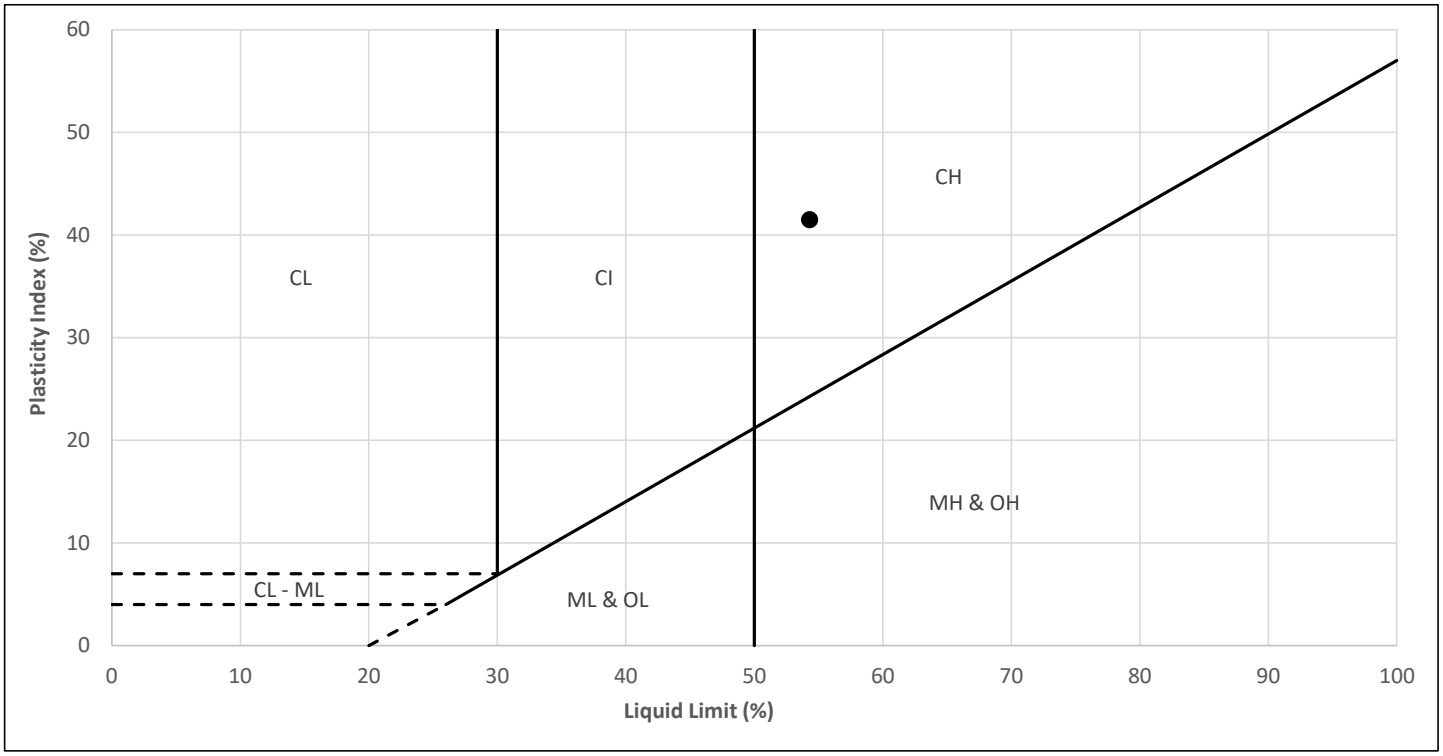
Project:	Snake Lake Reservoir Expansion	**Sample #:**	482AU1
Project No.:	1560-193-00	**Source:**	22BH482
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 482AU1	**Test Date:**	24-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.3
Plastic Limit (PL)	12.8
Plasticity Index (PI)	41.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

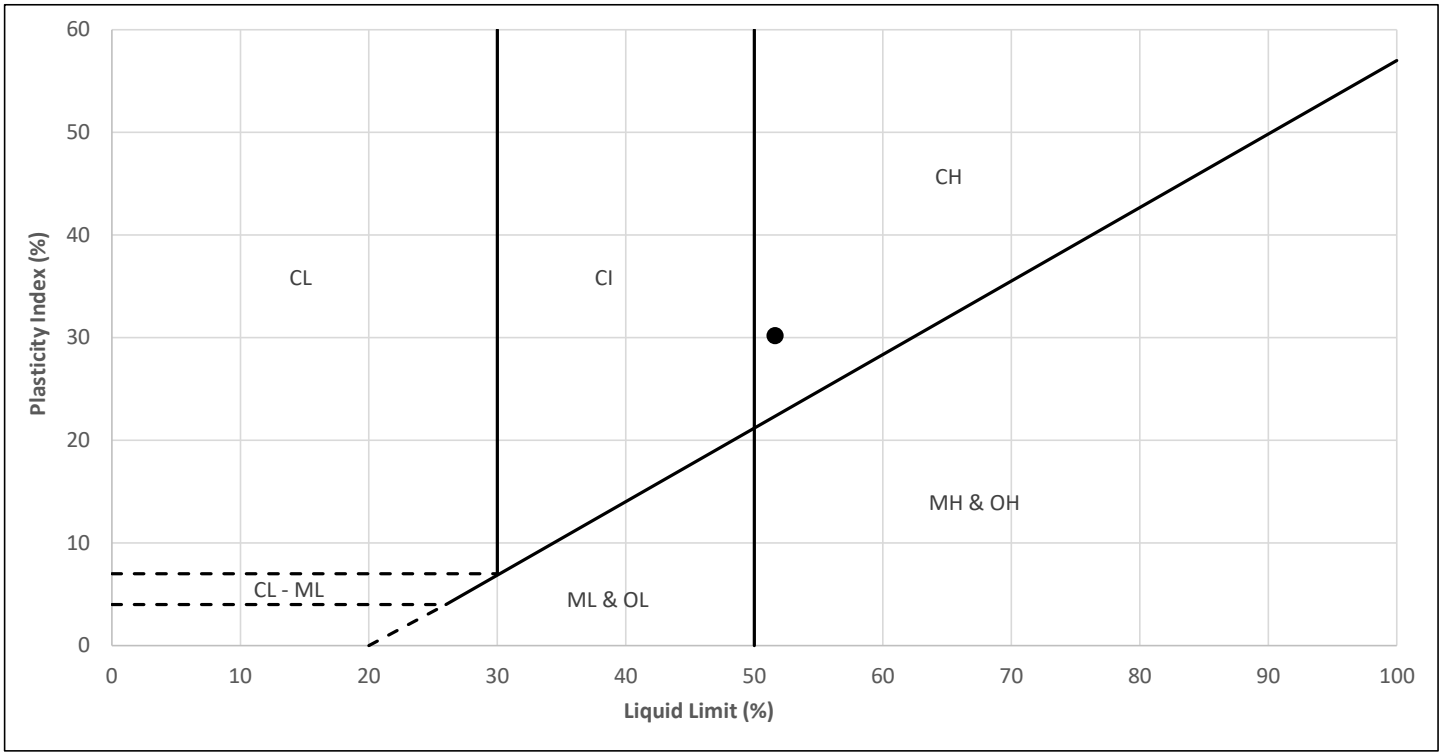
Project:	Snake Lake Reservoir Expansion	**Sample #:**	482AU2
Project No.:	1560-193-00	**Source:**	22BH482
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 482AU2	**Test Date:**	22-08-23

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.6
Plastic Limit (PL)	21.4
Plasticity Index (PI)	30.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

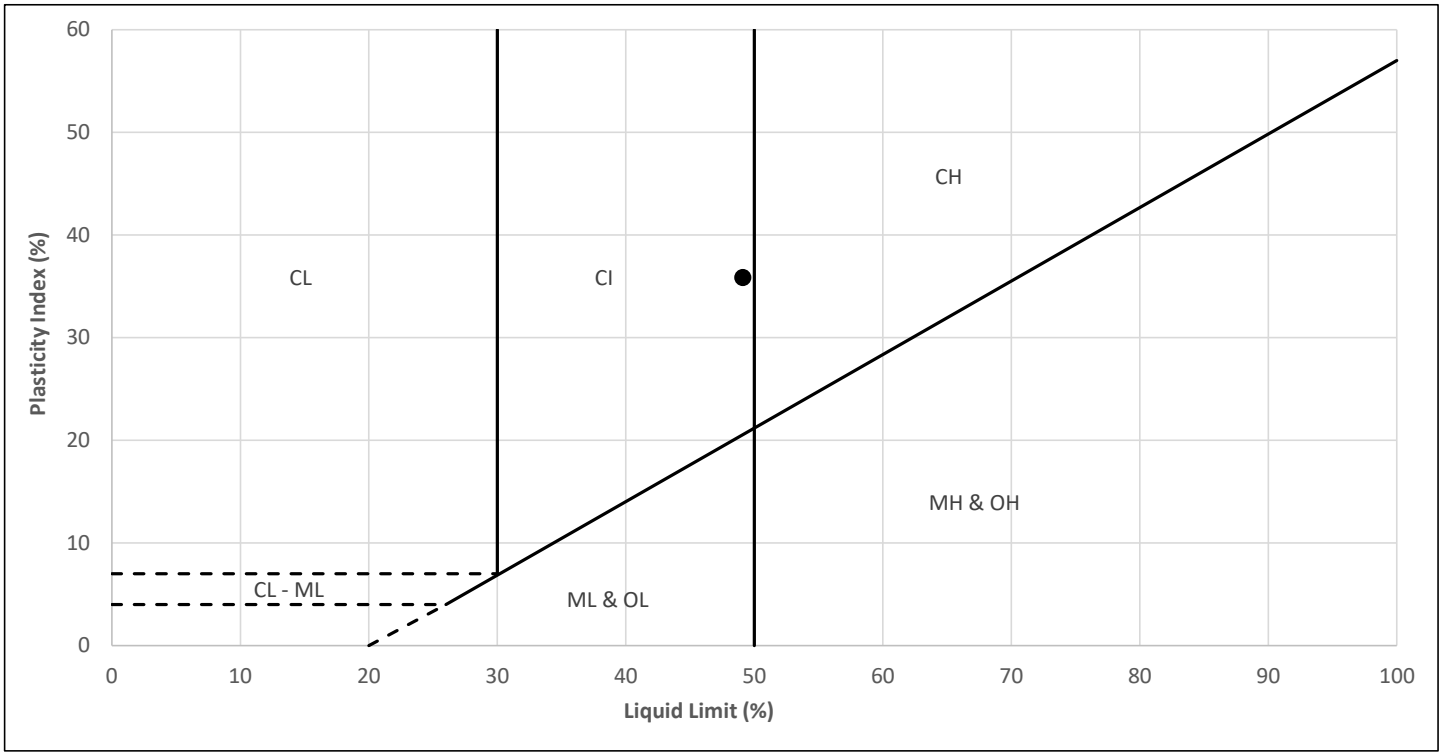
Project:	Snake Lake Reservoir Expansion	**Sample #:**	482AU4
Project No.:	1560-193-00	**Source:**	22BH482
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 482AU4	**Test Date:**	24-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.1
Plastic Limit (PL)	13.2
Plasticity Index (PI)	35.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

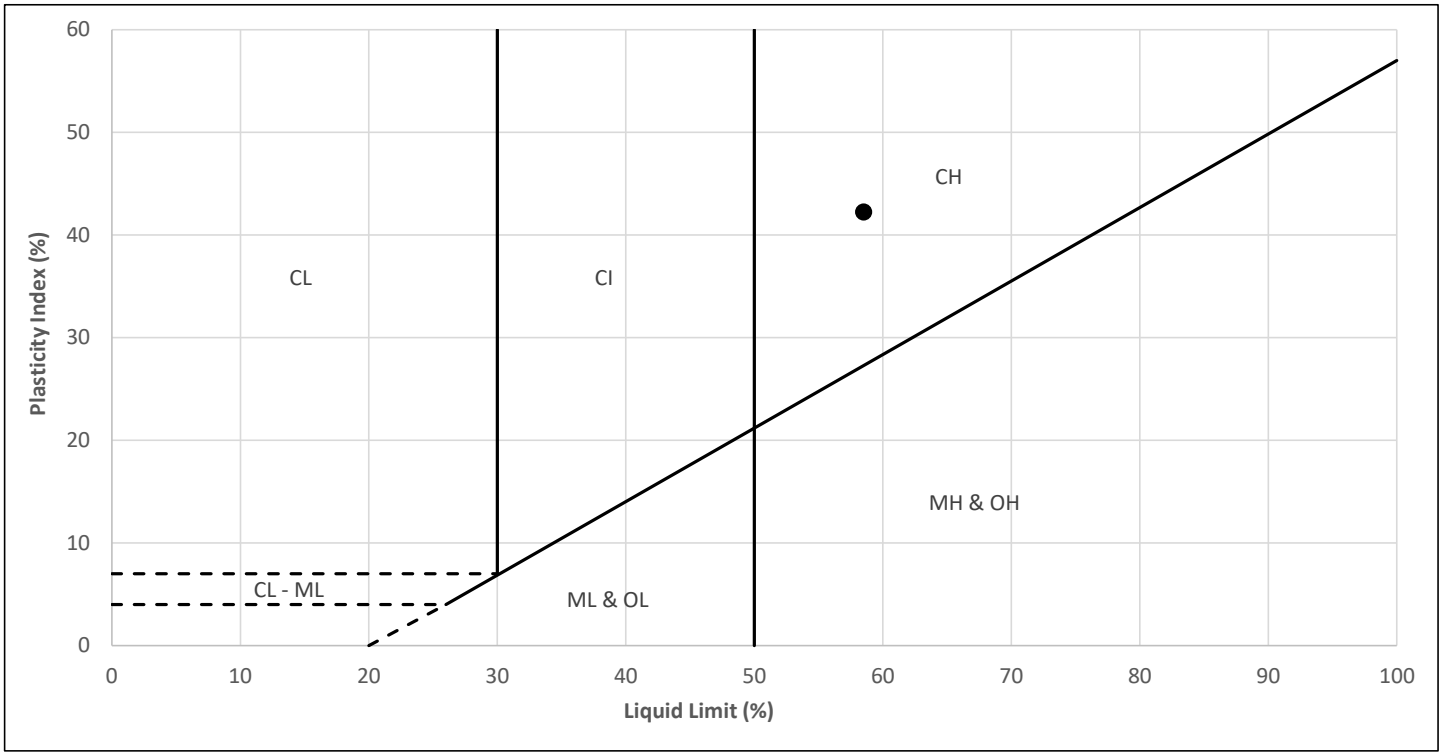
Project:	Snake Lake Reservoir Expansion	**Sample #:**	483AU1
Project No.:	1560-193-00	**Source:**	22BH483
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 483AU1	**Test Date:**	21-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	58.5
Plastic Limit (PL)	16.3
Plasticity Index (PI)	42.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

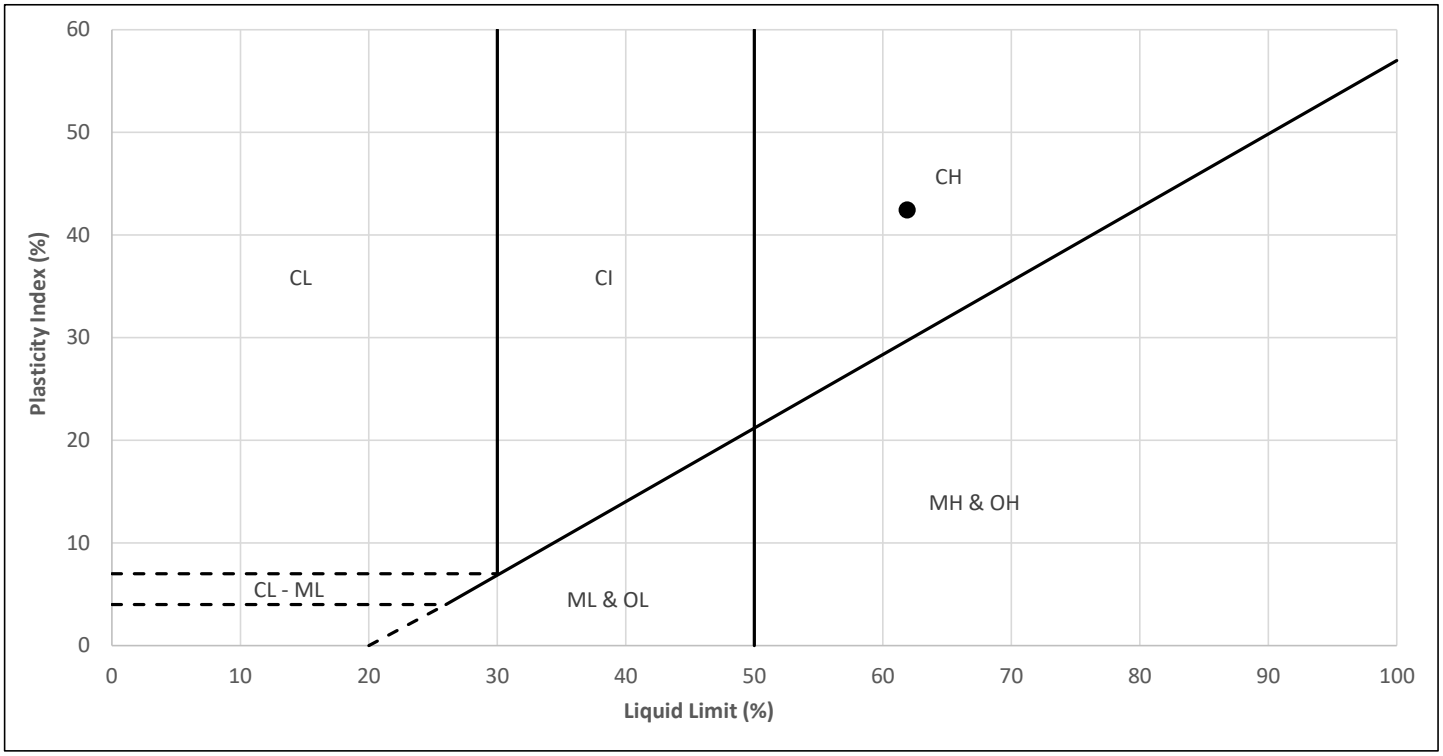
Project:	Snake Lake Reservoir Expansion	**Sample #:**	483AU2
Project No.:	1560-193-00	**Source:**	22BH483
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 483AU2	**Test Date:**	13-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	61.9
Plastic Limit (PL)	19.4
Plasticity Index (PI)	42.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

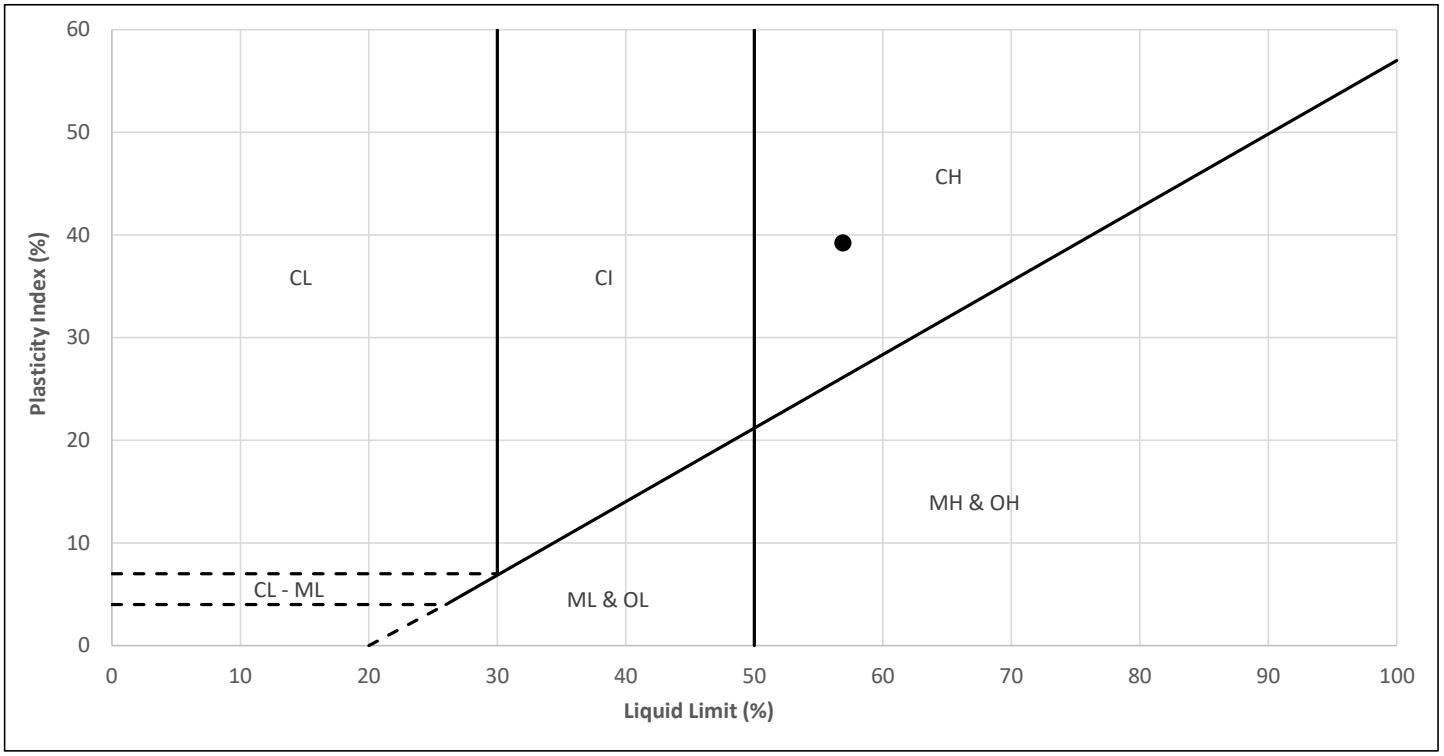
Project:	Snake Lake Reservoir Expansion	**Sample #:**	484AU3
Project No.:	1560-193-00	**Source:**	22BH484
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 484AU3	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	56.9
Plastic Limit (PL)	17.7
Plasticity Index (PI)	39.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

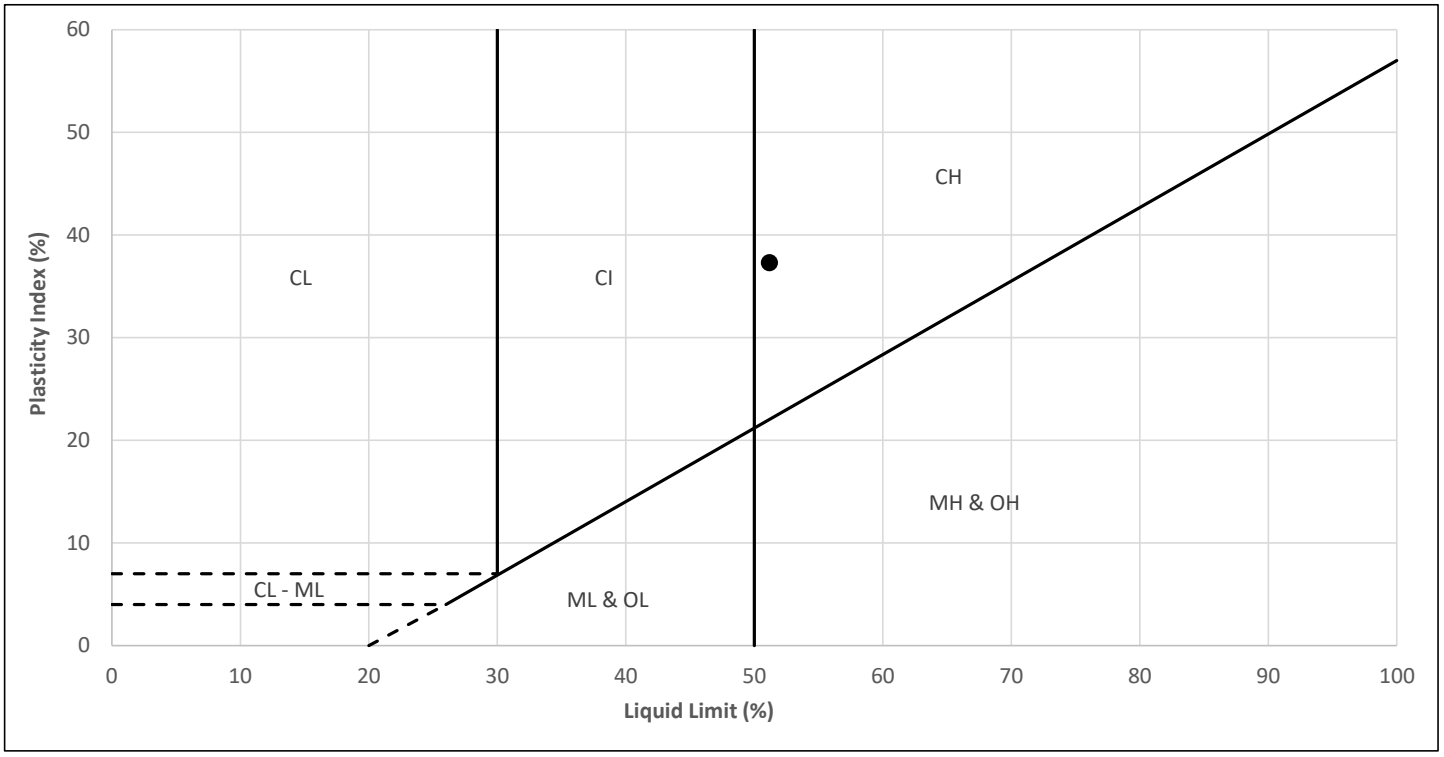
Project:	Snake Lake Reservoir Expansion	**Sample #:**	484AU6
Project No.:	1560-193-00	**Source:**	22BH484
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 484AU6	**Test Date:**	22-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.2
Plastic Limit (PL)	13.9
Plasticity Index (PI)	37.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

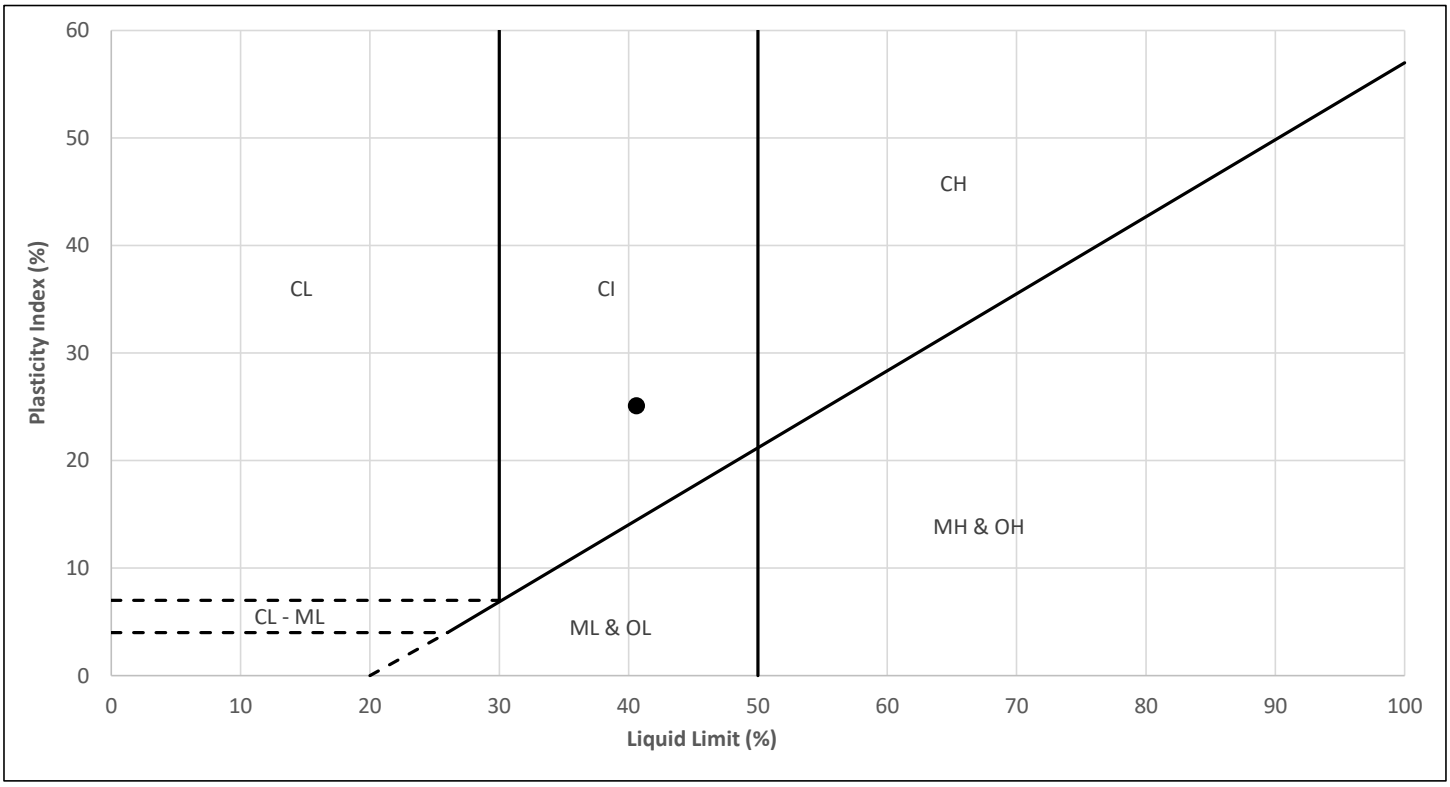
Project:	Snake Lake Reservoir Expansion	**Sample #:**	485AU2
Project No.:	1560-193-00	**Source:**	22BH485
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 485AU2	**Test Date:**	30-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	40.6
Plastic Limit (PL)	15.5
Plasticity Index (PI)	25.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

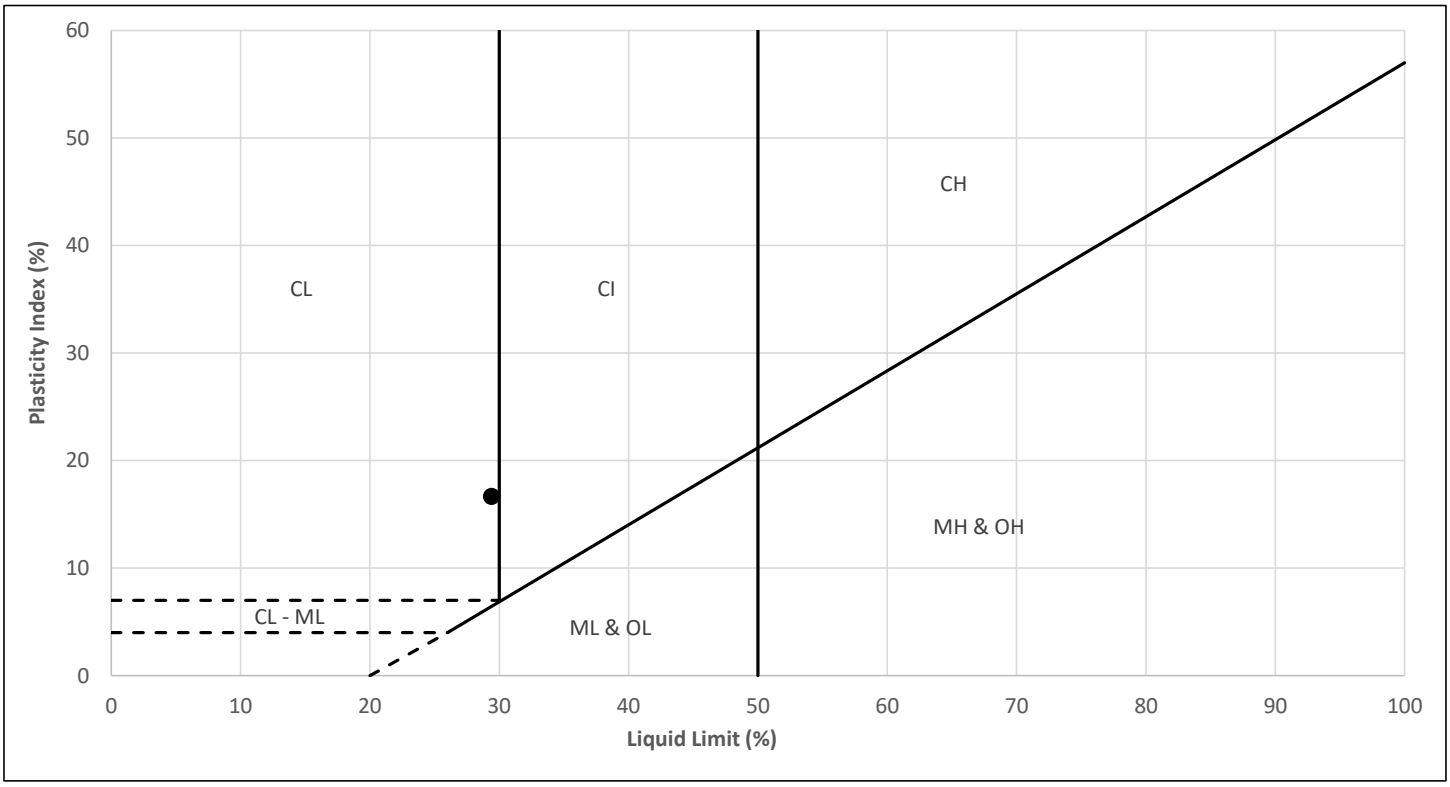
Project:	Snake Lake Reservoir Expansion	**Sample #:**	486AU1
Project No.:	1560-193-00	**Source:**	22BH486
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 486AU1	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays

Liquid Limit (LL)	29.4
Plastic Limit (PL)	12.7
Plasticity Index (PI)	16.7

Soil Plasticity	Low
Soil Classification	CL



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ATTERBERG LIMITS

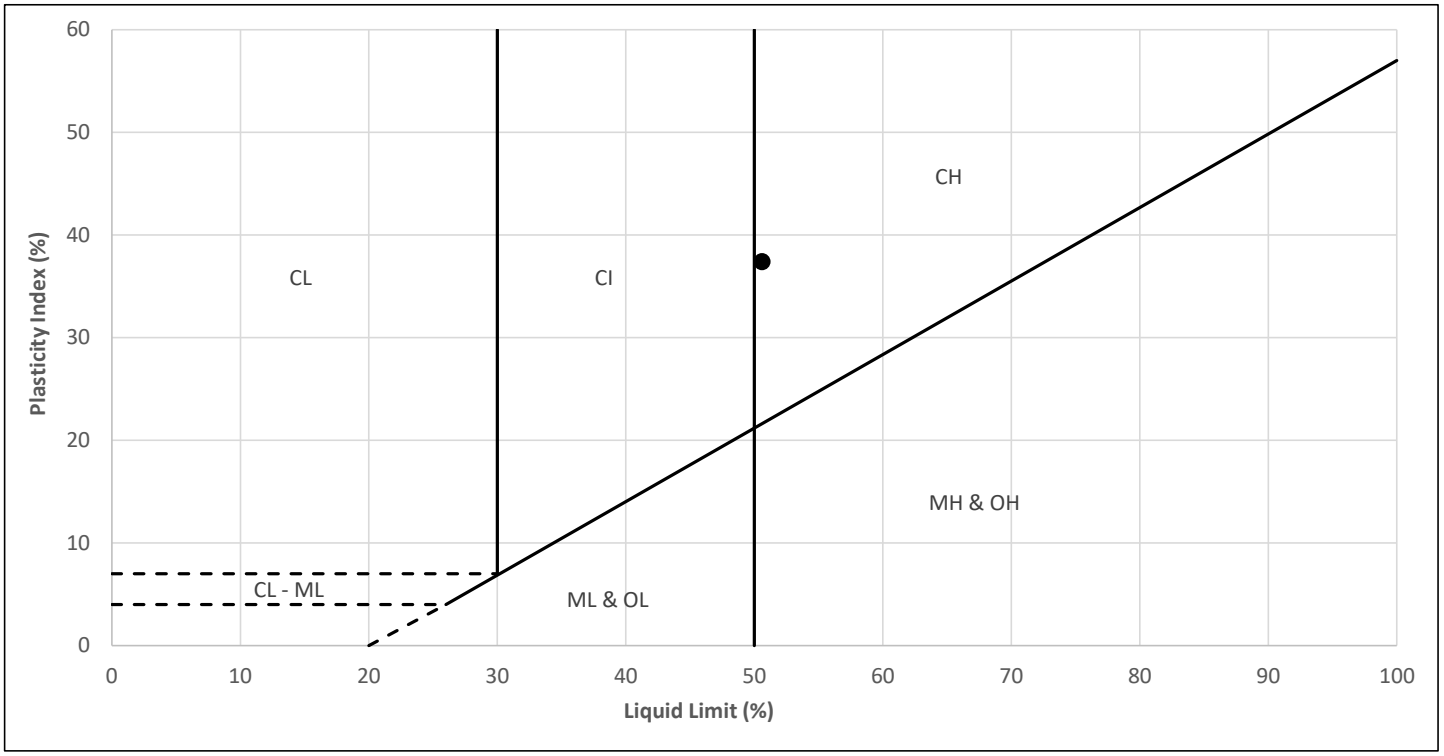
Project:	Snake Lake Reservoir Expansion	**Sample #:**	487AU2
Project No.:	1560-193-00	**Source:**	22BH487
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 487AU2	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.6
Plastic Limit (PL)	13.2
Plasticity Index (PI)	37.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

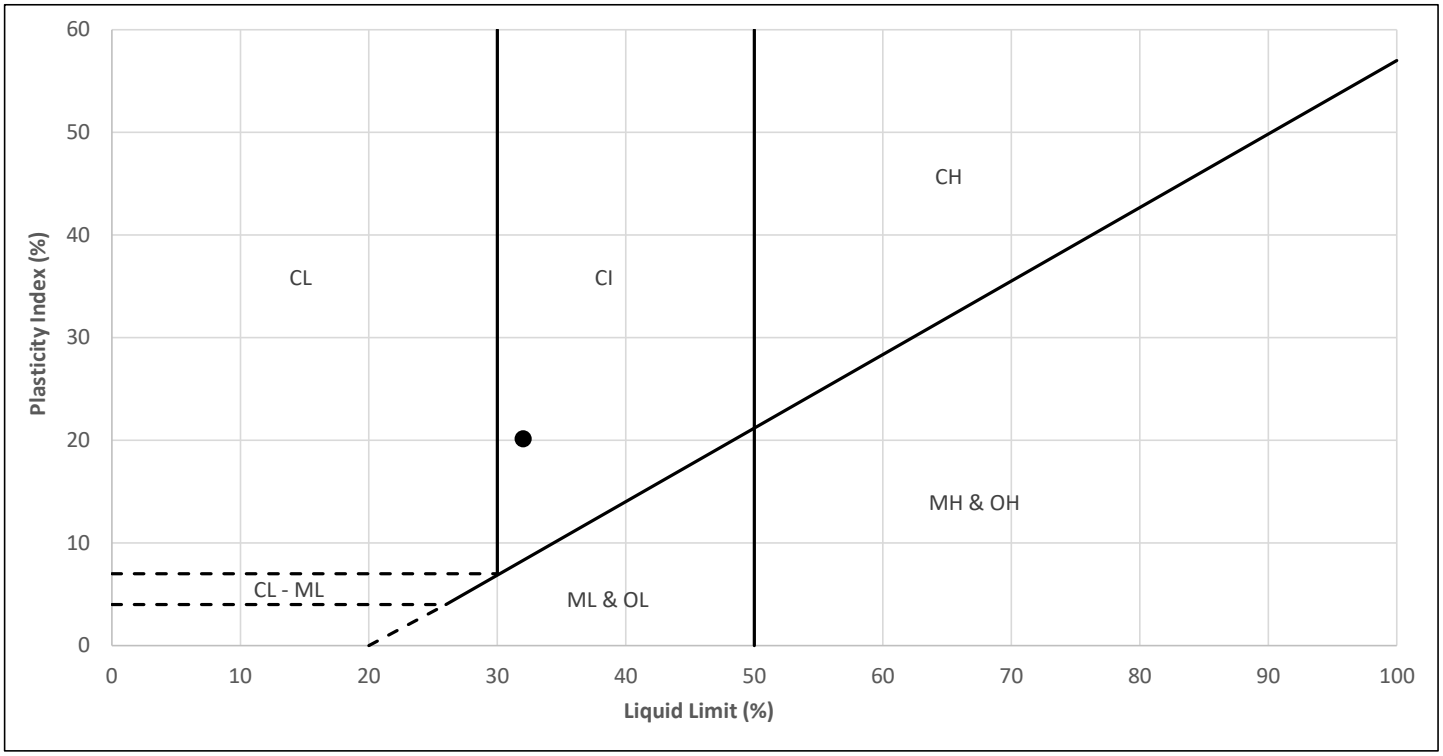
Project:	Snake Lake Reservoir Expansion	**Sample #:**	488AU8
Project No.:	1560-193-00	**Source:**	22BH488
Owner:	EID	**Sample Depth:**	5.7m
File No.:	AL - 488AU8	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	32.0
Plastic Limit (PL)	11.8
Plasticity Index (PI)	20.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

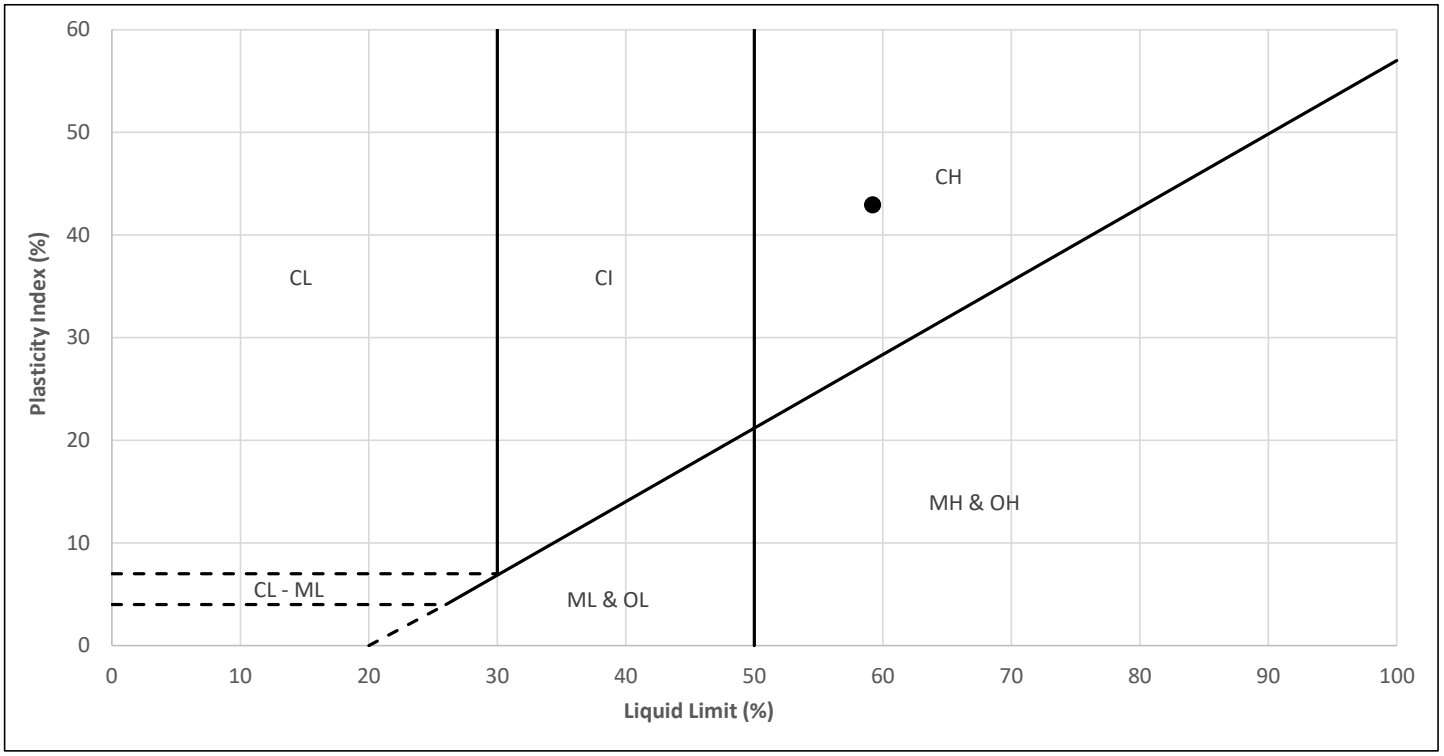
Project:	Snake Lake Reservoir Expansion	**Sample #:**	489AU2
Project No.:	1560-193-00	**Source:**	22BH489
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 489AU2	**Test Date:**	26-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	59.2
Plastic Limit (PL)	16.3
Plasticity Index (PI)	42.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

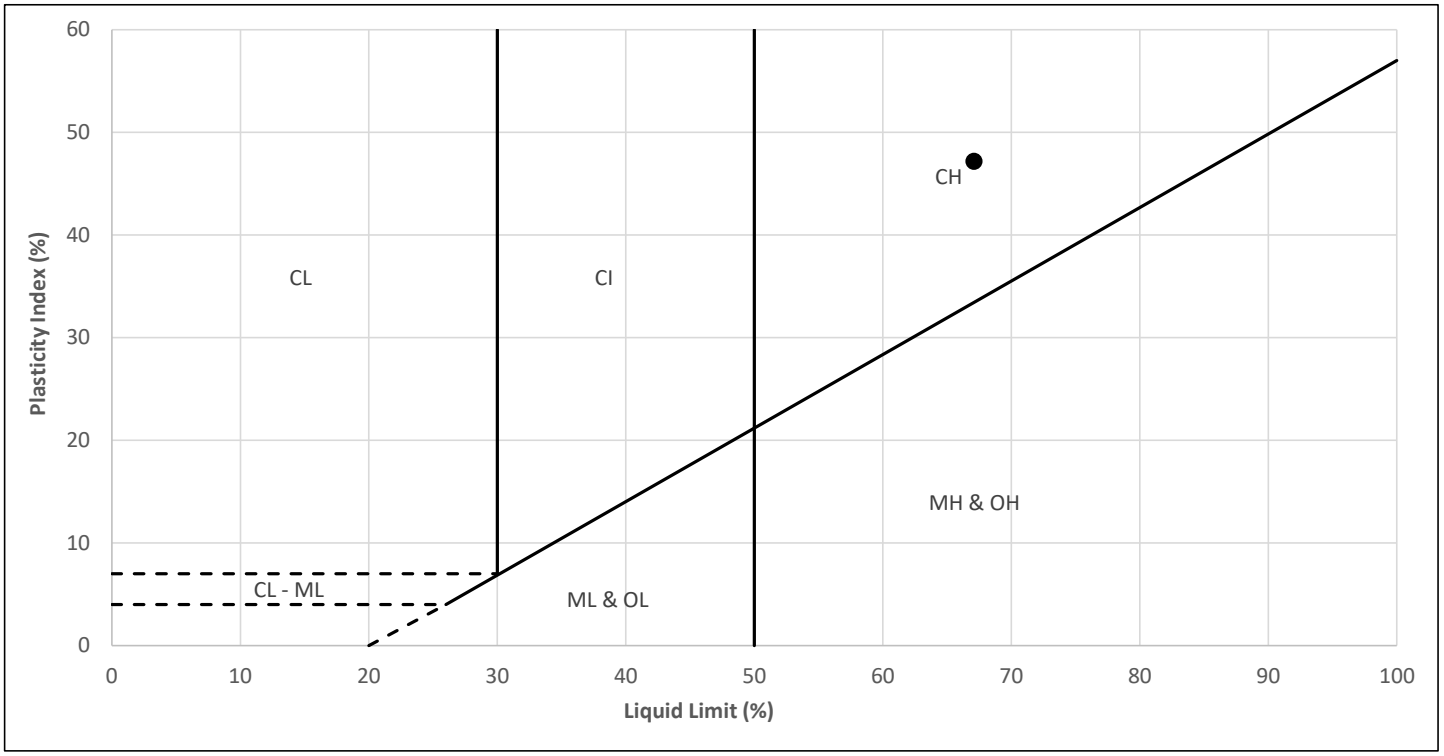
Project:	Snake Lake Reservoir Expansion	**Sample #:**	489AU7
Project No.:	1560-193-00	**Source:**	22BH489
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 489AU7	**Test Date:**	26-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	67.1
Plastic Limit (PL)	19.9
Plasticity Index (PI)	47.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

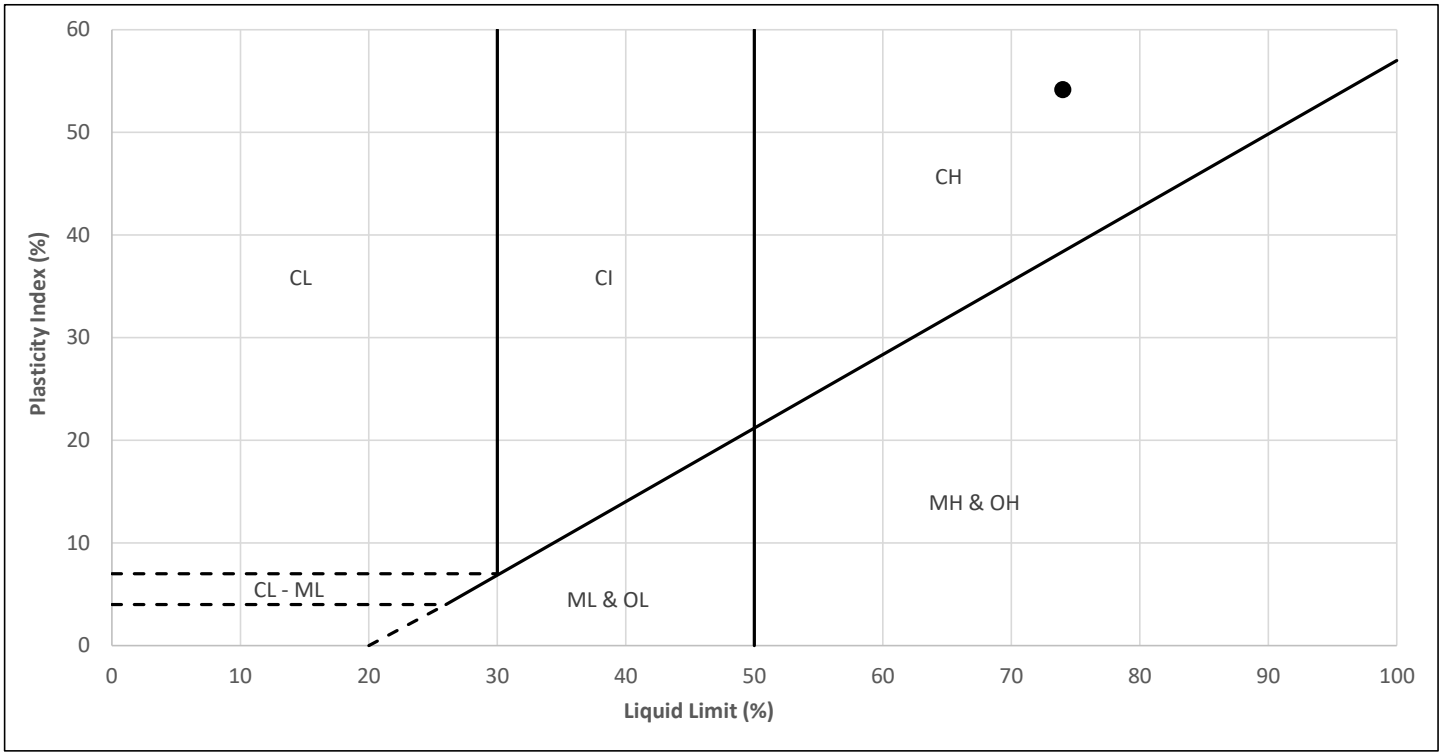
Project:	Snake Lake Reservoir Expansion	**Sample #:**	490AU2
Project No.:	1560-193-00	**Source:**	22BH490
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 490AU2	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	74.0
Plastic Limit (PL)	19.8
Plasticity Index (PI)	54.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

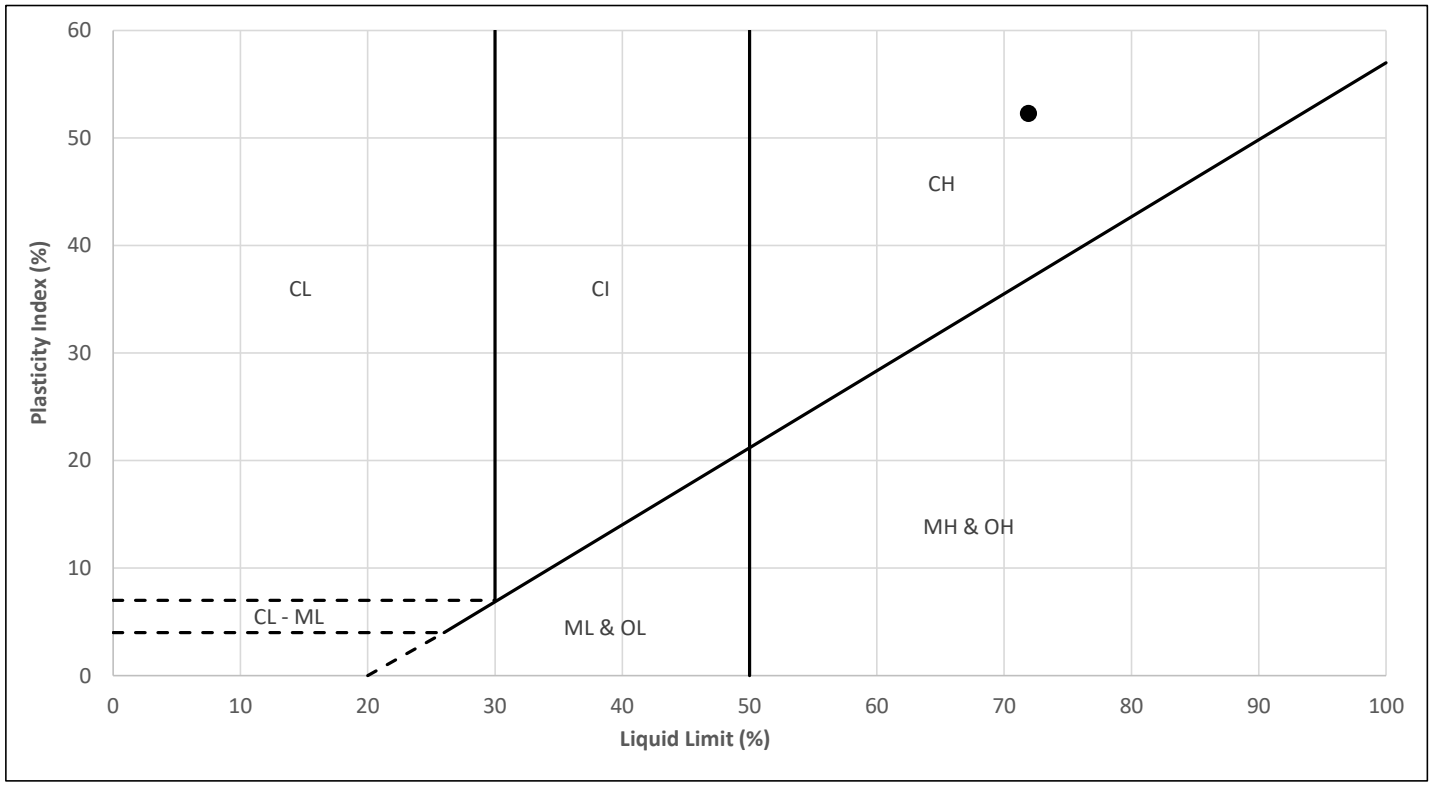
Project:	Snake Lake Reservoir Expansion	**Sample #:**	490AU3 GW
Project No.:	1560-193-00	**Source:**	22BH490
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 490AU3 GW	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	71.9
Plastic Limit (PL)	19.6
Plasticity Index (PI)	52.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

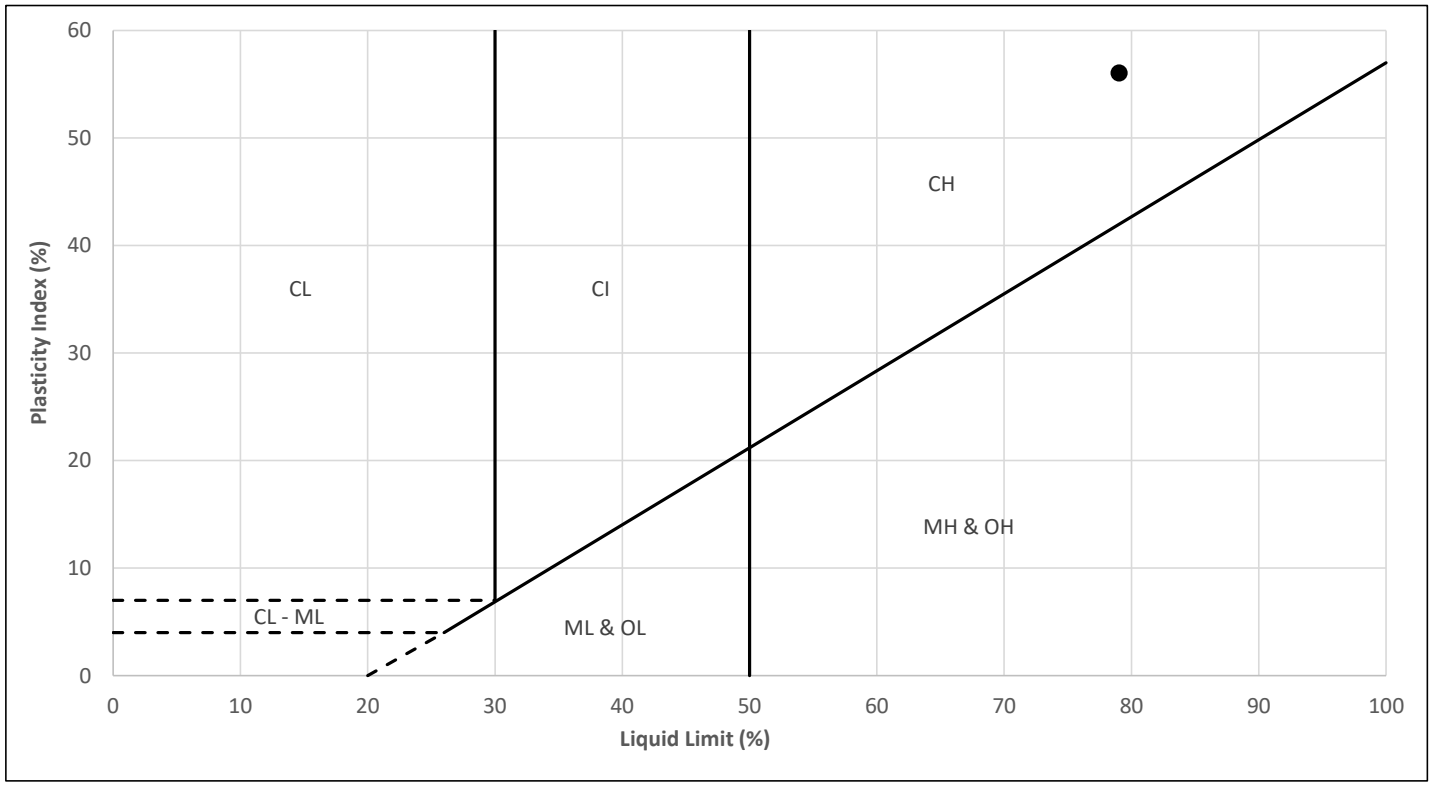
Project:	Snake Lake Reservoir Expansion	**Sample #:**	490AU3
Project No.:	1560-193-00	**Source:**	22BH490
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 490AU3	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	79.0
Plastic Limit (PL)	22.9
Plasticity Index (PI)	56.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

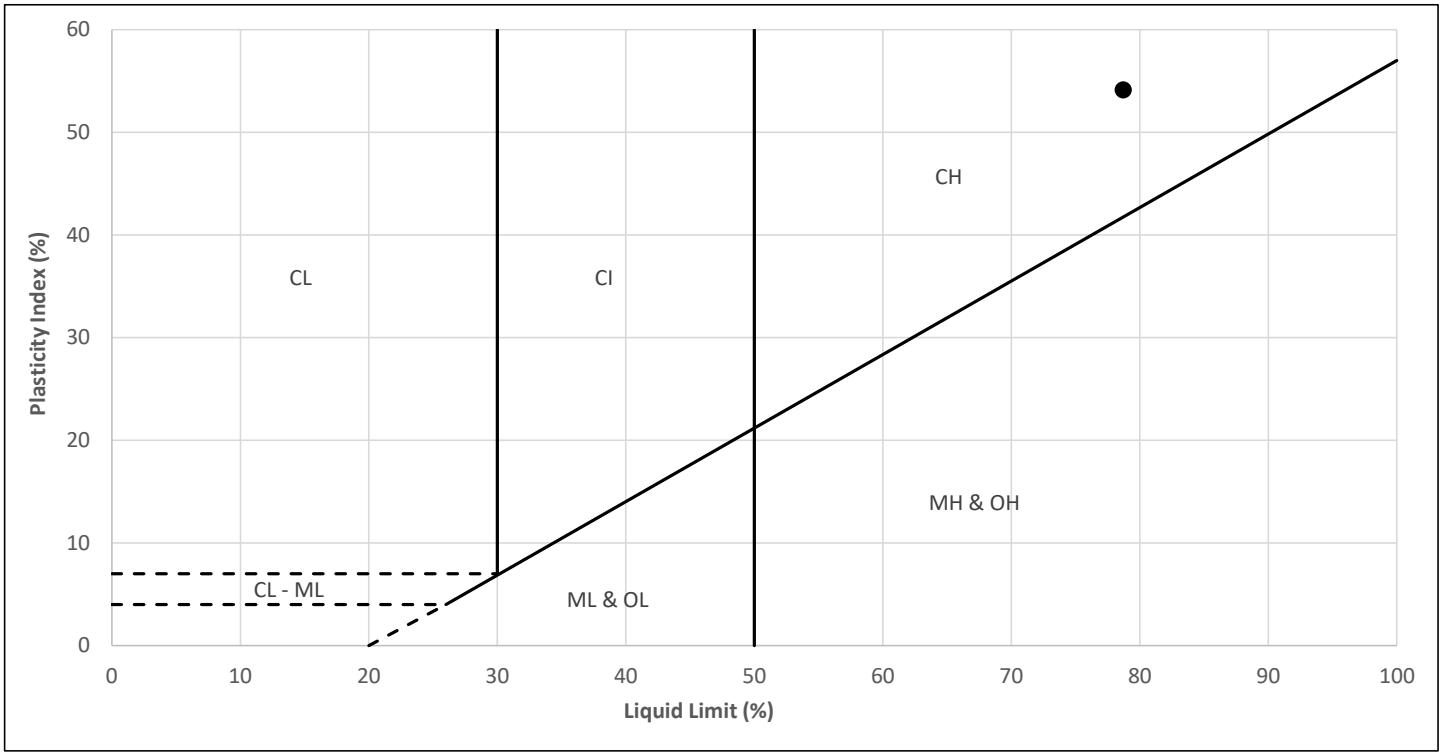
Project:	Snake Lake Reservoir Expansion	**Sample #:**	490AU6
Project No.:	1560-193-00	**Source:**	22BH490
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 490AU6	**Test Date:**	24-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	78.7
Plastic Limit (PL)	24.5
Plasticity Index (PI)	54.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

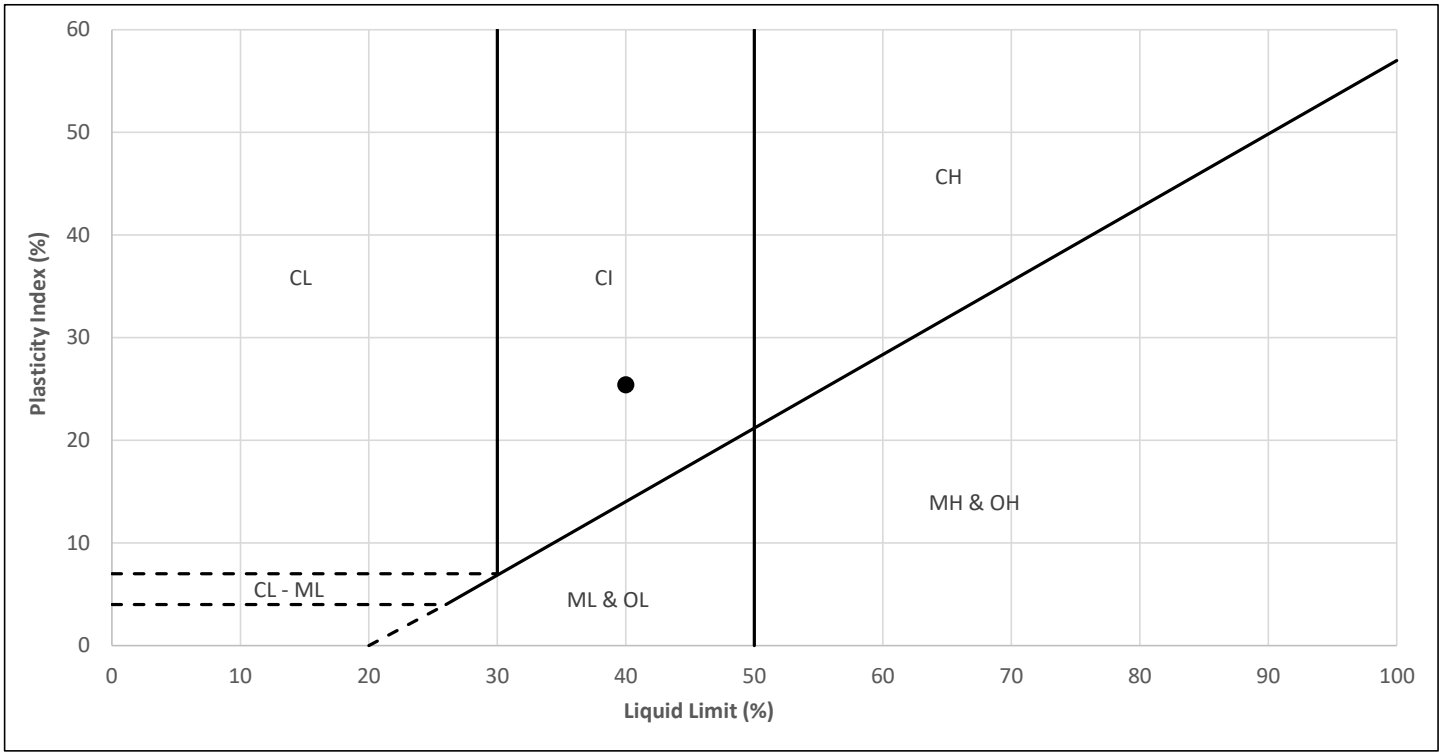
Project:	Snake Lake Reservoir Expansion	**Sample #:**	491AU2
Project No.:	1560-193-00	**Source:**	22BH491
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 491AU2	**Test Date:**	21-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	40.0
Plastic Limit (PL)	14.6
Plasticity Index (PI)	25.4

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

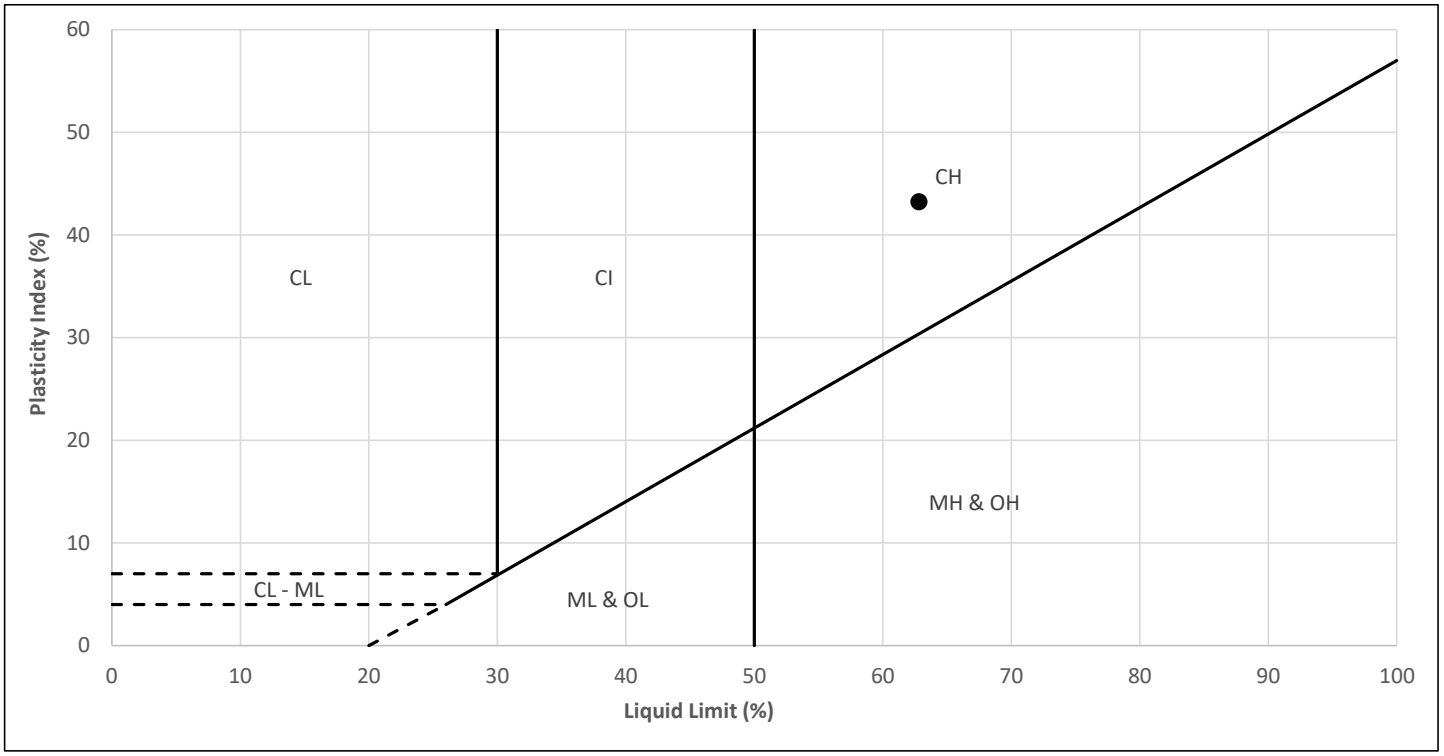
Project:	Snake Lake Reservoir Expansion	**Sample #:**	491AU7
Project No.:	1560-193-00	**Source:**	22BH491
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 491AU7	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	62.8
Plastic Limit (PL)	19.5
Plasticity Index (PI)	43.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

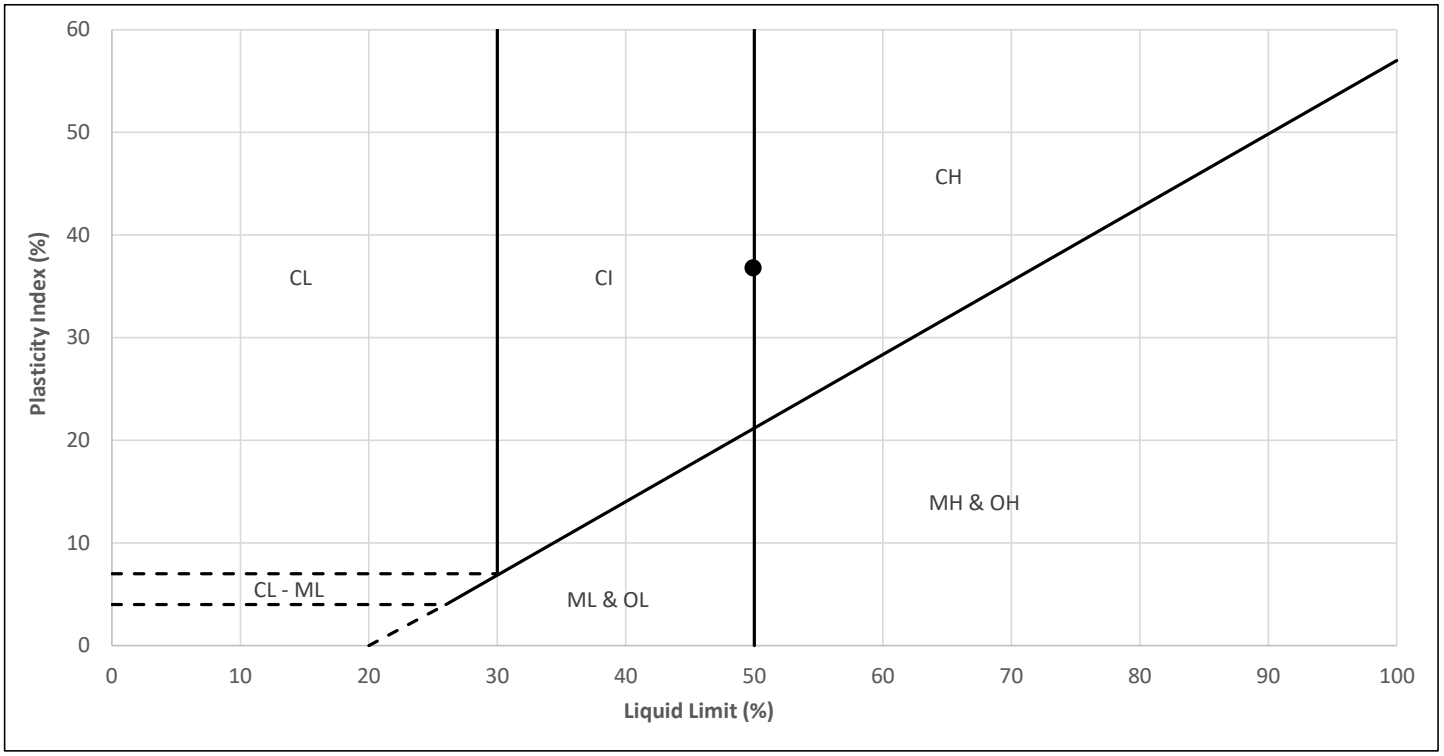
Project:	Snake Lake Reservoir Expansion	**Sample #:**	492AU2
Project No.:	1560-193-00	**Source:**	22BH492
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 492AU2	**Test Date:**	21-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.9
Plastic Limit (PL)	13.1
Plasticity Index (PI)	36.8

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

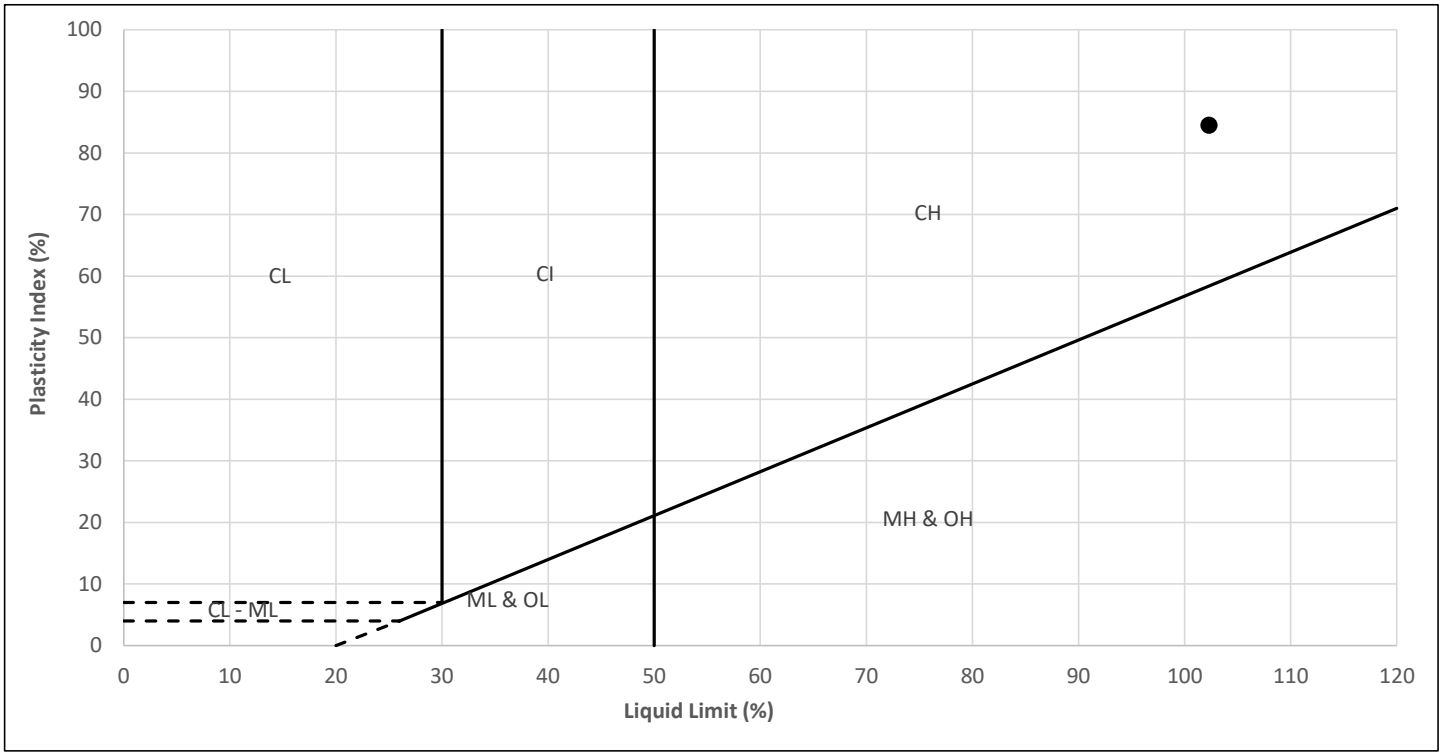
Project:	Snake Lake Reservoir Expansion	**Sample #:**	492AU6
Project No.:	1560-193-00	**Source:**	22BH492
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 492AU6	**Test Date:**	21-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	102.3
Plastic Limit (PL)	17.8
Plasticity Index (PI)	84.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

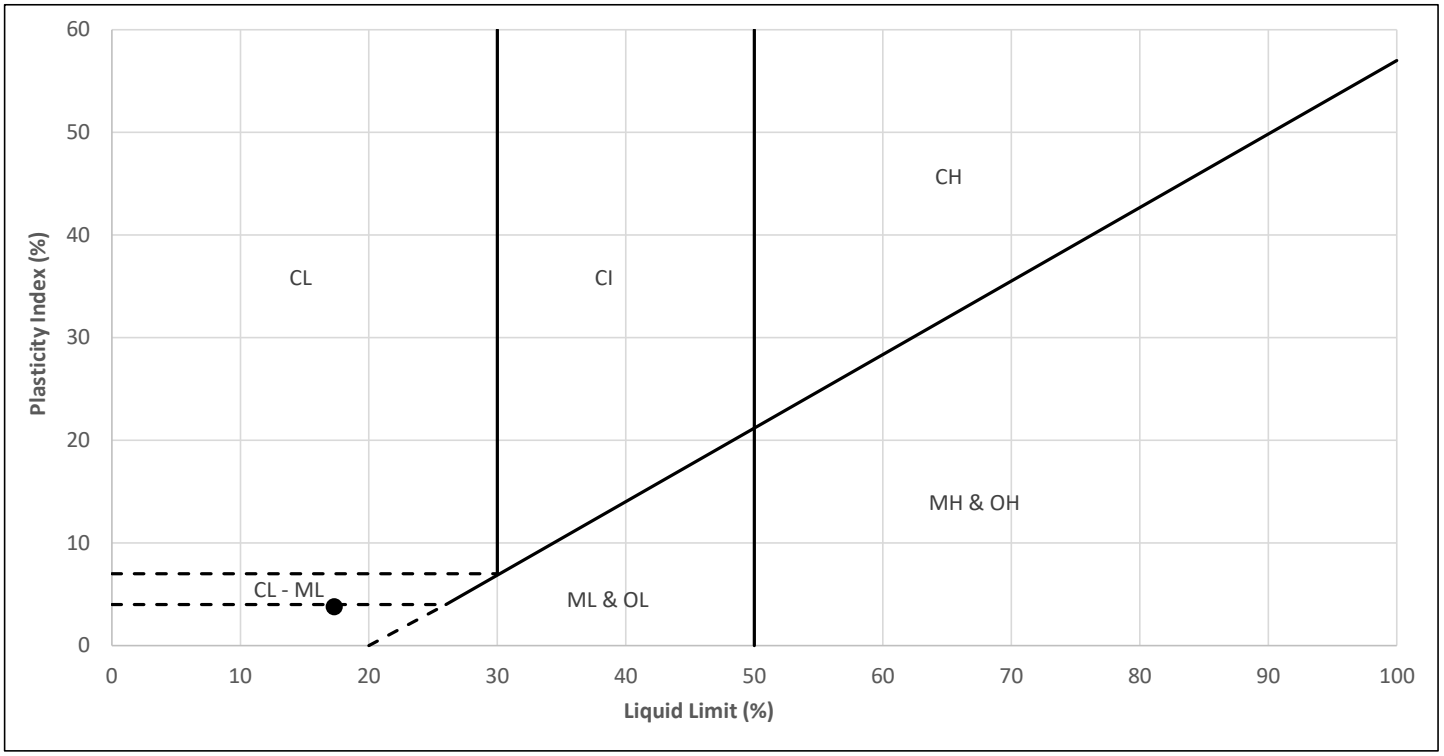
Project:	Snake Lake Reservoir Expansion	**Sample #:**	493AU2
Project No.:	1560-193-00	**Source:**	22BH493
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 493AU2	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays

Liquid Limit (LL)	17.3
Plastic Limit (PL)	13.5
Plasticity Index (PI)	3.8

Soil Plasticity	Low
Soil Classification	CL



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ATTERBERG LIMITS

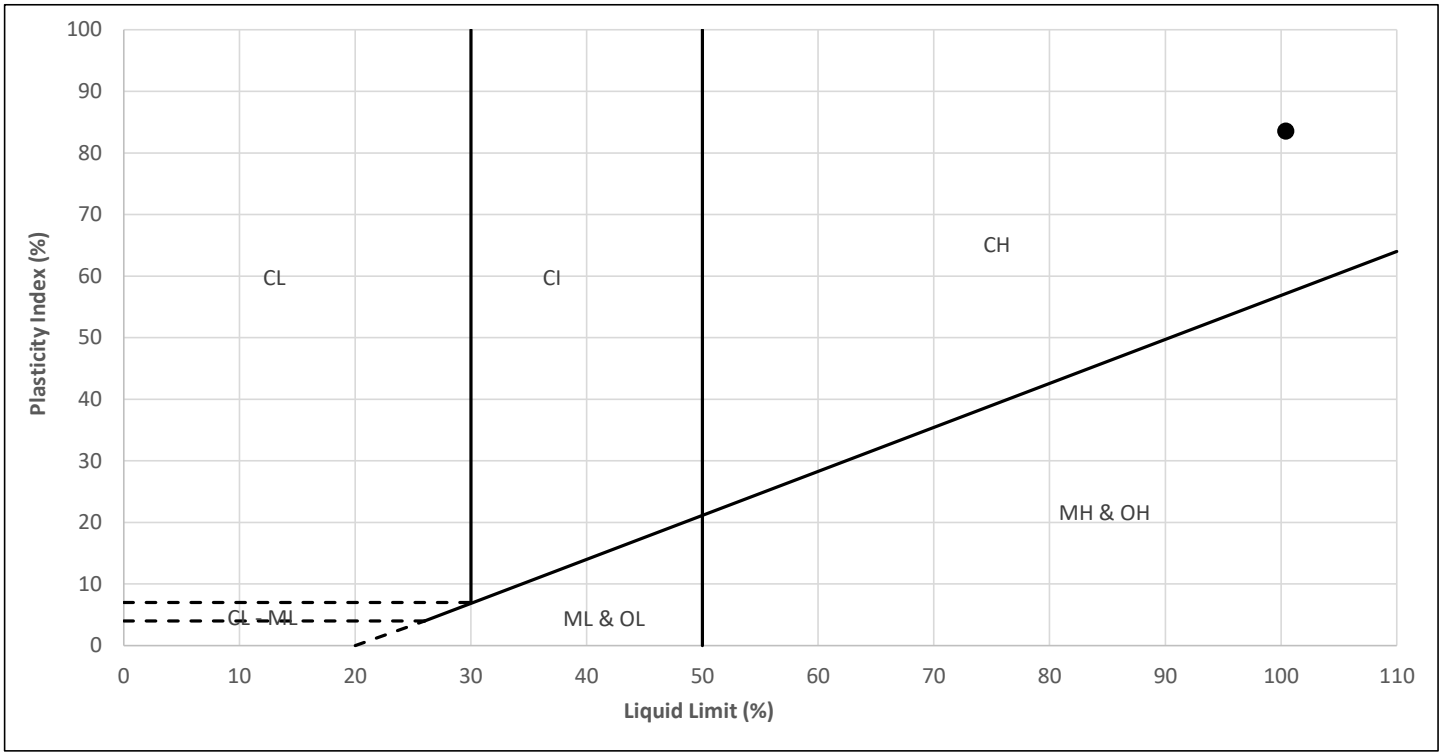
Project:	Snake Lake Reservoir Expansion	**Sample #:**	493AU7
Project No.:	1560-193-00	**Source:**	22BH493
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 493AU7	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	100.4
Plastic Limit (PL)	16.9
Plasticity Index (PI)	83.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

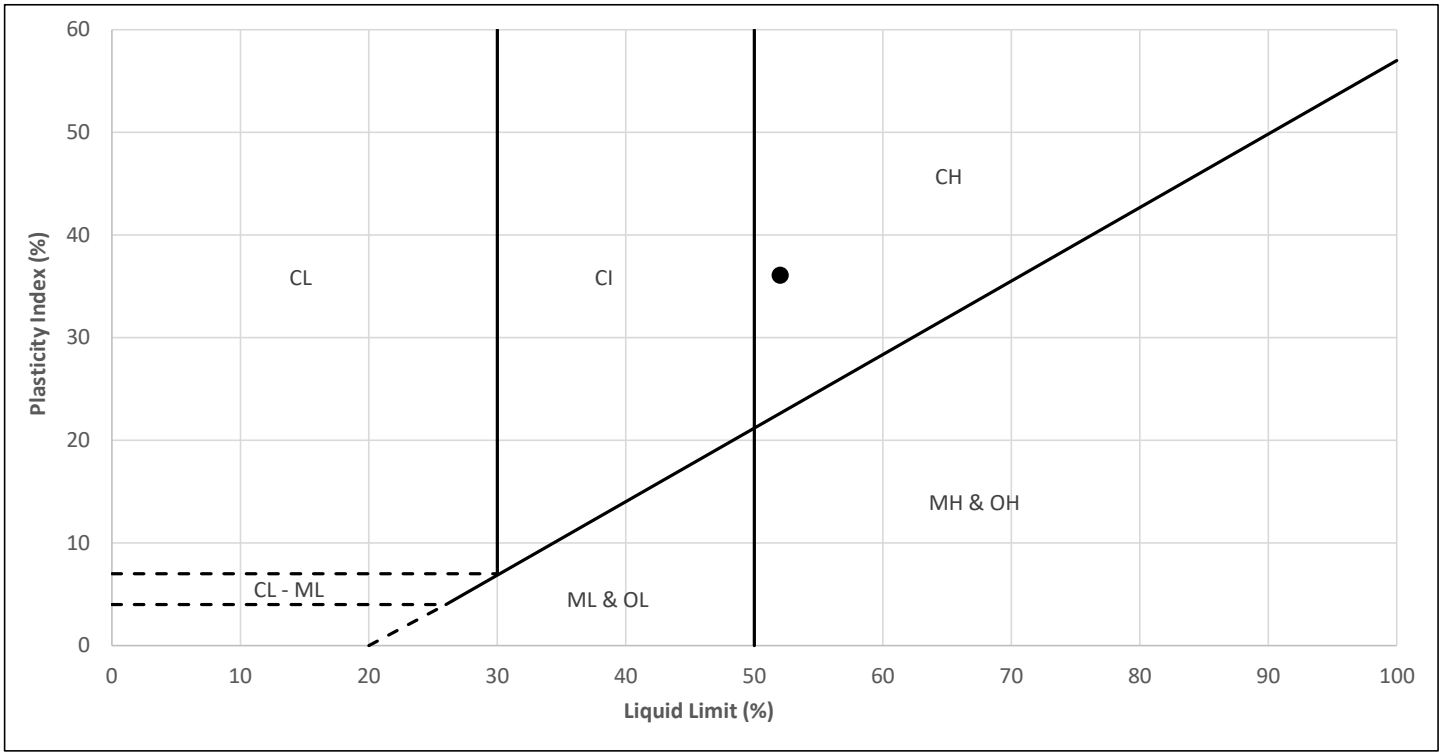
Project:	Snake Lake Reservoir Expansion	**Sample #:**	494AU2
Project No.:	1560-193-00	**Source:**	22BH494
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 494AU2	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.0
Plastic Limit (PL)	15.9
Plasticity Index (PI)	36.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

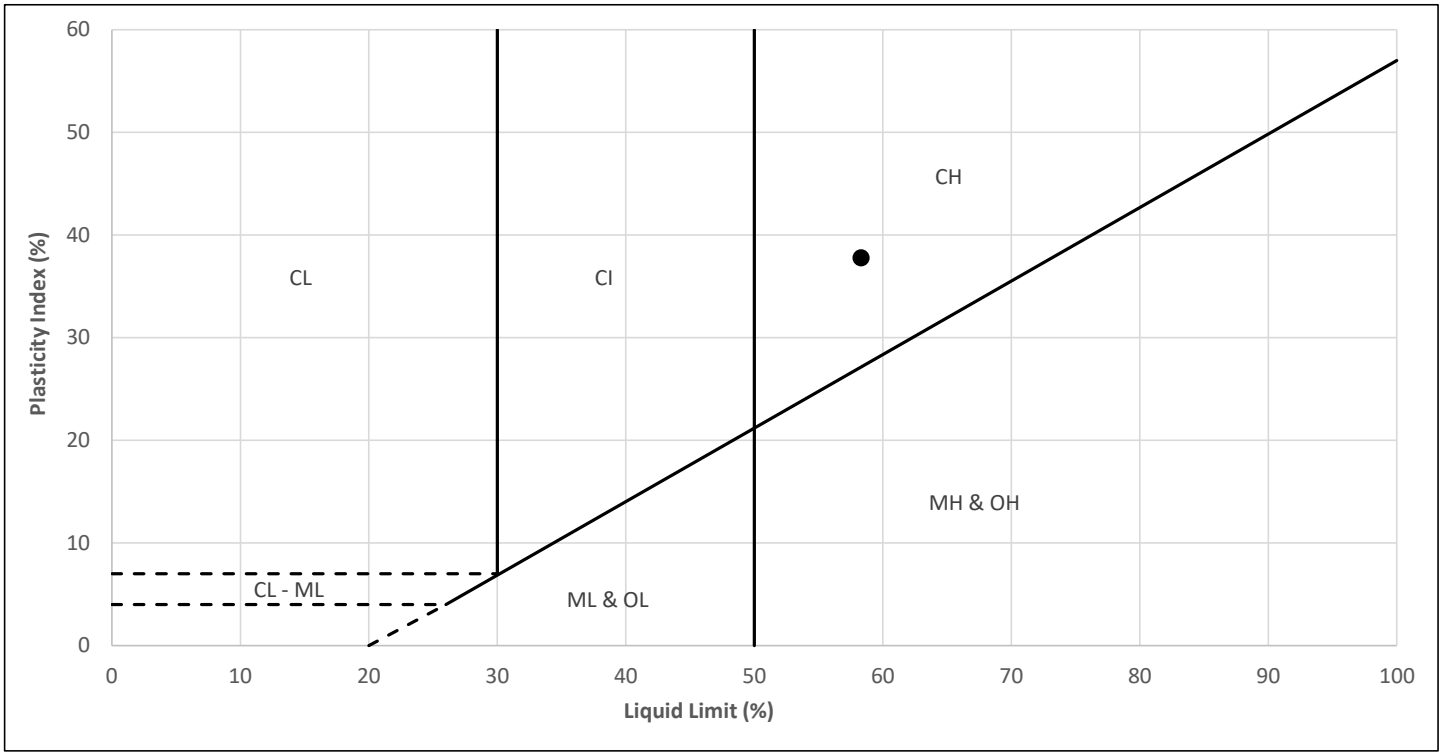
Project:	Snake Lake Reservoir Expansion	**Sample #:**	494AU6
Project No.:	1560-193-00	**Source:**	22BH494
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 494AU6	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	58.3
Plastic Limit (PL)	20.5
Plasticity Index (PI)	37.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

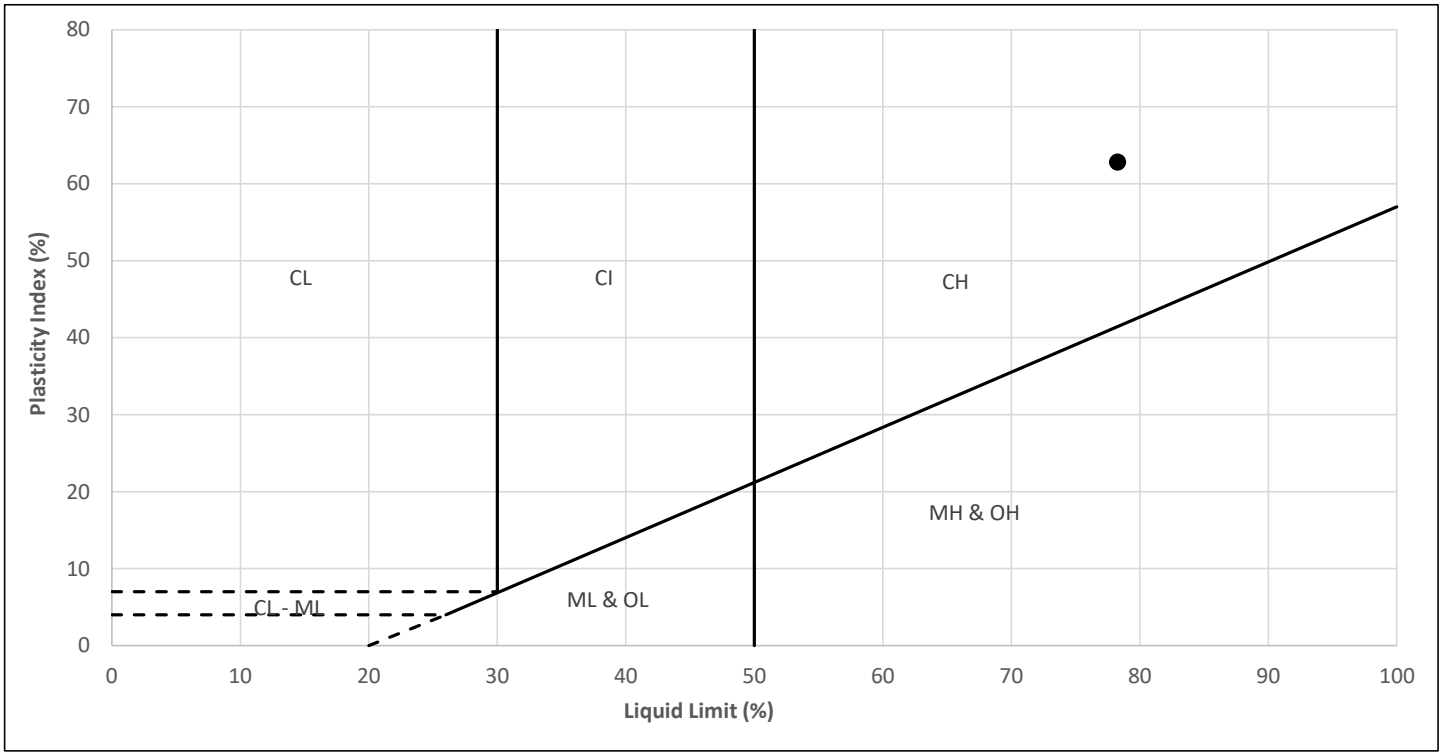
Project:	Snake Lake Reservoir Expansion	**Sample #:**	495AU2
Project No.:	1560-193-00	**Source:**	22BH495
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 495AU2	**Test Date:**	22-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	78.3
Plastic Limit (PL)	15.5
Plasticity Index (PI)	62.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

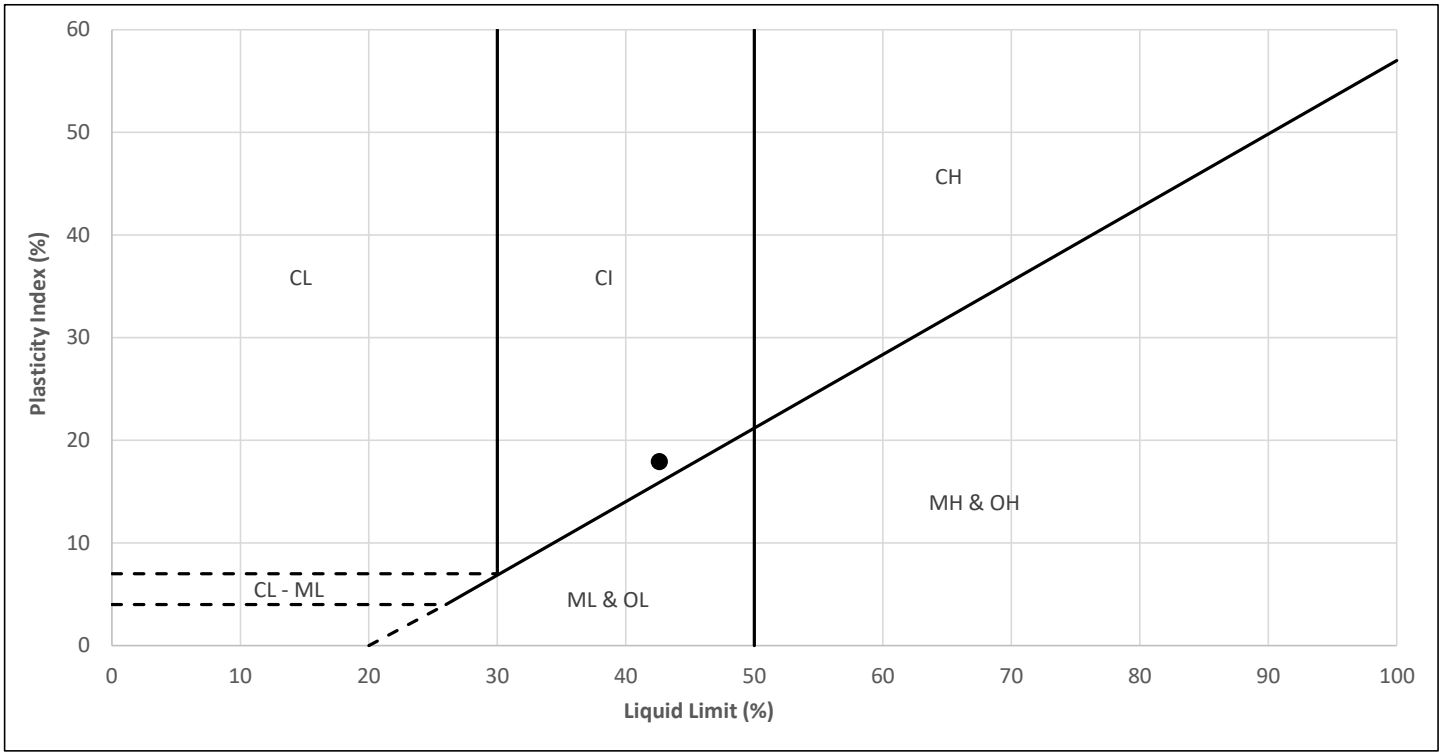
Project:	Snake Lake Reservoir Expansion	**Sample #:**	495AU7
Project No.:	1560-193-00	**Source:**	22BH495
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 495AU7	**Test Date:**	23-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	42.6
Plastic Limit (PL)	24.7
Plasticity Index (PI)	17.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

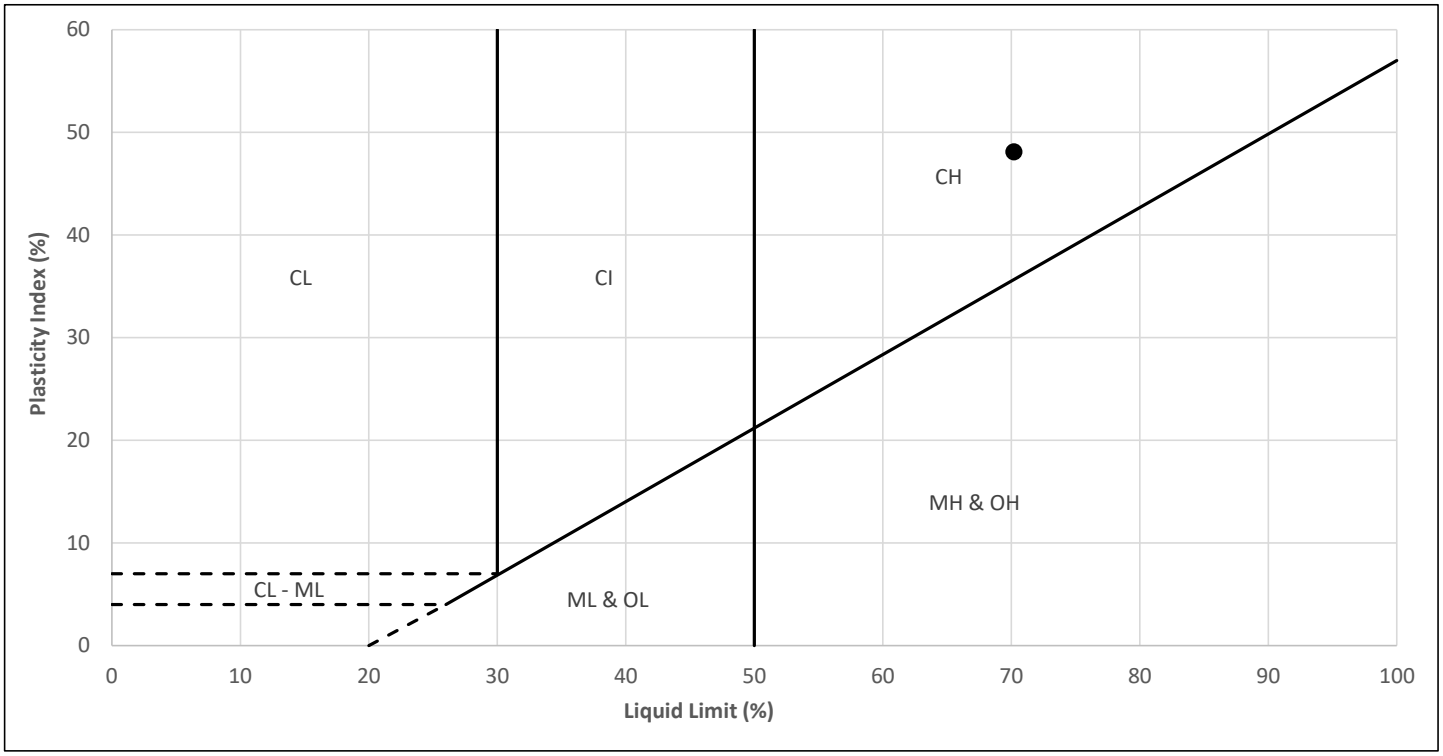
Project:	Snake Lake Reservoir Expansion	**Sample #:**	496AU2
Project No.:	1560-193-00	**Source:**	22BH496
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 496AU2	**Test Date:**	24-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	70.2
Plastic Limit (PL)	22.1
Plasticity Index (PI)	48.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

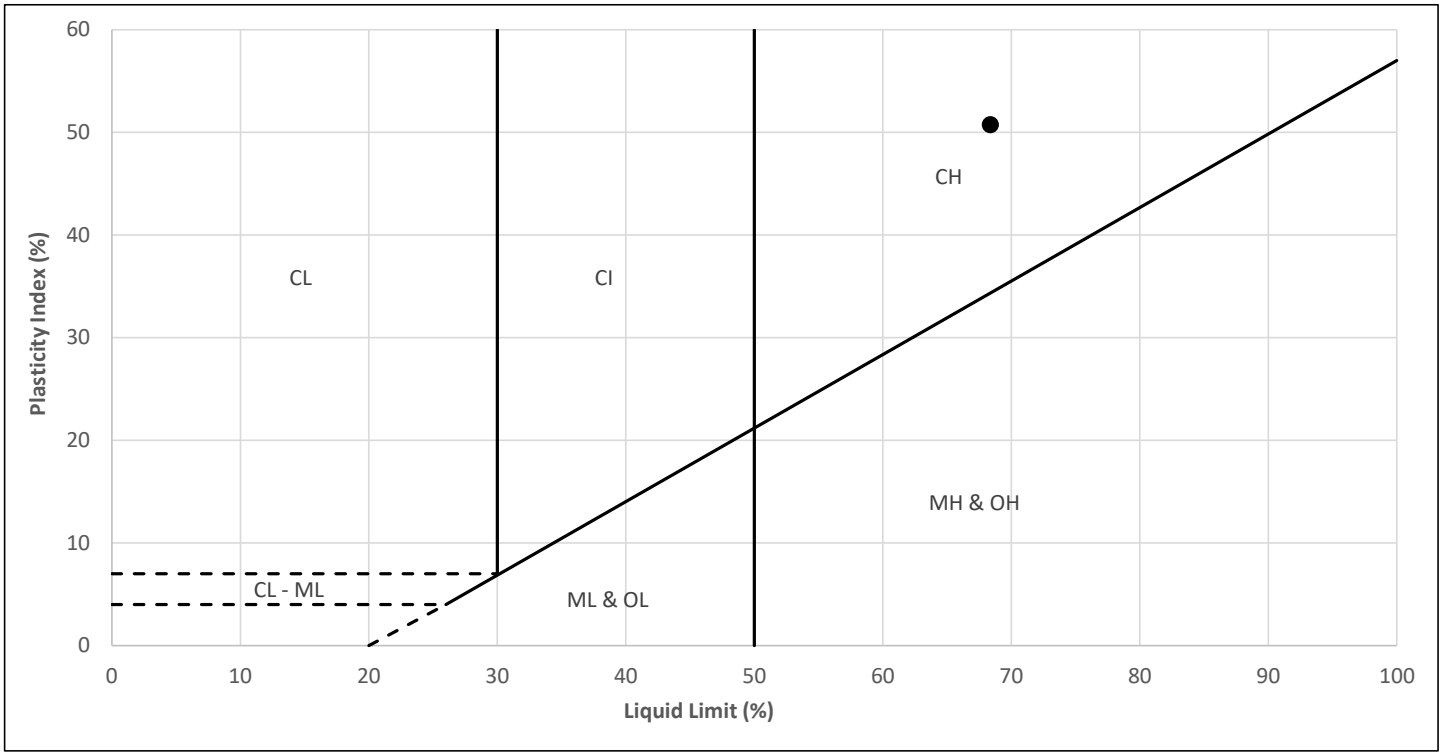
Project:	Snake Lake Reservoir Expansion	**Sample #:**	496AU4
Project No.:	1560-193-00	**Source:**	22BH496
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 496AU4	**Test Date:**	22-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	68.4
Plastic Limit (PL)	17.6
Plasticity Index (PI)	50.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

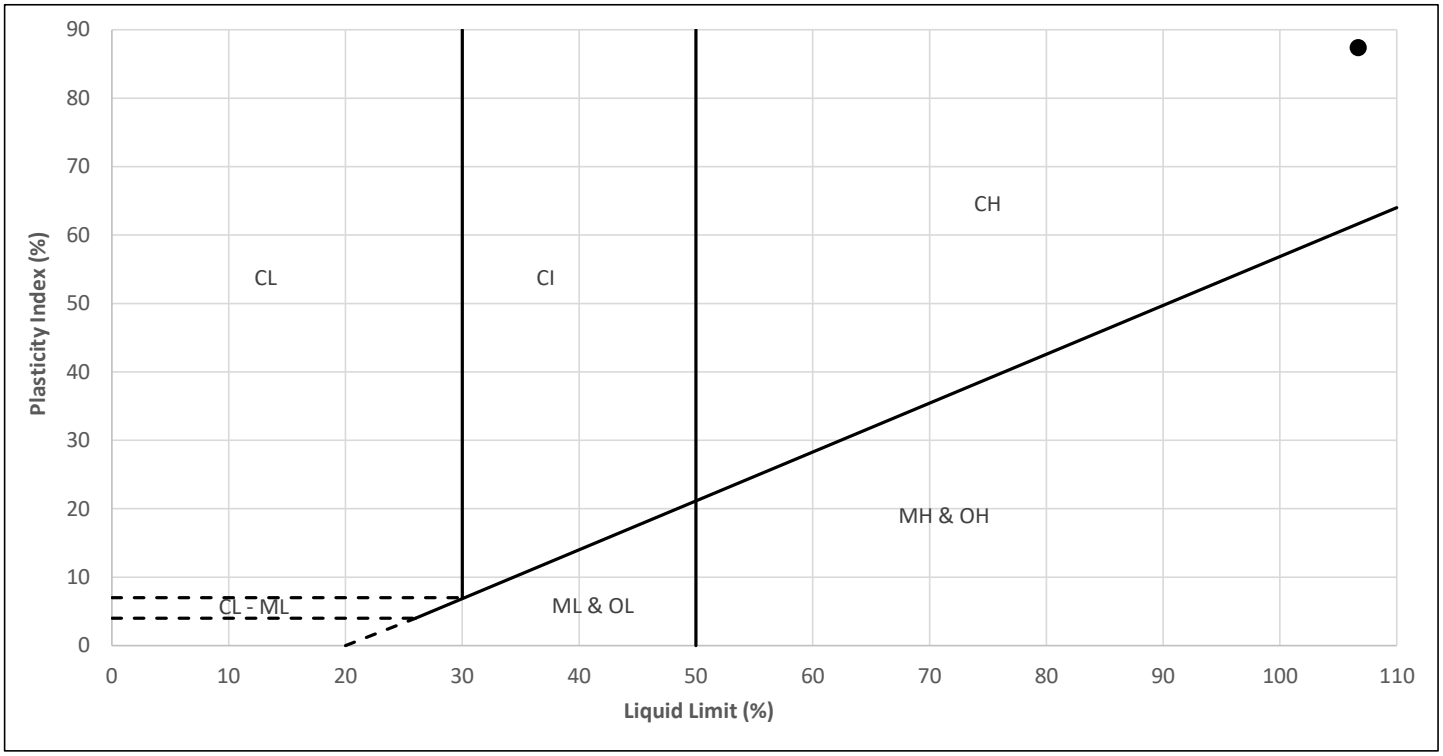
Project:	Snake Lake Reservoir Expansion	**Sample #:**	496AU6
Project No.:	1560-193-00	**Source:**	22BH496
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 496AU6	**Test Date:**	23-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	106.7
Plastic Limit (PL)	19.3
Plasticity Index (PI)	87.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

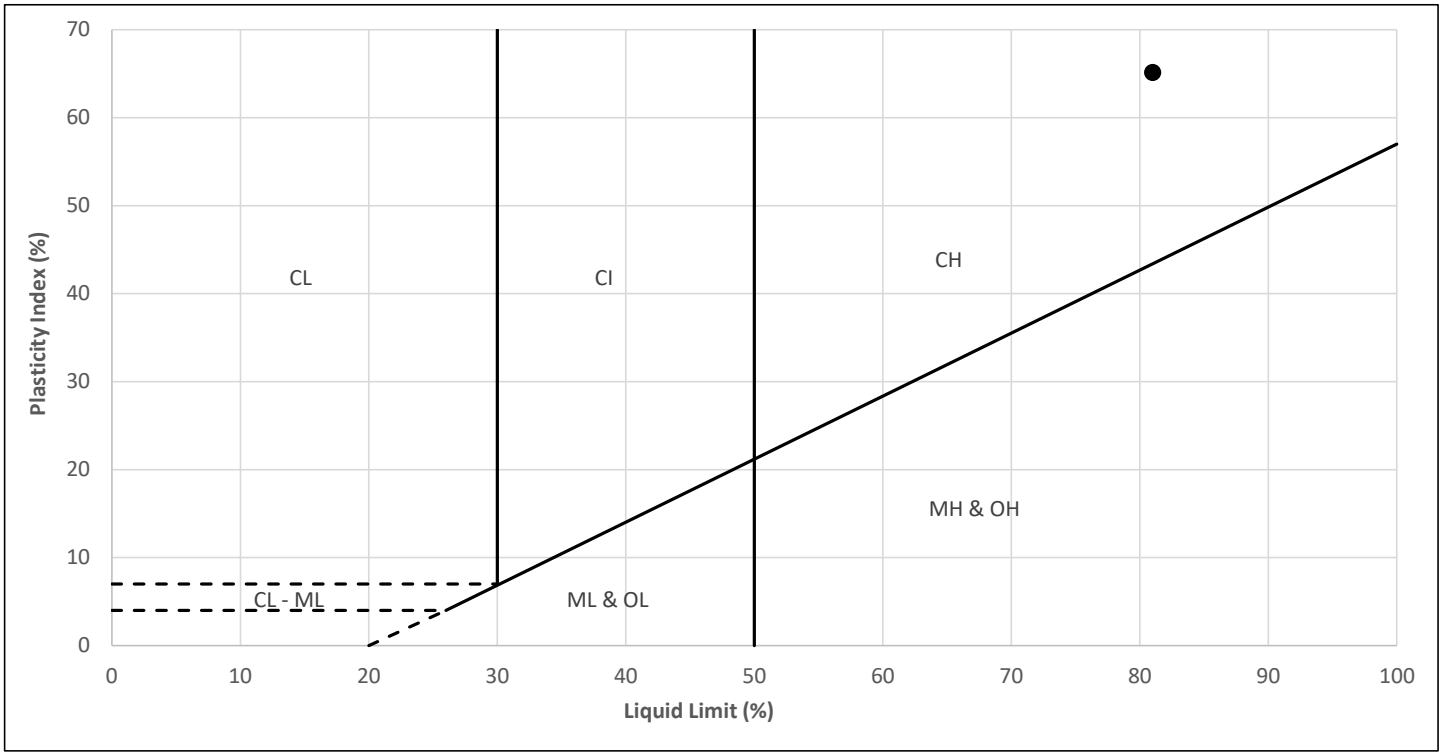
Project:	Snake Lake Reservoir Expansion	**Sample #:**	497AU2
Project No.:	1560-193-00	**Source:**	22BH497
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 497AU2	**Test Date:**	14-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	81.0
Plastic Limit (PL)	15.8
Plasticity Index (PI)	65.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

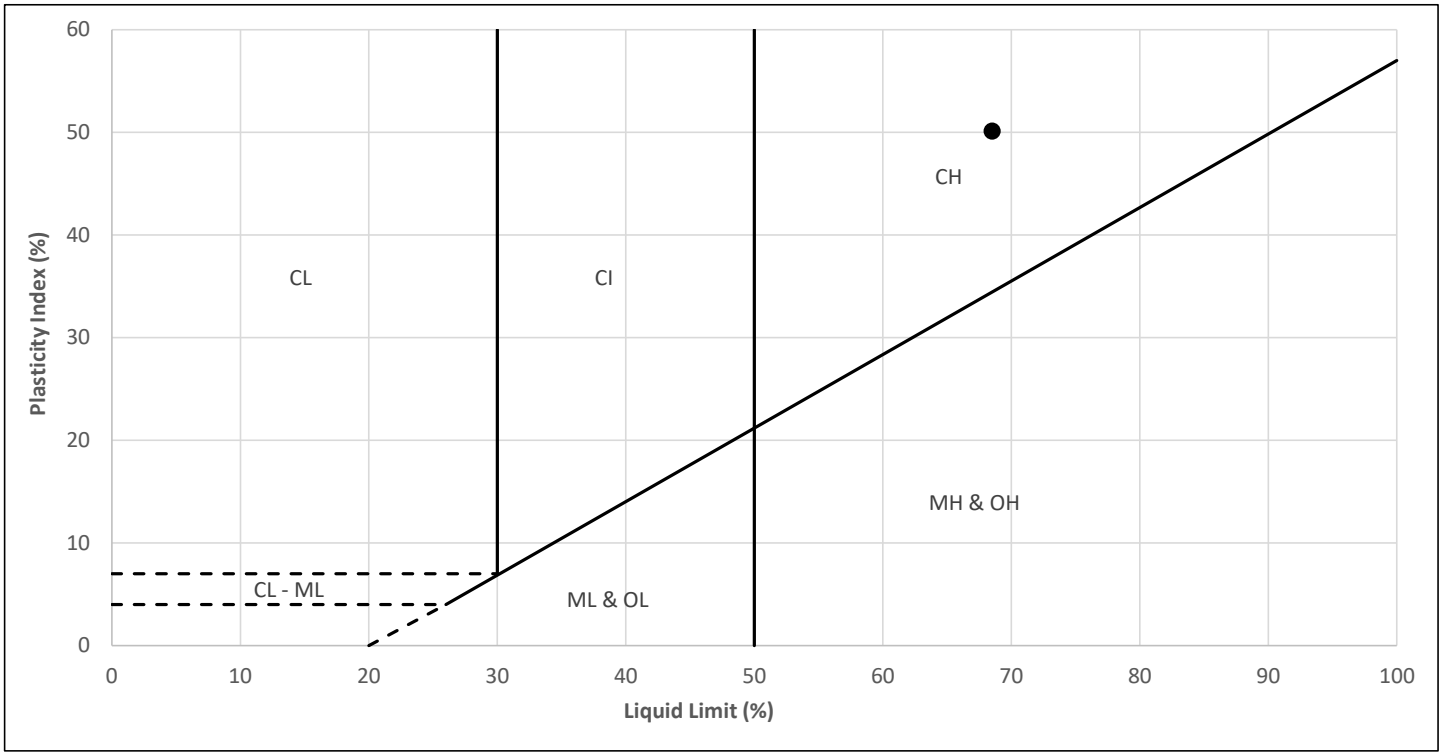
Project:	Snake Lake Reservoir Expansion	**Sample #:**	497AU7
Project No.:	1560-193-00	**Source:**	22BH497
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 497AU7	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	68.5
Plastic Limit (PL)	18.4
Plasticity Index (PI)	50.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

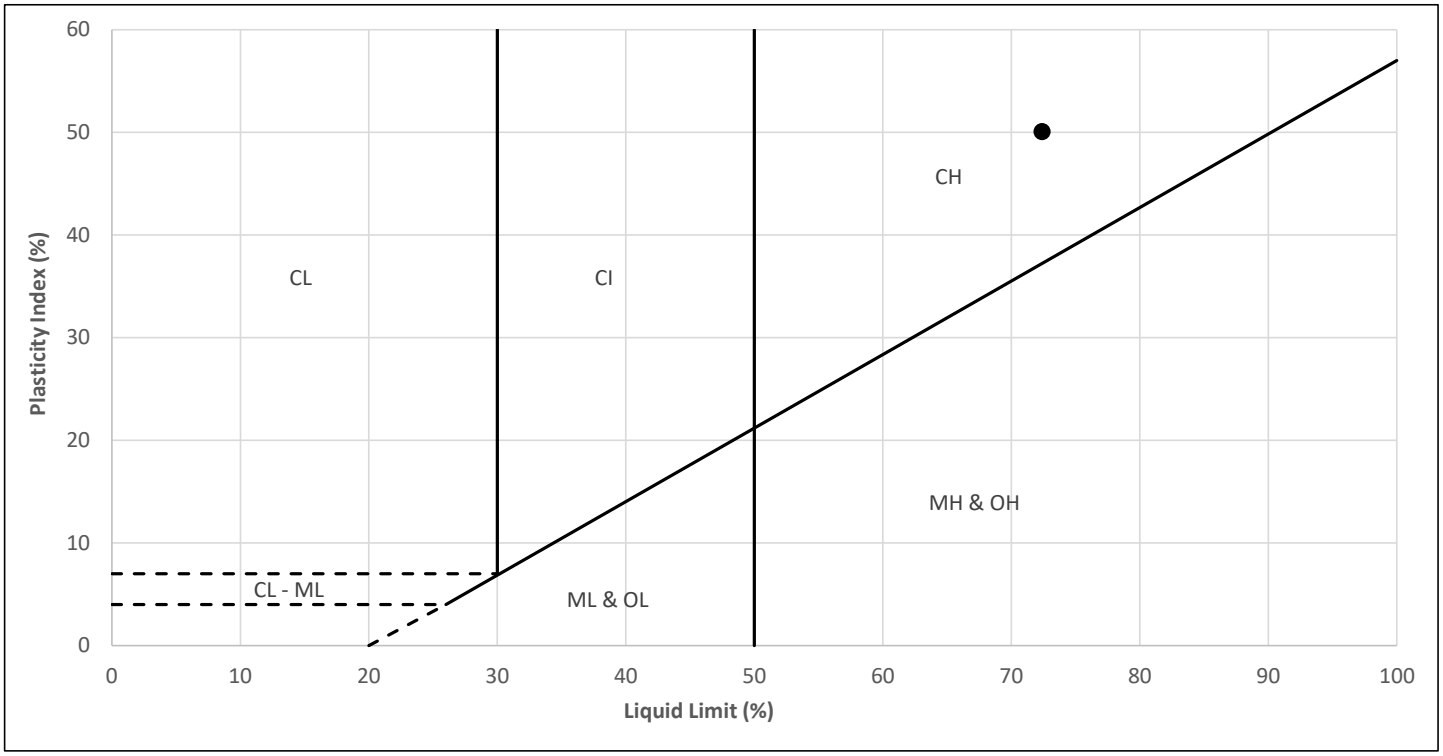
Project:	Snake Lake Reservoir Expansion	**Sample #:**	498AU2
Project No.:	1560-193-00	**Source:**	22BH498
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 498AU2	**Test Date:**	1-Nov-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	72.4
Plastic Limit (PL)	22.3
Plasticity Index (PI)	50.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

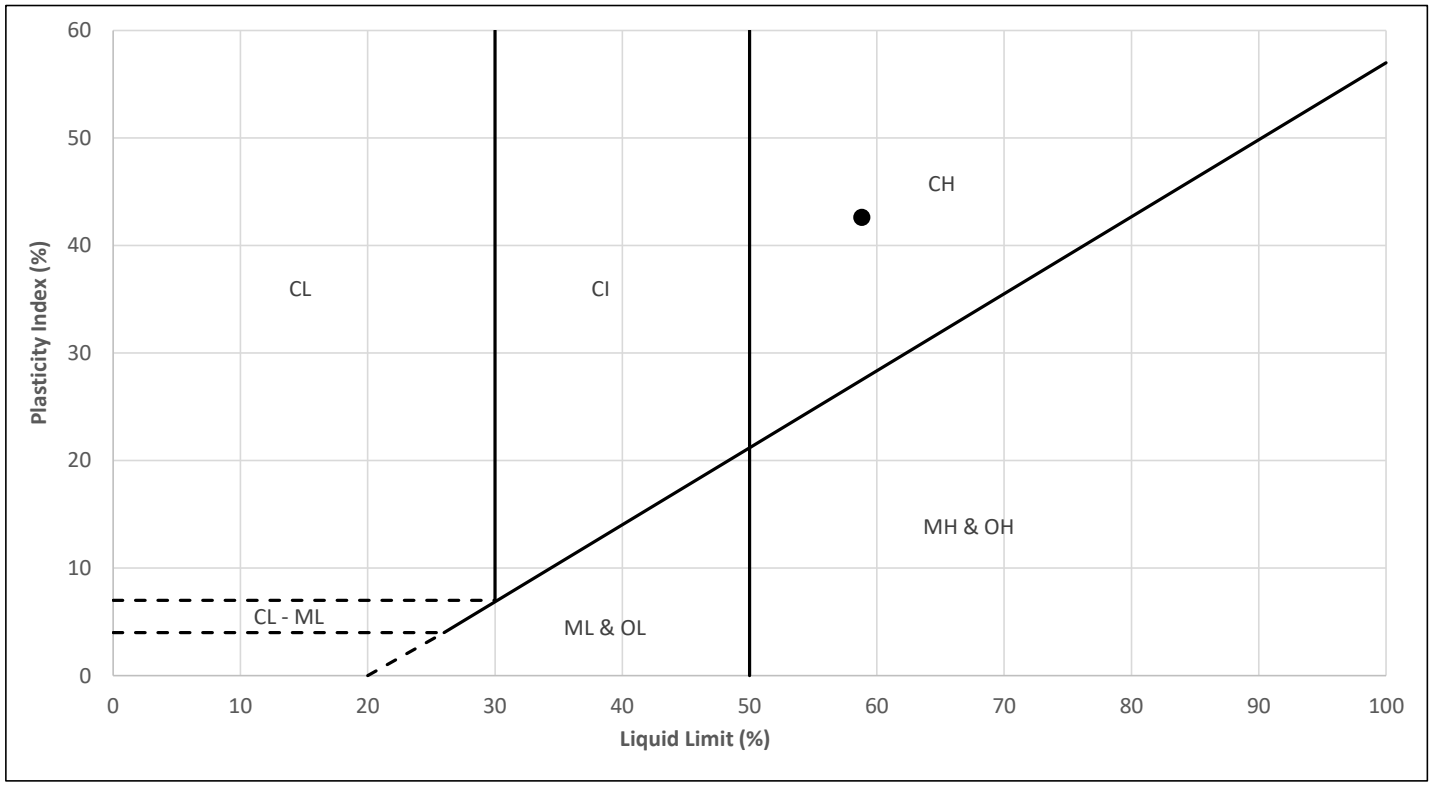
Project:	Snake Lake Reservoir Expansion	**Sample #:**	498AU2 GW
Project No.:	1560-193-00	**Source:**	22BH498
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 498AU2 GW	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	58.8
Plastic Limit (PL)	16.2
Plasticity Index (PI)	42.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

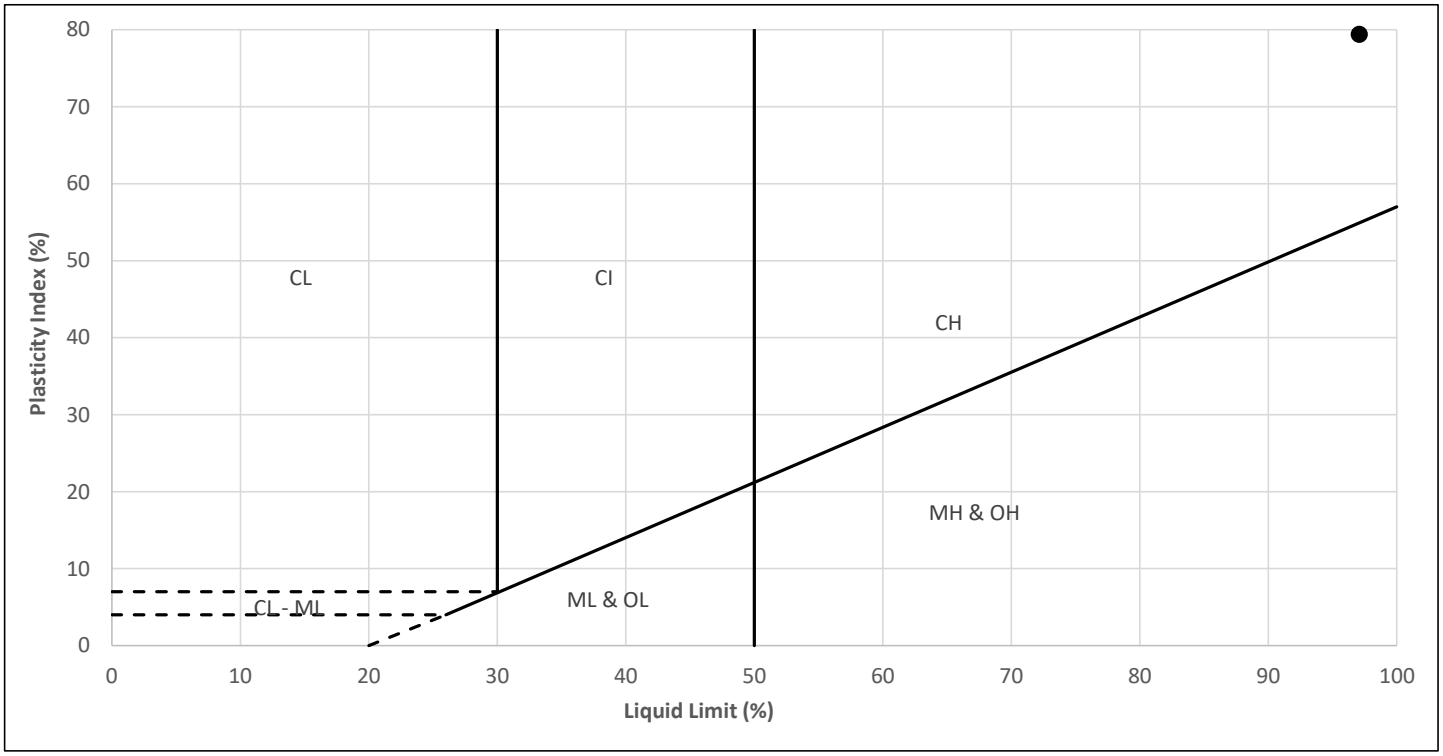
Project:	Snake Lake Reservoir Expansion	**Sample #:**	498AU5
Project No.:	1560-193-00	**Source:**	22BH498
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 498AU5	**Test Date:**	22-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	97.1
Plastic Limit (PL)	17.7
Plasticity Index (PI)	79.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

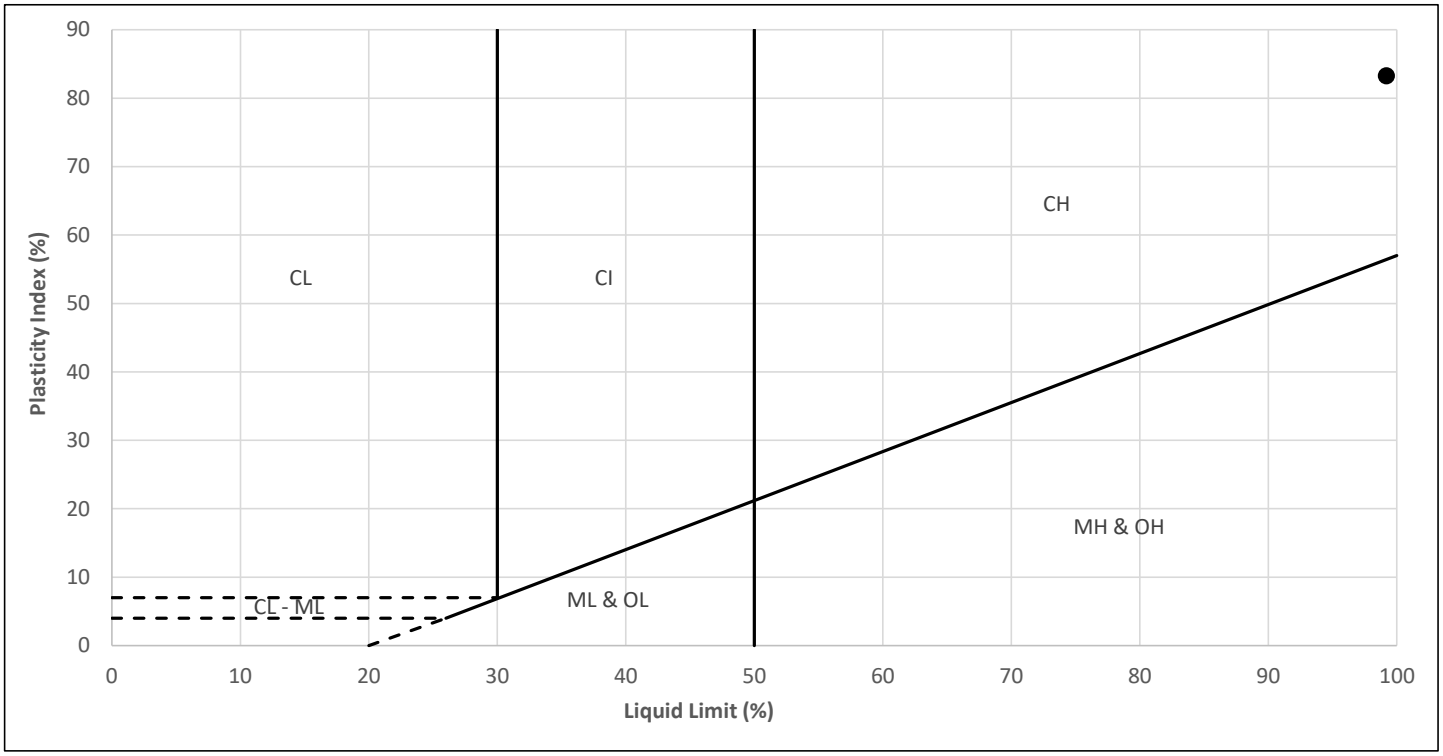
Project:	Snake Lake Reservoir Expansion	**Sample #:**	498AU6
Project No.:	1560-193-00	**Source:**	22BH498
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 498AU6	**Test Date:**	19-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	99.2
Plastic Limit (PL)	15.9
Plasticity Index (PI)	83.3

Soil Plasticity	High
Soil Classification	CH



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Tel: (403)892-6036

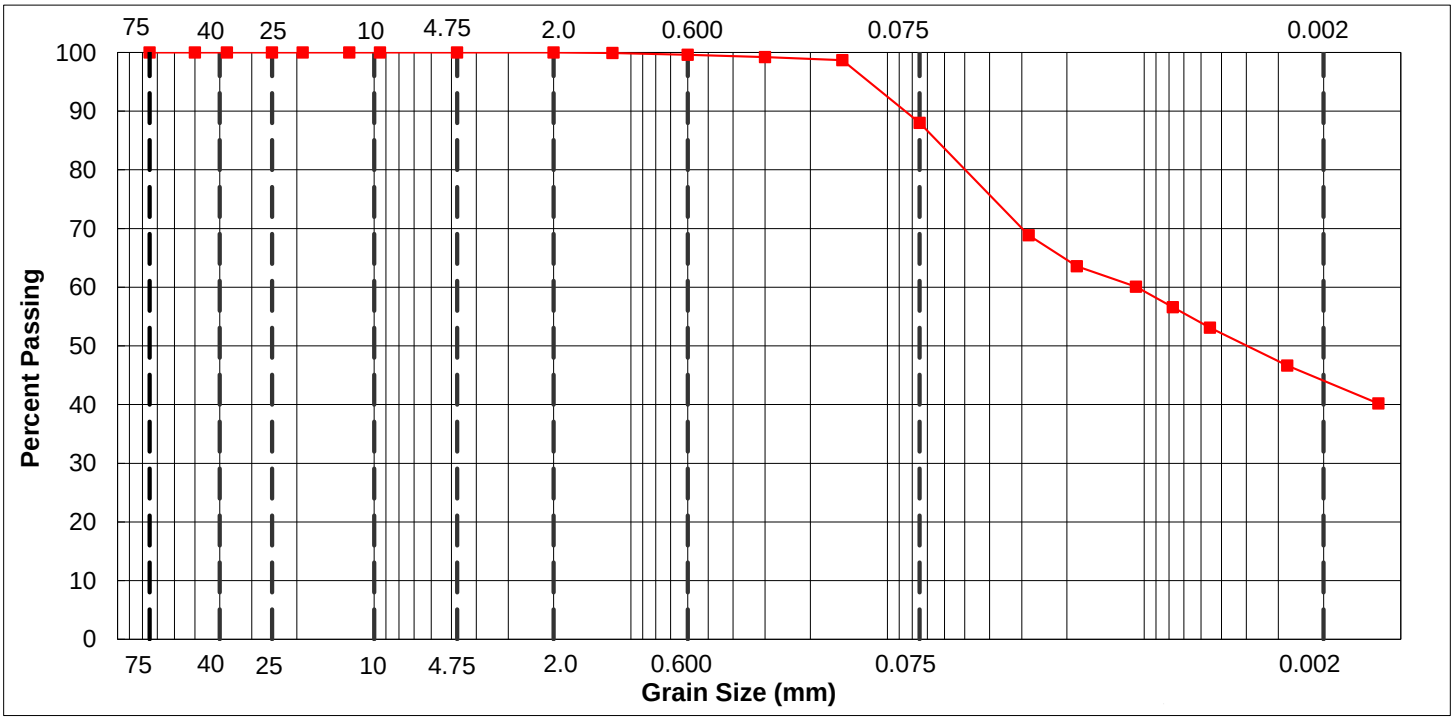
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	402AU1
Project No.:	1560-193-00	**Source:**	22BH402
Owner:	EID	**Sample Depth:**	1.0 m
File No.:	GSA - 402AU1	**Test Date:**	5-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	99.2
50.0	100.0	0.150	98.7
37.5	100.0	0.075	88.0
25.0	100.0	0.0281	68.8
19.0	100.0	0.0183	63.6
12.5	100.0	0.0108	60.1
9.5	100.0	0.0077	56.6
4.75	100.0	0.0055	53.1
2.00	100.0	0.0028	46.6
1.180	99.9	0.0012	40.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	11.6	425 µm to 75 µm
Silt	43.9	75 µm to 2 µm
Clay	44.1	<2 µm



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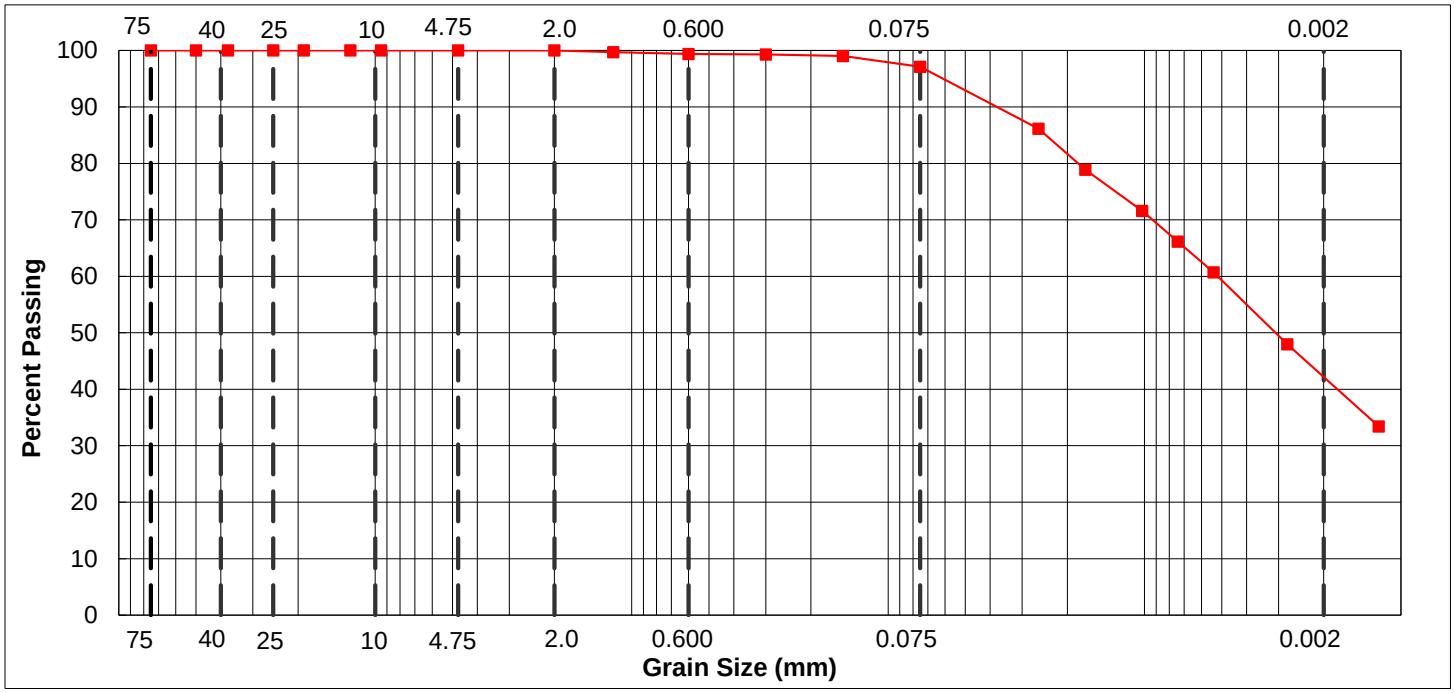
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	402AU3
Project No.:	1560-193-00	**Source:**	22BH402
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 402AU3	**Test Date:**	3-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	99.3
50.0	100.0	0.150	99.0
37.5	100.0	0.075	97.1
25.0	100.0	0.0259	86.2
19.0	100.0	0.0170	78.9
12.5	100.0	0.0102	71.6
9.5	100.0	0.0074	66.2
4.75	100.0	0.0054	60.7
2.00	100.0	0.0028	48.0
1.180	99.7	0.0012	33.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	2.3	425 µm to 75 µm
Silt	54.9	75 µm to 2 µm
Clay	42.2	<2 µm



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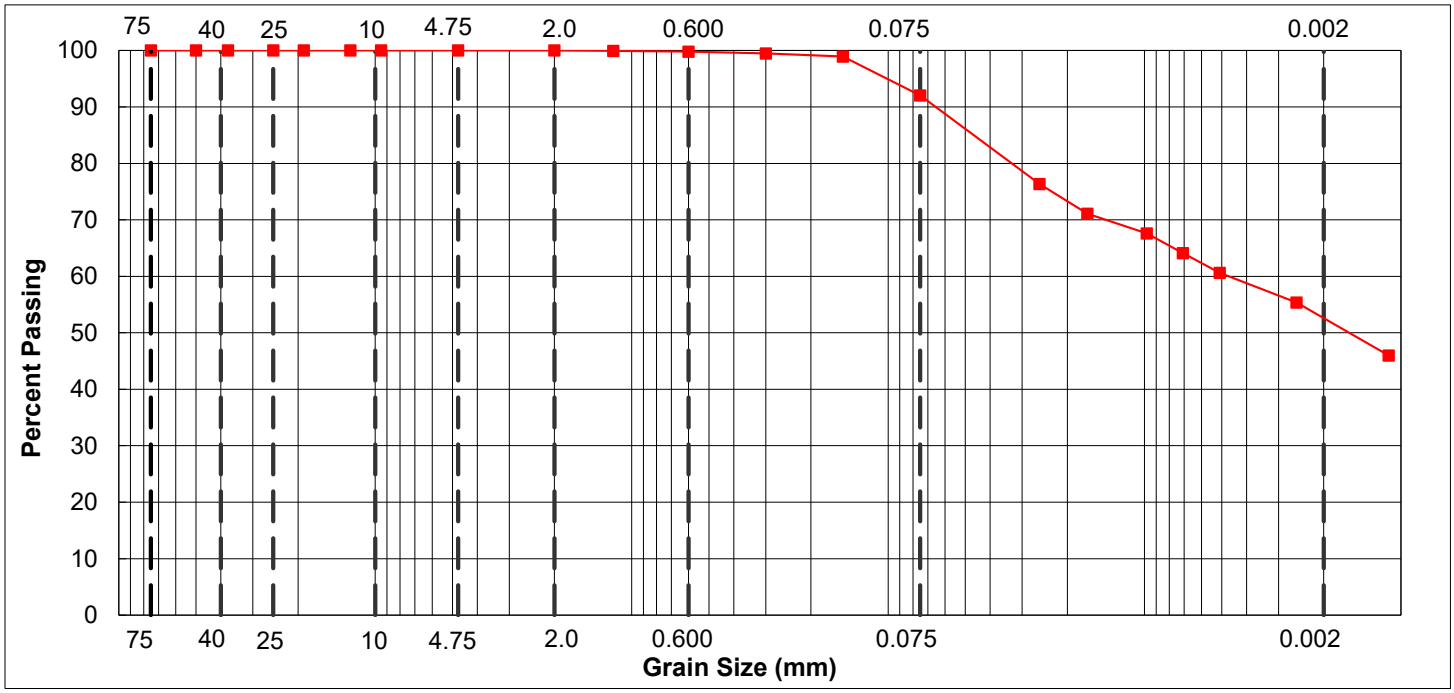
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	403AU1
Project No.:	1560-193-00	**Source:**	22BH403
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 403AU1	**Test Date:**	17-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.5
50.0	100.0	0.150	98.9
37.5	100.0	0.075	92.0
25.0	100.0	0.0257	76.3
19.0	100.0	0.0167	71.1
12.5	100.0	0.0098	67.6
9.5	100.0	0.0071	64.1
4.75	100.0	0.0051	60.6
2.00	100.0	0.0026	55.4
1.180	99.9	0.0011	46.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	7.7	425 µm to 75 µm
Silt	39.5	75 µm to 2 µm
Clay	52.6	<2 µm



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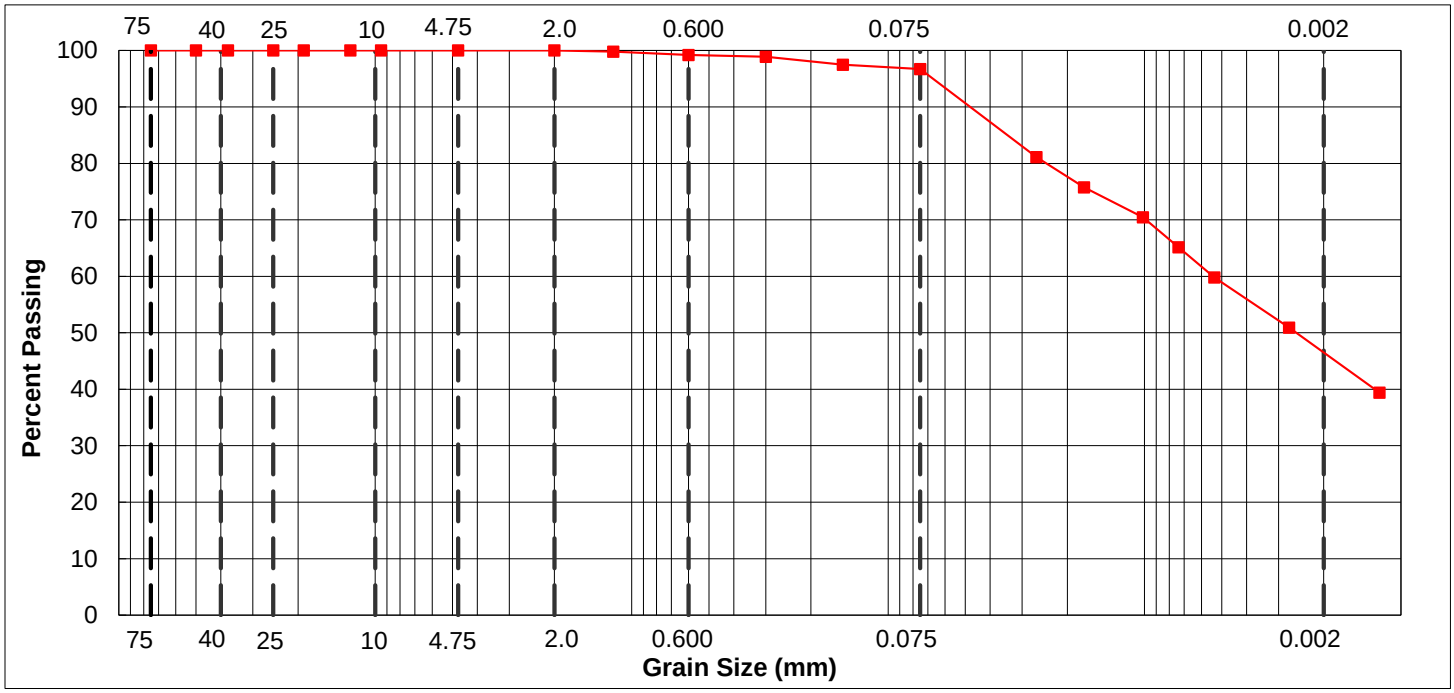
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	403AU3
Project No.:	1560-193-00	**Source:**	22BH403
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 403AU3	**Test Date:**	30-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	98.9
50.0	100.0	0.150	97.5
37.5	100.0	0.075	96.7
25.0	100.0	0.0264	81.1
19.0	100.0	0.0172	75.8
12.5	100.0	0.0102	70.5
9.5	100.0	0.0074	65.1
4.75	100.0	0.0053	59.8
2.00	100.0	0.0027	50.9
1.180	99.8	0.0012	39.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	2.5	425 µm to 75 µm
Silt	50.2	75 µm to 2 µm
Clay	46.5	<2 µm



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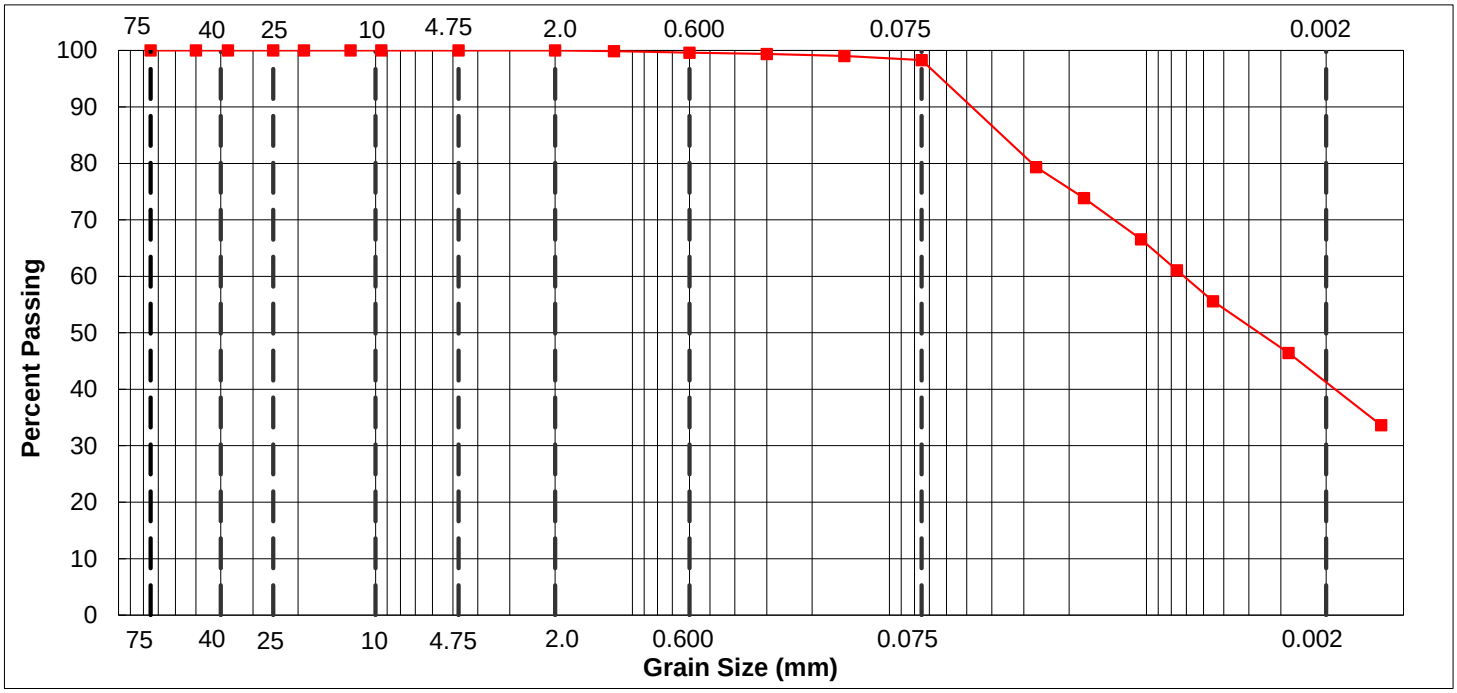
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	404AU2
Project No.:	1560-193-00	**Source:**	22BH404
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 404AU2	**Test Date:**	3-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	99.4
50.0	100.0	0.150	99.0
37.5	100.0	0.075	98.3
25.0	100.0	0.0269	79.3
19.0	100.0	0.0175	73.9
12.5	100.0	0.0105	66.5
9.5	100.0	0.0076	61.1
4.75	100.0	0.0055	55.6
2.00	100.0	0.0028	46.4
1.180	99.9	0.0012	33.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	1.3	425 µm to 75 µm
Silt	57.1	75 µm to 2 µm
Clay	41.2	<2 µm



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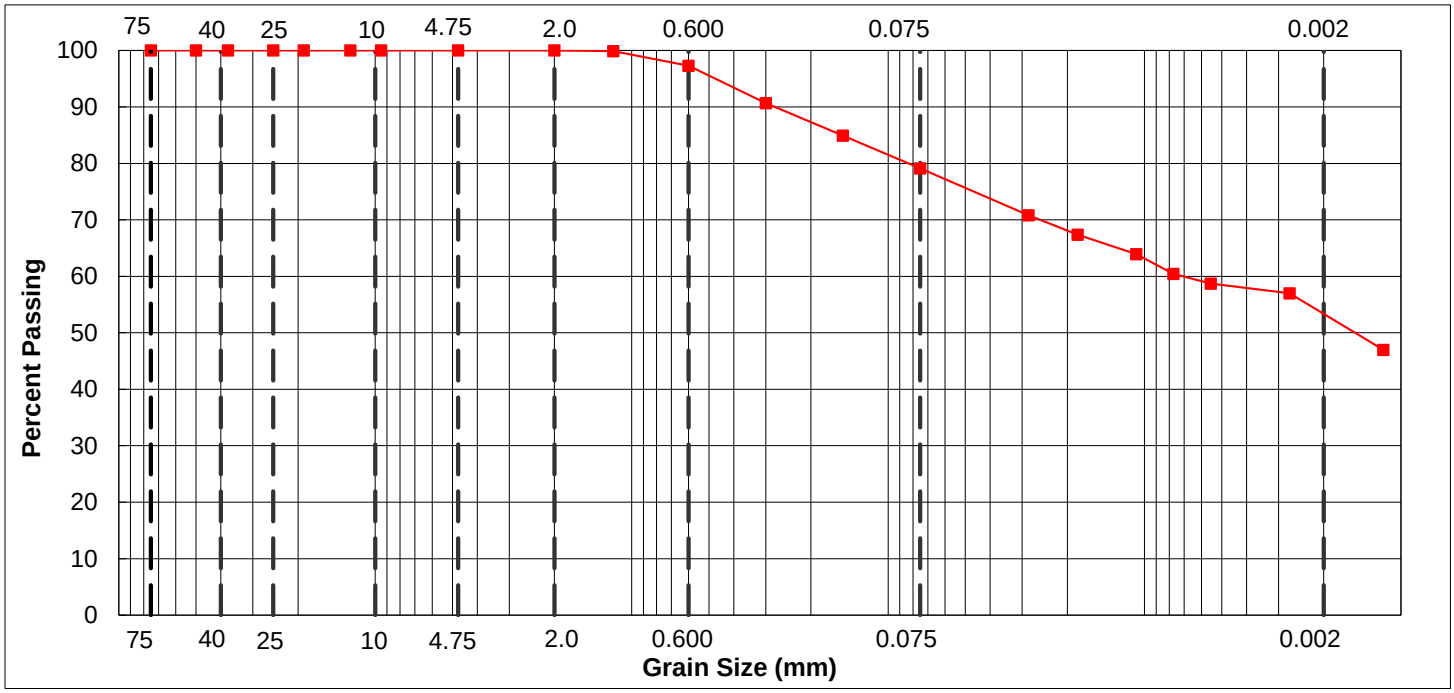
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	404AU4
Project No.:	1560-193-00	**Source:**	22BH404
Owner:	EID	**Sample Depth:**	3.2m
File No.:	GSA - 404AU4	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.3
75.0	100.0	0.300	90.7
50.0	100.0	0.150	84.9
37.5	100.0	0.075	79.1
25.0	100.0	0.0284	70.8
19.0	100.0	0.0182	67.4
12.5	100.0	0.0108	63.9
9.5	100.0	0.0077	60.5
4.75	100.0	0.0055	58.7
2.00	100.0	0.0027	57.0
1.180	99.9	0.0012	47.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.7	2.00 mm to 425 µm
Fine Sand	18.2	425 µm to 75 µm
Silt	25.7	75 µm to 2 µm
Clay	53.4	<2 µm



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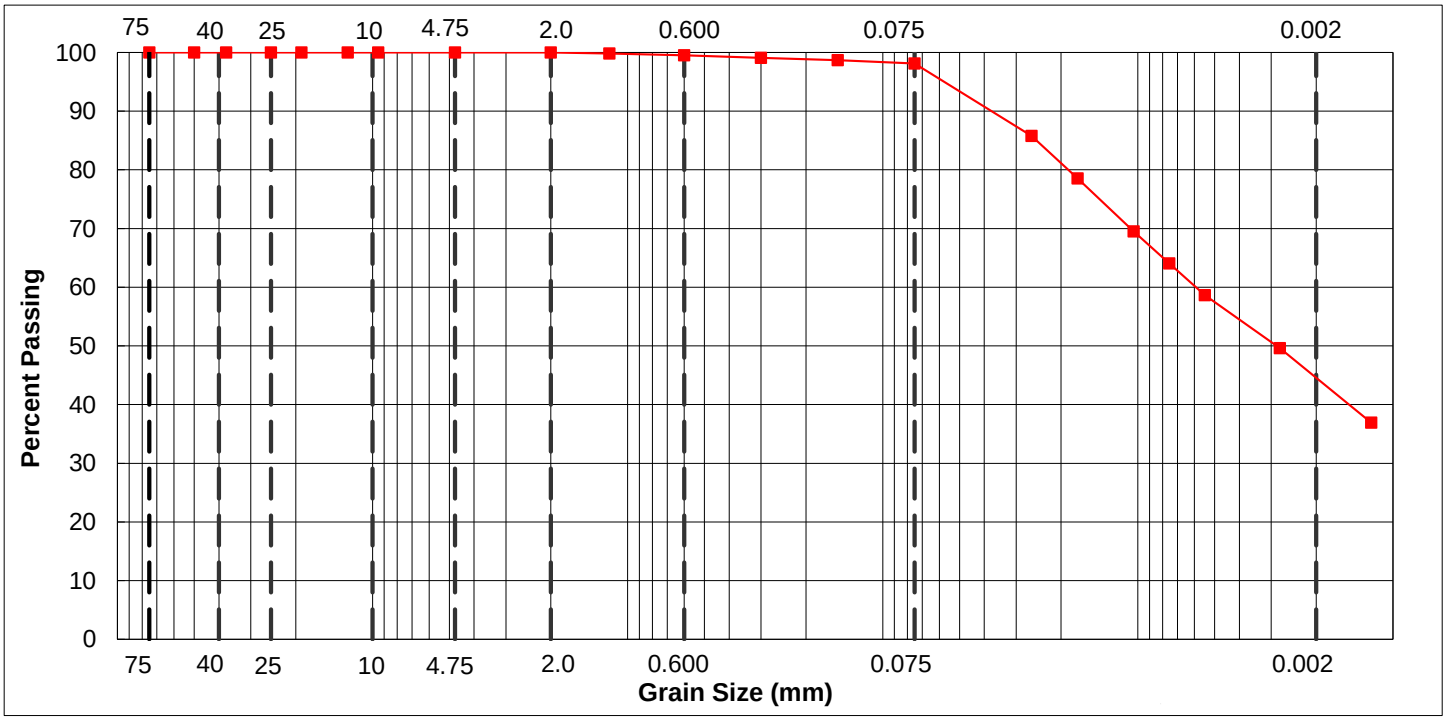
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	405AU2
Project No.:	1560-193-00	**Source:**	22BH405
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 405AU2	**Test Date:**	25-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.1
50.0	100.0	0.150	98.7
37.5	100.0	0.075	98.1
25.0	100.0	0.0261	85.8
19.0	100.0	0.0172	78.5
12.5	100.0	0.0104	69.5
9.5	100.0	0.0075	64.1
4.75	100.0	0.0055	58.6
2.00	100.0	0.0028	49.6
1.180	99.8	0.0012	36.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	1.4	425 µm to 75 µm
Silt	53.6	75 µm to 2 µm
Clay	44.5	<2 µm



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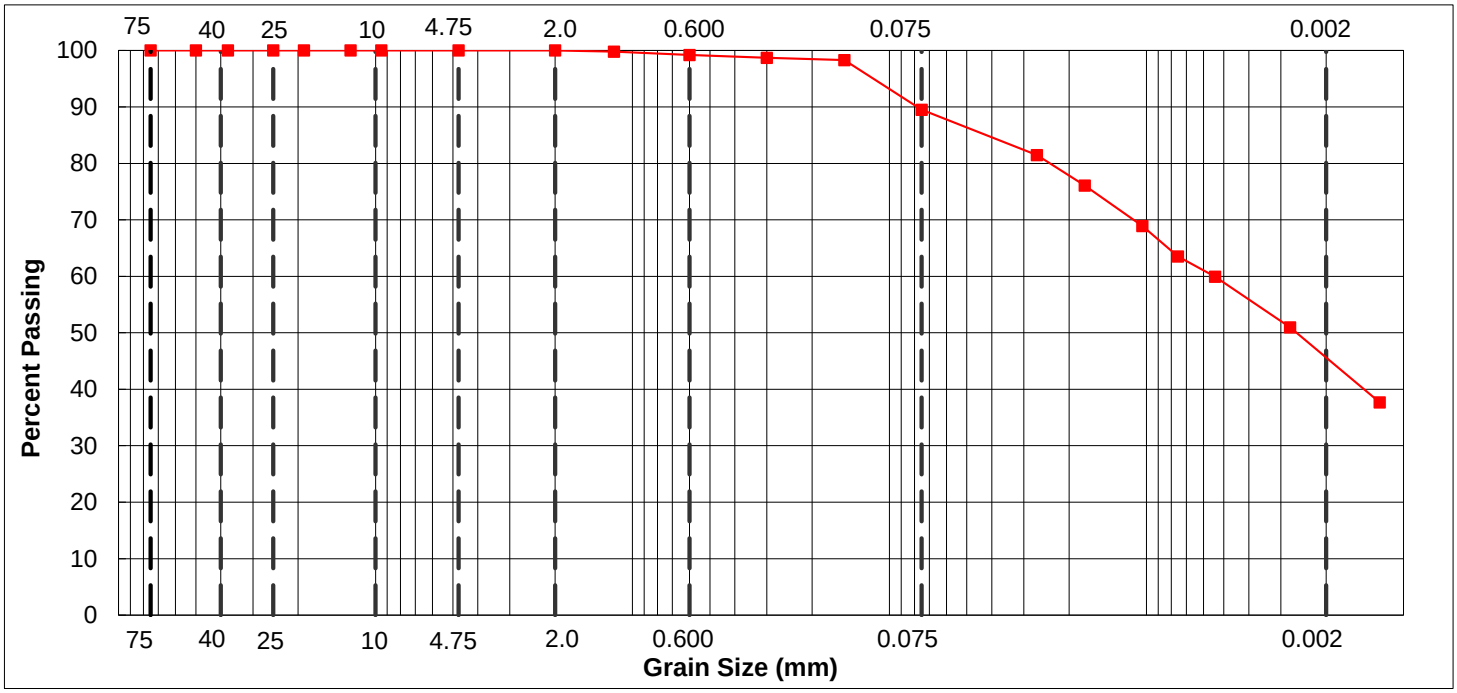
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	405AU4
Project No.:	1560-193-00	**Source:**	22BH405
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 405AU4	**Test Date:**	4-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	98.7
50.0	100.0	0.150	98.3
37.5	100.0	0.075	89.5
25.0	100.0	0.0267	81.5
19.0	100.0	0.0174	76.1
12.5	100.0	0.0104	68.9
9.5	100.0	0.0075	63.5
4.75	100.0	0.0054	59.9
2.00	100.0	0.0028	51.0
1.180	99.8	0.0012	37.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	9.7	425 µm to 75 µm
Silt	43.9	75 µm to 2 µm
Clay	45.6	<2 µm



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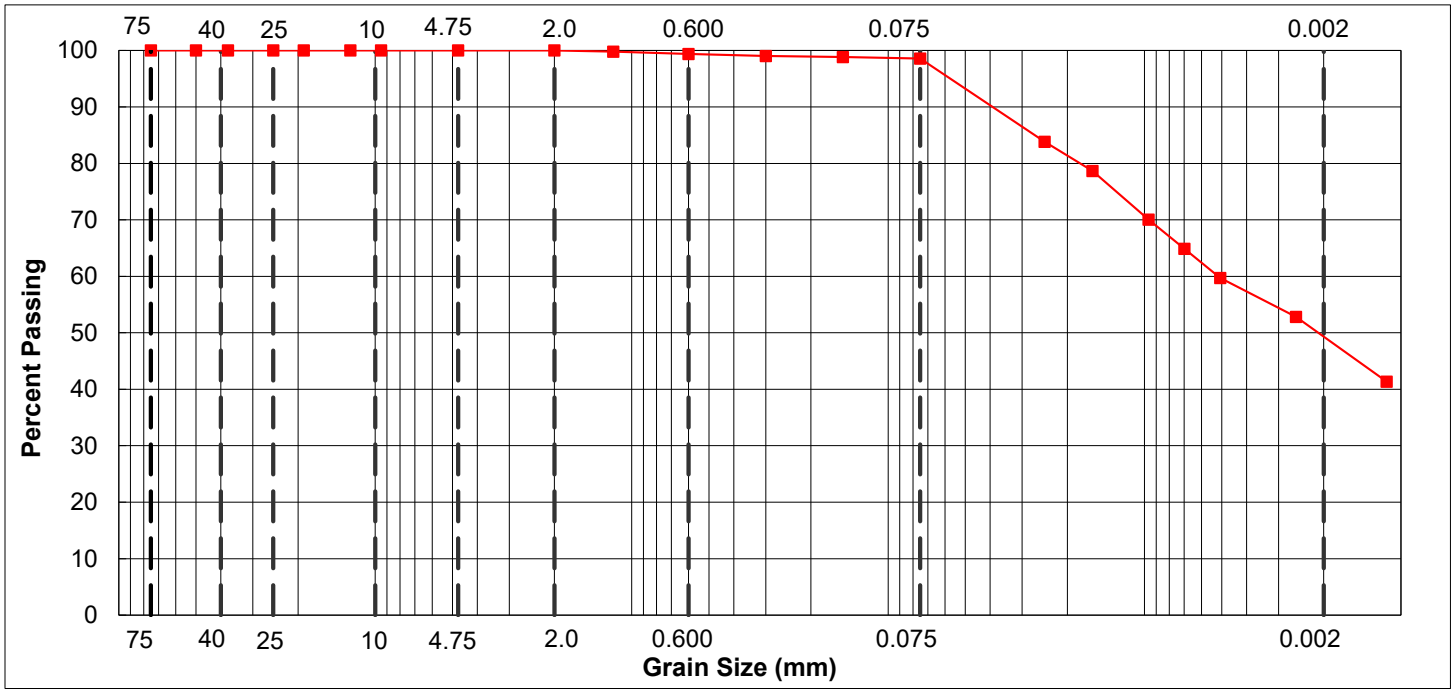
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	406AU3
Project No.:	1560-193-00	**Source:**	22BH406
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 406AU3	**Test Date:**	17-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	99.0
50.0	100.0	0.150	98.8
37.5	100.0	0.075	98.6
25.0	100.0	0.0245	83.8
19.0	100.0	0.0160	78.7
12.5	100.0	0.0096	70.1
9.5	100.0	0.0070	64.9
4.75	100.0	0.0051	59.7
2.00	100.0	0.0026	52.8
1.180	99.8	0.0011	41.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	0.8	425 µm to 75 µm
Silt	49.3	75 µm to 2 µm
Clay	49.3	<2 µm



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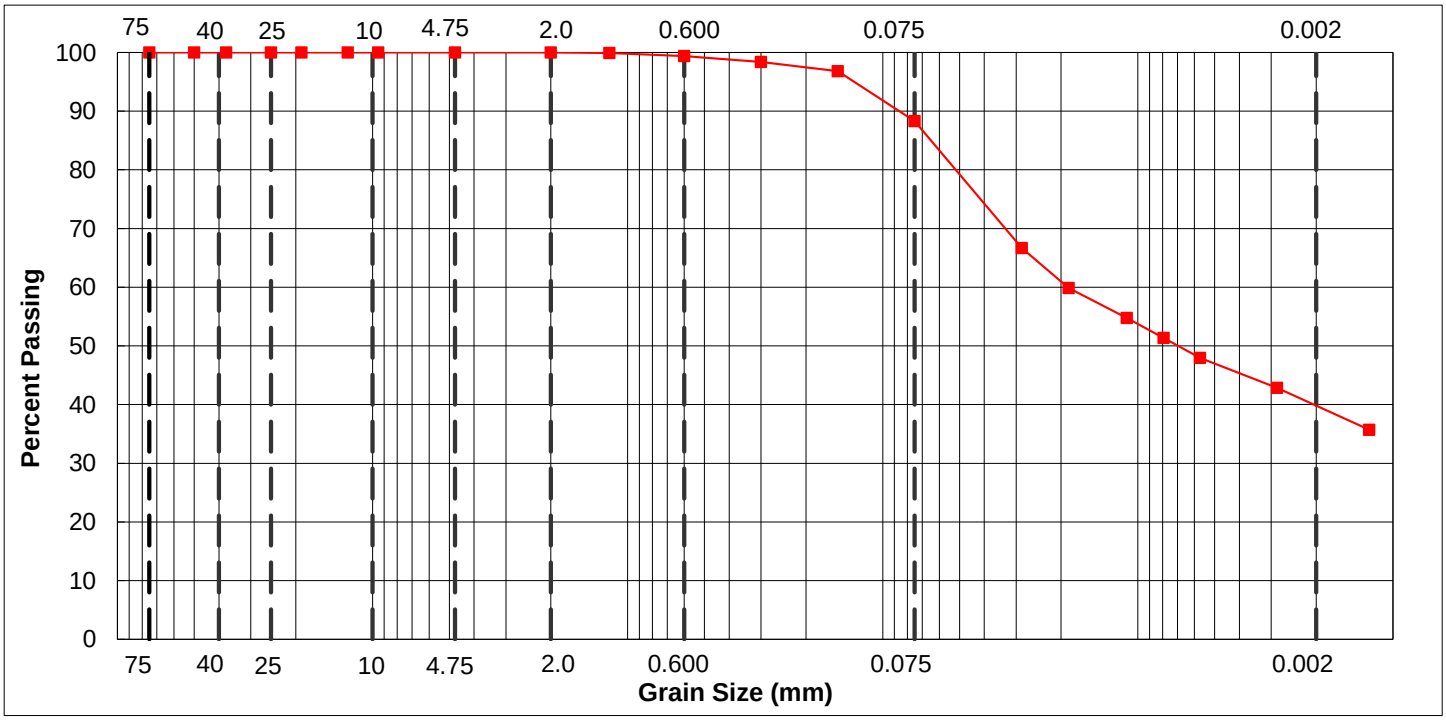
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	407AU1
Project No.:	1560-193-00	**Source:**	22BH407
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 407AU1	**Test Date:**	25-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	98.4
50.0	100.0	0.150	96.8
37.5	100.0	0.075	88.3
25.0	100.0	0.0285	66.6
19.0	100.0	0.0187	59.8
12.5	100.0	0.0111	54.7
9.5	100.0	0.0079	51.3
4.75	100.0	0.0057	47.9
2.00	100.0	0.0028	42.8
1.180	99.9	0.0012	35.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	11.1	425 µm to 75 µm
Silt	48.5	75 µm to 2 µm
Clay	39.8	<2 µm



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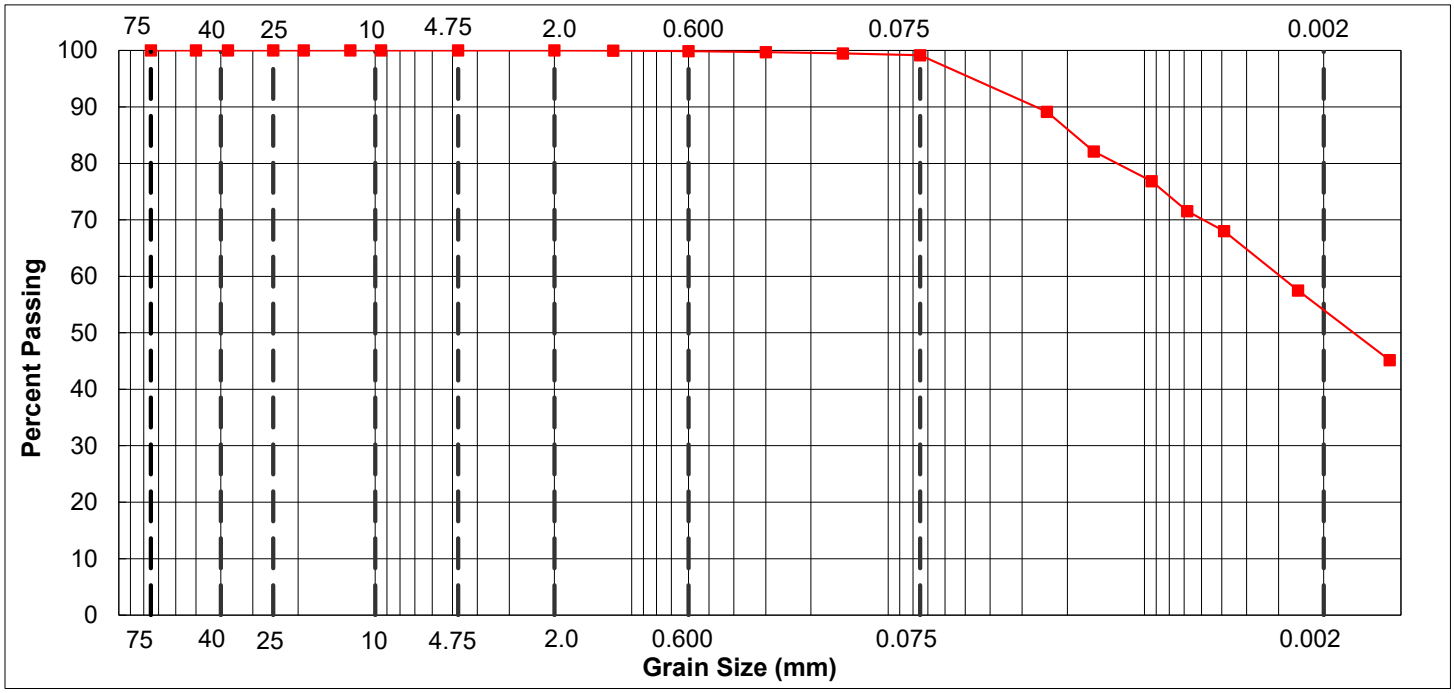
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	407AU2
Project No.:	1560-193-00	**Source:**	22BH407
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 407AU2	**Test Date:**	16-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.7
50.0	100.0	0.150	99.5
37.5	100.0	0.075	99.1
25.0	100.0	0.0241	89.2
19.0	100.0	0.0158	82.1
12.5	100.0	0.0094	76.8
9.5	100.0	0.0068	71.6
4.75	100.0	0.0049	68.0
2.00	100.0	0.0025	57.5
1.180	100.0	0.0011	45.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.8	425 µm to 75 µm
Silt	45.1	75 µm to 2 µm
Clay	54.0	<2 µm



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Lethbridge, Alberta T1H 5J3
Tel: (403)892-6036

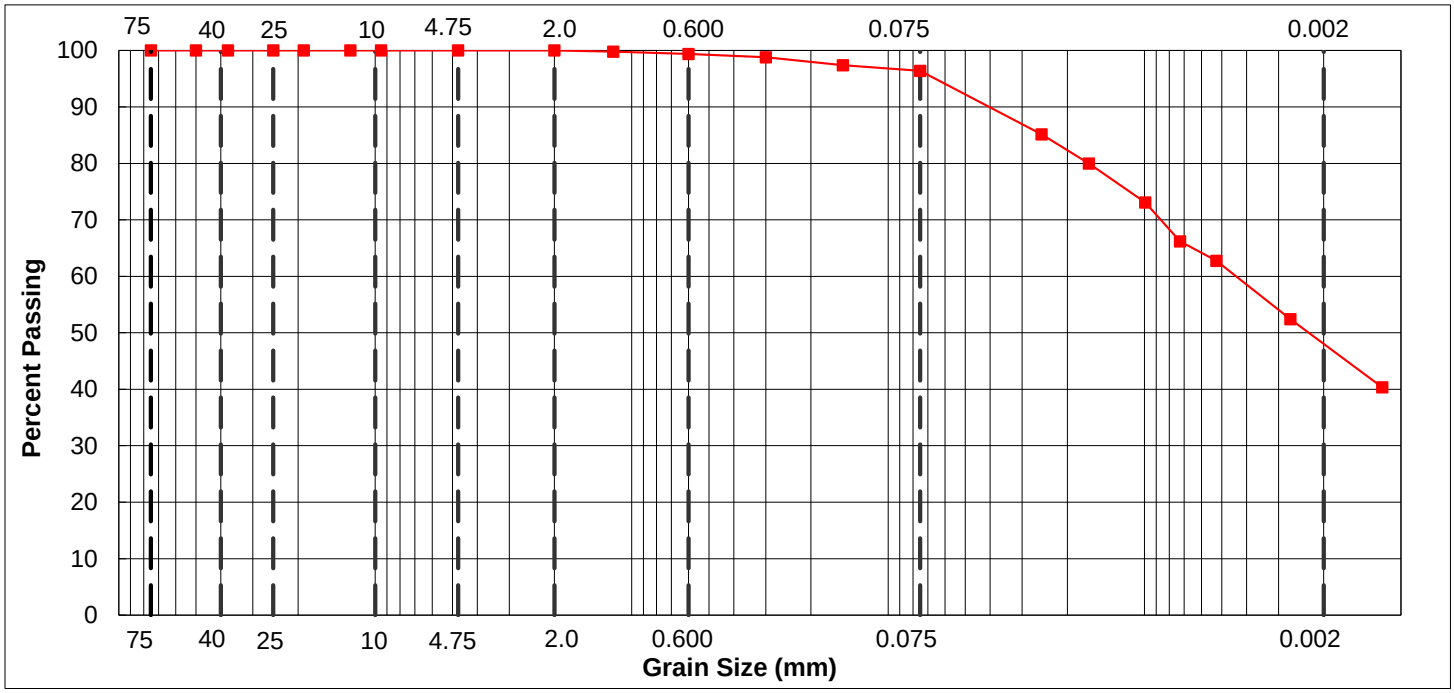
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	408AU2
Project No.:	1560-193-00	**Source:**	22BH408
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 408AU2	**Test Date:**	3-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	98.8
50.0	100.0	0.150	97.4
37.5	100.0	0.075	96.4
25.0	100.0	0.0252	85.2
19.0	100.0	0.0165	80.0
12.5	100.0	0.0099	73.1
9.5	100.0	0.0073	66.2
4.75	100.0	0.0052	62.7
2.00	100.0	0.0027	52.4
1.180	99.8	0.0012	40.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	3.0	425 µm to 75 µm
Silt	48.4	75 µm to 2 µm
Clay	48.0	<2 µm



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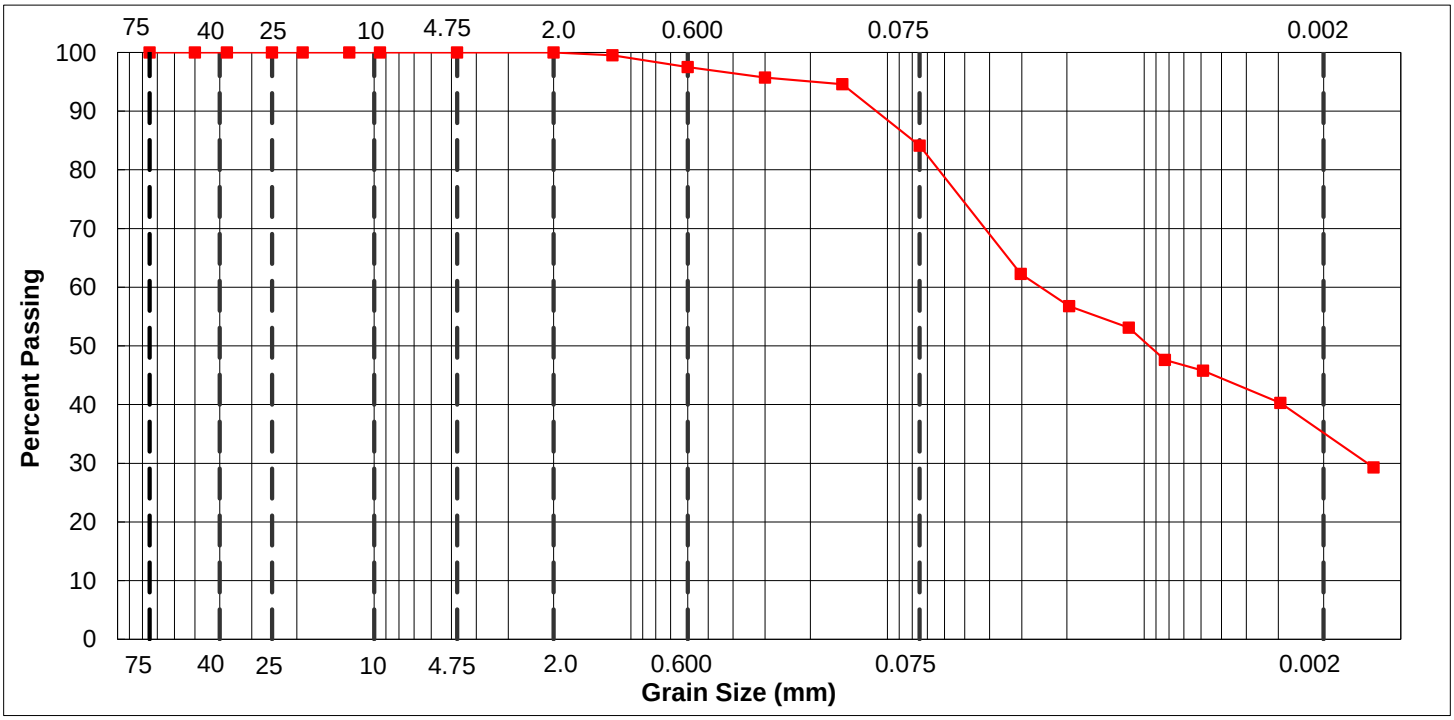
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	408AU3
Project No.:	1560-193-00	**Source:**	22BH480
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 408AU3	**Test Date:**	25-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.5
75.0	100.0	0.300	95.7
50.0	100.0	0.150	94.6
37.5	100.0	0.075	84.1
25.0	100.0	0.0302	62.3
19.0	100.0	0.0196	56.8
12.5	100.0	0.0115	53.1
9.5	100.0	0.0083	47.6
4.75	100.0	0.0059	45.8
2.00	100.0	0.0029	40.3
1.180	99.5	0.0013	29.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.5	2.00 mm to 425 µm
Fine Sand	13.4	425 µm to 75 µm
Silt	48.9	75 µm to 2 µm
Clay	35.2	<2 µm



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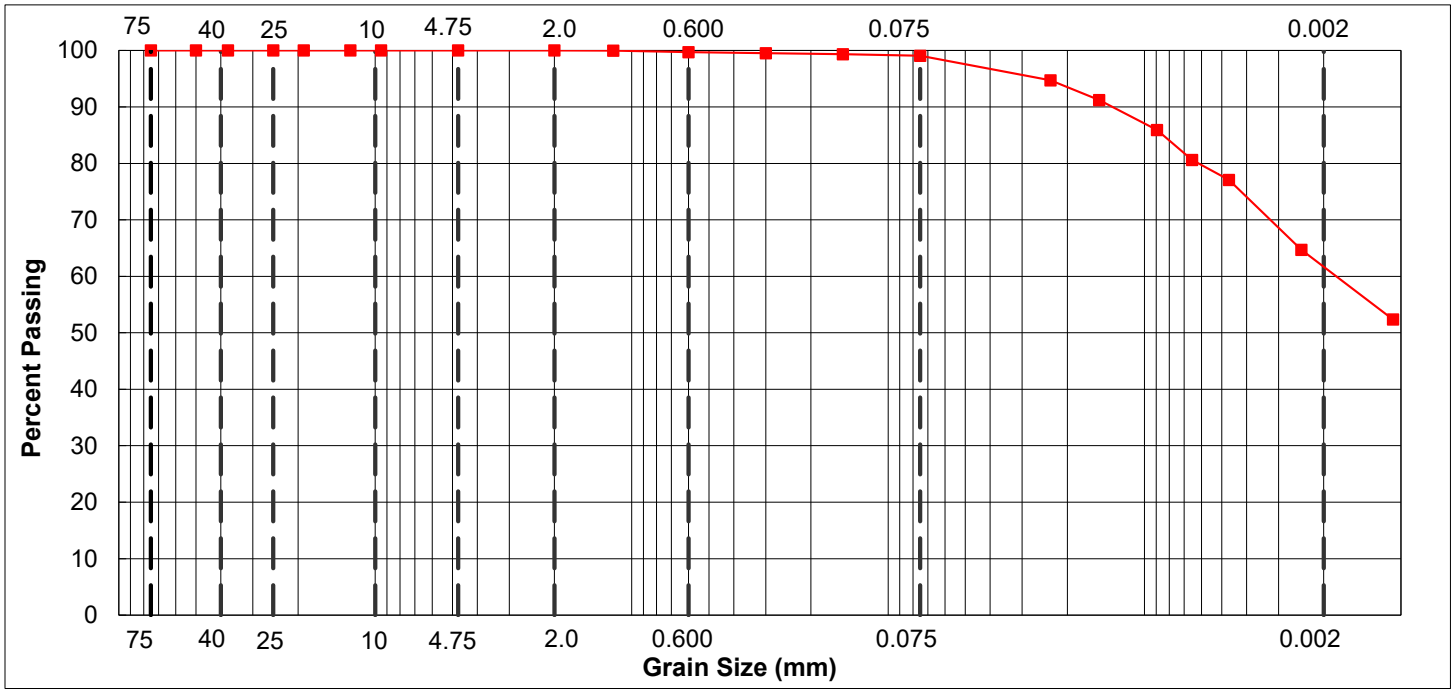
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	409AU1
Project No.:	1560-193-00	**Source:**	22BH409
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 409AU1	**Test Date:**	16-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.3
37.5	100.0	0.075	99.1
25.0	100.0	0.0233	94.7
19.0	100.0	0.0150	91.2
12.5	100.0	0.0090	85.9
9.5	100.0	0.0065	80.6
4.75	100.0	0.0047	77.1
2.00	100.0	0.0024	64.7
1.180	100.0	0.0011	52.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	0.6	425 µm to 75 µm
Silt	37.4	75 µm to 2 µm
Clay	61.7	<2 µm



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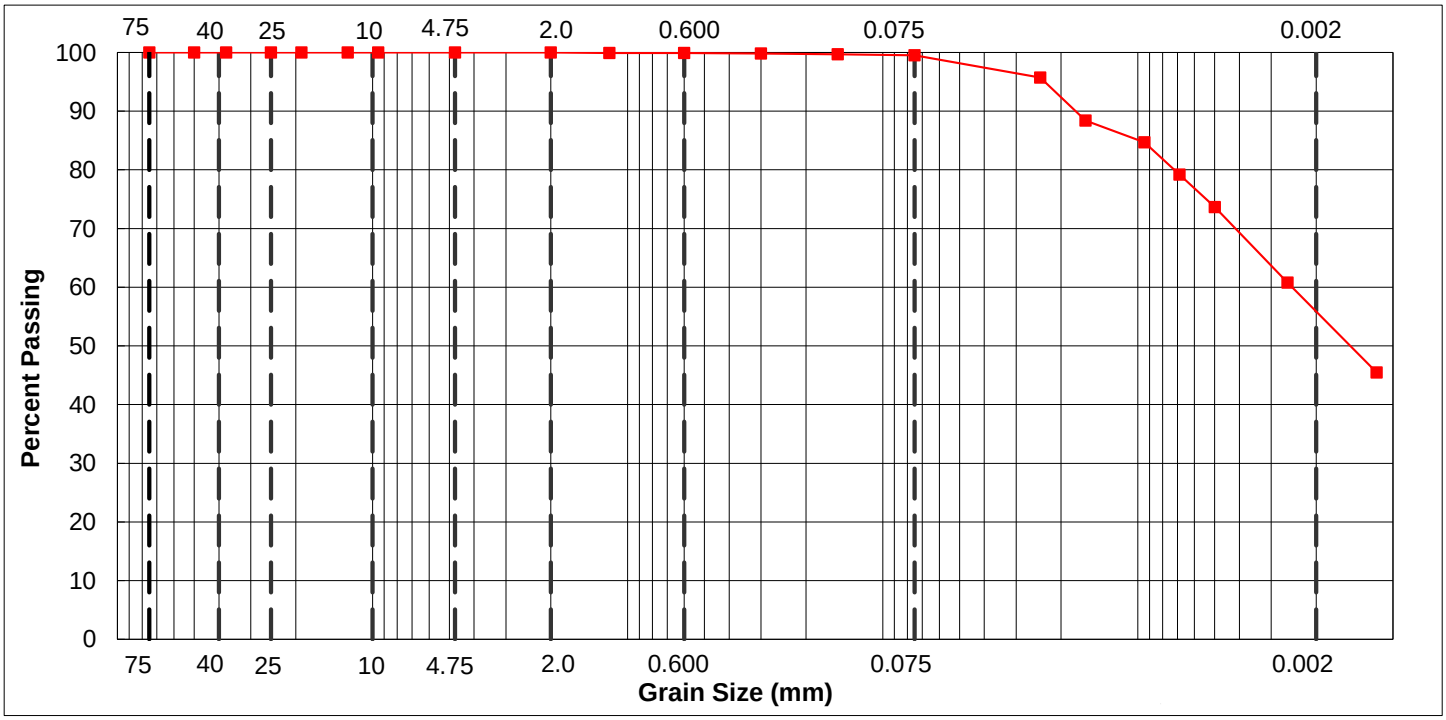
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	409AU2
Project No.:	1560-193-00	**Source:**	22BH409
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 409AU2	**Test Date:**	27-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.5
25.0	100.0	0.0242	95.7
19.0	100.0	0.0160	88.4
12.5	100.0	0.0094	84.7
9.5	100.0	0.0069	79.2
4.75	100.0	0.0050	73.6
2.00	100.0	0.0026	60.8
1.180	99.9	0.0012	45.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	43.7	75 µm to 2 µm
Clay	55.8	<2 µm



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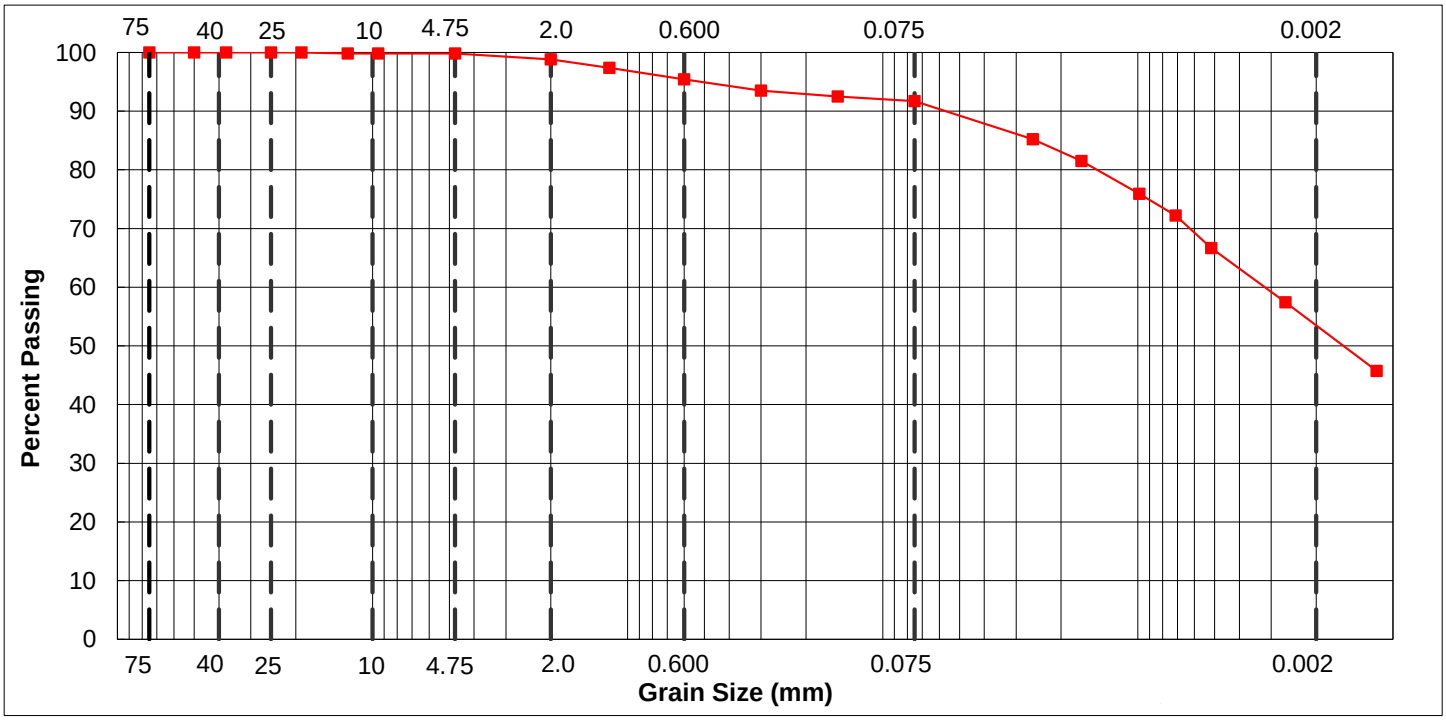
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	410AU1
Project No.:	1560-193-00	**Source:**	22BH410
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 410AU1	**Test Date:**	27-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	95.4
75.0	100.0	0.300	93.5
50.0	100.0	0.150	92.5
37.5	100.0	0.075	91.7
25.0	100.0	0.0258	85.2
19.0	100.0	0.0166	81.5
12.5	99.8	0.0099	75.9
9.5	99.8	0.0071	72.2
4.75	99.8	0.0052	66.7
2.00	98.8	0.0026	57.4
1.180	97.4	0.0012	45.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.2	20 mm to 4.75 mm
Coarse Sand	1.0	4.75 mm to 2.00 mm
Medium Sand	3.4	2.00 mm to 425 µm
Fine Sand	3.7	425 µm to 75 µm
Silt	38.2	75 µm to 2 µm
Clay	53.5	<2 µm



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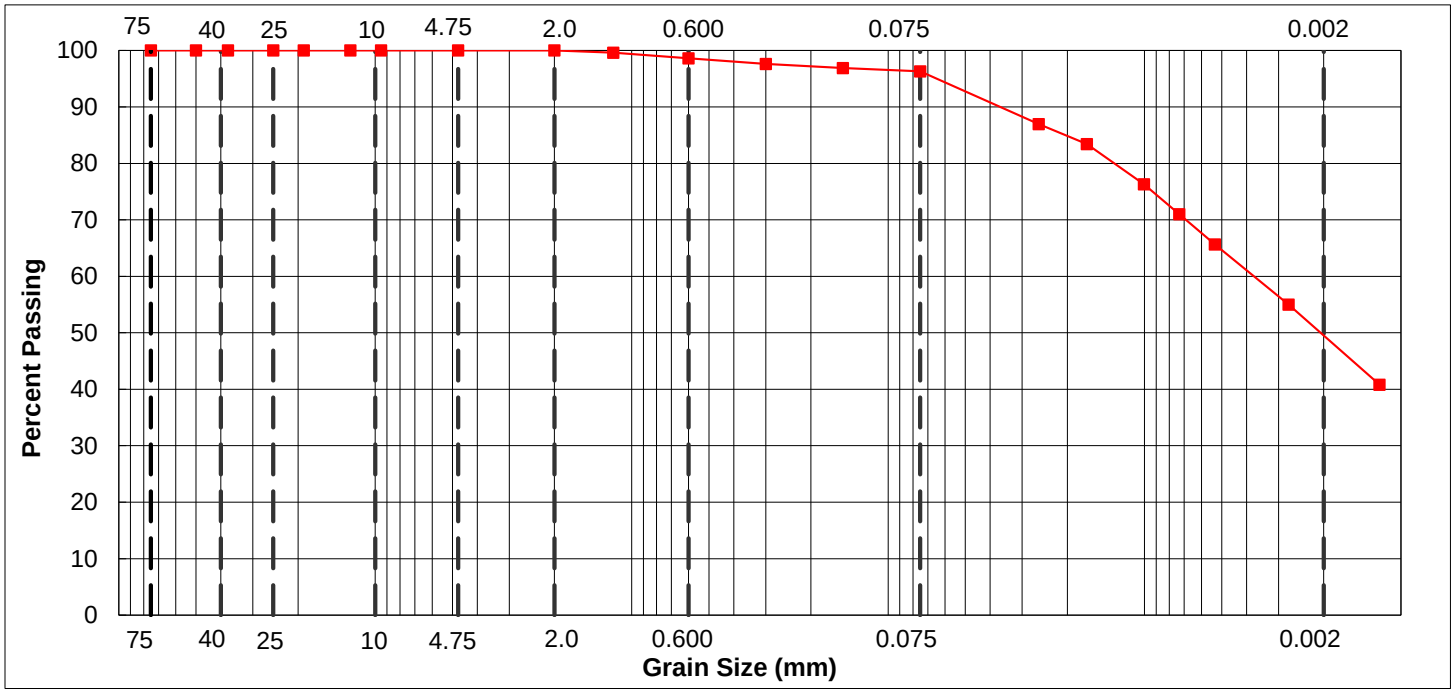
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	410AU3
Project No.:	1560-193-00	**Source:**	22BH410
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 410AU3	**Test Date:**	24-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.6
75.0	100.0	0.300	97.6
50.0	100.0	0.150	96.9
37.5	100.0	0.075	96.3
25.0	100.0	0.0259	87.0
19.0	100.0	0.0168	83.4
12.5	100.0	0.0101	76.3
9.5	100.0	0.0073	71.0
4.75	100.0	0.0053	65.7
2.00	100.0	0.0027	55.0
1.180	99.6	0.0012	40.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.4	2.00 mm to 425 µm
Fine Sand	2.3	425 µm to 75 µm
Silt	46.8	75 µm to 2 µm
Clay	49.5	<2 µm



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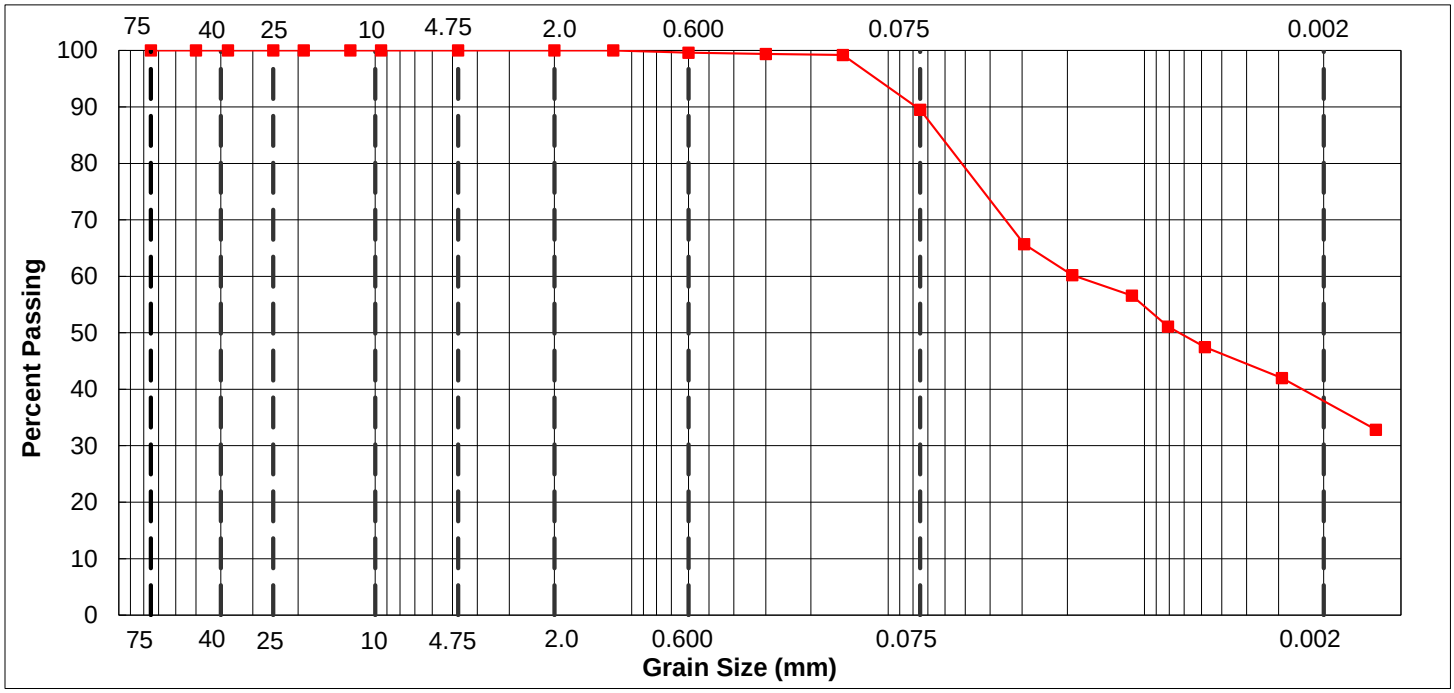
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	411AU3
Project No.:	1560-193-00	**Source:**	22BH411
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 411AU3	**Test Date:**	24-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	99.4
50.0	100.0	0.150	99.2
37.5	100.0	0.075	89.5
25.0	100.0	0.0295	65.7
19.0	100.0	0.0191	60.2
12.5	100.0	0.0112	56.6
9.5	100.0	0.0081	51.1
4.75	100.0	0.0058	47.5
2.00	100.0	0.0029	42.0
1.180	100.0	0.0013	32.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	10.1	425 µm to 75 µm
Silt	51.6	75 µm to 2 µm
Clay	37.9	<2 µm



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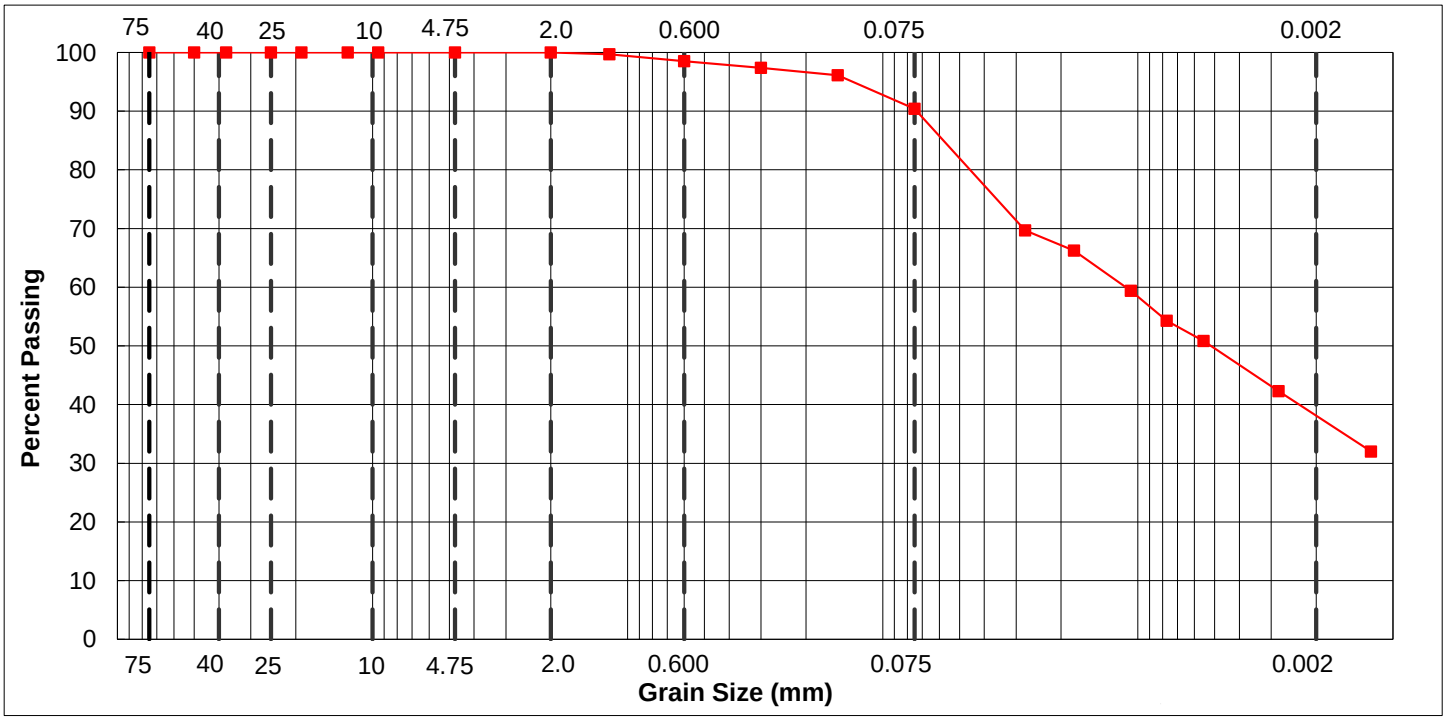
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	411AU4
Project No.:	1560-193-00	**Source:**	22BH411
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 411AU4	**Test Date:**	26-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.5
75.0	100.0	0.300	97.4
50.0	100.0	0.150	96.1
37.5	100.0	0.075	90.4
25.0	100.0	0.0277	69.7
19.0	100.0	0.0178	66.2
12.5	100.0	0.0106	59.4
9.5	100.0	0.0077	54.3
4.75	100.0	0.0055	50.8
2.00	100.0	0.0028	42.3
1.180	99.7	0.0012	32.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.5	2.00 mm to 425 µm
Fine Sand	8.1	425 µm to 75 µm
Silt	52.3	75 µm to 2 µm
Clay	38.1	<2 µm



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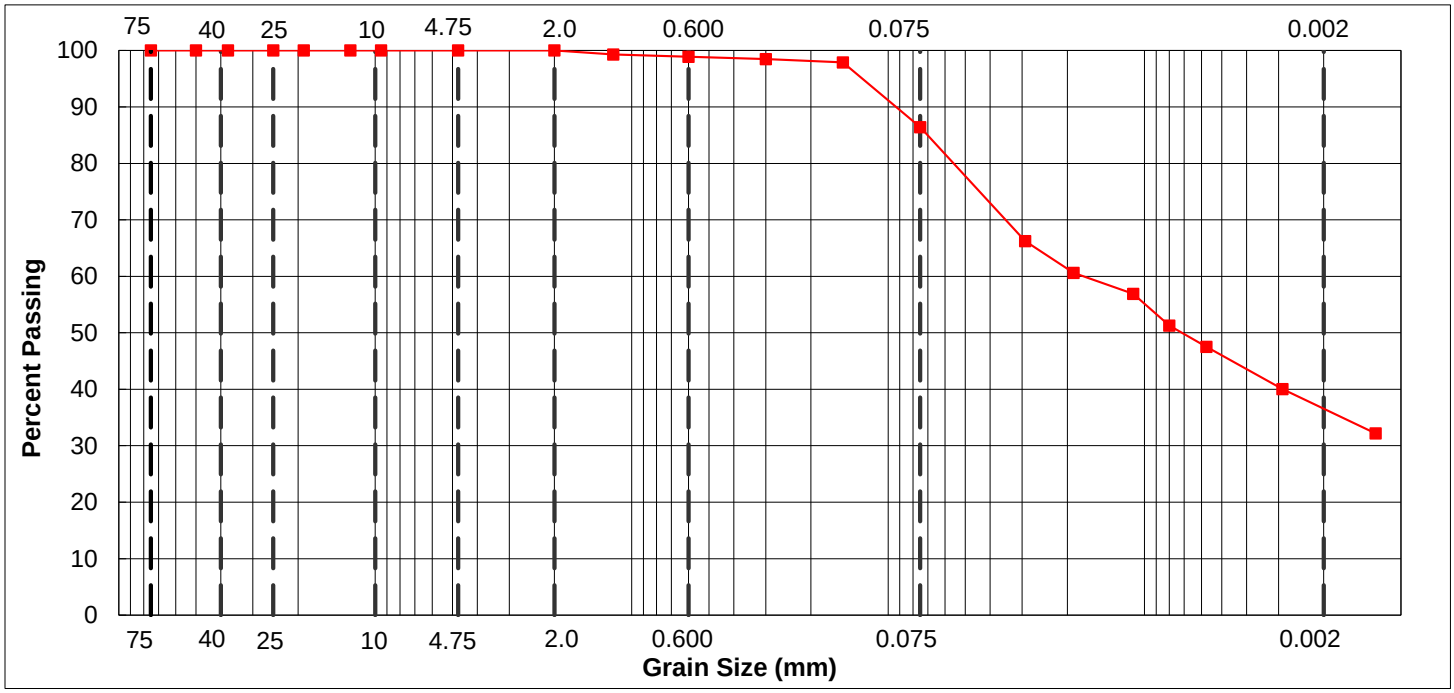
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	412AU3
Project No.:	1560-193-00	**Source:**	22BH412
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 412AU3	**Test Date:**	4-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.9
75.0	100.0	0.300	98.5
50.0	100.0	0.150	97.9
37.5	100.0	0.075	86.4
25.0	100.0	0.0292	66.2
19.0	100.0	0.0189	60.6
12.5	100.0	0.0111	56.9
9.5	100.0	0.0080	51.3
4.75	100.0	0.0057	47.5
2.00	100.0	0.0029	40.0
1.180	99.3	0.0013	32.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.1	2.00 mm to 425 µm
Fine Sand	12.5	425 µm to 75 µm
Silt	49.8	75 µm to 2 µm
Clay	36.6	<2 µm



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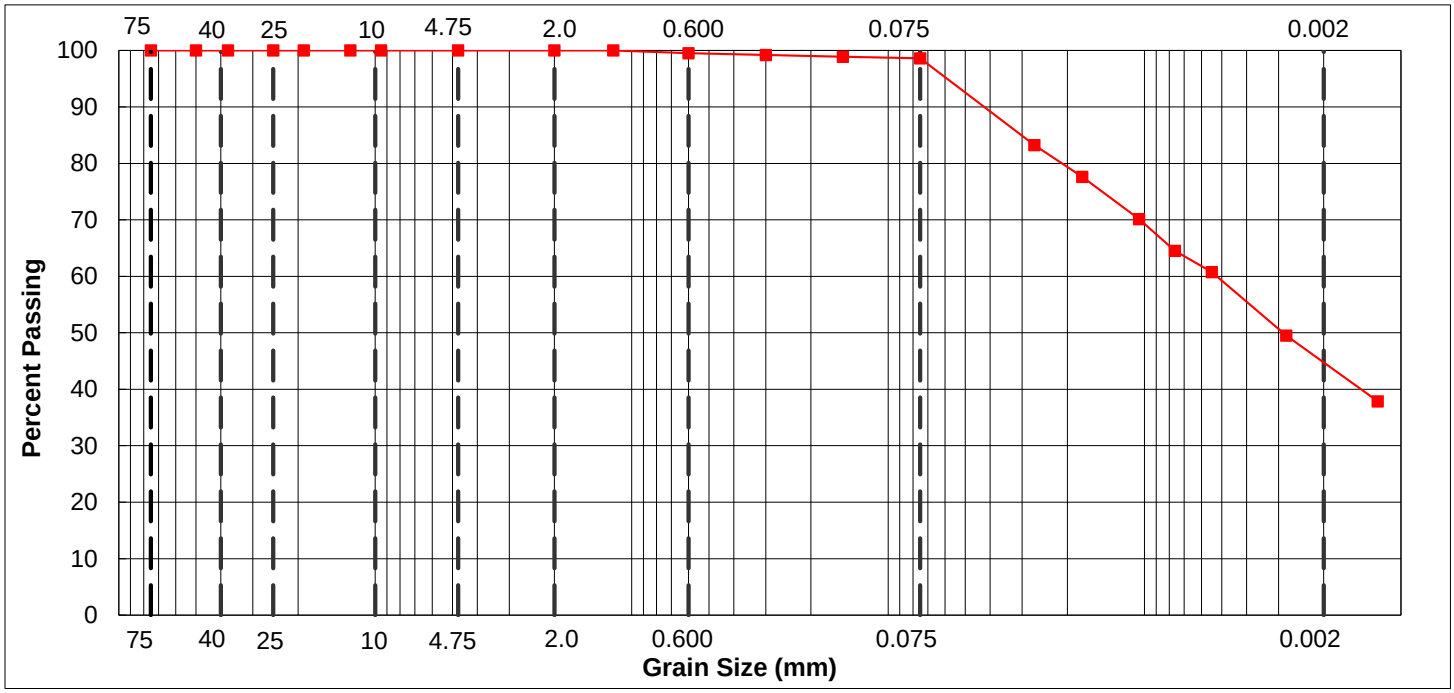
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	413AU2 OR 433AU2
Project No.:	1560-193-00	**Source:**	22BH413 OR 22BH433
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 413AU2 OR 433AU2	**Test Date:**	4-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.2
50.0	100.0	0.150	98.9
37.5	100.0	0.075	98.6
25.0	100.0	0.0269	83.3
19.0	100.0	0.0175	77.6
12.5	100.0	0.0105	70.1
9.5	100.0	0.0076	64.5
4.75	100.0	0.0055	60.8
2.00	100.0	0.0028	49.5
1.180	100.0	0.0012	37.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	0.9	425 µm to 75 µm
Silt	53.9	75 µm to 2 µm
Clay	44.7	<2 µm



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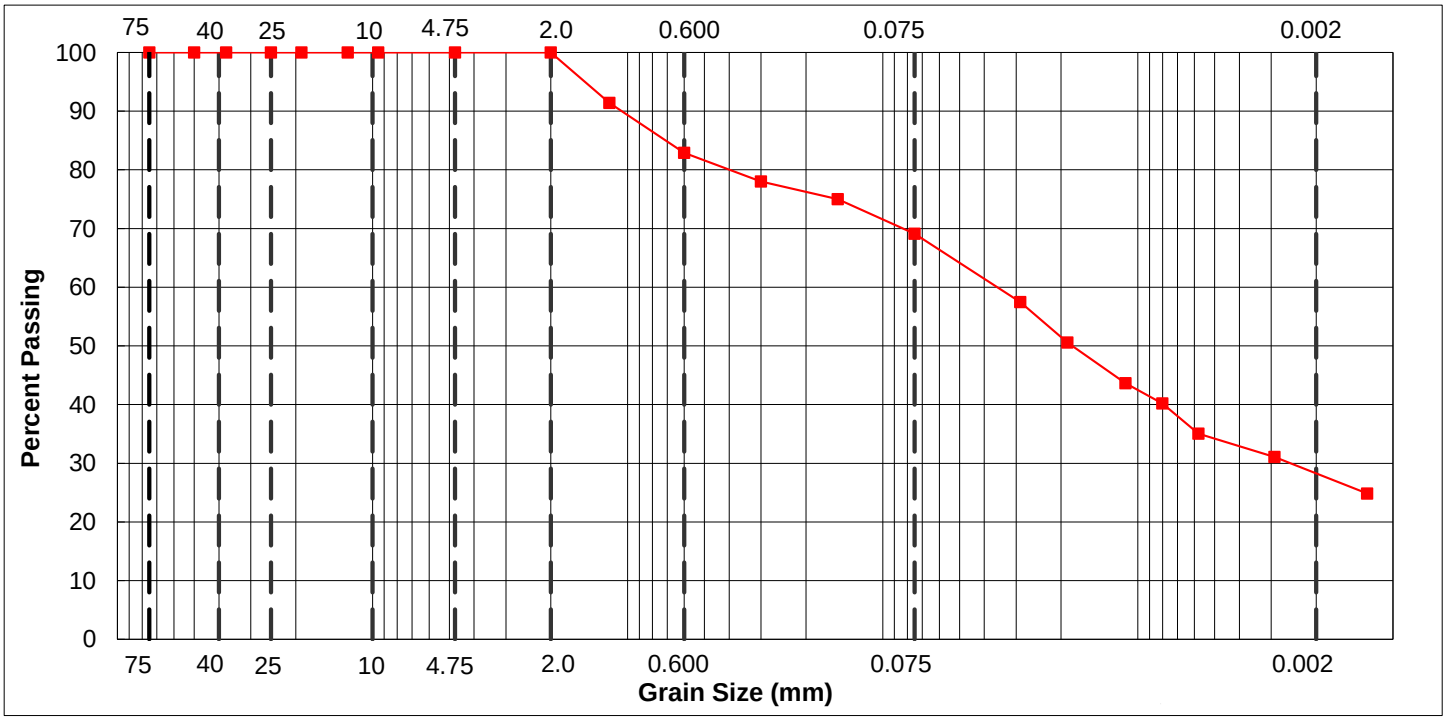
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	413AU3
Project No.:	1560-193-00	**Source:**	22BH413
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 413AU3	**Test Date:**	29-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	82.9
75.0	100.0	0.300	78.0
50.0	100.0	0.150	75.0
37.5	100.0	0.075	69.1
25.0	100.0	0.0289	57.5
19.0	100.0	0.0189	50.6
12.5	100.0	0.0112	43.7
9.5	100.0	0.0080	40.2
4.75	100.0	0.0058	35.0
2.00	100.0	0.0029	31.1
1.180	91.4	0.0013	24.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	17.1	2.00 mm to 425 µm
Fine Sand	13.8	425 µm to 75 µm
Silt	40.8	75 µm to 2 µm
Clay	28.3	<2 µm



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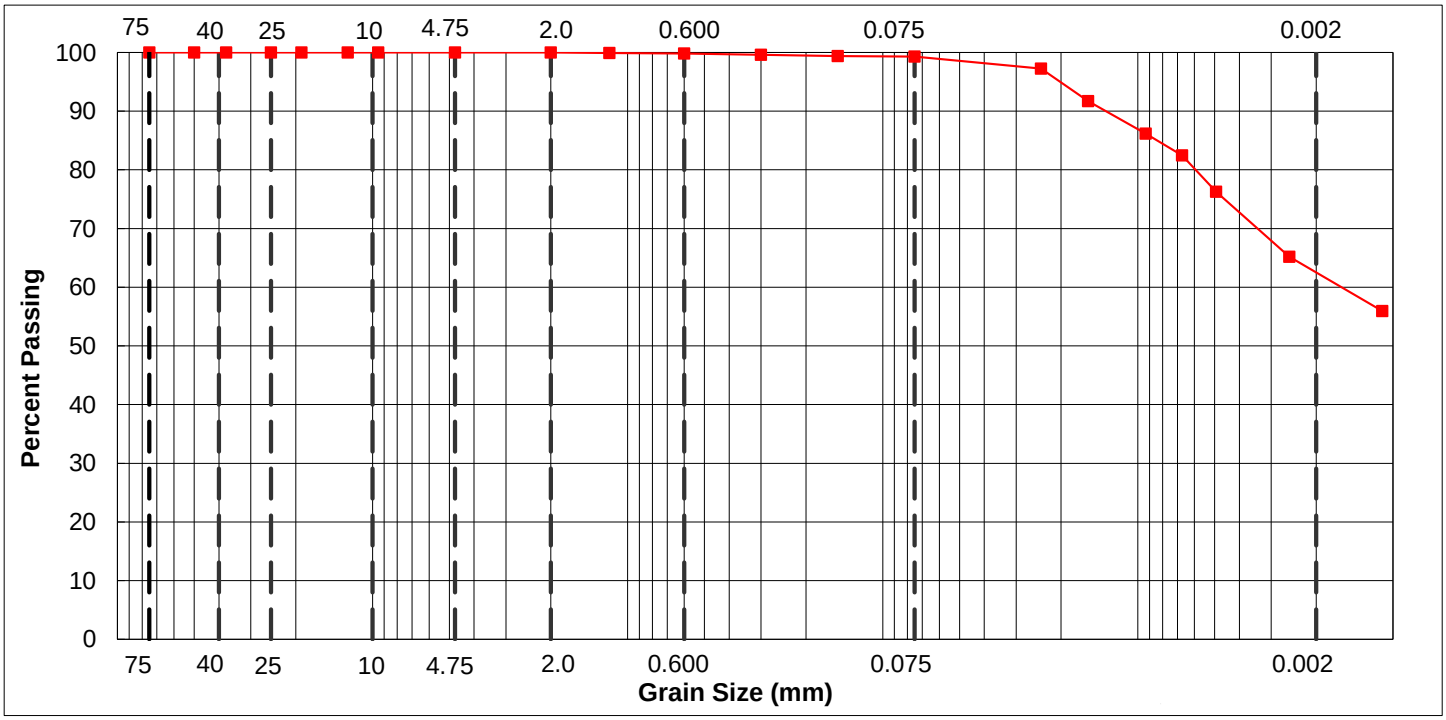
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	414AU1
Project No.:	1560-193-00	**Source:**	22BH414
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 414AU1	**Test Date:**	27-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.6
50.0	100.0	0.150	99.4
37.5	100.0	0.075	99.3
25.0	100.0	0.0239	97.2
19.0	100.0	0.0156	91.7
12.5	100.0	0.0093	86.1
9.5	100.0	0.0067	82.5
4.75	100.0	0.0049	76.3
2.00	100.0	0.0025	65.2
1.180	99.9	0.0011	56.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	0.5	425 µm to 75 µm
Silt	36.8	75 µm to 2 µm
Clay	62.5	<2 µm



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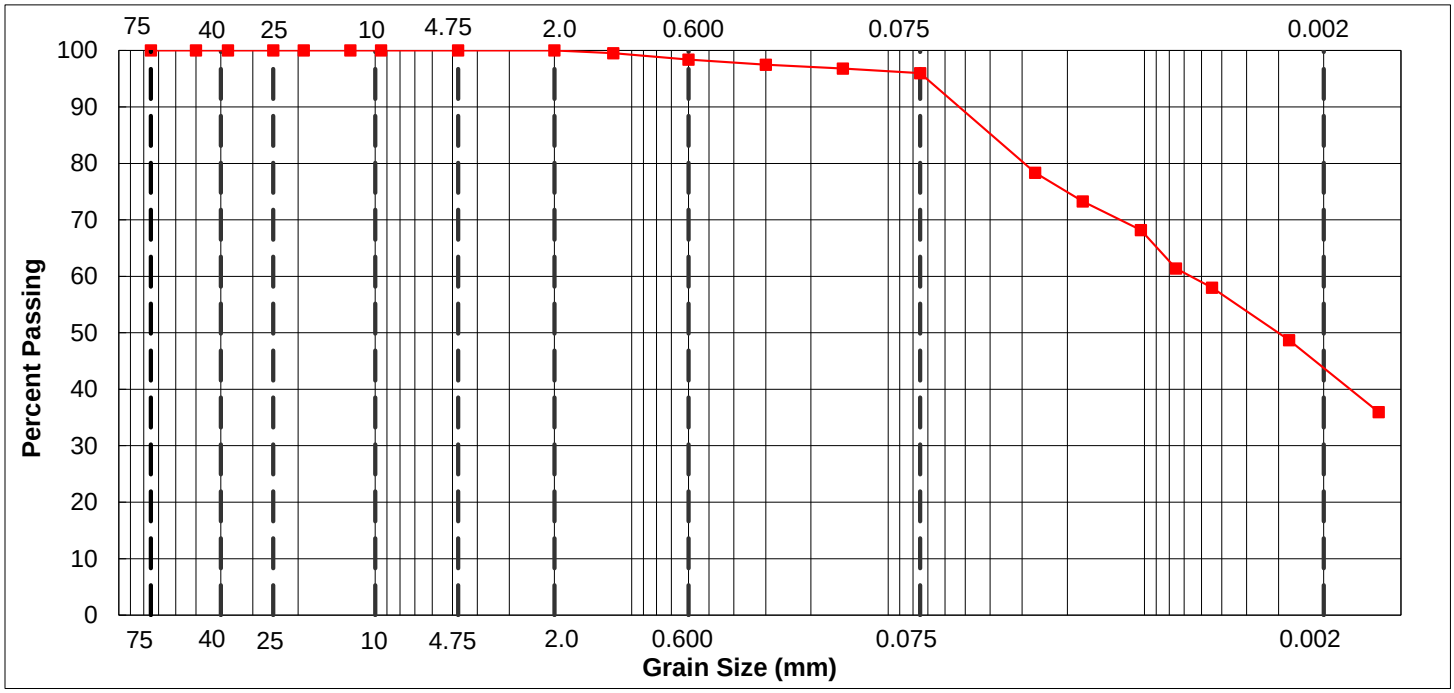
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	414AU3
Project No.:	1560-193-00	**Source:**	22BH414
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 414AU3	**Test Date:**	19-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.4
75.0	100.0	0.300	97.5
50.0	100.0	0.150	96.8
37.5	100.0	0.075	96.0
25.0	100.0	0.0267	78.4
19.0	100.0	0.0174	73.3
12.5	100.0	0.0103	68.2
9.5	100.0	0.0076	61.4
4.75	100.0	0.0054	58.0
2.00	100.0	0.0027	48.7
1.180	99.5	0.0012	36.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.6	2.00 mm to 425 µm
Fine Sand	2.4	425 µm to 75 µm
Silt	52.3	75 µm to 2 µm
Clay	43.7	<2 µm



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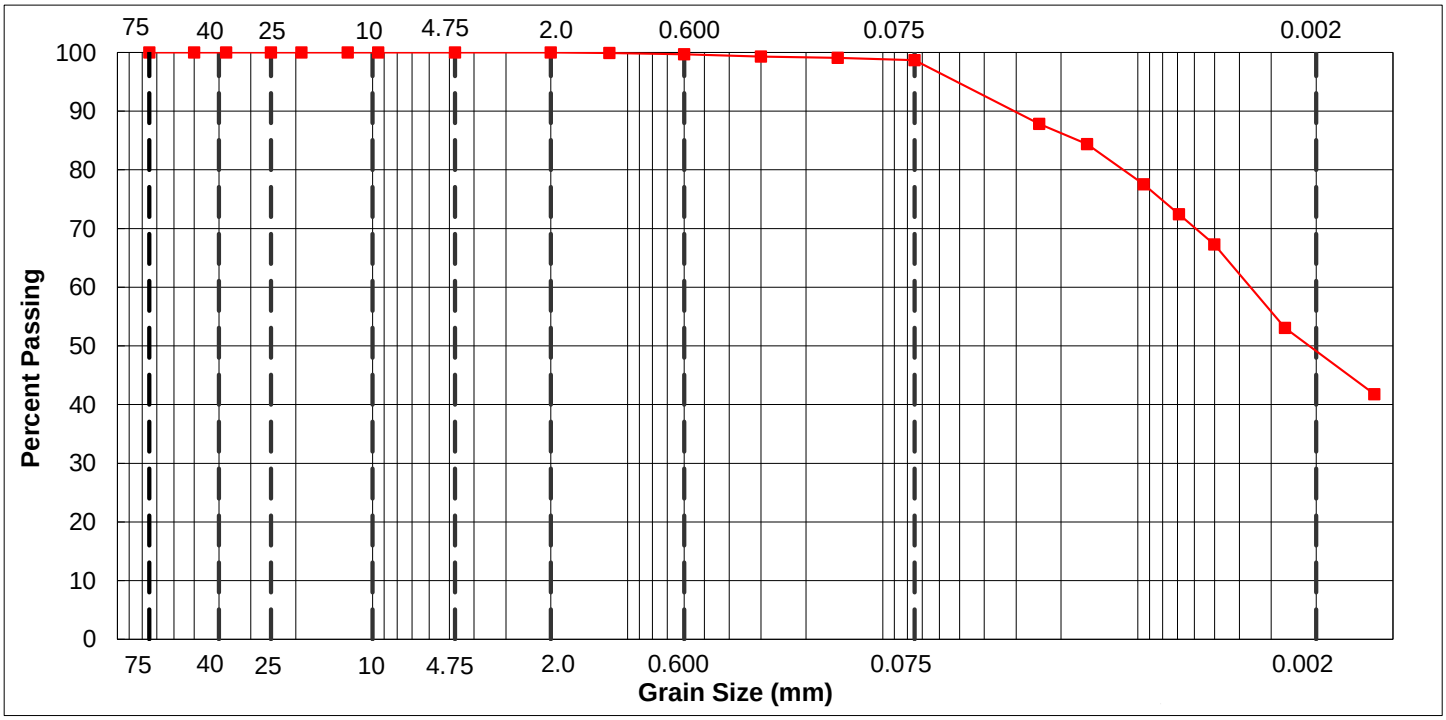
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	415AU1
Project No.:	1560-193-00	**Source:**	22BH415
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 415AU1	**Test Date:**	29-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.3
50.0	100.0	0.150	99.1
37.5	100.0	0.075	98.7
25.0	100.0	0.0244	87.8
19.0	100.0	0.0158	84.4
12.5	100.0	0.0095	77.5
9.5	100.0	0.0069	72.4
4.75	100.0	0.0050	67.3
2.00	100.0	0.0027	53.1
1.180	99.9	0.0012	41.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	1.0	425 µm to 75 µm
Silt	49.6	75 µm to 2 µm
Clay	49.1	<2 µm



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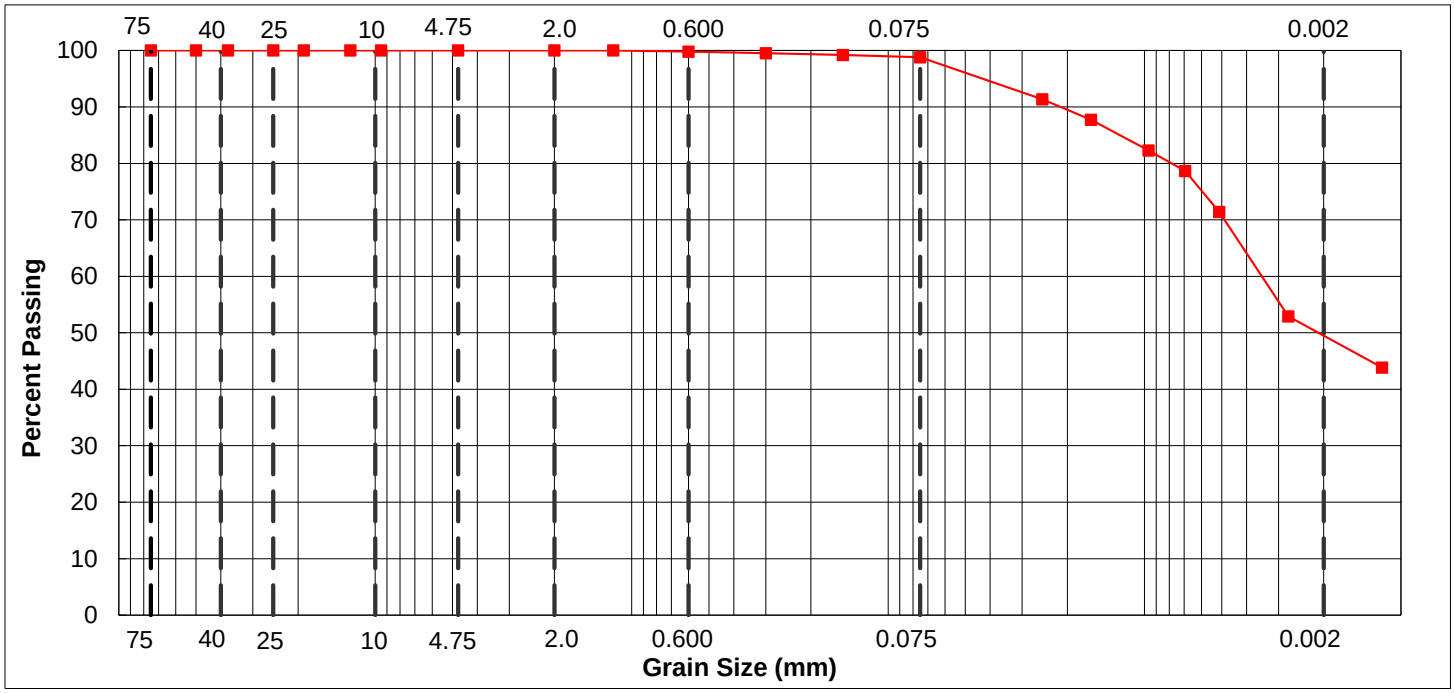
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	415AU2
Project No.:	1560-193-00	**Source:**	22BH415
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 415AU2	**Test Date:**	18-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.2
37.5	100.0	0.075	98.8
25.0	100.0	0.0251	91.4
19.0	100.0	0.0162	87.7
12.5	100.0	0.0096	82.3
9.5	100.0	0.0069	78.7
4.75	100.0	0.0051	71.4
2.00	100.0	0.0027	52.9
1.180	100.0	0.0012	43.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	1.0	425 µm to 75 µm
Silt	49.3	75 µm to 2 µm
Clay	49.5	<2 µm



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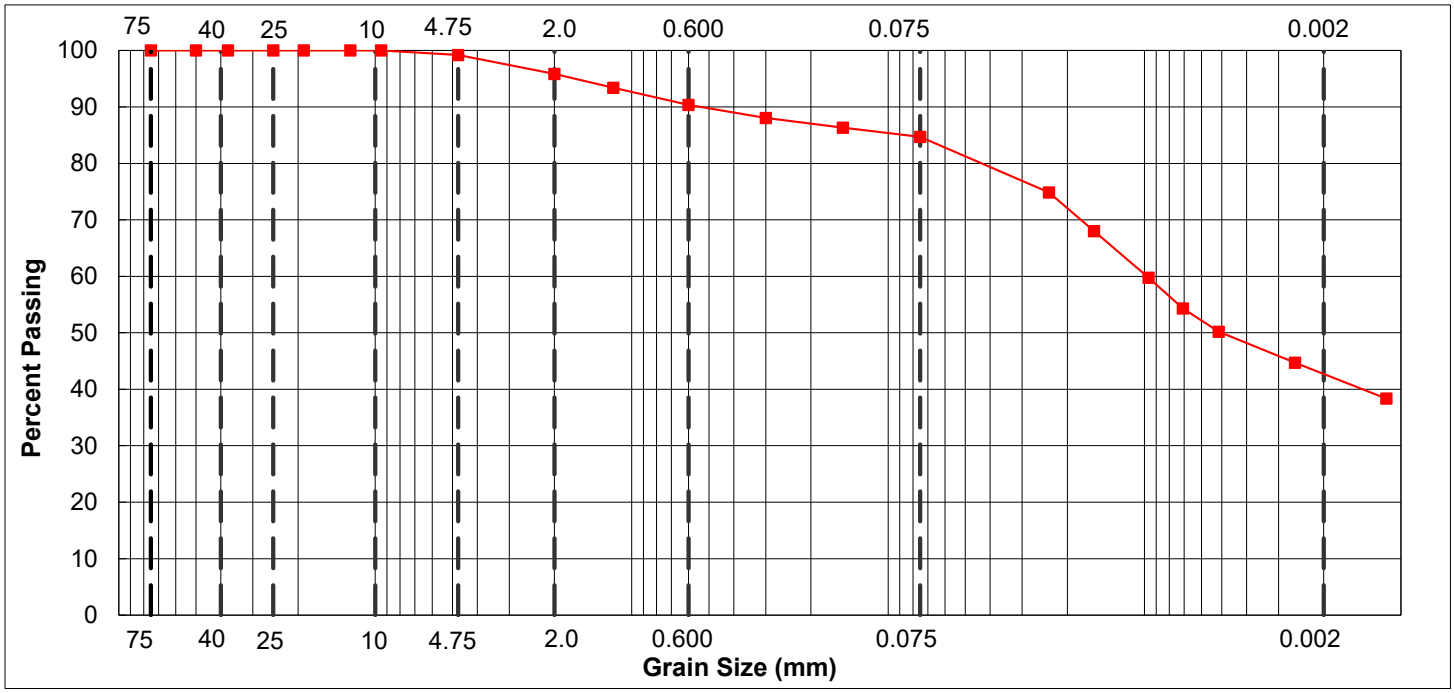
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	416AU1
Project No.:	1560-193-00	**Source:**	22BH416
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 416AU1	**Test Date:**	17-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	90.3
75.0	100.0	0.300	88.1
50.0	100.0	0.150	86.3
37.5	100.0	0.075	84.7
25.0	100.0	0.0236	74.8
19.0	100.0	0.0157	68.0
12.5	100.0	0.0097	59.8
9.5	100.0	0.0071	54.3
4.75	99.2	0.0051	50.2
2.00	95.8	0.0026	44.7
1.180	93.4	0.0011	38.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.8	20 mm to 4.75 mm
Coarse Sand	3.3	4.75 mm to 2.00 mm
Medium Sand	5.5	2.00 mm to 425 µm
Fine Sand	5.7	425 µm to 75 µm
Silt	42.0	75 µm to 2 µm
Clay	42.7	<2 µm



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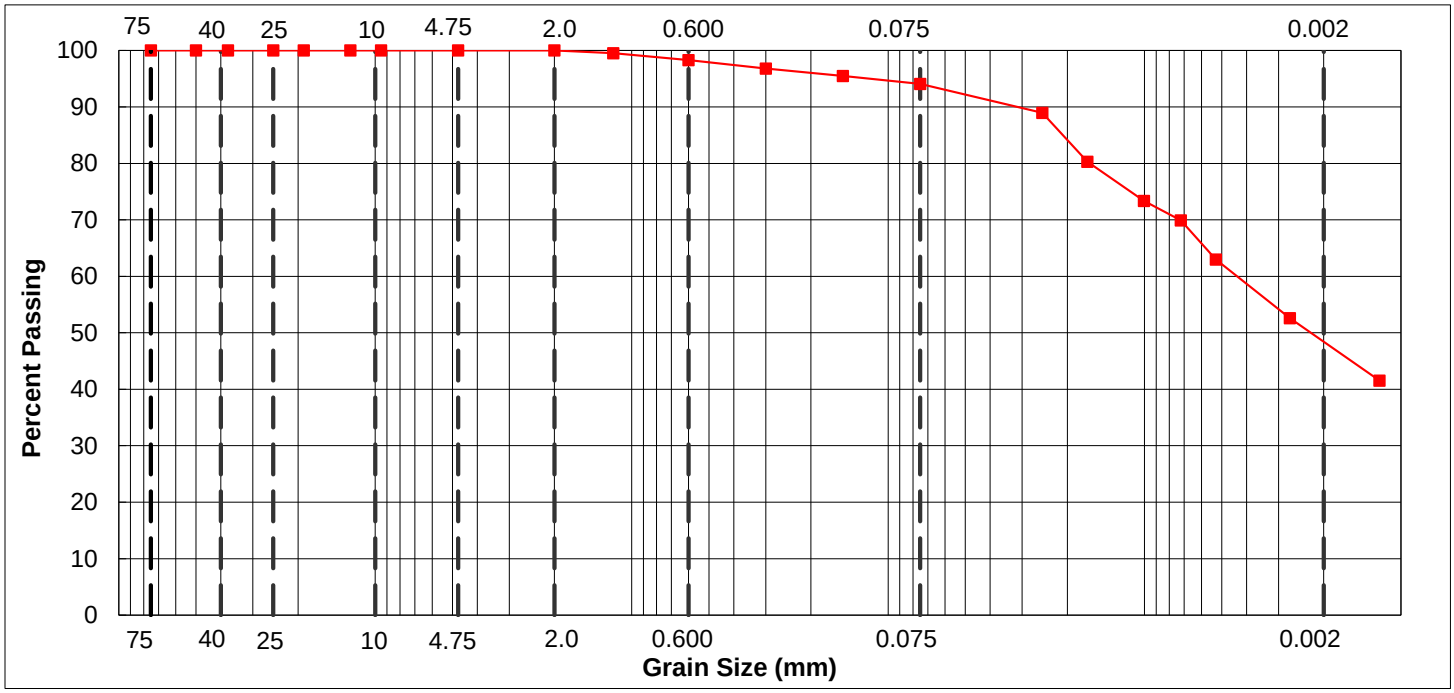
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	416AU3
Project No.:	1560-193-00	**Source:**	22BH416
Owner:	EID	**Sample Depth:**	3.5m
File No.:	GSA - 416AU3	**Test Date:**	4-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.3
75.0	100.0	0.300	96.8
50.0	100.0	0.150	95.5
37.5	100.0	0.075	94.1
25.0	100.0	0.0251	88.9
19.0	100.0	0.0167	80.3
12.5	100.0	0.0100	73.4
9.5	100.0	0.0072	69.9
4.75	100.0	0.0053	63.0
2.00	100.0	0.0027	52.6
1.180	99.5	0.0012	41.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.7	2.00 mm to 425 µm
Fine Sand	4.2	425 µm to 75 µm
Silt	45.7	75 µm to 2 µm
Clay	48.4	<2 µm



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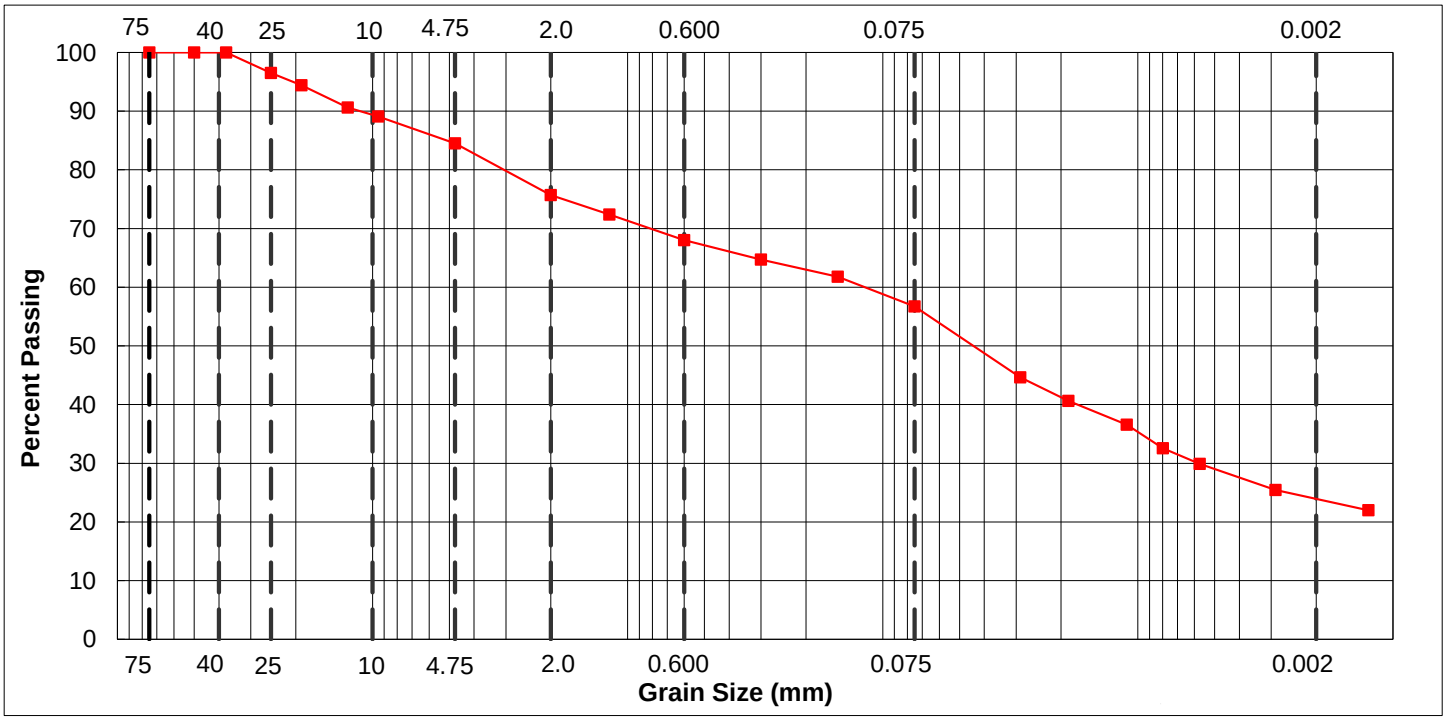
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	417AU1
Project No.:	1560-193-00	**Source:**	22BH417
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 417AU1	**Test Date:**	29-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	68.0
75.0	100.0	0.300	64.7
50.0	100.0	0.150	61.8
37.5	100.0	0.075	56.7
25.0	96.5	0.0289	44.6
19.0	94.4	0.0187	40.6
12.5	90.6	0.0110	36.6
9.5	89.1	0.0080	32.6
4.75	84.5	0.0057	29.9
2.00	75.7	0.0029	25.5
1.180	72.4	0.0012	22.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	3.5	80 mm to 20 mm
Fine Gravel	12.0	20 mm to 4.75 mm
Coarse Sand	8.8	4.75 mm to 2.00 mm
Medium Sand	7.7	2.00 mm to 425 µm
Fine Sand	11.3	425 µm to 75 µm
Silt	32.8	75 µm to 2 µm
Clay	23.9	<2 µm



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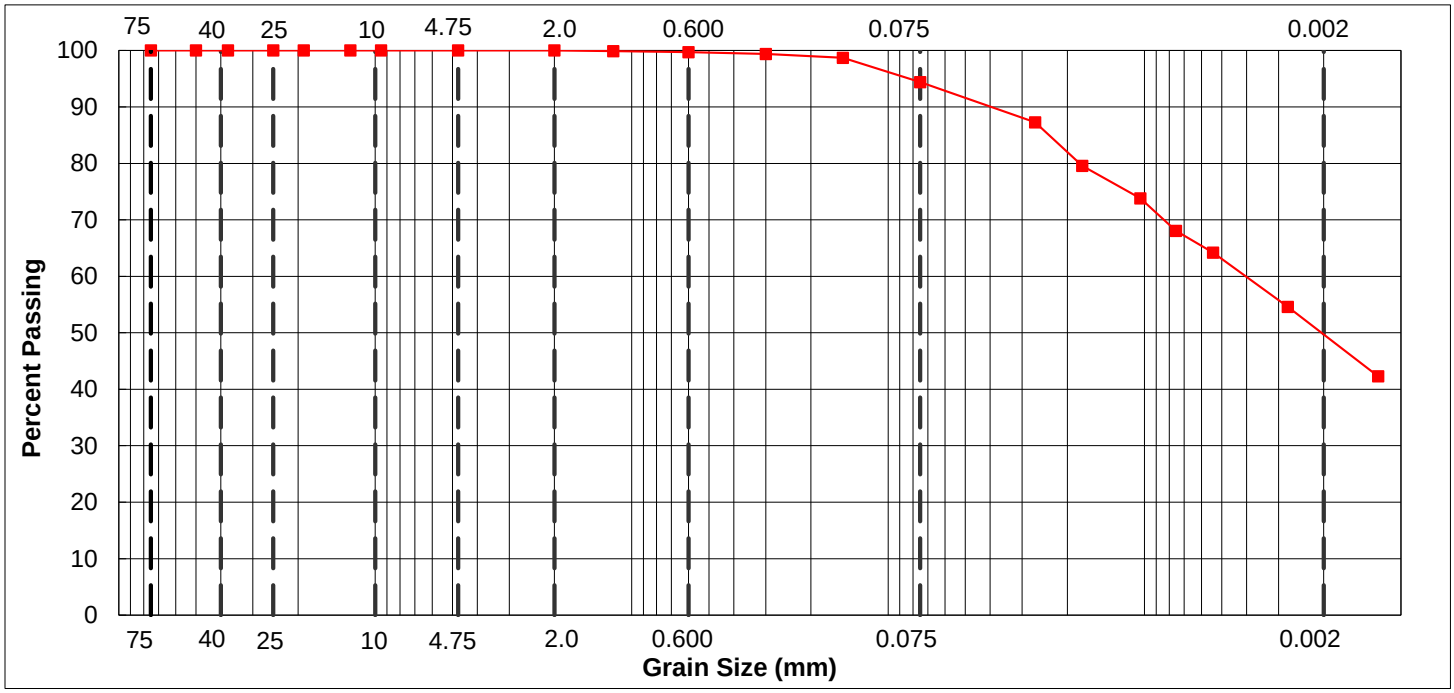
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	418AU2
Project No.:	1560-193-00	**Source:**	22BH418
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 418AU2	**Test Date:**	4-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.4
50.0	100.0	0.150	98.7
37.5	100.0	0.075	94.4
25.0	100.0	0.0267	87.3
19.0	100.0	0.0175	79.6
12.5	100.0	0.0104	73.8
9.5	100.0	0.0075	68.1
4.75	100.0	0.0054	64.2
2.00	100.0	0.0028	54.6
1.180	99.9	0.0012	42.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	5.3	425 µm to 75 µm
Silt	44.7	75 µm to 2 µm
Clay	49.7	<2 µm



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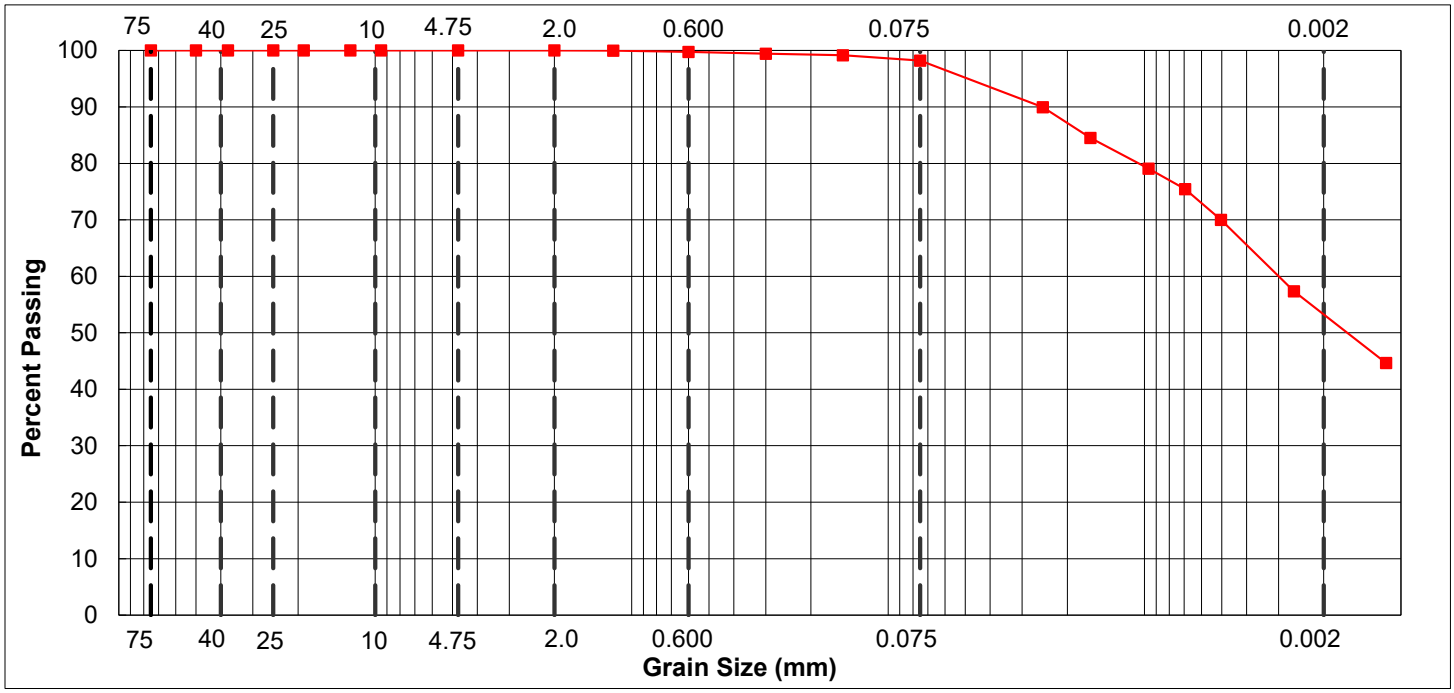
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	418AU4
Project No.:	1560-193-00	**Source:**	22BH418
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 418AU4	**Test Date:**	16-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.2
37.5	100.0	0.075	98.2
25.0	100.0	0.0249	89.9
19.0	100.0	0.0162	84.5
12.5	100.0	0.0097	79.1
9.5	100.0	0.0069	75.5
4.75	100.0	0.0050	70.0
2.00	100.0	0.0026	57.3
1.180	100.0	0.0011	44.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	1.6	425 µm to 75 µm
Silt	45.0	75 µm to 2 µm
Clay	53.2	<2 µm



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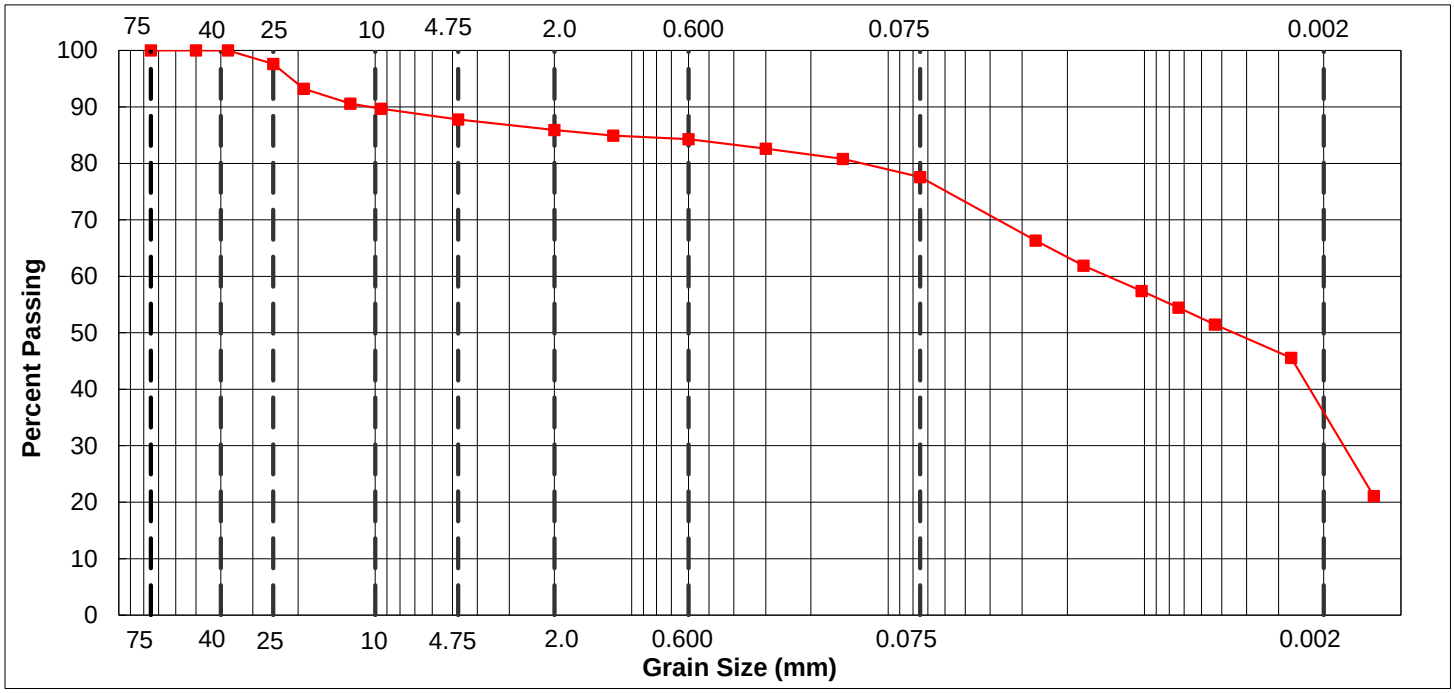
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	419AU1
Project No.:	1560-193-00	**Source:**	22BH419
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 419AU1	**Test Date:**	30-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	84.3
75.0	100.0	0.300	82.6
50.0	100.0	0.150	80.8
37.5	100.0	0.075	77.6
25.0	97.6	0.0266	66.3
19.0	93.2	0.0173	61.9
12.5	90.6	0.0103	57.4
9.5	89.7	0.0074	54.5
4.75	87.8	0.0053	51.5
2.00	85.9	0.0027	45.5
1.180	84.9	0.0013	21.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	2.4	80 mm to 20 mm
Fine Gravel	9.8	20 mm to 4.75 mm
Coarse Sand	1.9	4.75 mm to 2.00 mm
Medium Sand	1.6	2.00 mm to 425 µm
Fine Sand	6.7	425 µm to 75 µm
Silt	41.7	75 µm to 2 µm
Clay	35.9	<2 µm



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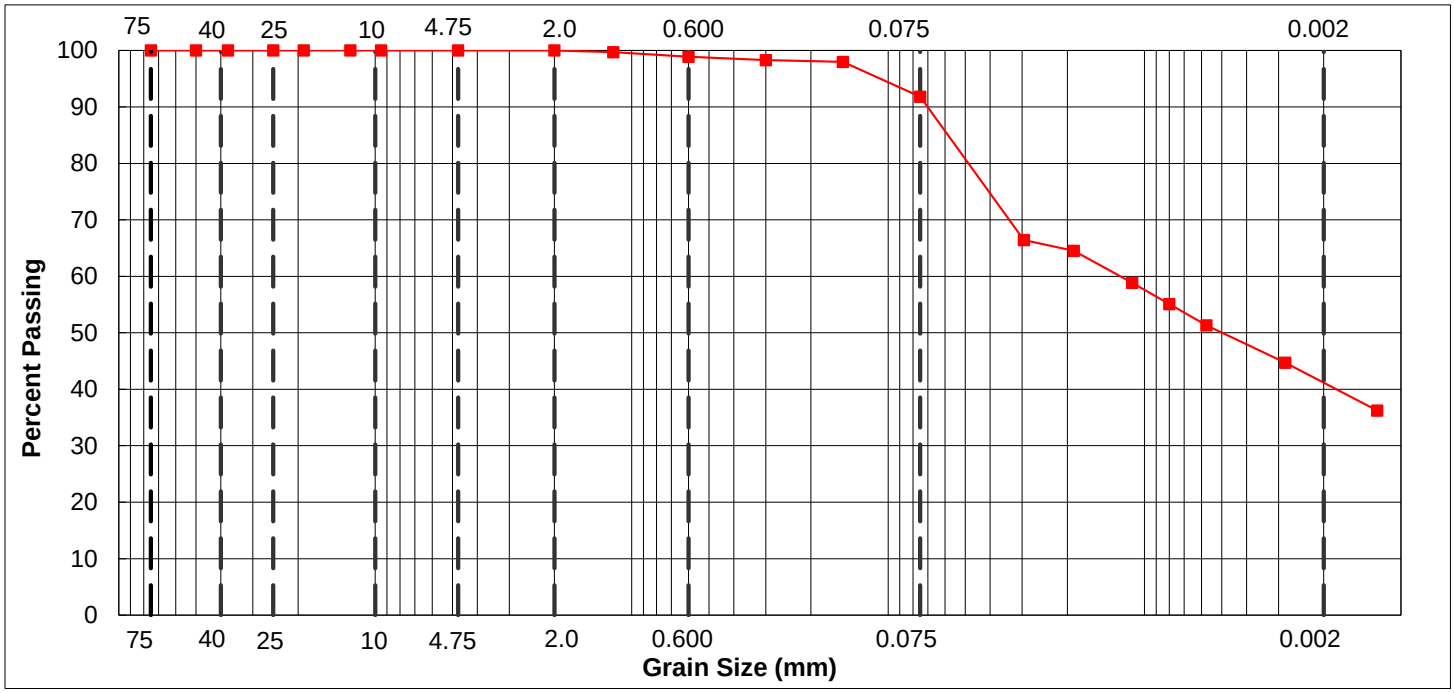
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	419AU3
Project No.:	1560-193-00	**Source:**	22CH419
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 419AU3	**Test Date:**	18-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.9
75.0	100.0	0.300	98.3
50.0	100.0	0.150	98.0
37.5	100.0	0.075	91.8
25.0	100.0	0.0295	66.4
19.0	100.0	0.0189	64.5
12.5	100.0	0.0112	58.9
9.5	100.0	0.0080	55.1
4.75	100.0	0.0057	51.3
2.00	100.0	0.0028	44.7
1.180	99.7	0.0012	36.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.1	2.00 mm to 425 µm
Fine Sand	7.1	425 µm to 75 µm
Silt	50.6	75 µm to 2 µm
Clay	41.2	<2 µm



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Kasz Leavitt, P.Tech. (Eng.)

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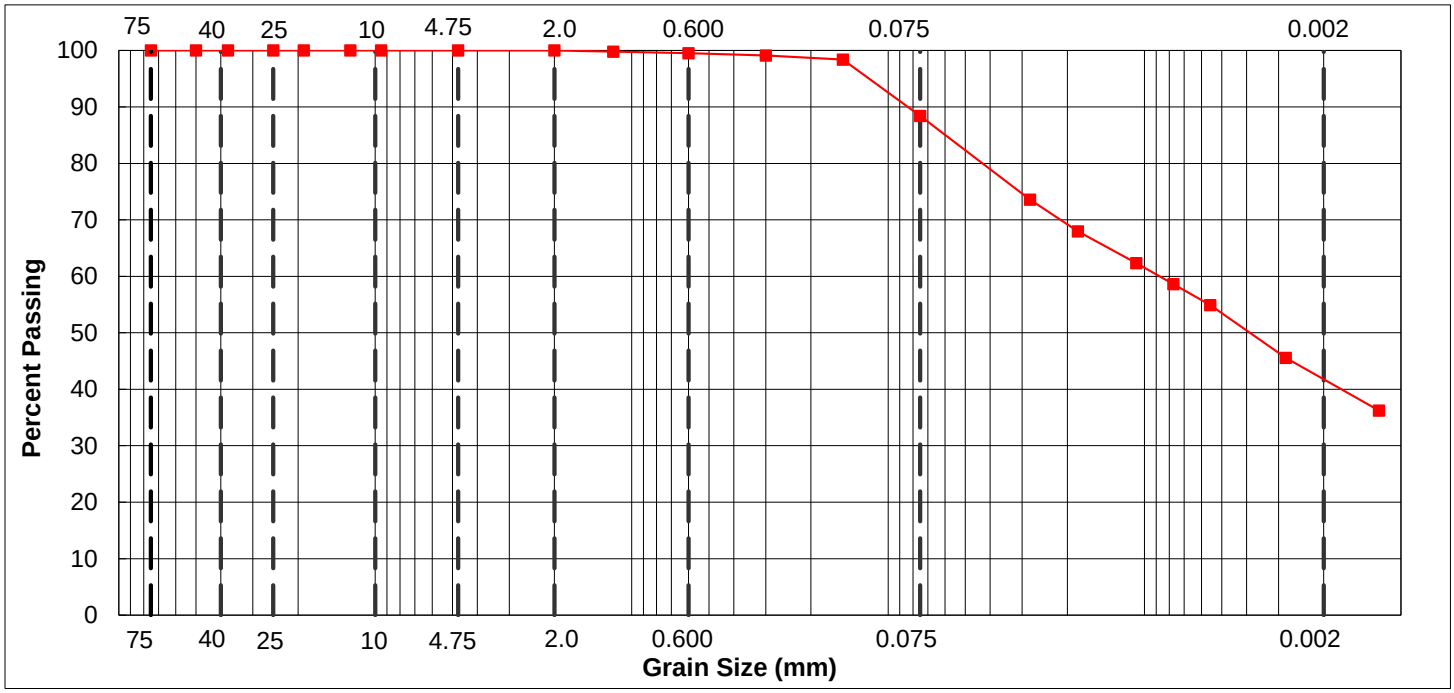
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	420AU2
Project No.:	1560-193-00	**Source:**	22BH420
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 420AU2	**Test Date:**	3-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.1
50.0	100.0	0.150	98.4
37.5	100.0	0.075	88.4
25.0	100.0	0.0280	73.6
19.0	100.0	0.0182	68.0
12.5	100.0	0.0108	62.4
9.5	100.0	0.0077	58.6
4.75	100.0	0.0055	54.9
2.00	100.0	0.0028	45.6
1.180	99.8	0.0012	36.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	11.1	425 µm to 75 µm
Silt	46.6	75 µm to 2 µm
Clay	41.8	<2 µm



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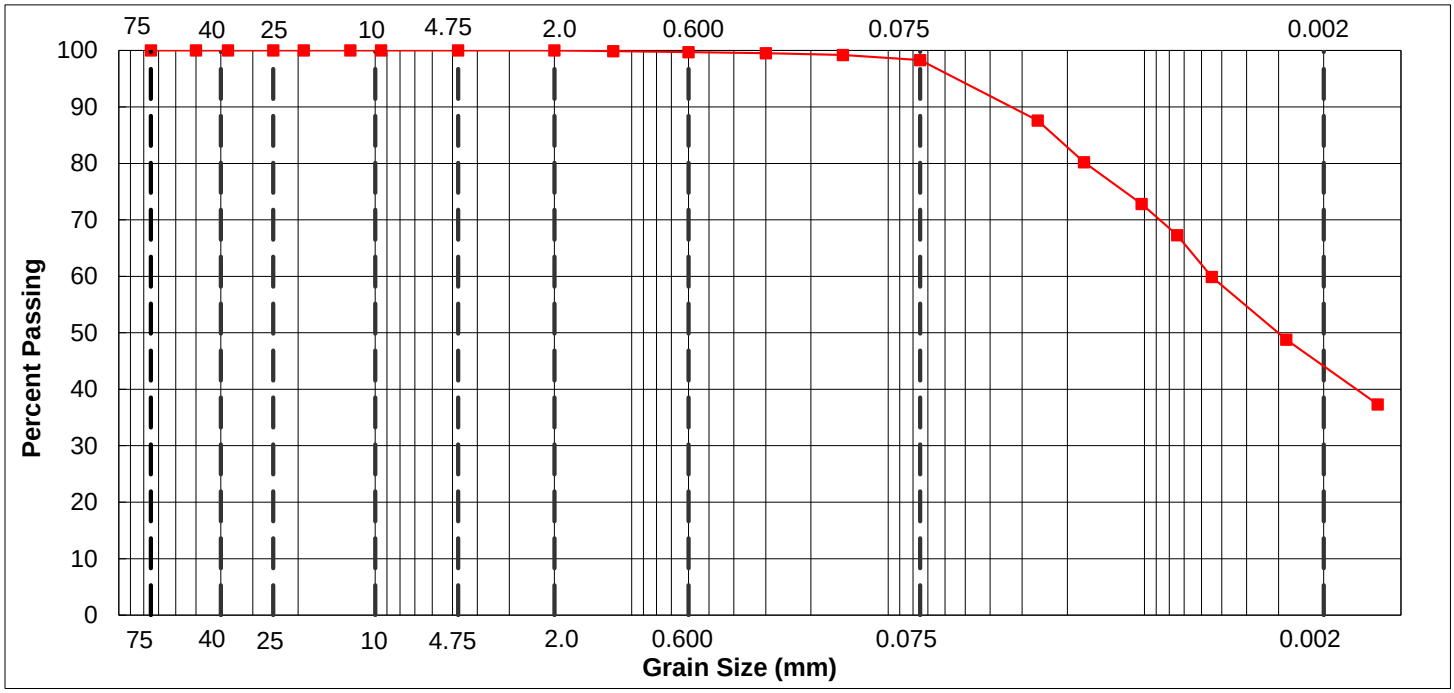
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	420AU4
Project No.:	1560-193-00	**Source:**	22BH420
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 420AU4	**Test Date:**	4-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.2
37.5	100.0	0.075	98.3
25.0	100.0	0.0261	87.6
19.0	100.0	0.0172	80.2
12.5	100.0	0.0103	72.8
9.5	100.0	0.0075	67.3
4.75	100.0	0.0055	59.9
2.00	100.0	0.0028	48.8
1.180	99.9	0.0012	37.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	1.4	425 µm to 75 µm
Silt	54.2	75 µm to 2 µm
Clay	44.1	<2 µm



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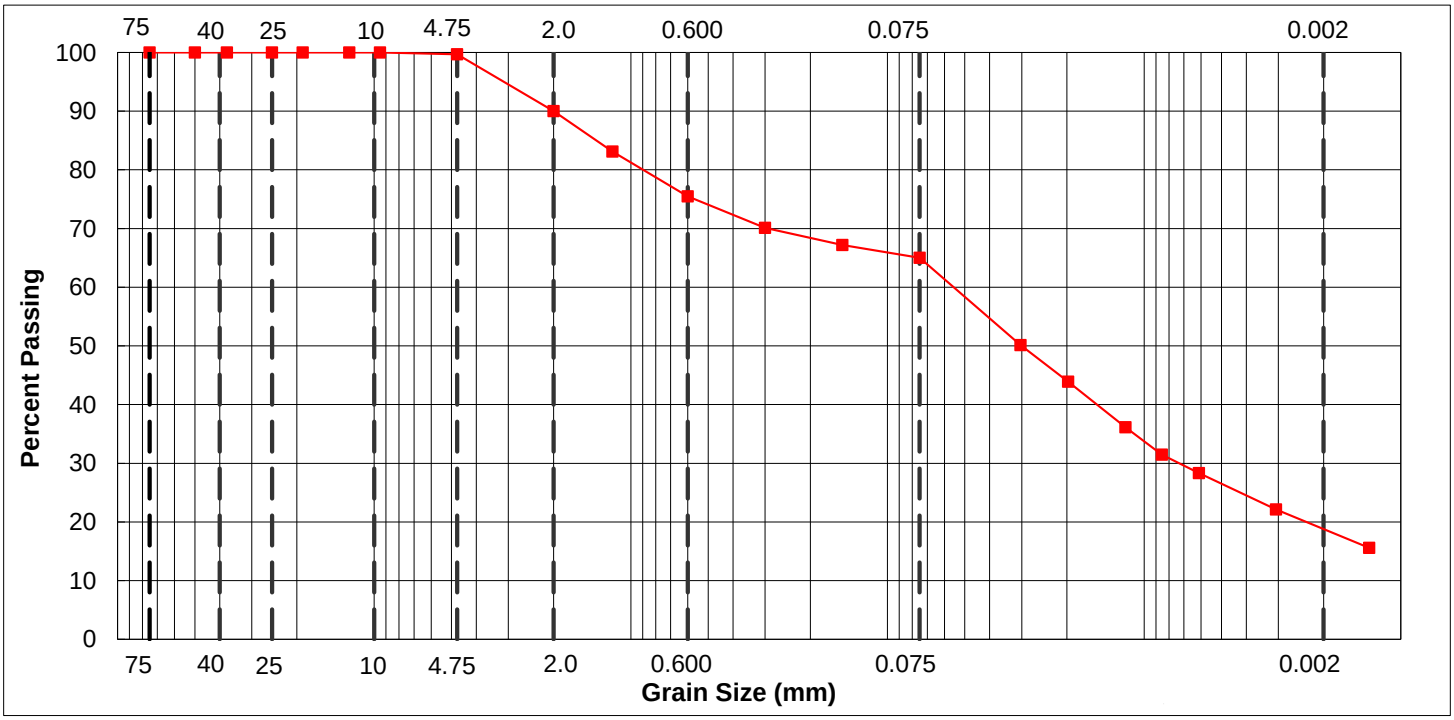
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	421AU3
Project No.:	1560-193-00	**Source:**	22BH421
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 421AU3	**Test Date:**	26-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	75.5
75.0	100.0	0.300	70.1
50.0	100.0	0.150	67.2
37.5	100.0	0.075	65.0
25.0	100.0	0.0303	50.1
19.0	100.0	0.0198	43.9
12.5	100.0	0.0118	36.1
9.5	100.0	0.0085	31.5
4.75	99.7	0.0061	28.3
2.00	90.0	0.0031	22.1
1.180	83.1	0.0013	15.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.3	20 mm to 4.75 mm
Coarse Sand	9.7	4.75 mm to 2.00 mm
Medium Sand	14.5	2.00 mm to 425 µm
Fine Sand	10.5	425 µm to 75 µm
Silt	46.2	75 µm to 2 µm
Clay	18.8	<2 µm



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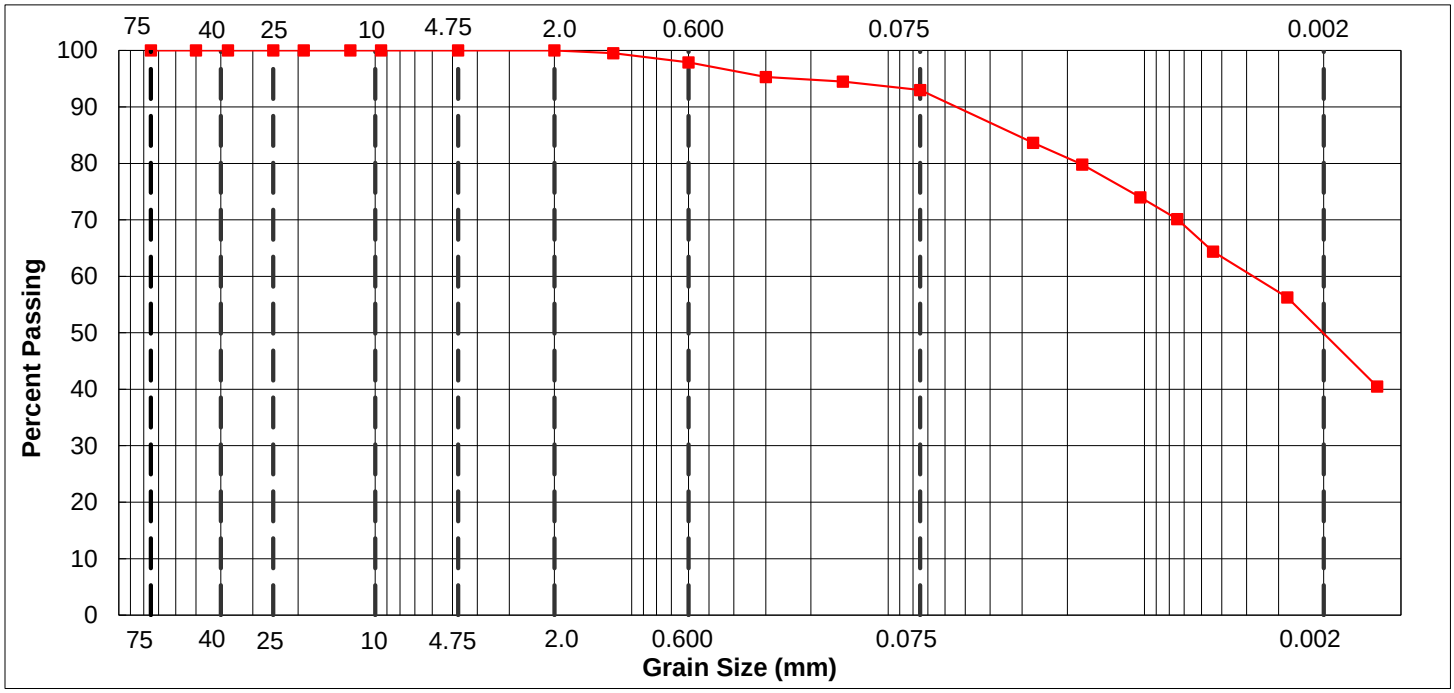
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	422AU1
Project No.:	1560-193-00	**Source:**	22BH422
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 422AU1	**Test Date:**	28-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.9
75.0	100.0	0.300	95.3
50.0	100.0	0.150	94.5
37.5	100.0	0.075	93.0
25.0	100.0	0.0272	83.7
19.0	100.0	0.0175	79.8
12.5	100.0	0.0104	74.0
9.5	100.0	0.0075	70.2
4.75	100.0	0.0054	64.4
2.00	100.0	0.0028	56.3
1.180	99.5	0.0012	40.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.1	2.00 mm to 425 µm
Fine Sand	4.9	425 µm to 75 µm
Silt	43.1	75 µm to 2 µm
Clay	49.9	<2 µm



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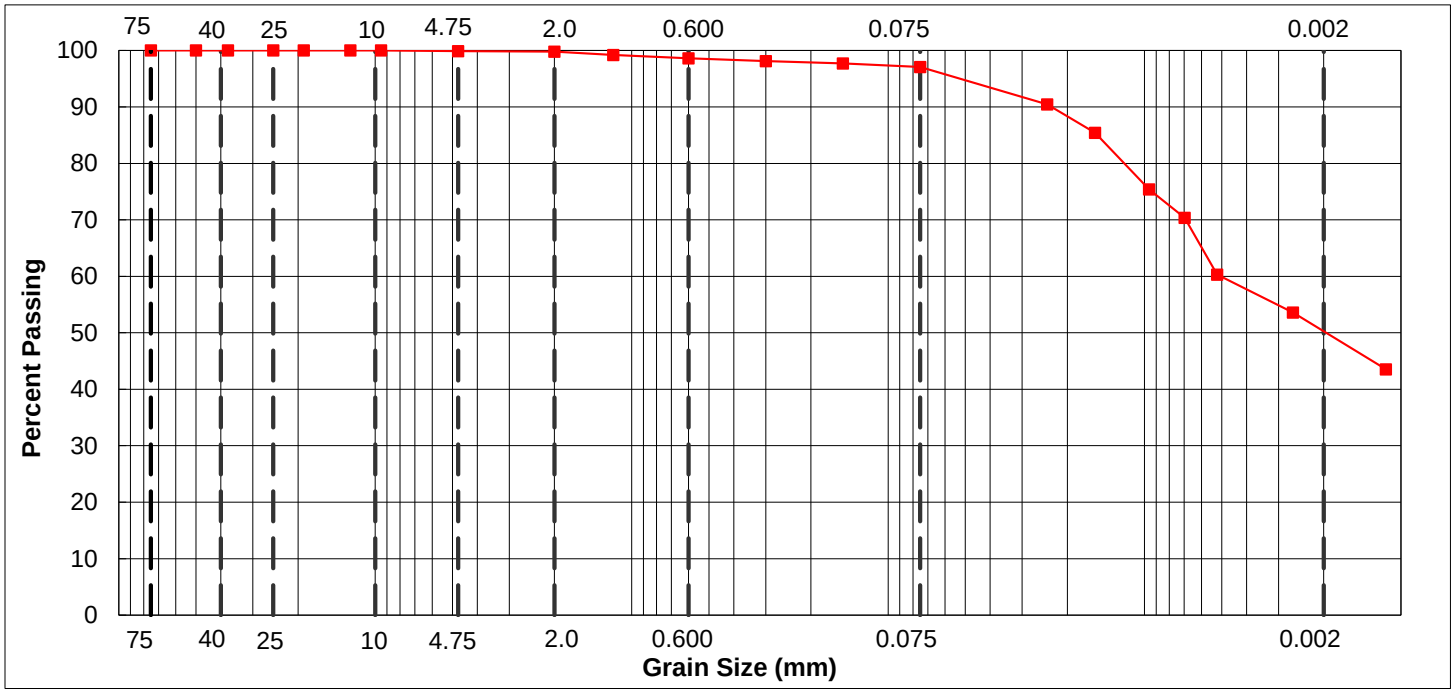
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	422AU2
Project No.:	1560-193-00	**Source:**	22BH422
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 422AU2	**Test Date:**	2-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.6
75.0	100.0	0.300	98.1
50.0	100.0	0.150	97.7
37.5	100.0	0.075	97.1
25.0	100.0	0.0240	90.5
19.0	100.0	0.0156	85.4
12.5	100.0	0.0096	75.4
9.5	100.0	0.0070	70.4
4.75	99.9	0.0052	60.3
2.00	99.8	0.0026	53.6
1.180	99.2	0.0011	43.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.1	20 mm to 4.75 mm
Coarse Sand	0.1	4.75 mm to 2.00 mm
Medium Sand	1.2	2.00 mm to 425 µm
Fine Sand	1.5	425 µm to 75 µm
Silt	46.8	75 µm to 2 µm
Clay	50.3	<2 µm



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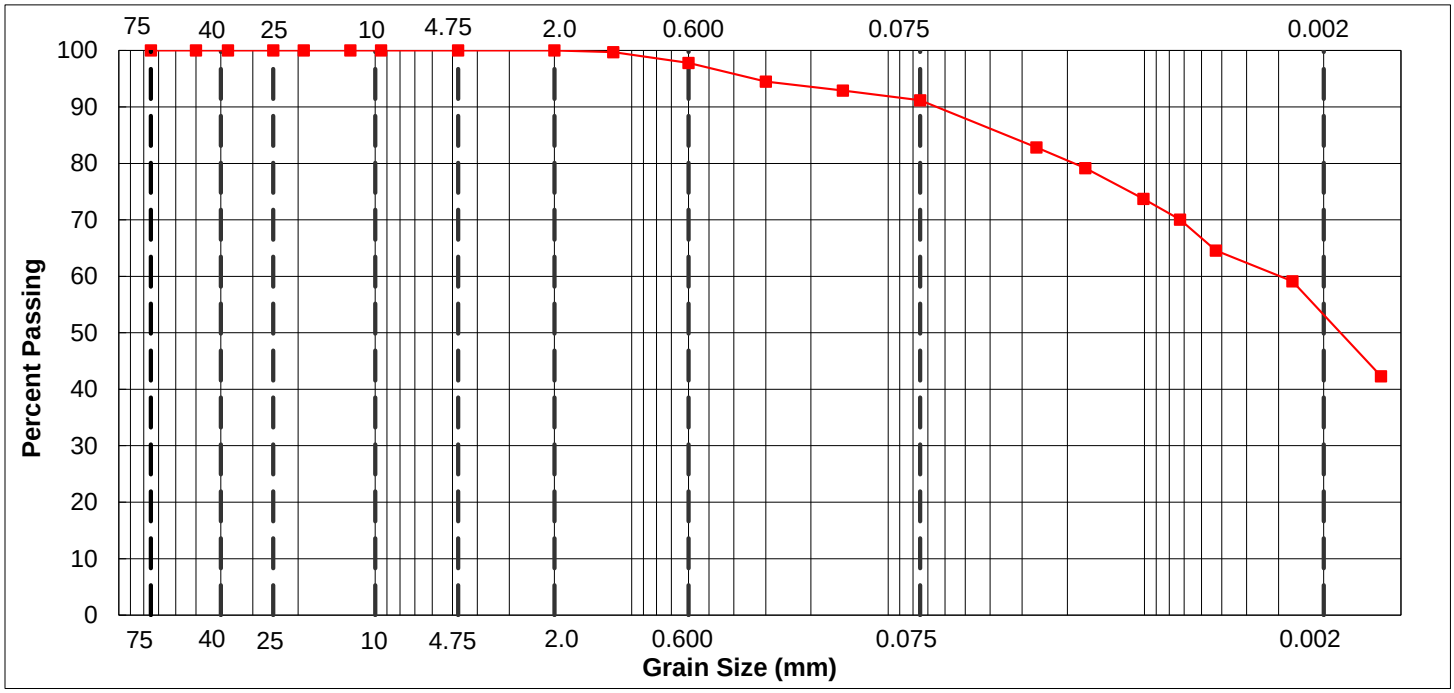
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	422AU3
Project No.:	1560-193-00	**Source:**	22BH422
Owner:	EID	**Sample Depth:**	3.5m
File No.:	GSA - 422AU3	**Test Date:**	18-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.8
75.0	100.0	0.300	94.5
50.0	100.0	0.150	92.9
37.5	100.0	0.075	91.2
25.0	100.0	0.0264	82.8
19.0	100.0	0.0170	79.2
12.5	100.0	0.0101	73.7
9.5	100.0	0.0073	70.1
4.75	100.0	0.0053	64.6
2.00	100.0	0.0027	59.1
1.180	99.7	0.0012	42.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.2	2.00 mm to 425 µm
Fine Sand	6.6	425 µm to 75 µm
Silt	38.0	75 µm to 2 µm
Clay	53.2	<2 µm



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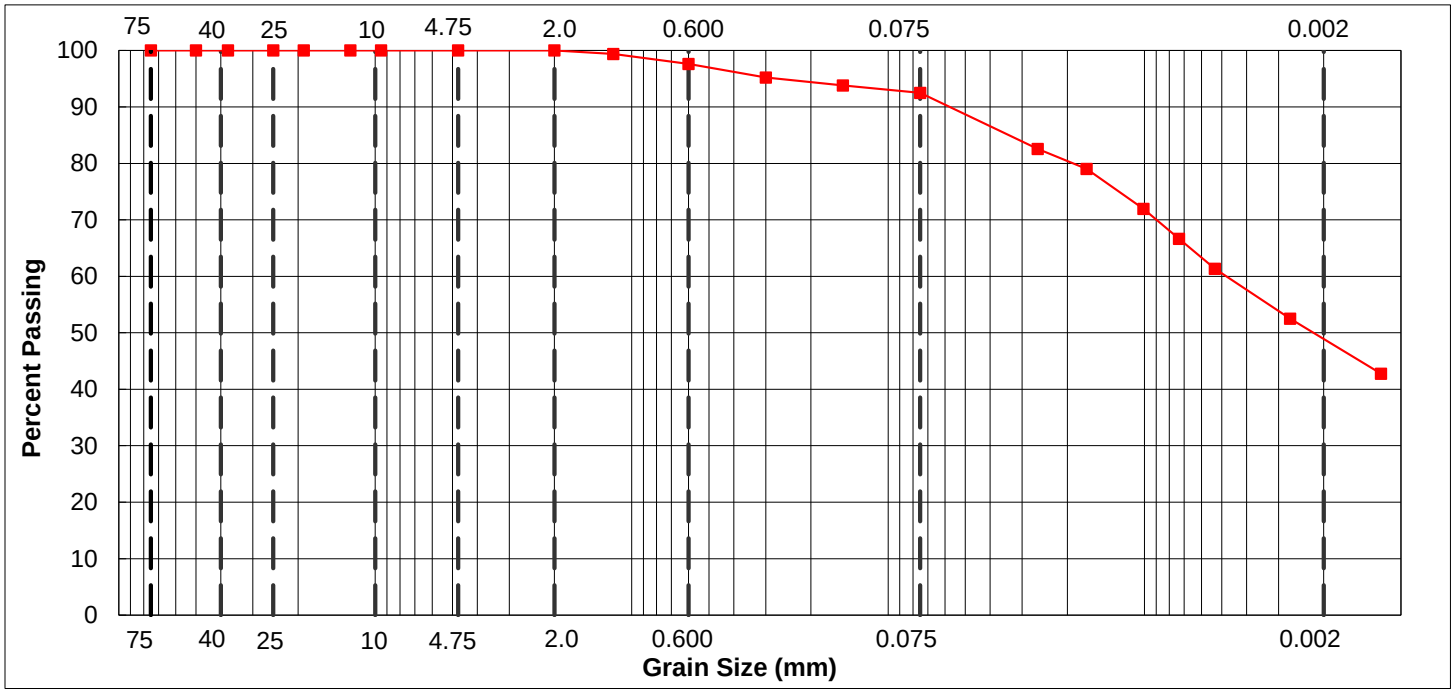
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	423AU3
Project No.:	1560-193-00	**Source:**	22BH423
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 423AU3	**Test Date:**	30-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.6
75.0	100.0	0.300	95.2
50.0	100.0	0.150	93.8
37.5	100.0	0.075	92.5
25.0	100.0	0.0261	82.5
19.0	100.0	0.0168	79.0
12.5	100.0	0.0101	71.9
9.5	100.0	0.0073	66.6
4.75	100.0	0.0053	61.3
2.00	100.0	0.0027	52.5
1.180	99.4	0.0012	42.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.4	2.00 mm to 425 µm
Fine Sand	5.1	425 µm to 75 µm
Silt	43.6	75 µm to 2 µm
Clay	48.9	<2 µm



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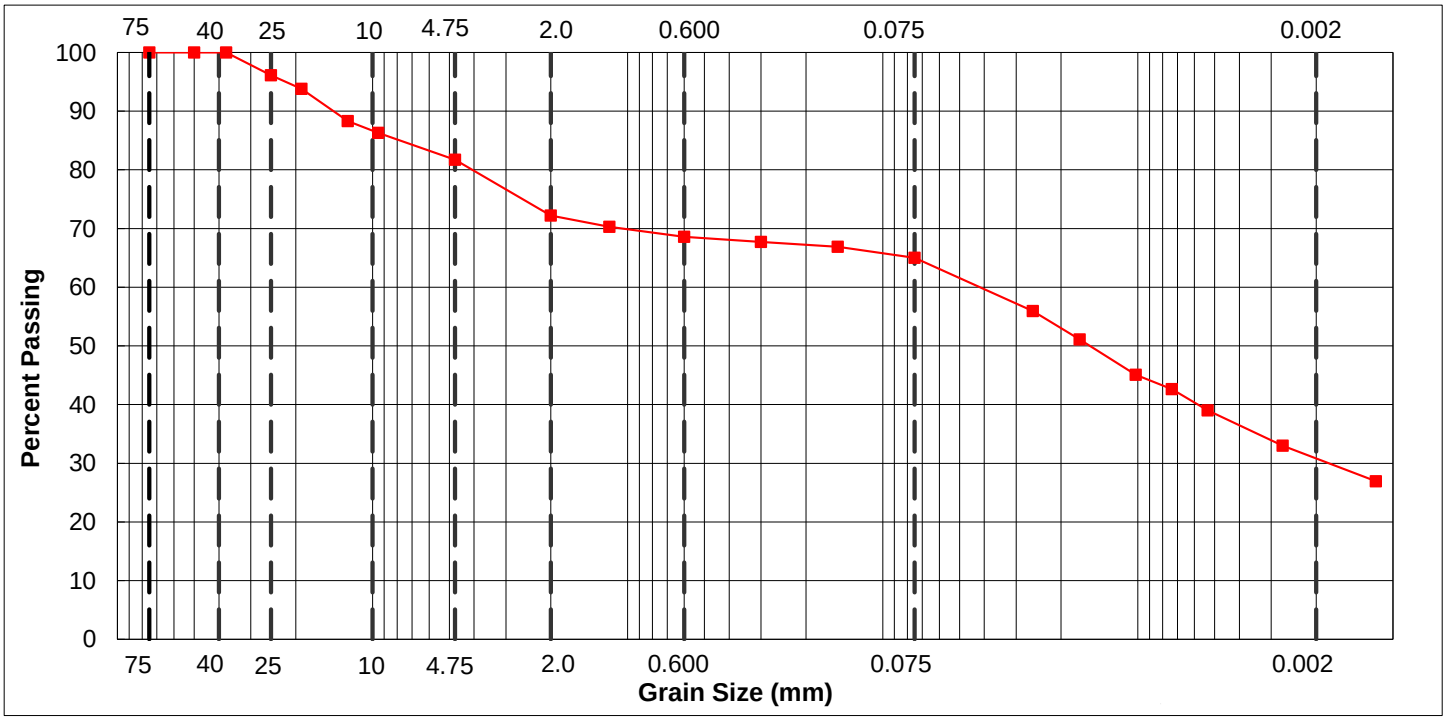
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	424AU1
Project No.:	1560-193-00	**Source:**	22BH424
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 424AU1	**Test Date:**	29-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	68.6
75.0	100.0	0.300	67.7
50.0	100.0	0.150	66.9
37.5	100.0	0.075	65.0
25.0	96.1	0.0258	55.9
19.0	93.8	0.0169	51.1
12.5	88.3	0.0102	45.1
9.5	86.3	0.0074	42.6
4.75	81.7	0.0053	39.0
2.00	72.2	0.0027	33.0
1.180	70.3	0.0012	26.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	3.9	80 mm to 20 mm
Fine Gravel	14.4	20 mm to 4.75 mm
Coarse Sand	9.5	4.75 mm to 2.00 mm
Medium Sand	3.6	2.00 mm to 425 µm
Fine Sand	3.6	425 µm to 75 µm
Silt	34.2	75 µm to 2 µm
Clay	30.8	<2 µm



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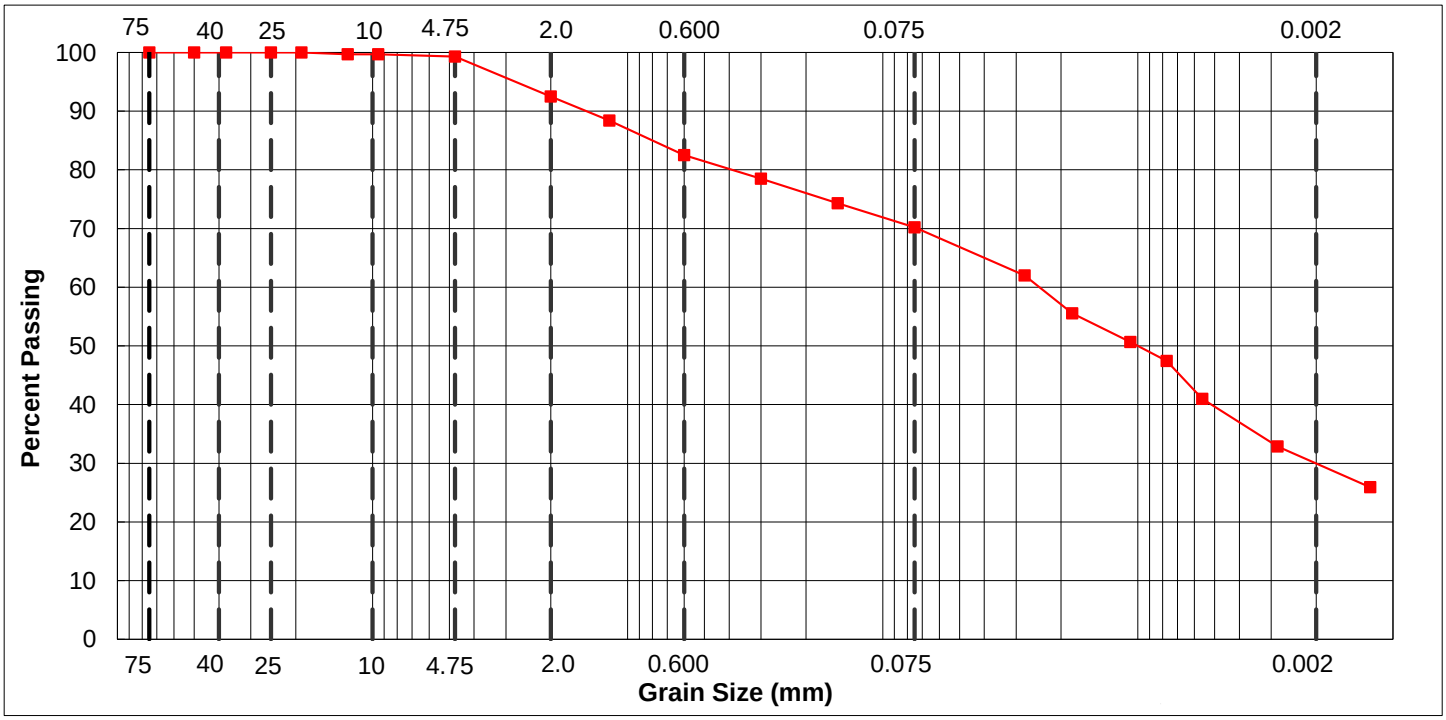
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	424AU2
Project No.:	1560-193-00	**Source:**	22BH424
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 424AU2	**Test Date:**	27-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	82.5
75.0	100.0	0.300	78.5
50.0	100.0	0.150	74.3
37.5	100.0	0.075	70.2
25.0	100.0	0.0278	62.0
19.0	100.0	0.0181	55.5
12.5	99.7	0.0107	50.7
9.5	99.7	0.0077	47.4
4.75	99.3	0.0056	41.0
2.00	92.5	0.0028	32.9
1.180	88.4	0.0012	25.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.7	20 mm to 4.75 mm
Coarse Sand	6.8	4.75 mm to 2.00 mm
Medium Sand	10.0	2.00 mm to 425 µm
Fine Sand	12.3	425 µm to 75 µm
Silt	40.2	75 µm to 2 µm
Clay	30.0	<2 µm



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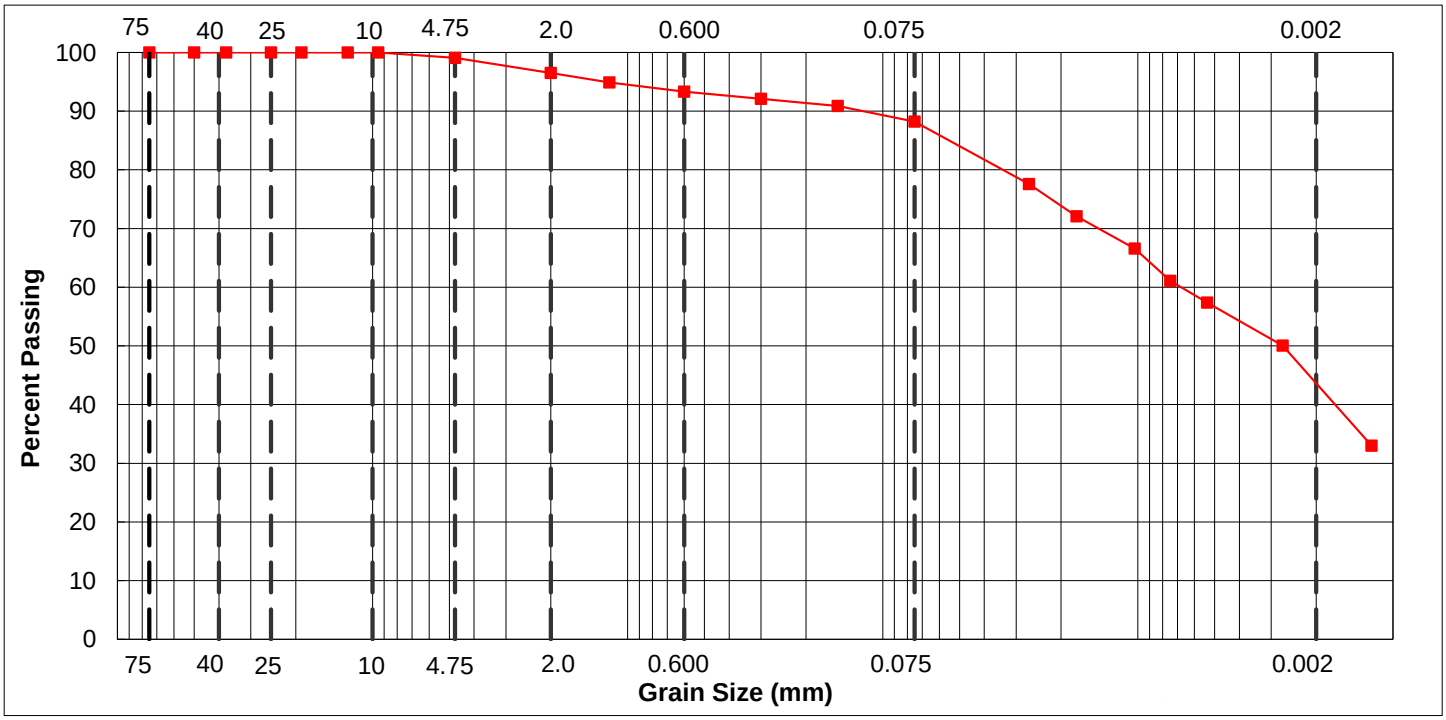
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	425AU2
Project No.:	1560-193-00	**Source:**	22BH425
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 425AU2	**Test Date:**	27-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	93.3
75.0	100.0	0.300	92.1
50.0	100.0	0.150	90.9
37.5	100.0	0.075	88.2
25.0	100.0	0.0267	77.6
19.0	100.0	0.0174	72.1
12.5	100.0	0.0103	66.6
9.5	100.0	0.0075	61.1
4.75	99.1	0.0054	57.4
2.00	96.5	0.0027	50.1
1.180	94.9	0.0012	33.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.9	20 mm to 4.75 mm
Coarse Sand	2.6	4.75 mm to 2.00 mm
Medium Sand	3.2	2.00 mm to 425 µm
Fine Sand	5.1	425 µm to 75 µm
Silt	44.6	75 µm to 2 µm
Clay	43.6	<2 µm



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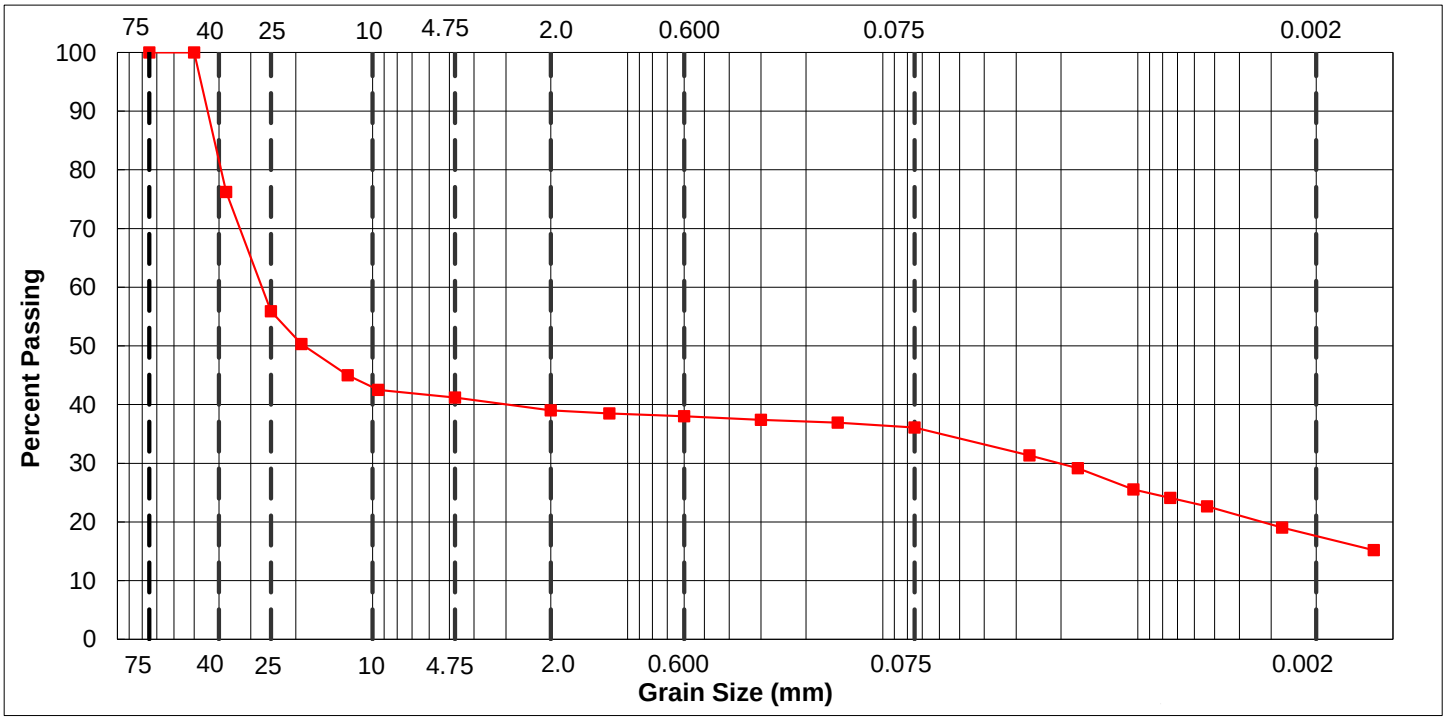
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	426AU1
Project No.:	1560-193-00	**Source:**	22BH426
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 426AU1	**Test Date:**	27-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	38.0
75.0	100.0	0.300	37.4
50.0	100.0	0.150	36.9
37.5	76.2	0.075	36.1
25.0	55.9	0.0266	31.3
19.0	50.3	0.0172	29.1
12.5	45.0	0.0104	25.5
9.5	42.5	0.0075	24.1
4.75	41.2	0.0054	22.6
2.00	39.0	0.0027	19.0
1.180	38.5	0.0012	15.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	44.1	80 mm to 20 mm
Fine Gravel	14.7	20 mm to 4.75 mm
Coarse Sand	2.2	4.75 mm to 2.00 mm
Medium Sand	1.0	2.00 mm to 425 µm
Fine Sand	1.9	425 µm to 75 µm
Silt	18.5	75 µm to 2 µm
Clay	17.6	<2 µm



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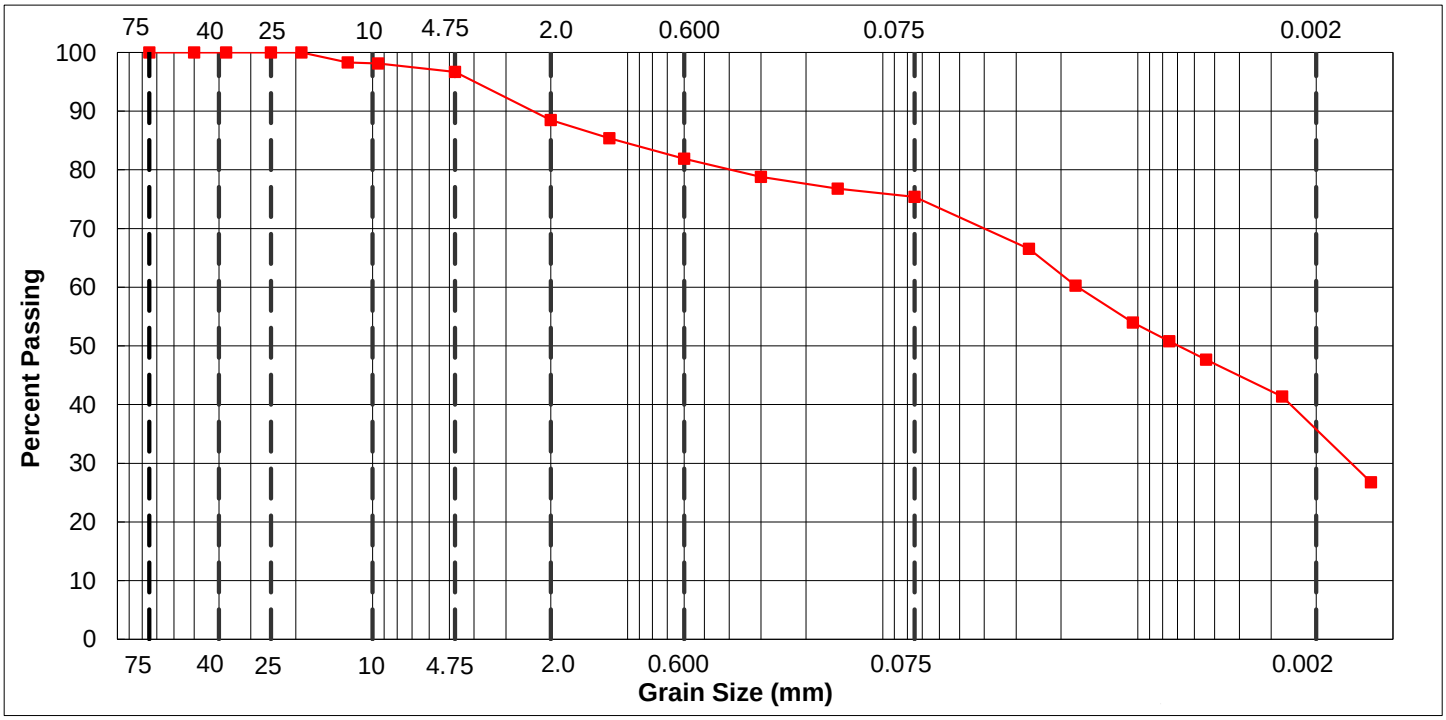
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	426AU2
Project No.:	1560-193-00	**Source:**	22BH426
Owner:	EID	**Sample Depth:**	2.0m
File No.:	GSA - 426AU2	**Test Date:**	27-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	81.9
75.0	100.0	0.300	78.8
50.0	100.0	0.150	76.8
37.5	100.0	0.075	75.4
25.0	100.0	0.0267	66.5
19.0	100.0	0.0176	60.2
12.5	98.3	0.0104	54.0
9.5	98.1	0.0075	50.8
4.75	96.7	0.0054	47.7
2.00	88.5	0.0027	41.4
1.180	85.4	0.0012	26.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	3.3	20 mm to 4.75 mm
Coarse Sand	8.2	4.75 mm to 2.00 mm
Medium Sand	6.6	2.00 mm to 425 µm
Fine Sand	6.5	425 µm to 75 µm
Silt	39.6	75 µm to 2 µm
Clay	35.8	<2 µm



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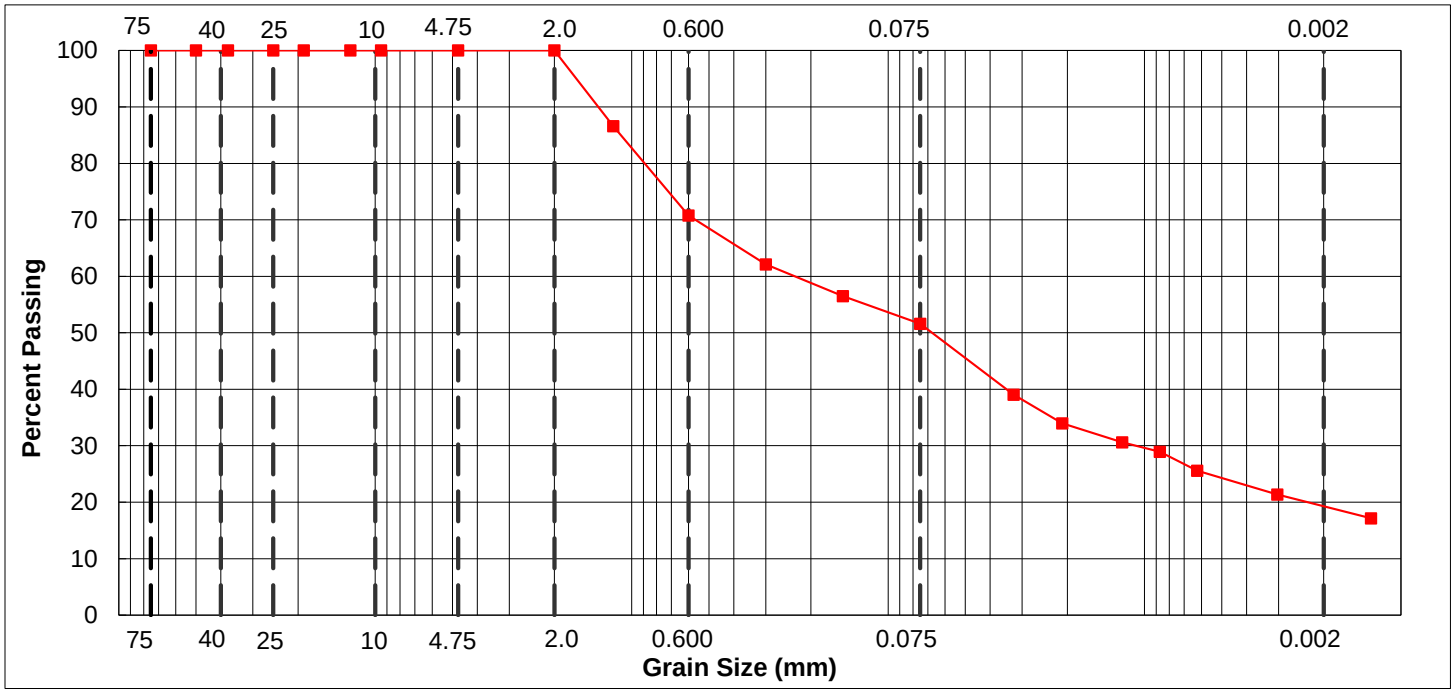
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	427AU1
Project No.:	1560-193-00	**Source:**	22CH427
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 427AU1	**Test Date:**	18-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	70.8
75.0	100.0	0.300	62.1
50.0	100.0	0.150	56.5
37.5	100.0	0.075	51.6
25.0	100.0	0.0324	39.0
19.0	100.0	0.0209	34.0
12.5	100.0	0.0122	30.6
9.5	100.0	0.0087	28.9
4.75	100.0	0.0062	25.6
2.00	100.0	0.0030	21.4
1.180	86.6	0.0013	17.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	29.2	2.00 mm to 425 µm
Fine Sand	19.2	425 µm to 75 µm
Silt	32.3	75 µm to 2 µm
Clay	19.3	<2 µm



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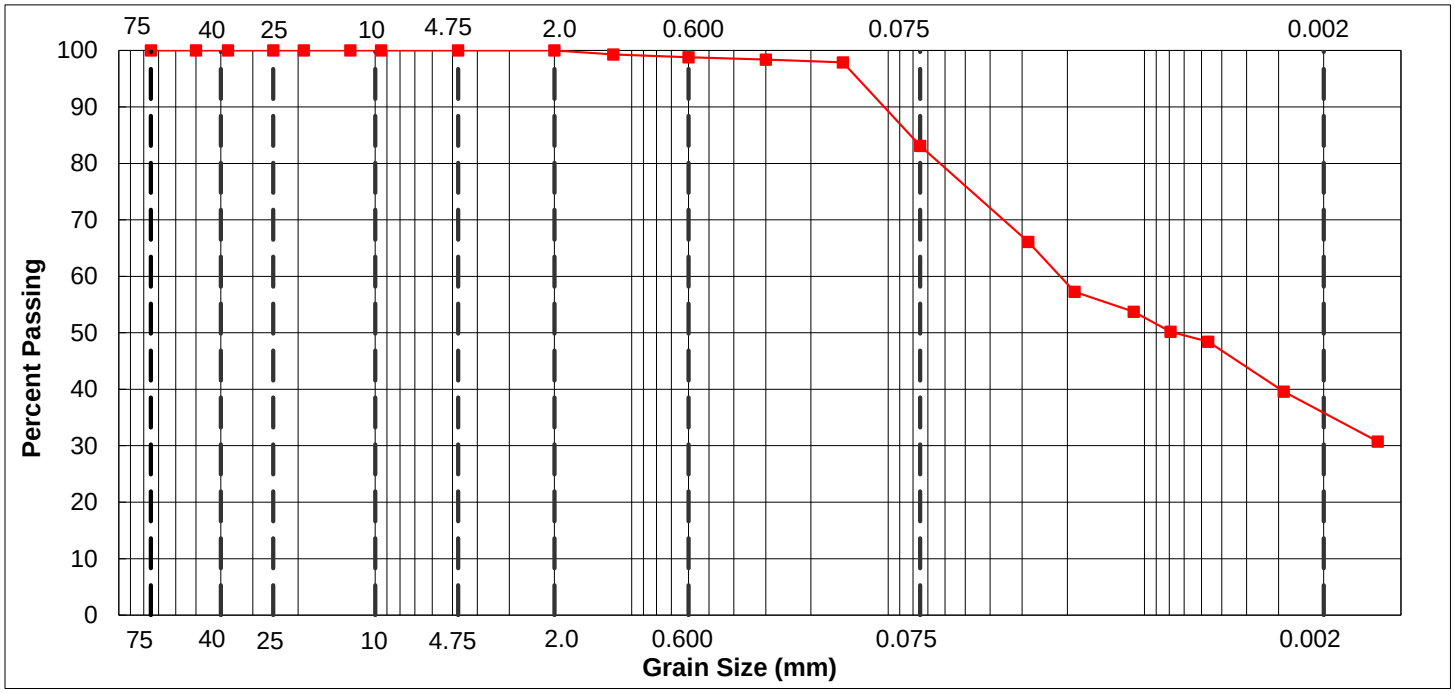
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	427AU4
Project No.:	1560-193-00	**Source:**	22BH427
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 427AU4	**Test Date:**	3-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.8
75.0	100.0	0.300	98.4
50.0	100.0	0.150	97.9
37.5	100.0	0.075	83.1
25.0	100.0	0.0284	66.1
19.0	100.0	0.0187	57.3
12.5	100.0	0.0110	53.7
9.5	100.0	0.0079	50.2
4.75	100.0	0.0056	48.4
2.00	100.0	0.0029	39.6
1.180	99.3	0.0012	30.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.2	2.00 mm to 425 µm
Fine Sand	15.7	425 µm to 75 µm
Silt	47.3	75 µm to 2 µm
Clay	35.8	<2 µm



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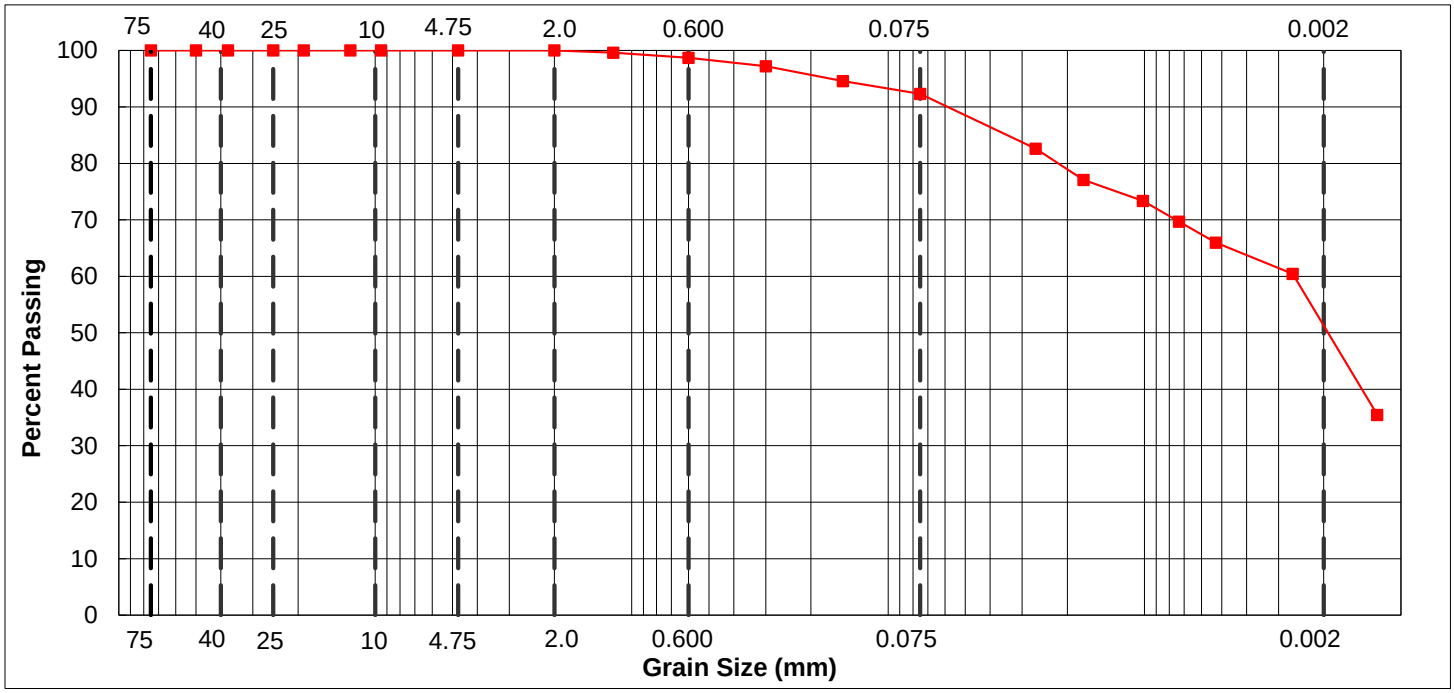
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	428AU1
Project No.:	1560-193-00	**Source:**	22BH428
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 428AU1	**Test Date:**	30-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.7
75.0	100.0	0.300	97.2
50.0	100.0	0.150	94.6
37.5	100.0	0.075	92.3
25.0	100.0	0.0266	82.6
19.0	100.0	0.0173	77.1
12.5	100.0	0.0102	73.4
9.5	100.0	0.0073	69.7
4.75	100.0	0.0053	66.0
2.00	100.0	0.0026	60.4
1.180	99.6	0.0012	35.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.3	2.00 mm to 425 µm
Fine Sand	6.4	425 µm to 75 µm
Silt	41.1	75 µm to 2 µm
Clay	51.2	<2 µm



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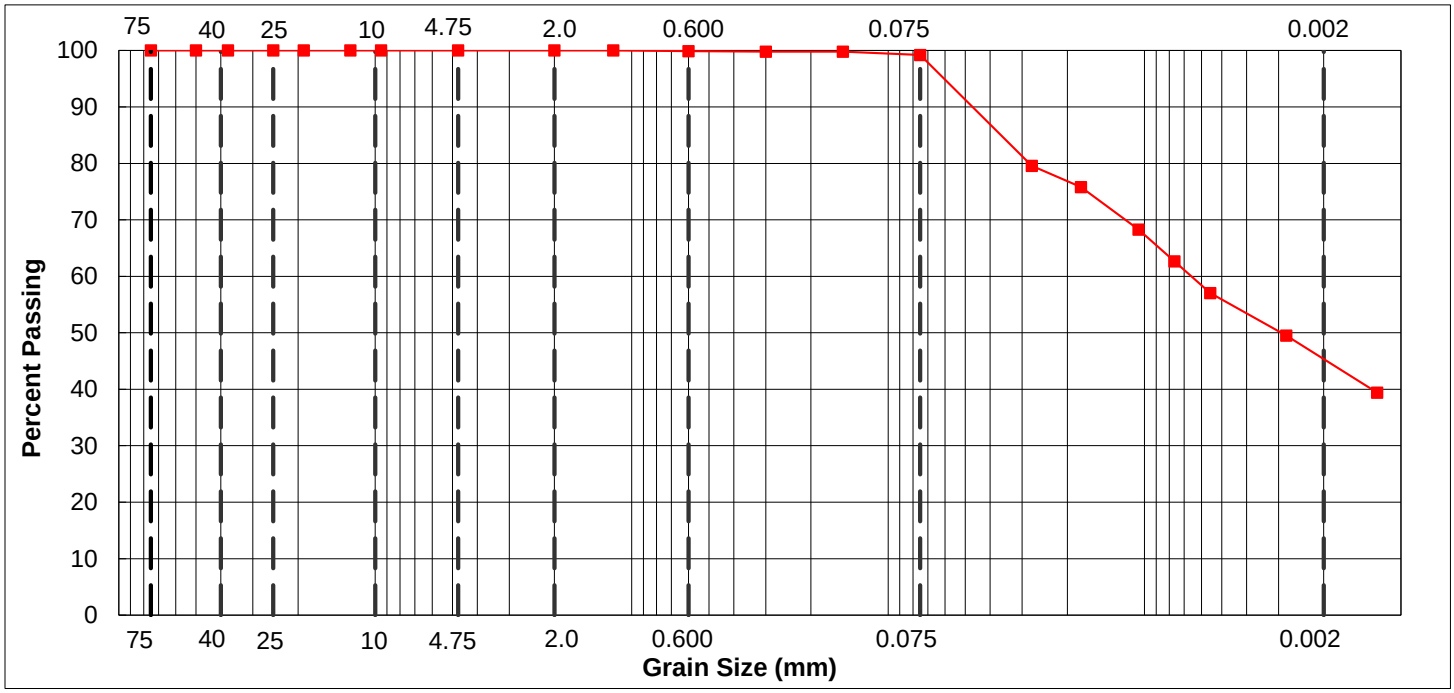
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	428AU4
Project No.:	1560-193-00	**Source:**	22BH428
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 428AU4	**Test Date:**	4-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.2
25.0	100.0	0.0275	79.6
19.0	100.0	0.0177	75.8
12.5	100.0	0.0106	68.3
9.5	100.0	0.0077	62.7
4.75	100.0	0.0055	57.0
2.00	100.0	0.0028	49.5
1.180	100.0	0.0012	39.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.7	425 µm to 75 µm
Silt	53.8	75 µm to 2 µm
Clay	45.4	<2 µm



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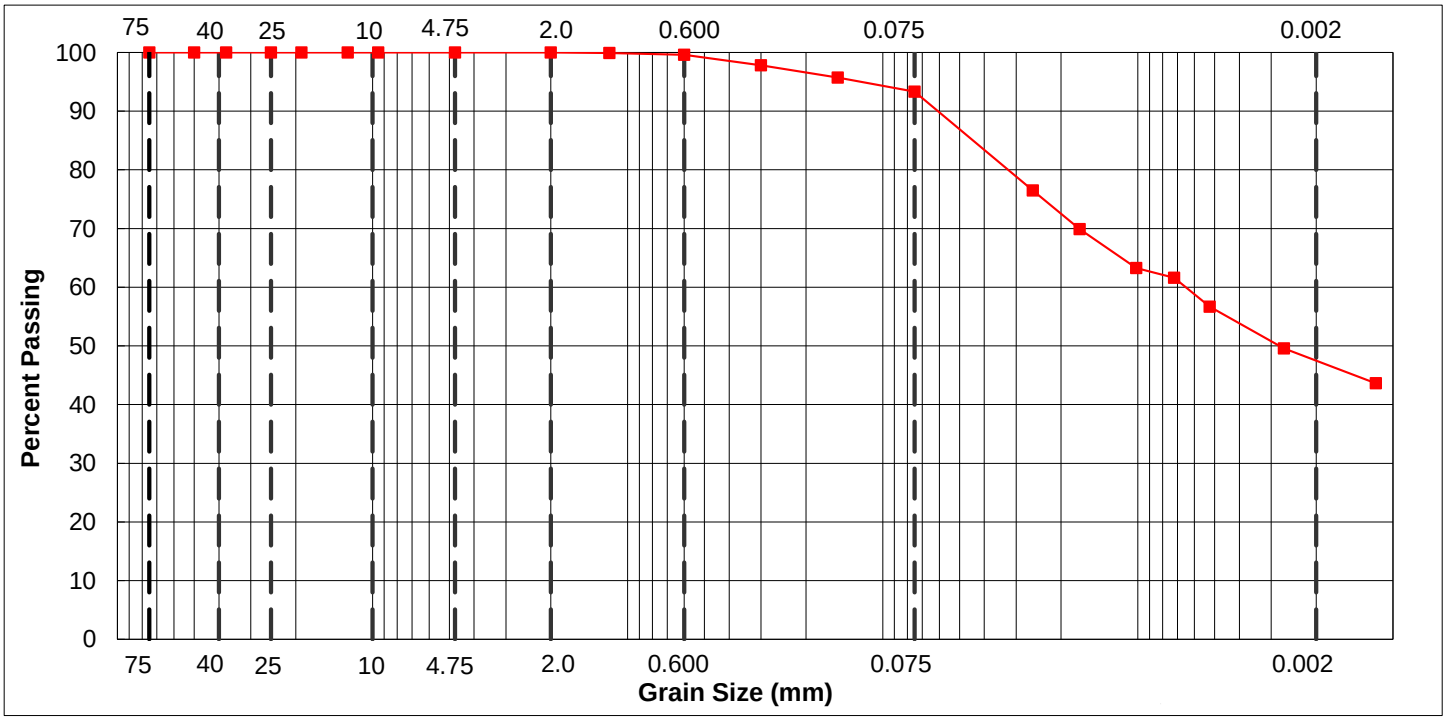
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	429AU1
Project No.:	1560-193-00	**Source:**	22BH429
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 429AU1	**Test Date:**	30-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	97.8
50.0	100.0	0.150	95.7
37.5	100.0	0.075	93.3
25.0	100.0	0.0258	76.5
19.0	100.0	0.0169	69.9
12.5	100.0	0.0101	63.3
9.5	100.0	0.0072	61.6
4.75	100.0	0.0052	56.7
2.00	100.0	0.0027	49.6
1.180	99.9	0.0012	43.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	6.3	425 µm to 75 µm
Silt	45.8	75 µm to 2 µm
Clay	47.5	<2 µm



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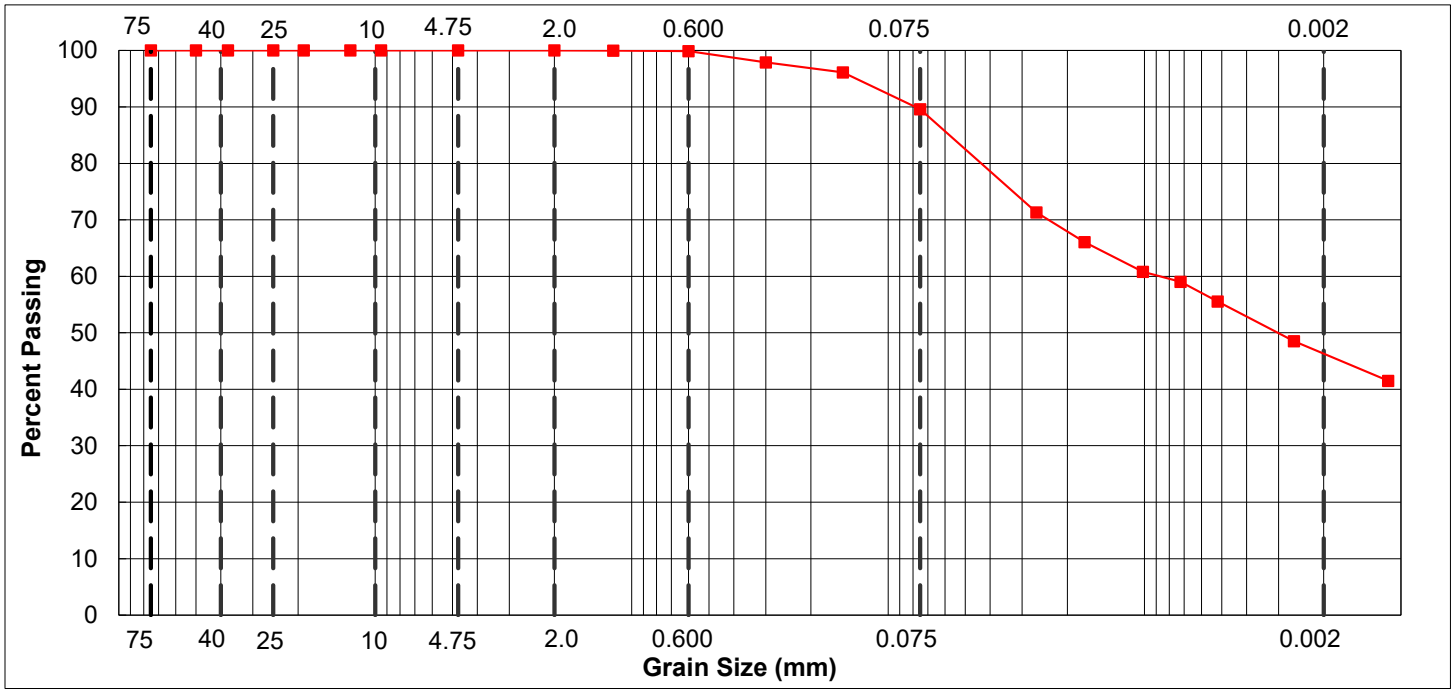
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	429AU3
Project No.:	15601-193-00	**Source:**	22BH429
Owner:	EID	**Sample Depth:**	3.5m
File No.:	GSA - 429AU3	**Test Date:**	16-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	97.9
50.0	100.0	0.150	96.1
37.5	100.0	0.075	89.6
25.0	100.0	0.0264	71.3
19.0	100.0	0.0171	66.1
12.5	100.0	0.0101	60.8
9.5	100.0	0.0072	59.1
4.75	100.0	0.0052	55.5
2.00	100.0	0.0026	48.5
1.180	100.0	0.0011	41.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	10.3	425 µm to 75 µm
Silt	43.3	75 µm to 2 µm
Clay	46.3	<2 µm



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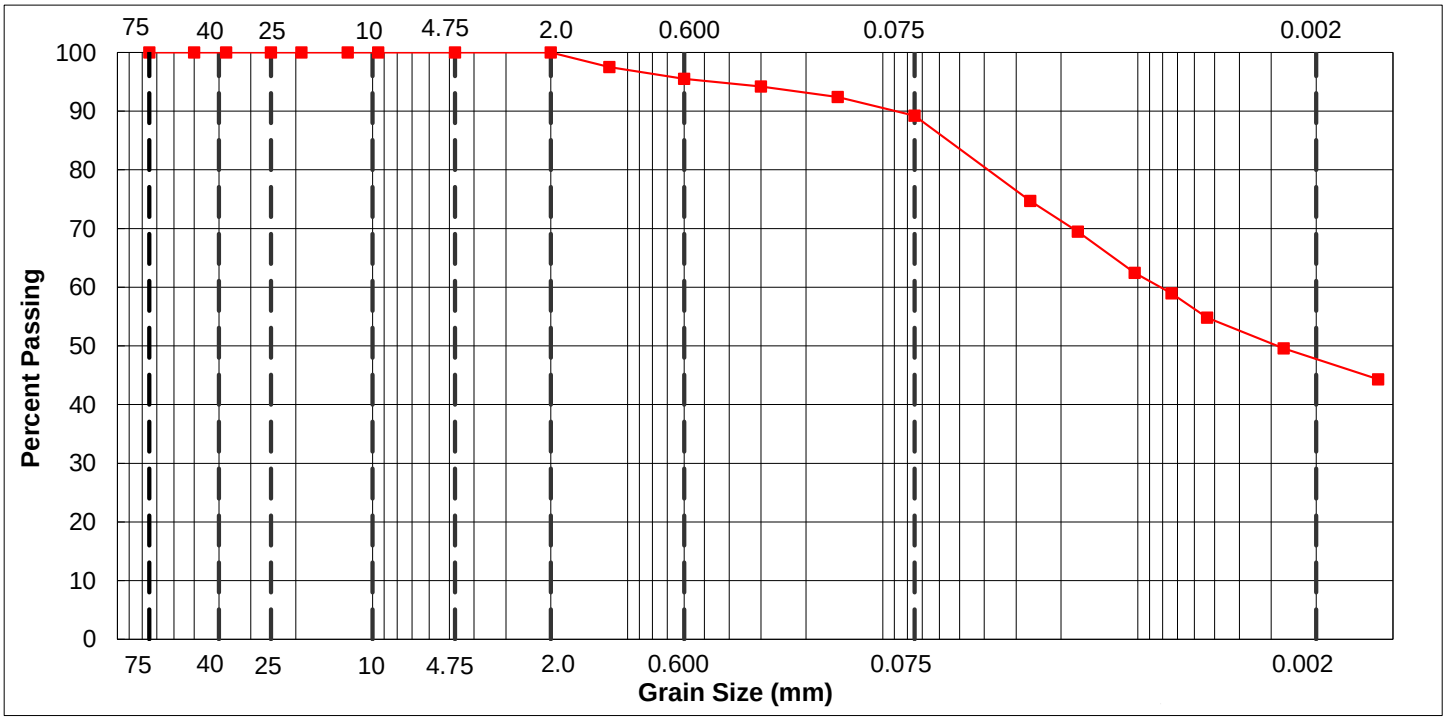
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	430AU1
Project No.:	1560-193-00	**Source:**	22BH430
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 430AU1	**Test Date:**	29-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	95.5
75.0	100.0	0.300	94.2
50.0	100.0	0.150	92.4
37.5	100.0	0.075	89.2
25.0	100.0	0.0264	74.7
19.0	100.0	0.0172	69.4
12.5	100.0	0.0103	62.4
9.5	100.0	0.0074	58.9
4.75	100.0	0.0054	54.8
2.00	100.0	0.0027	49.6
1.180	97.5	0.0011	44.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	4.5	2.00 mm to 425 µm
Fine Sand	6.3	425 µm to 75 µm
Silt	41.4	75 µm to 2 µm
Clay	47.8	<2 µm



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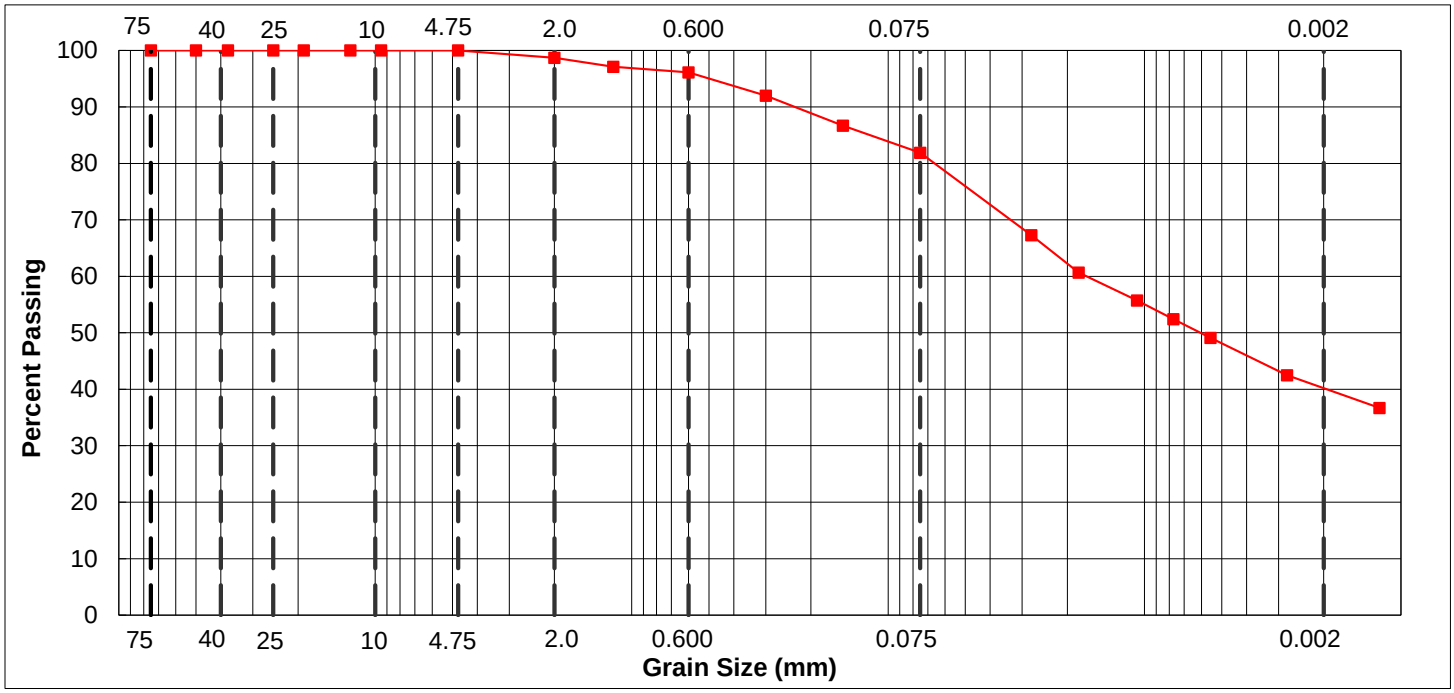
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	431AU1
Project No.:	1560-193-00	**Source:**	22BH431
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 431AU1	**Test Date:**	30-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	96.1
75.0	100.0	0.300	92.0
50.0	100.0	0.150	86.7
37.5	100.0	0.075	81.9
25.0	100.0	0.0277	67.3
19.0	100.0	0.0181	60.7
12.5	100.0	0.0107	55.7
9.5	100.0	0.0077	52.4
4.75	100.0	0.0055	49.1
2.00	98.7	0.0028	42.5
1.180	97.1	0.0012	36.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	1.3	4.75 mm to 2.00 mm
Medium Sand	2.6	2.00 mm to 425 µm
Fine Sand	14.2	425 µm to 75 µm
Silt	41.7	75 µm to 2 µm
Clay	40.2	<2 µm



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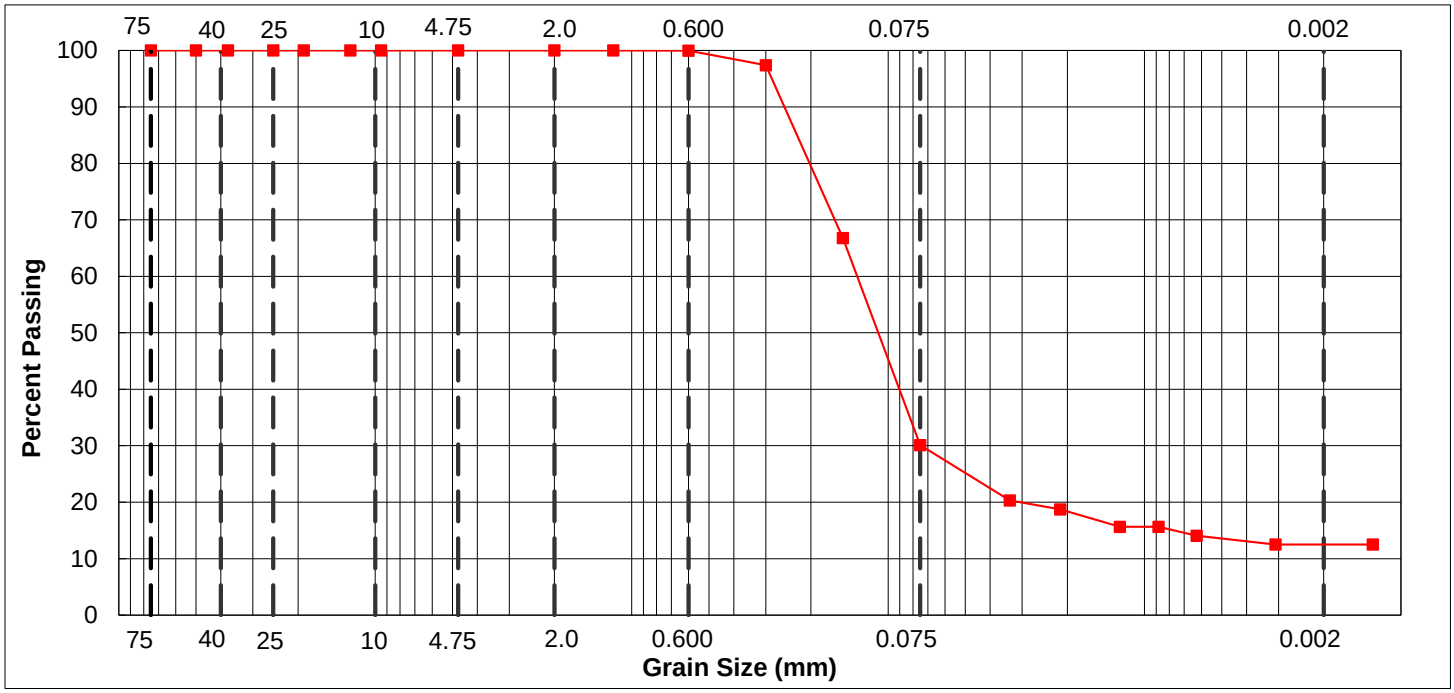
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	431B1
Project No.:	1560-193-00	**Source:**	22TP431
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 431B1	**Test Date:**	2-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	97.4
50.0	100.0	0.150	66.8
37.5	100.0	0.075	30.1
25.0	100.0	0.0336	20.3
19.0	100.0	0.0213	18.8
12.5	100.0	0.0125	15.6
9.5	100.0	0.0088	15.6
4.75	100.0	0.0063	14.1
2.00	100.0	0.0031	12.5
1.180	100.0	0.0013	12.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	69.9	425 µm to 75 µm
Silt	17.6	75 µm to 2 µm
Clay	12.5	<2 µm



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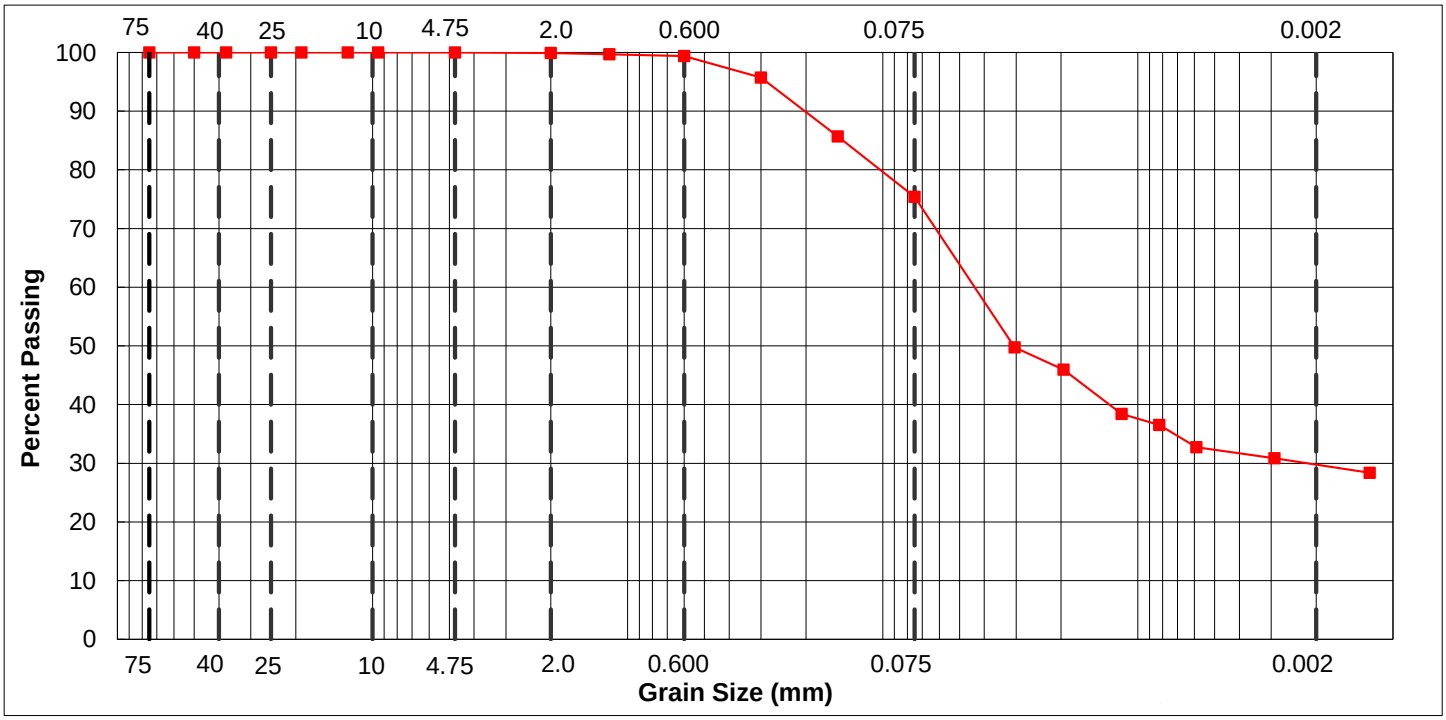
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	432AU1
Project No.:	1560-193-00	**Source:**	22BH432
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 432AU1	**Test Date:**	27-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	95.7
50.0	100.0	0.150	85.7
37.5	100.0	0.075	75.4
25.0	100.0	0.0304	49.8
19.0	100.0	0.0195	46.0
12.5	100.0	0.0116	38.4
9.5	100.0	0.0082	36.5
4.75	100.0	0.0059	32.7
2.00	99.9	0.0029	30.8
1.180	99.7	0.0012	28.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.1	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	24.0	425 µm to 75 µm
Silt	45.6	75 µm to 2 µm
Clay	29.8	<2 µm



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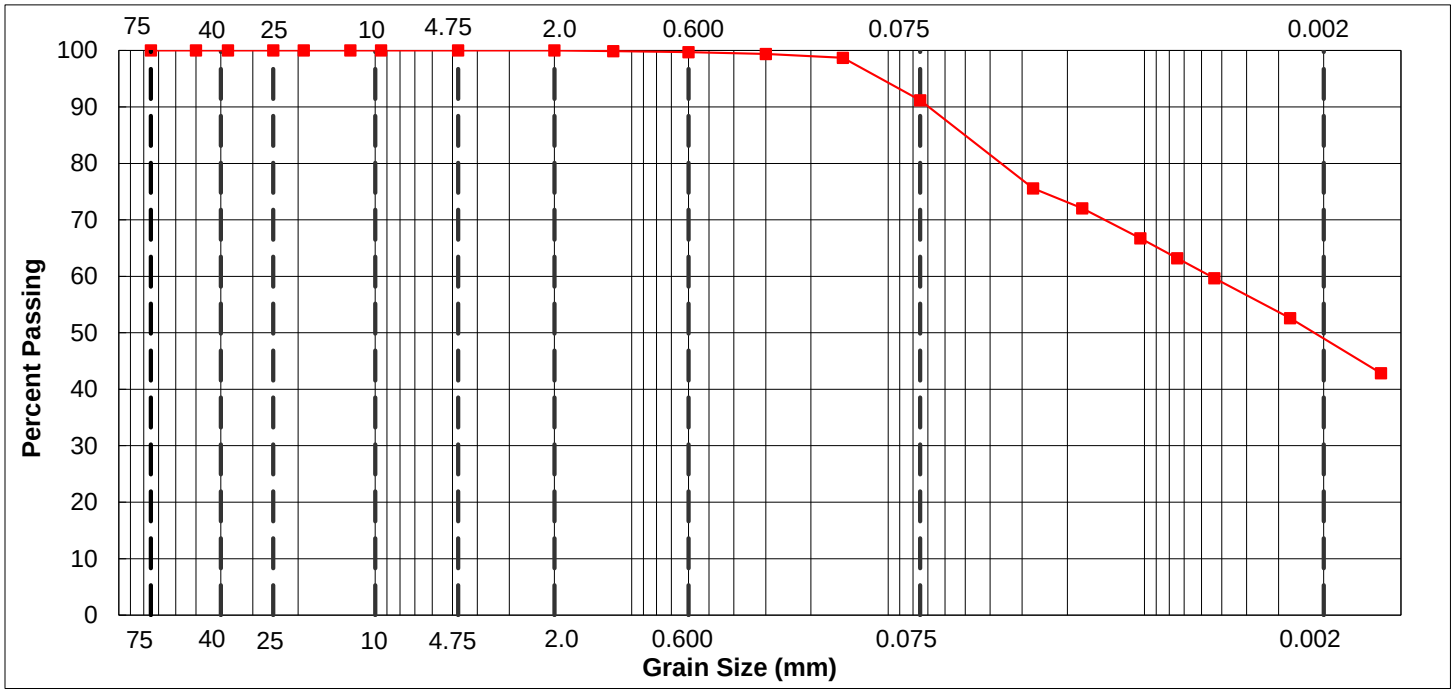
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	432AU2
Project No.:	1560-193-00	**Source:**	22BH432
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 432AU2	**Test Date:**	30-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.4
50.0	100.0	0.150	98.7
37.5	100.0	0.075	91.2
25.0	100.0	0.0272	75.6
19.0	100.0	0.0175	72.1
12.5	100.0	0.0104	66.7
9.5	100.0	0.0075	63.2
4.75	100.0	0.0053	59.7
2.00	100.0	0.0027	52.6
1.180	99.9	0.0012	42.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	8.5	425 µm to 75 µm
Silt	42.2	75 µm to 2 µm
Clay	49.0	<2 µm



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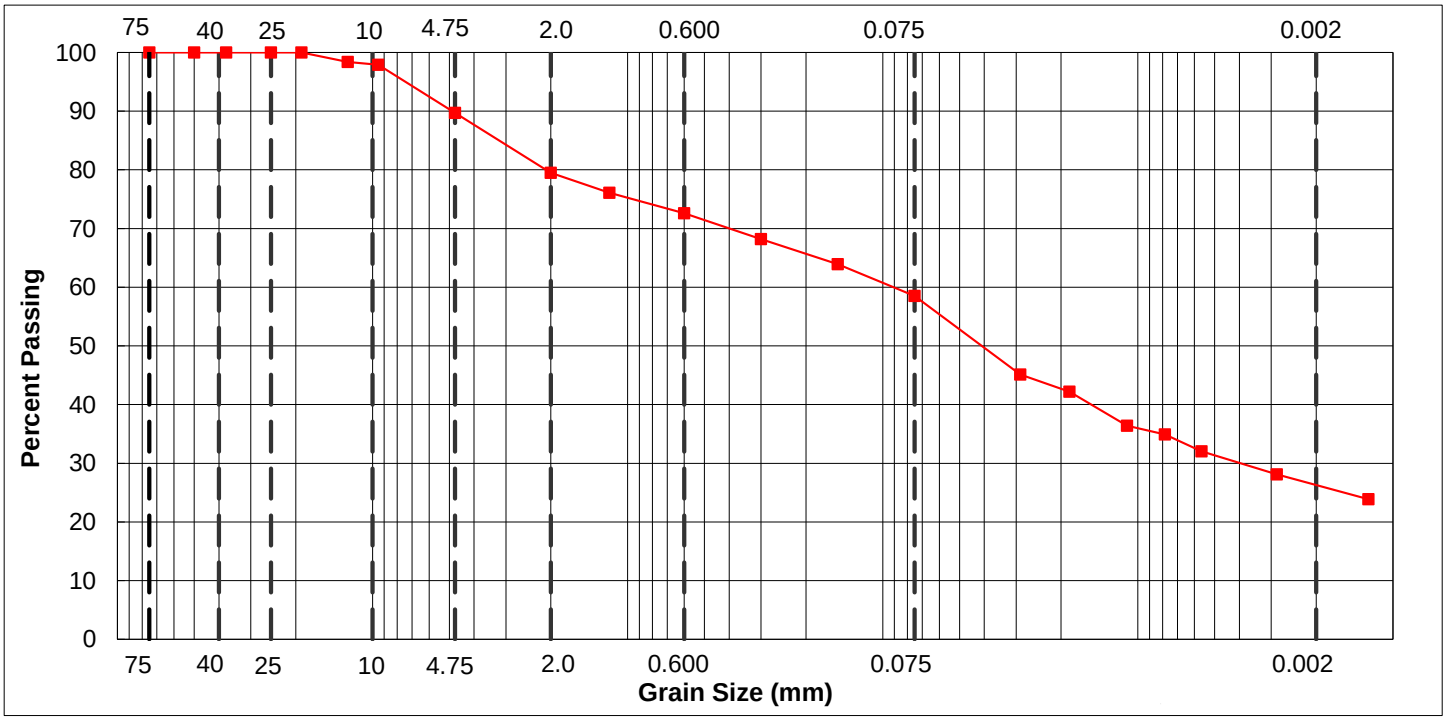
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	433AU1
Project No.:	1560-193-00	**Source:**	22BH433
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 433AU1	**Test Date:**	30-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	72.6
75.0	100.0	0.300	68.2
50.0	100.0	0.150	63.9
37.5	100.0	0.075	58.5
25.0	100.0	0.0289	45.1
19.0	100.0	0.0185	42.2
12.5	98.4	0.0110	36.4
9.5	97.9	0.0078	34.9
4.75	89.7	0.0056	32.0
2.00	79.5	0.0029	28.1
1.180	76.1	0.0012	23.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	10.3	20 mm to 4.75 mm
Coarse Sand	10.2	4.75 mm to 2.00 mm
Medium Sand	6.9	2.00 mm to 425 µm
Fine Sand	14.1	425 µm to 75 µm
Silt	32.2	75 µm to 2 µm
Clay	26.3	<2 µm



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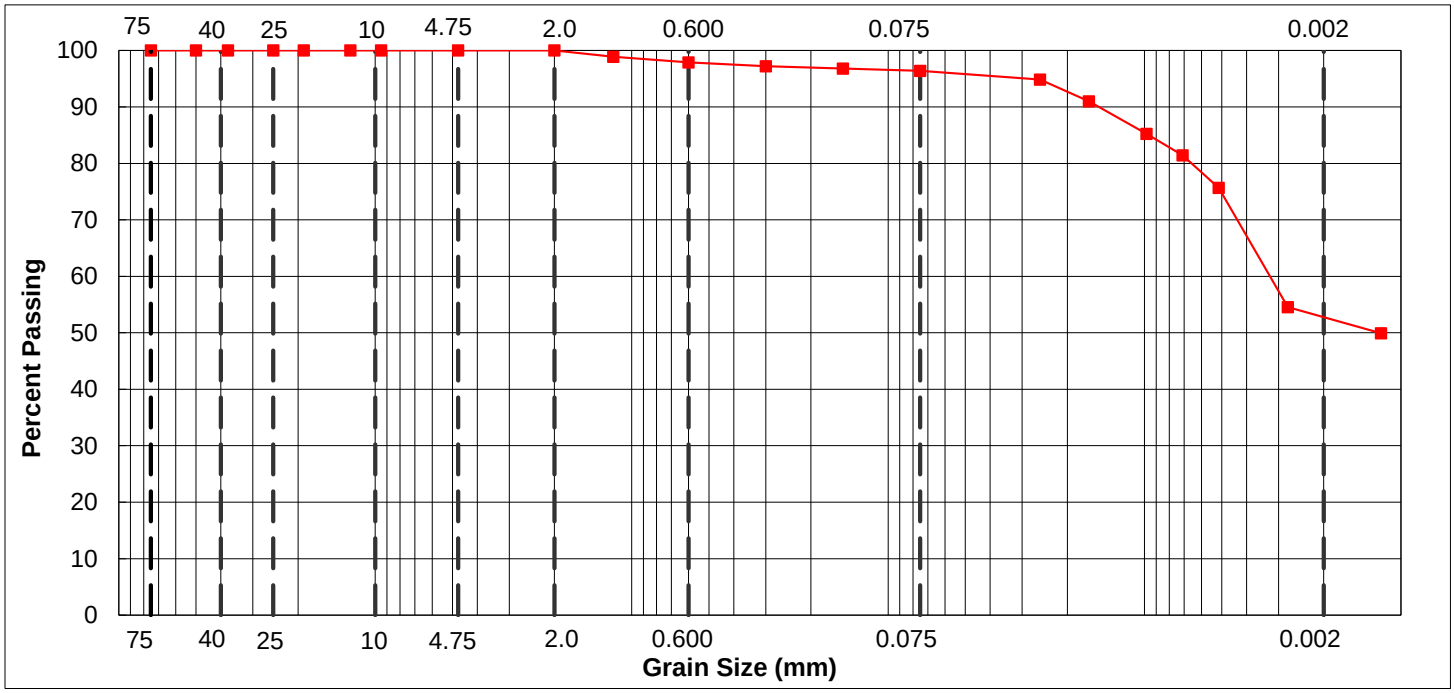
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	433AU2
Project No.:	1560-193-00	**Source:**	22BH433
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 433AU2	**Test Date:**	4-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.9
75.0	100.0	0.300	97.2
50.0	100.0	0.150	96.8
37.5	100.0	0.075	96.4
25.0	100.0	0.0256	94.9
19.0	100.0	0.0165	91.0
12.5	100.0	0.0098	85.3
9.5	100.0	0.0071	81.4
4.75	100.0	0.0051	75.7
2.00	100.0	0.0028	54.5
1.180	98.9	0.0012	49.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.1	2.00 mm to 425 µm
Fine Sand	1.5	425 µm to 75 µm
Silt	43.7	75 µm to 2 µm
Clay	52.7	<2 µm



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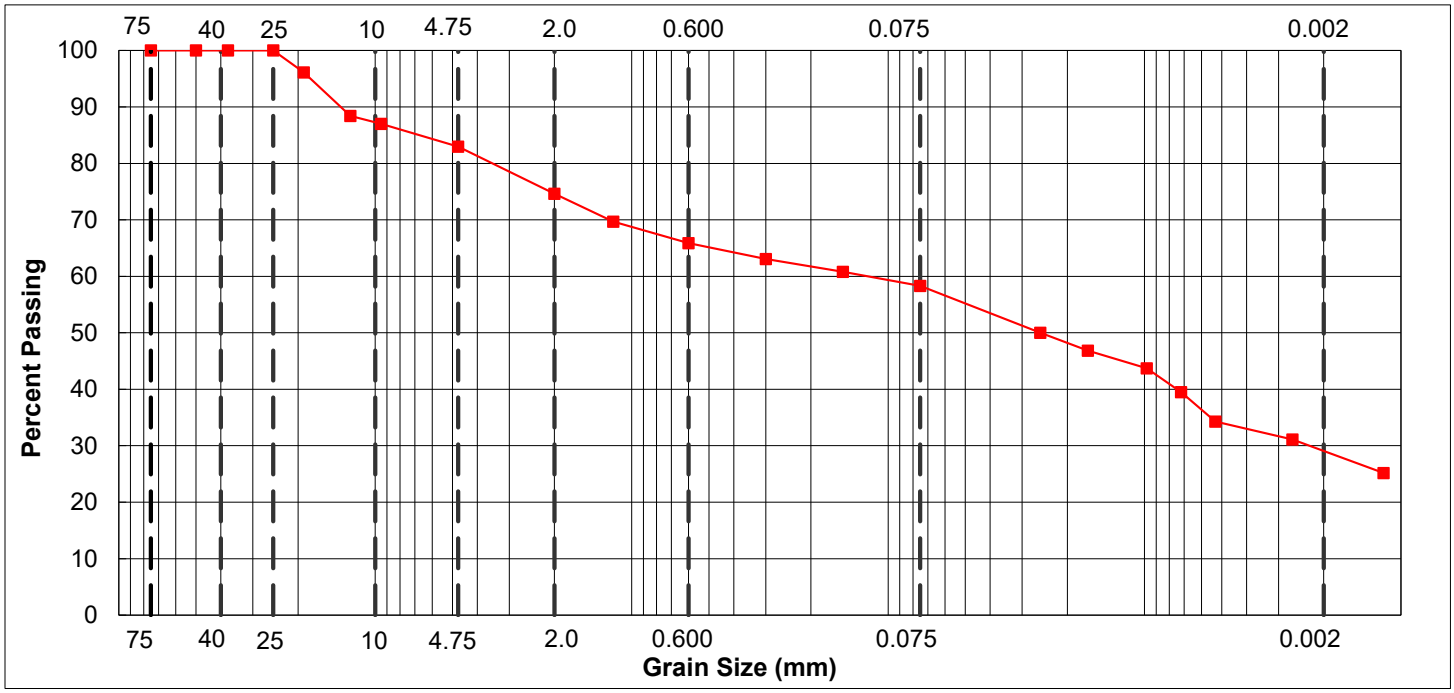
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	434AU1
Project No.:	1560-193-00	**Source:**	22BH434
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 434AU1	**Test Date:**	17-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	65.9
75.0	100.0	0.300	63.1
50.0	100.0	0.150	60.8
37.5	100.0	0.075	58.3
25.0	100.0	0.0255	50.0
19.0	96.1	0.0166	46.9
12.5	88.4	0.0098	43.7
9.5	87.0	0.0072	39.5
4.75	83.0	0.0053	34.3
2.00	74.6	0.0027	31.1
1.180	69.7	0.0012	25.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	17.0	20 mm to 4.75 mm
Coarse Sand	8.3	4.75 mm to 2.00 mm
Medium Sand	8.7	2.00 mm to 425 µm
Fine Sand	7.6	425 µm to 75 µm
Silt	29.3	75 µm to 2 µm
Clay	29.1	<2 µm



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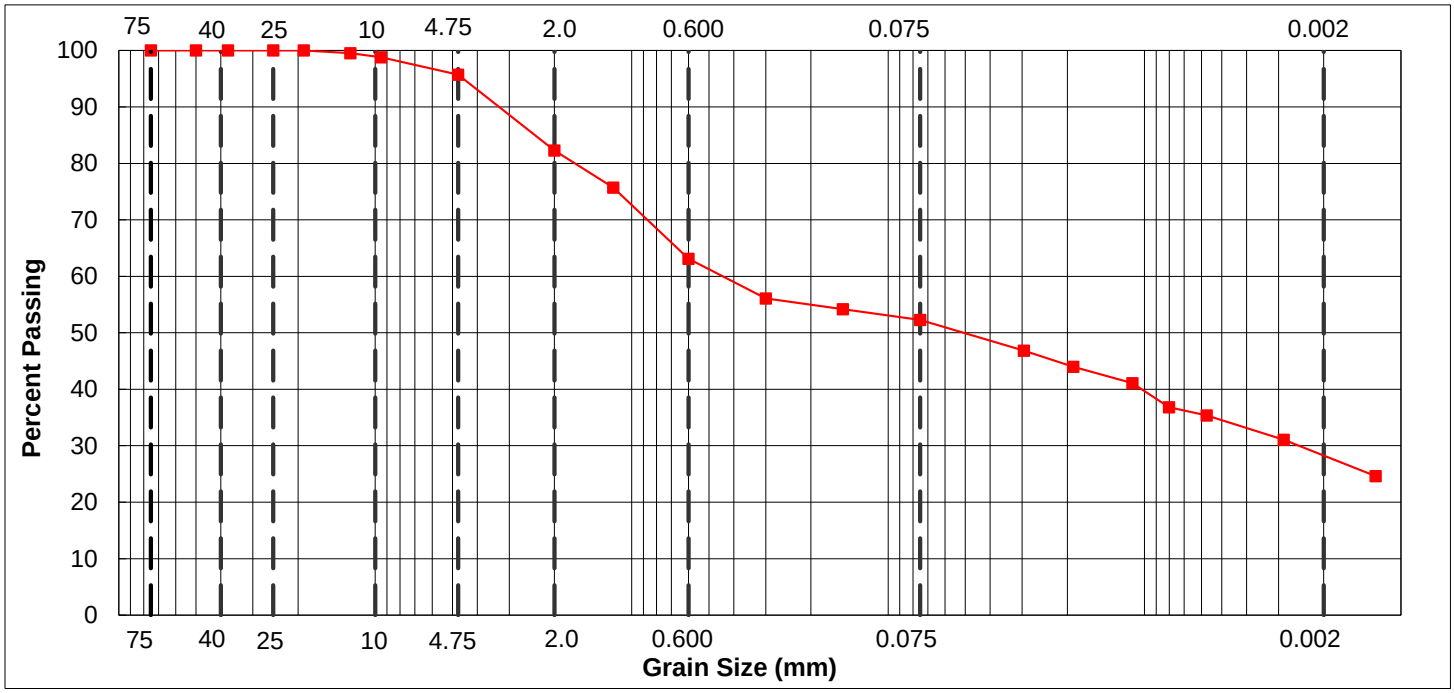
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	434AU3
Project No.:	1560-193-00	**Source:**	22BH434
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 434AU3	**Test Date:**	30-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	63.1
75.0	100.0	0.300	56.1
50.0	100.0	0.150	54.2
37.5	100.0	0.075	52.3
25.0	100.0	0.0296	46.8
19.0	100.0	0.0190	44.0
12.5	99.5	0.0112	41.1
9.5	98.8	0.0080	36.8
4.75	95.7	0.0057	35.4
2.00	82.3	0.0029	31.1
1.180	75.7	0.0013	24.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	4.3	20 mm to 4.75 mm
Coarse Sand	13.4	4.75 mm to 2.00 mm
Medium Sand	19.2	2.00 mm to 425 µm
Fine Sand	10.8	425 µm to 75 µm
Silt	24.0	75 µm to 2 µm
Clay	28.3	<2 µm



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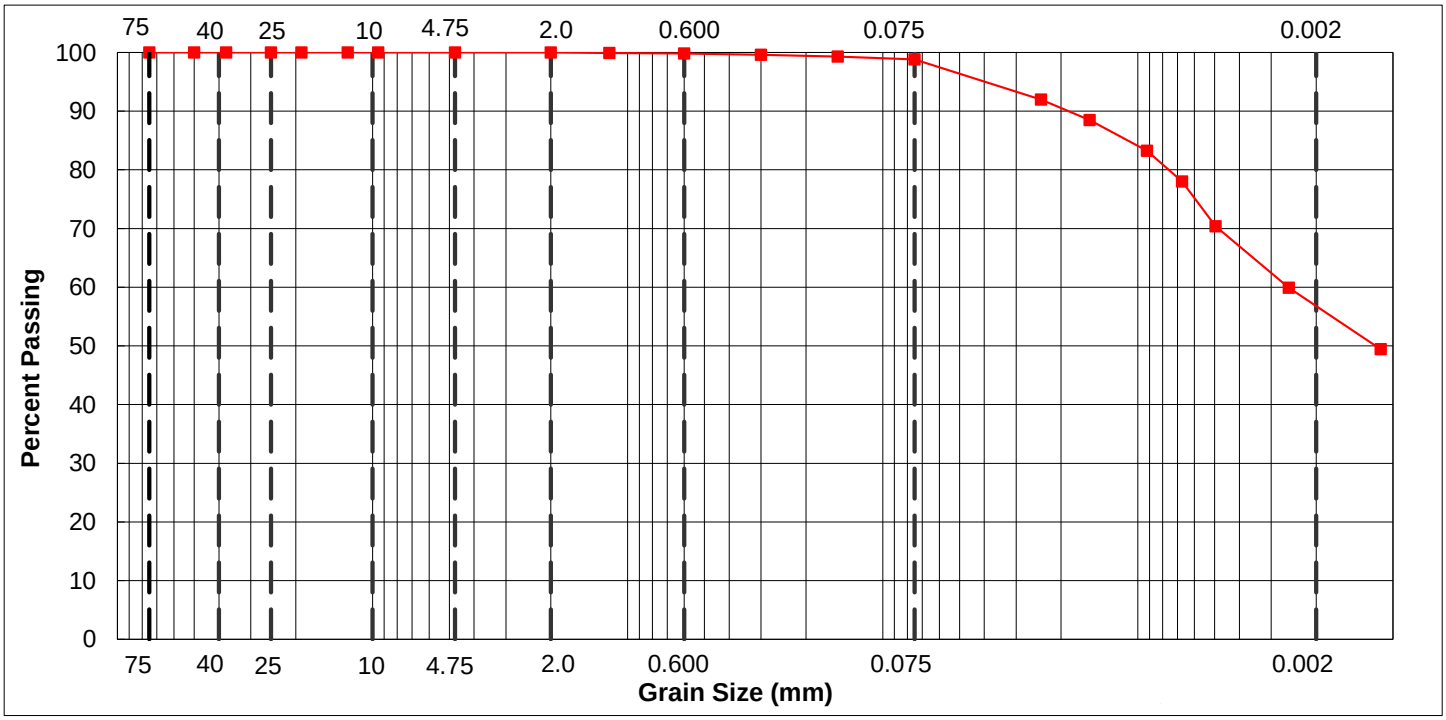
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	435AU1
Project No.:	1560-193-00	**Source:**	22BH435
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 435AU1	**Test Date:**	29-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.6
50.0	100.0	0.150	99.3
37.5	100.0	0.075	98.8
25.0	100.0	0.0239	92.0
19.0	100.0	0.0154	88.5
12.5	100.0	0.0092	83.2
9.5	100.0	0.0067	78.0
4.75	100.0	0.0050	70.4
2.00	100.0	0.0026	59.9
1.180	99.9	0.0011	49.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	1.0	425 µm to 75 µm
Silt	42.0	75 µm to 2 µm
Clay	56.8	<2 µm



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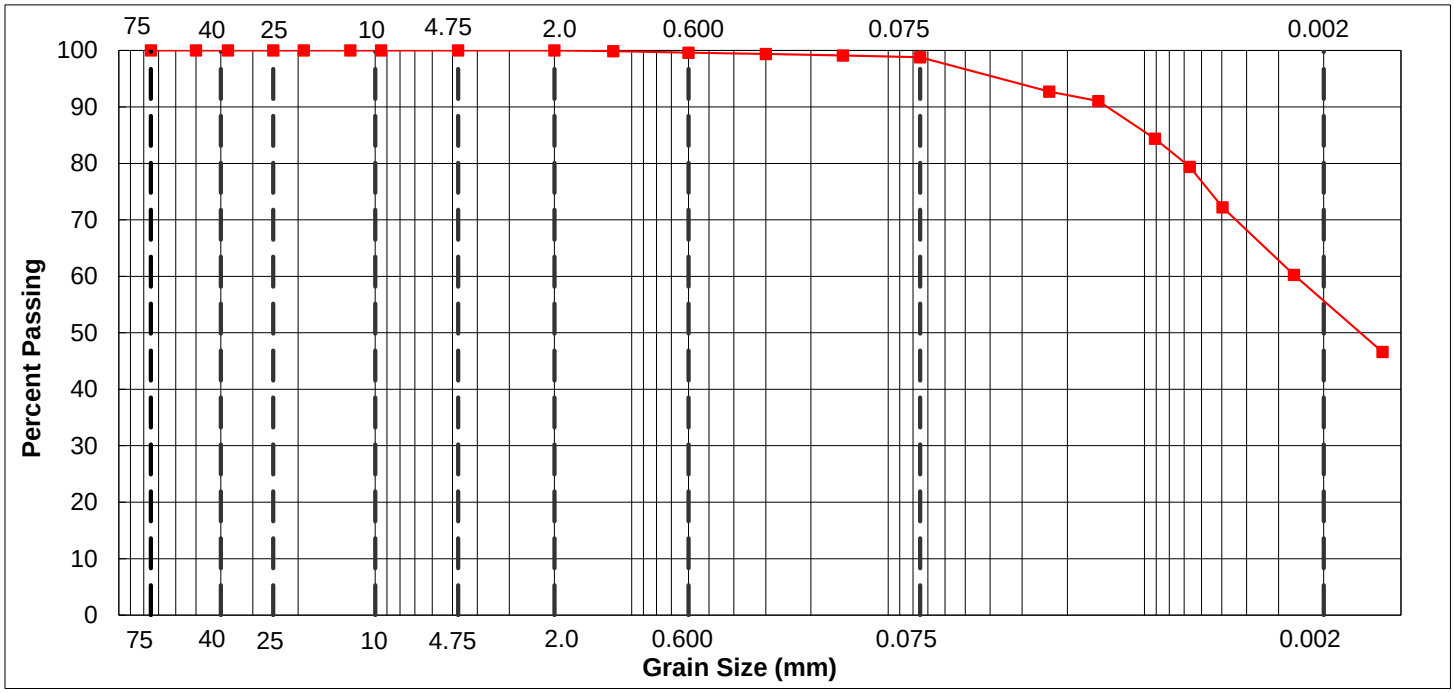
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	435AU2
Project No.:	1560-193-00	**Source:**	22BH435
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 435AU2	**Test Date:**	21-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	99.4
50.0	100.0	0.150	99.1
37.5	100.0	0.075	98.8
25.0	100.0	0.0236	92.7
19.0	100.0	0.0151	91.0
12.5	100.0	0.0091	84.4
9.5	100.0	0.0067	79.4
4.75	100.0	0.0050	72.2
2.00	100.0	0.0026	60.3
1.180	99.9	0.0012	46.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	0.8	425 µm to 75 µm
Silt	43.2	75 µm to 2 µm
Clay	55.6	<2 µm



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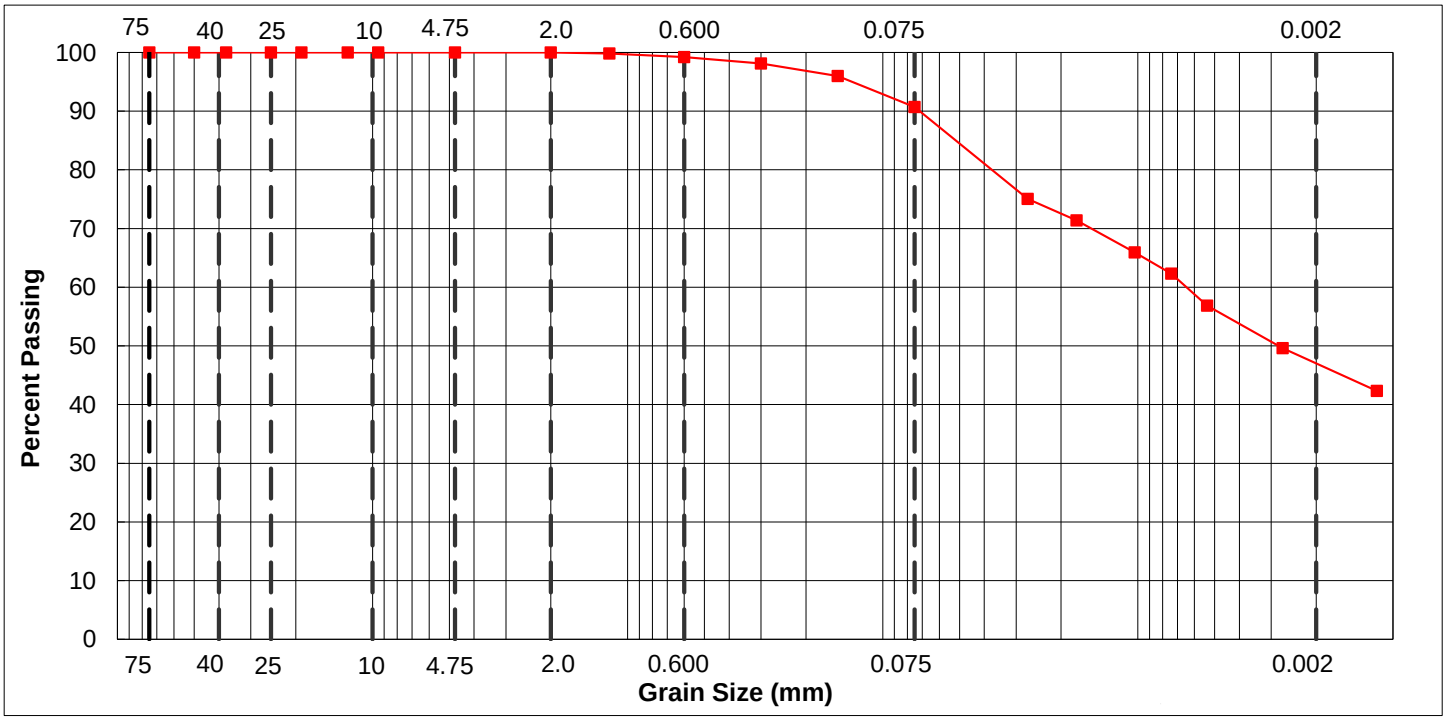
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	435BAU1
Project No.:	1560-193-00	**Source:**	22BH435B
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 435BAU1	**Test Date:**	29-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	98.1
50.0	100.0	0.150	96.0
37.5	100.0	0.075	90.7
25.0	100.0	0.0270	75.0
19.0	100.0	0.0174	71.4
12.5	100.0	0.0103	65.9
9.5	100.0	0.0074	62.3
4.75	100.0	0.0054	56.9
2.00	100.0	0.0027	49.6
1.180	99.8	0.0012	42.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	8.5	425 µm to 75 µm
Silt	43.7	75 µm to 2 µm
Clay	47.0	<2 µm



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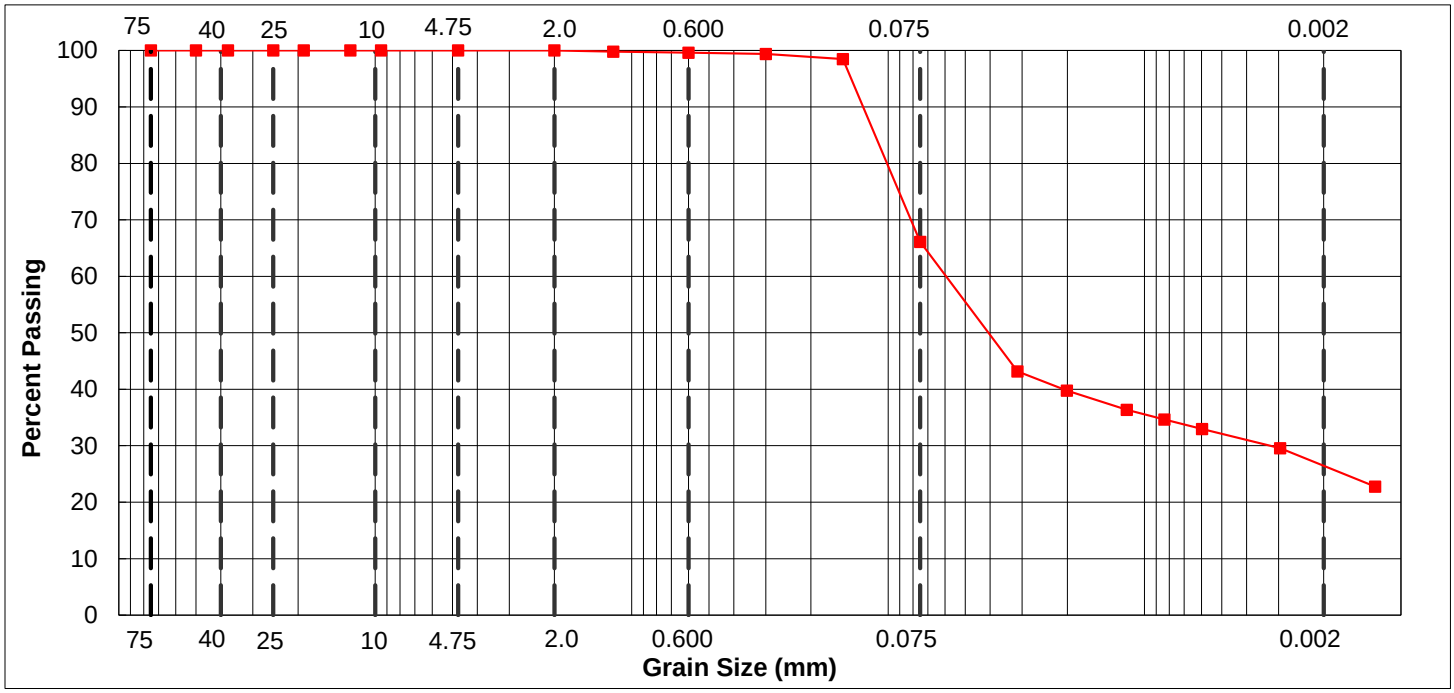
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	435AU7
Project No.:	1560-193-00	**Source:**	22BH435
Owner:	EID	**Sample Depth:**	5.2m
File No.:	GSA - 435AU7	**Test Date:**	3-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	99.4
50.0	100.0	0.150	98.5
37.5	100.0	0.075	66.1
25.0	100.0	0.0313	43.2
19.0	100.0	0.0201	39.8
12.5	100.0	0.0117	36.4
9.5	100.0	0.0084	34.7
4.75	100.0	0.0060	33.0
2.00	100.0	0.0030	29.6
1.180	99.8	0.0013	22.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	33.5	425 µm to 75 µm
Silt	39.7	75 µm to 2 µm
Clay	26.4	<2 µm



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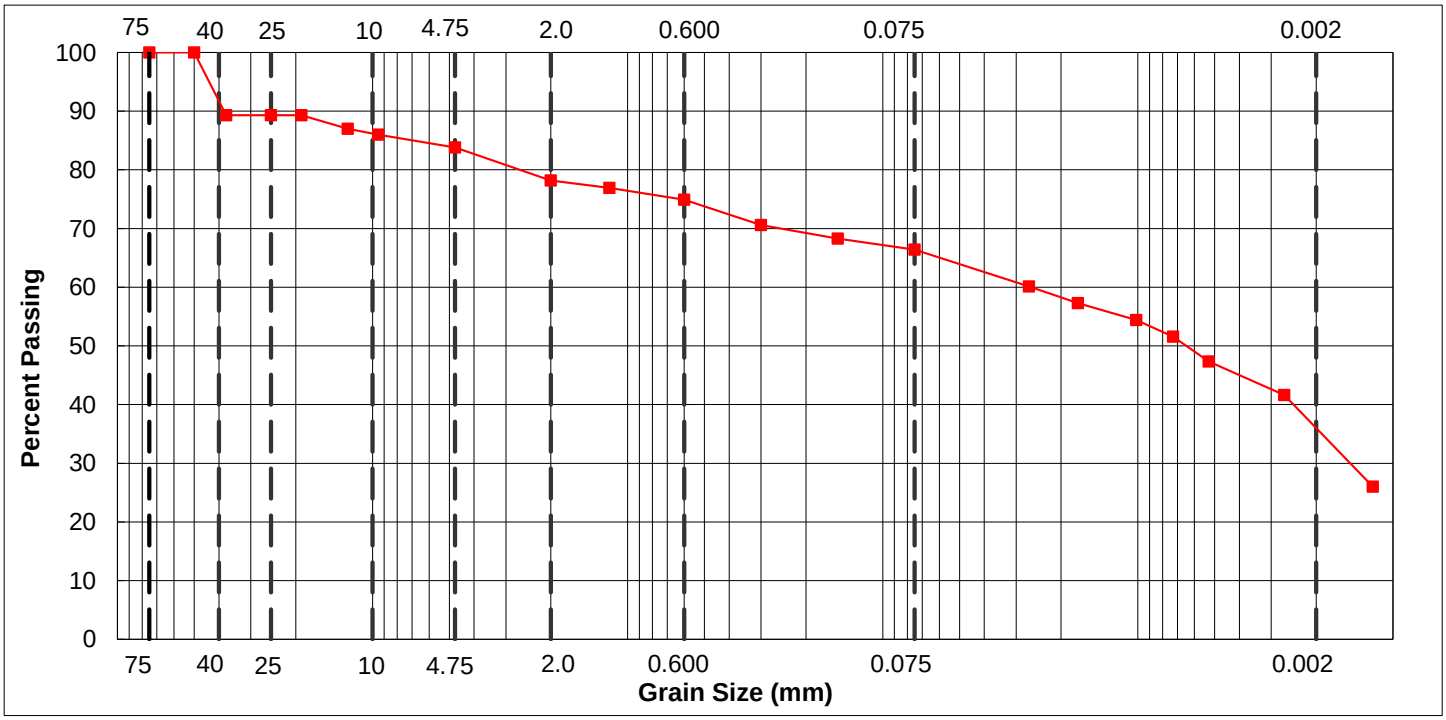
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	436AU1
Project No.:	1560-193-00	**Source:**	22BH436
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 436AU1	**Test Date:**	29-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	74.9
75.0	100.0	0.300	70.6
50.0	100.0	0.150	68.3
37.5	89.3	0.075	66.4
25.0	89.3	0.0267	60.1
19.0	89.3	0.0172	57.3
12.5	87.0	0.0101	54.4
9.5	86.0	0.0073	51.6
4.75	83.8	0.0053	47.3
2.00	78.2	0.0027	41.6
1.180	76.9	0.0012	26.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	10.7	80 mm to 20 mm
Fine Gravel	5.5	20 mm to 4.75 mm
Coarse Sand	5.6	4.75 mm to 2.00 mm
Medium Sand	3.3	2.00 mm to 425 µm
Fine Sand	8.5	425 µm to 75 µm
Silt	30.4	75 µm to 2 µm
Clay	36.0	<2 µm



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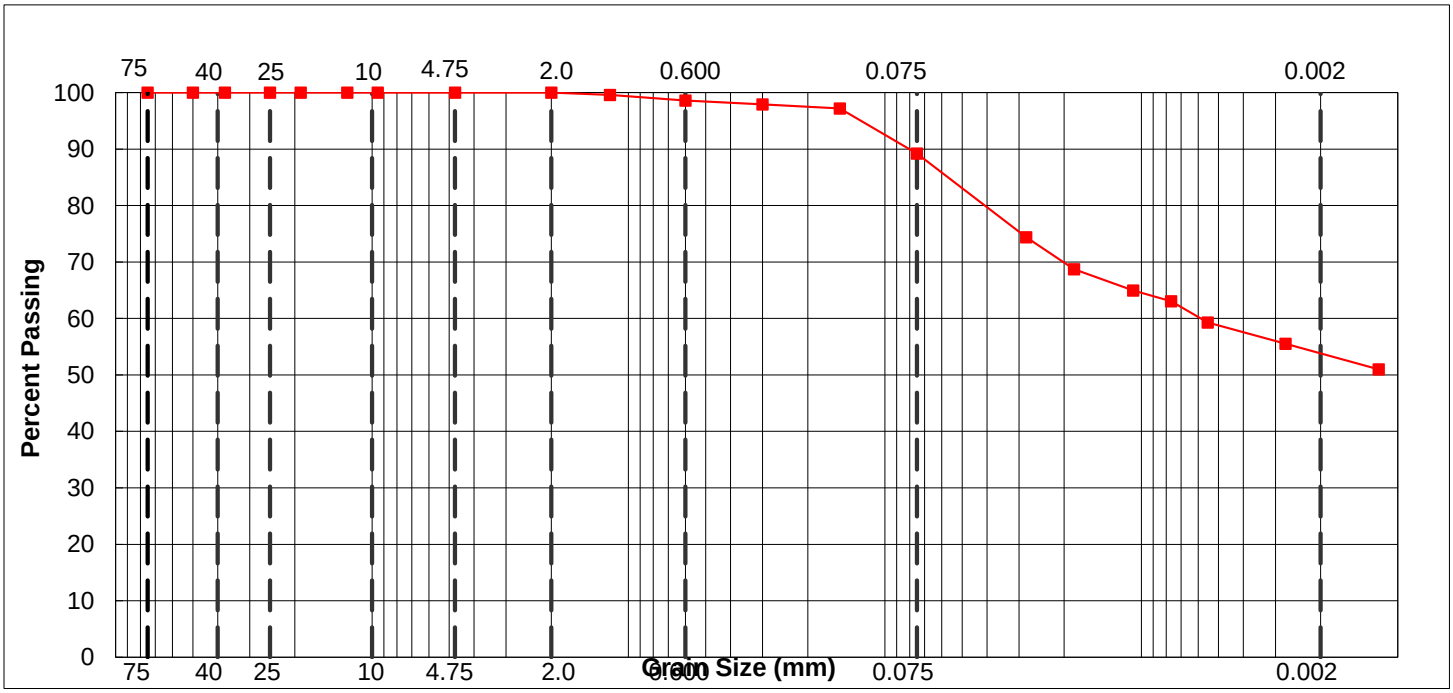
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	436BAU2
Project No.:	1560-193-00	**Source:**	22BH436B
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 436BAU2	**Test Date:**	4-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.6
75.0	100.0	0.300	97.9
50.0	100.0	0.150	97.2
37.5	100.0	0.075	89.2
25.0	100.0	0.0281	74.4
19.0	100.0	0.0183	68.7
12.5	100.0	0.0108	65.0
9.5	100.0	0.0077	63.1
4.75	100.0	0.0055	59.3
2.00	100.0	0.0027	55.5
1.180	99.6	0.0012	51.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.4	2.00 mm to 425 µm
Fine Sand	9.4	425 µm to 75 µm
Silt	35.4	75 µm to 2 µm
Clay	53.8	<2 µm



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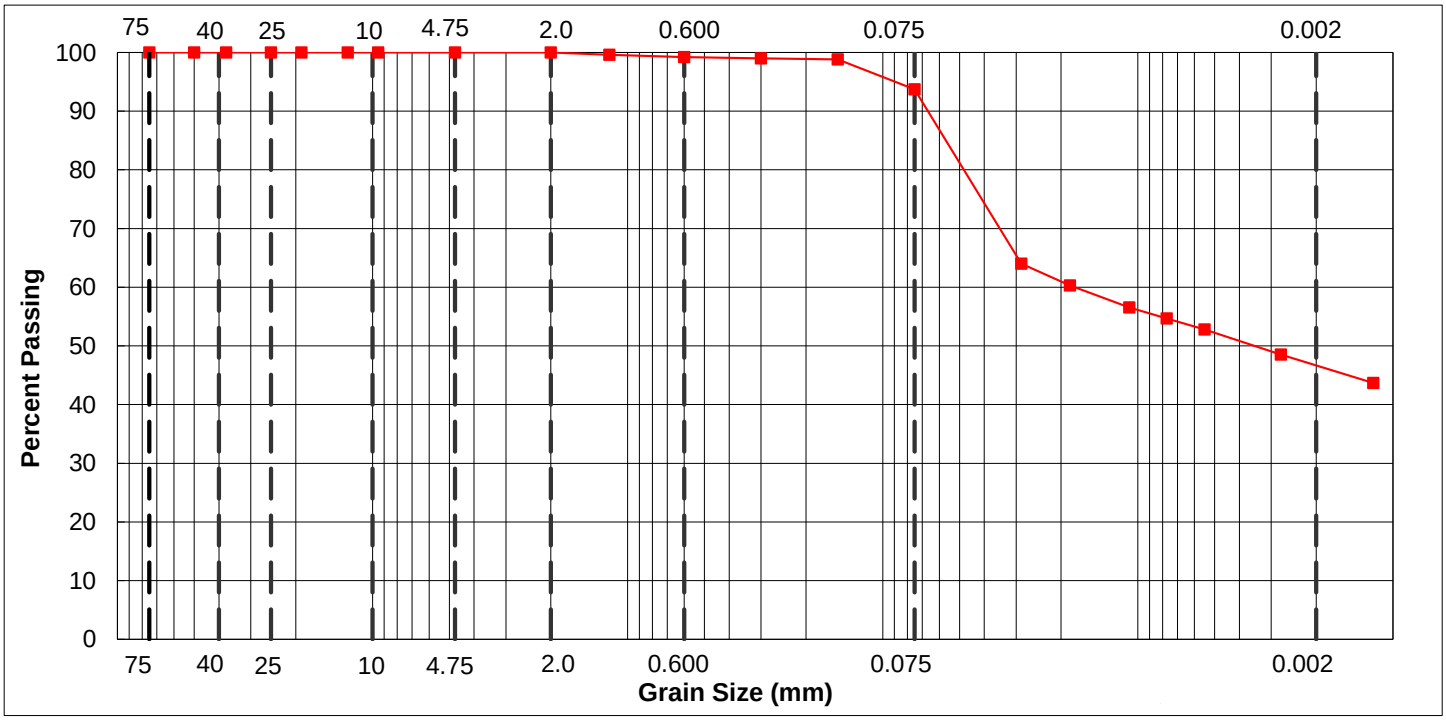
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	436BAU5
Project No.:	1560-193-00	**Source:**	22BH436B
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 436BAU5	**Test Date:**	29-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	99.0
50.0	100.0	0.150	98.8
37.5	100.0	0.075	93.7
25.0	100.0	0.0286	64.0
19.0	100.0	0.0184	60.3
12.5	100.0	0.0108	56.5
9.5	100.0	0.0077	54.7
4.75	100.0	0.0055	52.8
2.00	100.0	0.0027	48.5
1.180	99.6	0.0012	43.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	5.5	425 µm to 75 µm
Silt	47.0	75 µm to 2 µm
Clay	46.7	<2 µm



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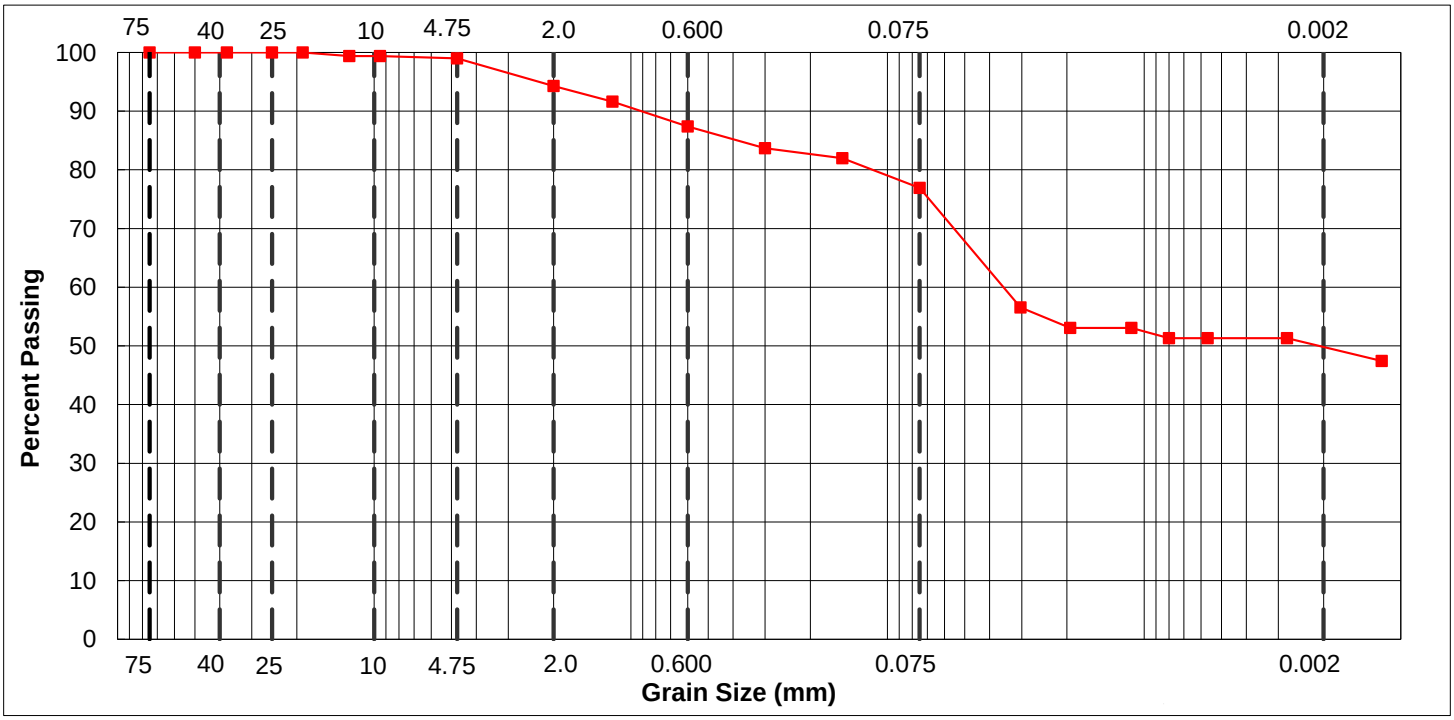
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	438AU1
Project No.:	1560-193-00	**Source:**	22BH438
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 438AU1	**Test Date:**	26-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	87.4
75.0	100.0	0.300	83.7
50.0	100.0	0.150	82.0
37.5	100.0	0.075	76.9
25.0	100.0	0.0303	56.6
19.0	100.0	0.0194	53.1
12.5	99.4	0.0112	53.1
9.5	99.4	0.0080	51.3
4.75	99.0	0.0057	51.3
2.00	94.3	0.0028	51.3
1.180	91.6	0.0012	47.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	1.0	20 mm to 4.75 mm
Coarse Sand	4.7	4.75 mm to 2.00 mm
Medium Sand	6.9	2.00 mm to 425 µm
Fine Sand	10.5	425 µm to 75 µm
Silt	27.1	75 µm to 2 µm
Clay	49.8	<2 µm



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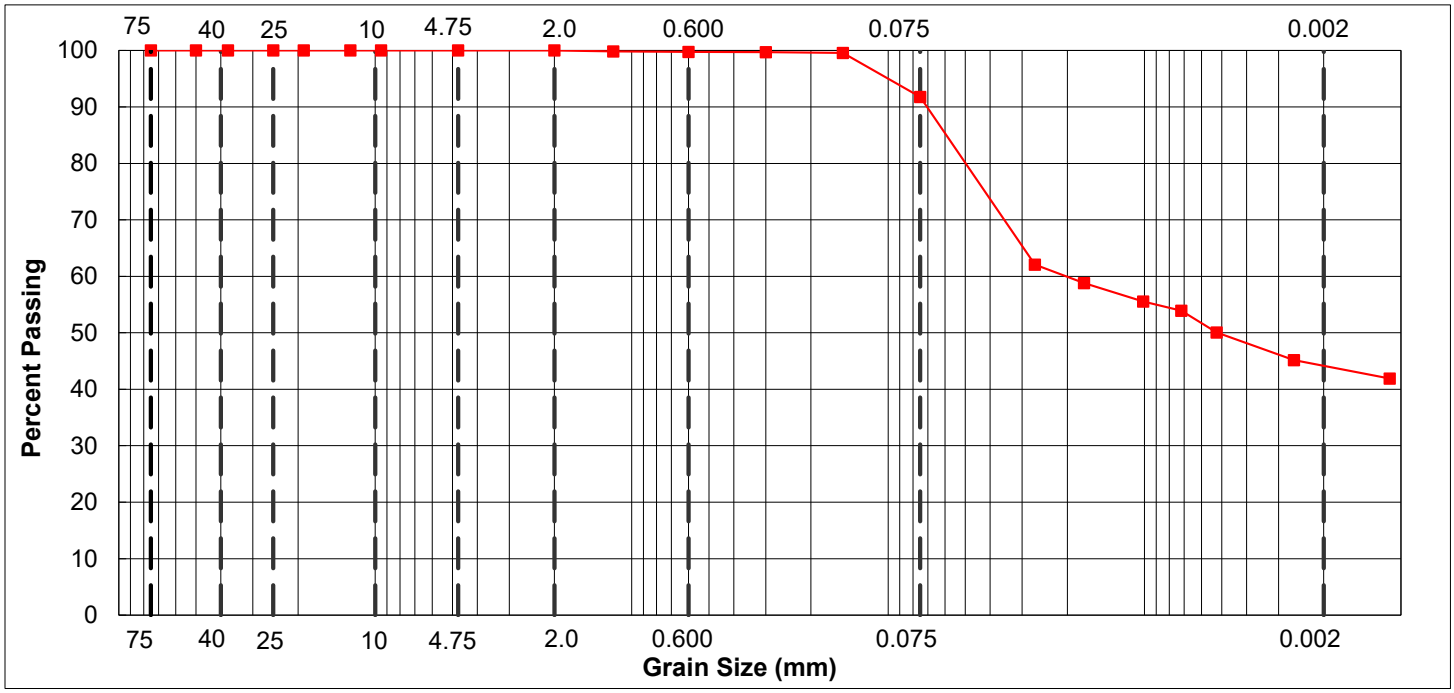
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	438AU4
Project No.:	1560-193-00	**Source:**	22BH438
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 438AU4	**Test Date:**	18-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.7
50.0	100.0	0.150	99.5
37.5	100.0	0.075	91.7
25.0	100.0	0.0268	62.1
19.0	100.0	0.0172	58.8
12.5	100.0	0.0101	55.5
9.5	100.0	0.0072	53.9
4.75	100.0	0.0052	50.1
2.00	100.0	0.0026	45.2
1.180	99.8	0.0011	41.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	8.0	425 µm to 75 µm
Silt	47.5	75 µm to 2 µm
Clay	44.2	<2 µm



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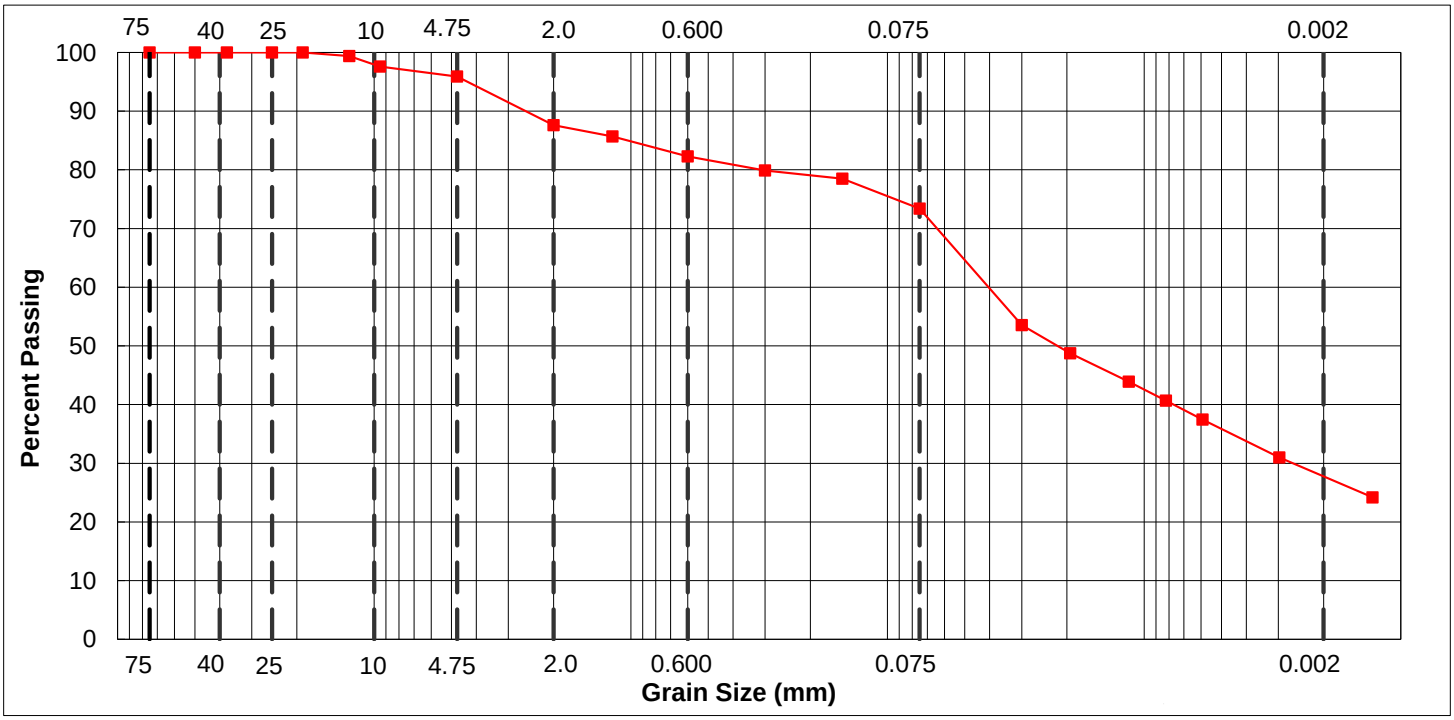
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	439AU2
Project No.:	1560-193-00	**Source:**	22BH439
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 439AU2	**Test Date:**	26-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	82.3
75.0	100.0	0.300	79.9
50.0	100.0	0.150	78.5
37.5	100.0	0.075	73.4
25.0	100.0	0.0300	53.6
19.0	100.0	0.0194	48.7
12.5	99.4	0.0115	43.9
9.5	97.6	0.0082	40.7
4.75	95.9	0.0059	37.4
2.00	87.6	0.0030	31.0
1.180	85.7	0.0013	24.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	4.1	20 mm to 4.75 mm
Coarse Sand	8.3	4.75 mm to 2.00 mm
Medium Sand	5.3	2.00 mm to 425 µm
Fine Sand	8.9	425 µm to 75 µm
Silt	45.6	75 µm to 2 µm
Clay	27.8	<2 µm



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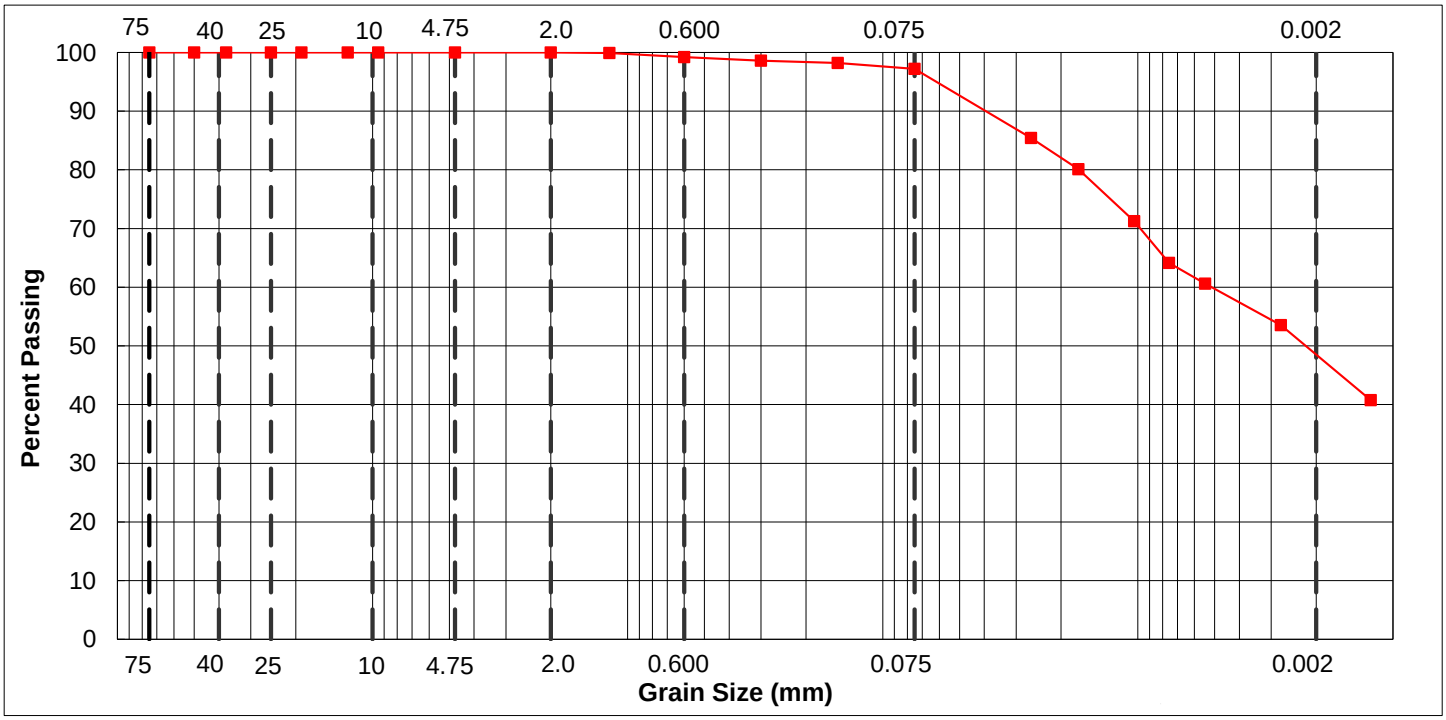
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	439AU5
Project No.:	1560-193-00	**Source:**	22BH439
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 439AU5	**Test Date:**	25-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	98.6
50.0	100.0	0.150	98.2
37.5	100.0	0.075	97.2
25.0	100.0	0.0262	85.4
19.0	100.0	0.0171	80.1
12.5	100.0	0.0103	71.2
9.5	100.0	0.0076	64.2
4.75	100.0	0.0054	60.6
2.00	100.0	0.0027	53.5
1.180	99.9	0.0012	40.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	2.0	425 µm to 75 µm
Silt	48.7	75 µm to 2 µm
Clay	48.5	<2 µm



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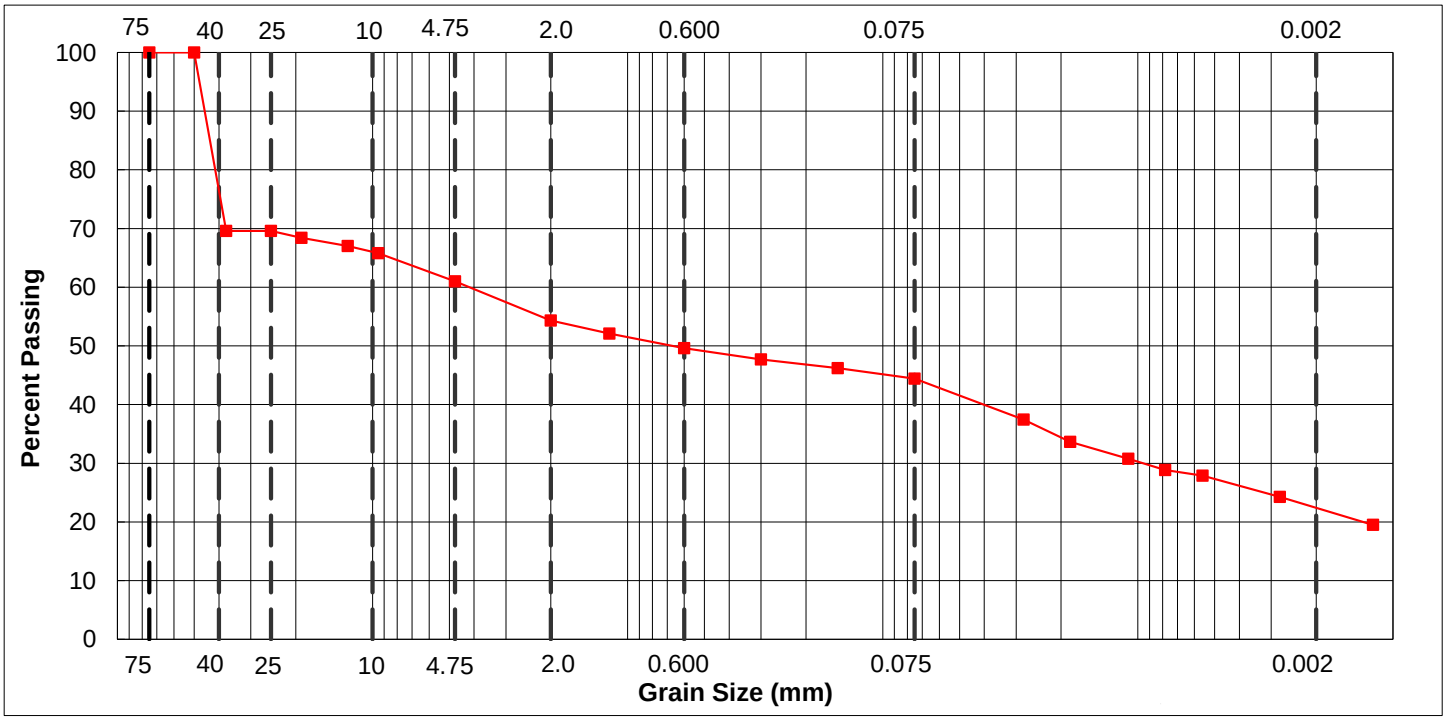
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	440AU1
Project No.:	1560-193-00	**Source:**	22BH440
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 440AU1	**Test Date:**	26-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	49.6
75.0	100.0	0.300	47.7
50.0	100.0	0.150	46.2
37.5	69.6	0.075	44.4
25.0	69.6	0.0280	37.5
19.0	68.4	0.0184	33.6
12.5	67.0	0.0109	30.8
9.5	65.8	0.0078	28.9
4.75	61.0	0.0056	27.9
2.00	54.3	0.0028	24.3
1.180	52.1	0.0012	19.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	30.4	80 mm to 20 mm
Fine Gravel	8.6	20 mm to 4.75 mm
Coarse Sand	6.7	4.75 mm to 2.00 mm
Medium Sand	4.7	2.00 mm to 425 µm
Fine Sand	5.2	425 µm to 75 µm
Silt	22.0	75 µm to 2 µm
Clay	22.4	<2 µm



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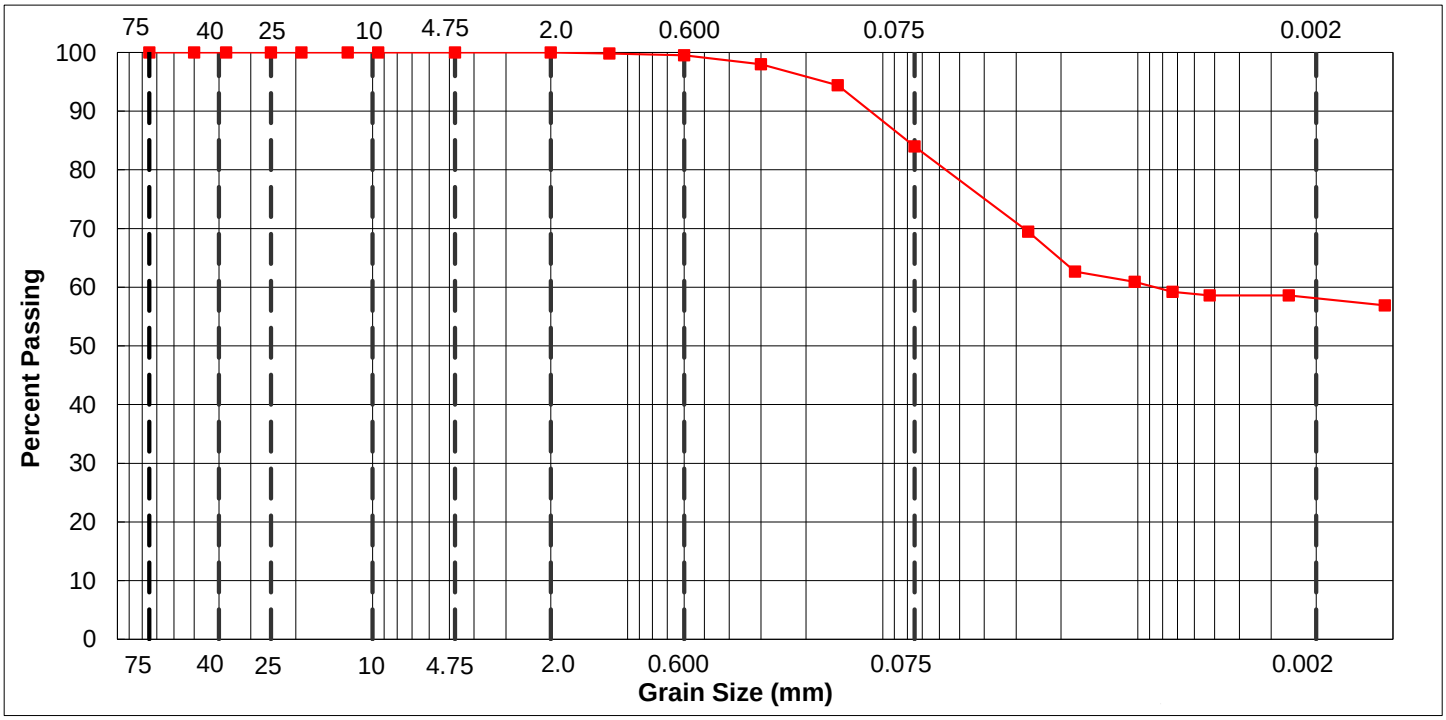
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	441AU1
Project No.:	1560-193-00	**Source:**	22BH441
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 441AU1	**Test Date:**	29-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	98.0
50.0	100.0	0.150	94.4
37.5	100.0	0.075	84.0
25.0	100.0	0.0269	69.5
19.0	100.0	0.0176	62.6
12.5	100.0	0.0103	60.9
9.5	100.0	0.0073	59.2
4.75	100.0	0.0052	58.6
2.00	100.0	0.0026	58.6
1.180	99.8	0.0011	56.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	15.5	425 µm to 75 µm
Silt	25.9	75 µm to 2 µm
Clay	58.1	<2 µm



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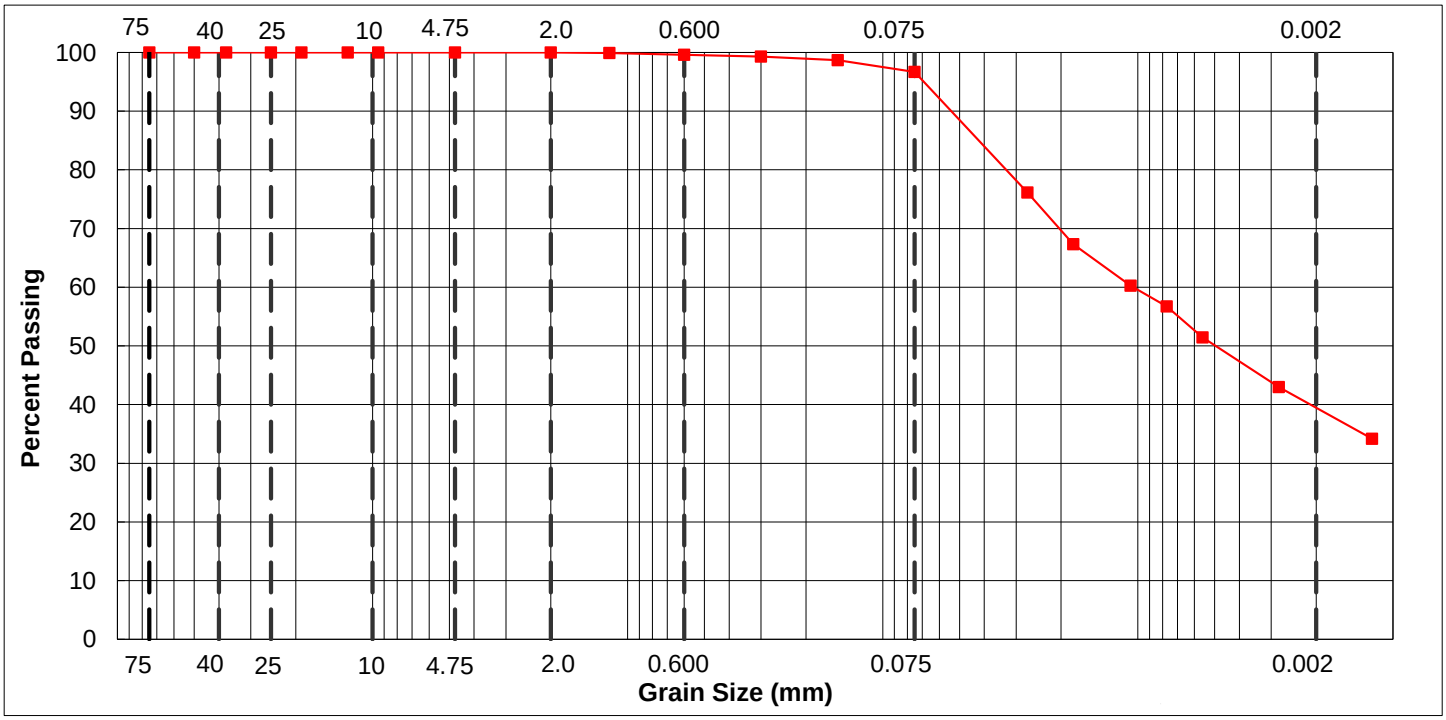
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	441AU7
Project No.:	1560-193-00	**Source:**	22BH441
Owner:	EID	**Sample Depth:**	5.1
File No.:	GSA - 441AU7	**Test Date:**	26-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	99.3
50.0	100.0	0.150	98.7
37.5	100.0	0.075	96.7
25.0	100.0	0.0271	76.1
19.0	100.0	0.0179	67.3
12.5	100.0	0.0107	60.3
9.5	100.0	0.0077	56.7
4.75	100.0	0.0056	51.4
2.00	100.0	0.0028	43.0
1.180	99.9	0.0012	34.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	2.9	425 µm to 75 µm
Silt	57.2	75 µm to 2 µm
Clay	39.5	<2 µm



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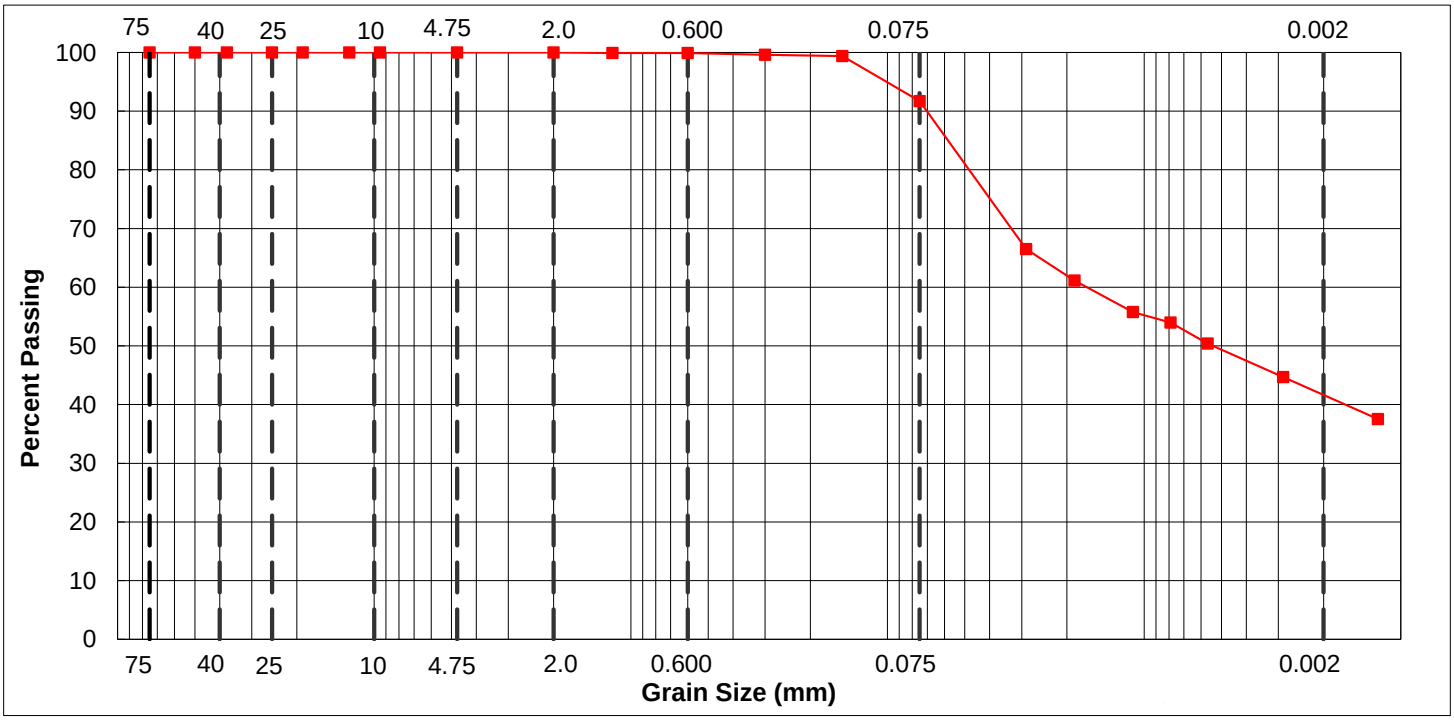
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	442AU1
Project No.:	1560-193-00	**Source:**	22BH442
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 442AU1	**Test Date:**	25-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.6
50.0	100.0	0.150	99.4
37.5	100.0	0.075	91.7
25.0	100.0	0.0288	66.5
19.0	100.0	0.0187	61.1
12.5	100.0	0.0111	55.8
9.5	100.0	0.0079	54.0
4.75	100.0	0.0057	50.4
2.00	100.0	0.0029	44.7
1.180	99.9	0.0012	37.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	8.2	425 µm to 75 µm
Silt	50.1	75 µm to 2 µm
Clay	41.6	<2 µm



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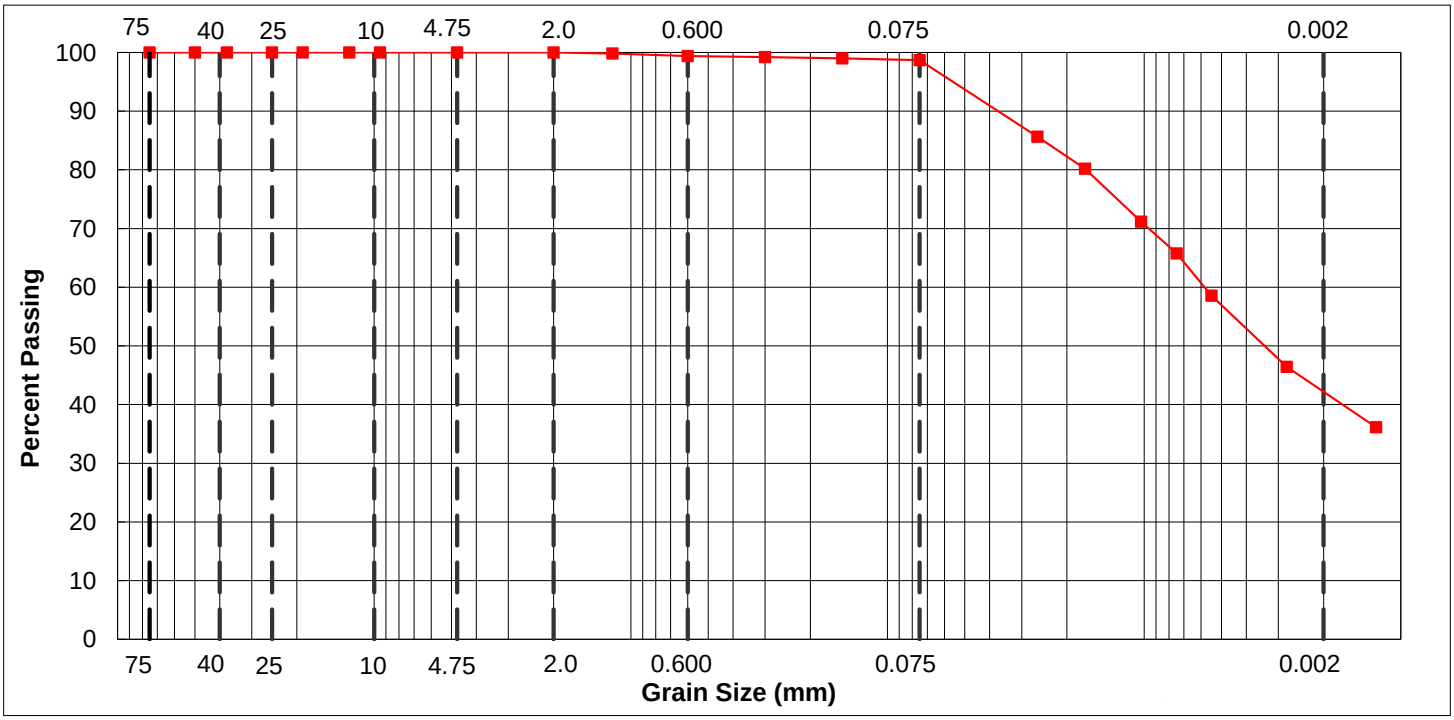
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	442AU4
Project No.:	1560-193-00	**Source:**	22BH442
Owner:	EID	**Sample Depth:**	5.5 m
File No.:	GSA - 442AU4	**Test Date:**	5-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	99.2
50.0	100.0	0.150	99.0
37.5	100.0	0.075	98.7
25.0	100.0	0.0261	85.6
19.0	100.0	0.0170	80.2
12.5	100.0	0.0103	71.2
9.5	100.0	0.0075	65.8
4.75	100.0	0.0055	58.5
2.00	100.0	0.0028	46.4
1.180	99.8	0.0012	36.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	0.7	425 µm to 75 µm
Silt	56.5	75 µm to 2 µm
Clay	42.2	<2 µm



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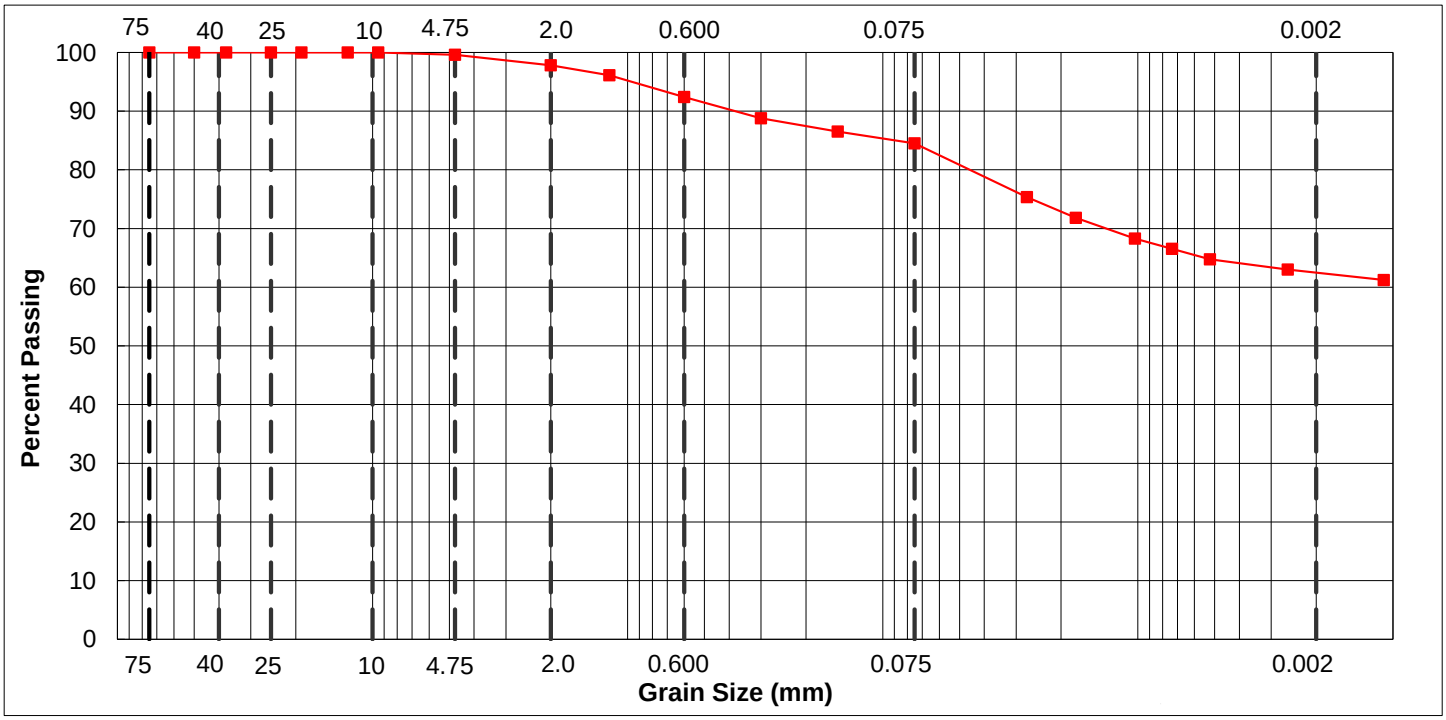
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	443AU1
Project No.:	1560-193-00	**Source:**	22BH443
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 443AU1	**Test Date:**	26-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	92.4
75.0	100.0	0.300	88.8
50.0	100.0	0.150	86.5
37.5	100.0	0.075	84.5
25.0	100.0	0.0272	75.4
19.0	100.0	0.0175	71.8
12.5	100.0	0.0103	68.3
9.5	100.0	0.0073	66.5
4.75	99.6	0.0052	64.8
2.00	97.8	0.0026	63.0
1.180	96.1	0.0011	61.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.4	20 mm to 4.75 mm
Coarse Sand	1.8	4.75 mm to 2.00 mm
Medium Sand	5.4	2.00 mm to 425 µm
Fine Sand	7.9	425 µm to 75 µm
Silt	22.0	75 µm to 2 µm
Clay	62.5	<2 µm



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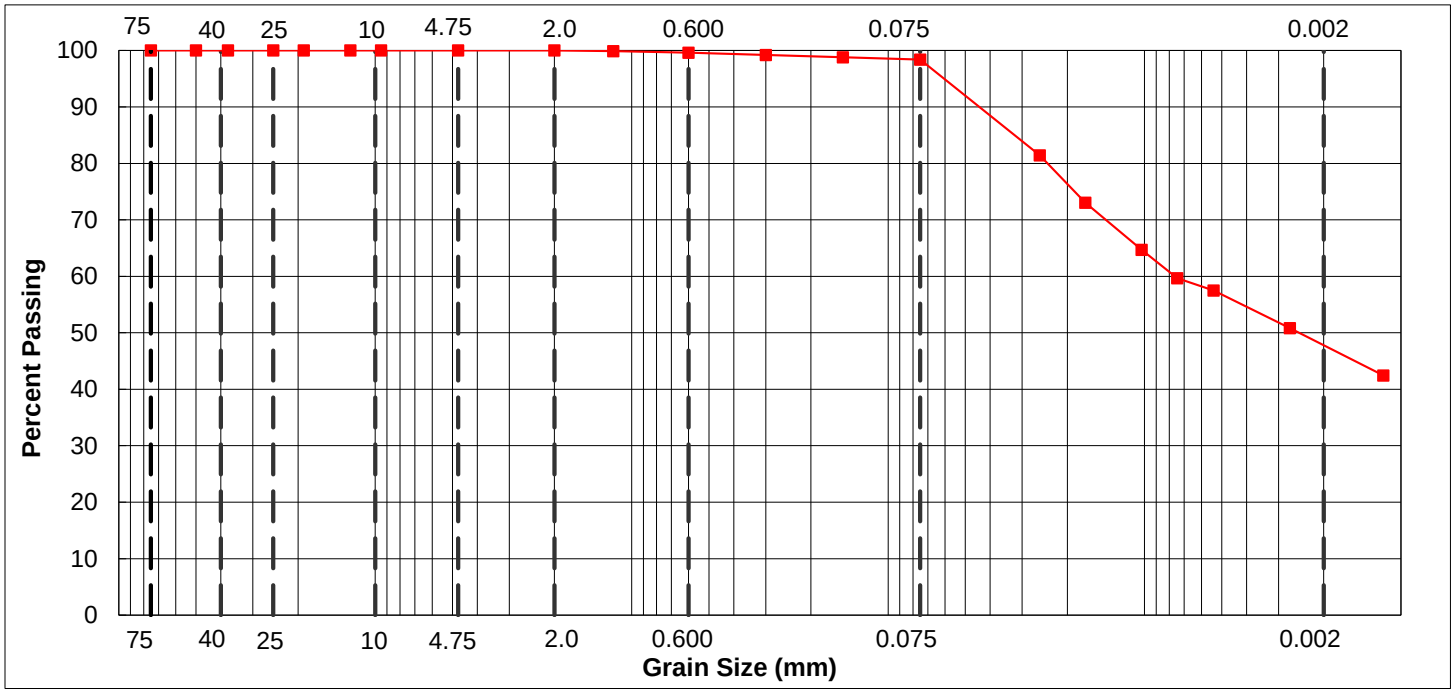
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	443AU2
Project No.:	1560-193-00	**Source:**	22BH443
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 443AU2	**Test Date:**	23-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	99.2
50.0	100.0	0.150	98.8
37.5	100.0	0.075	98.4
25.0	100.0	0.0256	81.4
19.0	100.0	0.0170	73.1
12.5	100.0	0.0103	64.7
9.5	100.0	0.0075	59.7
4.75	100.0	0.0054	57.5
2.00	100.0	0.0027	50.8
1.180	99.9	0.0012	42.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	1.2	425 µm to 75 µm
Silt	50.6	75 µm to 2 µm
Clay	47.8	<2 µm



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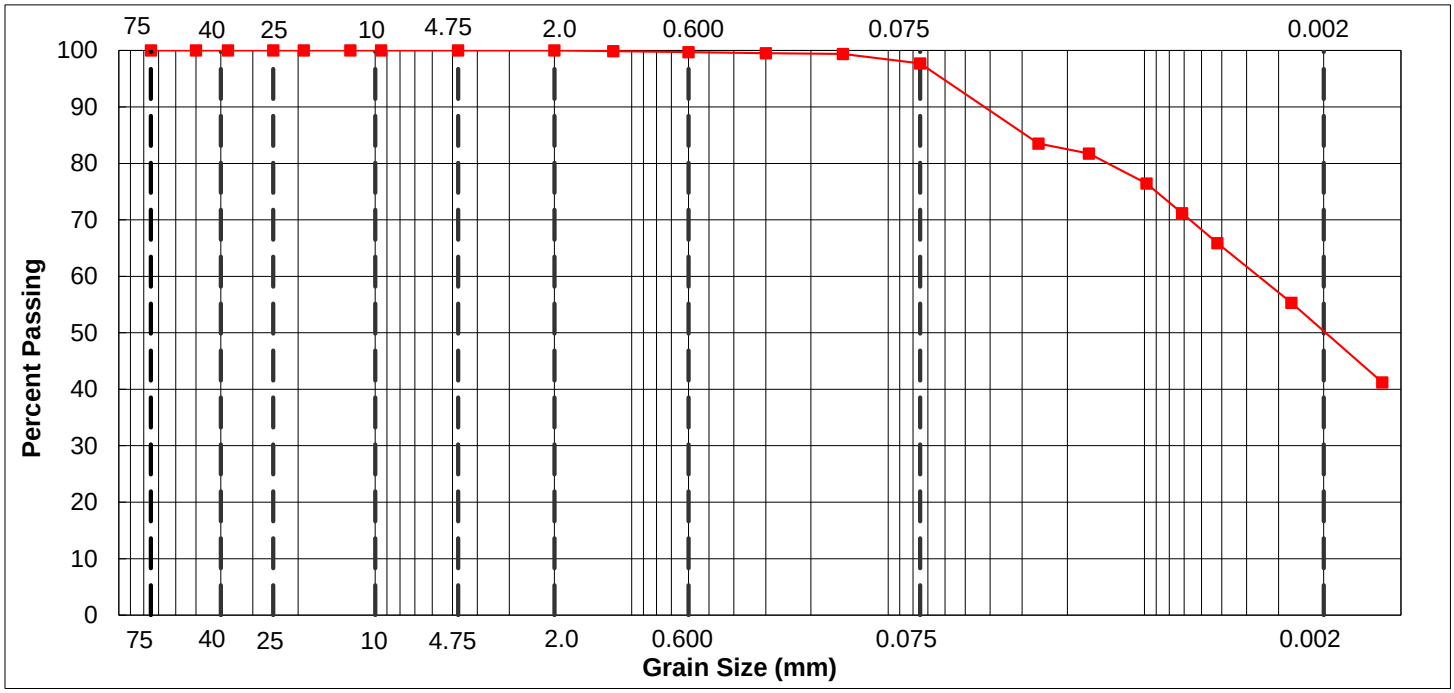
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	446AU1
Project No.:	1560-193-00	**Source:**	22BH446AU1
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 446AU1	**Test Date:**	3-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.4
37.5	100.0	0.075	97.7
25.0	100.0	0.0259	83.5
19.0	100.0	0.0165	81.7
12.5	100.0	0.0098	76.5
9.5	100.0	0.0071	71.2
4.75	100.0	0.0052	65.9
2.00	100.0	0.0027	55.3
1.180	99.9	0.0012	41.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	2.0	425 µm to 75 µm
Silt	47.4	75 µm to 2 µm
Clay	50.3	<2 µm



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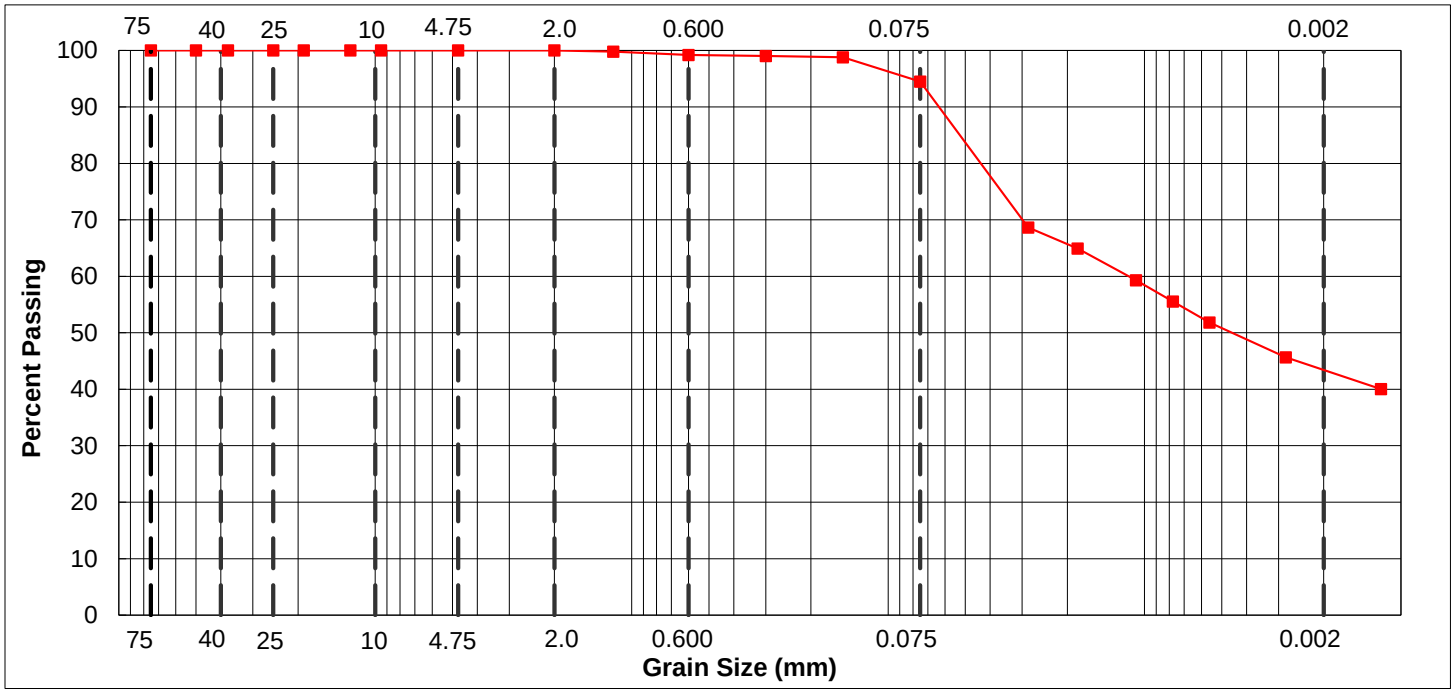
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	446AU4
Project No.:	1560-193-00	**Source:**	22BH446
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 446AU4	**Test Date:**	22-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	99.0
50.0	100.0	0.150	98.8
37.5	100.0	0.075	94.5
25.0	100.0	0.0284	68.7
19.0	100.0	0.0183	64.9
12.5	100.0	0.0108	59.3
9.5	100.0	0.0077	55.6
4.75	100.0	0.0056	51.8
2.00	100.0	0.0028	45.6
1.180	99.8	0.0012	40.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	4.7	425 µm to 75 µm
Silt	51.1	75 µm to 2 µm
Clay	43.4	<2 µm



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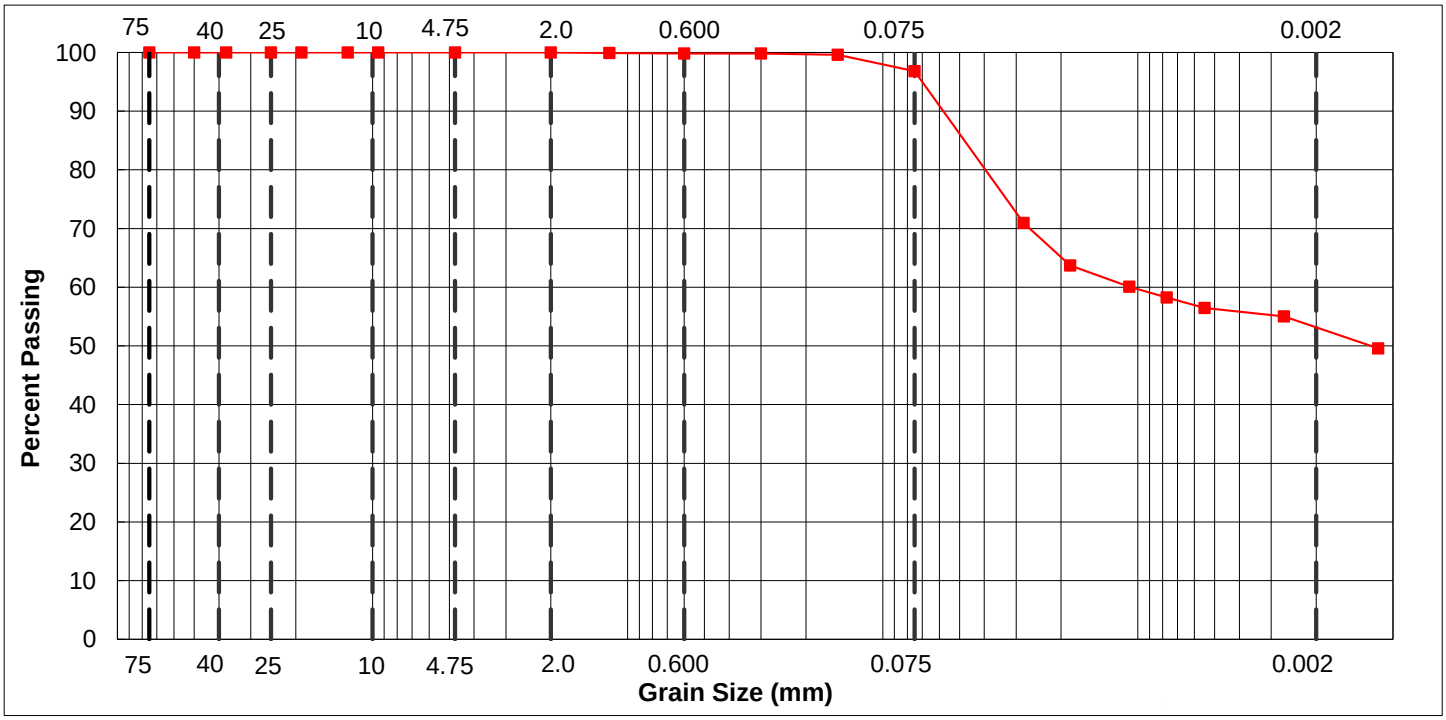
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	446AU5
Project No.:	1560-193-00	**Source:**	22BH446
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 446AU5	**Test Date:**	26-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.6
37.5	100.0	0.075	96.8
25.0	100.0	0.0280	70.9
19.0	100.0	0.0184	63.7
12.5	100.0	0.0108	60.1
9.5	100.0	0.0077	58.3
4.75	100.0	0.0055	56.4
2.00	100.0	0.0027	55.0
1.180	99.9	0.0011	49.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	3.0	425 µm to 75 µm
Silt	43.7	75 µm to 2 µm
Clay	53.1	<2 µm



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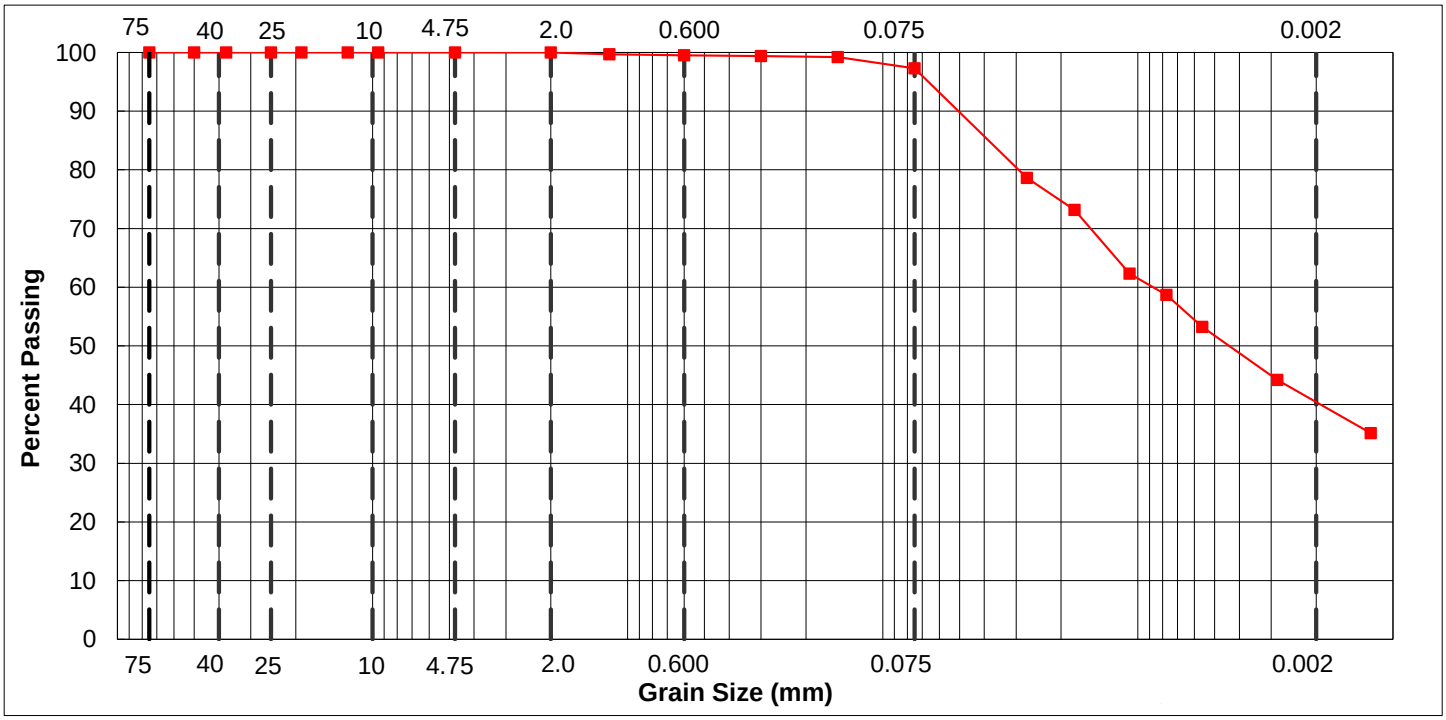
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	446AU6
Project No.:	1560-193-00	**Source:**	22BH446
Owner:	EID	**Sample Depth:**	4.3m
File No.:	GSA - 446AU6	**Test Date:**	25-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.4
50.0	100.0	0.150	99.2
37.5	100.0	0.075	97.3
25.0	100.0	0.0272	78.6
19.0	100.0	0.0177	73.2
12.5	100.0	0.0108	62.3
9.5	100.0	0.0077	58.7
4.75	100.0	0.0056	53.2
2.00	100.0	0.0028	44.2
1.180	99.7	0.0012	35.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	2.2	425 µm to 75 µm
Silt	56.9	75 µm to 2 µm
Clay	40.4	<2 µm



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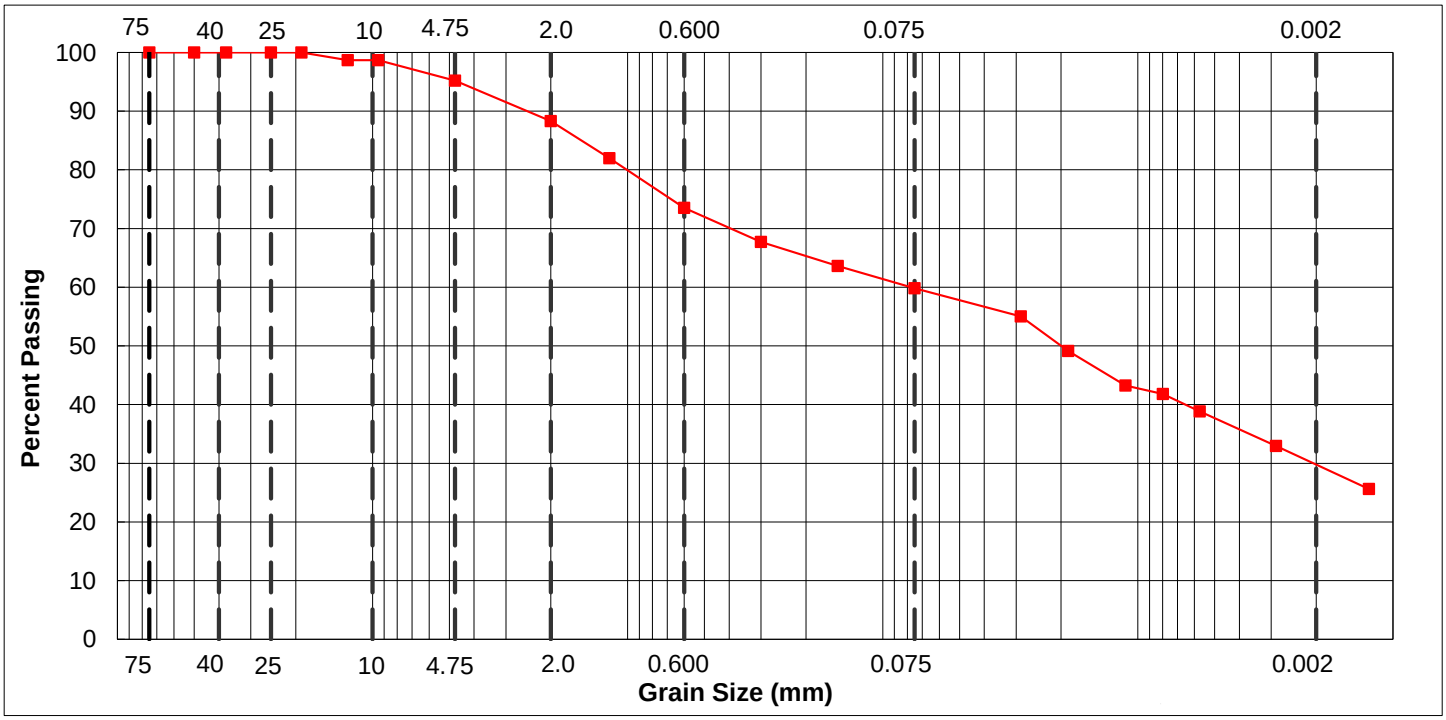
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	448AU1
Project No.:	1560-193-00	**Source:**	22BH448
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 448AU1	**Test Date:**	25-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	73.5
75.0	100.0	0.300	67.7
50.0	100.0	0.150	63.6
37.5	100.0	0.075	59.8
25.0	100.0	0.0287	55.0
19.0	100.0	0.0187	49.1
12.5	98.7	0.0112	43.3
9.5	98.7	0.0080	41.8
4.75	95.2	0.0057	38.8
2.00	88.3	0.0029	33.0
1.180	82.0	0.0012	25.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	4.8	20 mm to 4.75 mm
Coarse Sand	6.9	4.75 mm to 2.00 mm
Medium Sand	14.8	2.00 mm to 425 µm
Fine Sand	13.7	425 µm to 75 µm
Silt	30.0	75 µm to 2 µm
Clay	29.8	<2 µm



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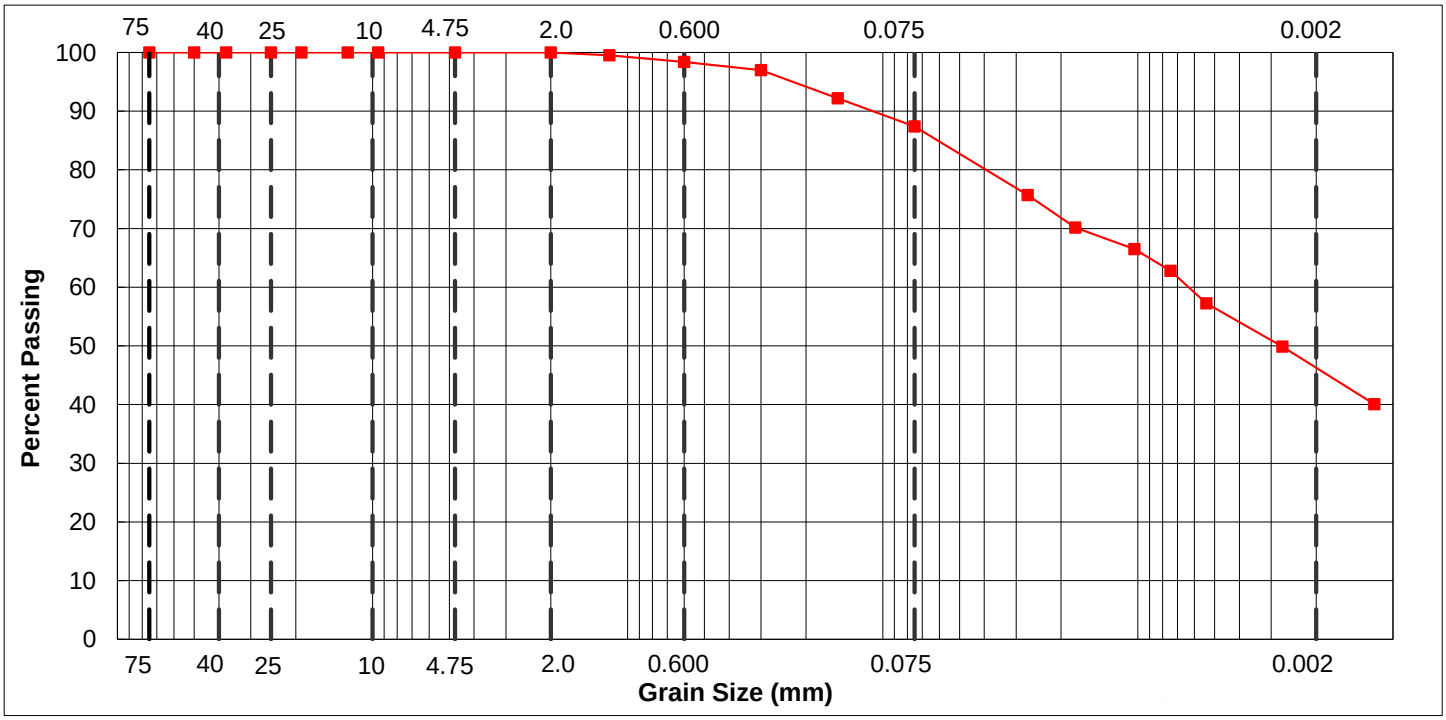
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	448AU4
Project No.:	1560-193-00	**Source:**	22BH448
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 448AU4	**Test Date:**	27-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.4
75.0	100.0	0.300	97.0
50.0	100.0	0.150	92.2
37.5	100.0	0.075	87.4
25.0	100.0	0.0270	75.7
19.0	100.0	0.0176	70.2
12.5	100.0	0.0103	66.5
9.5	100.0	0.0074	62.8
4.75	100.0	0.0054	57.2
2.00	100.0	0.0027	49.9
1.180	99.5	0.0012	40.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.6	2.00 mm to 425 µm
Fine Sand	11.0	425 µm to 75 µm
Silt	41.1	75 µm to 2 µm
Clay	46.3	<2 µm



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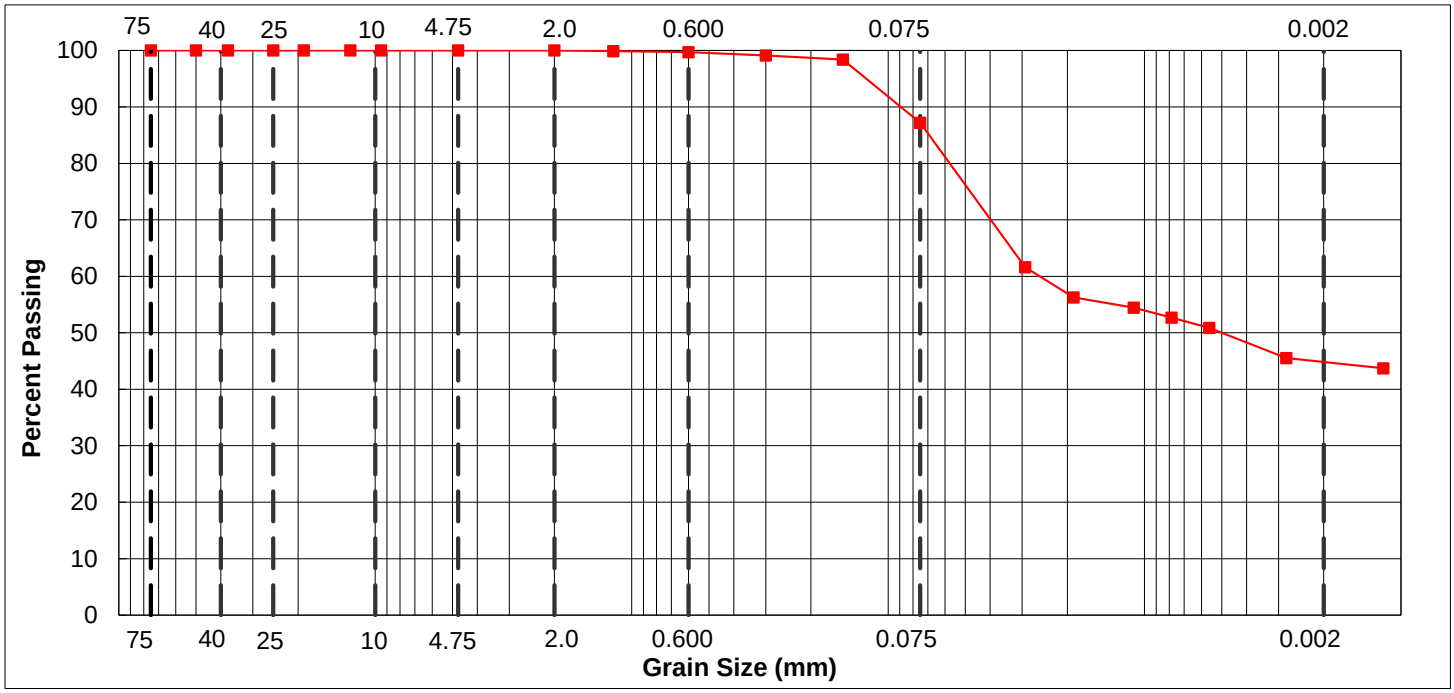
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	449AU2
Project No.:	1560-193-00	**Source:**	22BH449
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 449AU2	**Test Date:**	3-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.1
50.0	100.0	0.150	98.4
37.5	100.0	0.075	87.2
25.0	100.0	0.0292	61.6
19.0	100.0	0.0189	56.3
12.5	100.0	0.0110	54.5
9.5	100.0	0.0078	52.7
4.75	100.0	0.0056	50.9
2.00	100.0	0.0028	45.5
1.180	99.9	0.0012	43.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	12.5	425 µm to 75 µm
Silt	42.4	75 µm to 2 µm
Clay	44.8	<2 µm



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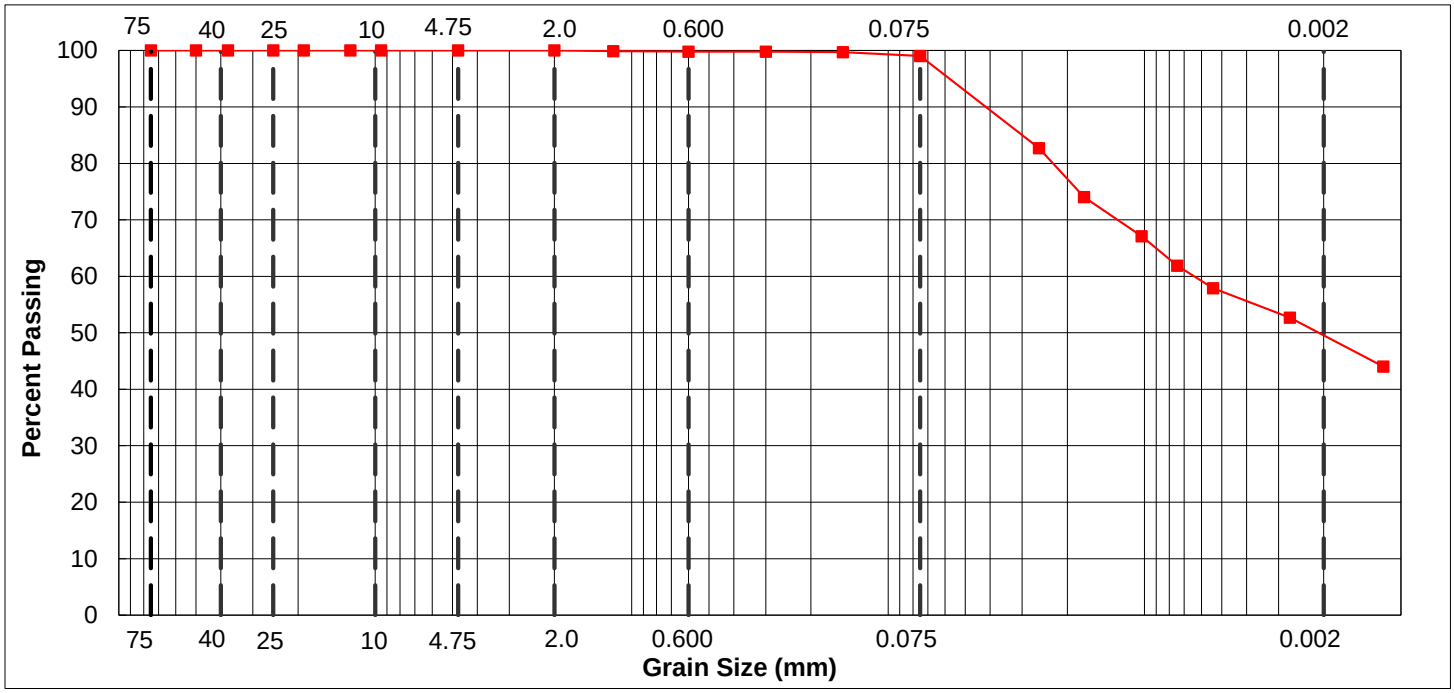
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	449AU5
Project No.:	1560-193-00	**Source:**	22BH449
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 449AU5	**Test Date:**	23-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.0
25.0	100.0	0.0258	82.7
19.0	100.0	0.0172	74.0
12.5	100.0	0.0103	67.1
9.5	100.0	0.0075	61.9
4.75	100.0	0.0054	57.9
2.00	100.0	0.0027	52.7
1.180	99.9	0.0012	44.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	0.8	425 µm to 75 µm
Silt	49.5	75 µm to 2 µm
Clay	49.5	<2 µm



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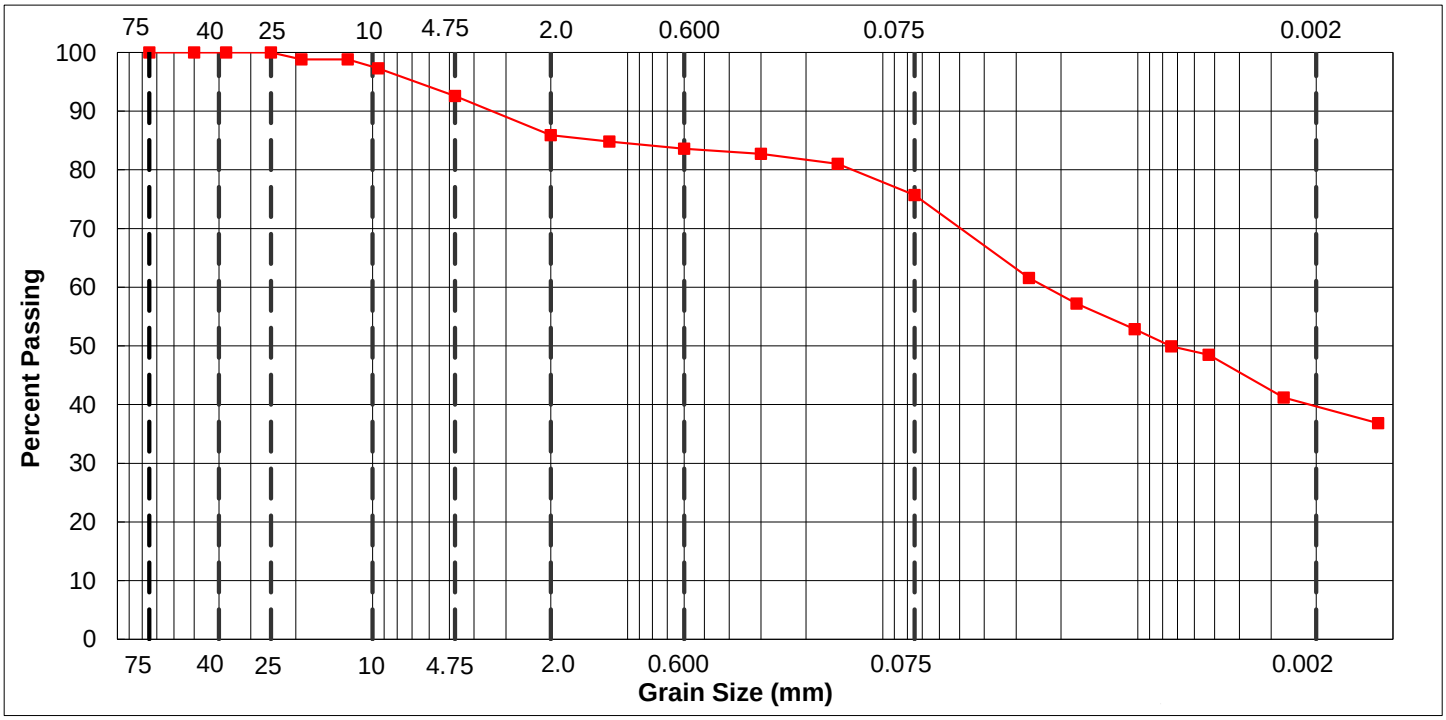
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	450AU1
Project No.:	1560-193-00	**Source:**	22BH450
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 450AU1	**Test Date:**	29-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	83.6
75.0	100.0	0.300	82.7
50.0	100.0	0.150	81.0
37.5	100.0	0.075	75.7
25.0	100.0	0.0267	61.6
19.0	98.8	0.0174	57.2
12.5	98.8	0.0103	52.8
9.5	97.3	0.0074	49.9
4.75	92.6	0.0053	48.5
2.00	85.9	0.0027	41.2
1.180	84.8	0.0011	36.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	7.4	20 mm to 4.75 mm
Coarse Sand	6.7	4.75 mm to 2.00 mm
Medium Sand	2.3	2.00 mm to 425 µm
Fine Sand	7.9	425 µm to 75 µm
Silt	36.0	75 µm to 2 µm
Clay	39.7	<2 µm



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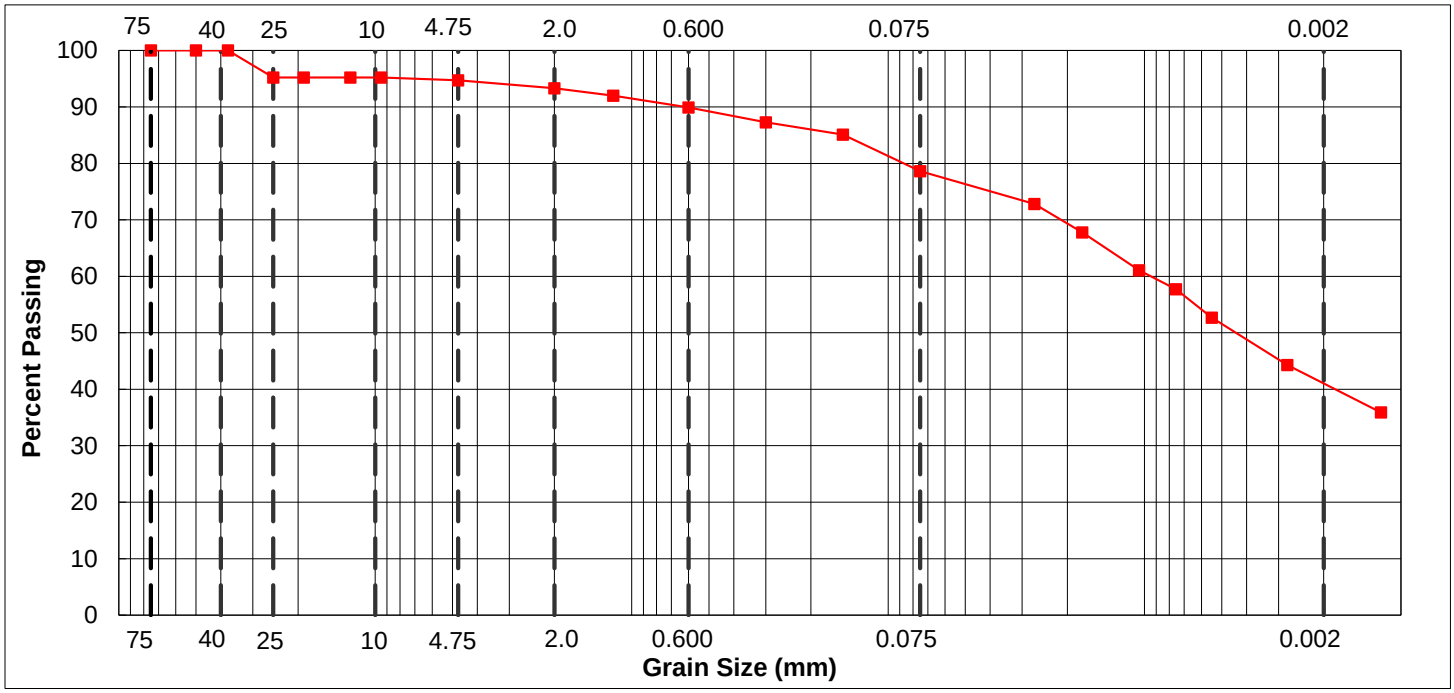
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	450AU4
Project No.:	1560-193-00	**Source:**	22BH450
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 450AU4	**Test Date:**	3-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	89.9
75.0	100.0	0.300	87.3
50.0	100.0	0.150	85.1
37.5	100.0	0.075	78.6
25.0	95.2	0.0269	72.8
19.0	95.2	0.0175	67.8
12.5	95.2	0.0105	61.1
9.5	95.2	0.0075	57.7
4.75	94.7	0.0055	52.7
2.00	93.3	0.0028	44.3
1.180	92.0	0.0012	35.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	4.8	80 mm to 20 mm
Fine Gravel	0.5	20 mm to 4.75 mm
Coarse Sand	1.4	4.75 mm to 2.00 mm
Medium Sand	3.4	2.00 mm to 425 µm
Fine Sand	11.3	425 µm to 75 µm
Silt	37.6	75 µm to 2 µm
Clay	41.0	<2 µm



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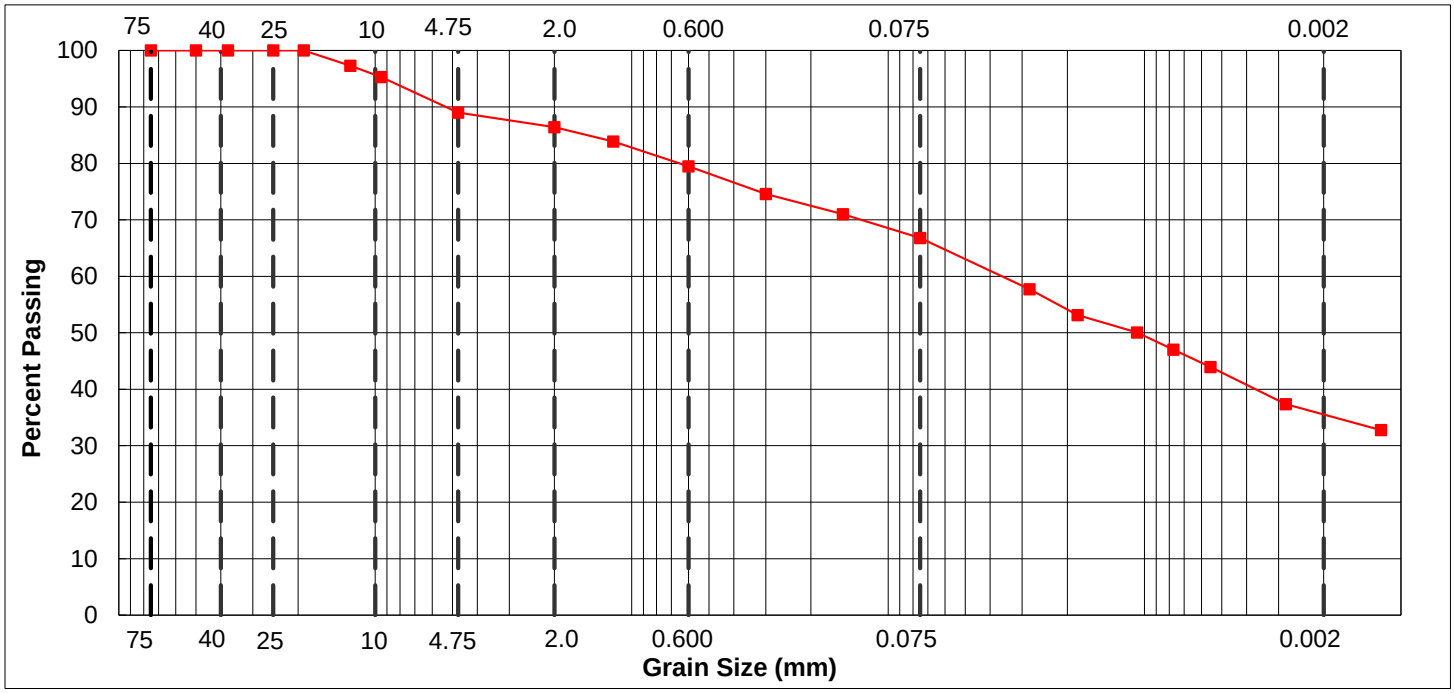
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	451AU2
Project No.:	1560-193-00	**Source:**	22BH451
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 451AU2	**Test Date:**	22-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	79.5
75.0	100.0	0.300	74.6
50.0	100.0	0.150	71.0
37.5	100.0	0.075	66.8
25.0	100.0	0.0281	57.7
19.0	100.0	0.0183	53.1
12.5	97.3	0.0107	50.1
9.5	95.3	0.0077	47.0
4.75	89.0	0.0055	43.9
2.00	86.4	0.0028	37.4
1.180	83.9	0.0012	32.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	11.0	20 mm to 4.75 mm
Coarse Sand	2.6	4.75 mm to 2.00 mm
Medium Sand	6.9	2.00 mm to 425 µm
Fine Sand	12.7	425 µm to 75 µm
Silt	31.3	75 µm to 2 µm
Clay	35.5	<2 µm



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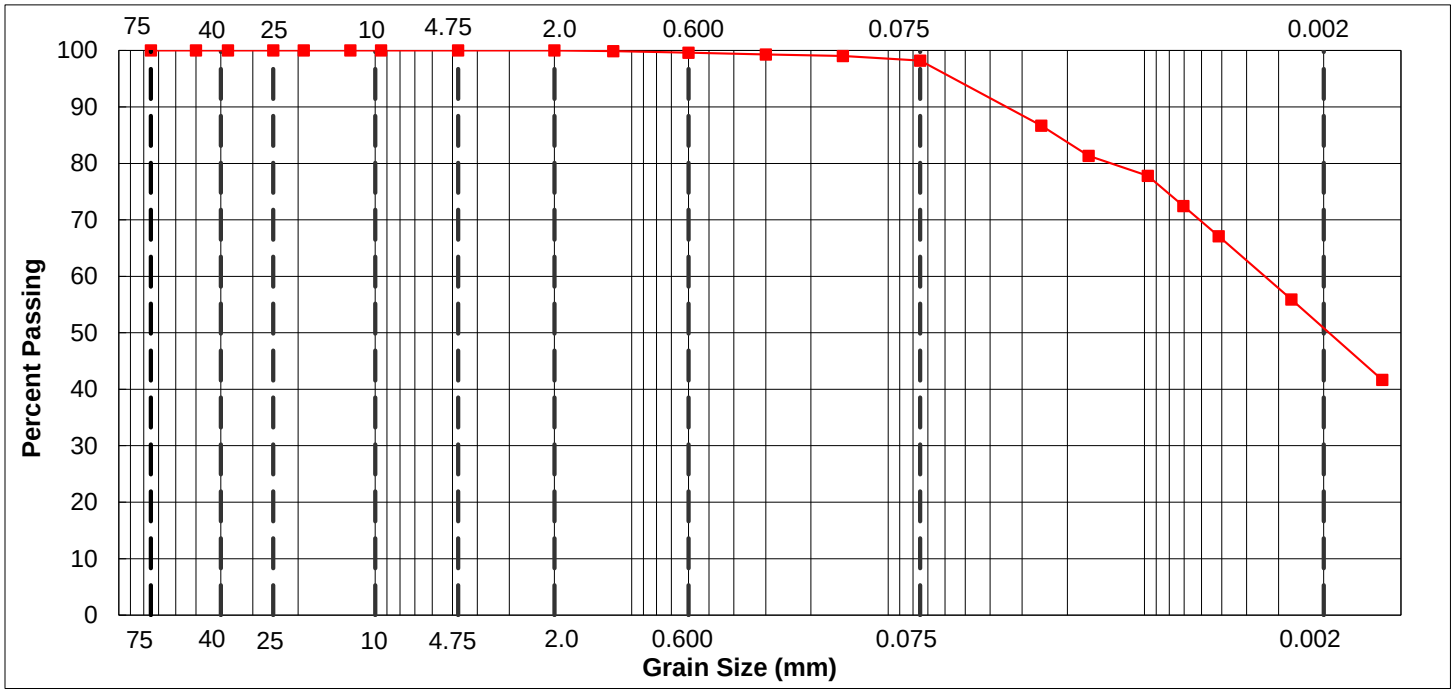
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	451AU5
Project No.:	1560-193-00	**Source:**	22BH451
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 451AU5	**Test Date:**	22-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	99.3
50.0	100.0	0.150	99.0
37.5	100.0	0.075	98.2
25.0	100.0	0.0253	86.7
19.0	100.0	0.0165	81.4
12.5	100.0	0.0097	77.8
9.5	100.0	0.0071	72.5
4.75	100.0	0.0051	67.1
2.00	100.0	0.0027	55.9
1.180	99.9	0.0012	41.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	1.4	425 µm to 75 µm
Silt	47.4	75 µm to 2 µm
Clay	50.8	<2 µm



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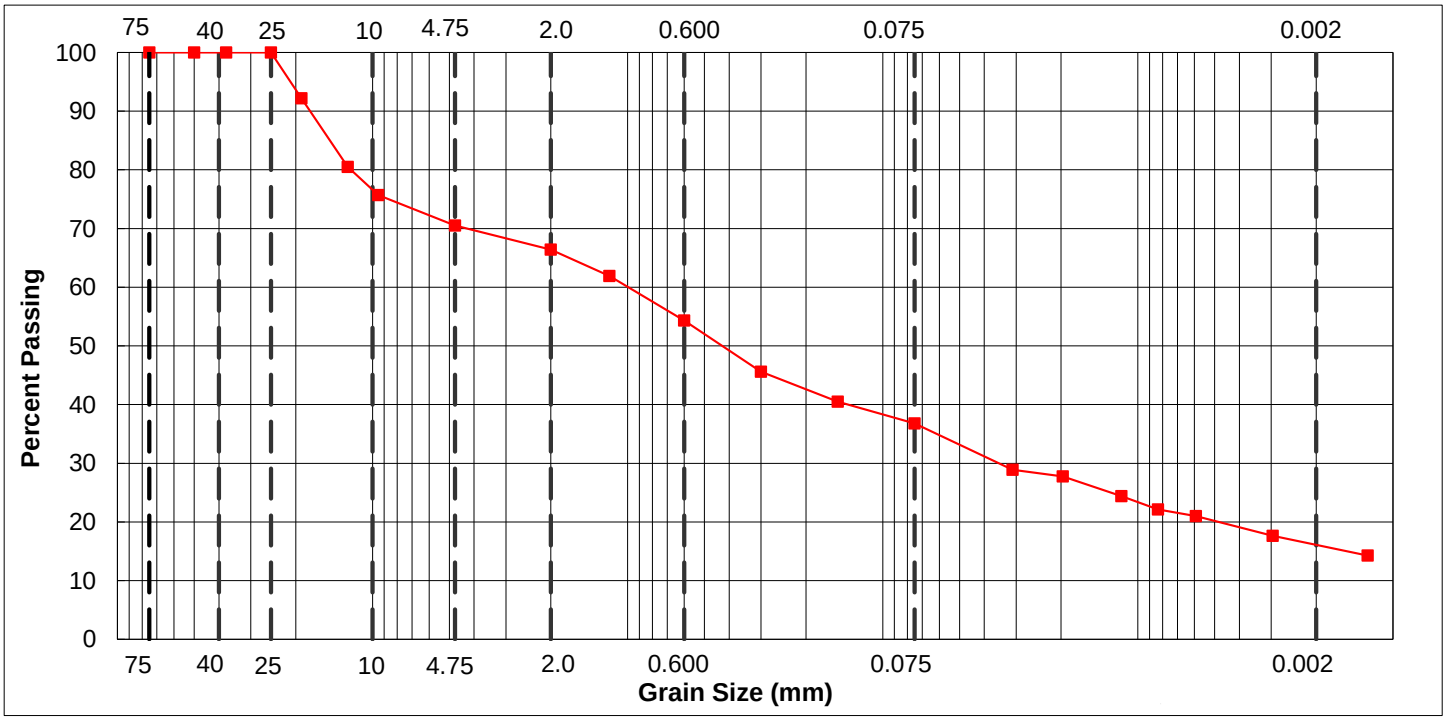
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	452AU1
Project No.:	1560-193-00	**Source:**	22BH452
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 452AU1	**Test Date:**	15-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	54.3
75.0	100.0	0.300	45.6
50.0	100.0	0.150	40.5
37.5	100.0	0.075	36.8
25.0	100.0	0.0310	28.9
19.0	92.2	0.0197	27.7
12.5	80.5	0.0116	24.4
9.5	75.7	0.0083	22.1
4.75	70.5	0.0059	21.0
2.00	66.4	0.0030	17.6
1.180	61.9	0.0013	14.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	29.5	20 mm to 4.75 mm
Coarse Sand	4.1	4.75 mm to 2.00 mm
Medium Sand	12.1	2.00 mm to 425 µm
Fine Sand	17.5	425 µm to 75 µm
Silt	20.7	75 µm to 2 µm
Clay	16.1	<2 µm



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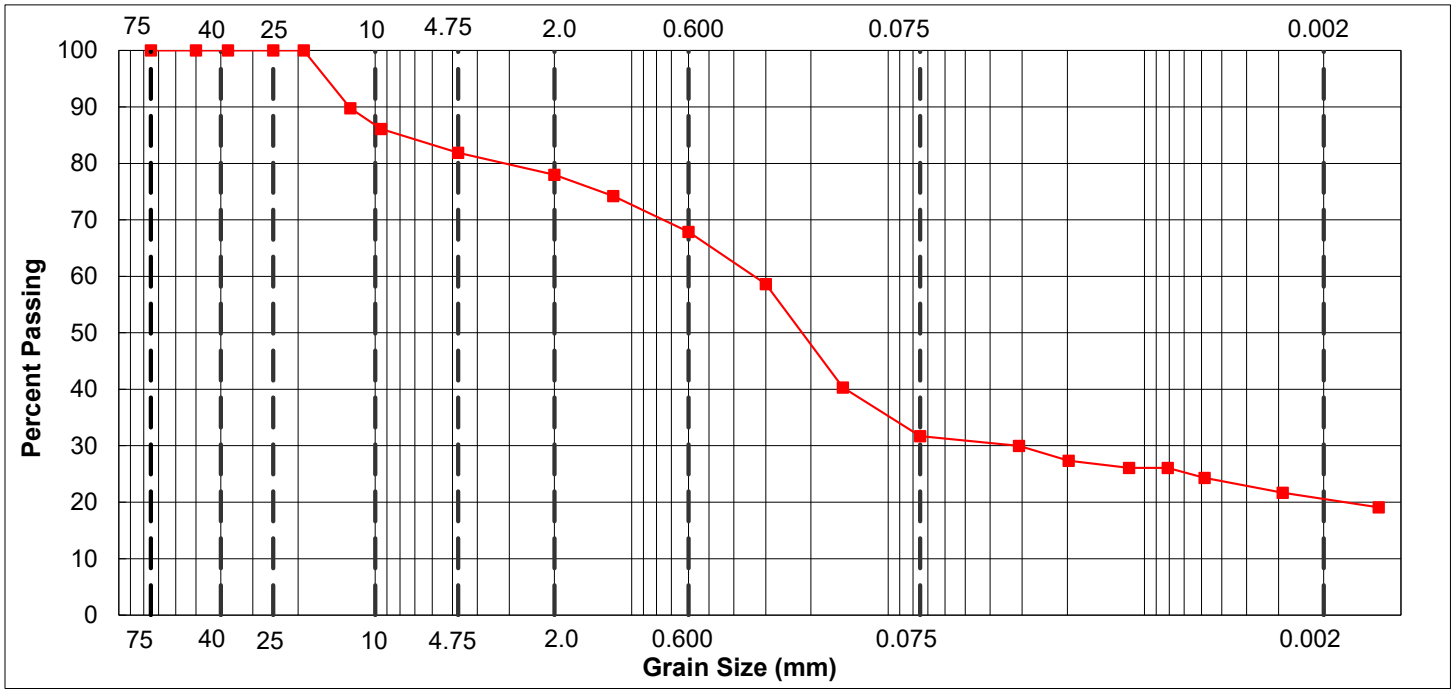
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	453AU2
Project No.:	1560-193-00	**Source:**	22BH453
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 453AU2	**Test Date:**	18-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	67.9
75.0	100.0	0.300	58.6
50.0	100.0	0.150	40.3
37.5	100.0	0.075	31.7
25.0	100.0	0.0309	30.0
19.0	100.0	0.0197	27.4
12.5	89.8	0.0115	26.1
9.5	86.1	0.0081	26.1
4.75	81.9	0.0058	24.3
2.00	78.0	0.0029	21.7
1.180	74.2	0.0012	19.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	18.1	20 mm to 4.75 mm
Coarse Sand	3.9	4.75 mm to 2.00 mm
Medium Sand	10.1	2.00 mm to 425 µm
Fine Sand	36.2	425 µm to 75 µm
Silt	11.1	75 µm to 2 µm
Clay	20.6	<2 µm



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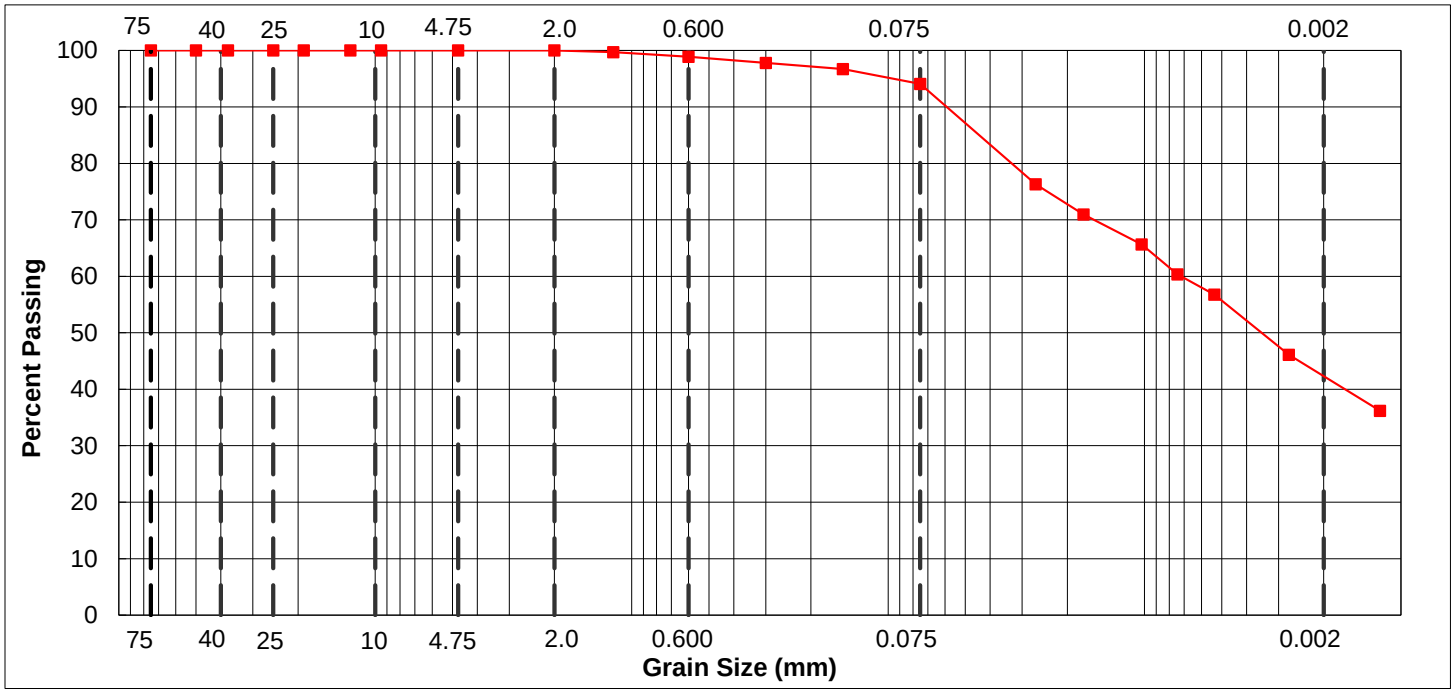
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	453AU5
Project No.:	1560-193-00	**Source:**	22BH453
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 453AU5	**Test Date:**	19-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.9
75.0	100.0	0.300	97.8
50.0	100.0	0.150	96.7
37.5	100.0	0.075	94.1
25.0	100.0	0.0266	76.3
19.0	100.0	0.0173	71.0
12.5	100.0	0.0103	65.7
9.5	100.0	0.0074	60.3
4.75	100.0	0.0053	56.8
2.00	100.0	0.0027	46.1
1.180	99.7	0.0012	36.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.1	2.00 mm to 425 µm
Fine Sand	4.8	425 µm to 75 µm
Silt	51.8	75 µm to 2 µm
Clay	42.3	<2 µm



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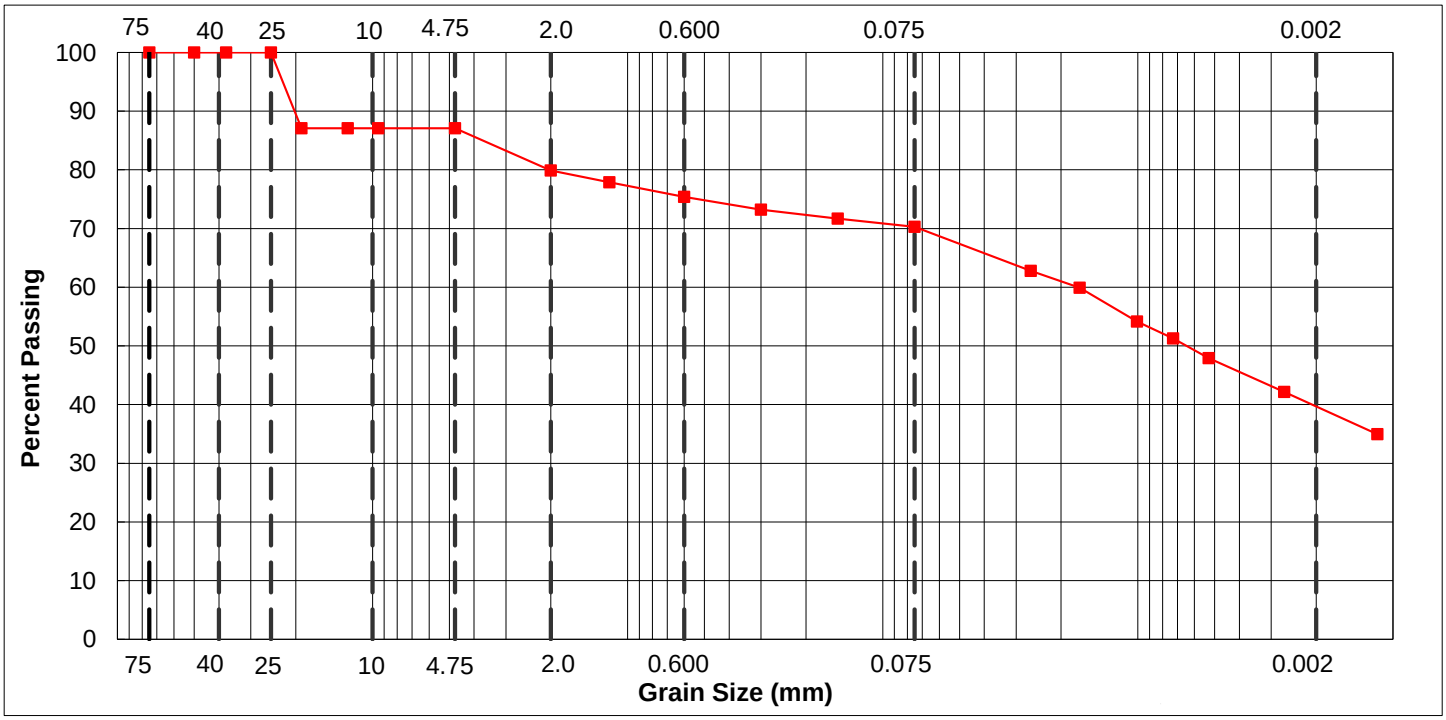
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	454AU1
Project No.:	1560-193-00	**Source:**	22BH454
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 454AU1	**Test Date:**	22-Sep-28

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	75.4
75.0	100.0	0.300	73.2
50.0	100.0	0.150	71.7
37.5	100.0	0.075	70.3
25.0	100.0	0.0263	62.8
19.0	87.1	0.0169	59.9
12.5	87.1	0.0101	54.2
9.5	87.1	0.0073	51.3
4.75	87.1	0.0053	47.9
2.00	79.9	0.0027	42.1
1.180	77.9	0.0012	35.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	12.9	20 mm to 4.75 mm
Coarse Sand	7.2	4.75 mm to 2.00 mm
Medium Sand	4.5	2.00 mm to 425 µm
Fine Sand	5.1	425 µm to 75 µm
Silt	30.6	75 µm to 2 µm
Clay	39.7	<2 µm



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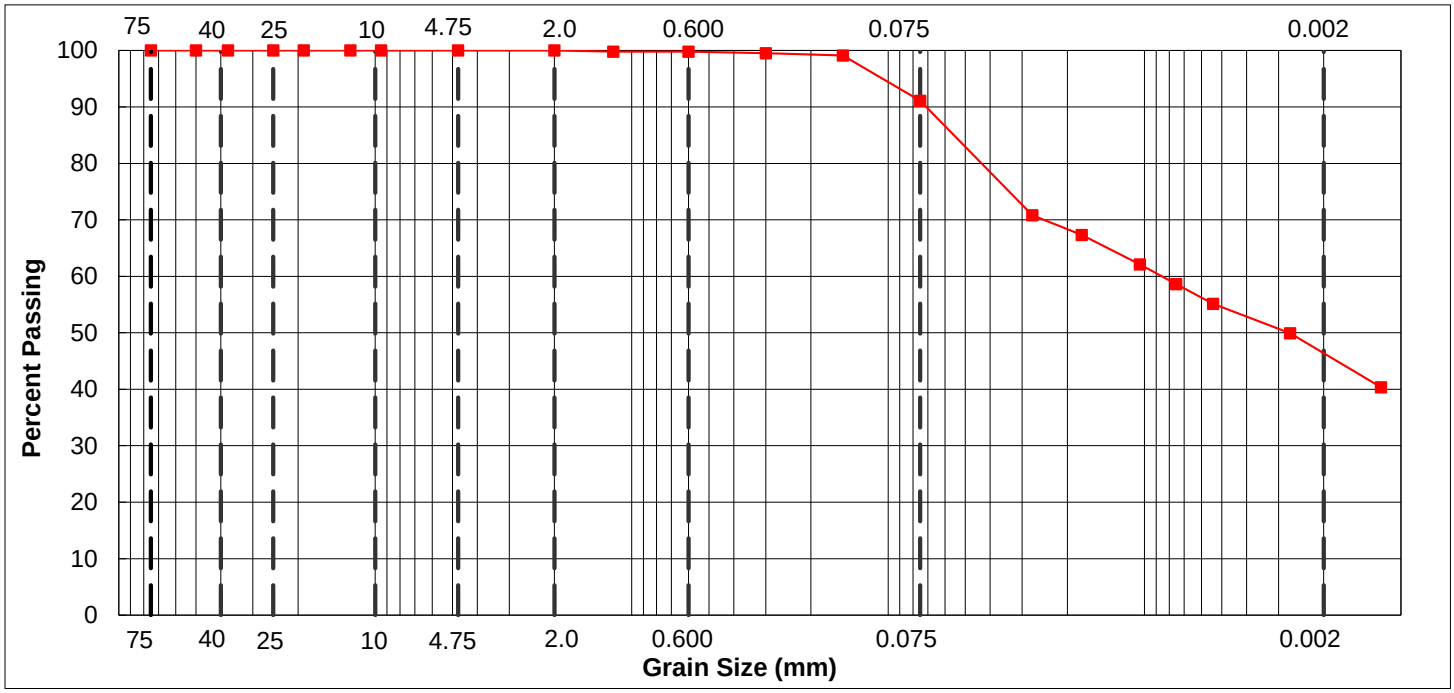
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	454AU2
Project No.:	1560-193-00	**Source:**	22BH454
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 454AU2	**Test Date:**	21-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.1
37.5	100.0	0.075	91.1
25.0	100.0	0.0274	70.8
19.0	100.0	0.0176	67.3
12.5	100.0	0.0104	62.1
9.5	100.0	0.0075	58.6
4.75	100.0	0.0054	55.2
2.00	100.0	0.0027	49.9
1.180	99.8	0.0012	40.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	8.7	425 µm to 75 µm
Silt	44.7	75 µm to 2 µm
Clay	46.4	<2 µm



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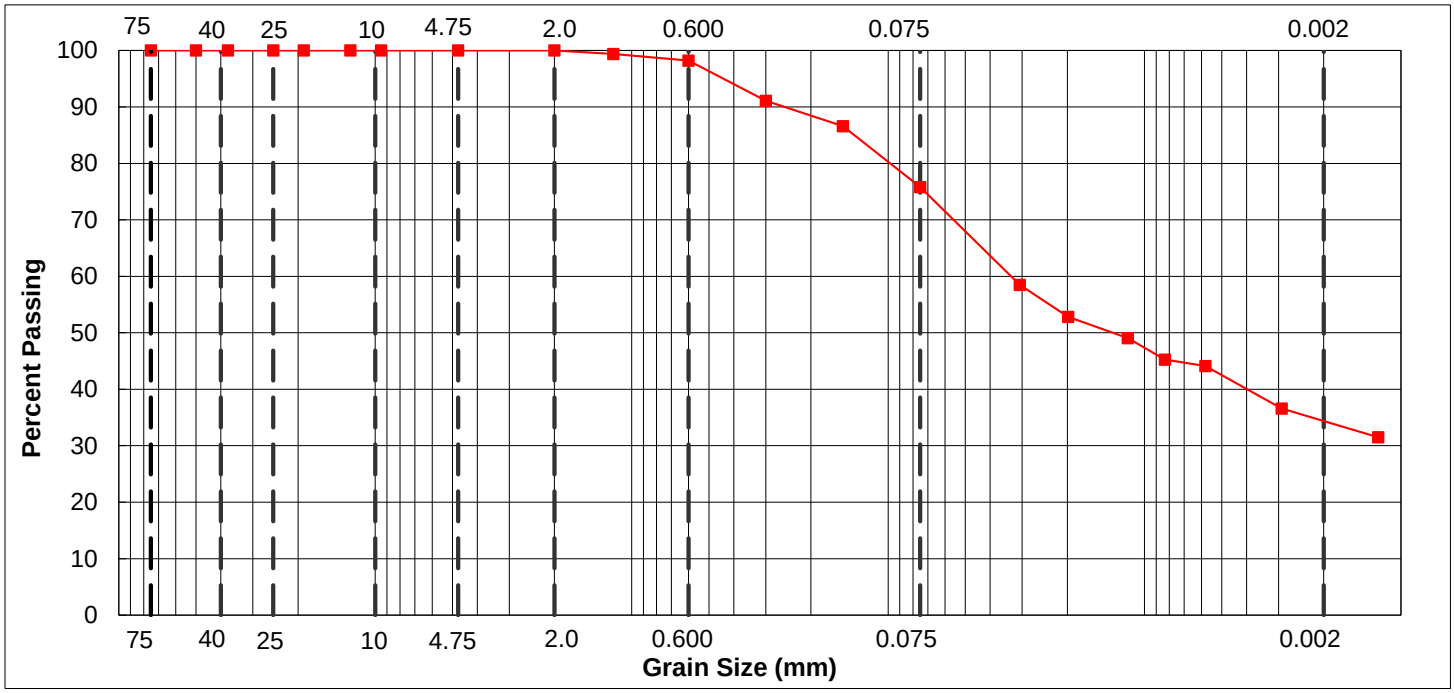
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	456AU1
Project No.:	1560-193-00	**Source:**	22BH456
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 456AU1	**Test Date:**	15-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.2
75.0	100.0	0.300	91.1
50.0	100.0	0.150	86.6
37.5	100.0	0.075	75.8
25.0	100.0	0.0307	58.5
19.0	100.0	0.0199	52.8
12.5	100.0	0.0116	49.0
9.5	100.0	0.0083	45.3
4.75	100.0	0.0058	44.1
2.00	100.0	0.0029	36.6
1.180	99.4	0.0012	31.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.8	2.00 mm to 425 µm
Fine Sand	22.4	425 µm to 75 µm
Silt	41.4	75 µm to 2 µm
Clay	34.4	<2 µm



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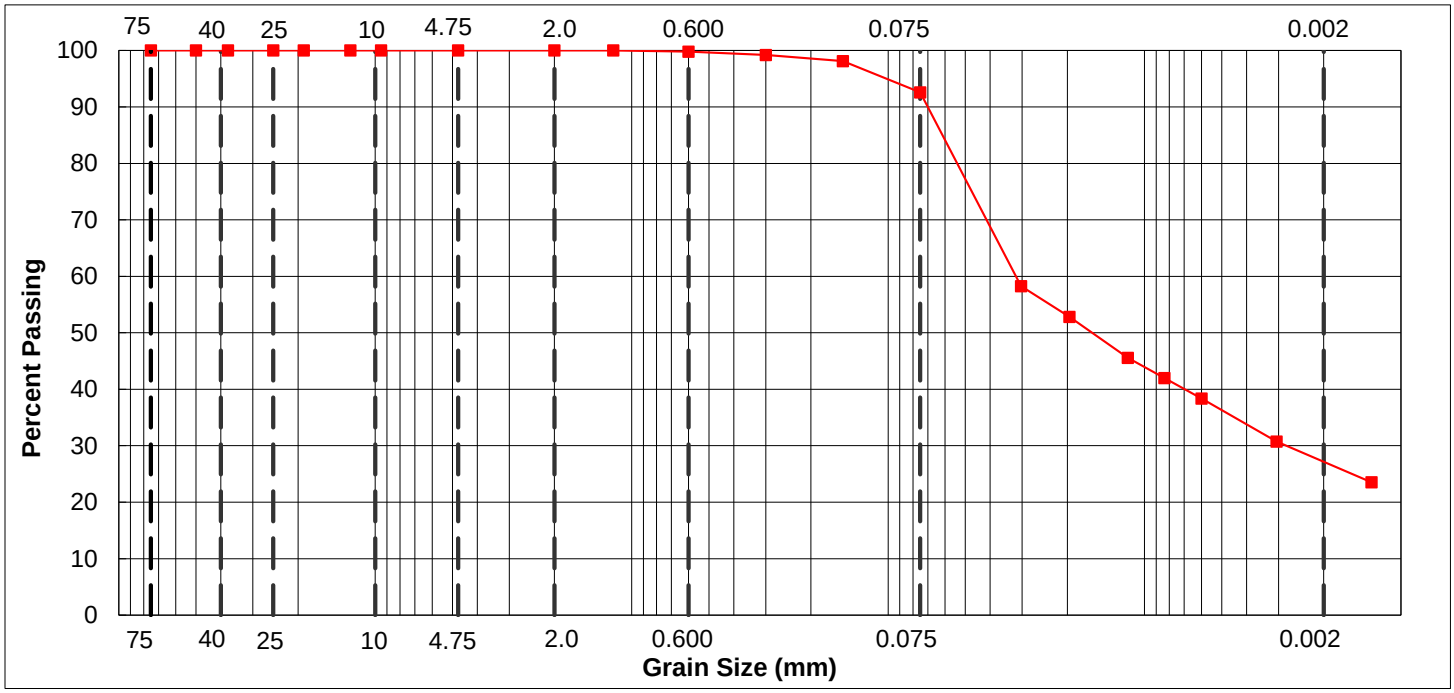
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	456AU4
Project No.:	1560-193-00	**Source:**	22BH456
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 456AU4	**Test Date:**	26-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.2
50.0	100.0	0.150	98.1
37.5	100.0	0.075	92.6
25.0	100.0	0.0303	58.3
19.0	100.0	0.0196	52.8
12.5	100.0	0.0116	45.6
9.5	100.0	0.0084	42.0
4.75	100.0	0.0060	38.4
2.00	100.0	0.0031	30.8
1.180	100.0	0.0013	23.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	7.2	425 µm to 75 µm
Silt	65.4	75 µm to 2 µm
Clay	27.2	<2 µm



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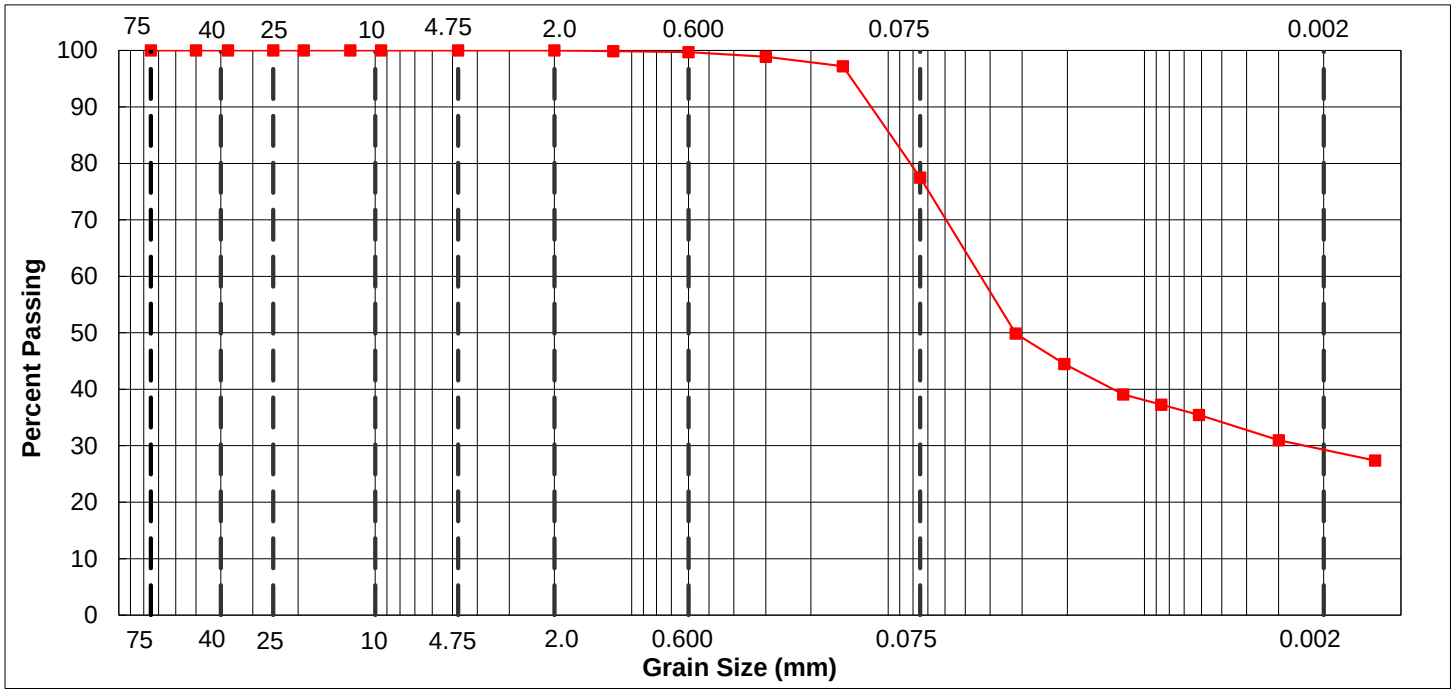
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	457AU2
Project No.:	1560-193-00	**Source:**	22BH457
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 457AU2	**Test Date:**	18-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	98.9
50.0	100.0	0.150	97.2
37.5	100.0	0.075	77.5
25.0	100.0	0.0318	49.9
19.0	100.0	0.0206	44.5
12.5	100.0	0.0121	39.1
9.5	100.0	0.0086	37.3
4.75	100.0	0.0061	35.5
2.00	100.0	0.0030	31.0
1.180	99.9	0.0013	27.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	22.2	425 µm to 75 µm
Silt	48.2	75 µm to 2 µm
Clay	29.3	<2 µm



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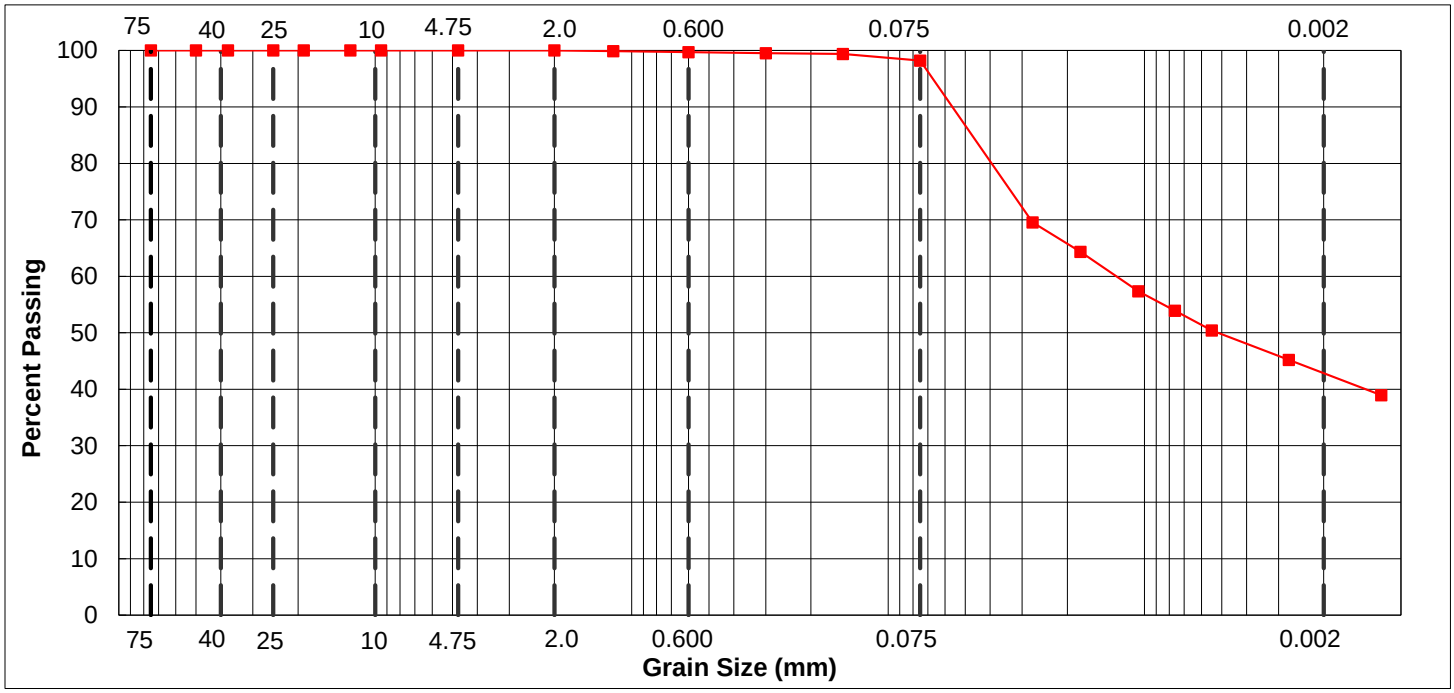
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	457AU5
Project No.:	1560-193-00	**Source:**	22BH457
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 457AU5	**Test Date:**	20-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.4
37.5	100.0	0.075	98.2
25.0	100.0	0.0273	69.5
19.0	100.0	0.0178	64.3
12.5	100.0	0.0106	57.4
9.5	100.0	0.0076	53.9
4.75	100.0	0.0055	50.4
2.00	100.0	0.0027	45.2
1.180	99.9	0.0012	38.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	1.5	425 µm to 75 µm
Silt	55.4	75 µm to 2 µm
Clay	42.8	<2 µm



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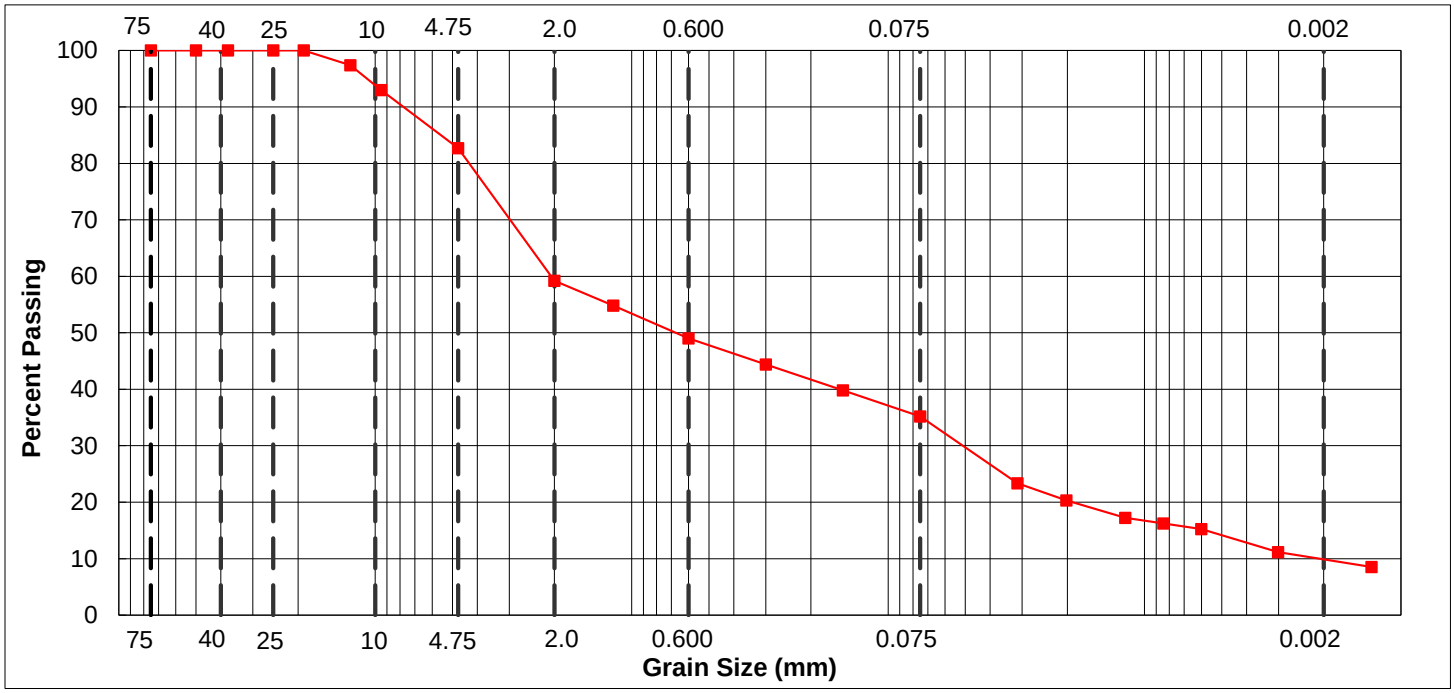
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	458AU1
Project No.:	1560-193-00	**Source:**	22BH458
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 458AU1	**Test Date:**	16-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	49.0
75.0	100.0	0.300	44.4
50.0	100.0	0.150	39.8
37.5	100.0	0.075	35.2
25.0	100.0	0.0313	23.3
19.0	100.0	0.0202	20.3
12.5	97.4	0.0119	17.3
9.5	93.0	0.0084	16.2
4.75	82.7	0.0060	15.2
2.00	59.2	0.0030	11.2
1.180	54.8	0.0013	8.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	17.3	20 mm to 4.75 mm
Coarse Sand	23.5	4.75 mm to 2.00 mm
Medium Sand	10.2	2.00 mm to 425 µm
Fine Sand	13.8	425 µm to 75 µm
Silt	25.3	75 µm to 2 µm
Clay	9.9	<2 µm



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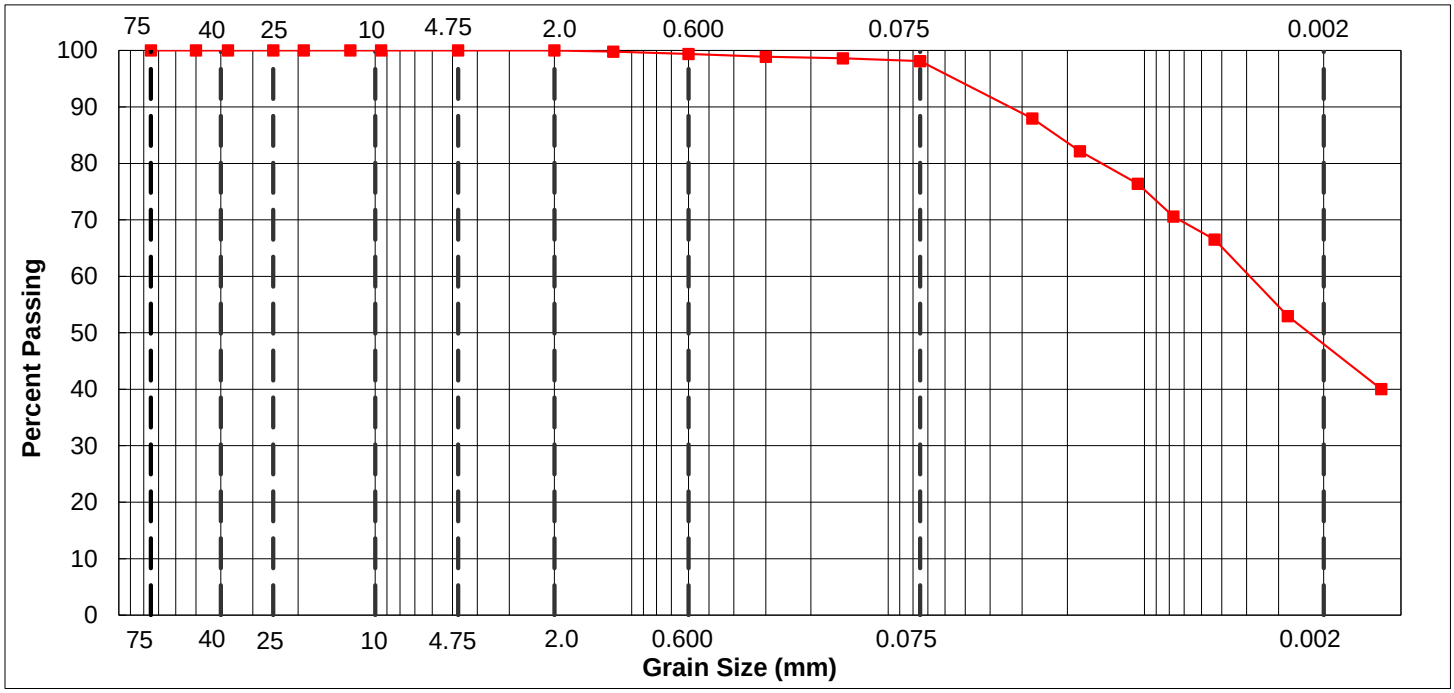
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	458AU4
Project No.:	1560-193-00	**Source:**	22BH458
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 458AU4	**Test Date:**	15-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	98.9
50.0	100.0	0.150	98.6
37.5	100.0	0.075	98.1
25.0	100.0	0.0274	88.0
19.0	100.0	0.0179	82.2
12.5	100.0	0.0106	76.4
9.5	100.0	0.0077	70.6
4.75	100.0	0.0053	66.5
2.00	100.0	0.0028	53.0
1.180	99.8	0.0012	40.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	1.3	425 µm to 75 µm
Silt	50.1	75 µm to 2 µm
Clay	48.0	<2 µm



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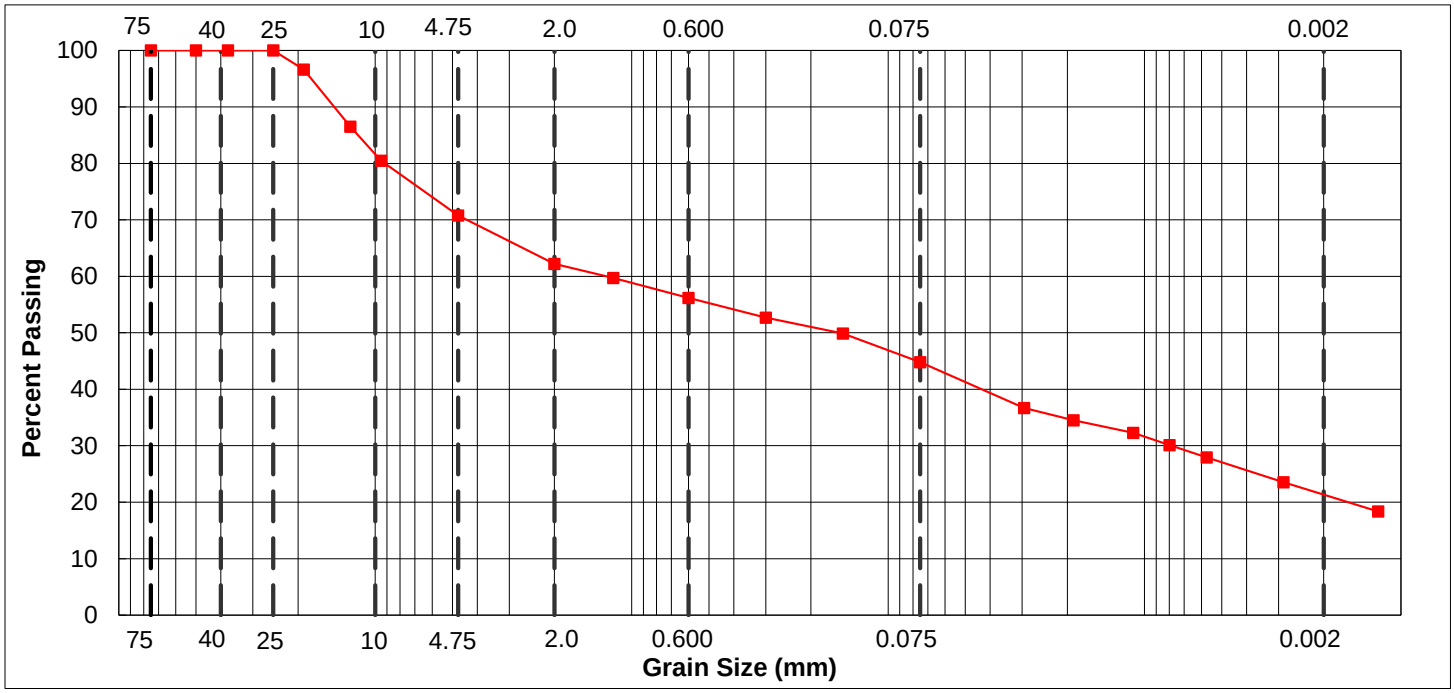
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	459AU2
Project No.:	1560-193-00	**Source:**	22BH459
Owner:	EID	**Sample Depth:**	1.2 m
File No.:	GSA - 459AU2	**Test Date:**	14-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	56.2
75.0	100.0	0.300	52.7
50.0	100.0	0.150	49.9
37.5	100.0	0.075	44.8
25.0	100.0	0.0295	36.7
19.0	96.6	0.0189	34.5
12.5	86.5	0.0111	32.3
9.5	80.5	0.0080	30.1
4.75	70.8	0.0057	27.9
2.00	62.2	0.0029	23.5
1.180	59.7	0.0012	18.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	29.2	20 mm to 4.75 mm
Coarse Sand	8.6	4.75 mm to 2.00 mm
Medium Sand	6.0	2.00 mm to 425 µm
Fine Sand	11.4	425 µm to 75 µm
Silt	23.5	75 µm to 2 µm
Clay	21.3	<2 µm



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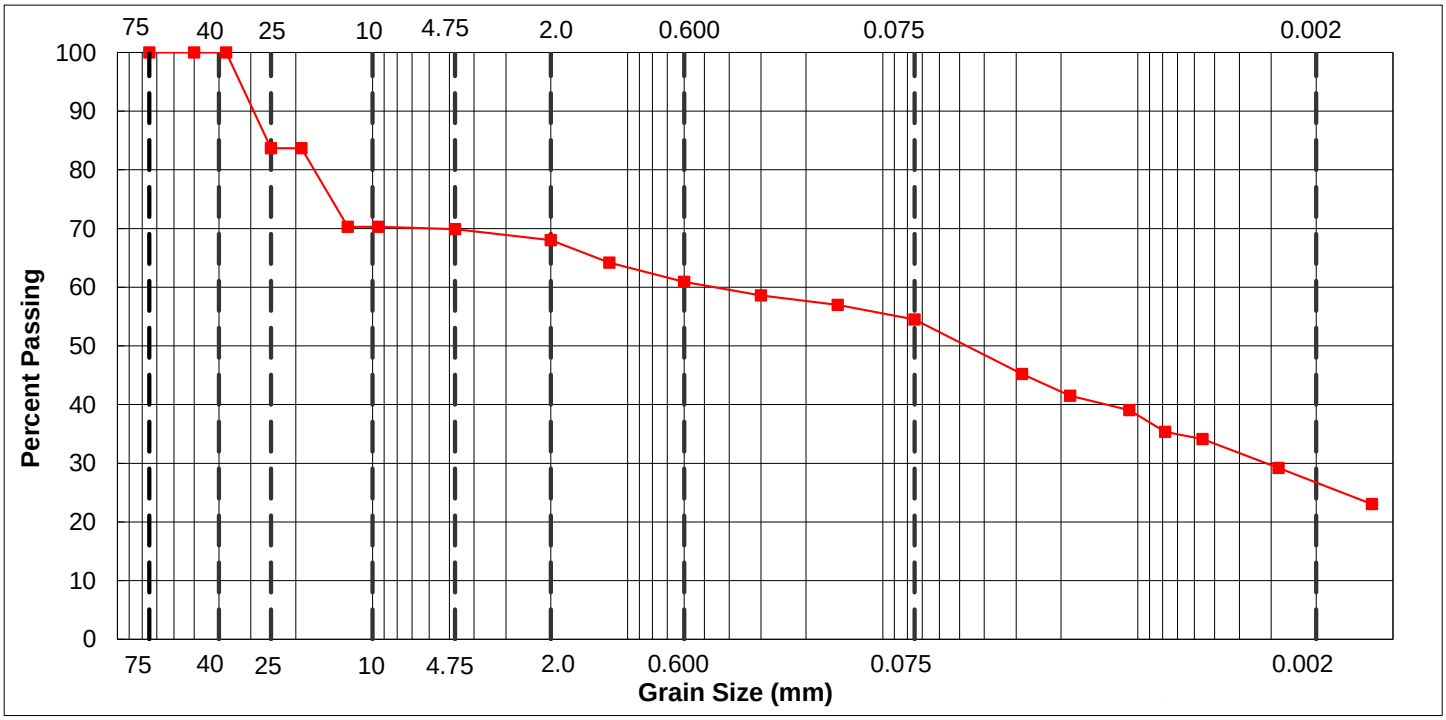
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	459AU5
Project No.:	1560-193-00	**Source:**	22BH459
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 459AU5	**Test Date:**	27-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	60.9
75.0	100.0	0.300	58.6
50.0	100.0	0.150	57.0
37.5	100.0	0.075	54.5
25.0	83.7	0.0284	45.2
19.0	83.7	0.0184	41.5
12.5	70.3	0.0108	39.0
9.5	70.3	0.0078	35.4
4.75	69.9	0.0056	34.1
2.00	68.0	0.0028	29.2
1.180	64.2	0.0012	23.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	16.3	80 mm to 20 mm
Fine Gravel	13.8	20 mm to 4.75 mm
Coarse Sand	1.9	4.75 mm to 2.00 mm
Medium Sand	7.1	2.00 mm to 425 µm
Fine Sand	6.4	425 µm to 75 µm
Silt	27.8	75 µm to 2 µm
Clay	26.7	<2 µm



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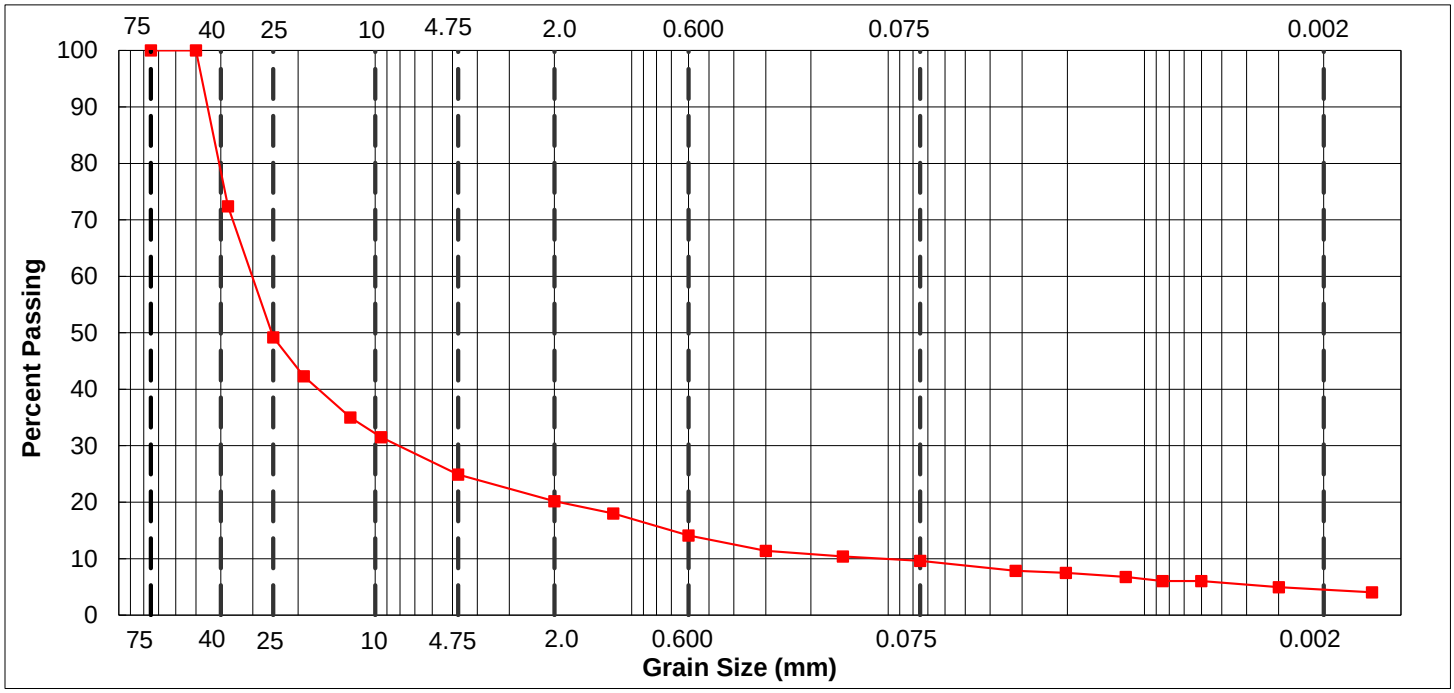
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	460AU1
Project No.:	1560-193-00	**Source:**	22BH460
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 460AU1	**Test Date:**	19-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	14.1
75.0	100.0	0.300	11.4
50.0	100.0	0.150	10.4
37.5	72.4	0.075	9.6
25.0	49.2	0.0318	7.8
19.0	42.3	0.0203	7.5
12.5	35.0	0.0118	6.8
9.5	31.5	0.0085	6.0
4.75	24.9	0.0060	6.0
2.00	20.2	0.0030	4.9
1.180	18.0	0.0013	4.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	50.8	80 mm to 20 mm
Fine Gravel	24.3	20 mm to 4.75 mm
Coarse Sand	4.7	4.75 mm to 2.00 mm
Medium Sand	6.1	2.00 mm to 425 µm
Fine Sand	4.5	425 µm to 75 µm
Silt	5.1	75 µm to 2 µm
Clay	4.5	<2 µm



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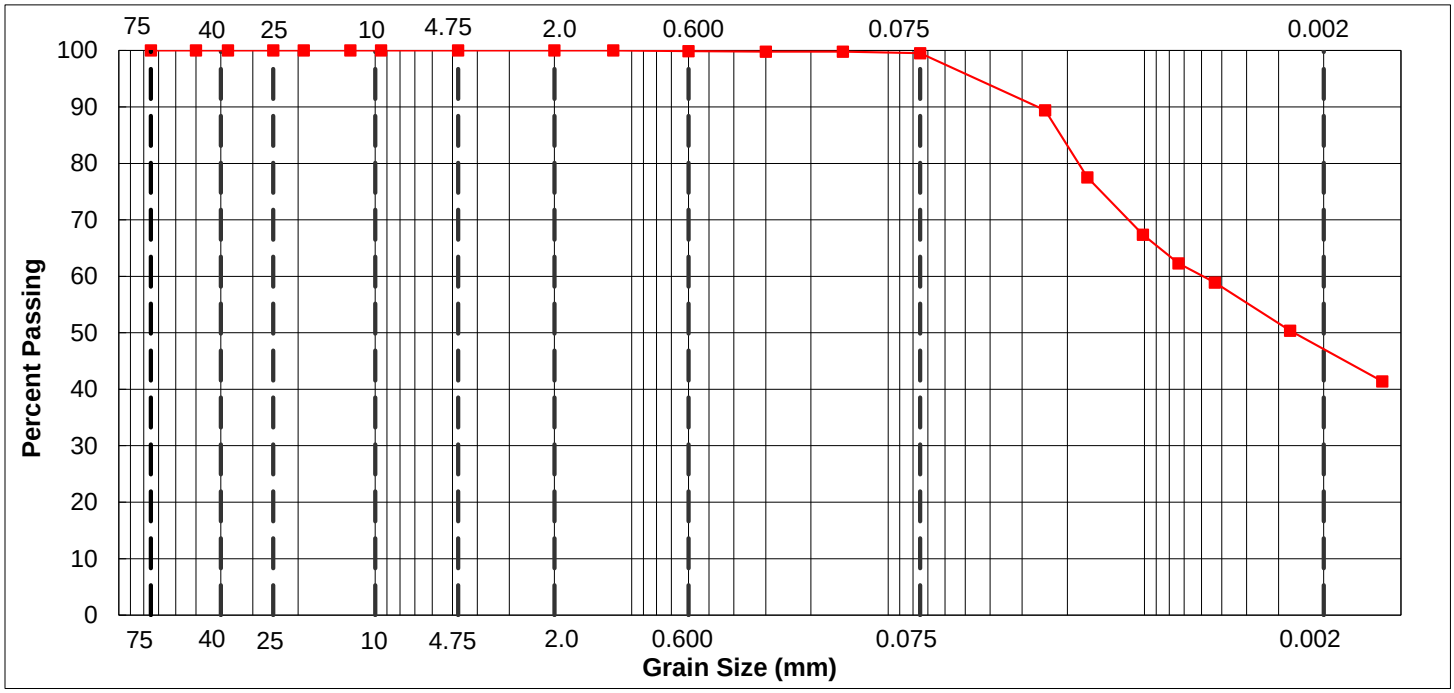
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	460AU4
Project No.:	1560-193-00	**Source:**	22BH460
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 460AU4	**Test Date:**	21-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.5
25.0	100.0	0.0244	89.4
19.0	100.0	0.0167	77.6
12.5	100.0	0.0102	67.4
9.5	100.0	0.0074	62.3
4.75	100.0	0.0053	58.9
2.00	100.0	0.0027	50.4
1.180	100.0	0.0012	41.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	52.4	75 µm to 2 µm
Clay	47.1	<2 µm



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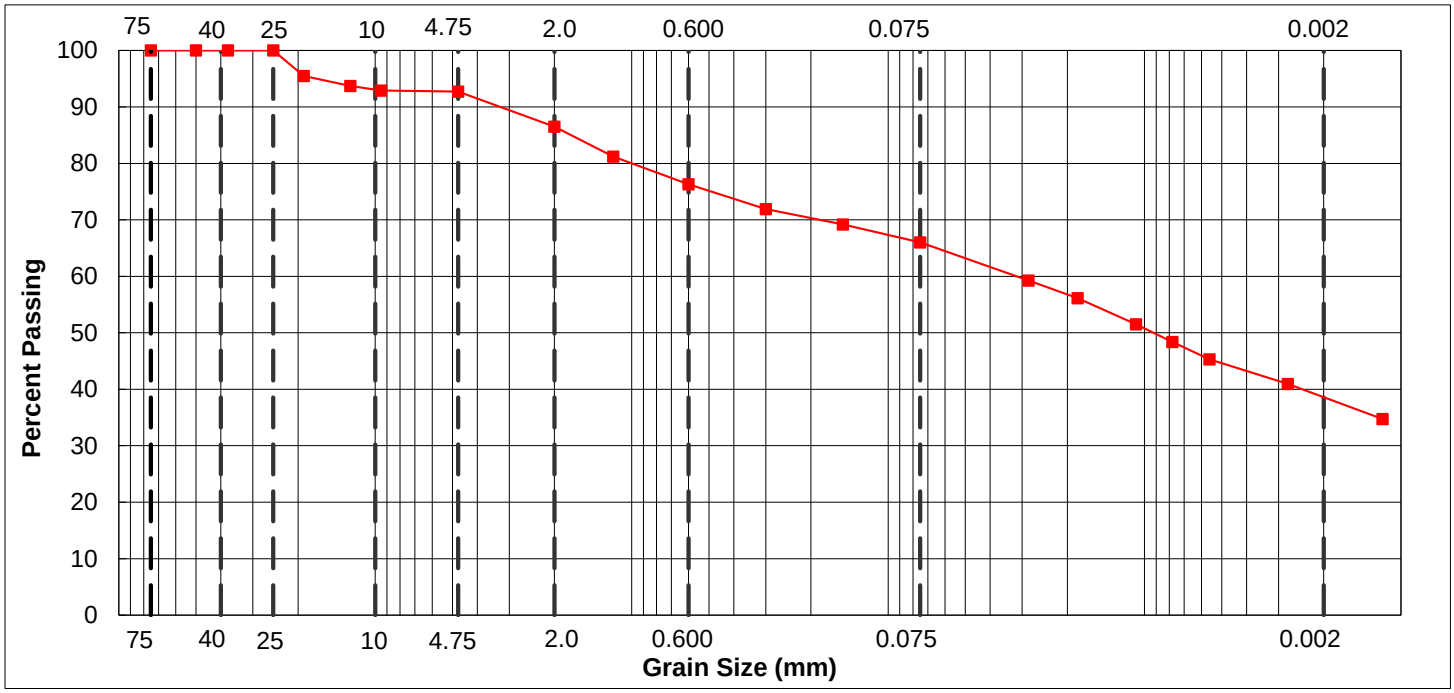
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	461AU1
Project No.:	1560-193-00	**Source:**	22BH461
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 461AU1	**Test Date:**	1-Sep-21

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	76.3
75.0	100.0	0.300	71.9
50.0	100.0	0.150	69.2
37.5	100.0	0.075	66.0
25.0	100.0	0.0284	59.3
19.0	95.5	0.0182	56.1
12.5	93.7	0.0108	51.5
9.5	92.9	0.0078	48.4
4.75	92.7	0.0056	45.3
2.00	86.5	0.0028	40.9
1.180	81.2	0.0012	34.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	7.3	20 mm to 4.75 mm
Coarse Sand	6.2	4.75 mm to 2.00 mm
Medium Sand	10.2	2.00 mm to 425 µm
Fine Sand	10.3	425 µm to 75 µm
Silt	27.4	75 µm to 2 µm
Clay	38.6	<2 µm



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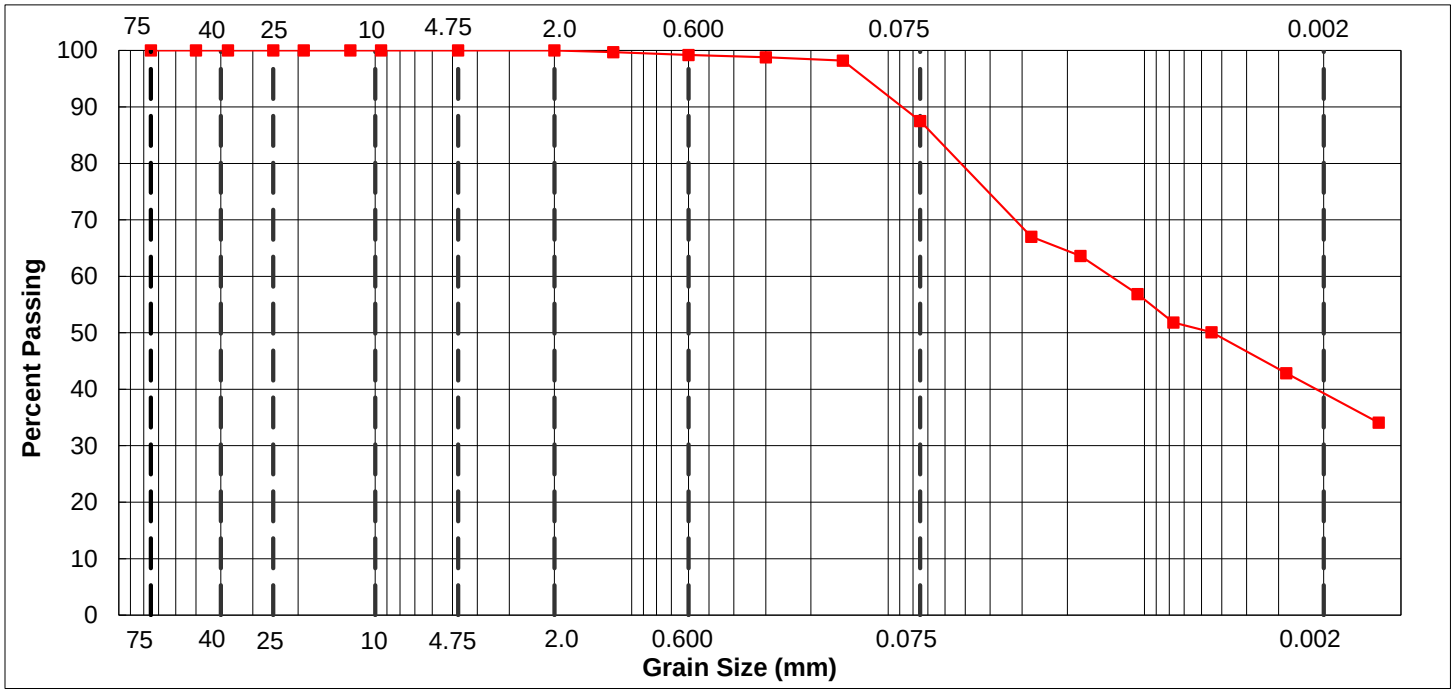
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	461AU3
Project No.:	1560-193-00	**Source:**	22BH461
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 461AU3	**Test Date:**	21-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	98.8
50.0	100.0	0.150	98.2
37.5	100.0	0.075	87.5
25.0	100.0	0.0277	67.0
19.0	100.0	0.0178	63.6
12.5	100.0	0.0106	56.9
9.5	100.0	0.0077	51.8
4.75	100.0	0.0055	50.1
2.00	100.0	0.0028	42.9
1.180	99.7	0.0012	34.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	11.7	425 µm to 75 µm
Silt	48.2	75 µm to 2 µm
Clay	39.3	<2 µm



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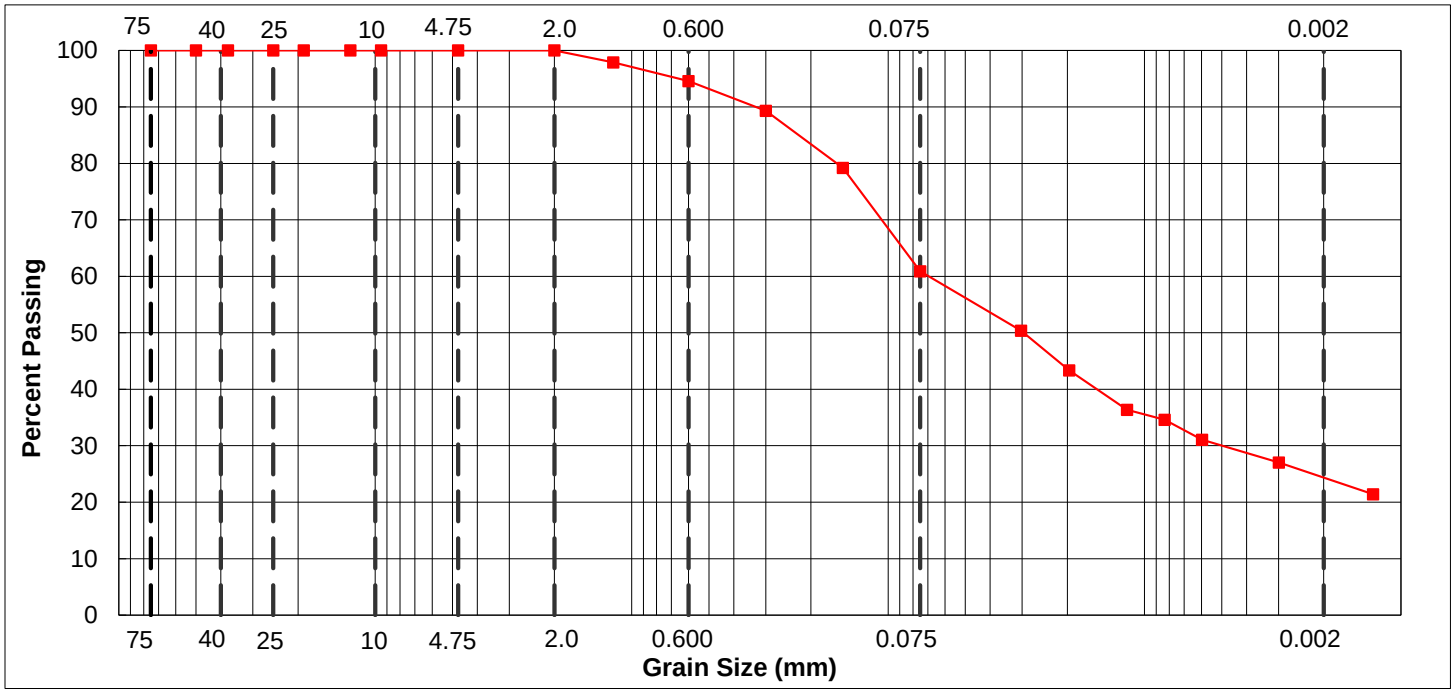
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	462AU1
Project No.:	1560-193-00	**Source:**	22BH462
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 462AU1	**Test Date:**	21-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	94.6
75.0	100.0	0.300	89.3
50.0	100.0	0.150	79.2
37.5	100.0	0.075	60.9
25.0	100.0	0.0303	50.4
19.0	100.0	0.0197	43.4
12.5	100.0	0.0117	36.3
9.5	100.0	0.0083	34.6
4.75	100.0	0.0060	31.1
2.00	100.0	0.0030	27.0
1.180	97.9	0.0013	21.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	5.4	2.00 mm to 425 µm
Fine Sand	33.7	425 µm to 75 µm
Silt	36.5	75 µm to 2 µm
Clay	24.4	<2 µm



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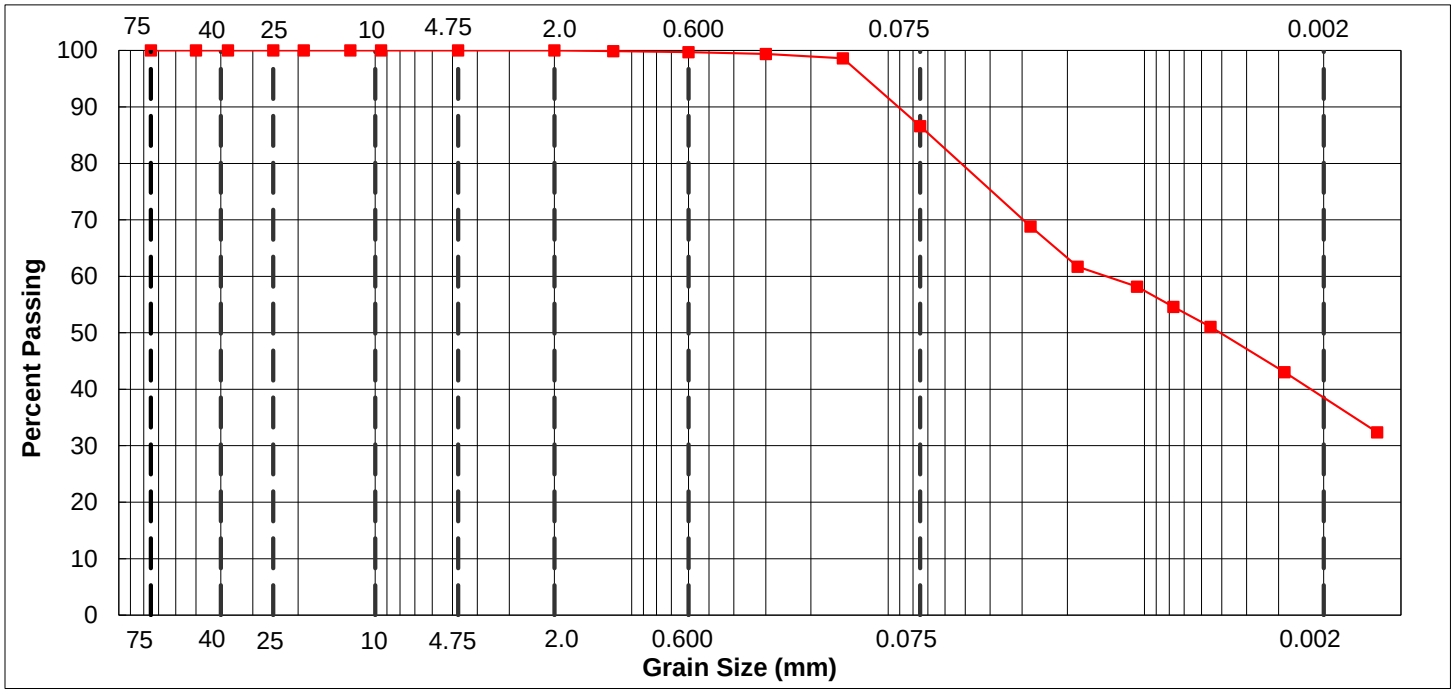
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	462AU3
Project No.:	1560-193-00	**Source:**	22BH462
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 462AU3	**Test Date:**	18-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.4
50.0	100.0	0.150	98.6
37.5	100.0	0.075	86.6
25.0	100.0	0.0278	68.8
19.0	100.0	0.0183	61.7
12.5	100.0	0.0107	58.2
9.5	100.0	0.0077	54.6
4.75	100.0	0.0055	51.1
2.00	100.0	0.0028	43.1
1.180	99.9	0.0012	32.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	13.1	425 µm to 75 µm
Silt	48.1	75 µm to 2 µm
Clay	38.5	<2 µm



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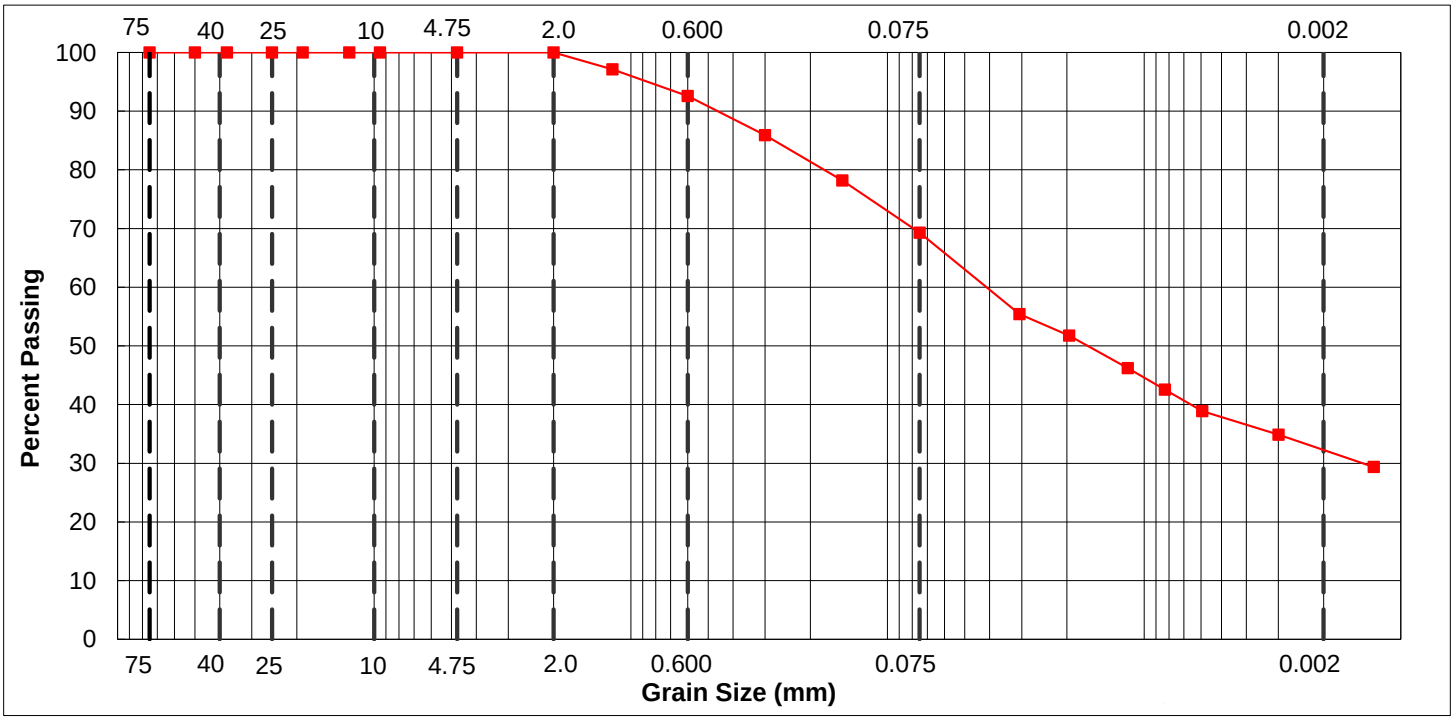
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	464AU1
Project No.:	1560-193-00	**Source:**	22BH464
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 464AU1	**Test Date:**	25-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	92.6
75.0	100.0	0.300	85.9
50.0	100.0	0.150	78.2
37.5	100.0	0.075	69.3
25.0	100.0	0.0306	55.4
19.0	100.0	0.0196	51.7
12.5	100.0	0.0116	46.2
9.5	100.0	0.0083	42.6
4.75	100.0	0.0059	38.9
2.00	100.0	0.0030	34.9
1.180	97.1	0.0013	29.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	7.4	2.00 mm to 425 µm
Fine Sand	23.3	425 µm to 75 µm
Silt	37.0	75 µm to 2 µm
Clay	32.3	<2 µm



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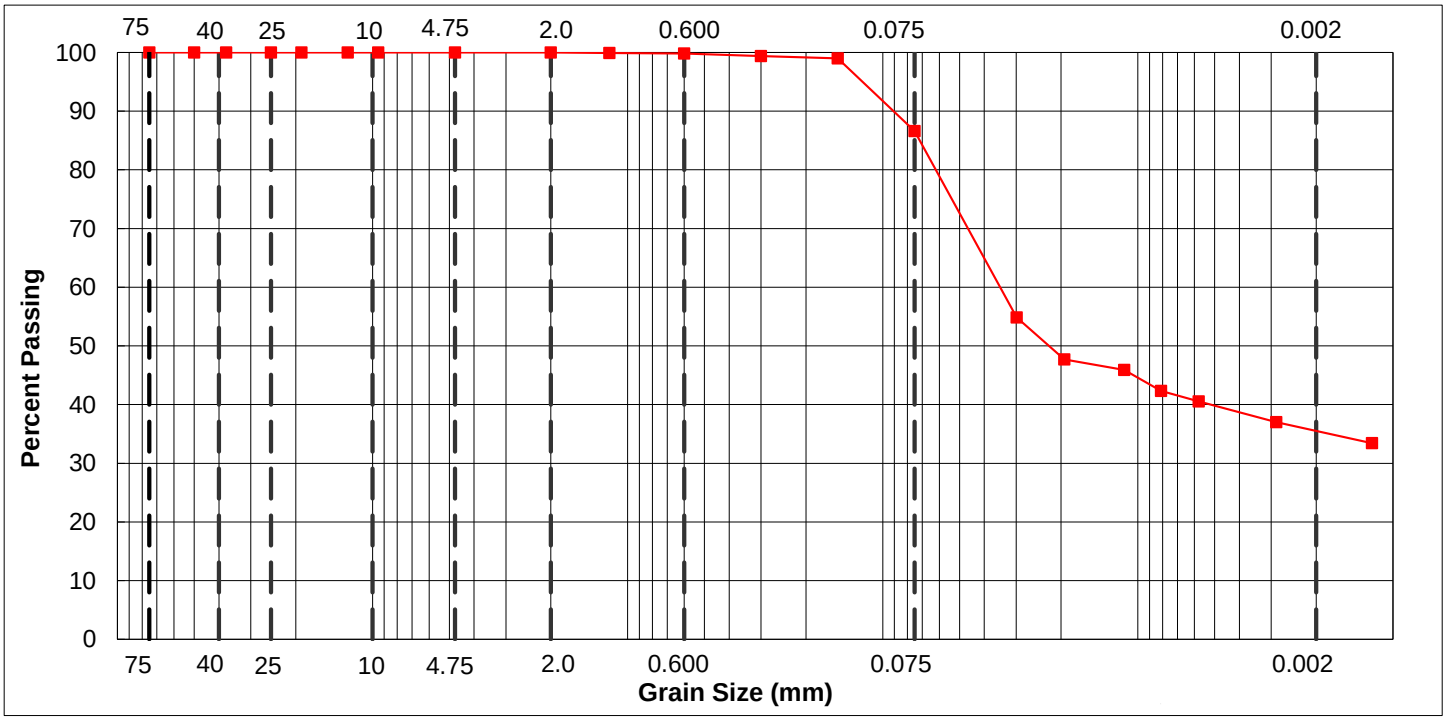
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	465AU1
Project No.:	1560-193-00	**Source:**	22BH465
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 465AU1	**Test Date:**	28-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.4
50.0	100.0	0.150	99.0
37.5	100.0	0.075	86.6
25.0	100.0	0.0299	54.9
19.0	100.0	0.0194	47.7
12.5	100.0	0.0113	45.9
9.5	100.0	0.0081	42.3
4.75	100.0	0.0058	40.6
2.00	100.0	0.0029	37.0
1.180	99.9	0.0012	33.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	13.2	425 µm to 75 µm
Silt	51.1	75 µm to 2 µm
Clay	35.5	<2 µm



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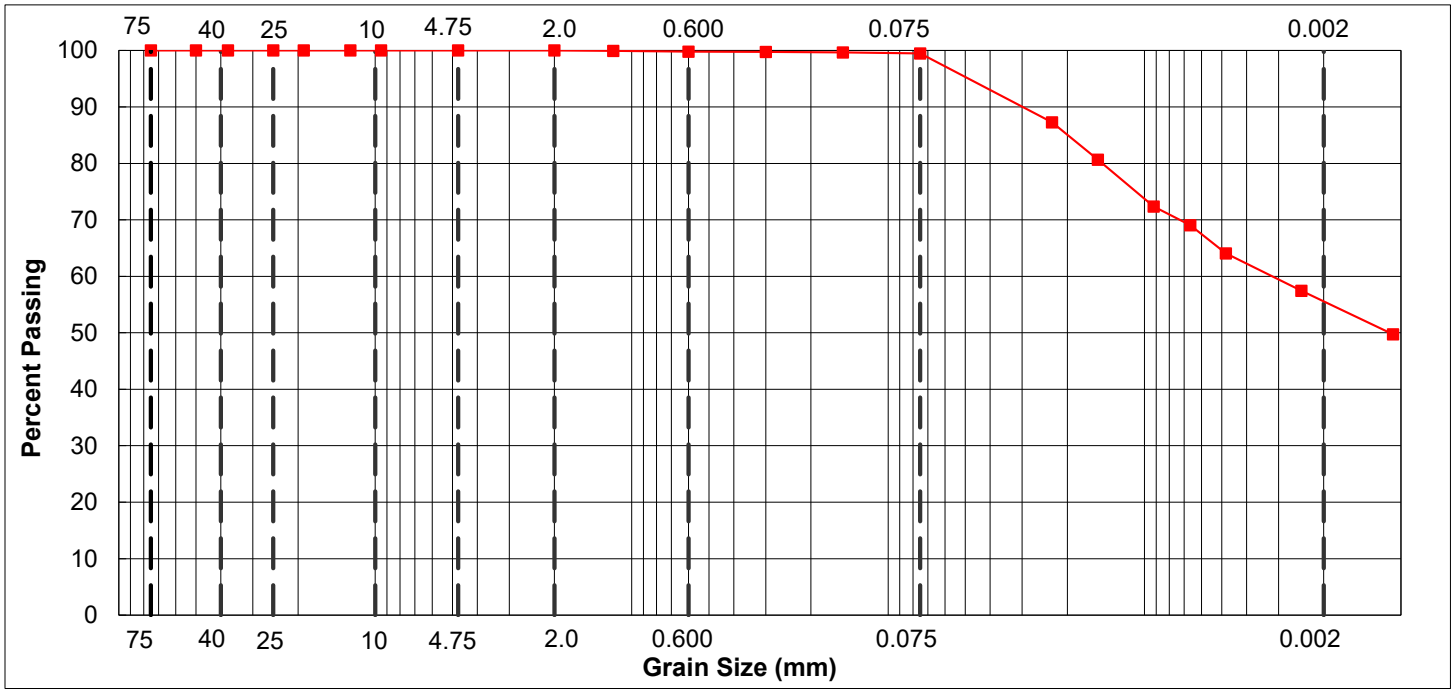
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	465AU5
Project No.:	1560-193-00	**Source:**	22BH465
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 465AU5	**Test Date:**	19-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.7
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.5
25.0	100.0	0.0229	87.3
19.0	100.0	0.0152	80.6
12.5	100.0	0.0092	72.4
9.5	100.0	0.0066	69.0
4.75	100.0	0.0048	64.1
2.00	100.0	0.0024	57.4
1.180	99.9	0.0011	49.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	44.0	75 µm to 2 µm
Clay	55.5	<2 µm



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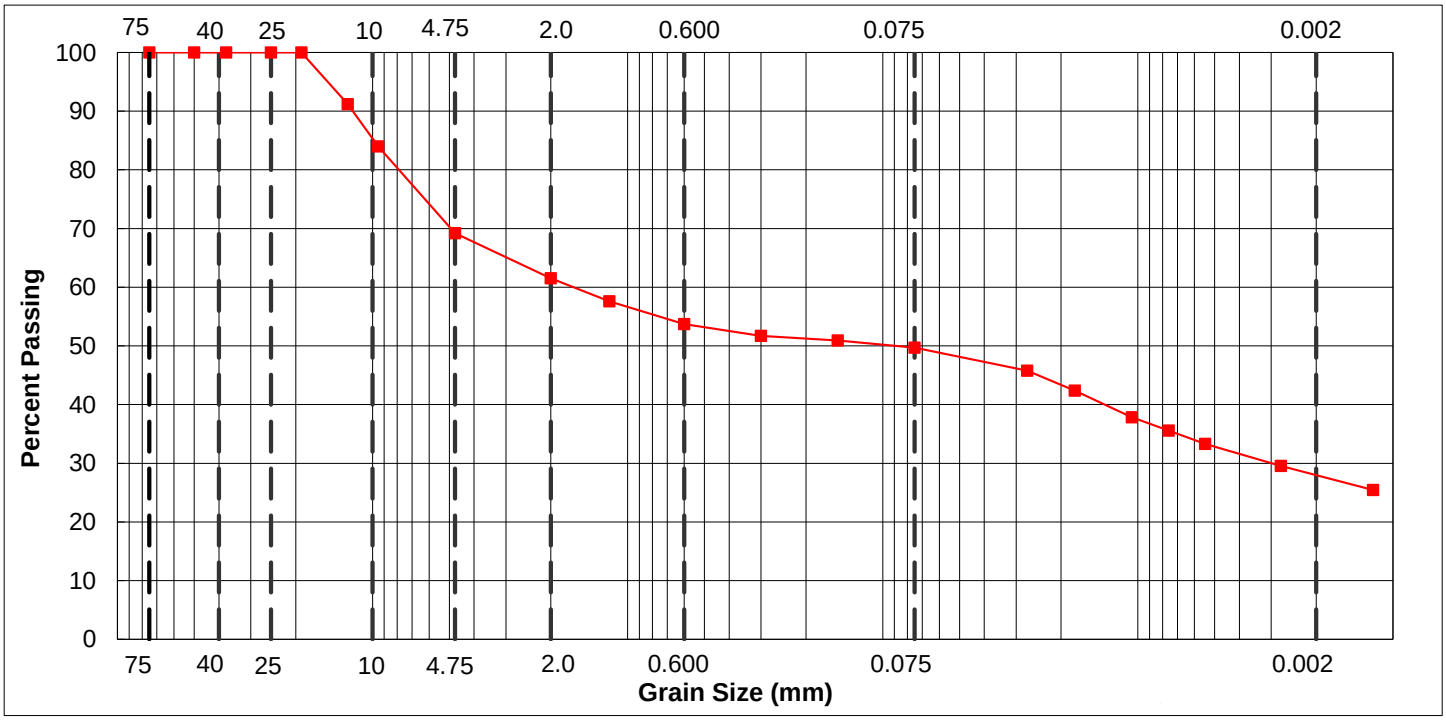
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	468AU1
Project No.:	1560-193-00	**Source:**	22BH468
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 468AU1	**Test Date:**	29-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	53.7
75.0	100.0	0.300	51.7
50.0	100.0	0.150	50.9
37.5	100.0	0.075	49.7
25.0	100.0	0.0272	45.8
19.0	100.0	0.0176	42.4
12.5	91.2	0.0105	37.8
9.5	84.0	0.0076	35.6
4.75	69.2	0.0054	33.3
2.00	61.5	0.0027	29.5
1.180	57.6	0.0012	25.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	30.8	20 mm to 4.75 mm
Coarse Sand	7.7	4.75 mm to 2.00 mm
Medium Sand	7.8	2.00 mm to 425 µm
Fine Sand	4.0	425 µm to 75 µm
Silt	21.7	75 µm to 2 µm
Clay	28.0	<2 µm



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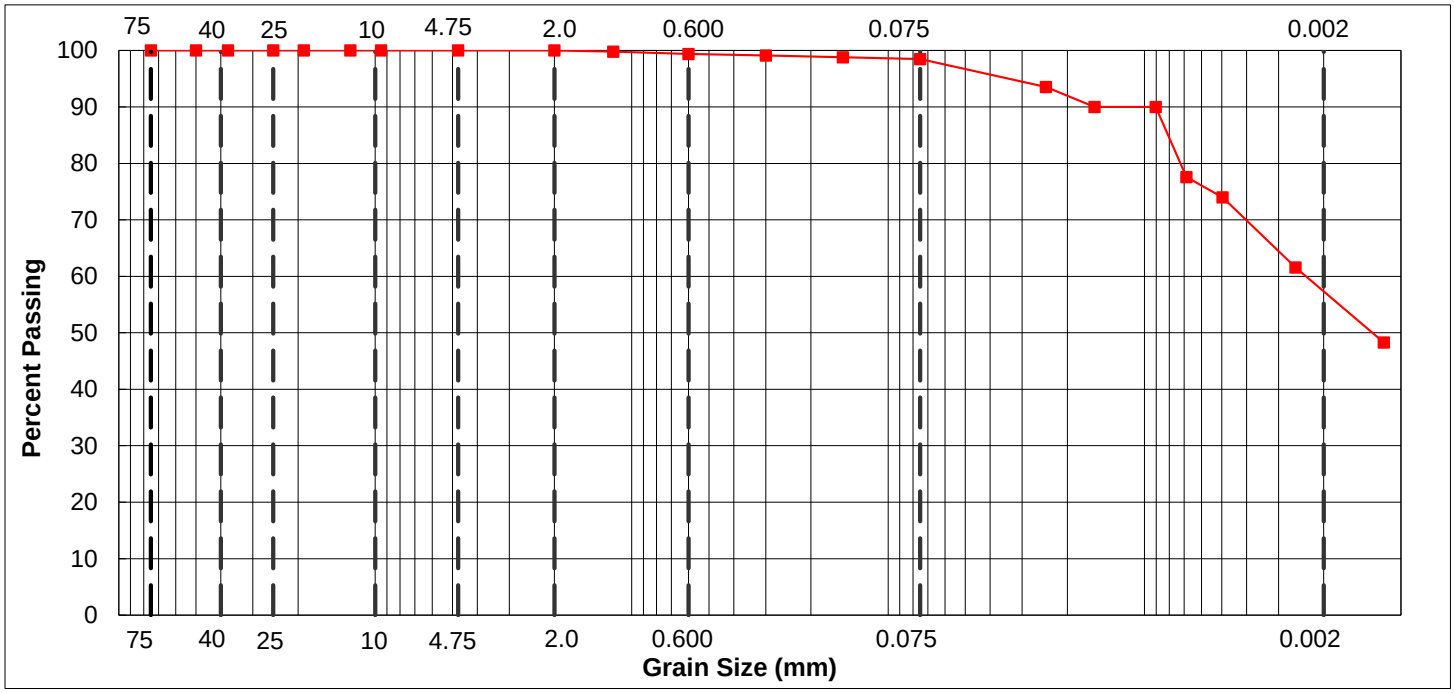
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	468AU3
Project No.:	1560-193-00	**Source:**	22BH468
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 468AU3	**Test Date:**	18-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	99.1
50.0	100.0	0.150	98.8
37.5	100.0	0.075	98.5
25.0	100.0	0.0243	93.5
19.0	100.0	0.0157	90.0
12.5	100.0	0.0090	90.0
9.5	100.0	0.0069	77.6
4.75	100.0	0.0050	74.0
2.00	100.0	0.0026	61.6
1.180	99.8	0.0012	48.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	0.9	425 µm to 75 µm
Silt	41.2	75 µm to 2 µm
Clay	57.3	<2 µm



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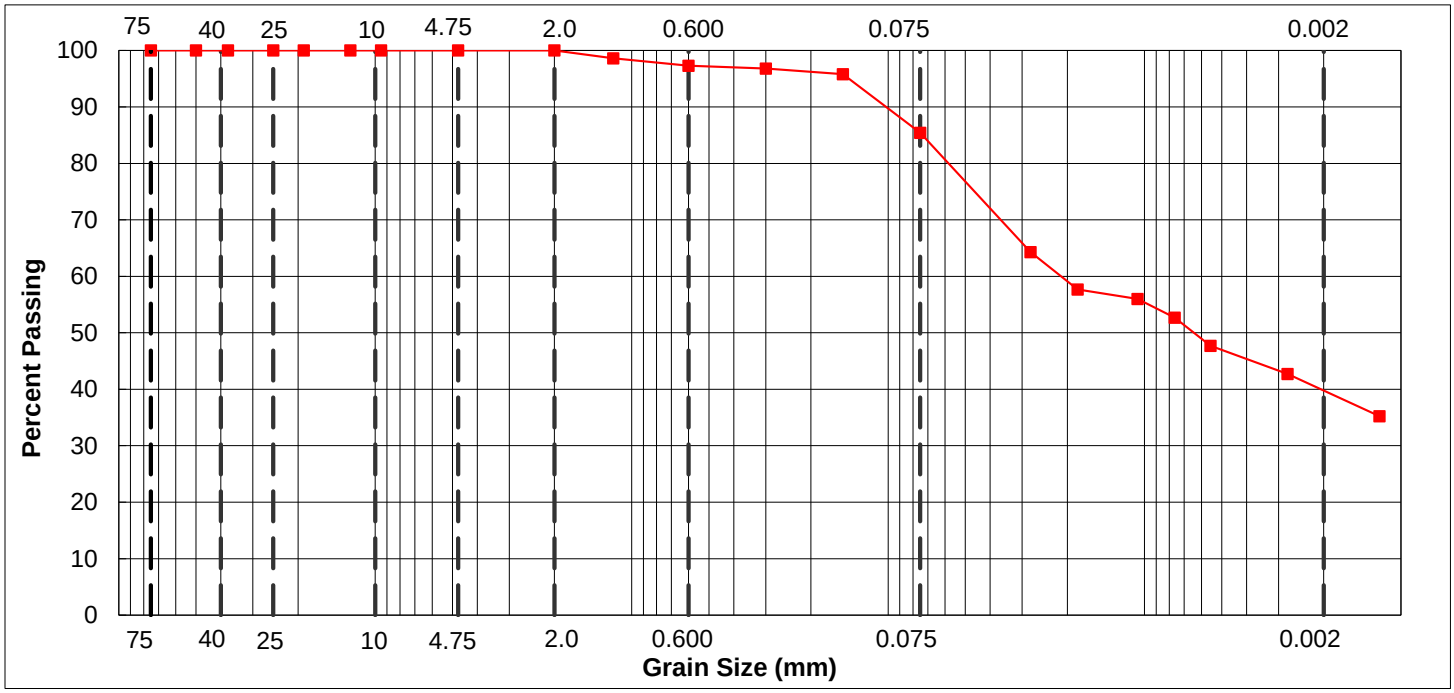
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	469AU1
Project No.:	1560-193-00	**Source:**	22BH469
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 469AU1	**Test Date:**	20-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.3
75.0	100.0	0.300	96.8
50.0	100.0	0.150	95.8
37.5	100.0	0.075	85.4
25.0	100.0	0.0278	64.3
19.0	100.0	0.0183	57.7
12.5	100.0	0.0106	56.0
9.5	100.0	0.0076	52.7
4.75	100.0	0.0055	47.7
2.00	100.0	0.0028	42.7
1.180	98.6	0.0012	35.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.7	2.00 mm to 425 µm
Fine Sand	11.9	425 µm to 75 µm
Silt	45.6	75 µm to 2 µm
Clay	39.8	<2 µm



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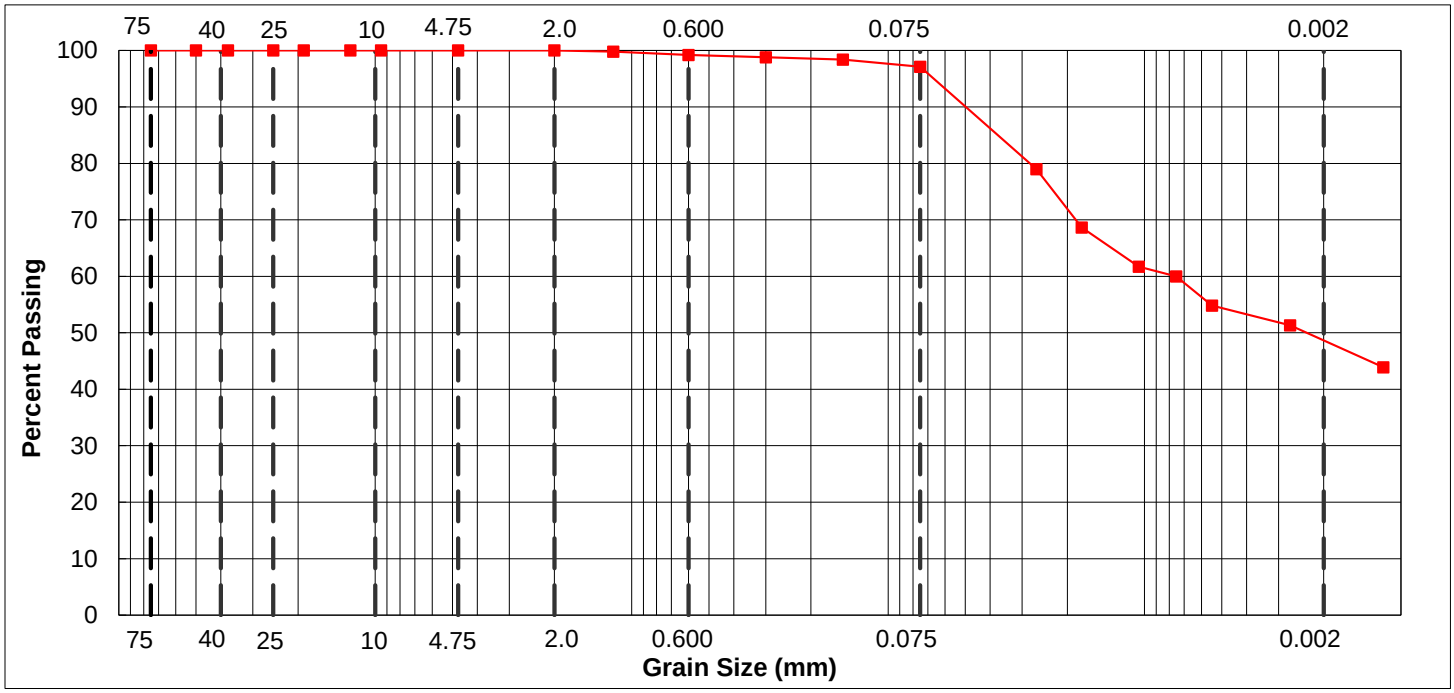
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	469AU6
Project No.:	1560-193-00	**Source:**	22BH469
Owner:	EID	**Sample Depth:**	5.8m
File No.:	GSA - 469AU6	**Test Date:**	21-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	98.8
50.0	100.0	0.150	98.4
37.5	100.0	0.075	97.1
25.0	100.0	0.0264	79.0
19.0	100.0	0.0176	68.6
12.5	100.0	0.0105	61.7
9.5	100.0	0.0075	60.0
4.75	100.0	0.0055	54.8
2.00	100.0	0.0027	51.3
1.180	99.8	0.0012	43.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	2.1	425 µm to 75 µm
Silt	48.5	75 µm to 2 µm
Clay	48.6	<2 µm



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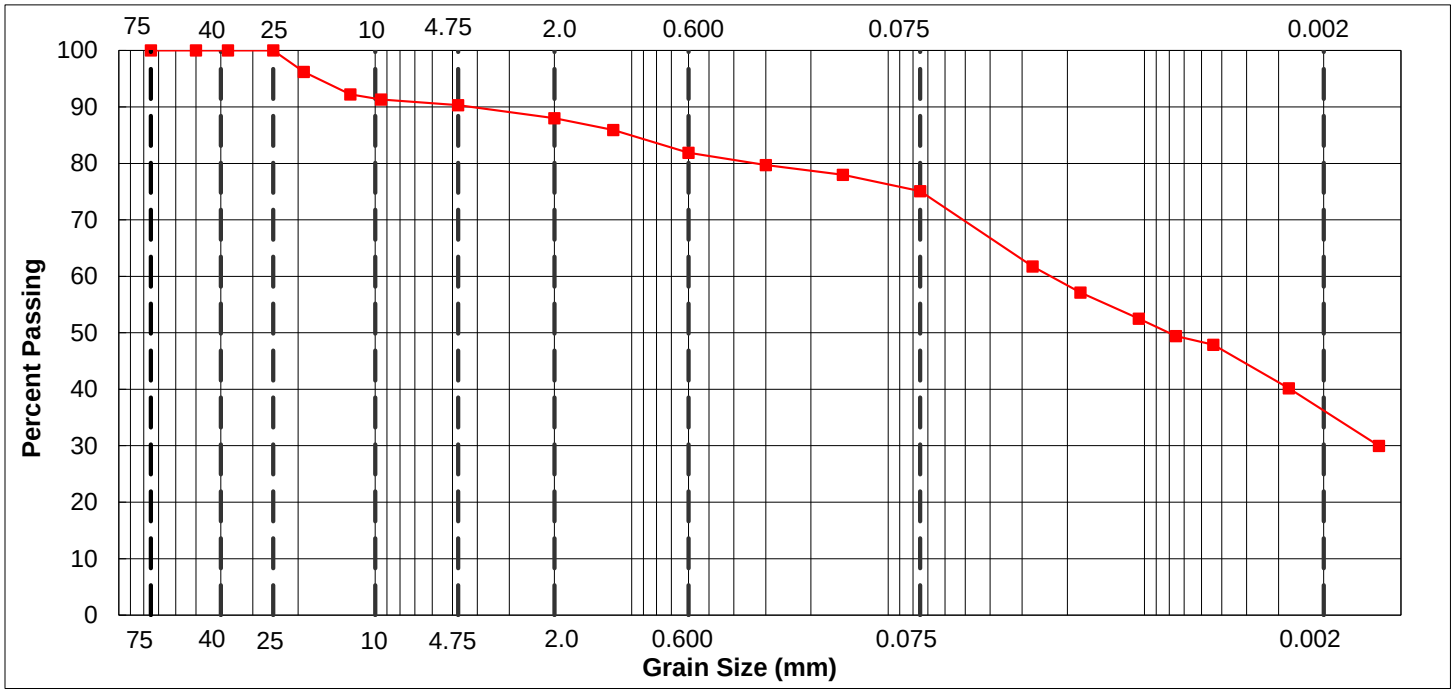
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	470AU1
Project No.:	1560-193-00	**Source:**	22BH470
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 470AU1	**Test Date:**	17-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	81.9
75.0	100.0	0.300	79.7
50.0	100.0	0.150	78.0
37.5	100.0	0.075	75.1
25.0	100.0	0.0273	61.8
19.0	96.2	0.0178	57.1
12.5	92.2	0.0105	52.5
9.5	91.3	0.0075	49.4
4.75	90.3	0.0054	47.9
2.00	88.0	0.0027	40.2
1.180	85.9	0.0012	30.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	9.7	20 mm to 4.75 mm
Coarse Sand	2.3	4.75 mm to 2.00 mm
Medium Sand	6.1	2.00 mm to 425 µm
Fine Sand	6.8	425 µm to 75 µm
Silt	38.9	75 µm to 2 µm
Clay	36.2	<2 µm



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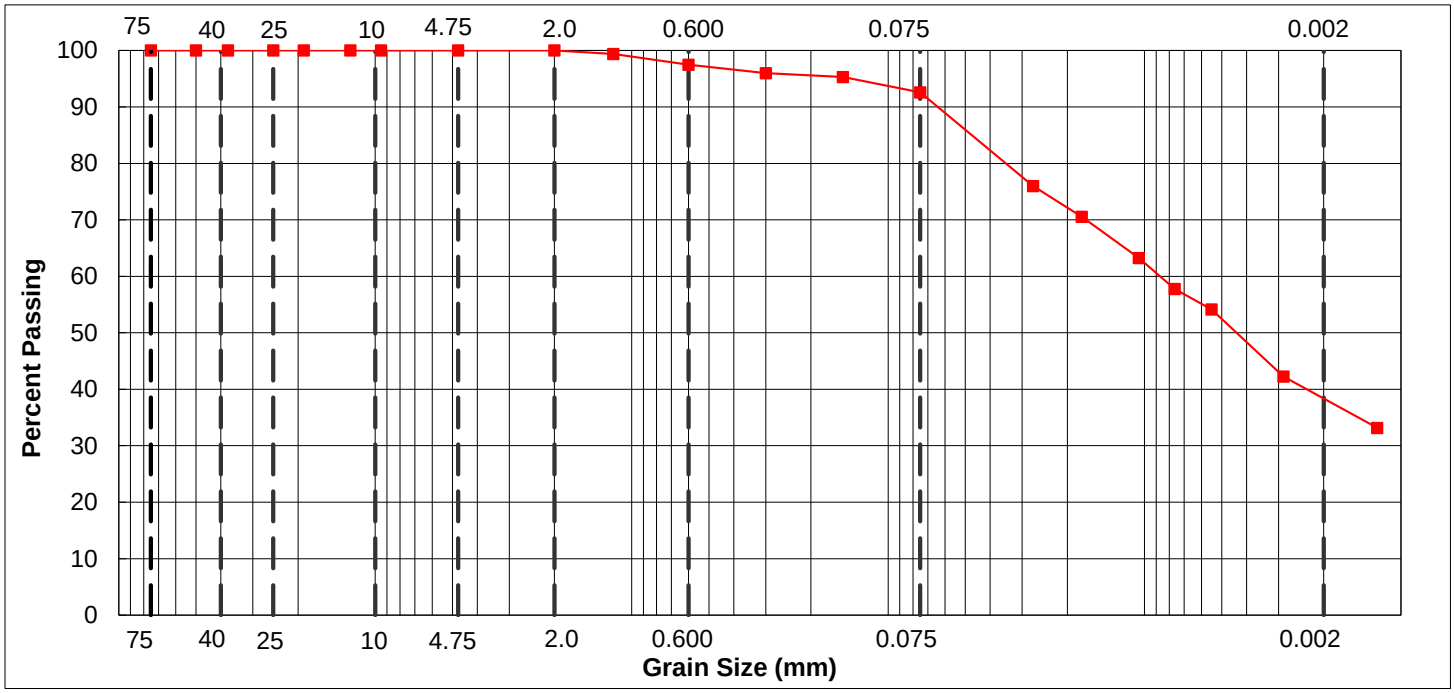
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	470AU4
Project No.:	1560-193-00	**Source:**	22BH470
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 470AU4	**Test Date:**	17-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.5
75.0	100.0	0.300	96.0
50.0	100.0	0.150	95.3
37.5	100.0	0.075	92.6
25.0	100.0	0.0272	76.0
19.0	100.0	0.0176	70.5
12.5	100.0	0.0105	63.2
9.5	100.0	0.0076	57.8
4.75	100.0	0.0055	54.1
2.00	100.0	0.0029	42.3
1.180	99.4	0.0012	33.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.5	2.00 mm to 425 µm
Fine Sand	4.9	425 µm to 75 µm
Silt	54.2	75 µm to 2 µm
Clay	38.4	<2 µm



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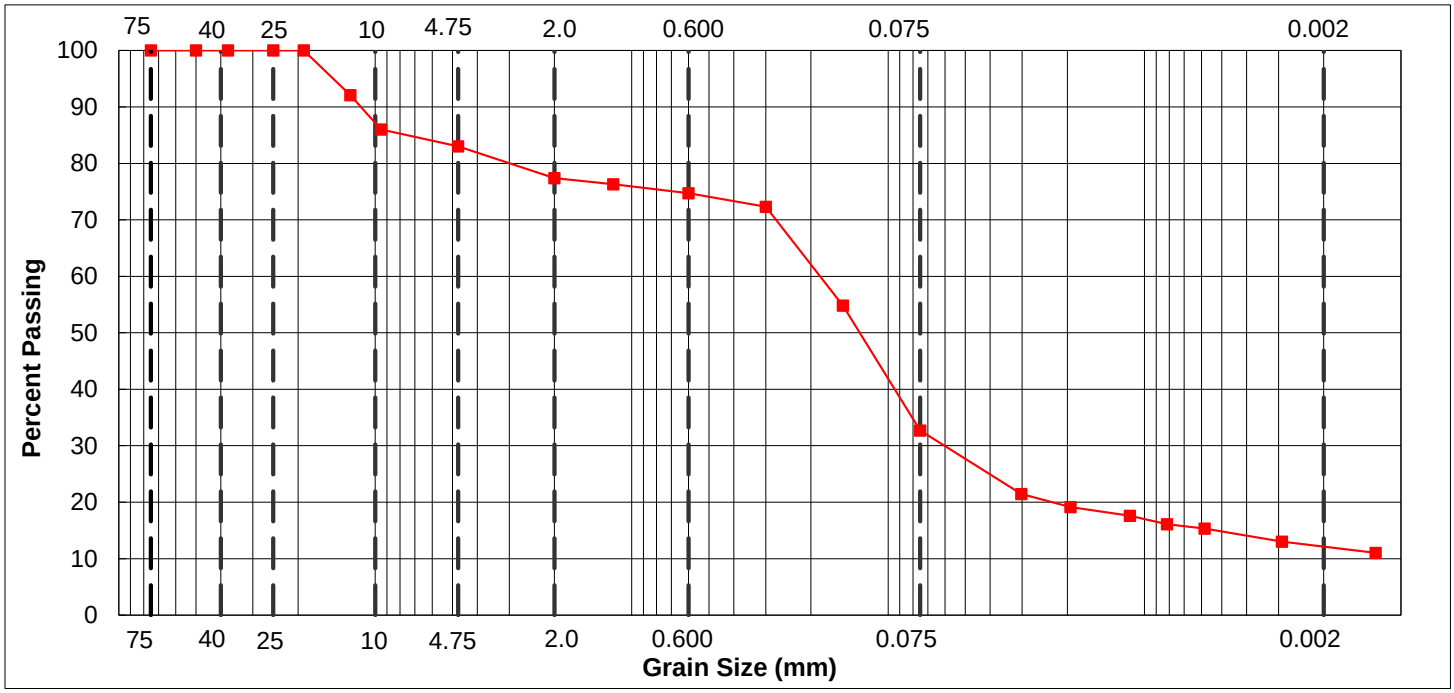
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	471AU1
Project No.:	1560-193-00	**Source:**	22BH471
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 471AU1	**Test Date:**	20-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	74.7
75.0	100.0	0.300	72.3
50.0	100.0	0.150	54.8
37.5	100.0	0.075	32.7
25.0	100.0	0.0302	21.5
19.0	100.0	0.0194	19.2
12.5	92.1	0.0114	17.6
9.5	86.0	0.0082	16.1
4.75	83.0	0.0058	15.3
2.00	77.4	0.0029	13.0
1.180	76.3	0.0013	11.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	17.0	20 mm to 4.75 mm
Coarse Sand	5.6	4.75 mm to 2.00 mm
Medium Sand	2.7	2.00 mm to 425 µm
Fine Sand	42.0	425 µm to 75 µm
Silt	20.6	75 µm to 2 µm
Clay	12.1	<2 µm



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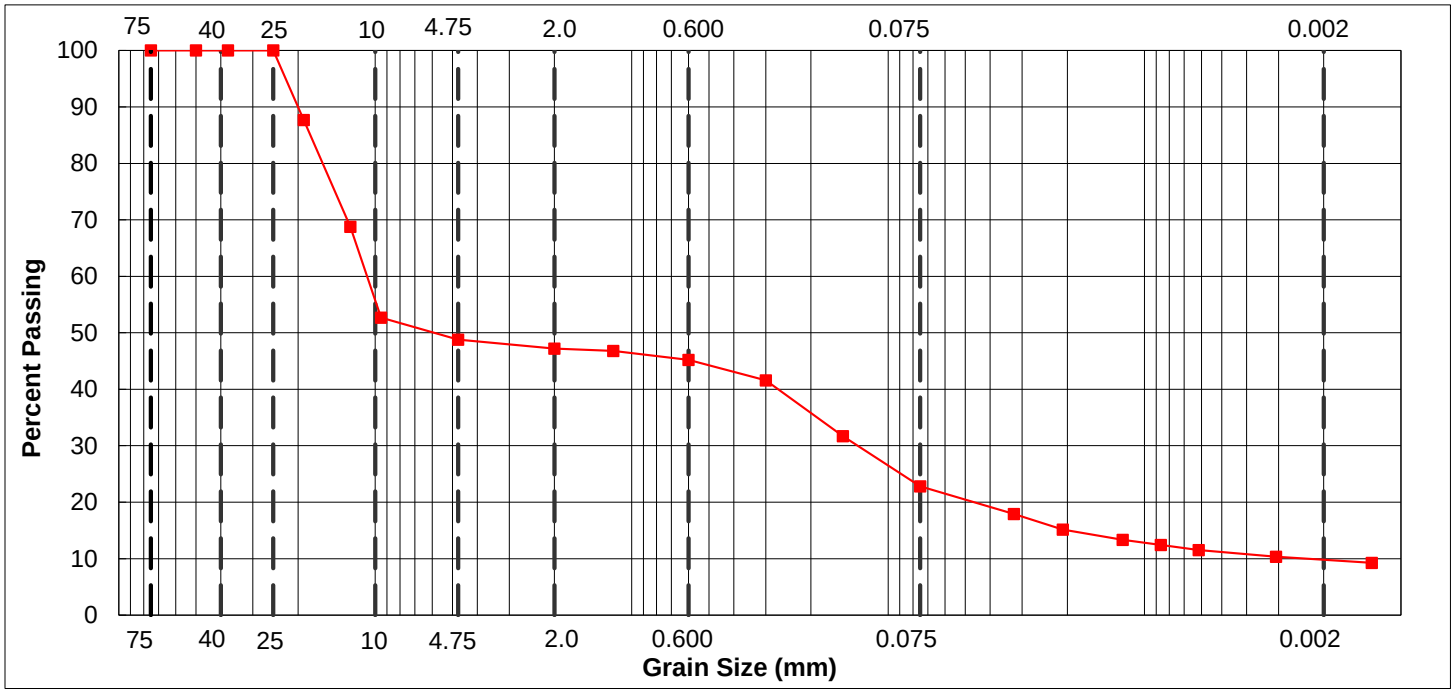
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	472AU1
Project No.:	1560-193-00	**Source:**	22BH472
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 472AU1	**Test Date:**	19-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	45.2
75.0	100.0	0.300	41.6
50.0	100.0	0.150	31.7
37.5	100.0	0.075	22.8
25.0	100.0	0.0323	17.9
19.0	87.7	0.0208	15.2
12.5	68.8	0.0122	13.4
9.5	52.7	0.0086	12.4
4.75	48.8	0.0062	11.5
2.00	47.2	0.0031	10.4
1.180	46.8	0.0013	9.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	51.2	20 mm to 4.75 mm
Coarse Sand	1.6	4.75 mm to 2.00 mm
Medium Sand	2.0	2.00 mm to 425 µm
Fine Sand	22.4	425 µm to 75 µm
Silt	13.0	75 µm to 2 µm
Clay	9.8	<2 µm



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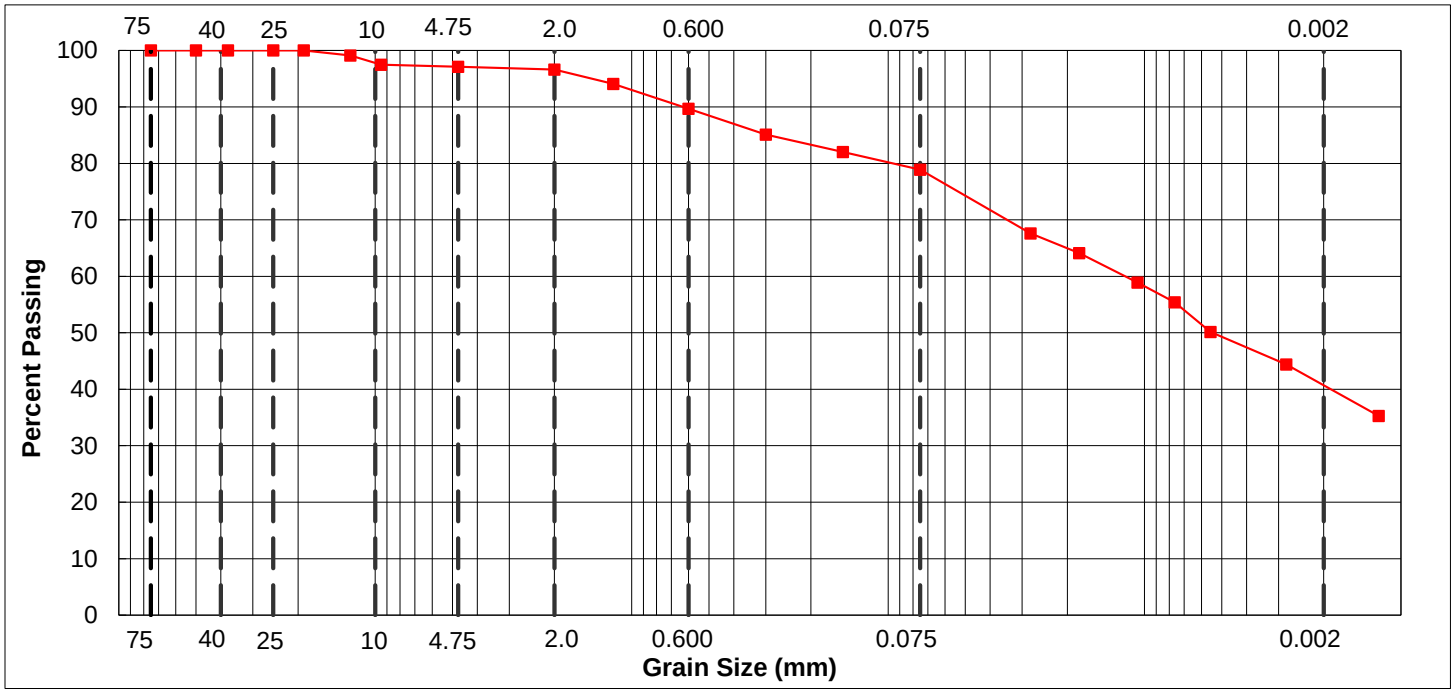
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	472AU4
Project No.:	1560-193-00	**Source:**	22BH472
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 472AU4	**Test Date:**	19-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	89.7
75.0	100.0	0.300	85.1
50.0	100.0	0.150	82.0
37.5	100.0	0.075	78.9
25.0	100.0	0.0278	67.6
19.0	100.0	0.0180	64.1
12.5	99.1	0.0106	58.9
9.5	97.5	0.0076	55.4
4.75	97.1	0.0055	50.1
2.00	96.6	0.0028	44.4
1.180	94.1	0.0012	35.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	2.9	20 mm to 4.75 mm
Coarse Sand	0.5	4.75 mm to 2.00 mm
Medium Sand	6.9	2.00 mm to 425 µm
Fine Sand	10.8	425 µm to 75 µm
Silt	38.2	75 µm to 2 µm
Clay	40.7	<2 µm



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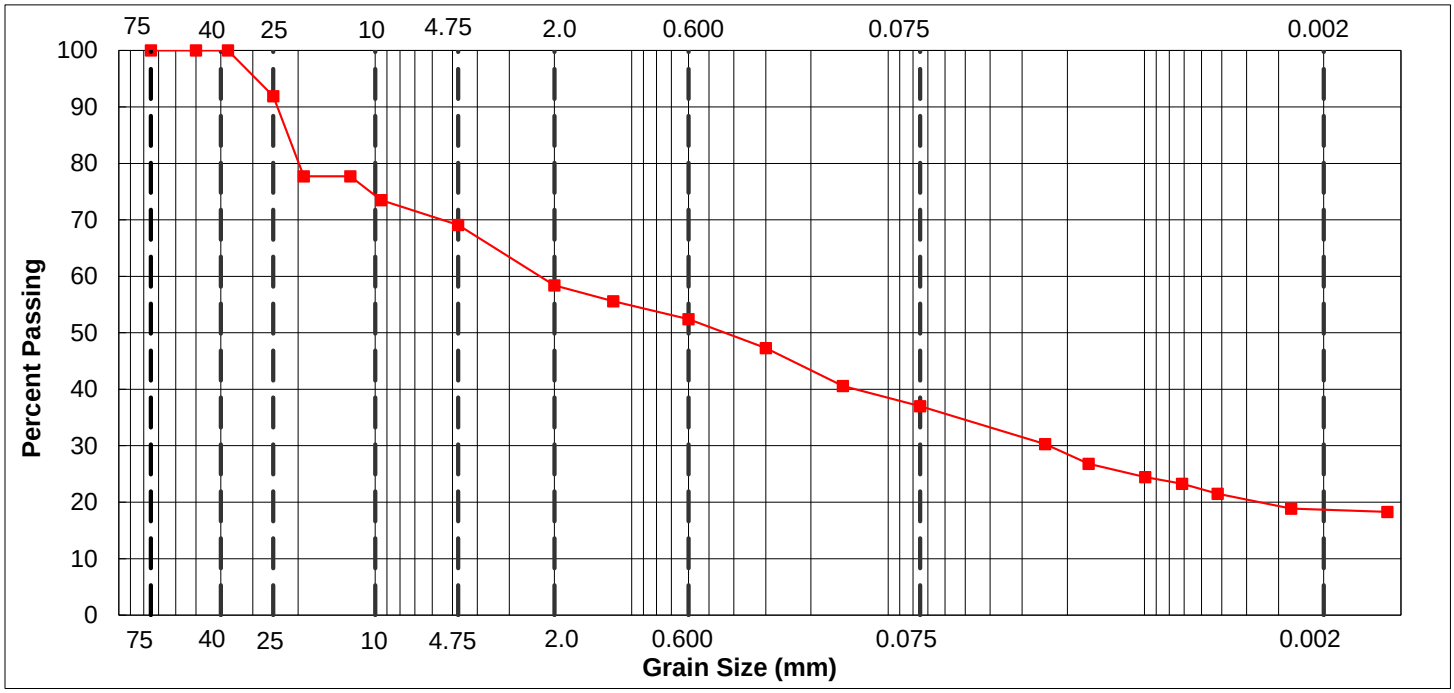
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	473AU1
Project No.:	1560-193-00	**Source:**	22BH473
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 473AU1	**Test Date:**	16-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	52.4
75.0	100.0	0.300	47.3
50.0	100.0	0.150	40.6
37.5	100.0	0.075	37.0
25.0	91.9	0.0244	30.3
19.0	77.7	0.0165	26.8
12.5	77.7	0.0099	24.4
9.5	73.5	0.0071	23.3
4.75	69.1	0.0052	21.5
2.00	58.4	0.0027	18.9
1.180	55.6	0.0011	18.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	8.1	80 mm to 20 mm
Fine Gravel	22.8	20 mm to 4.75 mm
Coarse Sand	10.7	4.75 mm to 2.00 mm
Medium Sand	6.0	2.00 mm to 425 µm
Fine Sand	15.4	425 µm to 75 µm
Silt	18.3	75 µm to 2 µm
Clay	18.7	<2 µm



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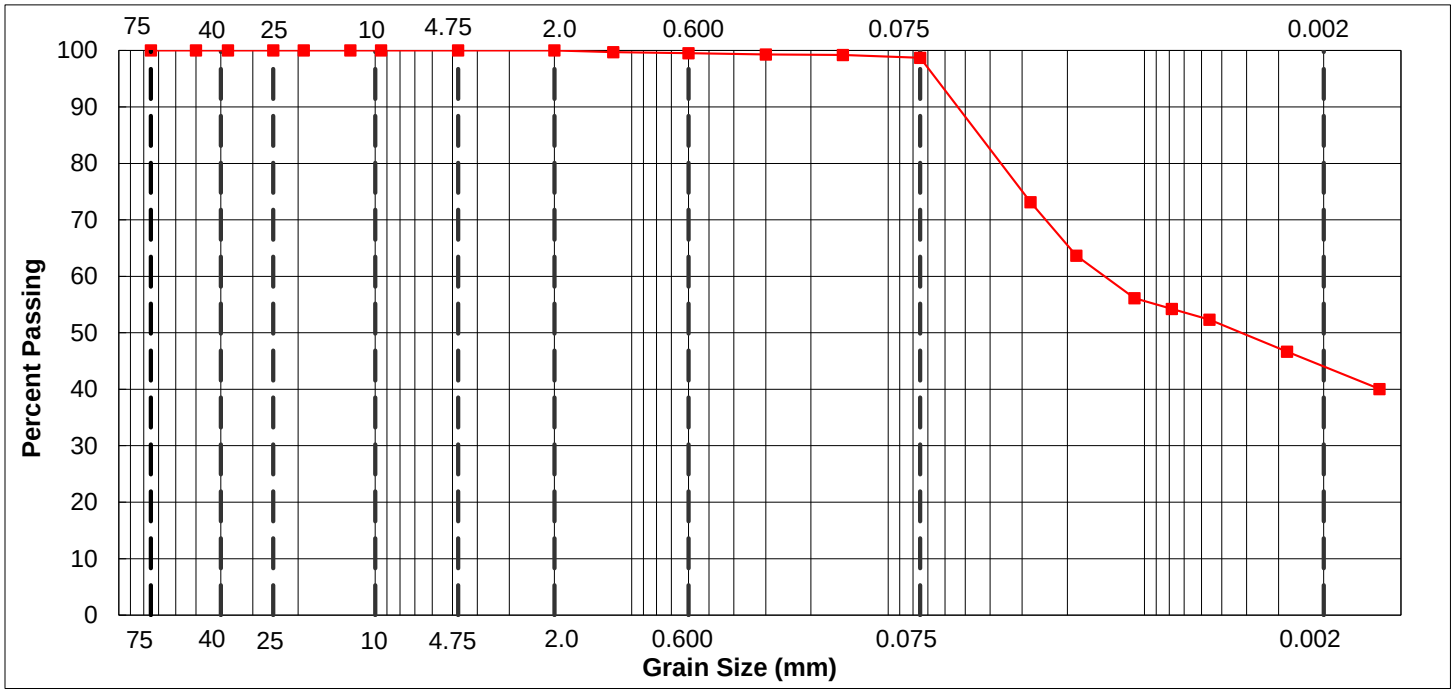
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	473AU7
Project No.:	1560-193-00	**Source:**	22BH473
Owner:	EID	**Sample Depth:**	5.2m
File No.:	GSA - 473AU7	**Test Date:**	20-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.3
50.0	100.0	0.150	99.2
37.5	100.0	0.075	98.7
25.0	100.0	0.0278	73.1
19.0	100.0	0.0184	63.7
12.5	100.0	0.0110	56.1
9.5	100.0	0.0078	54.2
4.75	100.0	0.0056	52.3
2.00	100.0	0.0028	46.7
1.180	99.7	0.0012	40.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	0.8	425 µm to 75 µm
Silt	54.7	75 µm to 2 µm
Clay	44.0	<2 µm



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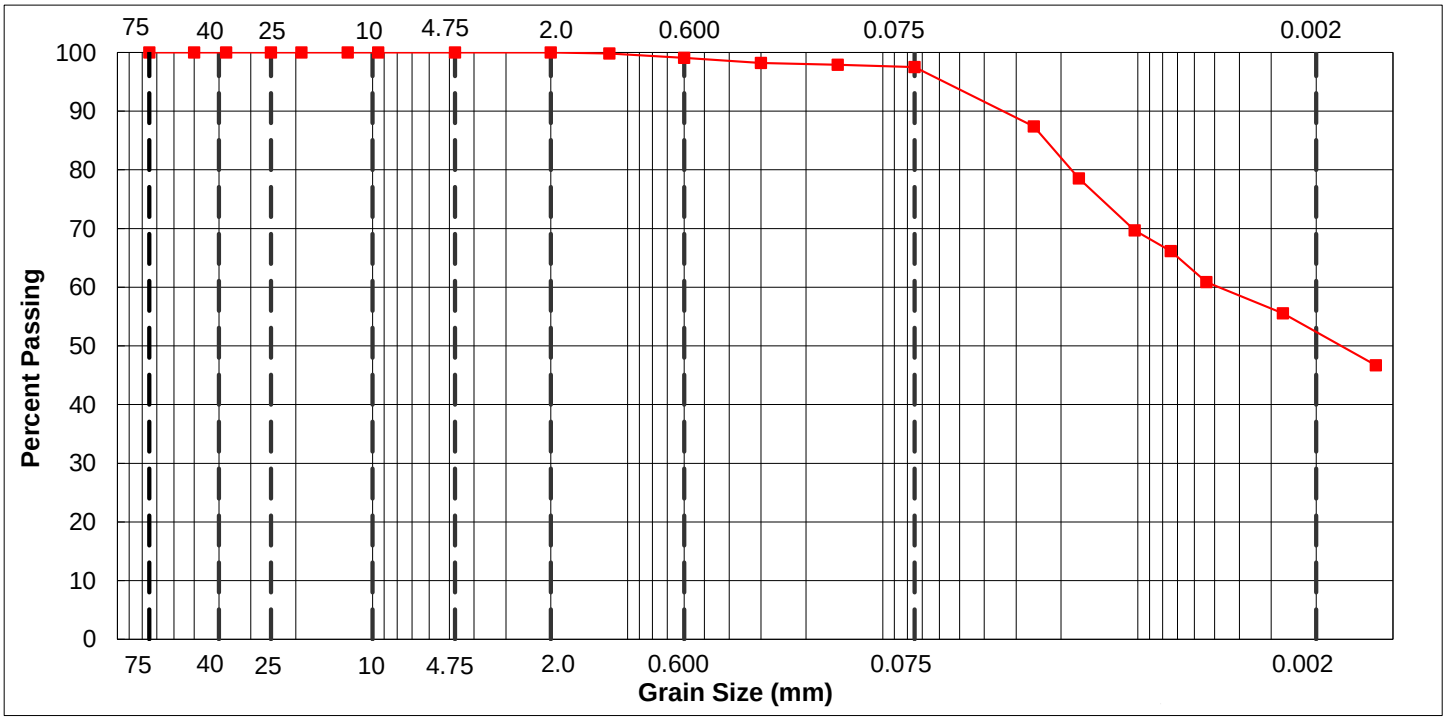
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	474AU3
Project No.:	1560-193-00	**Source:**	22BH474
Owner:	EID	**Sample Depth:**	2.1m
File No.:	GSA - 474AU3	**Test Date:**	25-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.1
75.0	100.0	0.300	98.2
50.0	100.0	0.150	97.9
37.5	100.0	0.075	97.5
25.0	100.0	0.0256	87.4
19.0	100.0	0.0170	78.5
12.5	100.0	0.0103	69.7
9.5	100.0	0.0074	66.2
4.75	100.0	0.0054	60.8
2.00	100.0	0.0027	55.5
1.180	99.8	0.0012	46.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.9	2.00 mm to 425 µm
Fine Sand	1.6	425 µm to 75 µm
Silt	45.1	75 µm to 2 µm
Clay	52.4	<2 µm



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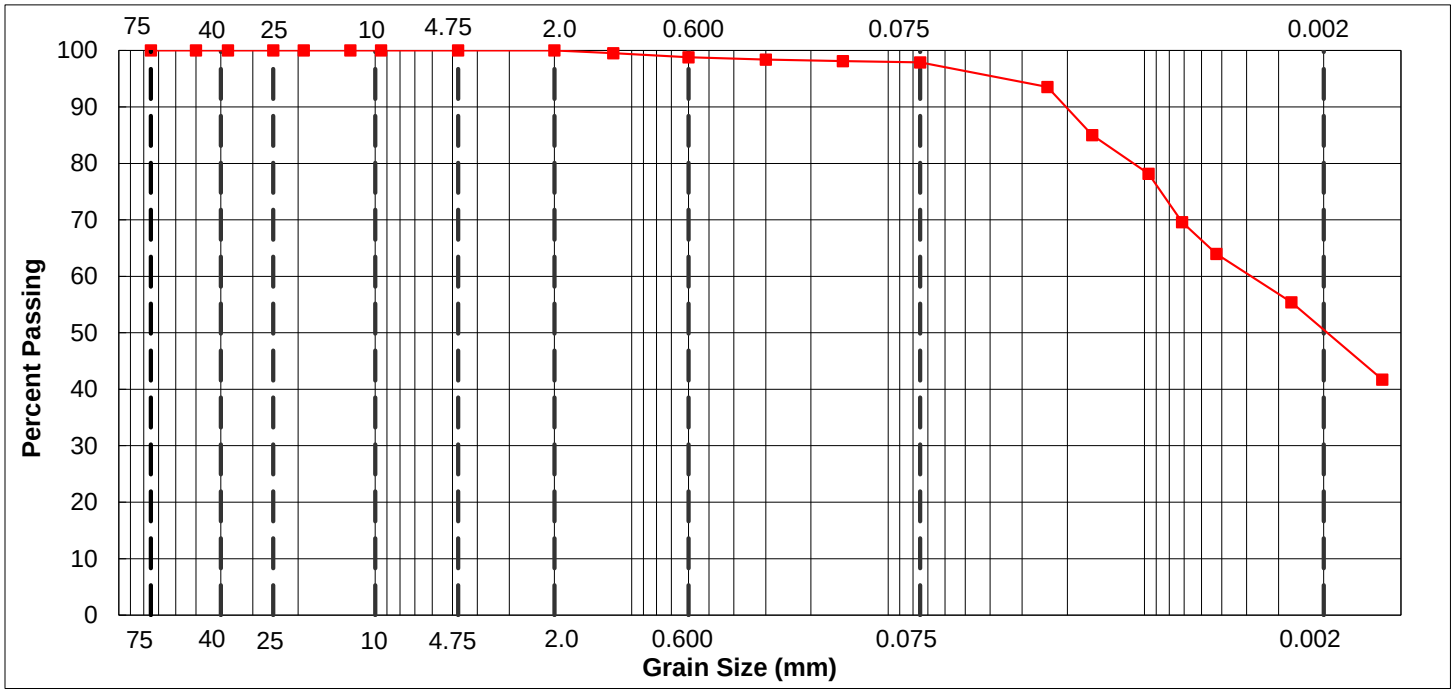
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	474AU5
Project No.:	1560-193-00	**Source:**	22BH474
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 474AU5	**Test Date:**	23-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.8
75.0	100.0	0.300	98.4
50.0	100.0	0.150	98.1
37.5	100.0	0.075	97.9
25.0	100.0	0.0239	93.5
19.0	100.0	0.0160	85.0
12.5	100.0	0.0096	78.2
9.5	100.0	0.0071	69.6
4.75	100.0	0.0052	64.0
2.00	100.0	0.0027	55.4
1.180	99.5	0.0012	41.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.2	2.00 mm to 425 µm
Fine Sand	0.9	425 µm to 75 µm
Silt	47.4	75 µm to 2 µm
Clay	50.5	<2 µm



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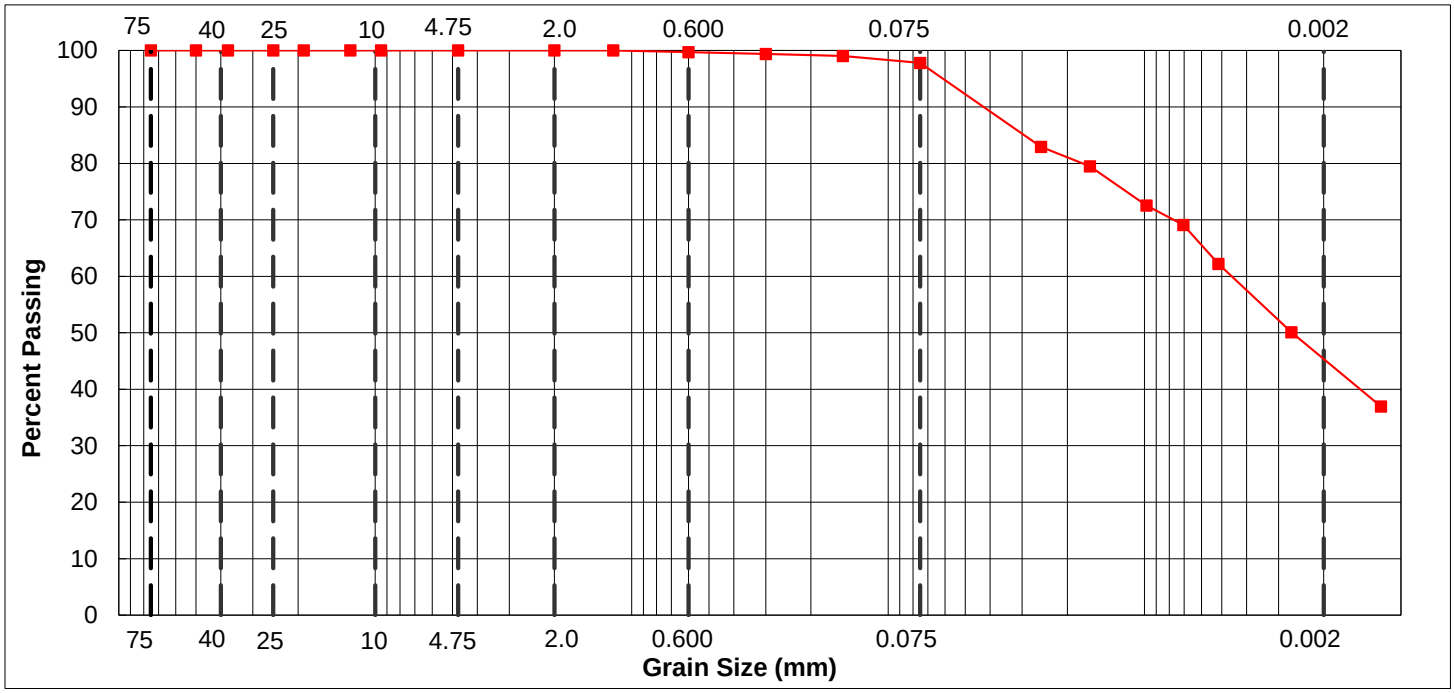
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	475AU3
Project No.:	1560-193-00	**Source:**	22BH475
Owner:	EID	**Sample Depth:**	3.5m
File No.:	GSA - 475AU3	**Test Date:**	21-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.4
50.0	100.0	0.150	99.0
37.5	100.0	0.075	97.8
25.0	100.0	0.0253	82.9
19.0	100.0	0.0163	79.5
12.5	100.0	0.0098	72.6
9.5	100.0	0.0071	69.1
4.75	100.0	0.0052	62.2
2.00	100.0	0.0027	50.1
1.180	100.0	0.0012	37.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	1.9	425 µm to 75 µm
Silt	52.5	75 µm to 2 µm
Clay	45.3	<2 µm



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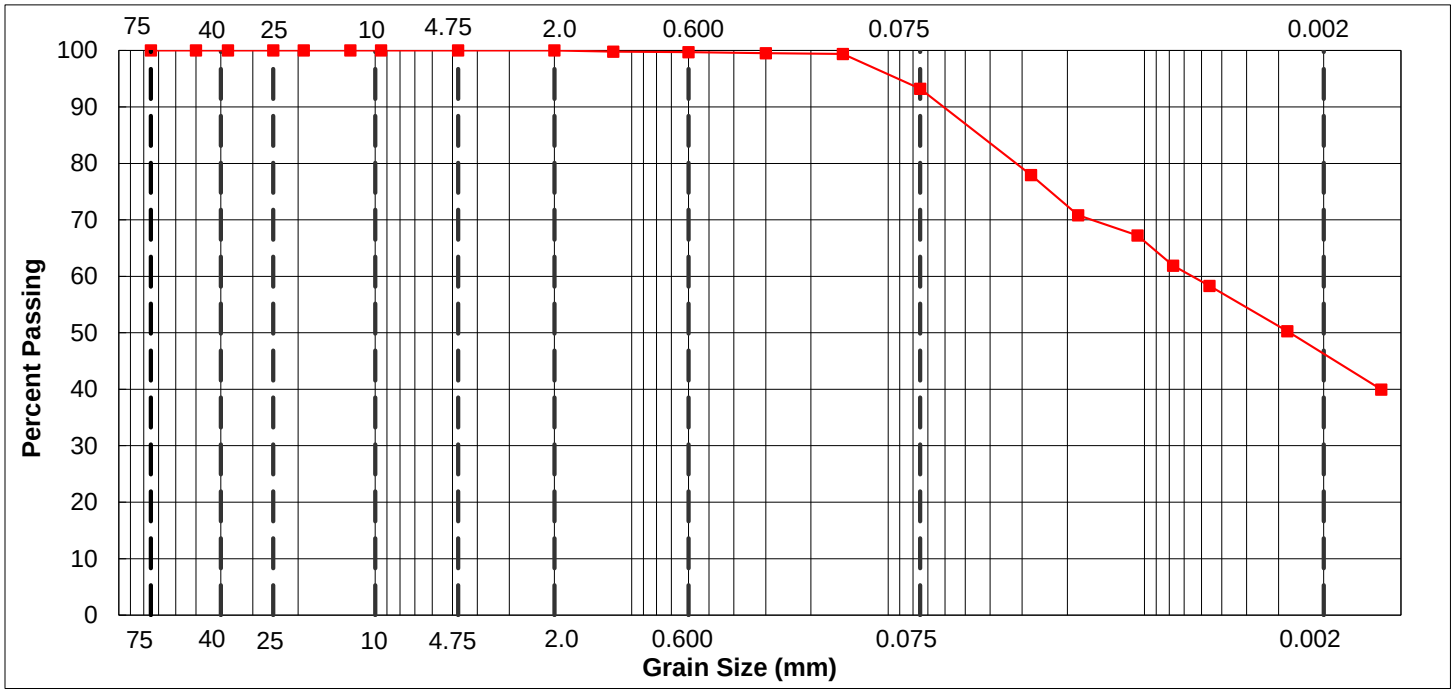
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	476AU2
Project No.:	1560-193-00	**Source:**	22BH476
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 476AU2	**Test Date:**	16-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.4
37.5	100.0	0.075	93.2
25.0	100.0	0.0277	78.0
19.0	100.0	0.0182	70.8
12.5	100.0	0.0107	67.2
9.5	100.0	0.0077	61.9
4.75	100.0	0.0056	58.3
2.00	100.0	0.0028	50.3
1.180	99.8	0.0012	40.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	6.5	425 µm to 75 µm
Silt	46.9	75 µm to 2 µm
Clay	46.3	<2 µm



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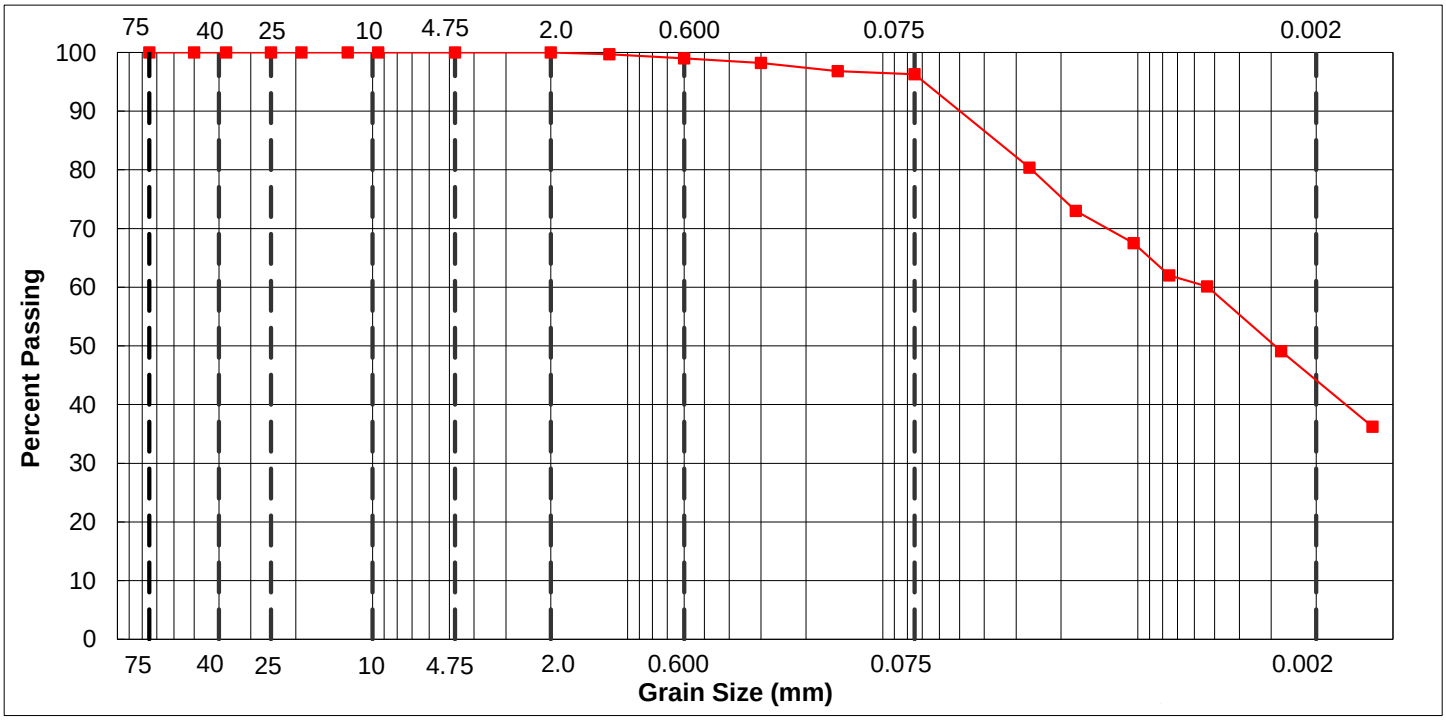
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	476AU4
Project No.:	1560-193-00	**Source:**	22BH476
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 476AU4	**Test Date:**	27-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.0
75.0	100.0	0.300	98.2
50.0	100.0	0.150	96.8
37.5	100.0	0.075	96.3
25.0	100.0	0.0266	80.4
19.0	100.0	0.0175	73.0
12.5	100.0	0.0104	67.5
9.5	100.0	0.0075	62.0
4.75	100.0	0.0053	60.1
2.00	100.0	0.0027	49.1
1.180	99.7	0.0012	36.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.0	2.00 mm to 425 µm
Fine Sand	2.7	425 µm to 75 µm
Silt	52.1	75 µm to 2 µm
Clay	44.2	<2 µm



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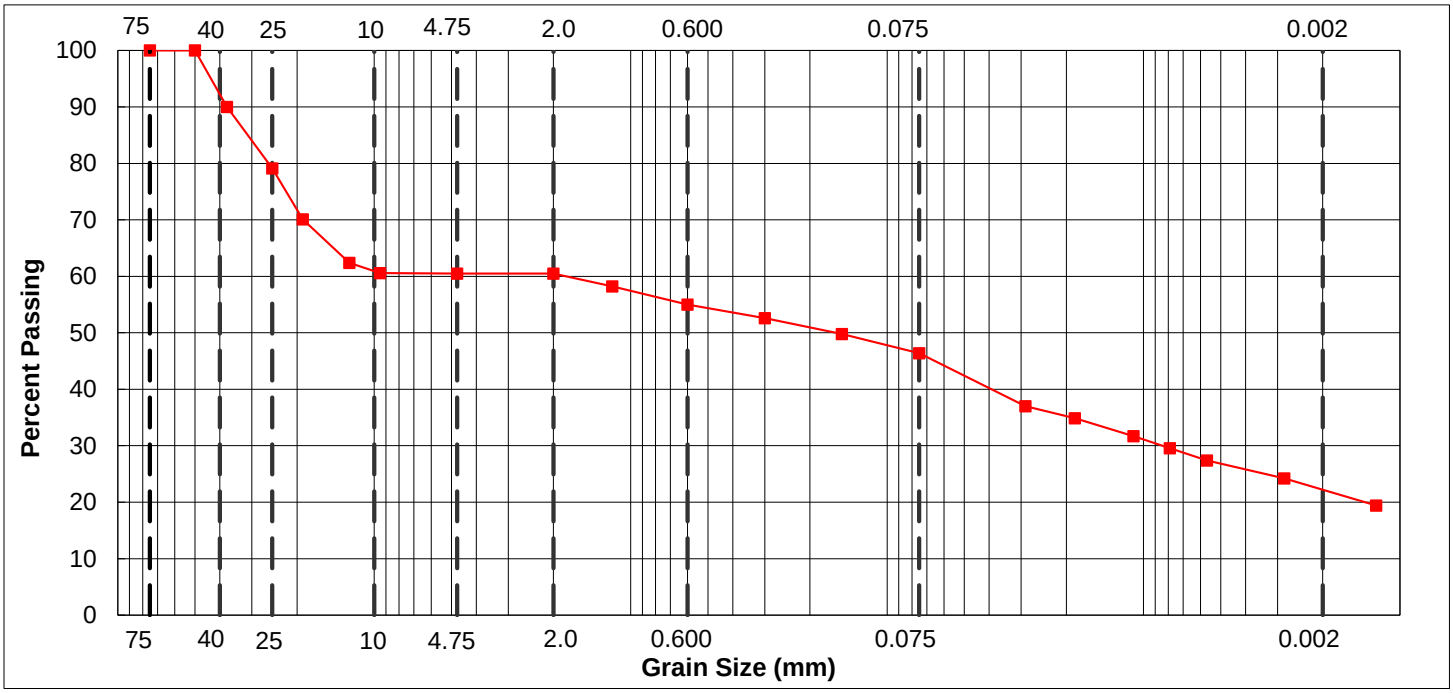
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	477AU2
Project No.:	1560-193-00	**Source:**	22BH477
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 477AU2	**Test Date:**	19-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	55.0
75.0	100.0	0.300	52.6
50.0	100.0	0.150	49.8
37.5	90.0	0.075	46.4
25.0	79.1	0.0289	37.0
19.0	70.1	0.0185	34.9
12.5	62.4	0.0110	31.7
9.5	60.6	0.0079	29.5
4.75	60.5	0.0057	27.4
2.00	60.5	0.0028	24.2
1.180	58.2	0.0012	19.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	20.9	80 mm to 20 mm
Fine Gravel	18.6	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	5.5	2.00 mm to 425 µm
Fine Sand	8.6	425 µm to 75 µm
Silt	24.2	75 µm to 2 µm
Clay	22.2	<2 µm



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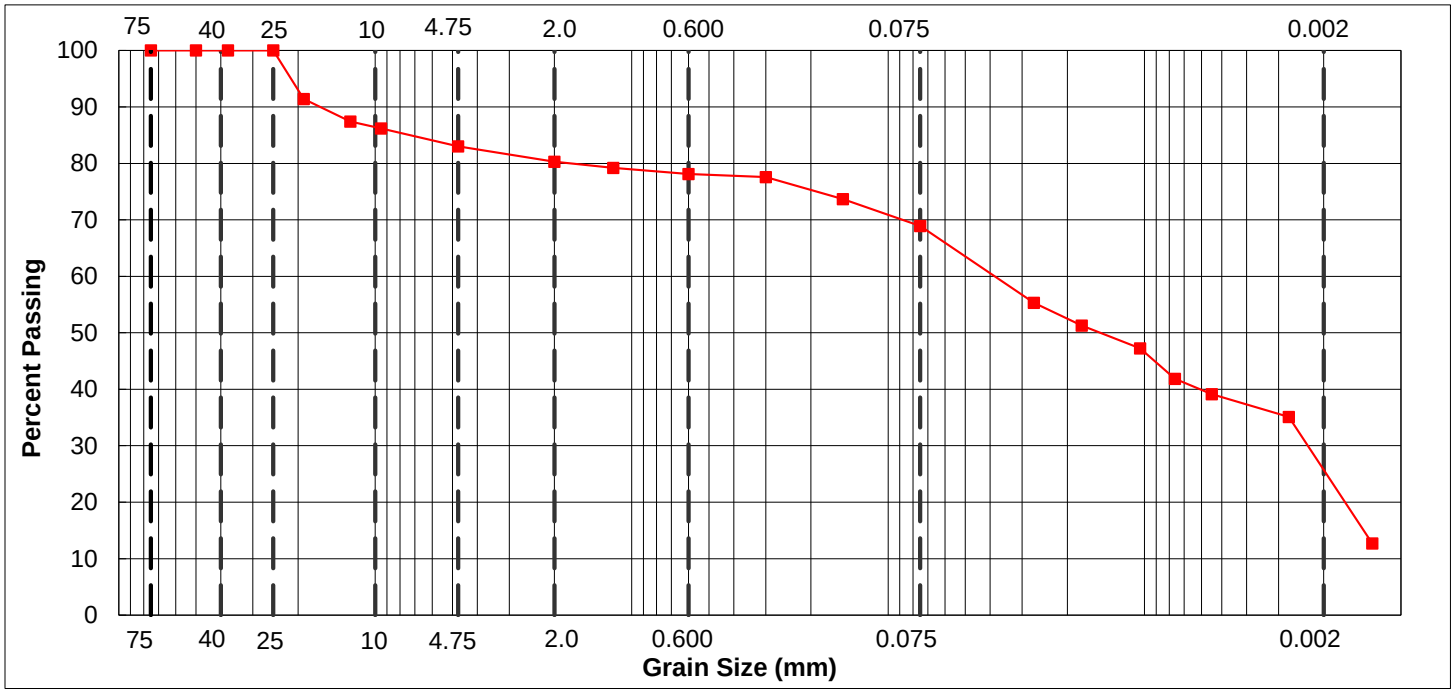
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	478AU2
Project No.:	1560-193-00	**Source:**	22BH478
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 478AU2	**Test Date:**	19-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	78.1
75.0	100.0	0.300	77.6
50.0	100.0	0.150	73.7
37.5	100.0	0.075	68.9
25.0	100.0	0.0270	55.3
19.0	91.4	0.0176	51.3
12.5	87.4	0.0104	47.2
9.5	86.2	0.0076	41.8
4.75	83.0	0.0055	39.1
2.00	80.3	0.0027	35.1
1.180	79.2	0.0013	12.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	17.0	20 mm to 4.75 mm
Coarse Sand	2.7	4.75 mm to 2.00 mm
Medium Sand	2.2	2.00 mm to 425 µm
Fine Sand	9.2	425 µm to 75 µm
Silt	43.2	75 µm to 2 µm
Clay	25.7	<2 µm



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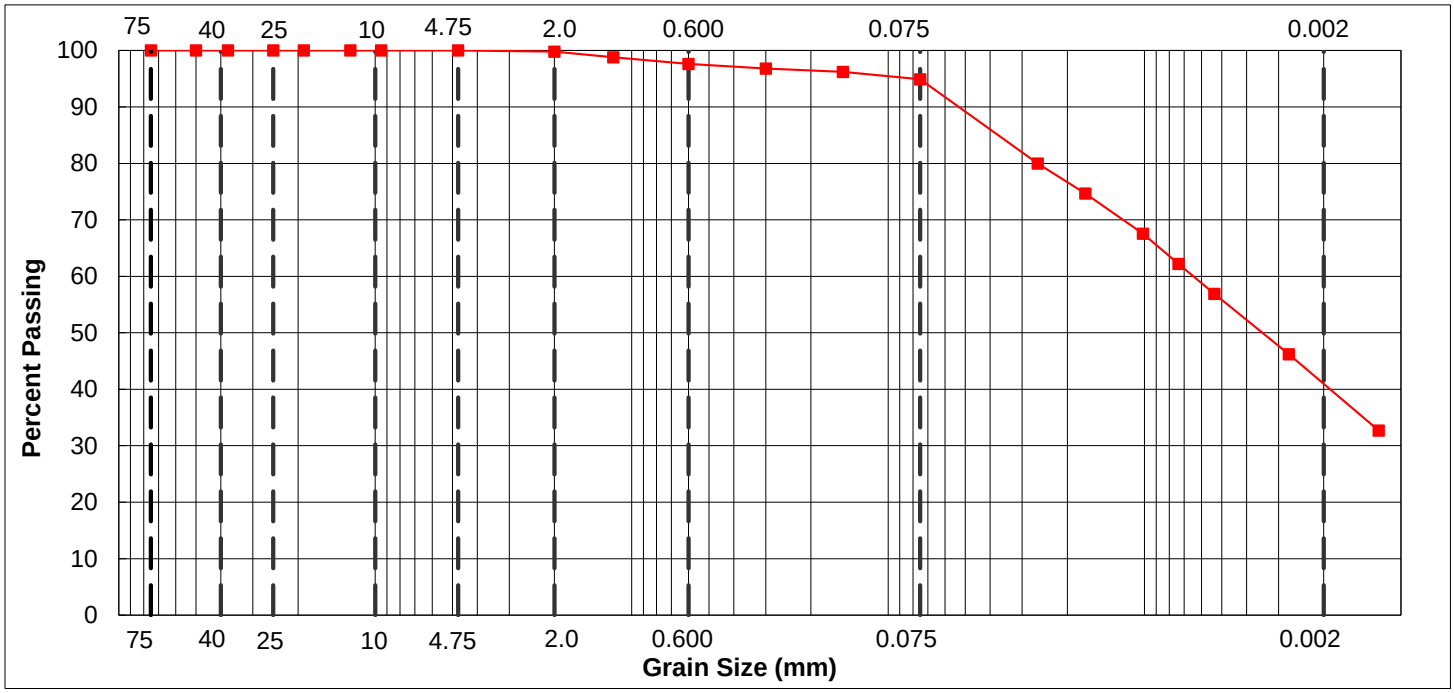
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	478AU5
Project No.:	1560-193-00	**Source:**	22BH478
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 478AU5	**Test Date:**	20-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.6
75.0	100.0	0.300	96.8
50.0	100.0	0.150	96.2
37.5	100.0	0.075	94.9
25.0	100.0	0.0261	80.0
19.0	100.0	0.0170	74.7
12.5	100.0	0.0101	67.6
9.5	100.0	0.0074	62.2
4.75	100.0	0.0053	56.9
2.00	99.8	0.0027	46.2
1.180	98.8	0.0012	32.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.2	4.75 mm to 2.00 mm
Medium Sand	2.2	2.00 mm to 425 µm
Fine Sand	2.7	425 µm to 75 µm
Silt	53.9	75 µm to 2 µm
Clay	41.0	<2 µm



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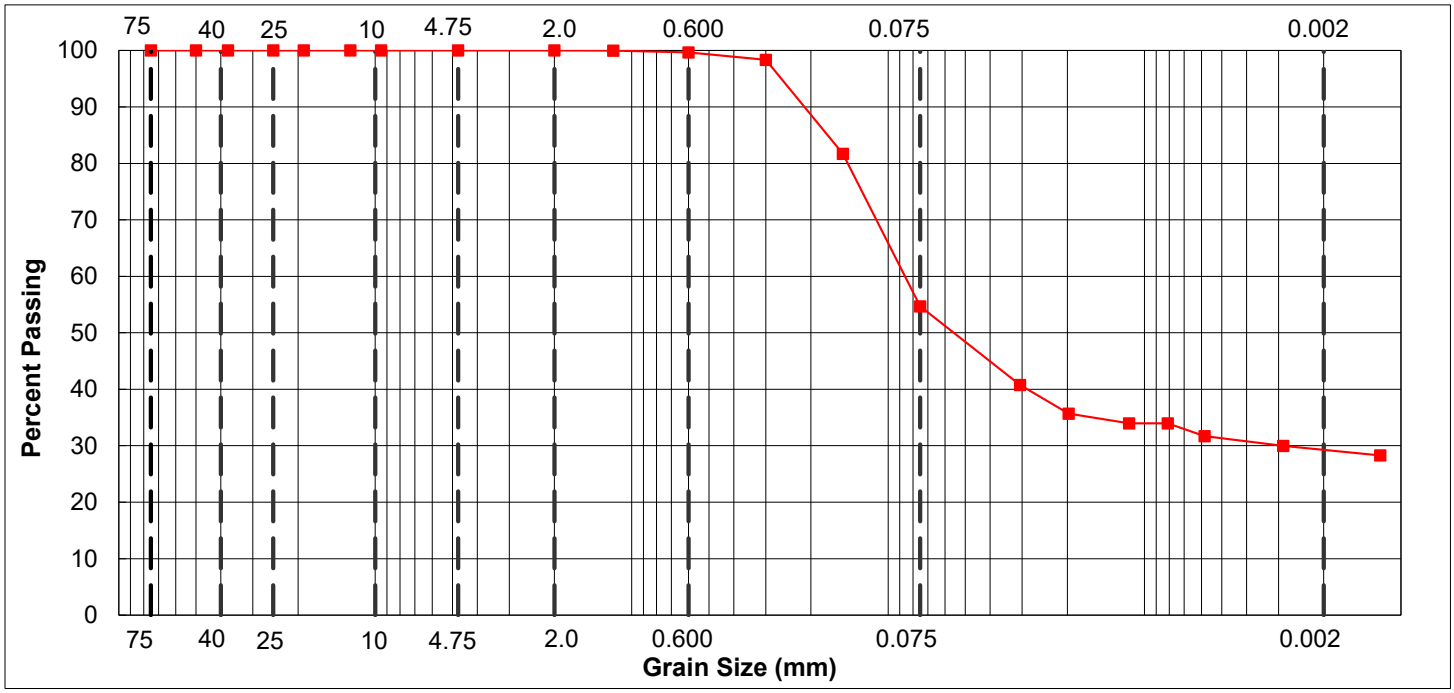
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	479AU1
Project No.:	1560-193-00	**Source:**	22BH479
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 479AU1	**Test Date:**	18-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	98.3
50.0	100.0	0.150	81.7
37.5	100.0	0.075	54.7
25.0	100.0	0.0306	40.8
19.0	100.0	0.0197	35.7
12.5	100.0	0.0115	34.0
9.5	100.0	0.0081	34.0
4.75	100.0	0.0058	31.7
2.00	100.0	0.0029	30.0
1.180	100.0	0.0012	28.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	45.0	425 µm to 75 µm
Silt	25.4	75 µm to 2 µm
Clay	29.3	<2 µm



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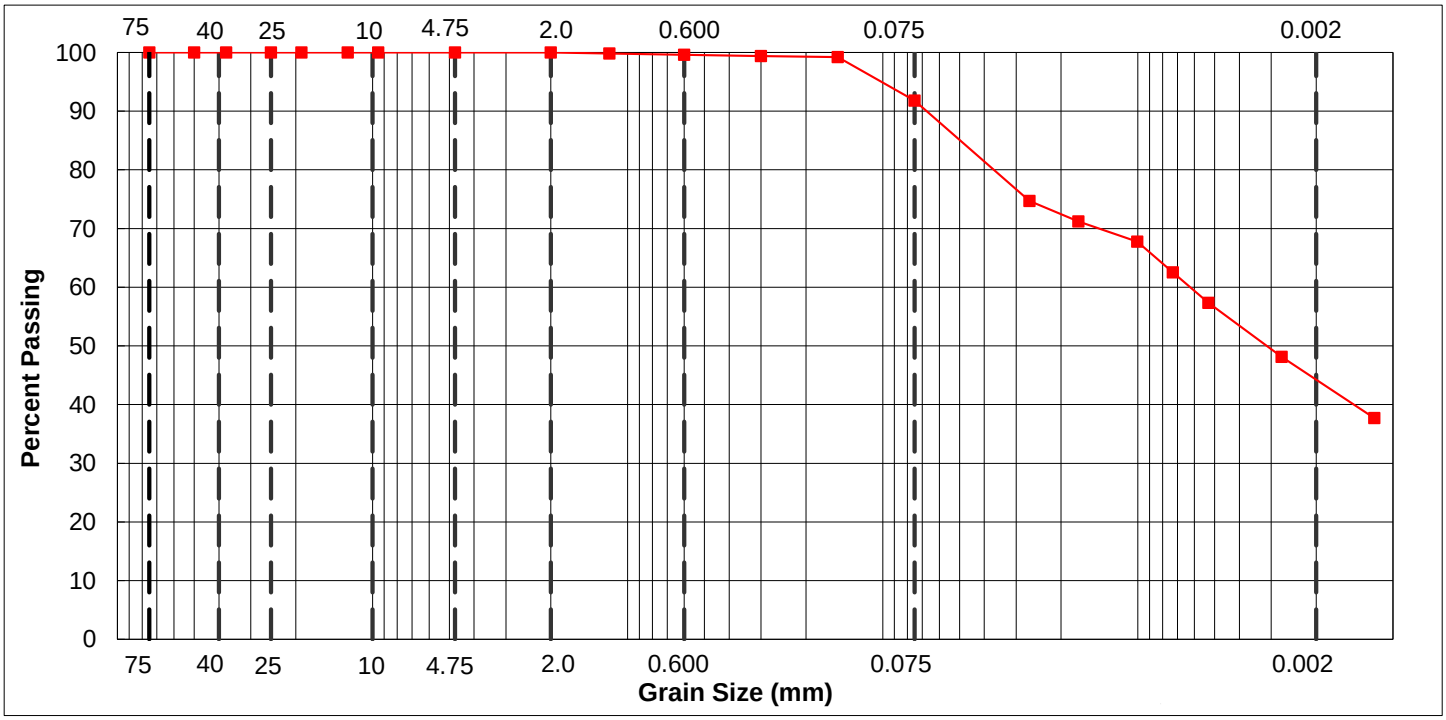
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	479AU4
Project No.:	1560-193-00	**Source:**	22BH479
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 479AU4	**Test Date:**	27-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	99.4
50.0	100.0	0.150	99.2
37.5	100.0	0.075	91.8
25.0	100.0	0.0266	74.7
19.0	100.0	0.0171	71.2
12.5	100.0	0.0100	67.7
9.5	100.0	0.0073	62.5
4.75	100.0	0.0053	57.3
2.00	100.0	0.0027	48.1
1.180	99.8	0.0012	37.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	7.8	425 µm to 75 µm
Silt	47.6	75 µm to 2 µm
Clay	44.2	<2 µm



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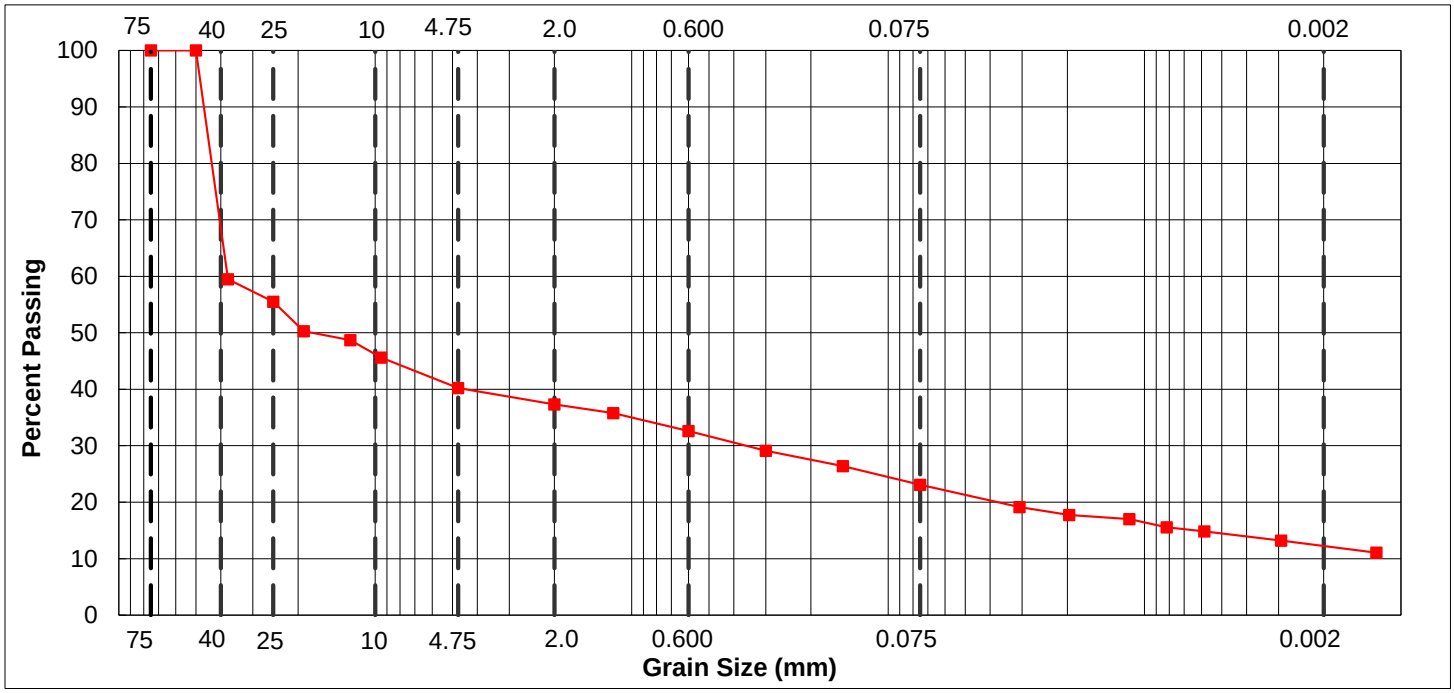
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	480AU2
Project No.:	1560-193-00	**Source:**	22BH480
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 480AU2	**Test Date:**	22-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	32.6
75.0	100.0	0.300	29.1
50.0	100.0	0.150	26.4
37.5	59.5	0.075	23.1
25.0	55.5	0.0307	19.2
19.0	50.3	0.0197	17.7
12.5	48.7	0.0115	17.0
9.5	45.6	0.0082	15.6
4.75	40.2	0.0058	14.9
2.00	37.3	0.0029	13.2
1.180	35.8	0.0012	11.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	44.5	80 mm to 20 mm
Fine Gravel	15.3	20 mm to 4.75 mm
Coarse Sand	2.9	4.75 mm to 2.00 mm
Medium Sand	4.7	2.00 mm to 425 µm
Fine Sand	9.5	425 µm to 75 µm
Silt	10.9	75 µm to 2 µm
Clay	12.2	<2 µm



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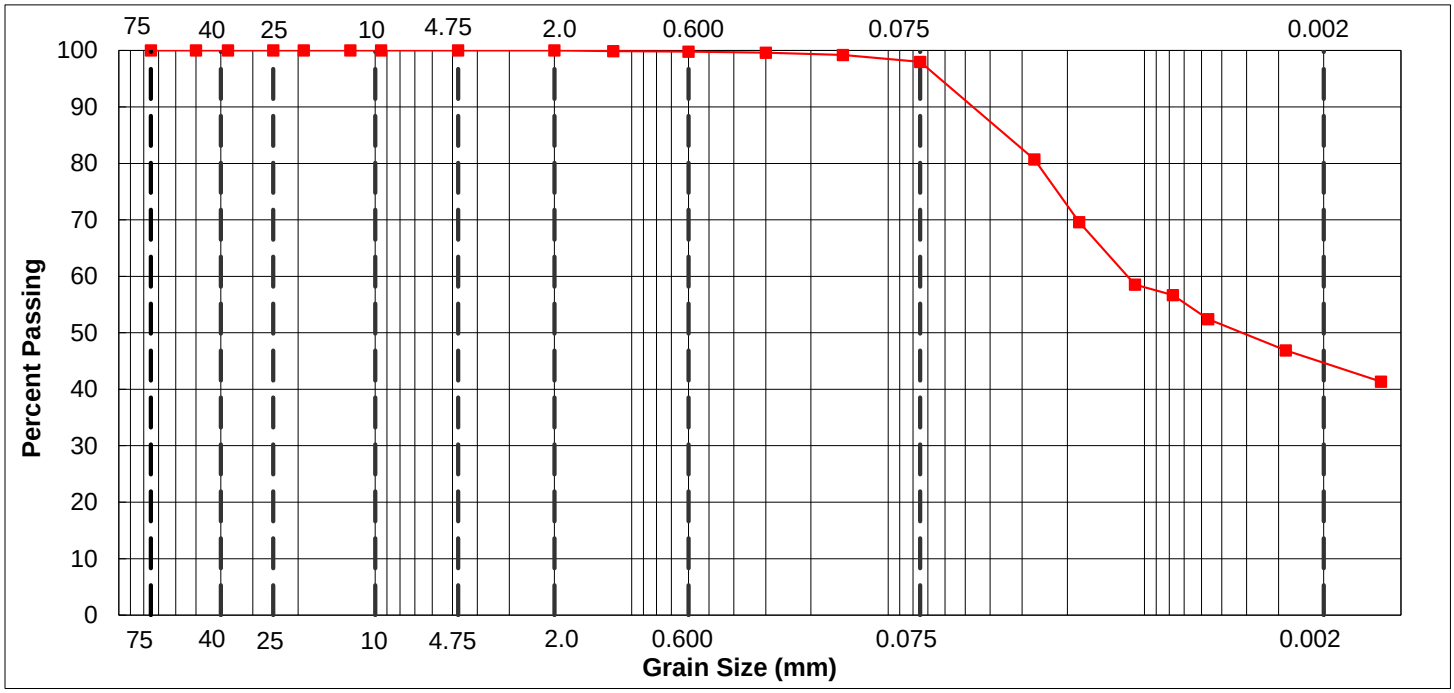
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	480AU6
Project No.:	1560-193-00	**Source:**	22BH480
Owner:	EID	**Sample Depth:**	4.3m
File No.:	GSA - 480AU6	**Test Date:**	23-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.6
50.0	100.0	0.150	99.2
37.5	100.0	0.075	98.0
25.0	100.0	0.0269	80.7
19.0	100.0	0.0180	69.6
12.5	100.0	0.0109	58.5
9.5	100.0	0.0077	56.7
4.75	100.0	0.0056	52.4
2.00	100.0	0.0028	46.9
1.180	99.9	0.0012	41.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	1.8	425 µm to 75 µm
Silt	53.3	75 µm to 2 µm
Clay	44.7	<2 µm



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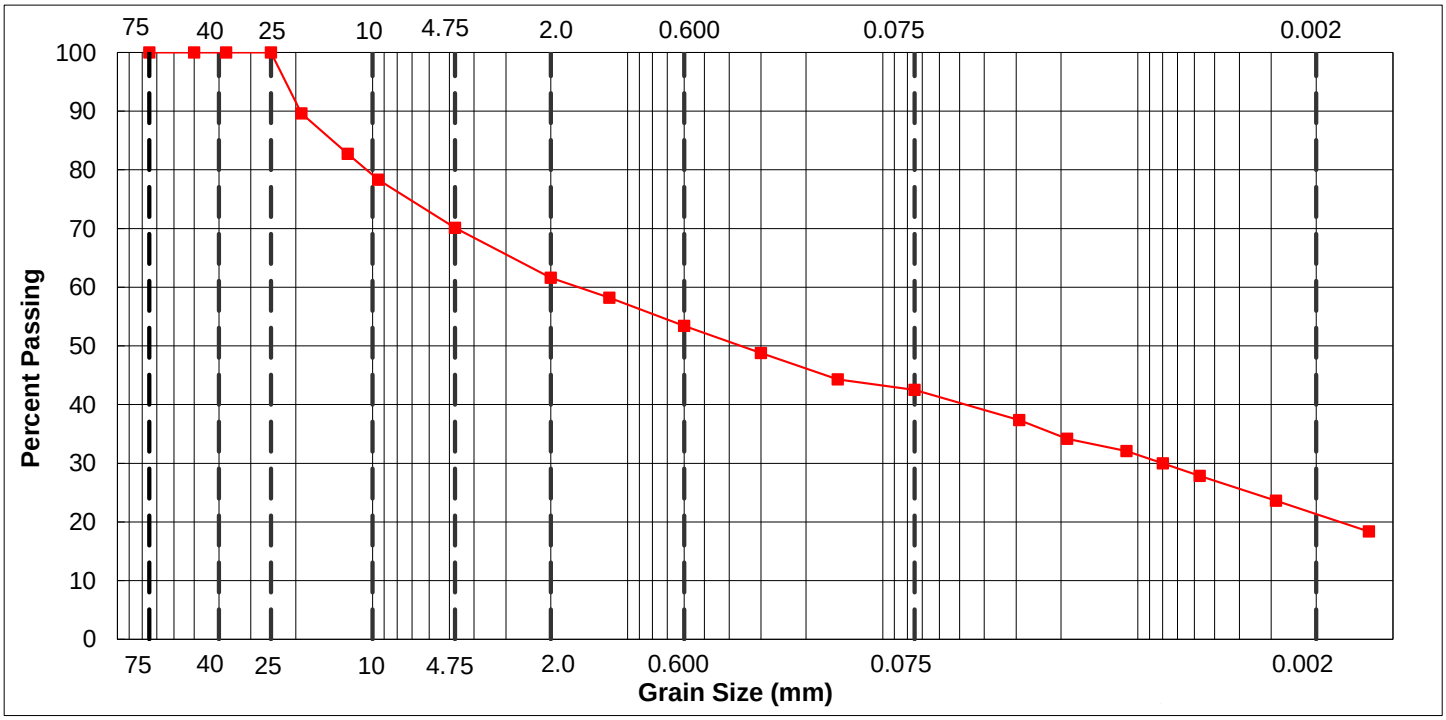
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	481AU2
Project No.:	1560-193-00	**Source:**	22BH481
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 481AU2	**Test Date:**	25-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	53.4
75.0	100.0	0.300	48.8
50.0	100.0	0.150	44.3
37.5	100.0	0.075	42.5
25.0	100.0	0.0292	37.3
19.0	89.6	0.0189	34.2
12.5	82.7	0.0111	32.1
9.5	78.3	0.0080	30.0
4.75	70.1	0.0057	27.8
2.00	61.6	0.0029	23.6
1.180	58.2	0.0012	18.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	29.9	20 mm to 4.75 mm
Coarse Sand	8.5	4.75 mm to 2.00 mm
Medium Sand	8.2	2.00 mm to 425 µm
Fine Sand	10.9	425 µm to 75 µm
Silt	21.2	75 µm to 2 µm
Clay	21.3	<2 µm



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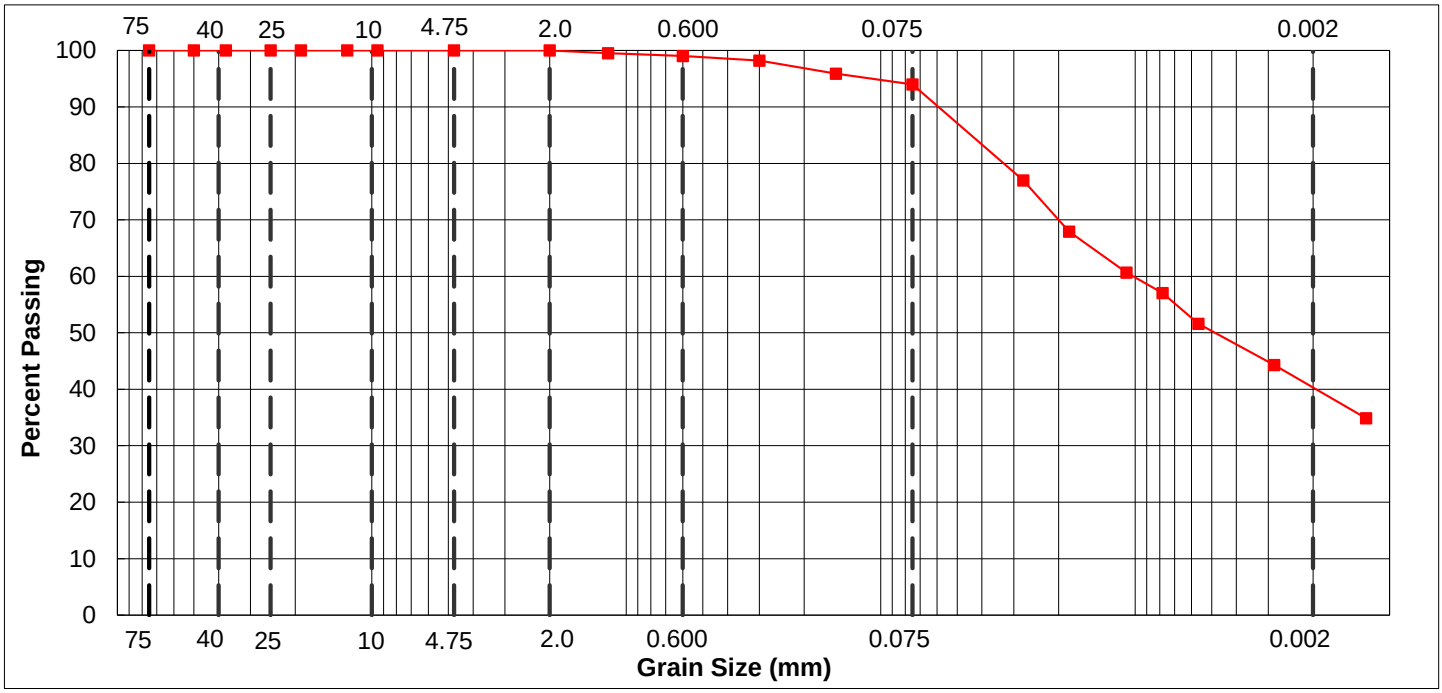
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	481AU6
Project No.:	1560-193-00	**Source:**	22BH481
Owner:	EID	**Sample Depth:**	4.3m
File No.:	GSA - 481AU6	**Test Date:**	26-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.0
75.0	100.0	0.300	98.2
50.0	100.0	0.150	95.9
37.5	100.0	0.075	94.0
25.0	100.0	0.0275	77.0
19.0	100.0	0.0182	67.9
12.5	100.0	0.0108	60.7
9.5	100.0	0.0078	57.0
4.75	100.0	0.0056	51.6
2.00	100.0	0.0028	44.3
1.180	99.5	0.0012	34.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.0	2.00 mm to 425 µm
Fine Sand	5.0	425 µm to 75 µm
Silt	53.7	75 µm to 2 µm
Clay	40.3	<2 µm



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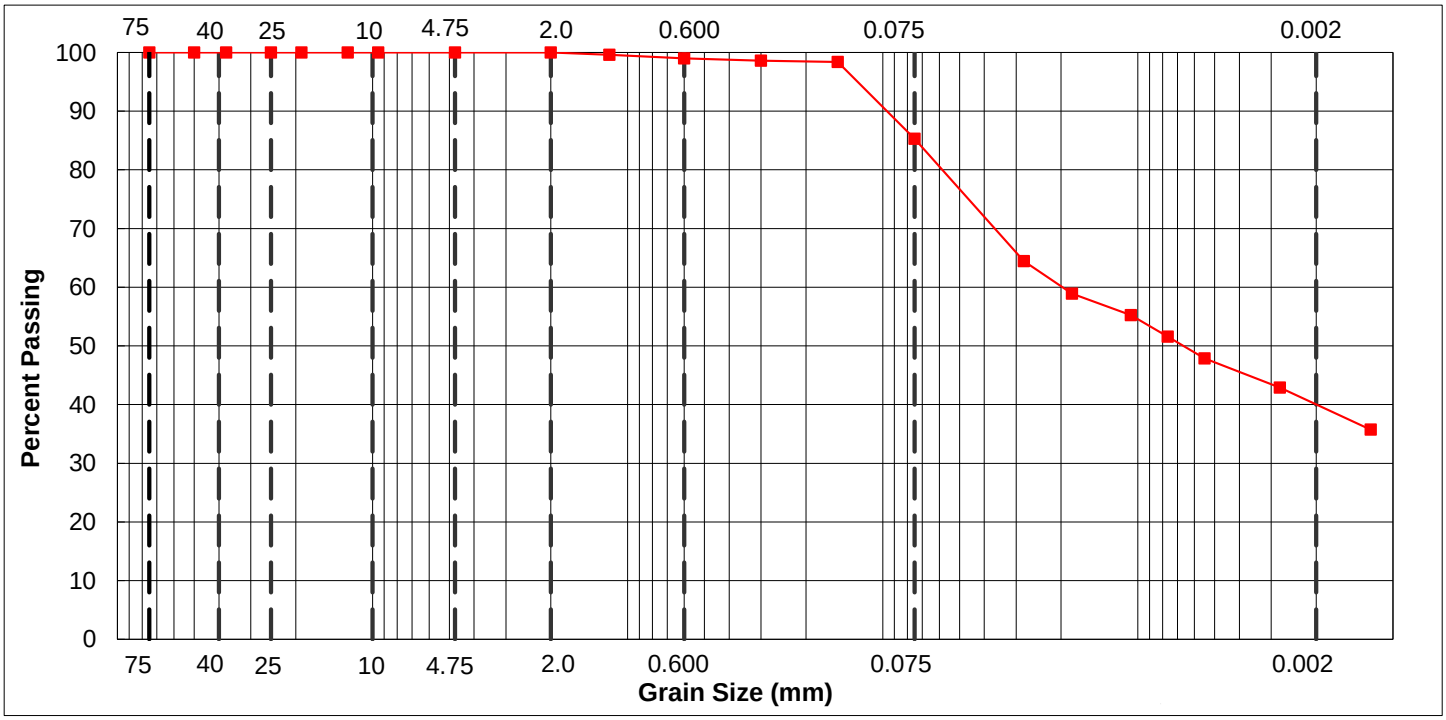
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	482AU4
Project No.:	1560-193-00	**Source:**	22BH482
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 482AU4	**Test Date:**	30-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.0
75.0	100.0	0.300	98.6
50.0	100.0	0.150	98.4
37.5	100.0	0.075	85.3
25.0	100.0	0.0280	64.4
19.0	100.0	0.0181	58.9
12.5	100.0	0.0107	55.2
9.5	100.0	0.0076	51.6
4.75	100.0	0.0055	47.9
2.00	100.0	0.0028	42.9
1.180	99.6	0.0012	35.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.0	2.00 mm to 425 µm
Fine Sand	13.7	425 µm to 75 µm
Silt	45.3	75 µm to 2 µm
Clay	40.0	<2 µm



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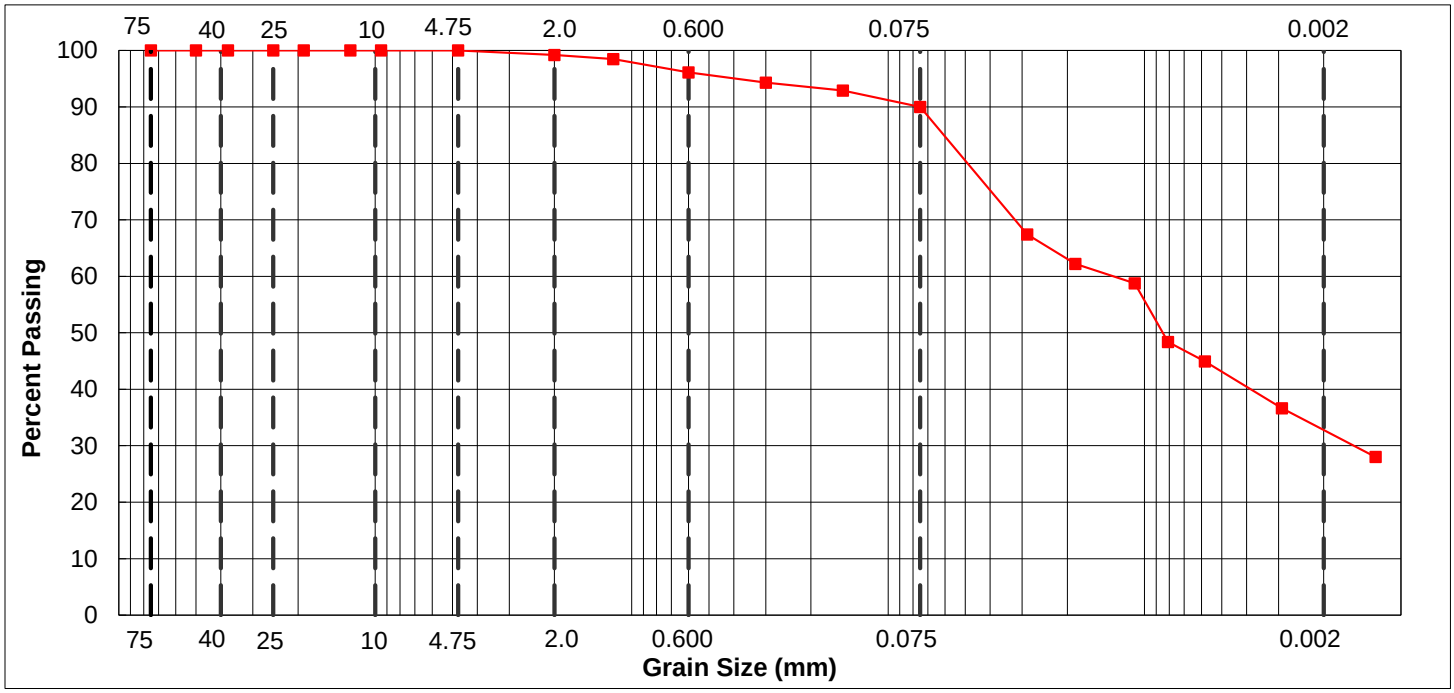
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	483AU3
Project No.:	1560-193-00	**Source:**	22BH483
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 483AU3	**Test Date:**	12-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	96.1
75.0	100.0	0.300	94.3
50.0	100.0	0.150	92.9
37.5	100.0	0.075	90.0
25.0	100.0	0.0287	67.4
19.0	100.0	0.0186	62.2
12.5	100.0	0.0109	58.8
9.5	100.0	0.0081	48.4
4.75	100.0	0.0058	44.9
2.00	99.2	0.0029	36.6
1.180	98.5	0.0013	28.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.8	4.75 mm to 2.00 mm
Medium Sand	3.1	2.00 mm to 425 µm
Fine Sand	6.1	425 µm to 75 µm
Silt	57.2	75 µm to 2 µm
Clay	32.8	<2 µm



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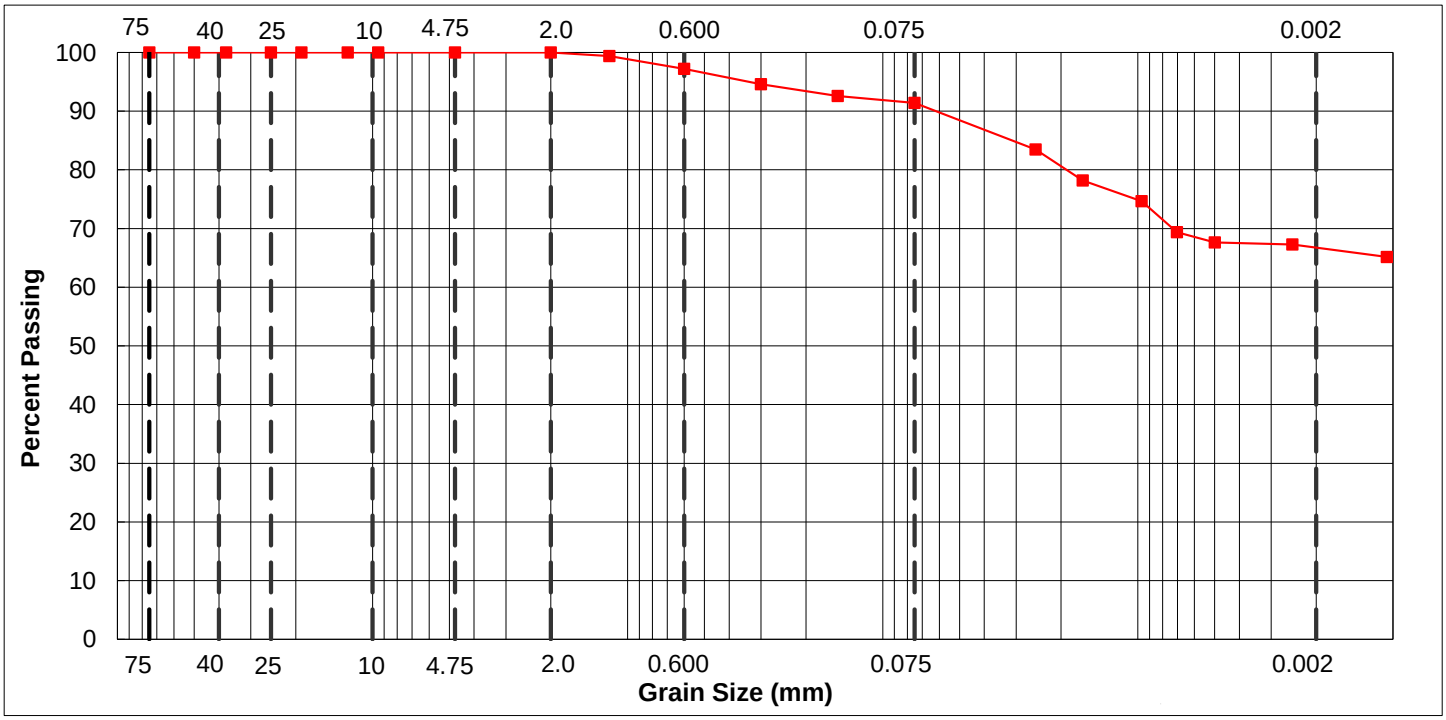
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	484AU1
Project No.:	1560-193-00	**Source:**	22BH484
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 484AU1	**Test Date:**	6-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.2
75.0	100.0	0.300	94.6
50.0	100.0	0.150	92.6
37.5	100.0	0.075	91.4
25.0	100.0	0.0252	83.5
19.0	100.0	0.0164	78.2
12.5	100.0	0.0097	74.7
9.5	100.0	0.0070	69.4
4.75	100.0	0.0050	67.6
2.00	100.0	0.0025	67.3
1.180	99.4	0.0011	65.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.8	2.00 mm to 425 µm
Fine Sand	5.8	425 µm to 75 µm
Silt	24.7	75 µm to 2 µm
Clay	66.7	<2 µm



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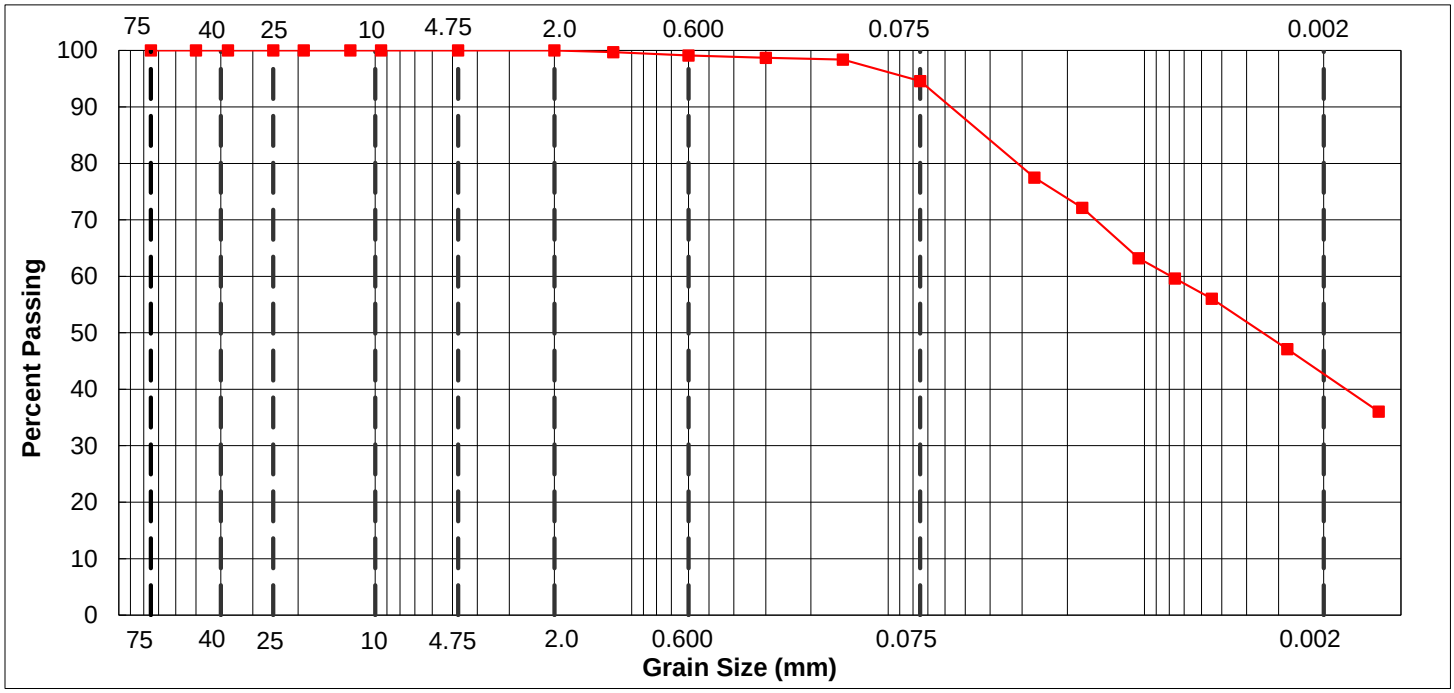
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	484AU8
Project No.:	1560-193-00	**Source:**	22BH484
Owner:	EID	**Sample Depth:**	5.8m
File No.:	GSA - 484AU8	**Test Date:**	18-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.1
75.0	100.0	0.300	98.7
50.0	100.0	0.150	98.4
37.5	100.0	0.075	94.6
25.0	100.0	0.0269	77.5
19.0	100.0	0.0175	72.1
12.5	100.0	0.0106	63.2
9.5	100.0	0.0076	59.6
4.75	100.0	0.0055	56.1
2.00	100.0	0.0028	47.1
1.180	99.7	0.0012	36.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.9	2.00 mm to 425 µm
Fine Sand	4.5	425 µm to 75 µm
Silt	51.9	75 µm to 2 µm
Clay	42.7	<2 µm



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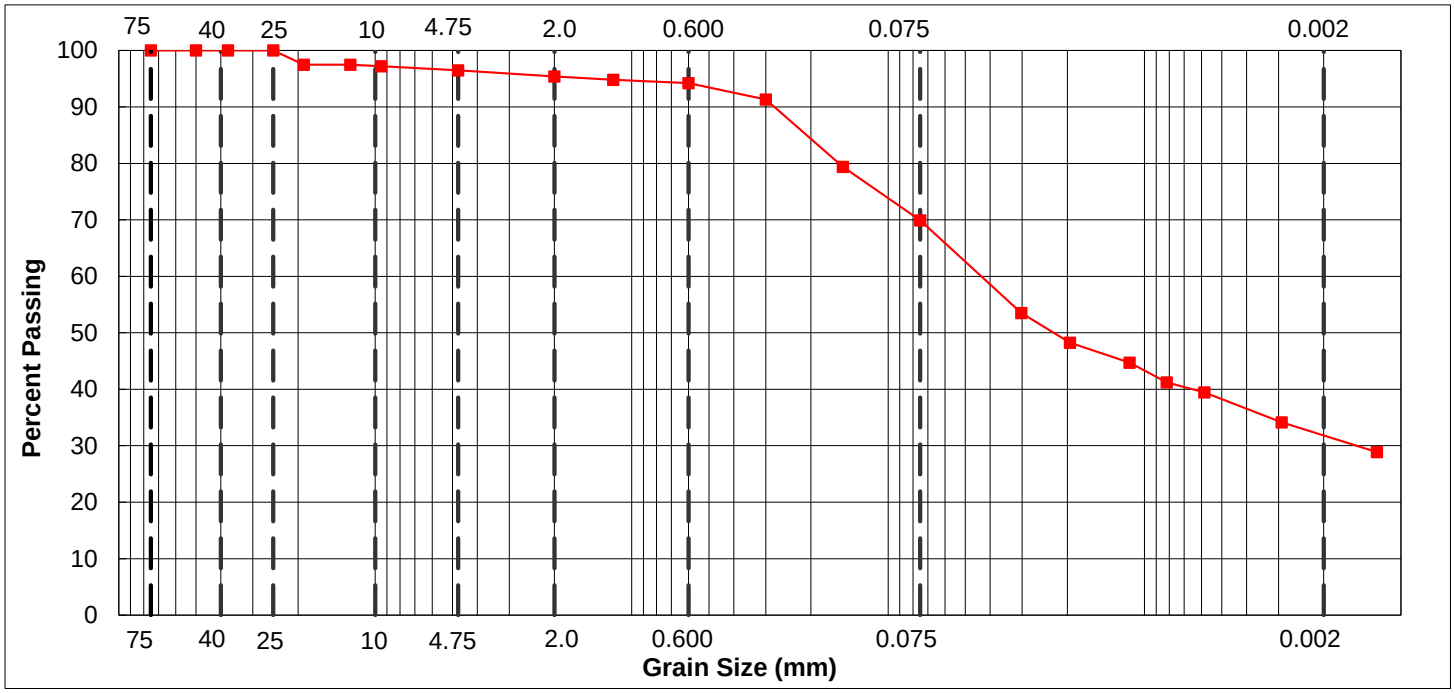
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	485AU1
Project No.:	1560-193-00	**Source:**	22BH485
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 485AU1	**Test Date:**	3-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	94.2
75.0	100.0	0.300	91.3
50.0	100.0	0.150	79.4
37.5	100.0	0.075	69.9
25.0	100.0	0.0302	53.5
19.0	97.5	0.0195	48.2
12.5	97.5	0.0114	44.7
9.5	97.2	0.0082	41.2
4.75	96.5	0.0058	39.4
2.00	95.4	0.0029	34.2
1.180	94.8	0.0012	28.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	3.5	20 mm to 4.75 mm
Coarse Sand	1.1	4.75 mm to 2.00 mm
Medium Sand	1.2	2.00 mm to 425 µm
Fine Sand	24.3	425 µm to 75 µm
Silt	38.1	75 µm to 2 µm
Clay	31.8	<2 µm



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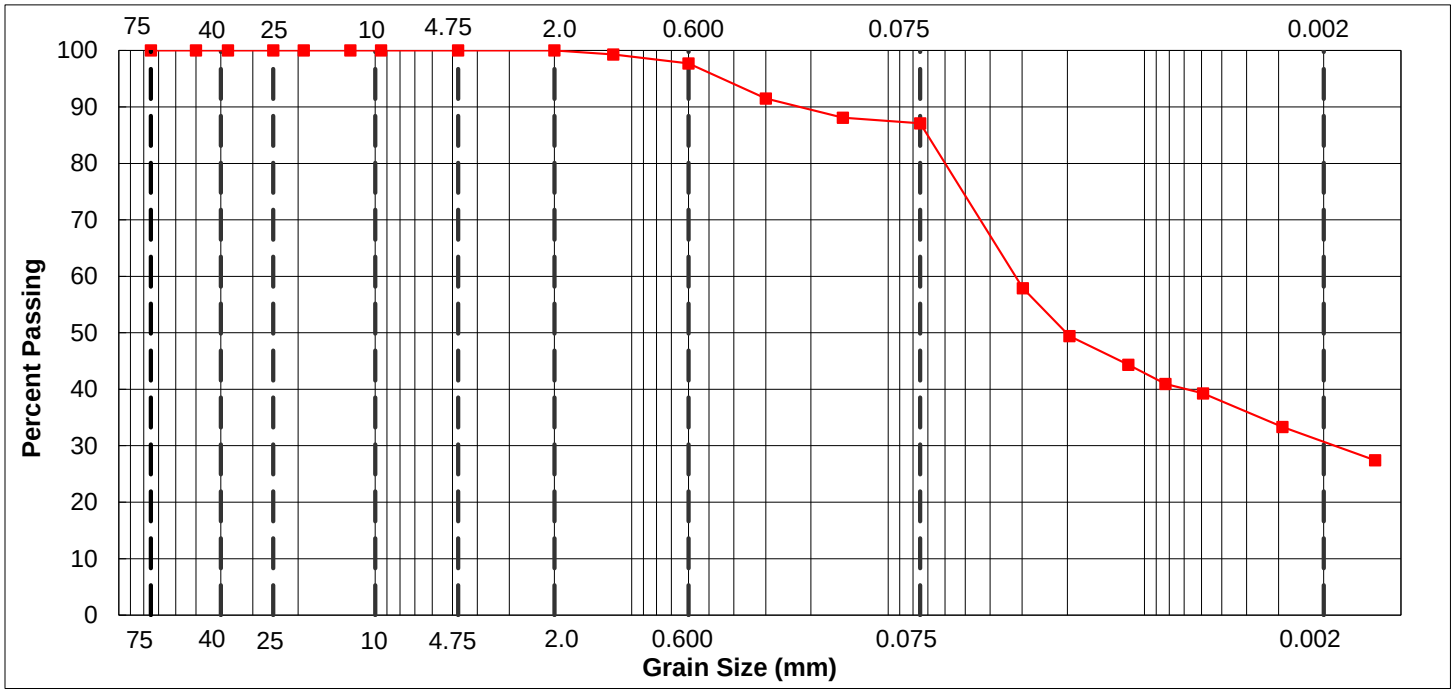
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	488AU7
Project No.:	1560-193-00	**Source:**	22BH488
Owner:	EID	**Sample Depth:**	5.2m
File No.:	GSA - 488AU7	**Test Date:**	19-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.7
75.0	100.0	0.300	91.5
50.0	100.0	0.150	88.1
37.5	100.0	0.075	87.1
25.0	100.0	0.0298	57.9
19.0	100.0	0.0196	49.4
12.5	100.0	0.0116	44.4
9.5	100.0	0.0083	41.0
4.75	100.0	0.0059	39.3
2.00	100.0	0.0029	33.3
1.180	99.3	0.0013	27.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.3	2.00 mm to 425 µm
Fine Sand	10.6	425 µm to 75 µm
Silt	56.4	75 µm to 2 µm
Clay	30.7	<2 µm



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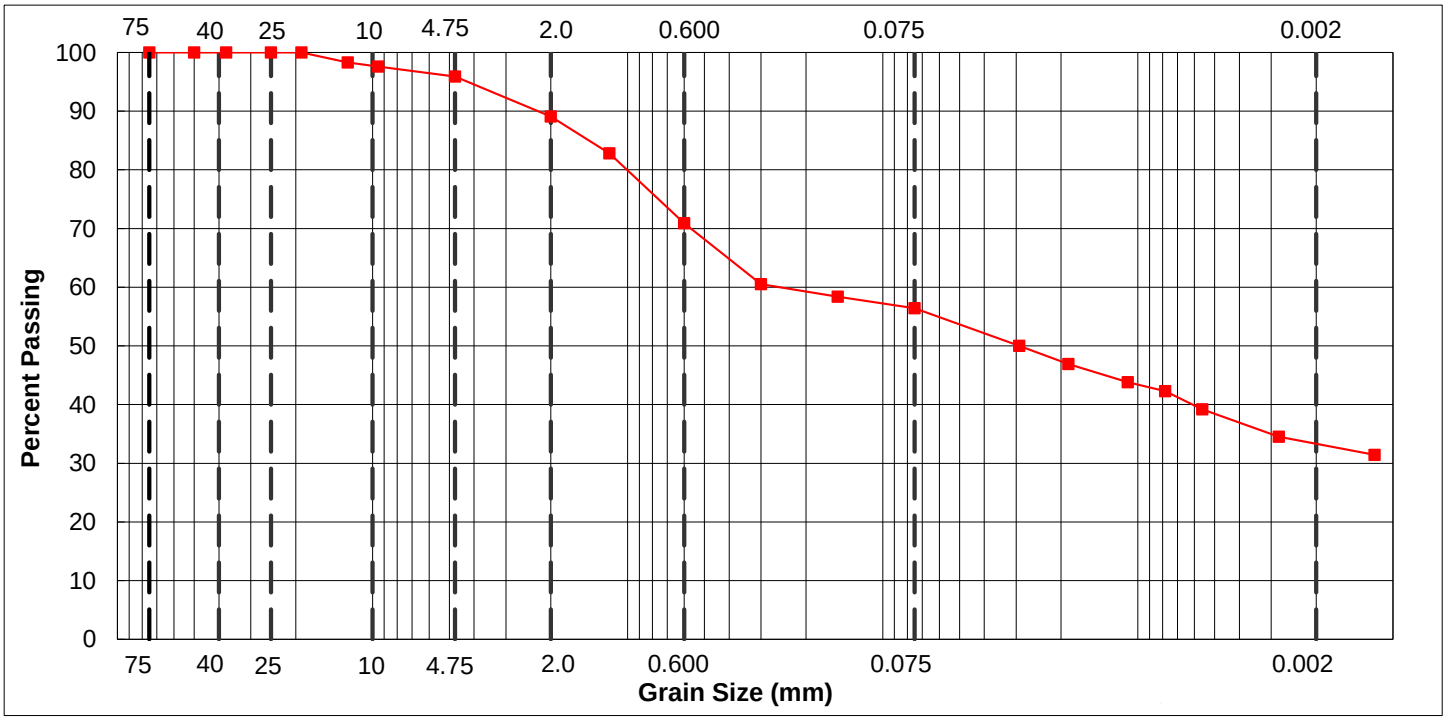
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	489AU1
Project No.:	1560-193-00	**Source:**	22BH489
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 489AU1	**Test Date:**	29-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	70.9
75.0	100.0	0.300	60.5
50.0	100.0	0.150	58.4
37.5	100.0	0.075	56.4
25.0	100.0	0.0292	50.0
19.0	100.0	0.0187	46.9
12.5	98.3	0.0109	43.8
9.5	97.6	0.0078	42.3
4.75	95.9	0.0056	39.2
2.00	89.1	0.0028	34.5
1.180	82.8	0.0012	31.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	4.1	20 mm to 4.75 mm
Coarse Sand	6.8	4.75 mm to 2.00 mm
Medium Sand	18.2	2.00 mm to 425 µm
Fine Sand	14.5	425 µm to 75 µm
Silt	23.1	75 µm to 2 µm
Clay	33.3	<2 µm



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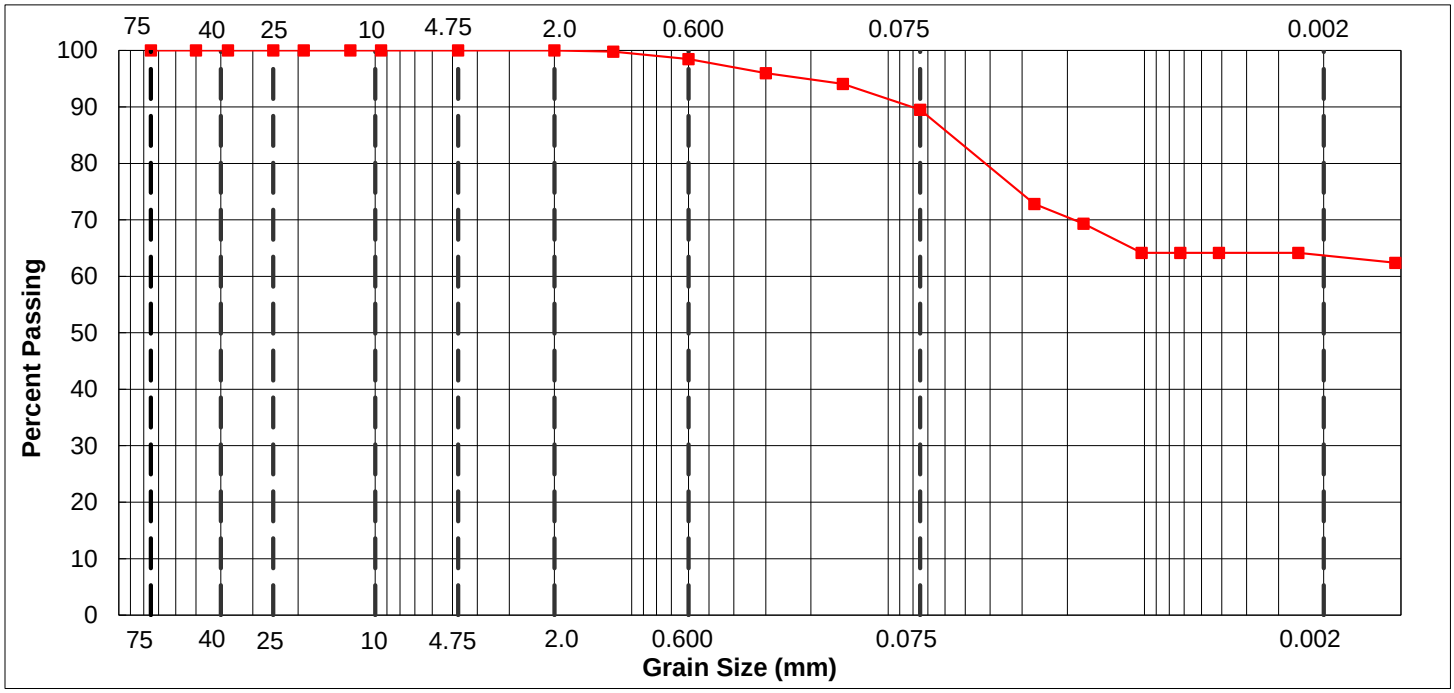
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	490AU1
Project No.:	1560-193-00	**Source:**	22BH490
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 490AU1	**Test Date:**	19-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.5
75.0	100.0	0.300	96.0
50.0	100.0	0.150	94.1
37.5	100.0	0.075	89.5
25.0	100.0	0.0269	72.8
19.0	100.0	0.0173	69.3
12.5	100.0	0.0103	64.1
9.5	100.0	0.0073	64.1
4.75	100.0	0.0051	64.1
2.00	100.0	0.0025	64.1
1.180	99.8	0.0011	62.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.5	2.00 mm to 425 µm
Fine Sand	9.0	425 µm to 75 µm
Silt	25.8	75 µm to 2 µm
Clay	63.7	<2 µm



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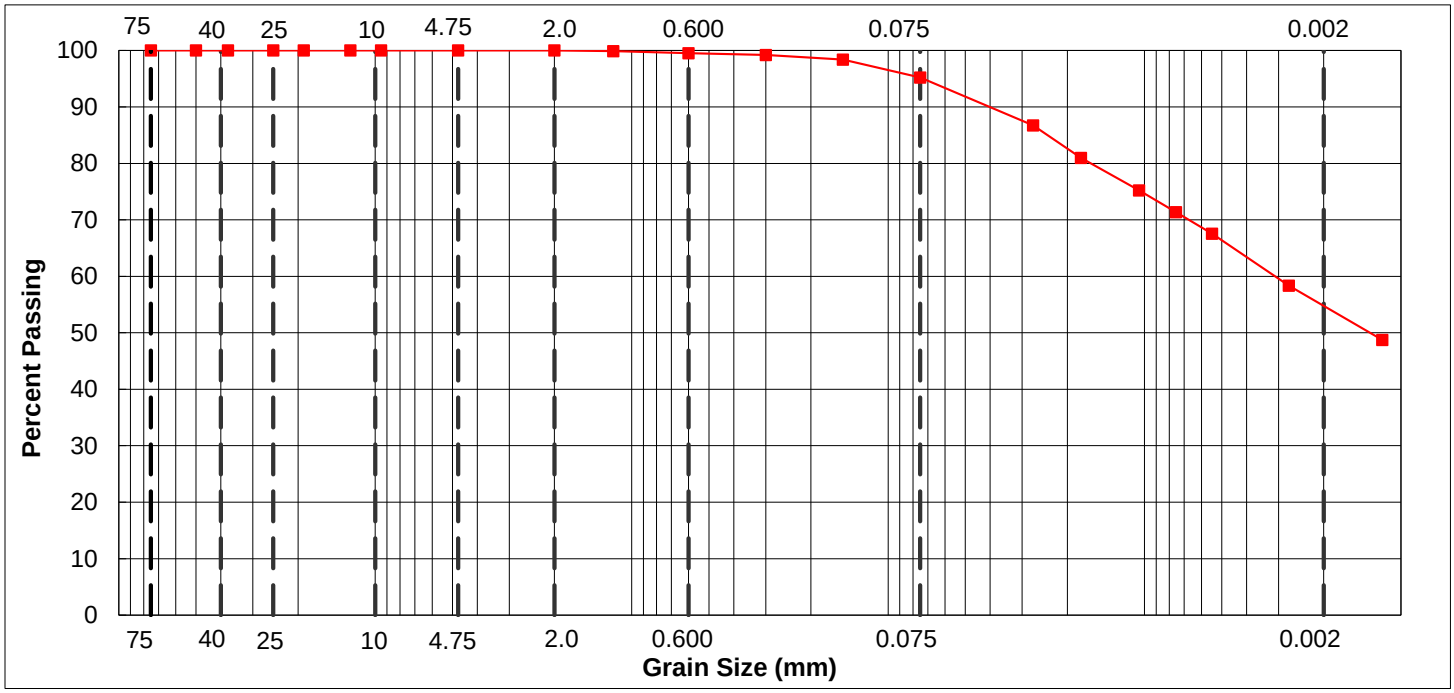
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	490AU2
Project No.:	1560-193-00	**Source:**	22BH490
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 490AU2	**Test Date:**	21-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.2
50.0	100.0	0.150	98.4
37.5	100.0	0.075	95.2
25.0	100.0	0.0272	86.7
19.0	100.0	0.0177	81.0
12.5	100.0	0.0105	75.2
9.5	100.0	0.0076	71.4
4.75	100.0	0.0054	67.5
2.00	100.0	0.0027	58.3
1.180	99.9	0.0012	48.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	4.3	425 µm to 75 µm
Silt	40.5	75 µm to 2 µm
Clay	54.7	<2 µm



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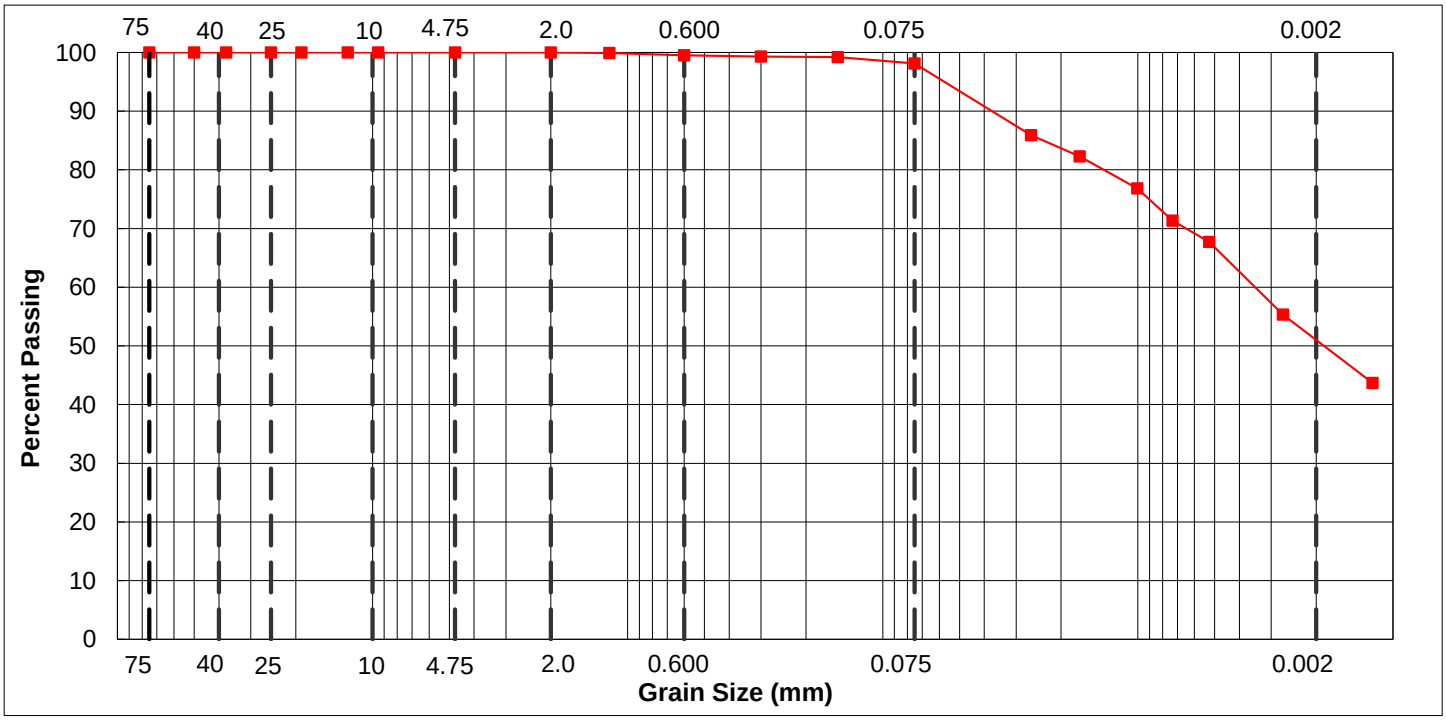
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	490AU4
Project No.:	1560-193-00	**Source:**	22BH490
Owner:	EID	**Sample Depth:**	2.7 m
File No.:	GSA - 490AU4	**Test Date:**	8-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.3
50.0	100.0	0.150	99.2
37.5	100.0	0.075	98.1
25.0	100.0	0.0262	85.9
19.0	100.0	0.0169	82.3
12.5	100.0	0.0101	76.8
9.5	100.0	0.0073	71.4
4.75	100.0	0.0053	67.7
2.00	100.0	0.0027	55.3
1.180	99.9	0.0012	43.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	1.4	425 µm to 75 µm
Silt	47.1	75 µm to 2 µm
Clay	51.0	<2 µm



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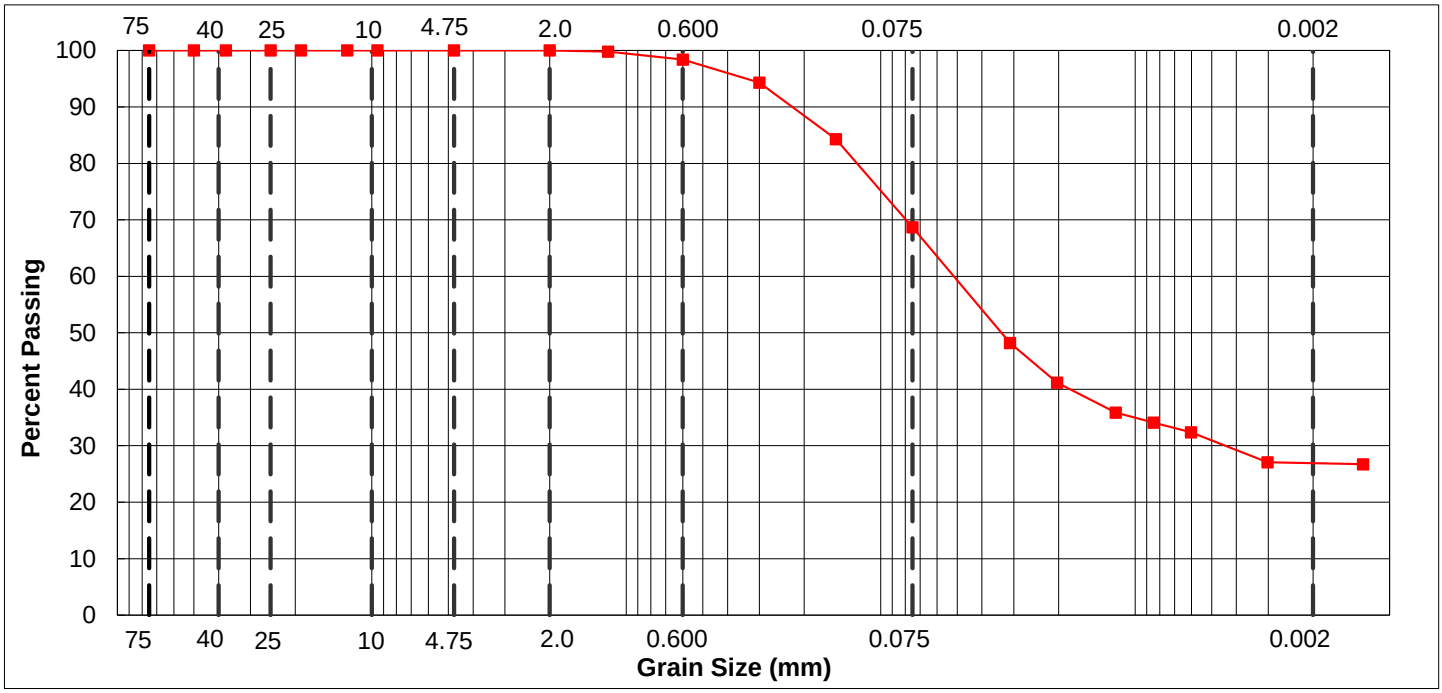
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	491AU1
Project No.:	1560-193-00	**Source:**	22BH491
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 491AU1	**Test Date:**	26-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.4
75.0	100.0	0.300	94.3
50.0	100.0	0.150	84.3
37.5	100.0	0.075	68.7
25.0	100.0	0.0310	48.2
19.0	100.0	0.0202	41.2
12.5	100.0	0.0119	35.9
9.5	100.0	0.0085	34.1
4.75	100.0	0.0060	32.4
2.00	100.0	0.0030	27.1
1.180	99.8	0.0013	26.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.6	2.00 mm to 425 µm
Fine Sand	29.7	425 µm to 75 µm
Silt	41.8	75 µm to 2 µm
Clay	26.9	<2 µm



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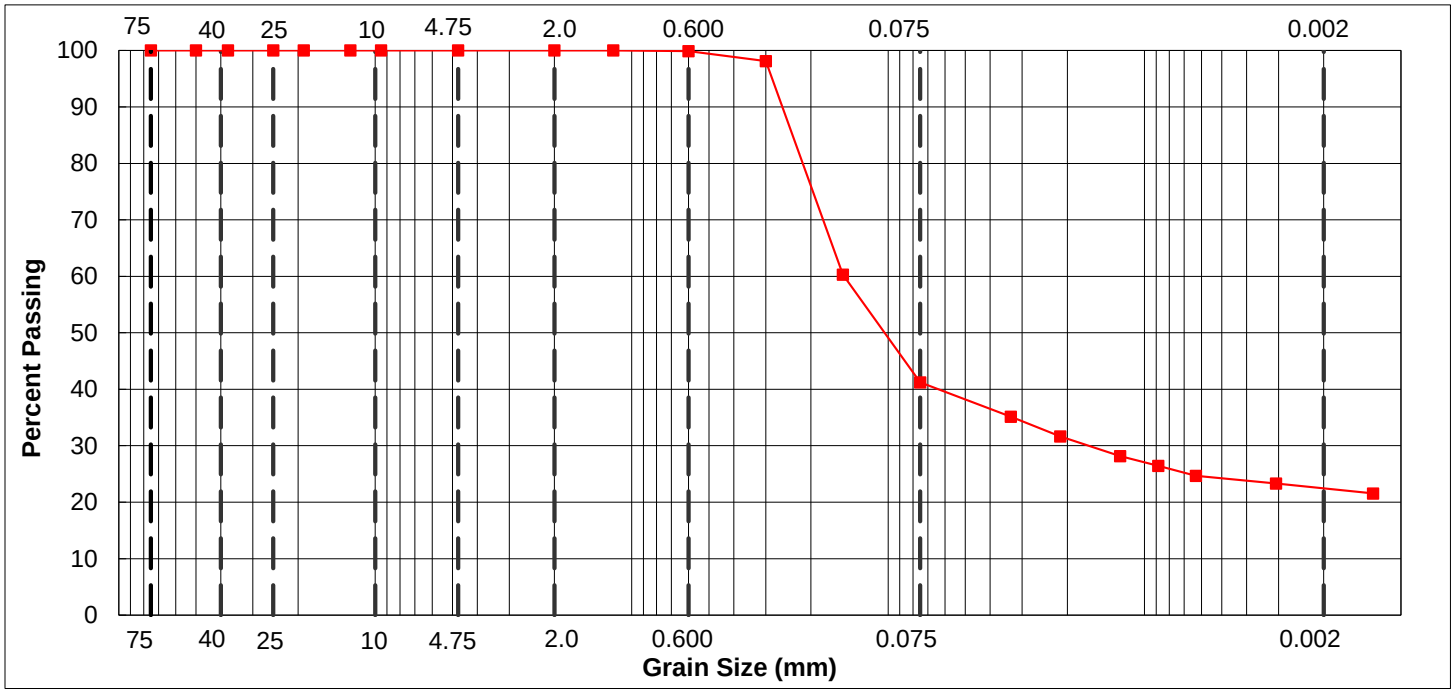
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	492AU1
Project No.:	1560-193-00	**Source:**	22BH492
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 492AU1	**Test Date:**	21-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	98.1
50.0	100.0	0.150	60.3
37.5	100.0	0.075	41.2
25.0	100.0	0.0332	35.1
19.0	100.0	0.0213	31.6
12.5	100.0	0.0125	28.2
9.5	100.0	0.0088	26.4
4.75	100.0	0.0063	24.7
2.00	100.0	0.0031	23.3
1.180	100.0	0.0013	21.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	58.7	425 µm to 75 µm
Silt	18.8	75 µm to 2 µm
Clay	22.4	<2 µm



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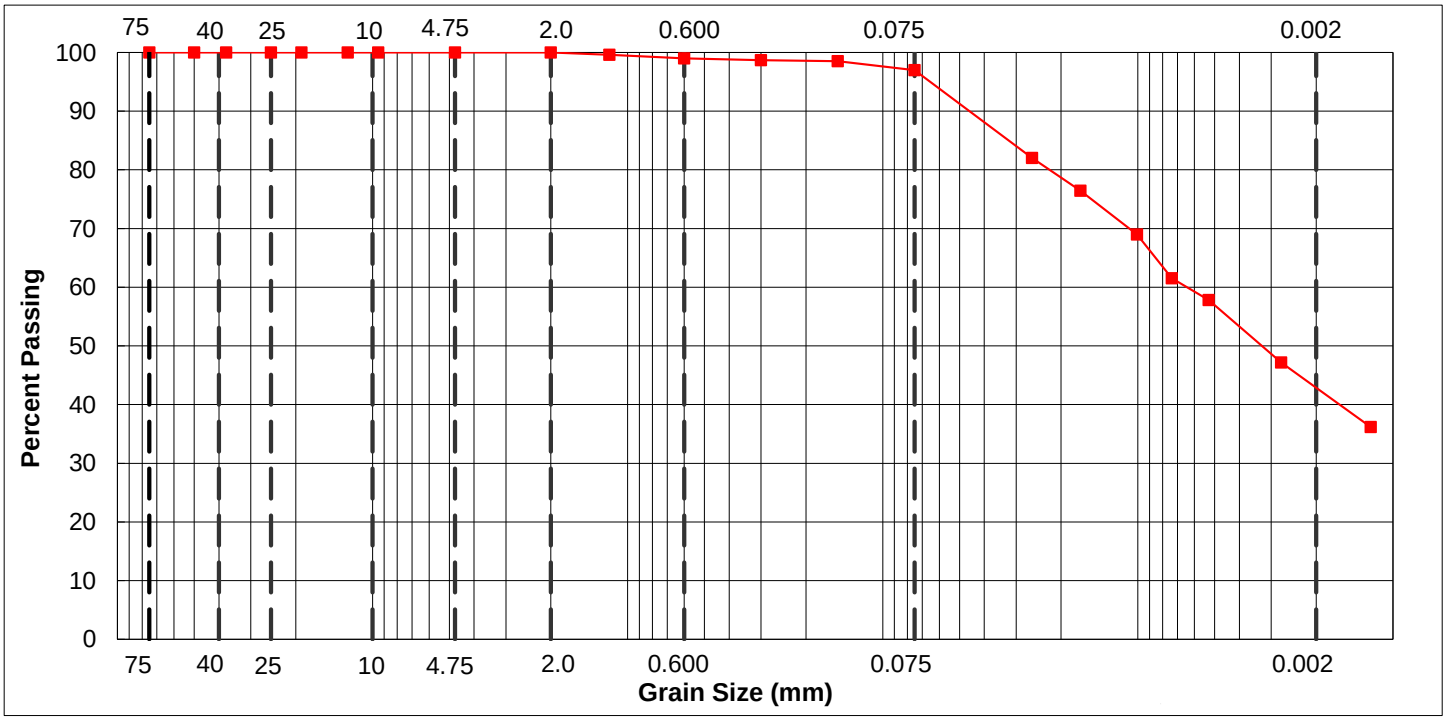
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	492AU4
Project No.:	1560-193-00	**Source:**	22BH492
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 492AU4	**Test Date:**	30-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.0
75.0	100.0	0.300	98.7
50.0	100.0	0.150	98.5
37.5	100.0	0.075	97.0
25.0	100.0	0.0260	82.0
19.0	100.0	0.0168	76.4
12.5	100.0	0.0101	69.0
9.5	100.0	0.0074	61.5
4.75	100.0	0.0053	57.8
2.00	100.0	0.0027	47.2
1.180	99.6	0.0012	36.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.0	2.00 mm to 425 µm
Fine Sand	2.0	425 µm to 75 µm
Silt	54.1	75 µm to 2 µm
Clay	42.9	<2 µm



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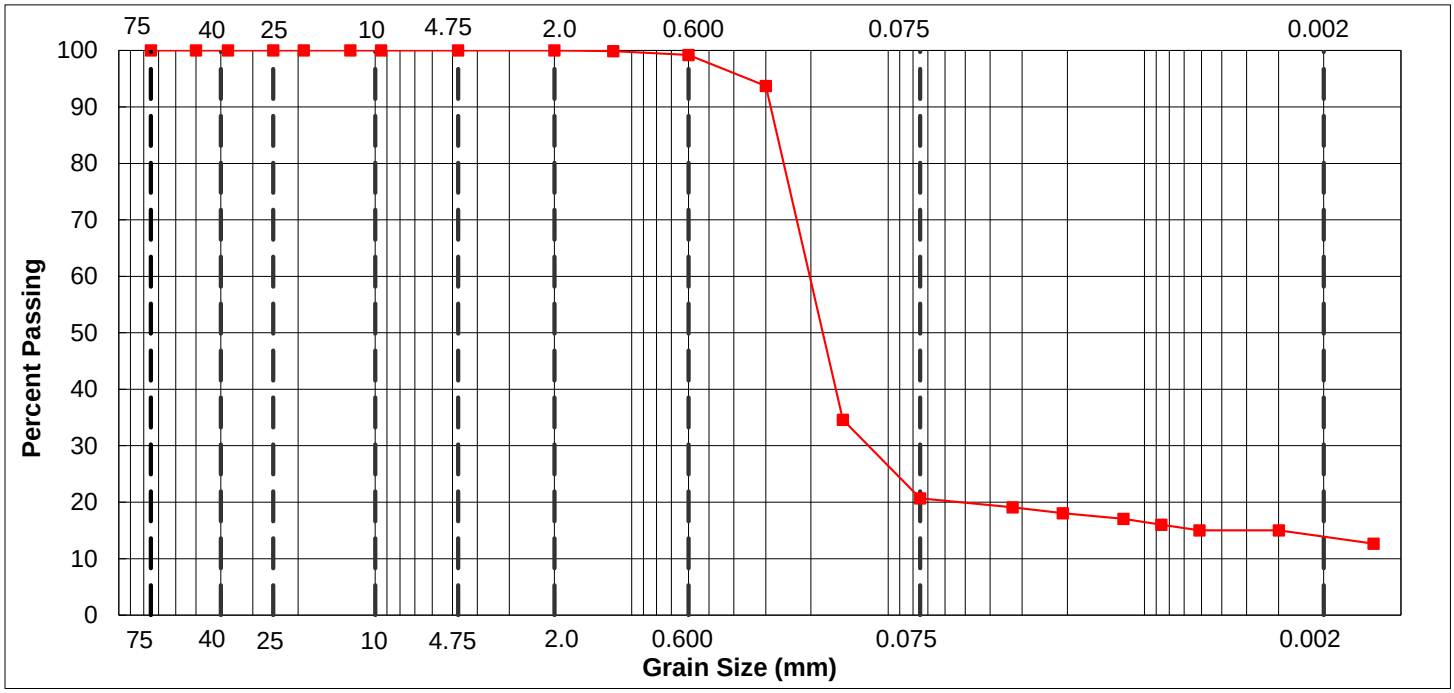
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	493AU1
Project No.:	1560-193-00	**Source:**	22BH493
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 493AU1	**Test Date:**	21-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	93.7
50.0	100.0	0.150	34.6
37.5	100.0	0.075	20.7
25.0	100.0	0.0327	19.1
19.0	100.0	0.0208	18.1
12.5	100.0	0.0121	17.1
9.5	100.0	0.0086	16.0
4.75	100.0	0.0061	15.0
2.00	100.0	0.0030	15.0
1.180	99.9	0.0013	12.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	78.5	425 µm to 75 µm
Silt	6.8	75 µm to 2 µm
Clay	13.9	<2 µm



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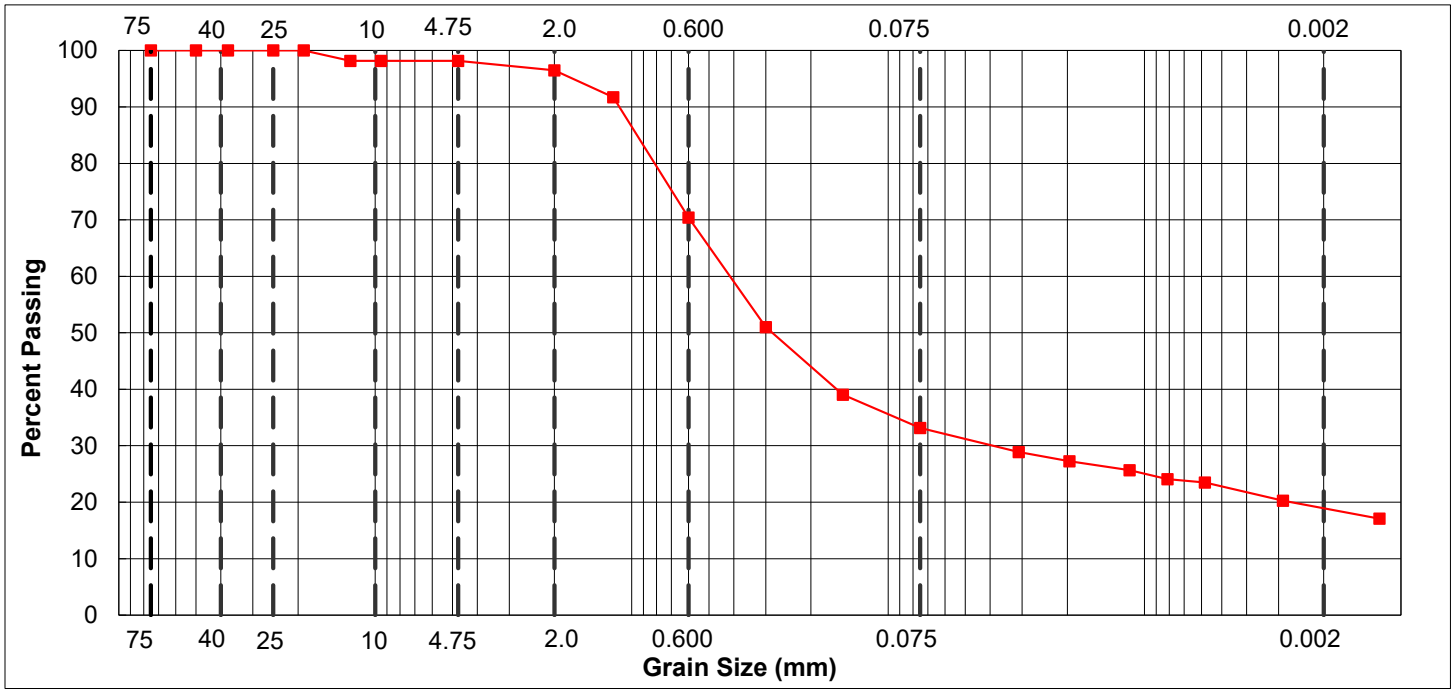
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	493AU3
Project No.:	1560-193-00	**Source:**	22BH493
Owner:	EID	**Sample Depth:**	2.1m
File No.:	GSA - 493AU3	**Test Date:**	18-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	70.4
75.0	100.0	0.300	51.0
50.0	100.0	0.150	39.1
37.5	100.0	0.075	33.2
25.0	100.0	0.0309	28.9
19.0	100.0	0.0196	27.3
12.5	98.2	0.0114	25.7
9.5	98.2	0.0081	24.1
4.75	98.2	0.0058	23.5
2.00	96.5	0.0029	20.3
1.180	91.7	0.0012	17.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	1.8	20 mm to 4.75 mm
Coarse Sand	1.7	4.75 mm to 2.00 mm
Medium Sand	26.1	2.00 mm to 425 µm
Fine Sand	37.2	425 µm to 75 µm
Silt	14.3	75 µm to 2 µm
Clay	18.9	<2 µm



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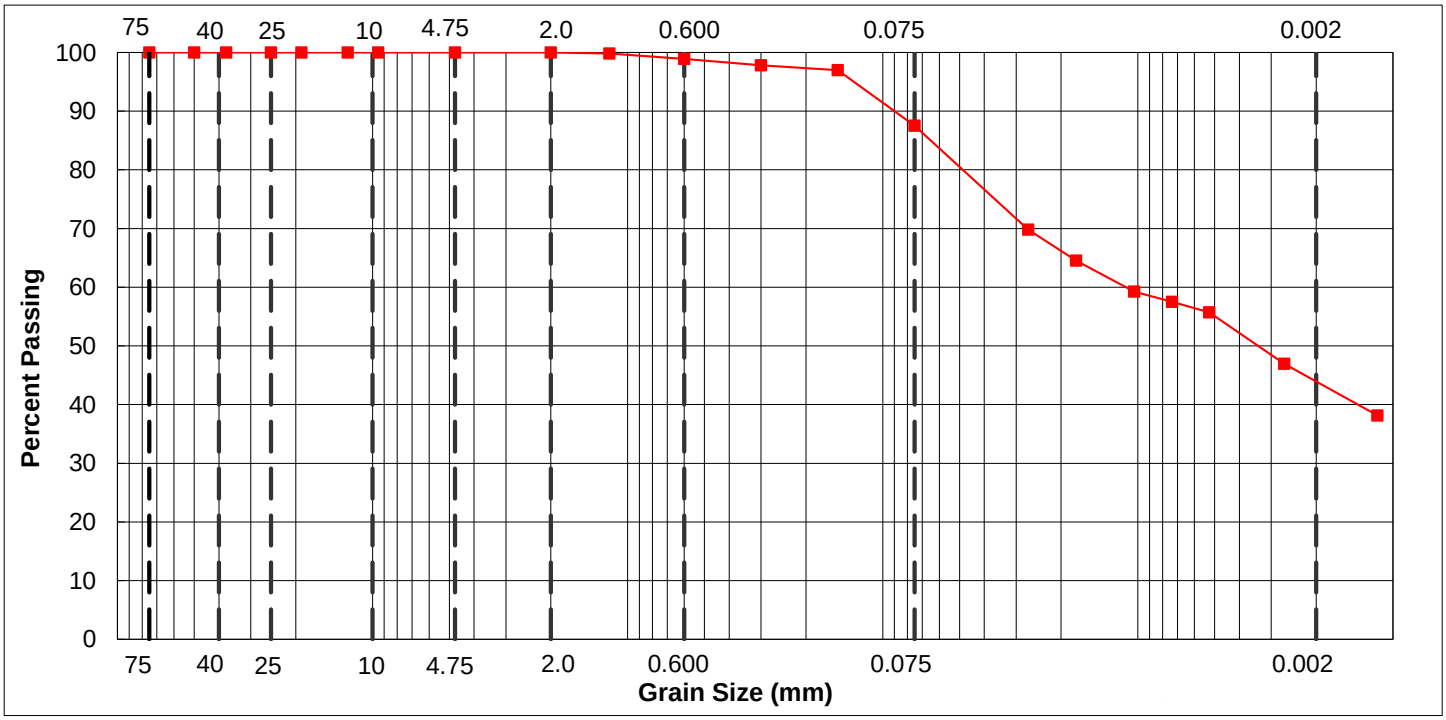
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	494AU1
Project No.:	1560-193-00	**Source:**	22BH491
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 494AU1	**Test Date:**	27-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.9
75.0	100.0	0.300	97.8
50.0	100.0	0.150	97.0
37.5	100.0	0.075	87.5
25.0	100.0	0.0269	69.8
19.0	100.0	0.0175	64.5
12.5	100.0	0.0103	59.3
9.5	100.0	0.0073	57.5
4.75	100.0	0.0052	55.7
2.00	100.0	0.0027	46.9
1.180	99.8	0.0012	38.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.1	2.00 mm to 425 µm
Fine Sand	11.4	425 µm to 75 µm
Silt	43.6	75 µm to 2 µm
Clay	43.9	<2 µm



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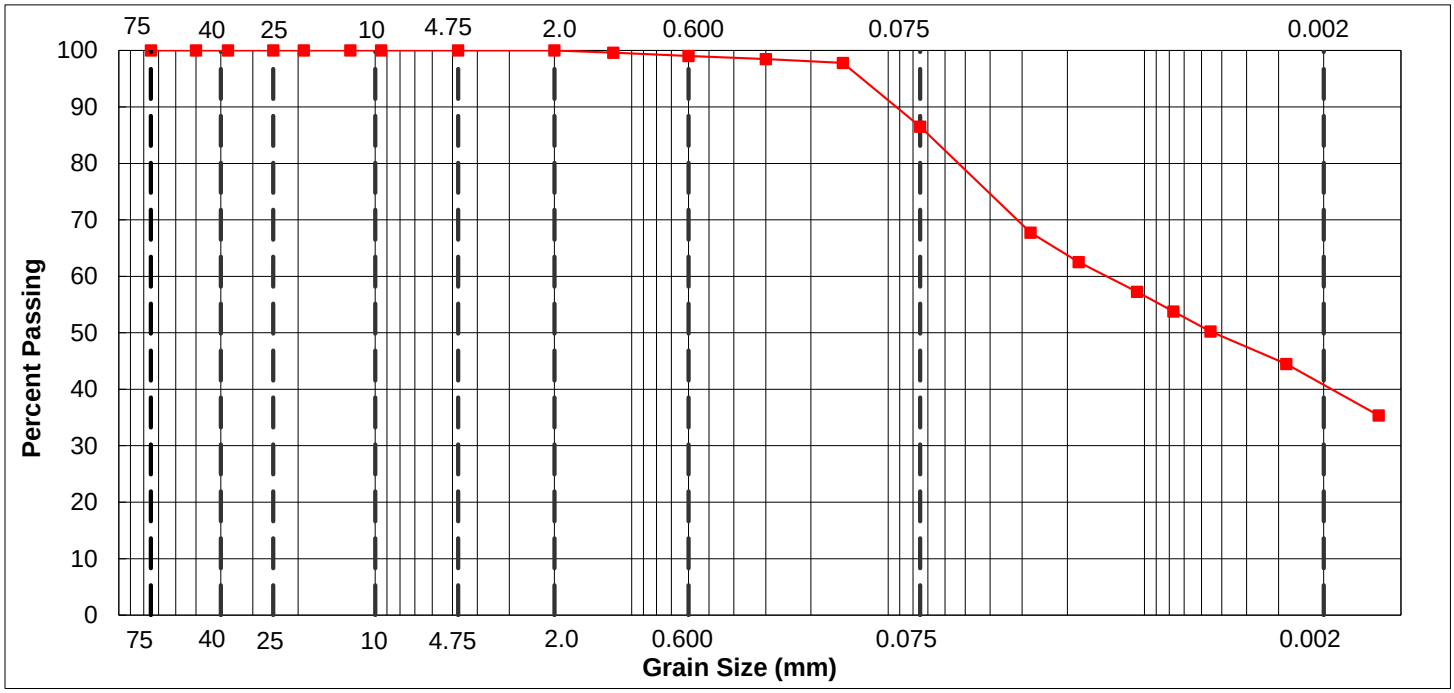
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	494AU4
Project No.:	1560-193-00	**Source:**	22BH494
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 494AU4	**Test Date:**	21-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.0
75.0	100.0	0.300	98.5
50.0	100.0	0.150	97.8
37.5	100.0	0.075	86.5
25.0	100.0	0.0278	67.8
19.0	100.0	0.0181	62.5
12.5	100.0	0.0107	57.3
9.5	100.0	0.0077	53.8
4.75	100.0	0.0055	50.3
2.00	100.0	0.0028	44.5
1.180	99.6	0.0012	35.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.0	2.00 mm to 425 µm
Fine Sand	12.5	425 µm to 75 µm
Silt	45.7	75 µm to 2 µm
Clay	40.8	<2 µm



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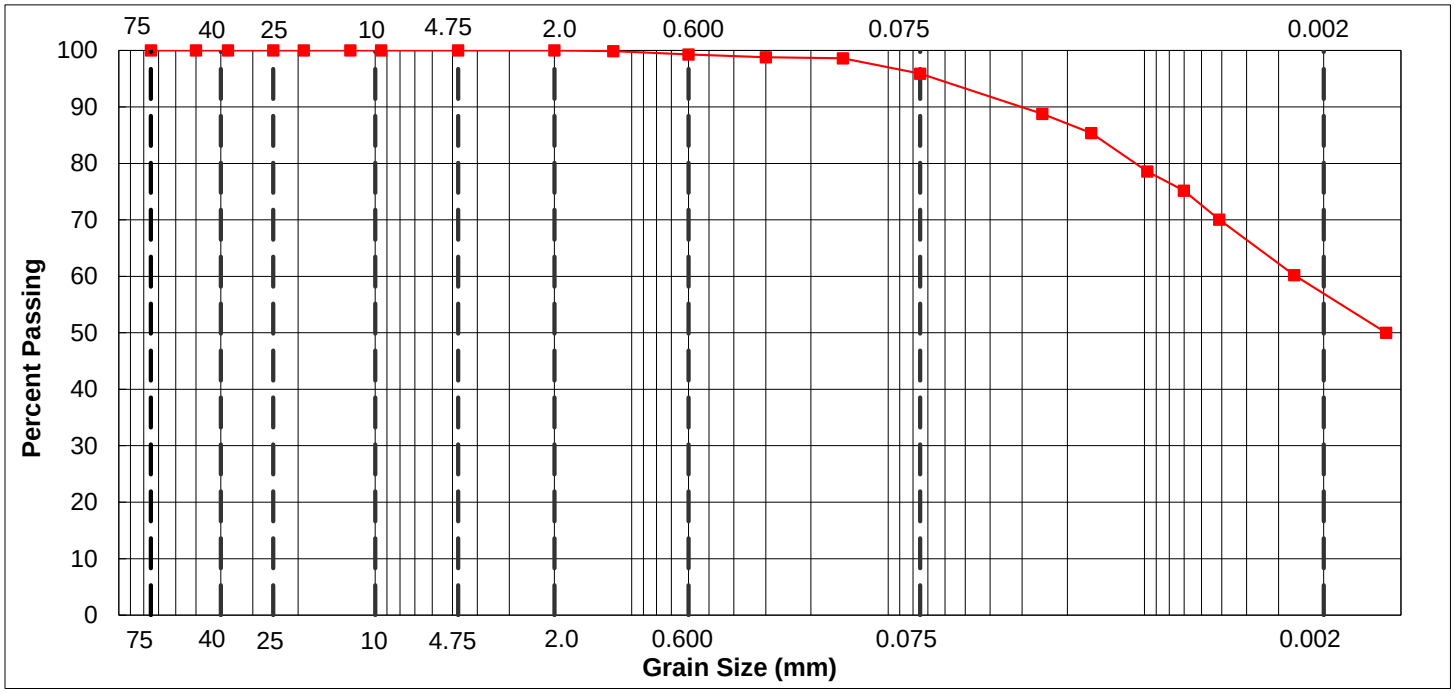
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	495AU1
Project No.:	1560-193-00	**Source:**	22BH495
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 495AU1	**Test Date:**	1-Sep-21

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.3
75.0	100.0	0.300	98.8
50.0	100.0	0.150	98.6
37.5	100.0	0.075	95.9
25.0	100.0	0.0250	88.8
19.0	100.0	0.0162	85.4
12.5	100.0	0.0098	78.6
9.5	100.0	0.0070	75.2
4.75	100.0	0.0051	70.1
2.00	100.0	0.0026	60.2
1.180	99.9	0.0011	50.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.7	2.00 mm to 425 µm
Fine Sand	3.4	425 µm to 75 µm
Silt	39.0	75 µm to 2 µm
Clay	56.9	<2 µm



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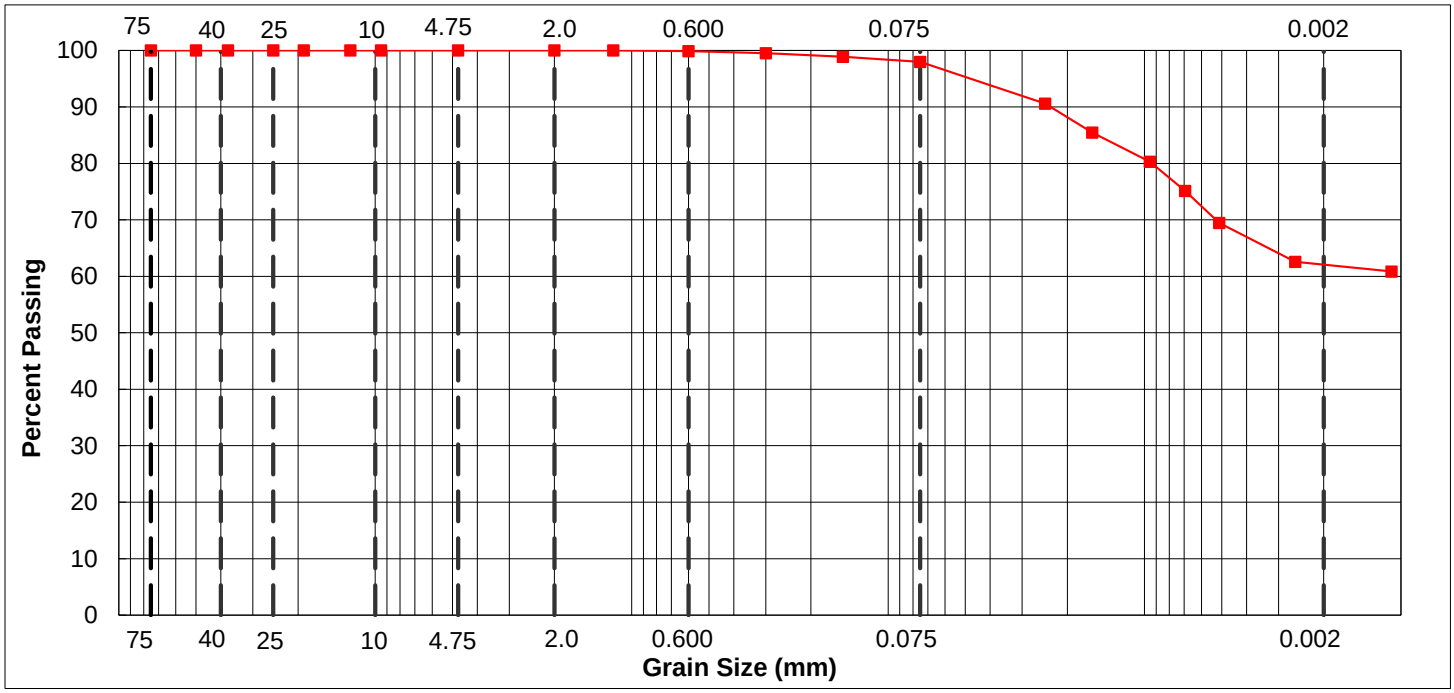
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	496AU1
Project No.:	1560-193-00	**Source:**	22BH496
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 496AU1	**Test Date:**	23-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.5
50.0	100.0	0.150	98.9
37.5	100.0	0.075	98.0
25.0	100.0	0.0244	90.6
19.0	100.0	0.0160	85.5
12.5	100.0	0.0095	80.3
9.5	100.0	0.0069	75.1
4.75	100.0	0.0051	69.5
2.00	100.0	0.0026	62.6
1.180	100.0	0.0011	60.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	1.9	425 µm to 75 µm
Silt	35.9	75 µm to 2 µm
Clay	62.1	<2 µm



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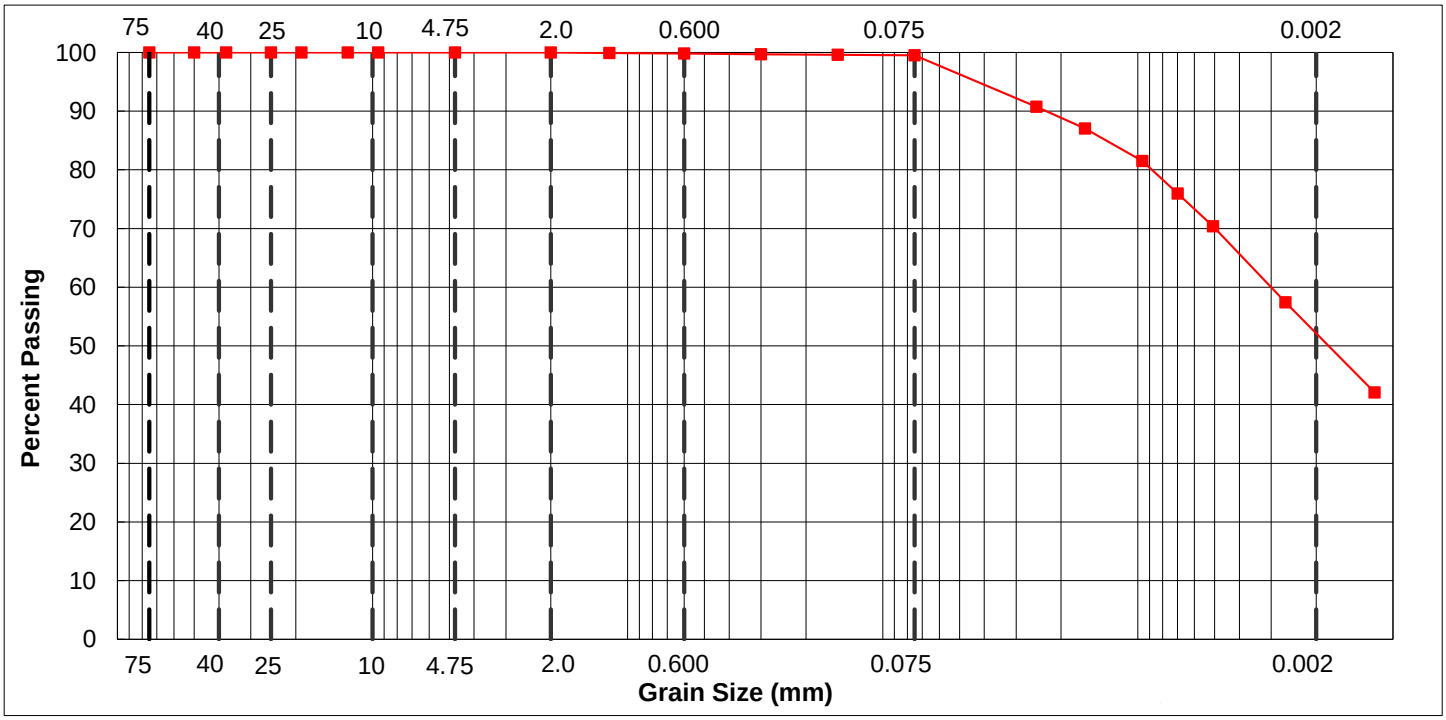
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	496AU4
Project No.:	1560-193-00	**Source:**	22BH496
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 496AU4	**Test Date:**	27-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.7
50.0	100.0	0.150	99.6
37.5	100.0	0.075	99.5
25.0	100.0	0.0250	90.8
19.0	100.0	0.0161	87.1
12.5	100.0	0.0096	81.5
9.5	100.0	0.0070	75.9
4.75	100.0	0.0051	70.4
2.00	100.0	0.0026	57.4
1.180	99.9	0.0012	42.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	47.4	75 µm to 2 µm
Clay	52.1	<2 µm



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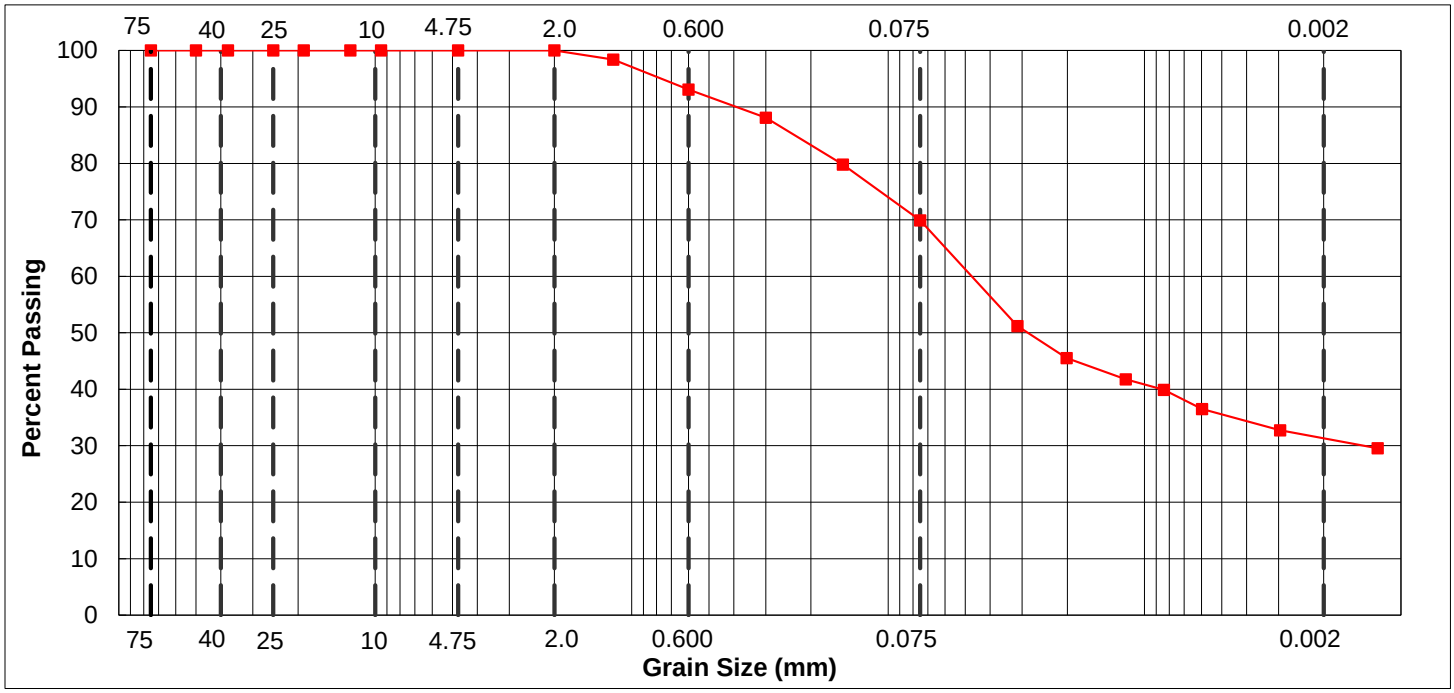
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	497AU1
Project No.:	1560-193-00	**Source:**	22BH497
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 497AU1	**Test Date:**	15-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	93.1
75.0	100.0	0.300	88.1
50.0	100.0	0.150	79.8
37.5	100.0	0.075	69.9
25.0	100.0	0.0313	51.2
19.0	100.0	0.0201	45.5
12.5	100.0	0.0118	41.8
9.5	100.0	0.0084	39.9
4.75	100.0	0.0060	36.5
2.00	100.0	0.0030	32.7
1.180	98.4	0.0012	29.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	6.9	2.00 mm to 425 µm
Fine Sand	23.2	425 µm to 75 µm
Silt	38.6	75 µm to 2 µm
Clay	31.3	<2 µm



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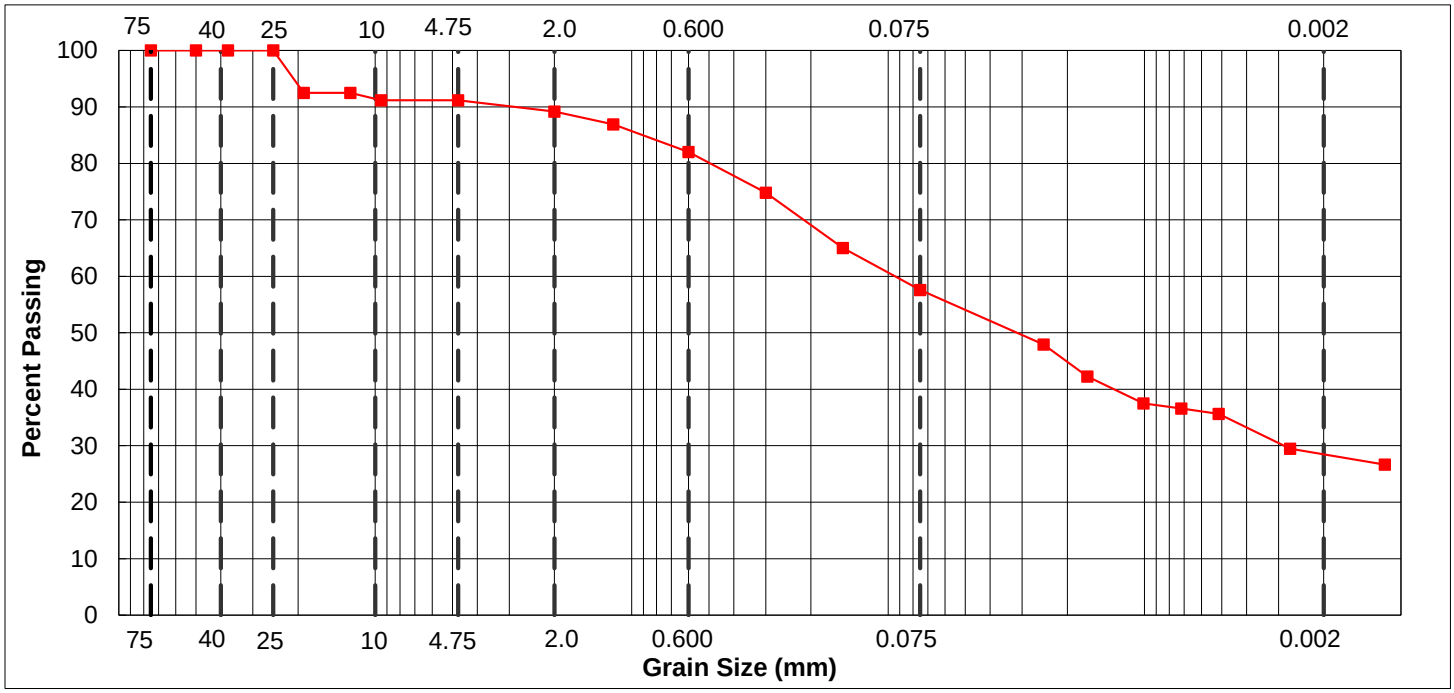
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	498AU1
Project No.:	1560-193-00	**Source:**	22BH498
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 498AU1	**Test Date:**	19-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	82.0
75.0	100.0	0.300	74.8
50.0	100.0	0.150	65.0
37.5	100.0	0.075	57.6
25.0	100.0	0.0248	47.9
19.0	92.5	0.0167	42.2
12.5	92.5	0.0101	37.5
9.5	91.2	0.0072	36.6
4.75	91.2	0.0051	35.6
2.00	89.2	0.0027	29.5
1.180	86.9	0.0012	26.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	8.8	20 mm to 4.75 mm
Coarse Sand	2.0	4.75 mm to 2.00 mm
Medium Sand	7.2	2.00 mm to 425 µm
Fine Sand	24.4	425 µm to 75 µm
Silt	29.1	75 µm to 2 µm
Clay	28.5	<2 µm



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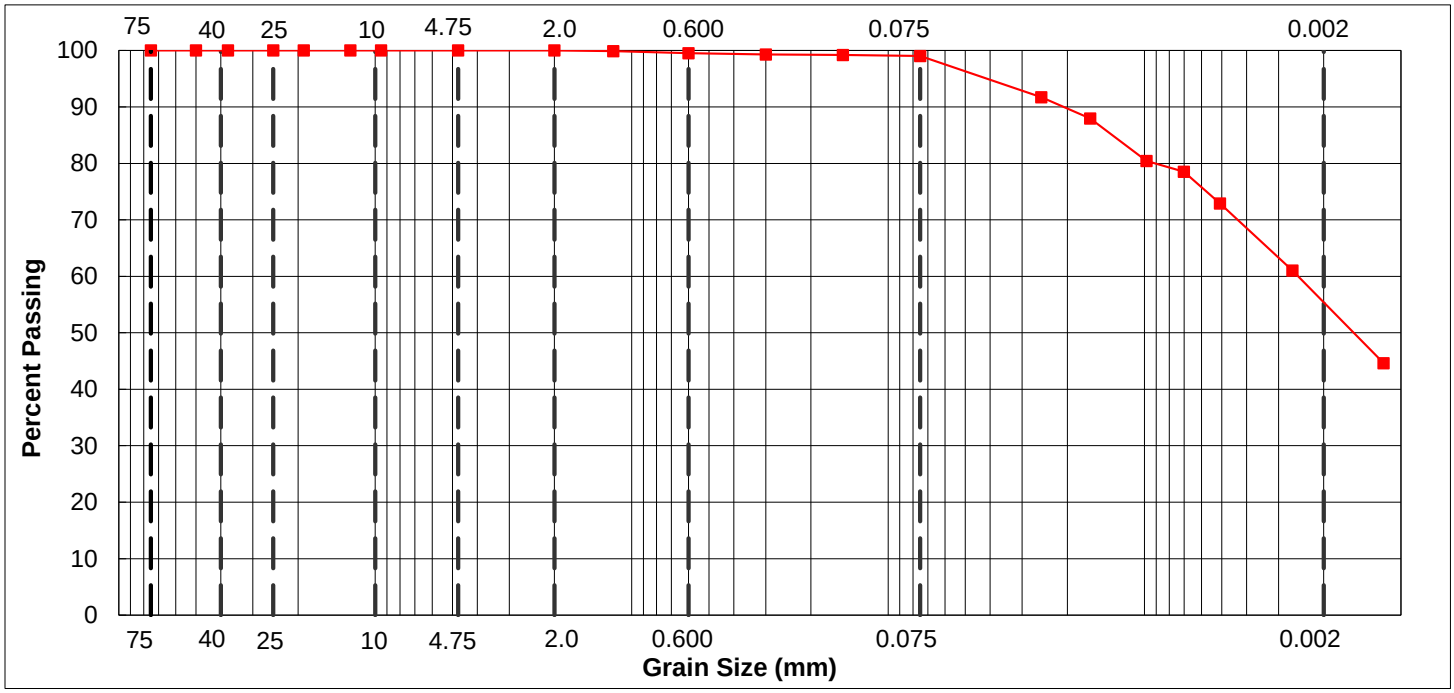
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	498AU4
Project No.:	1560-193-00	**Source:**	22BH498
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 498AU4	**Test Date:**	15-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.3
50.0	100.0	0.150	99.2
37.5	100.0	0.075	99.0
25.0	100.0	0.0253	91.7
19.0	100.0	0.0163	88.0
12.5	100.0	0.0098	80.4
9.5	100.0	0.0070	78.5
4.75	100.0	0.0051	72.9
2.00	100.0	0.0027	61.0
1.180	99.9	0.0012	44.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	0.5	425 µm to 75 µm
Silt	43.6	75 µm to 2 µm
Clay	55.4	<2 µm



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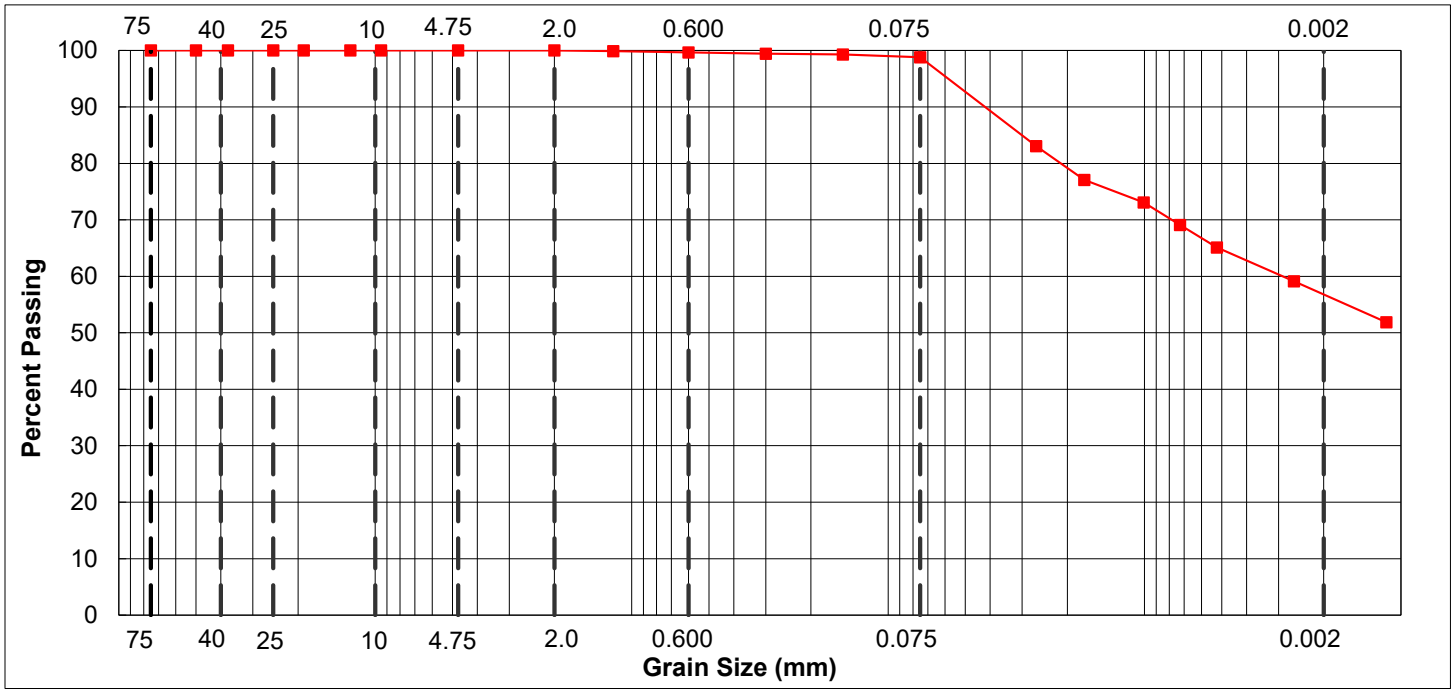
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	498AU5
Project No.:	1560-193-00	**Source:**	22BH498
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 498AU5	**Test Date:**	19-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	99.4
50.0	100.0	0.150	99.3
37.5	100.0	0.075	98.8
25.0	100.0	0.0264	83.1
19.0	100.0	0.0172	77.1
12.5	100.0	0.0101	73.1
9.5	100.0	0.0073	69.1
4.75	100.0	0.0052	65.1
2.00	100.0	0.0026	59.1
1.180	99.9	0.0011	51.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	0.8	425 µm to 75 µm
Silt	42.0	75 µm to 2 µm
Clay	56.8	<2 µm



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SIEVE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	409B1
Project No.:	1560-193-00	**Source:**	22TP409
Owner:	EID	**Sample Depth:**	1.5m
File No.:	SA - 409B1	**Test Date:**	27-Oct-22

Tested in accordance with ASTM C117, C136, C702, D5821(Size Analysis of Aggregates)

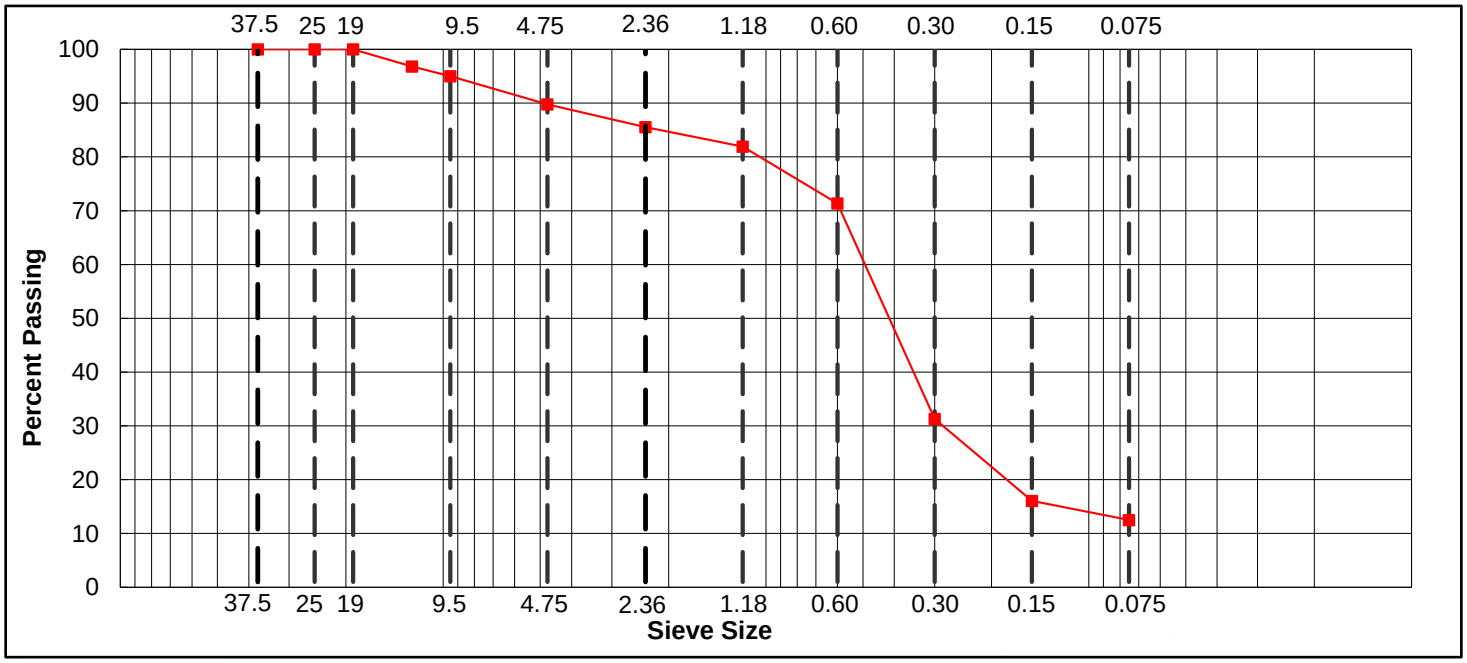
Aggregate Specification: Pit Run

SIEVE SIZE (mm)	PERCENT PASSING	Gradation Limits	
37.5	100		
25	100		
19	100		
12.5	97		
9.5	95		
4.75	90		
2.36	86		
1.18	82		
0.6	71		
0.3	31		
0.150	16.1		
0.075	12.5		

Additional Tests:

Moisture of crushed aggregate: 0.0%

Comments:



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SIEVE ANALYSIS REPORT

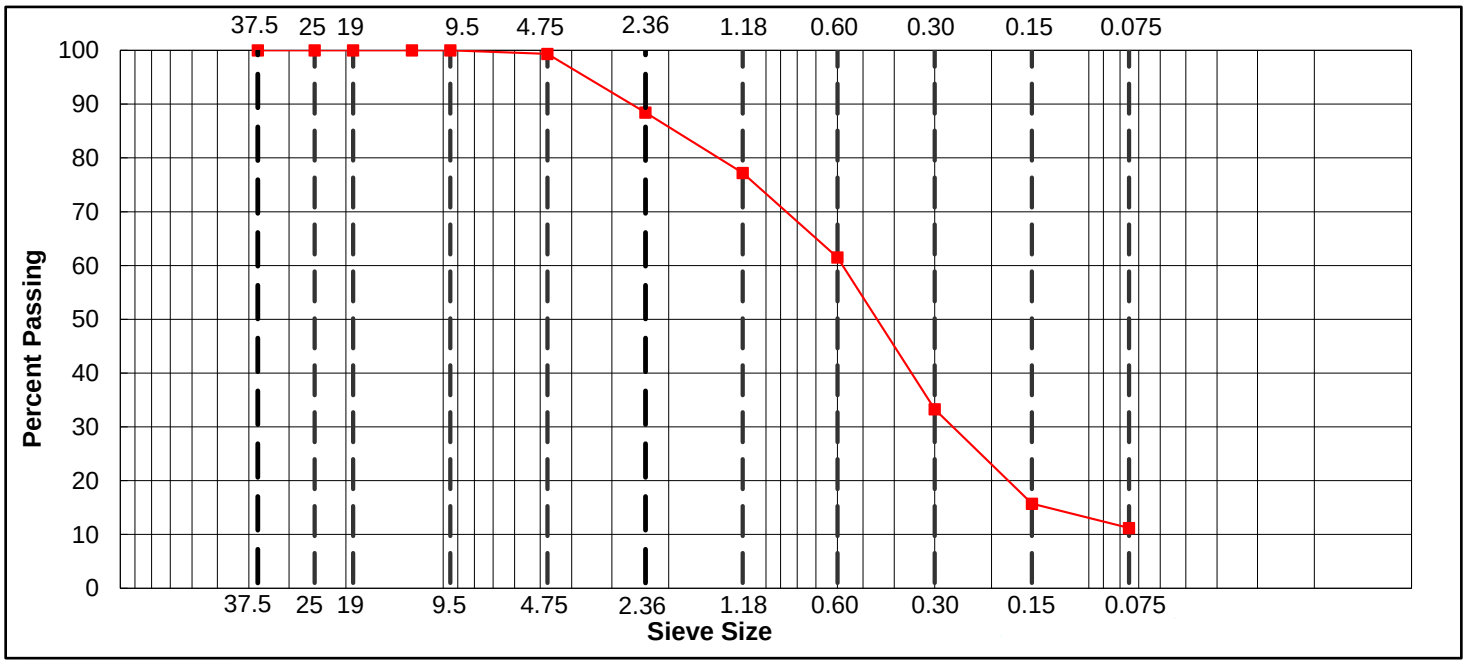
Project:	Snake Lake Reservoir Expansion	**Sample No.:**	409B2
Project No.:	1560-193-00	**Source:**	22TP409
Owner:	EID	**Sample Depth:**	3.4m
File No.:	SA - 409B2	**Test Date:**	27-Oct-22

Tested in accordance with ASTM C117, C136, C702, D5821(Size Analysis of Aggregates)

SIEVE SIZE (mm)	PERCENT PASSING	Gradation Limits	
37.5	100		
25	100		
19	100		
12.5	100		
9.5	100		
4.75	99		
2.36	88		
1.18	77		
0.600	62		
0.300	33		
0.150	15.7		
0.075	11.2		

Additional Tests:

Comments:



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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	401B1
Project No.:	1560-193-00	**Source:**	22TP401
Owner:	EID	**Sample Depth:**	1.0m
File No.:	DT - 401B1	**Date:**	19-Oct-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI — Inorganic clays of medium plasticity, silty clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1787.3	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	10.3	%	**Hydraulic Head:**	180	mm
Moisture Content (After):	14.2	%	**Flow Rate:**	2.41	ml/s
Length of Sample:	37.0	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	403AU1
Project No.:	1560-193-00	**Source:**	22BH403
Owner:	EID	**Sample Depth:**	1.0m
File No.:	DT - 403AU1	**Date:**	15-Aug-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI — Inorganic clays of medium plasticity, silty clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1791.8	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	14.3	%	**Hydraulic Head:**	180	mm
Moisture Content (After):	19.5	%	**Flow Rate:**	2.08	ml/s
Length of Sample:	39.1	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	404B2
Project No.:	1560-193-00	**Source:**	22TP404
Owner:	EID	**Sample Depth:**	3.7m
File No.:	DT - 404B2	**Date:**	29-Oct-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI — Inorganic clays of medium plasticity, silty clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1631.4	kg/m^3	**Classification:**	ND1	
Moisture Content (before):	13.4	%	**Hydraulic Head:**	1020	mm
Moisture Content (After):	25.6	%	**Flow Rate:**	1.41	ml/s
Length of Sample:	39.3	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	**Project:**	Snake Laker Reservoir	**Sample #:**	406B1
Project No.:	**Project No.:**	1560-193-00	**Source:**	22TP406
Owner:	**Owner:**	EID	**Sample Depth:**	1.0m
File No.:	DT - 406B1		**Date:**	13-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CH — Inorganic clays of high plasticity, fat clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1901.5	kg/m^3	**Classification:**	ND2	
Moisture Content (before):	5.5	%	**Hydraulic Head:**	1020	mm
Moisture Content (After):	16.6	%	**Flow Rate:**	3.66	ml/s
Length of Sample:	38.5	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	408B2
Project No.:	1560-193-00	**Source:**	22TP408
Owner:	EID	**Sample Depth:**	3.8m
File No.:	DT - 408B2	**Date:**	26-Oct-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI — Inorganic clays of medium plasticity, silty clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1548.7	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	16.9	%	**Hydraulic Head:**	380	mm
Moisture Content (After):	21.9	%	**Flow Rate:**	1.86	ml/s
Length of Sample:	38.0	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	411AU1
Project No.:	1560-193-00	**Source:**	22BH411
Owner:	EID	**Sample Depth:**	1.0m
File No.:	DT - 411AU1	**Date:**	15-Aug-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Remolded	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1556.9	kg/m^3	**Classification:**	D2	
Moisture Content (before):	15.0	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	18.4	%	**Flow Rate:**	1.10	ml/s
Length of Sample:	38.4	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	411AU2
Project No.:	1560-193-00	**Source:**	22BH411
Owner:	EID	**Sample Depth:**	2.5m
File No.:	DT - 411AU2	**Date:**	27-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CH Inorganic clays of high plasticity, fat clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1579.3	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	19.2	%	**Hydraulic Head:**	380	mm
Moisture Content (After):	24.5	%	**Flow Rate:**	2.22	ml/s
Length of Sample:	38.1	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Laker Reservoir	**Sample #:**	413B2
Project No.:	1560-193-00	**Source:**	22TP413
Owner:	EID	**Sample Depth:**	2.5m
File No.:	DT - 413B2	**Date:**	13-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CH — Inorganic clays of high plasticity, fat clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1746.6	kg/m^3	**Classification:**	D2	
Moisture Content (before):	15.2	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	26.9	%	**Flow Rate:**	1.79	ml/s
Length of Sample:	38.5	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	417AU1
Project No.:	1560-193-00	**Source:**	22BH417
Owner:	EID	**Sample Depth:**	1.0m
File No.:	DT - 417AU1	**Date:**	22-Oct-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI — Inorganic clays of medium plasticity, silty clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1836.2	kg/m^3	**Classification:**	D2	
Moisture Content (before):	14.6	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	15.8	%	**Flow Rate:**	1.79	ml/s
Length of Sample:	37.3	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	417B1
Project No.:	1560-193-00	**Source:**	22TP417
Owner:	EID	**Sample Depth:**	1.0m
File No.:	DT - 417B1	**Date:**	19-Oct-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI — Inorganic clays of medium plasticity, silty clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1842.0	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	10.4	%	**Hydraulic Head:**	180	mm
Moisture Content (After):	13.6	%	**Flow Rate:**	2.55	ml/s
Length of Sample:	38.9	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	431AU2
Project No.:	1560-193-00	**Source:**	22BH403
Owner:	EID	**Sample Depth:**	1.5m
File No.:	DT - 431AU2	**Date:**	15-Aug-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI Inorganic clays of medium plasticity, silty clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1637.8	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	10.7	%	**Hydraulic Head:**	180	mm
Moisture Content (After):	15.8	%	**Flow Rate:**	3.48	ml/s
Length of Sample:	38.0	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	473AU3
Project No.:	1560-193-00	**Source:**	22BH473
Owner:	EID	**Sample Depth:**	2.1m
File No.:	DT - 473AU3	**Date:**	6-Oct-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI Inorganic clays of medium plasticity, silty clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1609.2	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	21.7	%	**Hydraulic Head:**	180	mm
Moisture Content (After):	22.1	%	**Flow Rate:**	2.66	ml/s
Length of Sample:	38.3	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	478AU7
Project No.:	1560-193-00	**Source:**	22BH478
Owner:	EID	**Sample Depth:**	5.2m
File No.:	DT - 478AU7	**Date:**	8-Oct-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI — Inorganic clays of medium plasticity, silty clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1677.3	kg/m^3	**Classification:**	D2	
Moisture Content (before):	15.2	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	16.8	%	**Flow Rate:**	1.58	ml/s
Length of Sample:	38.8	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
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Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	482AU2
Project No.:	1560-193-00	**Source:**	22BH482
Owner:	EID	**Sample Depth:**	2.5m
File No.:	DT - 482AU2	**Date:**	16-Aug-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Remolded	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1599.4	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	21.2	%	**Hydraulic Head:**	180	mm
Moisture Content (After):	22.3	%	**Flow Rate:**	2.48	ml/s
Length of Sample:	39.2	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	483AU2
Project No.:	1560-193-00	**Source:**	22BH483
Owner:	EID	**Sample Depth:**	2.5m
File No.:	DT - 483AU2	**Date:**	17-Oct-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI — Inorganic clays of medium plasticity, silty clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1551.4	kg/m^3	**Classification:**	D2	
Moisture Content (before):	19.6	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	21.2	%	**Flow Rate:**	1.35	ml/s
Length of Sample:	39.3	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Reviewed By: Kasz Leavitt, P.Tech. (Eng.)

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	488AU2
Project No.:	1560-193-00	**Source:**	22BH488
Owner:	EID	**Sample Depth:**	1.2m
File No.:	DT - 488AU2	**Date:**	17-Oct-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	SC	Clayey sands, sand-clay mixtures
Sample Type:	Remolded	

Course Material >2mm:	2.6	%	**Test Method:**	Method A	
Specimen Density:	1835.8	kg/m^3	**Classification:**	ND4	
Moisture Content (before):	2.8	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	20.9	%	**Flow Rate:**	0.95	ml/s
Length of Sample:	39.4	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	490AU3
Project No.:	1560-193-00	**Source:**	22BH490
Owner:	EID	**Sample Depth:**	2.1m
File No.:	DT - 490AU3	**Date:**	27-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CH — Inorganic clays of high plasticity, fat clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1677.4	kg/m^3	**Classification:**	ND4	
Moisture Content (before):	18.2	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	21.2	%	**Flow Rate:**	0.98	ml/s
Length of Sample:	39.4	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

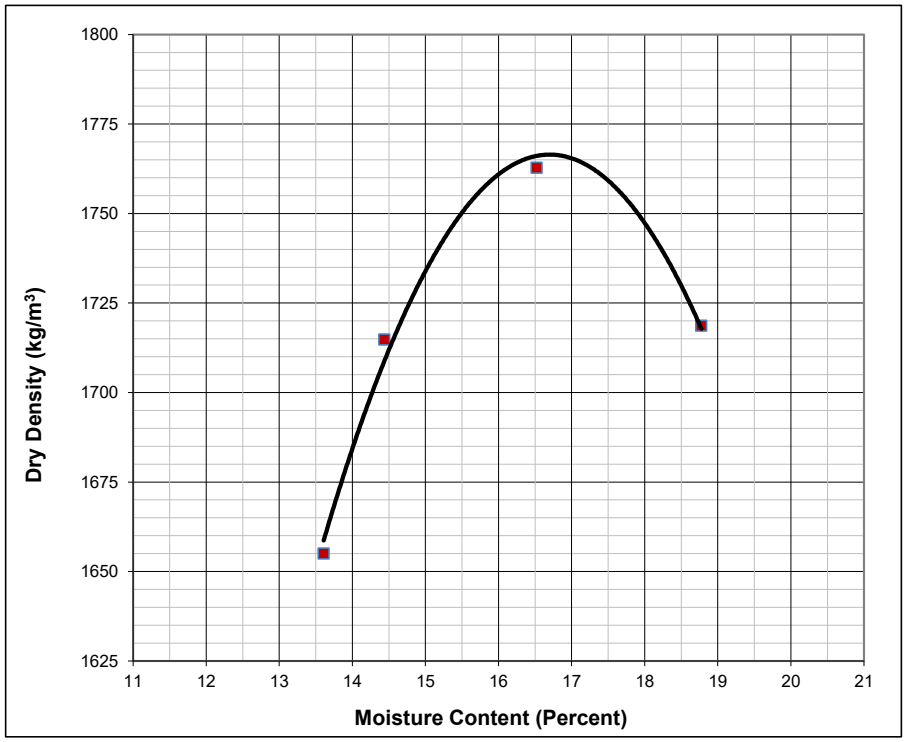
Project:	Snake Lake Reservoir Expansion	**Sample No:**	401B1
Project No.:	1560-193-00	**Source:**	22TP401
Owner:	EID	**Sampled Depth:**	1.0 m
File No.:	MDR - 401B1	**Date:**	August 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1766 **Optimum Moisture Content (%): 16.7**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	0.0%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	August 15, 2022	**Insitu Moisture Content (%):**	6.6
Tested By:	Matt Veldman	**Preparation Method:**	Moist

Soil Description CL Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1655	13.6
2	1715	14.4
3	1763	16.5
4	1719	18.8
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1808	16.3%
10%	1849	15.9%
15%	1891	15.6%
20%	1933	15.3%
25%	1975	14.9%
30%	2016	14.6%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

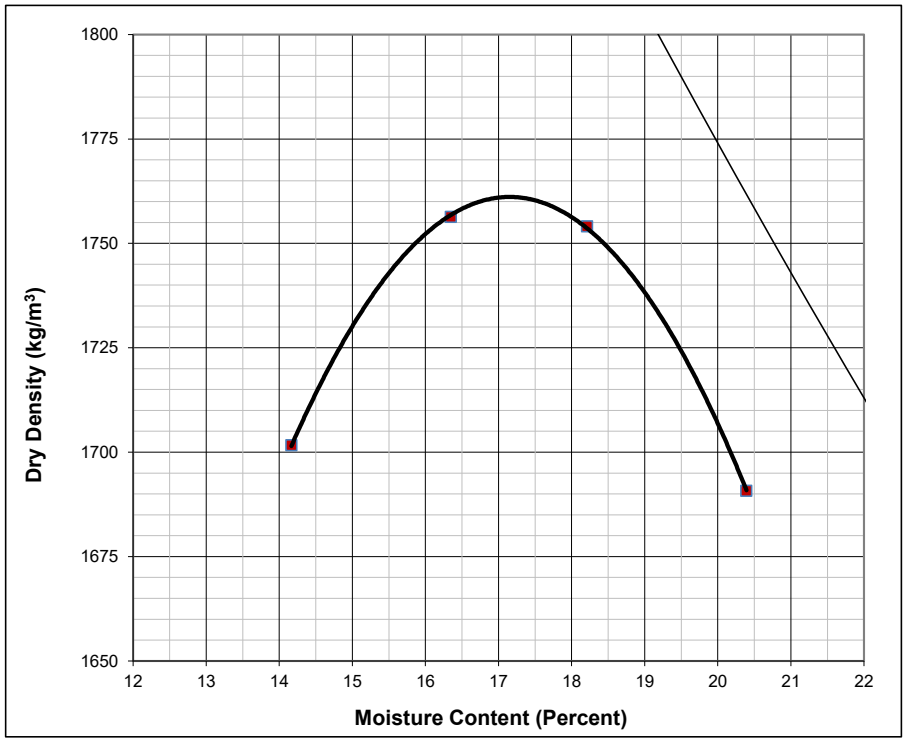
Project:	Snake Lake Reservoir Expansion	**Sample No:**	403B1
Project No.:	1560-193-00	**Source:**	22TP403
Owner:	EID	**Sampled Depth:**	1.3m
File No.:	MDR - 403B1	**Date:**	August 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1761 **Optimum Moisture Content (%): 17.3**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	40.4%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	August 15, 2022	**Insitu Moisture Content (%):**	6.6
Tested By:	Matt Veldman	**Preparation Method:**	Moist

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1702	14.2
2	1756	16.3
3	1754	18.2
4	1691	20.4
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1803	16.9%
10%	1845	16.5%
15%	1887	16.1%
20%	1929	15.8%
25%	1971	15.5%
30%	2013	15.1%

Comments:

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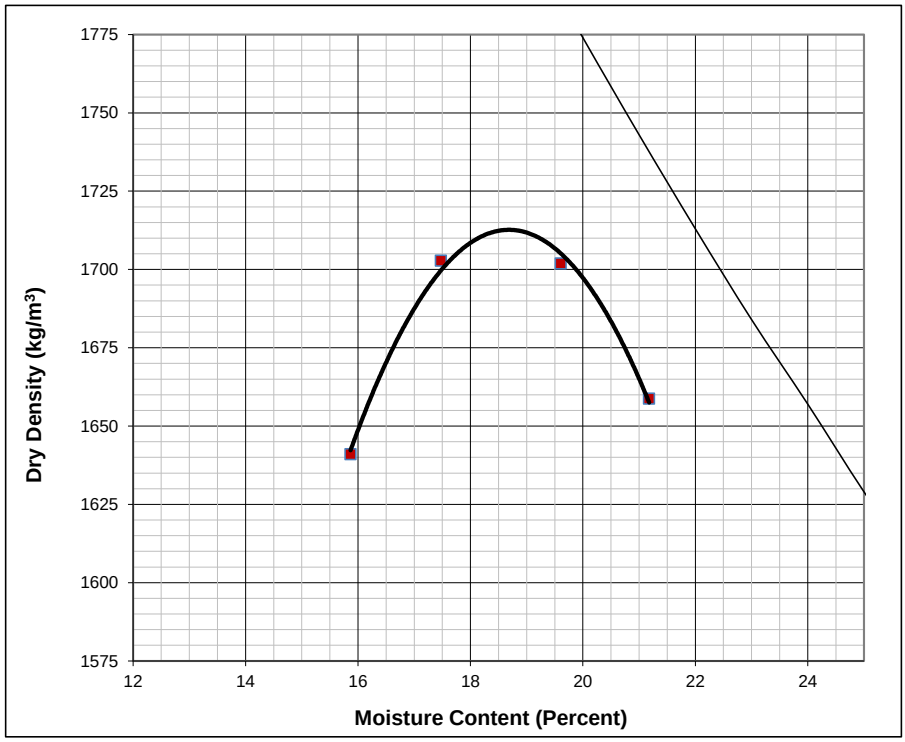
MOISTURE - DENSITY RELATIONSHIP REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No:**	404B1
Project No.:	1560-193-00	**Source:**	22TP404
Owner:	EID	**Sampled Depth:**	1.0 m
File No.:	MDR - 404B1	**Date:**	October 14, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1713 **Optimum Moisture Content (%): 18.7**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	1.3%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	October 14, 2022	**Insitu Moisture Content (%):**	0.0
Tested By:	CT	**Preparation Method:**	Dry
Soil Description	CI Inorganic clays of medium plasticity, silty clays		



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1641	15.9
2	1703	17.5
3	1702	19.6
4	1659	21.2
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1757	18.2%
10%	1802	17.8%
15%	1846	17.4%
20%	1890	16.9%
25%	1935	16.6%
30%	1979	16.2%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

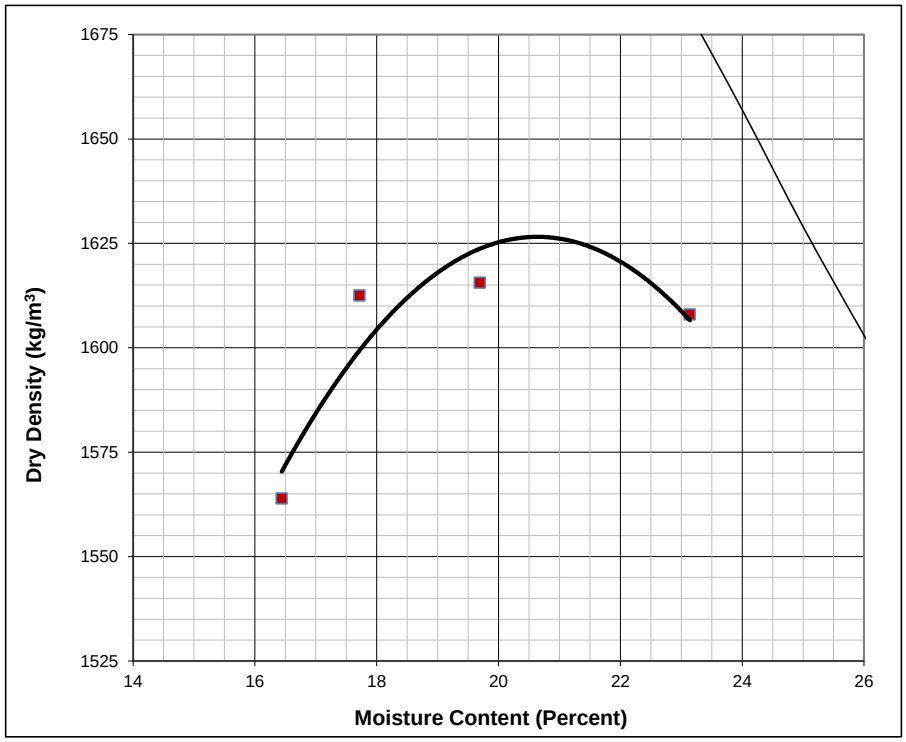
Project:	Snake Lake Reservoir Expansion	**Sample No:**	404B2
Project No.:	1560-193-00	**Source:**	22TP404
Owner:	EID	**Sampled Depth:**	3.6m
File No.:	MDR - 404B2	**Date:**	October 28, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1627 **Optimum Moisture Content (%): 20.7**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	0.0%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	October 28, 2022	**Insitu Moisture Content (%):**	-
Tested By:	Adam	**Preparation Method:**	Dry

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1564	16.4
2	1613	17.7
3	1616	19.7
4	1608	23.1
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1676	20.1%
10%	1724	19.5%
15%	1773	19.0%
20%	1822	18.5%
25%	1870	18.0%
30%	1919	17.6%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

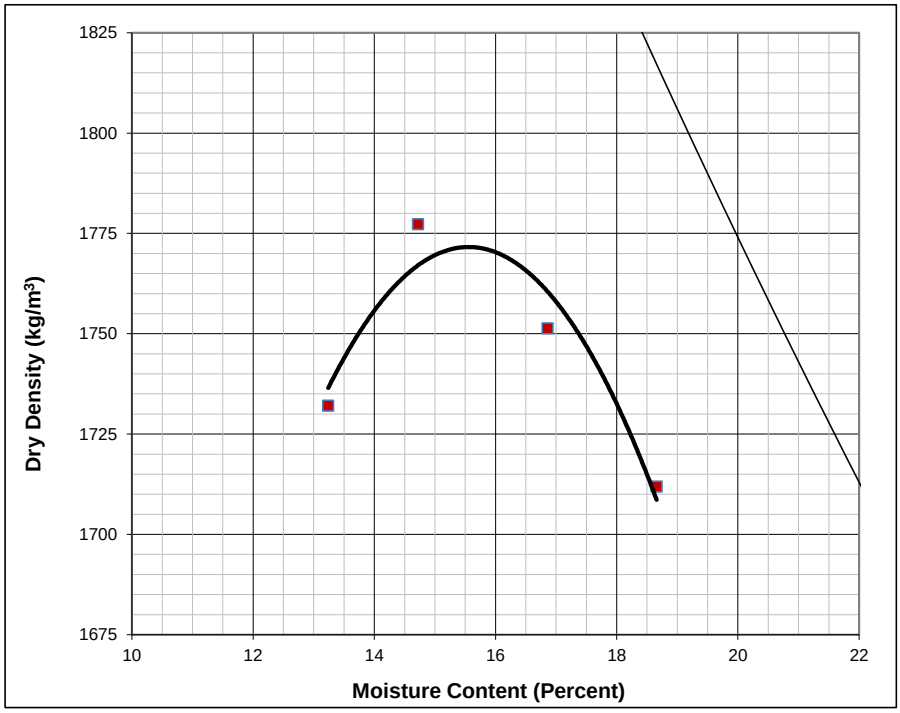
Project:	Snake Lake Reservoir Expansion	**Sample No:**	405B1
Project No.:	1560-193-00	**Source:**	22TP405
Owner:	EID	**Sampled Depth:**	1.0m
File No.:	MDR - 405B1	**Date:**	October 21, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1771 **Optimum Moisture Content (%): 15.6**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	20.9%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	October 21, 2022	**Insitu Moisture Content (%):**	13.8
Tested By:	Eugene Voloshyn	**Preparation Method:**	Dry

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1732	13.2
2	1777	14.7
3	1751	16.9
4	1712	18.7
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1812	15.2%
10%	1854	14.9%
15%	1895	14.6%
20%	1937	14.3%
25%	1978	14.0%
30%	2020	13.7%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

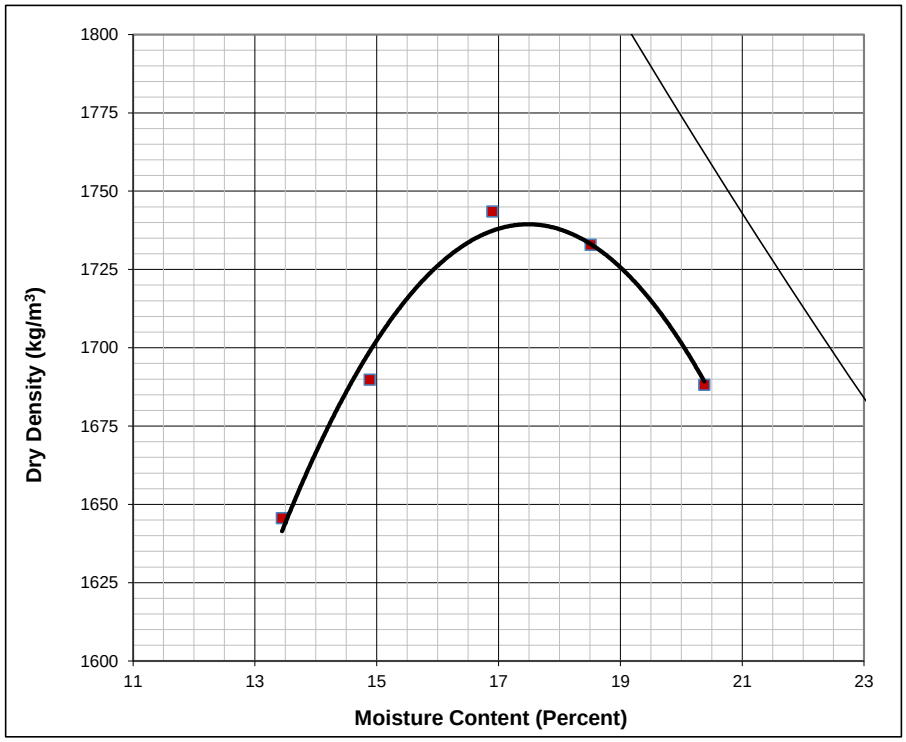
Project:	Snake Lake Reservoir Expansion	**Sample No:**	406B1
Project No.:	1560-193-00	**Source:**	22TP406
Owner:	EID	**Sampled Depth:**	1.0m
File No.:	MDR - 406B1	**Date:**	September 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1740 **Optimum Moisture Content (%): 17.5**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	15.8%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	September 14, 2022	**Insitu Moisture Content (%):**	2.9
Tested By:	Kurt Baker	**Preparation Method:**	Dry

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1646	13.4
2	1690	14.9
3	1743	16.9
4	1733	18.5
5	1688	20.4
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1783	17.1%
10%	1826	16.7%
15%	1869	16.3%
20%	1912	15.9%
25%	1955	15.6%
30%	1998	15.2%

Comments:

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Checked By: Kasz Leavitt, P.Tech. (Eng.)

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MOISTURE - DENSITY RELATIONSHIP REPORT

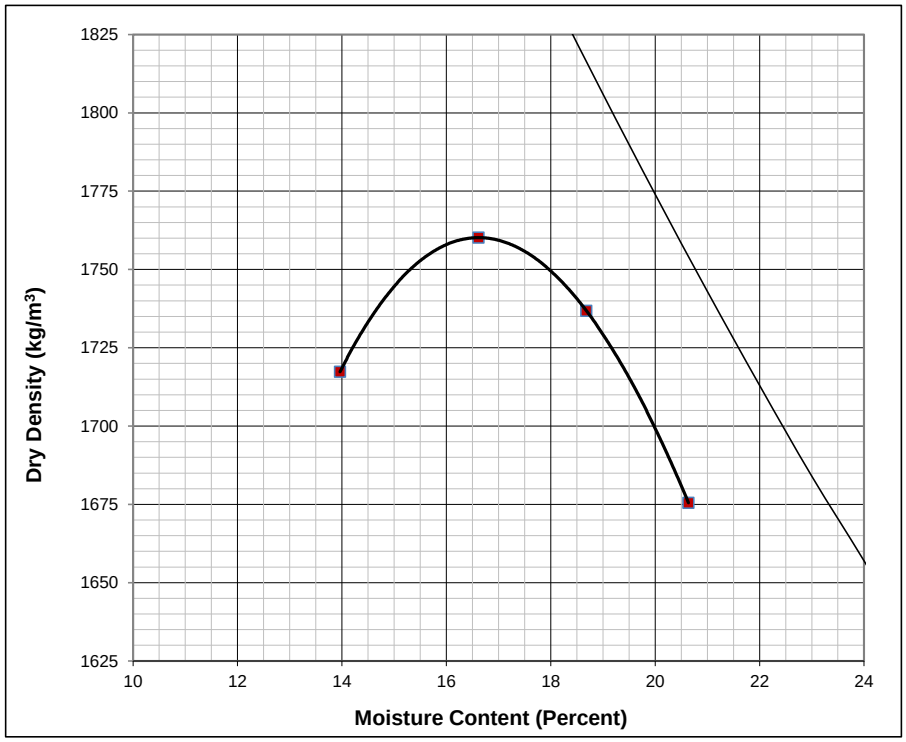
Project:	Snake Lake Reservoir Expansion	**Sample No:**	407B1
Project No.:	1560-193-00	**Source:**	22TP407
Owner:	EID	**Sampled Depth:**	1.0m
File No.:	MDR - 407B1	**Date Sampled:**	June 22, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1760 **Optimum Moisture Content (%): 16.7**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	<5
Mold size:	101.6mm	**Oversize rock density (kg/m^3):**	2600
Test Date:	September 28, 2022	**Insitu Moisture Content (%):**	4.9
Tested By:	B.Tataryn		

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1717	14.0
2	1760	16.6
3	1737	18.7
4	1675	20.6

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1802	16.3%
10%	1844	15.9%
15%	1886	15.6%
20%	1928	15.2%
25%	1970	14.9%
30%	2012	14.6%

Comments:

Checked By: Kasz Leavitt

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MOISTURE - DENSITY RELATIONSHIP REPORT

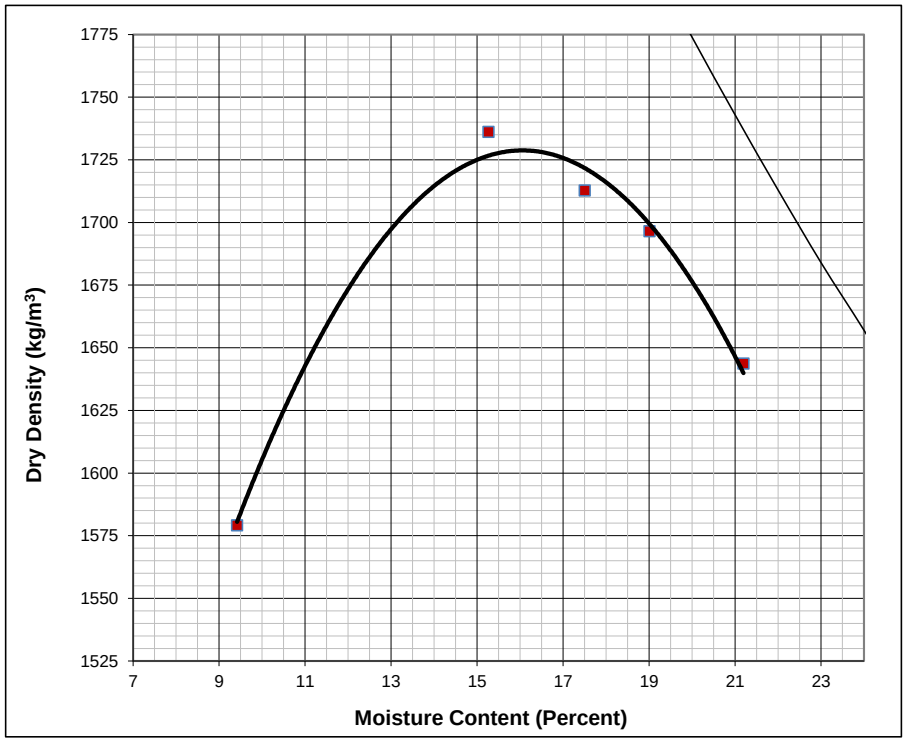
Project:	Snake Lake Reservoir Expansion	**Sample No:**	408B2
Project No.:	1560-193-00	**Source:**	22TP408
Owner:	EID	**Sampled Depth:**	2.8 m
File No.:	MDR - 408B2	**Date:**	August 30, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1729 **Optimum Moisture Content (%): 16.1**

Method used:	Method C (< 30% retained on 20mm)	**Oversize rock in sample (%):**	9.5%
Equipment:	152.4 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	August 30, 2022	**Insitu Moisture Content (%):**	-
Tested By:	Matt Veldman	**Preparation Method:**	Moist

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1579	9.4
2	1736	15.3
3	1713	17.5
4	1696	19.0
5	1644	21.2
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1773	15.7%
10%	1816	15.3%
15%	1860	15.0%
20%	1903	14.6%
25%	1947	14.3%
30%	1990	14.0%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

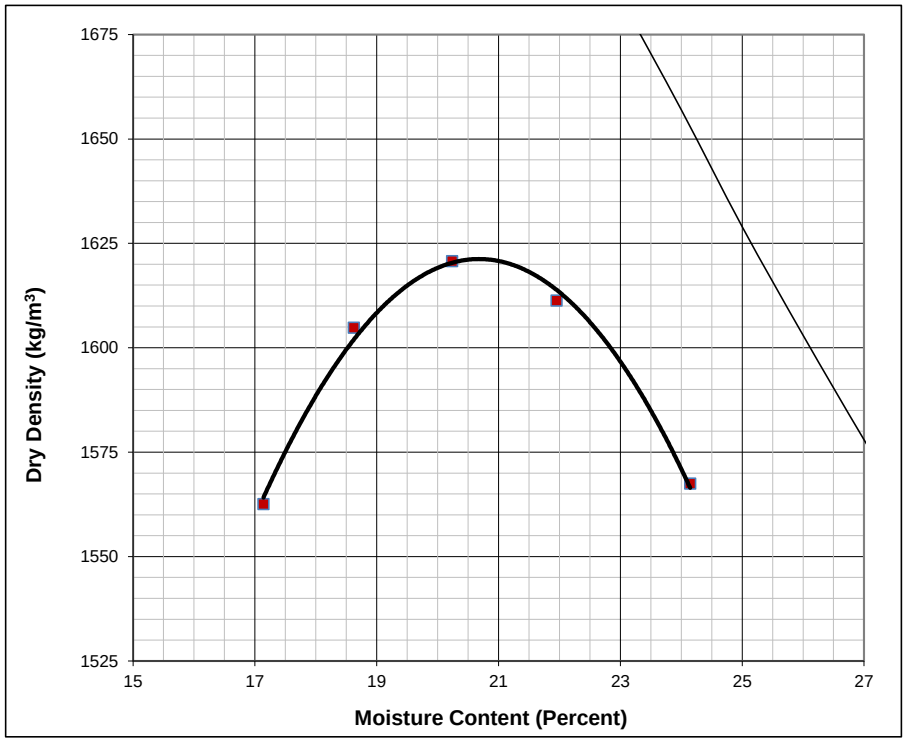
Project:	Snake Lake Reservoir Expansion	**Sample No:**	410B2
Project No.:	1560-193-00	**Source:**	22TP410
Owner:	EID	**Sampled Depth:**	4.5m
File No.:	MDR - 410B2	**Date:**	September 16, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1622 **Optimum Moisture Content (%): 20.8**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	#DIV/0!
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	September 16, 2022	**Insitu Moisture Content (%):**	14.6
Tested By:	Angelo Sultan	**Preparation Method:**	Dry

Soil Description CH Inorganic clays of high plasticity, fat clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1563	17.1
2	1605	18.6
3	1621	20.2
4	1611	22.0
5	1567	24.1
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1671	20.2%
10%	1720	19.6%
15%	1769	19.1%
20%	1818	18.6%
25%	1867	18.1%
30%	1915	17.6%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

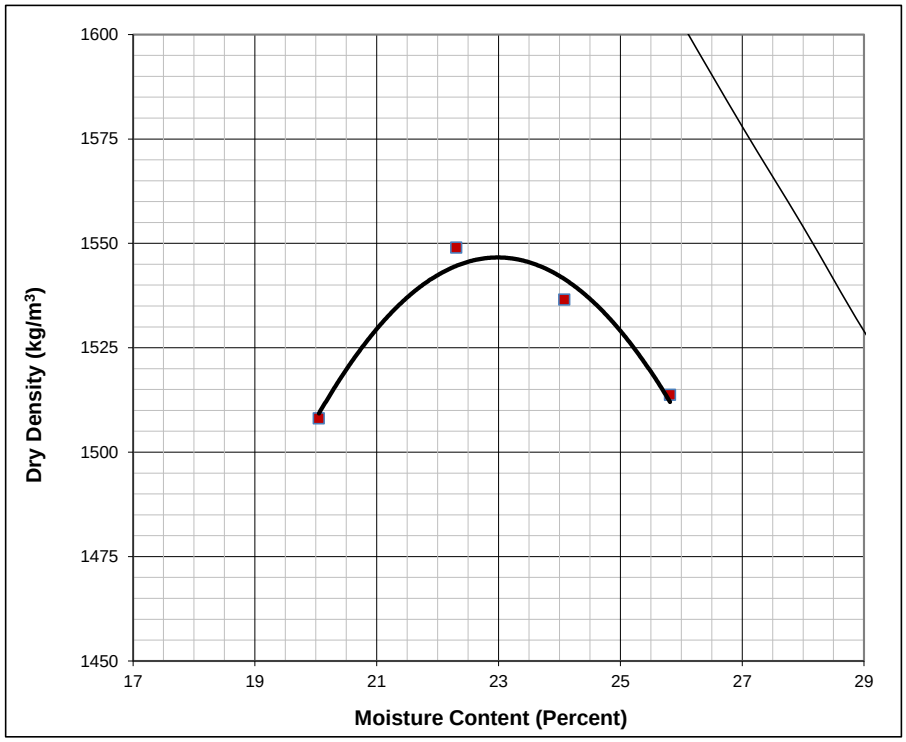
Project:	Snake Lake Reservoir Expansion	**Sample No:**	412B2
Project No.:	1560-193-00	**Source:**	22TP412
Owner:	EID	**Sampled Depth:**	4.0m
File No.:	MDR - 412B2	**Date:**	September 16, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1547 **Optimum Moisture Content (%): 23.0**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	0.0%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	September 16, 2022	**Insitu Moisture Content (%):**	21.9
Tested By:	Adam Wojcik	**Preparation Method:**	Dry

Soil Description CH Inorganic clays of high plasticity, fat clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1508	20.1
2	1549	22.3
3	1537	24.1
4	1514	25.8
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1600	22.2%
10%	1652	21.5%
15%	1705	20.9%
20%	1758	20.2%
25%	1810	19.7%
30%	1863	19.1%

Comments:

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Checked By: Kasz Leavitt, P.Tech. (Eng.)

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MOISTURE - DENSITY RELATIONSHIP REPORT

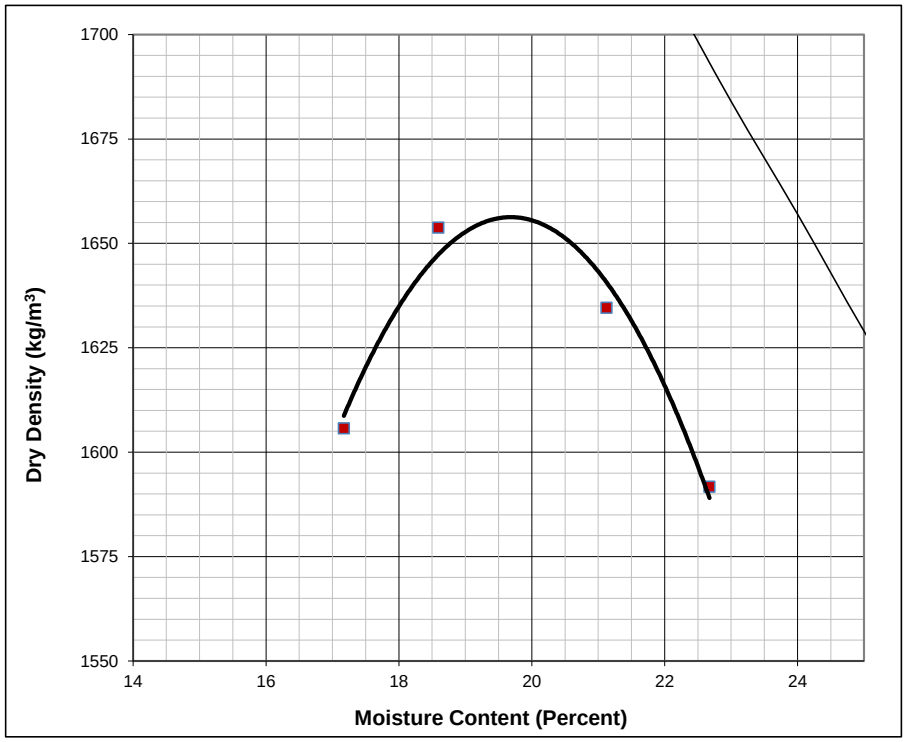
Project:	Snake Lake Reservoir Expansion	**Sample No:**	413B1
Project No.:	1560-193-00	**Source:**	122TP413
Owner:	EID	**Sampled Depth:**	1.0m
File No.:	MDR - 413B1	**Date:**	September 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1656 **Optimum Moisture Content (%): 19.7**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	0.0%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	September 14, 2022	**Insitu Moisture Content (%):**	3.2
Tested By:	Kurt Baker	**Preparation Method:**	Dry

Soil Description CH Inorganic clays of high plasticity, fat clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1606	17.2
2	1654	18.6
3	1635	21.1
4	1592	22.7
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1703	19.2%
10%	1750	18.6%
15%	1798	18.1%
20%	1845	17.7%
25%	1892	17.2%
30%	1939	16.8%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

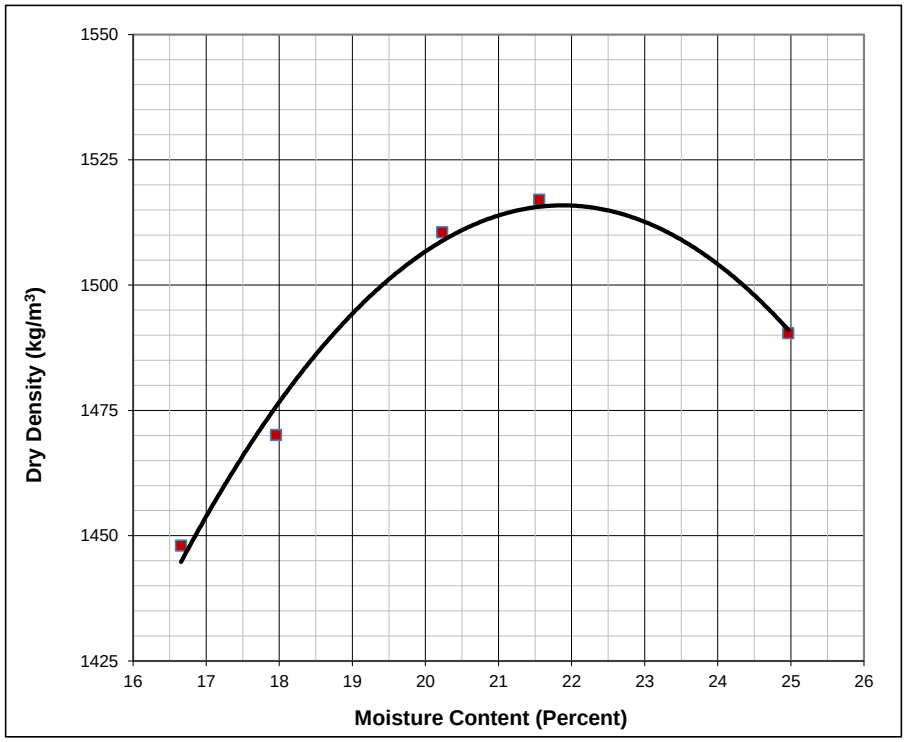
Project:	Snake Lake Reservoir Expansion	**Sample No:**	413B2
Project No.:	1560-193-00	**Source:**	22TP413
Owner:	EID	**Sampled Depth:**	2.5m
File No.:	MDR - 413B2	**Date:**	September 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1516 **Optimum Moisture Content (%): 21.8**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	0.0%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	September 14, 2022	**Insitu Moisture Content (%):**	3.5
Tested By:	Kurt Baker	**Preparation Method:**	Dry

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1448	16.7
2	1470	18.0
3	1511	20.2
4	1517	21.6
5	1490	25.0
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1570	21.0%
10%	1624	20.3%
15%	1679	19.7%
20%	1733	19.1%
25%	1787	18.5%
30%	1841	17.9%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

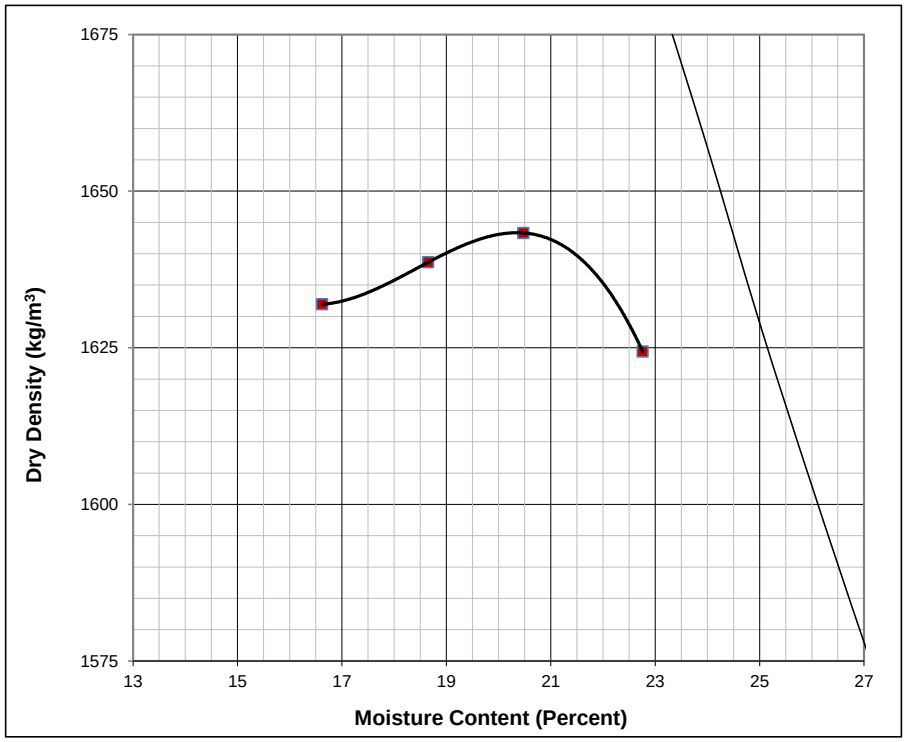
Project:	Snake Lake Reservoir Expansion	**Sample No:**	414B3
Project No.:	1560-193-00	**Source:**	22TP414
Owner:	EID	**Sampled Depth:**	4.5m
File No.:	MDR - 414B3	**Date Sampled:**	July 6, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1643 **Optimum Moisture Content (%): 20.5**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	<5.0%
Mold size:	101.6mm	**Oversize rock density (kg/m^3):**	2600
Test Date:	September 9, 2022	**Insitu Moisture Content (%):**	14.9
Tested By:	B.Tataryn		

Soil Description CH Inorganic clays of high plasticity, fat clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1632	16.6
2	1639	18.7
3	1643	20.5
4	1624	22.8
5		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1691	19.9%
10%	1739	19.4%
15%	1787	18.9%
20%	1834	18.4%
25%	1882	17.9%
30%	1930	17.5%

Comments:

Checked By: Kasz Leavitt, Engineering Licensee

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MOISTURE - DENSITY RELATIONSHIP REPORT

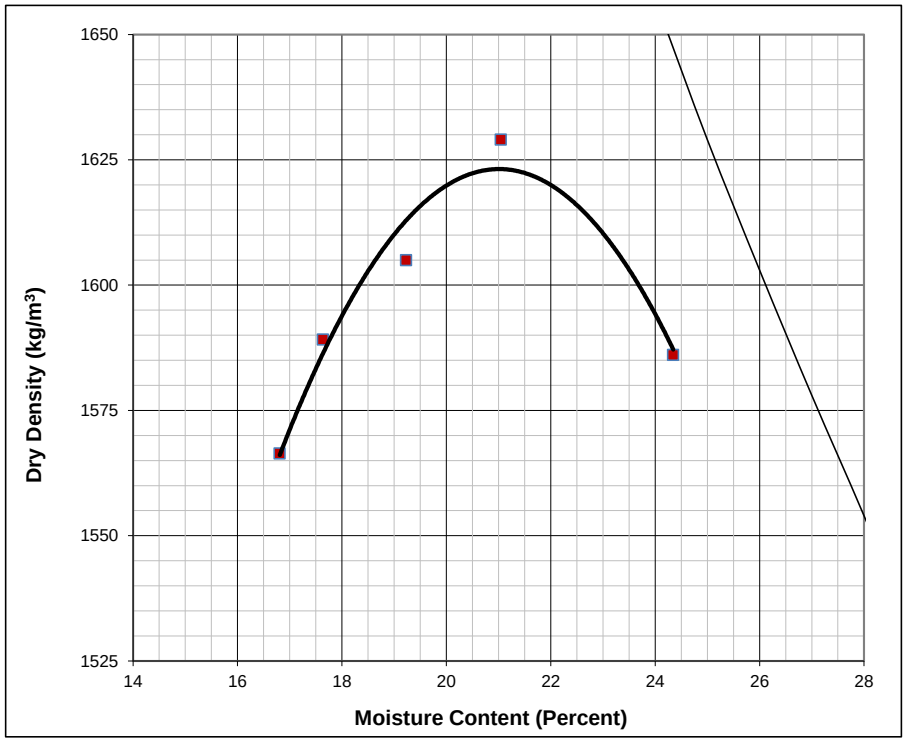
Project:	Snake Lake Reservoir Expansion	**Sample No:**	415B2
Project No.:	1560-193-00	**Source:**	22TP415
Owner:	EID	**Sampled Depth:**	3.5m
File No.:	MDR - 415B2	**Date:**	September 17, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1623 **Optimum Moisture Content (%): 21.5**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	-
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	September 17, 2022	**Insitu Moisture Content (%):**	18.9
Tested By:	Angelo Sultan	**Preparation Method:**	Dry

Soil Description CH Inorganic clays of high plasticity, fat clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1566	16.8
2	1589	17.6
3	1605	19.2
4	1629	21.0
5	1586	24.3
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1672	20.9%
10%	1721	20.3%
15%	1770	19.7%
20%	1818	19.2%
25%	1867	18.7%
30%	1916	18.2%

Comments:

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Checked By: Kasz Leavitt, P.Tech. (Eng.)

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MOISTURE - DENSITY RELATIONSHIP REPORT

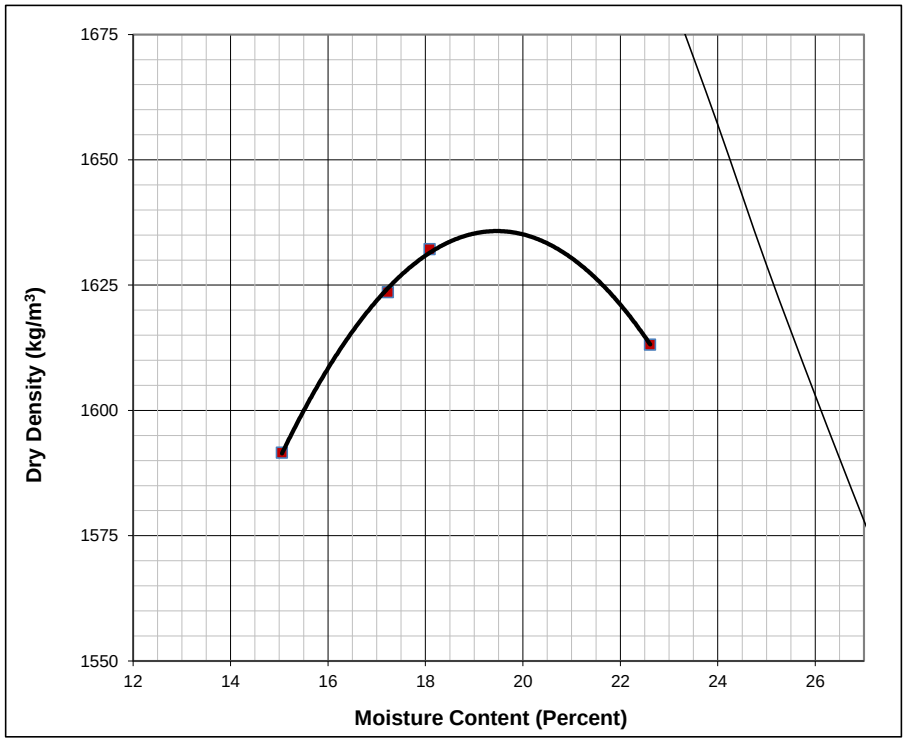
Project:	Snake Lake Reservoir Expansion	**Sample No:**	415B3
Project No.:	1560-193-00	**Source:**	22TP415
Owner:	EID	**Sampled Depth:**	4.0m
File No.:	MDR - 415B3	**Date:**	September 16, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1636 **Optimum Moisture Content (%): 19.5**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	0.0%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	September 16, 2022	**Insitu Moisture Content (%):**	17.8
Tested By:	Angelo Sultan	**Preparation Method:**	Dry

Soil Description CH Inorganic clays of high plasticity, fat clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1592	15.1
2	1624	17.2
3	1632	18.1
4	1613	22.6
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1684	18.9%
10%	1732	18.4%
15%	1781	17.9%
20%	1829	17.4%
25%	1877	17.0%
30%	1925	16.6%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

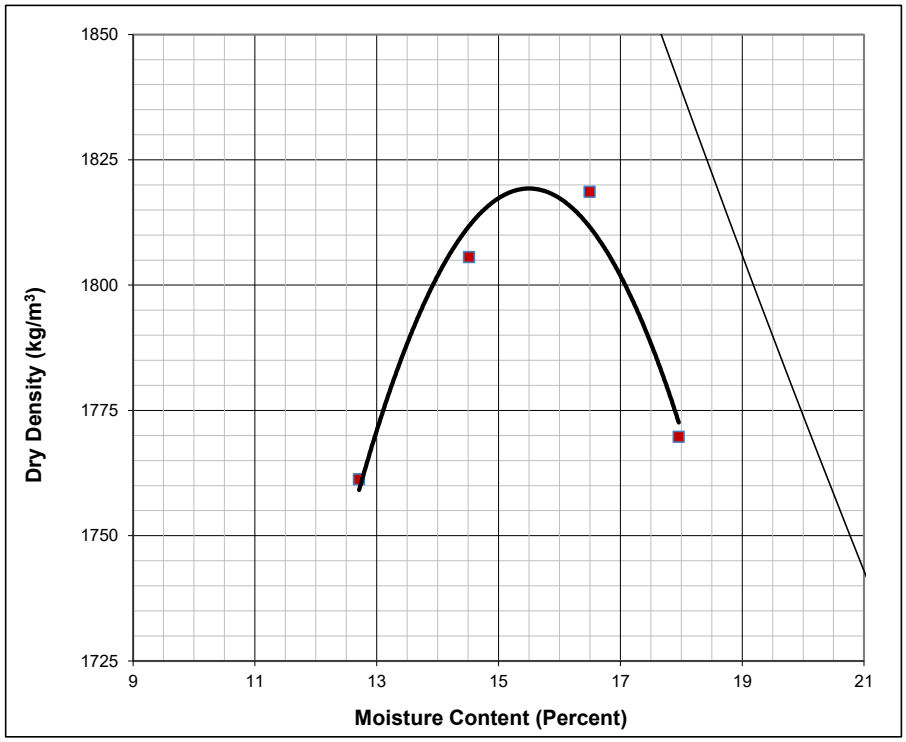
Project:	Snake Lake Reservoir Expansion	**Sample No:**	417B1
Project No.:	1560-193-00	**Source:**	22TP417
Owner:	EID	**Sampled Depth:**	1.1 m
File No.:	MDR - 417B1	**Date:**	August 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1820 **Optimum Moisture Content (%): 15.5**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	9.5%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	August 15, 2022	**Insitu Moisture Content (%):**	0.0
Tested By:	Matt Veldman	**Preparation Method:**	Moist

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1761	12.7
2	1806	14.5
3	1819	16.5
4	1770	18.0
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1859	15.2%
10%	1898	14.9%
15%	1937	14.6%
20%	1976	14.3%
25%	2015	14.0%
30%	2054	13.7%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

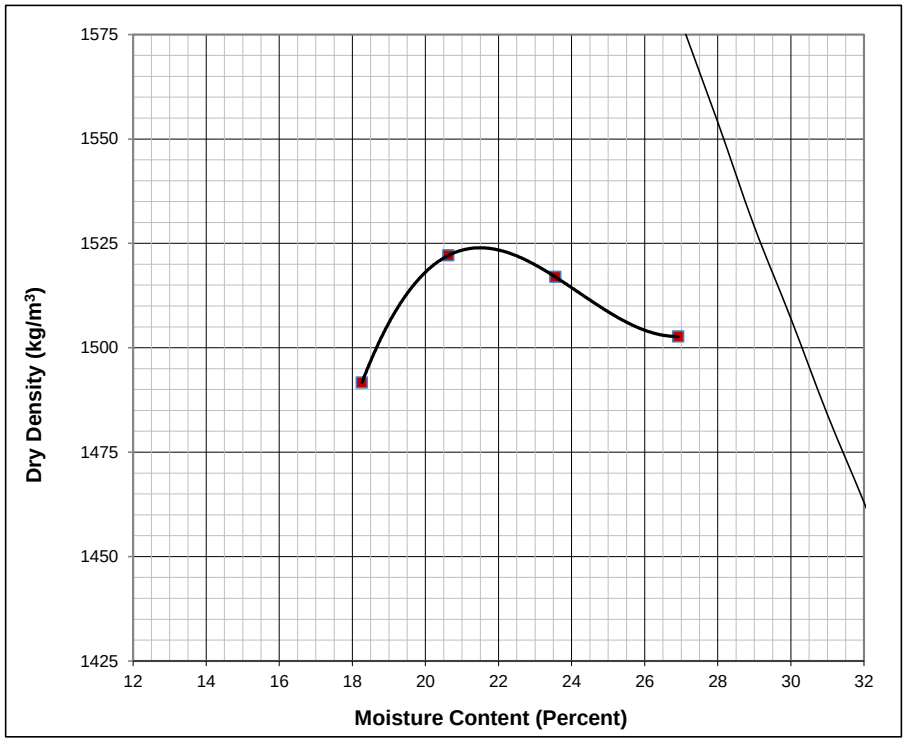
Project:	Snake Lake Reservoir Expansion	**Sample No:**	422B2
Project No.:	1560-193-00	**Source:**	22TP422
Owner:	EID	**Sampled Depth:**	3.8m
File No.:	MDR - 422B2	**Date Sampled:**	July 7, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1524 **Optimum Moisture Content (%): 21.5**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	<5.0%
Mold size:	101.6mm	**Oversize rock density (kg/m^3):**	2600
Test Date:	October 12, 2022	**Insitu Moisture Content (%):**	-
Tested By:	B.Tataryn		

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1492	18.3
2	1522	20.6
3	1517	23.6
4	1503	26.9

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1578	20.8%
10%	1632	20.1%
15%	1685	19.4%
20%	1739	18.8%
25%	1793	18.3%
30%	1847	17.7%

Comments:

Checked By: Kasz Leavitt

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MOISTURE - DENSITY RELATIONSHIP REPORT

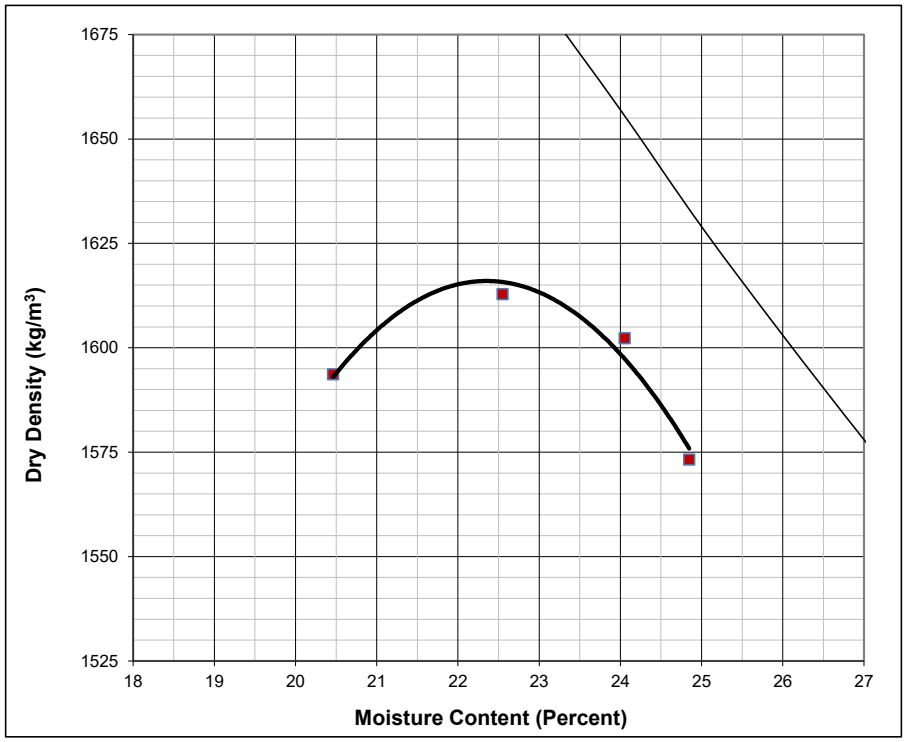
Project:	Snake Lake Reservoir Expansion	**Sample No:**	424B2
Project No.:	1560-193-00	**Source:**	22BH424
Owner:	EID	**Sampled Depth:**	1.2 m
File No.:	MDR - 424B2	**Date:**	August 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1616 **Optimum Moisture Content (%): 22.4**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	9.8%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	August 15, 2022	**Insitu Moisture Content (%):**	11.5
Tested By:	Matt Veldman	**Preparation Method:**	Moist

Soil Description CH Inorganic clays of high plasticity, fat clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1594	20.5
2	1613	22.5
3	1602	24.1
4	1573	24.8
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1665	21.7%
10%	1714	21.1%
15%	1764	20.5%
20%	1813	20.0%
25%	1862	19.4%
30%	1911	18.9%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

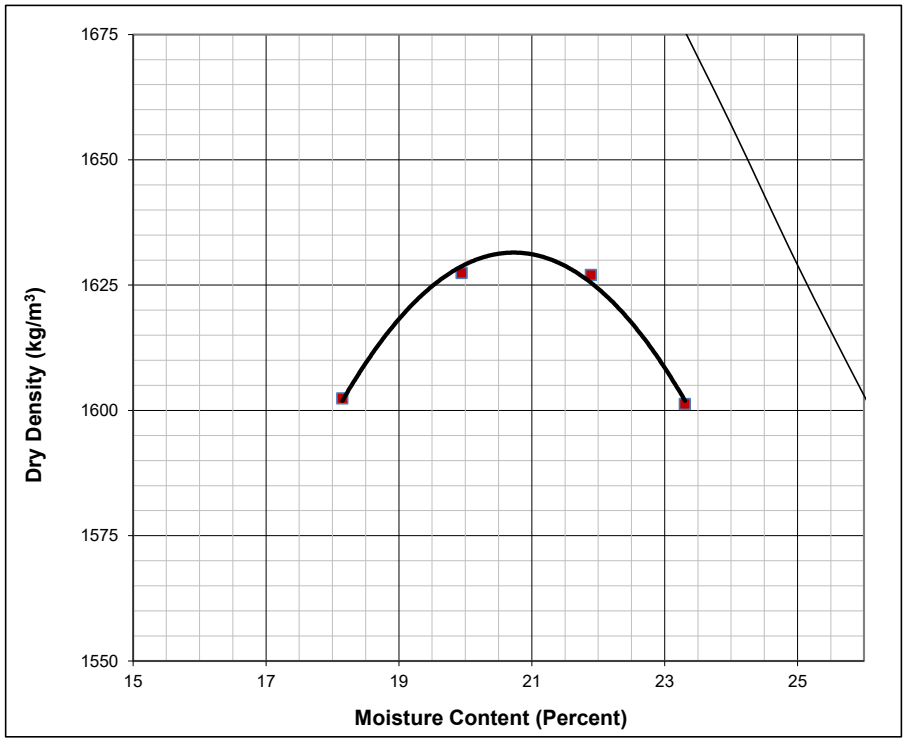
Project:	Snake Lake Reservoir Expansion	**Sample No:**	425B1
Project No.:	1560-193-00	**Source:**	22TP425
Owner:	EID	**Sampled Depth:**	1.0 m
File No.:	MDR - 425B1	**Date:**	August 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1631 **Optimum Moisture Content (%): 20.7**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	0.0%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	August 15, 2022	**Insitu Moisture Content (%):**	11.4
Tested By:	Matt Veldman	**Preparation Method:**	Moist

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1602	18.1
2	1627	19.9
3	1627	21.9
4	1601	23.3
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1679	20.1%
10%	1728	19.5%
15%	1776	19.0%
20%	1825	18.5%
25%	1873	18.0%
30%	1922	17.6%

Comments:

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Checked By: Kasz Leavitt, P.Tech. (Eng.)

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MOISTURE - DENSITY RELATIONSHIP REPORT

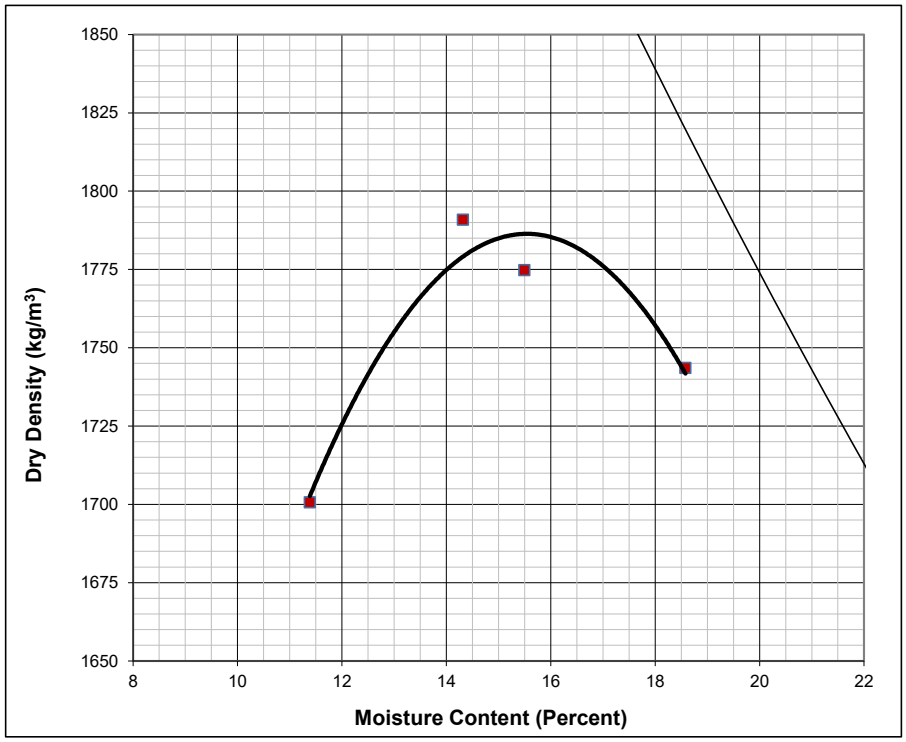
Project:	Snake Lake Reservoir Expansion	**Sample No:**	428B1
Project No.:	1560-193-00	**Source:**	22BH428
Owner:	EID	**Sampled Depth:**	1.0 m
File No.:	MDR - 428B1	**Date:**	August 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1786 **Optimum Moisture Content (%): 15.5**

Method used:	Method B (< 25% retained on 10mm)	**Oversize rock in sample (%):**	9.8%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	August 15, 2022	**Insitu Moisture Content (%):**	11.7
Tested By:	Matt Veldman	**Preparation Method:**	Moist

Soil Description CL Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1701	11.4
2	1791	14.3
3	1775	15.5
4	1744	18.6
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1827	15.2%
10%	1867	14.8%
15%	1908	14.5%
20%	1949	14.2%
25%	1990	13.9%
30%	2030	13.6%

Comments:

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Checked By: Kasz Leavitt, P.Tech. (Eng.)

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MOISTURE - DENSITY RELATIONSHIP REPORT

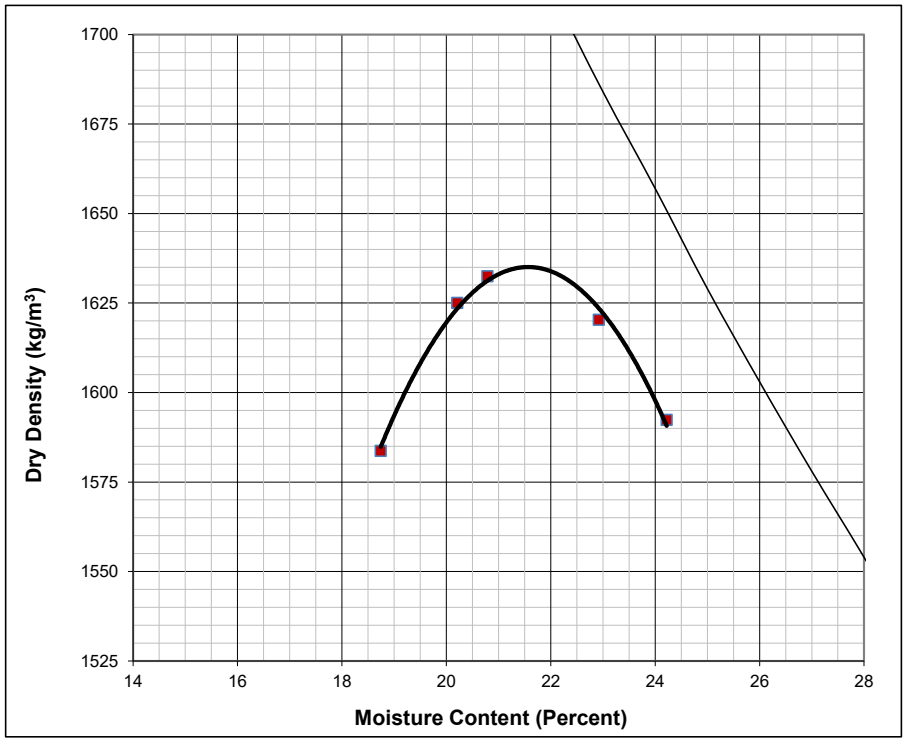
Project:	Snake Lake Reservoir Expansion	**Sample No:**	429B1
Project No.:	1560-193-00	**Source:**	22TP429
Owner:	EID	**Sampled Depth:**	1.0 m
File No.:	MDR - 429B1	**Date:**	August 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1635 **Optimum Moisture Content (%): 21.6**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	9.5%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	August 15, 2022	**Insitu Moisture Content (%):**	21.4
Tested By:	Matt Veldman	**Preparation Method:**	Moist

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1584	18.7
2	1625	20.2
3	1632	20.8
4	1620	22.9
5	1592	24.2
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1683	21.0%
10%	1732	20.4%
15%	1780	19.8%
20%	1828	19.3%
25%	1876	18.8%
30%	1925	18.4%

Comments:

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MPE Engineering Ltd.
1, 3320 18 Avenue North
Lethbridge, Alberta T1H 5J3
Tel: (403)892-6036

ATTERBERG LIMITS

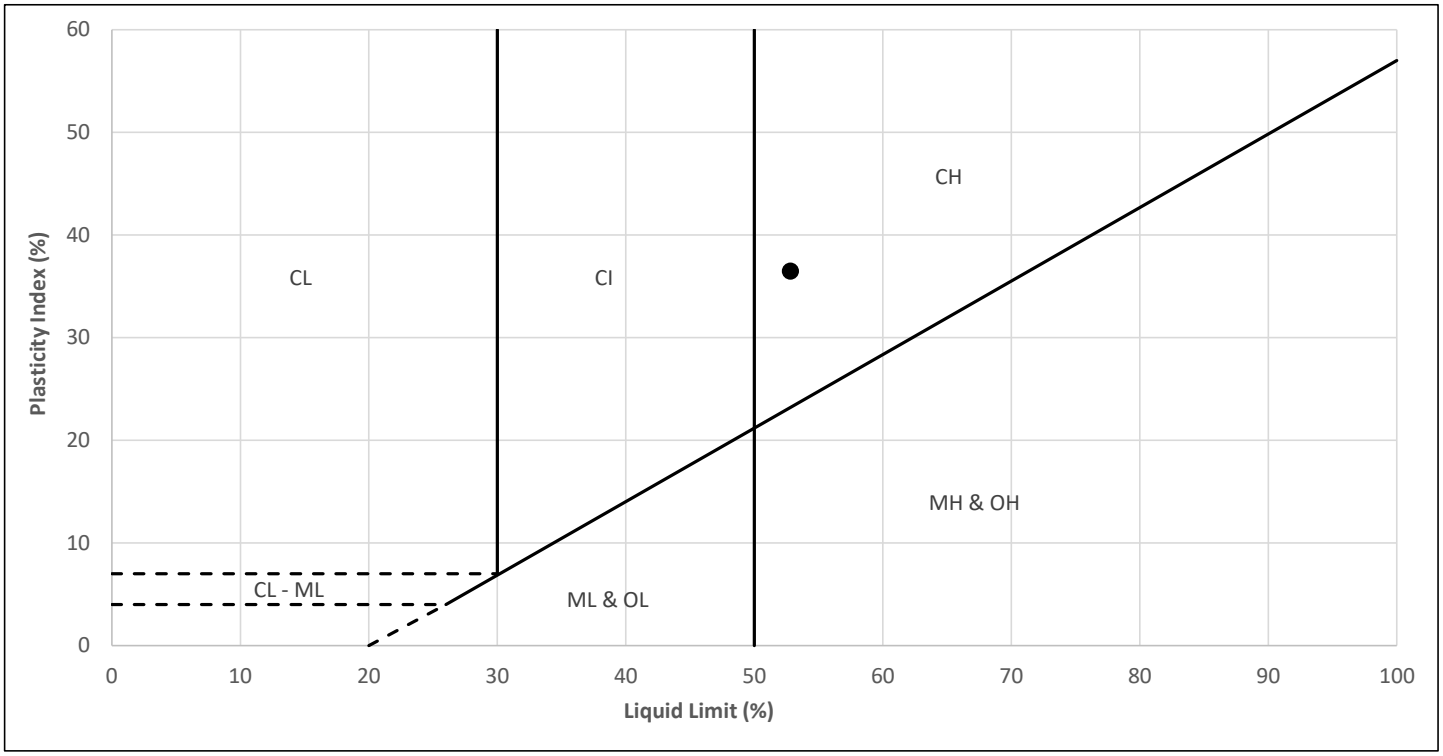
Project:	Snake Lake Reservoir Expansion	**Sample #:**	505AU1
Project No.:	1560-193-00	**Source:**	22BH505
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 505AU1	**Test Date:**	14-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.8
Plastic Limit (PL)	16.3
Plasticity Index (PI)	36.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

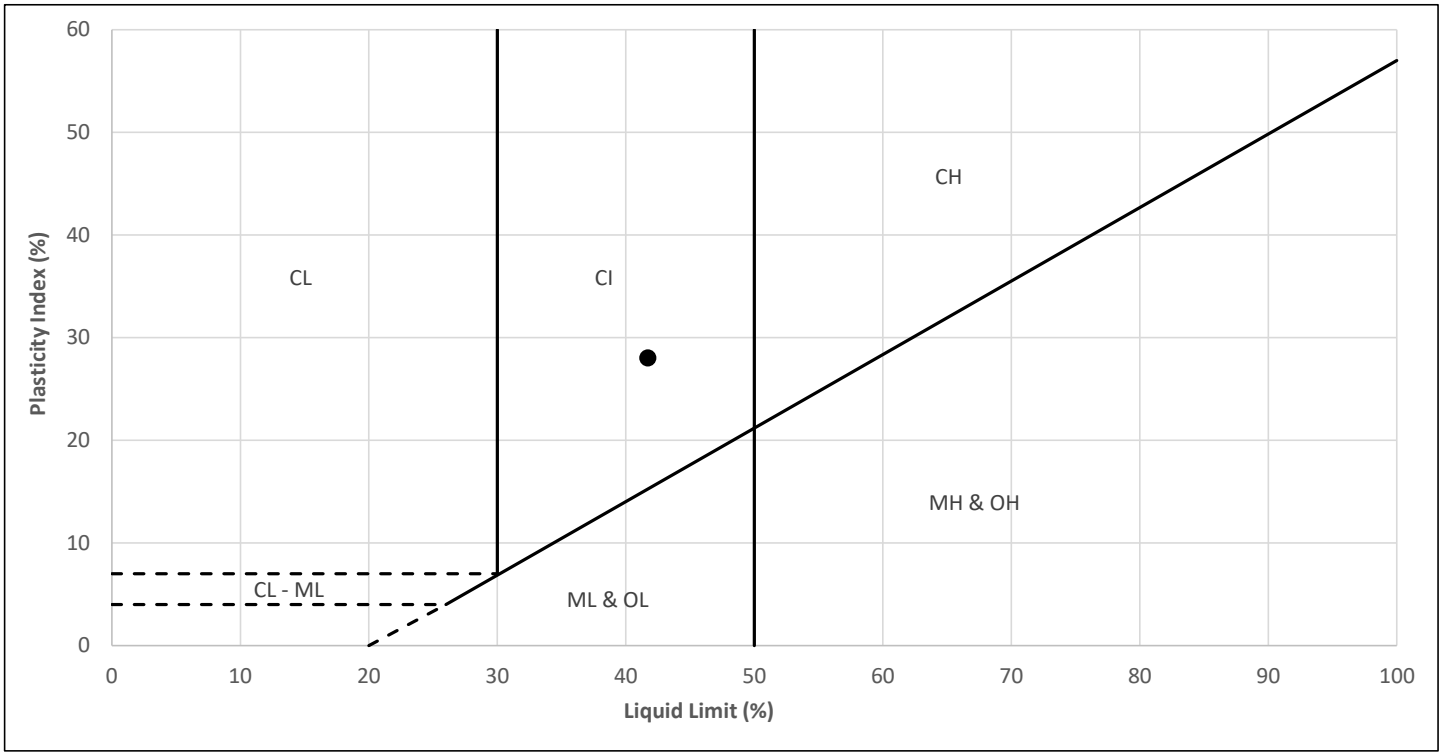
Project:	Snake Lake Reservoir Expansion	**Sample #:**	505AU3
Project No.:	1560-193-00	**Source:**	22BH505
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 505AU3	**Test Date:**	15-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	41.7
Plastic Limit (PL)	13.7
Plasticity Index (PI)	28.0

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

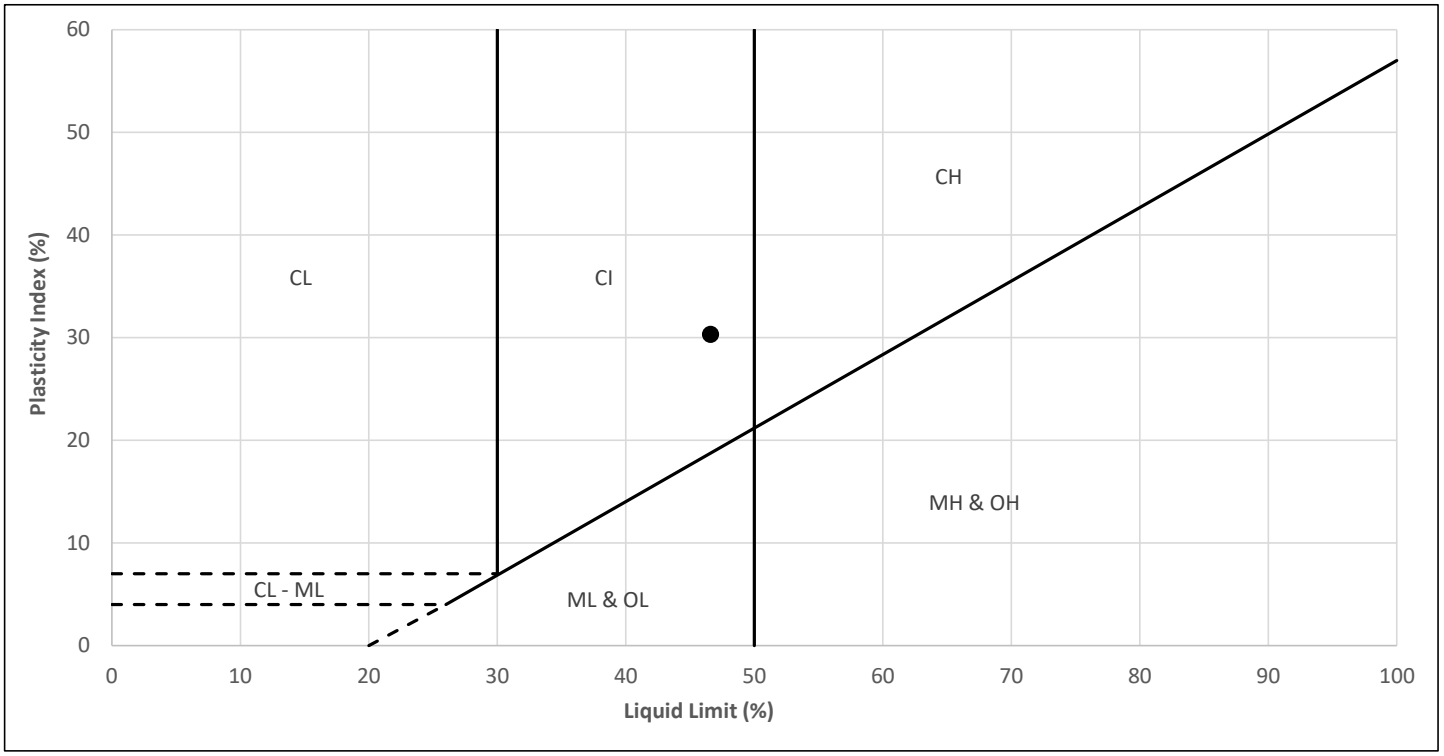
Project:	Snake Lake Reservoir Expansion	**Sample #:**	506AU1
Project No.:	1560-193-00	**Source:**	22BH506
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 506AU1	**Test Date:**	14-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	46.6
Plastic Limit (PL)	16.3
Plasticity Index (PI)	30.3

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

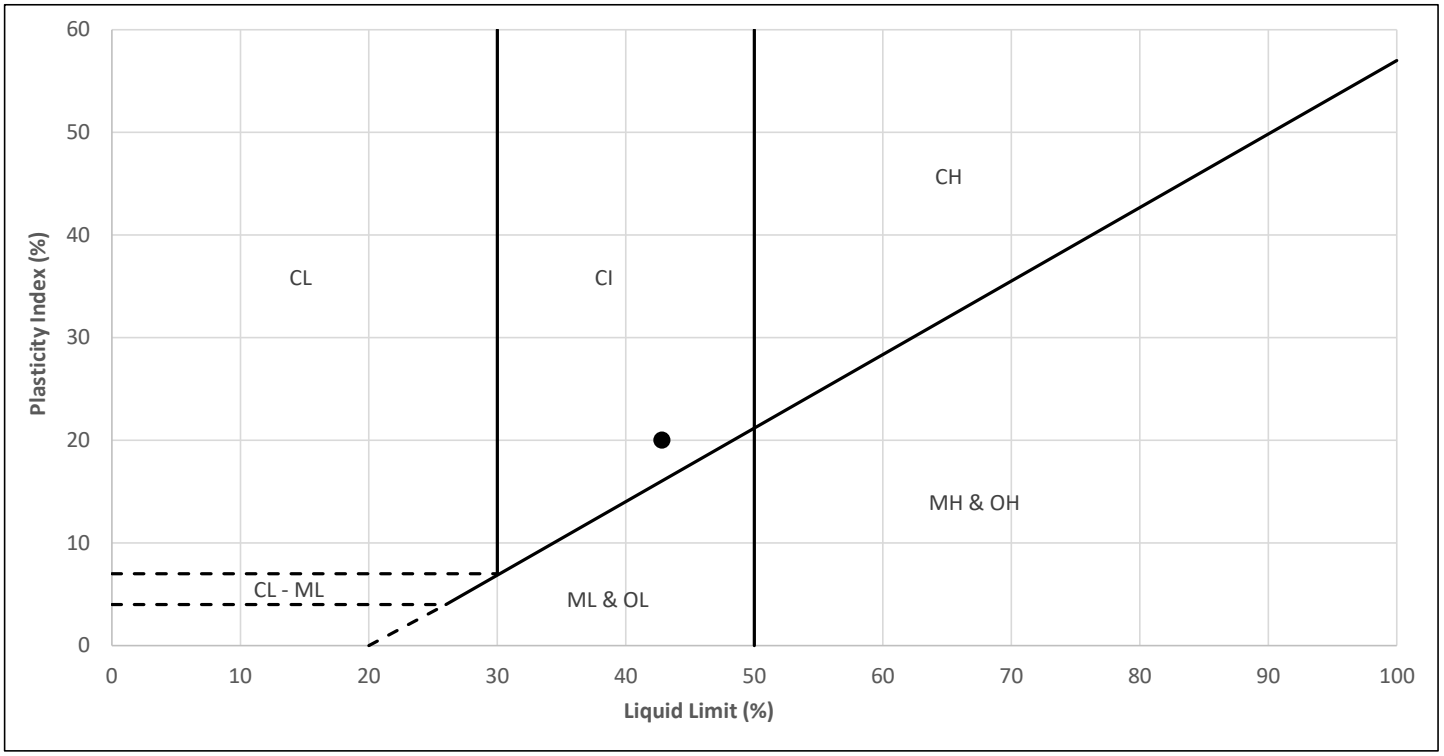
Project:	Snake Lake Reservoir Expansion	**Sample #:**	506AU3
Project No.:	1560-193-00	**Source:**	22BH506
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 506AU3	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	42.8
Plastic Limit (PL)	22.8
Plasticity Index (PI)	20.0

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

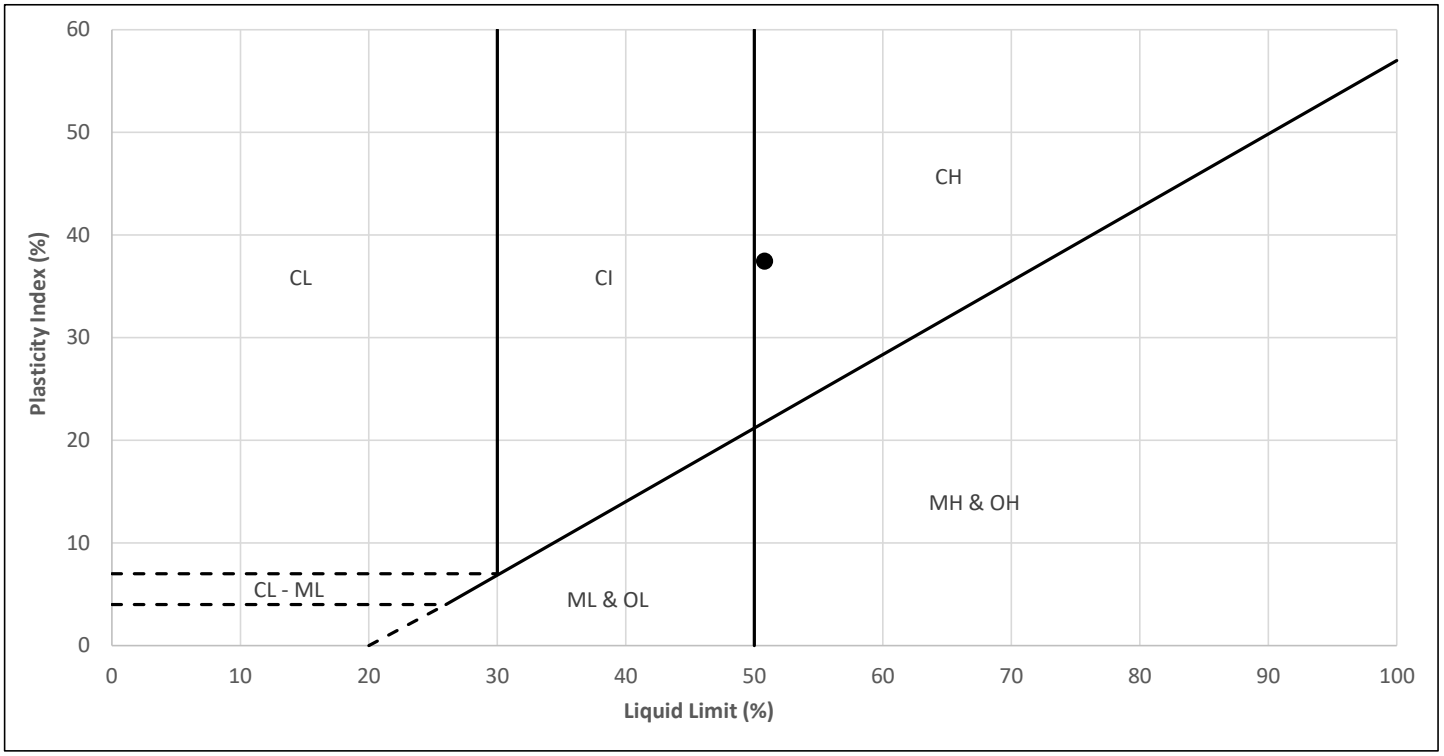
Project:	Snake Lake Reservoir Expansion	**Sample #:**	511AU2
Project No.:	1560-193-00	**Source:**	22BH511
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 511AU2	**Test Date:**	19-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.8
Plastic Limit (PL)	13.3
Plasticity Index (PI)	37.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

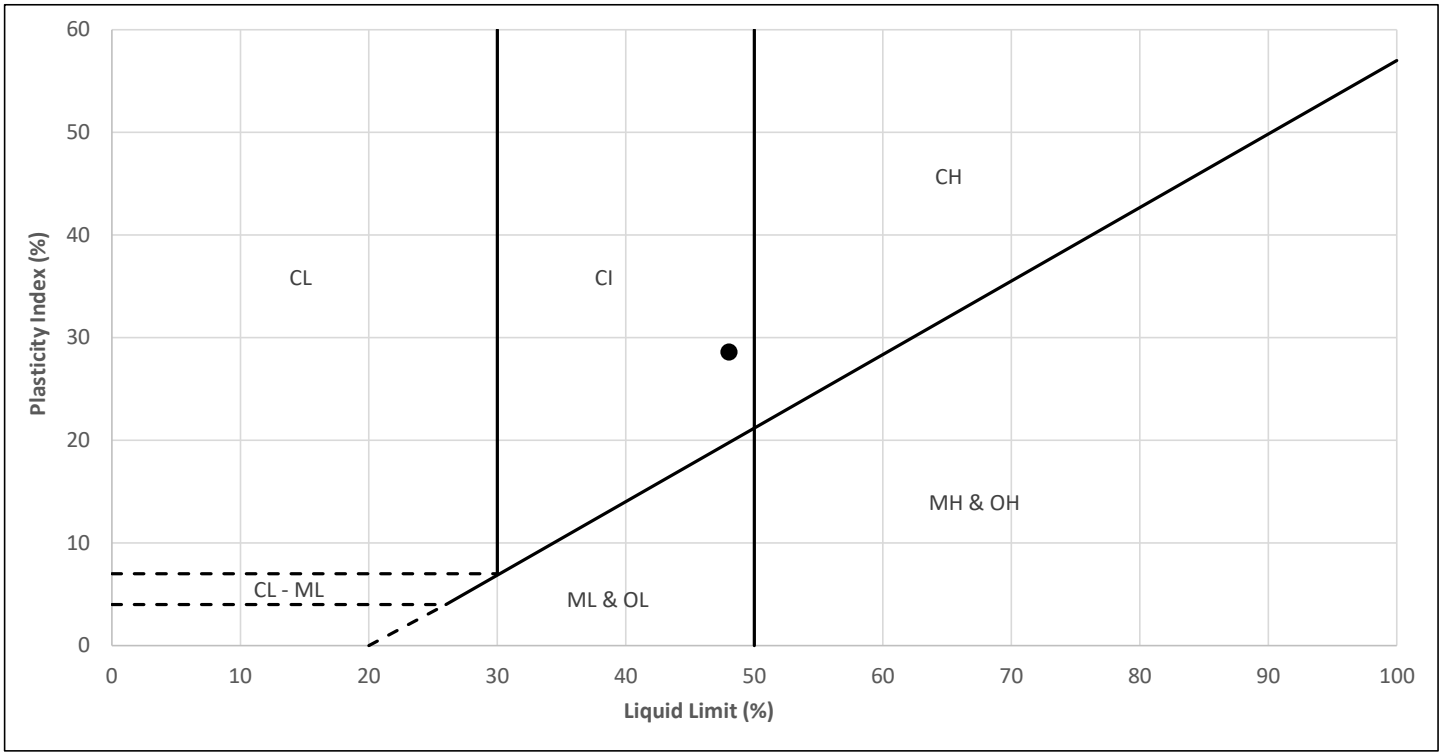
Project:	Snake Lake Reservoir Expansion	**Sample #:**	511AU3
Project No.:	1560-193-00	**Source:**	22BH511
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 511AU3	**Test Date:**	22-08-24

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	48.0
Plastic Limit (PL)	19.4
Plasticity Index (PI)	28.6

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

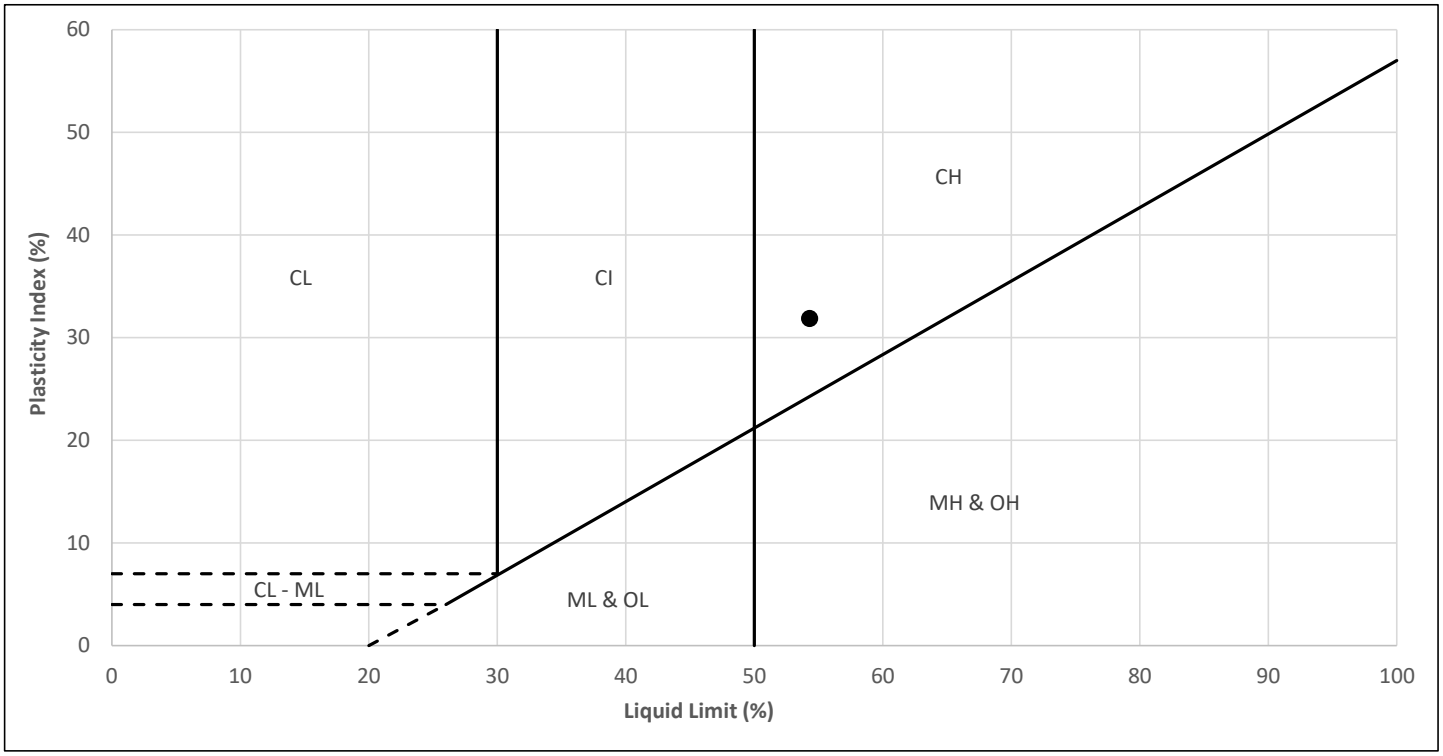
Project:	Snake Lake Reservoir Expansion	**Sample #:**	511AU4
Project No.:	1560-193-00	**Source:**	22BH511
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 511AU4	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.3
Plastic Limit (PL)	22.4
Plasticity Index (PI)	31.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

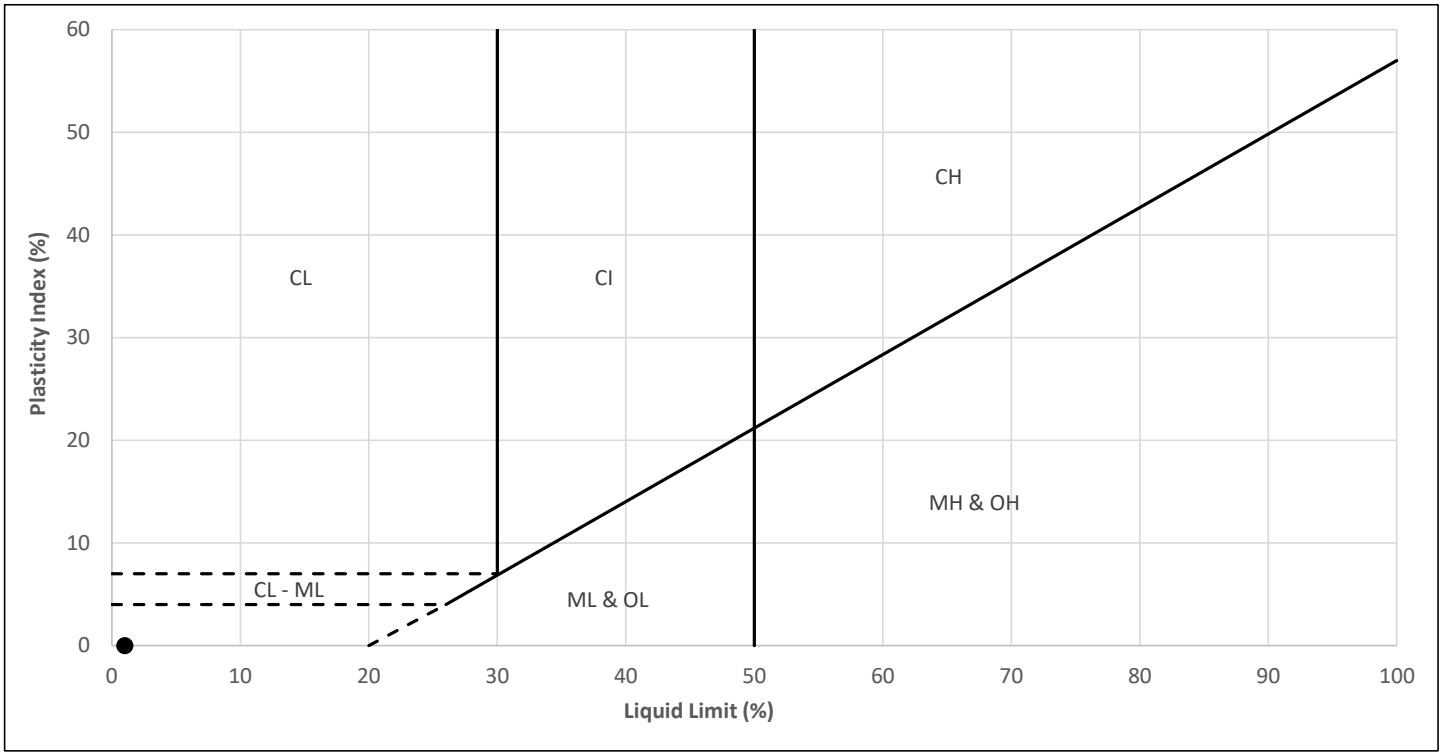
Project:	Snake Lake Reservoir Expansion	**Sample #:**	512AU1
Project No.:	1560-193-00	**Source:**	22BH512
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 512AU1	**Test Date:**	26-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic silts, very fine sands, rock flour, silty or clayey fine sands of slight plasticity

Liquid Limit (LL)	-
Plastic Limit (PL)	7.2
Plasticity Index (PI)	-

Soil Plasticity	Low
Soil Classification	ML



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ATTERBERG LIMITS

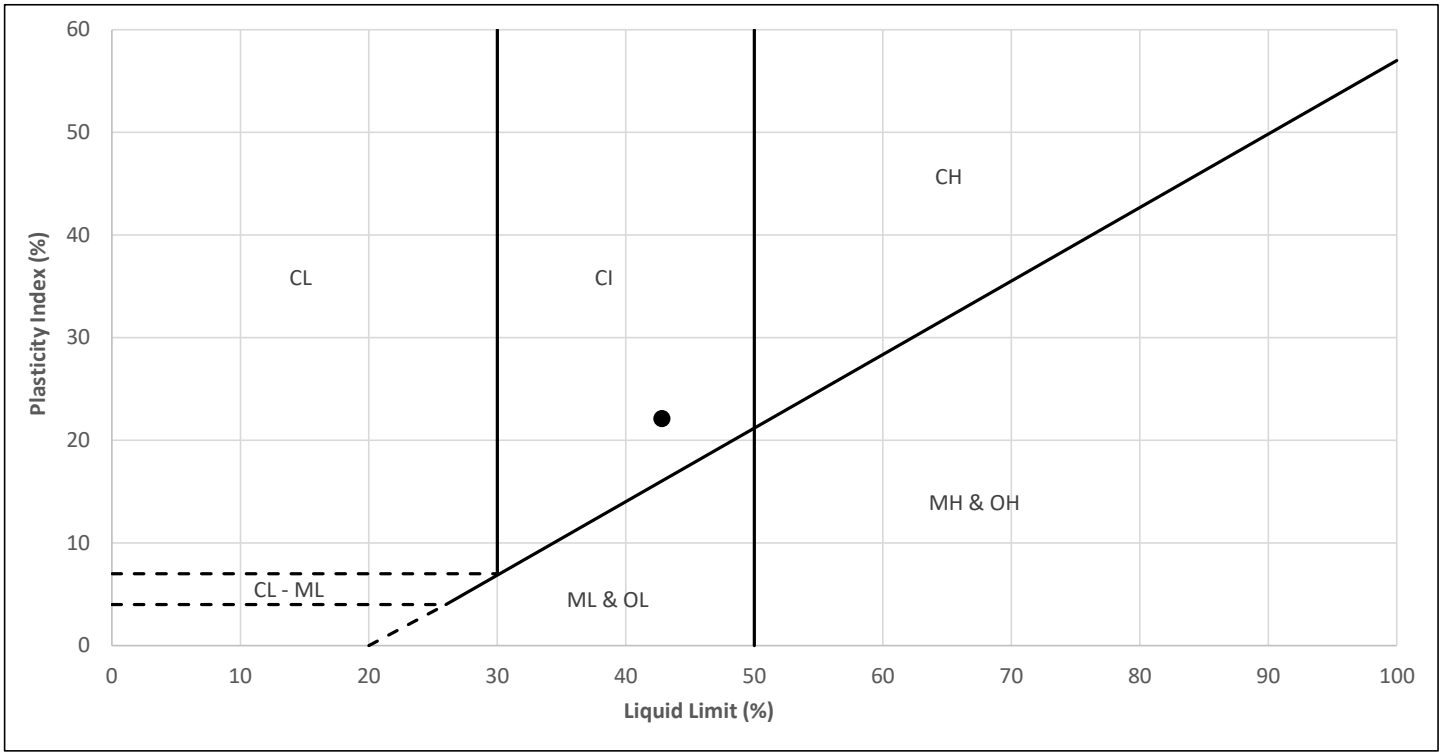
Project:	Snake Lake Reservoir Expansion	**Sample #:**	512AU3
Project No.:	1560-193-00	**Source:**	22BH512
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 512AU3	**Test Date:**	25-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	42.8
Plastic Limit (PL)	20.7
Plasticity Index (PI)	22.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

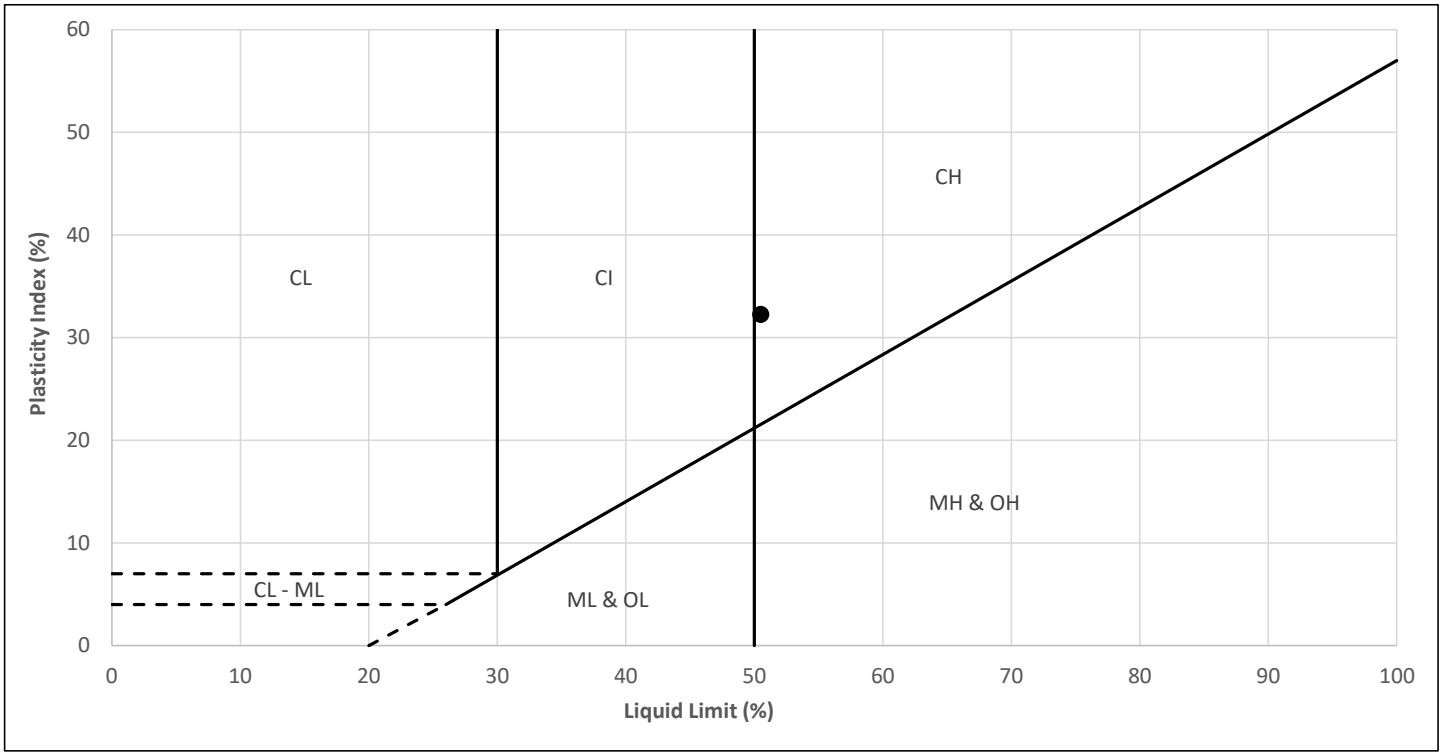
Project:	Snake Lake Reservoir Expansion	**Sample #:**	513AU2
Project No.:	1560-193-00	**Source:**	22BH513
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 513AU2	**Test Date:**	25-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.5
Plastic Limit (PL)	18.2
Plasticity Index (PI)	32.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

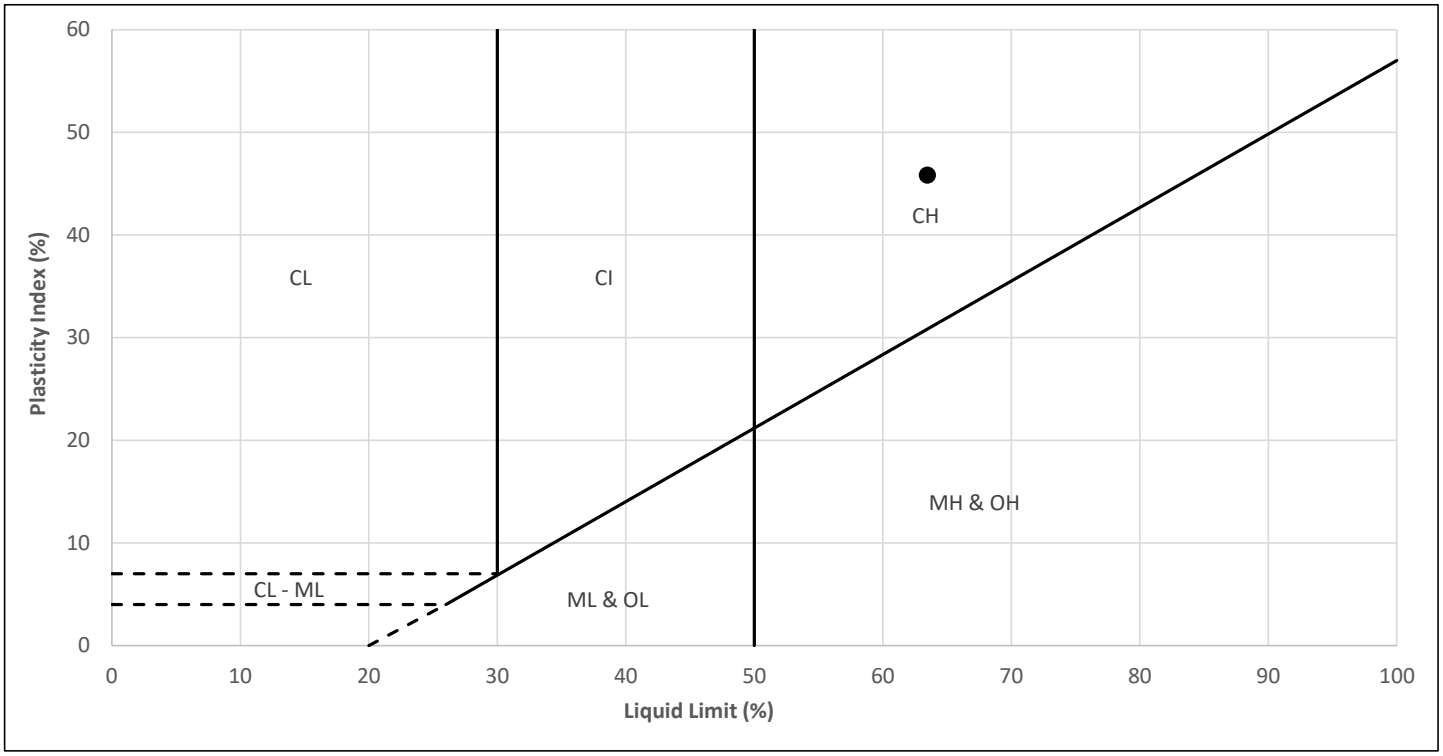
Project:	Snake Lake Reservoir Expansion	**Sample #:**	513AU3
Project No.:	1560-193-00	**Source:**	22BH513
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 513AU3	**Test Date:**	26-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	63.5
Plastic Limit (PL)	17.6
Plasticity Index (PI)	45.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

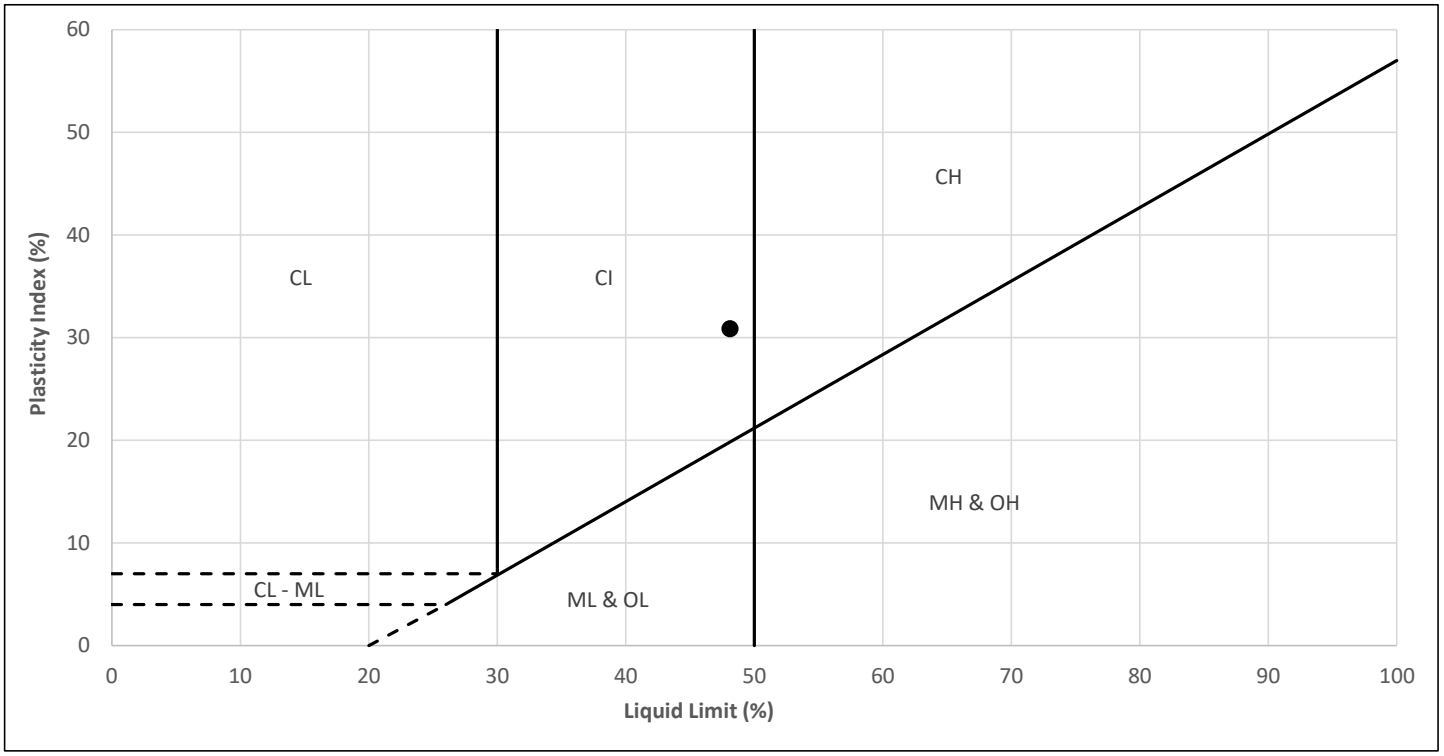
Project:	Snake Lake Reservoir Expansion	**Sample #:**	513AU4
Project No.:	1560-193-00	**Source:**	22BH513
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 513AU4	**Test Date:**	25-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	48.1
Plastic Limit (PL)	17.2
Plasticity Index (PI)	30.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

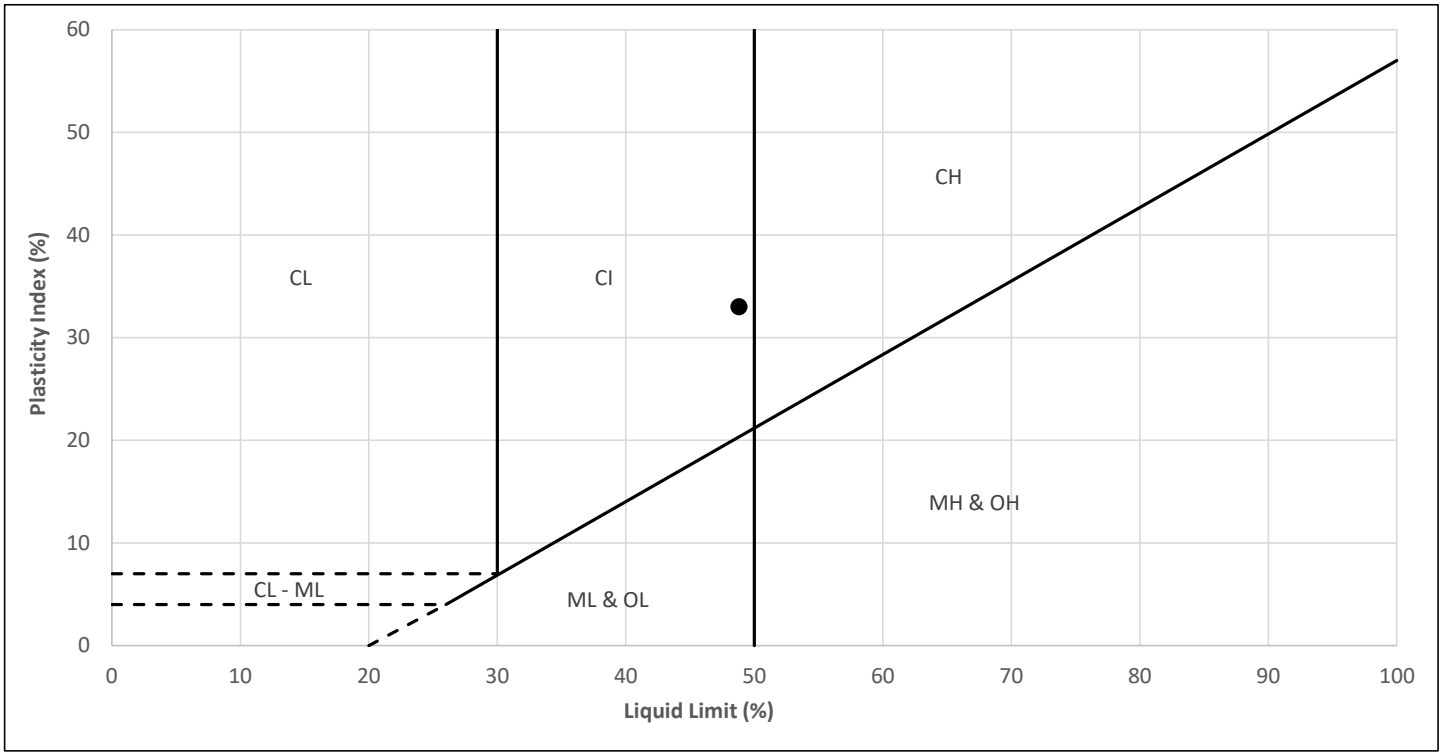
Project:	Snake Lake Reservoir Expansion	**Sample #:**	514AU1
Project No.:	1560-193-00	**Source:**	22BH514
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 514AU1	**Test Date:**	26-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	48.8
Plastic Limit (PL)	15.8
Plasticity Index (PI)	33.0

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

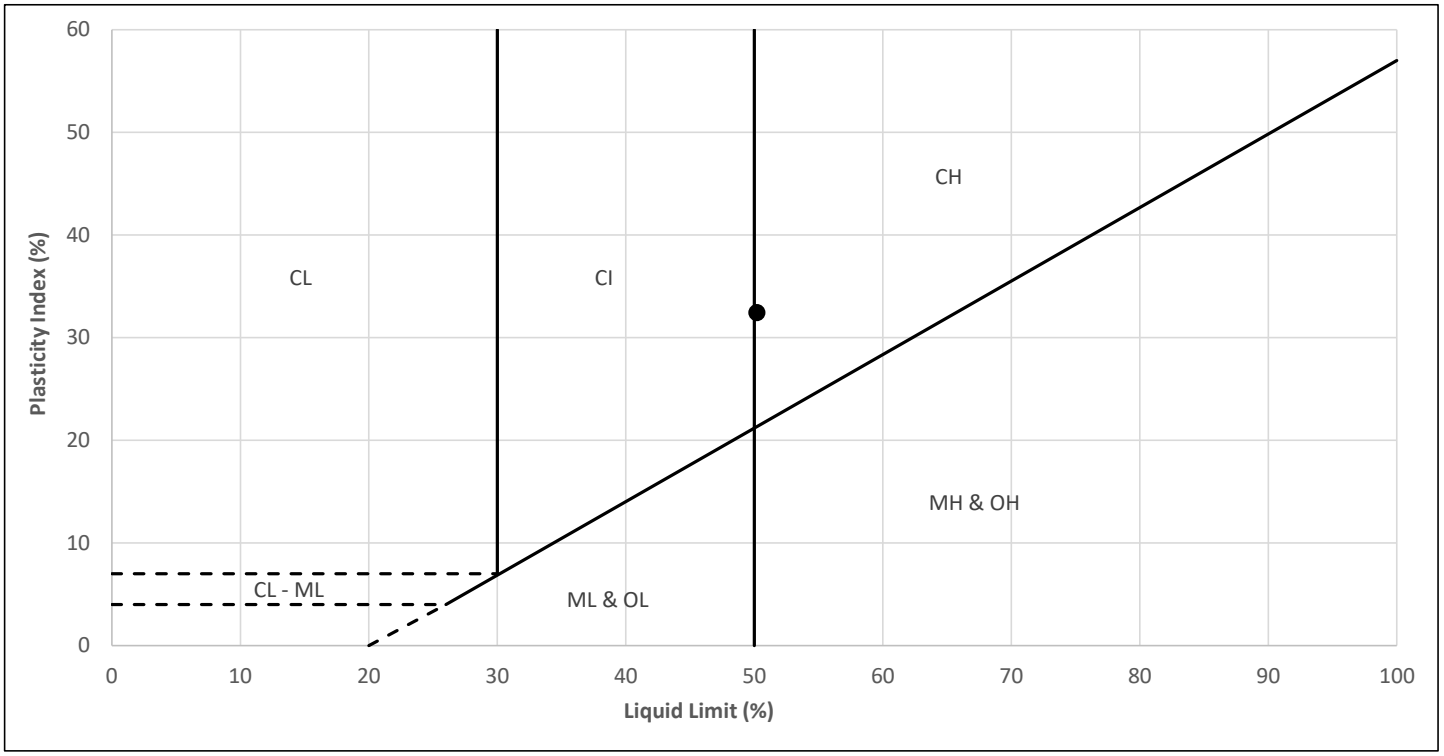
Project:	Snake Lake Reservoir Expansion	**Sample #:**	514AU3
Project No.:	1560-193-00	**Source:**	22BH514
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 514AU3	**Test Date:**	27-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.2
Plastic Limit (PL)	17.7
Plasticity Index (PI)	32.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

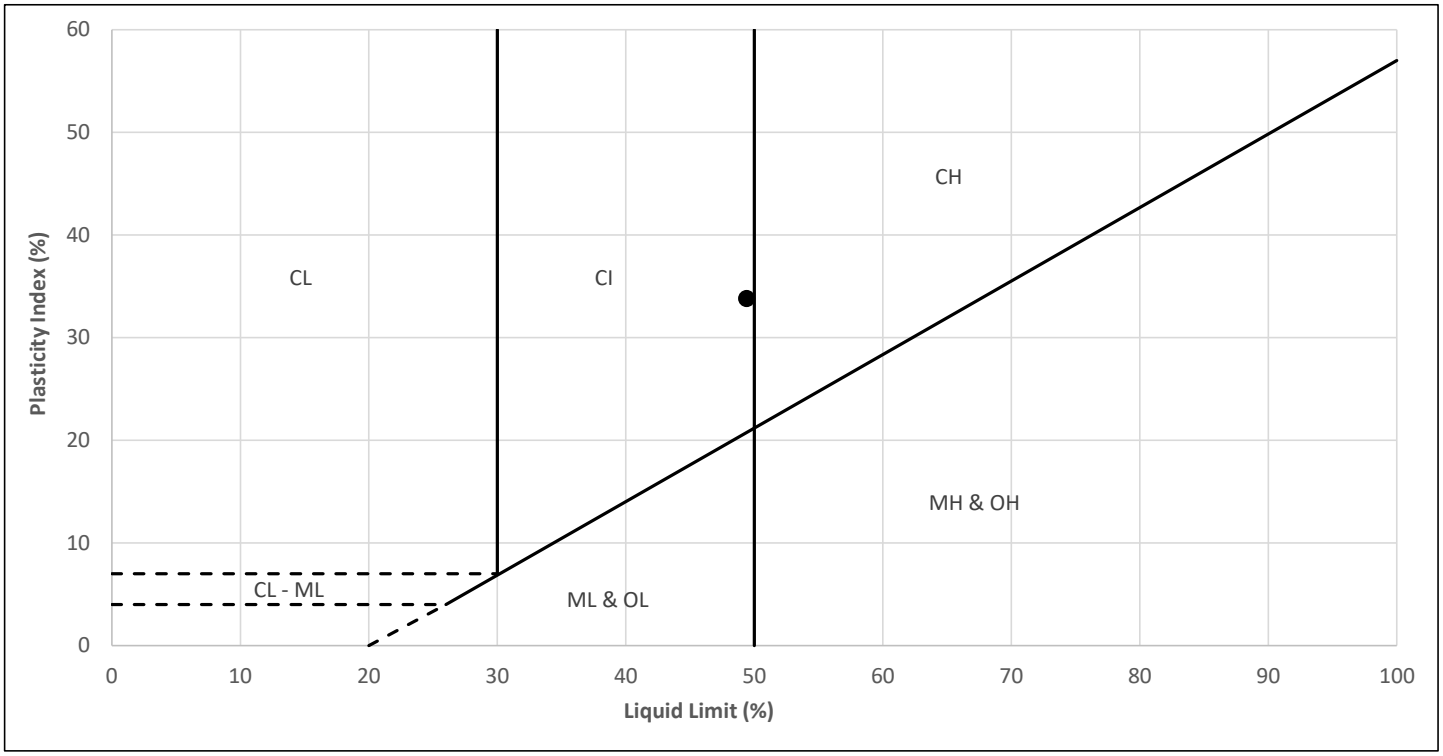
Project:	Snake Lake Reservoir Expansion	**Sample #:**	515AU2
Project No.:	1560-193-00	**Source:**	22BH515
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 515AU2	**Test Date:**	26-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.4
Plastic Limit (PL)	15.6
Plasticity Index (PI)	33.8

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

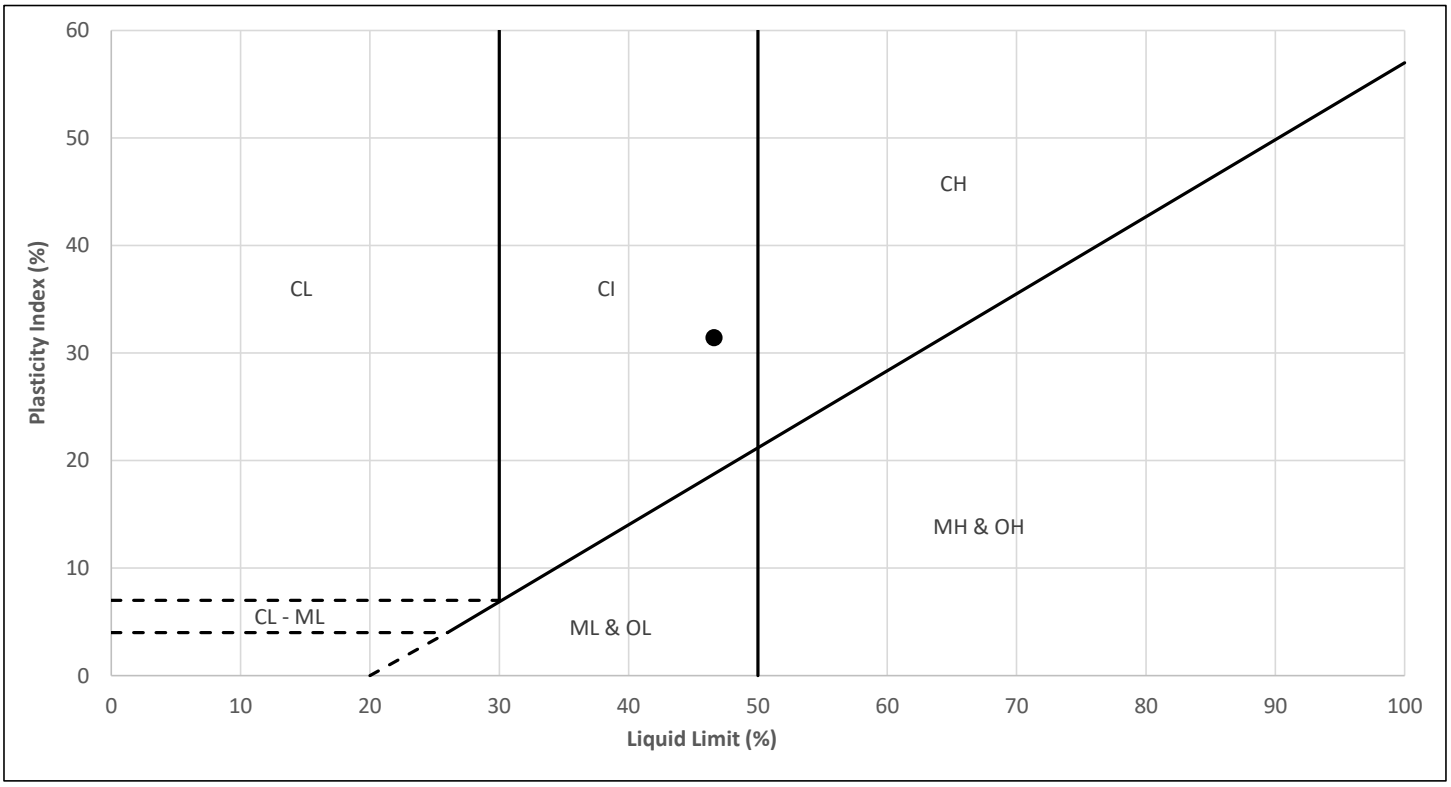
Project:	Snake Lake Reservoir Expansion	**Sample #:**	515AU3
Project No.:	1560-193-00	**Source:**	22BH515
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 515AU3	**Test Date:**	8-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	46.6
Plastic Limit (PL)	15.2
Plasticity Index (PI)	31.4

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

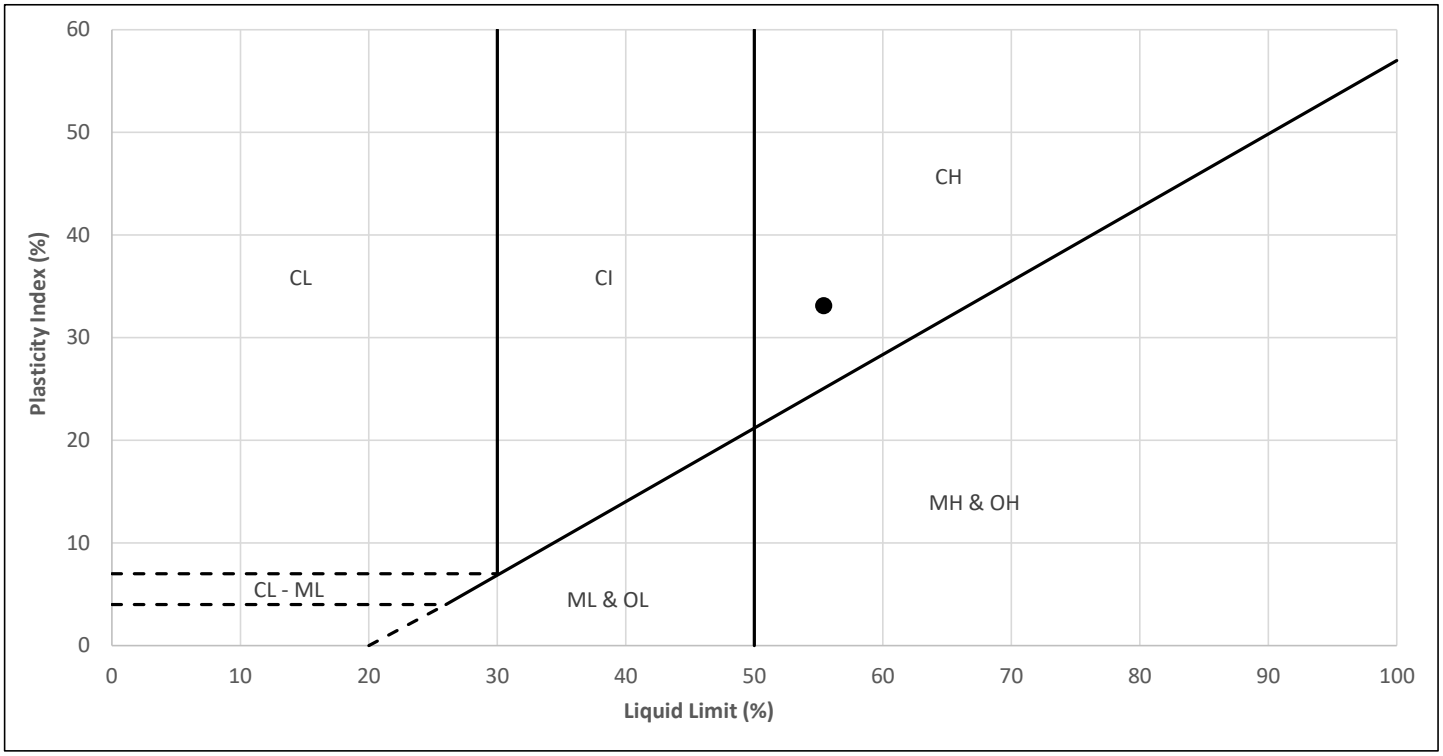
Project:	Snake Lake Reservoir Expansion	**Sample #:**	516AU1
Project No.:	1560-193-00	**Source:**	22BH516
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 516AU1	**Test Date:**	26-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.4
Plastic Limit (PL)	22.3
Plasticity Index (PI)	33.1

Soil Plasticity	High
Soil Classification	CH



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1, 3320 18 Avenue North
Lethbridge, Alberta T1H 5J3
Tel: (403)892-6036

ATTERBERG LIMITS

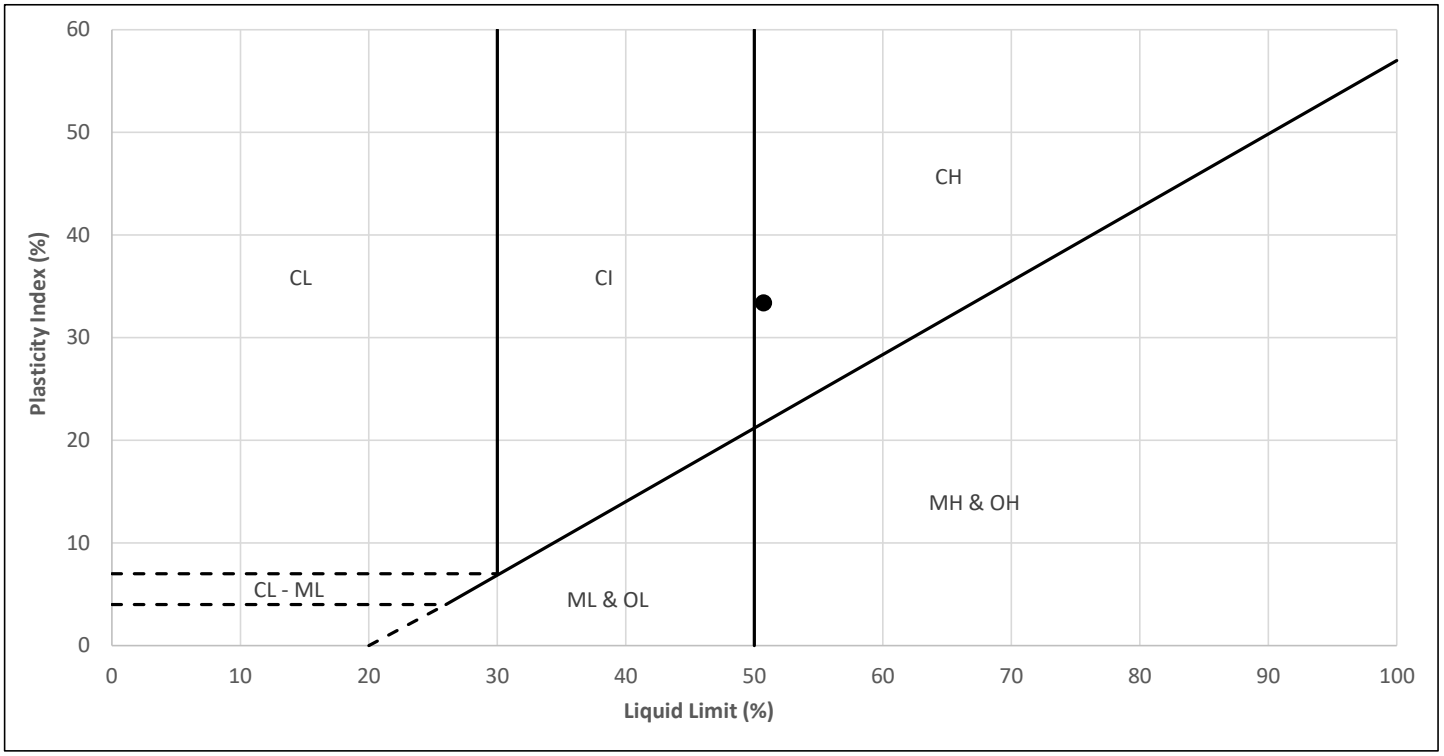
Project:	Snake Lake Reservoir Expansion	**Sample #:**	516AU2
Project No.:	1560-193-00	**Source:**	22BH516
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 516AU2	**Test Date:**	24-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.7
Plastic Limit (PL)	17.3
Plasticity Index (PI)	33.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

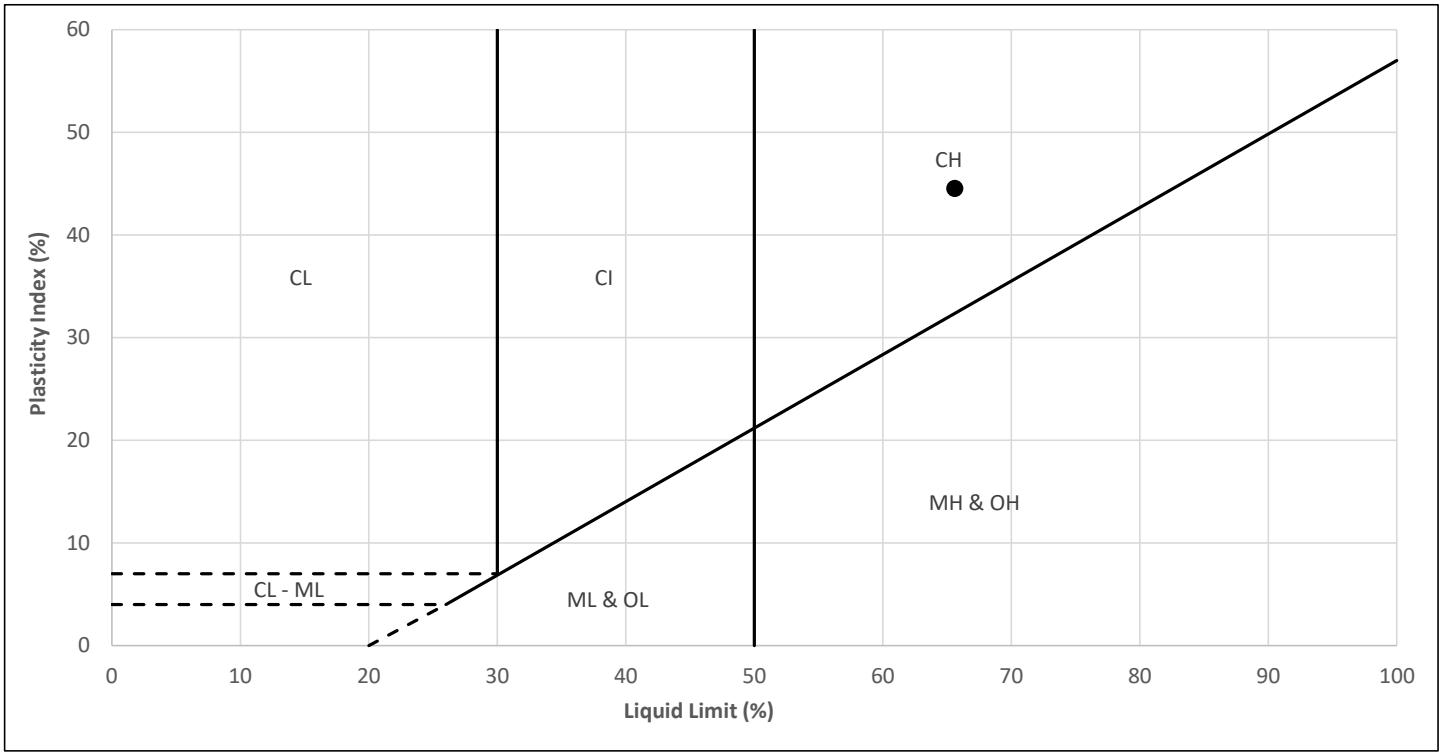
Project:	Snake Lake Reservoir Expansion	**Sample #:**	516AU3
Project No.:	1560-193-00	**Source:**	22BH516
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 516AU3	**Test Date:**	27-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	65.6
Plastic Limit (PL)	21.1
Plasticity Index (PI)	44.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

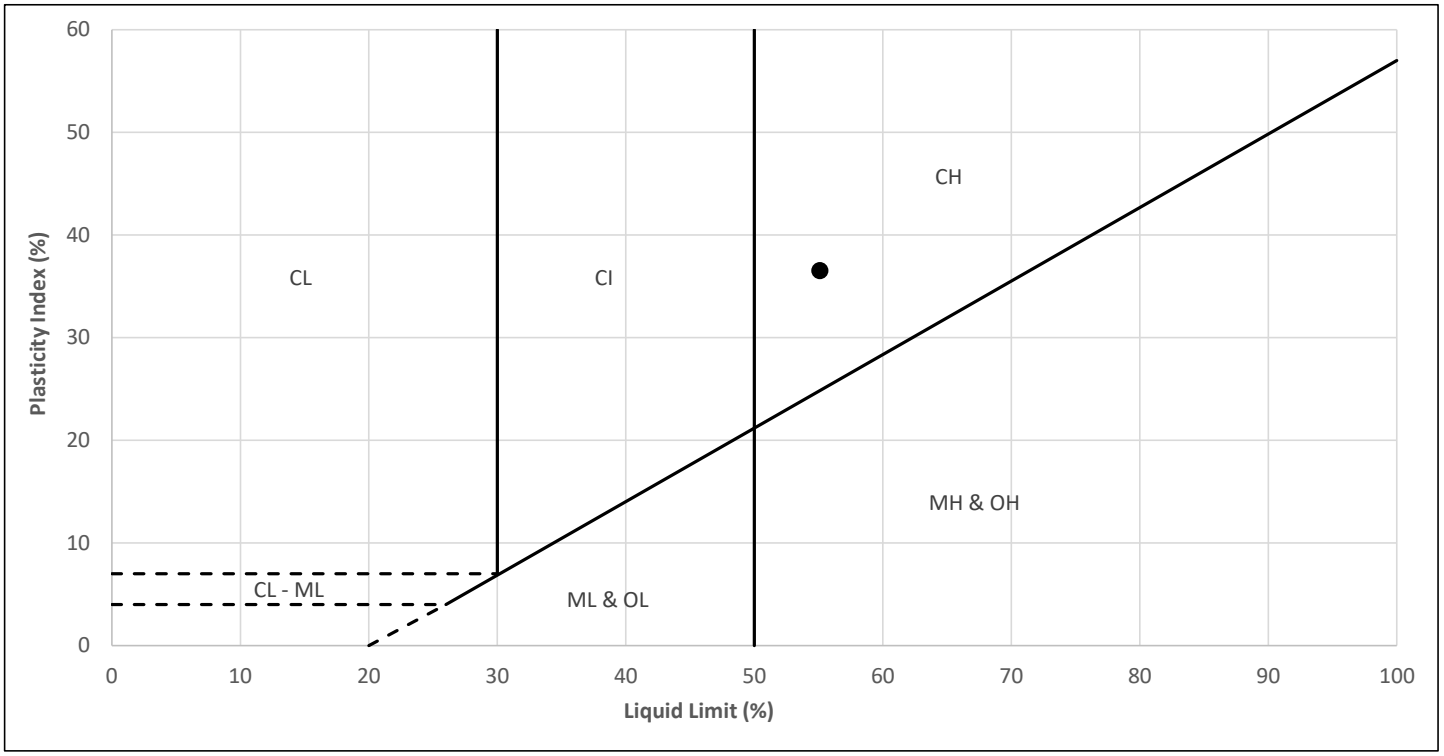
Project:	Snake Lake Reservoir Expansion	**Sample #:**	517AU2
Project No.:	1560-193-00	**Source:**	22BH517
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 517AU2	**Test Date:**	27-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.1
Plastic Limit (PL)	18.6
Plasticity Index (PI)	36.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

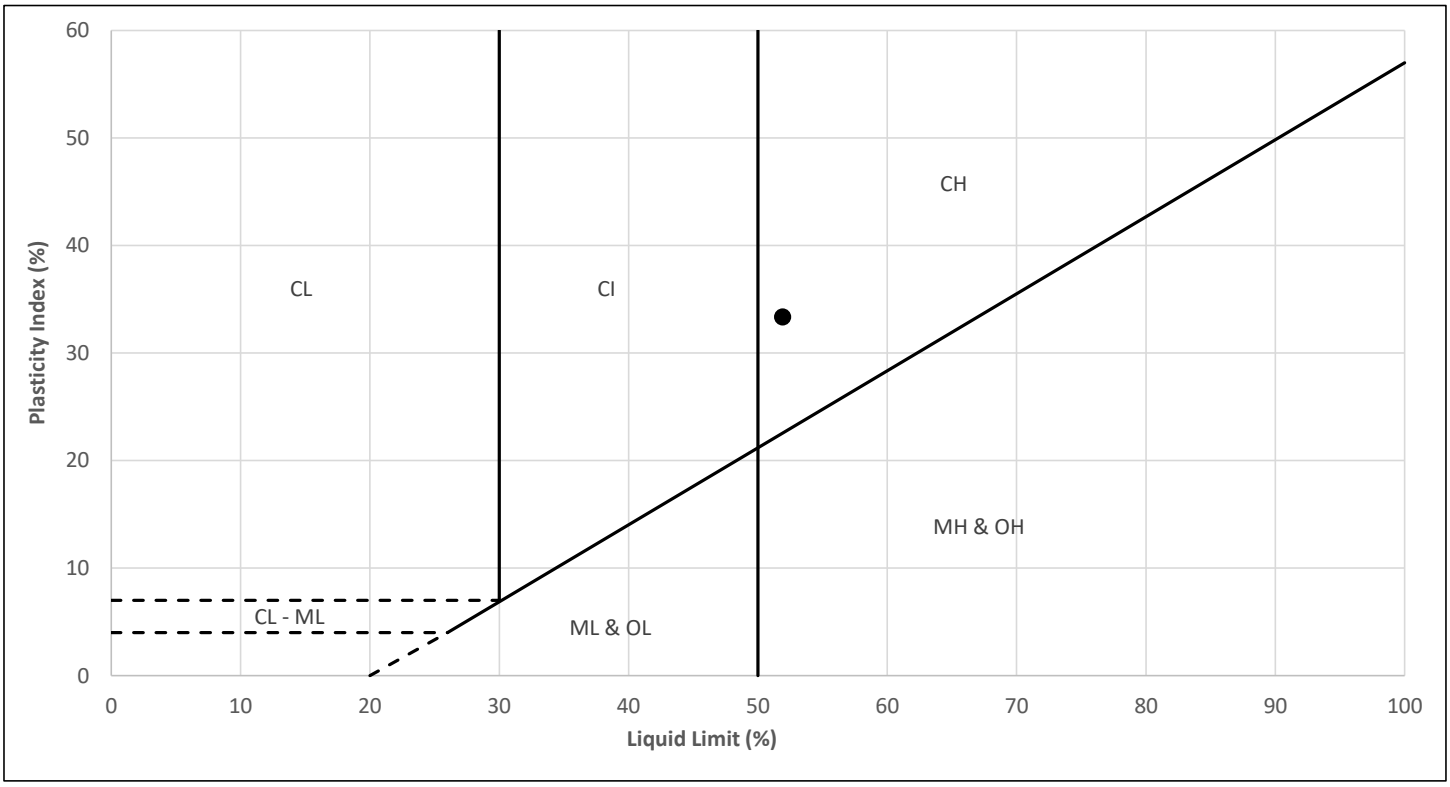
Project:	Snake Lake Reservoir Expansion	**Sample #:**	517AU3
Project No.:	1560-193-00	**Source:**	22BH517
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 517AU3	**Test Date:**	7-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.9
Plastic Limit (PL)	18.5
Plasticity Index (PI)	33.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

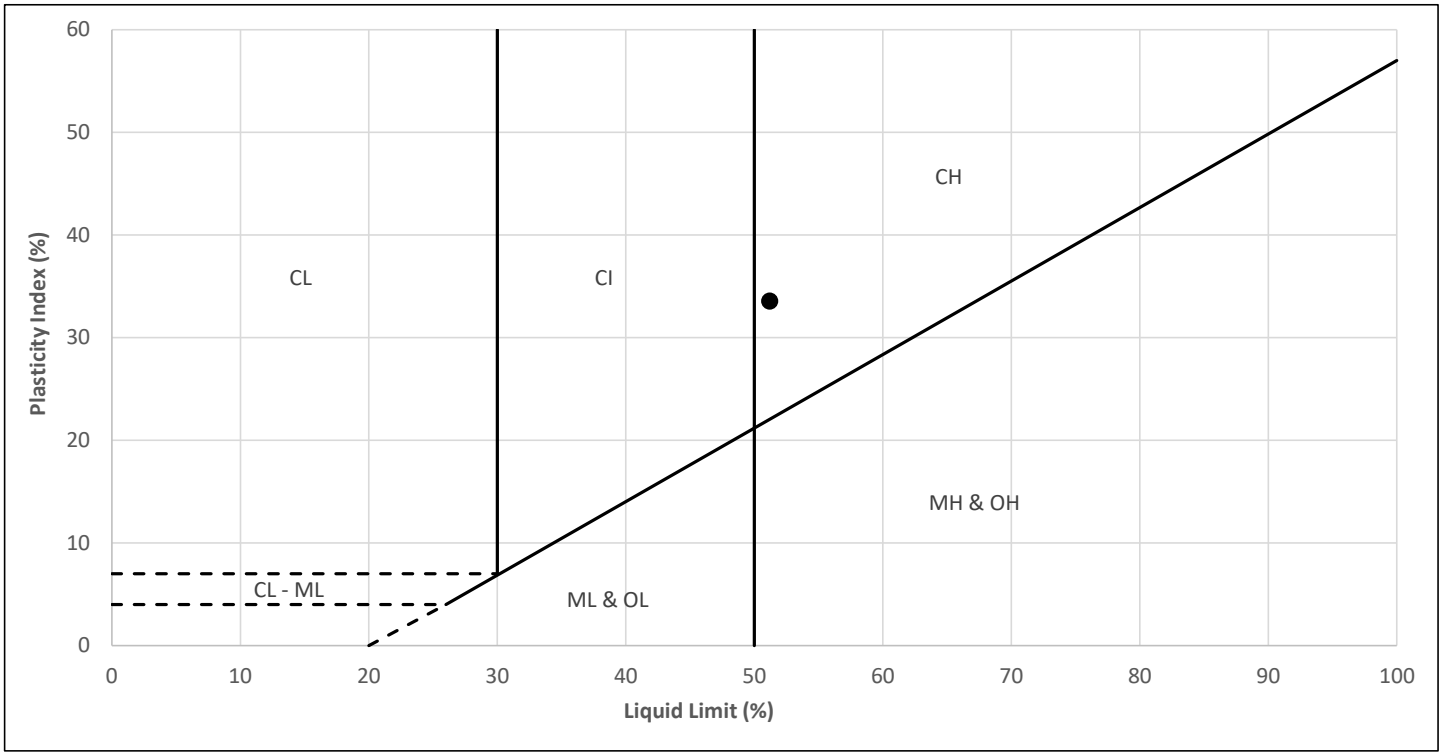
Project:	Snake Lake Reservoir Expansion	**Sample #:**	517AU4
Project No.:	1560-193-00	**Source:**	22BH517
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 517AU4	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.2
Plastic Limit (PL)	17.6
Plasticity Index (PI)	33.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

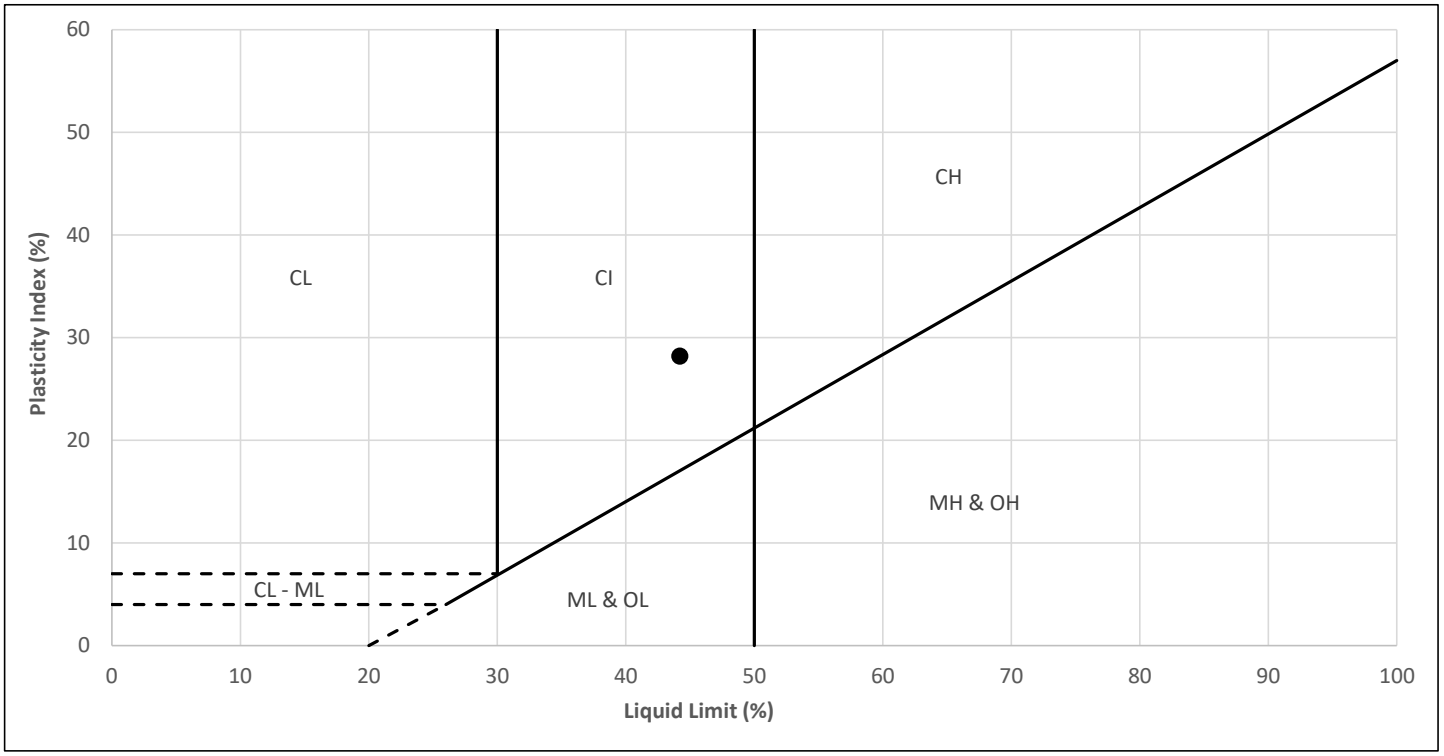
Project:	Snake Lake Reservoir Expansion	**Sample #:**	518AU1
Project No.:	1560-193-00	**Source:**	22BH518
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 518AU1	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.2
Plastic Limit (PL)	16.0
Plasticity Index (PI)	28.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

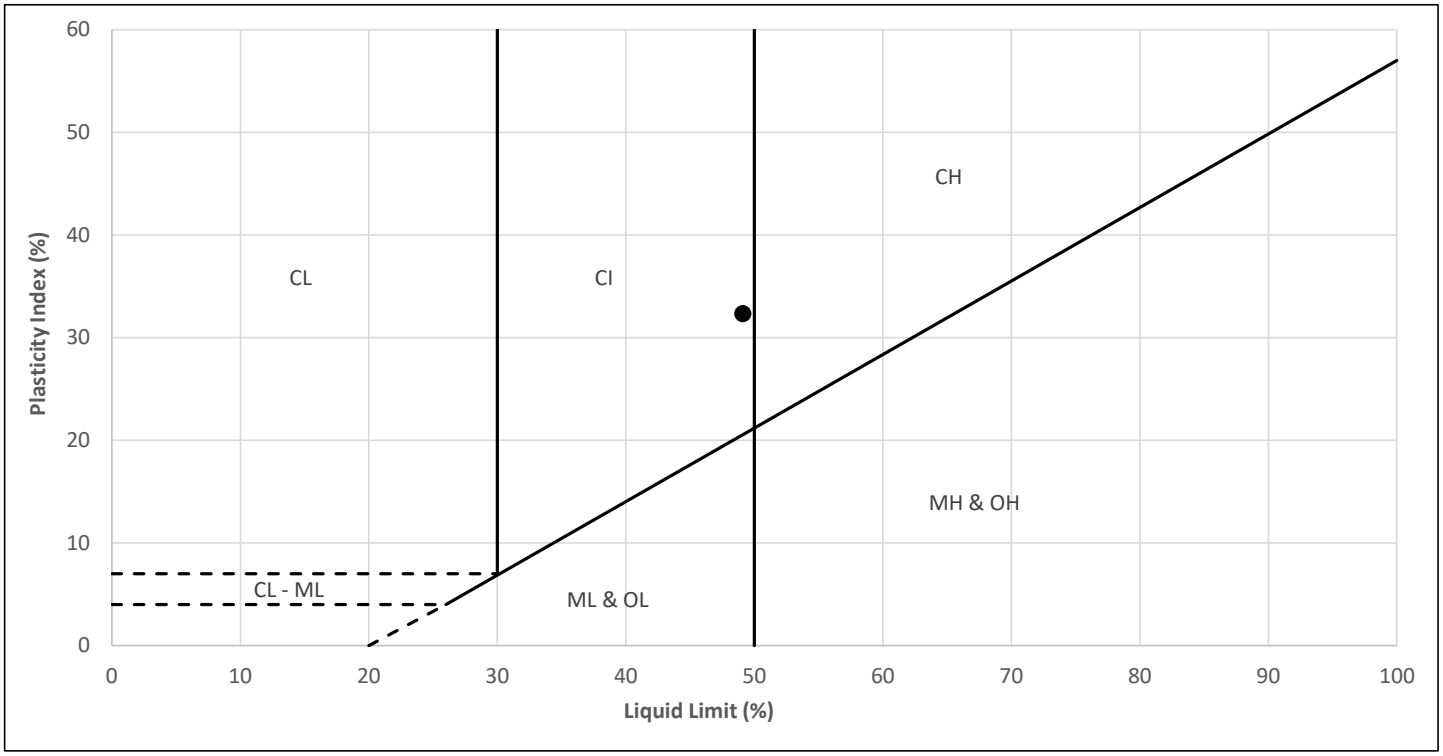
Project:	Snake Lake Reservoir Expansion	**Sample #:**	518AU3
Project No.:	1560-193-00	**Source:**	22BH518
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 518AU3	**Test Date:**	27-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.1
Plastic Limit (PL)	16.7
Plasticity Index (PI)	32.4

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

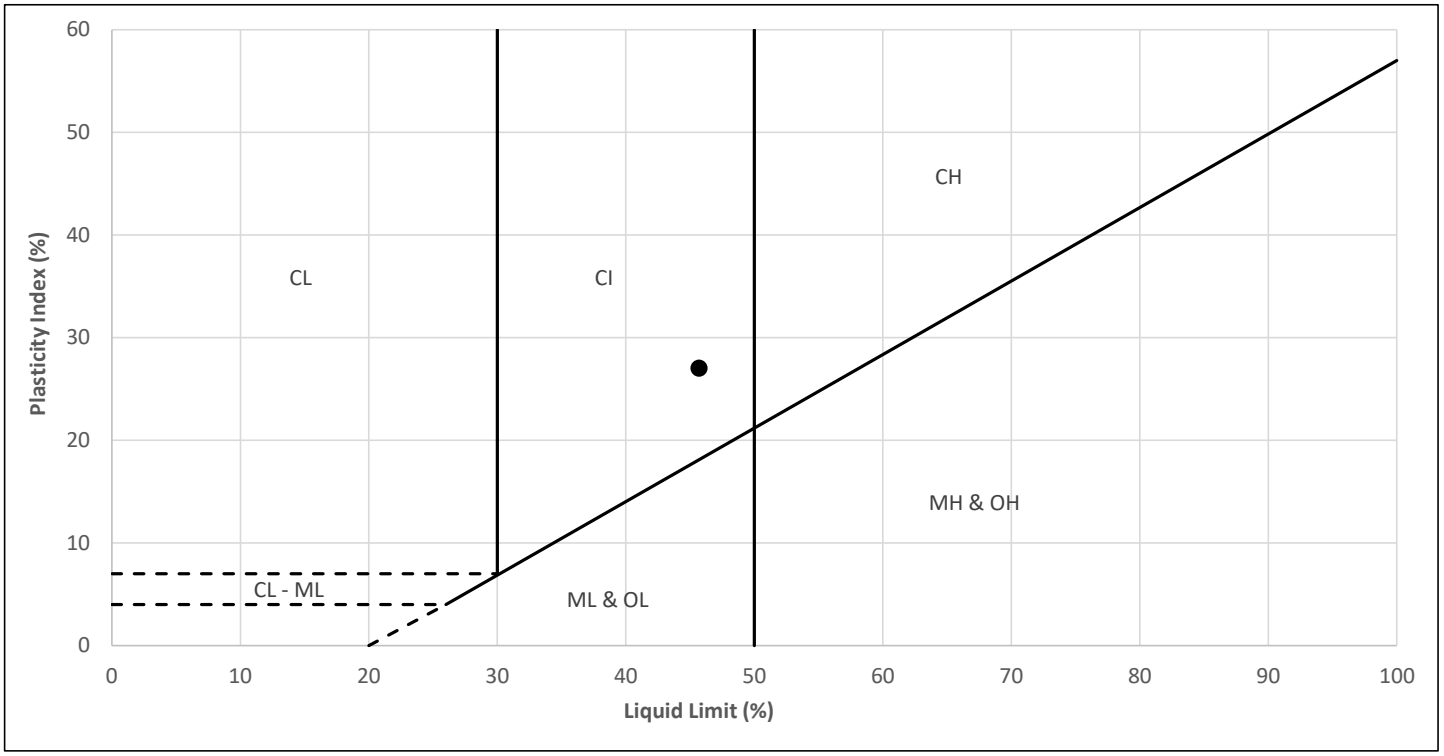
Project:	Snake Lake Reservoir Expansion	**Sample #:**	519AU2
Project No.:	1560-193-00	**Source:**	22BH519
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 519AU2	**Test Date:**	24-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	45.7
Plastic Limit (PL)	18.7
Plasticity Index (PI)	27.0

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

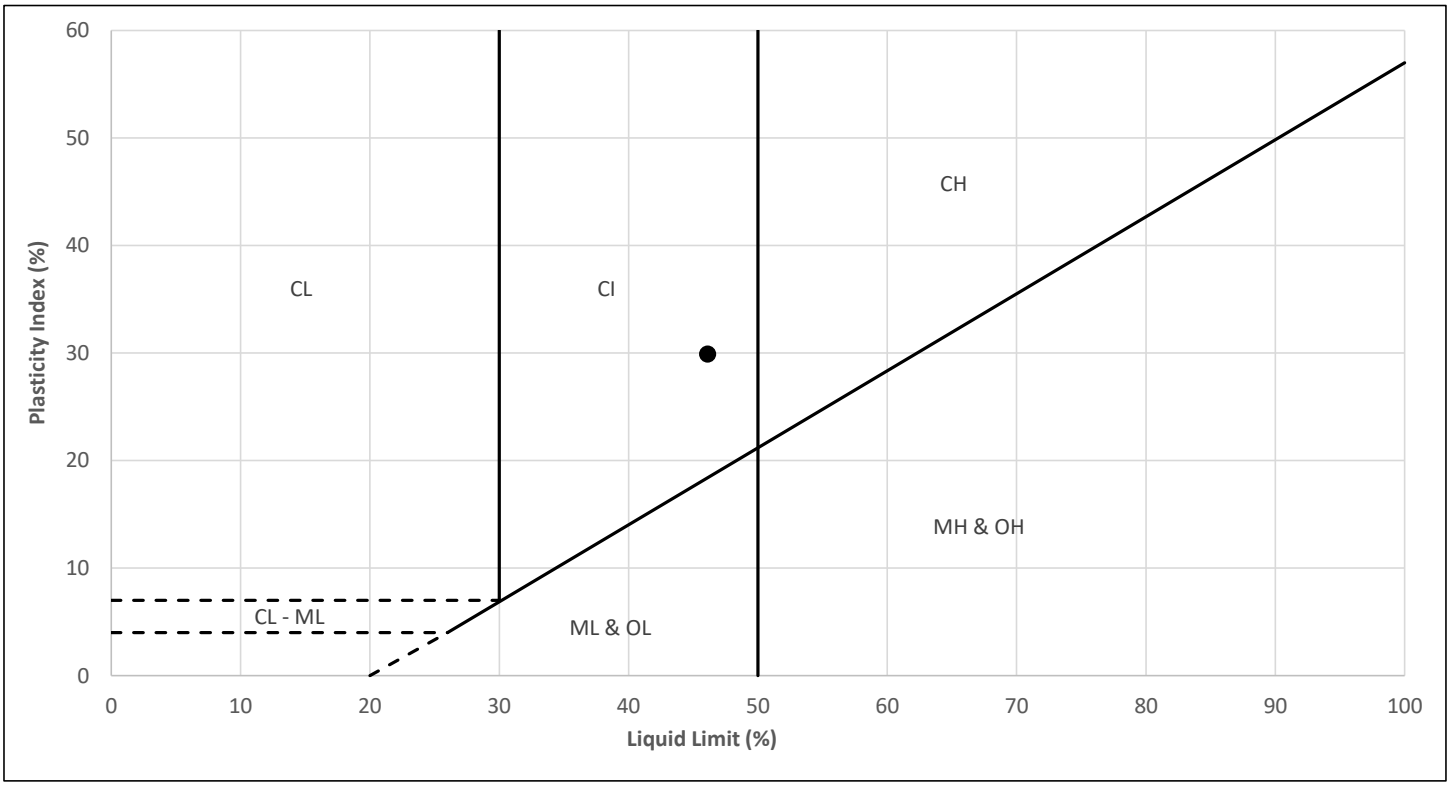
Project:	Snake Lake Reservoir Expansion	**Sample #:**	519AU3
Project No.:	1560-193-00	**Source:**	22BH519
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 519AU3	**Test Date:**	10-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	46.1
Plastic Limit (PL)	16.2
Plasticity Index (PI)	29.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

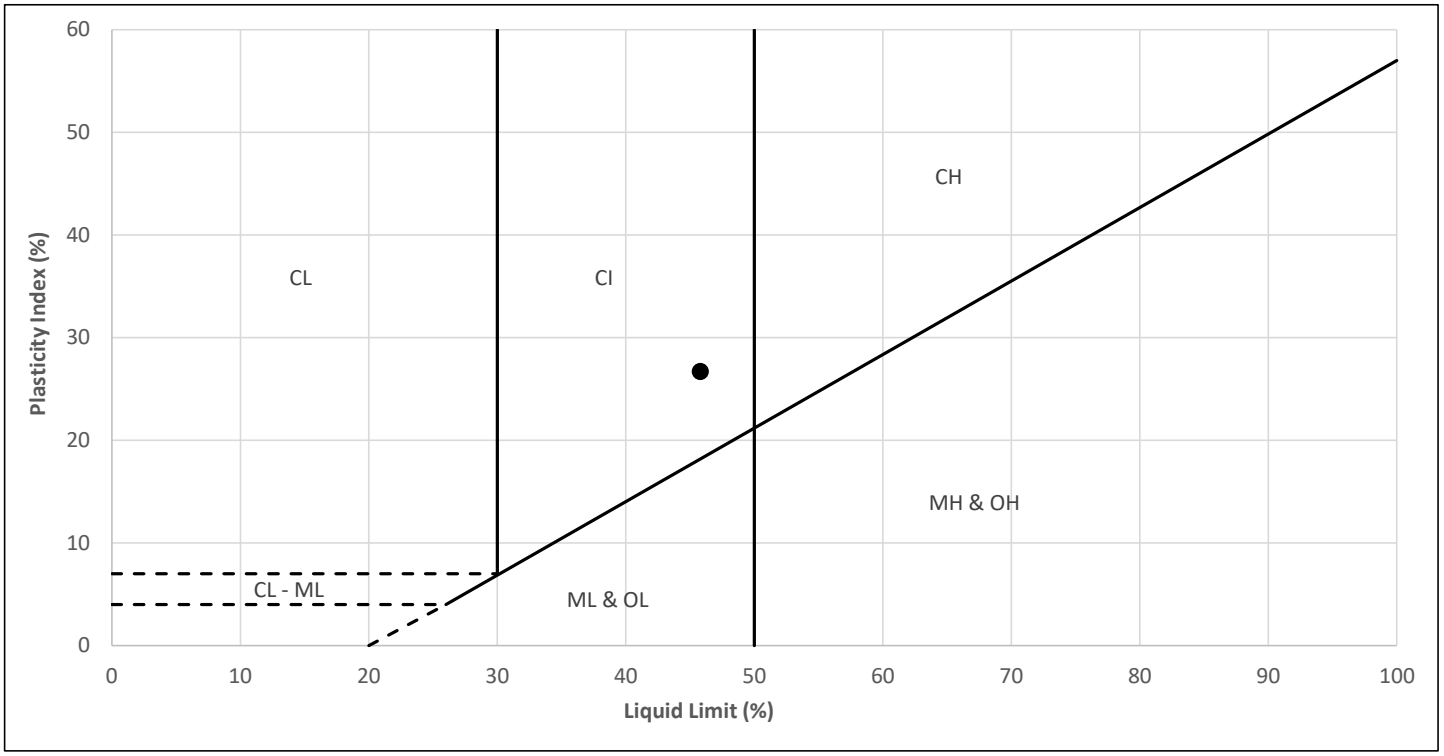
Project:	Snake Lake Reservoir Expansion	**Sample #:**	519AU4
Project No.:	1560-193-00	**Source:**	22BH519
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 519AU4	**Test Date:**	26-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	45.8
Plastic Limit (PL)	19.1
Plasticity Index (PI)	26.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

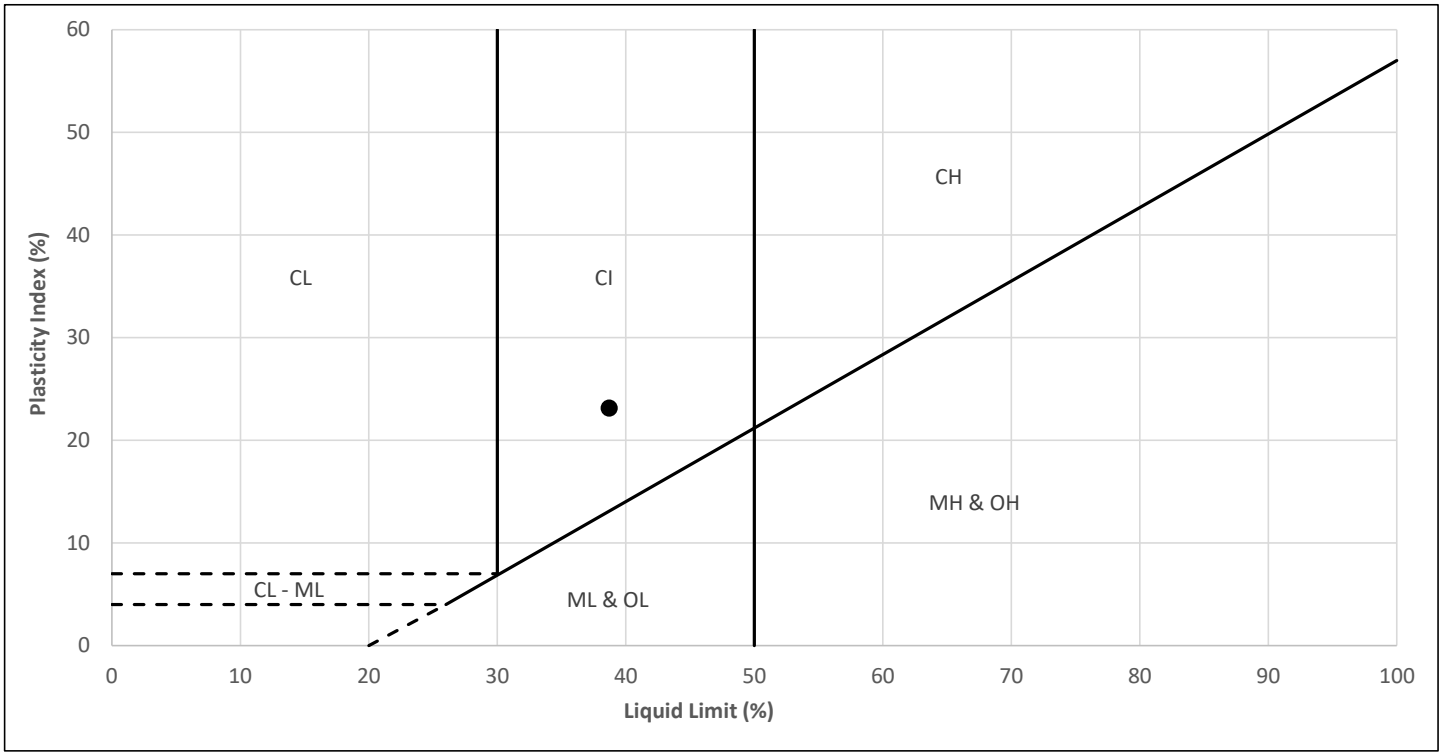
Project:	Snake Lake Reservoir Expansion	**Sample #:**	520AU1
Project No.:	1560-193-00	**Source:**	22BH520
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 520AU1	**Test Date:**	24-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	38.7
Plastic Limit (PL)	15.6
Plasticity Index (PI)	23.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

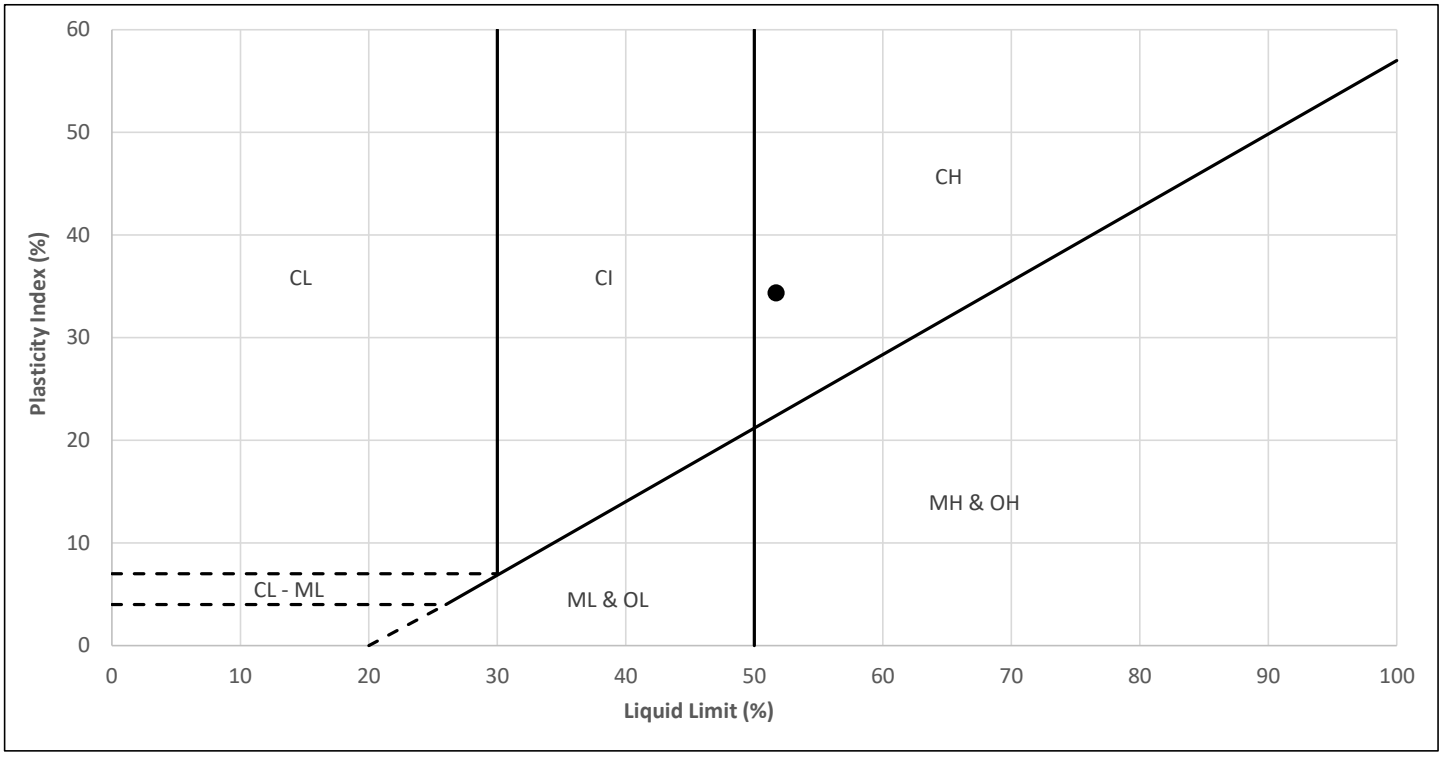
Project:	Snake Lake Reservoir Expansion	**Sample #:**	520AU2
Project No.:	1560-193-00	**Source:**	22BH520
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 520AU2	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.7
Plastic Limit (PL)	17.3
Plasticity Index (PI)	34.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

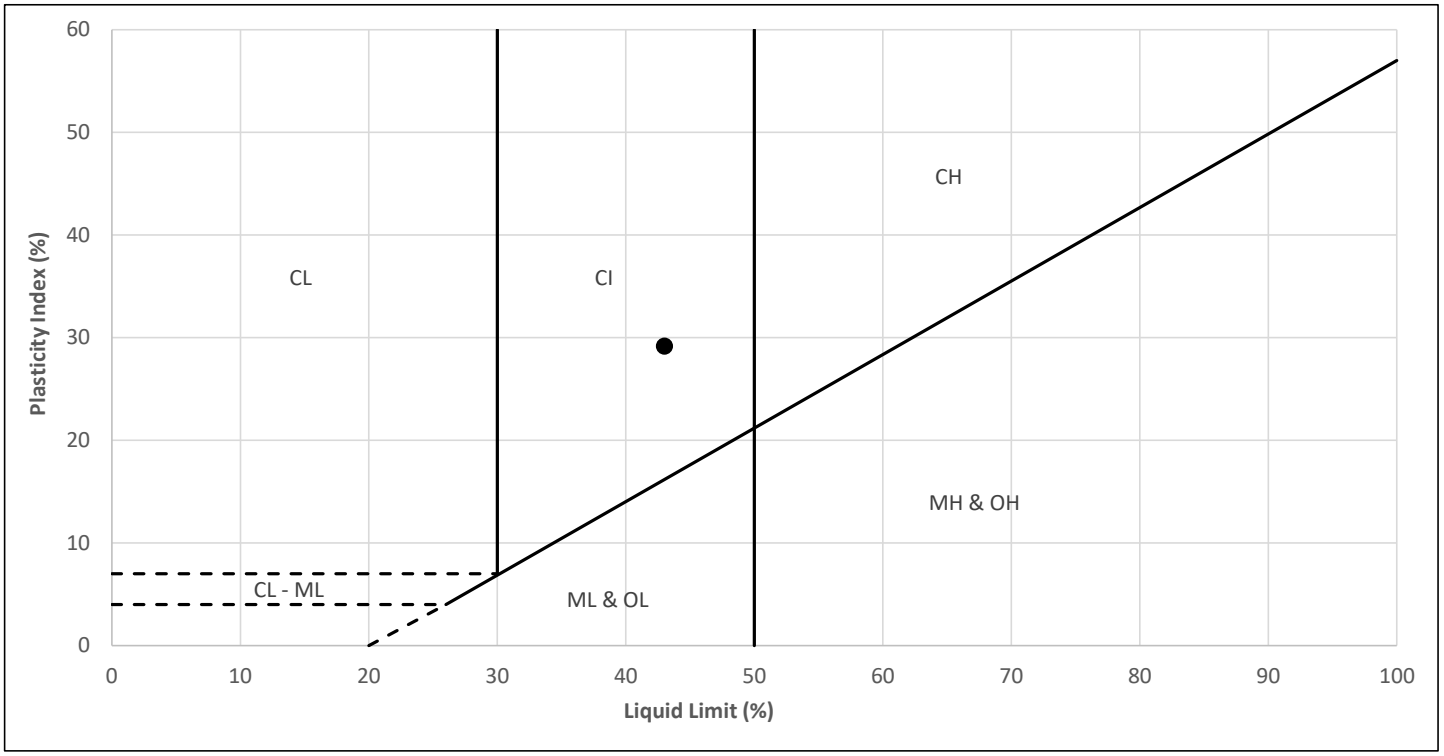
Project:	Snake Lake Reservoir Expansion	**Sample #:**	520AU3
Project No.:	1560-193-00	**Source:**	22BH520
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 520AU3	**Test Date:**	24-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	43.0
Plastic Limit (PL)	13.8
Plasticity Index (PI)	29.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

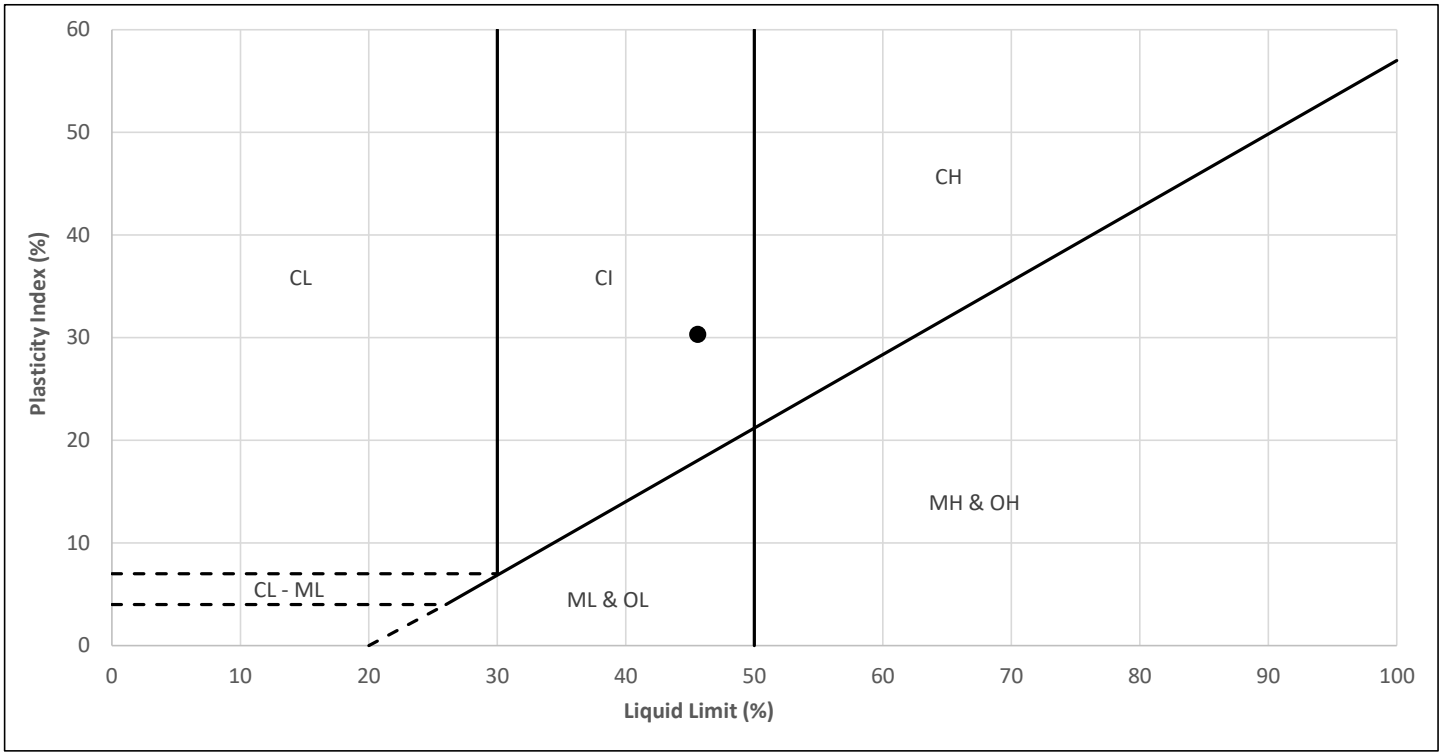
Project:	Snake Lake Reservoir Expansion	**Sample #:**	521AU2
Project No.:	1560-193-00	**Source:**	22BH521
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 521AU2	**Test Date:**	24-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	45.6
Plastic Limit (PL)	15.3
Plasticity Index (PI)	30.3

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

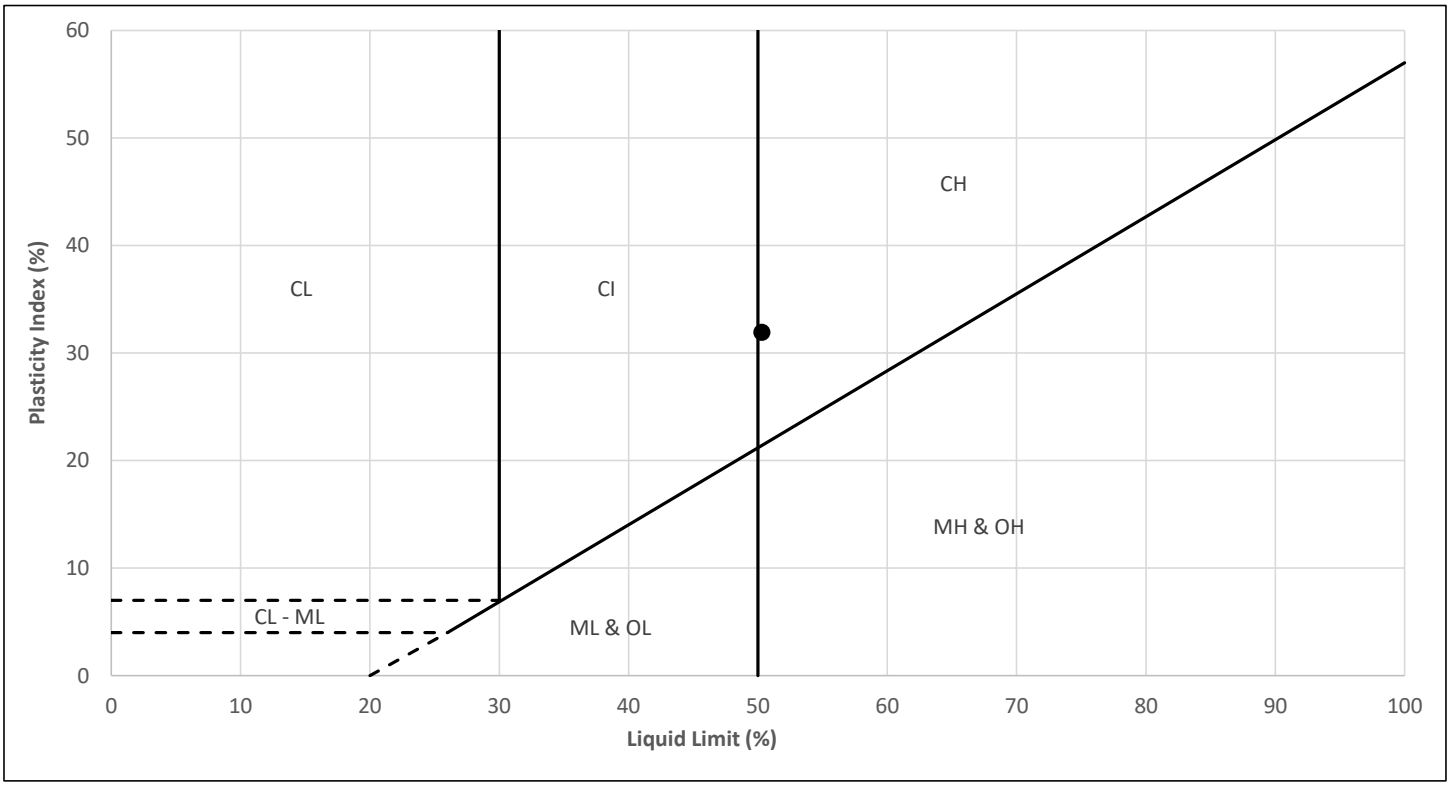
Project:	Snake Lake Reservoir Expansion	**Sample #:**	521AU3
Project No.:	1560-193-00	**Source:**	22BH521
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 521AU3	**Test Date:**	7-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.3
Plastic Limit (PL)	18.4
Plasticity Index (PI)	31.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

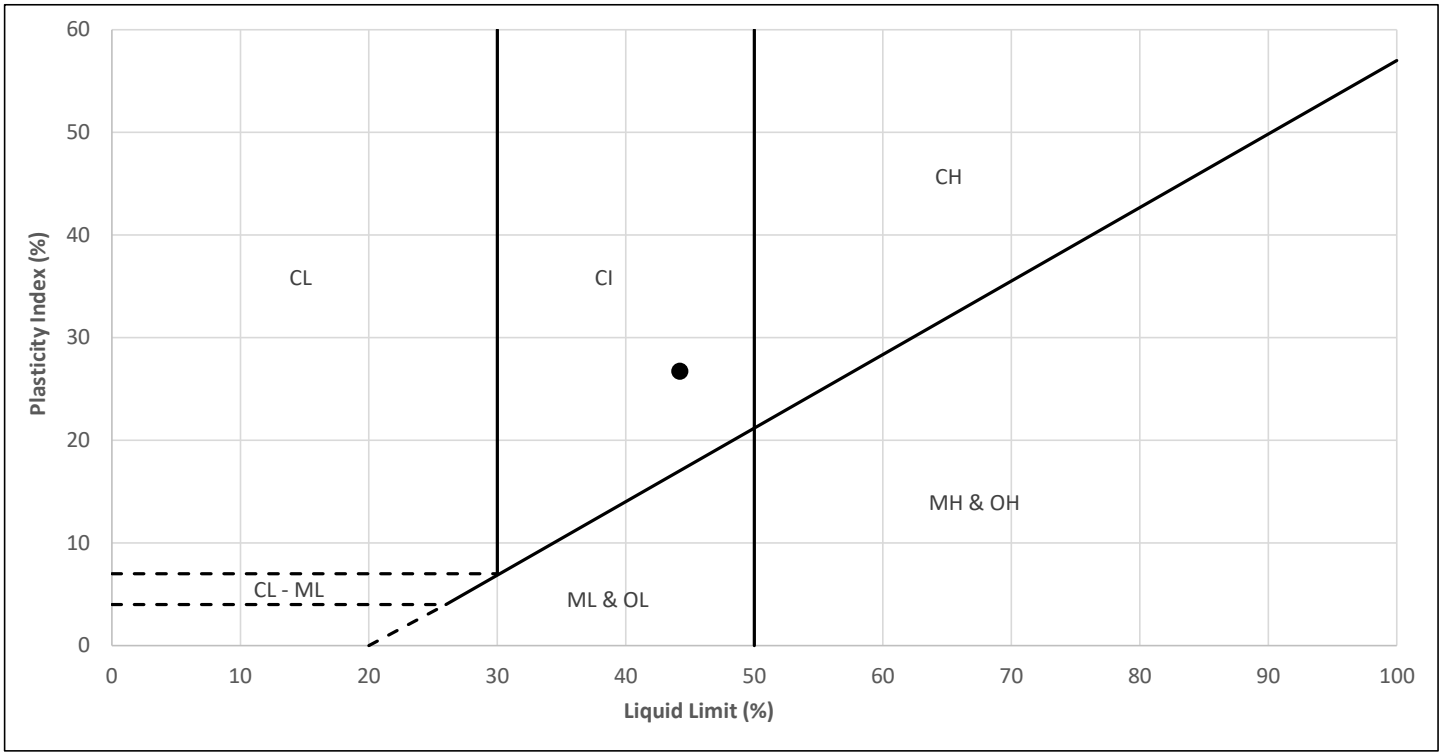
Project:	Snake Lake Reservoir Expansion	**Sample #:**	521AU4
Project No.:	1560-193-00	**Source:**	22BH521
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 521AU4	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.2
Plastic Limit (PL)	17.5
Plasticity Index (PI)	26.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

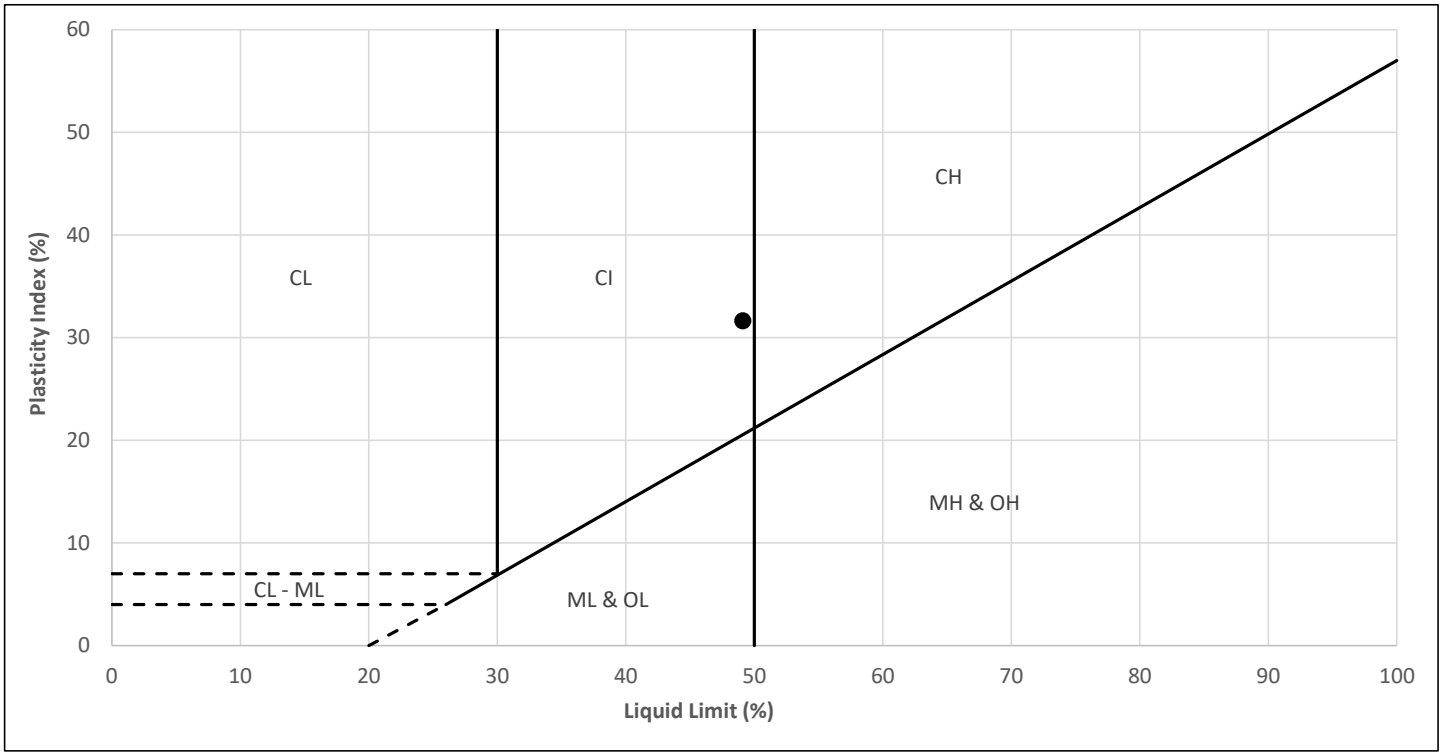
Project:	Snake Lake Reservoir Expansion	**Sample #:**	522AU1
Project No.:	1560-193-00	**Source:**	22BH522
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 522AU1	**Test Date:**	22-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.1
Plastic Limit (PL)	17.4
Plasticity Index (PI)	31.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

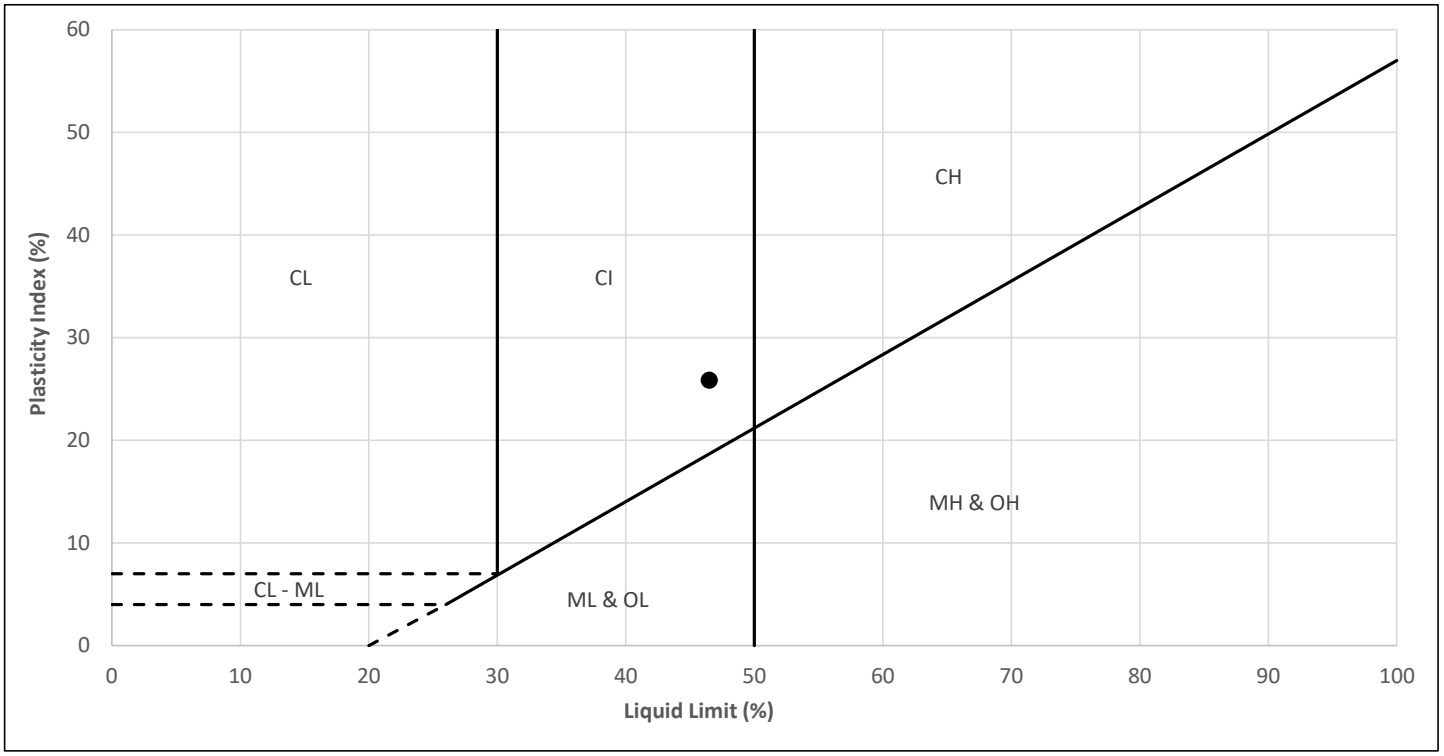
Project:	Snake Lake Reservoir Expansion	**Sample #:**	522AU3
Project No.:	1560-193-00	**Source:**	22BH522
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 522AU3	**Test Date:**	24-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	46.5
Plastic Limit (PL)	20.6
Plasticity Index (PI)	25.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

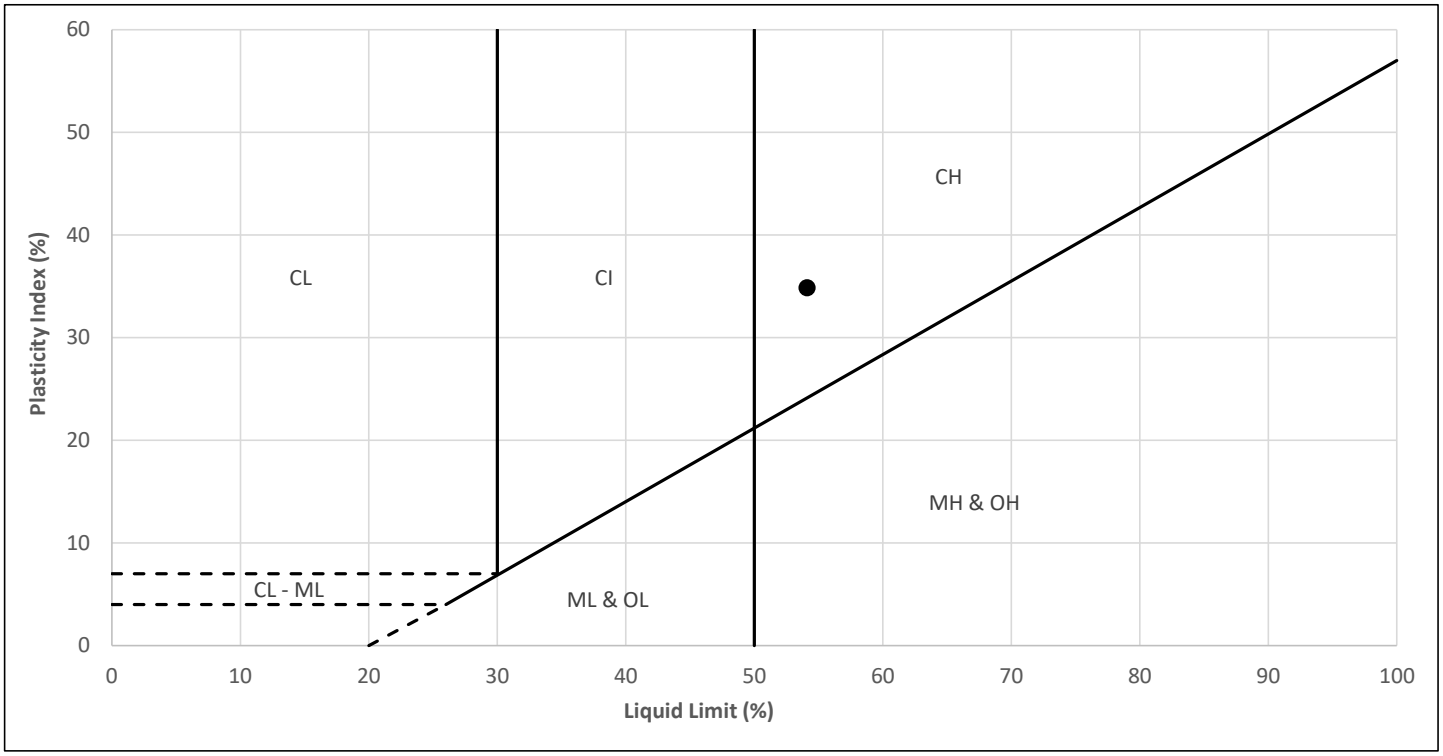
Project:	Snake Lake Reservoir Expansion	**Sample #:**	523AU2
Project No.:	1560-193-00	**Source:**	22BH523
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 523AU2	**Test Date:**	27-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.1
Plastic Limit (PL)	19.2
Plasticity Index (PI)	34.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

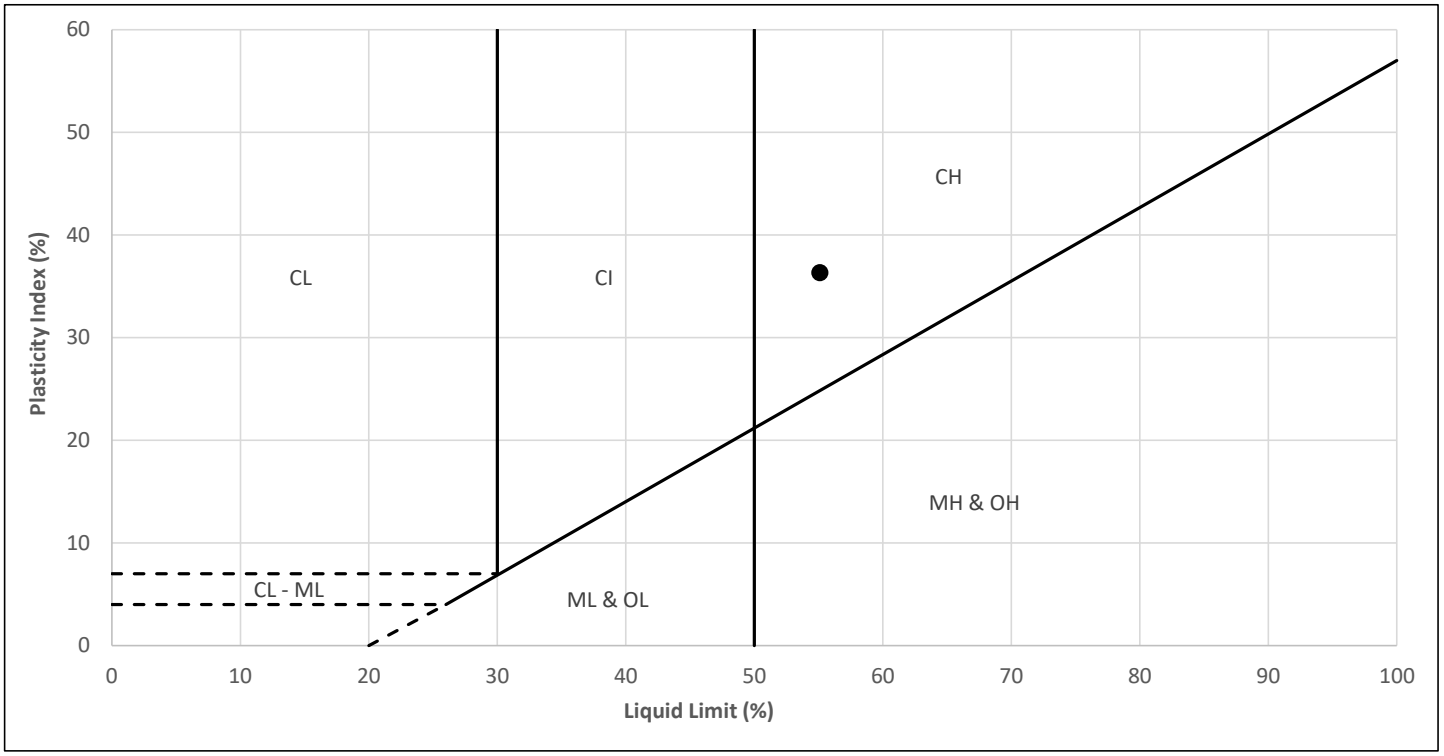
Project:	Snake Lake Reservoir Expansion	**Sample #:**	523AU4
Project No.:	1560-193-00	**Source:**	22BH523
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 523AU4	**Test Date:**	26-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.1
Plastic Limit (PL)	18.8
Plasticity Index (PI)	36.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

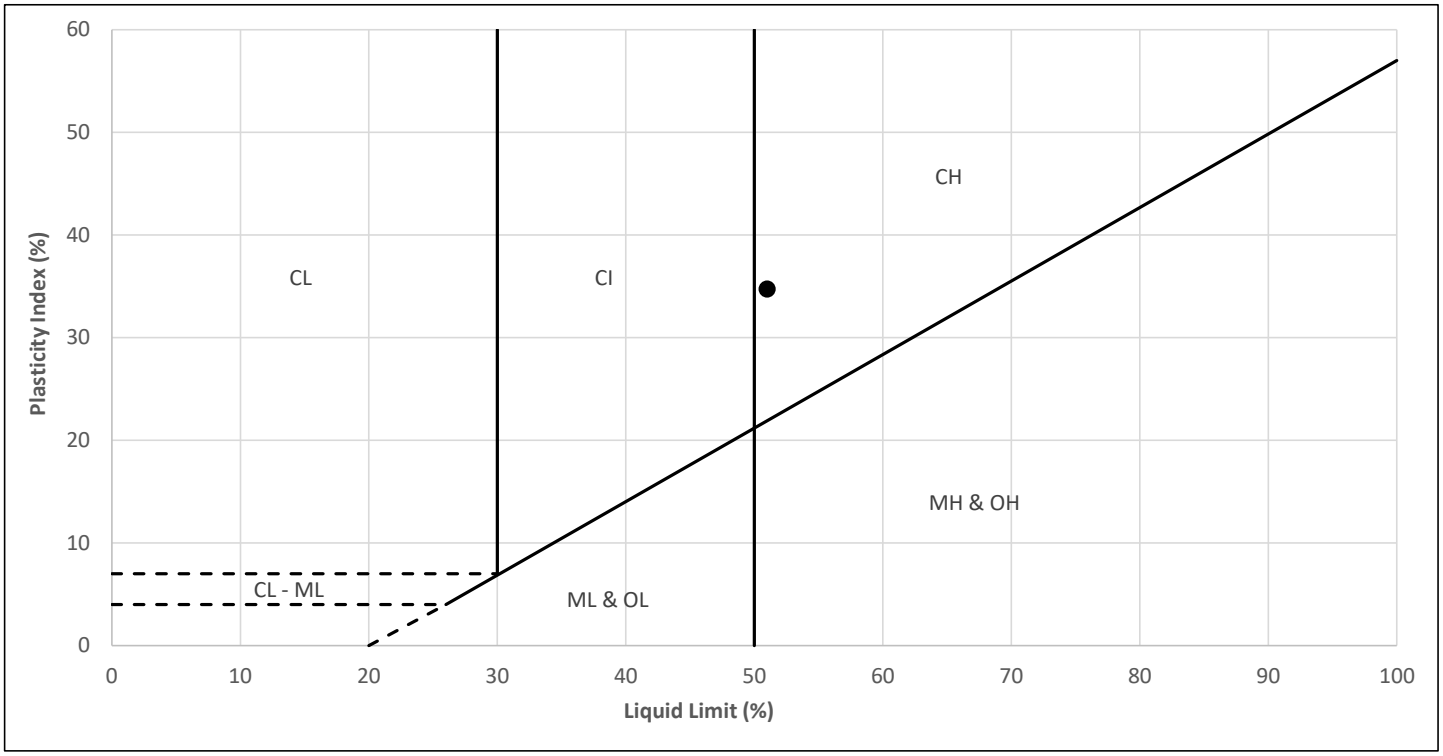
Project:	Snake Lake Reservoir Expansion	**Sample #:**	524AU1
Project No.:	1560-193-00	**Source:**	22BH524
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 524AU1	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.0
Plastic Limit (PL)	16.3
Plasticity Index (PI)	34.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

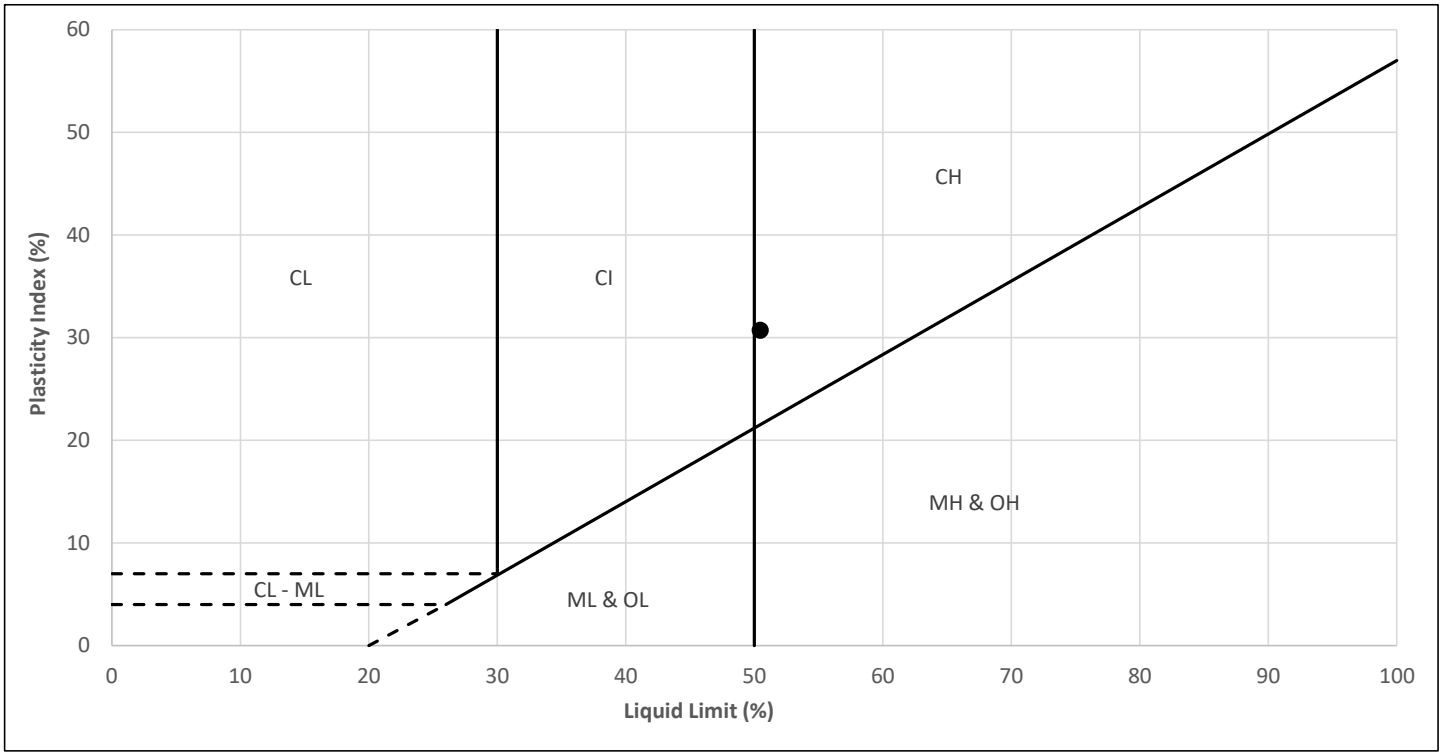
Project:	Snake Lake Reservoir Expansion	**Sample #:**	524AU3
Project No.:	1560-193-00	**Source:**	22BH524
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 524AU3	**Test Date:**	24-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.5
Plastic Limit (PL)	19.7
Plasticity Index (PI)	30.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

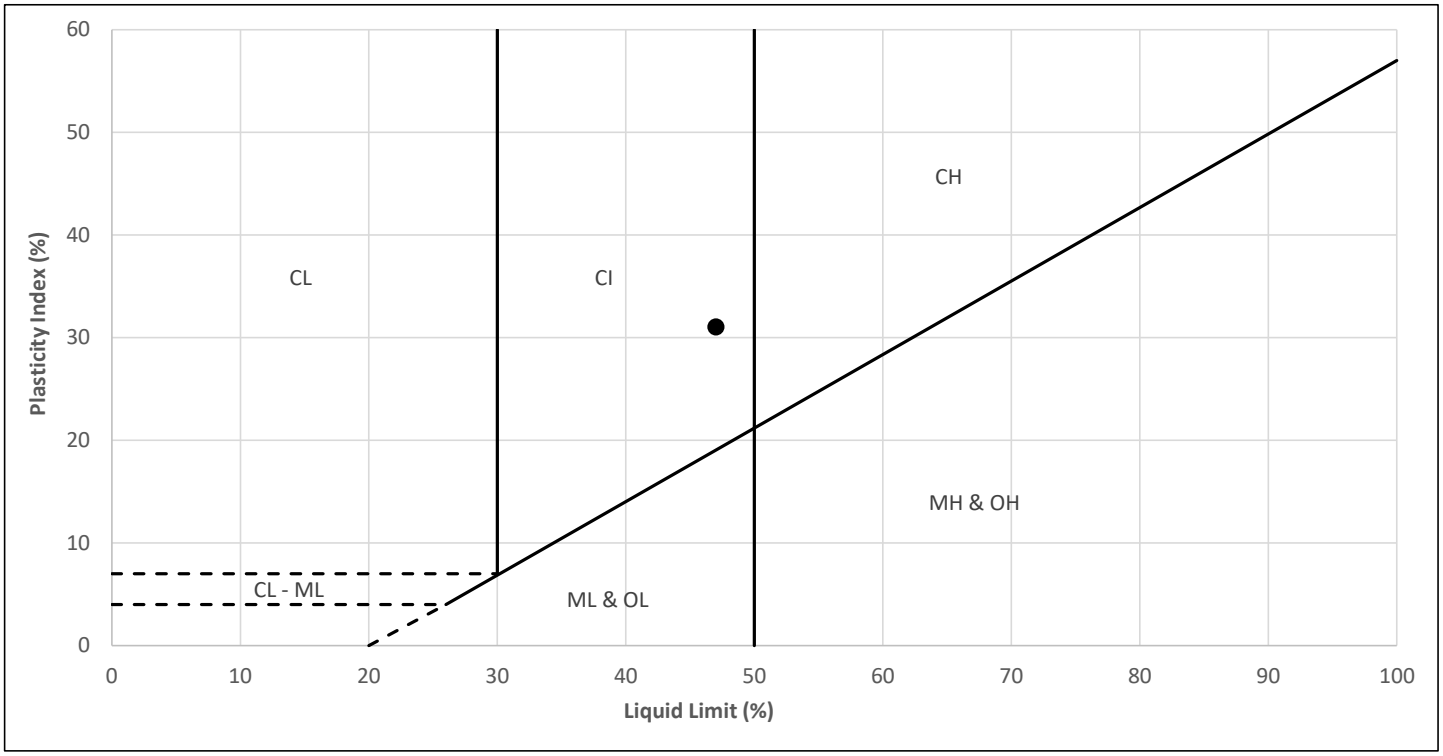
Project:	Snake Lake Reservoir Expansion	**Sample #:**	525AU2
Project No.:	1560-193-00	**Source:**	22BH525
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 525AU2	**Test Date:**	28-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	47.0
Plastic Limit (PL)	15.9
Plasticity Index (PI)	31.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

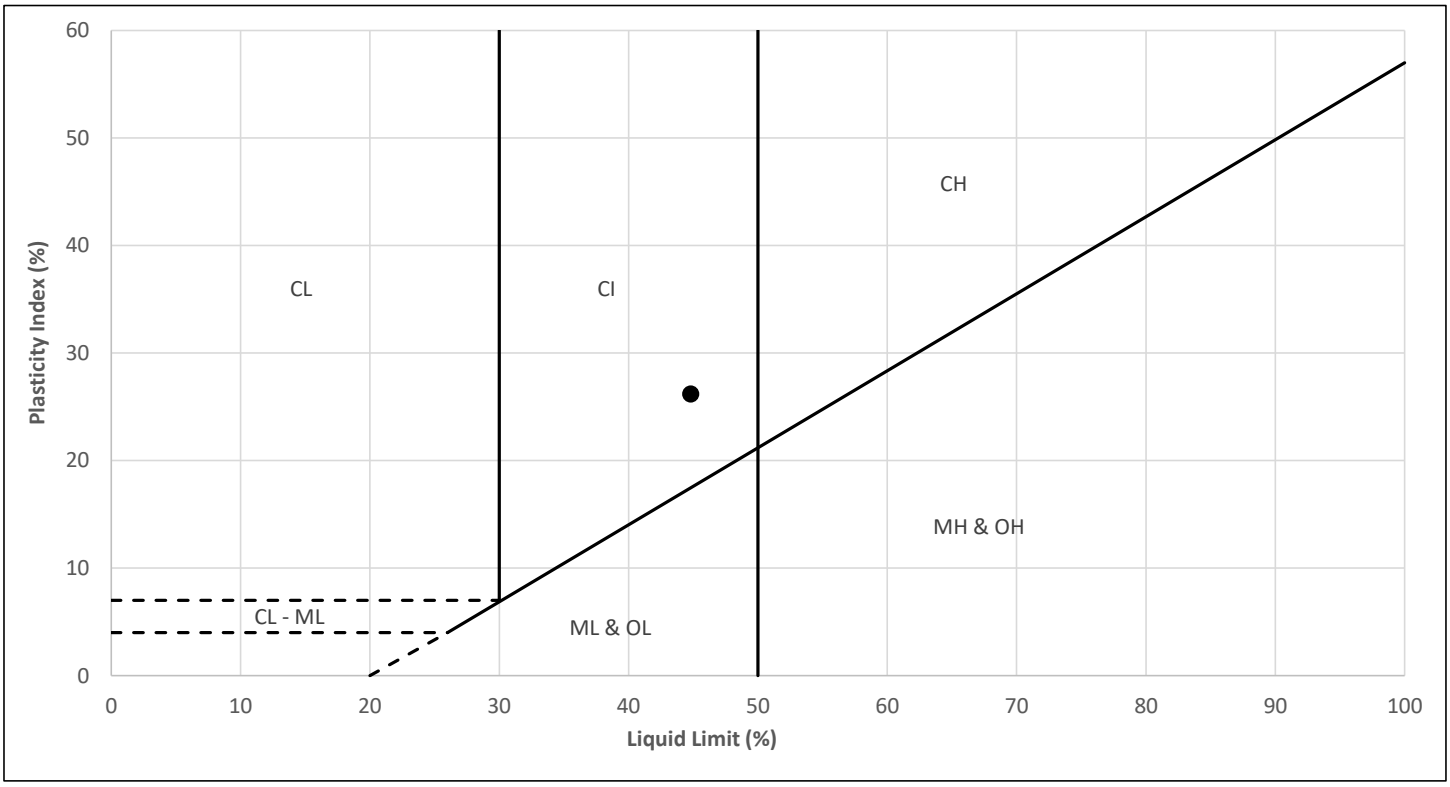
Project:	Snake Lake Reservoir Expansion	**Sample #:**	525AU3
Project No.:	1560-193-00	**Source:**	22BH525
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 525AU3	**Test Date:**	7-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.8
Plastic Limit (PL)	18.6
Plasticity Index (PI)	26.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

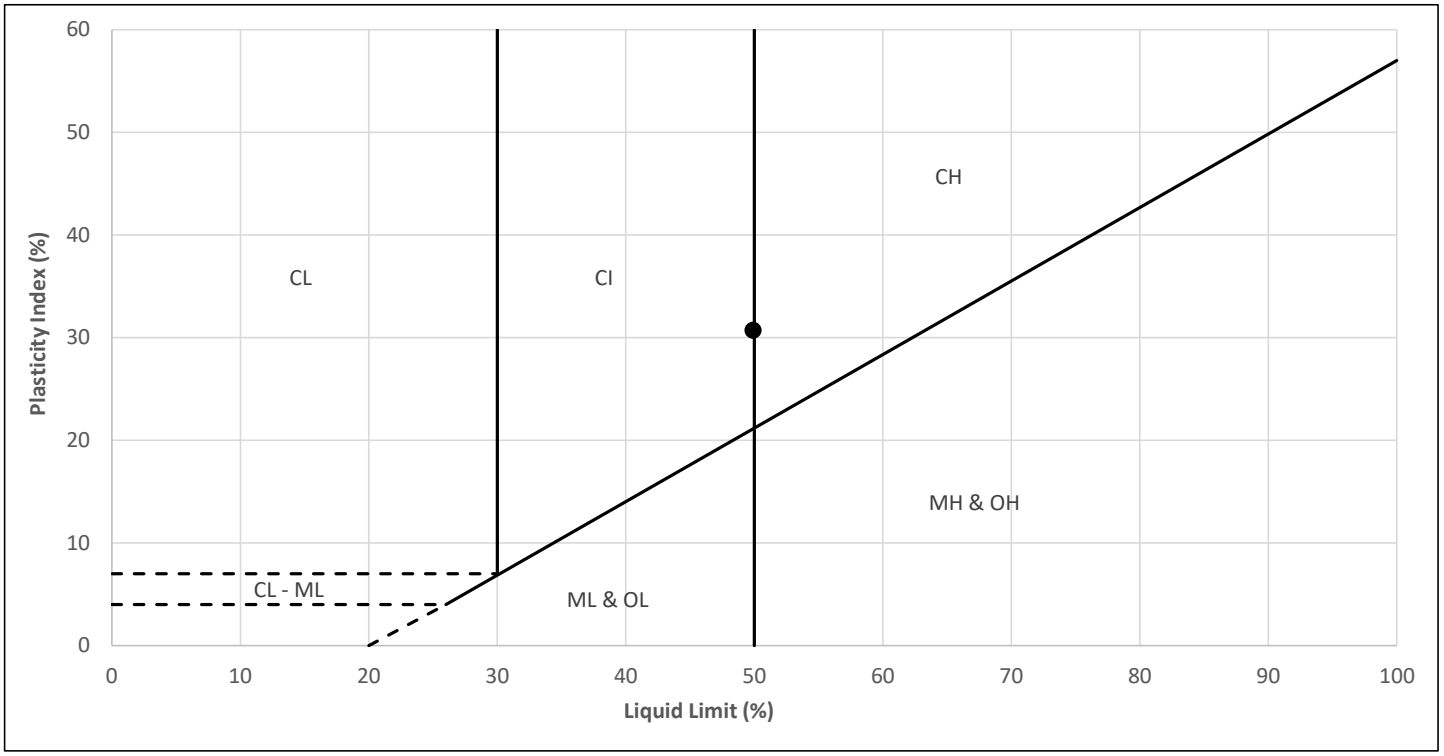
Project:	Snake Lake Reservoir Expansion	**Sample #:**	525AU4
Project No.:	1560-193-00	**Source:**	22BH525
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 525AU4	**Test Date:**	26-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.9
Plastic Limit (PL)	19.2
Plasticity Index (PI)	30.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

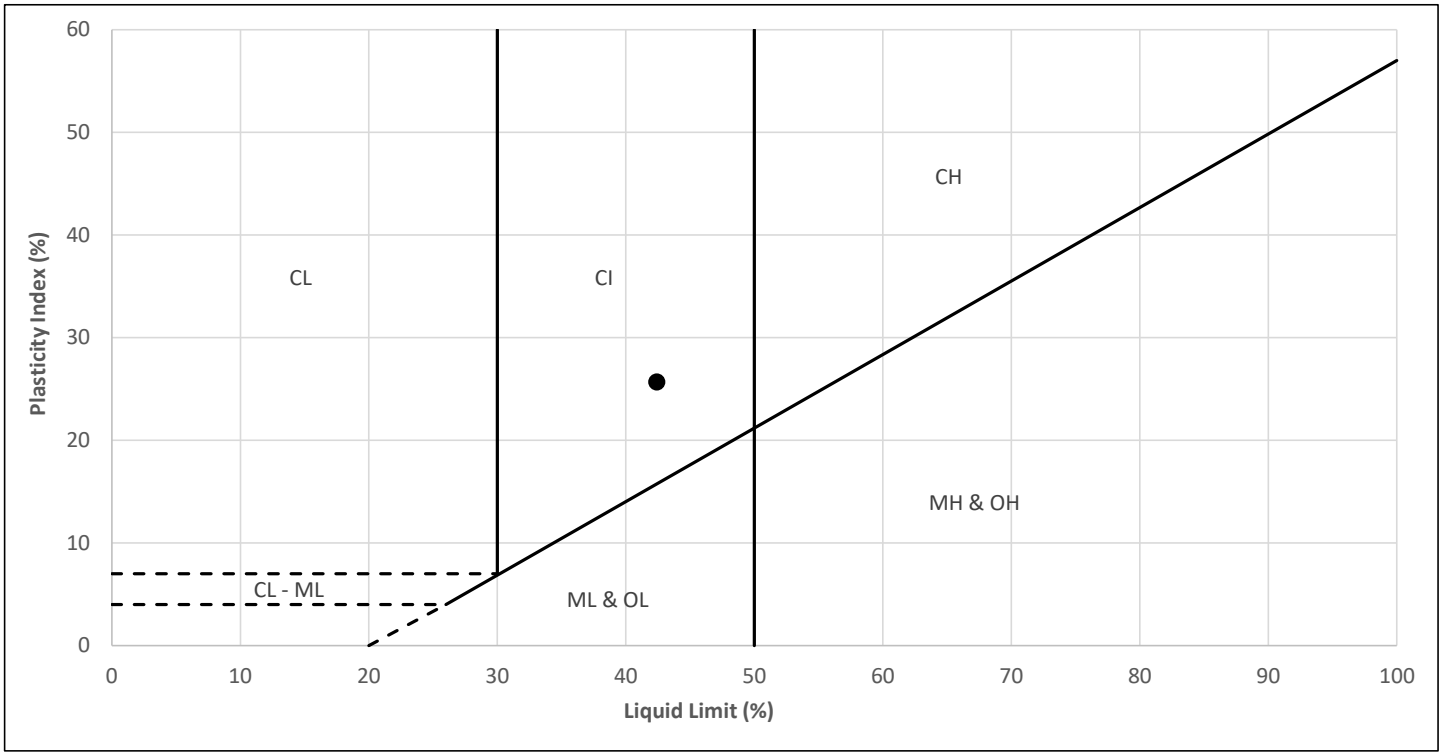
Project:	Snake Lake Reservoir Expansion	**Sample #:**	526AU1
Project No.:	1560-193-00	**Source:**	22BH526
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 526AU1	**Test Date:**	25-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	42.4
Plastic Limit (PL)	16.7
Plasticity Index (PI)	25.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

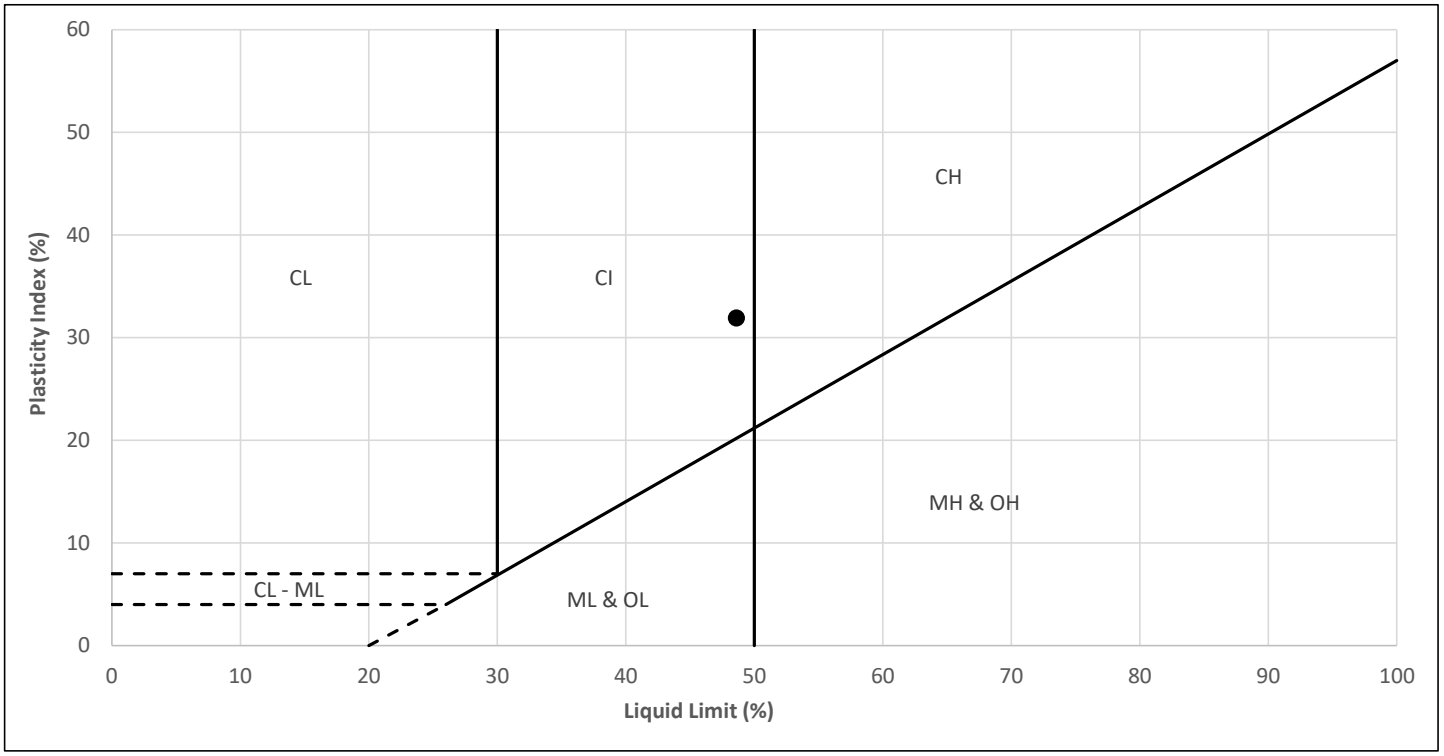
Project:	Snake Lake Reservoir Expansion	**Sample #:**	526AU3
Project No.:	1560-193-00	**Source:**	22BH526
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 526AU3	**Test Date:**	26-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	48.6
Plastic Limit (PL)	16.7
Plasticity Index (PI)	31.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

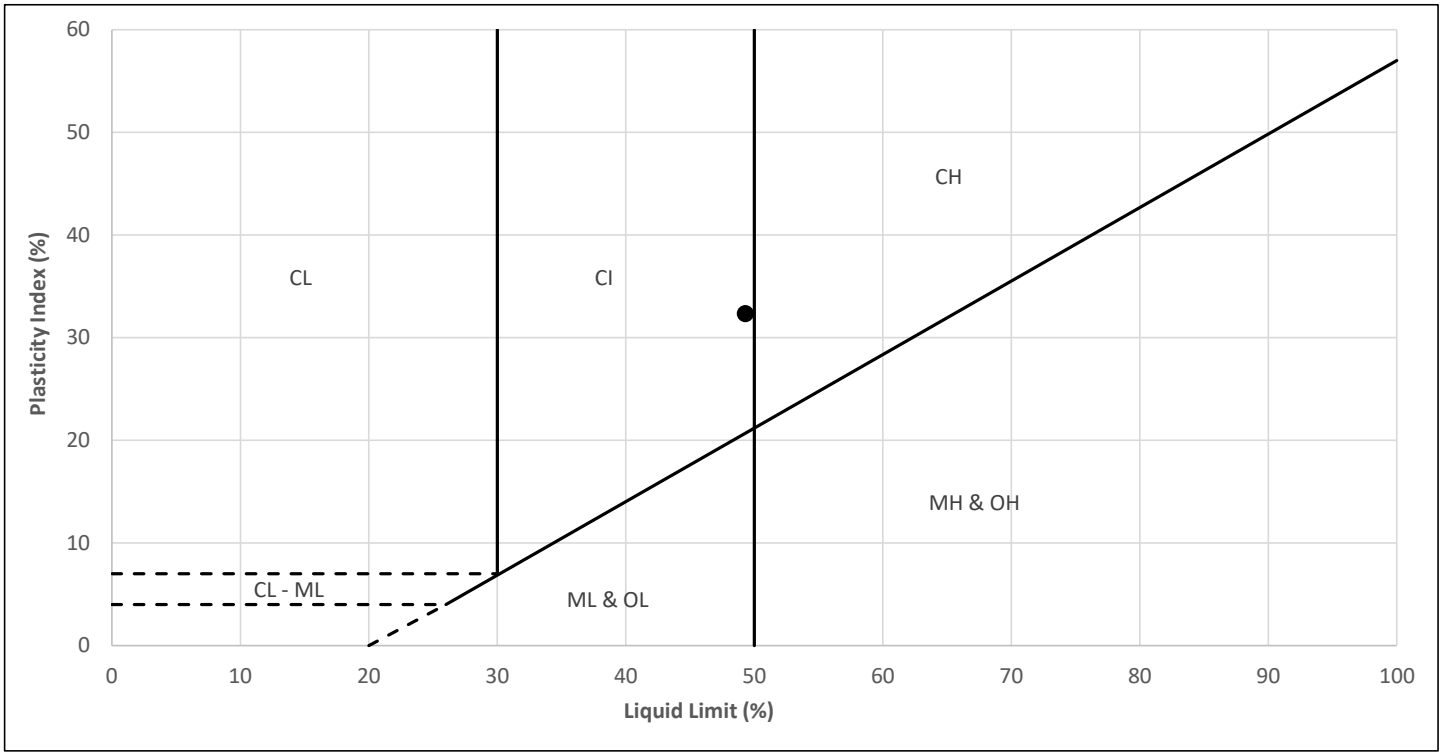
Project:	Snake Lake Reservoir Expansion	**Sample #:**	527AU2
Project No.:	1560-193-00	**Source:**	22BH527
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 527AU2	**Test Date:**	27-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.3
Plastic Limit (PL)	16.9
Plasticity Index (PI)	32.4

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

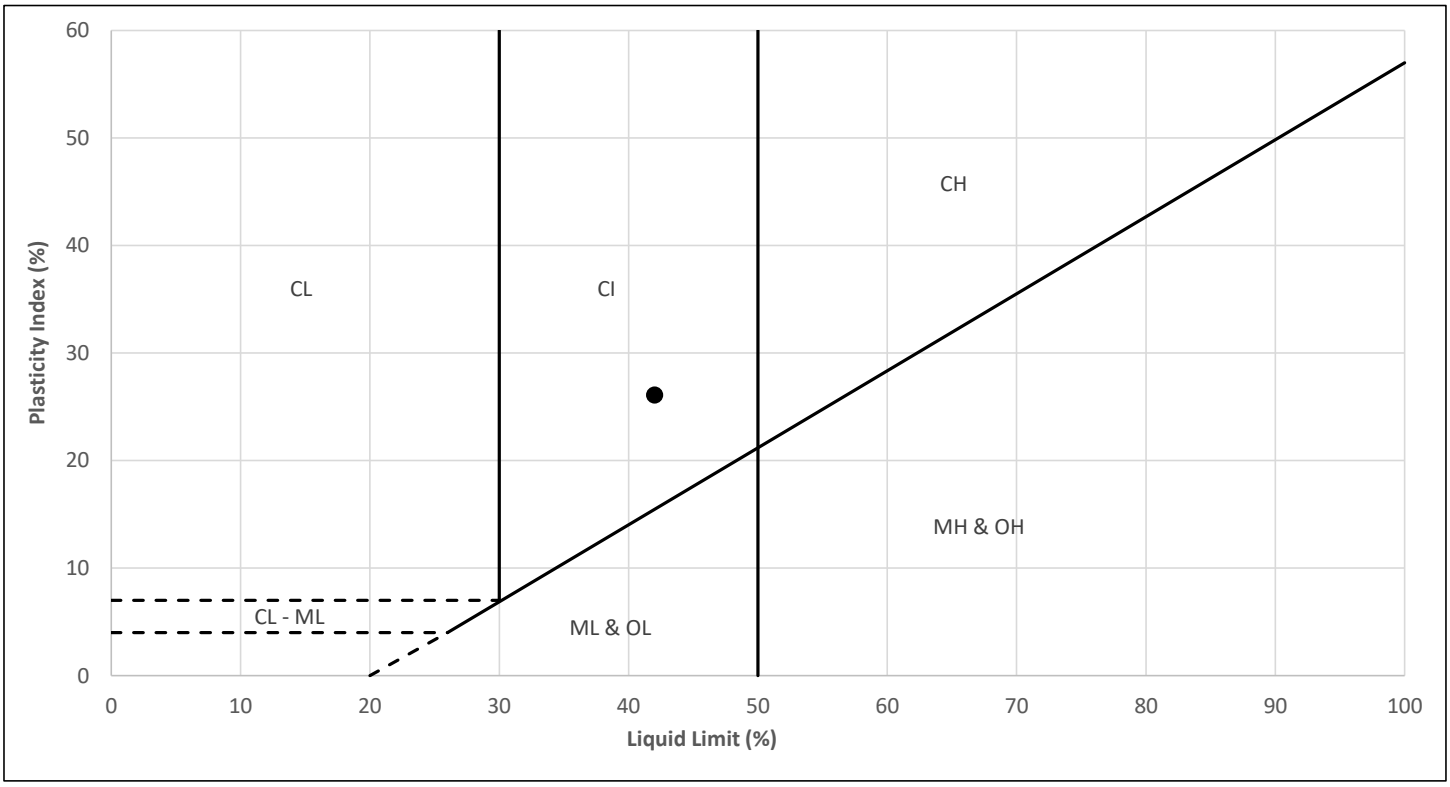
Project:	Snake Lake Reservoir Expansion	**Sample #:**	527AU3
Project No.:	1560-193-00	**Source:**	22BH527
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 527AU3	**Test Date:**	7-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	42.0
Plastic Limit (PL)	15.9
Plasticity Index (PI)	26.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

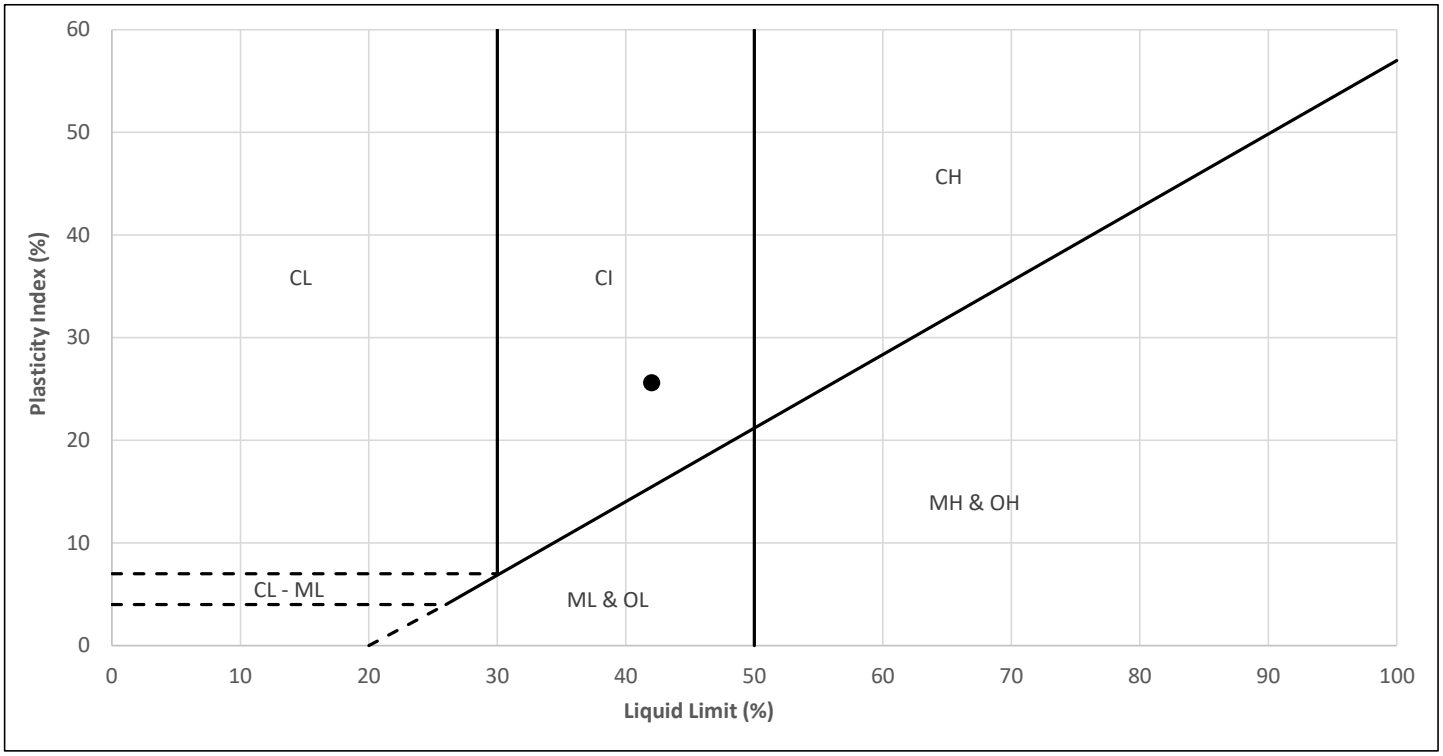
Project:	Snake Lake Reservoir Expansion	**Sample #:**	527AU4
Project No.:	1560-193-00	**Source:**	22BH527
Owner:	EID	**Sample Depth:**	5.5mm
File No.:	AL - 527AU4	**Test Date:**	22-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	42.0
Plastic Limit (PL)	16.4
Plasticity Index (PI)	25.6

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

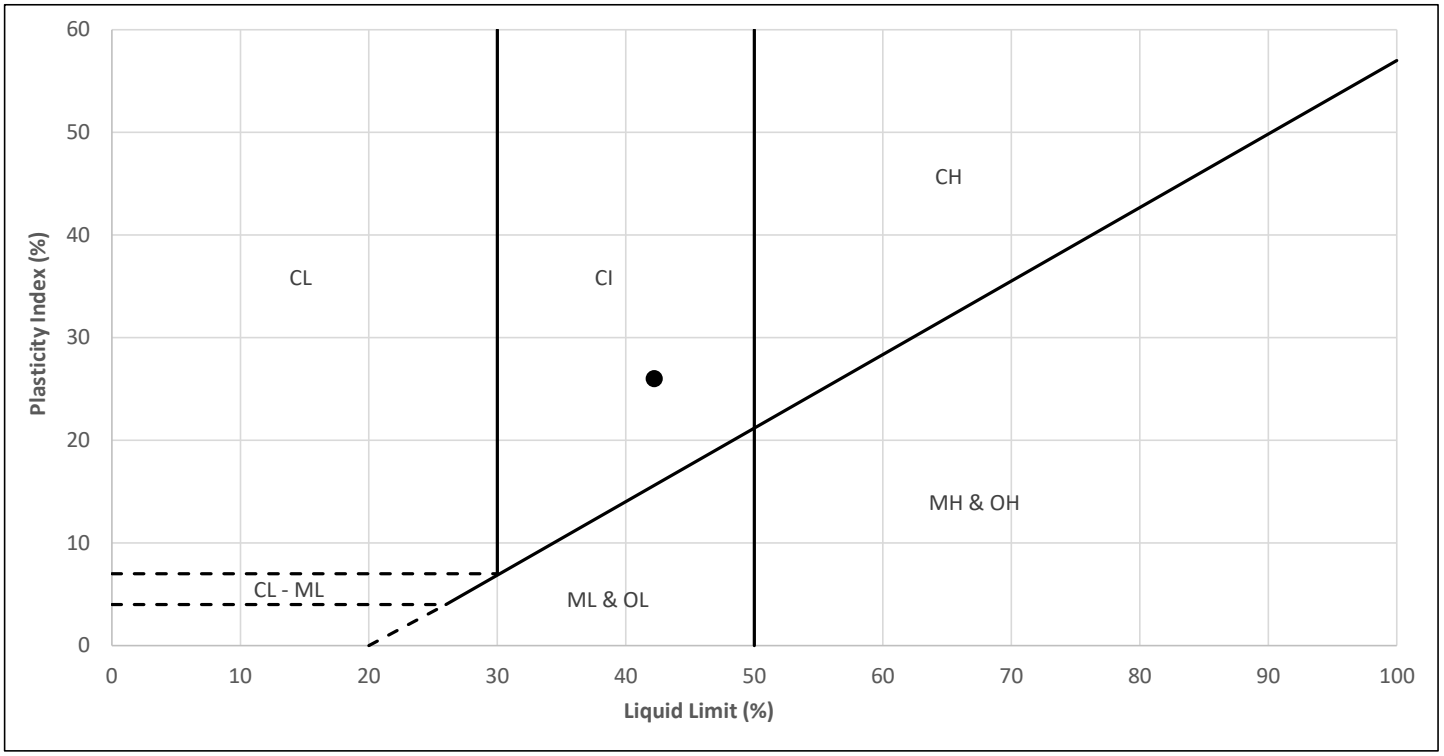
Project:	Snake Lake Reservoir Expansion	**Sample #:**	528AU1
Project No.:	1560-193-00	**Source:**	22BH528
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 528AU1	**Test Date:**	26-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	42.2
Plastic Limit (PL)	16.2
Plasticity Index (PI)	26.0

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

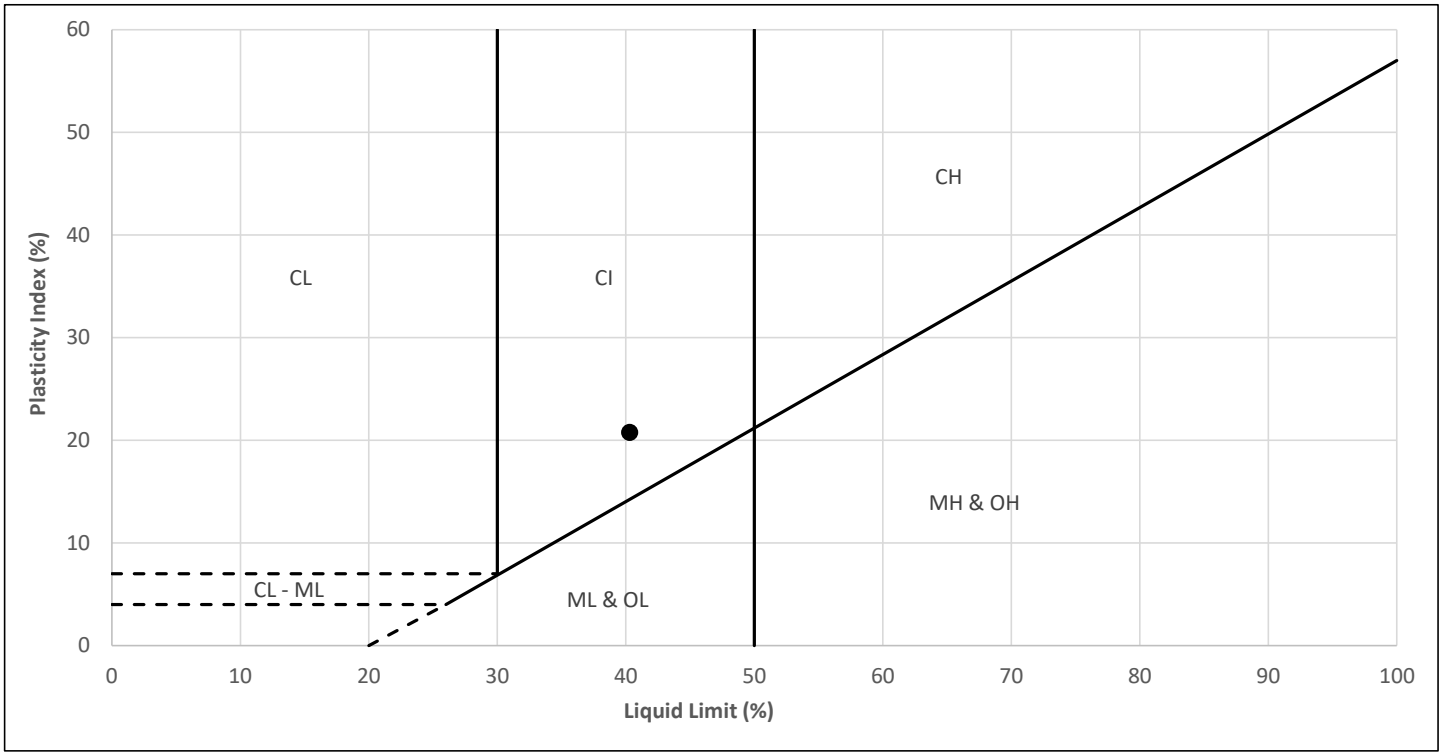
Project:	Snake Lake Reservoir Expansion	**Sample #:**	528AU3
Project No.:	1560-193-00	**Source:**	22BH528
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 528AU3	**Test Date:**	25-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	40.3
Plastic Limit (PL)	19.5
Plasticity Index (PI)	20.8

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

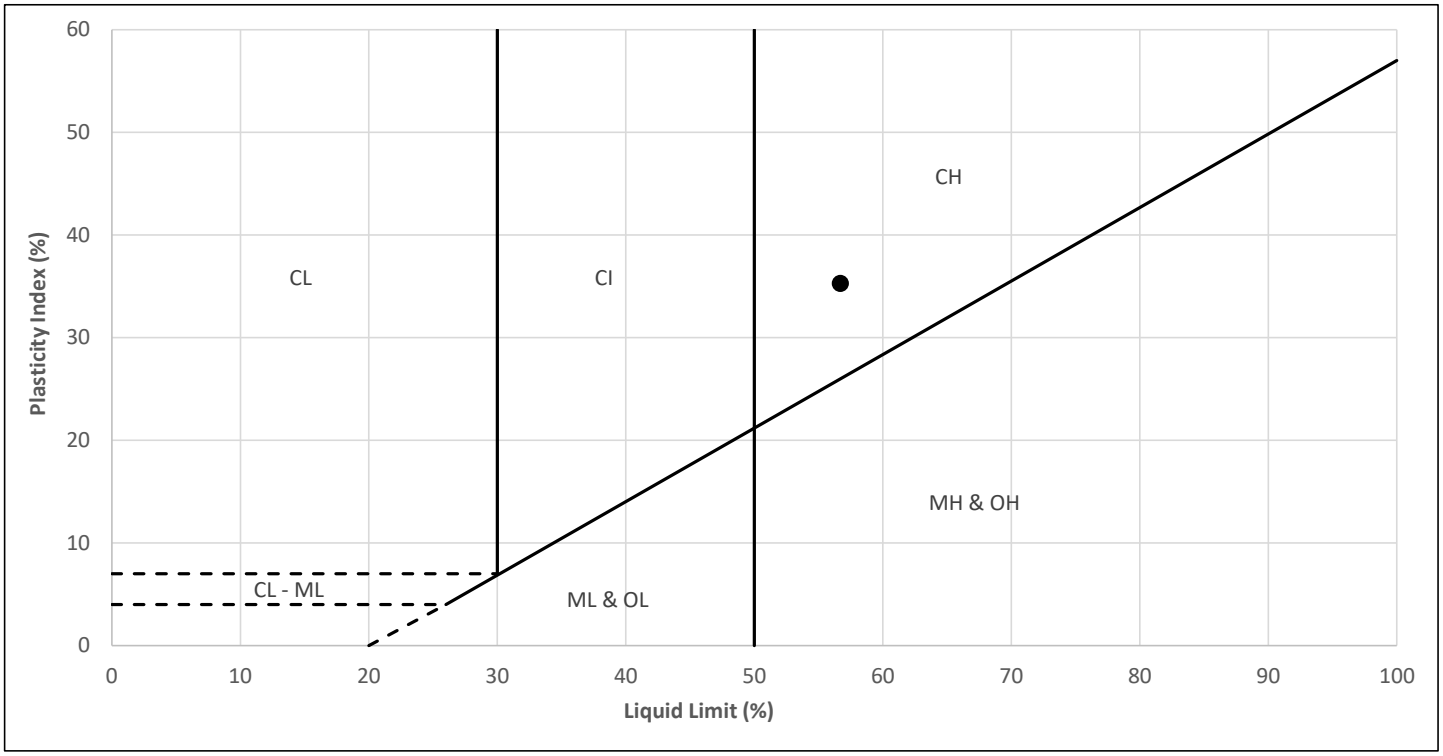
Project:	Snake Lake Reservoir Expansion	**Sample #:**	529AU2
Project No.:	1560-193-00	**Source:**	22BH529
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 529AU2	**Test Date:**	26-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	56.7
Plastic Limit (PL)	21.4
Plasticity Index (PI)	35.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

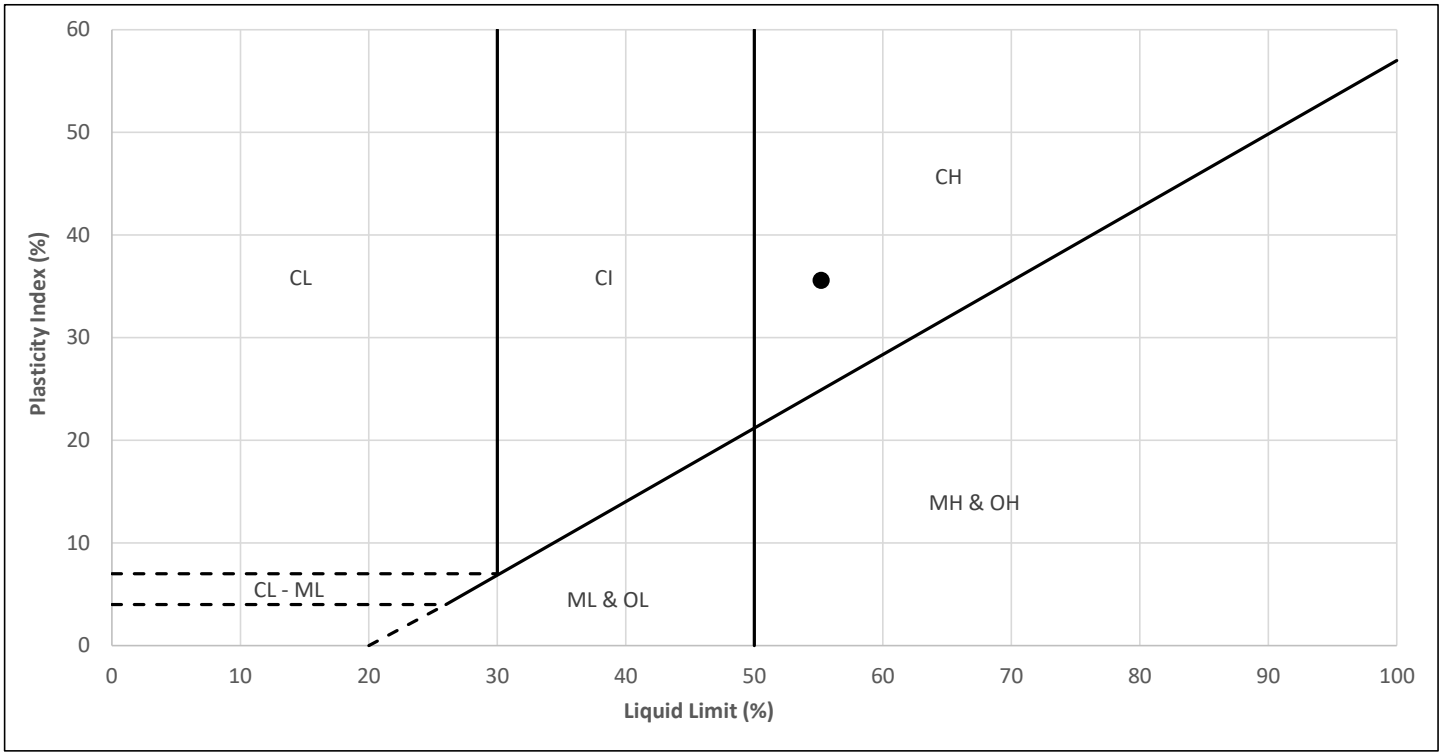
Project:	Snake Lake Reservoir Expansion	**Sample #:**	529AU3
Project No.:	1560-193-00	**Source:**	22BH529
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 529AU3	**Test Date:**	7-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.2
Plastic Limit (PL)	19.6
Plasticity Index (PI)	35.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

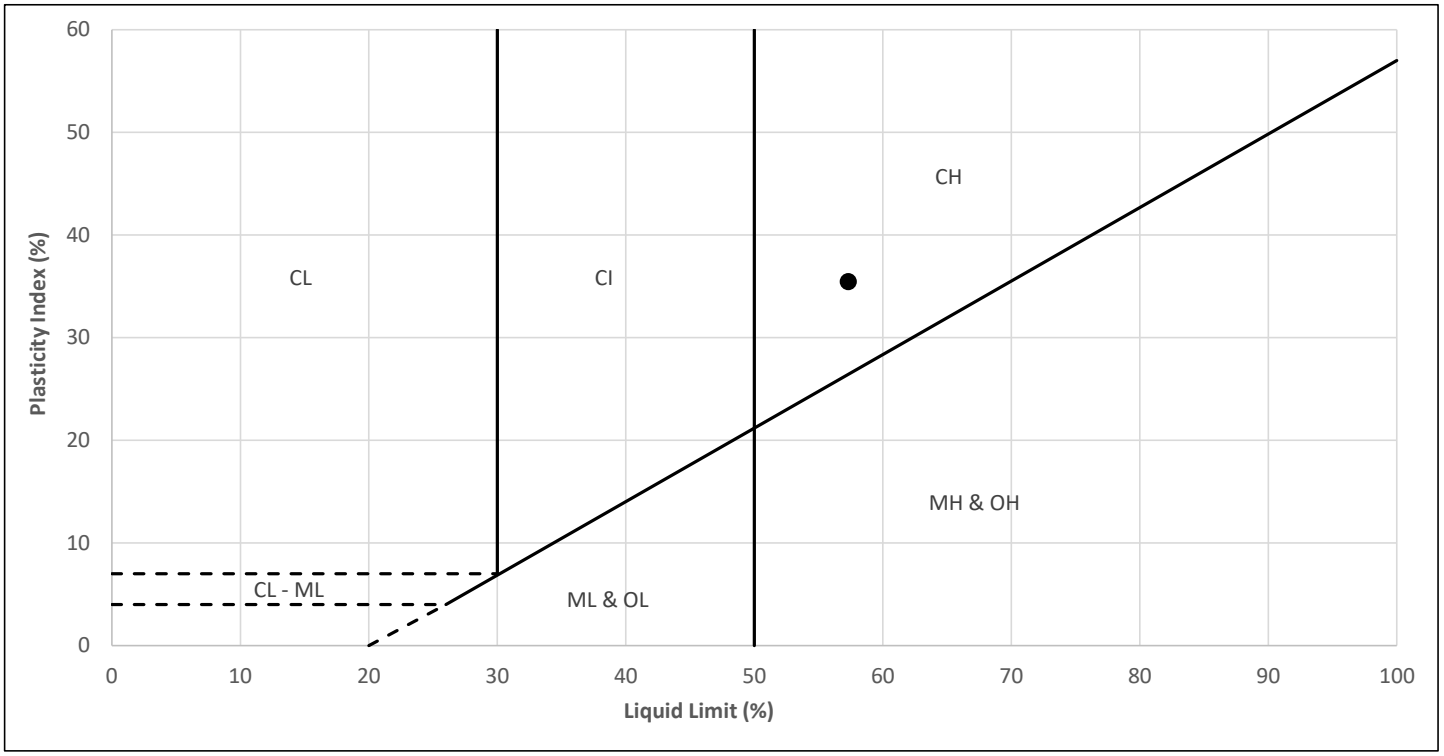
Project:	Snake Lake Reservoir Expansion	**Sample #:**	529AU4
Project No.:	1560-193-00	**Source:**	22BH529
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 529AU4	**Test Date:**	25-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	57.3
Plastic Limit (PL)	21.8
Plasticity Index (PI)	35.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

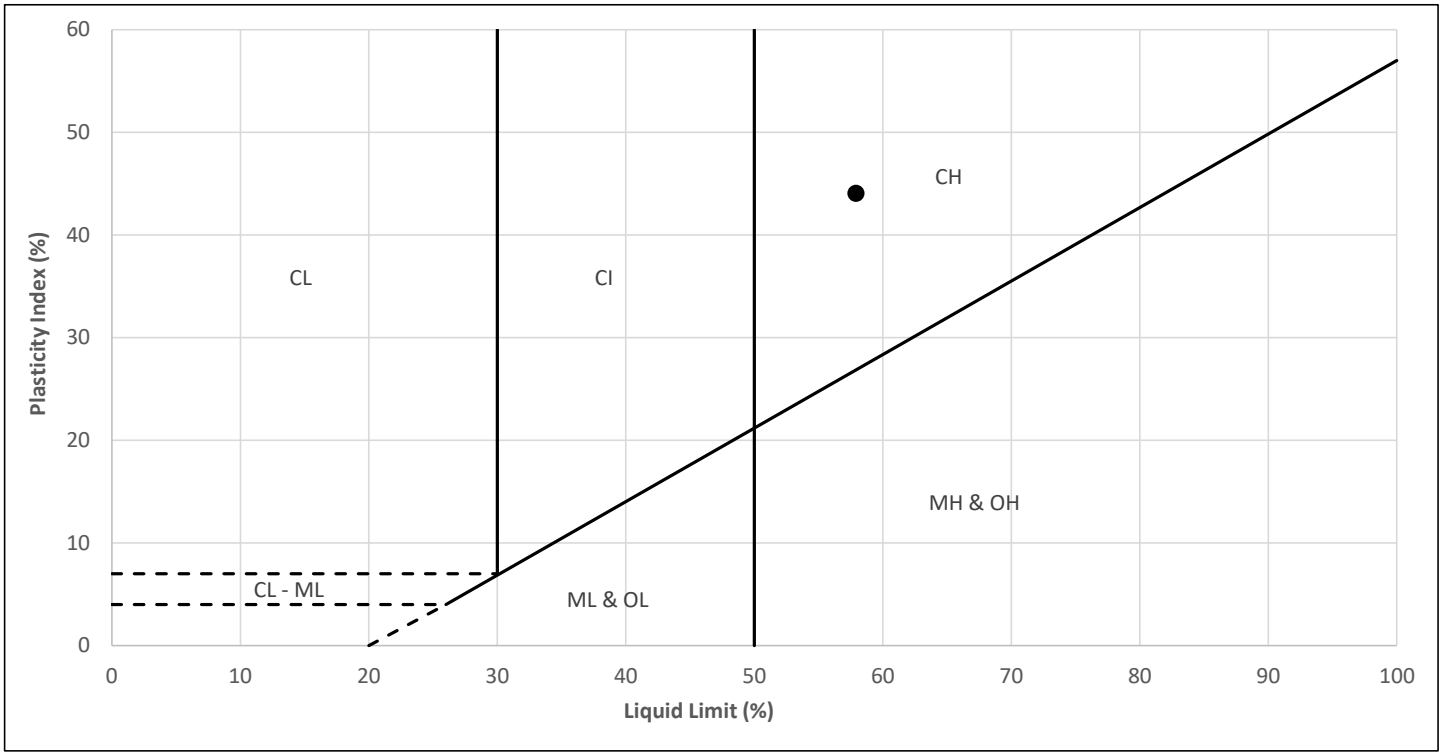
Project:	Snake Lake Reservoir Expansion	**Sample #:**	530AU1
Project No.:	1560-193-00	**Source:**	22BH530
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 530AU1	**Test Date:**	21-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	57.9
Plastic Limit (PL)	13.8
Plasticity Index (PI)	44.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

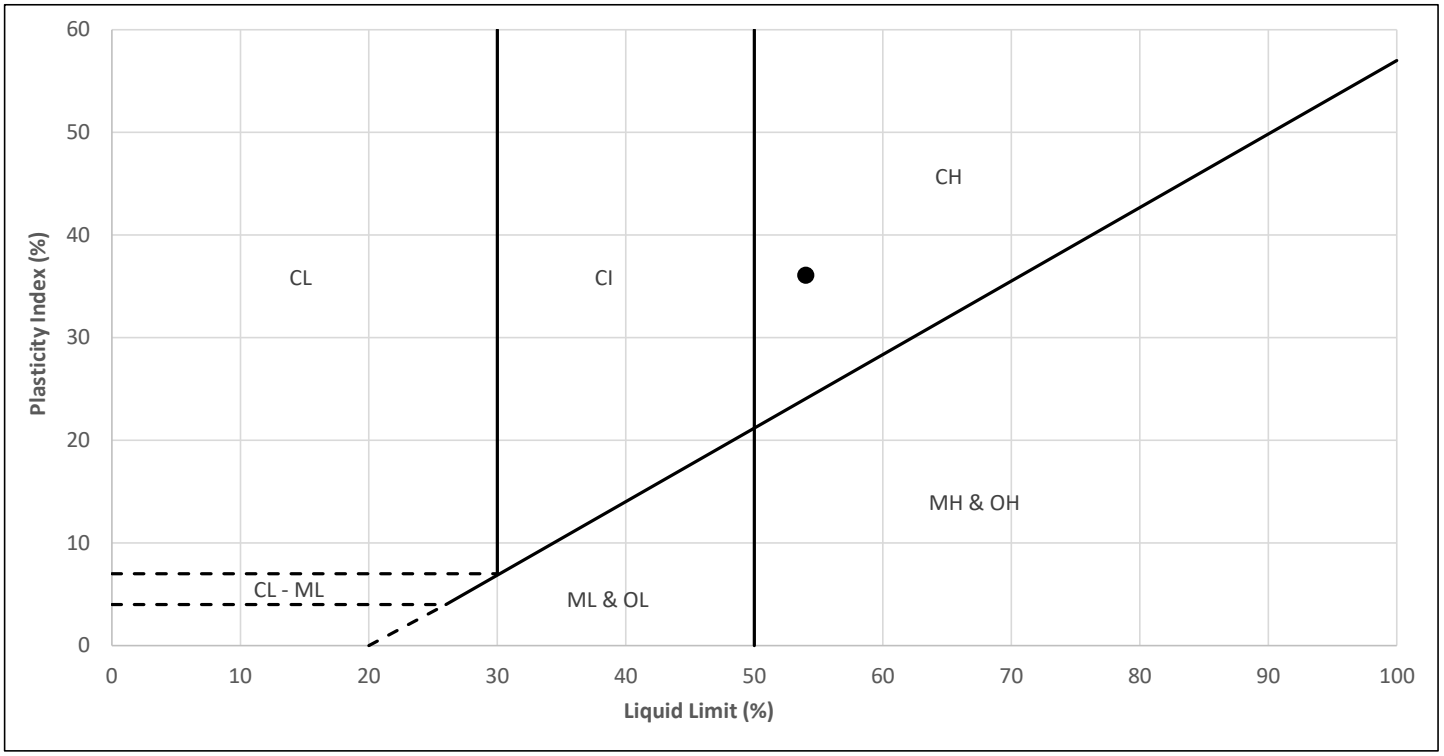
Project:	Snake Lake Reservoir Expansion	**Sample #:**	530AU3
Project No.:	1560-193-00	**Source:**	22BH530
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 530AU3	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.0
Plastic Limit (PL)	17.9
Plasticity Index (PI)	36.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

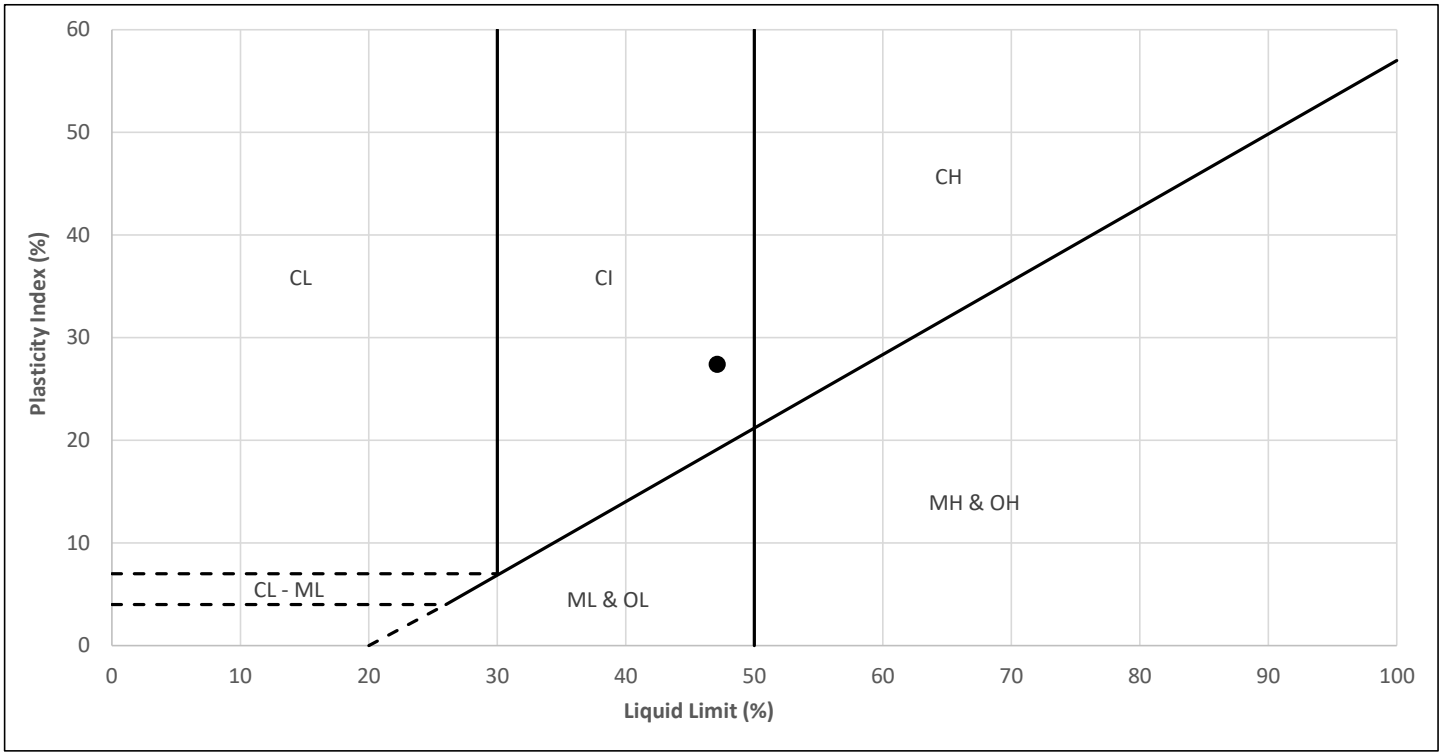
Project:	Snake Lake Reservoir Expansion	**Sample #:**	531AU2
Project No.:	1560-193-00	**Source:**	22BH531
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 531AU2	**Test Date:**	21-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	47.1
Plastic Limit (PL)	19.7
Plasticity Index (PI)	27.4

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

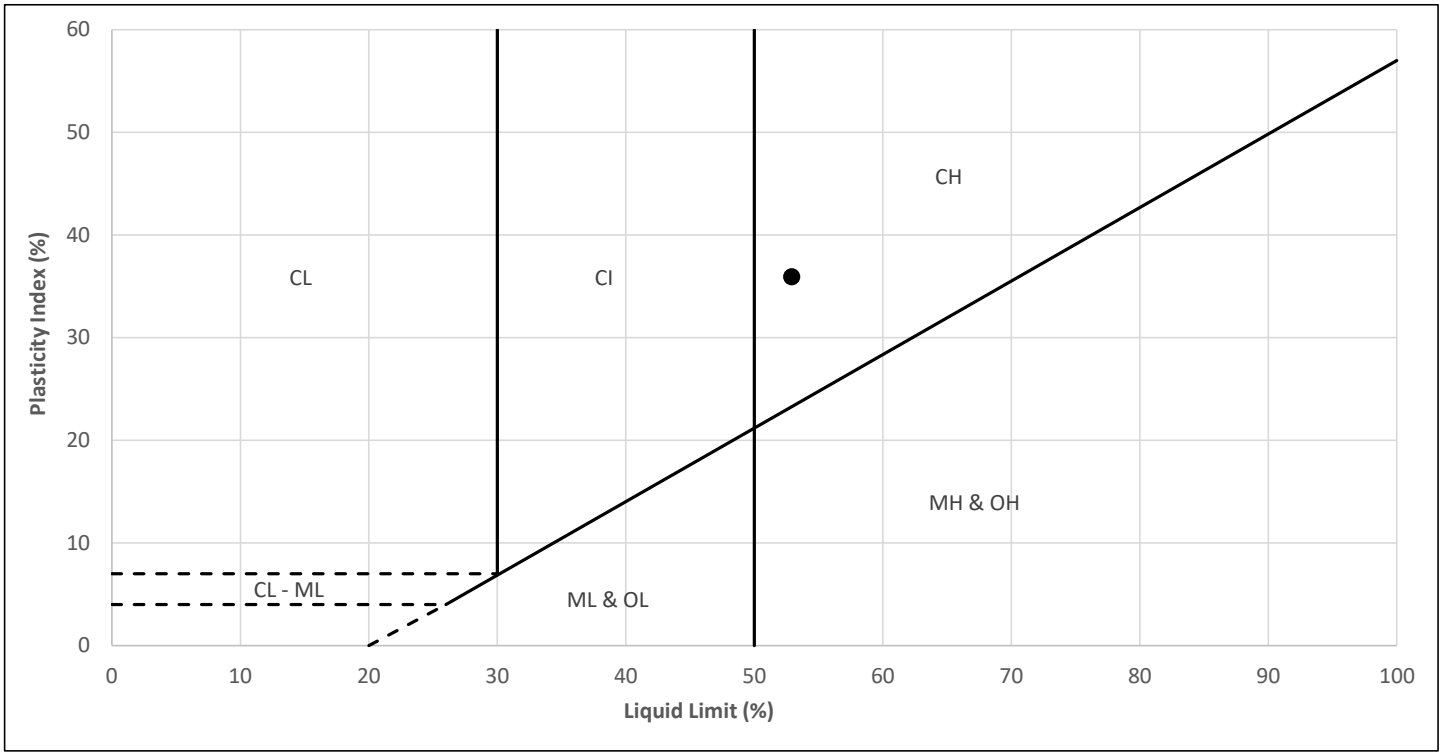
Project:	Snake Lake Reservoir Expansion	**Sample #:**	531AU3
Project No.:	1560-193-00	**Source:**	22BH531
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 531AU3	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.9
Plastic Limit (PL)	17.0
Plasticity Index (PI)	35.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

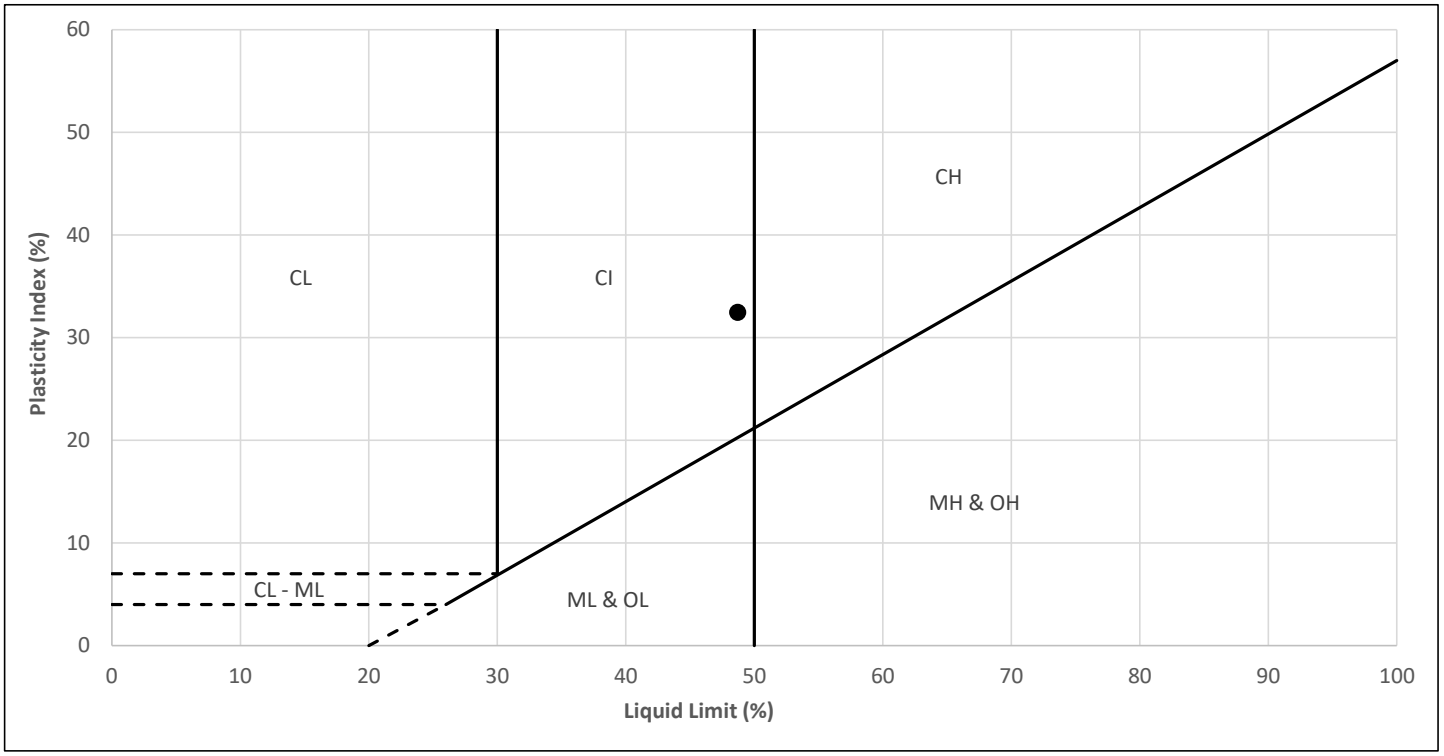
Project:	Snake Lake Reservoir Expansion	**Sample #:**	531AU4
Project No.:	1560-193-00	**Source:**	22BH531
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 531AU4	**Test Date:**	23-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	48.7
Plastic Limit (PL)	16.2
Plasticity Index (PI)	32.5

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

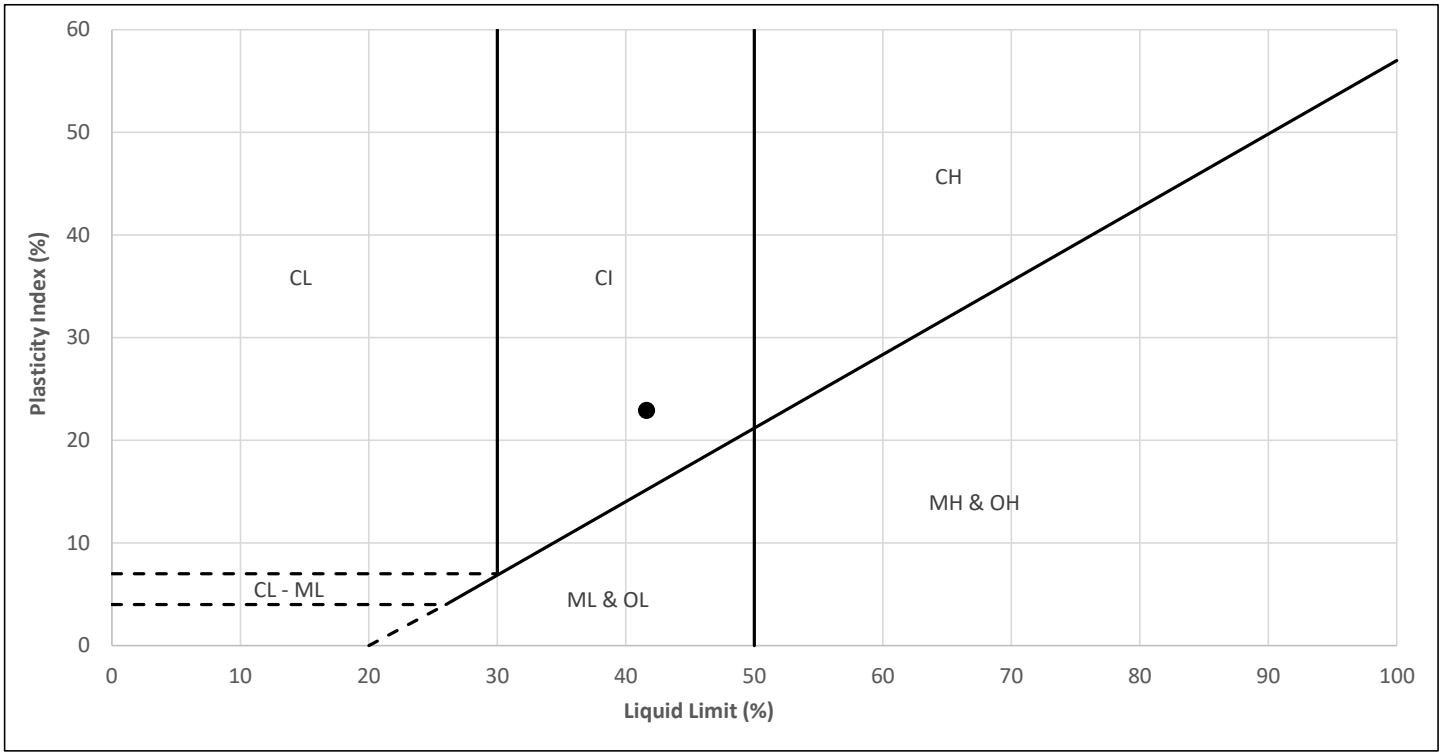
Project:	Snake Lake Reservoir Expansion	**Sample #:**	532AU1
Project No.:	1560-193-00	**Source:**	22BH532
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 532AU1	**Test Date:**	21-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	41.6
Plastic Limit (PL)	18.7
Plasticity Index (PI)	22.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

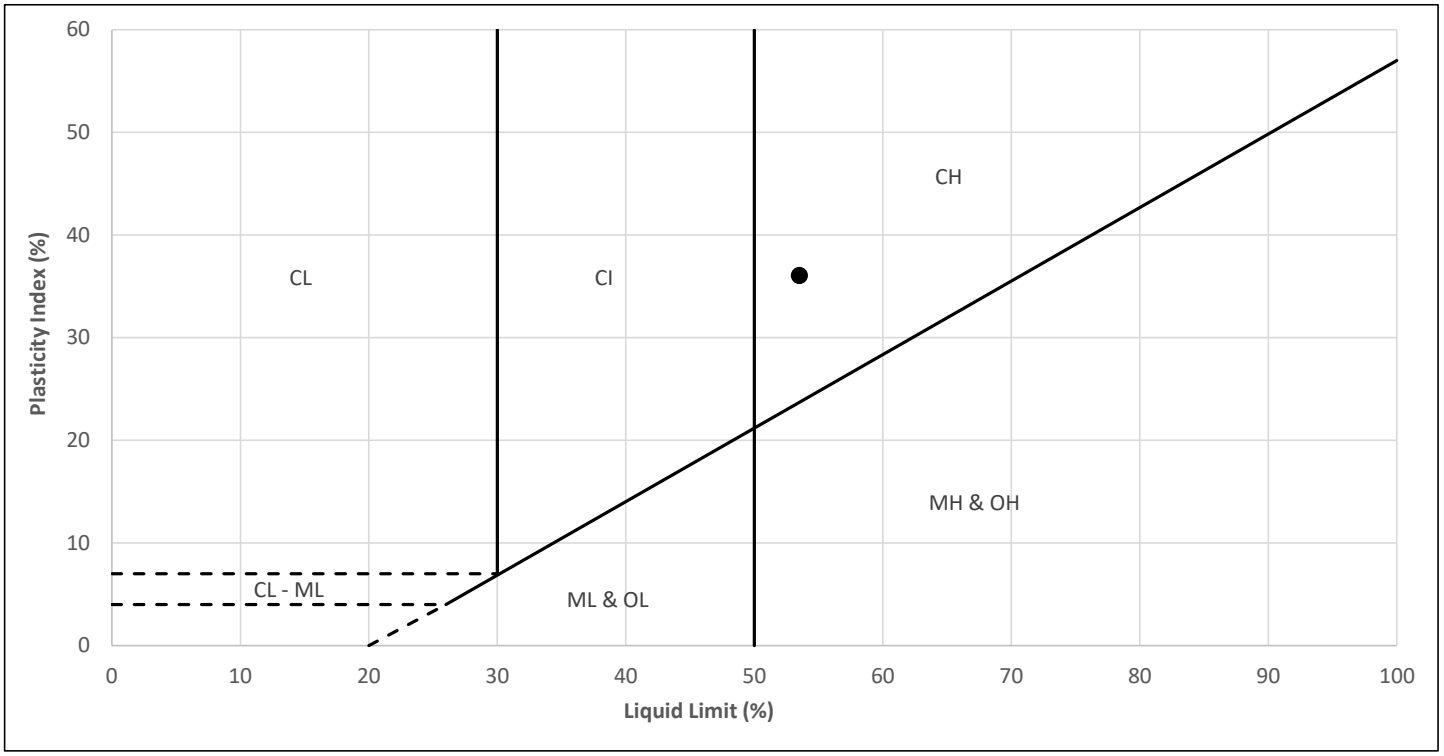
Project:	Snake Lake Reservoir Expansion	**Sample #:**	532AU3
Project No.:	1560-193-00	**Source:**	22BH532
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 532AU3	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.5
Plastic Limit (PL)	17.4
Plasticity Index (PI)	36.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

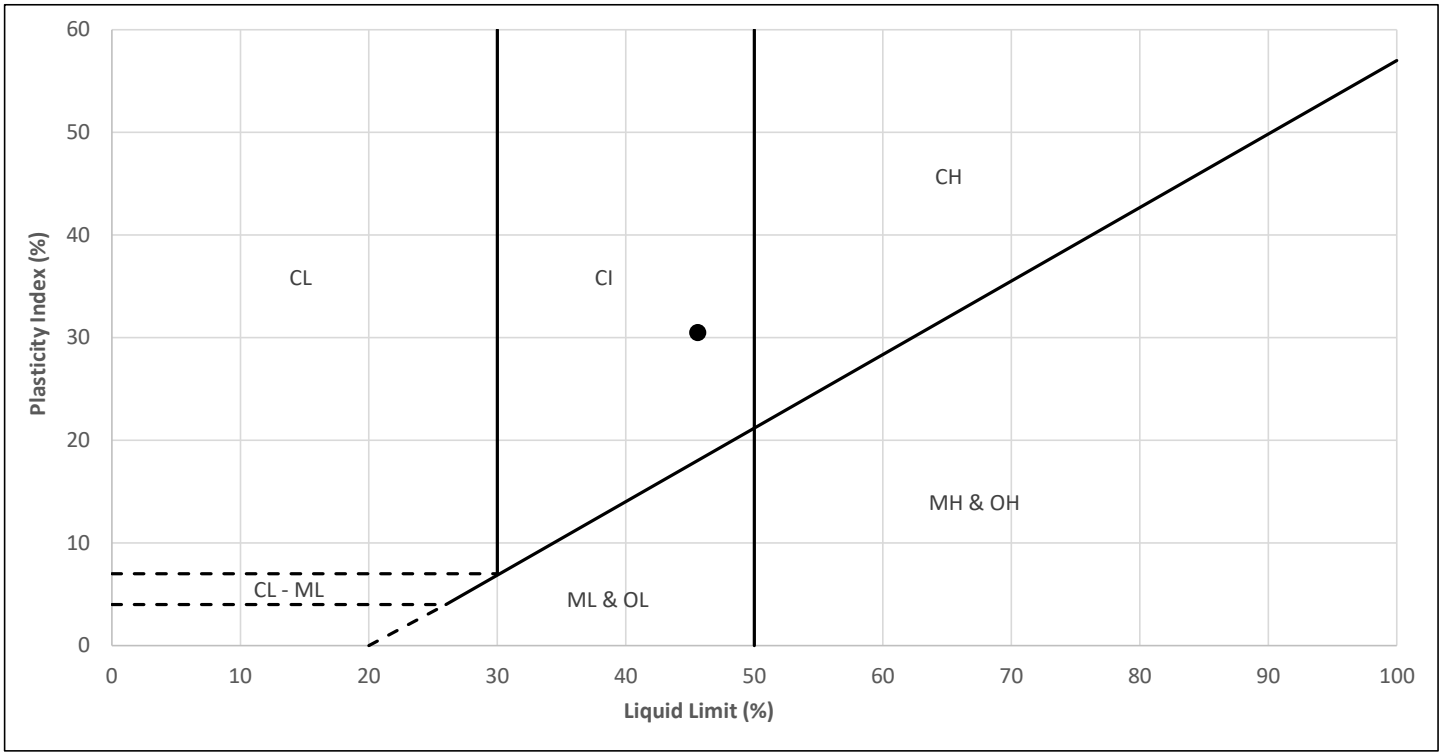
Project:	Snake Lake Reservoir Expansion	**Sample #:**	533AU1
Project No.:	1560-193-00	**Source:**	22BH533
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 533AU1	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	45.6
Plastic Limit (PL)	15.1
Plasticity Index (PI)	30.5

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

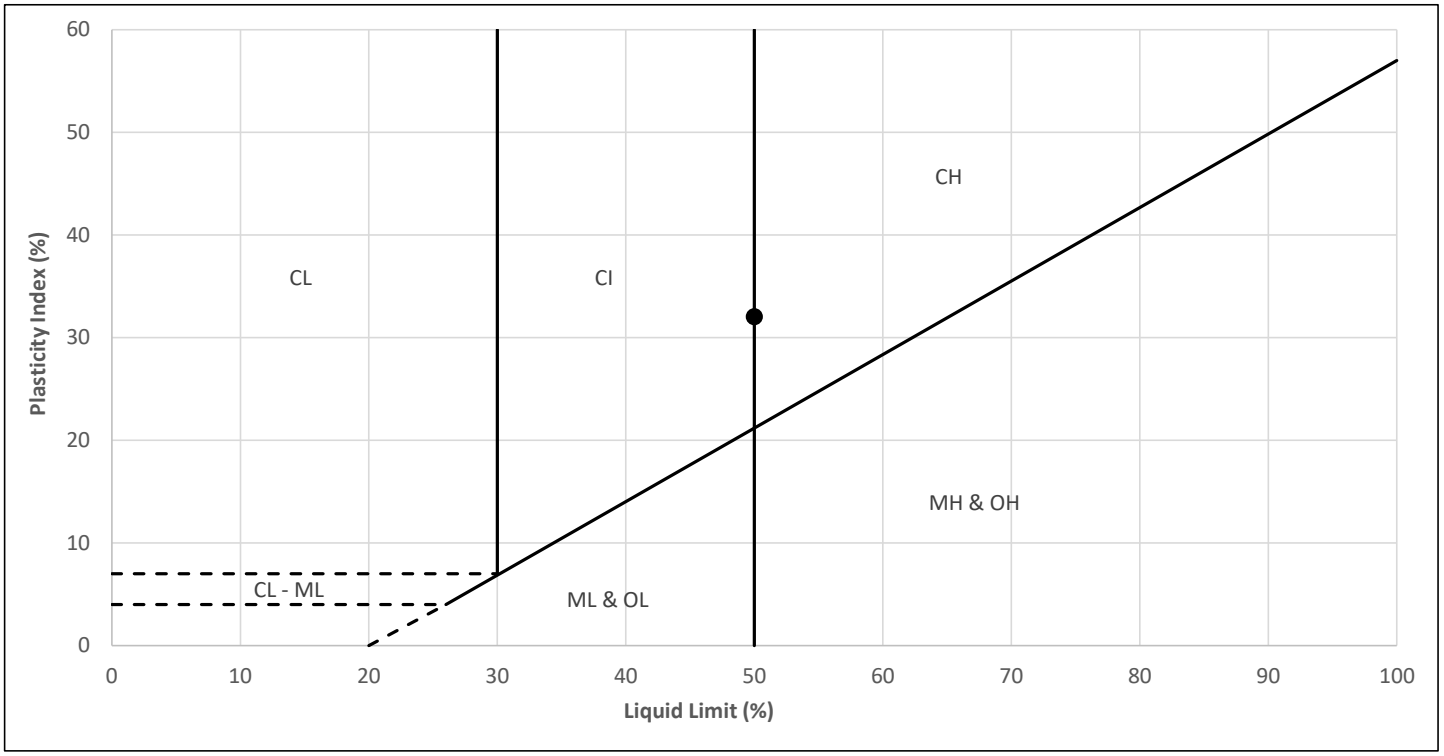
Project:	Snake Lake Reservoir Expansion	**Sample #:**	533AU3
Project No.:	1560-193-00	**Source:**	22BH533
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 533AU3	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.0
Plastic Limit (PL)	18.0
Plasticity Index (PI)	32.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

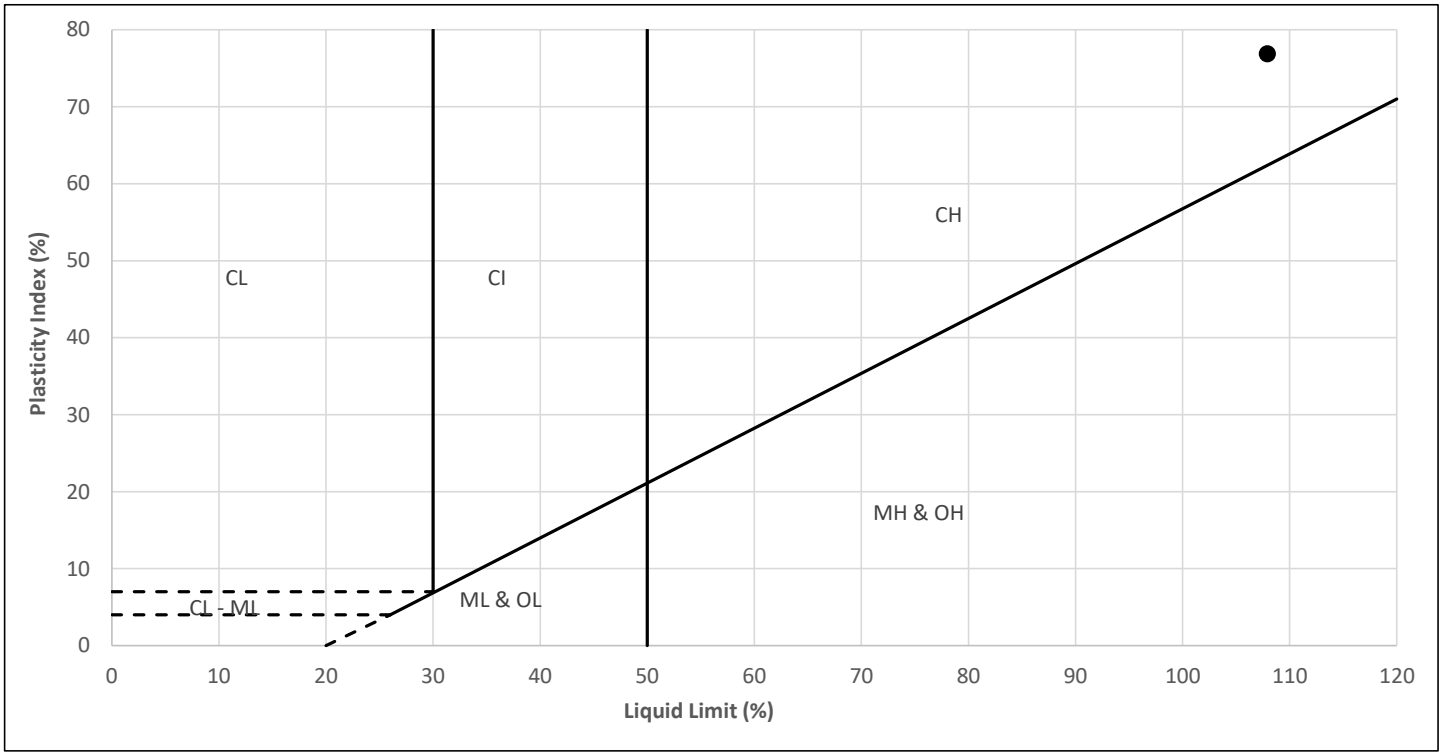
Project:	Snake Lake Reservoir Expansion	**Sample #:**	533AU5
Project No.:	1560-193-00	**Source:**	22BH533
Owner:	EID	**Sample Depth:**	5.6m
File No.:	AL - 533AU5	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	107.9
Plastic Limit (PL)	31.0
Plasticity Index (PI)	76.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

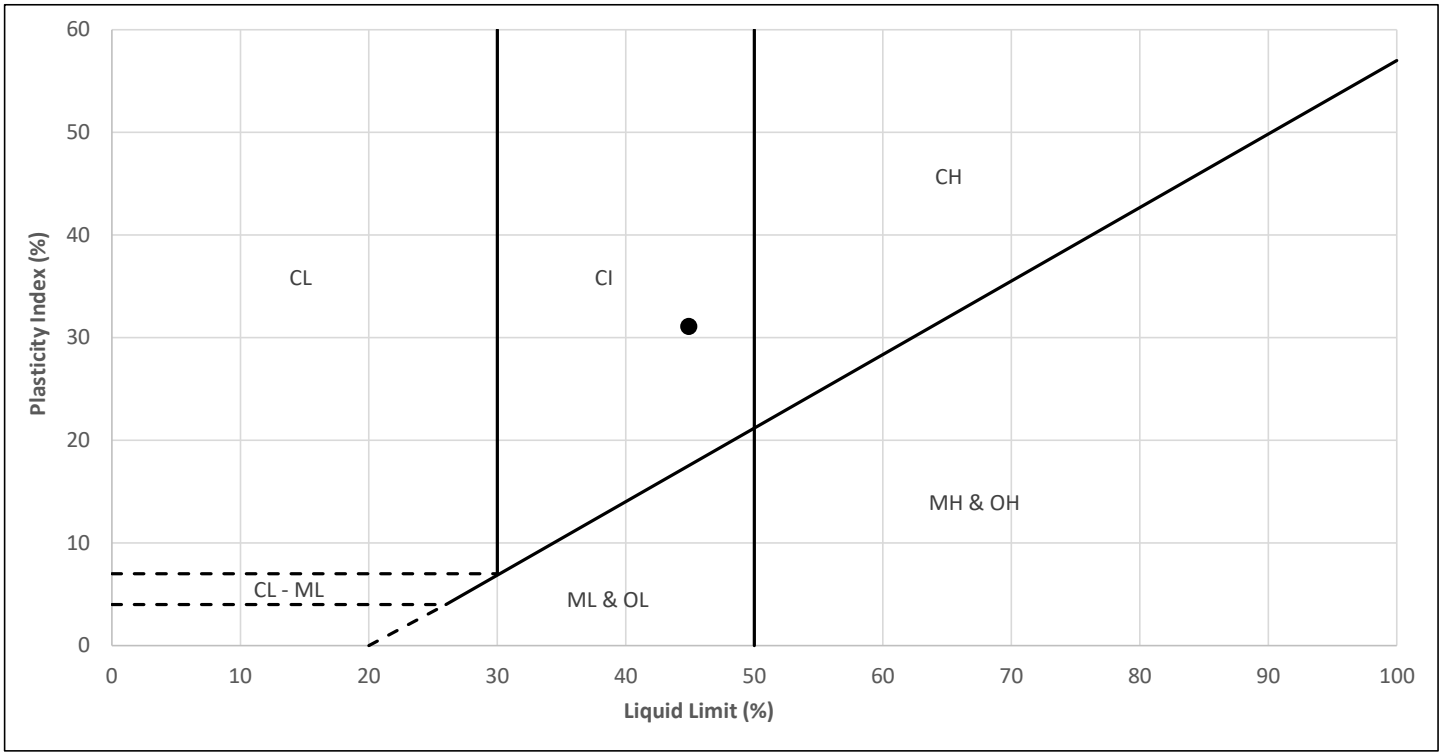
Project:	Snake Lake Reservoir Expansion	**Sample #:**	534AU1
Project No.:	1560-193-00	**Source:**	22BH534
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 534AU1	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.9
Plastic Limit (PL)	13.8
Plasticity Index (PI)	31.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

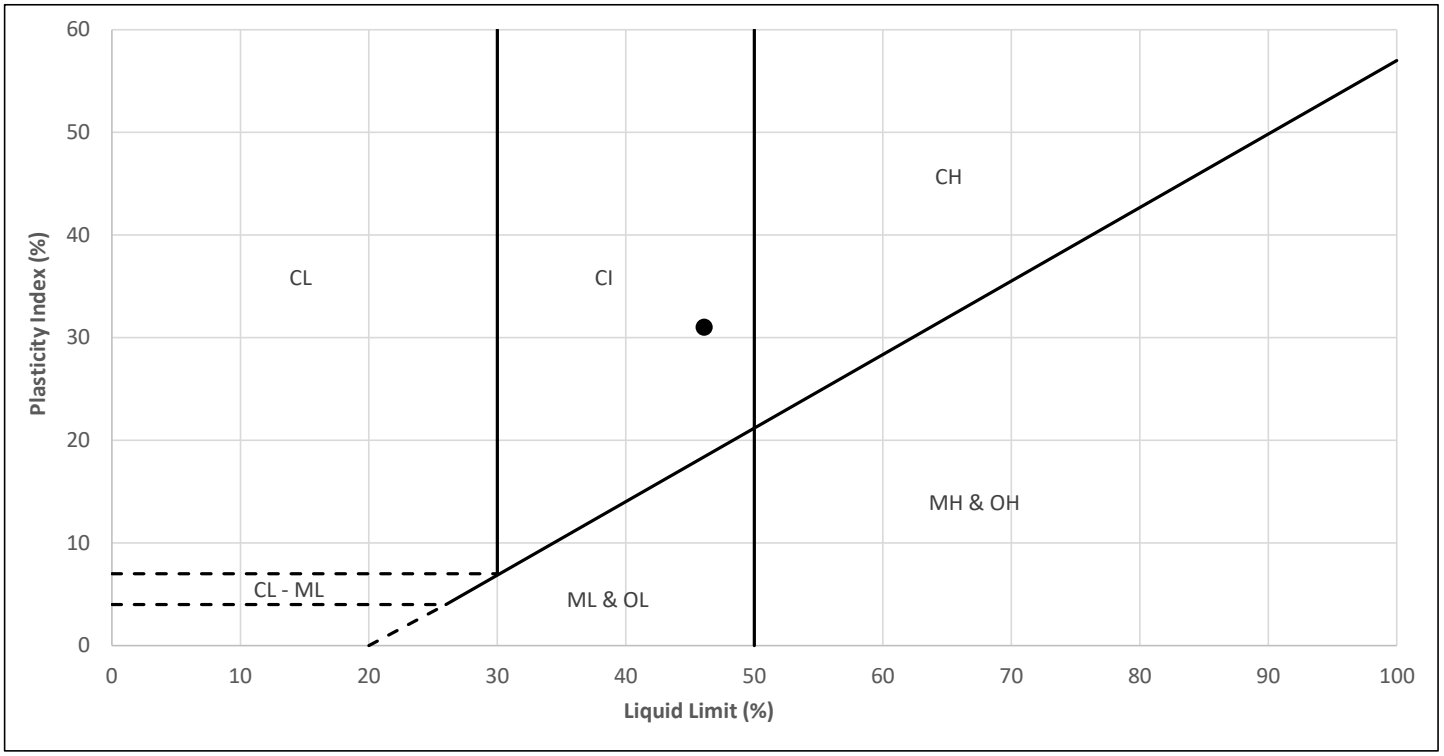
Project:	Snake Lake Reservoir Expansion	**Sample #:**	534AU3
Project No.:	1560-193-00	**Source:**	22BH534
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 534AU3	**Test Date:**	6-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	46.1
Plastic Limit (PL)	15.1
Plasticity Index (PI)	31.0

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

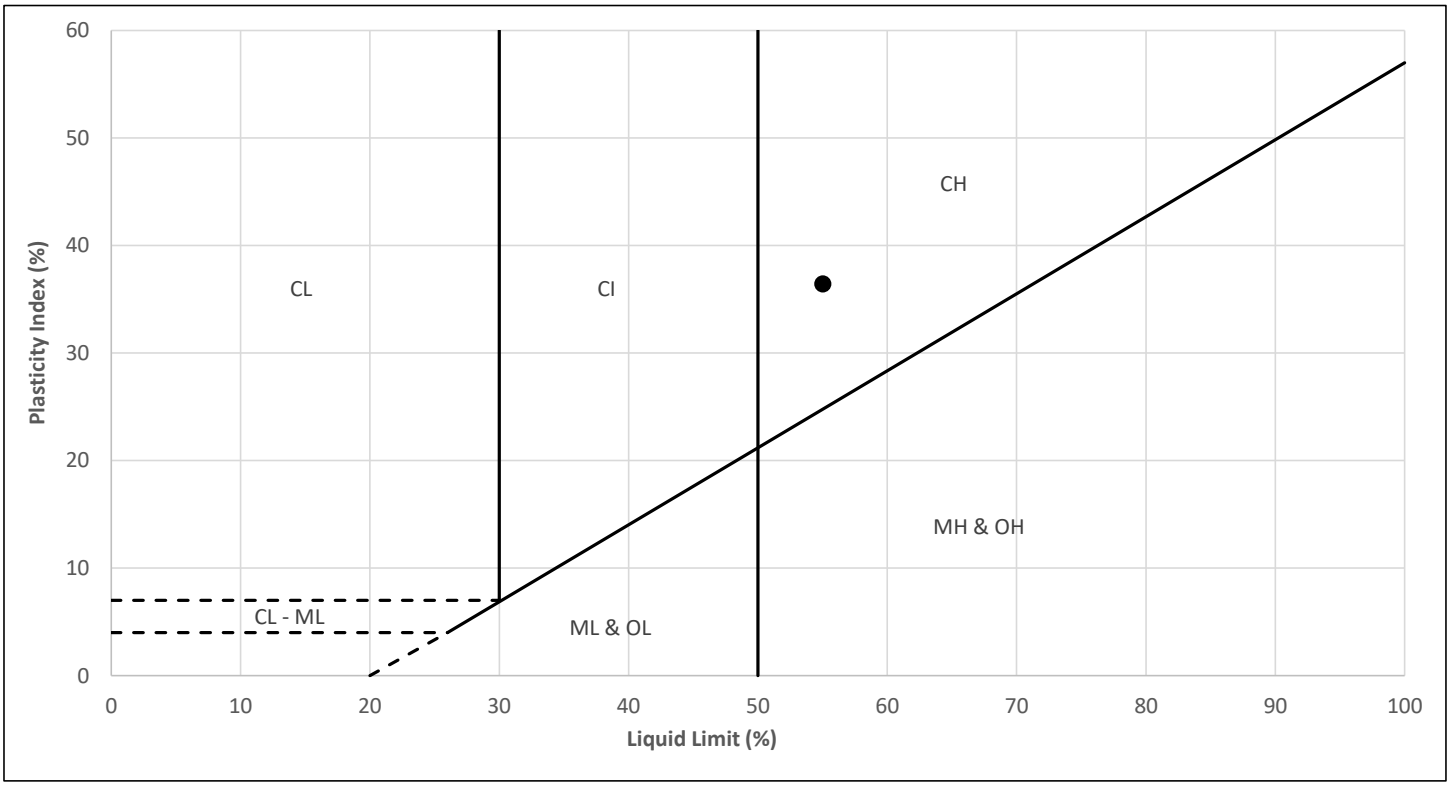
Project:	Snake Lake Reservoir Expansion	**Sample #:**	535AU2
Project No.:	1560-193-00	**Source:**	22BH535
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 535AU2	**Test Date:**	7-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.0
Plastic Limit (PL)	18.6
Plasticity Index (PI)	36.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

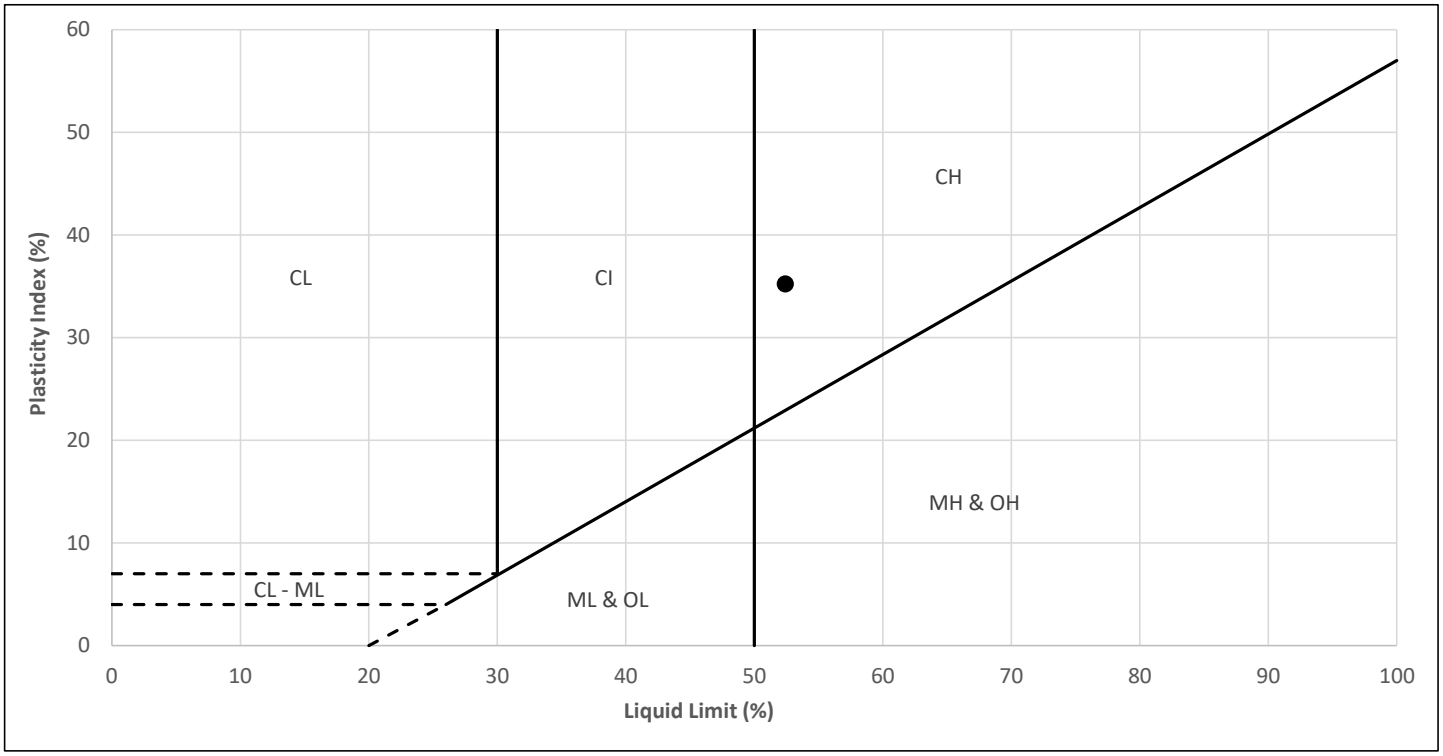
Project:	Snake Lake Reservoir Expansion	**Sample #:**	535AU3
Project No.:	1560-193-00	**Source:**	22BH535
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 535AU3	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.4
Plastic Limit (PL)	17.2
Plasticity Index (PI)	35.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

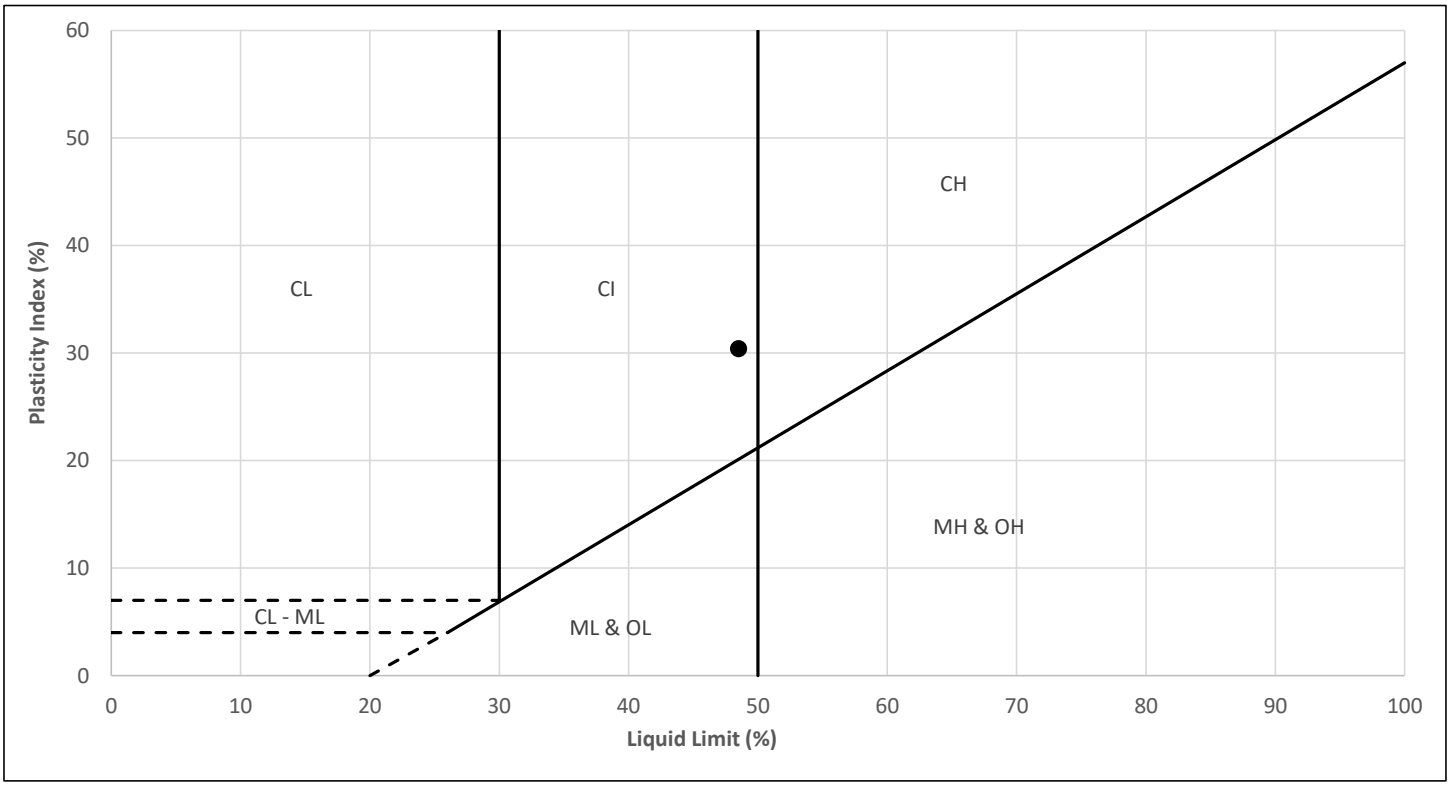
Project:	Snake Lake Reservoir Expansion	**Sample #:**	535AU4
Project No.:	1560-193-00	**Source:**	22BH535
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 535AU4	**Test Date:**	11-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	48.5
Plastic Limit (PL)	18.1
Plasticity Index (PI)	30.4

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

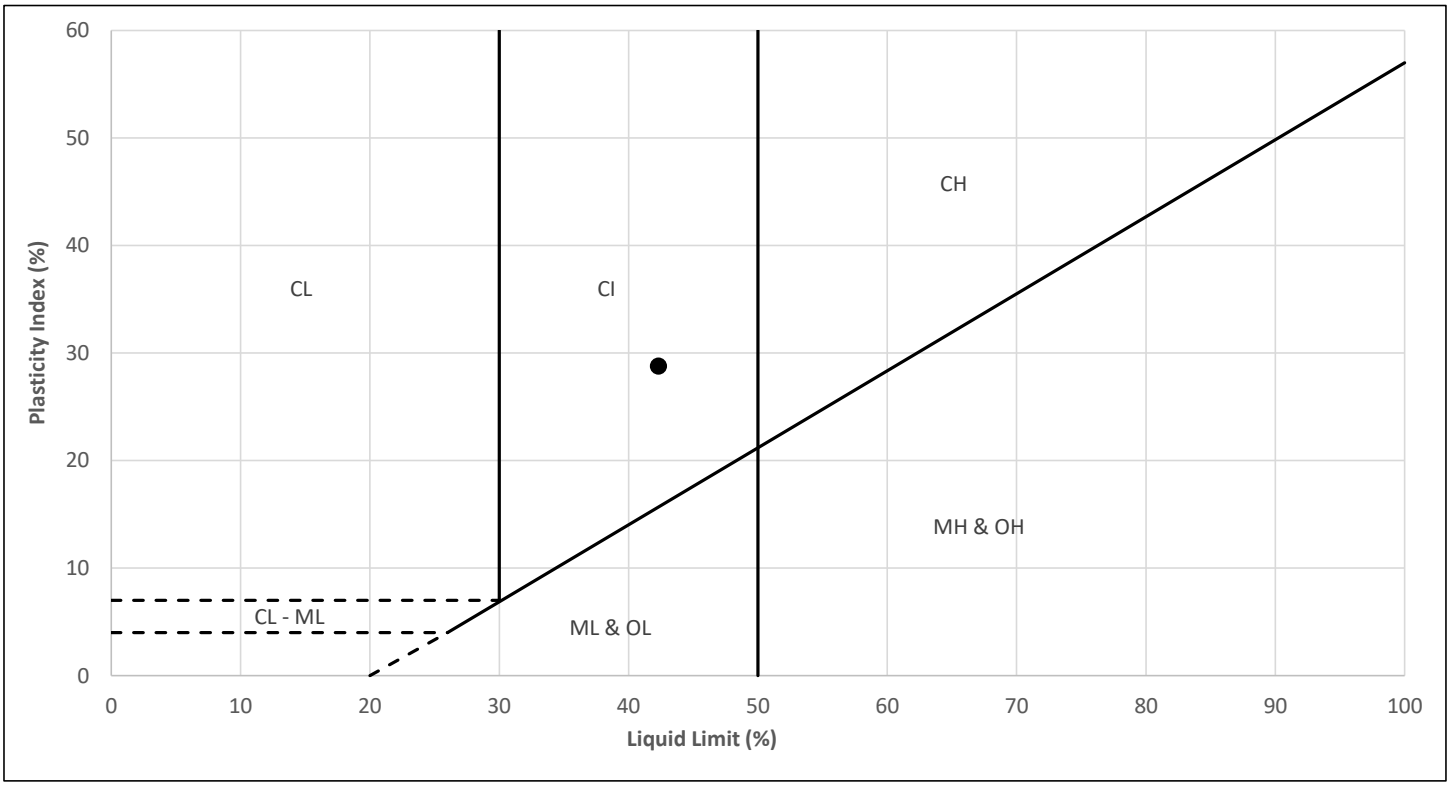
Project:	Snake Lake Reservoir Expansion	**Sample #:**	536AU1
Project No.:	1560-193-00	**Source:**	22BH536
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 536AU1	**Test Date:**	11-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	42.3
Plastic Limit (PL)	13.5
Plasticity Index (PI)	28.8

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

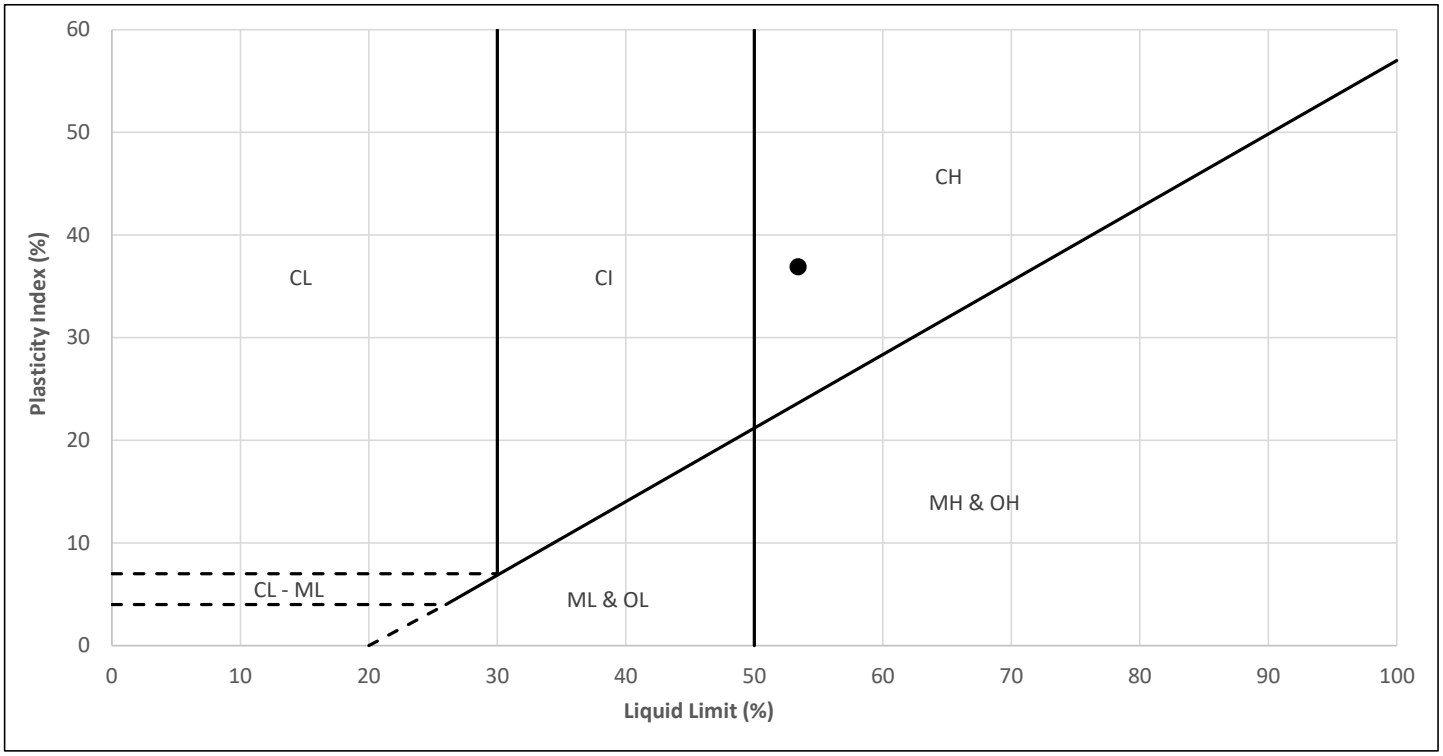
Project:	Snake Lake Reservoir Expansion	**Sample #:**	536AU3
Project No.:	1560-193-00	**Source:**	22BH536
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 536AU3	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.4
Plastic Limit (PL)	16.5
Plasticity Index (PI)	36.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

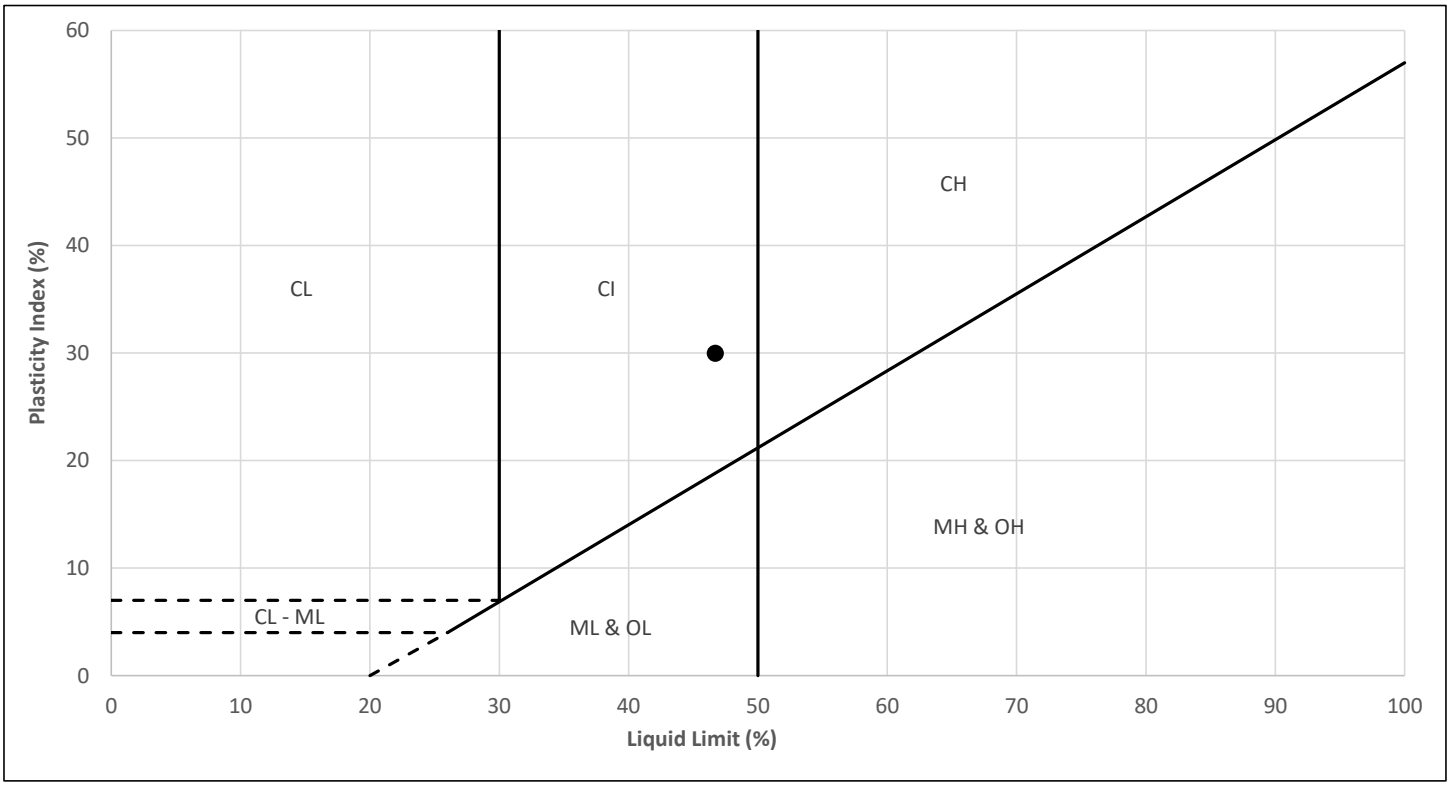
Project:	Snake Lake Reservoir Expansion	**Sample #:**	537AU2
Project No.:	1560-193-00	**Source:**	22BH537
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 537AU2	**Test Date:**	8-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	46.7
Plastic Limit (PL)	16.7
Plasticity Index (PI)	30.0

Soil Plasticity	Medium
Soil Classification	CI



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MPE Engineering Ltd.
1, 3320 18 Avenue North
Lethbridge, Alberta T1H 5J3
Tel: (403)892-6036

ATTERBERG LIMITS

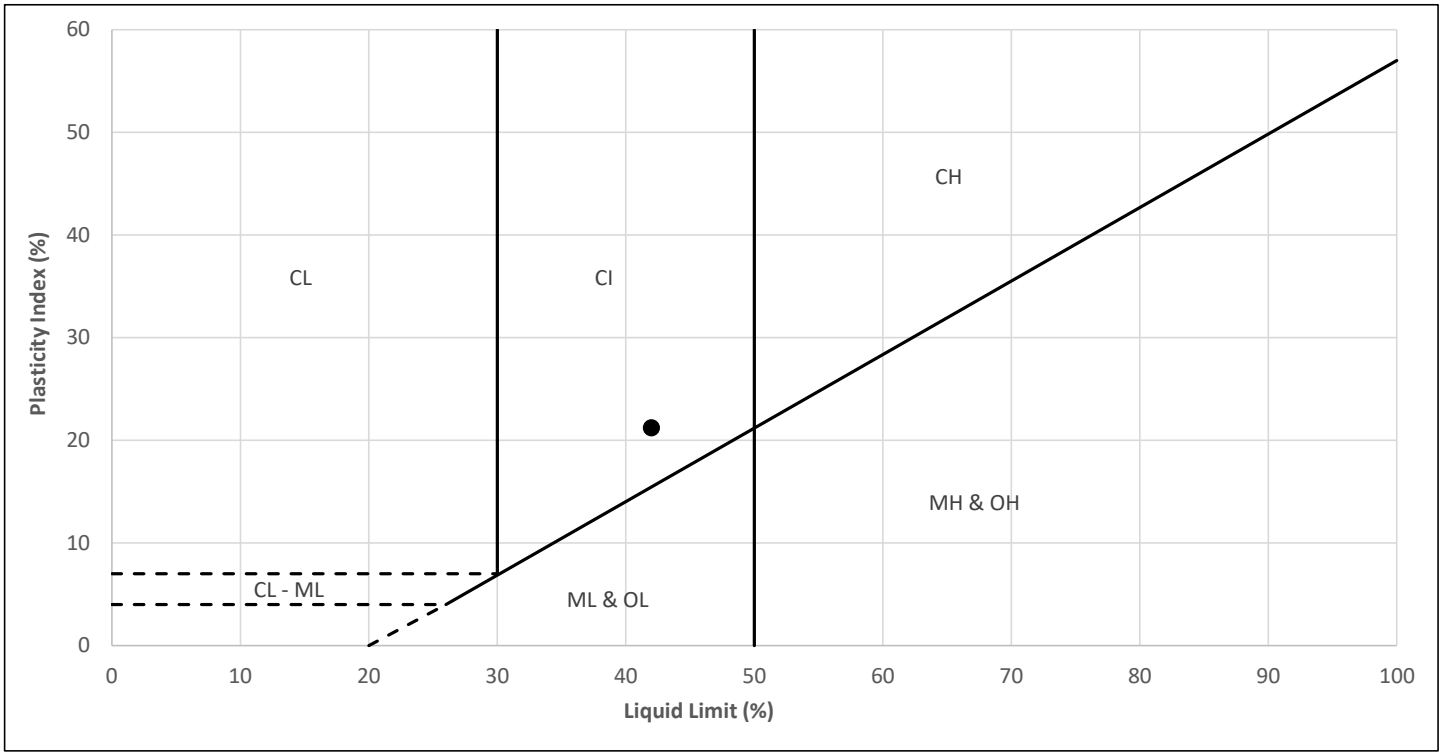
Project:	Snake Lake Reservoir Expansion	**Sample #:**	537AU3
Project No.:	1560-193-00	**Source:**	22BH537
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 537AU3	**Test Date:**	22-Aug-23

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	42.0
Plastic Limit (PL)	20.8
Plasticity Index (PI)	21.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

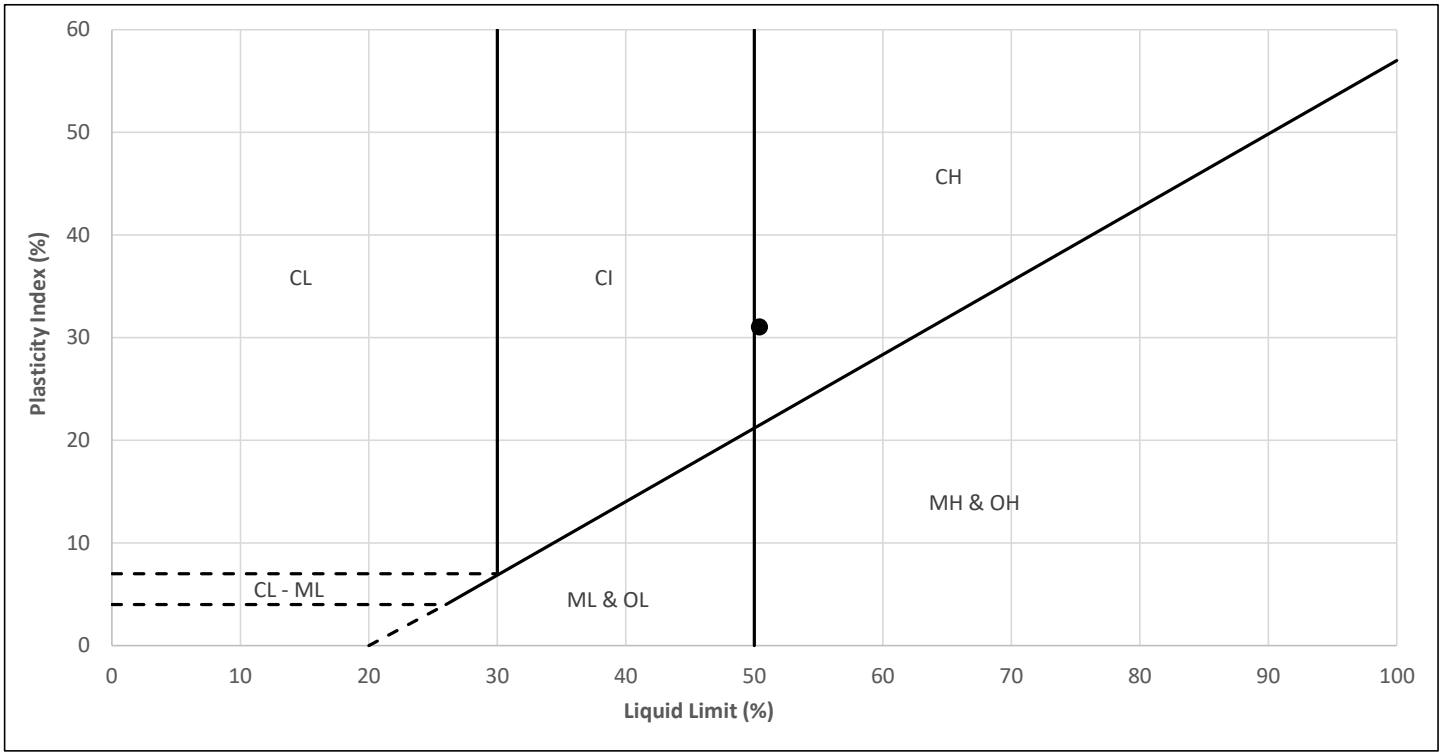
Project:	Snake Lake Reservoir Expansion	**Sample #:**	537AU4
Project No.:	1560-193-00	**Source:**	22BH537
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 537AU4	**Test Date:**	6-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.4
Plastic Limit (PL)	19.3
Plasticity Index (PI)	31.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

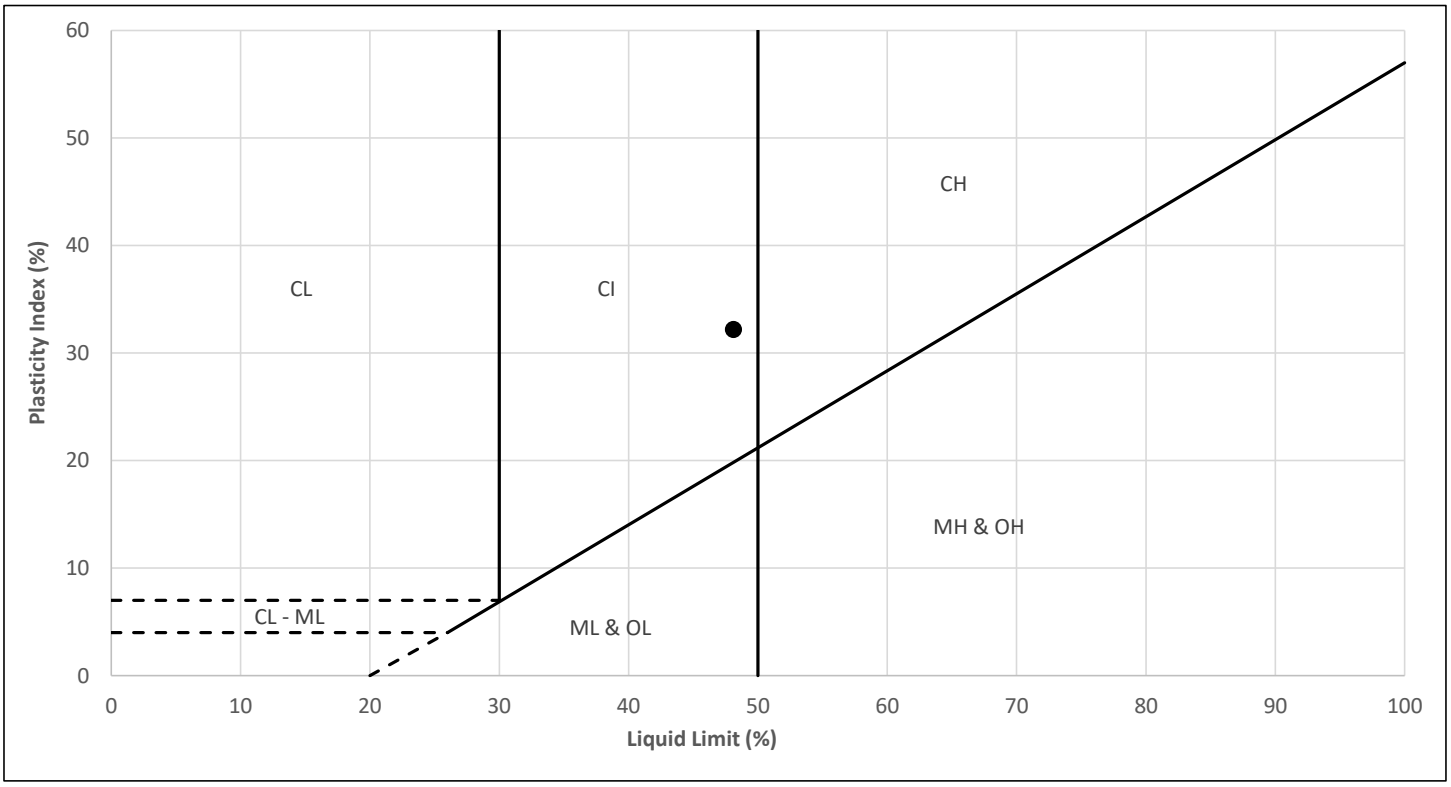
Project:	Snake Lake Reservoir Expansion	**Sample #:**	539AU2
Project No.:	1560-193-00	**Source:**	22BH539
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 539AU2	**Test Date:**	11-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	48.1
Plastic Limit (PL)	15.9
Plasticity Index (PI)	32.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

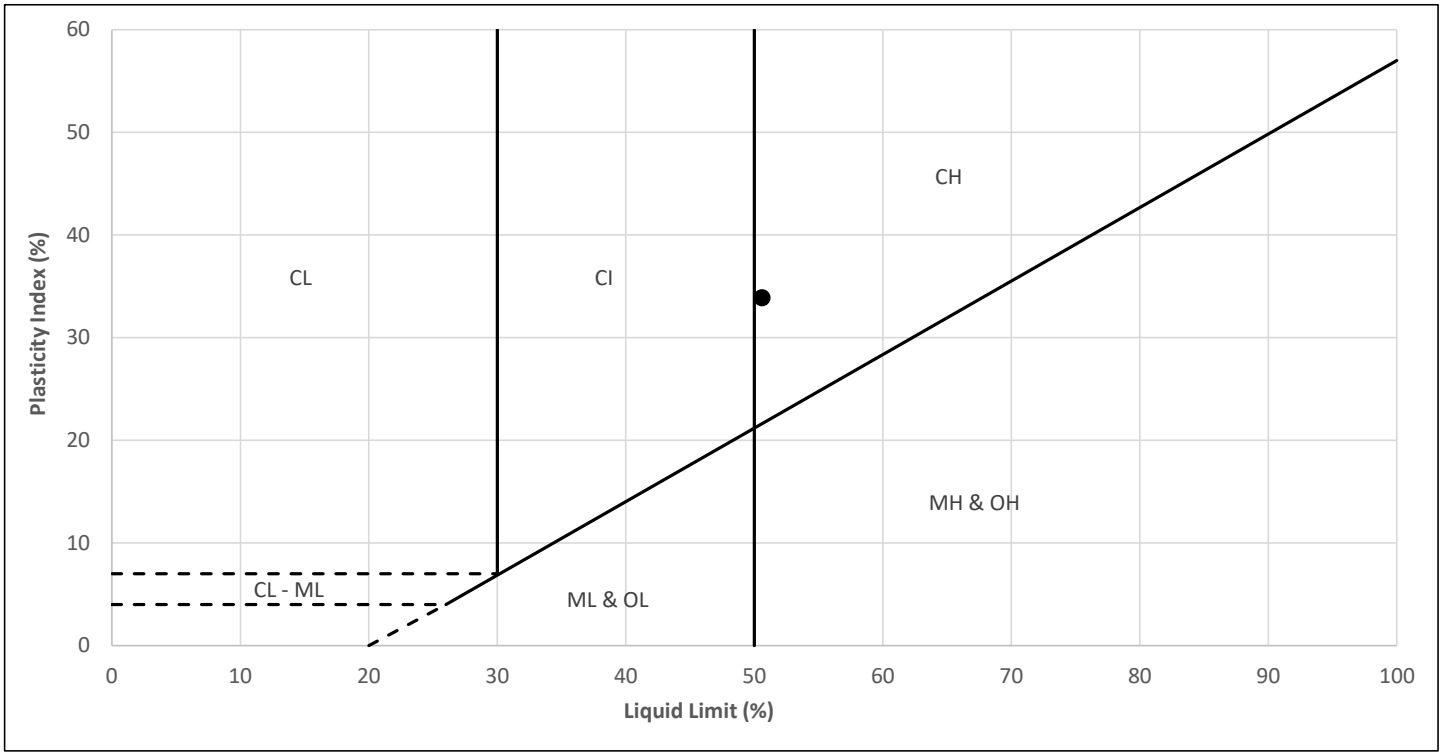
Project:	Snake Lake Reservoir Expansion	**Sample #:**	539AU3
Project No.:	1560-193-00	**Source:**	22BH539
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 539AU3	**Test Date:**	21-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.6
Plastic Limit (PL)	16.7
Plasticity Index (PI)	33.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

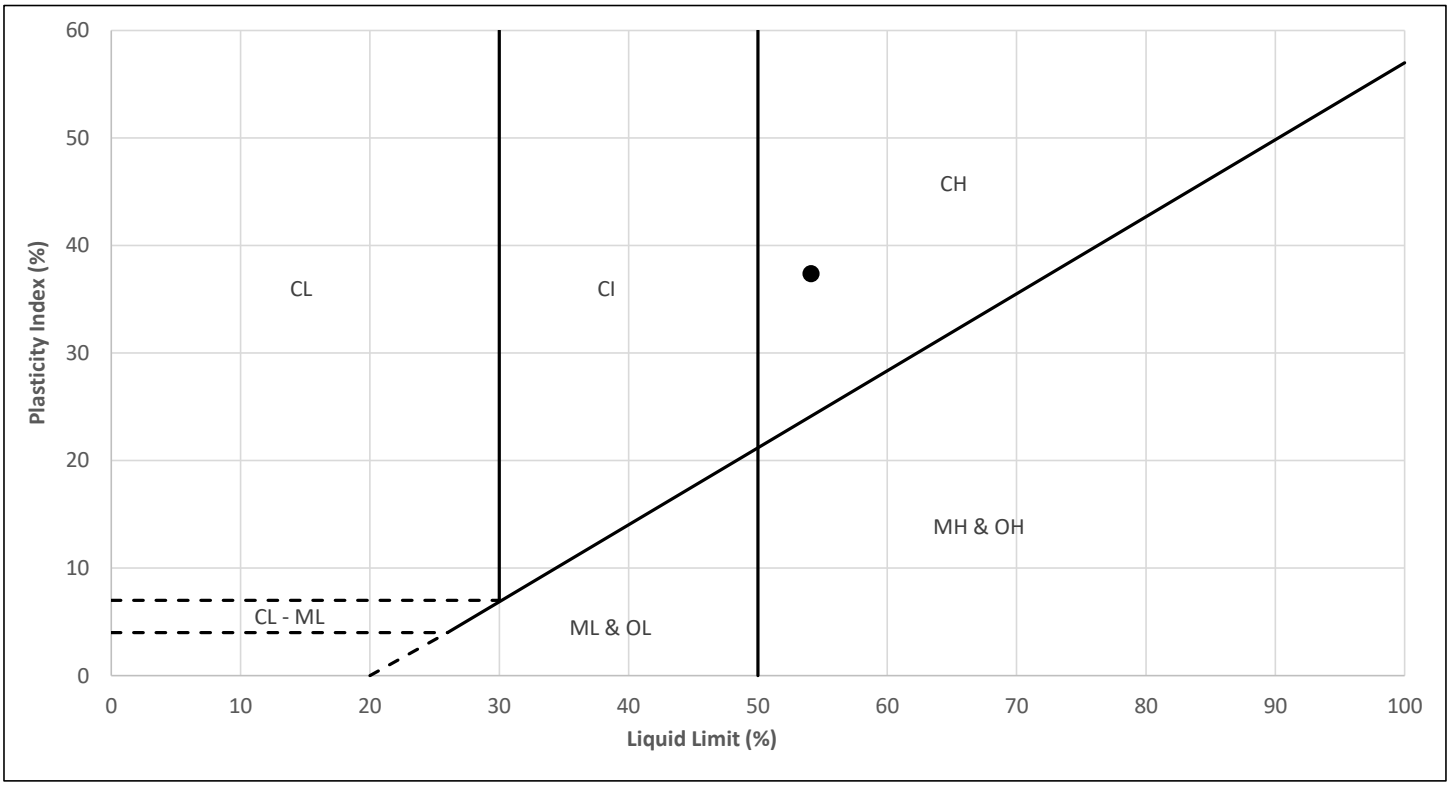
Project:	Snake Lake Reservoir Expansion	**Sample #:**	539AU4
Project No.:	1560-193-00	**Source:**	22BH539
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 539AU4	**Test Date:**	11-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.1
Plastic Limit (PL)	16.7
Plasticity Index (PI)	37.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

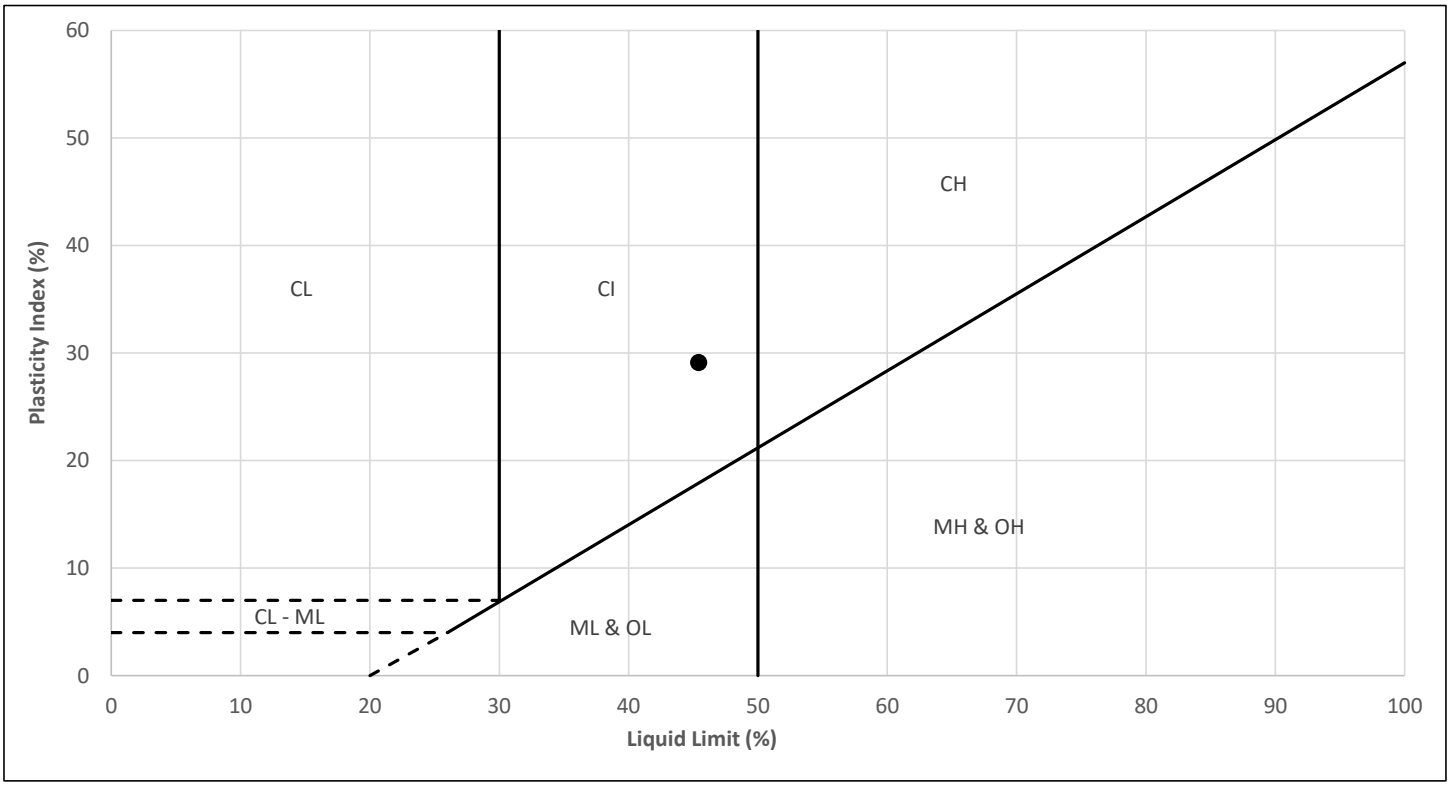
Project:	Snake Lake Reservoir Expansion	**Sample #:**	540AU1
Project No.:	1560-193-00	**Source:**	22BH540
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 540AU1	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	45.4
Plastic Limit (PL)	16.3
Plasticity Index (PI)	29.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

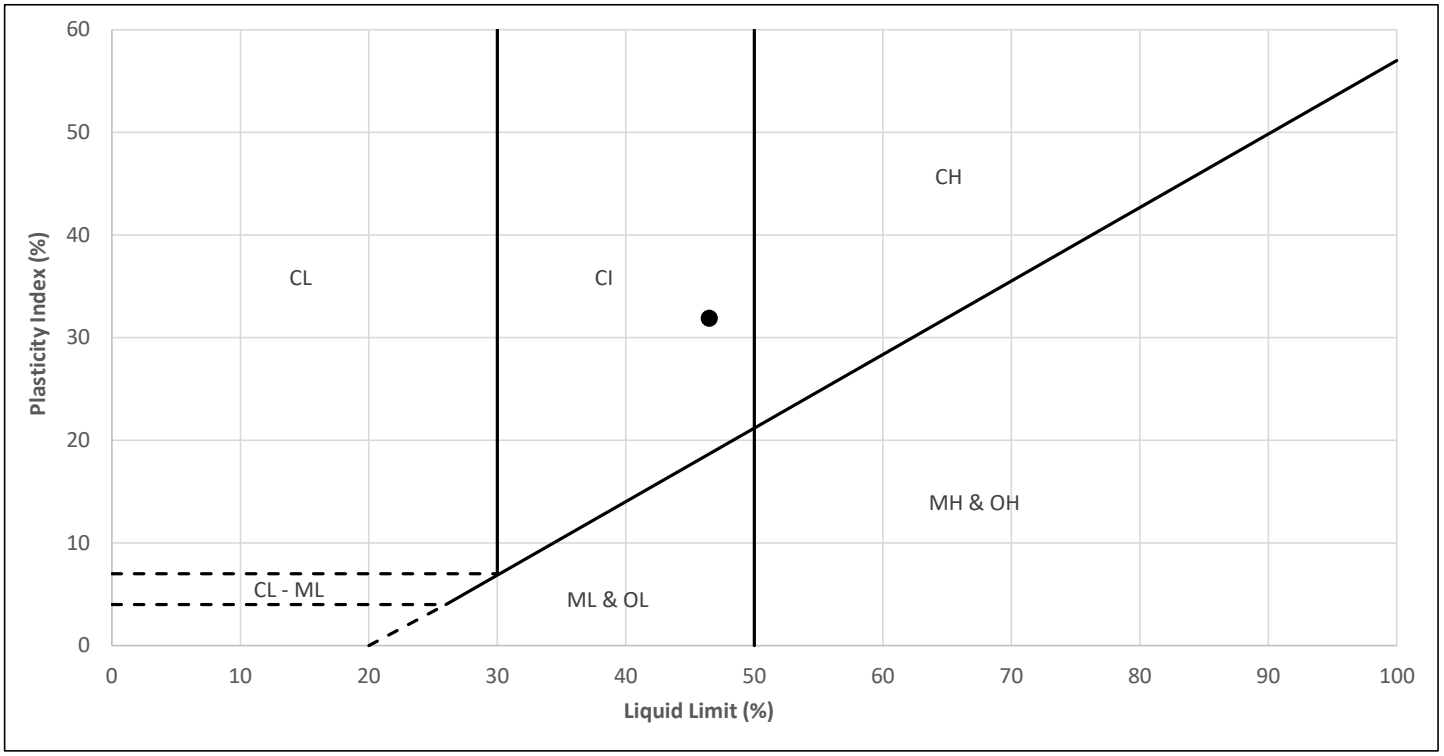
Project:	Snake Lake Reservoir Expansion	**Sample #:**	540AU3
Project No.:	1560-193-00	**Source:**	22BH540
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 540AU3	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	46.5
Plastic Limit (PL)	14.6
Plasticity Index (PI)	31.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

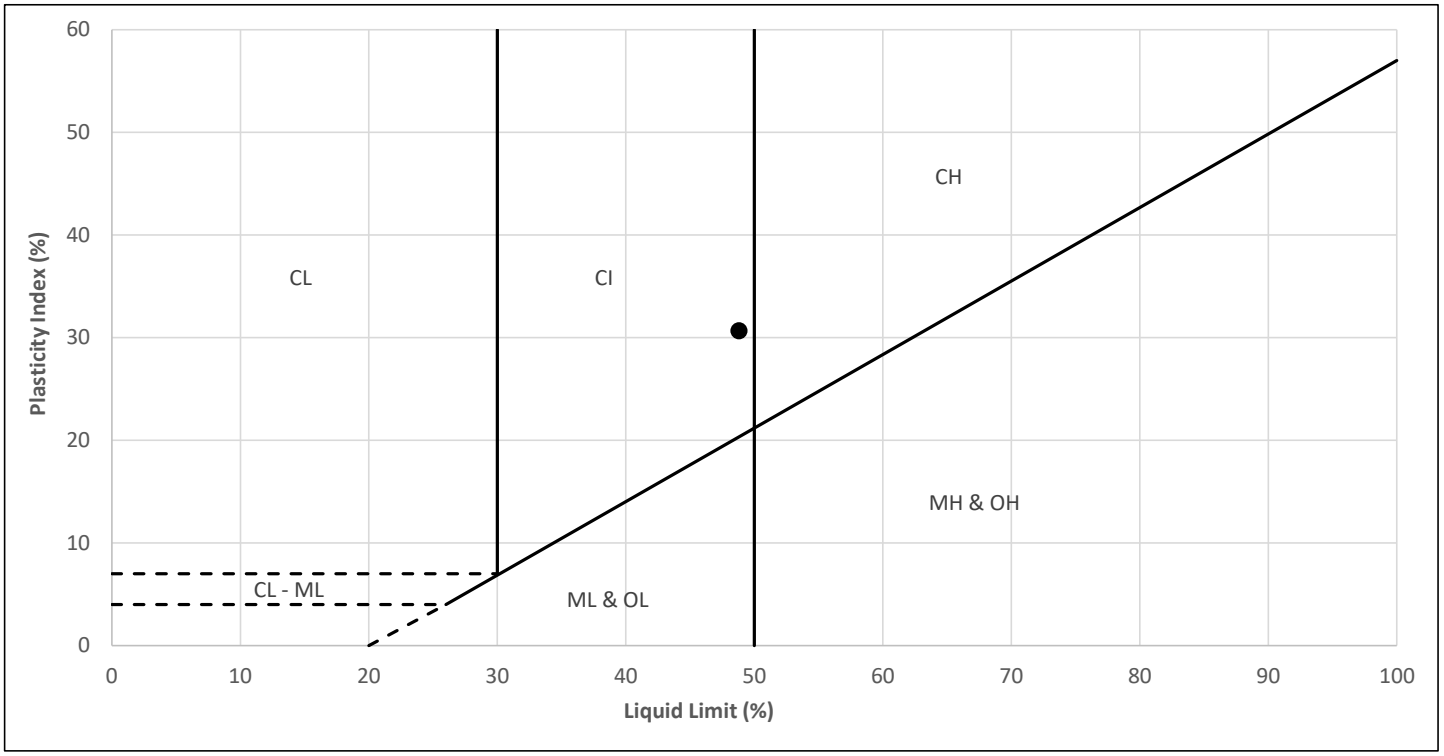
Project:	Snake Lake Reservoir Expansion	**Sample #:**	541AU2
Project No.:	1560-193-00	**Source:**	22BH541
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 541AU2	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	48.8
Plastic Limit (PL)	18.1
Plasticity Index (PI)	30.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

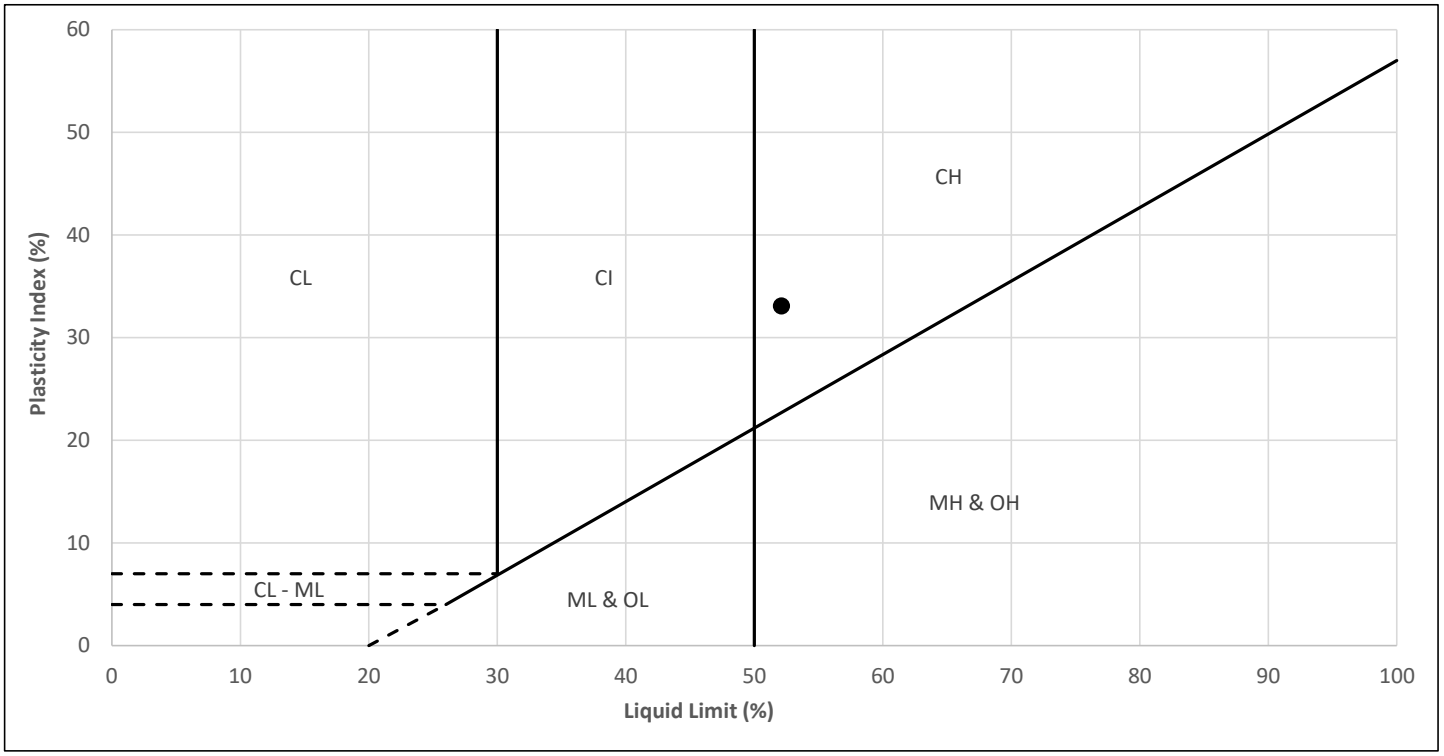
Project:	Snake Lake Reservoir Expansion	**Sample #:**	541AU3
Project No.:	1560-193-00	**Source:**	22BH541
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 541AU3	**Test Date:**	21-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.1
Plastic Limit (PL)	19.0
Plasticity Index (PI)	33.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

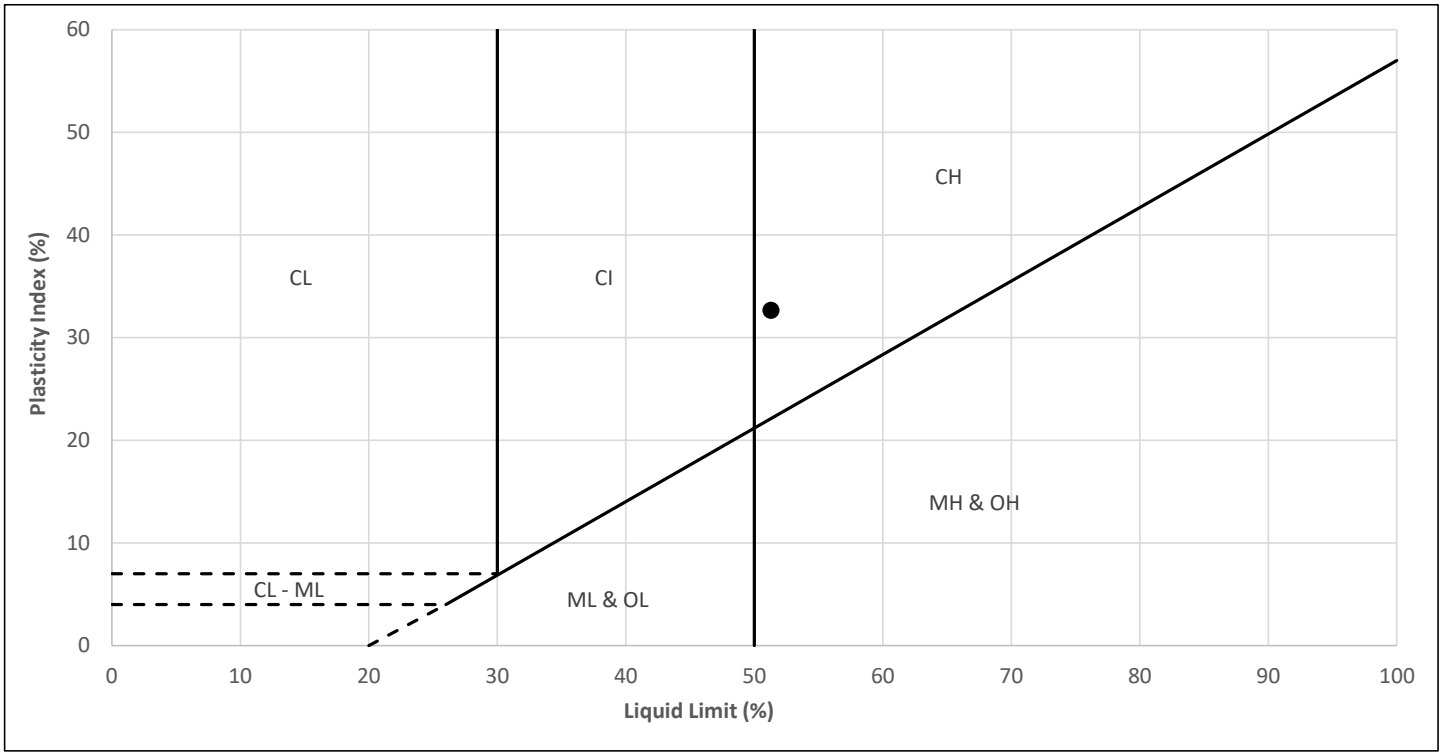
Project:	Snake Lake Reservoir Expansion	**Sample #:**	541AU4
Project No.:	1560-193-00	**Source:**	22BH541
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 541AU4	**Test Date:**	4-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.3
Plastic Limit (PL)	18.6
Plasticity Index (PI)	32.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

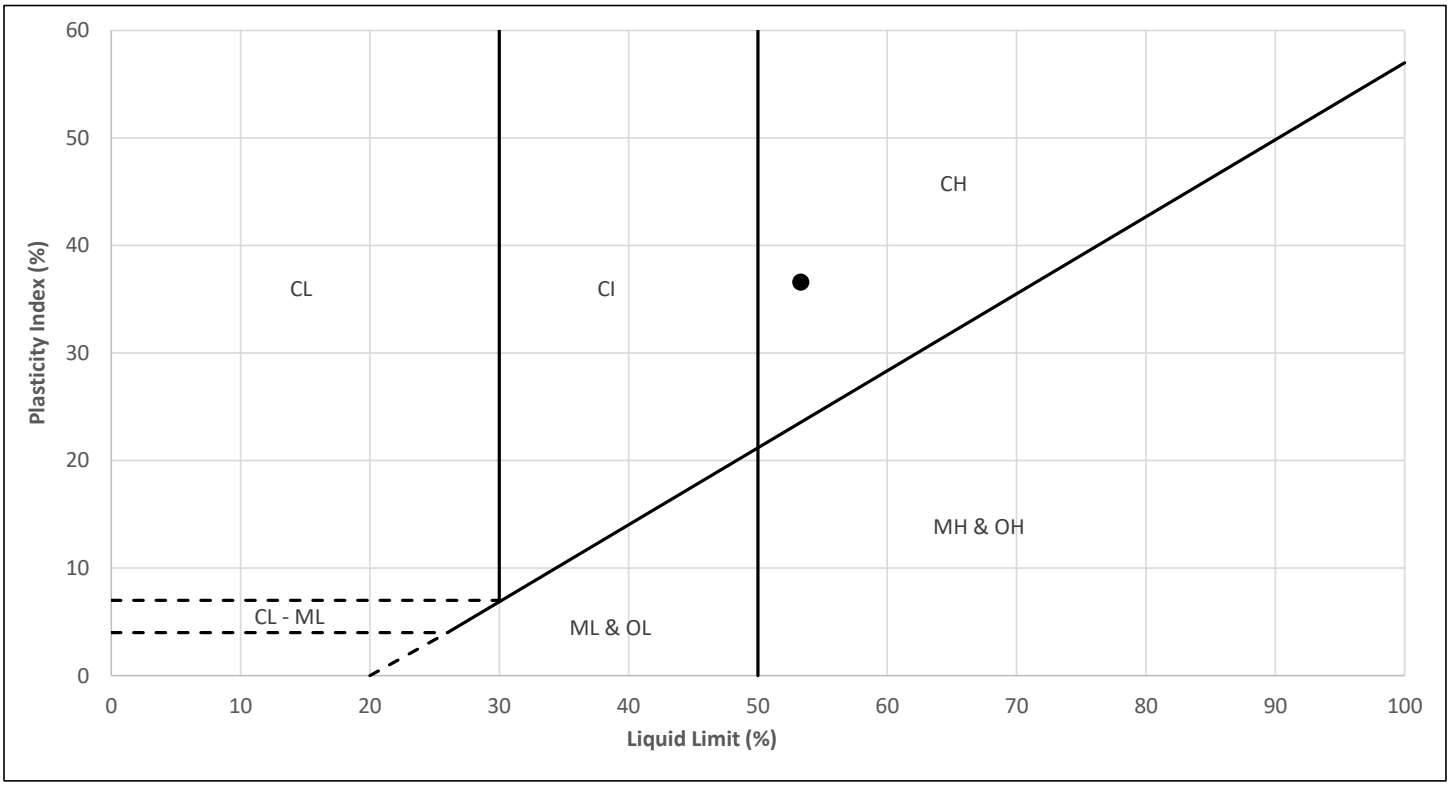
Project:	Snake Lake Reservoir Expansion	**Sample #:**	542AU1
Project No.:	1560-193-00	**Source:**	22BH542
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 542AU1	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.3
Plastic Limit (PL)	16.7
Plasticity Index (PI)	36.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

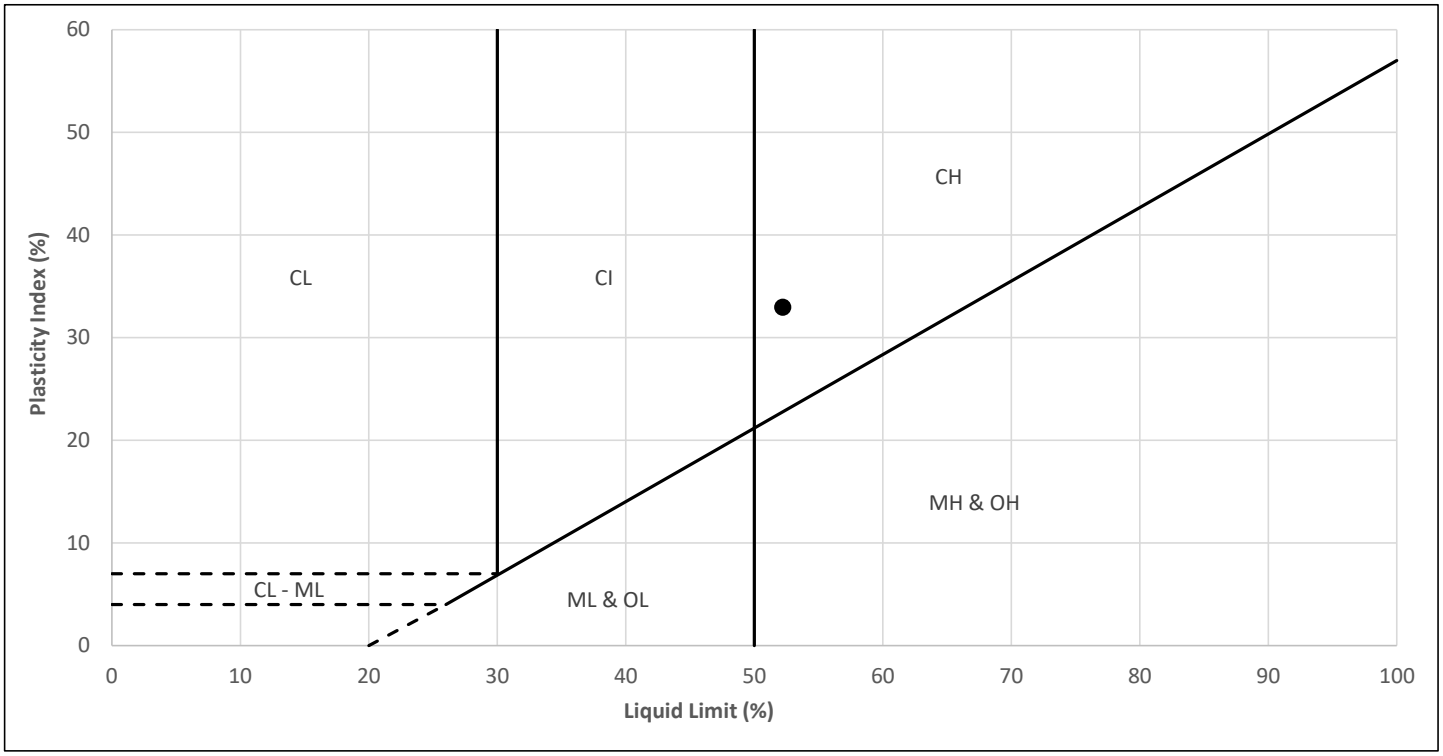
Project:	Snake Lake Reservoir Expansion	**Sample #:**	542AU3
Project No.:	1560-193-00	**Source:**	22BH542
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 542AU3	**Test Date:**	30-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.2
Plastic Limit (PL)	19.2
Plasticity Index (PI)	33.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

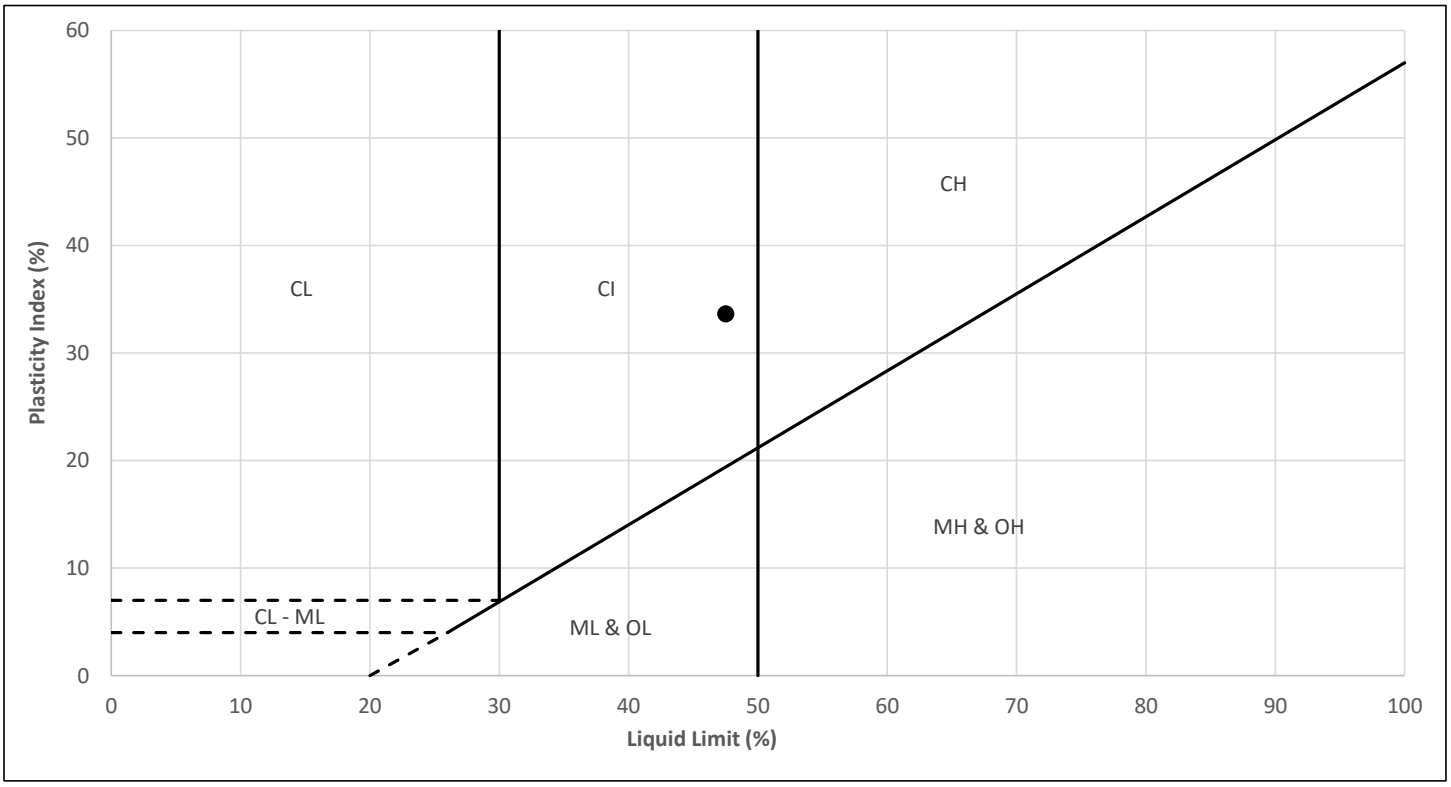
Project:	Snake Lake Reservoir Expansion	**Sample #:**	543AU2
Project No.:	1560-193-00	**Source:**	22BH543
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 543AU2	**Test Date:**	8-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	47.5
Plastic Limit (PL)	13.8
Plasticity Index (PI)	33.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

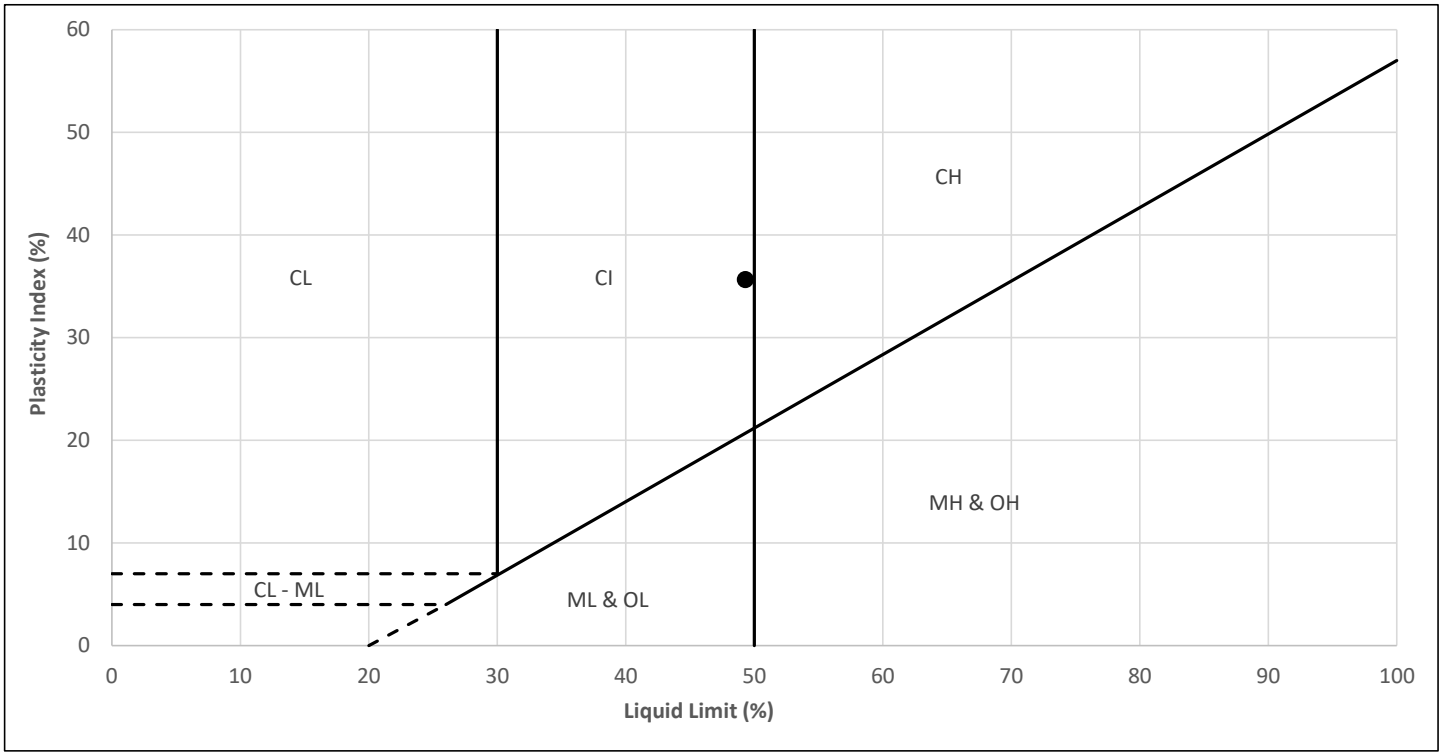
Project:	Snake Lake Reservoir Expansion	**Sample #:**	543AU3
Project No.:	1560-193-00	**Source:**	22BH543
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 543AU3	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.3
Plastic Limit (PL)	13.6
Plasticity Index (PI)	35.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

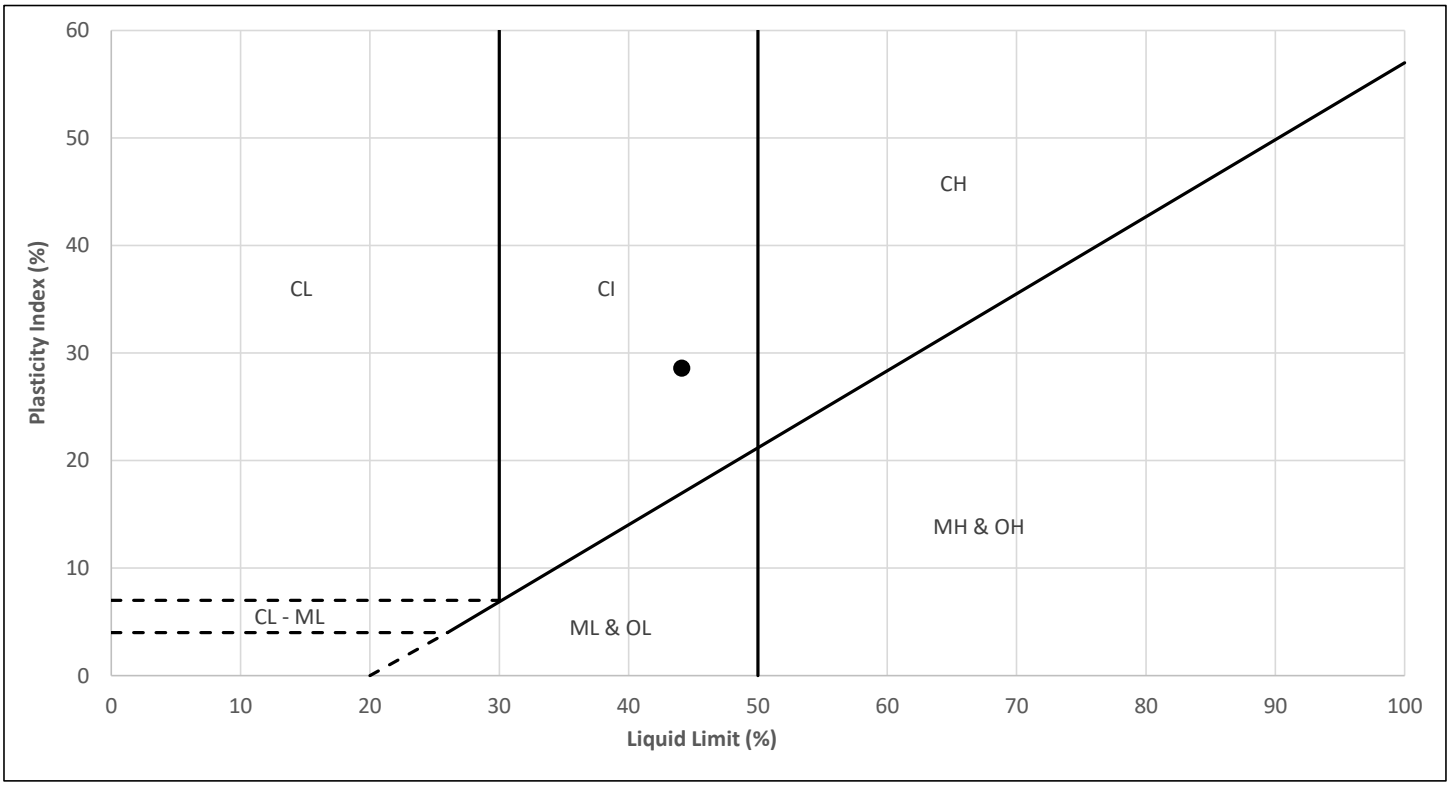
Project:	Snake Lake Reservoir Expansion	**Sample #:**	543AU4
Project No.:	1560-193-00	**Source:**	22BH543
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 543AU4	**Test Date:**	11-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.1
Plastic Limit (PL)	15.5
Plasticity Index (PI)	28.6

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

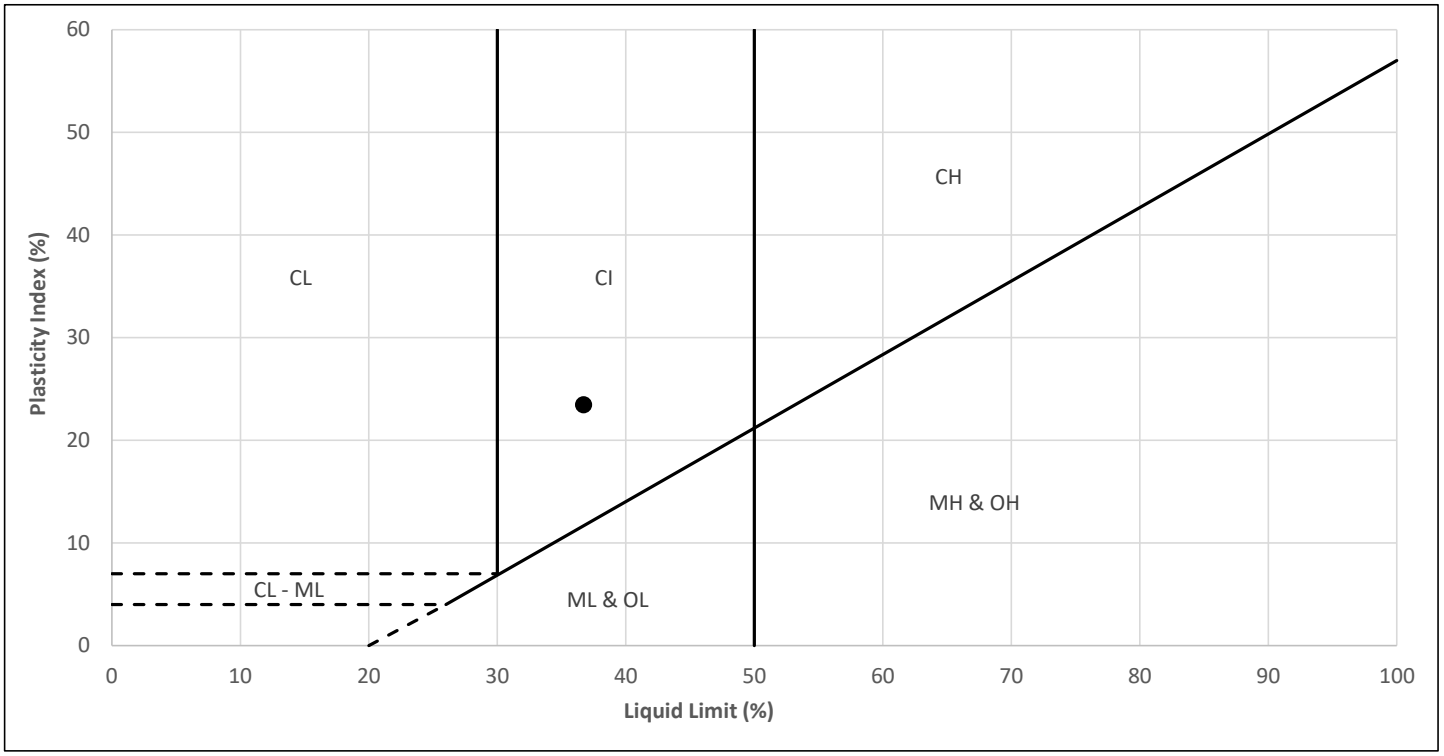
Project:	Snake Lake Reservoir Expansion	**Sample #:**	546AU1
Project No.:	1560-193-00	**Source:**	22BH546
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 546AU1	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	36.7
Plastic Limit (PL)	13.2
Plasticity Index (PI)	23.5

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

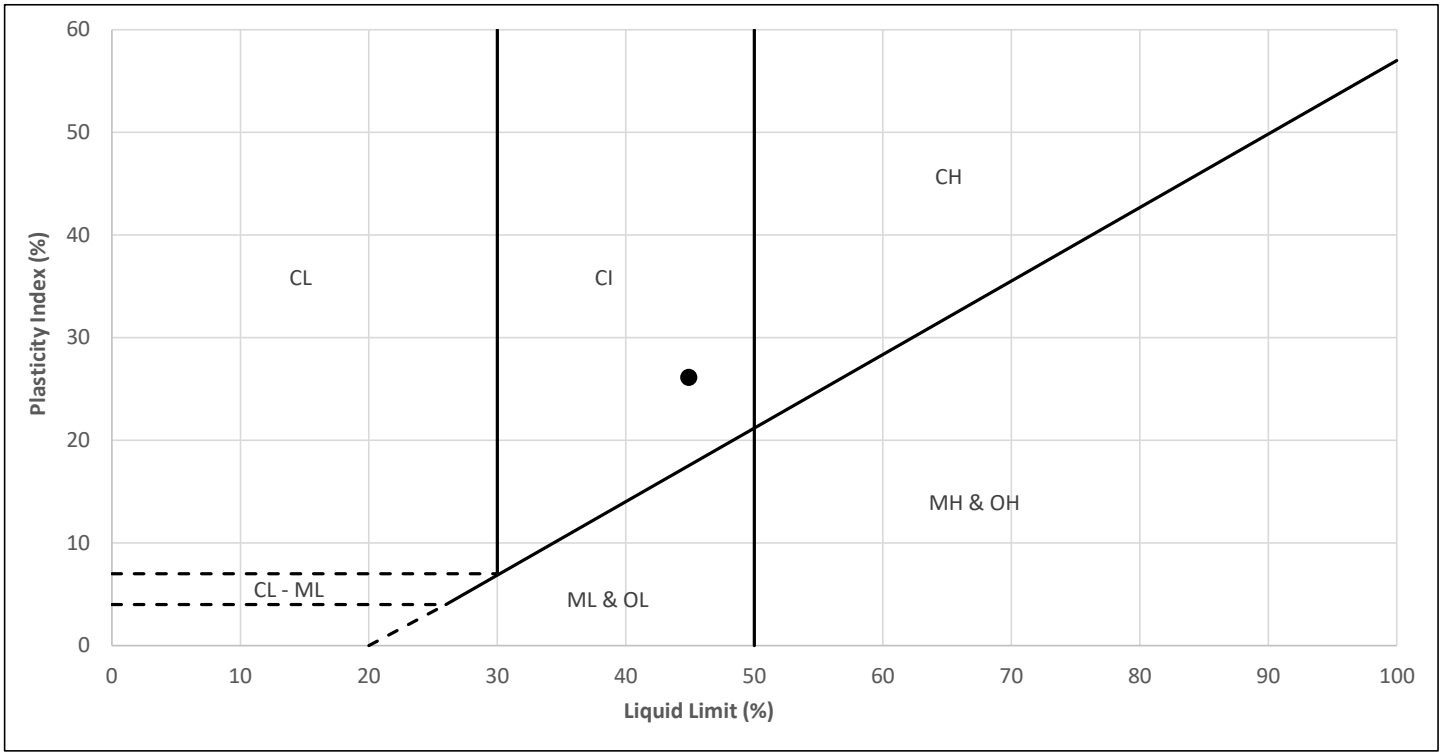
Project:	Snake Lake Reservoir Expansion	**Sample #:**	546AU3
Project No.:	1560-193-00	**Source:**	22BH546
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 546AU3	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.9
Plastic Limit (PL)	18.8
Plasticity Index (PI)	26.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

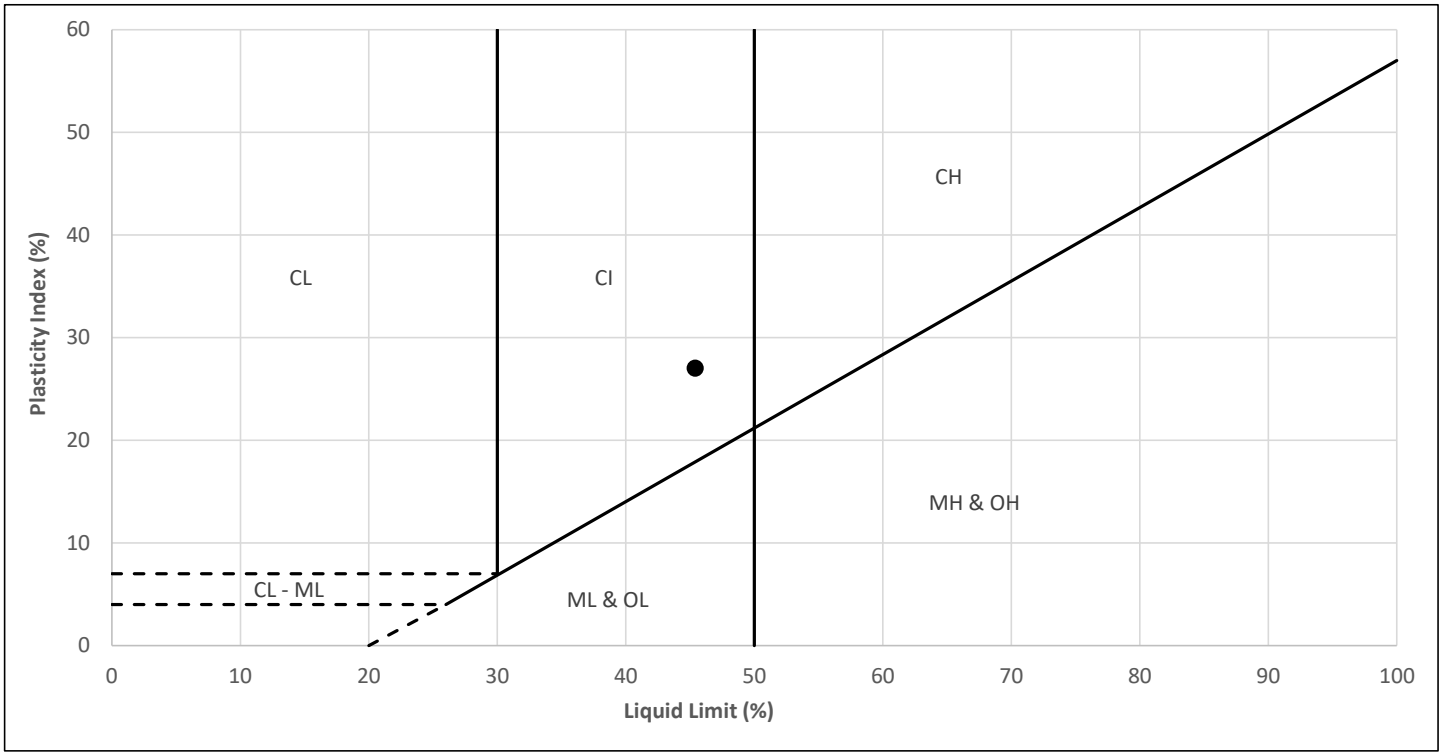
Project:	Snake Lake Reservoir Expansion	**Sample #:**	547AU2
Project No.:	1560-193-00	**Source:**	22BH547
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 547AU2	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	45.4
Plastic Limit (PL)	18.4
Plasticity Index (PI)	27.0

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

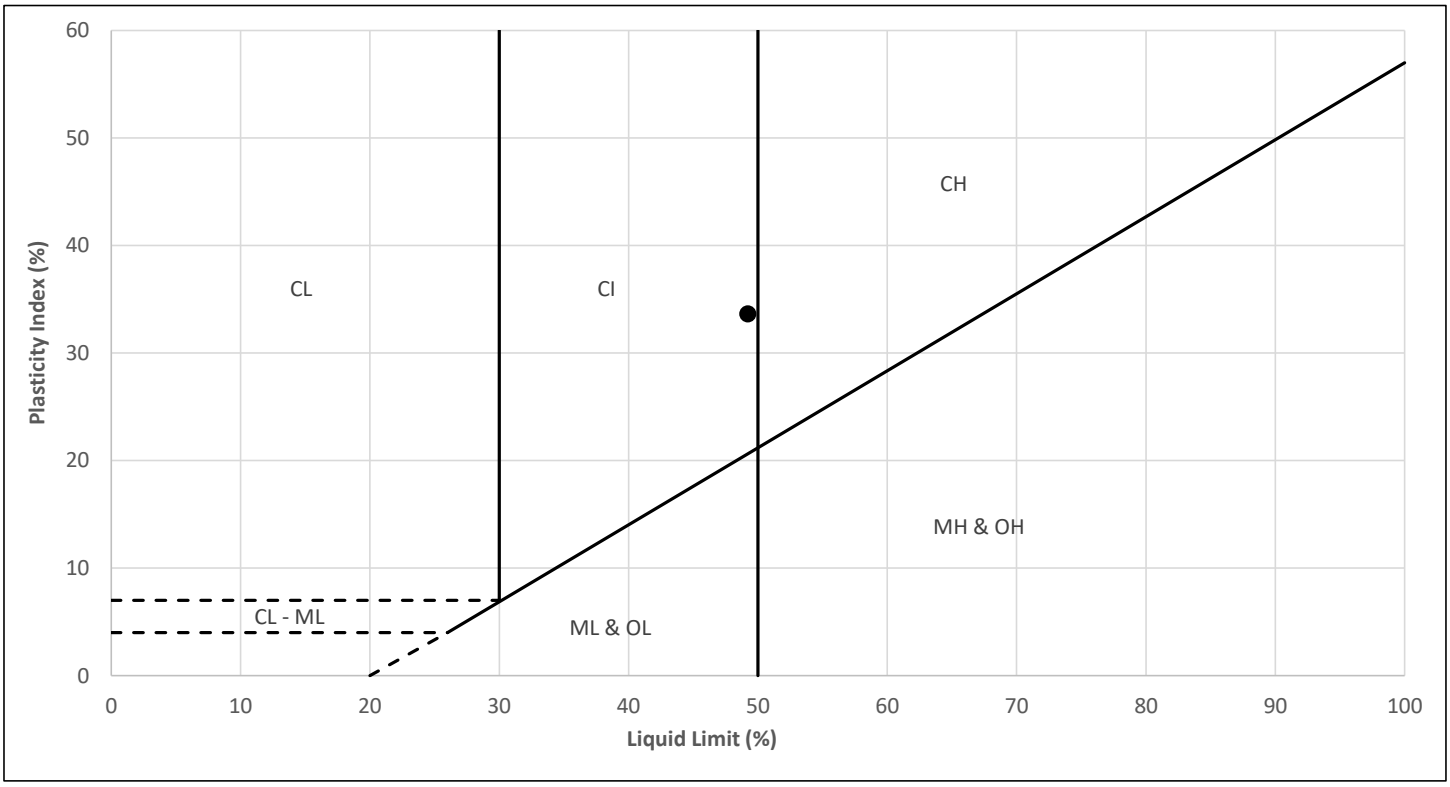
Project:	Snake Lake Reservoir Expansion	**Sample #:**	547AU3
Project No.:	1560-193-00	**Source:**	22BH547
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 547AU3	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.2
Plastic Limit (PL)	15.5
Plasticity Index (PI)	33.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

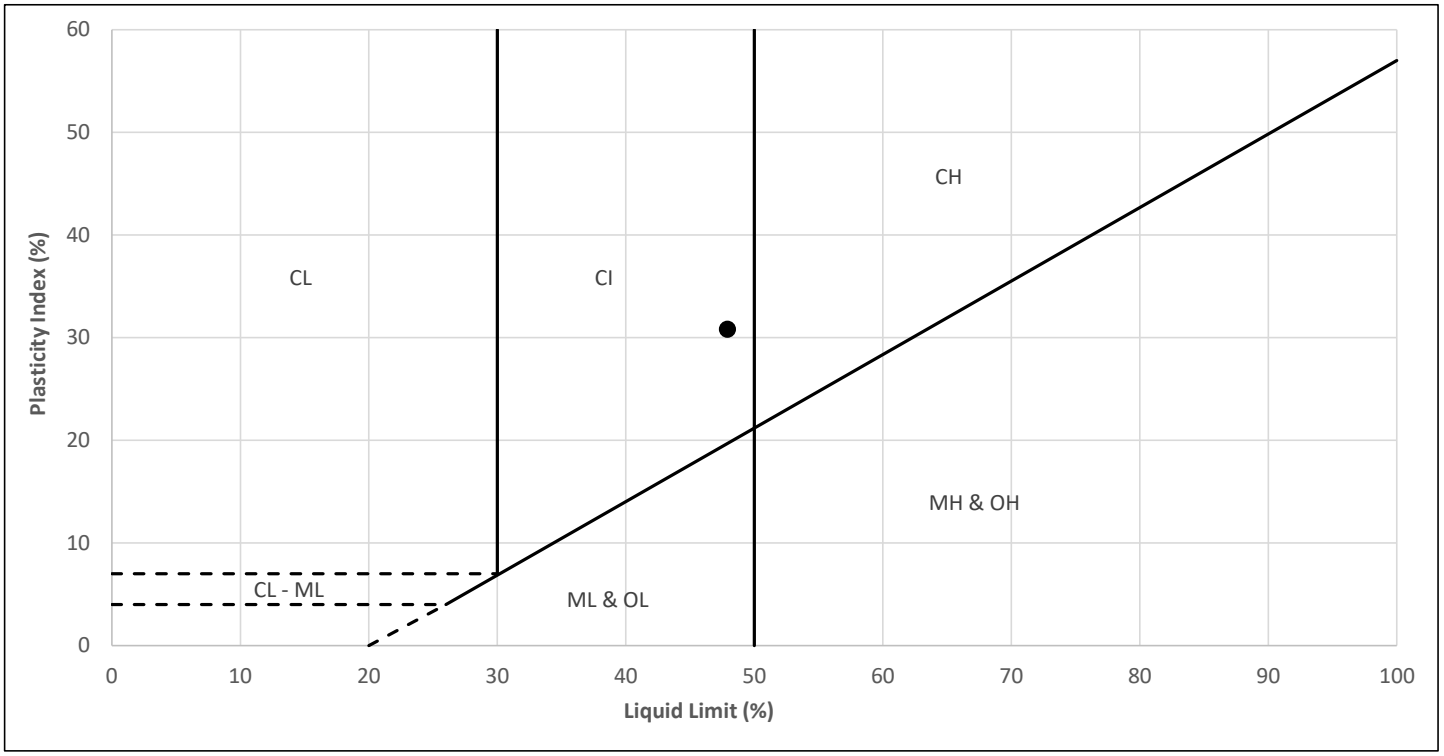
Project:	Snake Lake Reservoir Expansion	**Sample #:**	547AU4
Project No.:	1560-193-00	**Source:**	22BH547
Owner:	EID	**Sample Depth:**	5.0m
File No.:	AL - 547AU4	**Test Date:**	6-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	47.9
Plastic Limit (PL)	17.1
Plasticity Index (PI)	30.8

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

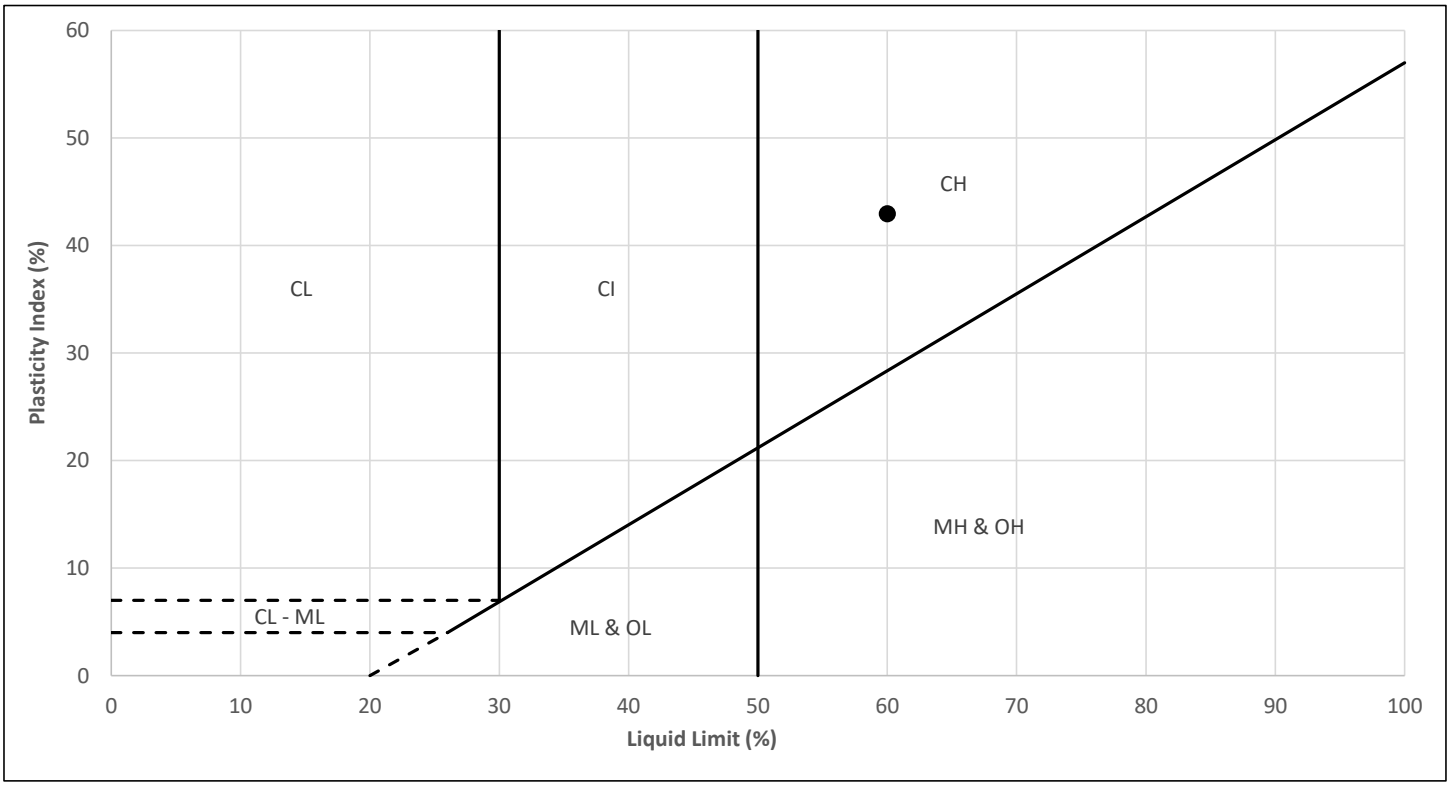
Project:	Snake Lake Reservoir Expansion	**Sample #:**	548AU1
Project No.:	1560-193-00	**Source:**	22BH548
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 548AU1	**Test Date:**	4-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	60.0
Plastic Limit (PL)	17.0
Plasticity Index (PI)	43.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

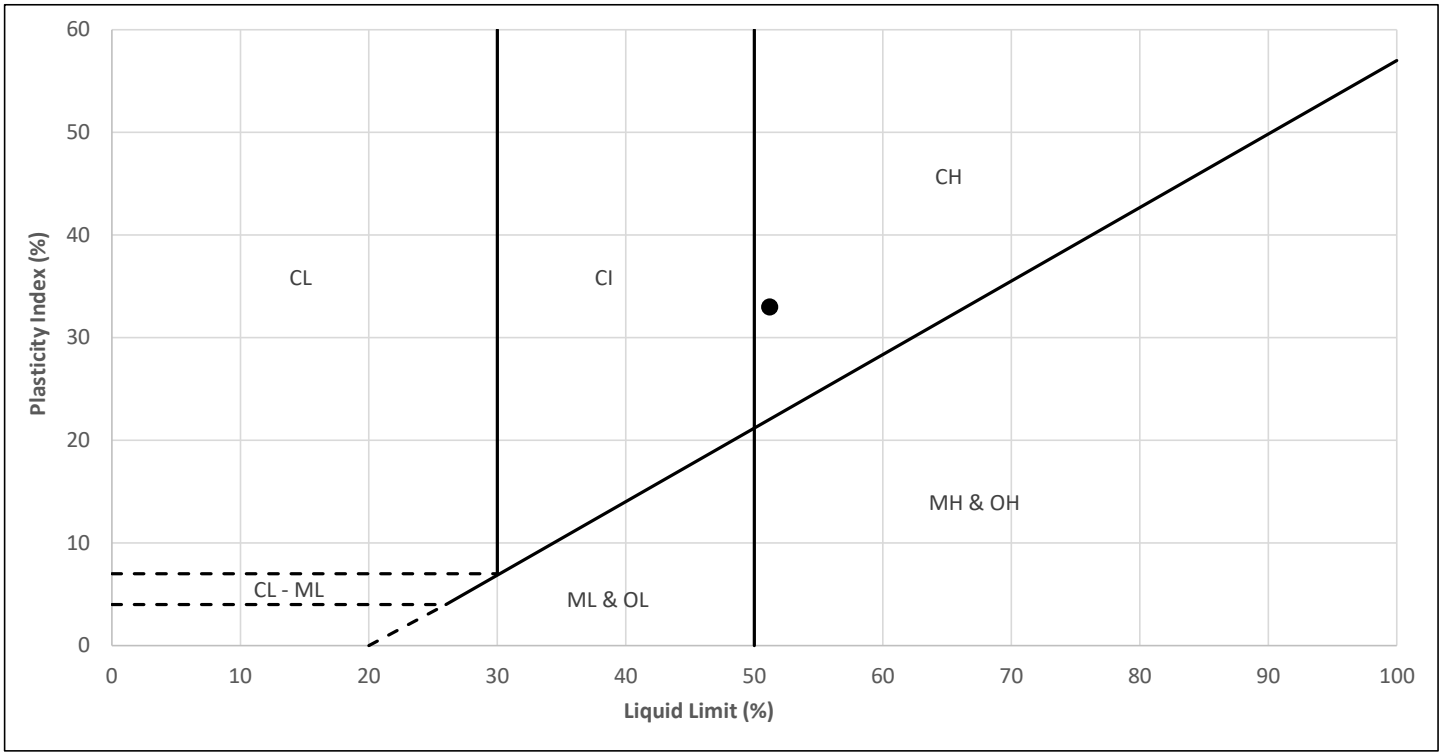
Project:	Snake Lake Reservoir Expansion	**Sample #:**	548AU2
Project No.:	1560-193-00	**Source:**	22BH548
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 548AU2	**Test Date:**	24-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.2
Plastic Limit (PL)	18.2
Plasticity Index (PI)	33.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

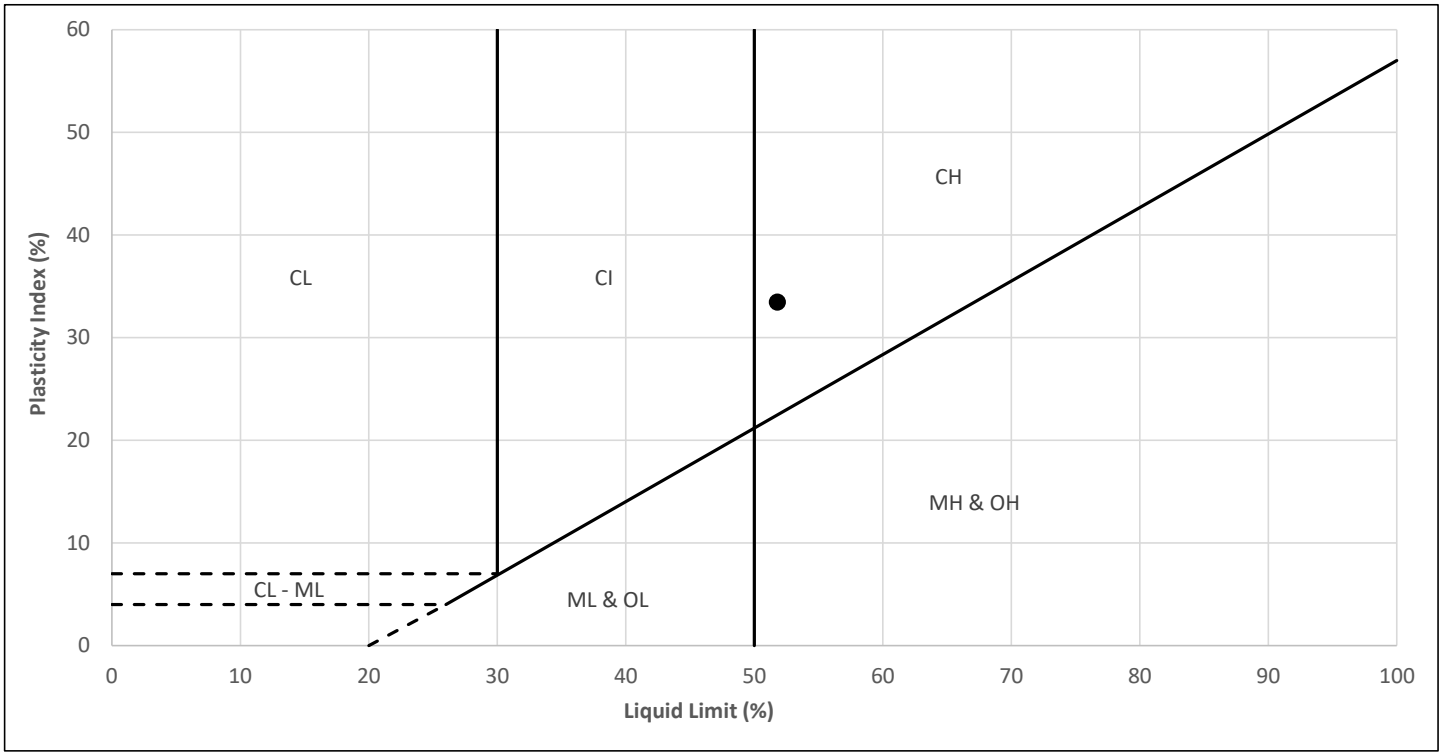
Project:	Snake Lake Reservoir Expansion	**Sample #:**	548AU3
Project No.:	1560-193-00	**Source:**	22BH548
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 548AU3	**Test Date:**	30-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.8
Plastic Limit (PL)	18.3
Plasticity Index (PI)	33.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

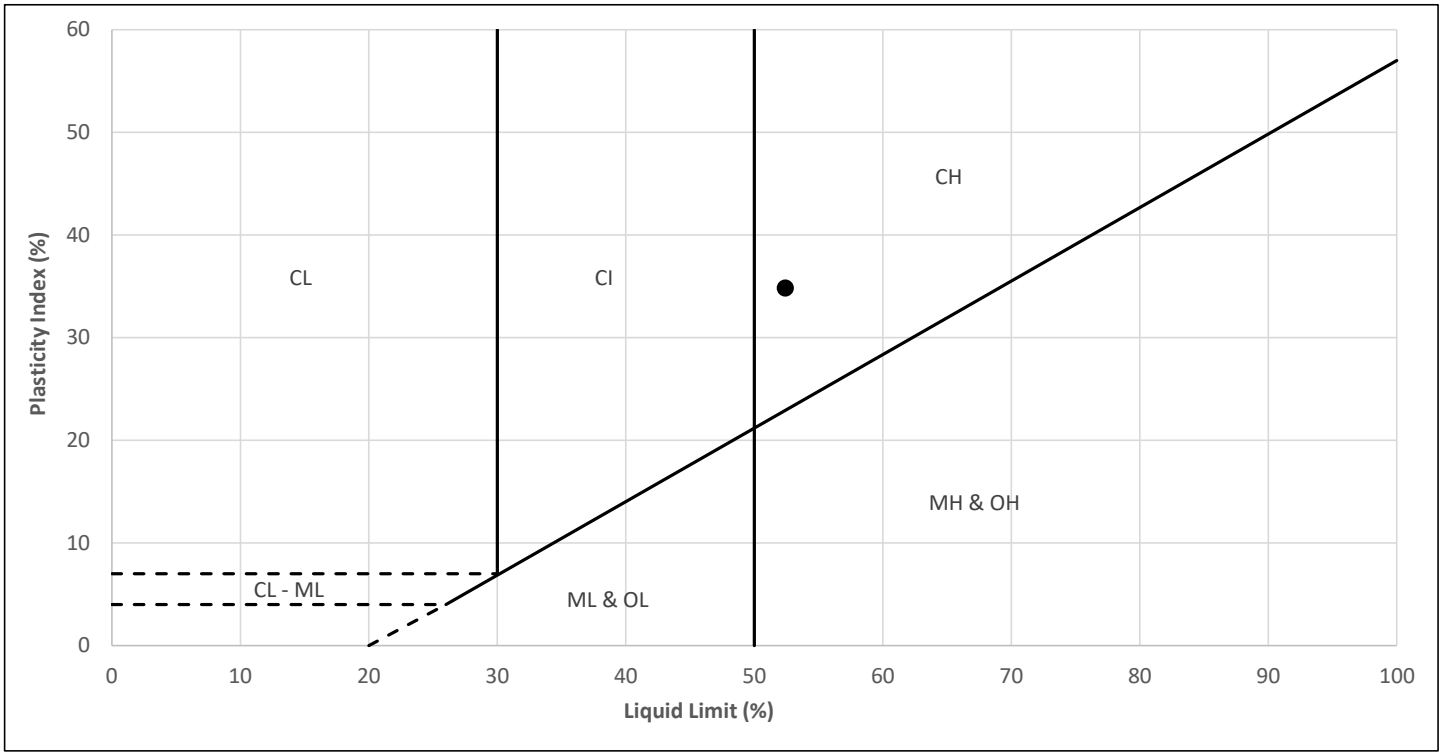
Project:	Snake Lake Reservoir Expansion	**Sample #:**	549AU2
Project No.:	1560-193-00	**Source:**	22BH549
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 549AU2	**Test Date:**	6-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.4
Plastic Limit (PL)	17.6
Plasticity Index (PI)	34.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

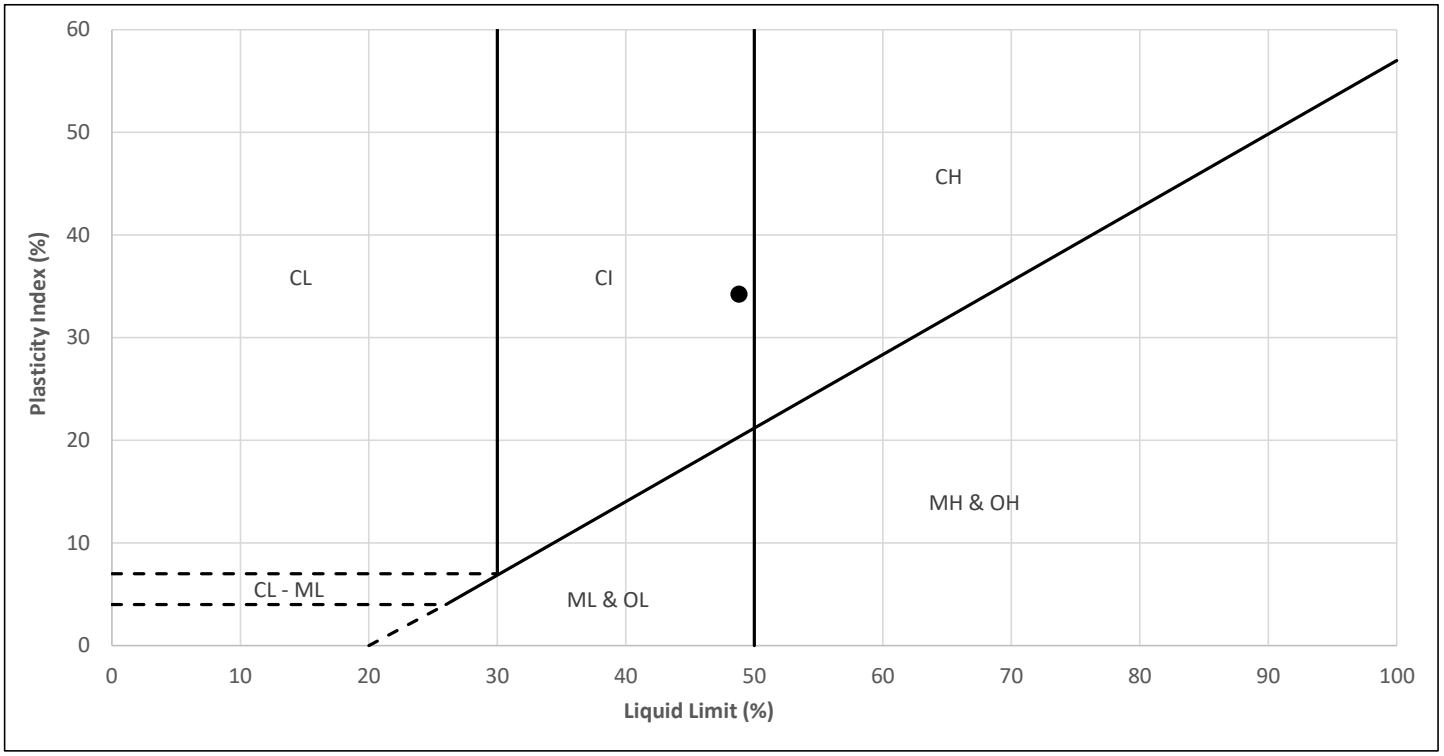
Project:	Snake Lake Reservoir Expansion	**Sample #:**	549AU3
Project No.:	1560-193-00	**Source:**	22BH549
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 549AU3	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	48.8
Plastic Limit (PL)	14.6
Plasticity Index (PI)	34.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

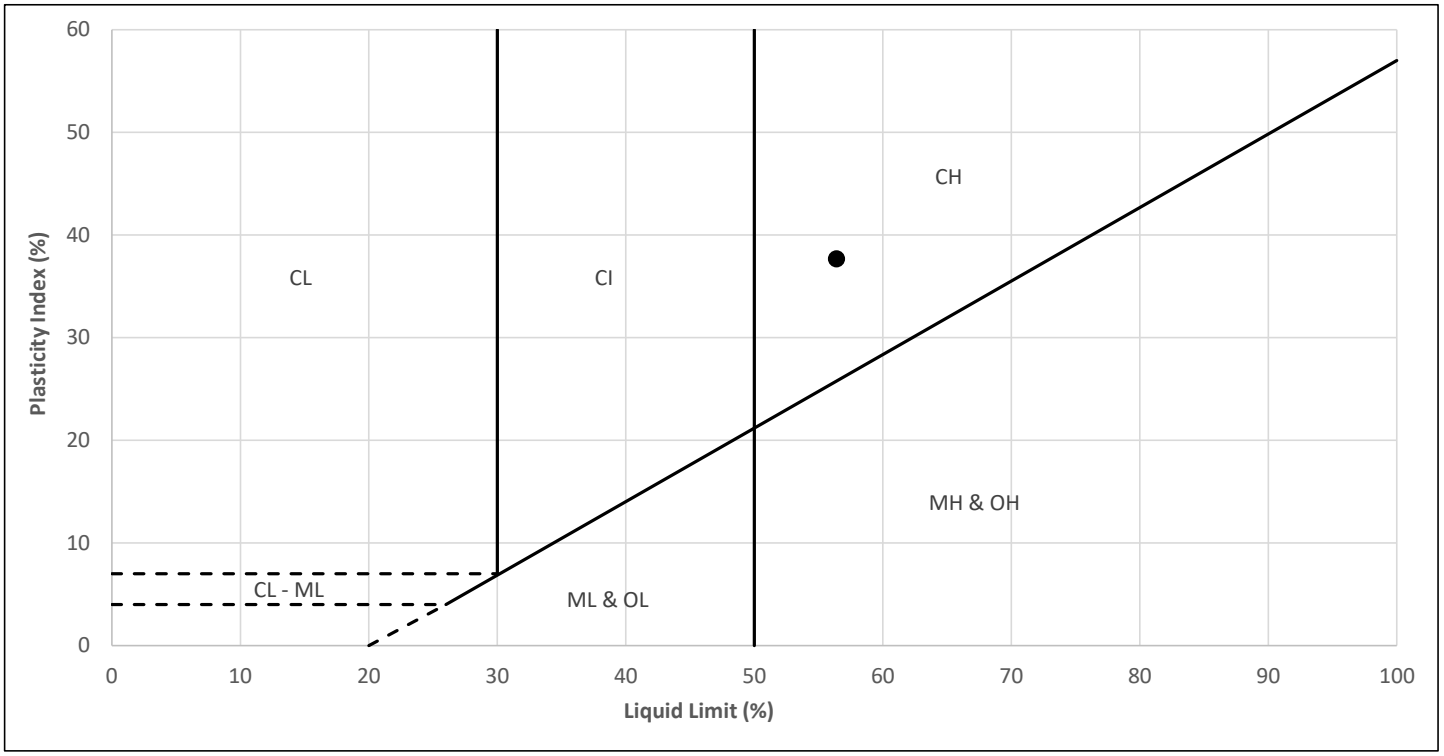
Project:	Snake Lake Reservoir Expansion	**Sample #:**	549AU4
Project No.:	1560-193-00	**Source:**	22BH549
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 549AU4	**Test Date:**	30-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	56.4
Plastic Limit (PL)	18.7
Plasticity Index (PI)	37.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

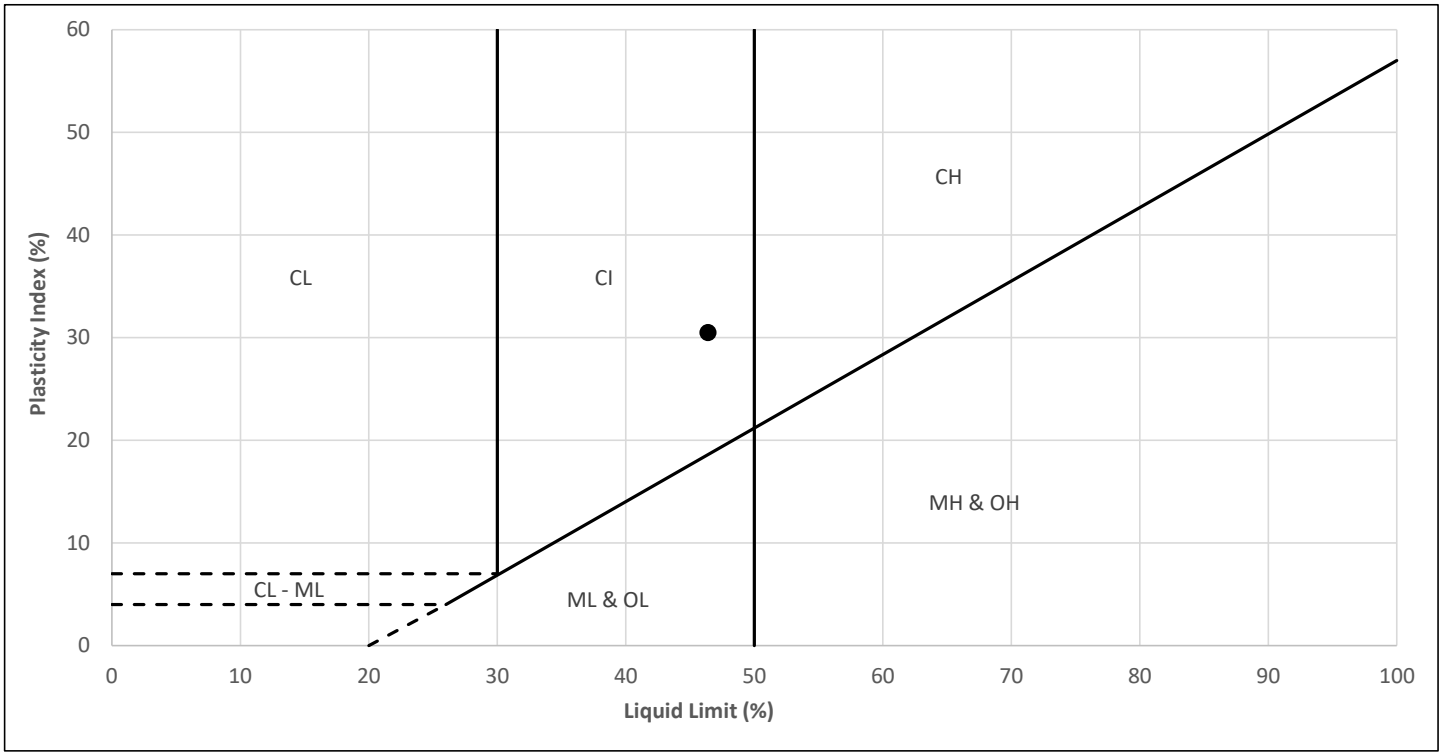
Project:	Snake Lake Reservoir Expansion	**Sample #:**	550AU1
Project No.:	1560-193-00	**Source:**	22BH550
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 550AU1	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	46.4
Plastic Limit (PL)	15.9
Plasticity Index (PI)	30.5

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

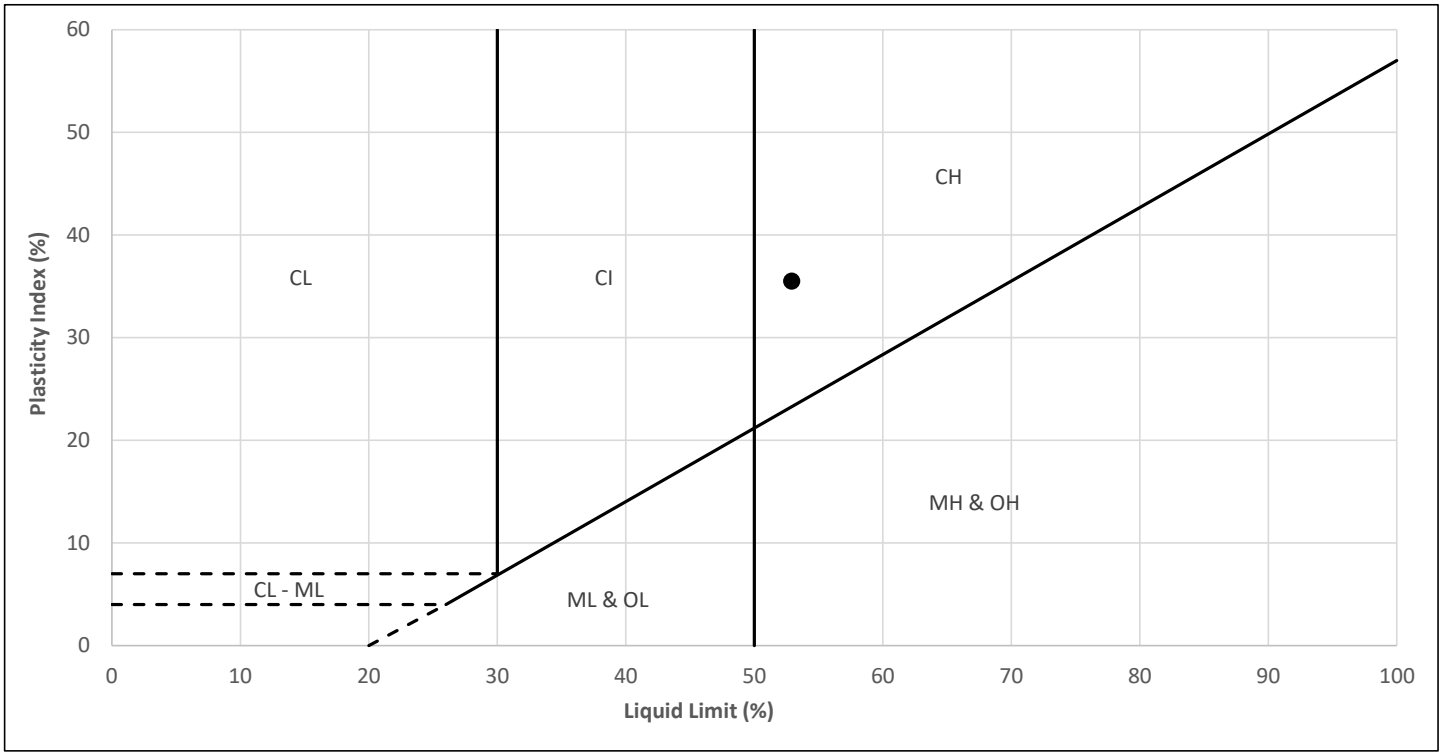
Project:	Snake Lake Reservoir Expansion	**Sample #:**	550AU3
Project No.:	1560-193-00	**Source:**	22BH550
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 550AU3	**Test Date:**	1-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.9
Plastic Limit (PL)	17.4
Plasticity Index (PI)	35.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

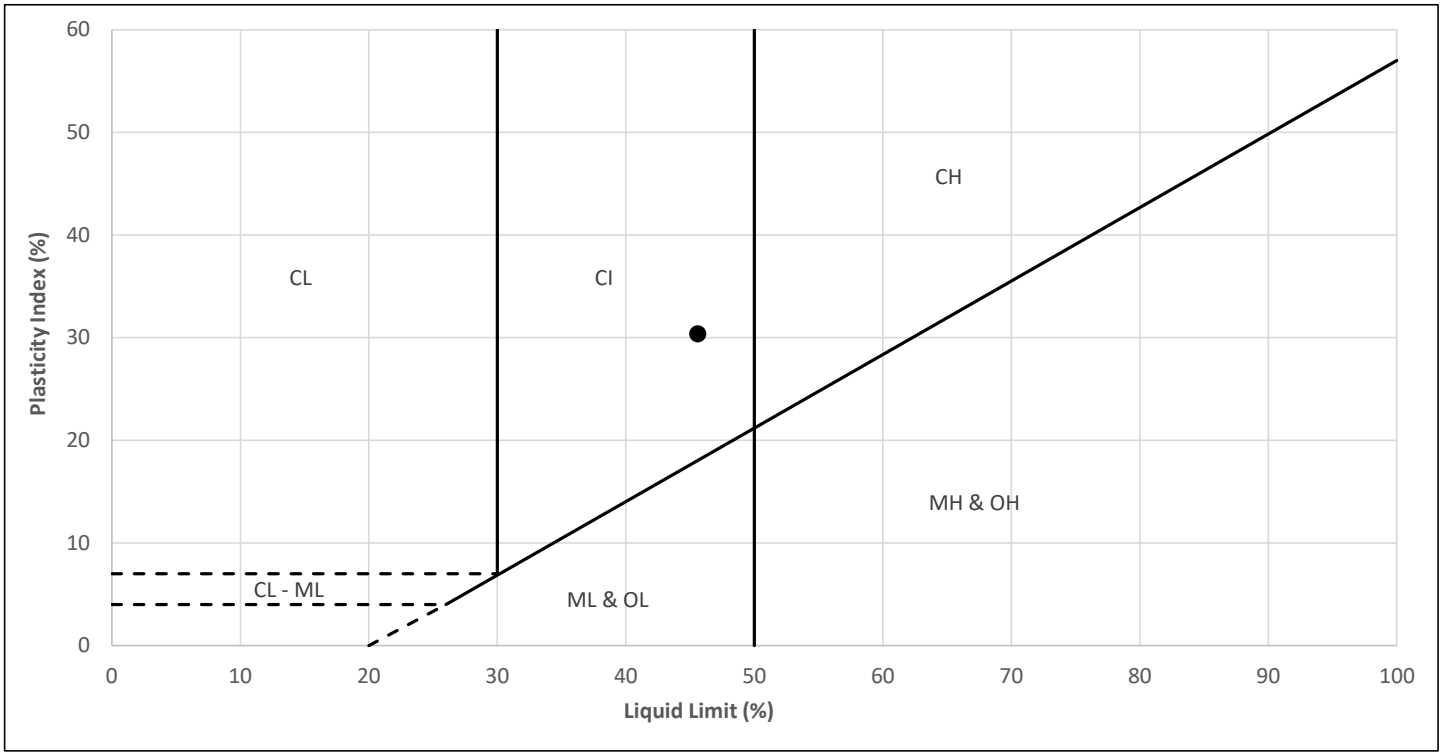
Project:	Snake Lake Reservoir Expansion	**Sample #:**	551AU2
Project No.:	1560-193-00	**Source:**	22BH551
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 551AU2	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	45.6
Plastic Limit (PL)	15.2
Plasticity Index (PI)	30.4

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

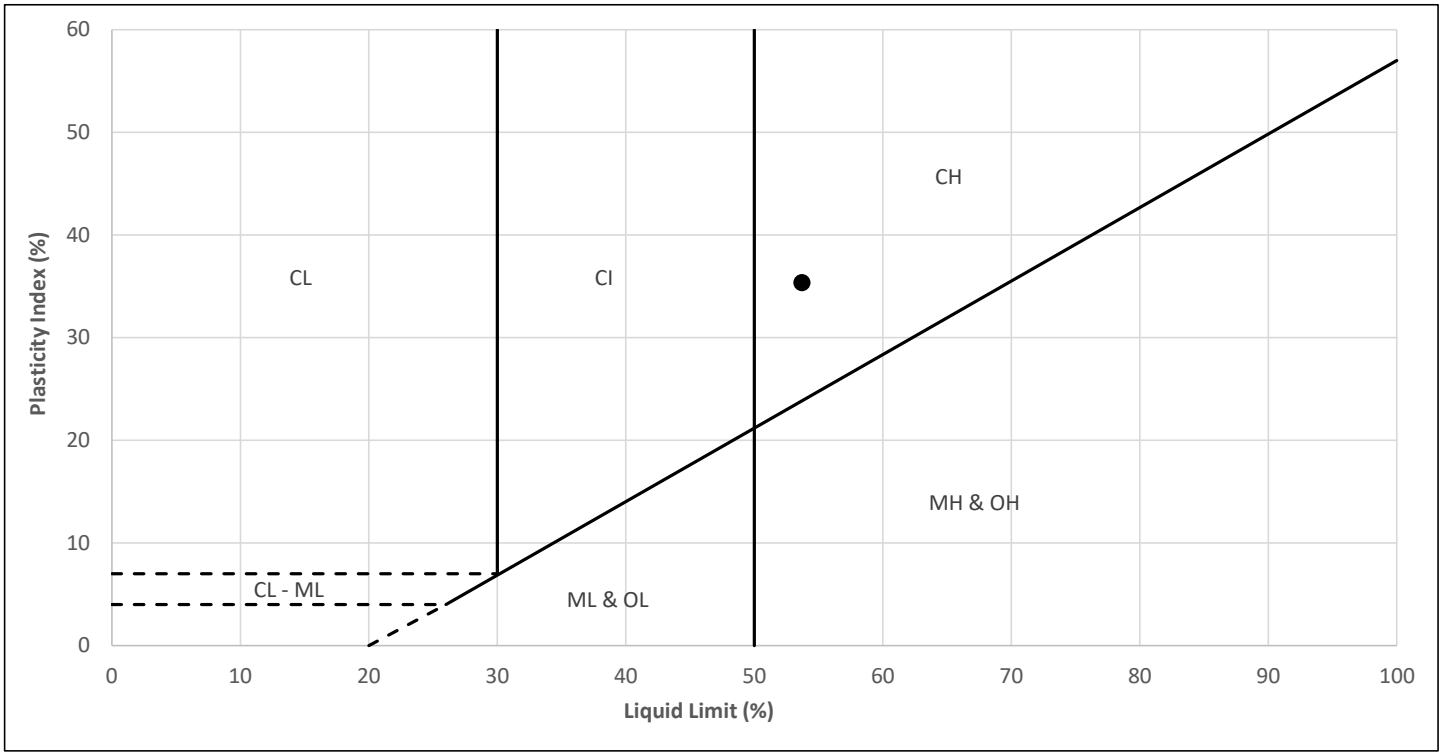
Project:	Snake Lake Reservoir Expansion	**Sample #:**	551AU3
Project No.:	1560-193-00	**Source:**	22BH513
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 551AU3	**Test Date:**	1-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.7
Plastic Limit (PL)	18.3
Plasticity Index (PI)	35.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

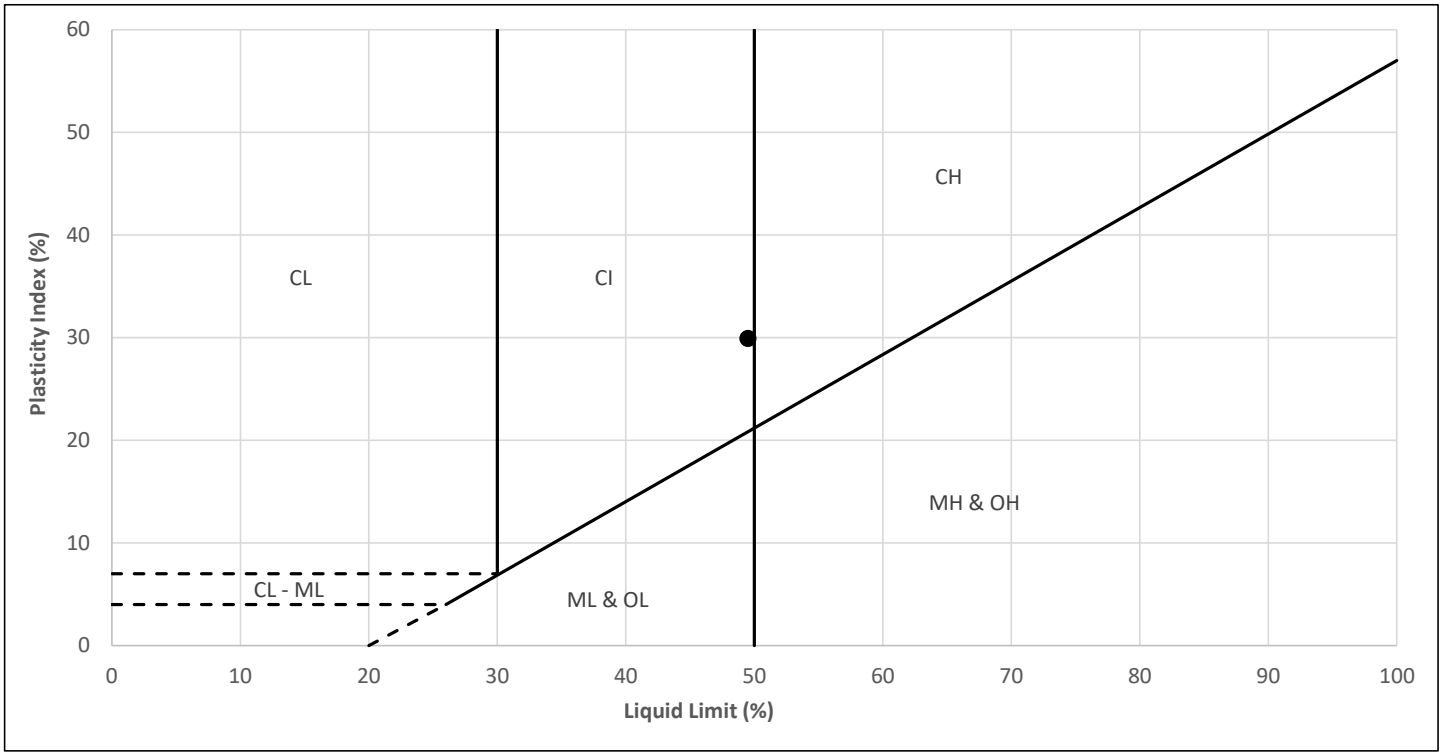
Project:	Snake Lake Reservoir Expansion	**Sample #:**	551AU4
Project No.:	1560-193-00	**Source:**	22BH551
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 551AU4	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.5
Plastic Limit (PL)	19.6
Plasticity Index (PI)	29.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

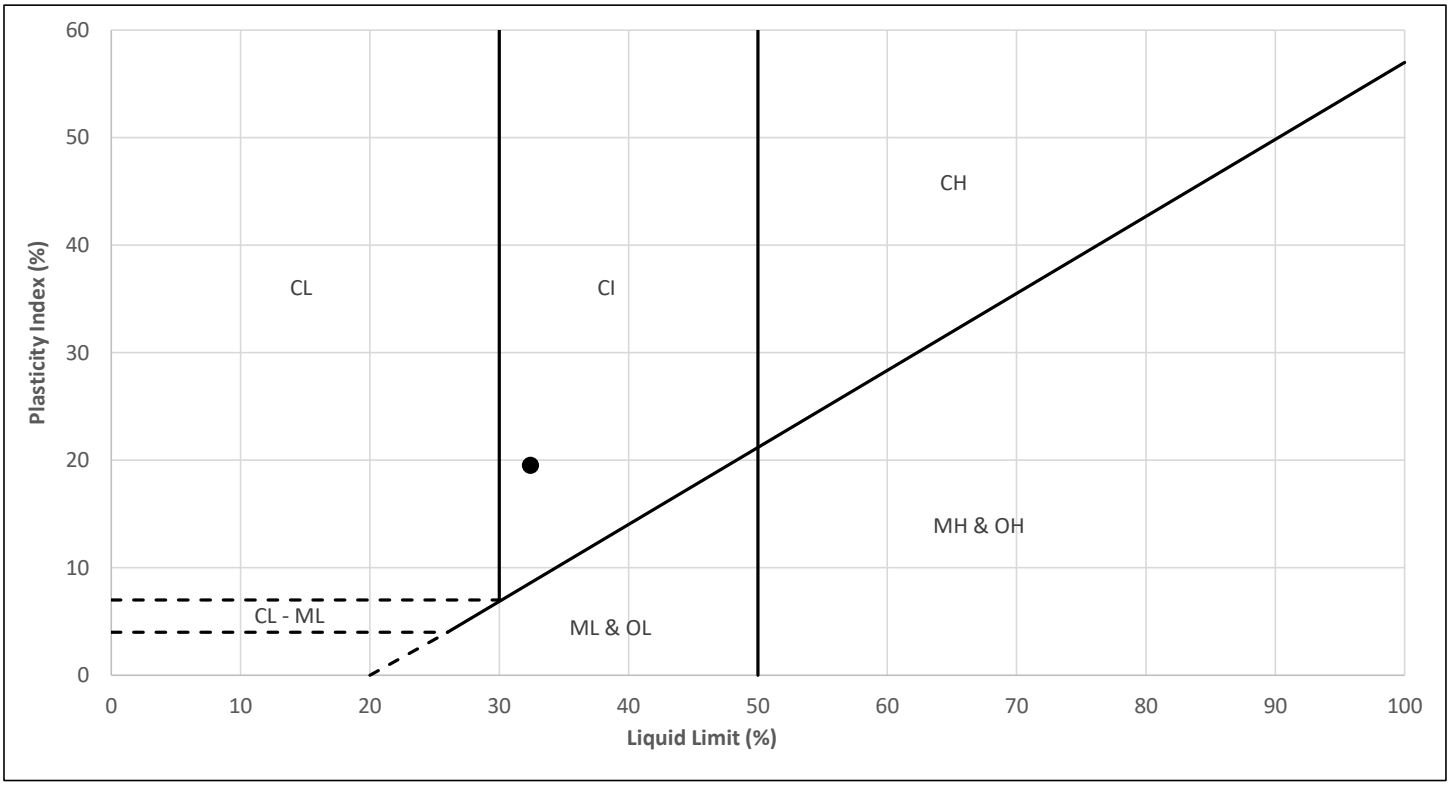
Project:	Snake Lake Reservoir Expansion	**Sample #:**	552AU1
Project No.:	1560-193-00	**Source:**	22BH552
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 552AU1	**Test Date:**	30-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	32.4
Plastic Limit (PL)	12.9
Plasticity Index (PI)	19.5

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

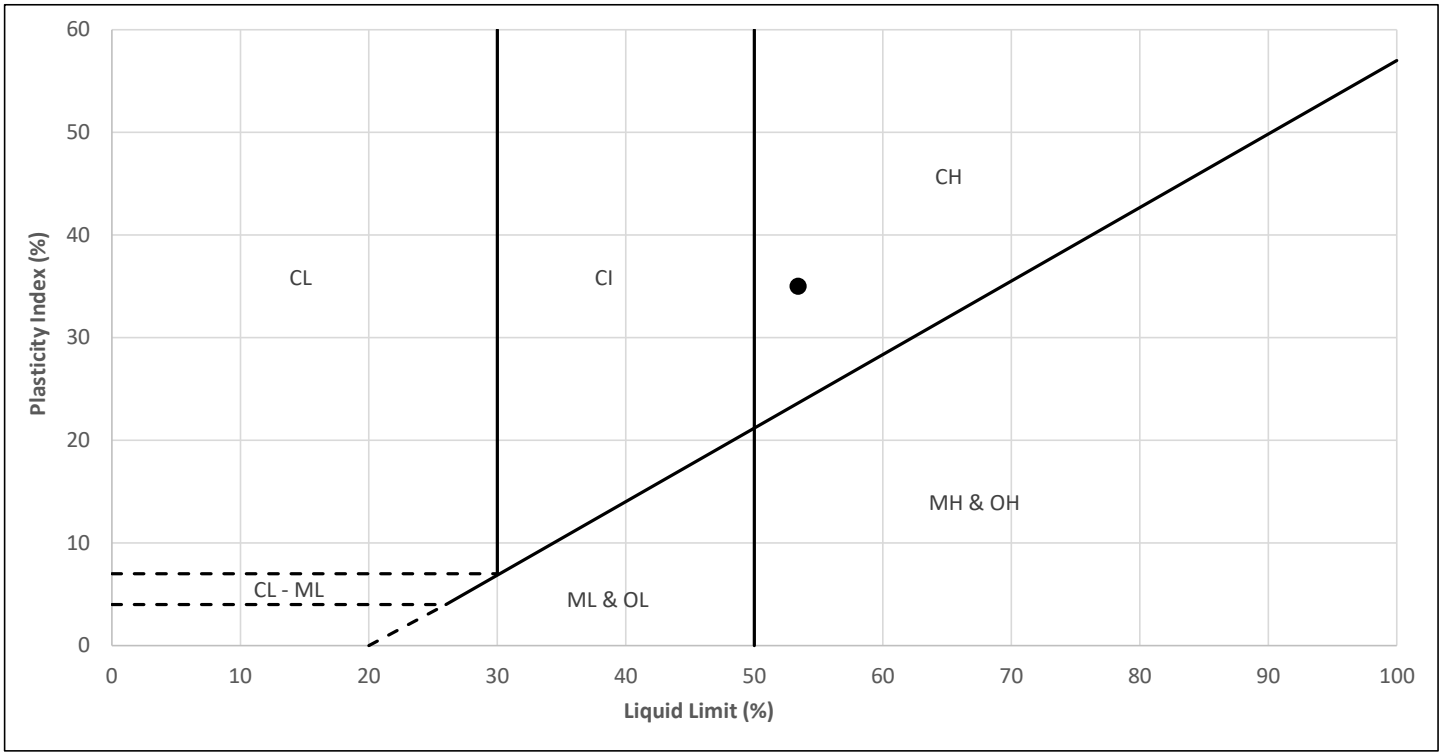
Project:	Snake Lake Reservoir Expansion	**Sample #:**	552AU3
Project No.:	1560-193-00	**Source:**	22BH552
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 552AU3	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.4
Plastic Limit (PL)	18.4
Plasticity Index (PI)	35.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

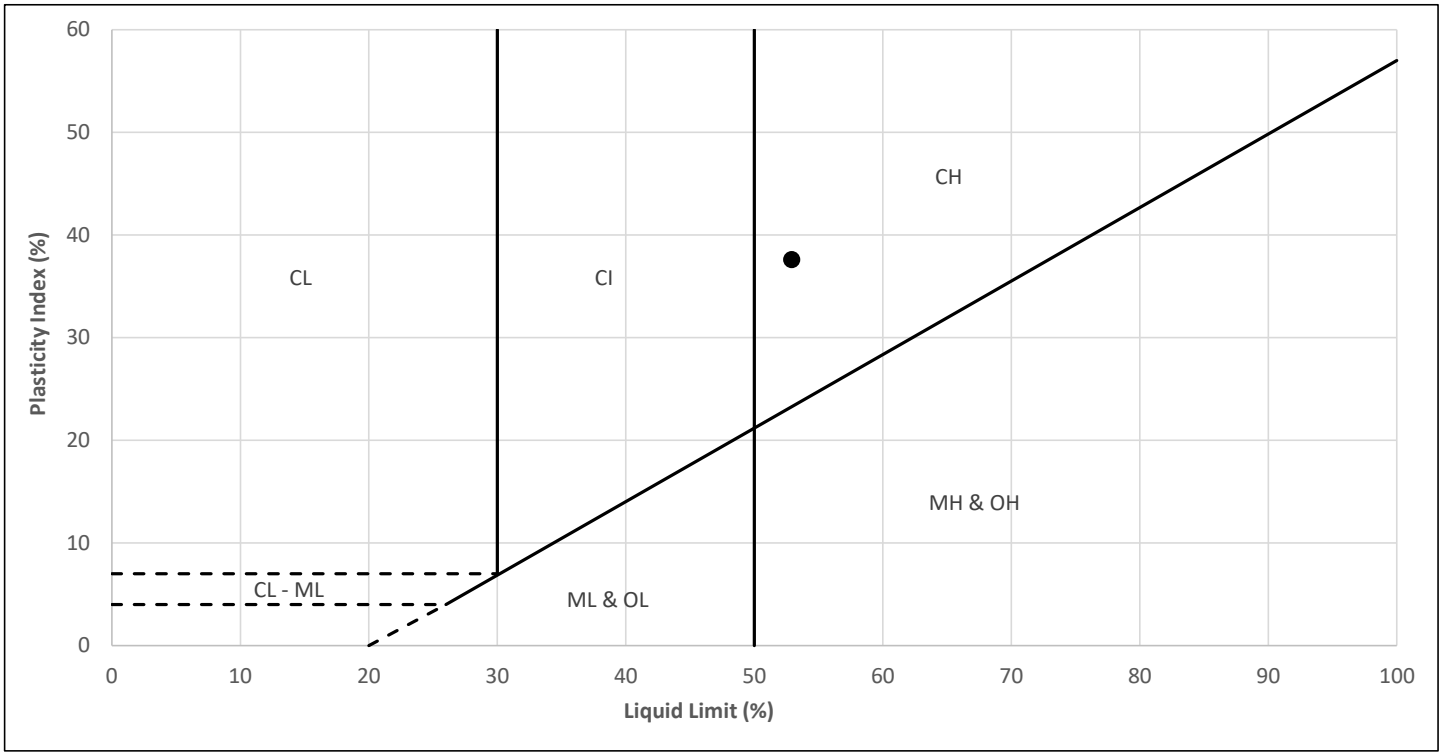
Project:	Snake Lake Reservoir Expansion	**Sample #:**	553AU2
Project No.:	1560-193-00	**Source:**	22BH553
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 553AU2	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.9
Plastic Limit (PL)	15.3
Plasticity Index (PI)	37.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

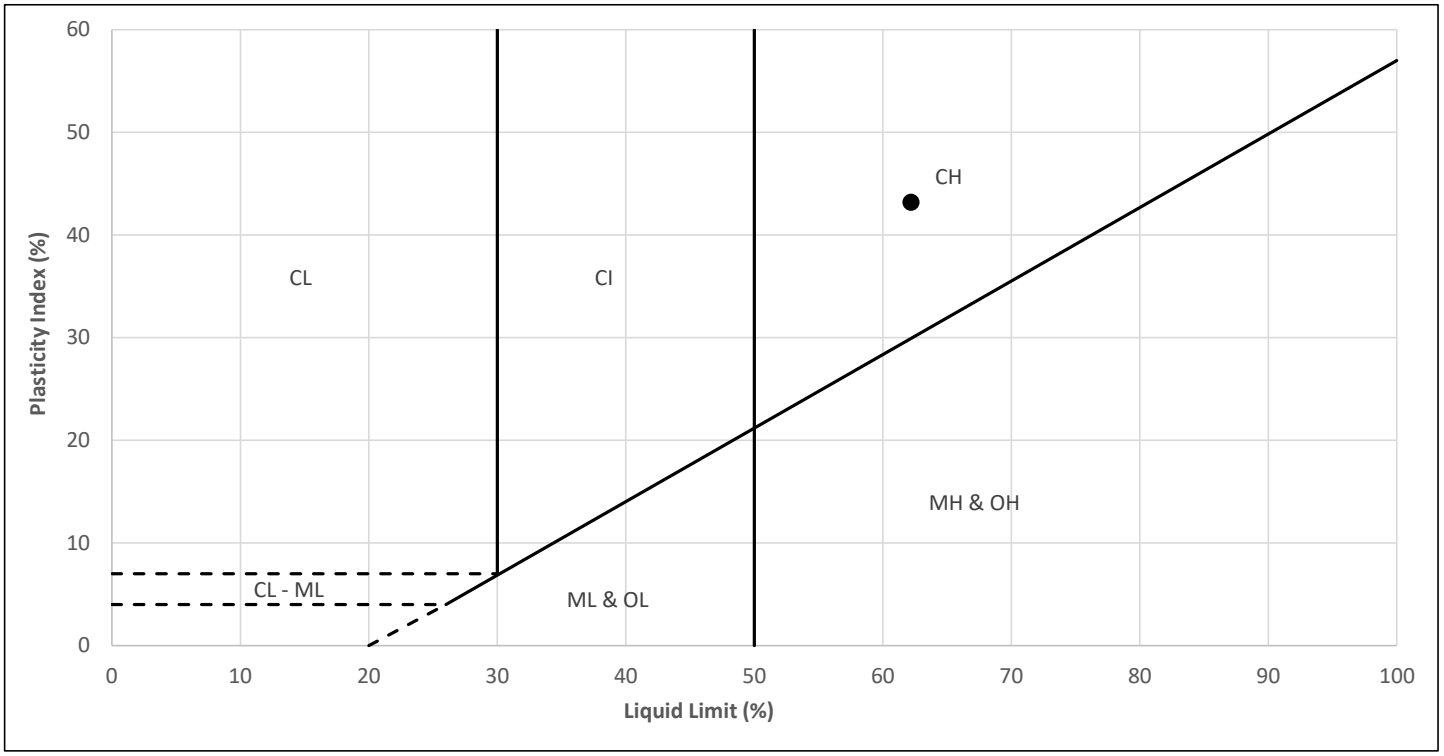
Project:	Snake Lake Reservoir Expansion	**Sample #:**	553AU4
Project No.:	1560-193-00	**Source:**	22BH553
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 553AU4	**Test Date:**	19-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	62.2
Plastic Limit (PL)	19.0
Plasticity Index (PI)	43.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

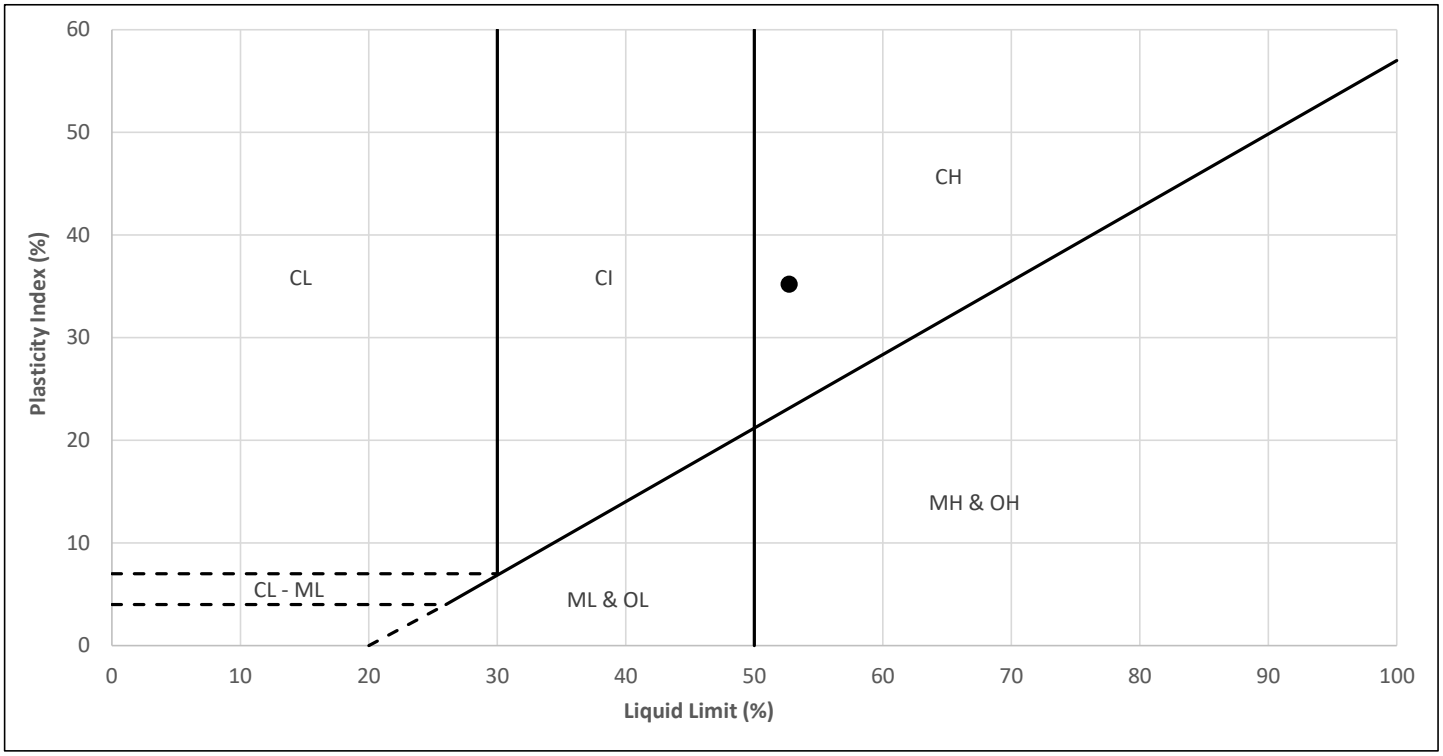
Project:	Snake Lake Reservoir Expansion	**Sample #:**	554AU1
Project No.:	1560-193-00	**Source:**	22BH554
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 554AU1	**Test Date:**	6-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.7
Plastic Limit (PL)	17.5
Plasticity Index (PI)	35.2

Soil Plasticity	High
Soil Classification	CH



Comments:

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Lethbridge, Alberta T1H 5J3
Tel: (403)892-6036

ATTERBERG LIMITS

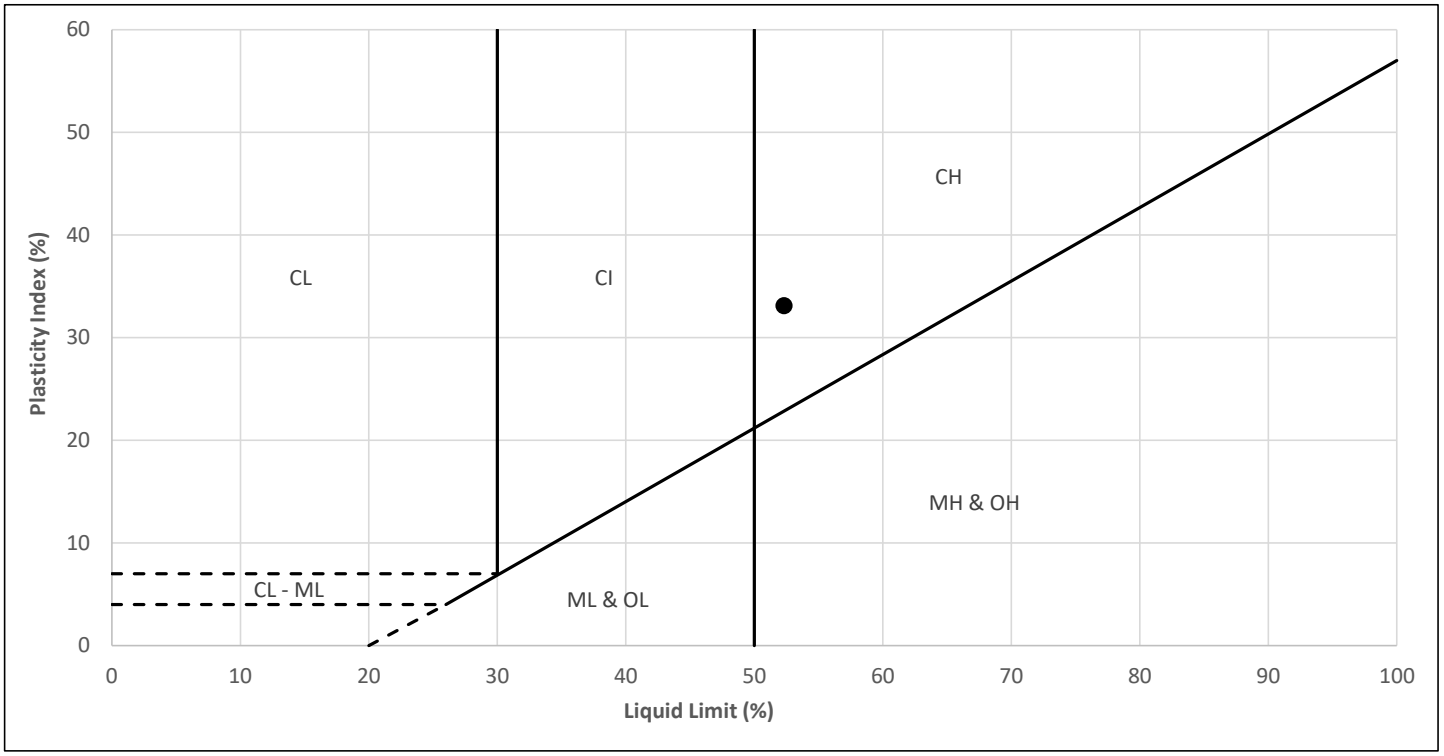
Project:	Snake Lake Reservoir Expansion	**Sample #:**	554AU3
Project No.:	1560-193-00	**Source:**	22BH554
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 554AU3	**Test Date:**	6-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.3
Plastic Limit (PL)	19.2
Plasticity Index (PI)	33.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

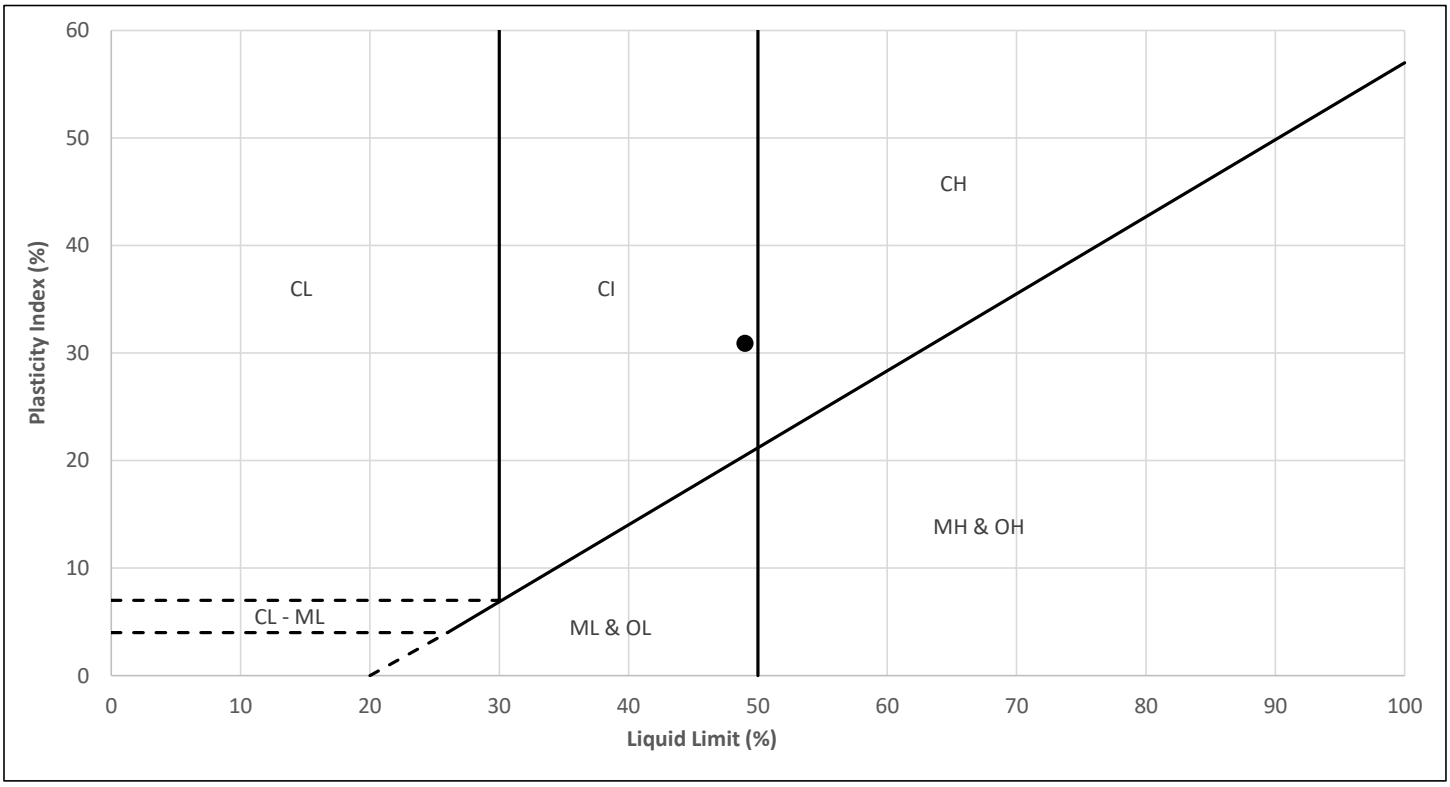
Project:	Snake Lake Reservoir Expansion	**Sample #:**	555AU2
Project No.:	1560-193-00	**Source:**	22BH555
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 555AU2	**Test Date:**	11-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.0
Plastic Limit (PL)	18.1
Plasticity Index (PI)	30.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

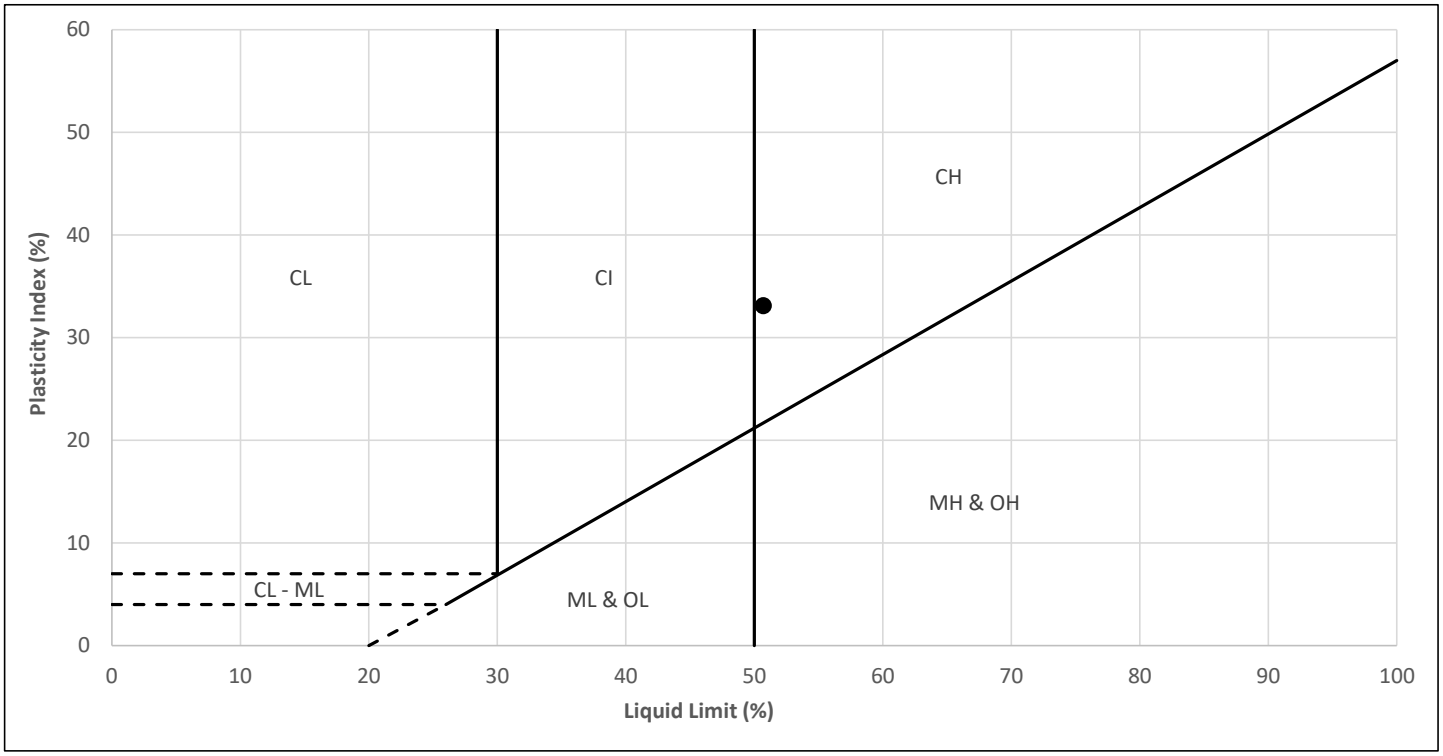
Project:	Snake Lake Reservoir Expansion	**Sample #:**	555AU3
Project No.:	1560-193-00	**Source:**	22BH555
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 555AU3	**Test Date:**	24-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.7
Plastic Limit (PL)	17.6
Plasticity Index (PI)	33.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

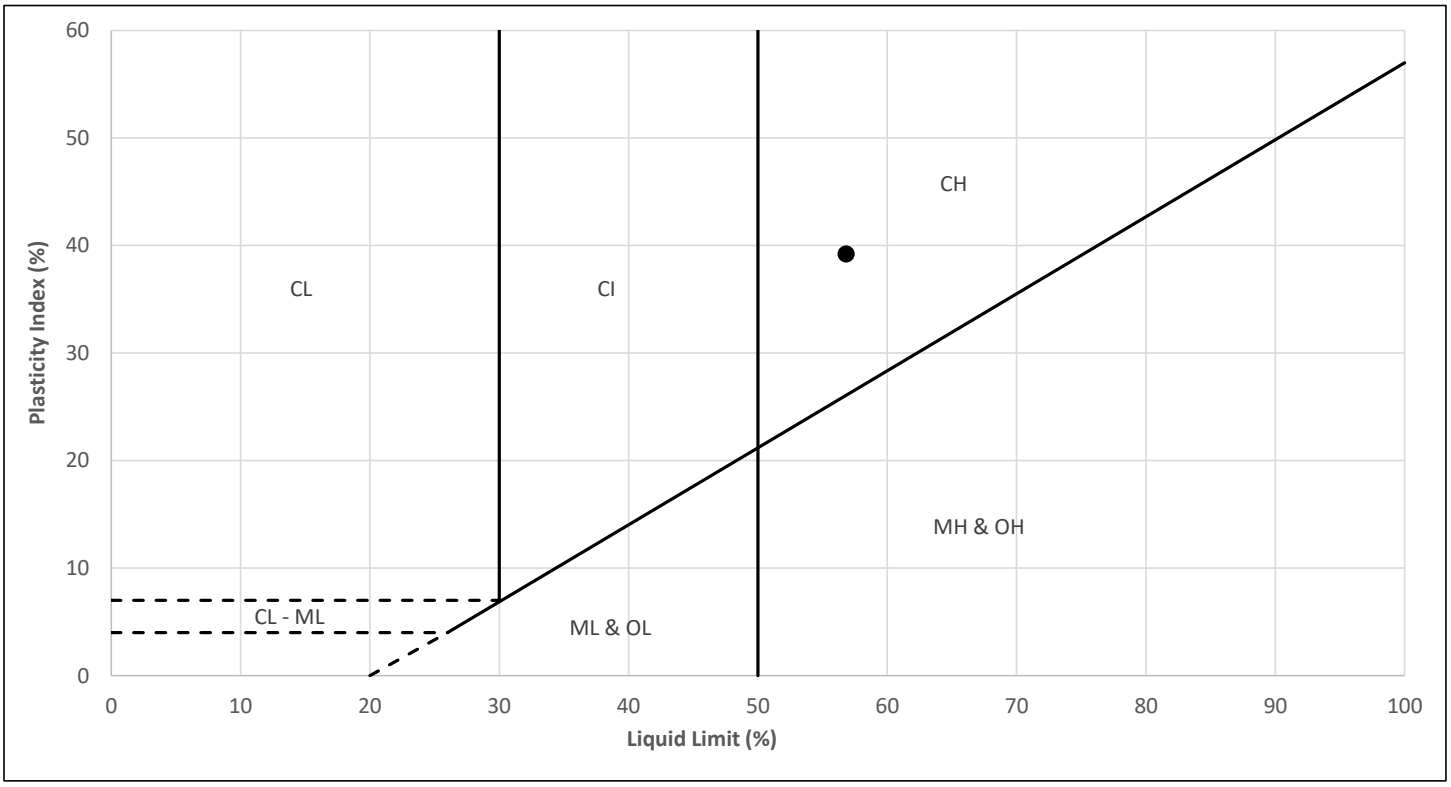
Project:	Snake Lake Reservoir Expansion	**Sample #:**	555AU4
Project No.:	1560-193-00	**Source:**	22BH555
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 555AU4	**Test Date:**	11-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	56.8
Plastic Limit (PL)	17.6
Plasticity Index (PI)	39.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

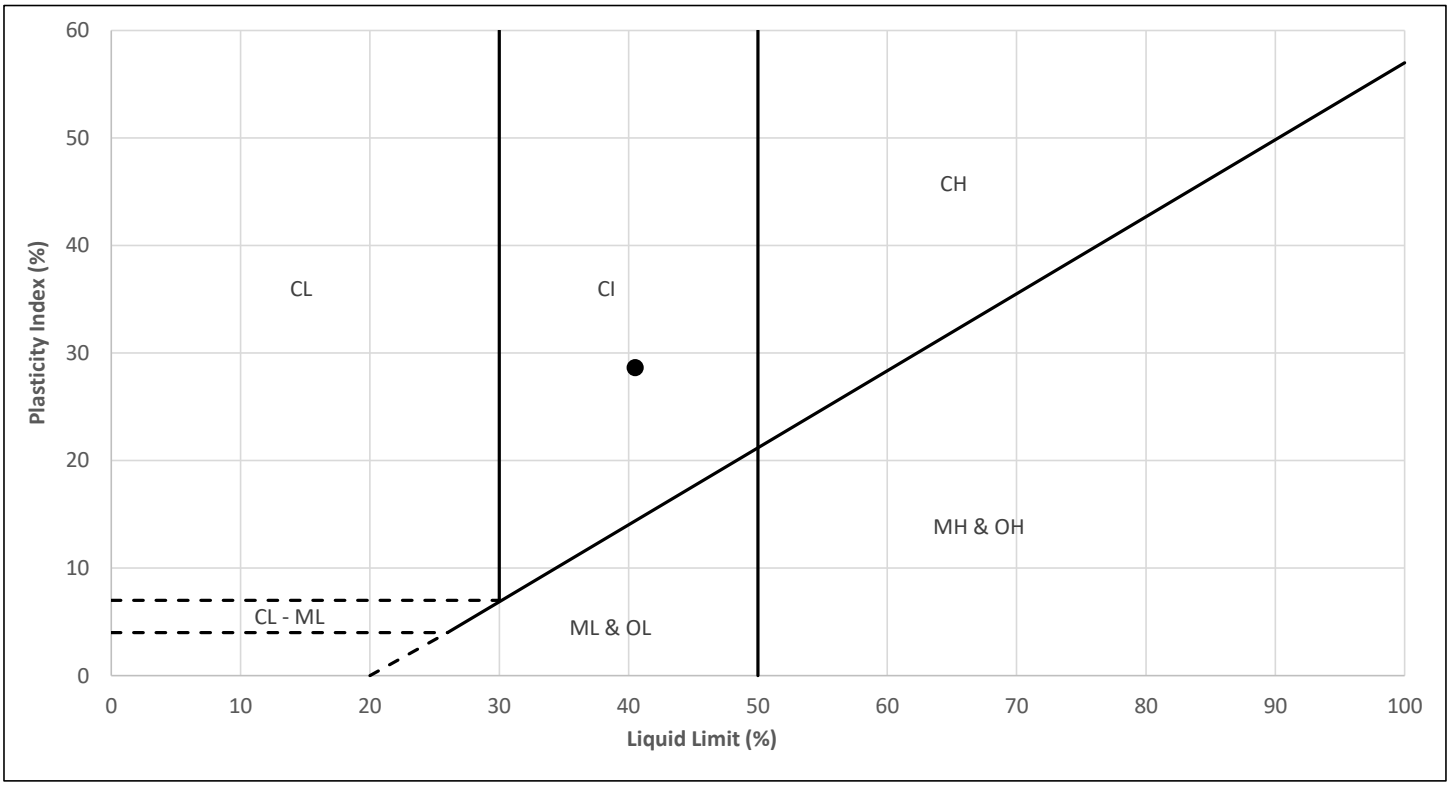
Project:	Snake Lake Reservoir Expansion	**Sample #:**	556AU1
Project No.:	1560-193-00	**Source:**	22BH556
Owner:	EID	**Sample Depth:**	1m
File No.:	AL - 556AU1	**Test Date:**	7-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	40.5
Plastic Limit (PL)	11.9
Plasticity Index (PI)	28.6

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

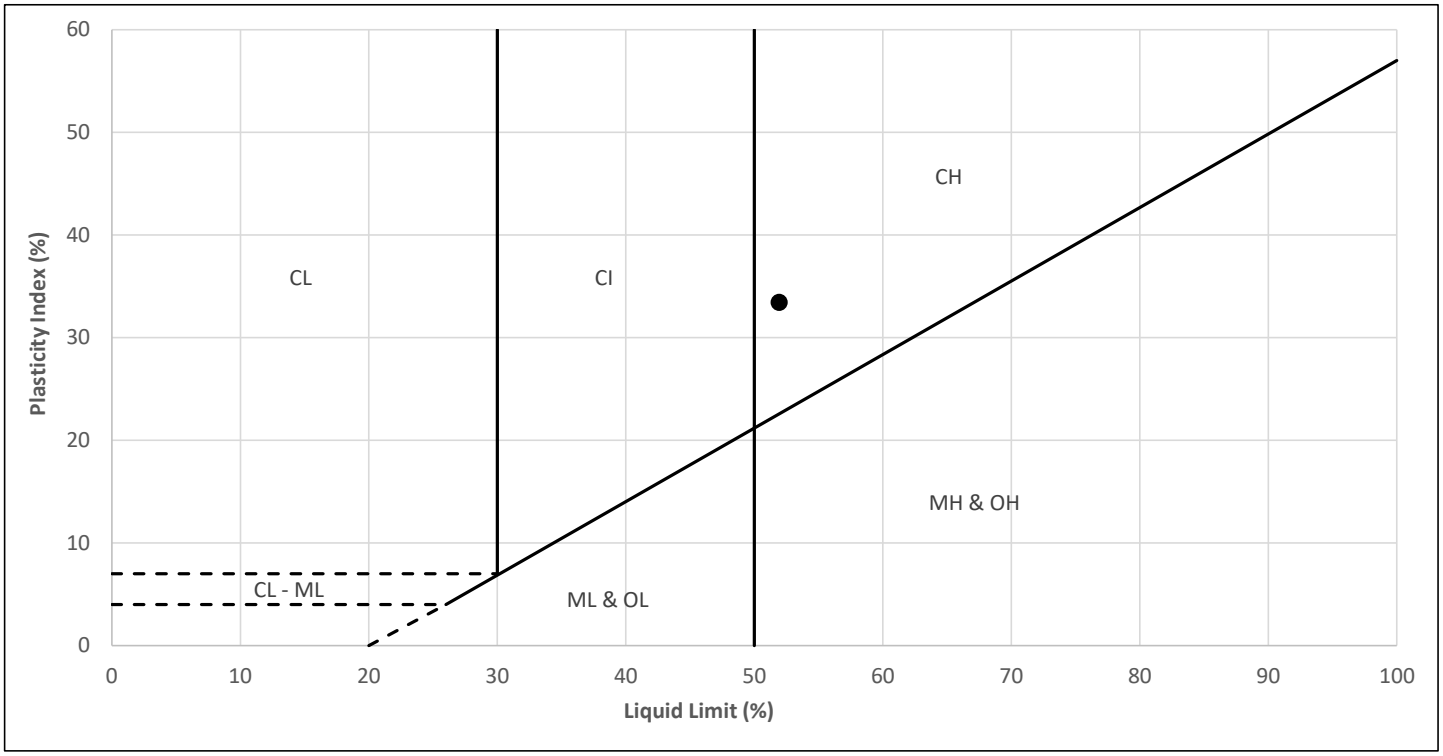
Project:	Snake Lake Reservoir Expansion	**Sample #:**	556AU3
Project No.:	1560-193-00	**Source:**	22BH556
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 556AU3	**Test Date:**	22-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.9
Plastic Limit (PL)	18.5
Plasticity Index (PI)	33.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

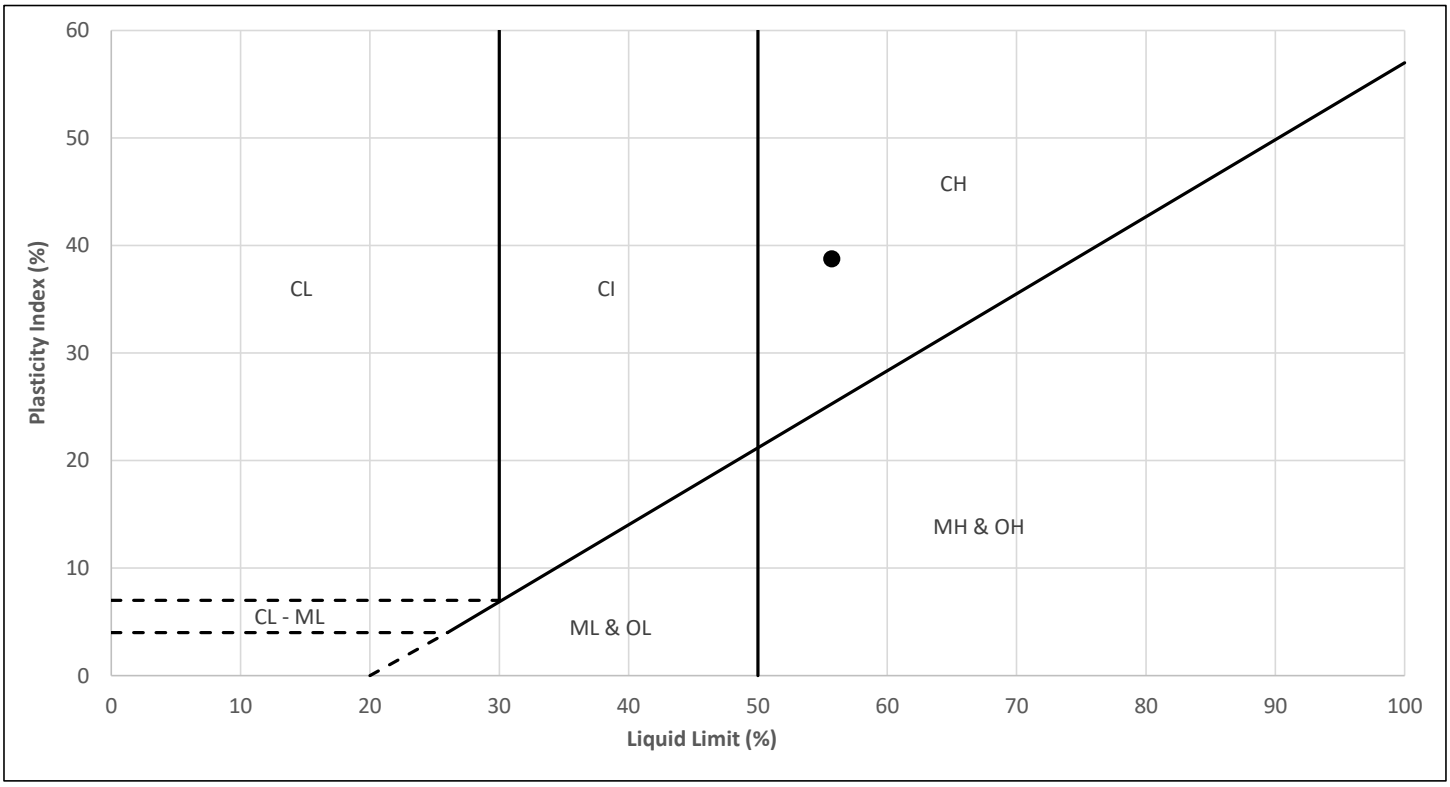
Project:	Snake Lake Reservoir Expansion	**Sample #:**	557AU2
Project No.:	1560-193-00	**Source:**	22BH557
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 557AU2	**Test Date:**	11-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.7
Plastic Limit (PL)	16.9
Plasticity Index (PI)	38.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

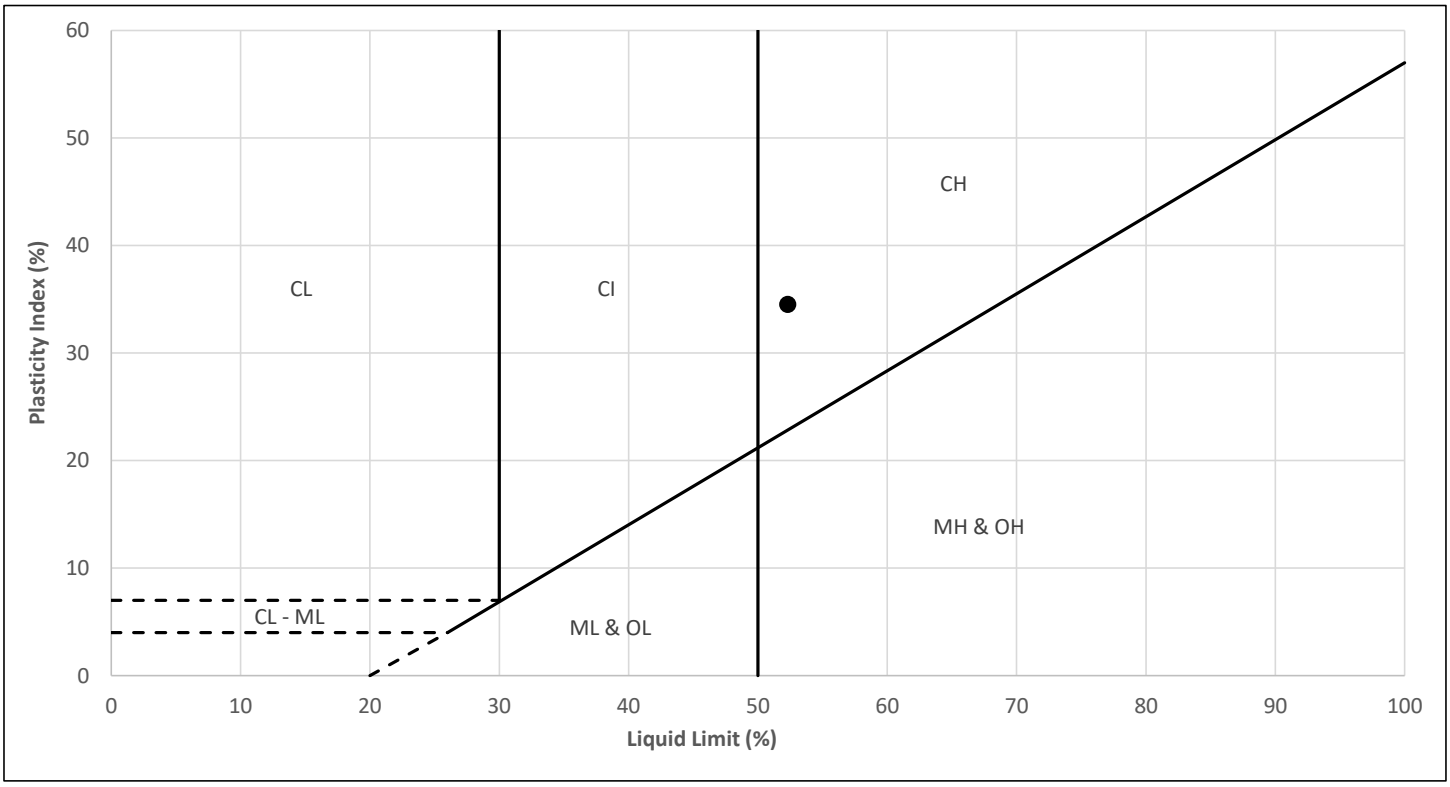
Project:	Snake Lake Reservoir Expansion	**Sample #:**	557AU3
Project No.:	1560-193-00	**Source:**	22BH557
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 557AU3	**Test Date:**	7-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.3
Plastic Limit (PL)	17.8
Plasticity Index (PI)	34.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

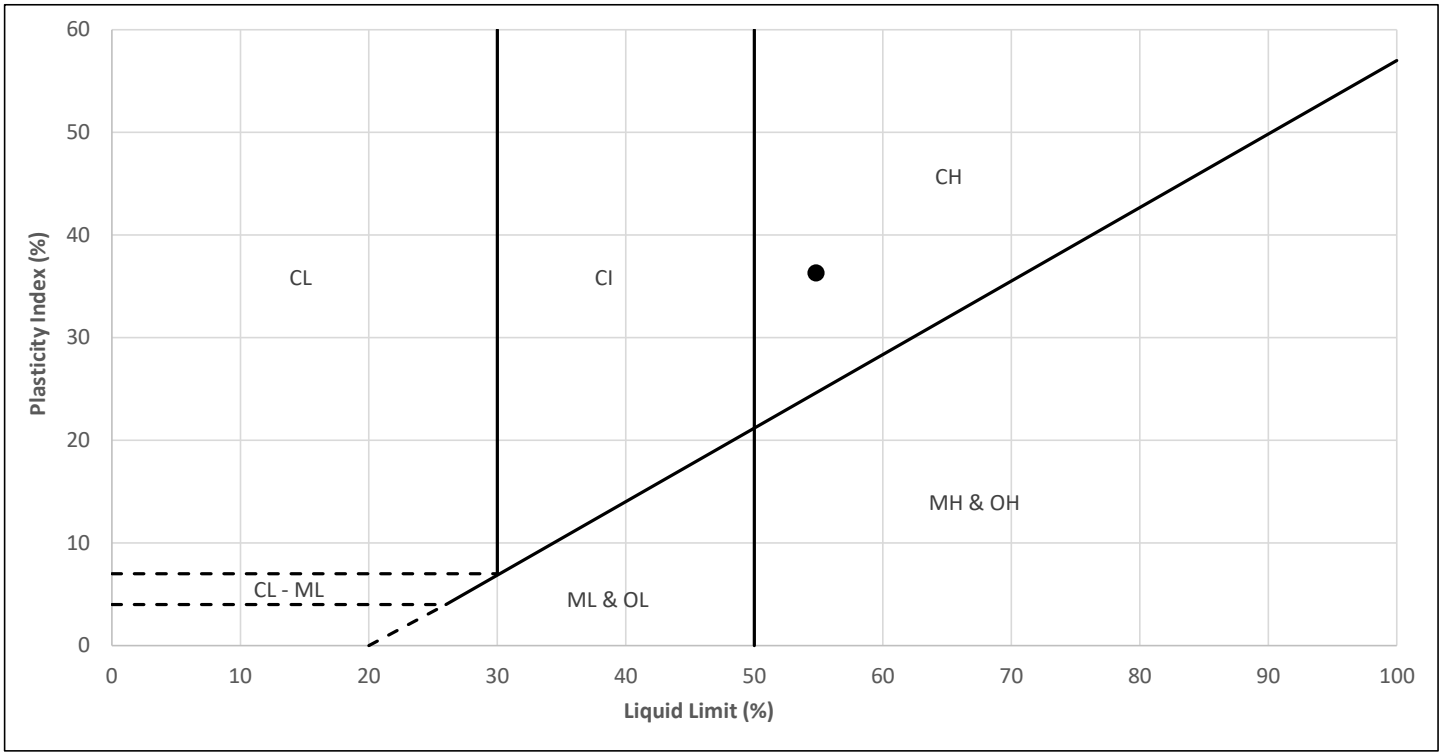
Project:	Snake Lake Reservoir Expansion	**Sample #:**	557AU4
Project No.:	1560-193-00	**Source:**	22BH557
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 557AU4	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.8
Plastic Limit (PL)	18.5
Plasticity Index (PI)	36.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

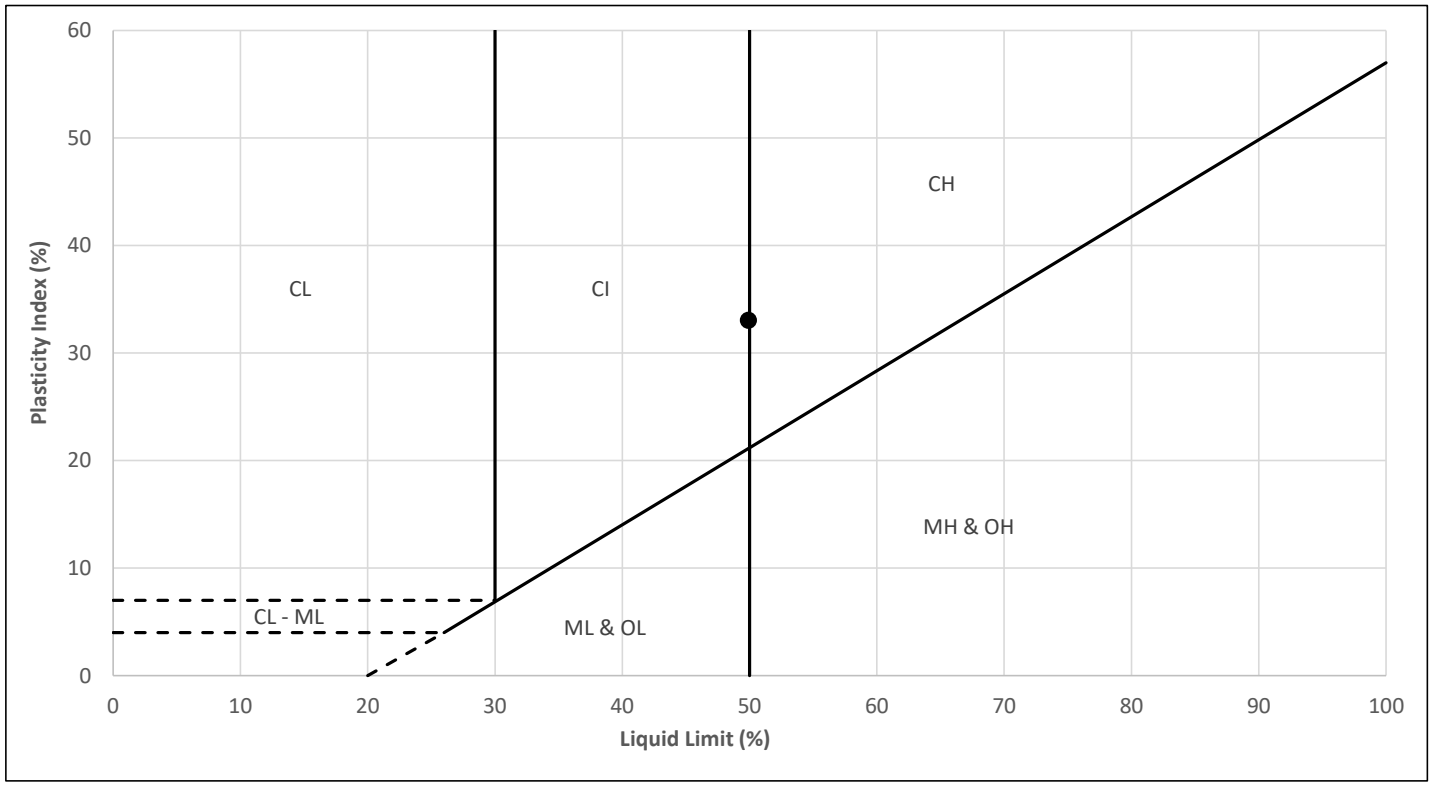
Project:	Snake Lake Reservoir Expansion	**Sample #:**	558AU1 GW
Project No.:	1560-193-00	**Source:**	22BH558
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 558AU1 GW	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.9
Plastic Limit (PL)	16.8
Plasticity Index (PI)	33.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

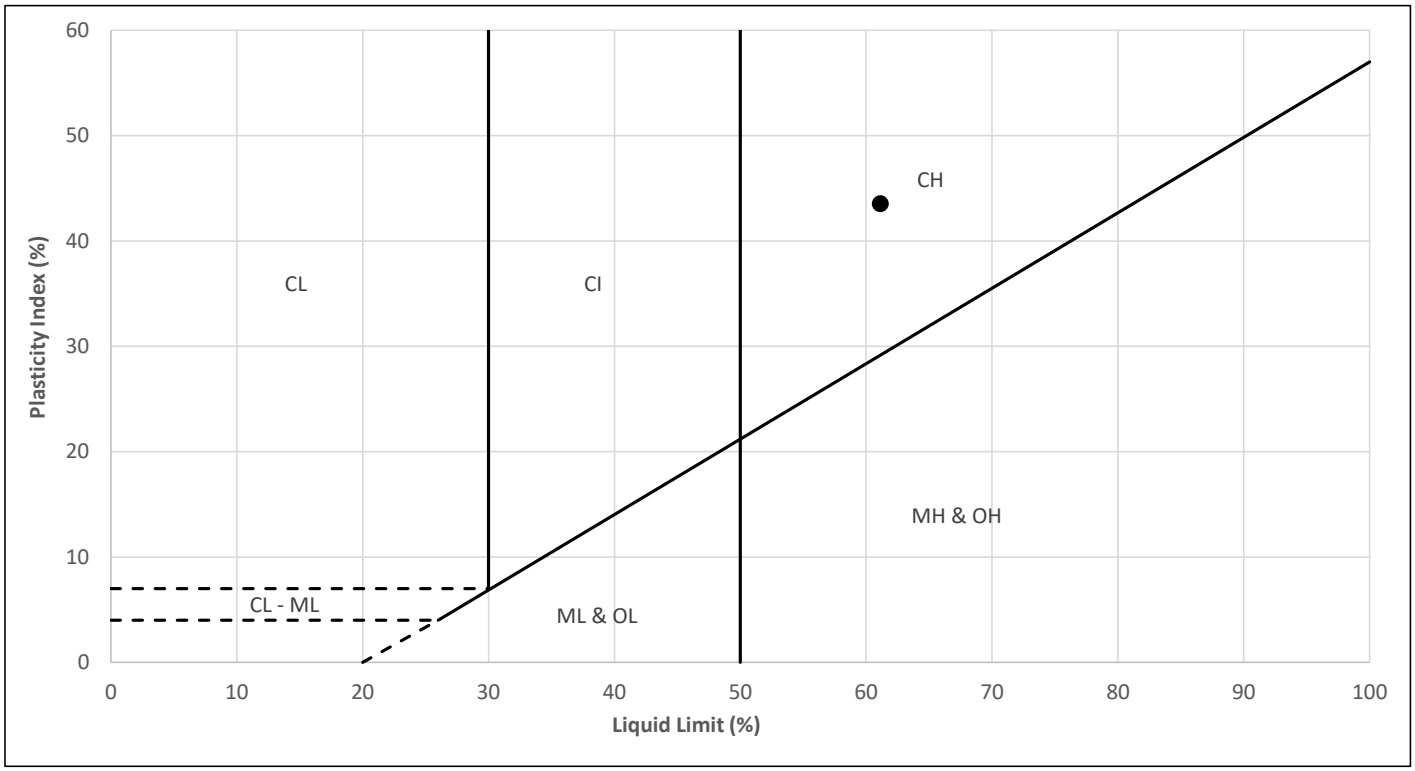
Project:	Snake Lake Reservoir Expansion	**Sample #:**	558AU1
Project No.:	1560-193-00	**Source:**	22BH558
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 558AU1	**Test Date:**	22-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	61.1
Plastic Limit (PL)	17.6
Plasticity Index (PI)	43.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

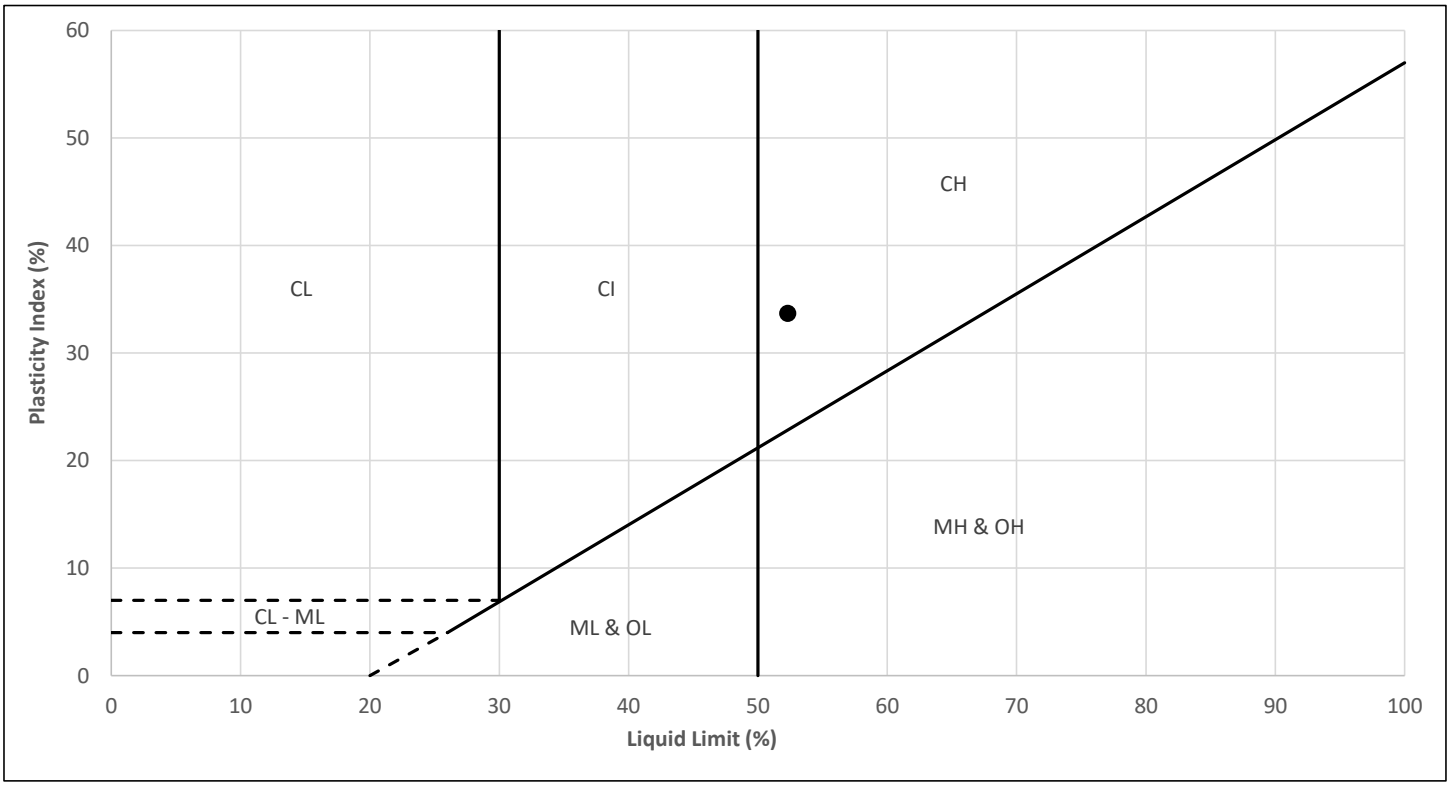
Project:	Snake Lake Reservoir Expansion	**Sample #:**	558AU3
Project No.:	1560-193-00	**Source:**	22BH558
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 558AU3	**Test Date:**	11-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.3
Plastic Limit (PL)	18.6
Plasticity Index (PI)	33.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

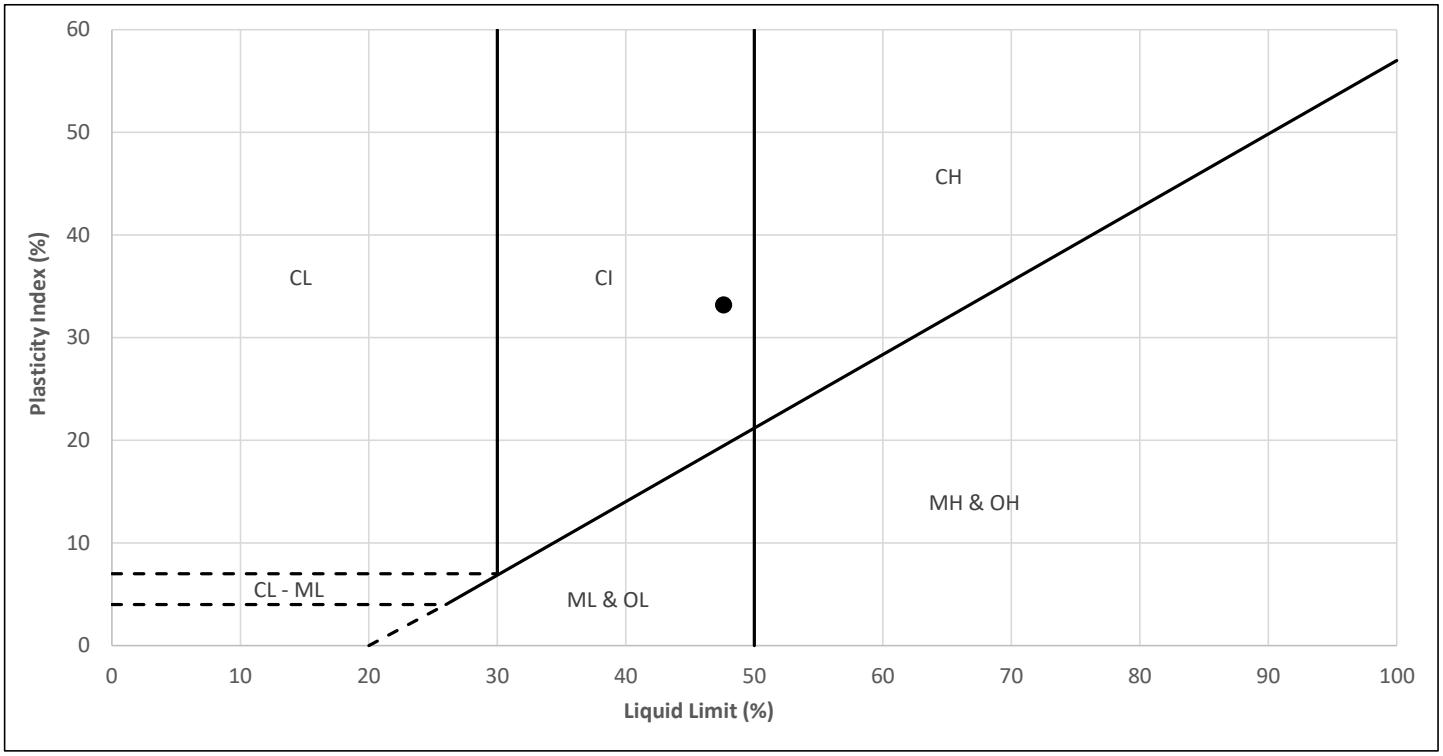
Project:	Snake Lake Reservoir Expansion	**Sample #:**	560AU1
Project No.:	1560-193-00	**Source:**	22BH560
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 560AU1	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	47.6
Plastic Limit (PL)	14.4
Plasticity Index (PI)	33.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

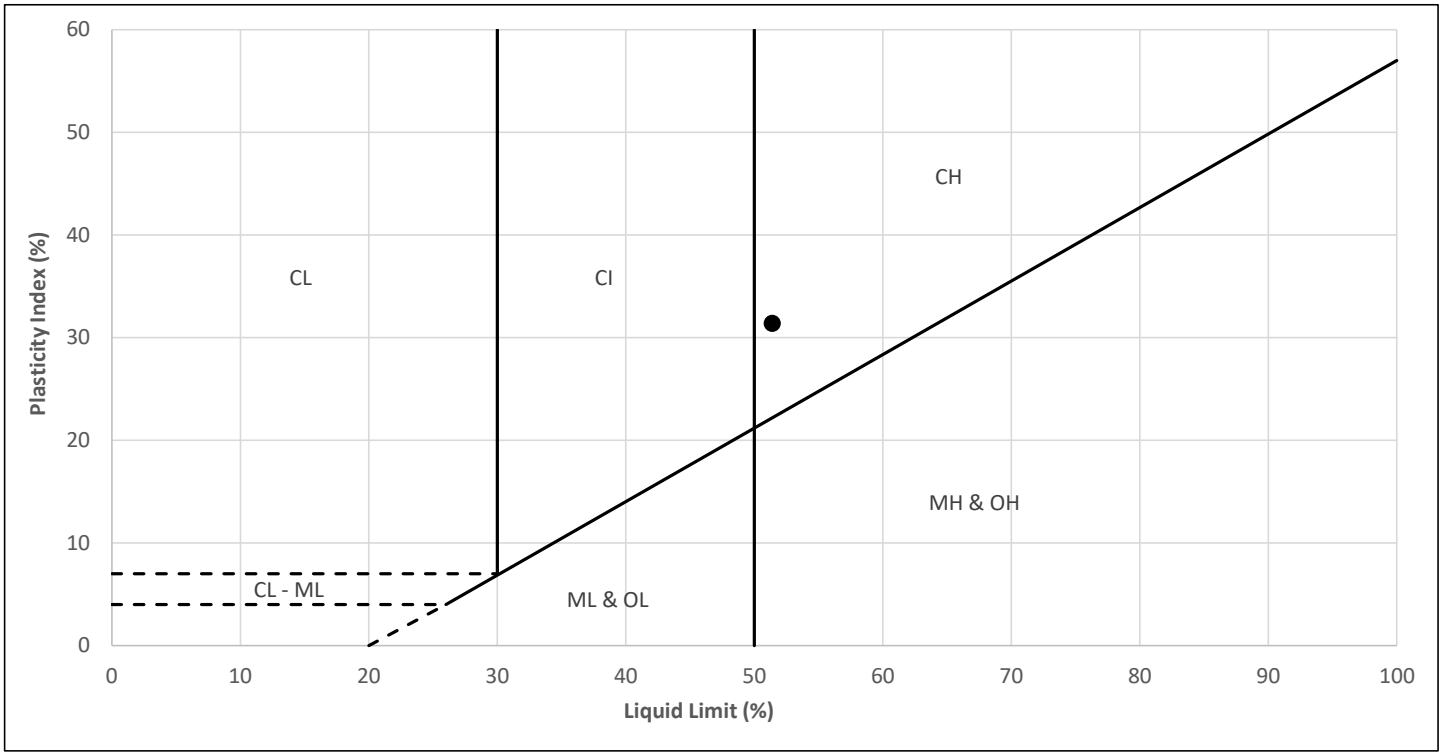
Project:	Snake Lake Reservoir Expansion	**Sample #:**	560AU3
Project No.:	1560-193-00	**Source:**	22BH560
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 560AU3	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.4
Plastic Limit (PL)	20.0
Plasticity Index (PI)	31.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

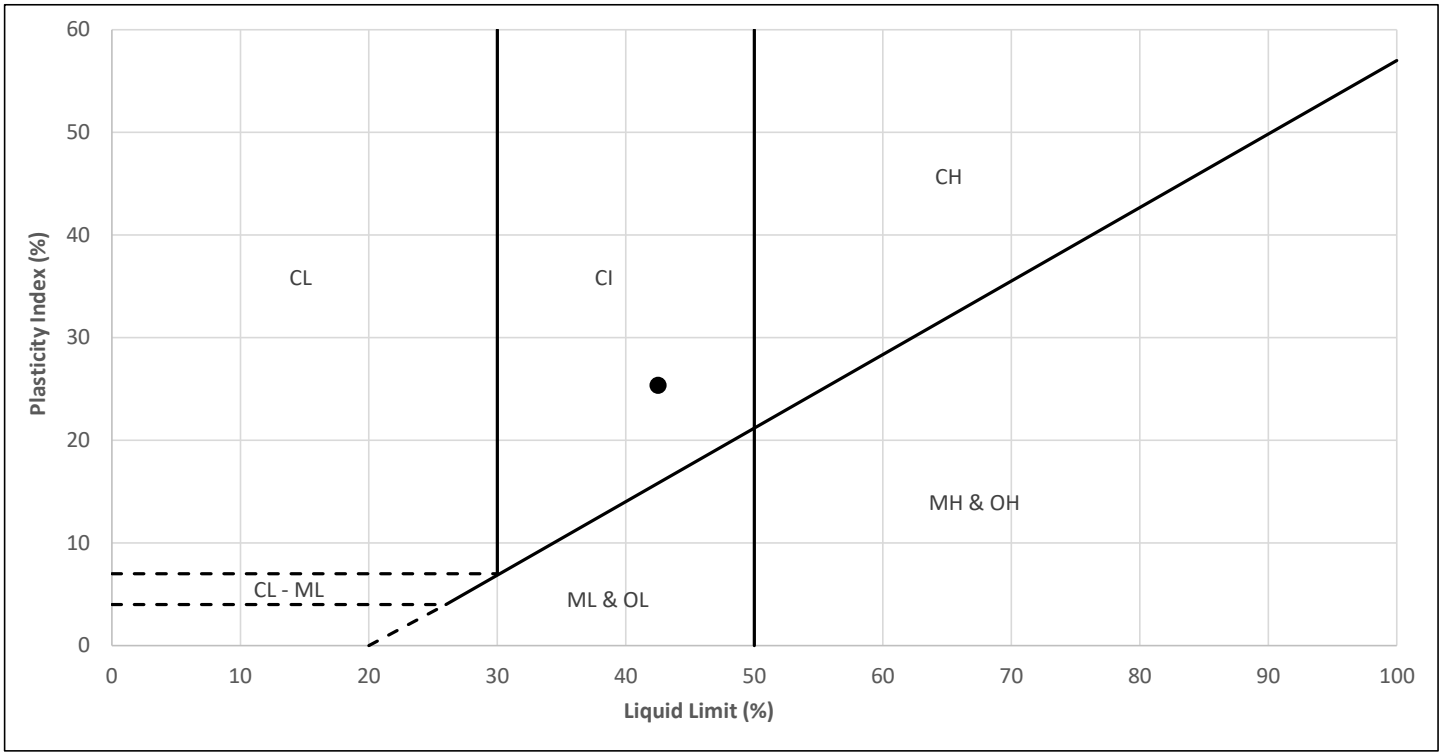
Project:	Snake Lake Reservoir Expansion	**Sample #:**	561AU1
Project No.:	1560-193-00	**Source:**	22BH561
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 561AU1	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	42.5
Plastic Limit (PL)	17.1
Plasticity Index (PI)	25.4

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

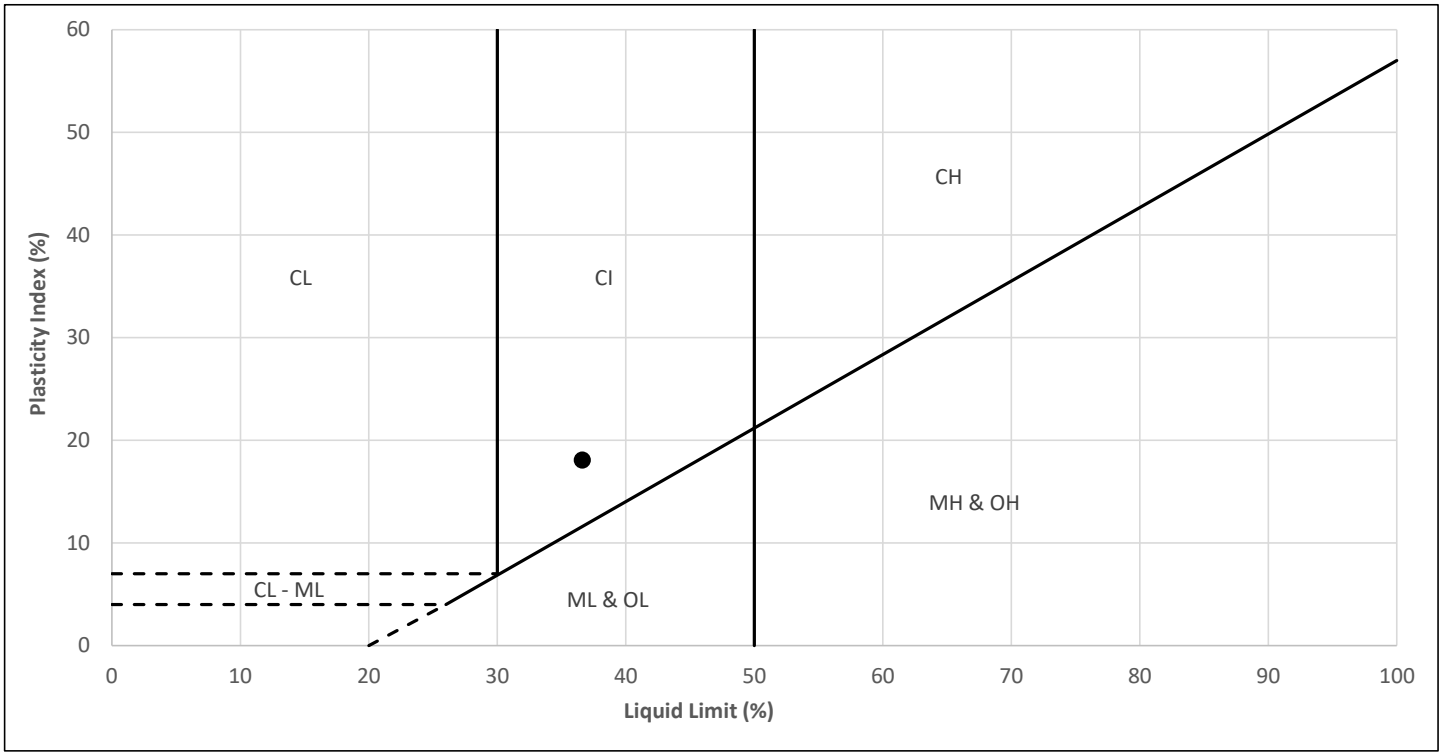
Project:	Snake Lake Reservoir Expansion	**Sample #:**	561AU3
Project No.:	1560-193-00	**Source:**	22BH561
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 561AU3	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	36.6
Plastic Limit (PL)	18.5
Plasticity Index (PI)	18.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

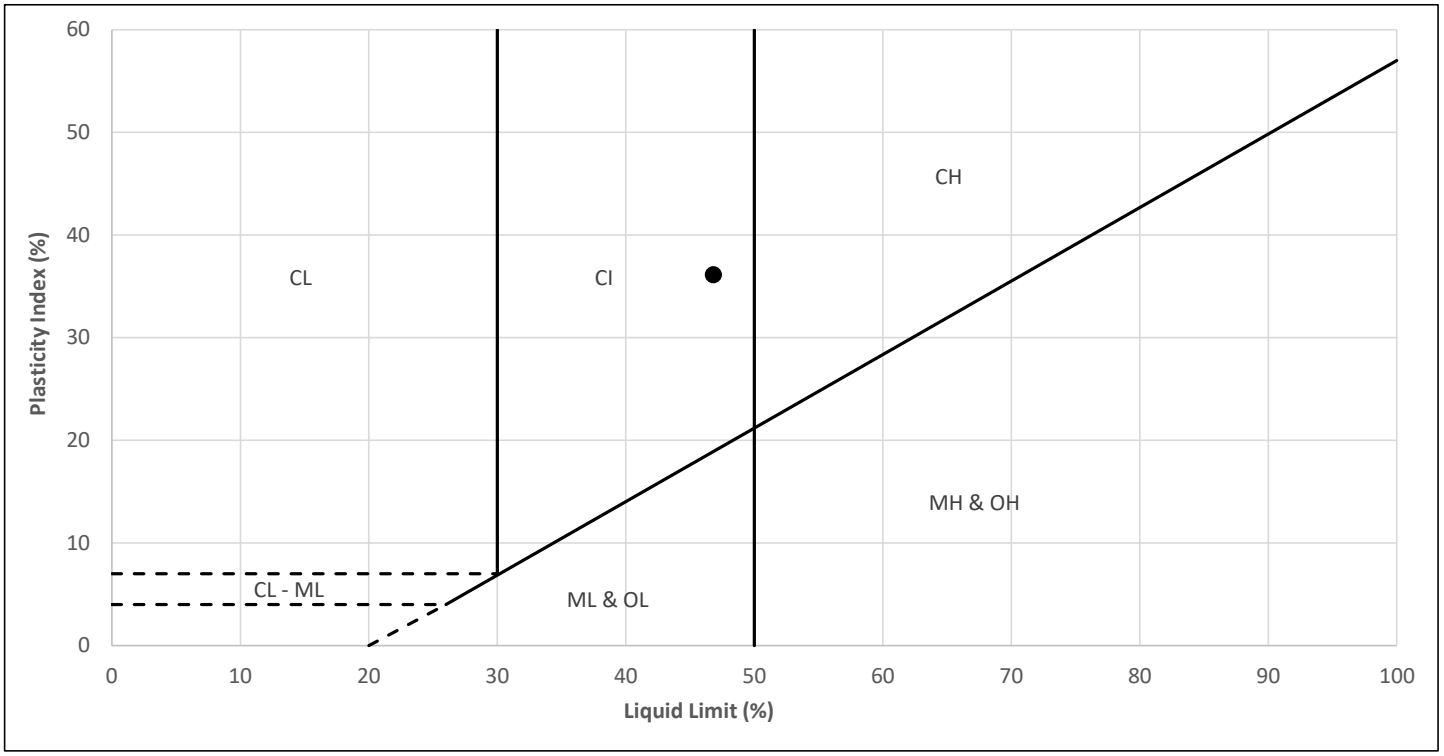
Project:	Snake Lake Reservoir Expansion	**Sample #:**	562AU1
Project No.:	1560-193-00	**Source:**	22BH562
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 562AU1	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	46.8
Plastic Limit (PL)	10.7
Plasticity Index (PI)	36.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

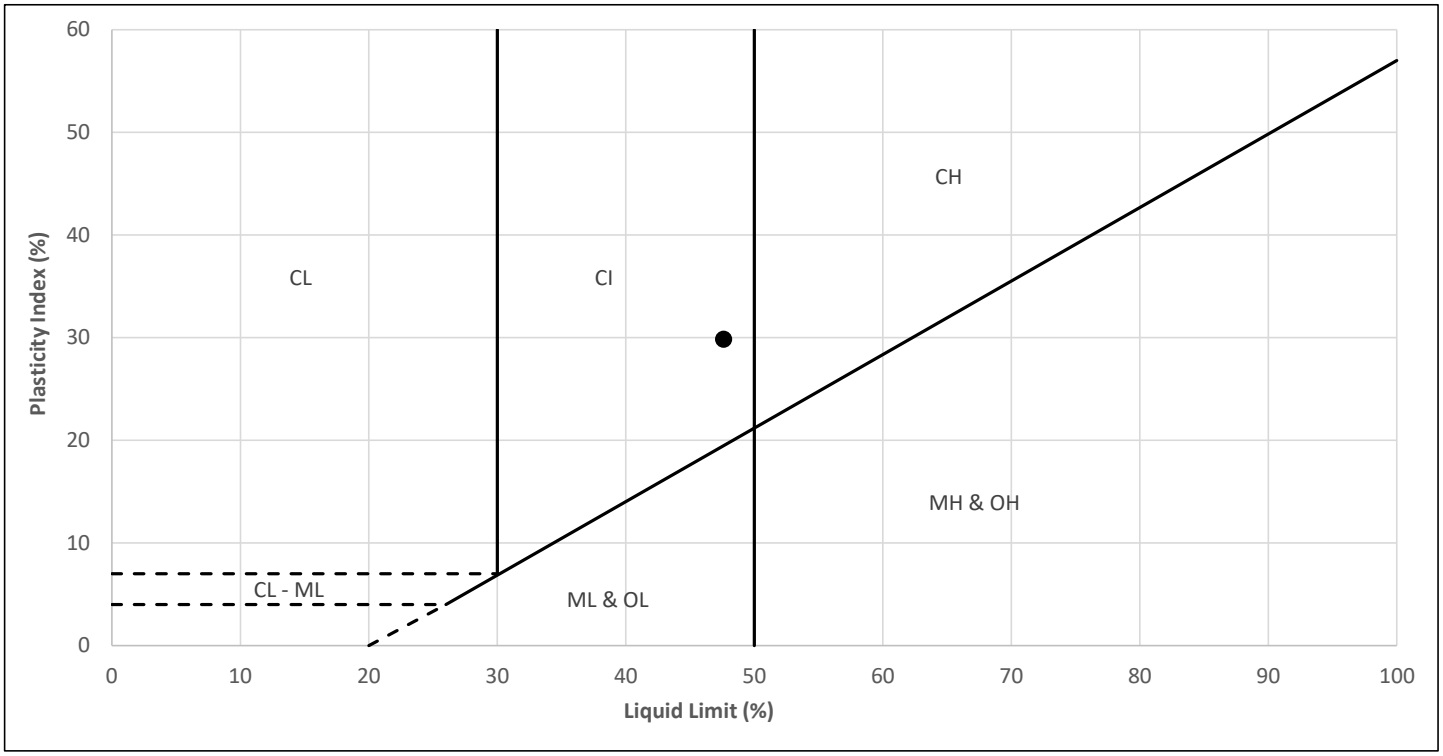
Project:	Snake Lake Reservoir Expansion	**Sample #:**	562AU3
Project No.:	1560-193-00	**Source:**	22BH562
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 562AU3	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	47.6
Plastic Limit (PL)	17.7
Plasticity Index (PI)	29.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

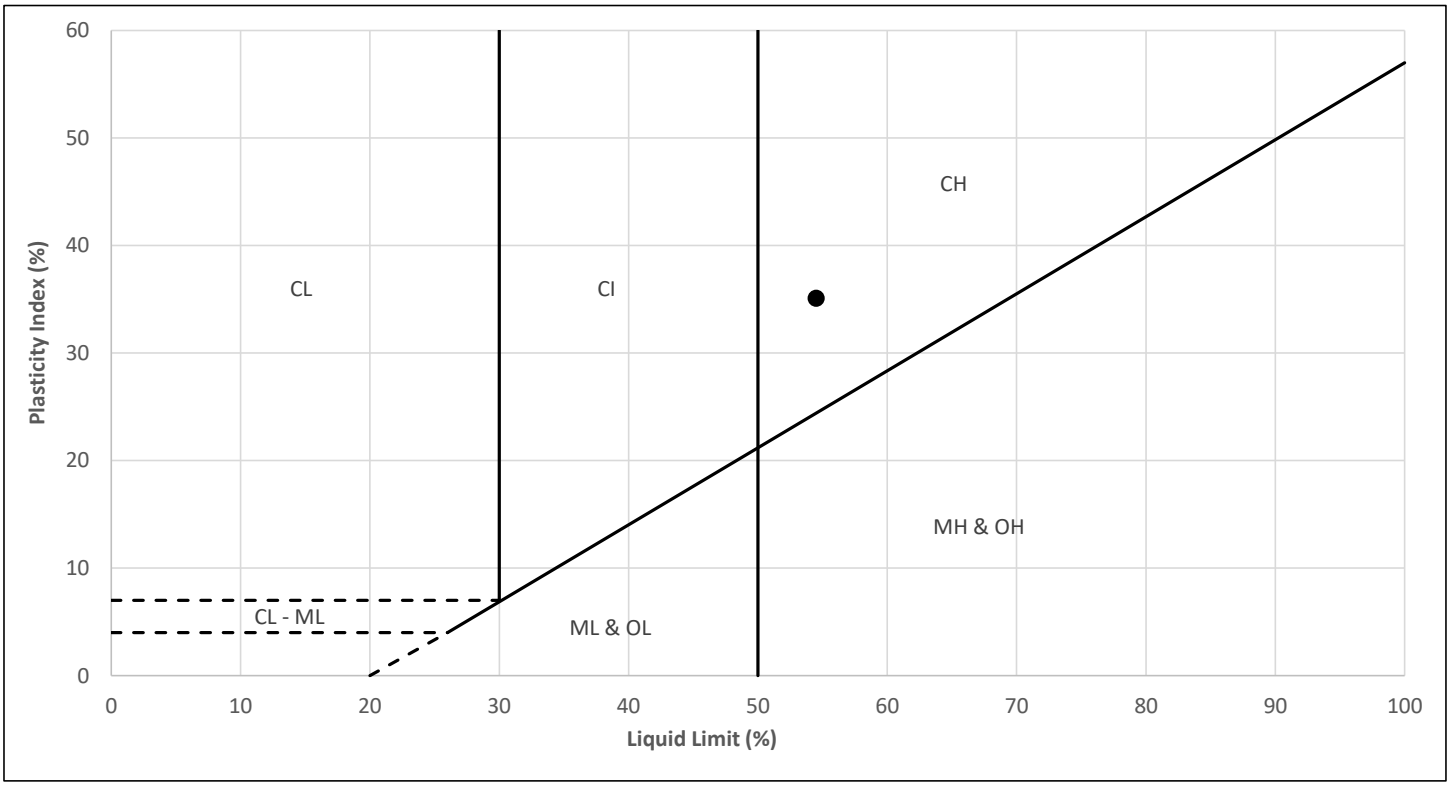
Project:	Snake Lake Reservoir Expansion	**Sample #:**	563AU2
Project No.:	1560-193-00	**Source:**	22BH563
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 563AU2	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.5
Plastic Limit (PL)	19.4
Plasticity Index (PI)	35.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

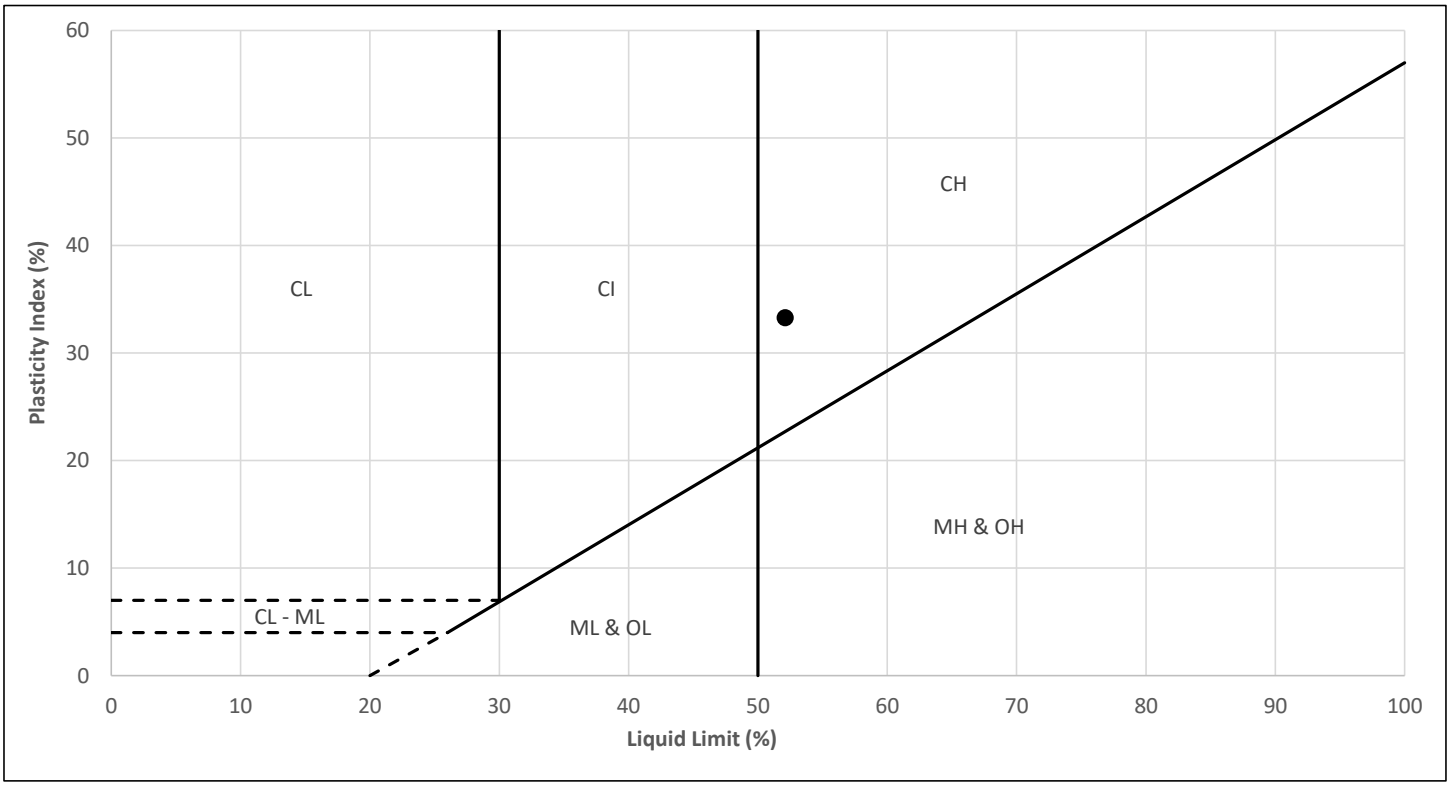
Project:	Snake Lake Reservoir Expansion	**Sample #:**	563AU3
Project No.:	1560-193-00	**Source:**	22BH563
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 563AU3	**Test Date:**	10-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.1
Plastic Limit (PL)	18.8
Plasticity Index (PI)	33.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

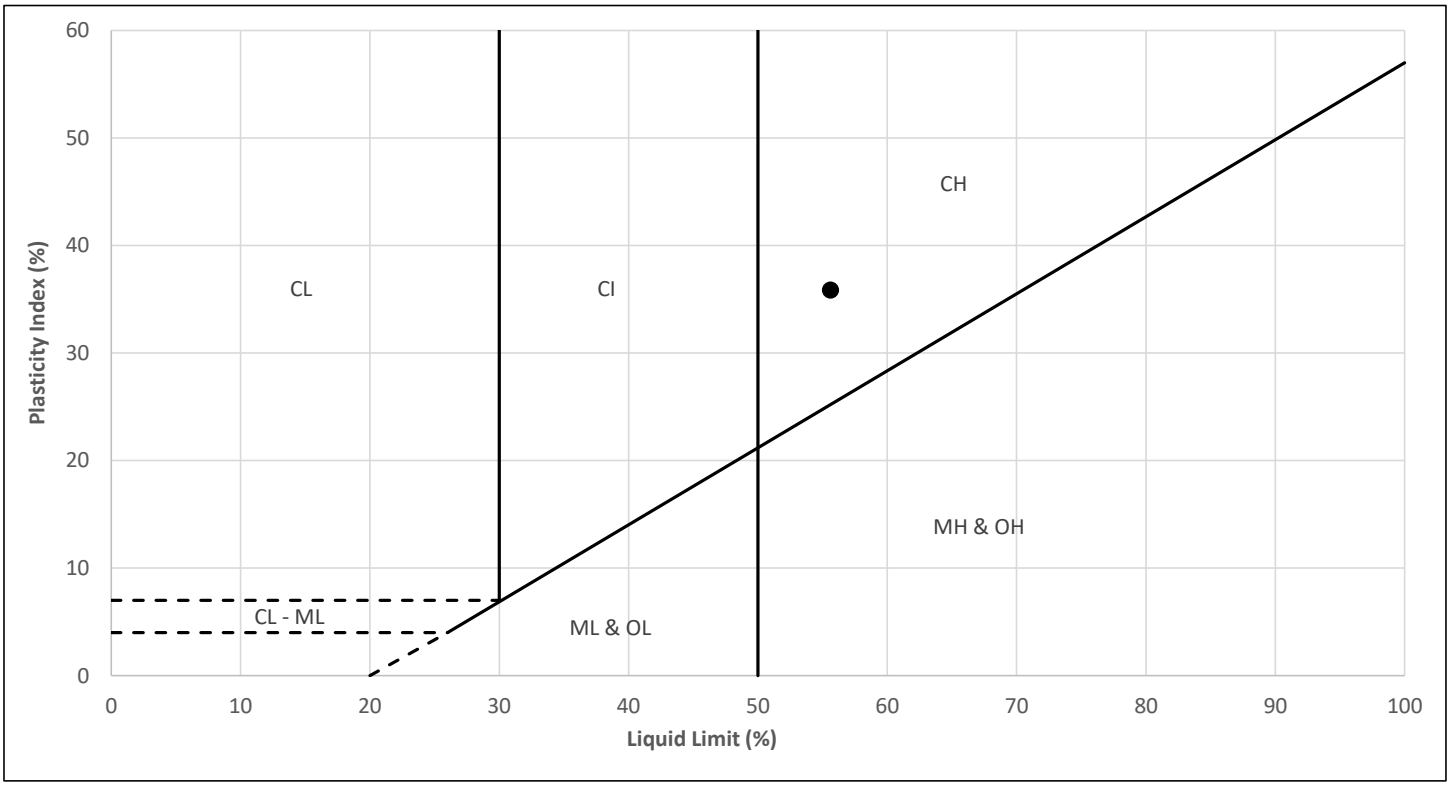
Project:	Snake Lake Reservoir Expansion	**Sample #:**	563AU4
Project No.:	1560-193-00	**Source:**	22BH563
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 563AU4	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.6
Plastic Limit (PL)	19.7
Plasticity Index (PI)	35.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

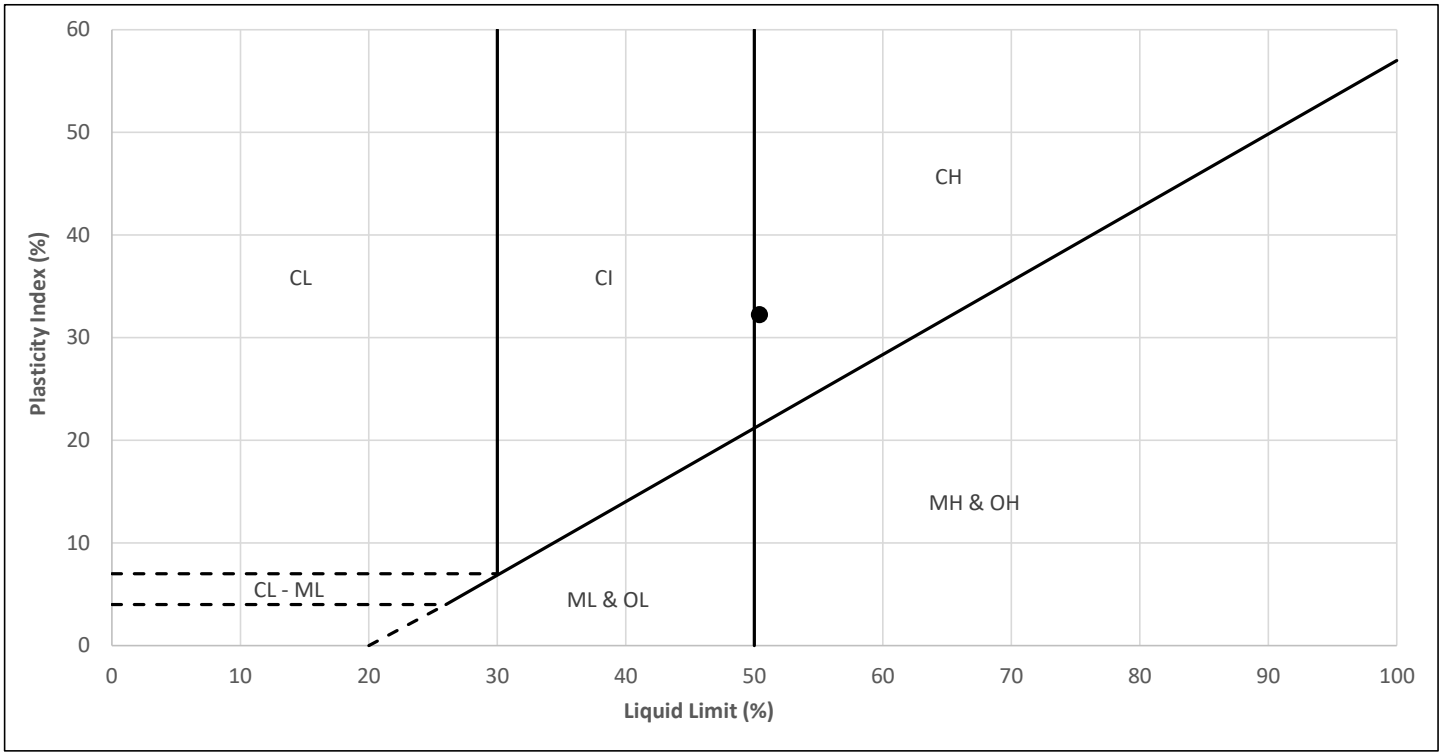
Project:	Snake Lake Reservoir Expansion	**Sample #:**	564AU1
Project No.:	1560-193-00	**Source:**	22BH564
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 564AU1	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.4
Plastic Limit (PL)	18.2
Plasticity Index (PI)	32.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

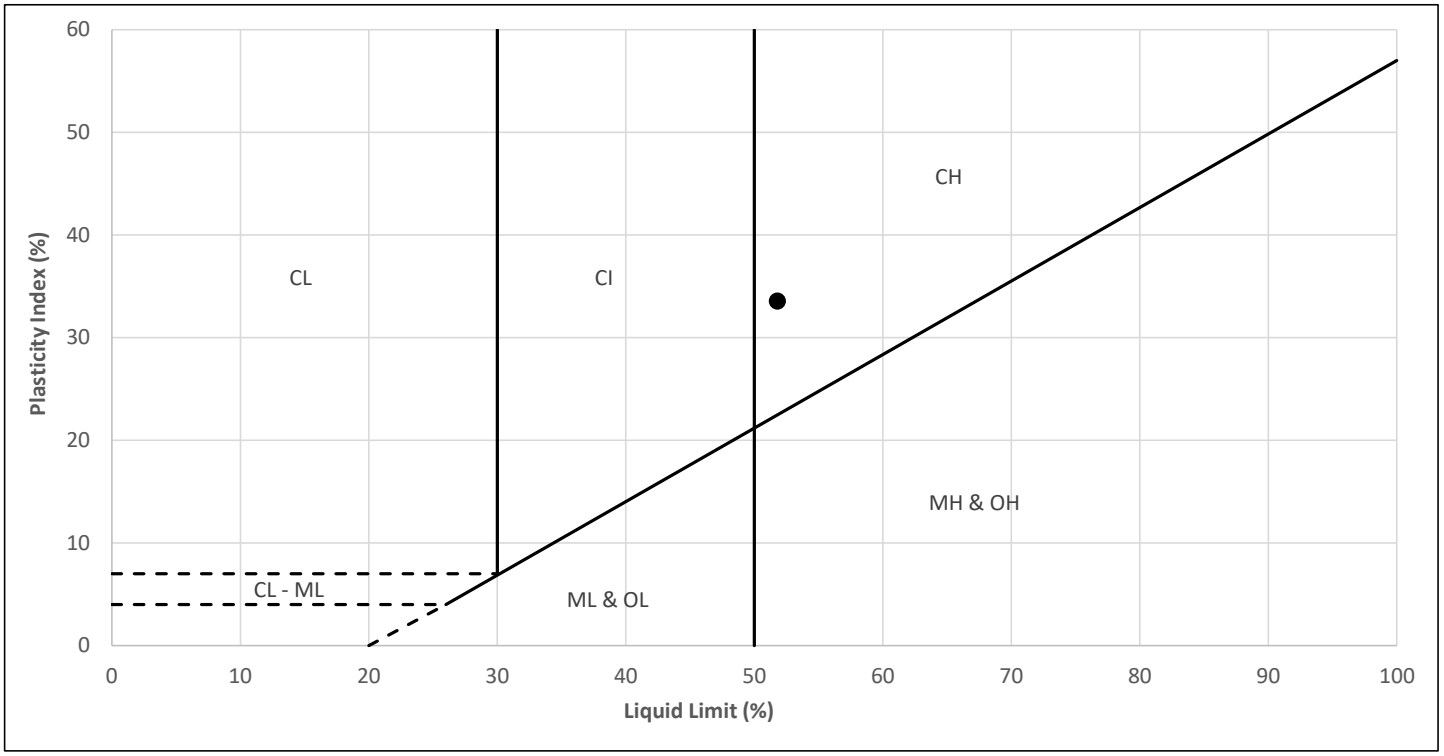
Project:	Snake Lake Reservoir Expansion	**Sample #:**	564AU3
Project No.:	1560-193-00	**Source:**	22BH564
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 564AU3	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.8
Plastic Limit (PL)	18.2
Plasticity Index (PI)	33.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

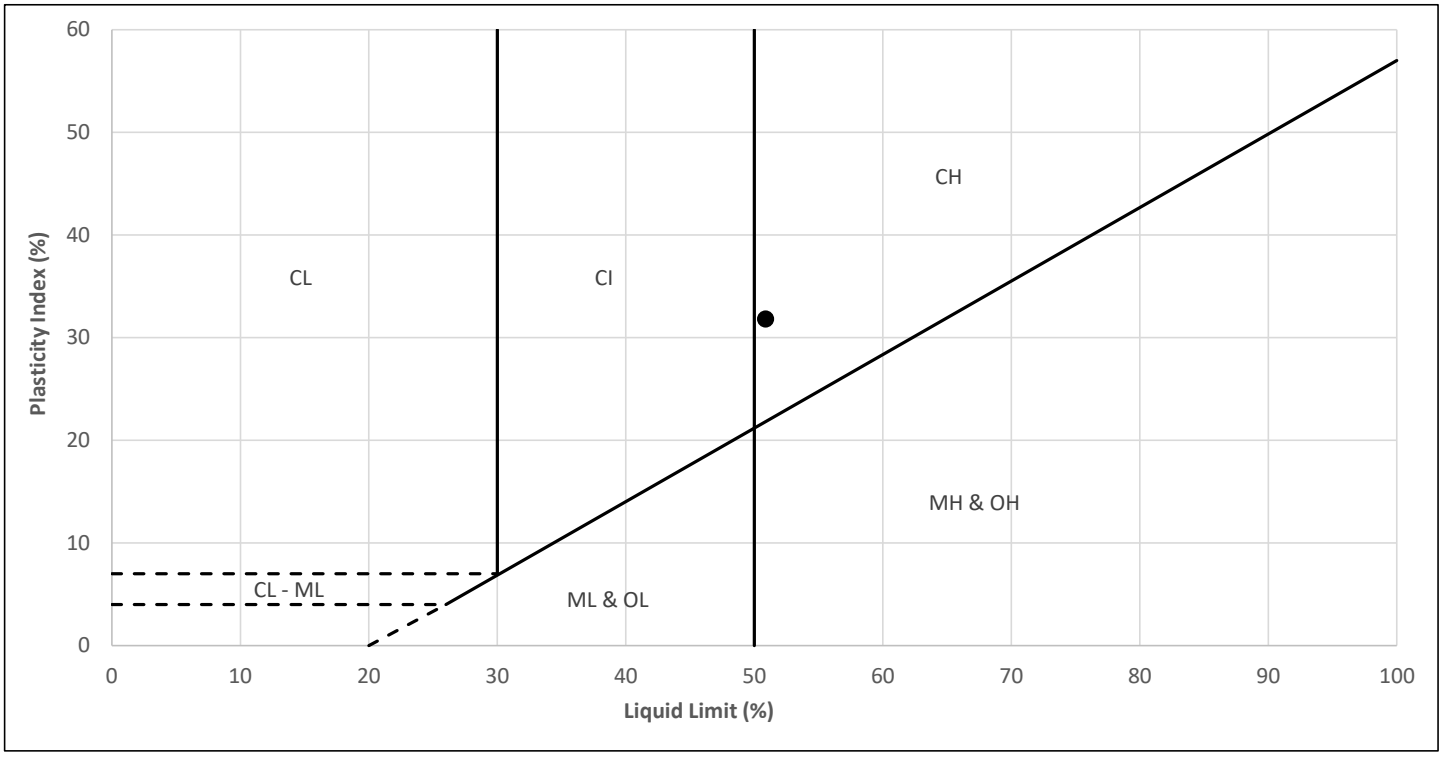
Project:	Snake Lake Reservoir Expansion	**Sample #:**	567AU2
Project No.:	1560-193-00	**Source:**	22BH567
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 567AU2	**Test Date:**	22-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.9
Plastic Limit (PL)	19.0
Plasticity Index (PI)	31.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

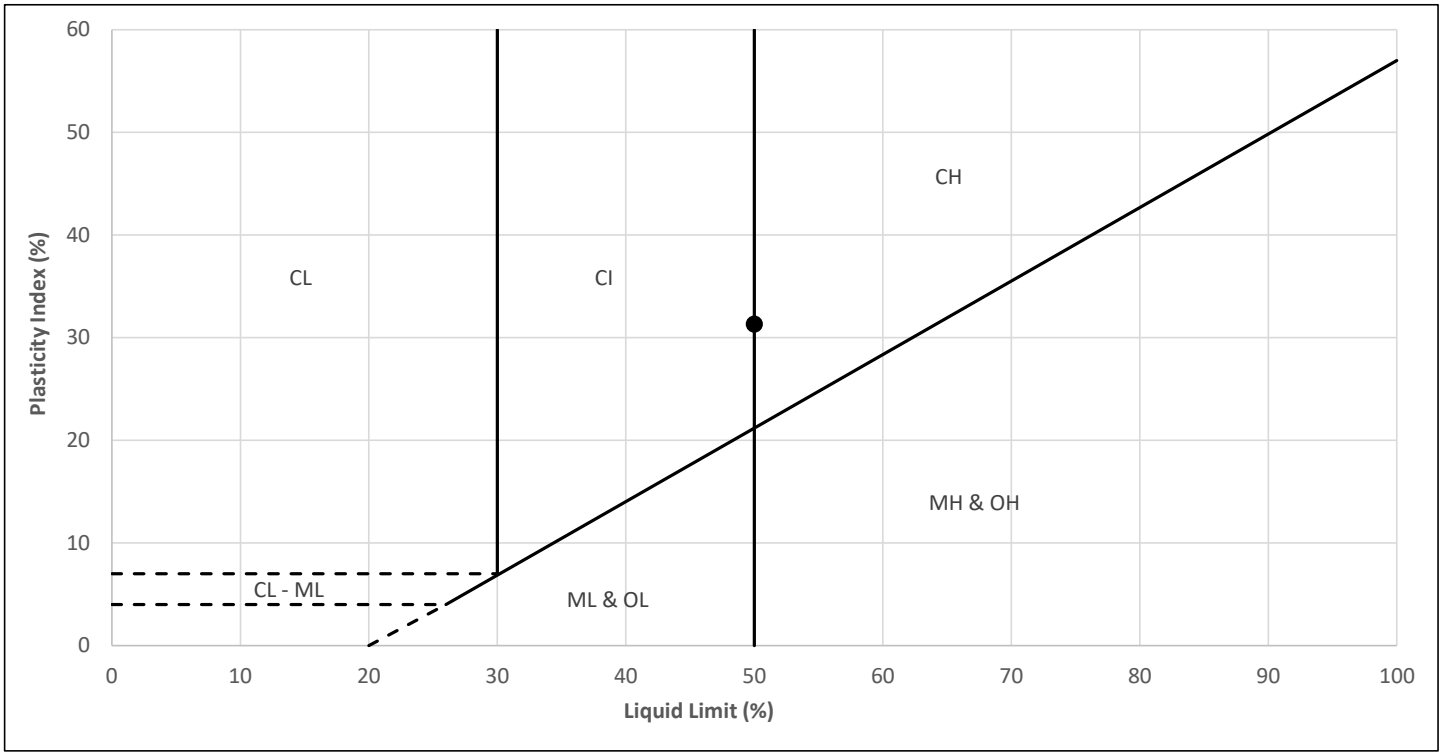
Project:	Snake Lake Reservoir Expansion	**Sample #:**	567AU3
Project No.:	1560-193-00	**Source:**	22BH567
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 567AU3	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.0
Plastic Limit (PL)	18.7
Plasticity Index (PI)	31.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

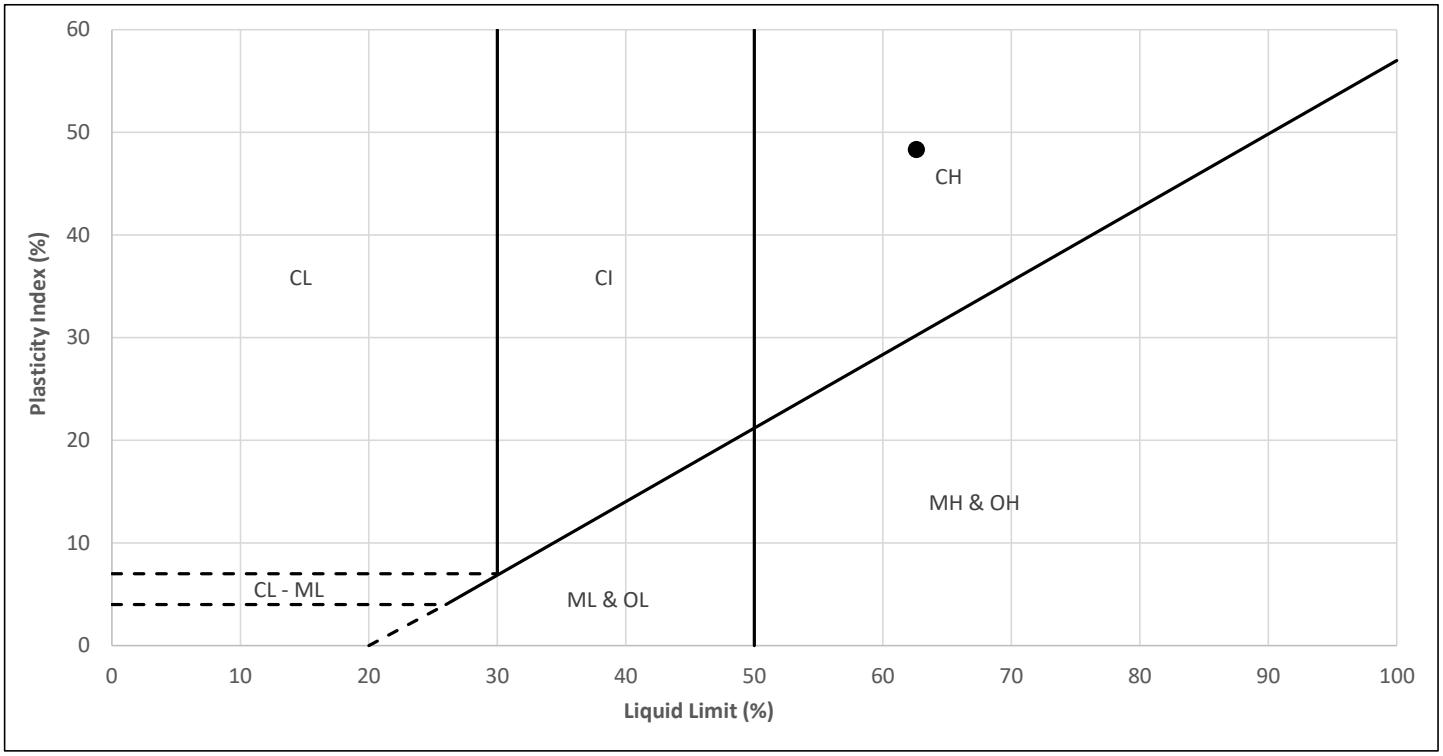
Project:	Snake Lake Reservoir Expansion	**Sample #:**	568AU1
Project No.:	1560-193-00	**Source:**	22BH568
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 568AU1	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	62.6
Plastic Limit (PL)	14.3
Plasticity Index (PI)	48.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

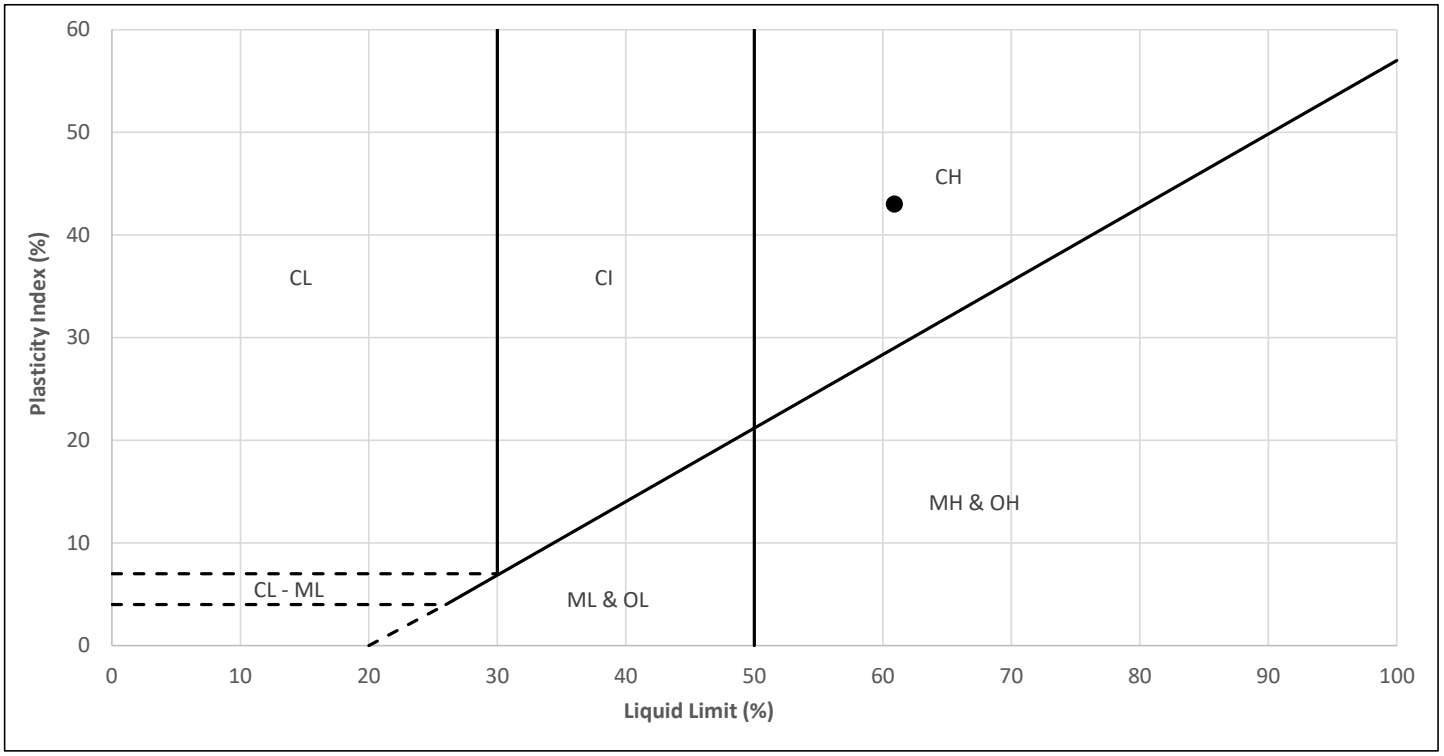
Project:	Snake Lake Reservoir Expansion	**Sample #:**	568AU3
Project No.:	1560-193-00	**Source:**	22BH568
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 568AU3	**Test Date:**	14-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	60.9
Plastic Limit (PL)	17.9
Plasticity Index (PI)	43.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

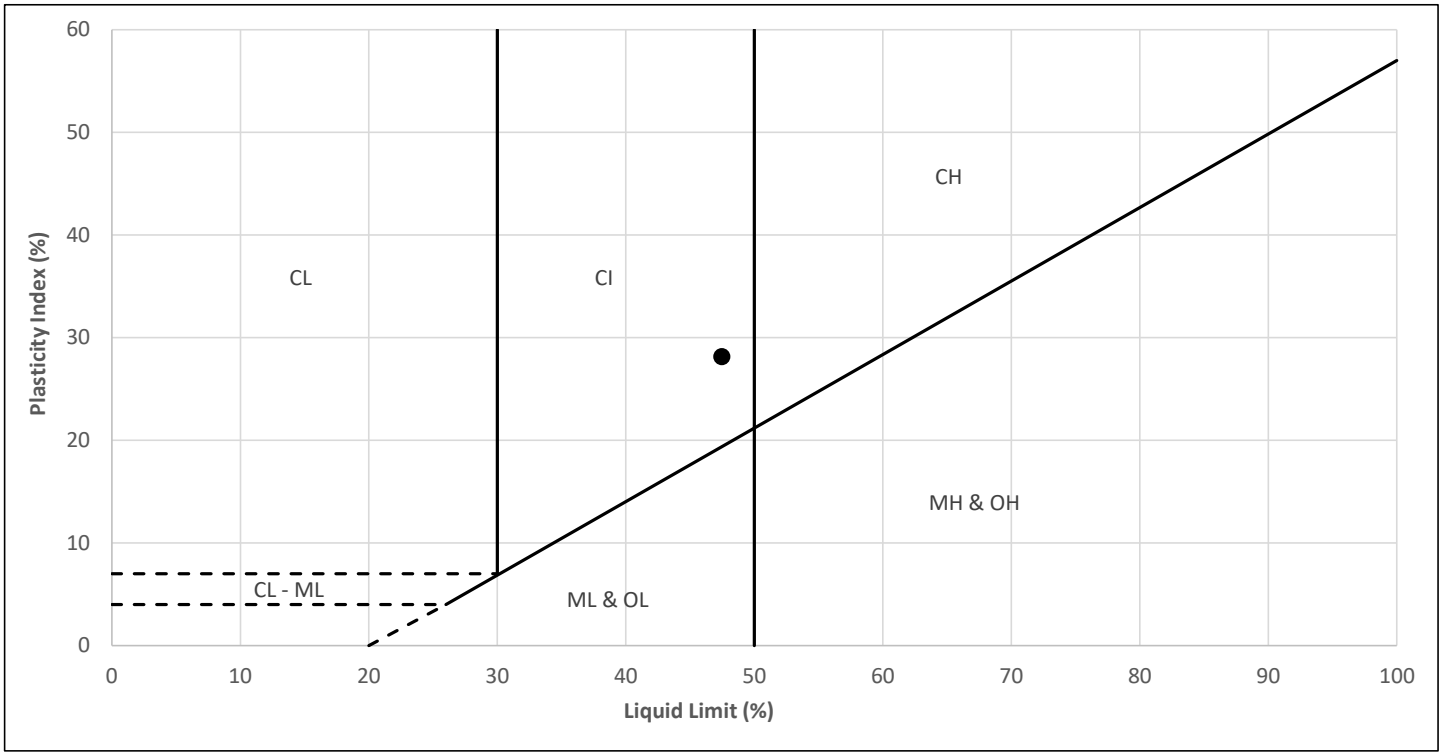
Project:	Snake Lake Reservoir Expansion	**Sample #:**	569AU1
Project No.:	1560-193-00	**Source:**	22BH569
Owner:	EID	**Sample Depth:**	11.0m
File No.:	AL - 569AU1	**Test Date:**	19-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	47.5
Plastic Limit (PL)	19.3
Plasticity Index (PI)	28.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

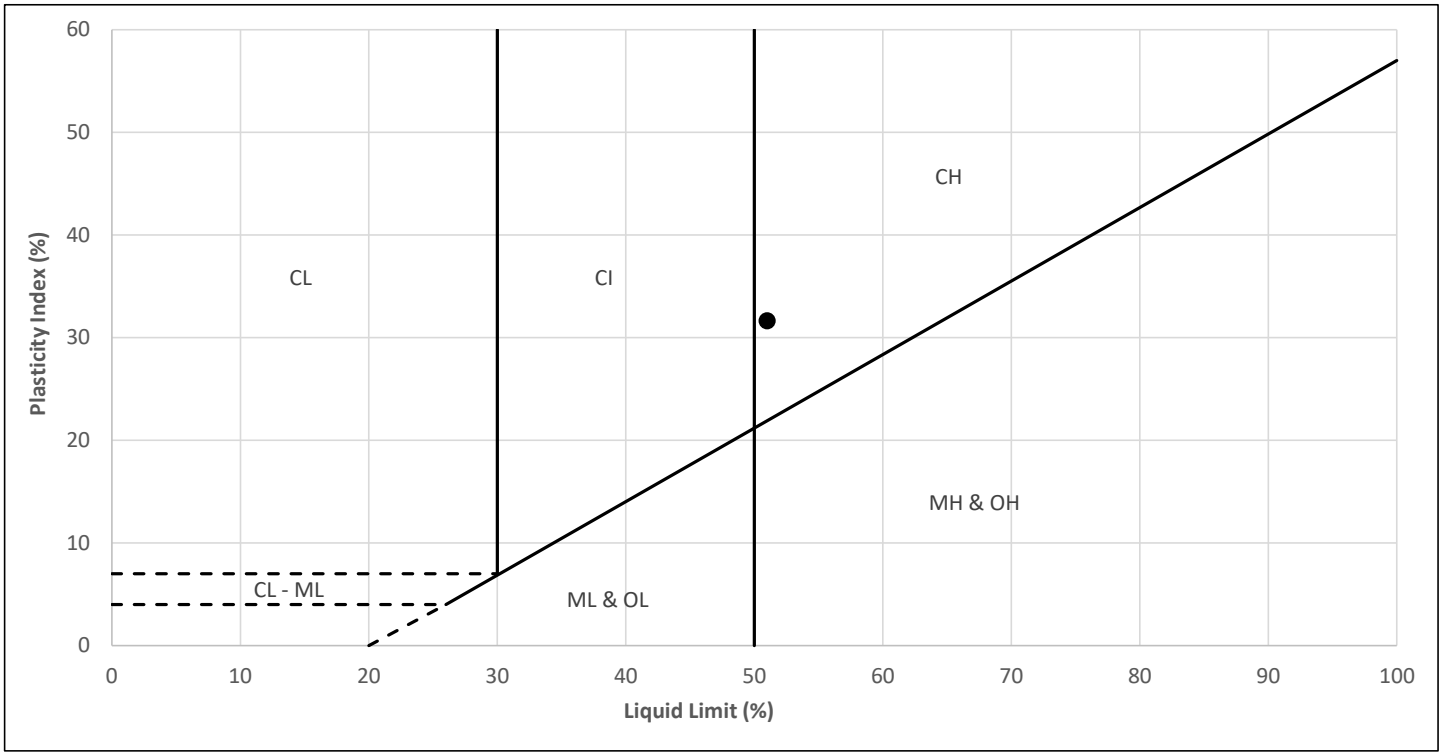
Project:	Snake Lake Reservoir Expansion	**Sample #:**	569AU2
Project No.:	1560-193-00	**Source:**	22BH569
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 569AU2	**Test Date:**	6-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.0
Plastic Limit (PL)	19.4
Plasticity Index (PI)	31.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

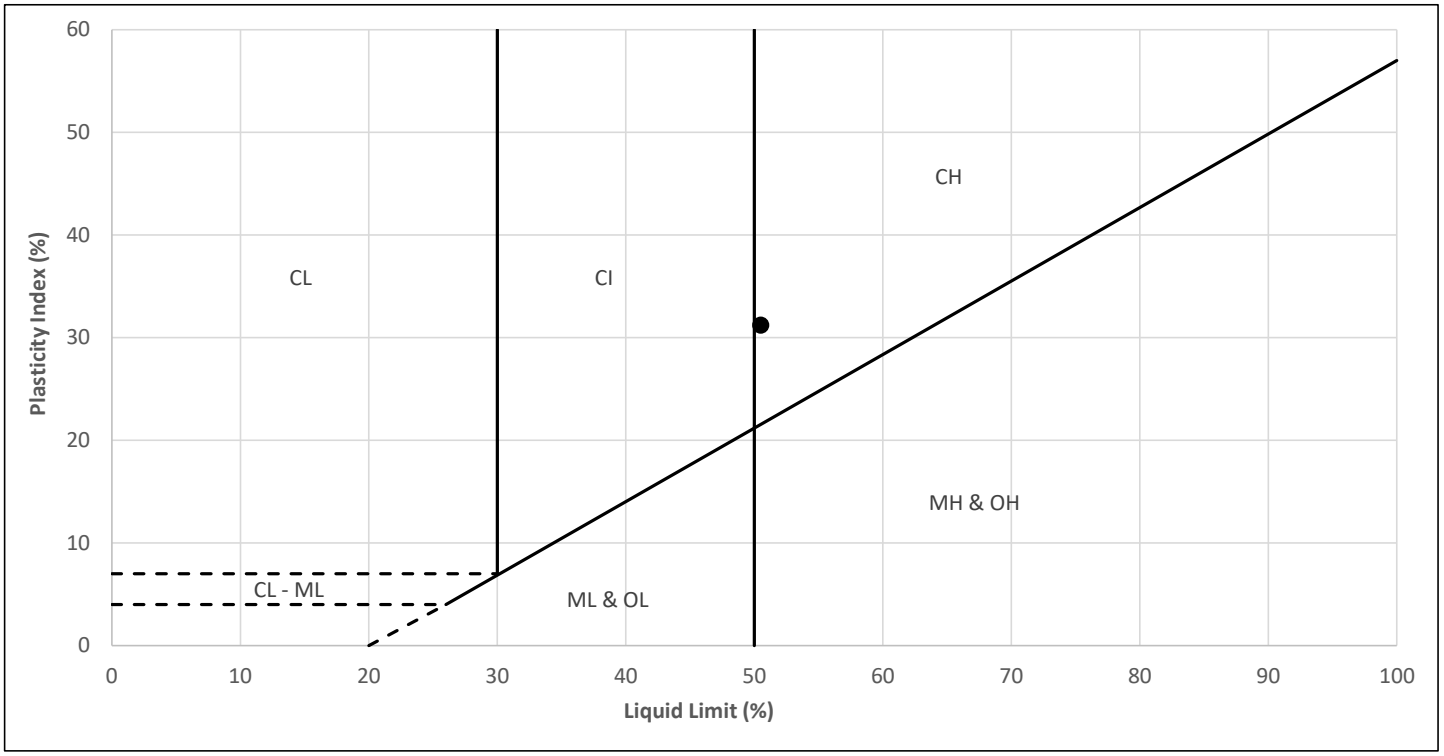
Project:	Snake Lake Reservoir Expansion	**Sample #:**	569AU3
Project No.:	1560-193-00	**Source:**	22BH569
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 569AU3	**Test Date:**	19-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.5
Plastic Limit (PL)	19.3
Plasticity Index (PI)	31.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

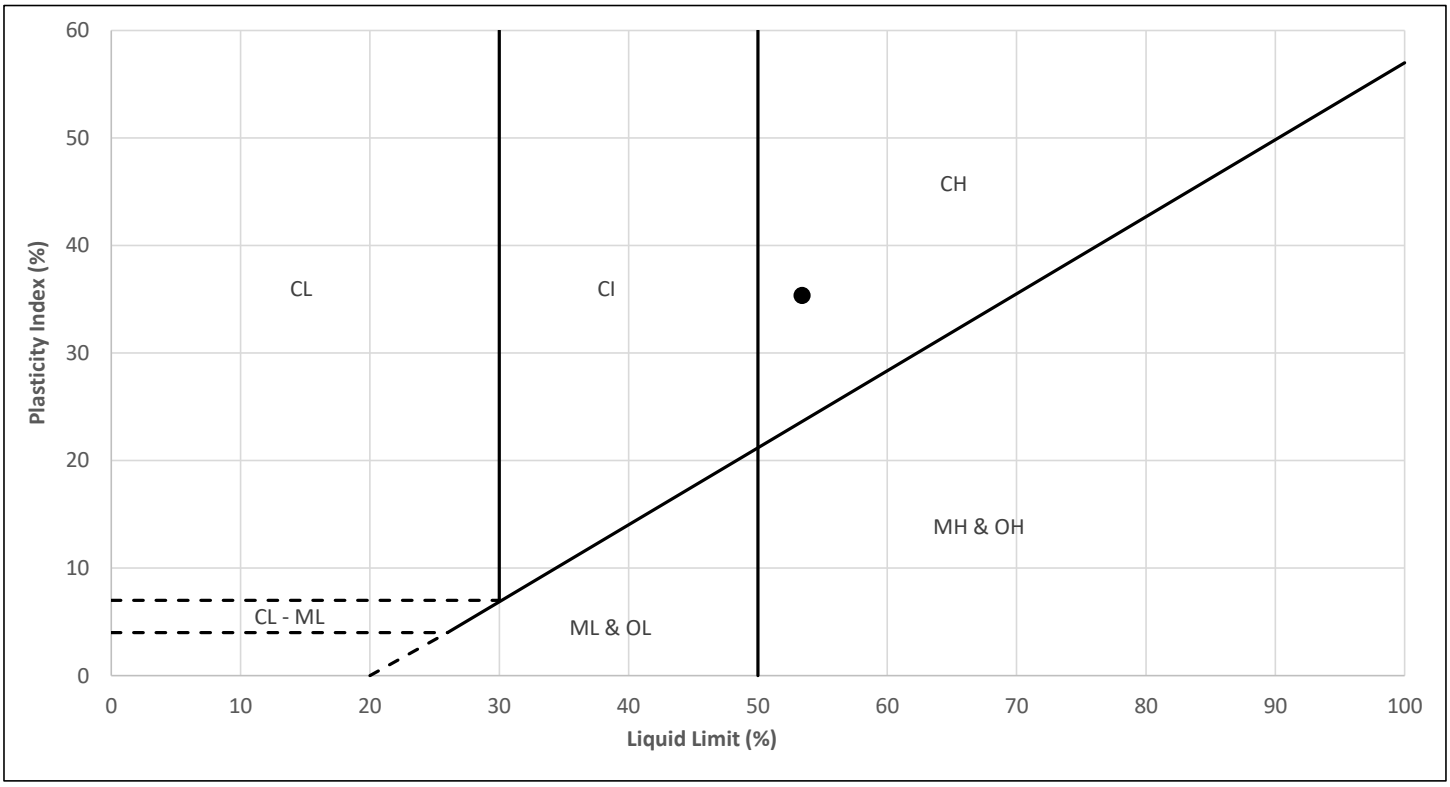
Project:	Snake Lake Reservoir Expansion	**Sample #:**	569AU4
Project No.:	1560-193-00	**Source:**	22CH569
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 569AU4	**Test Date:**	7-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.4
Plastic Limit (PL)	18.0
Plasticity Index (PI)	35.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

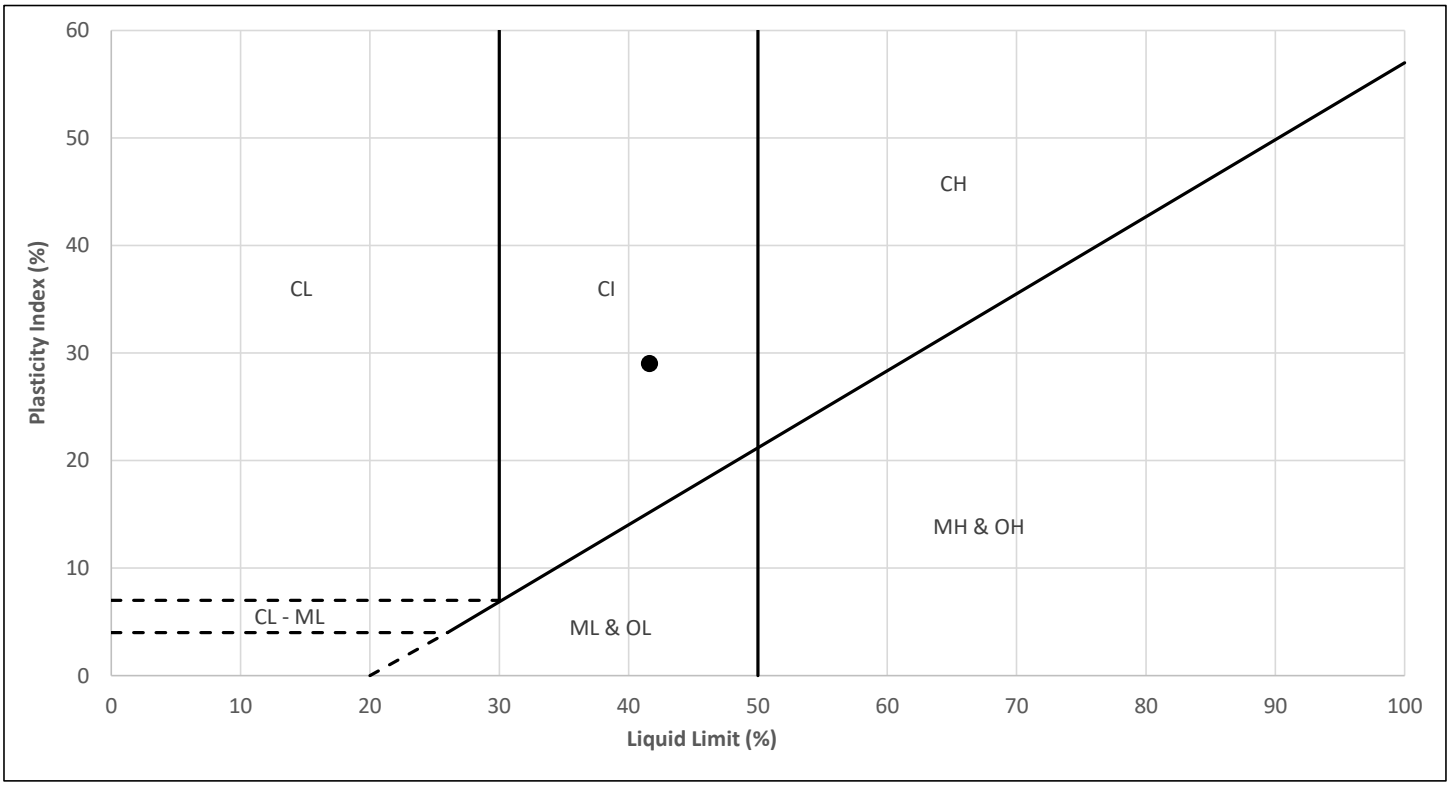
Project:	Snake Lake Reservoir Expansion	**Sample #:**	570AU1
Project No.:	1560-193-00	**Source:**	22BH570
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 570AU1	**Test Date:**	11-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	41.6
Plastic Limit (PL)	12.6
Plasticity Index (PI)	29.0

Soil Plasticity	Medium
Soil Classification	Ci



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ATTERBERG LIMITS

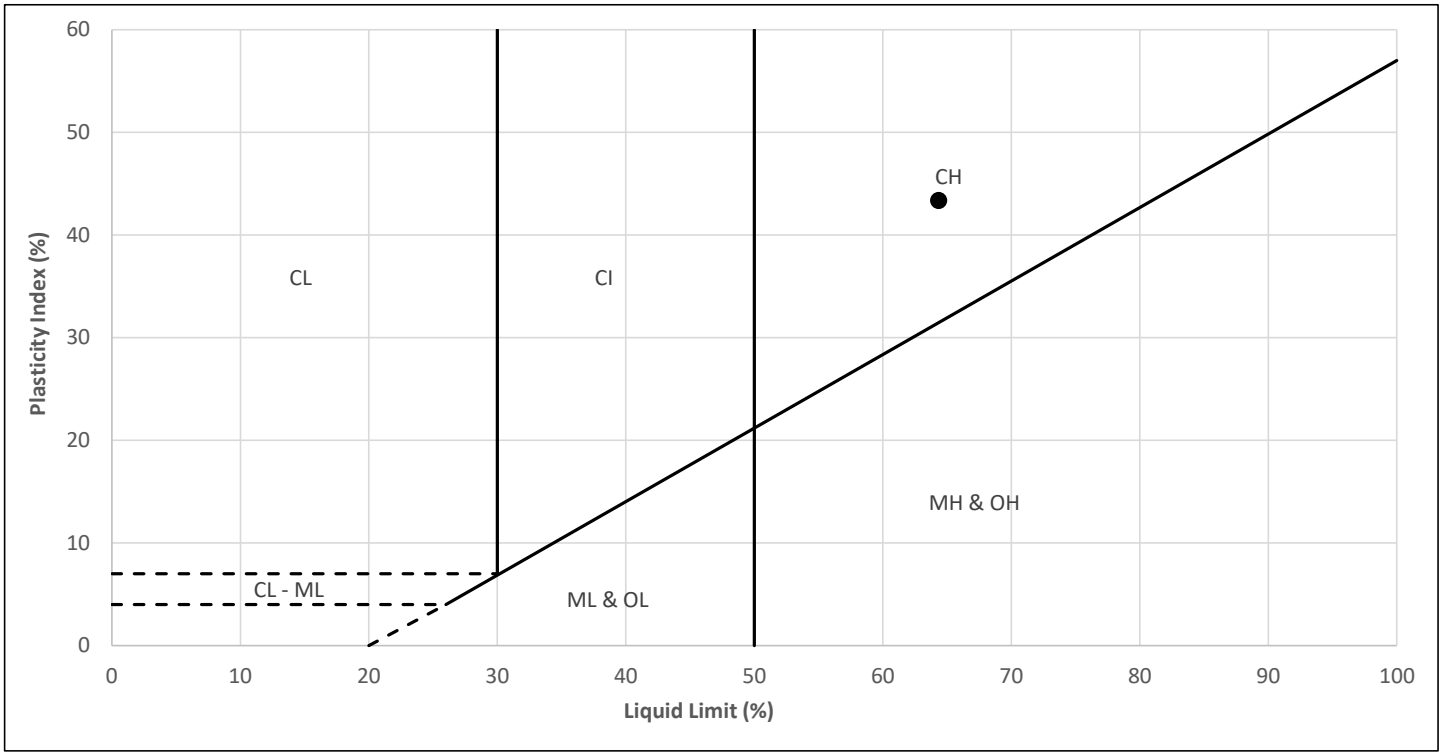
Project:	Snake Lake Reservoir Expansion	**Sample #:**	570AU2
Project No.:	1560-193-00	**Source:**	22BH570
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 570AU2	**Test Date:**	22-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	64.3
Plastic Limit (PL)	20.9
Plasticity Index (PI)	43.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

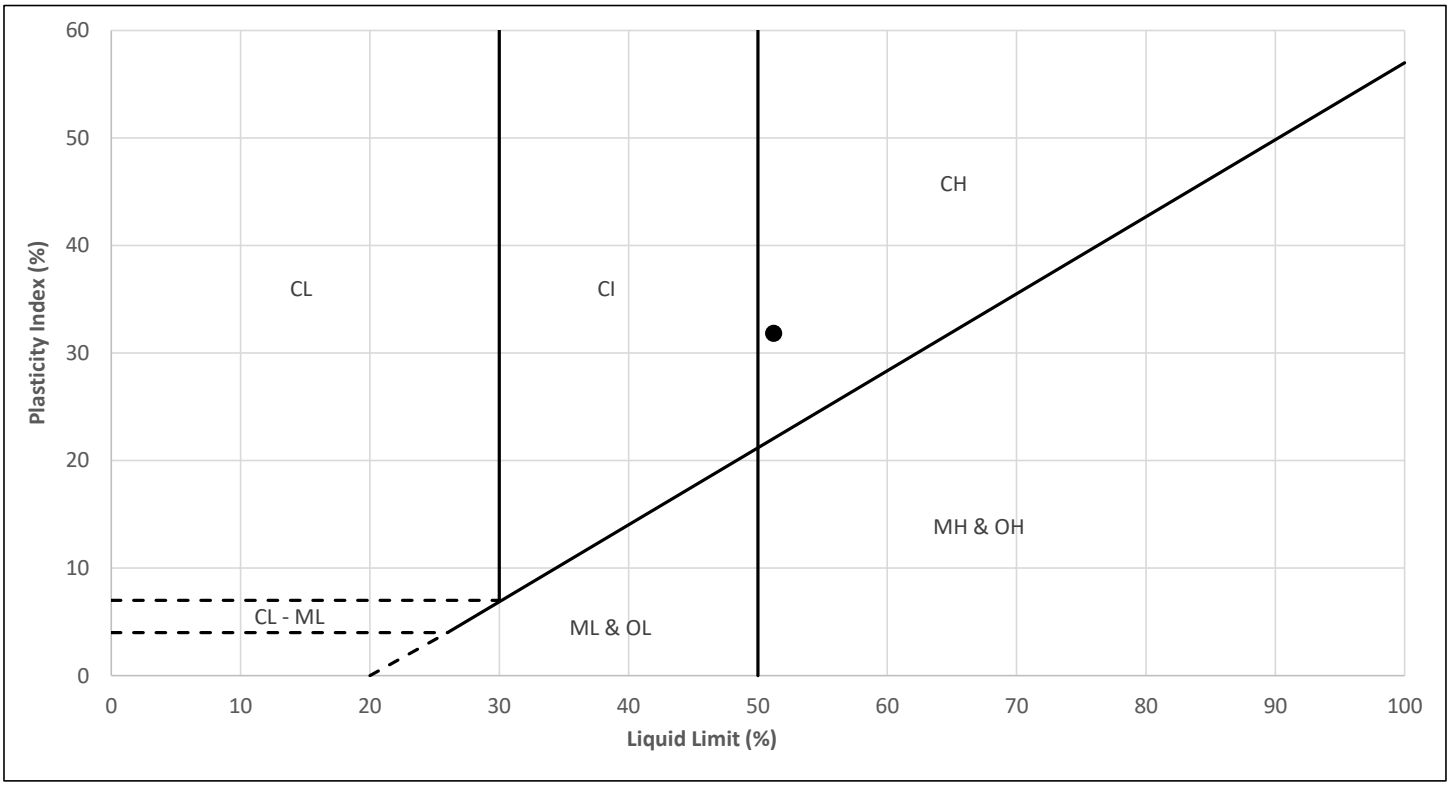
Project:	Snake Lake Reservoir Expansion	**Sample #:**	570AU3
Project No.:	1560-193-00	**Source:**	22BH570
Owner:	EID	**Sample Depth:**	4m
File No.:	AL - 570AU3	**Test Date:**	8-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.2
Plastic Limit (PL)	19.4
Plasticity Index (PI)	31.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

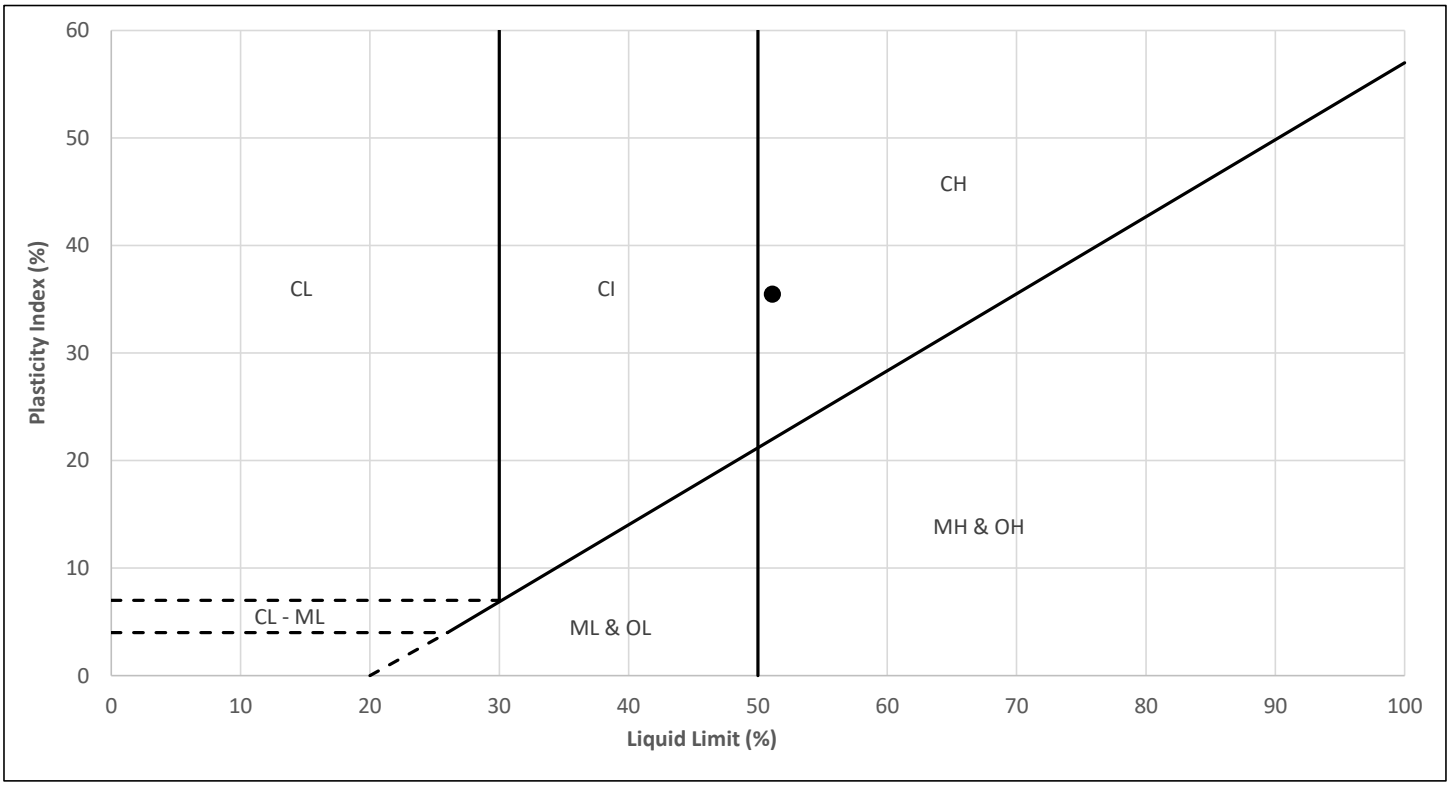
Project:	Snake Lake Reservoir Expansion	**Sample #:**	573AU2
Project No.:	1560-193-00	**Source:**	22BH573
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 573AU2	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.1
Plastic Limit (PL)	15.6
Plasticity Index (PI)	35.5

Soil Plasticity	High
Soil Classification	CH



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Lethbridge, Alberta T1H 5J3
Tel: (403)892-6036

ATTERBERG LIMITS

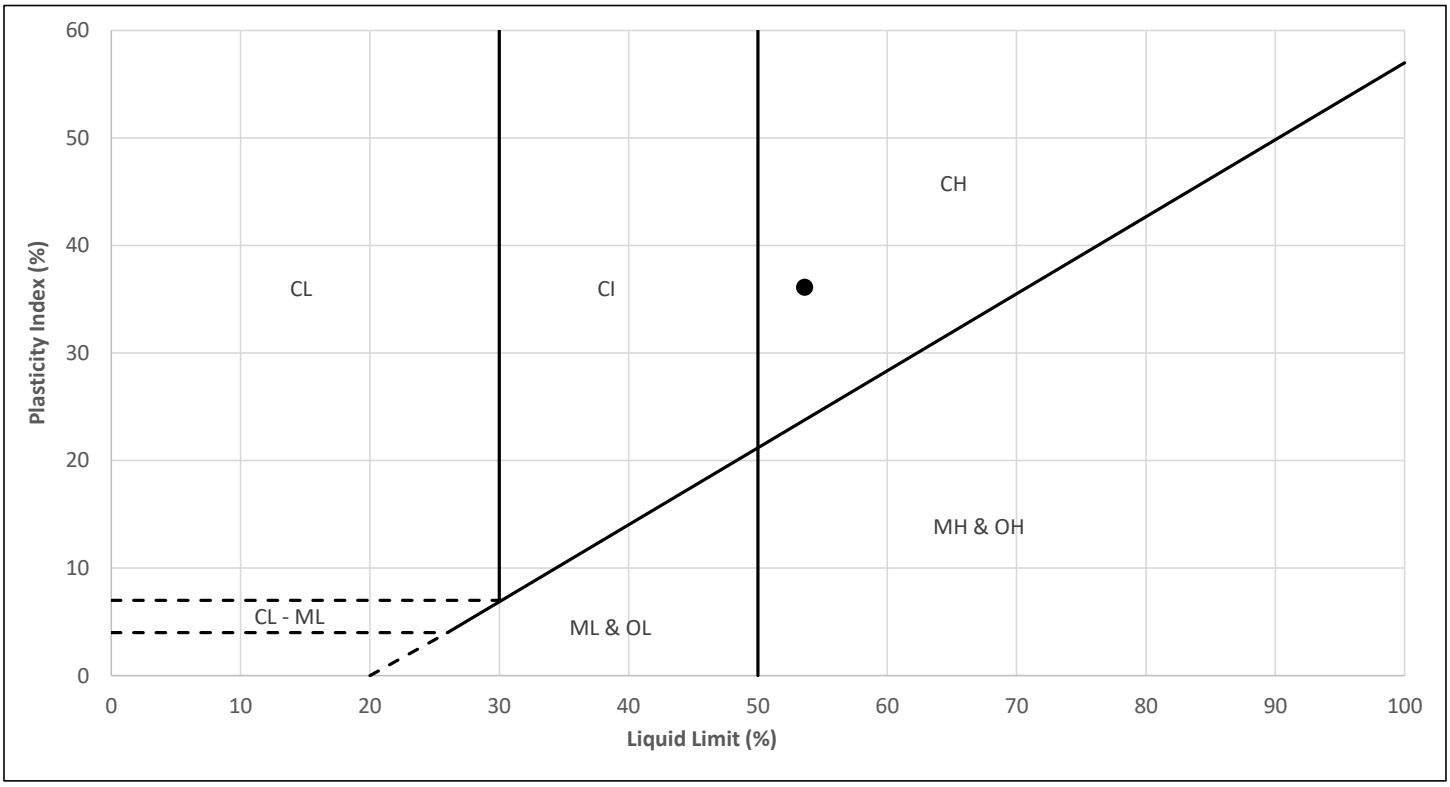
Project:	Snake Lake Reservoir Expansion	**Sample #:**	573AU3
Project No.:	1560-193-00	**Source:**	22BH573
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 573AU3	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.6
Plastic Limit (PL)	17.5
Plasticity Index (PI)	36.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

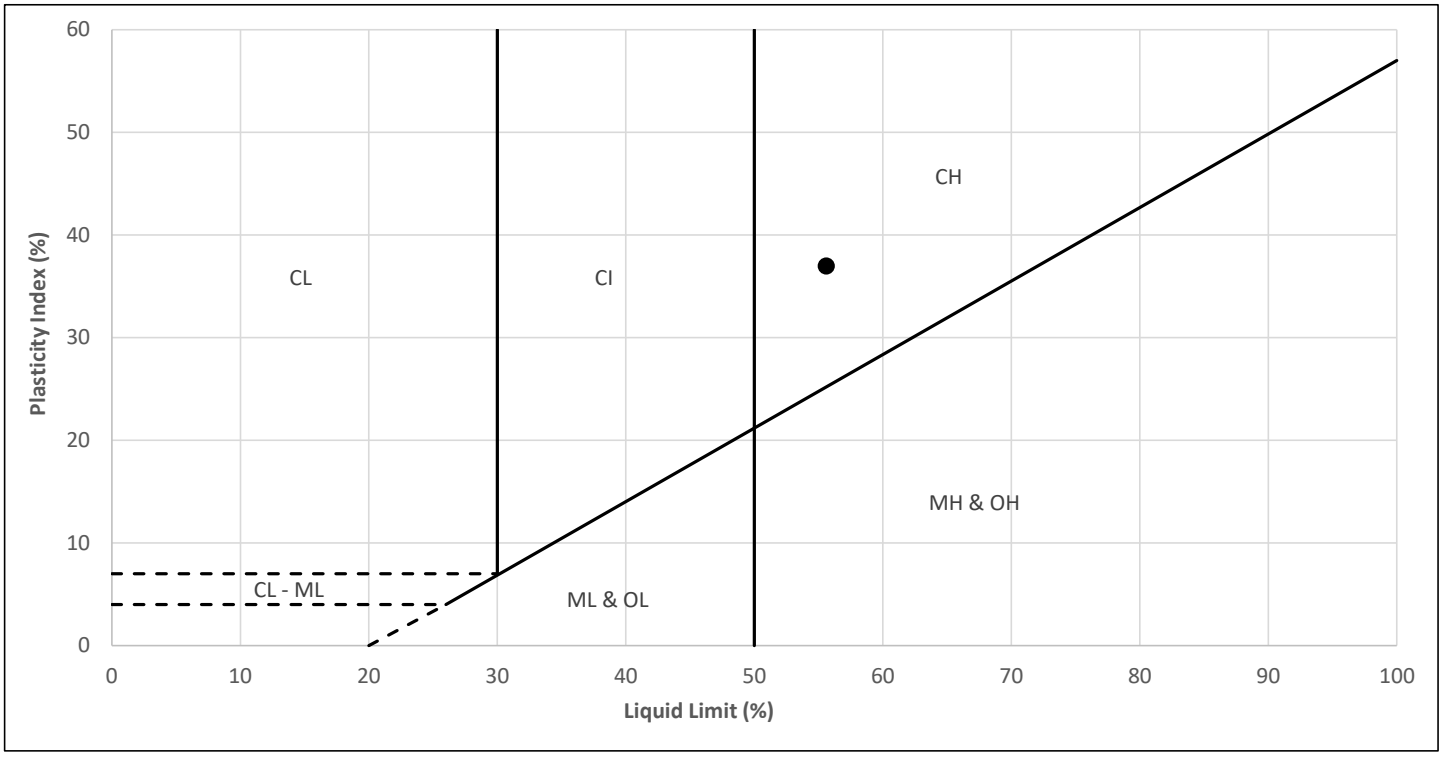
Project:	Snake Lake Reservoir Expansion	**Sample #:**	573AU4
Project No.:	1560-193-00	**Source:**	22BH573
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 573AU4	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.6
Plastic Limit (PL)	18.6
Plasticity Index (PI)	37.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

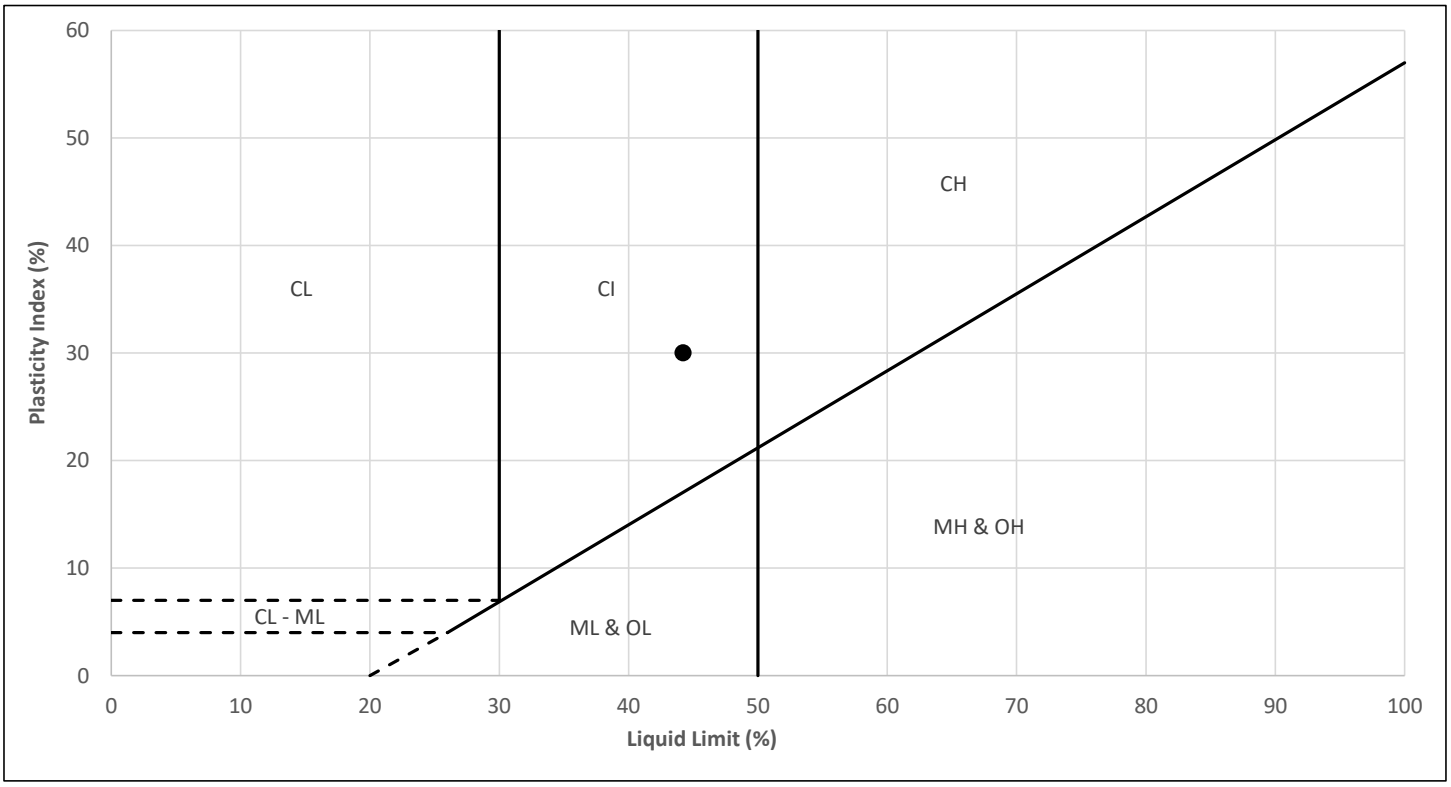
Project:	Snake Lake Reservoir Expansion	**Sample #:**	574AU1
Project No.:	1560-193-00	**Source:**	22BH574
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 574AU1	**Test Date:**	11-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.2
Plastic Limit (PL)	14.2
Plasticity Index (PI)	30.0

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

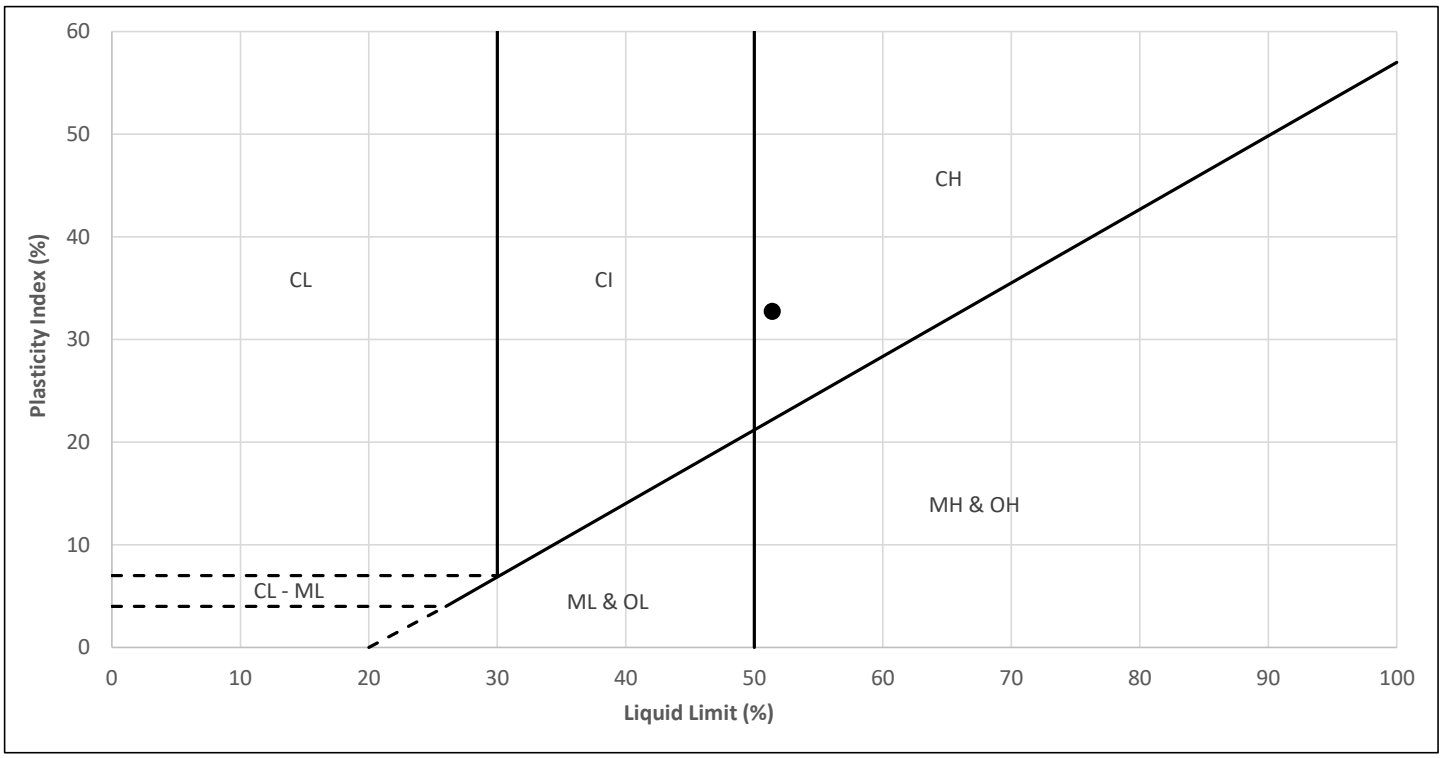
Project:	Snake Lake Reservoir Expansion	**Sample #:**	574AU3
Project No.:	1560-193-00	**Source:**	22BH574
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 574AU3	**Test Date:**	11-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.4
Plastic Limit (PL)	18.7
Plasticity Index (PI)	32.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

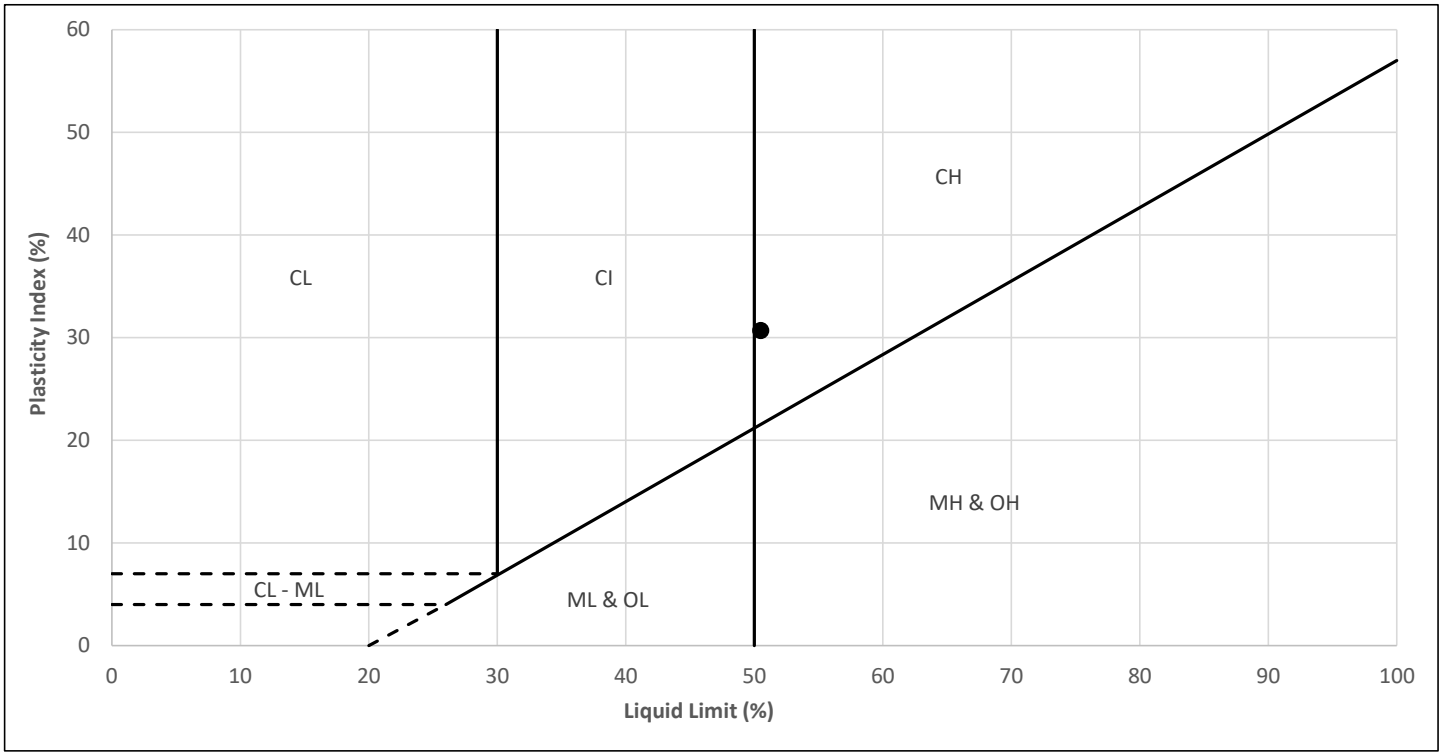
Project:	Snake Lake Reservoir Expansion	**Sample #:**	575AU2
Project No.:	1560-193-00	**Source:**	22BH575
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 575AU2	**Test Date:**	6-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.5
Plastic Limit (PL)	19.8
Plasticity Index (PI)	30.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

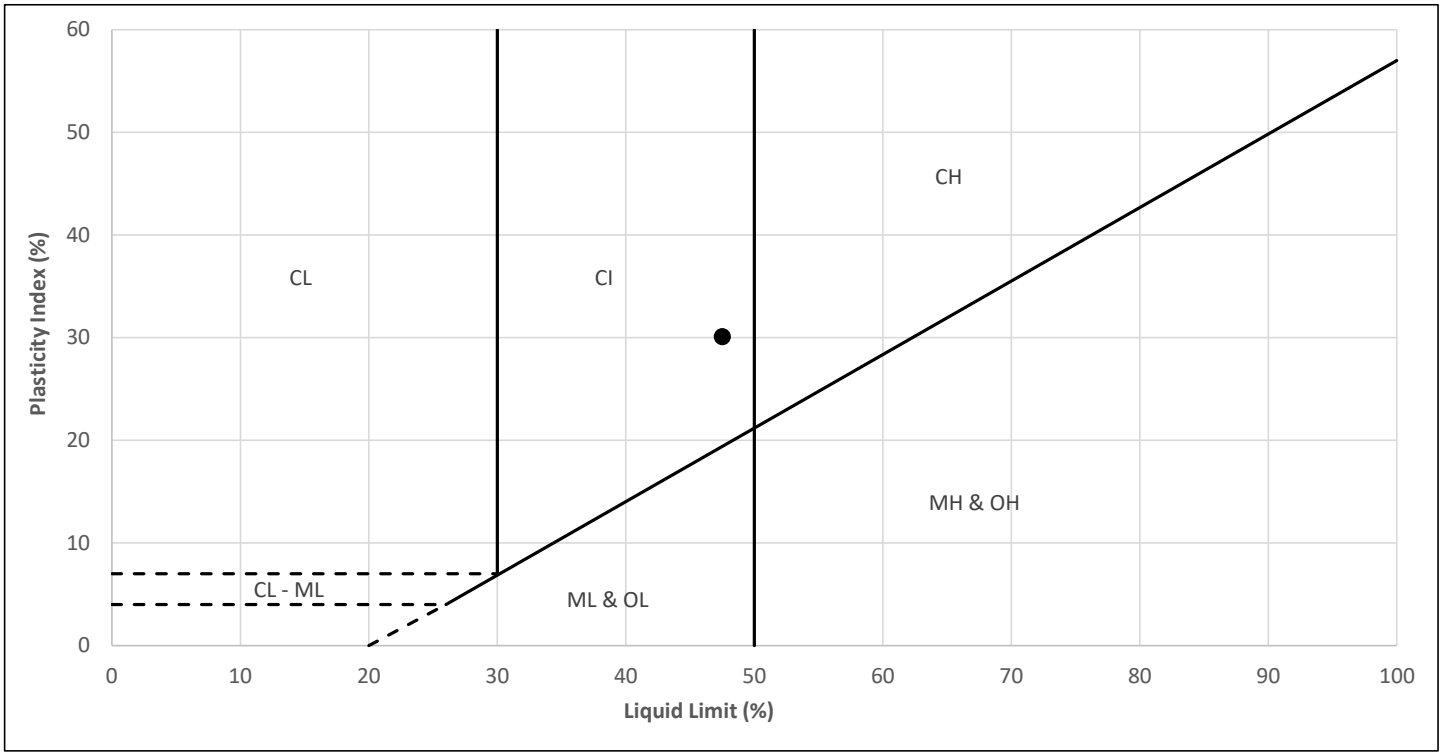
Project:	Snake Lake Reservoir Expansion	**Sample #:**	575AU3
Project No.:	1560-193-00	**Source:**	22BH575
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 575AU3	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	47.5
Plastic Limit (PL)	17.4
Plasticity Index (PI)	30.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

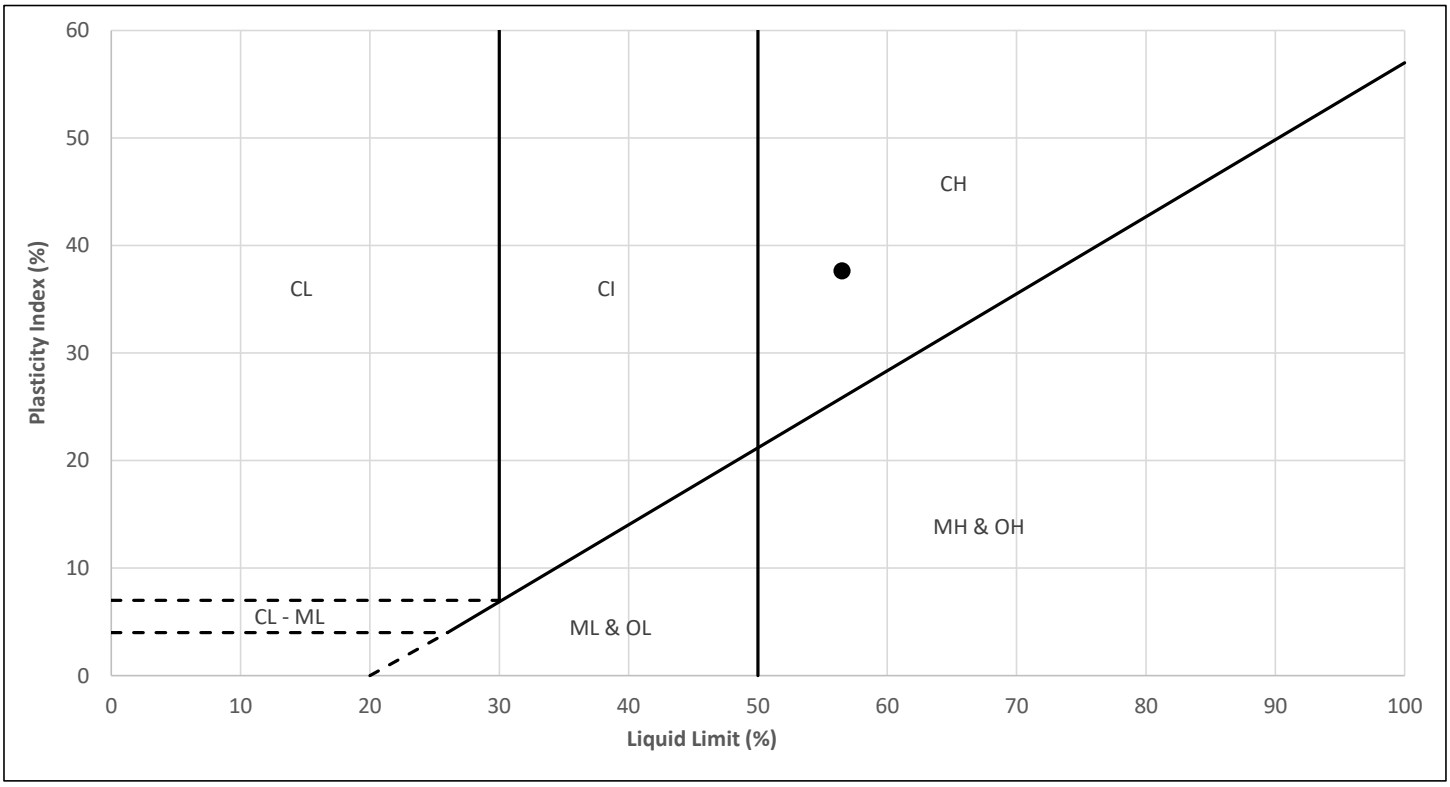
Project:	Snake Lake Reservoir Expansion	**Sample #:**	575AU4
Project No.:	1560-193-00	**Source:**	22BH575
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 575AU4	**Test Date:**	7-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	56.5
Plastic Limit (PL)	18.9
Plasticity Index (PI)	37.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

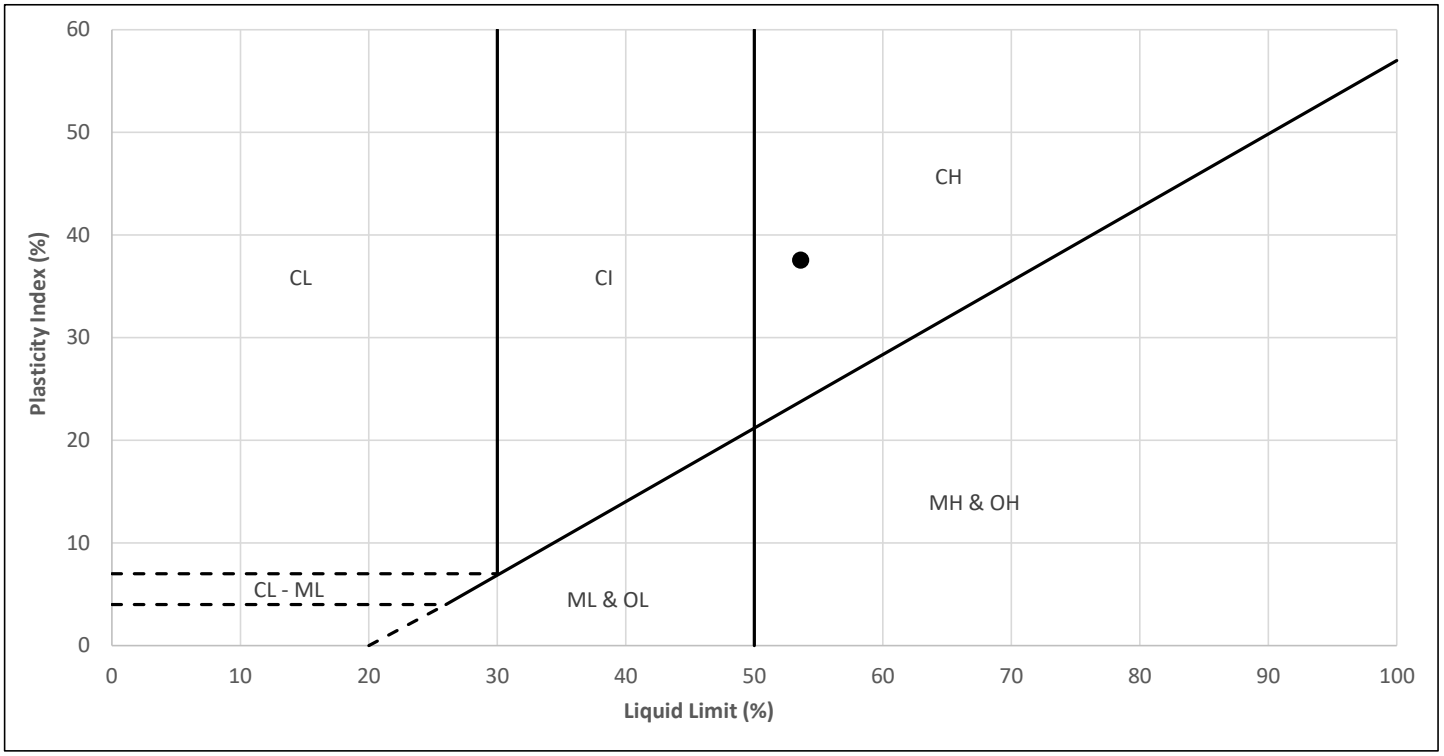
Project:	Snake Lake Reservoir Expansion	**Sample #:**	576AU1
Project No.:	1560-193-00	**Source:**	22BH576
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 576AU1	**Test Date:**	30-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.6
Plastic Limit (PL)	16.0
Plasticity Index (PI)	37.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

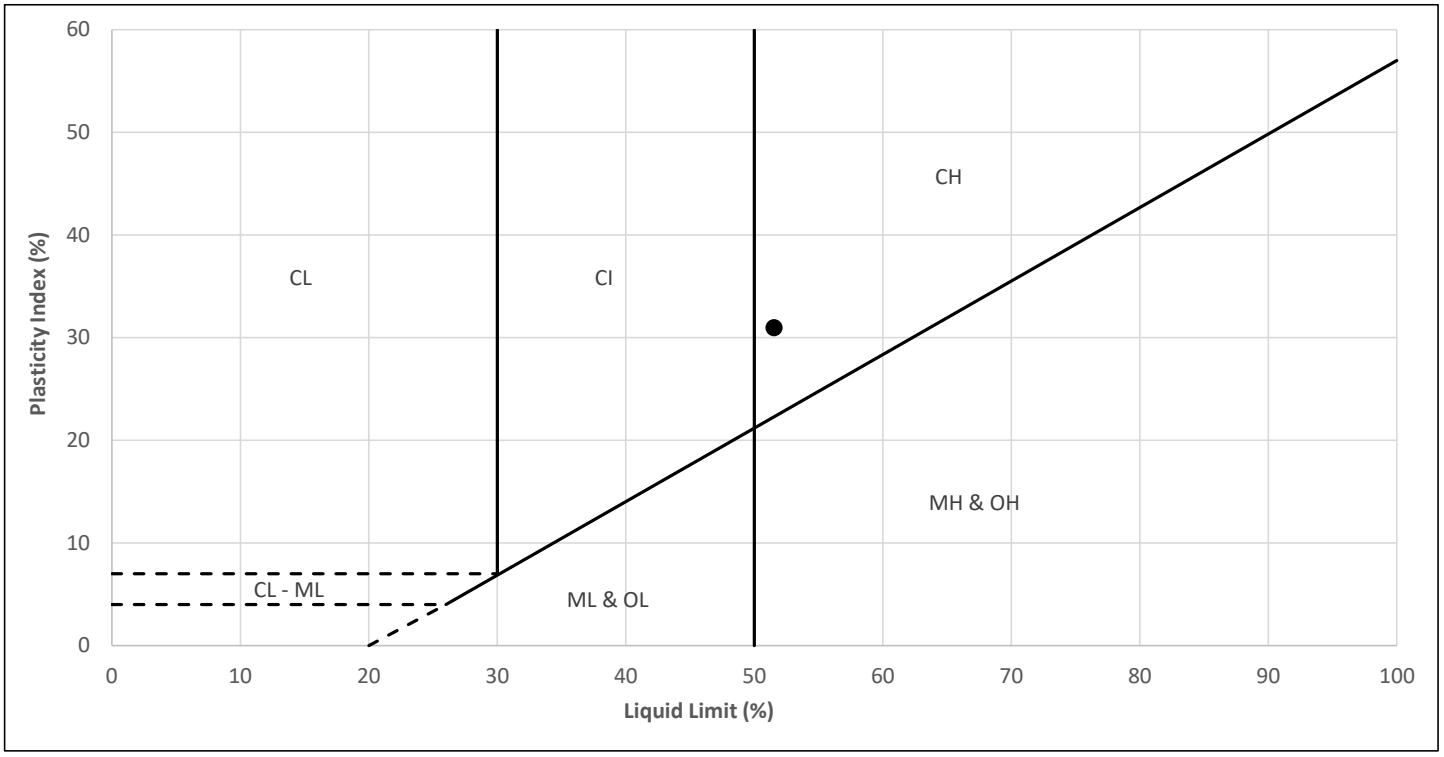
Project:	Snake Lake Reservoir Expansion	**Sample #:**	576AU3
Project No.:	1560-193-00	**Source:**	22BH576
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 576AU3	**Test Date:**	22-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.5
Plastic Limit (PL)	20.5
Plasticity Index (PI)	31.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

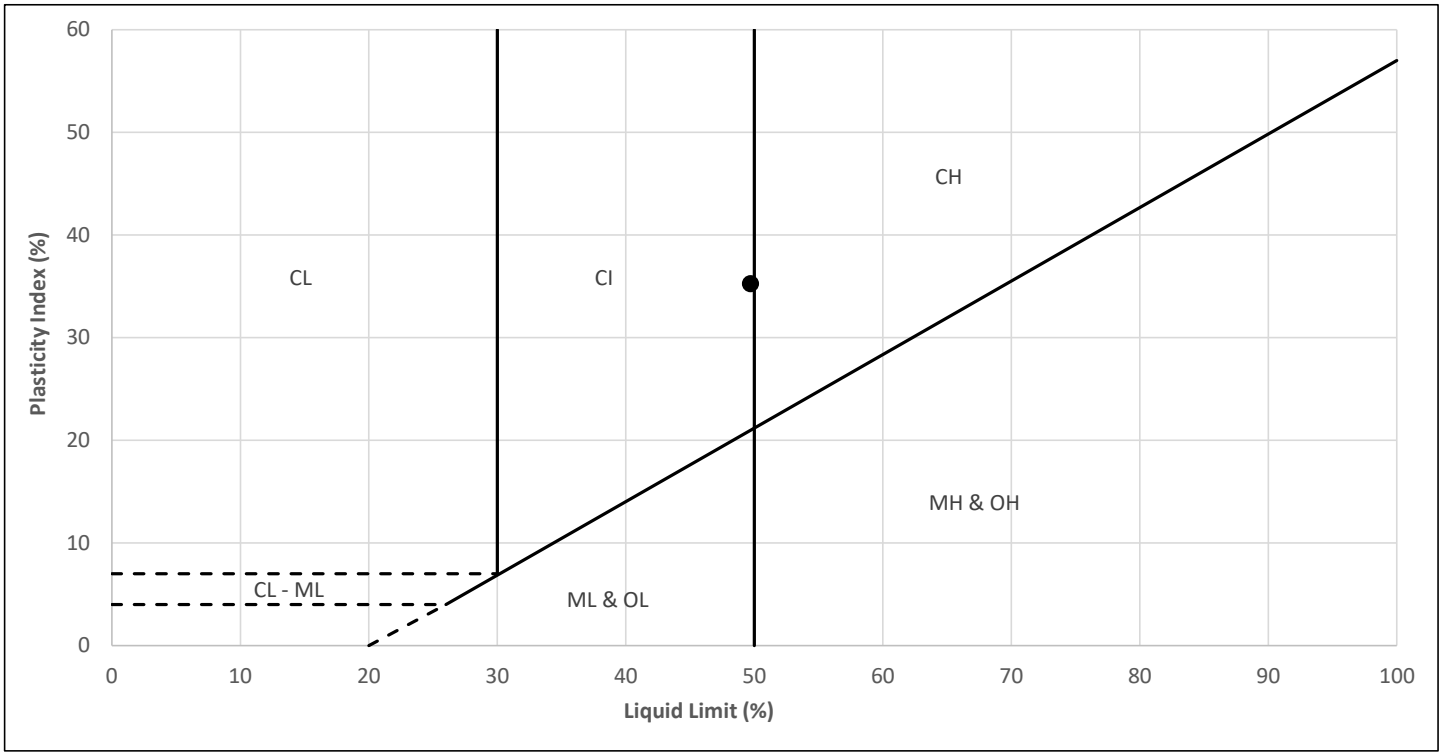
Project:	Snake Lake Reservoir Expansion	**Sample #:**	580AU1
Project No.:	1560-193-00	**Source:**	22BH580
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 580AU1	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.7
Plastic Limit (PL)	14.4
Plasticity Index (PI)	35.3

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

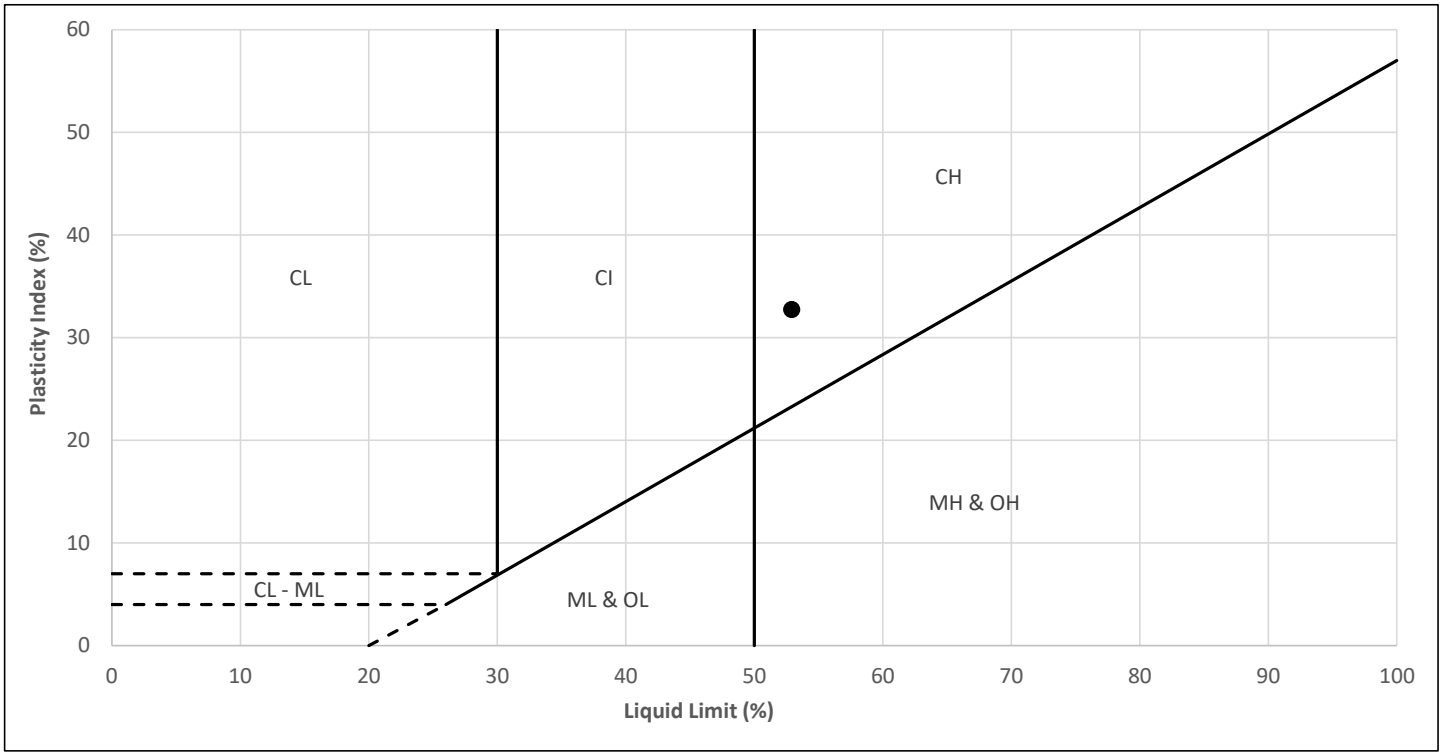
Project:	Snake Lake Reservoir Expansion	**Sample #:**	580AU3
Project No.:	1560-193-00	**Source:**	22BH580
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 580AU3	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.9
Plastic Limit (PL)	20.1
Plasticity Index (PI)	32.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

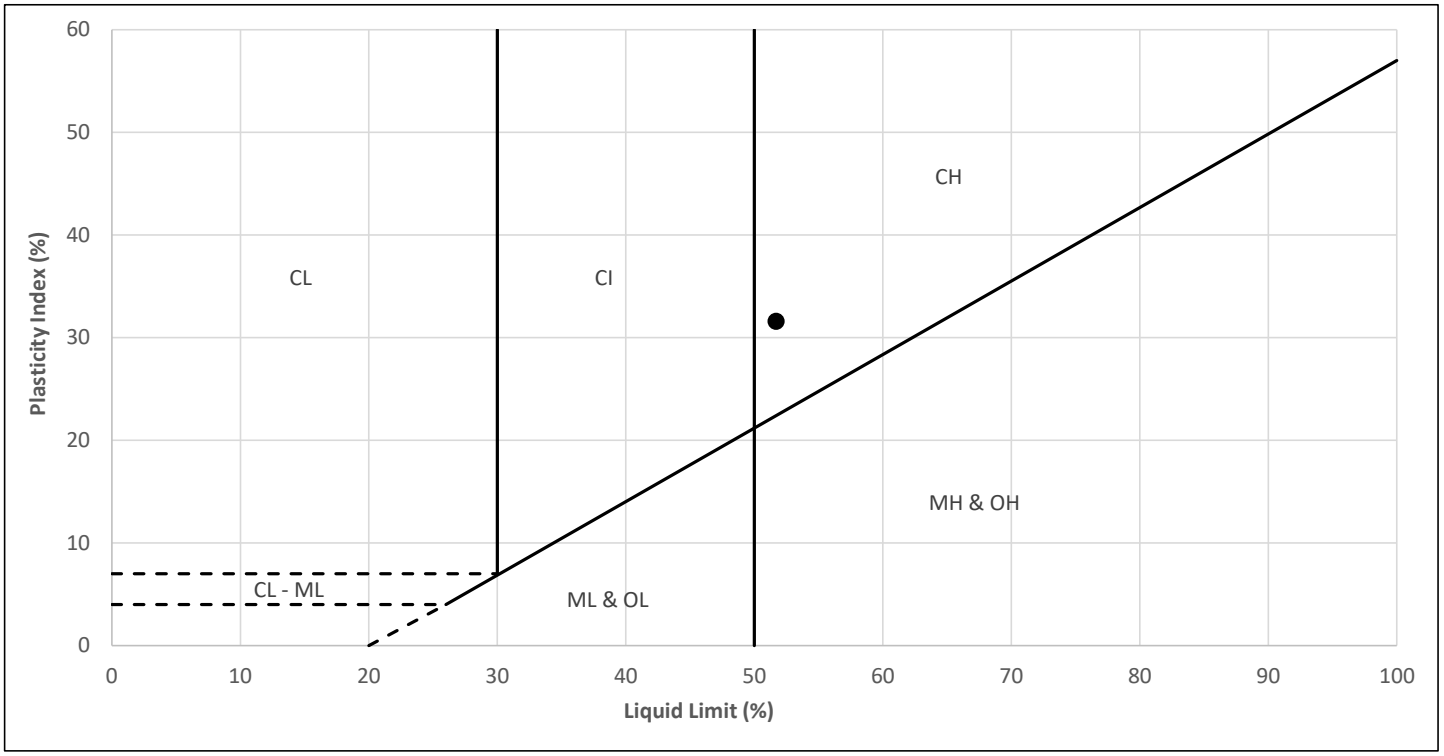
Project:	Snake Lake Reservoir Expansion	**Sample #:**	581AU3
Project No.:	1560-193-00	**Source:**	22BH581
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 581AU3	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.7
Plastic Limit (PL)	20.1
Plasticity Index (PI)	31.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

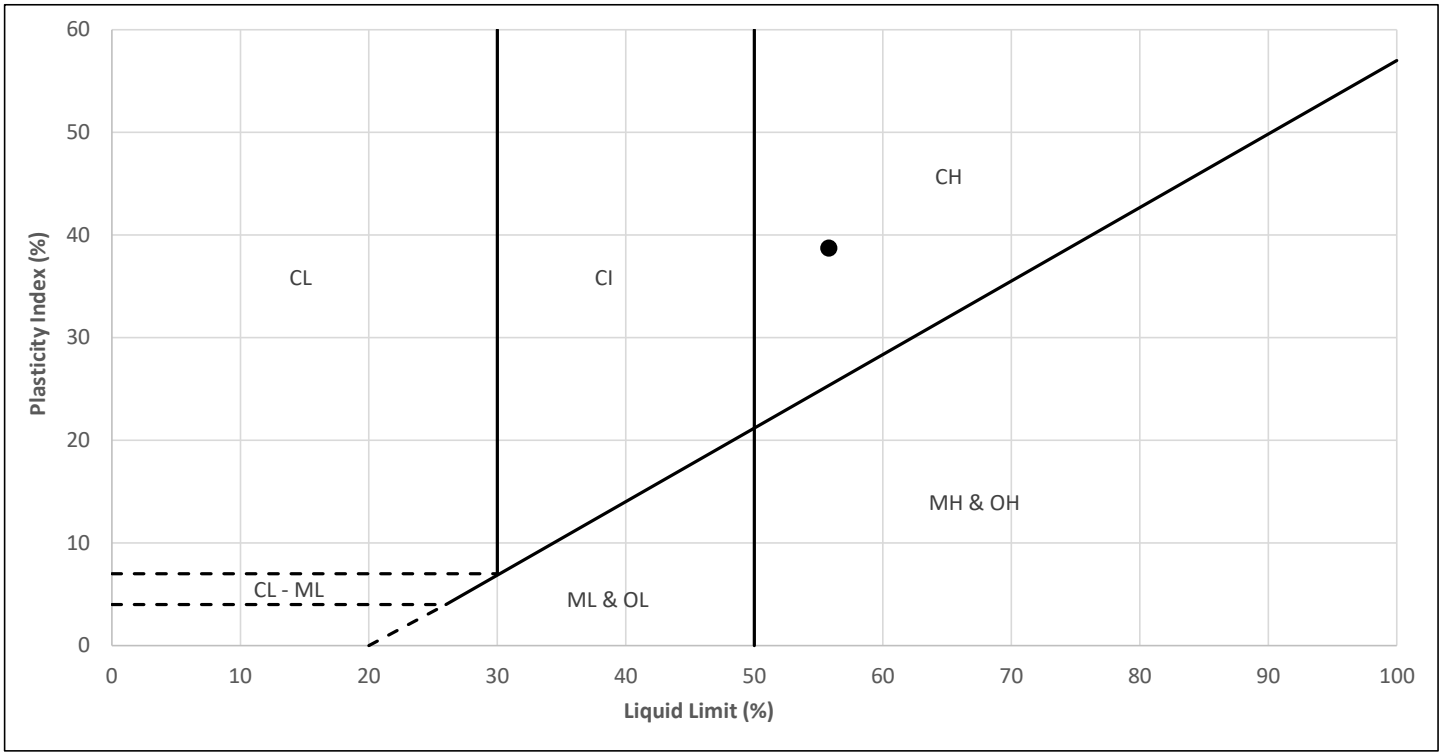
Project:	Snake Lake Reservoir Expansion	**Sample #:**	581AU4
Project No.:	1560-193-00	**Source:**	22BH581
Owner:	EID	**Sample Depth:**	5.5m
File No.:	AL - 581AU4	**Test Date:**	30-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	55.8
Plastic Limit (PL)	17.1
Plasticity Index (PI)	38.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

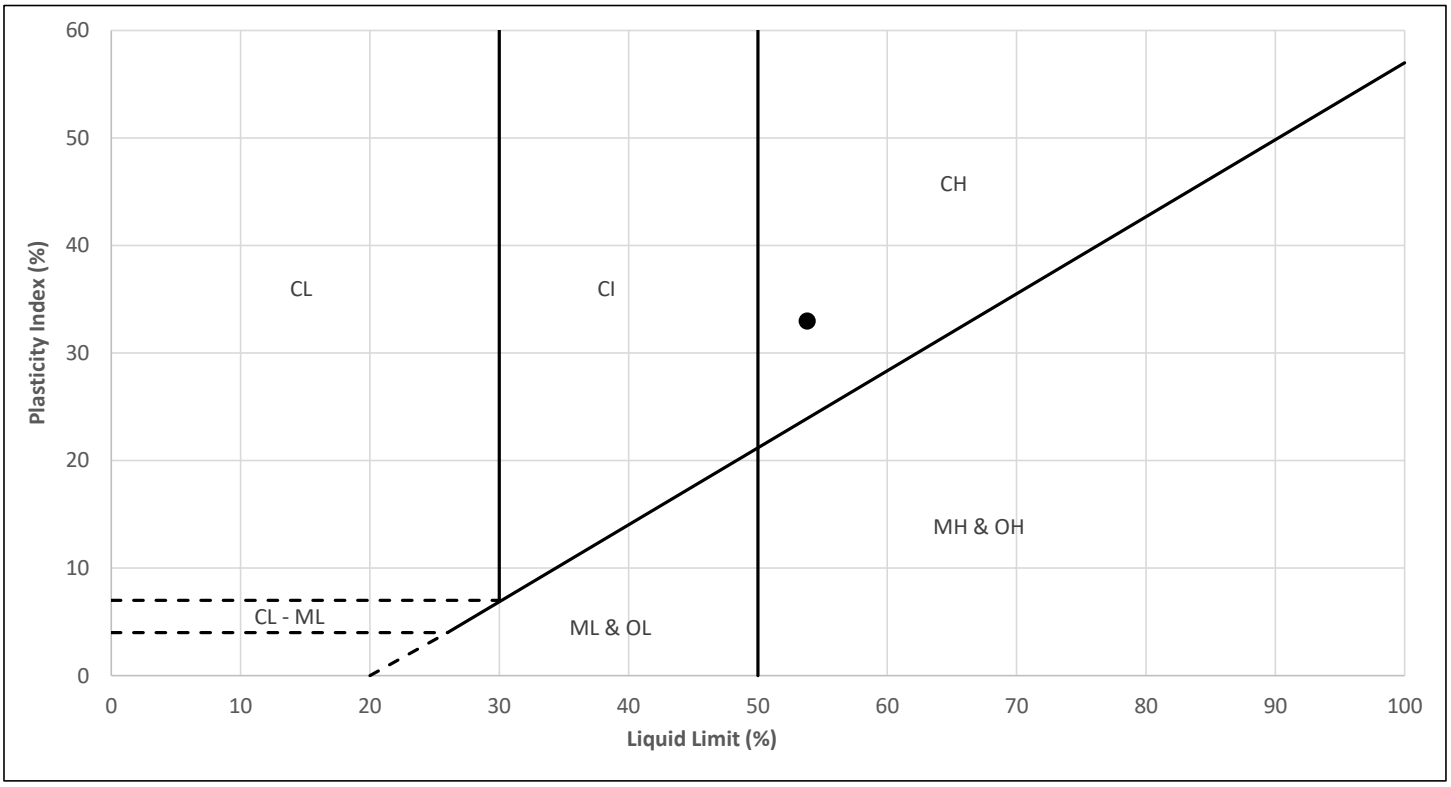
Project:	Snake Lake Reservoir Expansion	**Sample #:**	585AU2
Project No.:	1560-193-00	**Source:**	22BH585
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 585AU2	**Test Date:**	30-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	53.8
Plastic Limit (PL)	20.8
Plasticity Index (PI)	33.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

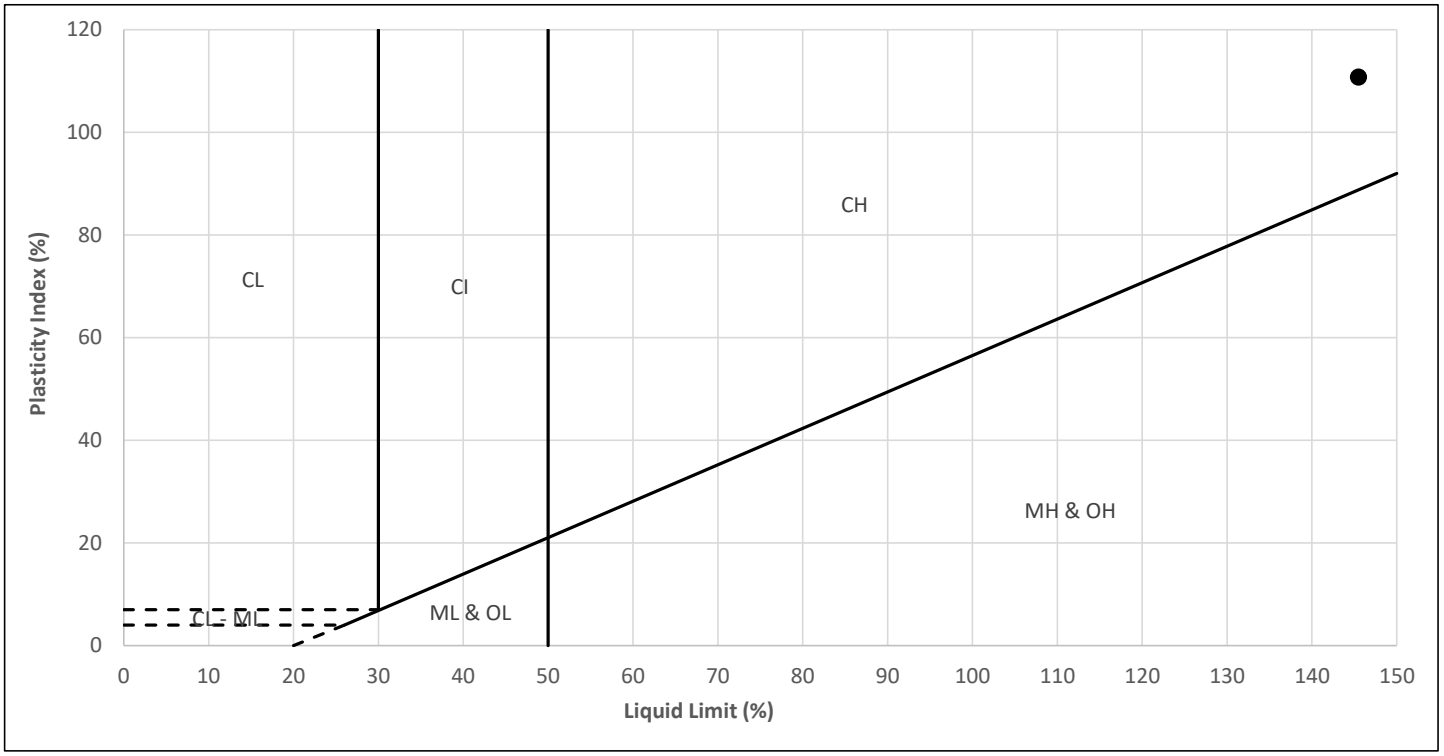
Project:	Snake Lake Reservoir Expansion	**Sample #:**	585AU3
Project No.:	1560-193-00	**Source:**	22BH585
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 585AU3	**Test Date:**	20-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	145.5
Plastic Limit (PL)	34.7
Plasticity Index (PI)	110.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

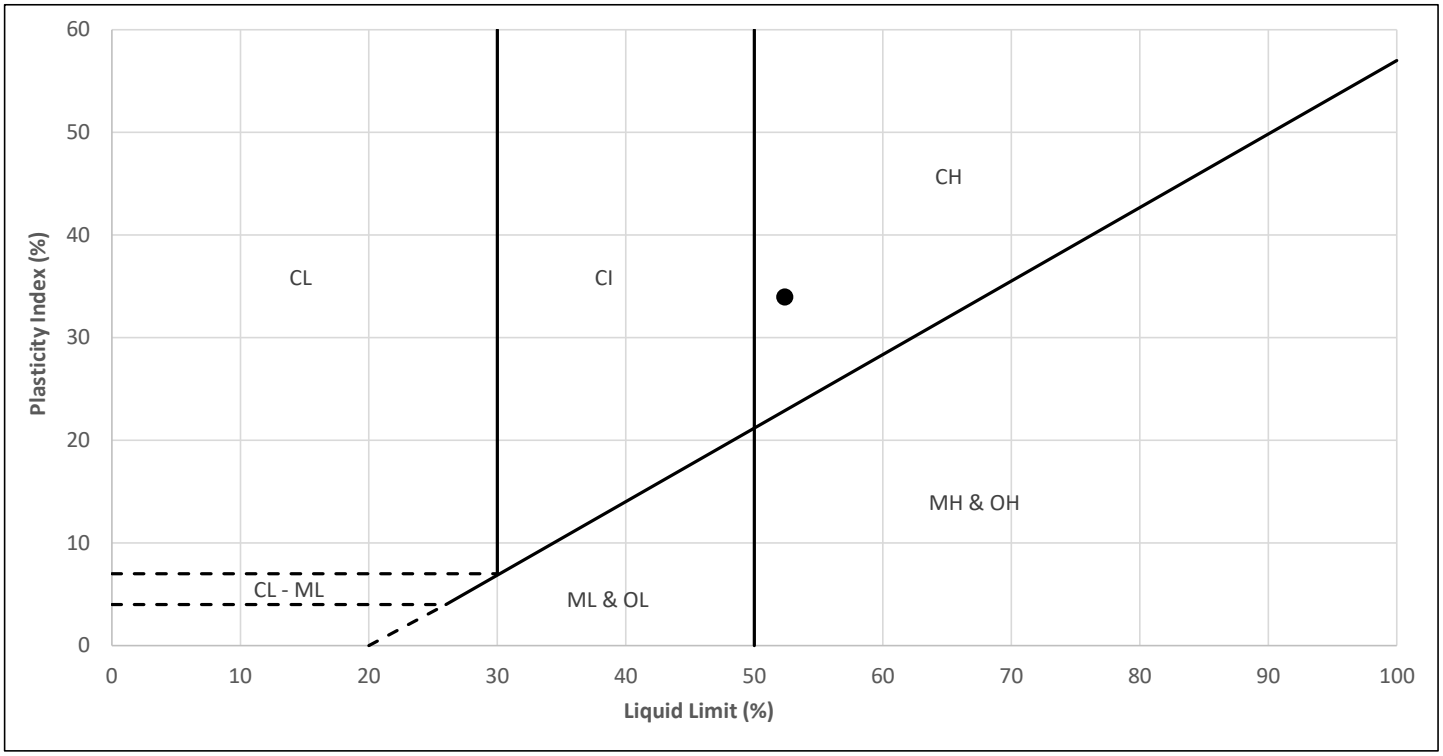
Project:	Snake Lake Reservoir Expansion	**Sample #:**	585AU3
Project No.:	1560-193-00	**Source:**	22BH585
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 585AU3	**Test Date:**	26-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	52.4
Plastic Limit (PL)	18.4
Plasticity Index (PI)	34.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

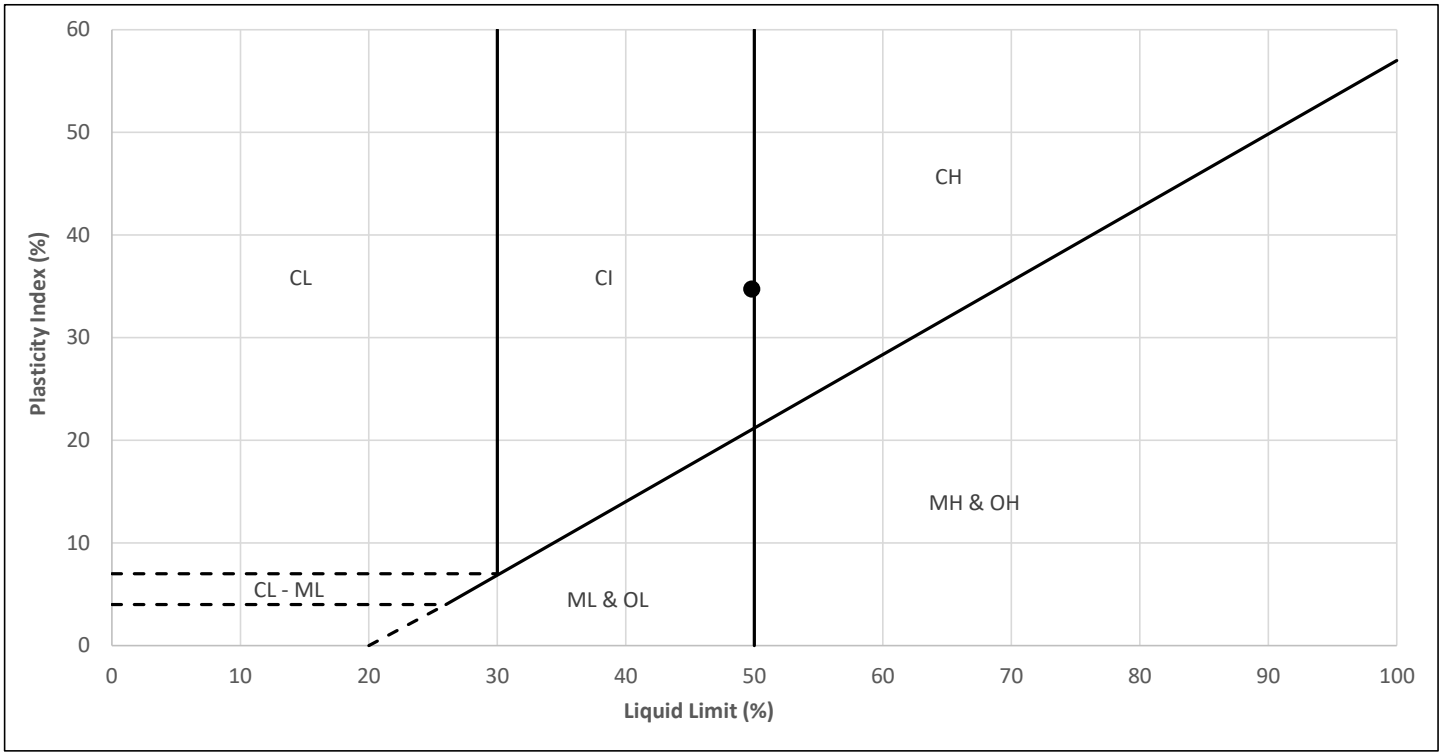
Project:	Snake Lake Reservoir Expansion	**Sample #:**	586AU1
Project No.:	1560-193-00	**Source:**	22BH586
Owner:	EID	**Sample Depth:**	1.0m
File No.:	AL - 586AU1	**Test Date:**	30-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.8
Plastic Limit (PL)	15.0
Plasticity Index (PI)	34.8

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

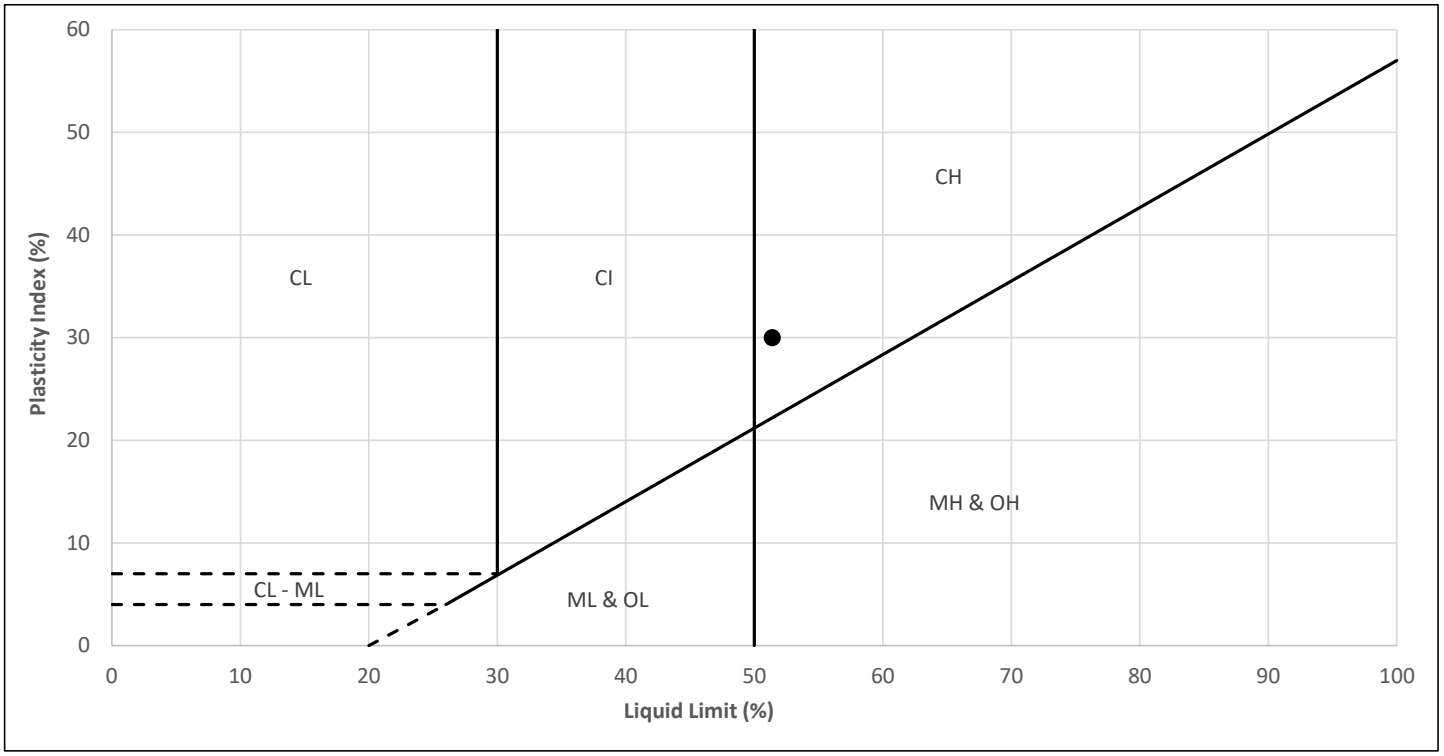
Project:	Snake Lake Reservoir Expansion	**Sample #:**	586AU3
Project No.:	1560-193-00	**Source:**	22BH586
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 586AU3	**Test Date:**	29-Sep-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.4
Plastic Limit (PL)	21.4
Plasticity Index (PI)	30.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

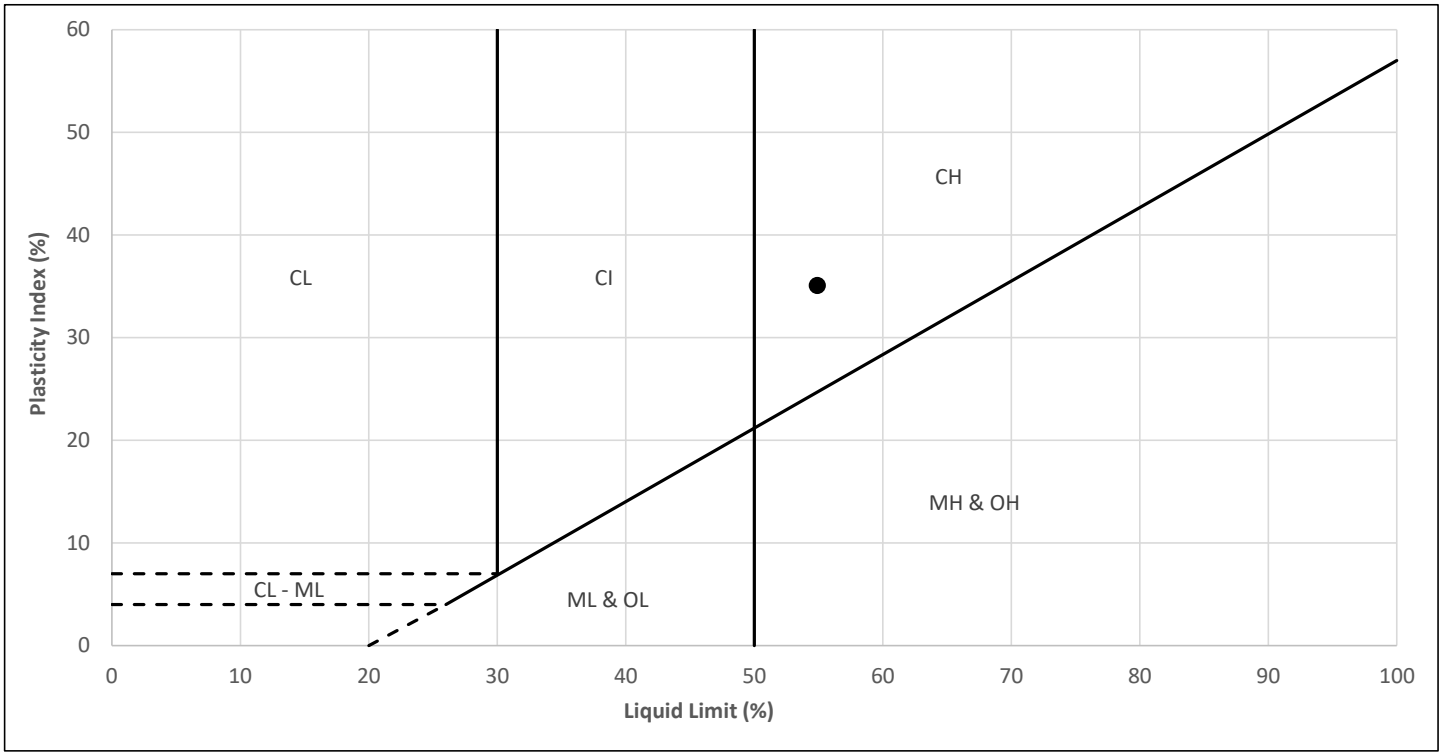
Project:	Snake Lake Reservoir Expansion	**Sample #:**	587AU2
Project No.:	1560-193-00	**Source:**	22BH587
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 587AU2	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.9
Plastic Limit (PL)	19.8
Plasticity Index (PI)	35.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

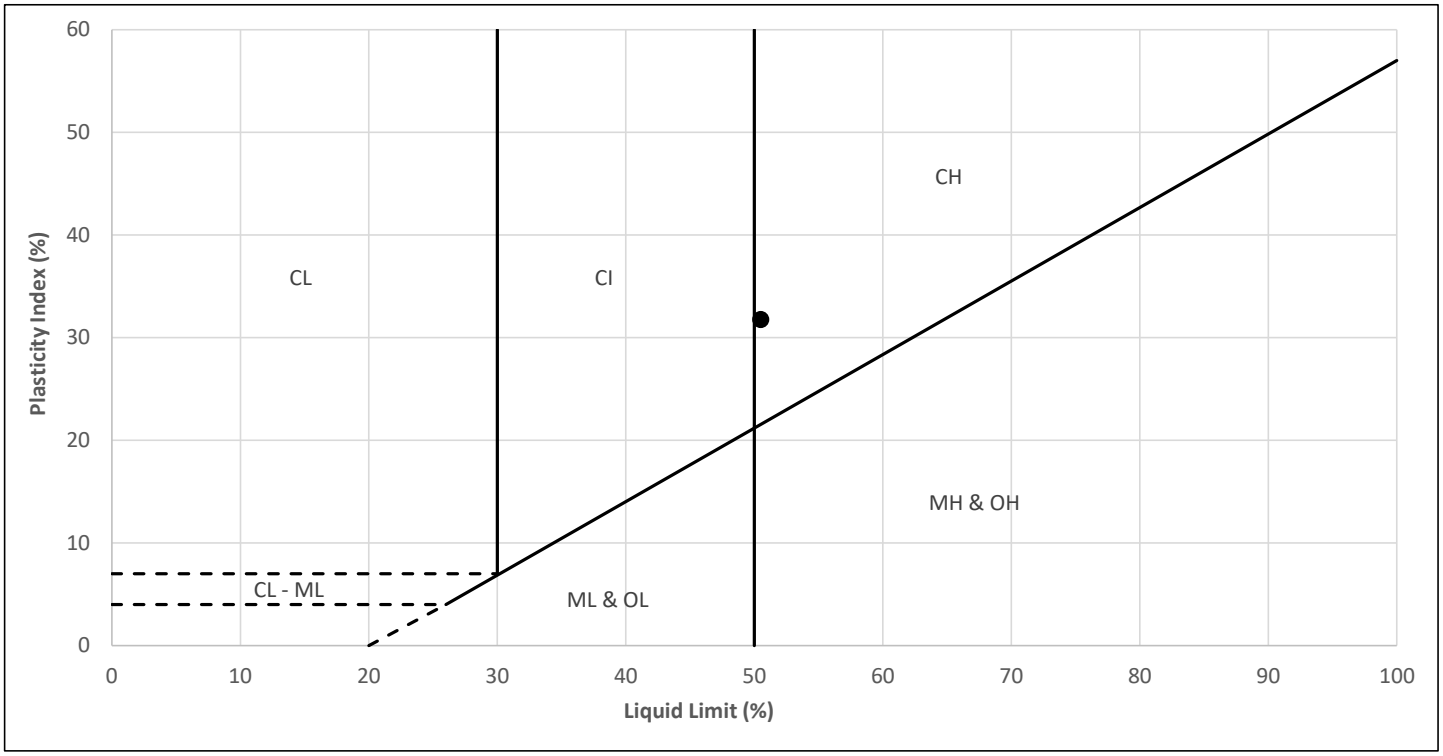
Project:	Snake Lake Reservoir Expansion	**Sample #:**	587AU3
Project No.:	1560-193-00	**Source:**	22BH587
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 587AU3	**Test Date:**	21-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.5
Plastic Limit (PL)	18.7
Plasticity Index (PI)	31.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

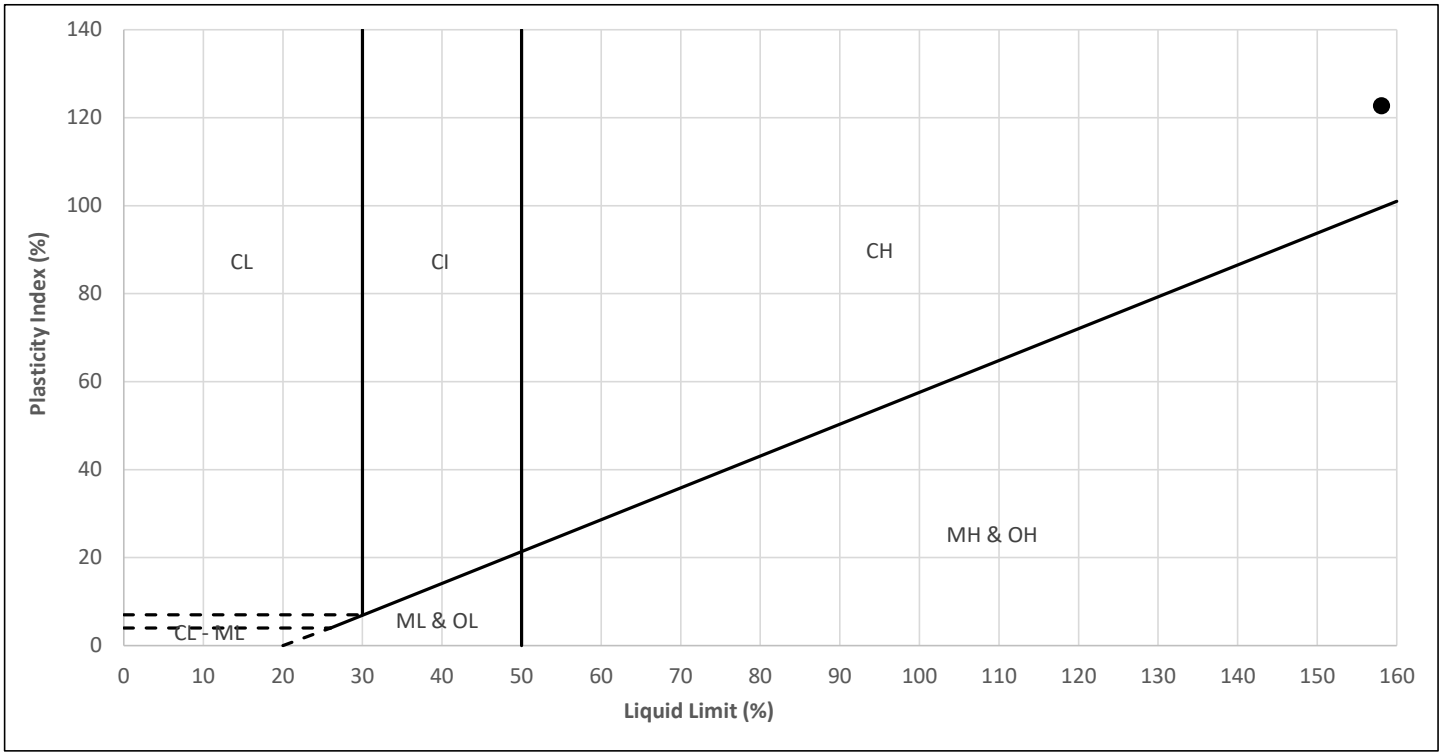
Project:	Snake Lake Reservoir Expansion	**Sample #:**	587AU4
Project No.:	1560-193-00	**Source:**	22BH587
Owner:	EID	**Sample Depth:**	4.0m
File No.:	AL - 587AU4	**Test Date:**	22-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	158.1
Plastic Limit (PL)	35.4
Plasticity Index (PI)	122.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

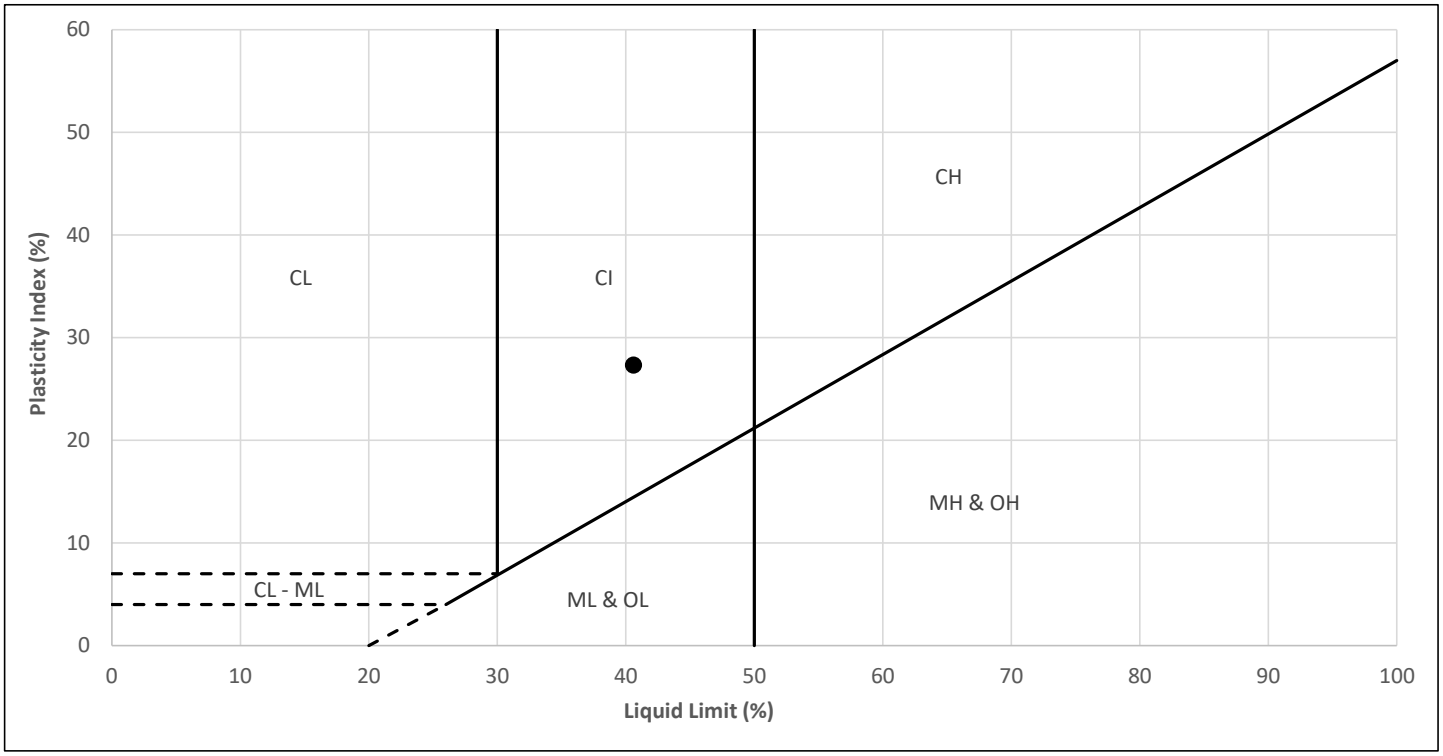
Project:	Snake Lake Reservoir Expansion	**Sample #:**	588AU1
Project No.:	1560-193-00	**Source:**	22BH588
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 588AU1	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	40.6
Plastic Limit (PL)	13.3
Plasticity Index (PI)	27.3

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

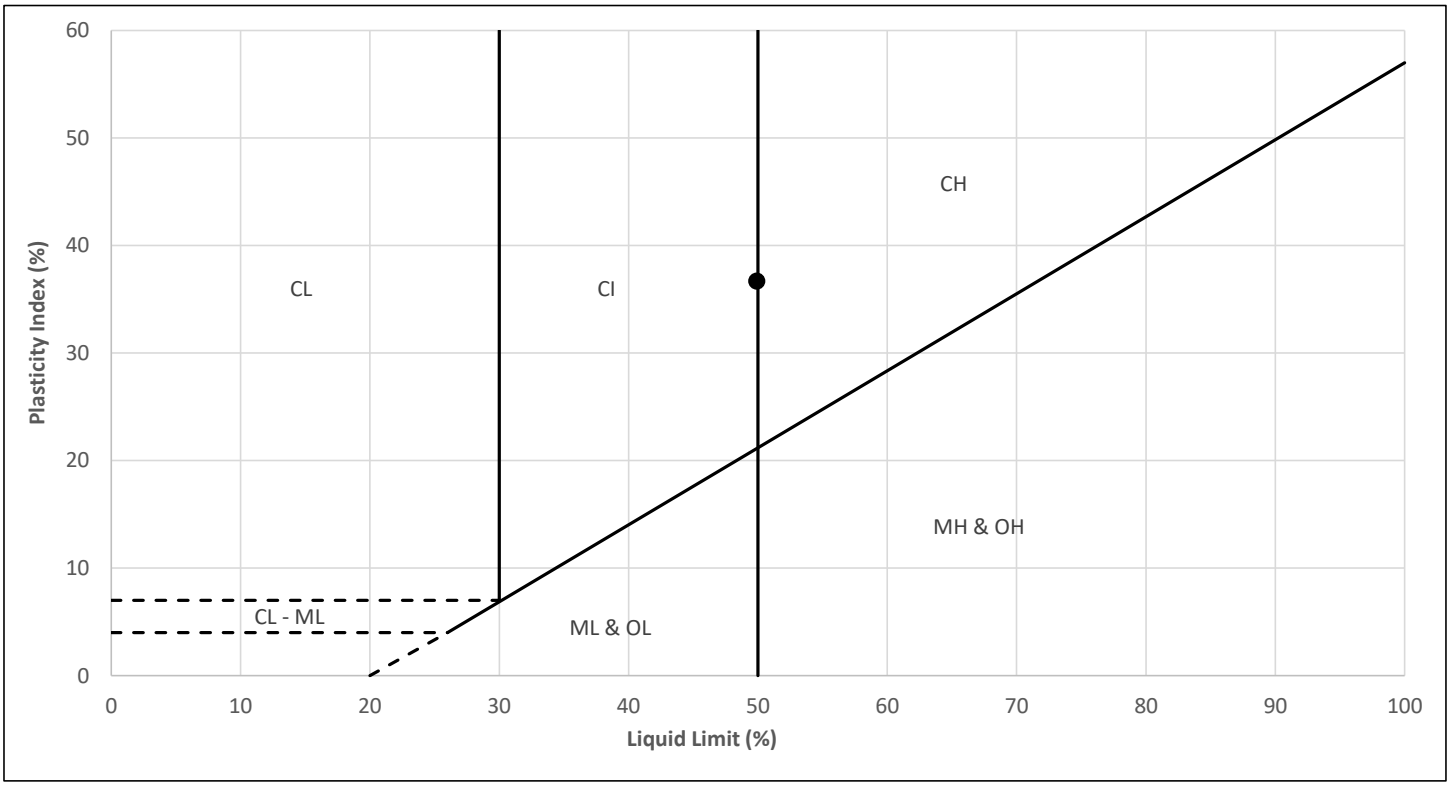
Project:	Snake Lake Reservoir Expansion	**Sample #:**	588AU3
Project No.:	1560-193-00	**Source:**	22BH588
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 588AU3	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	49.9
Plastic Limit (PL)	13.2
Plasticity Index (PI)	36.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

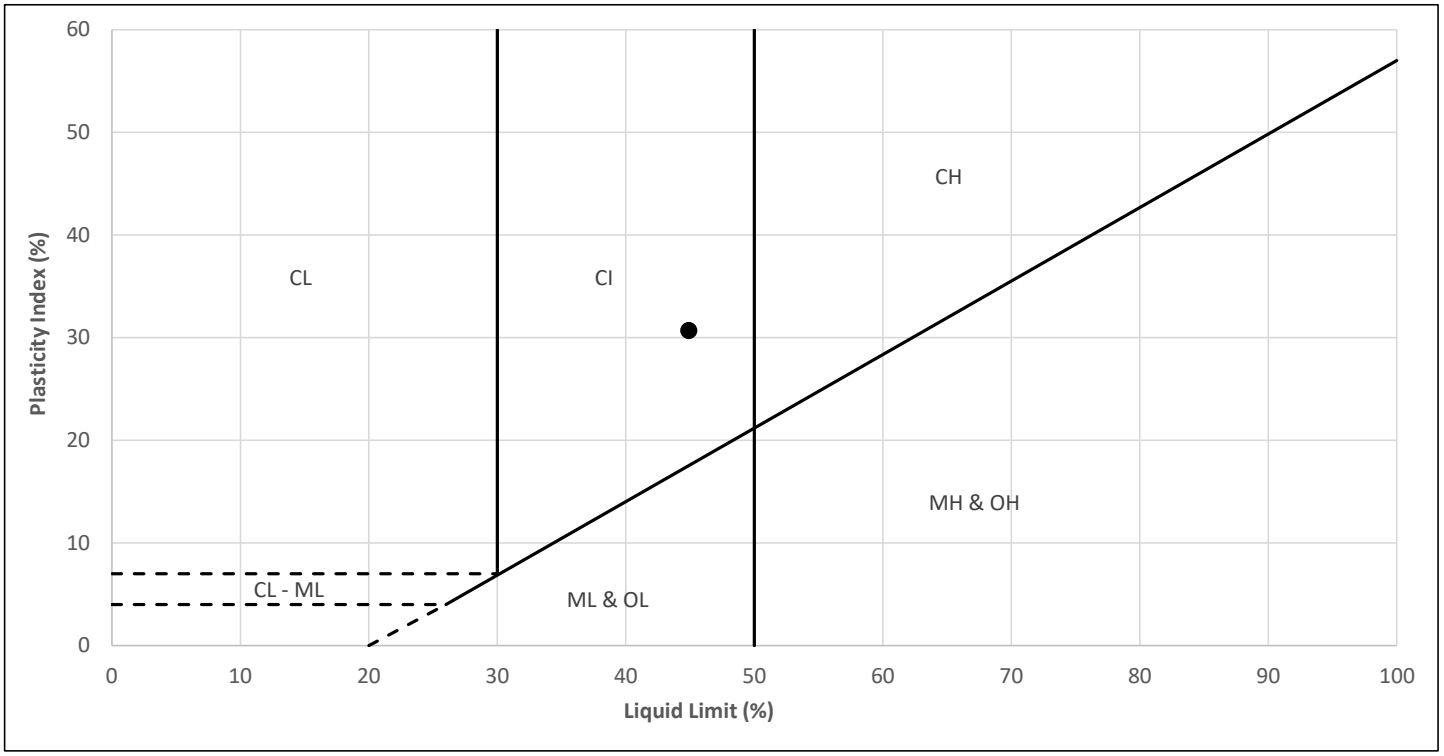
Project:	Snake Lake Reservoir Expansion	**Sample #:**	589AU2
Project No.:	1560-193-00	**Source:**	22BH589
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 589AU2	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.9
Plastic Limit (PL)	14.2
Plasticity Index (PI)	30.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

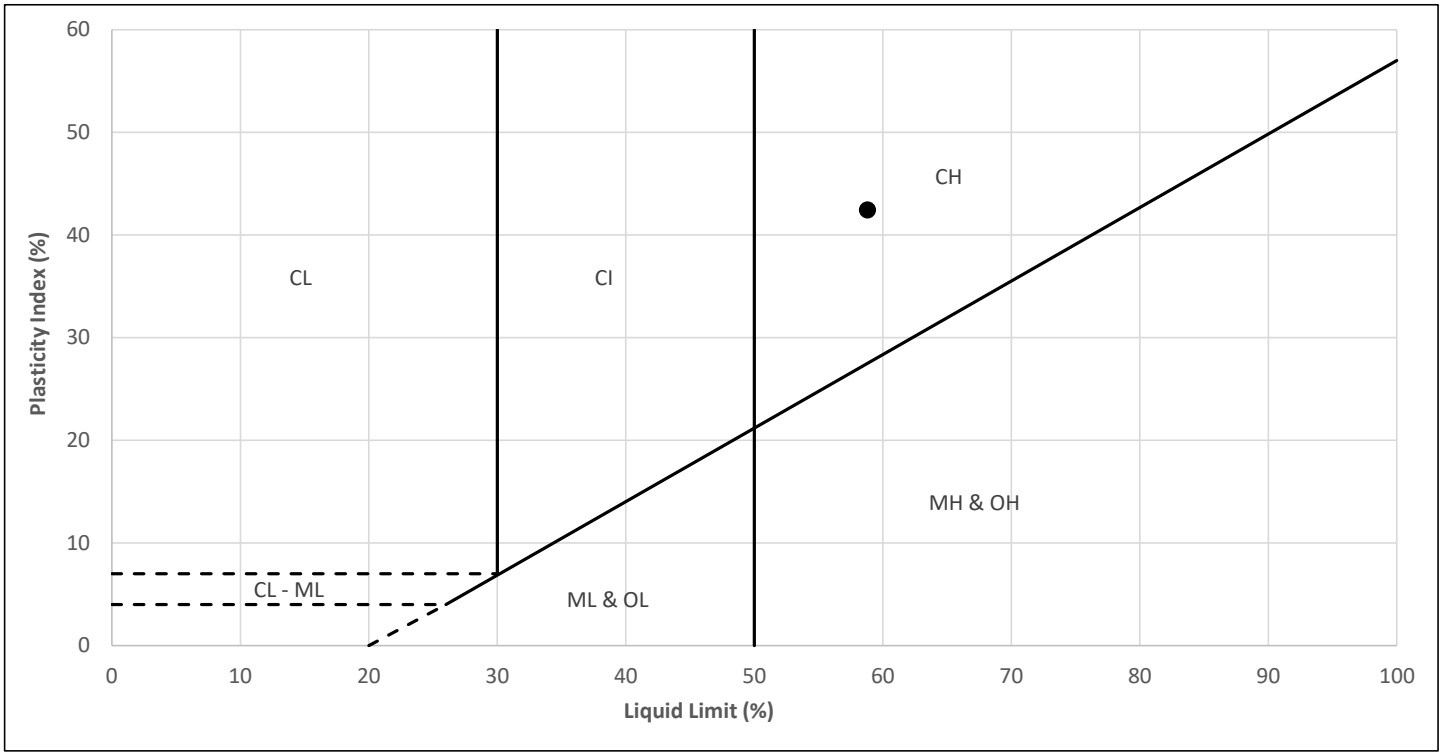
Project:	Snake Lake Reservoir Expansion	**Sample #:**	589AU3
Project No.:	1560-193-00	**Source:**	22BH589
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 589AU3	**Test Date:**	21-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	58.8
Plastic Limit (PL)	16.4
Plasticity Index (PI)	42.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

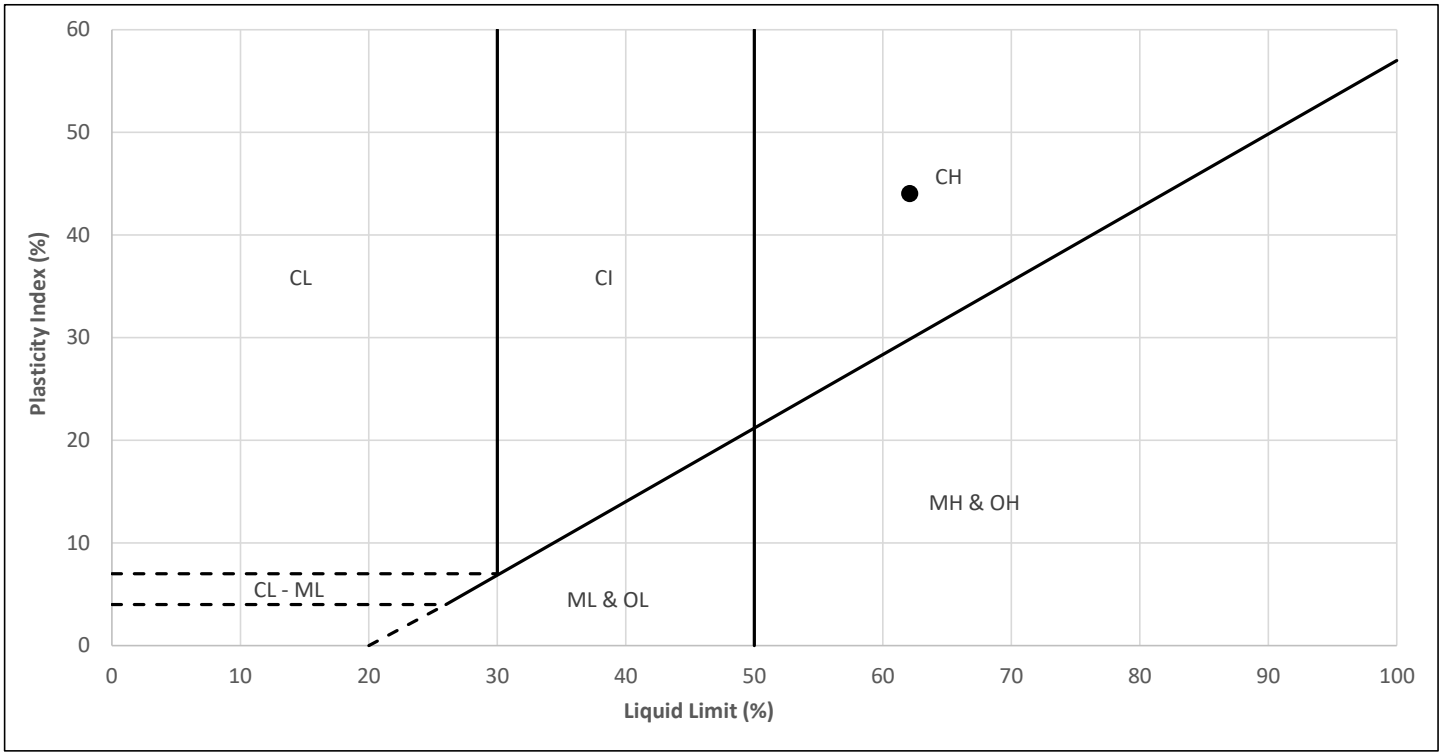
Project:	Snake Lake Reservoir Expansion	**Sample #:**	589AU4
Project No.:	1560-193-00	**Source:**	22BH589
Owner:	EID	**Sample Depth:**	2.5m
File No.:	AL - 589AU4	**Test Date:**	24-Aug-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	62.1
Plastic Limit (PL)	18.0
Plasticity Index (PI)	44.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

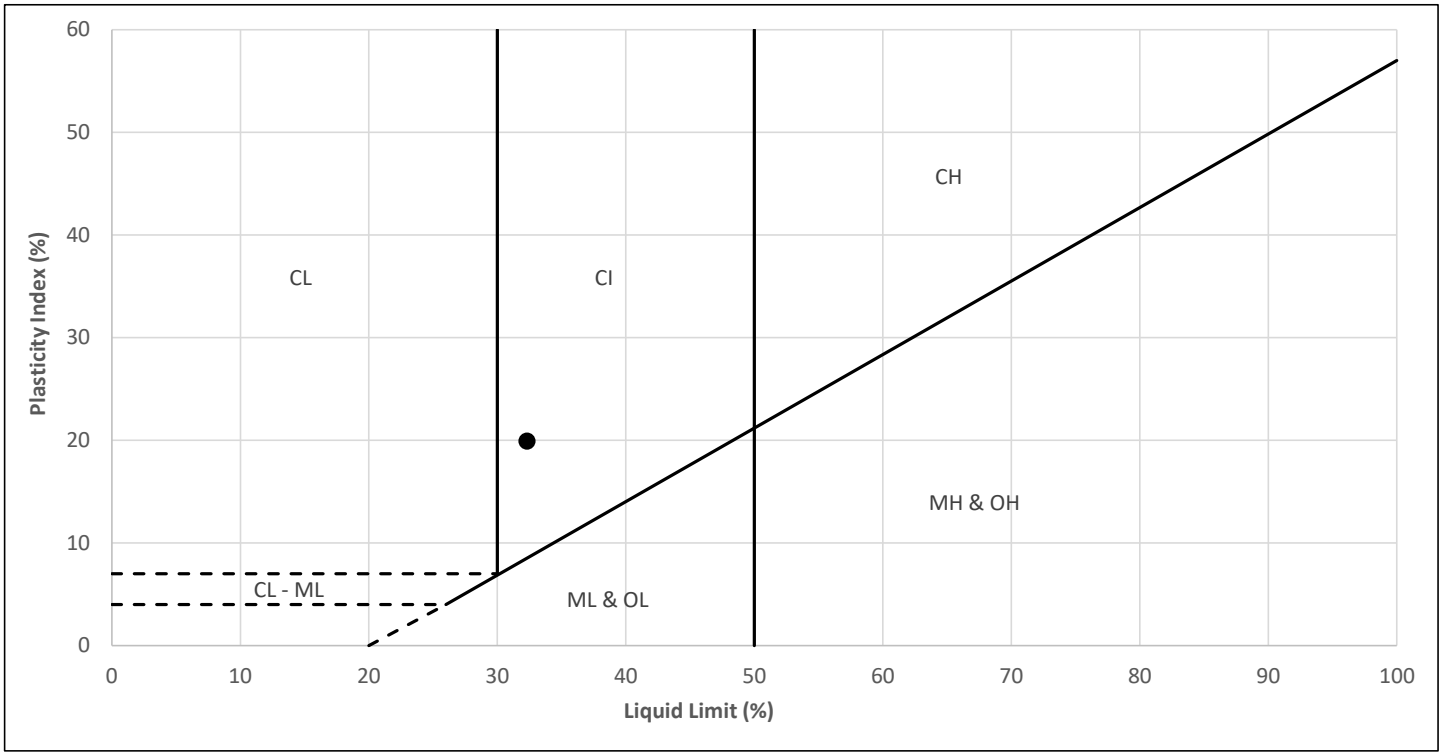
Project:	Snake Lake Reservoir Expansion	**Sample #:**	590AU1
Project No.:	1560-193-00	**Source:**	22BH590
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 590AU1	**Test Date:**	5-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	32.3
Plastic Limit (PL)	12.4
Plasticity Index (PI)	19.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

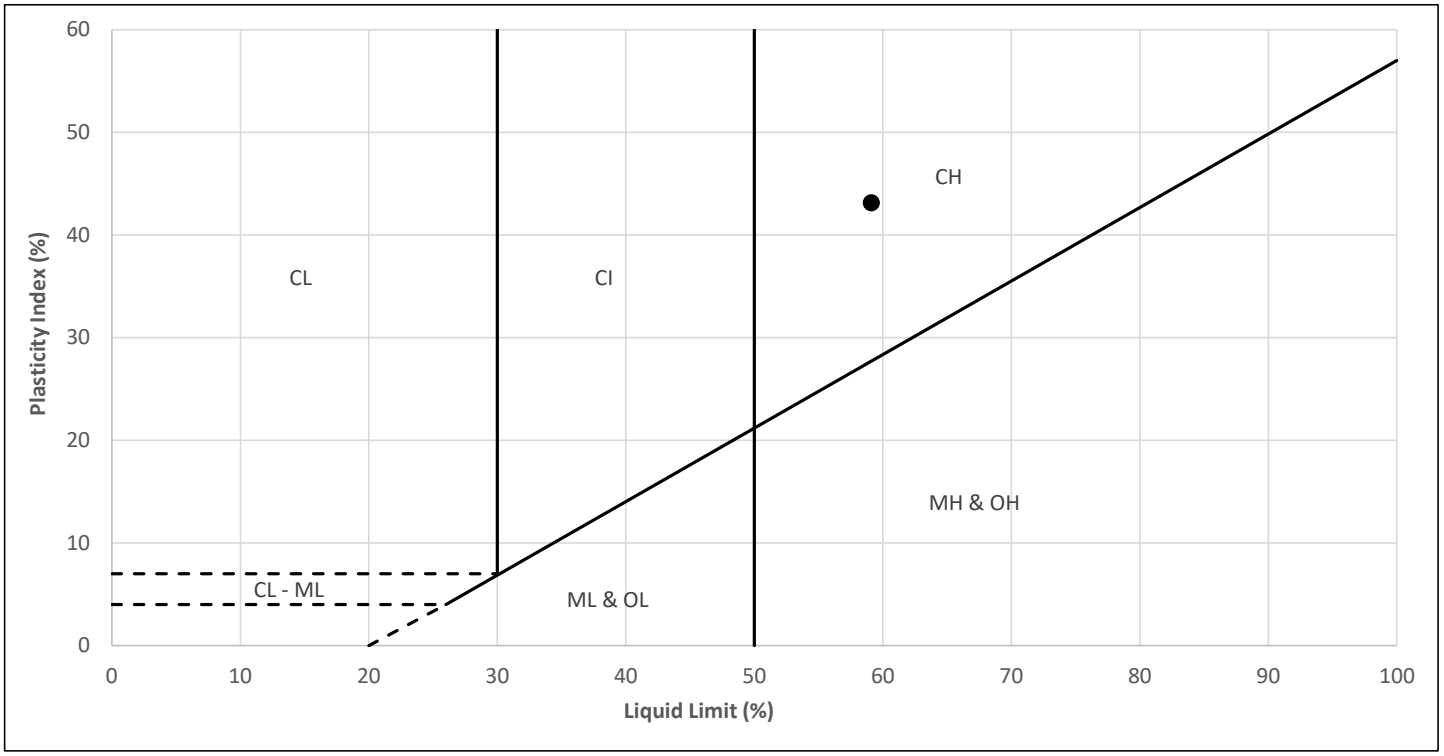
Project:	Snake Lake Reservoir Expansion	**Sample #:**	590AU3
Project No.:	1560-193-00	**Source:**	22BH590
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 590AU3	**Test Date:**	3-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	59.1
Plastic Limit (PL)	16.0
Plasticity Index (PI)	43.1

Soil Plasticity	High
Soil Classification	CH



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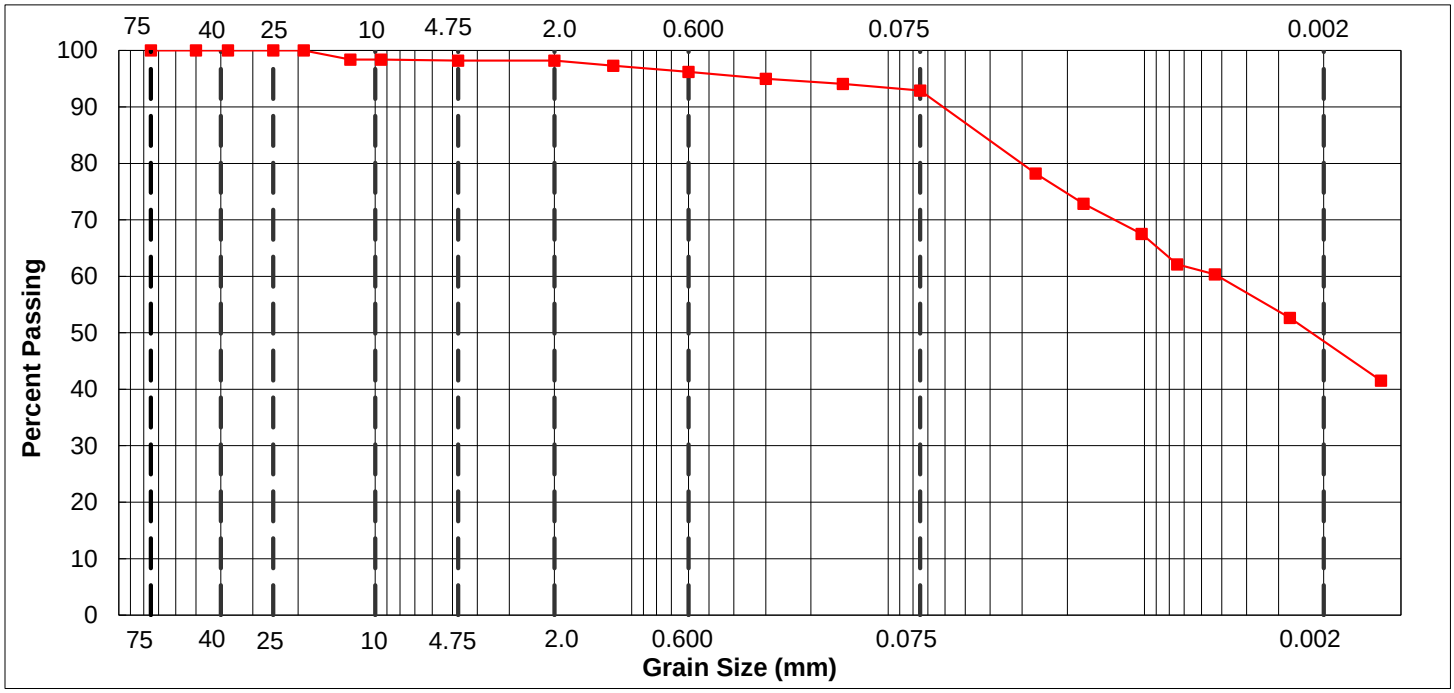
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	505AU2
Project No.:	1560-193-00	**Source:**	22BH505
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 505AU2	**Test Date:**	21-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	96.2
75.0	100.0	0.300	95.0
50.0	100.0	0.150	94.1
37.5	100.0	0.075	92.9
25.0	100.0	0.0266	78.2
19.0	100.0	0.0173	72.9
12.5	98.4	0.0103	67.5
9.5	98.4	0.0075	62.1
4.75	98.2	0.0053	60.3
2.00	98.2	0.0027	52.6
1.180	97.3	0.0012	41.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	1.8	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.0	2.00 mm to 425 µm
Fine Sand	3.3	425 µm to 75 µm
Silt	44.4	75 µm to 2 µm
Clay	48.5	<2 µm



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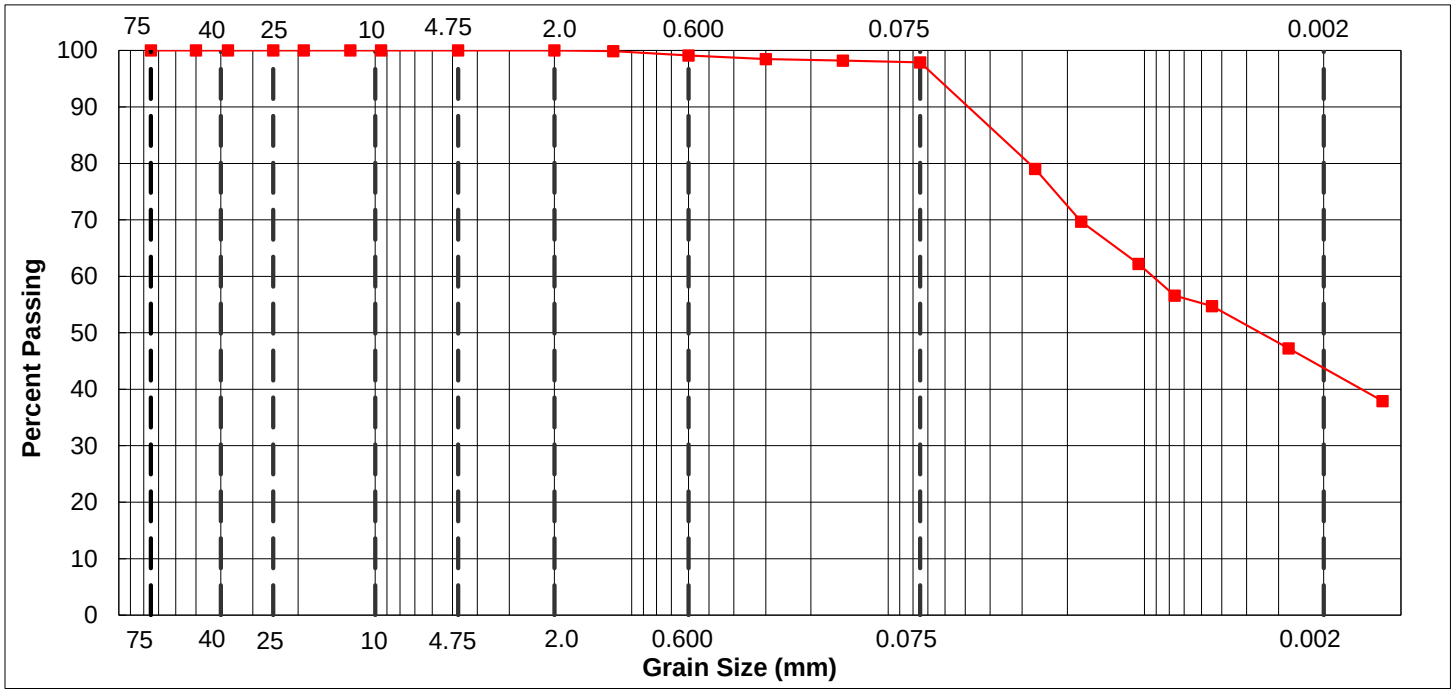
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	505AU3
Project No.:	1560-193-00	**Source:**	22BH505
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 505AU3	**Test Date:**	29-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.1
75.0	100.0	0.300	98.5
50.0	100.0	0.150	98.2
37.5	100.0	0.075	97.9
25.0	100.0	0.0267	79.0
19.0	100.0	0.0176	69.7
12.5	100.0	0.0105	62.2
9.5	100.0	0.0076	56.6
4.75	100.0	0.0054	54.7
2.00	100.0	0.0027	47.3
1.180	99.9	0.0012	37.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.9	2.00 mm to 425 µm
Fine Sand	1.2	425 µm to 75 µm
Silt	54.1	75 µm to 2 µm
Clay	43.8	<2 µm



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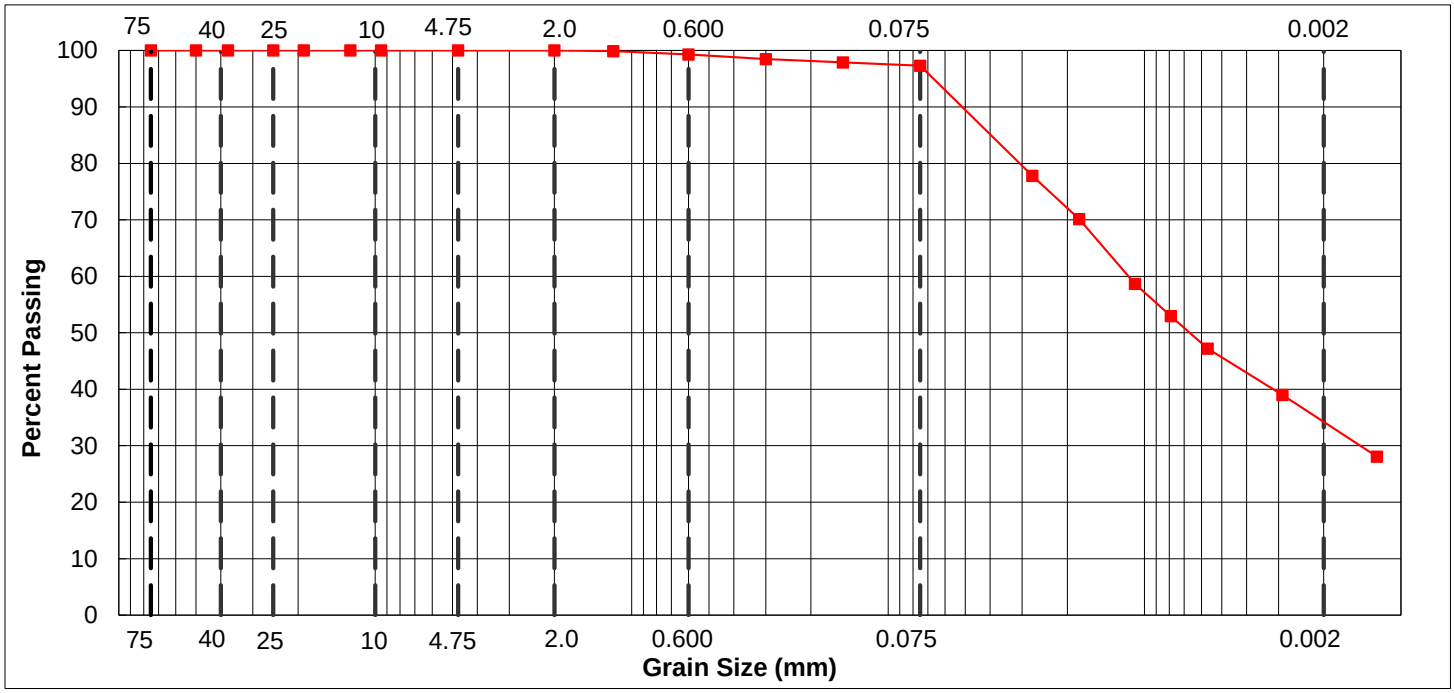
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	506AU2
Project No.:	1560-193-00	**Source:**	22BH506
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 506AU2	**Test Date:**	15-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.3
75.0	100.0	0.300	98.5
50.0	100.0	0.150	97.9
37.5	100.0	0.075	97.3
25.0	100.0	0.0274	77.8
19.0	100.0	0.0180	70.1
12.5	100.0	0.0109	58.7
9.5	100.0	0.0079	52.9
4.75	100.0	0.0057	47.2
2.00	100.0	0.0029	39.0
1.180	99.9	0.0012	28.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.7	2.00 mm to 425 µm
Fine Sand	2.0	425 µm to 75 µm
Silt	63.1	75 µm to 2 µm
Clay	34.2	<2 µm



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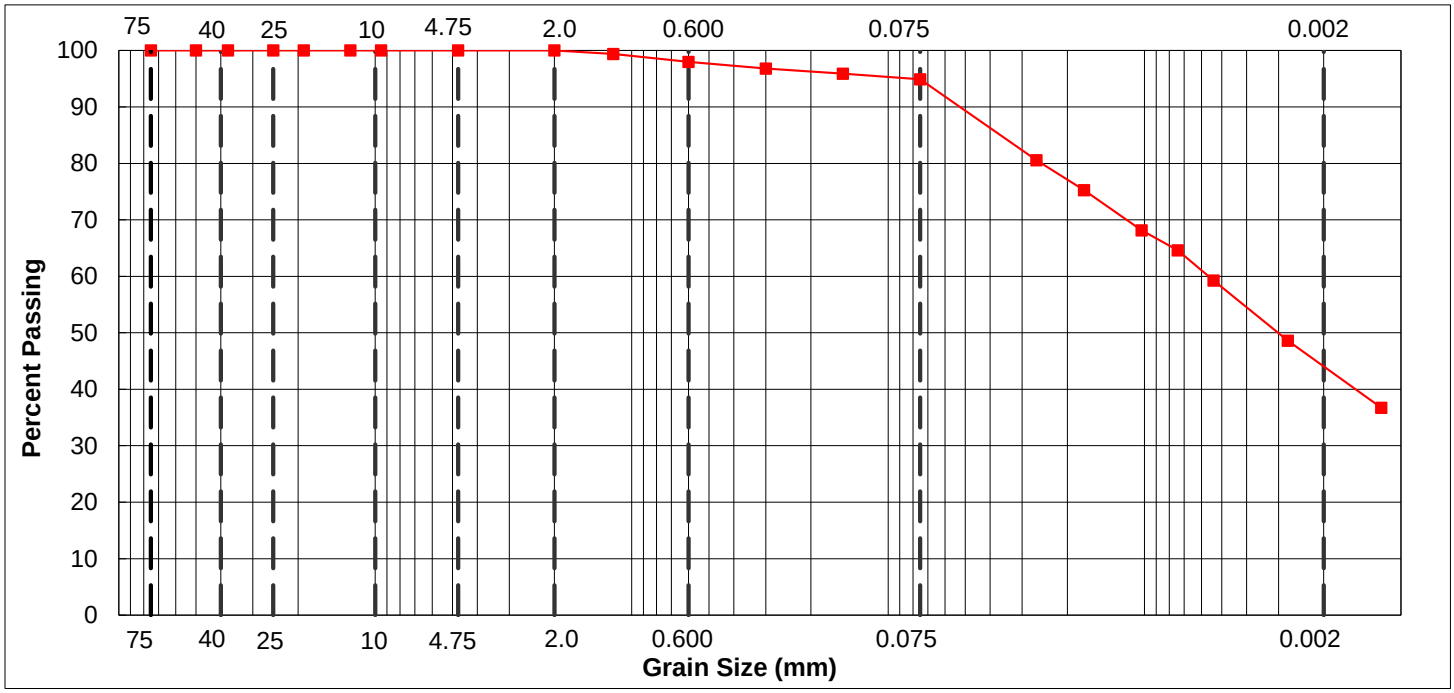
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	506AU4
Project No.:	1560-193-00	**Source:**	22BH506
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 506AU4	**Test Date:**	15-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.0
75.0	100.0	0.300	96.8
50.0	100.0	0.150	95.9
37.5	100.0	0.075	94.9
25.0	100.0	0.0264	80.6
19.0	100.0	0.0172	75.3
12.5	100.0	0.0103	68.2
9.5	100.0	0.0074	64.6
4.75	100.0	0.0054	59.3
2.00	100.0	0.0028	48.6
1.180	99.4	0.0012	36.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.0	2.00 mm to 425 µm
Fine Sand	3.1	425 µm to 75 µm
Silt	50.9	75 µm to 2 µm
Clay	44.0	<2 µm



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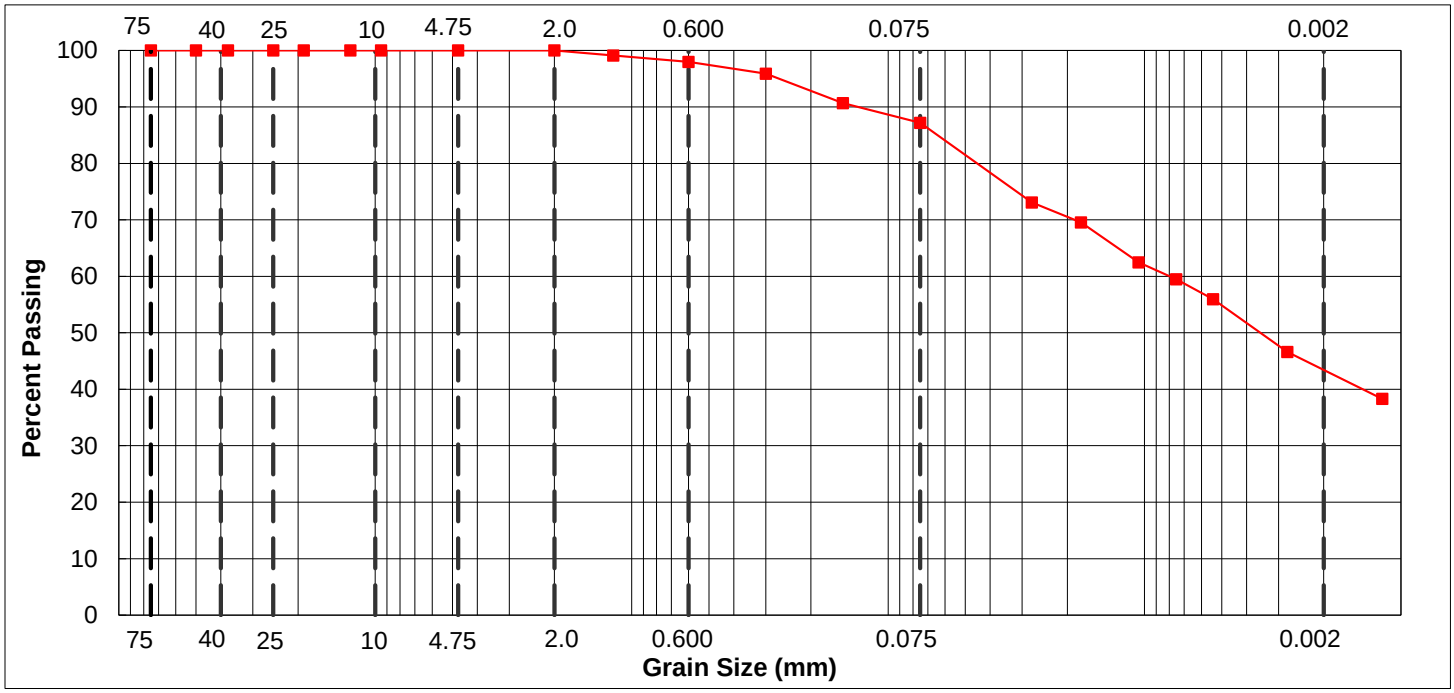
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	511AU1
Project No.:	1560-193-00	**Source:**	22BH511
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 511AU1	**Test Date:**	15-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.0
75.0	100.0	0.300	95.9
50.0	100.0	0.150	90.7
37.5	100.0	0.075	87.2
25.0	100.0	0.0275	73.1
19.0	100.0	0.0177	69.5
12.5	100.0	0.0106	62.5
9.5	100.0	0.0075	59.5
4.75	100.0	0.0054	56.0
2.00	100.0	0.0028	46.6
1.180	99.1	0.0012	38.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.0	2.00 mm to 425 µm
Fine Sand	10.8	425 µm to 75 µm
Silt	43.8	75 µm to 2 µm
Clay	43.4	<2 µm



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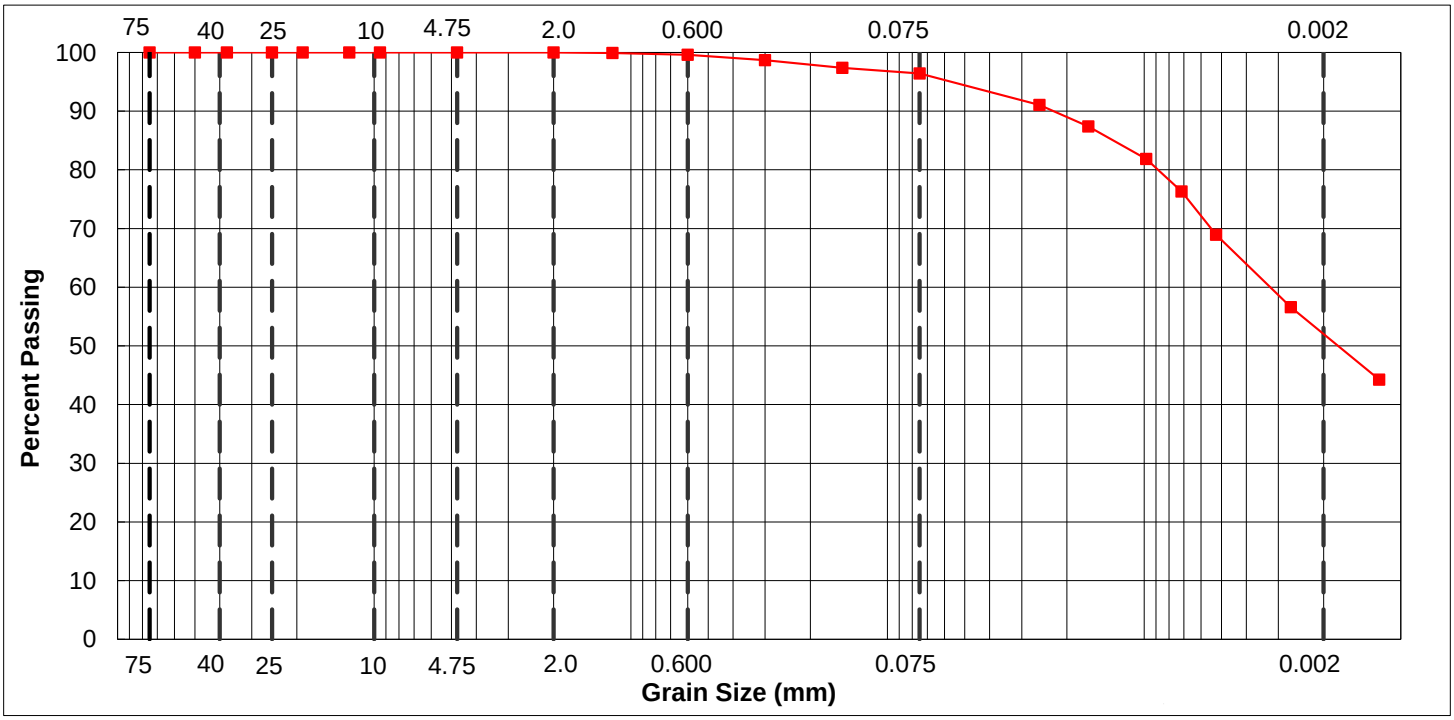
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	511AU3
Project No.:	1560-193-00	**Source:**	22BH511
Owner:	EID	**Sample Depth:**	4.0 m
File No.:	GSA - 511AU3	**Test Date:**	5-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	98.7
50.0	100.0	0.150	97.4
37.5	100.0	0.075	96.4
25.0	100.0	0.0256	91.1
19.0	100.0	0.0165	87.4
12.5	100.0	0.0098	81.8
9.5	100.0	0.0071	76.3
4.75	100.0	0.0052	68.9
2.00	100.0	0.0027	56.6
1.180	99.9	0.0012	44.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	3.2	425 µm to 75 µm
Silt	44.4	75 µm to 2 µm
Clay	52.0	<2 µm



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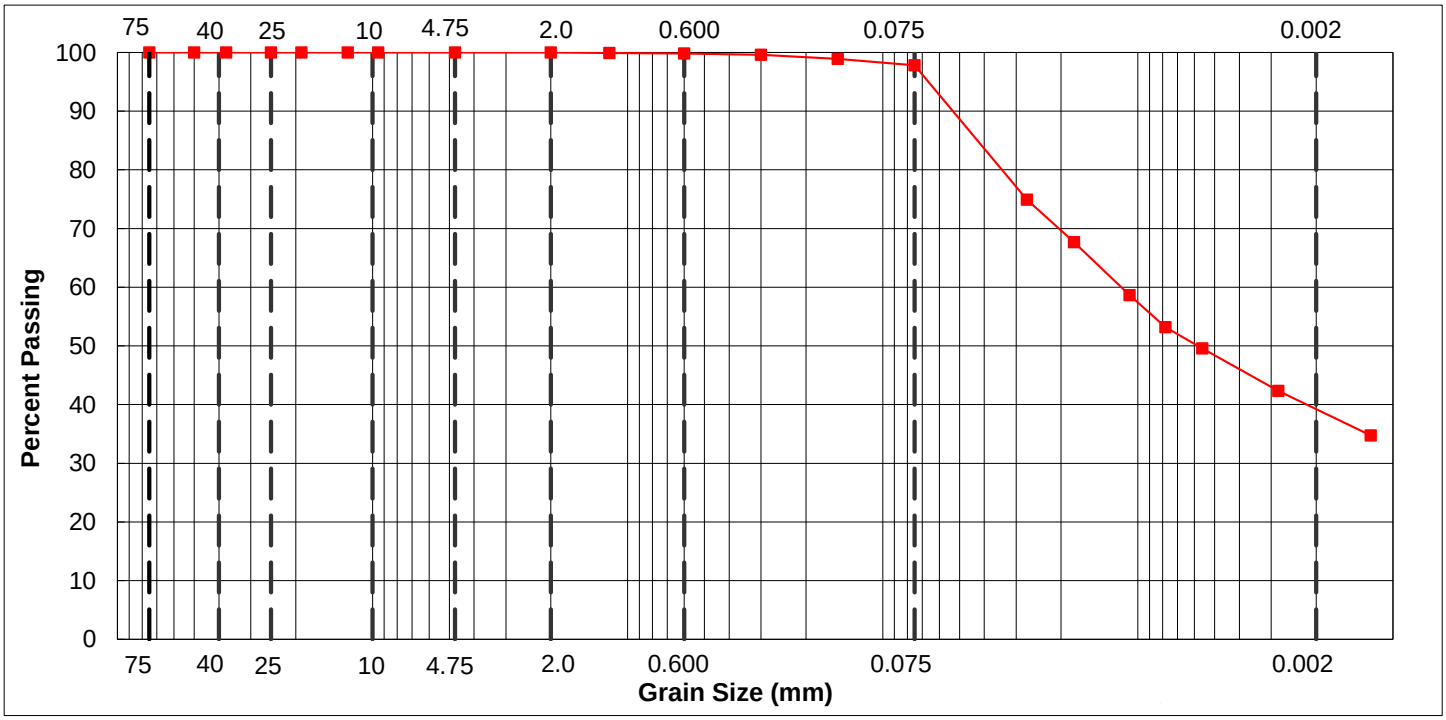
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	512AU2
Project No.:	1560-193-00	**Source:**	22BH512
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 512AU2	**Test Date:**	7-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.6
50.0	100.0	0.150	98.9
37.5	100.0	0.075	97.8
25.0	100.0	0.0272	74.9
19.0	100.0	0.0178	67.7
12.5	100.0	0.0108	58.6
9.5	100.0	0.0078	53.2
4.75	100.0	0.0056	49.6
2.00	100.0	0.0028	42.3
1.180	99.9	0.0012	34.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	2.0	425 µm to 75 µm
Silt	58.6	75 µm to 2 µm
Clay	39.2	<2 µm



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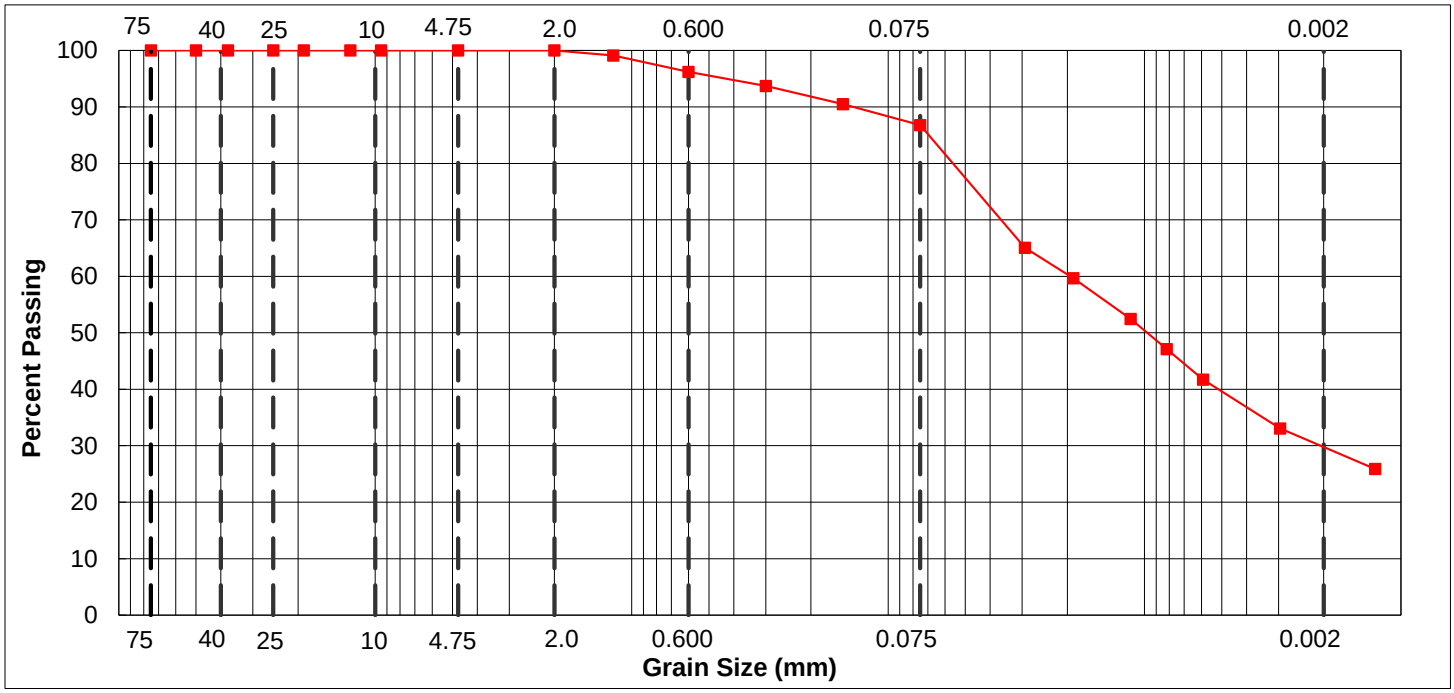
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	512AU4
Project No.:	1560-193-00	**Source:**	22BH512
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 512AU4	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	96.2
75.0	100.0	0.300	93.7
50.0	100.0	0.150	90.5
37.5	100.0	0.075	86.8
25.0	100.0	0.0292	65.1
19.0	100.0	0.0190	59.7
12.5	100.0	0.0113	52.5
9.5	100.0	0.0082	47.1
4.75	100.0	0.0059	41.7
2.00	100.0	0.0030	33.1
1.180	99.1	0.0013	25.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	3.8	2.00 mm to 425 µm
Fine Sand	9.4	425 µm to 75 µm
Silt	57.0	75 µm to 2 µm
Clay	29.8	<2 µm



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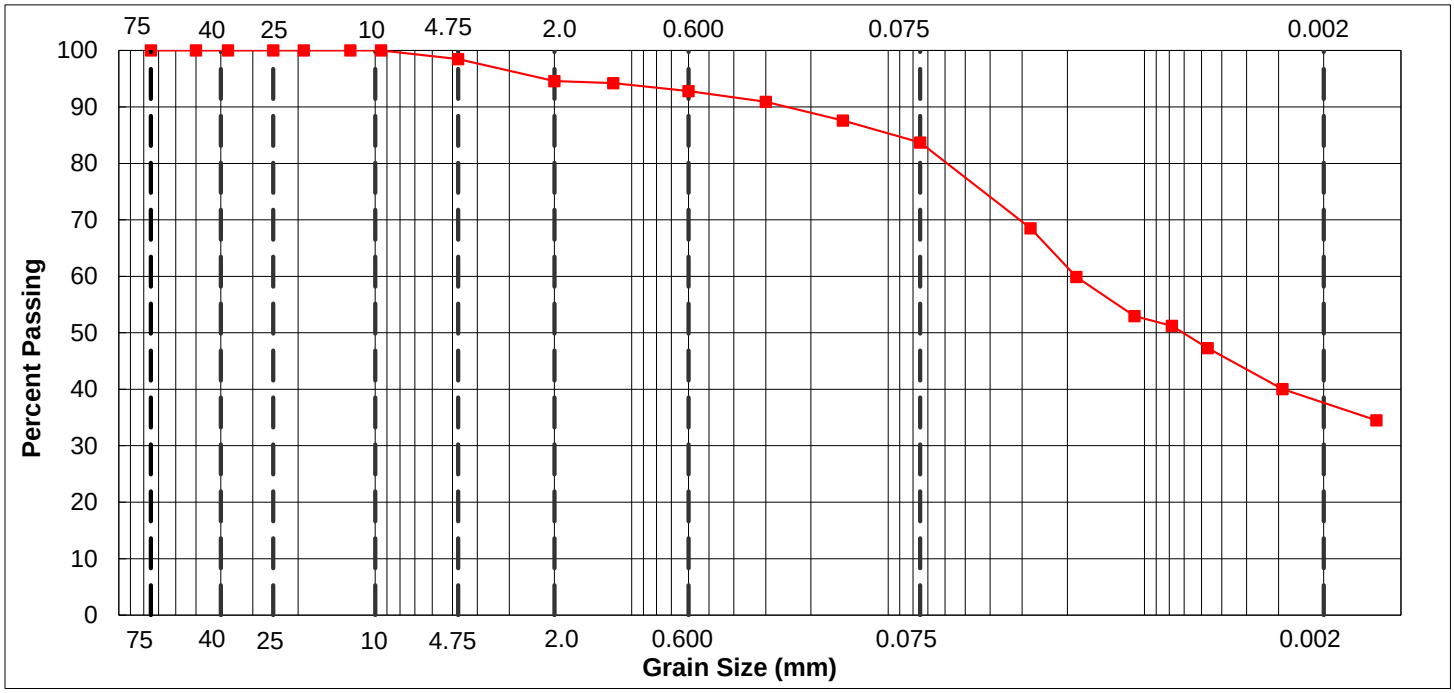
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	513AU1
Project No.:	1560-193-00	**Source:**	22BH513
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 513AU1	**Test Date:**	21-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	92.8
75.0	100.0	0.300	90.9
50.0	100.0	0.150	87.6
37.5	100.0	0.075	83.7
25.0	100.0	0.0278	68.5
19.0	100.0	0.0184	59.9
12.5	100.0	0.0110	53.0
9.5	100.0	0.0078	51.2
4.75	98.5	0.0057	47.3
2.00	94.6	0.0029	40.0
1.180	94.2	0.0012	34.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	1.5	20 mm to 4.75 mm
Coarse Sand	3.9	4.75 mm to 2.00 mm
Medium Sand	1.8	2.00 mm to 425 µm
Fine Sand	9.1	425 µm to 75 µm
Silt	46.1	75 µm to 2 µm
Clay	37.6	<2 µm



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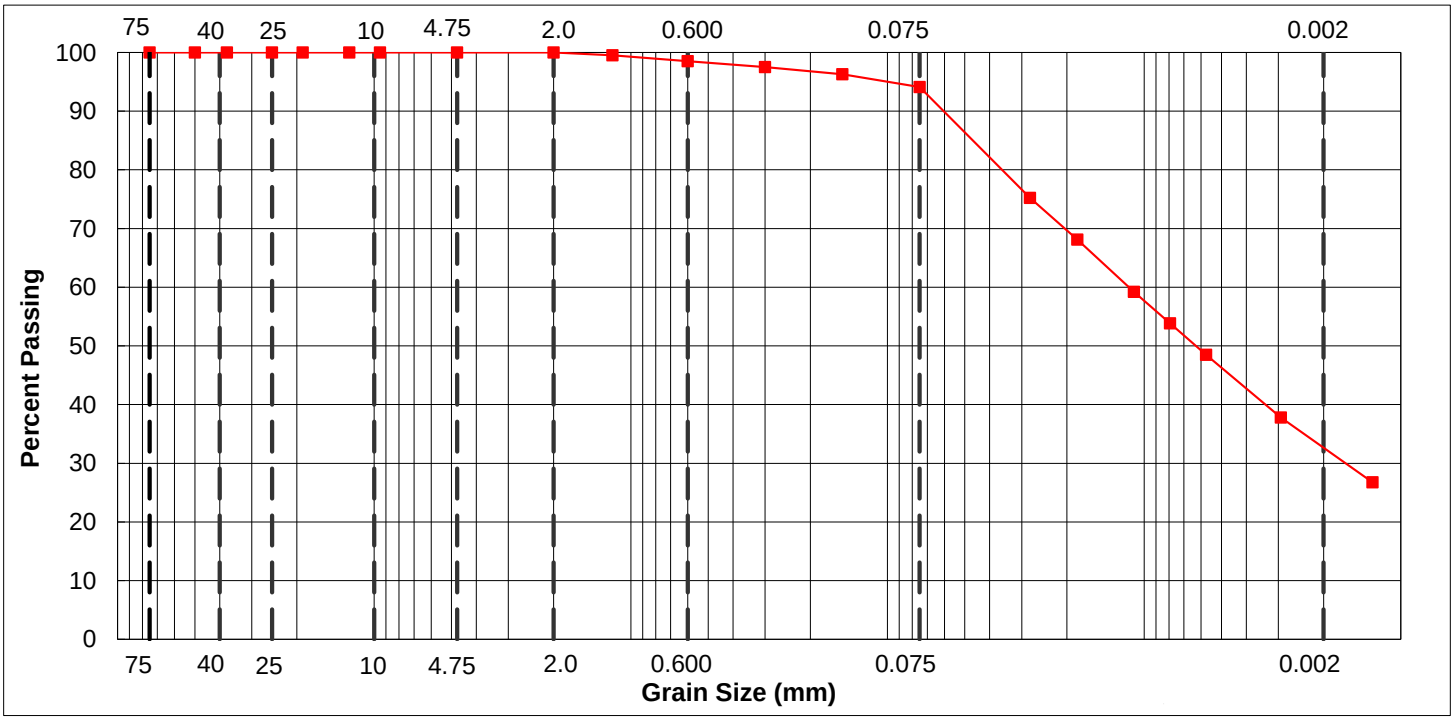
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	513AU3
Project No.:	1560-193-00	**Source:**	22BH513
Owner:	EID	**Sample Depth:**	1.8m
File No.:	GSA - 513AU3	**Test Date:**	26-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.5
75.0	100.0	0.300	97.5
50.0	100.0	0.150	96.3
37.5	100.0	0.075	94.1
25.0	100.0	0.0279	75.2
19.0	100.0	0.0182	68.1
12.5	100.0	0.0110	59.2
9.5	100.0	0.0079	53.8
4.75	100.0	0.0057	48.5
2.00	100.0	0.0029	37.8
1.180	99.5	0.0013	26.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.5	2.00 mm to 425 µm
Fine Sand	4.4	425 µm to 75 µm
Silt	61.4	75 µm to 2 µm
Clay	32.7	<2 µm



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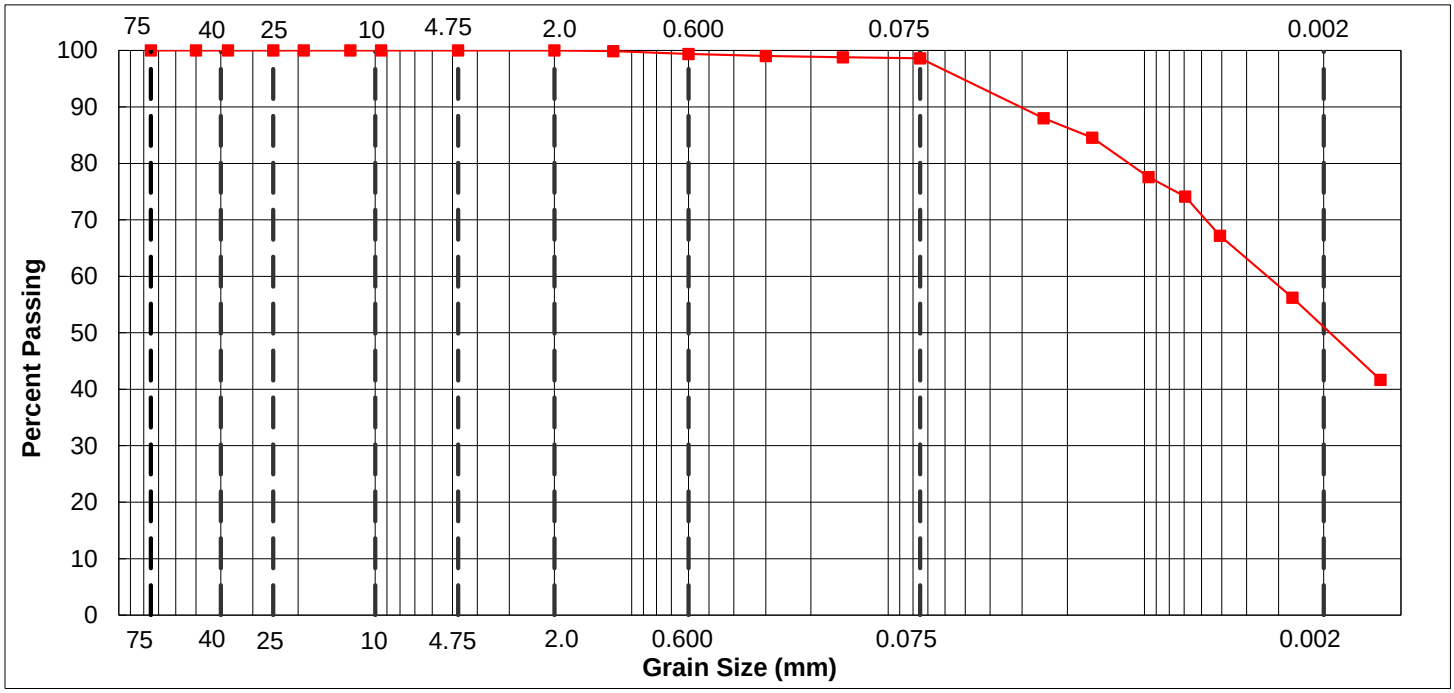
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	514AU2
Project No.:	1560-193-00	**Source:**	22BH514
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 514AU2	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	99.0
50.0	100.0	0.150	98.8
37.5	100.0	0.075	98.6
25.0	100.0	0.0248	88.0
19.0	100.0	0.0160	84.5
12.5	100.0	0.0096	77.6
9.5	100.0	0.0069	74.1
4.75	100.0	0.0051	67.2
2.00	100.0	0.0027	56.2
1.180	99.9	0.0012	41.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	0.8	425 µm to 75 µm
Silt	47.5	75 µm to 2 µm
Clay	51.1	<2 µm



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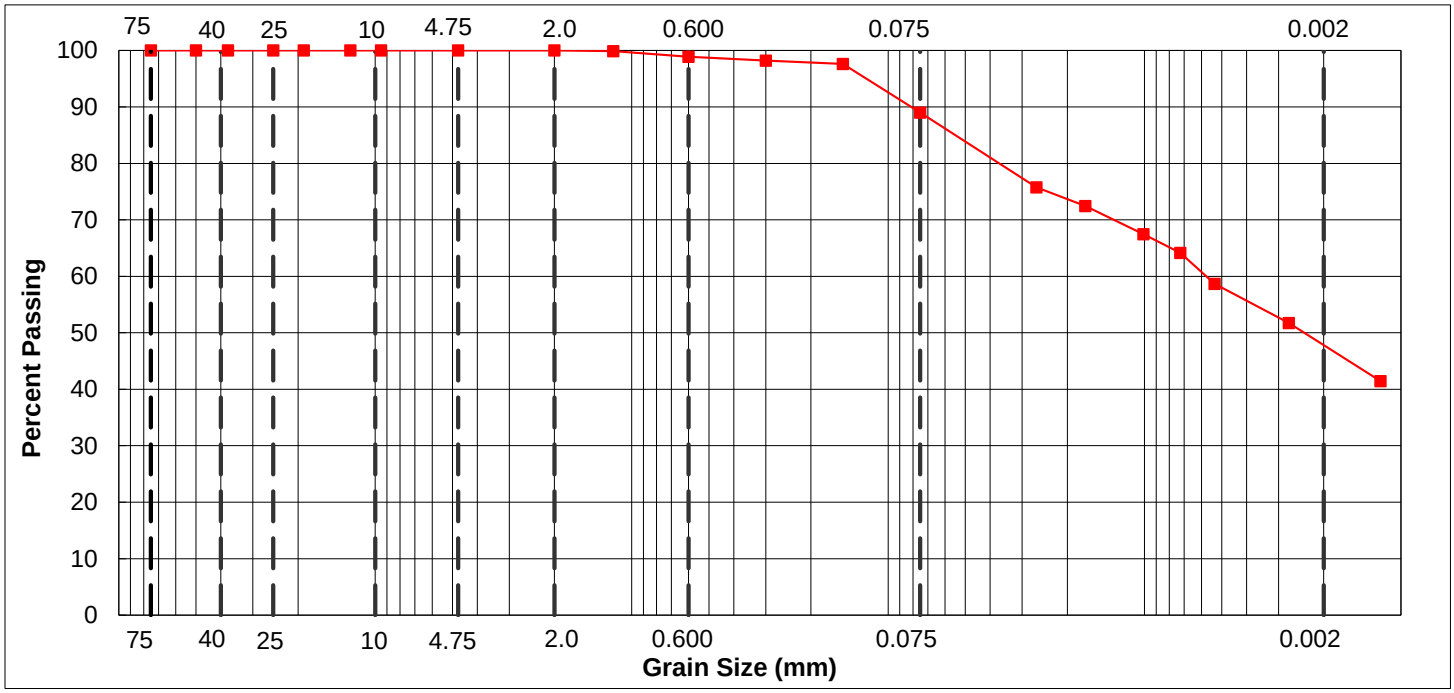
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	514AU4
Project No.:	1560-193-00	**Source:**	22BH514
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 514AU4	**Test Date:**	21-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.9
75.0	100.0	0.300	98.2
50.0	100.0	0.150	97.6
37.5	100.0	0.075	89.0
25.0	100.0	0.0264	75.8
19.0	100.0	0.0170	72.5
12.5	100.0	0.0101	67.5
9.5	100.0	0.0073	64.2
4.75	100.0	0.0053	58.7
2.00	100.0	0.0027	51.7
1.180	99.9	0.0012	41.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.1	2.00 mm to 425 µm
Fine Sand	9.9	425 µm to 75 µm
Silt	41.2	75 µm to 2 µm
Clay	47.8	<2 µm



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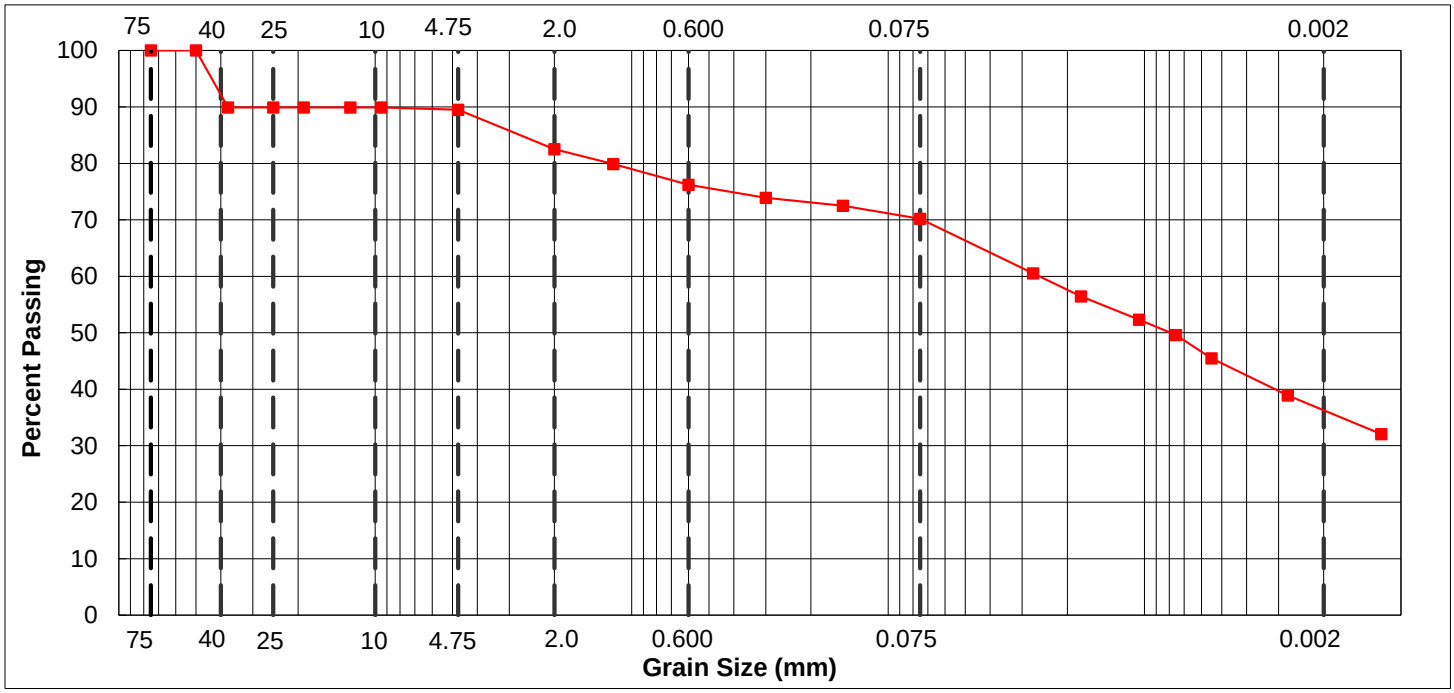
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	515AU1
Project No.:	1560-193-00	**Source:**	22BH515
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 515AU1	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	76.2
75.0	100.0	0.300	73.9
50.0	100.0	0.150	72.5
37.5	89.9	0.075	70.2
25.0	89.9	0.0272	60.5
19.0	89.9	0.0177	56.4
12.5	89.9	0.0105	52.3
9.5	89.9	0.0076	49.6
4.75	89.5	0.0055	45.5
2.00	82.5	0.0028	38.9
1.180	79.9	0.0012	32.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	10.1	80 mm to 20 mm
Fine Gravel	0.4	20 mm to 4.75 mm
Coarse Sand	7.0	4.75 mm to 2.00 mm
Medium Sand	6.3	2.00 mm to 425 µm
Fine Sand	6.0	425 µm to 75 µm
Silt	33.9	75 µm to 2 µm
Clay	36.3	<2 µm



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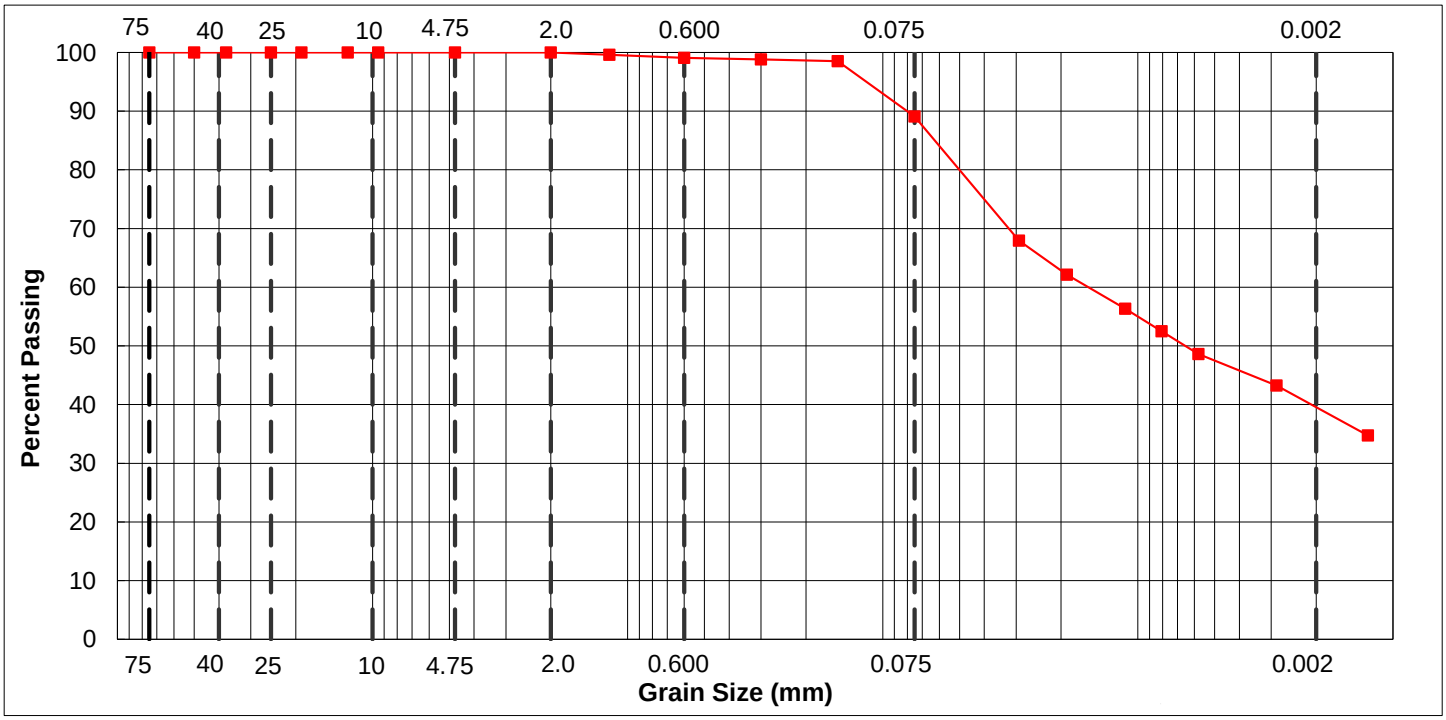
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	515AU3
Project No.:	1560-193-00	**Source:**	22BH515
Owner:	EID	**Sample Depth:**	4.0 m
File No.:	GSA - 515AU3	**Test Date:**	5-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.1
75.0	100.0	0.300	98.8
50.0	100.0	0.150	98.5
37.5	100.0	0.075	89.1
25.0	100.0	0.0292	67.9
19.0	100.0	0.0190	62.1
12.5	100.0	0.0112	56.3
9.5	100.0	0.0081	52.5
4.75	100.0	0.0058	48.6
2.00	100.0	0.0029	43.2
1.180	99.6	0.0013	34.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.9	2.00 mm to 425 µm
Fine Sand	10.0	425 µm to 75 µm
Silt	49.6	75 µm to 2 µm
Clay	39.5	<2 µm



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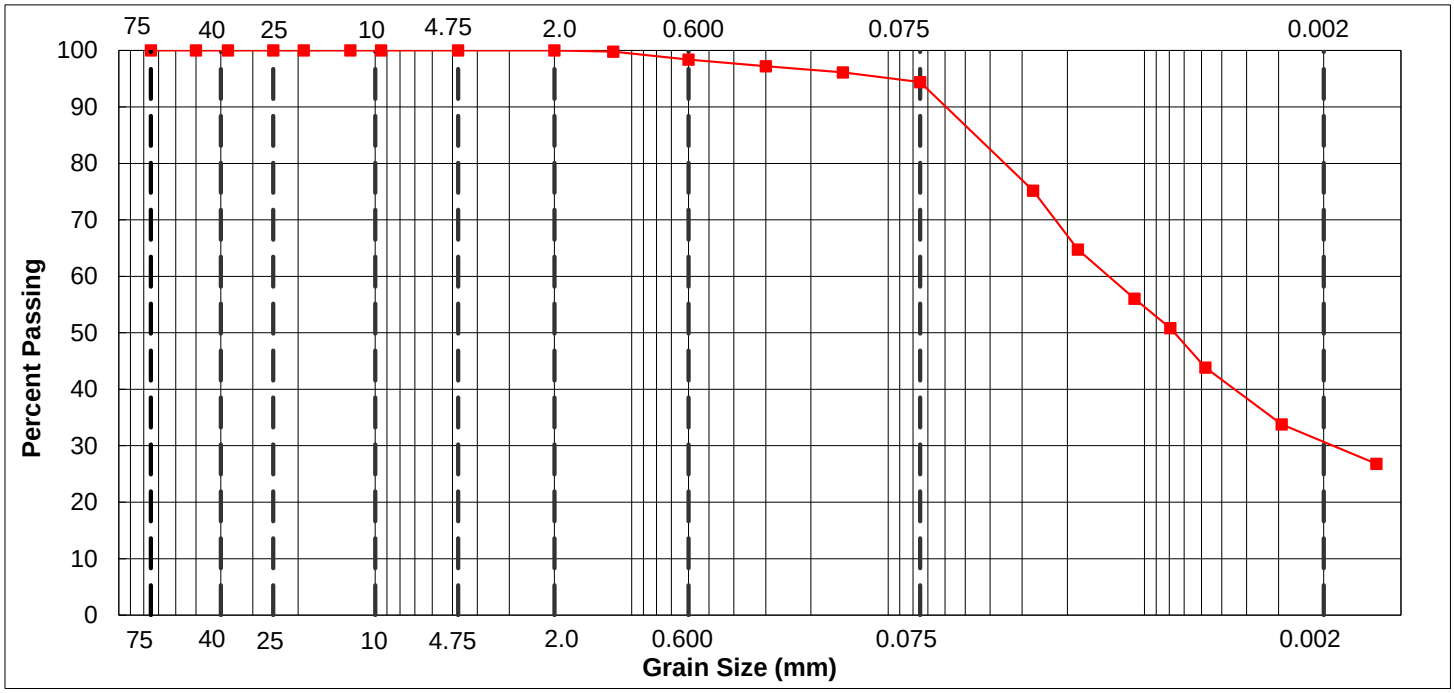
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	516AU2
Project No.:	1560-193-00	**Source:**	22BH516
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 516AU2	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.4
75.0	100.0	0.300	97.2
50.0	100.0	0.150	96.1
37.5	100.0	0.075	94.4
25.0	100.0	0.0272	75.2
19.0	100.0	0.0182	64.7
12.5	100.0	0.0110	56.0
9.5	100.0	0.0079	50.8
4.75	100.0	0.0058	43.9
2.00	100.0	0.0029	33.8
1.180	99.8	0.0012	26.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.6	2.00 mm to 425 µm
Fine Sand	4.0	425 µm to 75 µm
Silt	63.7	75 µm to 2 µm
Clay	30.7	<2 µm



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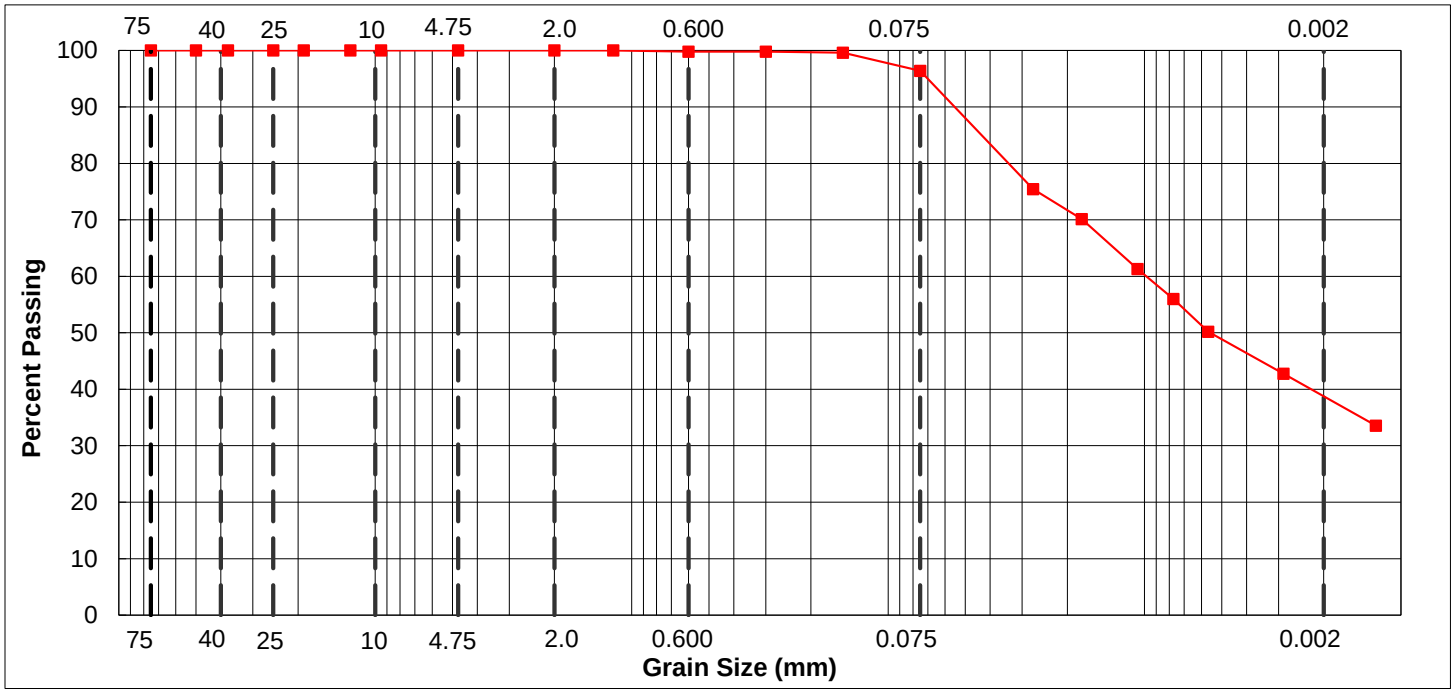
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	516AU4
Project No.:	1560-193-00	**Source:**	22BH516
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 516AU4	**Test Date:**	21-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.6
37.5	100.0	0.075	96.4
25.0	100.0	0.0272	75.5
19.0	100.0	0.0176	70.2
12.5	100.0	0.0106	61.3
9.5	100.0	0.0077	56.0
4.75	100.0	0.0056	50.2
2.00	100.0	0.0029	42.8
1.180	100.0	0.0013	33.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	3.4	425 µm to 75 µm
Silt	57.6	75 µm to 2 µm
Clay	38.8	<2 µm



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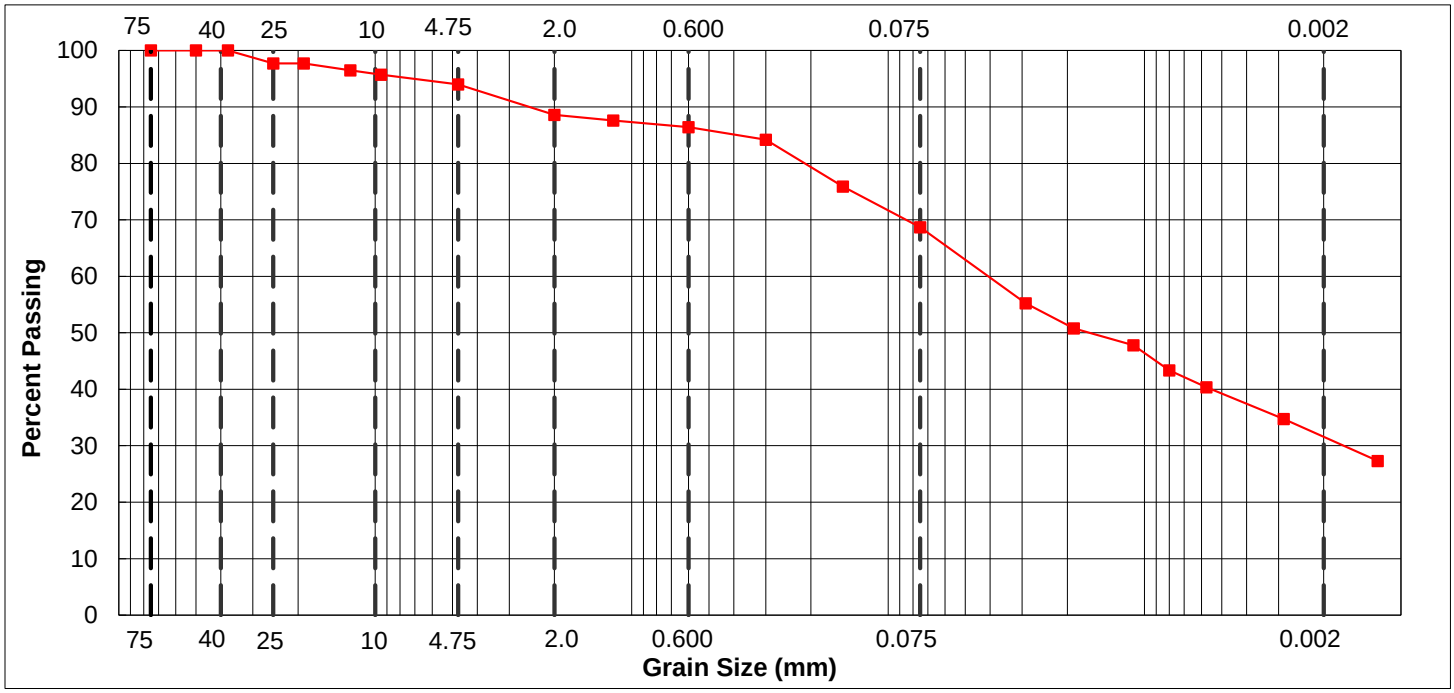
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	517AU1
Project No.:	1560-193-00	**Source:**	22BH517
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 517AU1	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	86.4
75.0	100.0	0.300	84.2
50.0	100.0	0.150	75.9
37.5	100.0	0.075	68.7
25.0	97.7	0.0291	55.2
19.0	97.7	0.0189	50.8
12.5	96.5	0.0111	47.8
9.5	95.7	0.0080	43.3
4.75	94.0	0.0057	40.4
2.00	88.6	0.0029	34.7
1.180	87.6	0.0012	27.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	2.3	80 mm to 20 mm
Fine Gravel	3.7	20 mm to 4.75 mm
Coarse Sand	5.4	4.75 mm to 2.00 mm
Medium Sand	2.2	2.00 mm to 425 µm
Fine Sand	17.7	425 µm to 75 µm
Silt	37.1	75 µm to 2 µm
Clay	31.6	<2 µm



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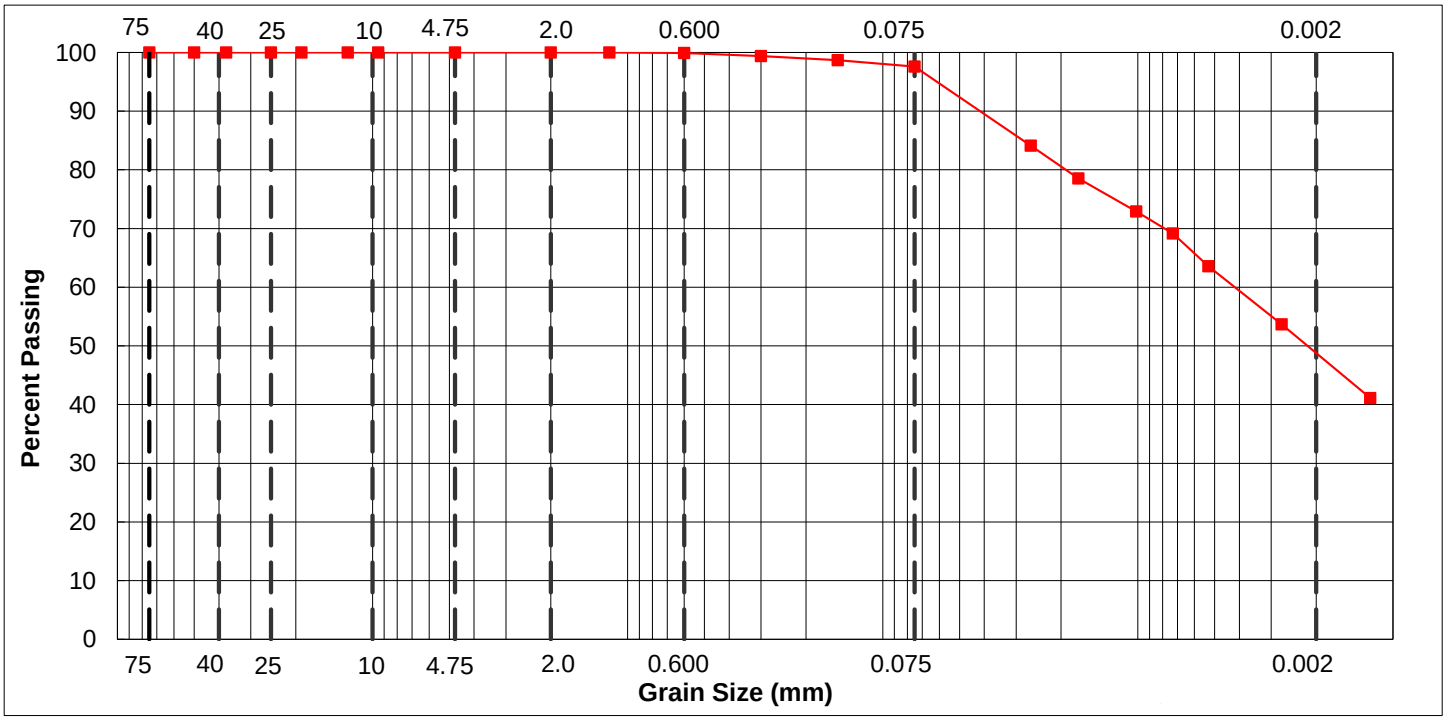
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	517AU3
Project No.:	1560-193-00	**Source:**	22BH517
Owner:	EID	**Sample Depth:**	4.0 m
File No.:	GSA - 517AU3	**Test Date:**	5-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.4
50.0	100.0	0.150	98.7
37.5	100.0	0.075	97.6
25.0	100.0	0.0263	84.1
19.0	100.0	0.0171	78.5
12.5	100.0	0.0101	72.9
9.5	100.0	0.0073	69.2
4.75	100.0	0.0053	63.6
2.00	100.0	0.0027	53.6
1.180	100.0	0.0012	41.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	2.3	425 µm to 75 µm
Silt	48.8	75 µm to 2 µm
Clay	48.8	<2 µm



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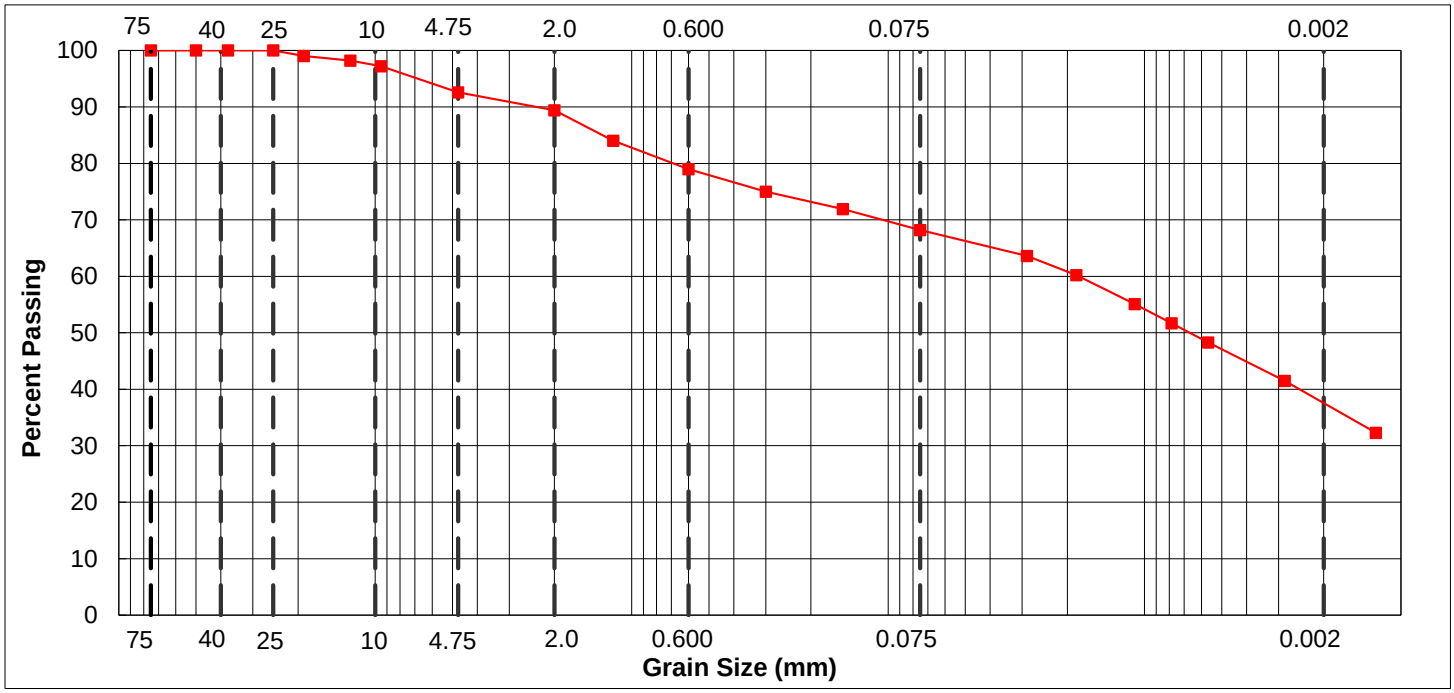
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	518AU2
Project No.:	1560-193-00	**Source:**	22BH518
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 518AU2	**Test Date:**	4-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	79.0
75.0	100.0	0.300	75.0
50.0	100.0	0.150	71.9
37.5	100.0	0.075	68.2
25.0	100.0	0.0287	63.6
19.0	99.0	0.0185	60.2
12.5	98.2	0.0109	55.1
9.5	97.2	0.0078	51.7
4.75	92.6	0.0056	48.3
2.00	89.4	0.0028	41.5
1.180	84.0	0.0013	32.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	7.4	20 mm to 4.75 mm
Coarse Sand	3.2	4.75 mm to 2.00 mm
Medium Sand	10.4	2.00 mm to 425 µm
Fine Sand	10.8	425 µm to 75 µm
Silt	30.6	75 µm to 2 µm
Clay	37.6	<2 µm



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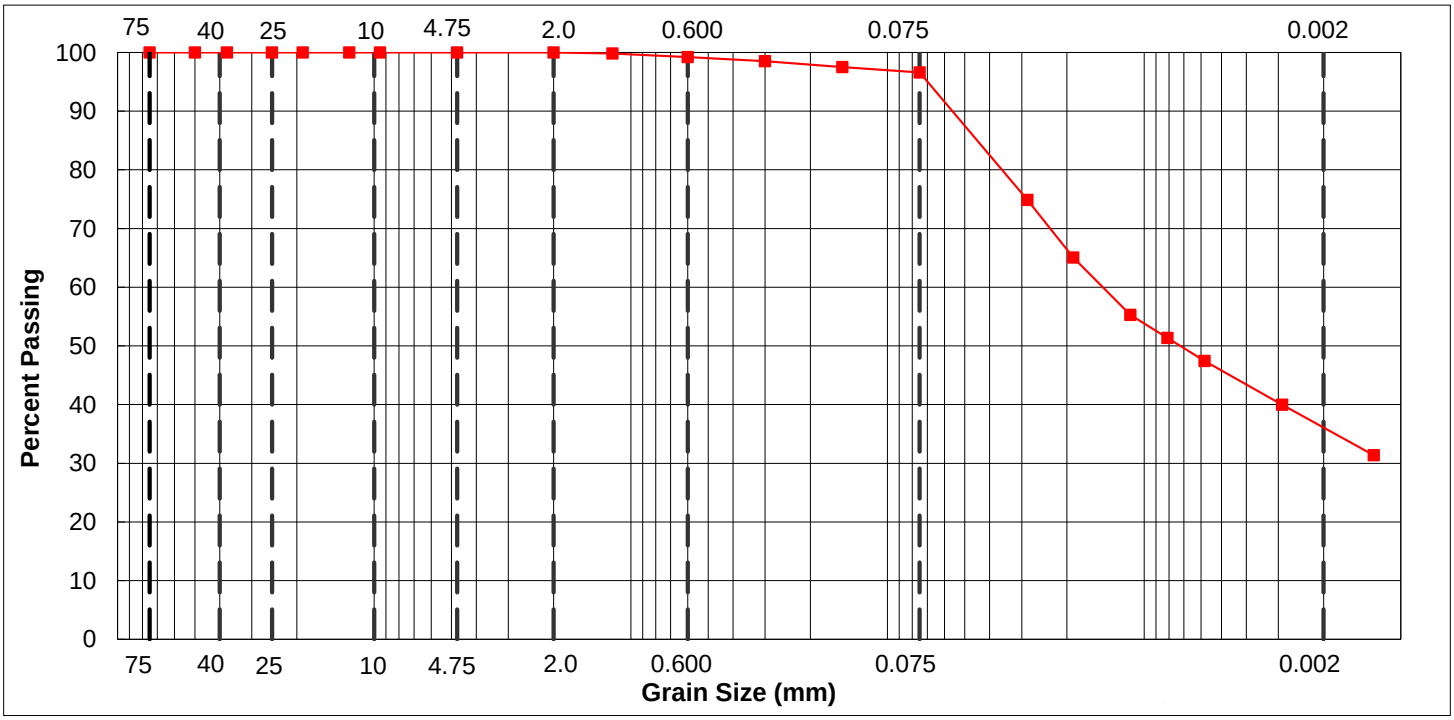
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	518AU4
Project No.:	1560-193-00	**Source:**	22BH518
Owner:	EID	**Sample Depth:**	5.5 m
File No.:	GSA - 518AU4	**Test Date:**	5-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	98.5
50.0	100.0	0.150	97.5
37.5	100.0	0.075	96.6
25.0	100.0	0.0285	74.9
19.0	100.0	0.0189	65.1
12.5	100.0	0.0113	55.3
9.5	100.0	0.0081	51.4
4.75	100.0	0.0058	47.4
2.00	100.0	0.0029	40.0
1.180	99.8	0.0013	31.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	2.6	425 µm to 75 µm
Silt	60.5	75 µm to 2 µm
Clay	36.1	<2 µm



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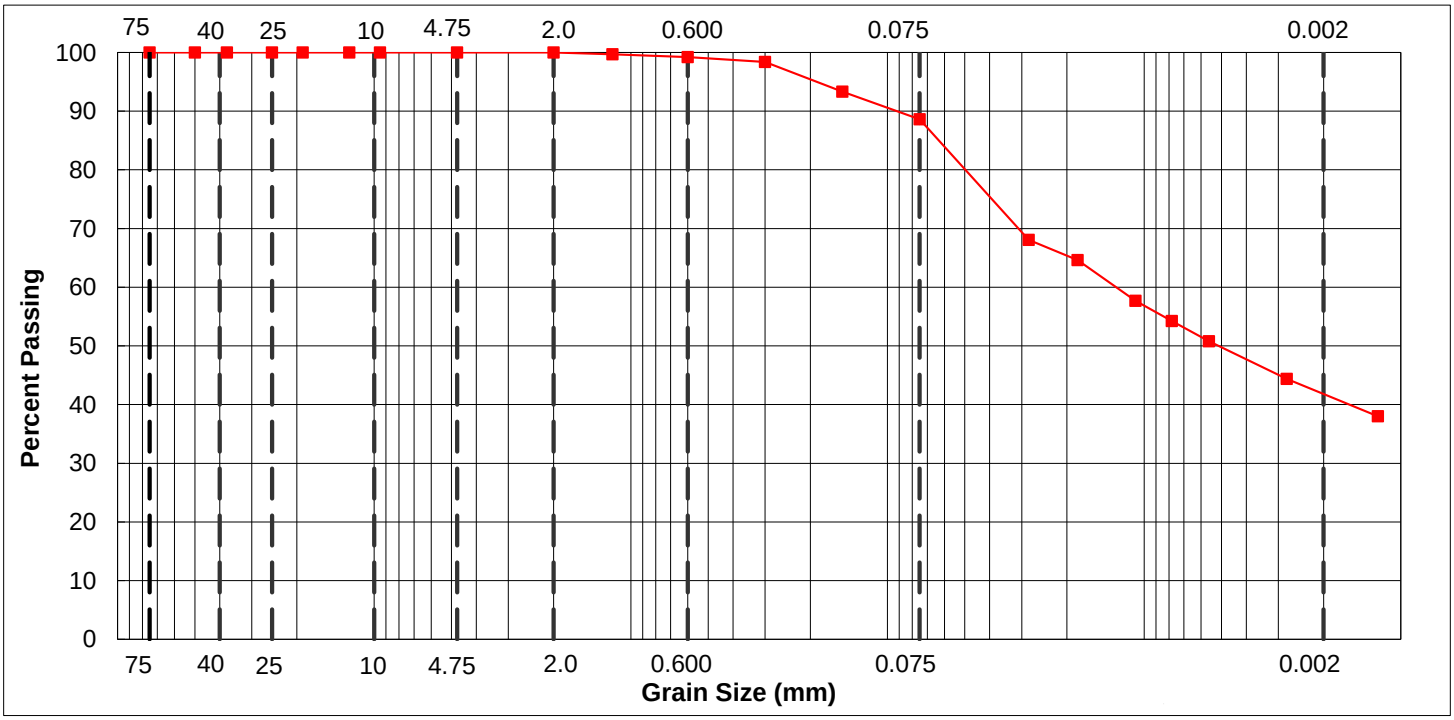
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	519AU1
Project No.:	1560-193-00	**Source:**	22BH519
Owner:	EID	**Sample Depth:**	1.0 m
File No.:	GSA - 519AU1	**Test Date:**	5-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	98.4
50.0	100.0	0.150	93.3
37.5	100.0	0.075	88.6
25.0	100.0	0.0281	68.0
19.0	100.0	0.0182	64.6
12.5	100.0	0.0108	57.7
9.5	100.0	0.0078	54.2
4.75	100.0	0.0056	50.8
2.00	100.0	0.0028	44.4
1.180	99.7	0.0012	38.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	10.6	425 µm to 75 µm
Silt	46.8	75 µm to 2 µm
Clay	41.8	<2 µm



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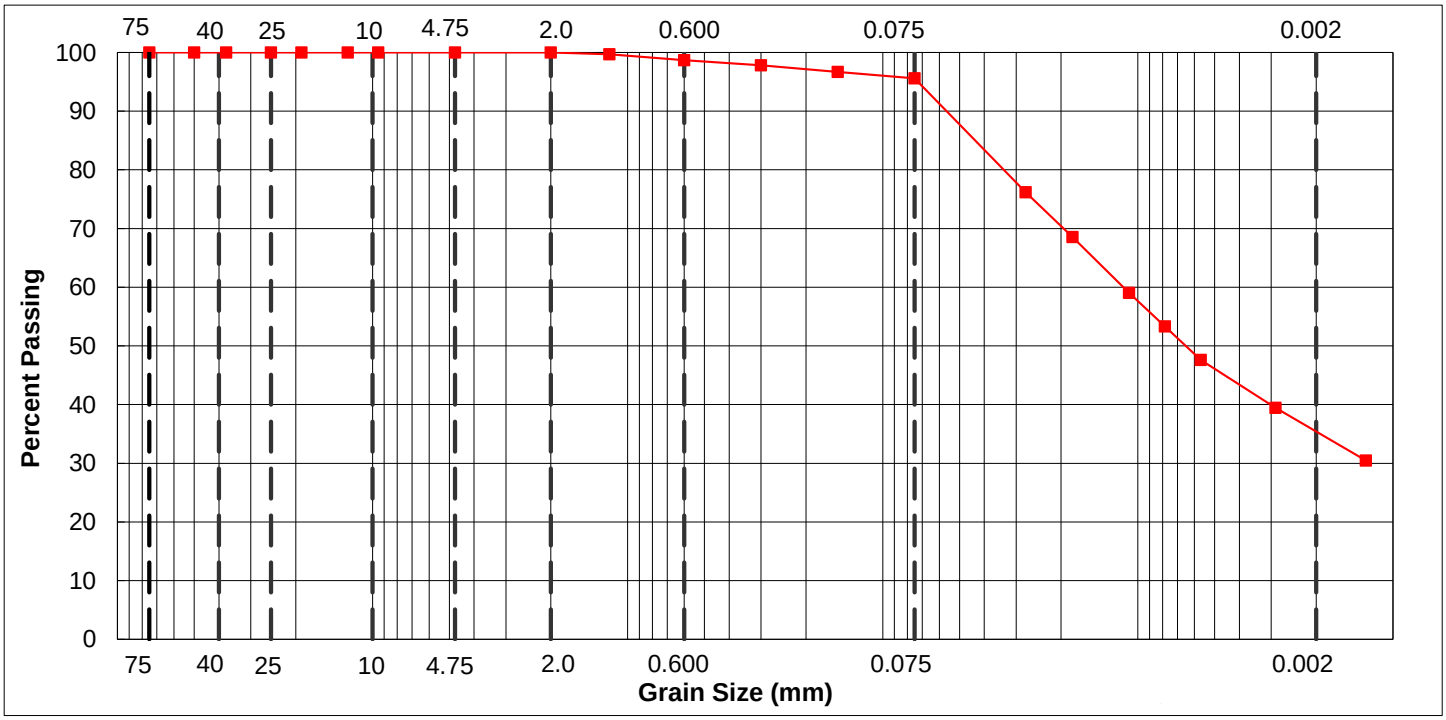
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	519AU3
Project No.:	1560-193-00	**Source:**	22BH519
Owner:	EID	**Sample Depth:**	4.0 m
File No.:	GSA - 519AU3	**Test Date:**	5-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.7
75.0	100.0	0.300	97.8
50.0	100.0	0.150	96.7
37.5	100.0	0.075	95.6
25.0	100.0	0.0275	76.2
19.0	100.0	0.0180	68.6
12.5	100.0	0.0108	59.0
9.5	100.0	0.0078	53.3
4.75	100.0	0.0057	47.6
2.00	100.0	0.0029	39.4
1.180	99.7	0.0013	30.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.3	2.00 mm to 425 µm
Fine Sand	3.1	425 µm to 75 µm
Silt	60.2	75 µm to 2 µm
Clay	35.4	<2 µm



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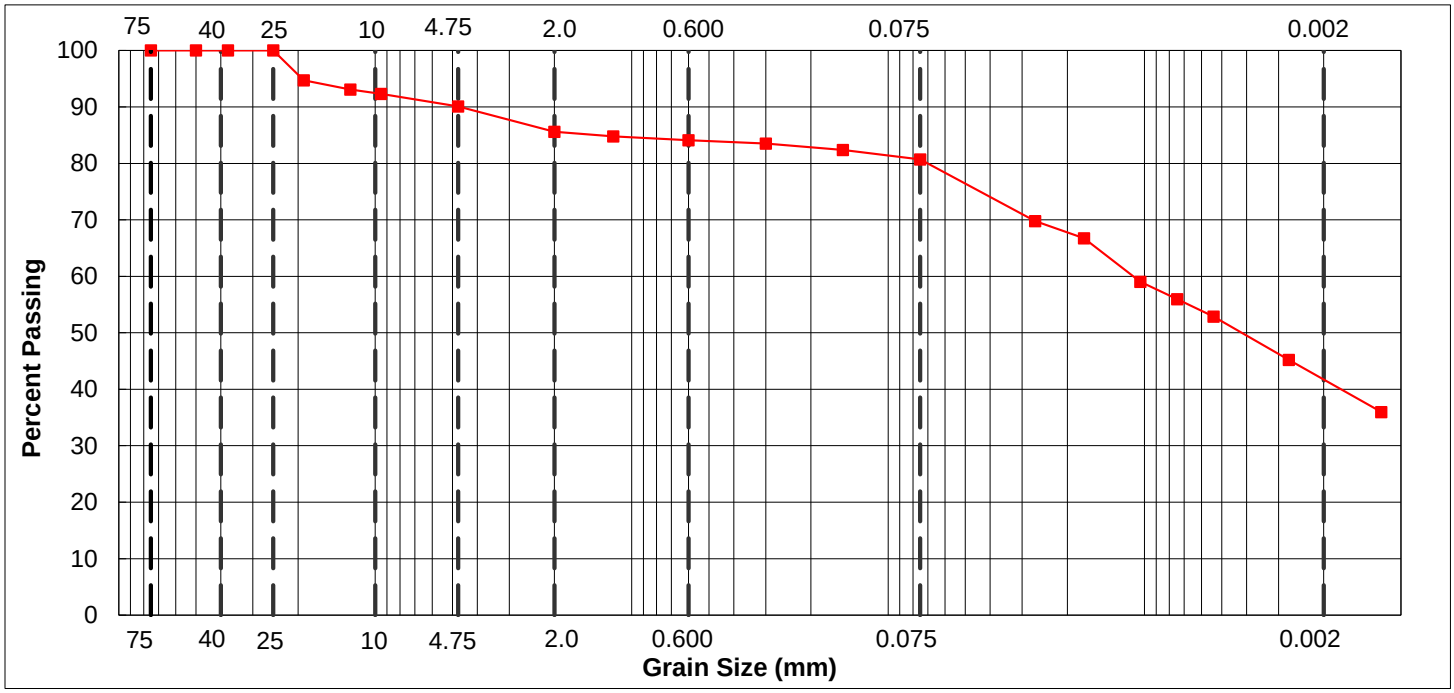
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	520AU2
Project No.:	1560-193-00	**Source:**	22BH520
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 520AU2	**Test Date:**	25-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	84.1
75.0	100.0	0.300	83.5
50.0	100.0	0.150	82.4
37.5	100.0	0.075	80.7
25.0	100.0	0.0267	69.8
19.0	94.7	0.0172	66.7
12.5	93.1	0.0104	59.0
9.5	92.3	0.0075	56.0
4.75	90.1	0.0054	52.9
2.00	85.6	0.0027	45.2
1.180	84.8	0.0012	36.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	9.9	20 mm to 4.75 mm
Coarse Sand	4.5	4.75 mm to 2.00 mm
Medium Sand	1.5	2.00 mm to 425 µm
Fine Sand	3.4	425 µm to 75 µm
Silt	39.0	75 µm to 2 µm
Clay	41.7	<2 µm



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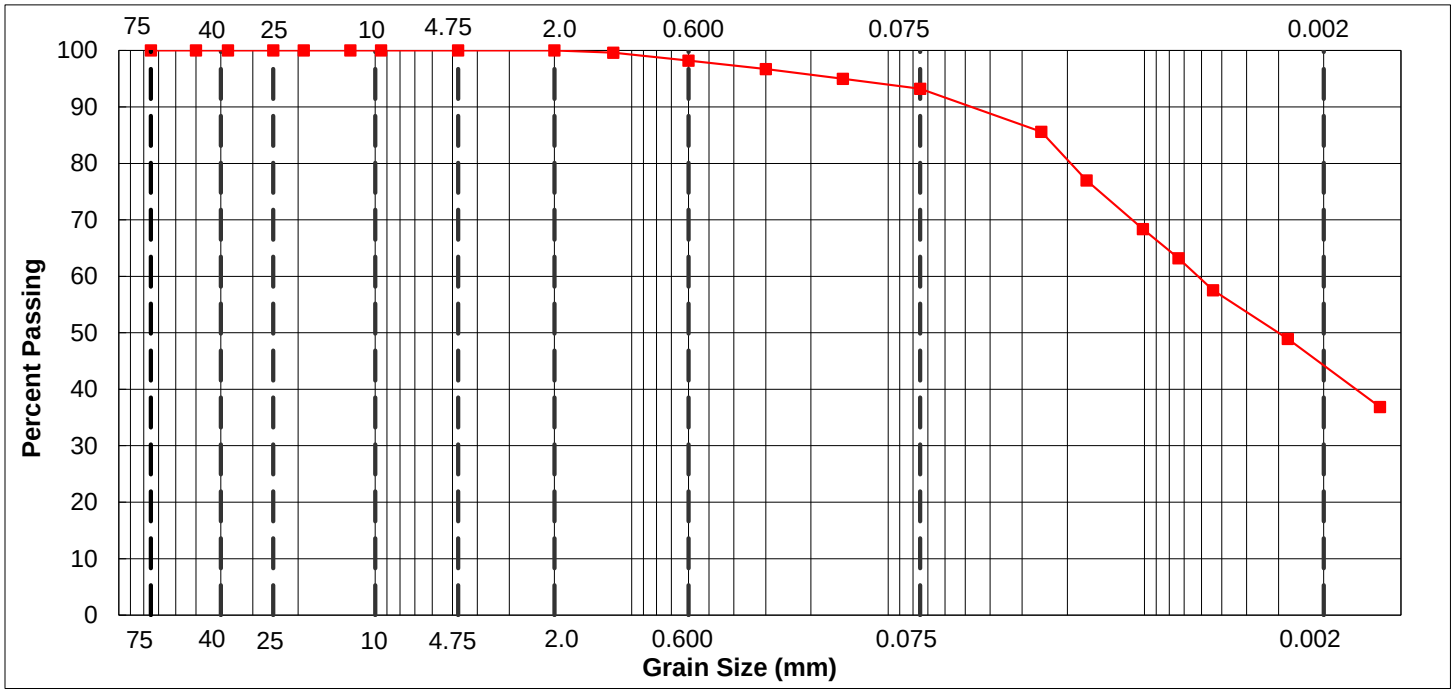
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	520AU4
Project No.:	1560-193-00	**Source:**	22BHAU4
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 520AU4	**Test Date:**	23-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.2
75.0	100.0	0.300	96.7
50.0	100.0	0.150	95.0
37.5	100.0	0.075	93.2
25.0	100.0	0.0253	85.6
19.0	100.0	0.0168	77.0
12.5	100.0	0.0102	68.4
9.5	100.0	0.0074	63.2
4.75	100.0	0.0054	57.5
2.00	100.0	0.0028	48.9
1.180	99.6	0.0012	36.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.8	2.00 mm to 425 µm
Fine Sand	5.0	425 µm to 75 µm
Silt	49.0	75 µm to 2 µm
Clay	44.2	<2 µm



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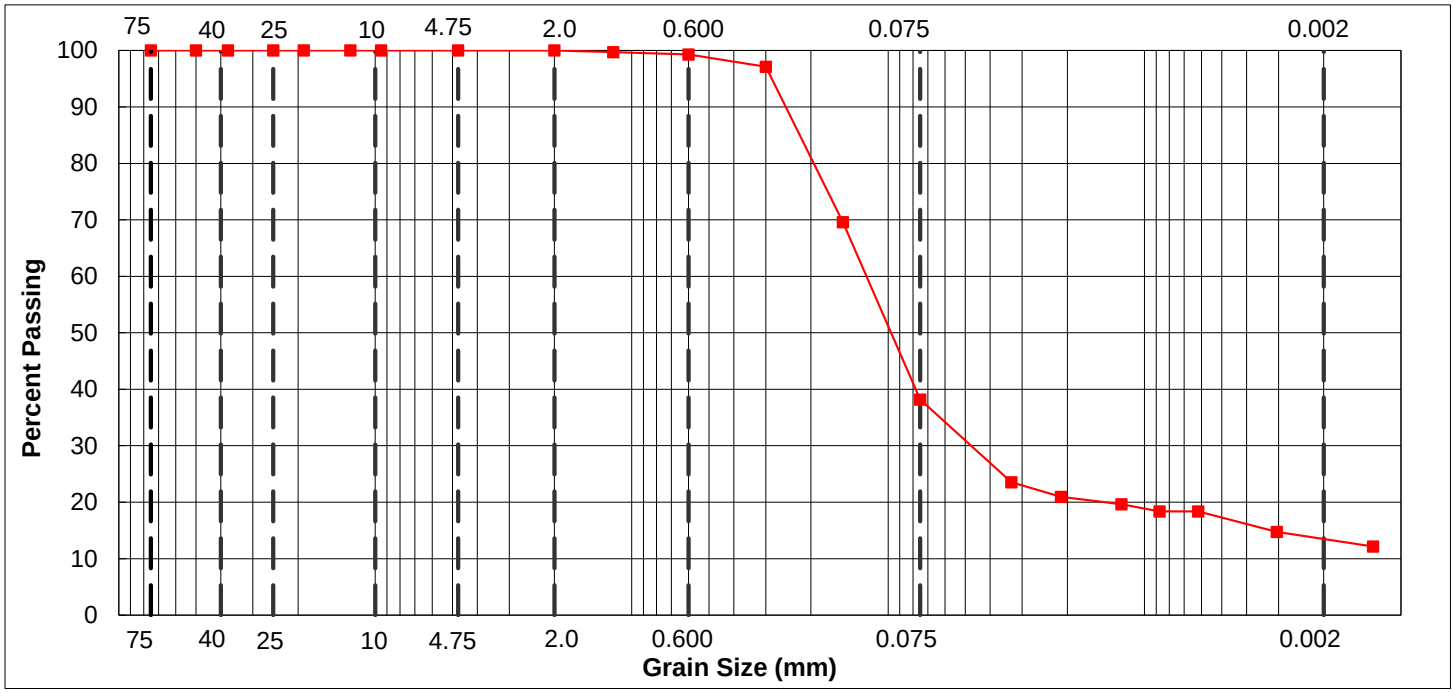
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	521AU1
Project No.:	1560-193-00	**Source:**	22BH521
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 521AU1	**Test Date:**	22-Sep-25

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.3
75.0	100.0	0.300	97.1
50.0	100.0	0.150	69.6
37.5	100.0	0.075	38.2
25.0	100.0	0.0331	23.5
19.0	100.0	0.0212	20.9
12.5	100.0	0.0123	19.7
9.5	100.0	0.0087	18.4
4.75	100.0	0.0062	18.4
2.00	100.0	0.0030	14.7
1.180	99.7	0.0013	12.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.7	2.00 mm to 425 µm
Fine Sand	61.1	425 µm to 75 µm
Silt	24.7	75 µm to 2 µm
Clay	13.5	<2 µm



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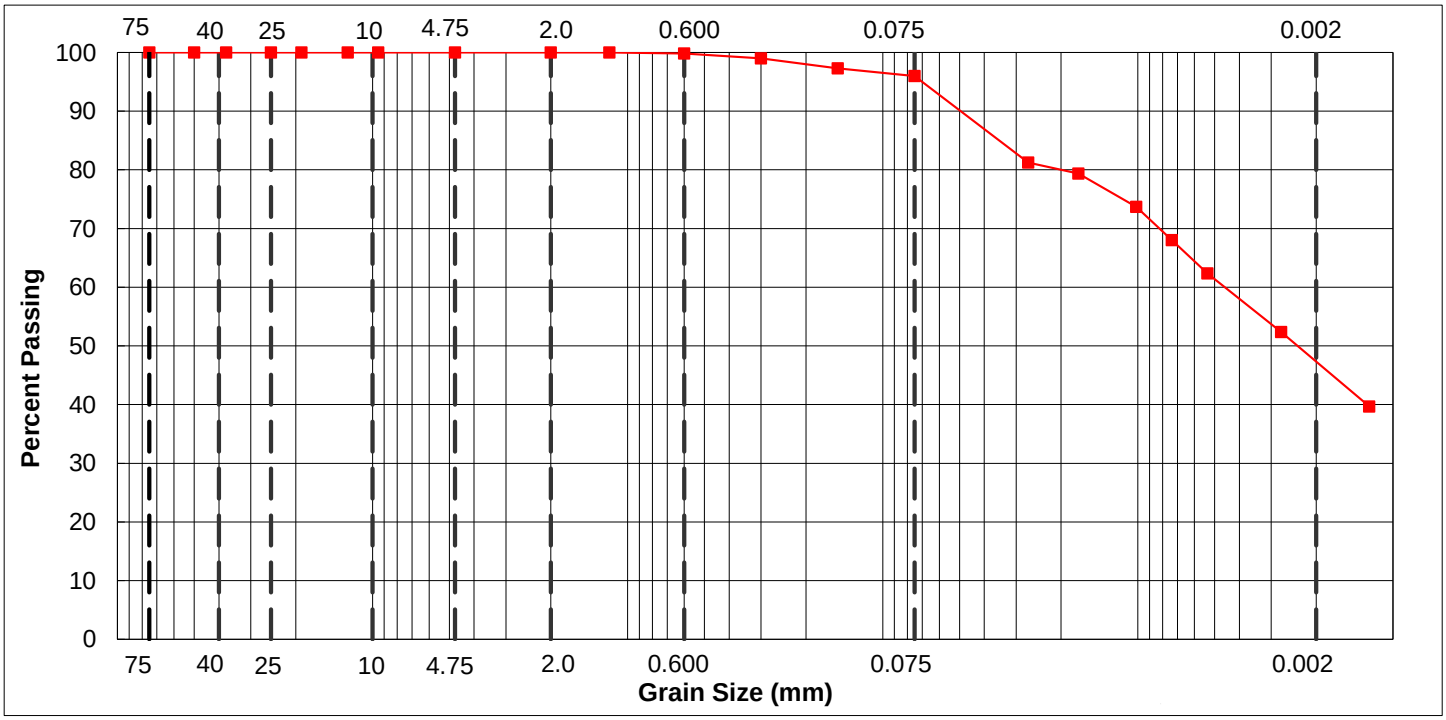
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	527AU3
Project No.:	1560-193-00	**Source:**	22BH527
Owner:	EID	**Sample Depth:**	4.0 m
File No.:	GSA - 527AU3	**Test Date:**	5-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.0
50.0	100.0	0.150	97.3
37.5	100.0	0.075	96.0
25.0	100.0	0.0269	81.3
19.0	100.0	0.0171	79.4
12.5	100.0	0.0101	73.7
9.5	100.0	0.0074	68.0
4.75	100.0	0.0053	62.4
2.00	100.0	0.0027	52.3
1.180	100.0	0.0012	39.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	3.8	425 µm to 75 µm
Silt	48.7	75 µm to 2 µm
Clay	47.3	<2 µm



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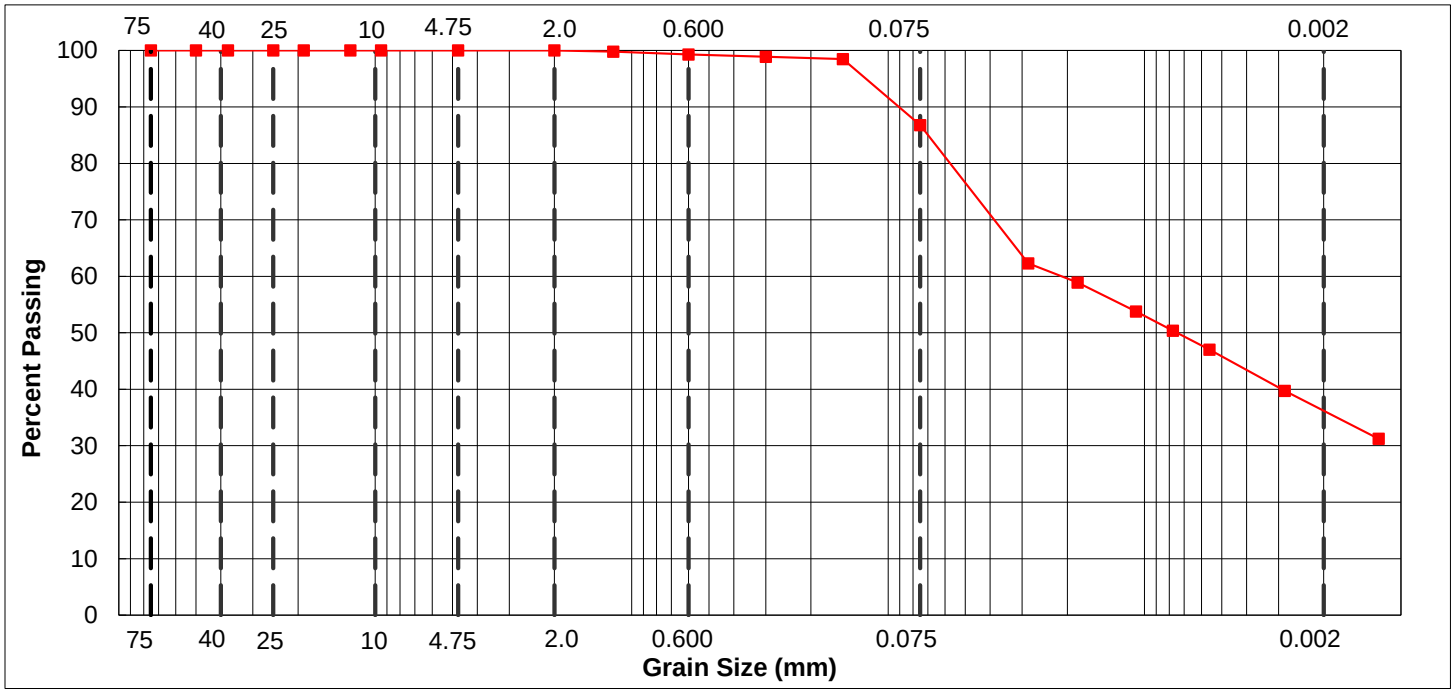
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	522AU2
Project No.:	1560-193-00	**Source:**	22BH522
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 522AU2	**Test Date:**	22-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.3
75.0	100.0	0.300	98.9
50.0	100.0	0.150	98.5
37.5	100.0	0.075	86.8
25.0	100.0	0.0284	62.3
19.0	100.0	0.0183	58.9
12.5	100.0	0.0108	53.8
9.5	100.0	0.0077	50.4
4.75	100.0	0.0056	47.0
2.00	100.0	0.0028	39.7
1.180	99.8	0.0012	31.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.7	2.00 mm to 425 µm
Fine Sand	12.5	425 µm to 75 µm
Silt	50.6	75 µm to 2 µm
Clay	36.2	<2 µm



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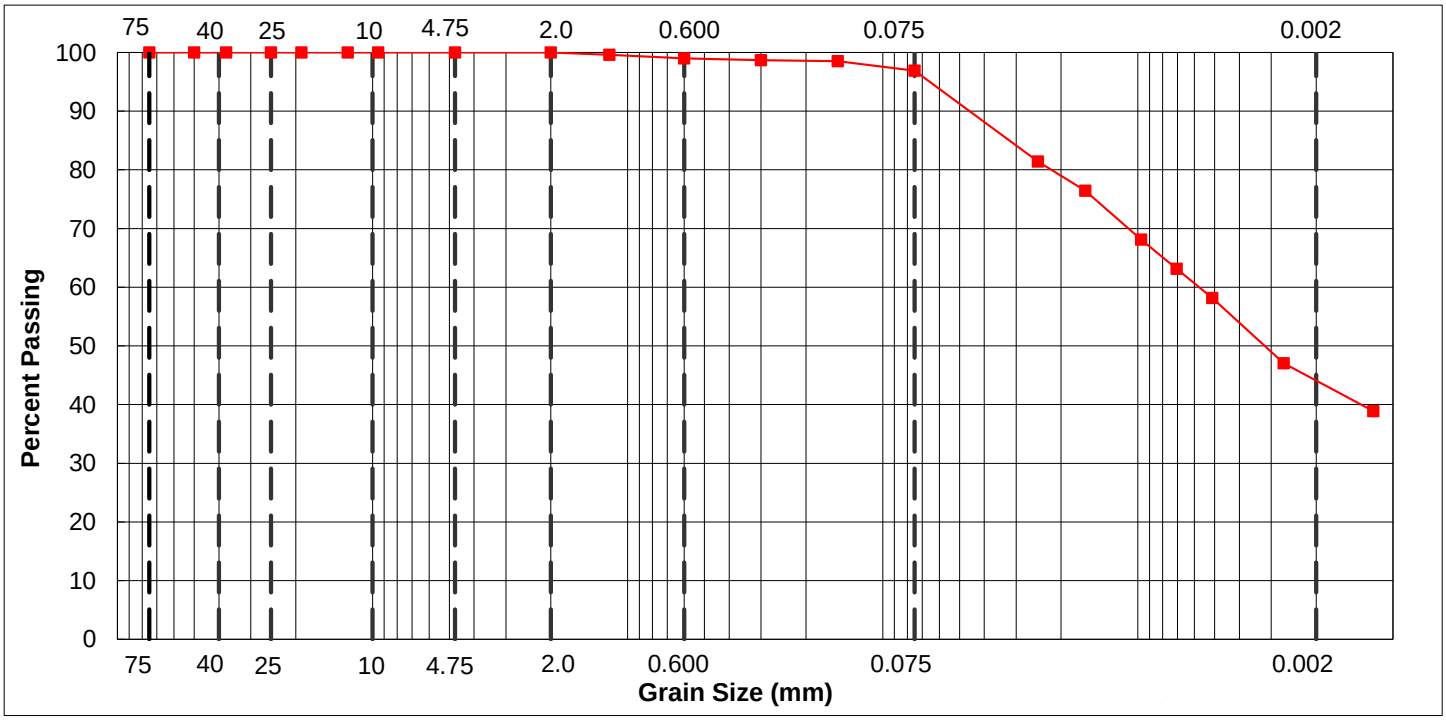
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	522AU4
Project No.:	1560-193-00	**Source:**	22BH522
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 522AU4	**Test Date:**	30-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.0
75.0	100.0	0.300	98.7
50.0	100.0	0.150	98.5
37.5	100.0	0.075	96.9
25.0	100.0	0.0246	81.4
19.0	100.0	0.0161	76.4
12.5	100.0	0.0097	68.1
9.5	100.0	0.0070	63.1
4.75	100.0	0.0051	58.1
2.00	100.0	0.0027	47.0
1.180	99.6	0.0012	38.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.0	2.00 mm to 425 µm
Fine Sand	2.1	425 µm to 75 µm
Silt	52.8	75 µm to 2 µm
Clay	44.1	<2 µm



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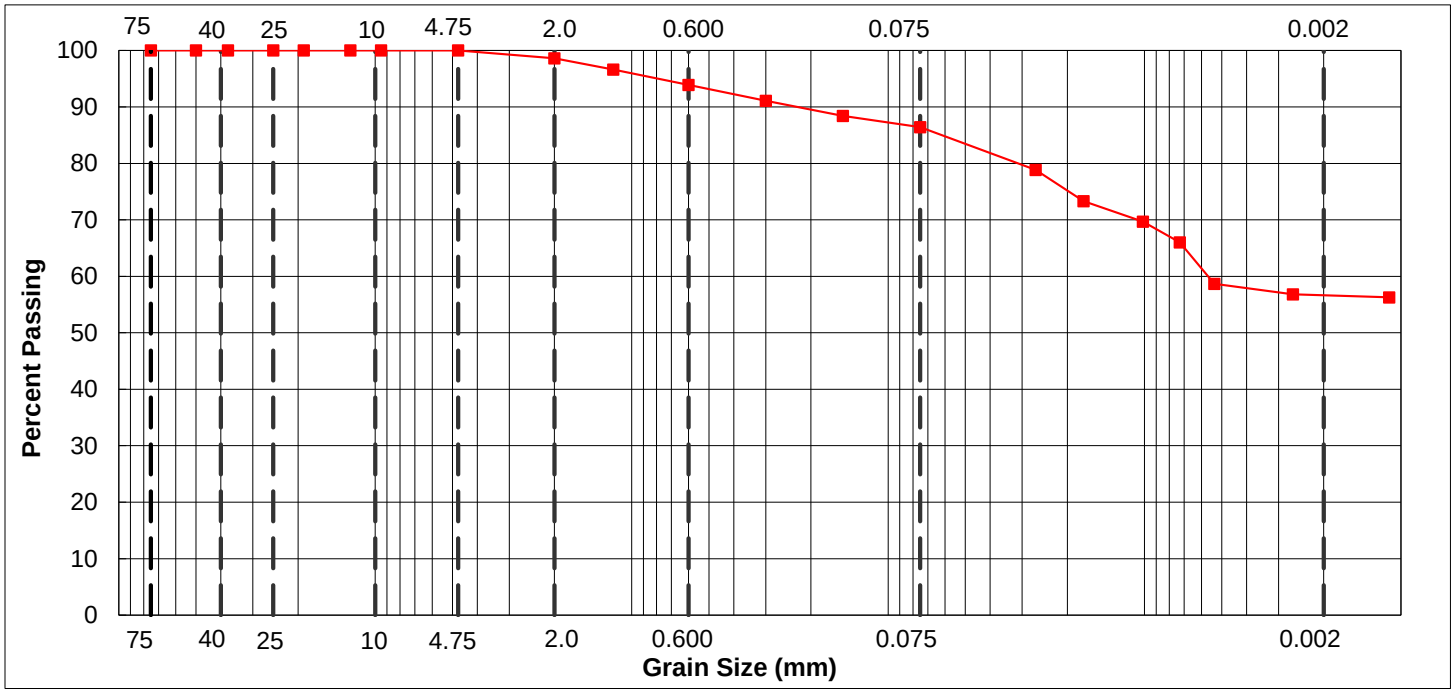
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	523AU1
Project No.:	1560-193-00	**Source:**	22BH523
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 523AU1	**Test Date:**	27-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	93.9
75.0	100.0	0.300	91.1
50.0	100.0	0.150	88.4
37.5	100.0	0.075	86.4
25.0	100.0	0.0266	78.8
19.0	100.0	0.0173	73.3
12.5	100.0	0.0101	69.7
9.5	100.0	0.0073	66.0
4.75	100.0	0.0053	58.7
2.00	98.6	0.0026	56.8
1.180	96.6	0.0011	56.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	1.4	4.75 mm to 2.00 mm
Medium Sand	4.7	2.00 mm to 425 µm
Fine Sand	7.5	425 µm to 75 µm
Silt	29.7	75 µm to 2 µm
Clay	56.7	<2 µm



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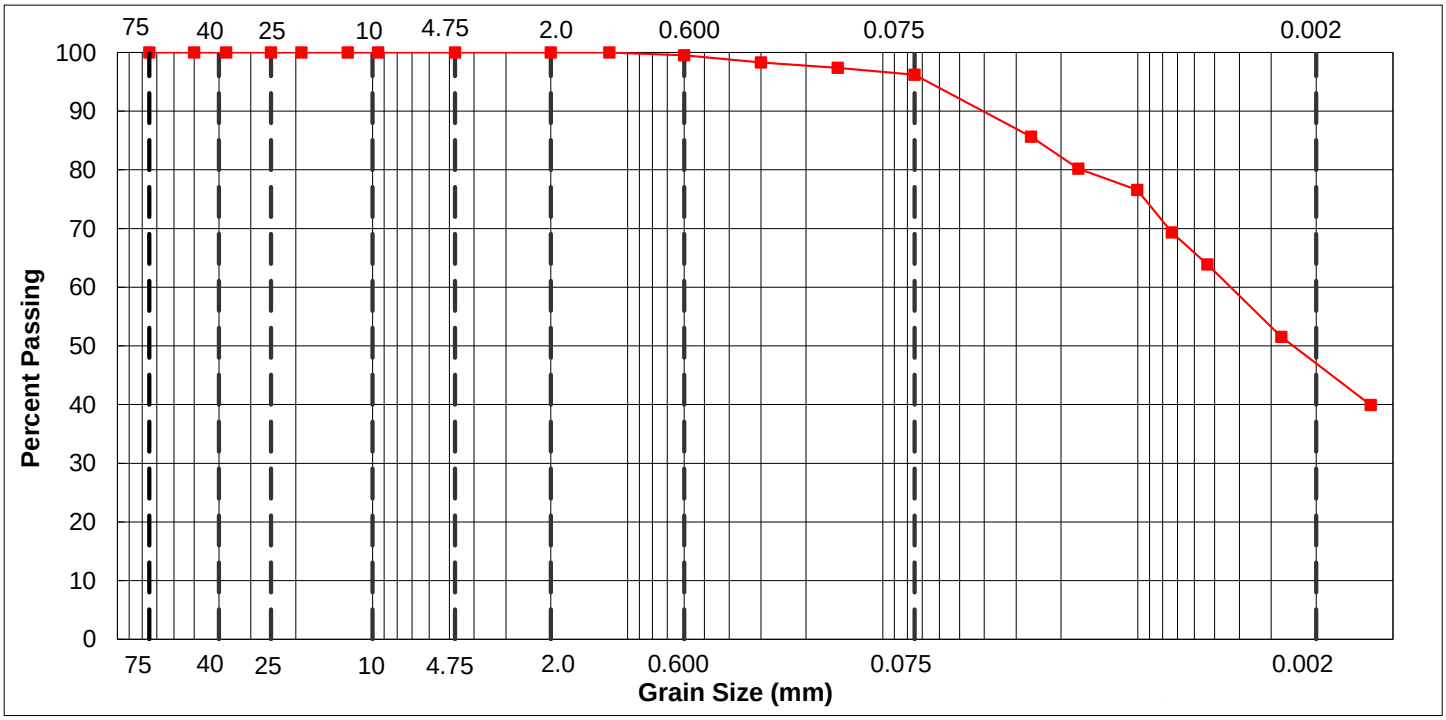
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	523AU3
Project No.:	1560-193-00	**Source:**	22BH523
Owner:	EID	**Sample Depth:**	4.0 m
File No.:	GSA - 523AU3	**Test Date:**	5-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	98.3
50.0	100.0	0.150	97.4
37.5	100.0	0.075	96.2
25.0	100.0	0.0262	85.6
19.0	100.0	0.0171	80.2
12.5	100.0	0.0101	76.6
9.5	100.0	0.0074	69.3
4.75	100.0	0.0053	63.9
2.00	100.0	0.0027	51.5
1.180	100.0	0.0012	39.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	3.3	425 µm to 75 µm
Silt	49.2	75 µm to 2 µm
Clay	47.0	<2 µm



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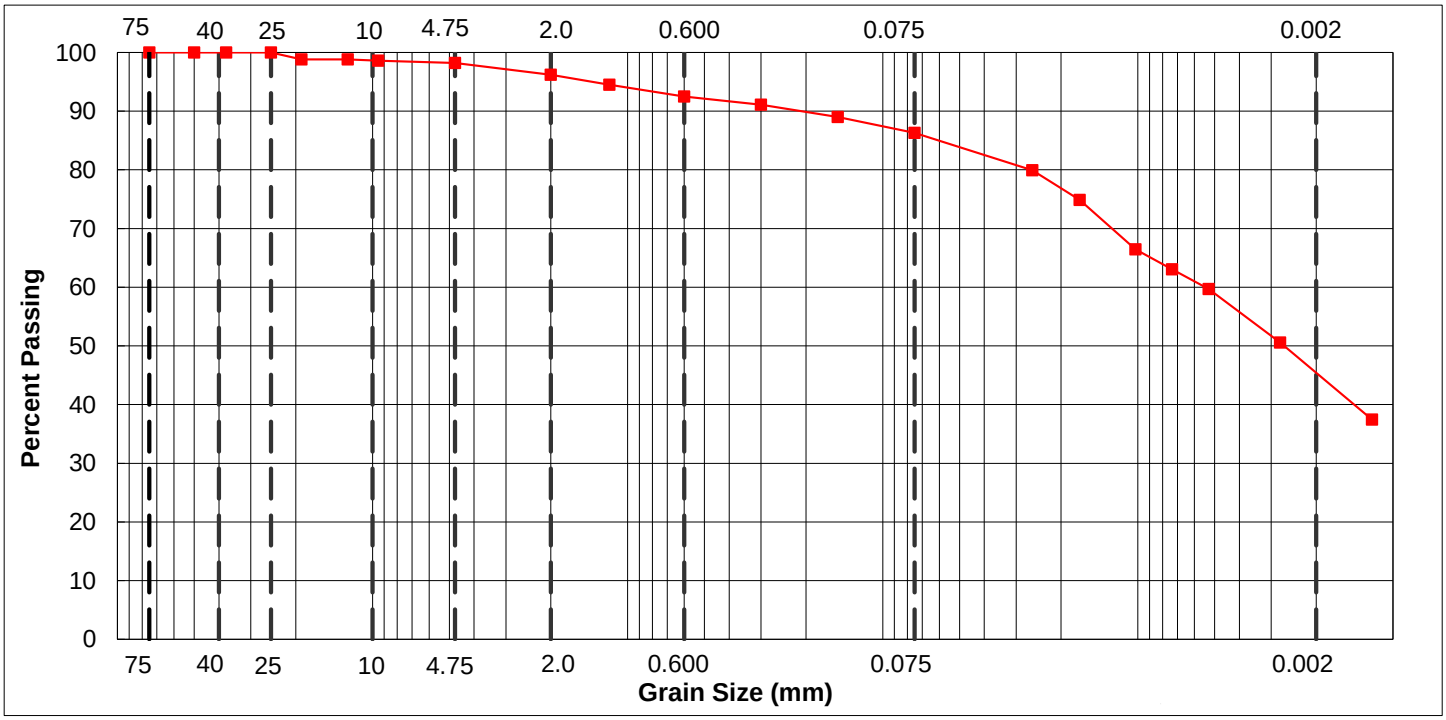
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	524AU2
Project No.:	1560-193-00	**Source:**	22BH524
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 524AU2	**Test Date:**	9-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	92.5
75.0	100.0	0.300	91.1
50.0	100.0	0.150	89.0
37.5	100.0	0.075	86.3
25.0	100.0	0.0259	79.9
19.0	98.8	0.0169	74.9
12.5	98.8	0.0102	66.4
9.5	98.6	0.0073	63.1
4.75	98.2	0.0053	59.7
2.00	96.2	0.0028	50.6
1.180	94.5	0.0012	37.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	1.8	20 mm to 4.75 mm
Coarse Sand	2.0	4.75 mm to 2.00 mm
Medium Sand	3.7	2.00 mm to 425 µm
Fine Sand	6.2	425 µm to 75 µm
Silt	40.9	75 µm to 2 µm
Clay	45.4	<2 µm



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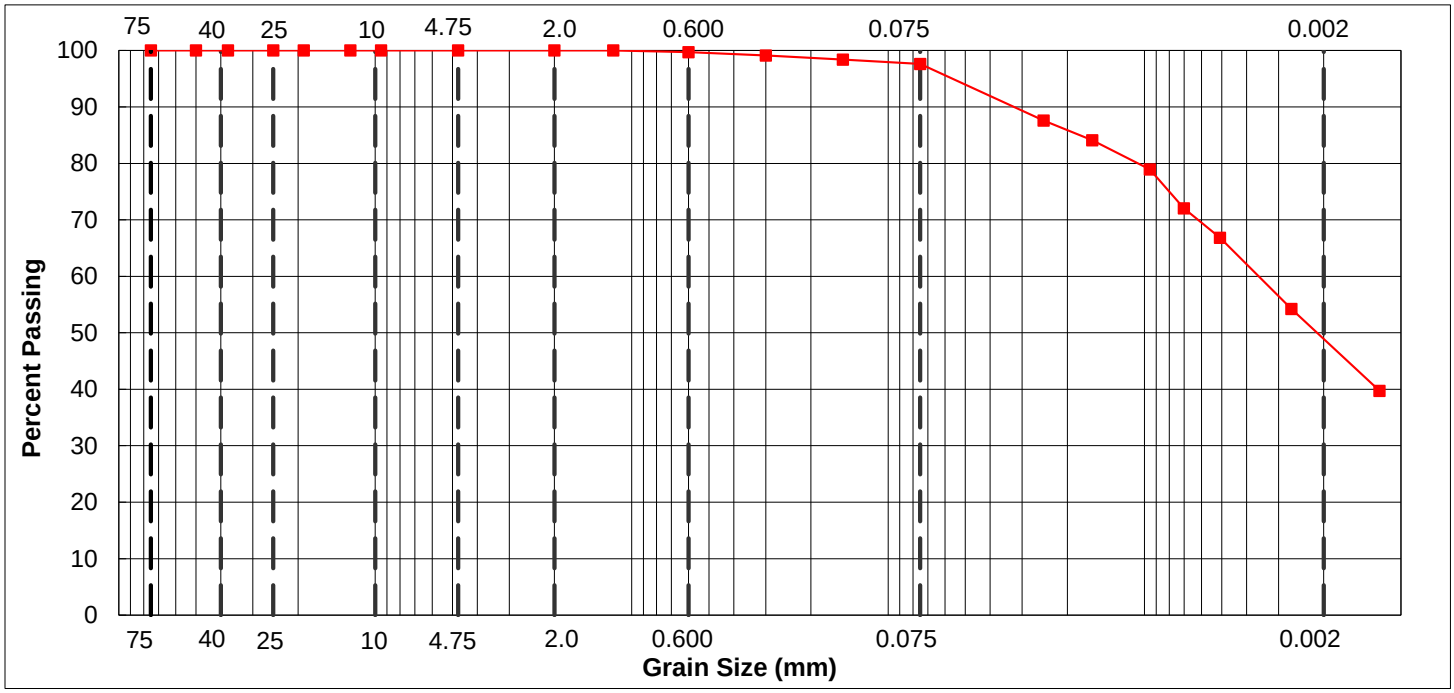
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	524AU4
Project No.:	1560-193-00	**Source:**	22BH524
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 524AU4	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.1
50.0	100.0	0.150	98.4
37.5	100.0	0.075	97.6
25.0	100.0	0.0248	87.6
19.0	100.0	0.0160	84.1
12.5	100.0	0.0095	78.9
9.5	100.0	0.0070	72.0
4.75	100.0	0.0051	66.9
2.00	100.0	0.0027	54.2
1.180	100.0	0.0012	39.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	2.1	425 µm to 75 µm
Silt	48.7	75 µm to 2 µm
Clay	48.9	<2 µm



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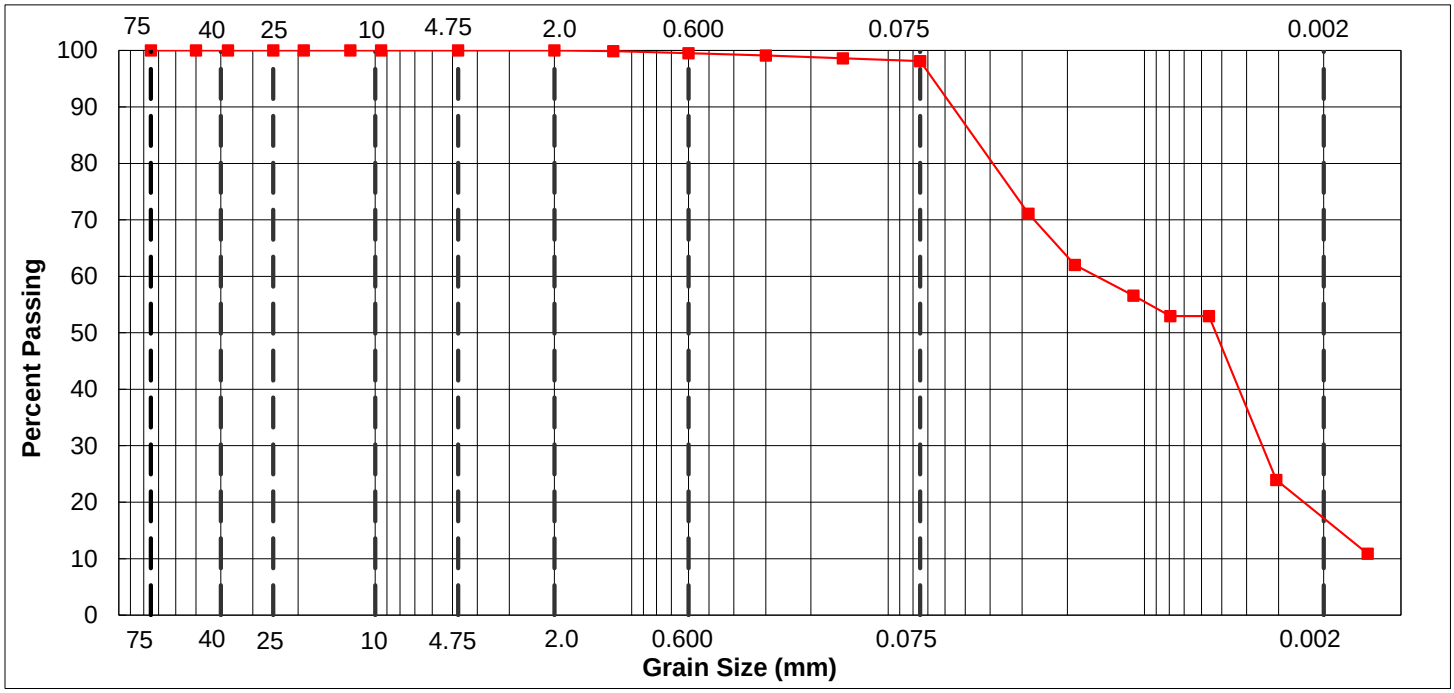
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	525AU1
Project No.:	1560-193-00	**Source:**	22BH525
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 525AU1	**Test Date:**	26-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.1
50.0	100.0	0.150	98.6
37.5	100.0	0.075	98.1
25.0	100.0	0.0283	71.1
19.0	100.0	0.0187	62.0
12.5	100.0	0.0111	56.6
9.5	100.0	0.0079	53.0
4.75	100.0	0.0056	53.0
2.00	100.0	0.0031	23.9
1.180	99.9	0.0013	10.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	1.4	425 µm to 75 µm
Silt	80.9	75 µm to 2 µm
Clay	17.2	<2 µm



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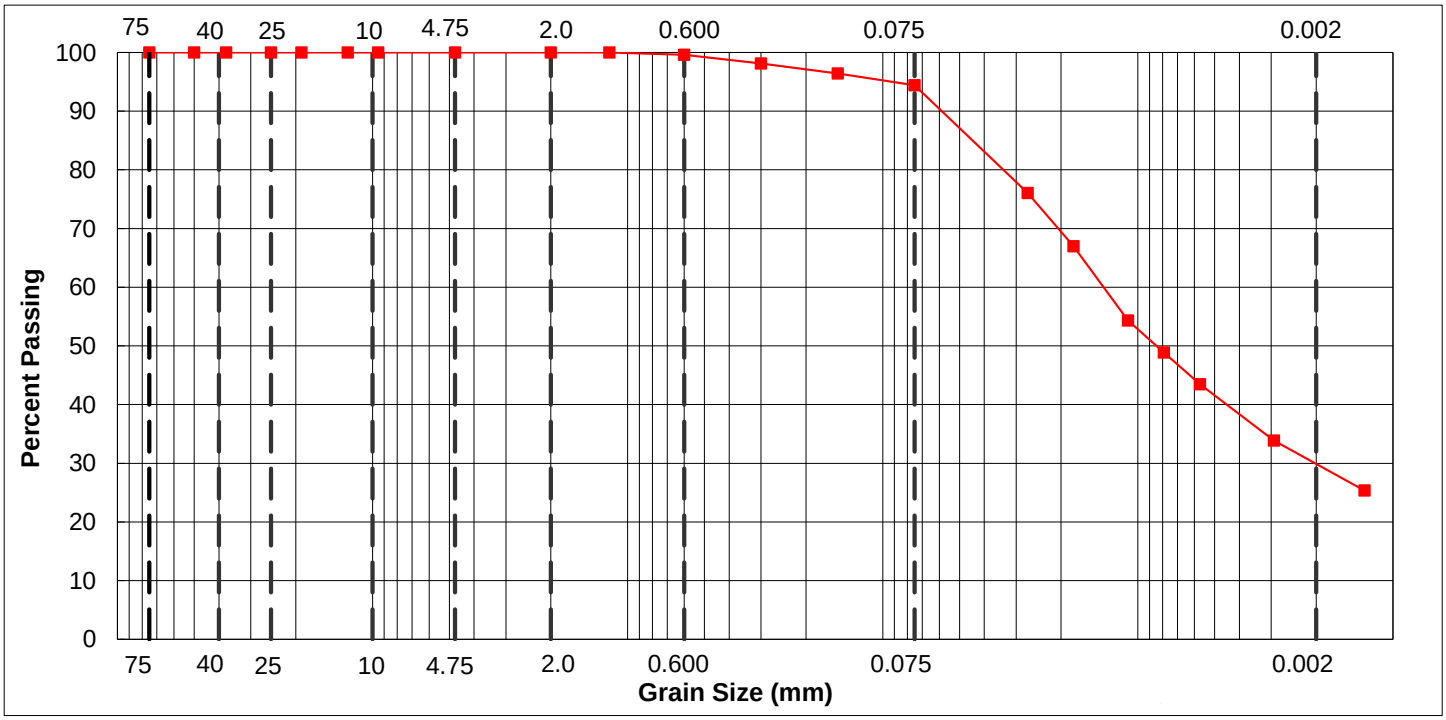
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	525AU3
Project No.:	1560-193-00	**Source:**	22BH525
Owner:	EID	**Sample Depth:**	4.0 m
File No.:	GSA - 525AU3	**Test Date:**	5-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	98.1
50.0	100.0	0.150	96.4
37.5	100.0	0.075	94.4
25.0	100.0	0.0270	76.0
19.0	100.0	0.0179	67.0
12.5	100.0	0.0109	54.3
9.5	100.0	0.0079	48.9
4.75	100.0	0.0057	43.4
2.00	100.0	0.0029	33.9
1.180	100.0	0.0013	25.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	5.2	425 µm to 75 µm
Silt	64.5	75 µm to 2 µm
Clay	29.9	<2 µm



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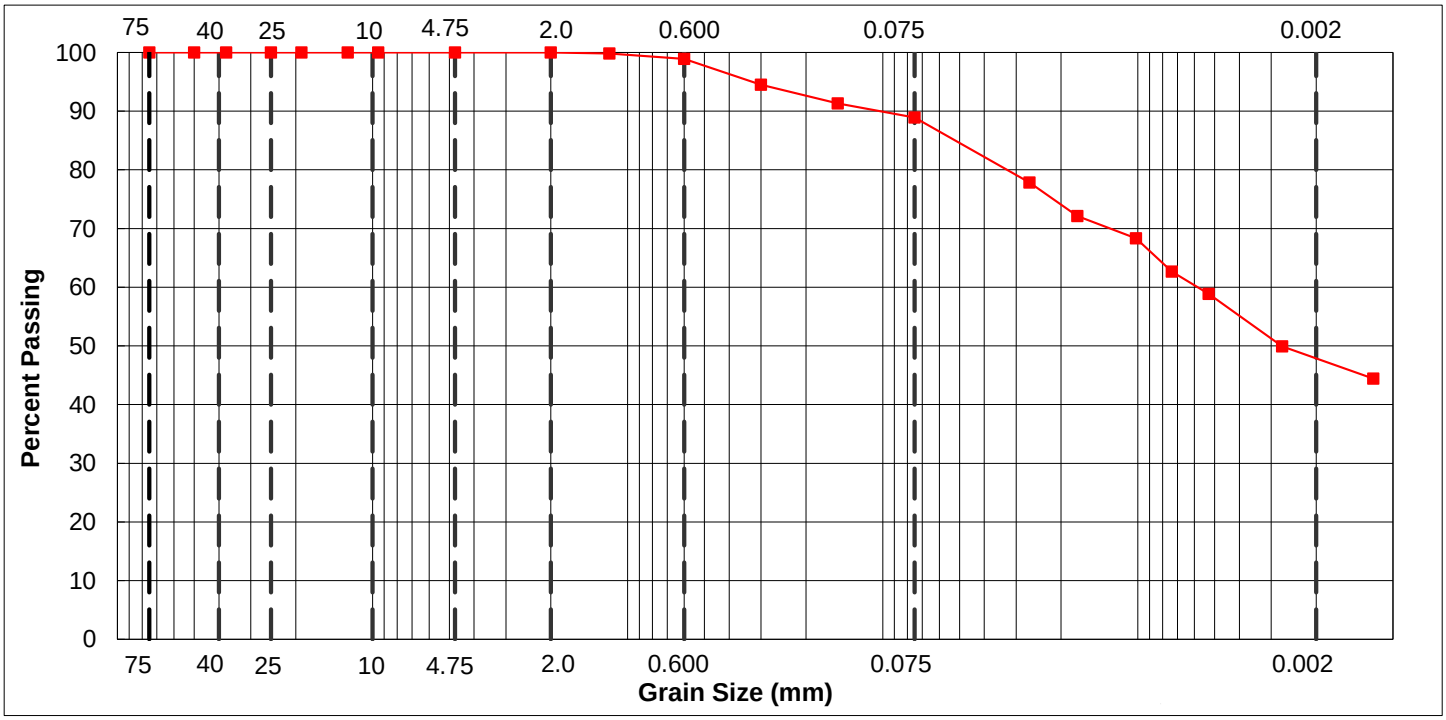
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	526AU2
Project No.:	1560-193-00	**Source:**	22BH526
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 526AU2	**Test Date:**	30-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.9
75.0	100.0	0.300	94.5
50.0	100.0	0.150	91.3
37.5	100.0	0.075	88.9
25.0	100.0	0.0266	77.8
19.0	100.0	0.0173	72.1
12.5	100.0	0.0102	68.3
9.5	100.0	0.0074	62.6
4.75	100.0	0.0053	58.8
2.00	100.0	0.0027	49.9
1.180	99.8	0.0012	44.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.1	2.00 mm to 425 µm
Fine Sand	10.0	425 µm to 75 µm
Silt	41.0	75 µm to 2 µm
Clay	47.9	<2 µm



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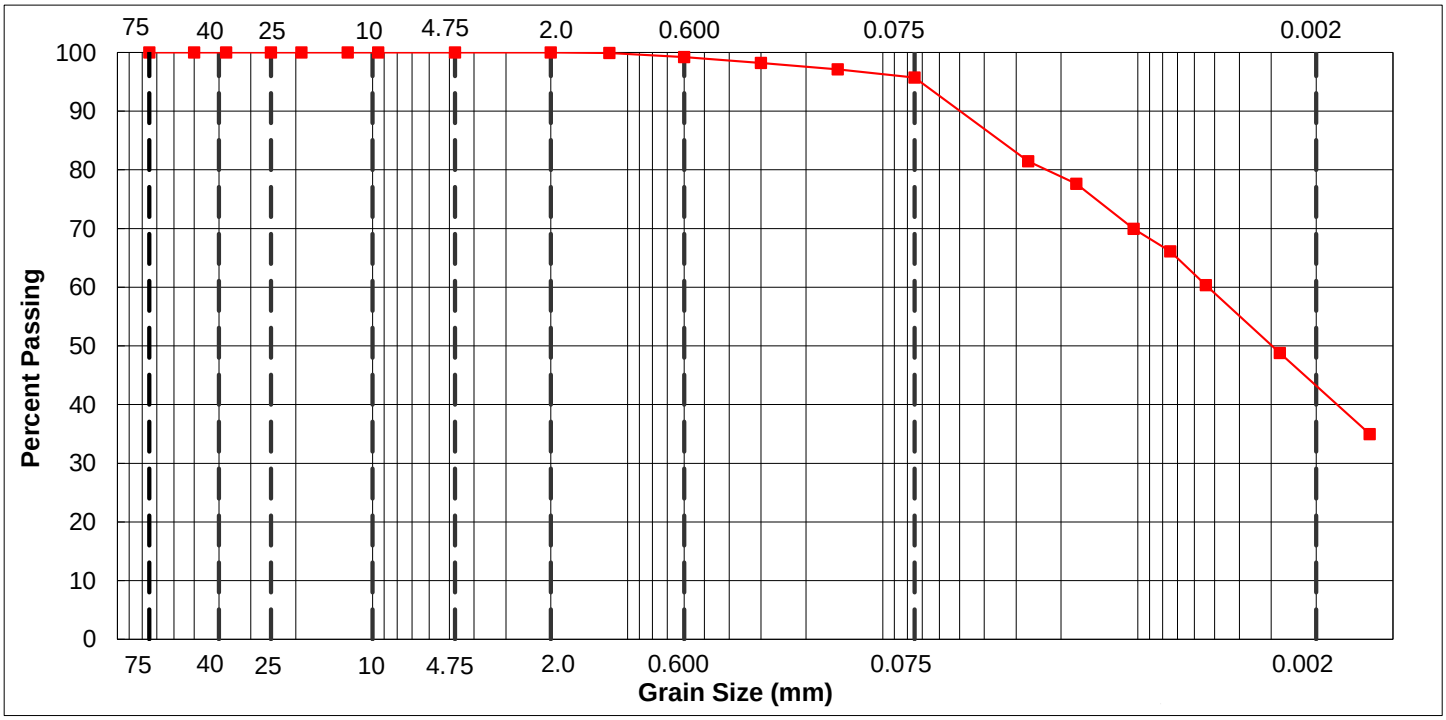
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	526AU4
Project No.:	1560-193-00	**Source:**	22BH526
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 526AU4	**Test Date:**	7-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	98.2
50.0	100.0	0.150	97.1
37.5	100.0	0.075	95.7
25.0	100.0	0.0269	81.5
19.0	100.0	0.0174	77.6
12.5	100.0	0.0104	69.9
9.5	100.0	0.0075	66.1
4.75	100.0	0.0054	60.3
2.00	100.0	0.0028	48.8
1.180	99.9	0.0012	35.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	3.5	425 µm to 75 µm
Silt	52.5	75 µm to 2 µm
Clay	43.2	<2 µm



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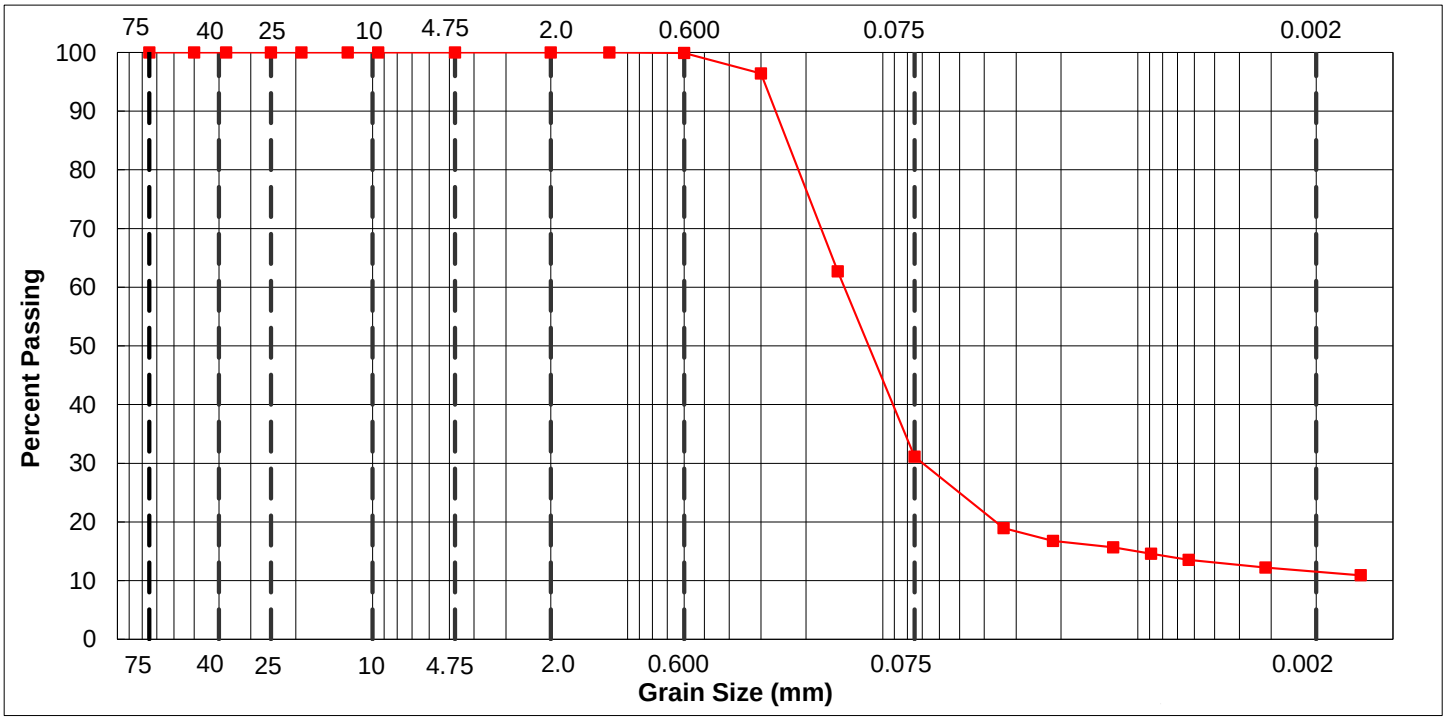
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	527AU1
Project No.:	1560-193-00	**Source:**	22BH527
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 527AU1	**Test Date:**	6-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	96.4
50.0	100.0	0.150	62.7
37.5	100.0	0.075	31.1
25.0	100.0	0.0336	19.0
19.0	100.0	0.0215	16.8
12.5	100.0	0.0125	15.7
9.5	100.0	0.0089	14.6
4.75	100.0	0.0063	13.5
2.00	100.0	0.0032	12.2
1.180	100.0	0.0013	10.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	68.8	425 µm to 75 µm
Silt	19.6	75 µm to 2 µm
Clay	11.5	<2 µm



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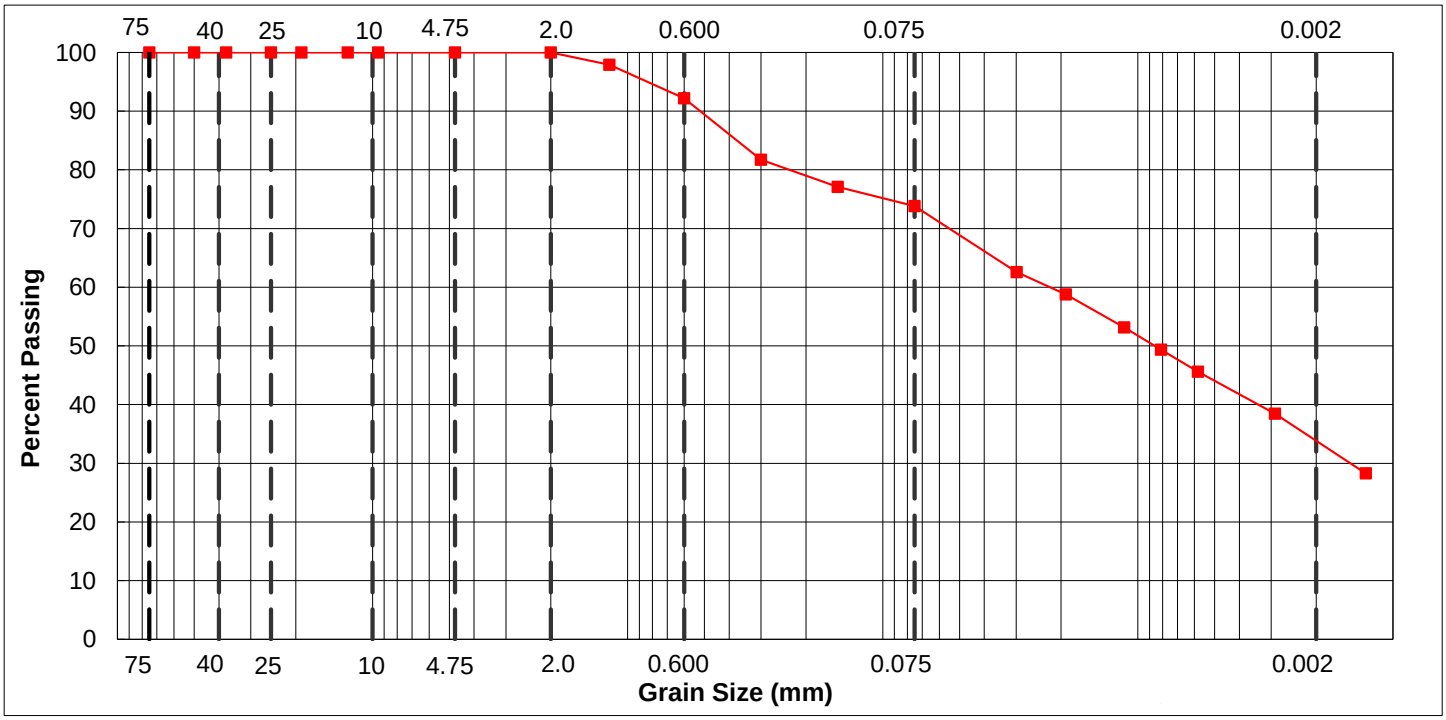
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	521AU3
Project No.:	1560-193-00	**Source:**	22BH521
Owner:	EID	**Sample Depth:**	4.0 m
File No.:	GSA - 521AU3	**Test Date:**	5-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	92.2
75.0	100.0	0.300	81.7
50.0	100.0	0.150	77.1
37.5	100.0	0.075	73.8
25.0	100.0	0.0298	62.6
19.0	100.0	0.0192	58.8
12.5	100.0	0.0113	53.1
9.5	100.0	0.0081	49.4
4.75	100.0	0.0058	45.6
2.00	100.0	0.0029	38.4
1.180	97.9	0.0013	28.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	7.8	2.00 mm to 425 µm
Fine Sand	18.4	425 µm to 75 µm
Silt	40.0	75 µm to 2 µm
Clay	33.8	<2 µm



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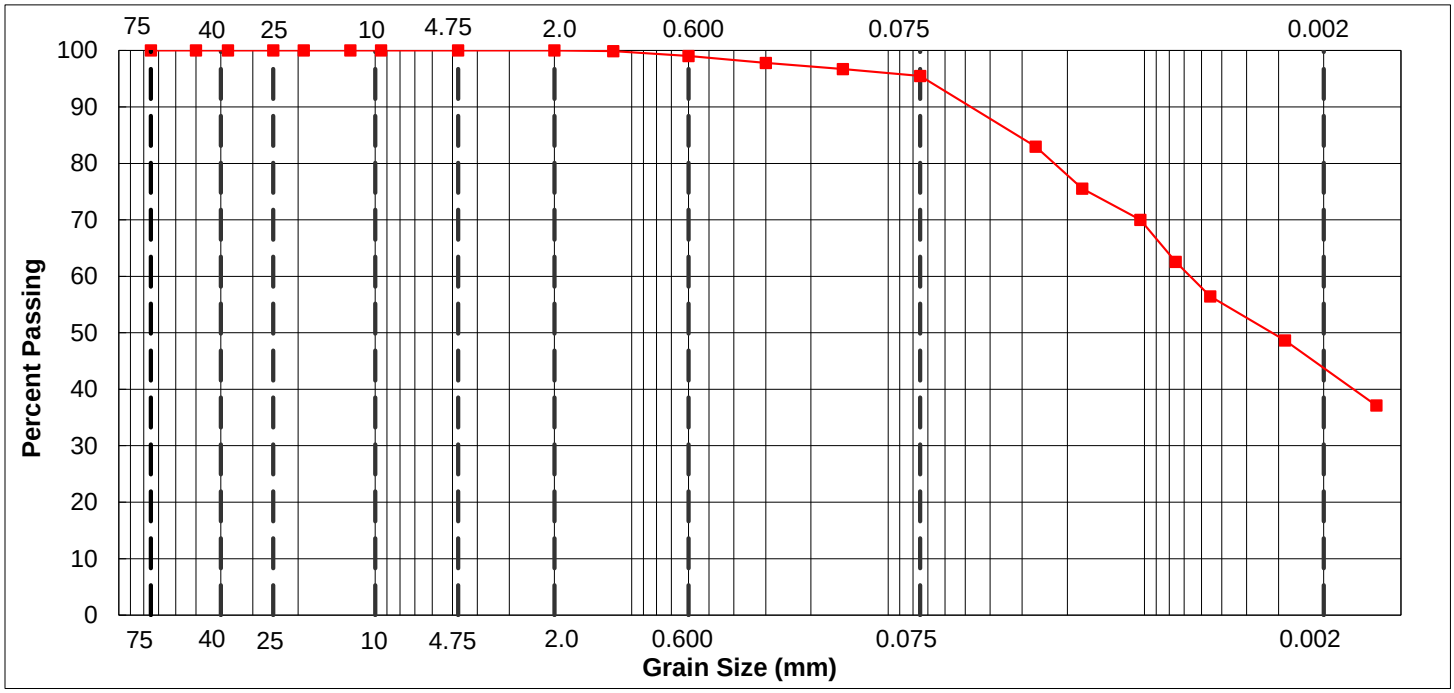
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	528AU2
Project No.:	1560-193-00	**Source:**	22BH528
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 528AU2	**Test Date:**	21-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.0
75.0	100.0	0.300	97.8
50.0	100.0	0.150	96.7
37.5	100.0	0.075	95.5
25.0	100.0	0.0266	83.0
19.0	100.0	0.0175	75.6
12.5	100.0	0.0104	70.0
9.5	100.0	0.0076	62.6
4.75	100.0	0.0055	56.4
2.00	100.0	0.0028	48.6
1.180	99.9	0.0012	37.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.0	2.00 mm to 425 µm
Fine Sand	3.5	425 µm to 75 µm
Silt	51.8	75 µm to 2 µm
Clay	43.7	<2 µm



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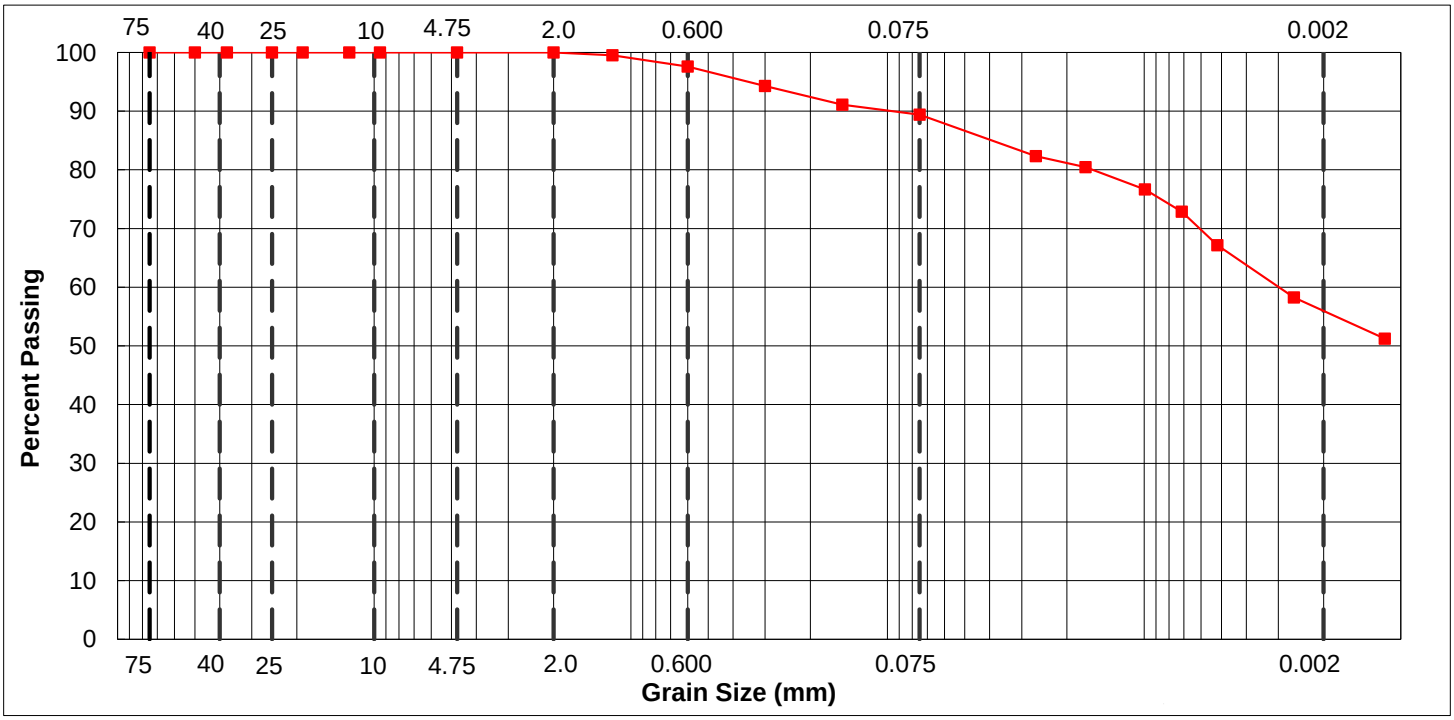
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	529AU1
Project No.:	1560-193-00	**Source:**	22BH529
Owner:	EID	**Sample Depth:**	1.0 m
File No.:	GSA - 529AU1	**Test Date:**	5-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.6
75.0	100.0	0.300	94.3
50.0	100.0	0.150	91.1
37.5	100.0	0.075	89.4
25.0	100.0	0.0264	82.3
19.0	100.0	0.0169	80.4
12.5	100.0	0.0099	76.6
9.5	100.0	0.0071	72.8
4.75	100.0	0.0052	67.2
2.00	100.0	0.0026	58.2
1.180	99.5	0.0012	51.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.4	2.00 mm to 425 µm
Fine Sand	8.2	425 µm to 75 µm
Silt	33.4	75 µm to 2 µm
Clay	56.0	<2 µm



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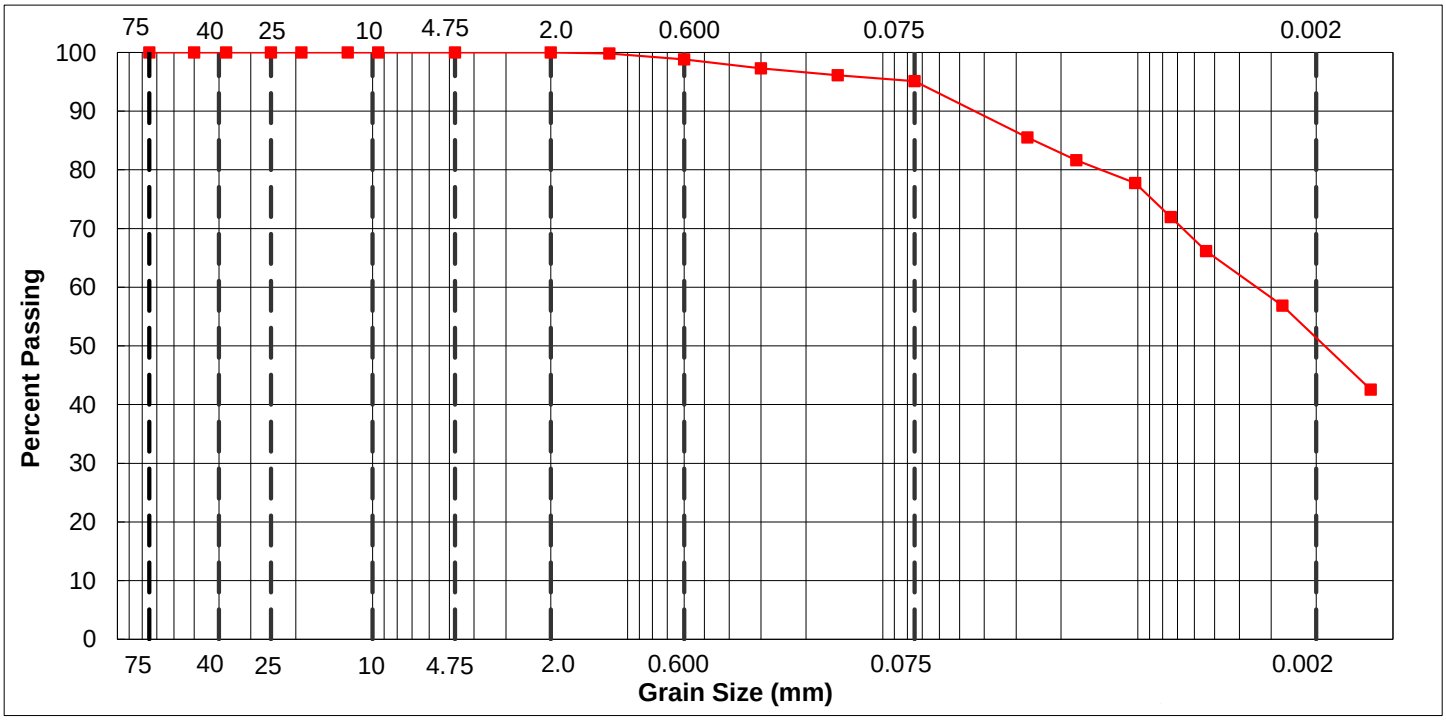
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	529AU3
Project No.:	1560-193-00	**Source:**	22BH529
Owner:	EID	**Sample Depth:**	4.0 m
File No.:	GSA - 529AU3	**Test Date:**	5-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.8
75.0	100.0	0.300	97.3
50.0	100.0	0.150	96.1
37.5	100.0	0.075	95.1
25.0	100.0	0.0271	85.5
19.0	100.0	0.0174	81.6
12.5	100.0	0.0102	77.8
9.5	100.0	0.0074	72.0
4.75	100.0	0.0054	66.2
2.00	100.0	0.0027	56.9
1.180	99.8	0.0012	42.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.2	2.00 mm to 425 µm
Fine Sand	3.7	425 µm to 75 µm
Silt	43.7	75 µm to 2 µm
Clay	51.4	<2 µm



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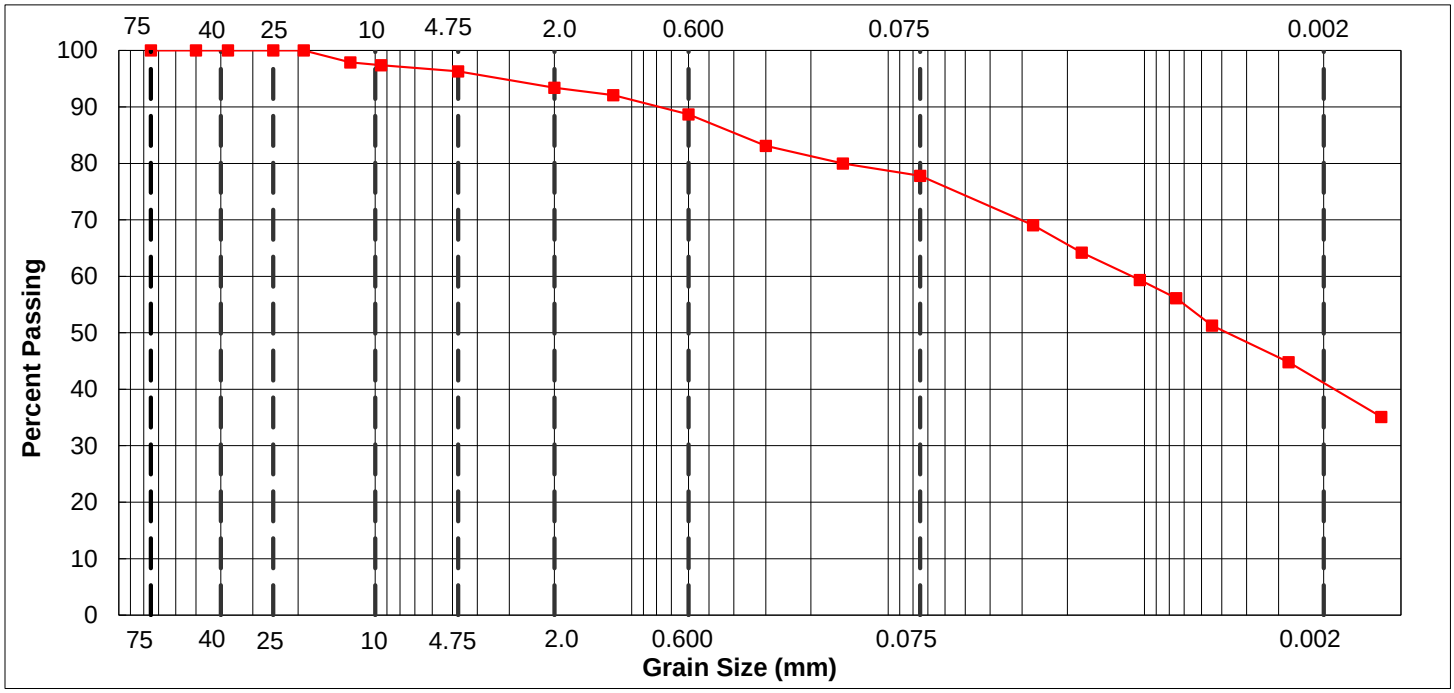
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	530AU2
Project No.:	1560-193-00	**Source:**	22BH530
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 530AU2	**Test Date:**	26-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	88.7
75.0	100.0	0.300	83.1
50.0	100.0	0.150	80.0
37.5	100.0	0.075	77.8
25.0	100.0	0.0272	69.1
19.0	100.0	0.0176	64.2
12.5	97.9	0.0104	59.4
9.5	97.4	0.0075	56.1
4.75	96.3	0.0055	51.3
2.00	93.4	0.0027	44.8
1.180	92.1	0.0012	35.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	3.7	20 mm to 4.75 mm
Coarse Sand	2.9	4.75 mm to 2.00 mm
Medium Sand	4.7	2.00 mm to 425 µm
Fine Sand	10.9	425 µm to 75 µm
Silt	36.7	75 µm to 2 µm
Clay	41.1	<2 µm



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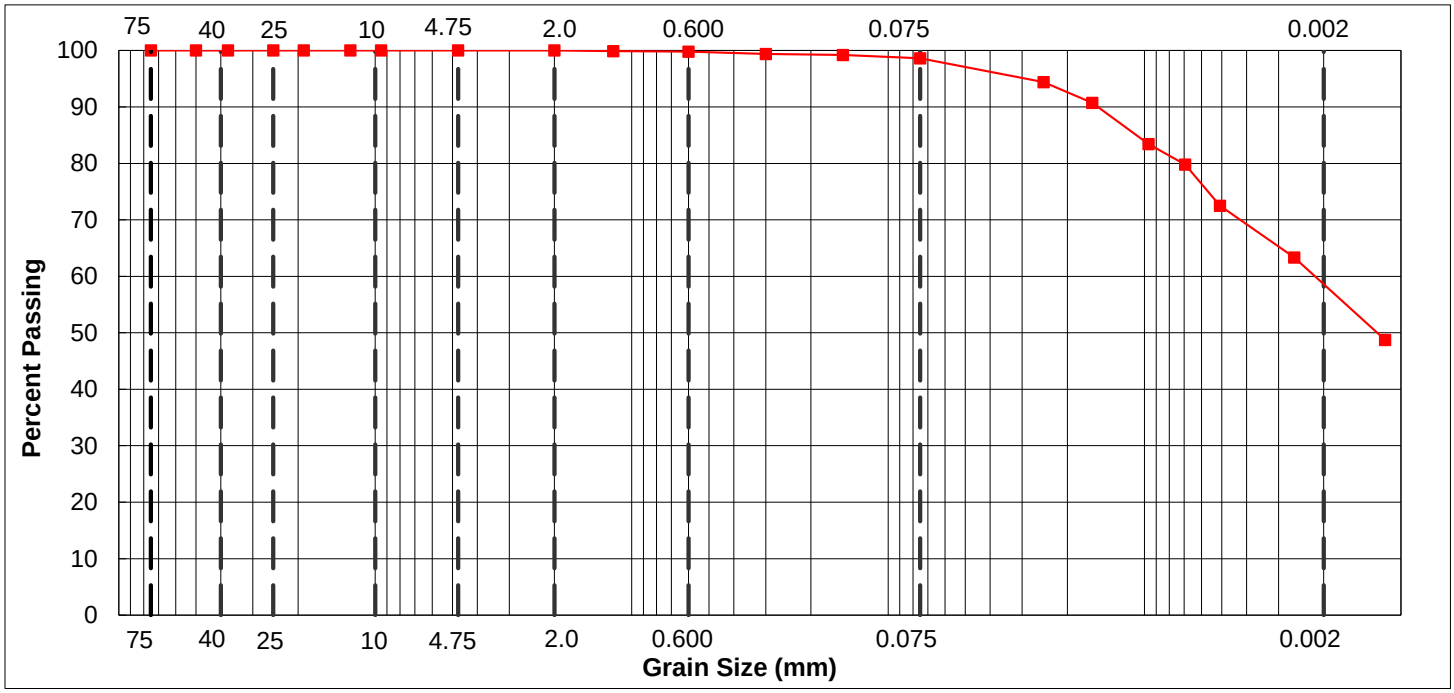
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	530AU4
Project No.:	1560-193-00	**Source:**	22BH530
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 530AU4	**Test Date:**	26-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.4
50.0	100.0	0.150	99.2
37.5	100.0	0.075	98.6
25.0	100.0	0.0248	94.4
19.0	100.0	0.0160	90.7
12.5	100.0	0.0096	83.4
9.5	100.0	0.0069	79.8
4.75	100.0	0.0051	72.5
2.00	100.0	0.0026	63.4
1.180	99.9	0.0012	48.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	1.2	425 µm to 75 µm
Silt	40.0	75 µm to 2 µm
Clay	58.6	<2 µm



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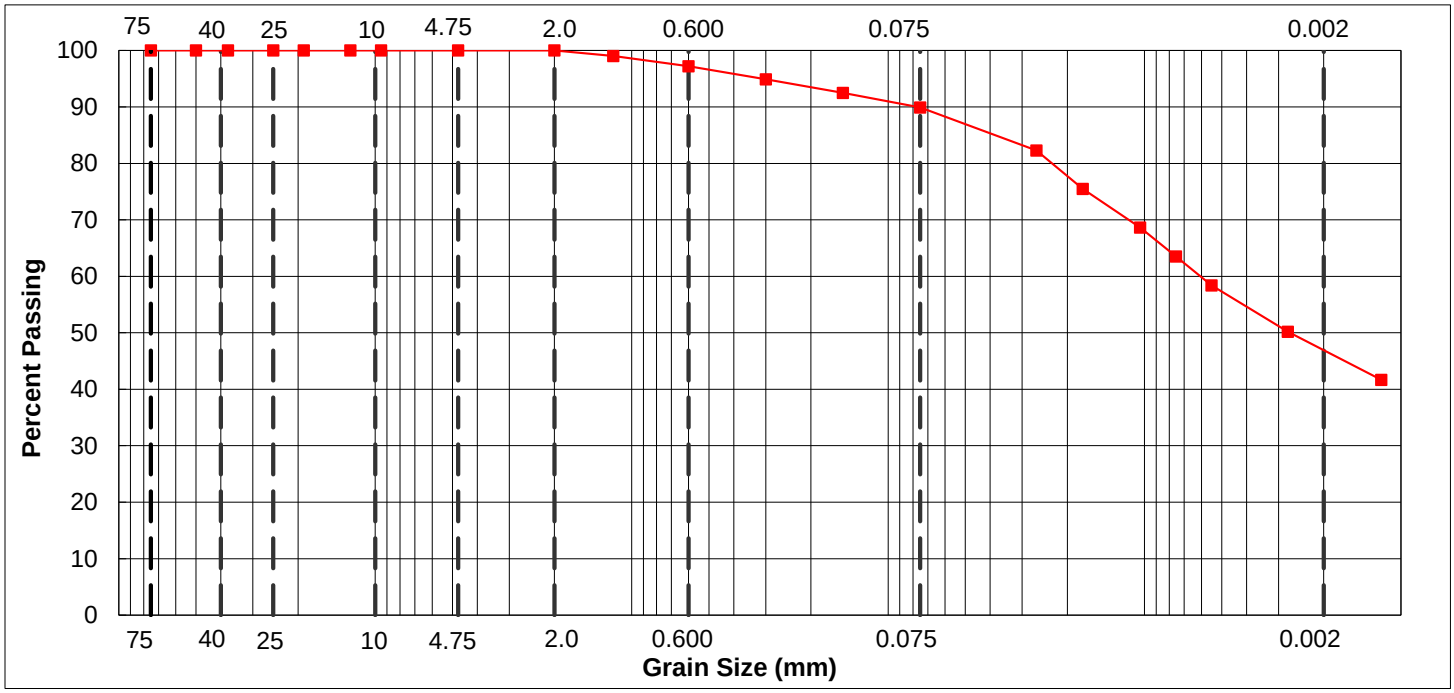
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	531AU1
Project No.:	1560-193-00	**Source:**	22BH531
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 531AU1	**Test Date:**	21-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.2
75.0	100.0	0.300	94.9
50.0	100.0	0.150	92.5
37.5	100.0	0.075	89.9
25.0	100.0	0.0264	82.3
19.0	100.0	0.0174	75.5
12.5	100.0	0.0104	68.7
9.5	100.0	0.0076	63.5
4.75	100.0	0.0055	58.4
2.00	100.0	0.0028	50.2
1.180	99.0	0.0012	41.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.8	2.00 mm to 425 µm
Fine Sand	7.3	425 µm to 75 µm
Silt	43.0	75 µm to 2 µm
Clay	46.9	<2 µm



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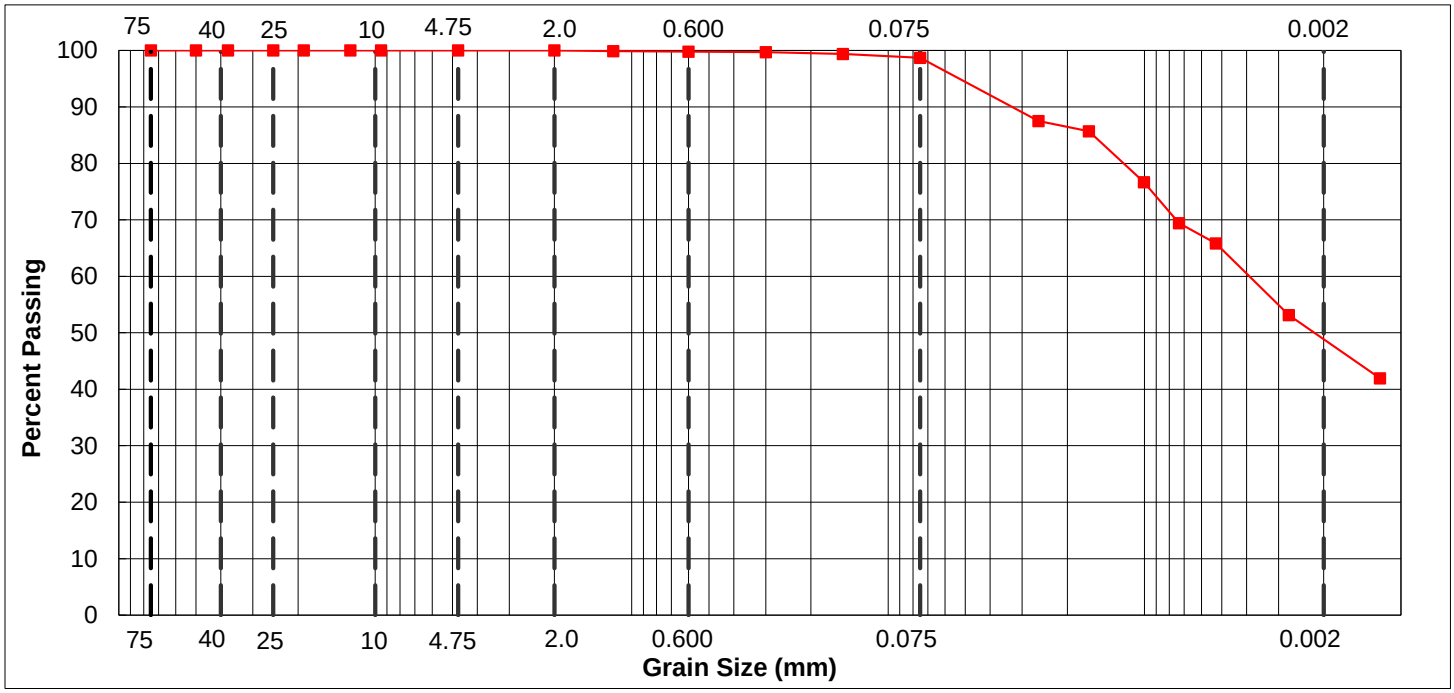
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	531AU3
Project No.:	1560-193-00	**Source:**	22BH531
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 531AU3	**Test Date:**	4-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.7
50.0	100.0	0.150	99.4
37.5	100.0	0.075	98.7
25.0	100.0	0.0259	87.5
19.0	100.0	0.0165	85.7
12.5	100.0	0.0100	76.7
9.5	100.0	0.0073	69.4
4.75	100.0	0.0053	65.8
2.00	100.0	0.0027	53.2
1.180	99.9	0.0012	42.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	1.1	425 µm to 75 µm
Silt	49.8	75 µm to 2 µm
Clay	48.9	<2 µm



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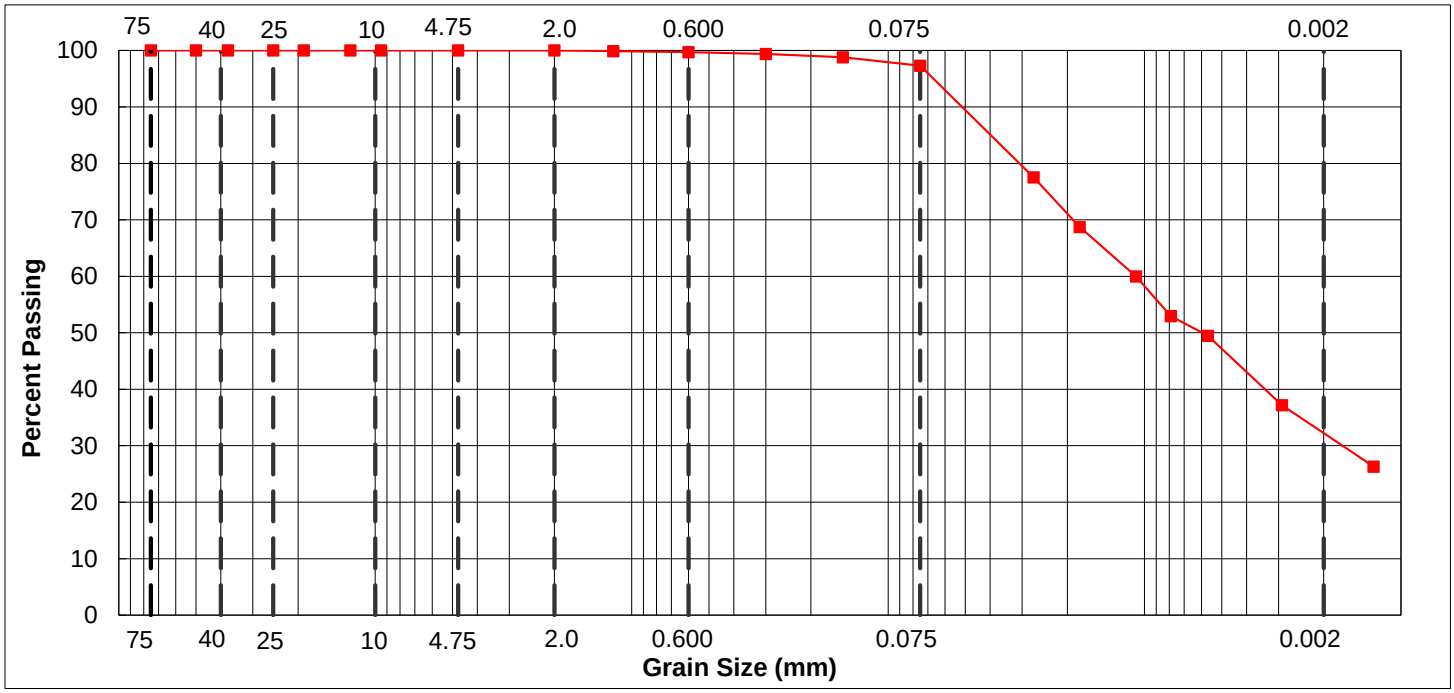
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	532AU2
Project No.:	1560-193-00	**Source:**	22BH532
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 532AU2	**Test Date:**	26-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.4
50.0	100.0	0.150	98.8
37.5	100.0	0.075	97.3
25.0	100.0	0.0271	77.5
19.0	100.0	0.0179	68.8
12.5	100.0	0.0108	60.0
9.5	100.0	0.0079	53.0
4.75	100.0	0.0057	49.5
2.00	100.0	0.0029	37.2
1.180	99.9	0.0013	26.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	2.4	425 µm to 75 µm
Silt	65.1	75 µm to 2 µm
Clay	32.2	<2 µm



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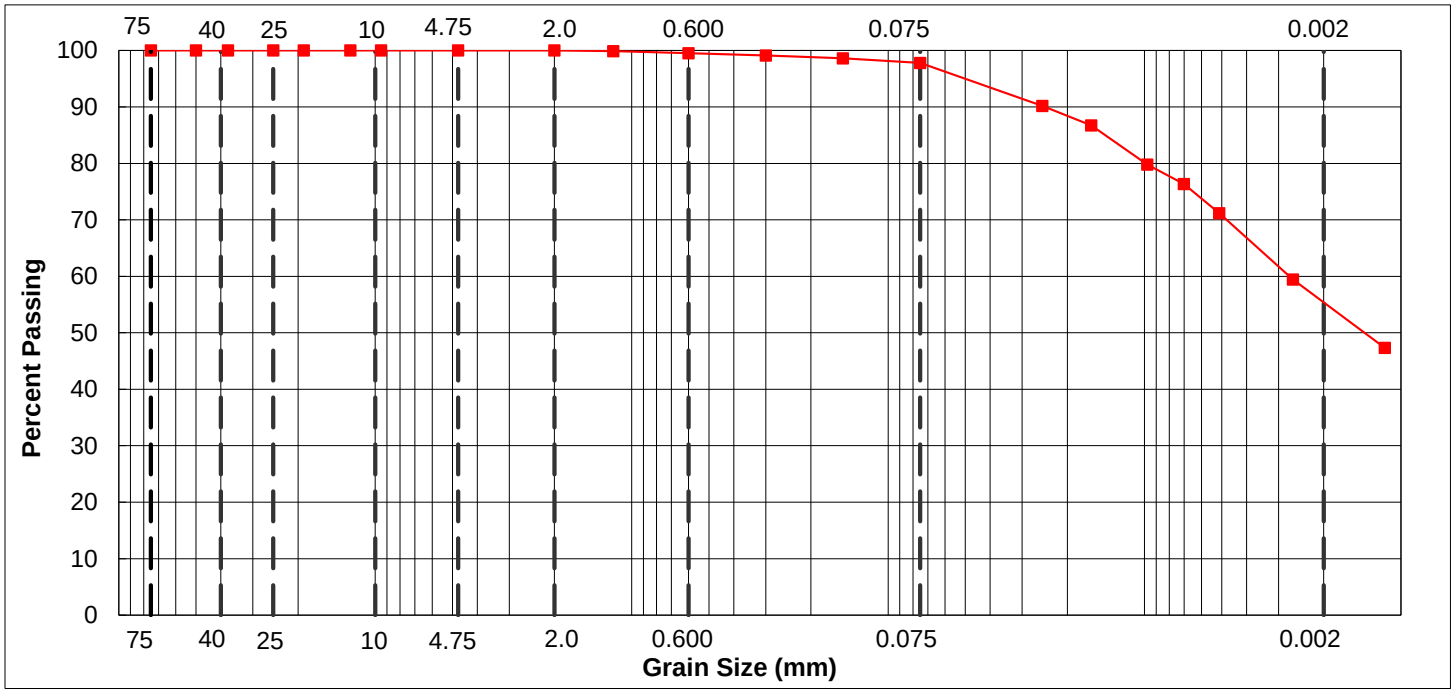
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	532AU4
Project No.:	1560-193-00	**Source:**	22BH532
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 532AU4	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.1
50.0	100.0	0.150	98.6
37.5	100.0	0.075	97.8
25.0	100.0	0.0250	90.2
19.0	100.0	0.0162	86.7
12.5	100.0	0.0098	79.8
9.5	100.0	0.0070	76.4
4.75	100.0	0.0051	71.2
2.00	100.0	0.0026	59.4
1.180	99.9	0.0012	47.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	1.7	425 µm to 75 µm
Silt	42.4	75 µm to 2 µm
Clay	55.4	<2 µm



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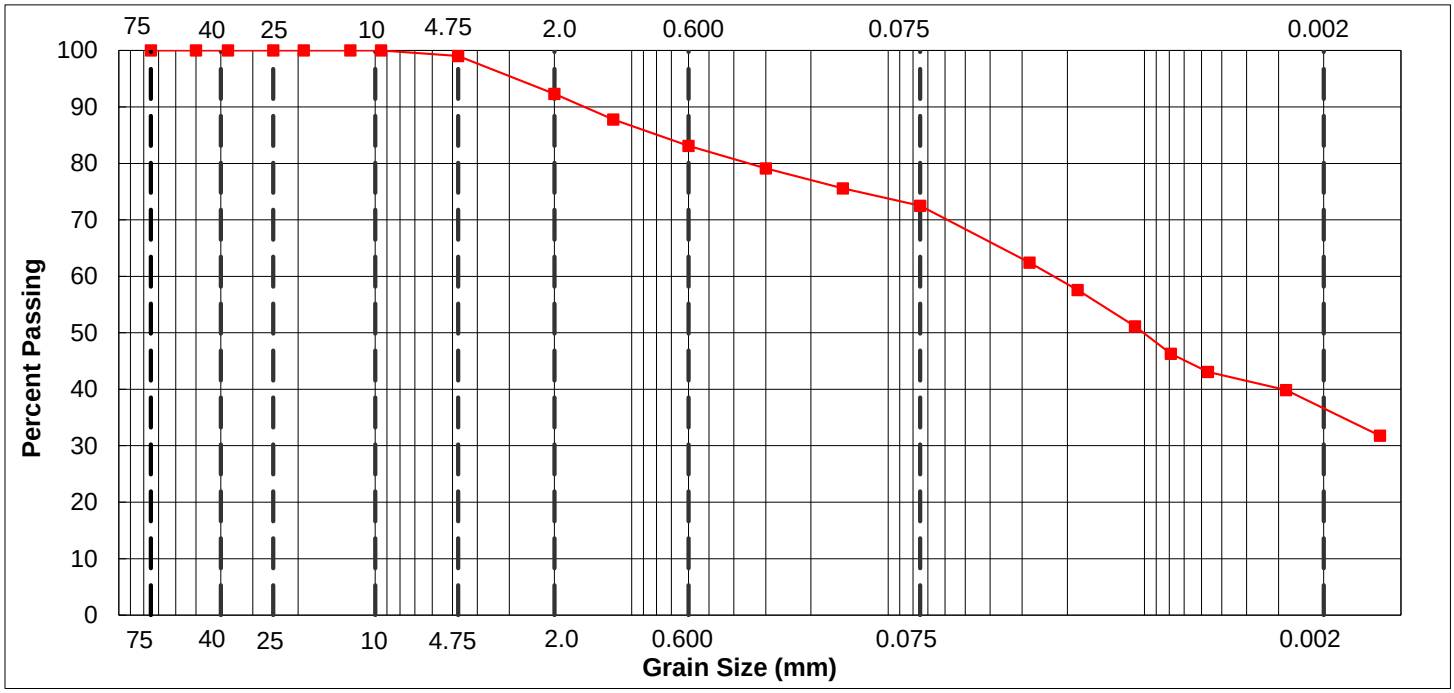
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	533AU2
Project No.:	1560-193-00	**Source:**	22BH533
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 533AU2	**Test Date:**	26-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	83.1
75.0	100.0	0.300	79.1
50.0	100.0	0.150	75.6
37.5	100.0	0.075	72.5
25.0	100.0	0.0281	62.4
19.0	100.0	0.0183	57.6
12.5	100.0	0.0109	51.1
9.5	100.0	0.0079	46.3
4.75	99.0	0.0057	43.1
2.00	92.3	0.0028	39.9
1.180	87.8	0.0012	31.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	1.0	20 mm to 4.75 mm
Coarse Sand	6.7	4.75 mm to 2.00 mm
Medium Sand	9.2	2.00 mm to 425 µm
Fine Sand	10.6	425 µm to 75 µm
Silt	35.9	75 µm to 2 µm
Clay	36.6	<2 µm



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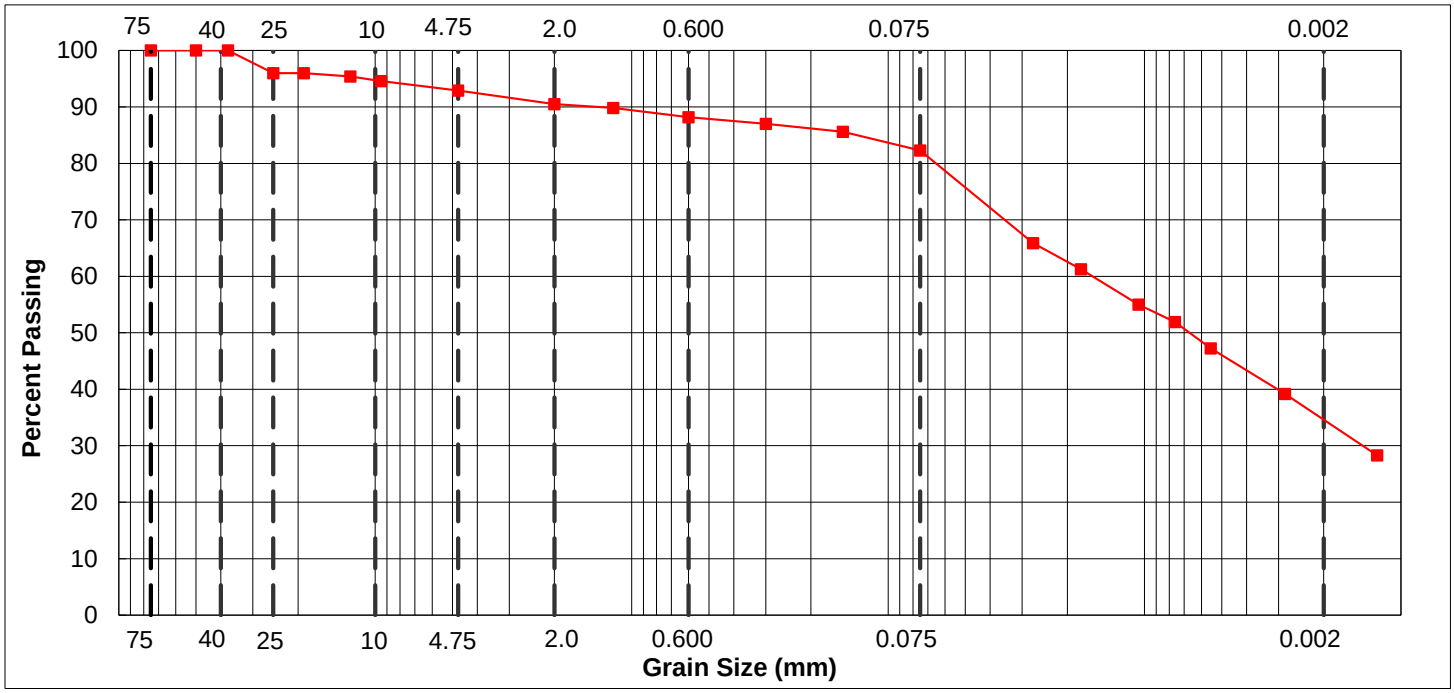
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	534AU2
Project No.:	1560-193-00	**Source:**	22BH534
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 534AU2	**Test Date:**	14-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	88.2
75.0	100.0	0.300	87.0
50.0	100.0	0.150	85.6
37.5	100.0	0.075	82.3
25.0	96.0	0.0272	65.9
19.0	96.0	0.0177	61.2
12.5	95.4	0.0106	55.0
9.5	94.6	0.0076	51.9
4.75	92.9	0.0055	47.2
2.00	90.5	0.0028	39.2
1.180	89.8	0.0012	28.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	4.0	80 mm to 20 mm
Fine Gravel	3.1	20 mm to 4.75 mm
Coarse Sand	2.4	4.75 mm to 2.00 mm
Medium Sand	2.3	2.00 mm to 425 µm
Fine Sand	5.9	425 µm to 75 µm
Silt	47.7	75 µm to 2 µm
Clay	34.6	<2 µm



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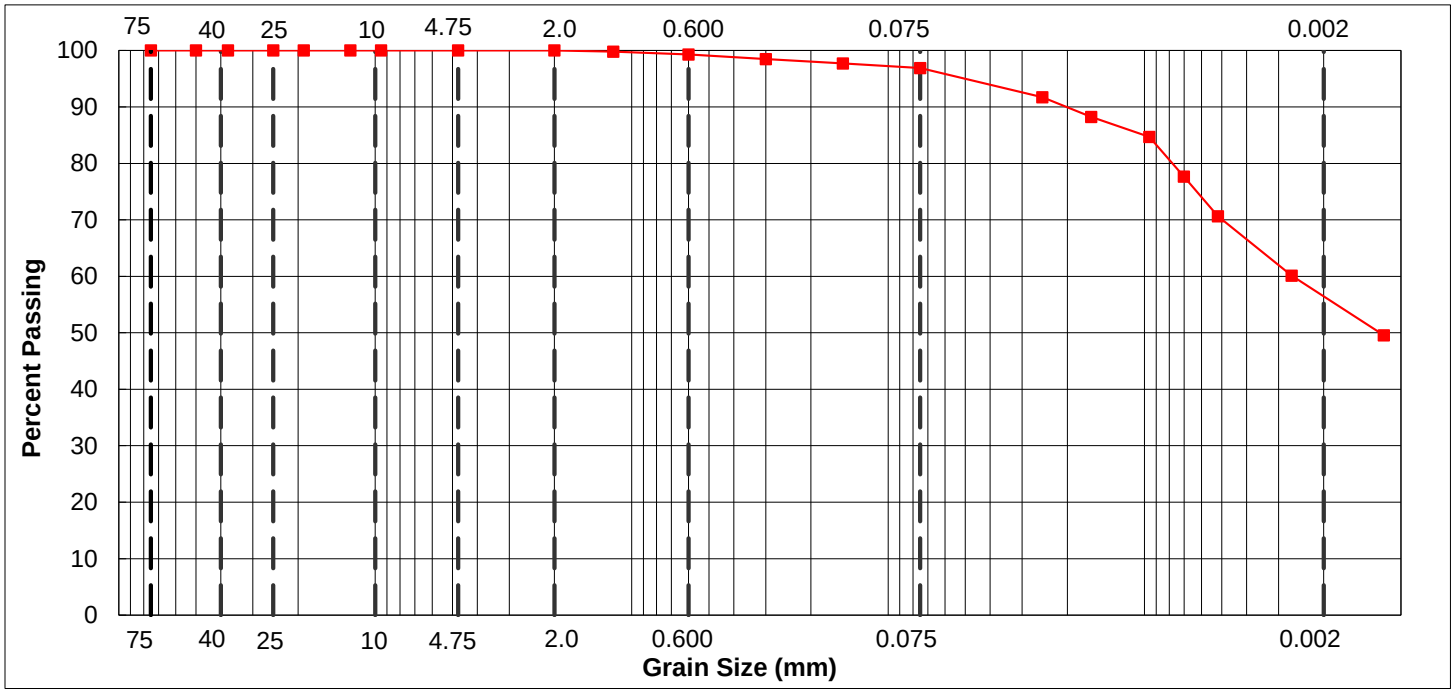
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	534AU4
Project No.:	1560-193-00	**Source:**	22BHAU4
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 534AU4	**Test Date:**	14-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.3
75.0	100.0	0.300	98.5
50.0	100.0	0.150	97.7
37.5	100.0	0.075	96.9
25.0	100.0	0.0250	91.7
19.0	100.0	0.0162	88.2
12.5	100.0	0.0096	84.7
9.5	100.0	0.0070	77.7
4.75	100.0	0.0052	70.7
2.00	100.0	0.0027	60.1
1.180	99.8	0.0012	49.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.7	2.00 mm to 425 µm
Fine Sand	2.4	425 µm to 75 µm
Silt	40.5	75 µm to 2 µm
Clay	56.4	<2 µm



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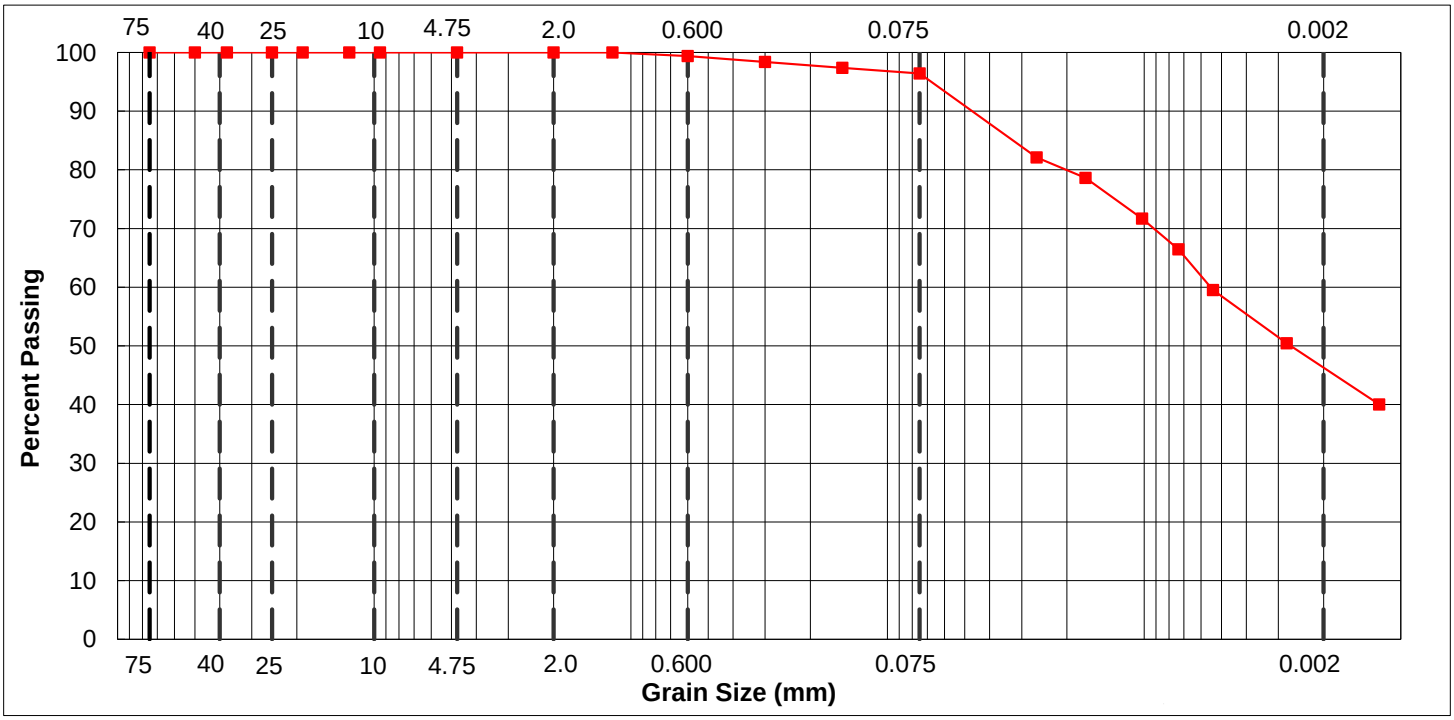
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	535AU1
Project No.:	1560-193-00	**Source:**	22BH535
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 535AU1	**Test Date:**	25-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	98.4
50.0	100.0	0.150	97.4
37.5	100.0	0.075	96.4
25.0	100.0	0.0262	82.1
19.0	100.0	0.0169	78.6
12.5	100.0	0.0102	71.7
9.5	100.0	0.0074	66.5
4.75	100.0	0.0054	59.5
2.00	100.0	0.0028	50.4
1.180	100.0	0.0012	40.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	3.0	425 µm to 75 µm
Silt	50.1	75 µm to 2 µm
Clay	46.3	<2 µm



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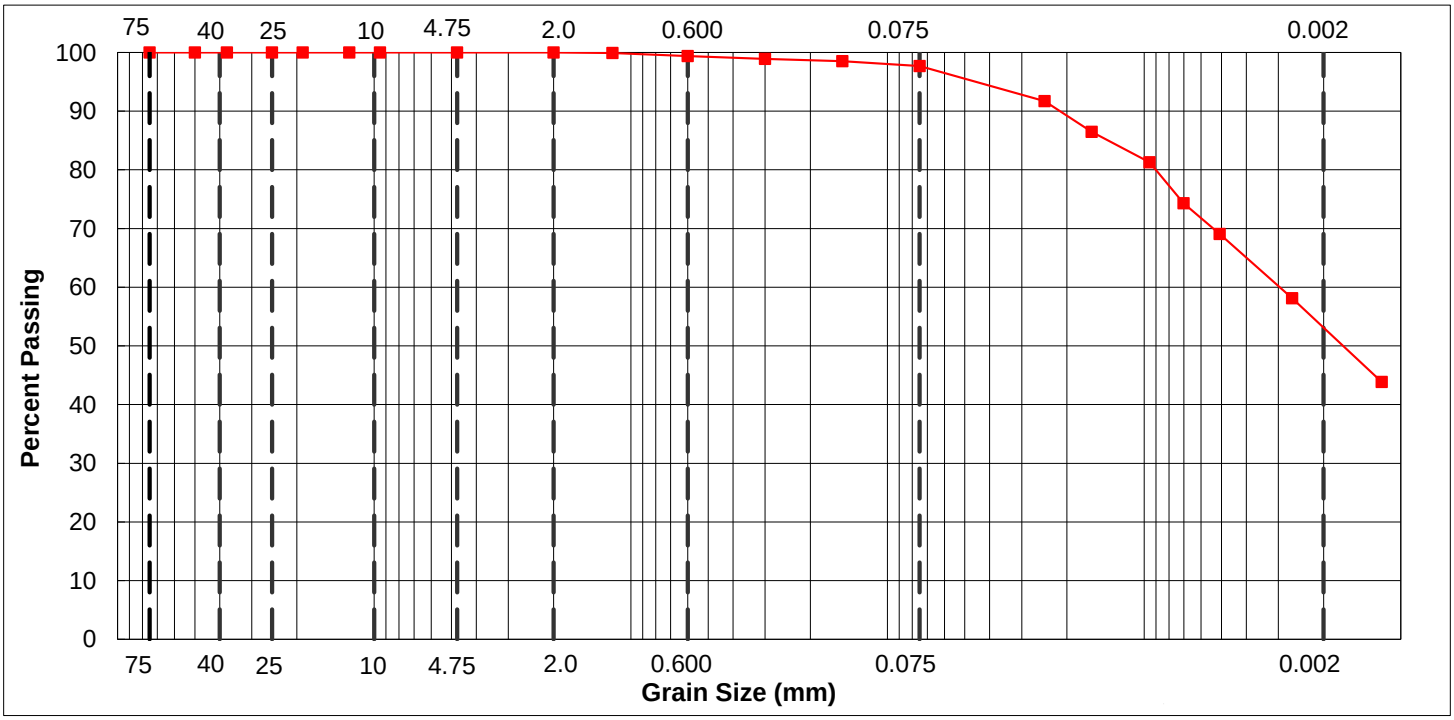
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	535AU3
Project No.:	1560-193-00	**Source:**	22BH535
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 535AU3	**Test Date:**	10-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	98.9
50.0	100.0	0.150	98.5
37.5	100.0	0.075	97.7
25.0	100.0	0.0244	91.7
19.0	100.0	0.0160	86.5
12.5	100.0	0.0095	81.3
9.5	100.0	0.0070	74.3
4.75	100.0	0.0051	69.1
2.00	100.0	0.0027	58.1
1.180	99.9	0.0012	43.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	1.7	425 µm to 75 µm
Silt	44.6	75 µm to 2 µm
Clay	53.1	<2 µm



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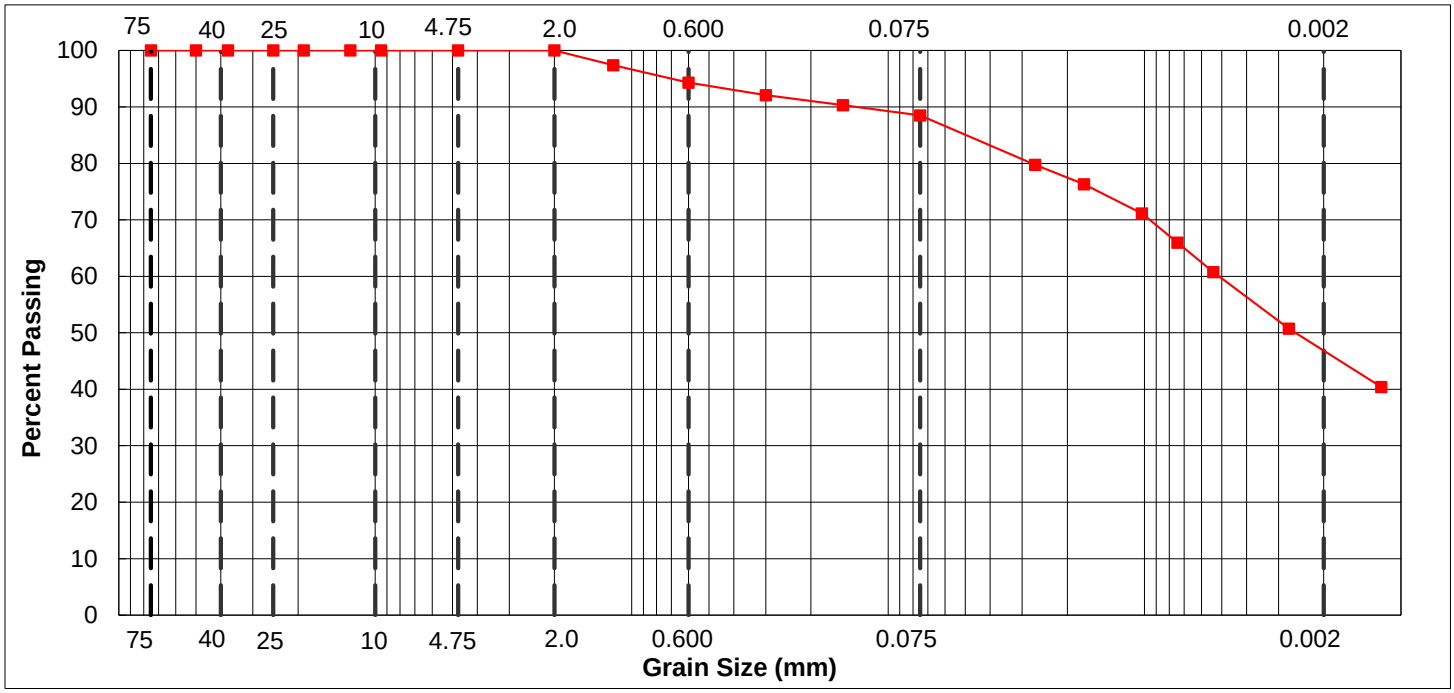
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	536AU2
Project No.:	1560-193-00	**Source:**	22BH536
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 536AU2	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	94.3
75.0	100.0	0.300	92.1
50.0	100.0	0.150	90.3
37.5	100.0	0.075	88.5
25.0	100.0	0.0267	79.8
19.0	100.0	0.0172	76.3
12.5	100.0	0.0102	71.1
9.5	100.0	0.0074	66.0
4.75	100.0	0.0054	60.8
2.00	100.0	0.0027	50.8
1.180	97.4	0.0012	40.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	5.7	2.00 mm to 425 µm
Fine Sand	5.8	425 µm to 75 µm
Silt	41.7	75 µm to 2 µm
Clay	46.8	<2 µm



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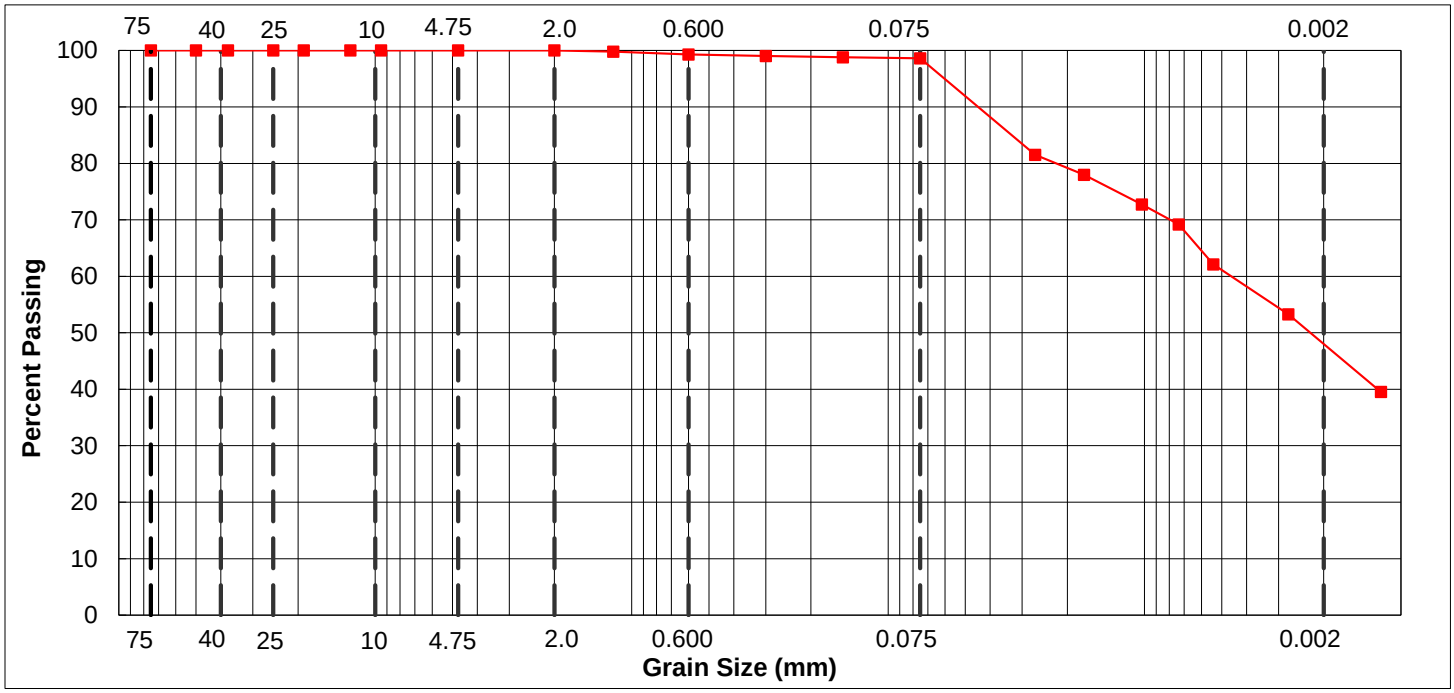
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	536AU4
Project No.:	1560-193-00	**Source:**	22BH536
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 536AU4	**Test Date:**	12-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.3
75.0	100.0	0.300	99.0
50.0	100.0	0.150	98.8
37.5	100.0	0.075	98.6
25.0	100.0	0.0267	81.5
19.0	100.0	0.0172	78.0
12.5	100.0	0.0102	72.7
9.5	100.0	0.0074	69.2
4.75	100.0	0.0054	62.1
2.00	100.0	0.0027	53.3
1.180	99.8	0.0012	39.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.7	2.00 mm to 425 µm
Fine Sand	0.7	425 µm to 75 µm
Silt	50.6	75 µm to 2 µm
Clay	48.0	<2 µm



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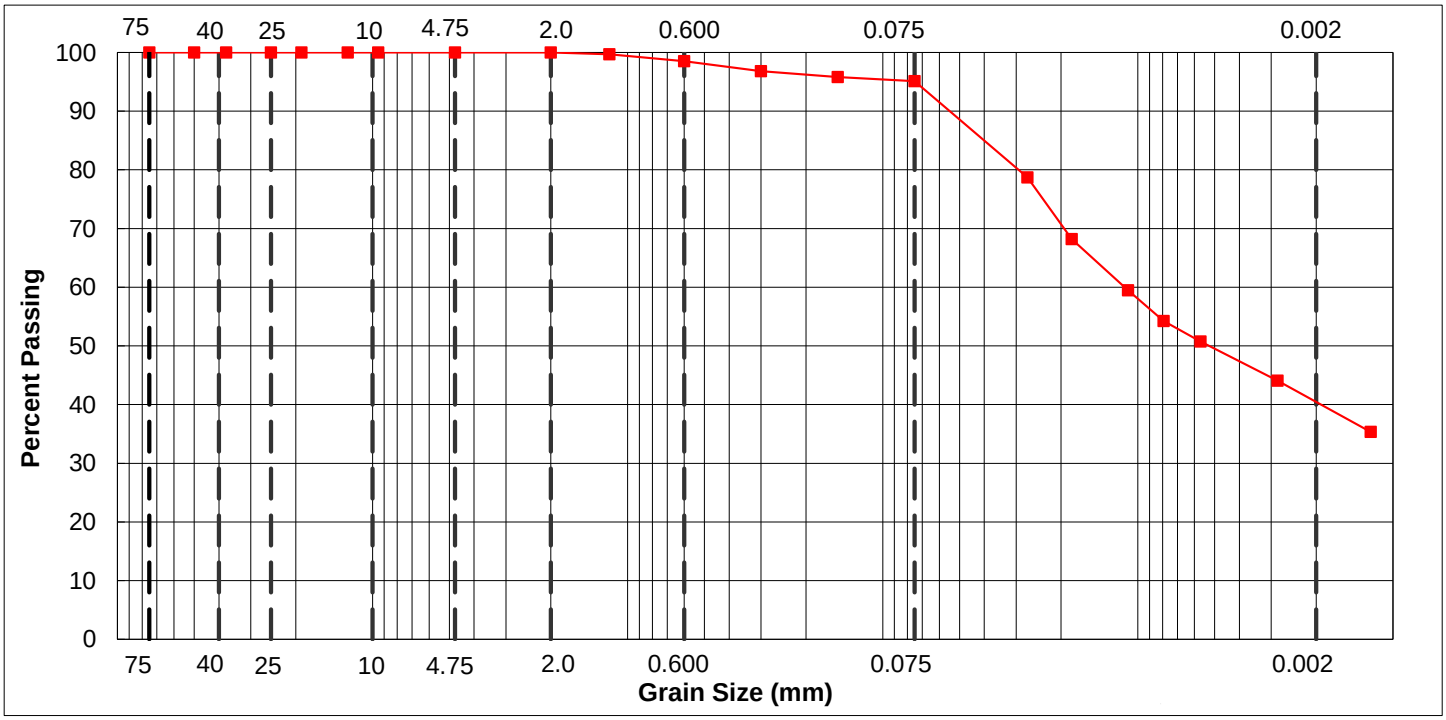
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	537AU1
Project No.:	1560-193-00	**Source:**	22BH537
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 537AU1	**Test Date:**	9-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.5
75.0	100.0	0.300	96.8
50.0	100.0	0.150	95.8
37.5	100.0	0.075	95.1
25.0	100.0	0.0271	78.7
19.0	100.0	0.0181	68.2
12.5	100.0	0.0109	59.5
9.5	100.0	0.0079	54.2
4.75	100.0	0.0057	50.7
2.00	100.0	0.0028	44.1
1.180	99.7	0.0012	35.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.5	2.00 mm to 425 µm
Fine Sand	3.4	425 µm to 75 µm
Silt	54.7	75 µm to 2 µm
Clay	40.4	<2 µm



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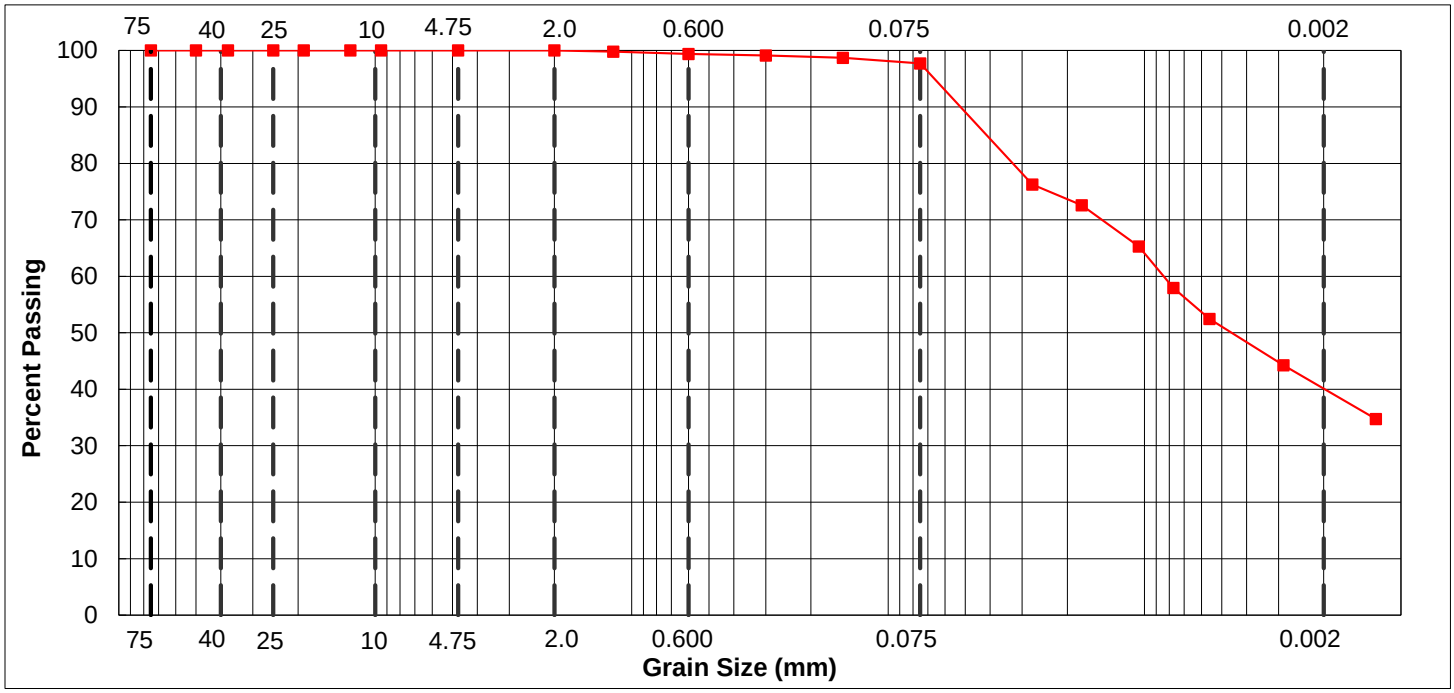
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	537AU3
Project No.:	1560-193-00	**Source:**	22BH537
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 537AU3	**Test Date:**	11-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	99.1
50.0	100.0	0.150	98.7
37.5	100.0	0.075	97.7
25.0	100.0	0.0274	76.3
19.0	100.0	0.0176	72.6
12.5	100.0	0.0105	65.3
9.5	100.0	0.0077	58.0
4.75	100.0	0.0056	52.5
2.00	100.0	0.0029	44.3
1.180	99.8	0.0013	34.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	1.7	425 µm to 75 µm
Silt	57.6	75 µm to 2 µm
Clay	40.1	<2 µm



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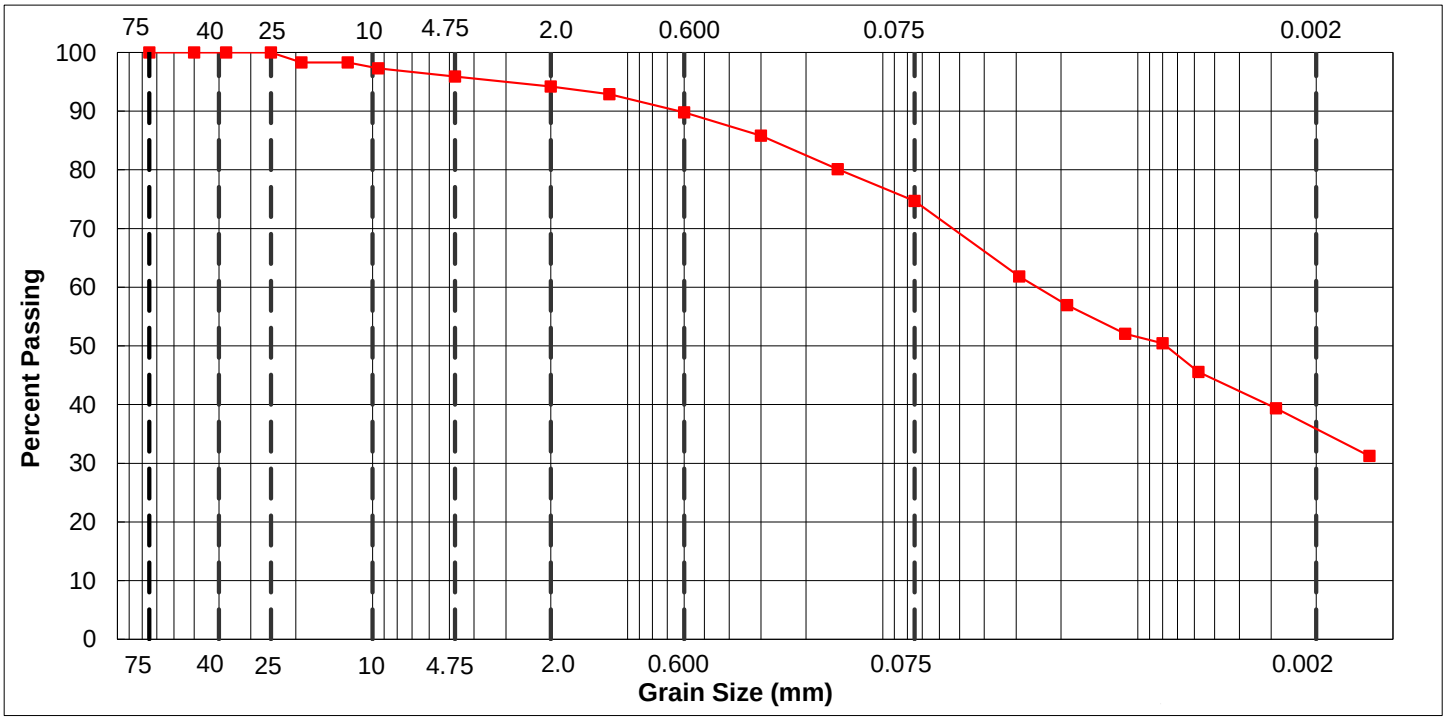
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	539AU1
Project No.:	1560-193-00	**Source:**	22BH539
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 539AU1	**Test Date:**	9-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	89.8
75.0	100.0	0.300	85.8
50.0	100.0	0.150	80.1
37.5	100.0	0.075	74.7
25.0	100.0	0.0292	61.8
19.0	98.3	0.0189	56.9
12.5	98.3	0.0112	52.0
9.5	97.3	0.0080	50.4
4.75	95.9	0.0058	45.5
2.00	94.2	0.0029	39.4
1.180	92.9	0.0012	31.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	4.1	20 mm to 4.75 mm
Coarse Sand	1.7	4.75 mm to 2.00 mm
Medium Sand	4.4	2.00 mm to 425 µm
Fine Sand	15.1	425 µm to 75 µm
Silt	38.8	75 µm to 2 µm
Clay	35.9	<2 µm



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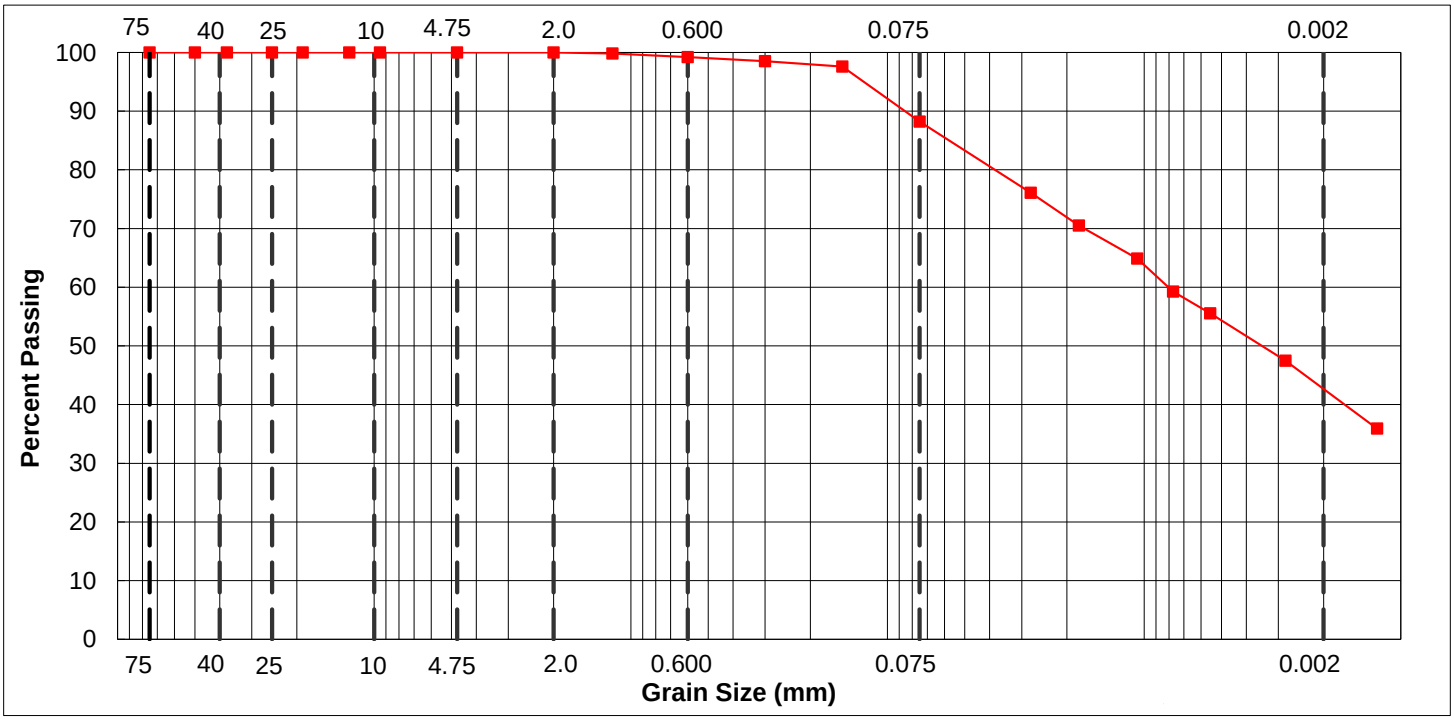
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	539AU3
Project No.:	1560-193-00	**Source:**	22BH539
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 539AU3	**Test Date:**	10-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	98.5
50.0	100.0	0.150	97.6
37.5	100.0	0.075	88.2
25.0	100.0	0.0277	76.1
19.0	100.0	0.0180	70.5
12.5	100.0	0.0106	64.9
9.5	100.0	0.0077	59.3
4.75	100.0	0.0055	55.5
2.00	100.0	0.0028	47.5
1.180	99.8	0.0012	35.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	11.0	425 µm to 75 µm
Silt	45.5	75 µm to 2 µm
Clay	42.7	<2 µm



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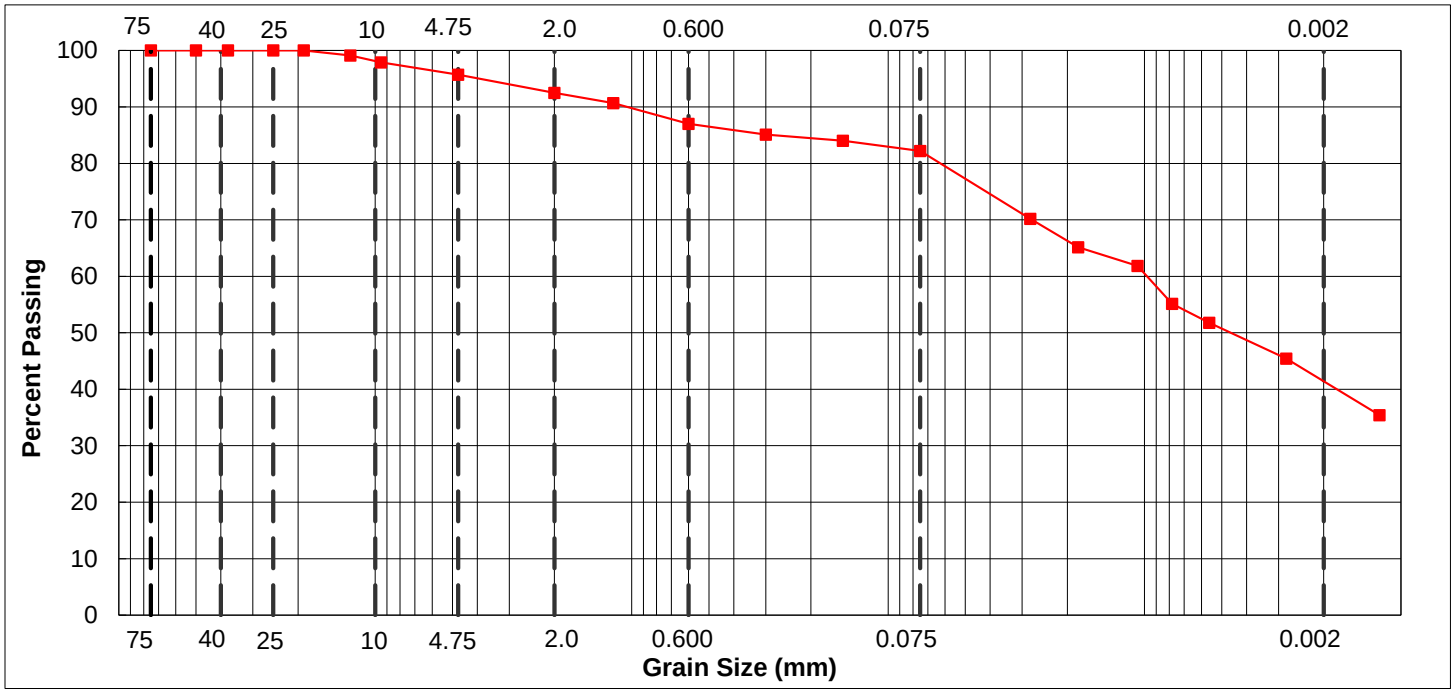
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	540AU2
Project No.:	1560-193-00	**Source:**	22BH540
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 540AU2	**Test Date:**	12-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	87.0
75.0	100.0	0.300	85.1
50.0	100.0	0.150	84.0
37.5	100.0	0.075	82.2
25.0	100.0	0.0279	70.2
19.0	100.0	0.0181	65.2
12.5	99.1	0.0106	61.8
9.5	97.9	0.0078	55.1
4.75	95.7	0.0056	51.8
2.00	92.5	0.0028	45.4
1.180	90.7	0.0012	35.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	4.3	20 mm to 4.75 mm
Coarse Sand	3.2	4.75 mm to 2.00 mm
Medium Sand	5.5	2.00 mm to 425 µm
Fine Sand	4.8	425 µm to 75 µm
Silt	40.8	75 µm to 2 µm
Clay	41.4	<2 µm



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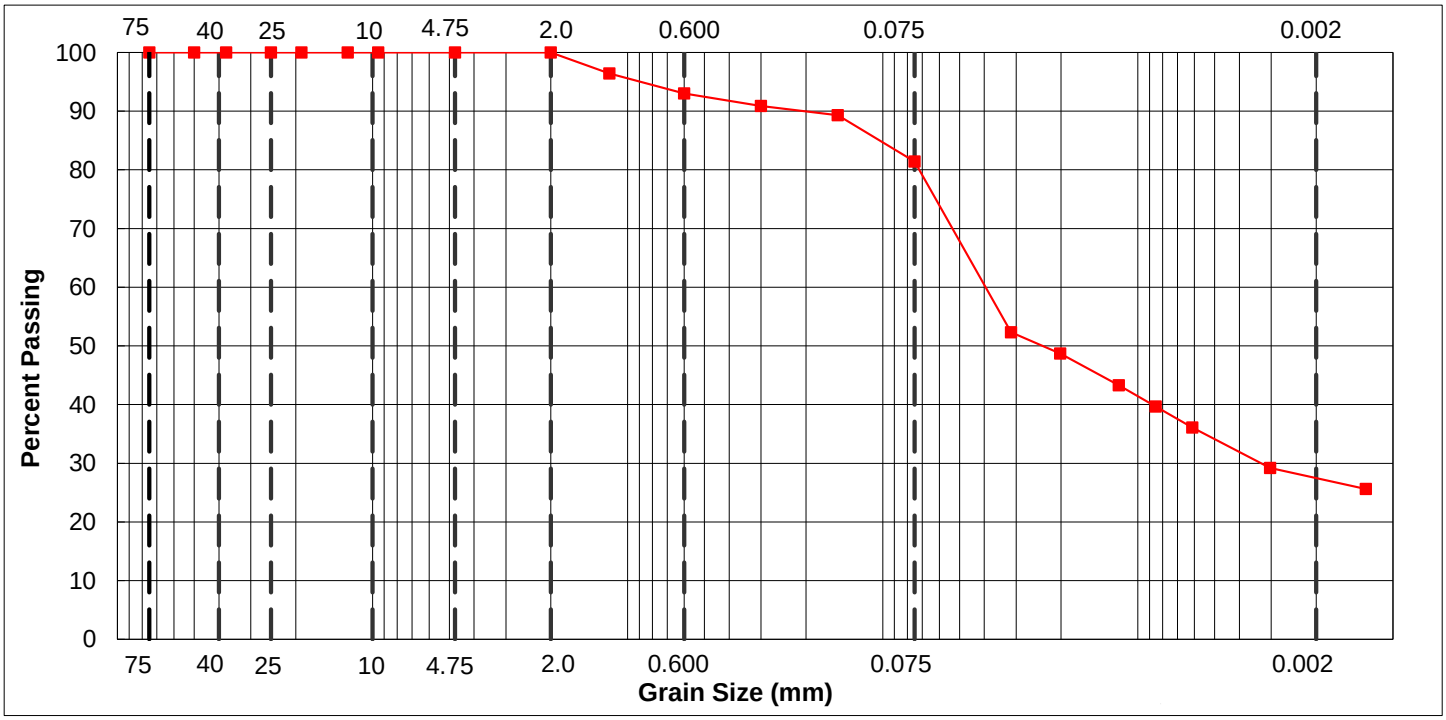
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	540AU4
Project No.:	1560-193-00	**Source:**	22BH540
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 540AU4	**Test Date:**	9-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	93.0
75.0	100.0	0.300	90.9
50.0	100.0	0.150	89.3
37.5	100.0	0.075	81.4
25.0	100.0	0.0314	52.3
19.0	100.0	0.0201	48.7
12.5	100.0	0.0119	43.3
9.5	100.0	0.0085	39.7
4.75	100.0	0.0061	36.1
2.00	100.0	0.0030	29.2
1.180	96.4	0.0013	25.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	7.0	2.00 mm to 425 µm
Fine Sand	11.6	425 µm to 75 µm
Silt	53.9	75 µm to 2 µm
Clay	27.5	<2 µm



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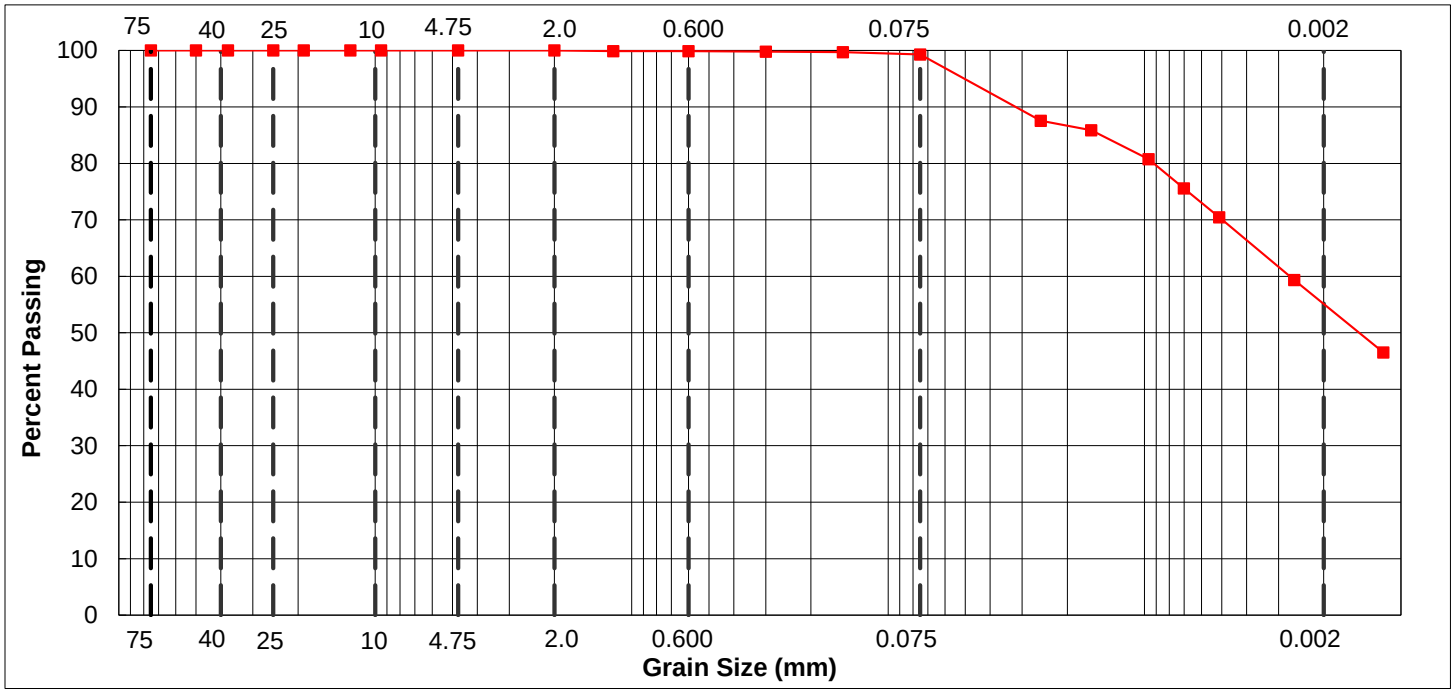
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	541AU1
Project No.:	1560-193-00	**Source:**	22BH541
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 541AU1	**Test Date:**	18-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.3
25.0	100.0	0.0254	87.6
19.0	100.0	0.0162	85.9
12.5	100.0	0.0096	80.7
9.5	100.0	0.0070	75.6
4.75	100.0	0.0051	70.5
2.00	100.0	0.0026	59.4
1.180	99.9	0.0012	46.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.6	425 µm to 75 µm
Silt	44.2	75 µm to 2 µm
Clay	55.1	<2 µm



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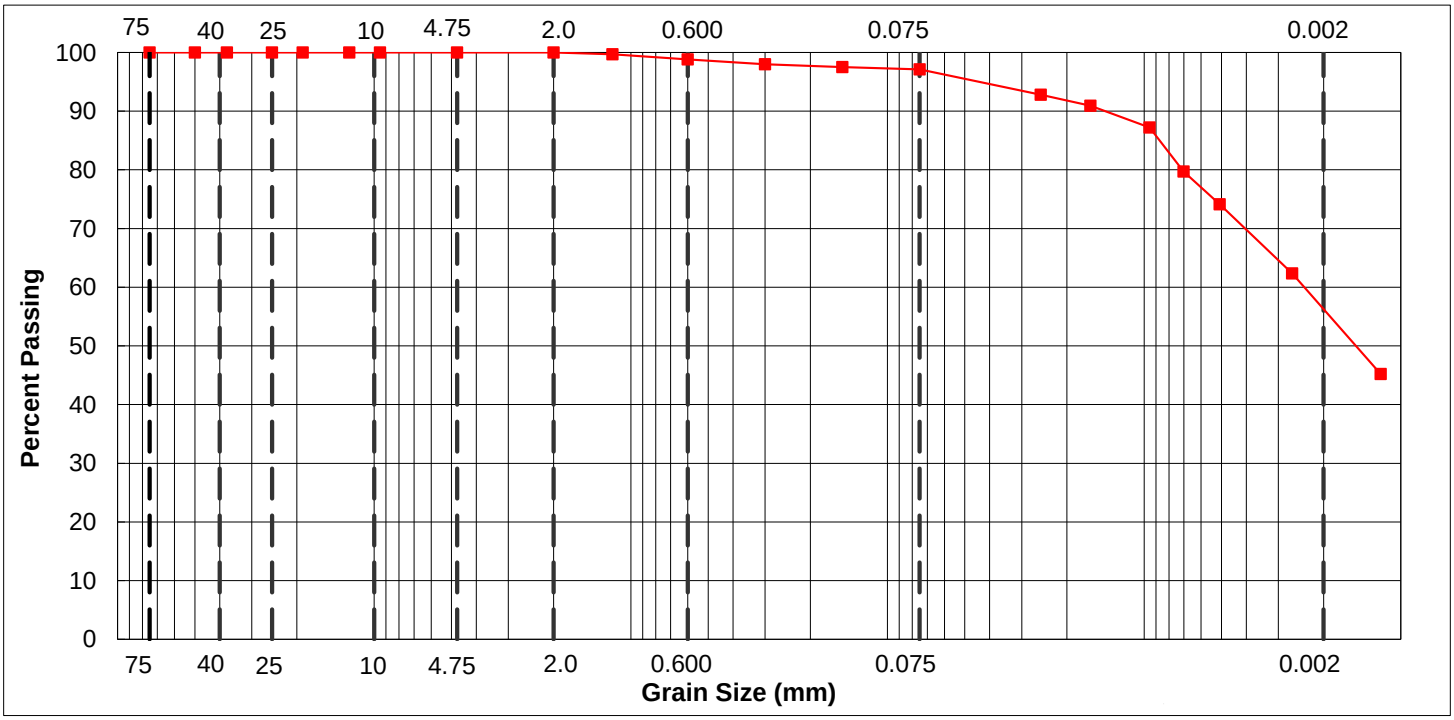
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	541AU3
Project No.:	1560-193-00	**Source:**	22BH541
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 541AU3	**Test Date:**	10-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.8
75.0	100.0	0.300	98.0
50.0	100.0	0.150	97.5
37.5	100.0	0.075	97.1
25.0	100.0	0.0253	92.8
19.0	100.0	0.0162	90.9
12.5	100.0	0.0095	87.2
9.5	100.0	0.0070	79.7
4.75	100.0	0.0051	74.1
2.00	100.0	0.0027	62.4
1.180	99.7	0.0012	45.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.2	2.00 mm to 425 µm
Fine Sand	1.7	425 µm to 75 µm
Silt	40.8	75 µm to 2 µm
Clay	56.3	<2 µm



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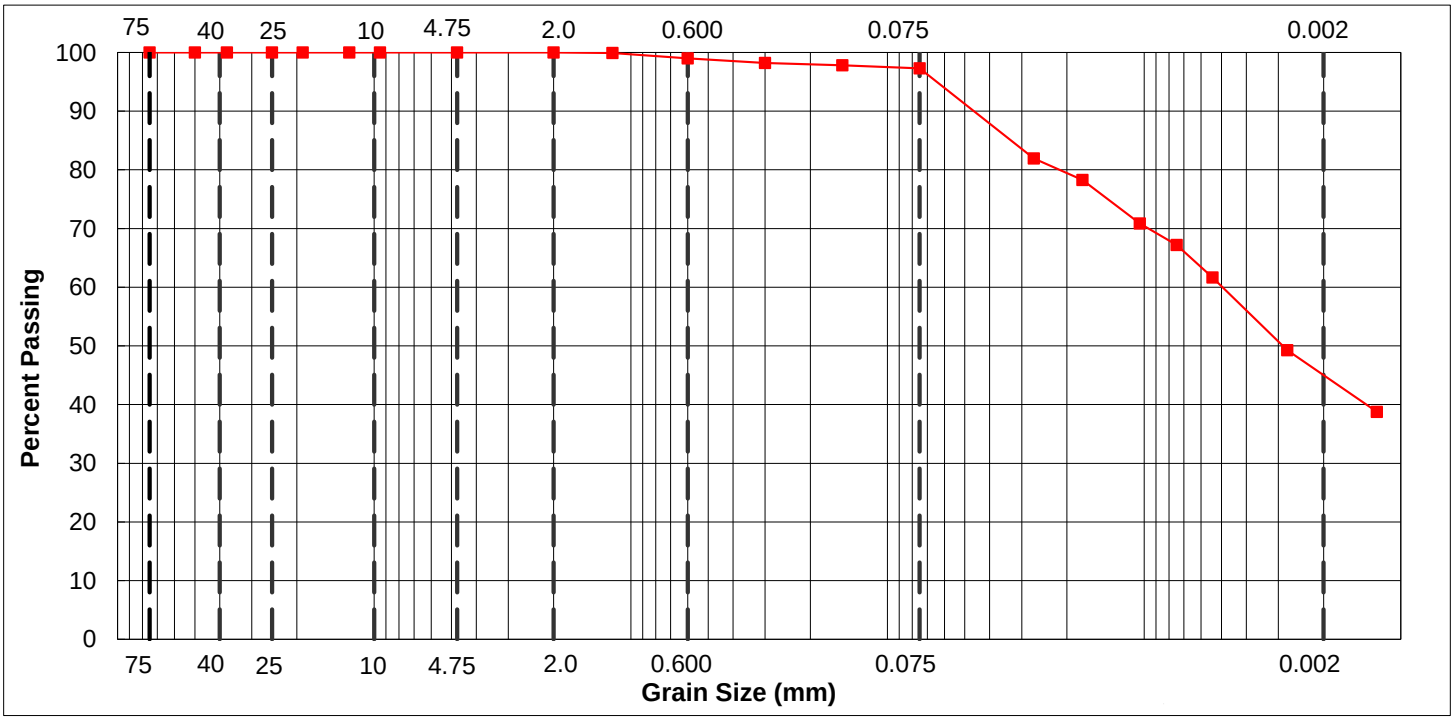
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	542AU1
Project No.:	1560-193-00	**Source:**	22BH542
Owner:	EID	**Sample Depth:**	1.0 m
File No.:	GSA - 542AU1	**Test Date:**	5-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.0
75.0	100.0	0.300	98.2
50.0	100.0	0.150	97.8
37.5	100.0	0.075	97.3
25.0	100.0	0.0269	81.9
19.0	100.0	0.0174	78.3
12.5	100.0	0.0104	70.9
9.5	100.0	0.0075	67.2
4.75	100.0	0.0054	61.6
2.00	100.0	0.0028	49.3
1.180	99.9	0.0012	38.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.0	2.00 mm to 425 µm
Fine Sand	1.7	425 µm to 75 µm
Silt	52.3	75 µm to 2 µm
Clay	45.0	<2 µm



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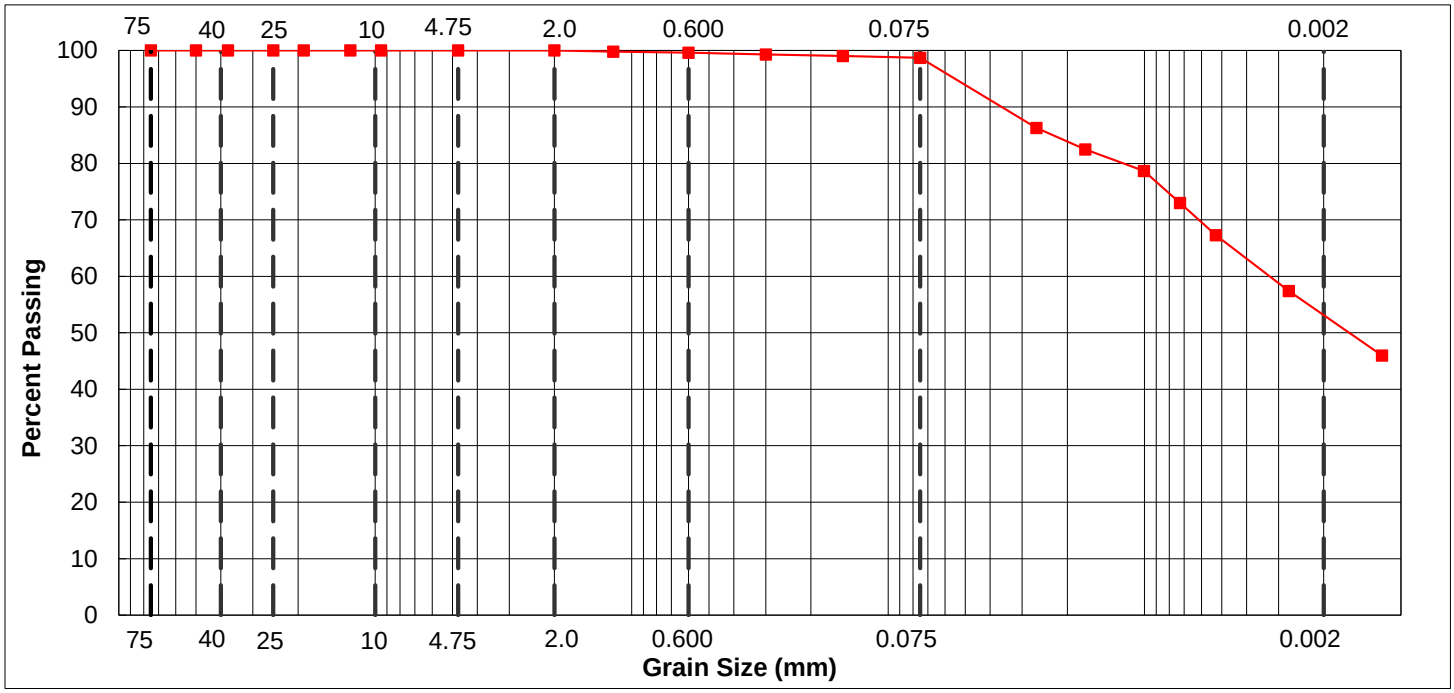
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	542AU2
Project No.:	1560-193-00	**Source:**	22BH542
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 542AU2	**Test Date:**	14-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	99.3
50.0	100.0	0.150	99.0
37.5	100.0	0.075	98.7
25.0	100.0	0.0264	86.3
19.0	100.0	0.0170	82.5
12.5	100.0	0.0100	78.7
9.5	100.0	0.0073	73.0
4.75	100.0	0.0053	67.3
2.00	100.0	0.0027	57.4
1.180	99.8	0.0012	46.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	0.9	425 µm to 75 µm
Silt	45.6	75 µm to 2 µm
Clay	53.1	<2 µm



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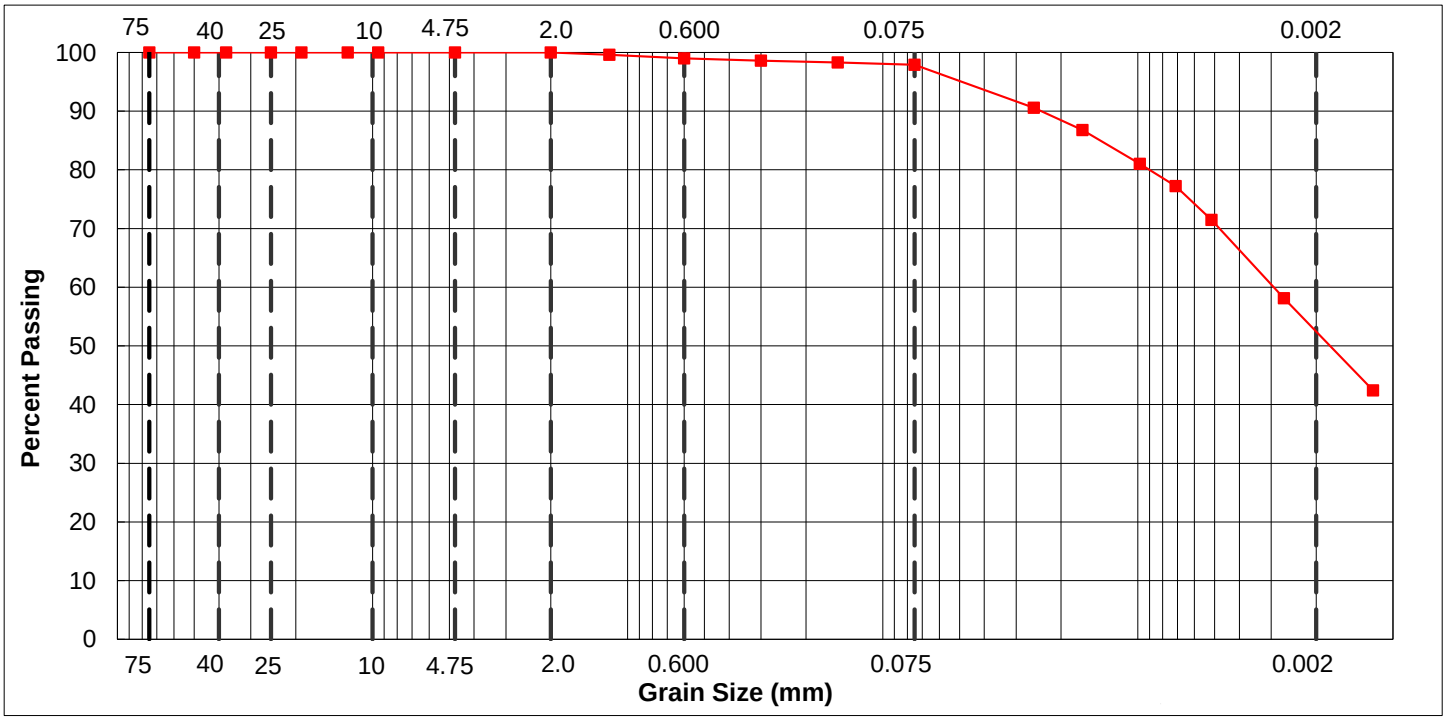
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	542AU4
Project No.:	1560-193-00	**Source:**	22BH542
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 542AU4	**Test Date:**	7-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.0
75.0	100.0	0.300	98.6
50.0	100.0	0.150	98.3
37.5	100.0	0.075	97.9
25.0	100.0	0.0256	90.6
19.0	100.0	0.0165	86.8
12.5	100.0	0.0098	81.0
9.5	100.0	0.0071	77.2
4.75	100.0	0.0051	71.5
2.00	100.0	0.0027	58.1
1.180	99.6	0.0012	42.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.0	2.00 mm to 425 µm
Fine Sand	1.1	425 µm to 75 µm
Silt	45.5	75 µm to 2 µm
Clay	52.4	<2 µm



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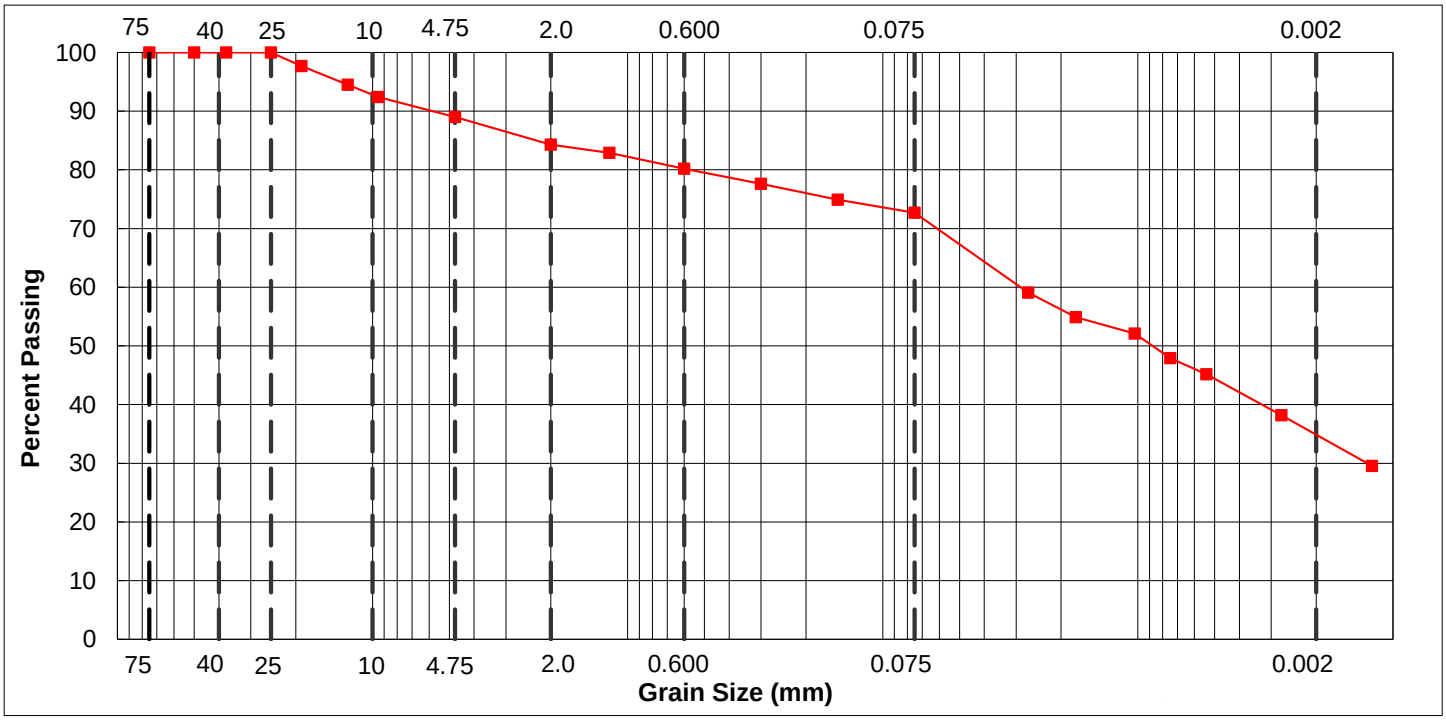
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	543AU1
Project No.:	1560-193-00	**Source:**	22BH543
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 543AU1	**Test Date:**	7-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	80.2
75.0	100.0	0.300	77.6
50.0	100.0	0.150	74.9
37.5	100.0	0.075	72.7
25.0	100.0	0.0269	59.1
19.0	97.7	0.0175	54.9
12.5	94.5	0.0103	52.1
9.5	92.4	0.0075	47.9
4.75	89.0	0.0054	45.1
2.00	84.3	0.0027	38.2
1.180	82.9	0.0012	29.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	11.0	20 mm to 4.75 mm
Coarse Sand	4.7	4.75 mm to 2.00 mm
Medium Sand	4.1	2.00 mm to 425 µm
Fine Sand	7.5	425 µm to 75 µm
Silt	37.8	75 µm to 2 µm
Clay	34.9	<2 µm



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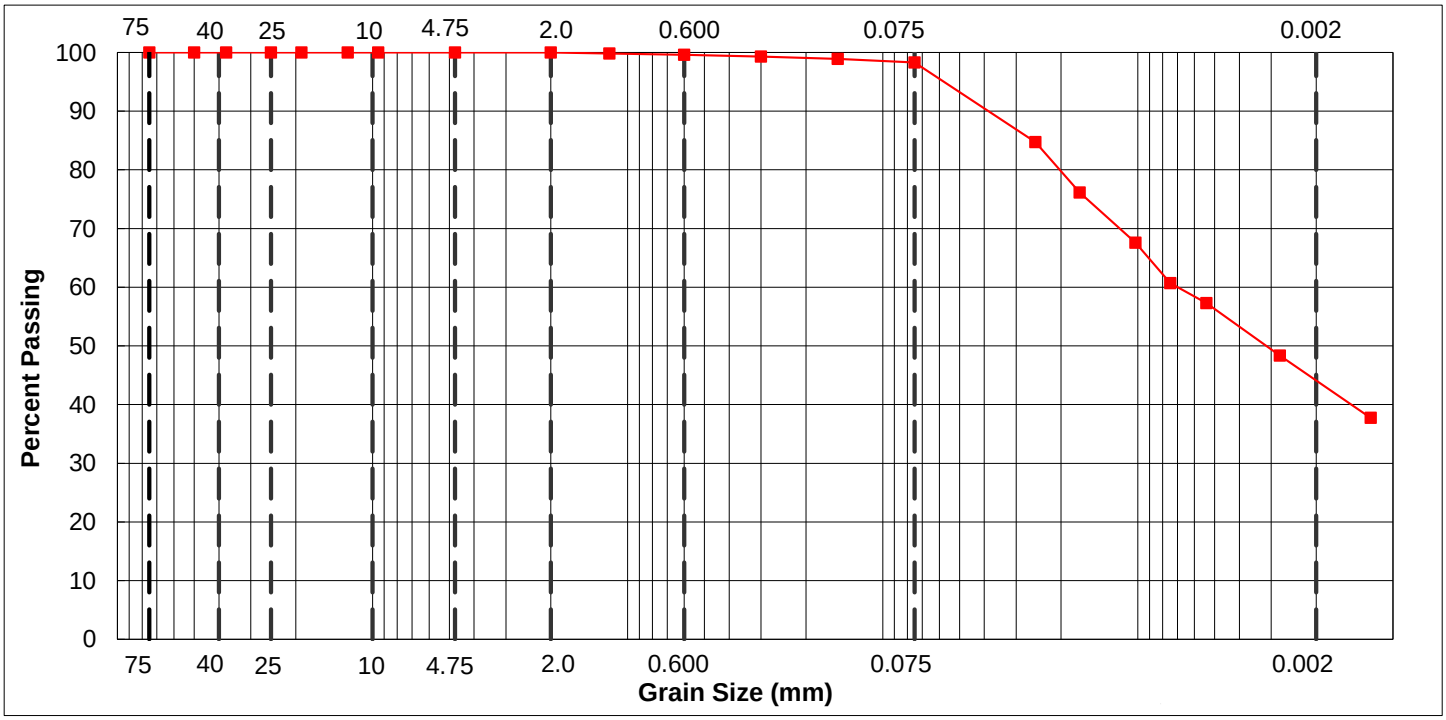
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	543AU3
Project No.:	1560-193-00	**Source:**	22BH543
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 543AU3	**Test Date:**	6-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	99.3
50.0	100.0	0.150	98.9
37.5	100.0	0.075	98.3
25.0	100.0	0.0252	84.7
19.0	100.0	0.0169	76.1
12.5	100.0	0.0102	67.6
9.5	100.0	0.0075	60.7
4.75	100.0	0.0054	57.3
2.00	100.0	0.0028	48.4
1.180	99.8	0.0012	37.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	1.3	425 µm to 75 µm
Silt	54.2	75 µm to 2 µm
Clay	44.1	<2 µm



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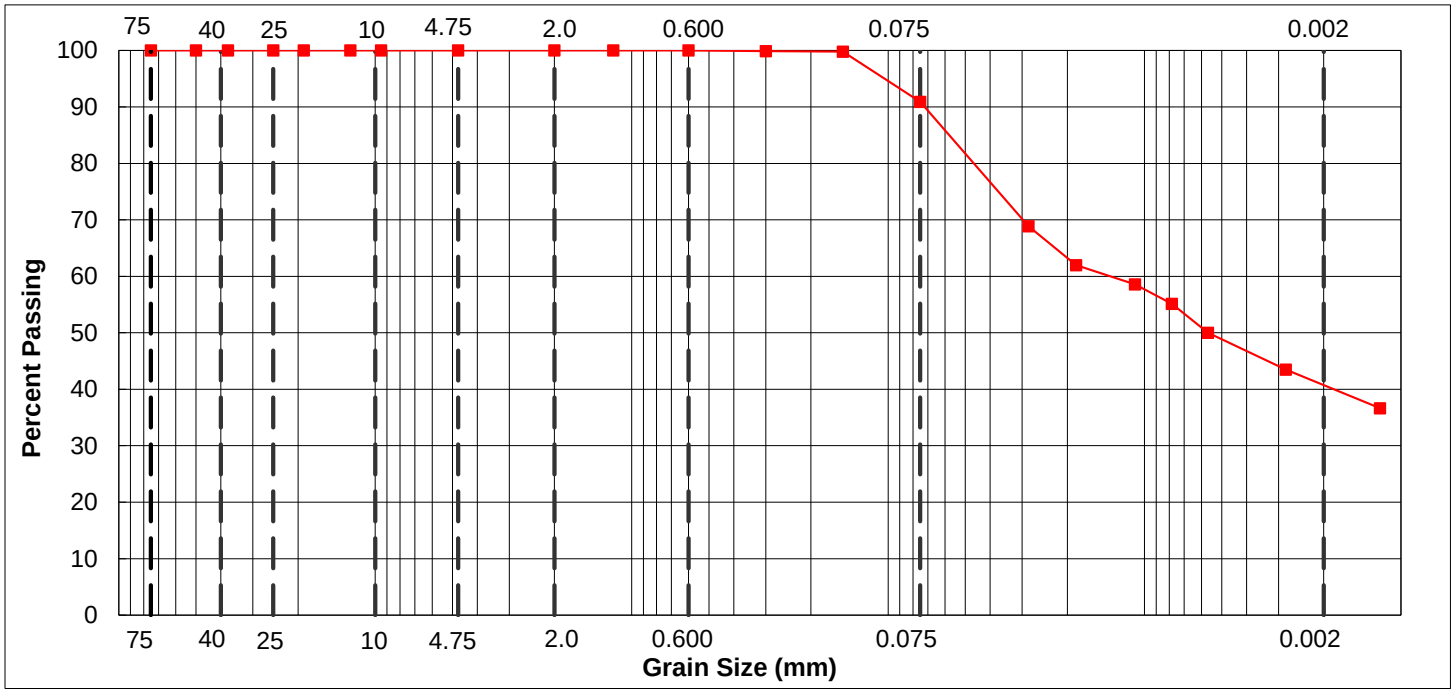
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	546AU2
Project No.:	1560-193-00	**Source:**	22BH546
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 546AU2	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.8
37.5	100.0	0.075	90.9
25.0	100.0	0.0283	68.9
19.0	100.0	0.0185	62.0
12.5	100.0	0.0109	58.6
9.5	100.0	0.0078	55.2
4.75	100.0	0.0057	50.0
2.00	100.0	0.0028	43.5
1.180	100.0	0.0012	36.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	9.1	425 µm to 75 µm
Silt	50.2	75 µm to 2 µm
Clay	40.7	<2 µm



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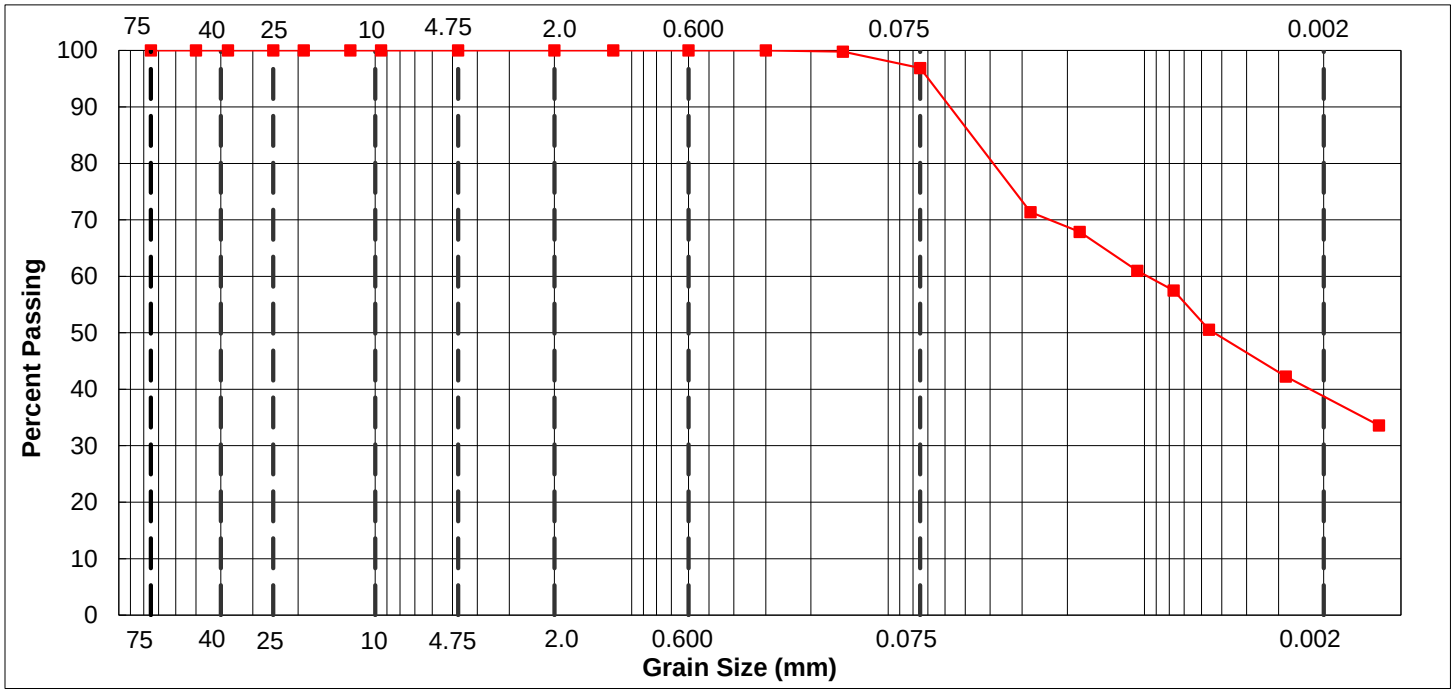
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	546AU4
Project No.:	1560-193-00	**Source:**	22BH546
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 546AU4	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	100.0
50.0	100.0	0.150	99.8
37.5	100.0	0.075	96.9
25.0	100.0	0.0279	71.4
19.0	100.0	0.0179	67.9
12.5	100.0	0.0107	61.0
9.5	100.0	0.0077	57.5
4.75	100.0	0.0056	50.6
2.00	100.0	0.0028	42.3
1.180	100.0	0.0012	33.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	3.1	425 µm to 75 µm
Silt	58.2	75 µm to 2 µm
Clay	38.7	<2 µm



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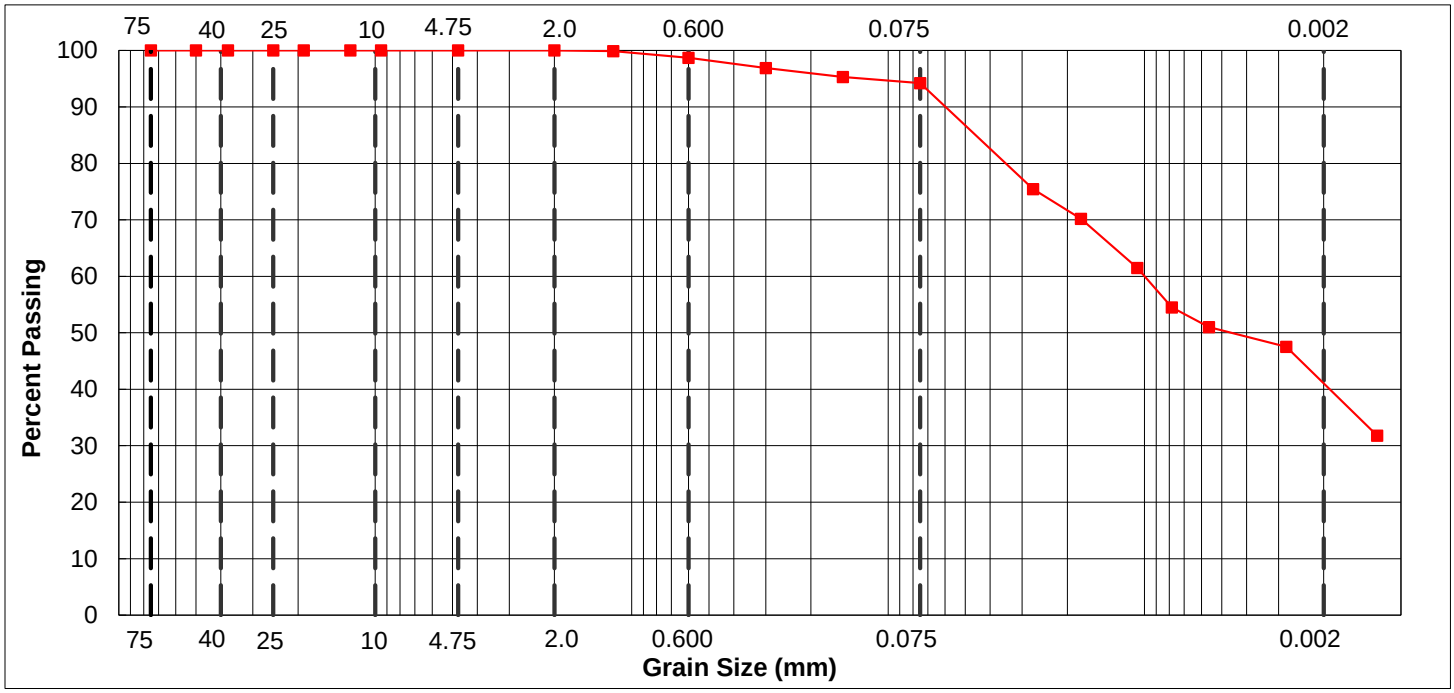
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	547AU1
Project No.:	1560-193-00	**Source:**	22BH547
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 547AU1	**Test Date:**	14-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.7
75.0	100.0	0.300	96.9
50.0	100.0	0.150	95.3
37.5	100.0	0.075	94.2
25.0	100.0	0.0272	75.4
19.0	100.0	0.0177	70.2
12.5	100.0	0.0107	61.5
9.5	100.0	0.0078	54.5
4.75	100.0	0.0056	51.0
2.00	100.0	0.0028	47.5
1.180	99.9	0.0012	31.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.3	2.00 mm to 425 µm
Fine Sand	4.5	425 µm to 75 µm
Silt	53.2	75 µm to 2 µm
Clay	41.0	<2 µm



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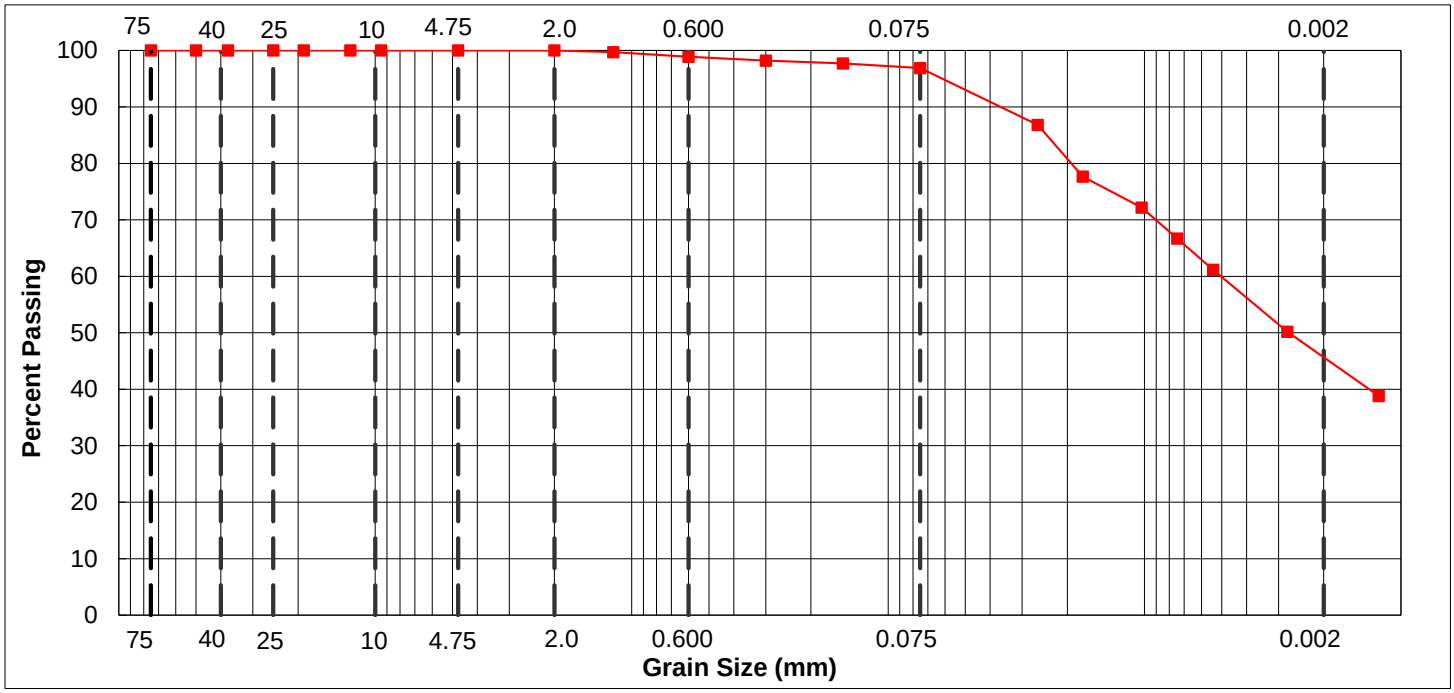
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	547AU3
Project No.:	1560-193-00	**Source:**	22BH547
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 547AU3	**Test Date:**	4-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.9
75.0	100.0	0.300	98.2
50.0	100.0	0.150	97.7
37.5	100.0	0.075	96.9
25.0	100.0	0.0261	86.8
19.0	100.0	0.0174	77.7
12.5	100.0	0.0103	72.2
9.5	100.0	0.0075	66.7
4.75	100.0	0.0054	61.2
2.00	100.0	0.0028	50.2
1.180	99.7	0.0012	38.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.1	2.00 mm to 425 µm
Fine Sand	2.0	425 µm to 75 µm
Silt	51.2	75 µm to 2 µm
Clay	45.7	<2 µm



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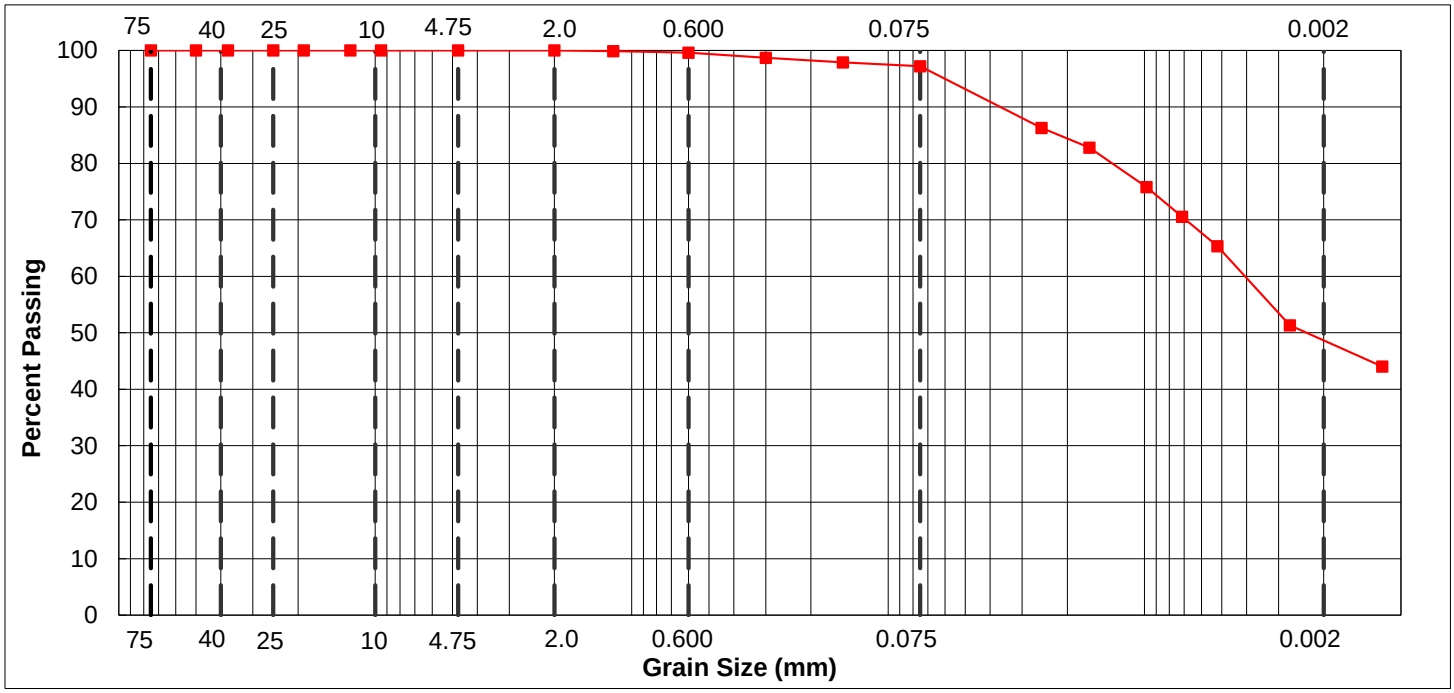
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	548AU2
Project No.:	1560-193-00	**Source:**	22BH548
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 548AU2	**Test Date:**	18-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	98.7
50.0	100.0	0.150	97.9
37.5	100.0	0.075	97.2
25.0	100.0	0.0252	86.3
19.0	100.0	0.0164	82.8
12.5	100.0	0.0098	75.8
9.5	100.0	0.0071	70.6
4.75	100.0	0.0052	65.3
2.00	100.0	0.0027	51.4
1.180	99.9	0.0012	44.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	2.4	425 µm to 75 µm
Silt	48.5	75 µm to 2 µm
Clay	48.7	<2 µm



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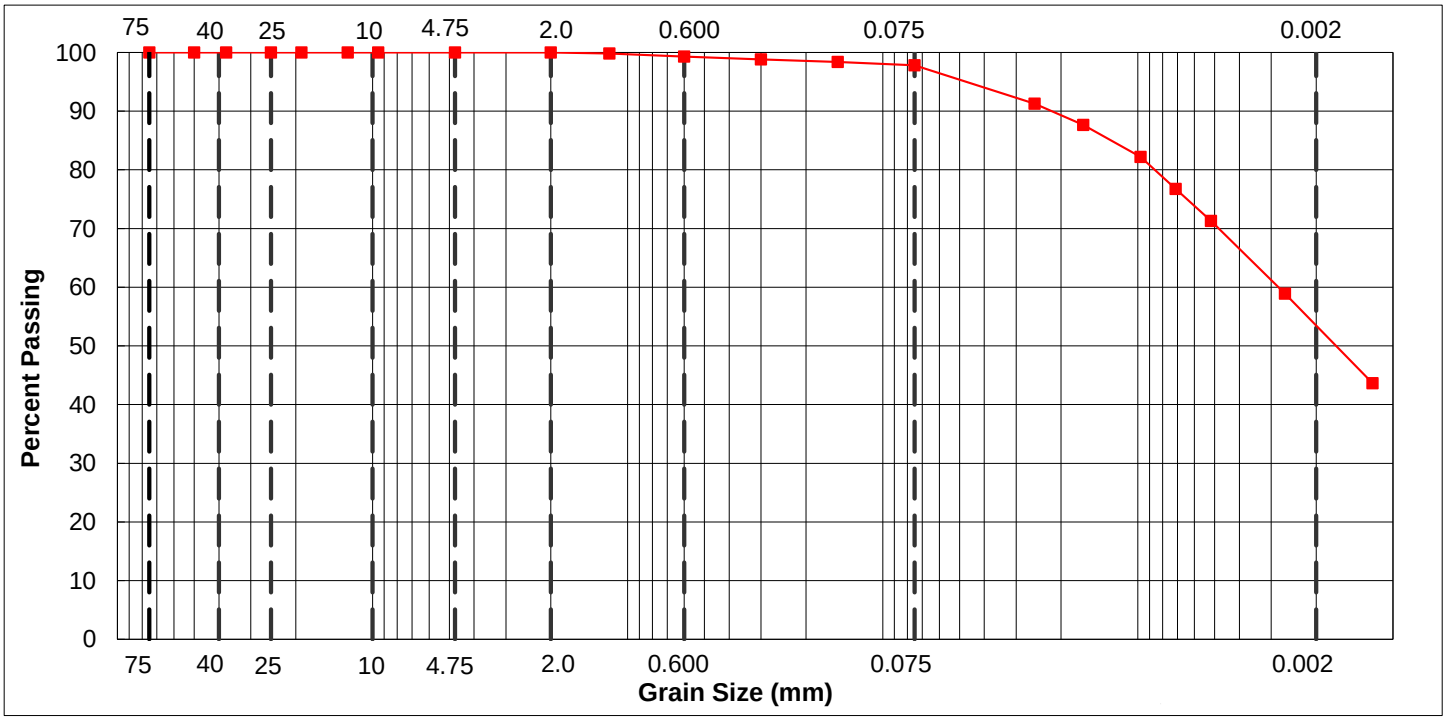
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	548AU4
Project No.:	1560-193-00	**Source:**	22BH548
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 548AU4	**Test Date:**	8-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.3
75.0	100.0	0.300	98.8
50.0	100.0	0.150	98.4
37.5	100.0	0.075	97.8
25.0	100.0	0.0254	91.3
19.0	100.0	0.0164	87.6
12.5	100.0	0.0098	82.2
9.5	100.0	0.0071	76.7
4.75	100.0	0.0052	71.3
2.00	100.0	0.0027	58.9
1.180	99.8	0.0012	43.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.7	2.00 mm to 425 µm
Fine Sand	1.5	425 µm to 75 µm
Silt	44.3	75 µm to 2 µm
Clay	53.5	<2 µm



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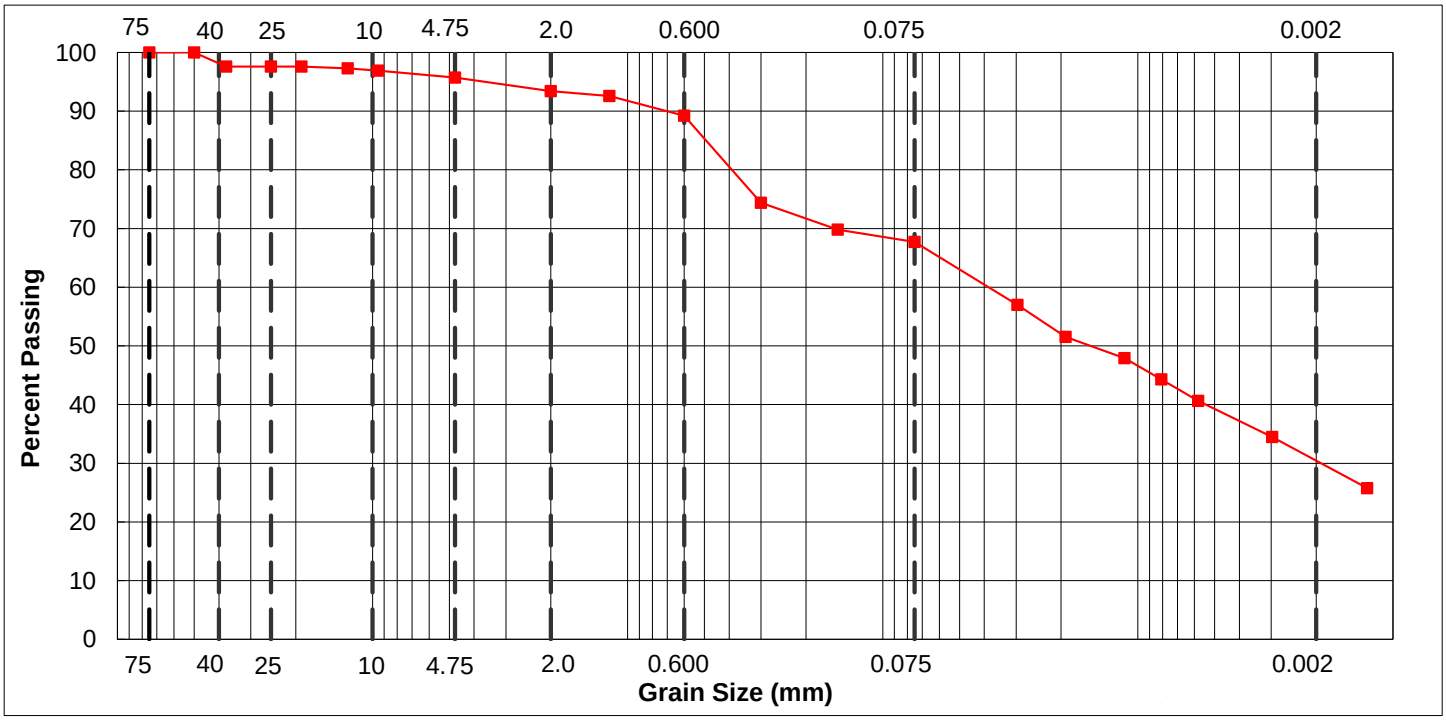
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	549AU1
Project No.:	1560-193-00	**Source:**	22BH549
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 549AU1	**Test Date:**	6-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	89.2
75.0	100.0	0.300	74.4
50.0	100.0	0.150	69.8
37.5	97.6	0.075	67.7
25.0	97.6	0.0296	57.0
19.0	97.6	0.0192	51.5
12.5	97.3	0.0113	47.9
9.5	96.9	0.0081	44.3
4.75	95.7	0.0058	40.6
2.00	93.4	0.0030	34.5
1.180	92.6	0.0013	25.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	2.4	80 mm to 20 mm
Fine Gravel	1.9	20 mm to 4.75 mm
Coarse Sand	2.3	4.75 mm to 2.00 mm
Medium Sand	4.2	2.00 mm to 425 µm
Fine Sand	21.5	425 µm to 75 µm
Silt	37.3	75 µm to 2 µm
Clay	30.4	<2 µm



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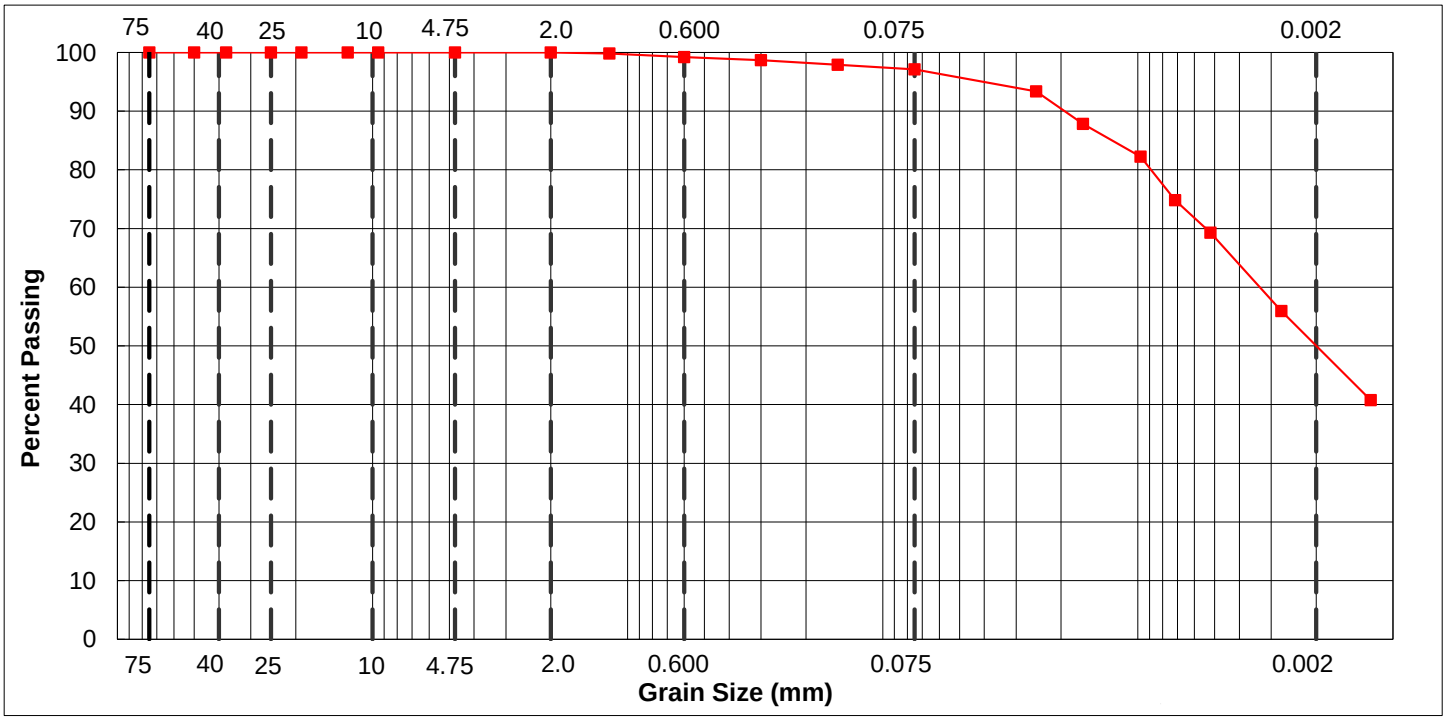
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	549AU3
Project No.:	1560-193-00	**Source:**	22BH549
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 549AU3	**Test Date:**	10-Jun-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	98.7
50.0	100.0	0.150	97.9
37.5	100.0	0.075	97.1
25.0	100.0	0.0251	93.4
19.0	100.0	0.0164	87.8
12.5	100.0	0.0098	82.3
9.5	100.0	0.0071	74.8
4.75	100.0	0.0052	69.3
2.00	100.0	0.0027	55.9
1.180	99.8	0.0012	40.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	2.1	425 µm to 75 µm
Silt	47.1	75 µm to 2 µm
Clay	50.0	<2 µm



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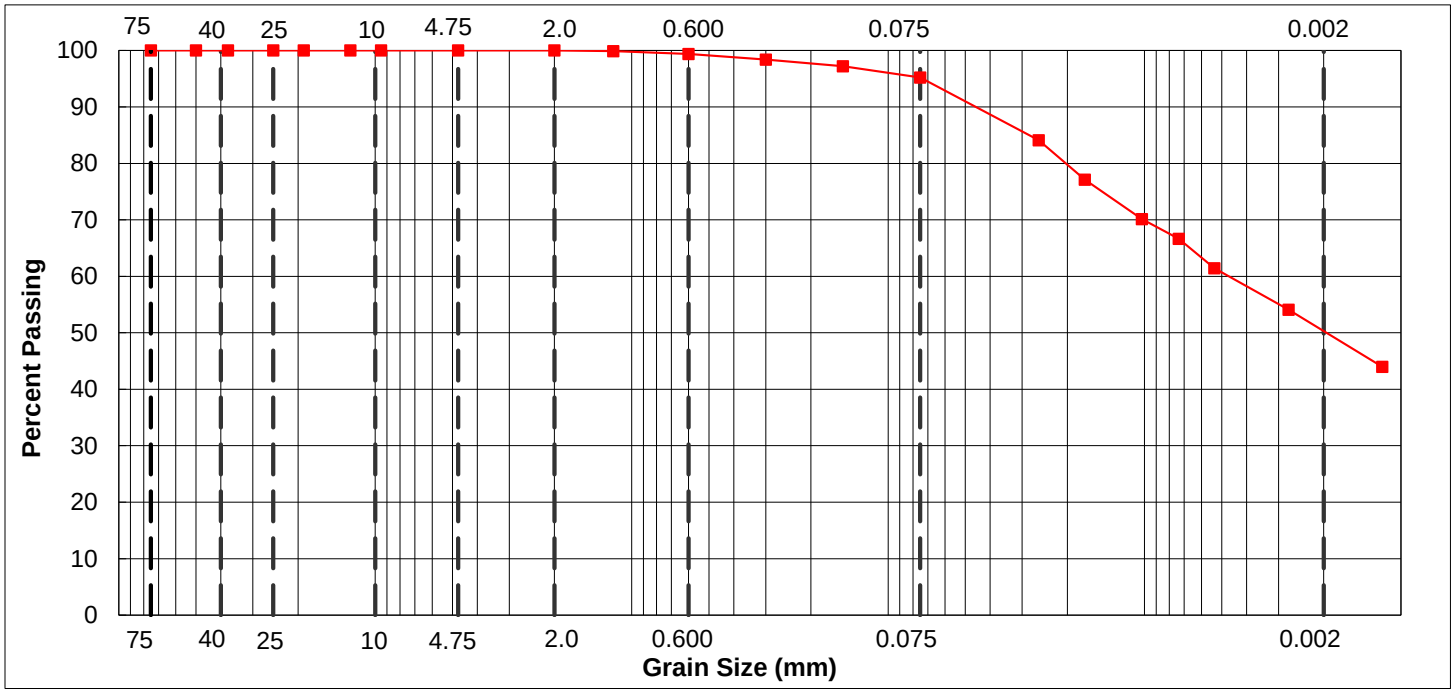
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	550AU2
Project No.:	1560-193-00	**Source:**	22BH550
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 550AU2	**Test Date:**	17-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	98.4
50.0	100.0	0.150	97.2
37.5	100.0	0.075	95.2
25.0	100.0	0.0259	84.1
19.0	100.0	0.0171	77.1
12.5	100.0	0.0102	70.1
9.5	100.0	0.0074	66.7
4.75	100.0	0.0053	61.4
2.00	100.0	0.0027	54.1
1.180	99.9	0.0012	44.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	4.2	425 µm to 75 µm
Silt	44.9	75 µm to 2 µm
Clay	50.3	<2 µm



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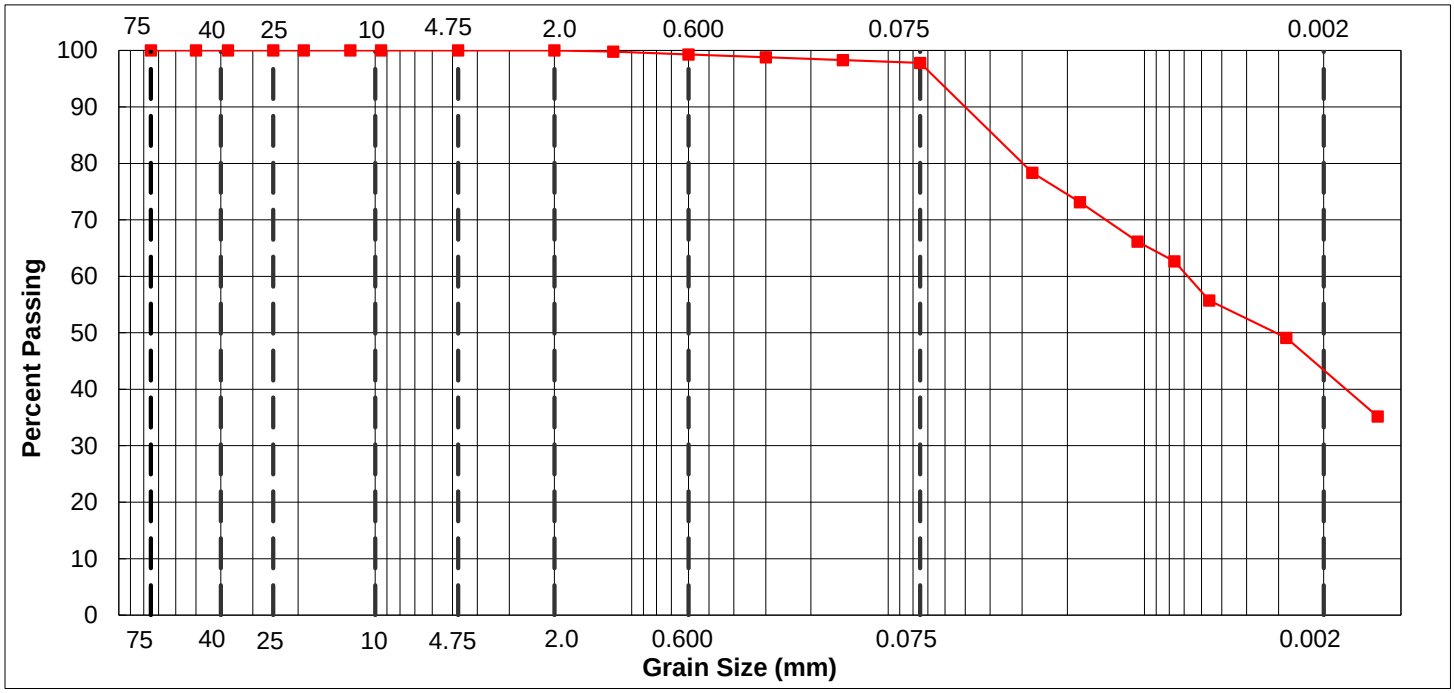
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	550AU4
Project No.:	1560-193-00	**Source:**	22BH550
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 550AU4	**Test Date:**	9-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.3
75.0	100.0	0.300	98.8
50.0	100.0	0.150	98.3
37.5	100.0	0.075	97.8
25.0	100.0	0.0274	78.4
19.0	100.0	0.0178	73.1
12.5	100.0	0.0106	66.2
9.5	100.0	0.0076	62.7
4.75	100.0	0.0056	55.7
2.00	100.0	0.0028	49.1
1.180	99.8	0.0012	35.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.7	2.00 mm to 425 µm
Fine Sand	1.5	425 µm to 75 µm
Silt	54.4	75 µm to 2 µm
Clay	43.4	<2 µm



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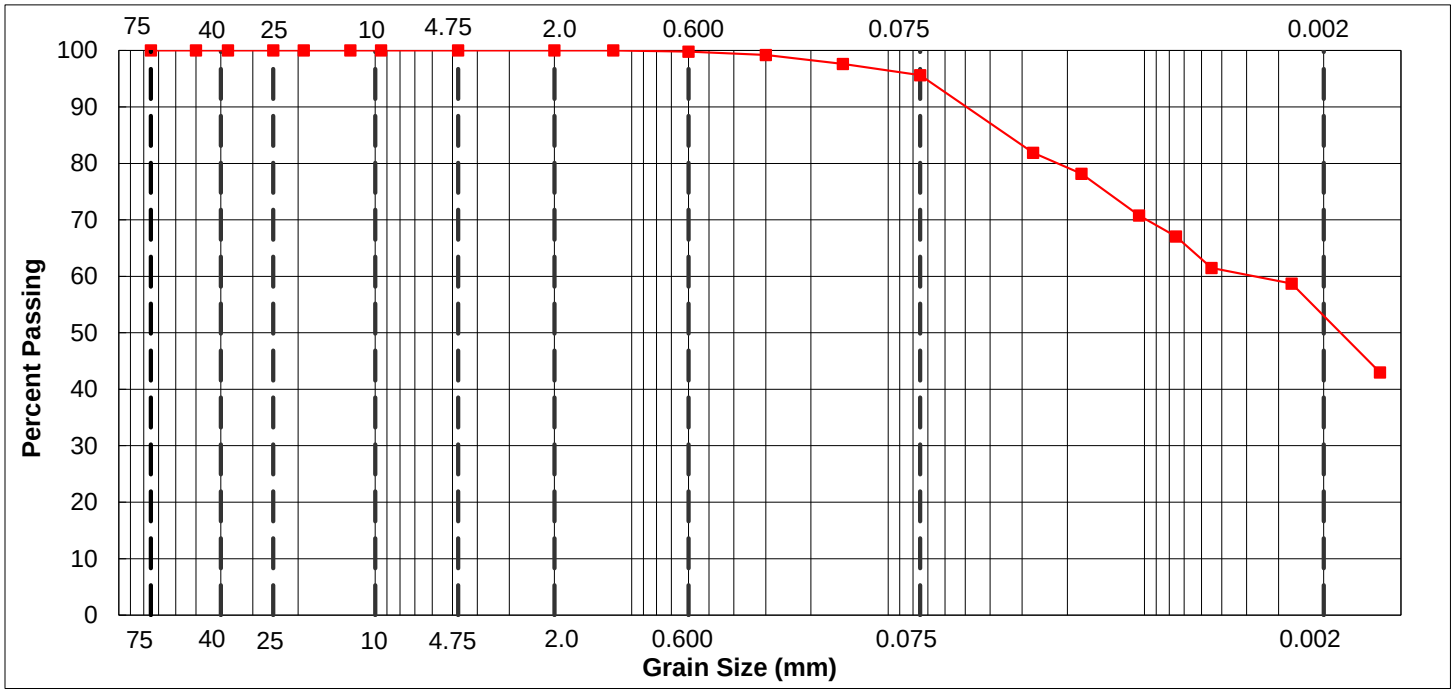
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	551AU1
Project No.:	1560-193-00	**Source:**	22BH551
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 551AU1	**Test Date:**	18-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.2
50.0	100.0	0.150	97.6
37.5	100.0	0.075	95.6
25.0	100.0	0.0272	81.9
19.0	100.0	0.0176	78.2
12.5	100.0	0.0105	70.8
9.5	100.0	0.0076	67.1
4.75	100.0	0.0055	61.5
2.00	100.0	0.0027	58.7
1.180	100.0	0.0012	43.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	4.2	425 µm to 75 µm
Silt	42.6	75 µm to 2 µm
Clay	53.0	<2 µm



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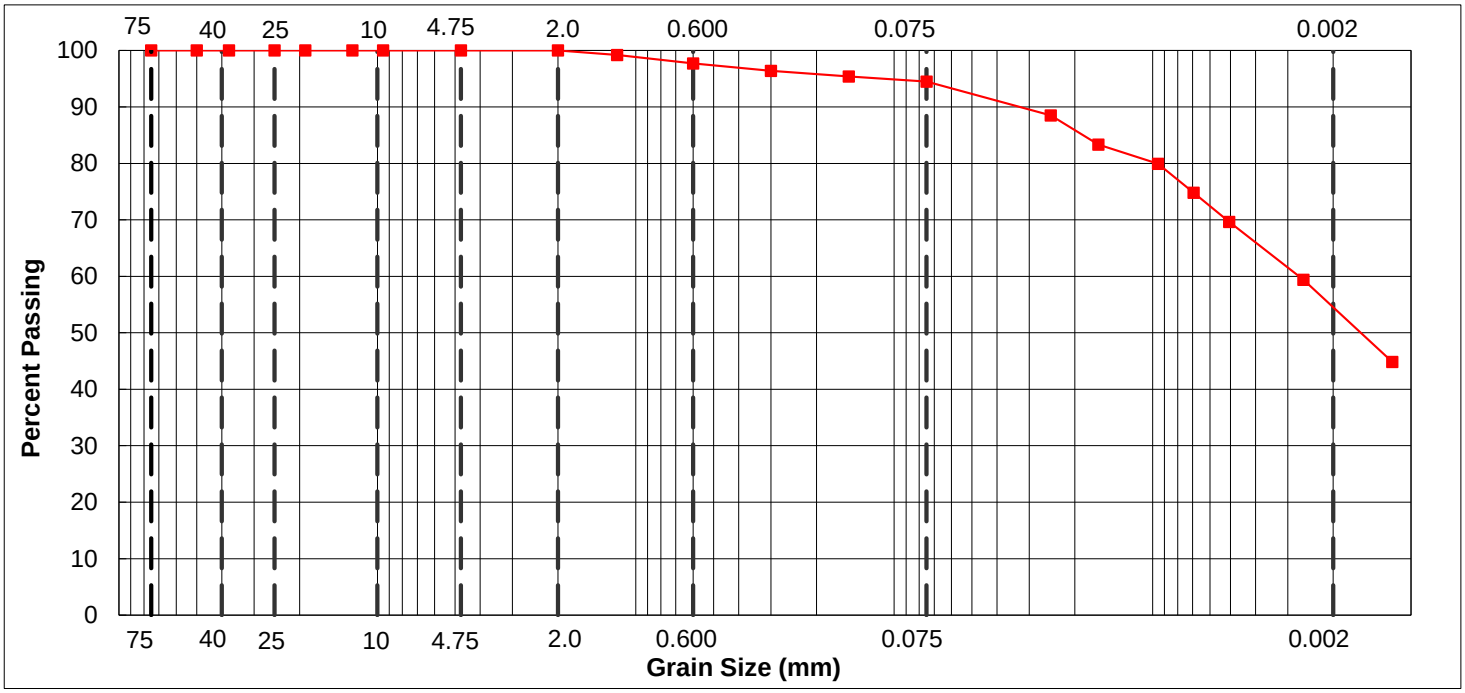
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	551AU3
Project No.:	1560-193-00	**Source:**	22BH551
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 551AU3	**Test Date:**	30-Sep-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.7
75.0	100.0	0.300	96.4
50.0	100.0	0.150	95.4
37.5	100.0	0.075	94.5
25.0	100.0	0.0248	88.5
19.0	100.0	0.0162	83.4
12.5	100.0	0.0095	79.9
9.5	100.0	0.0069	74.8
4.75	100.0	0.0051	69.7
2.00	100.0	0.0026	59.4
1.180	99.2	0.0012	44.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.3	2.00 mm to 425 µm
Fine Sand	3.2	425 µm to 75 µm
Silt	40.0	75 µm to 2 µm
Clay	54.5	<2 µm



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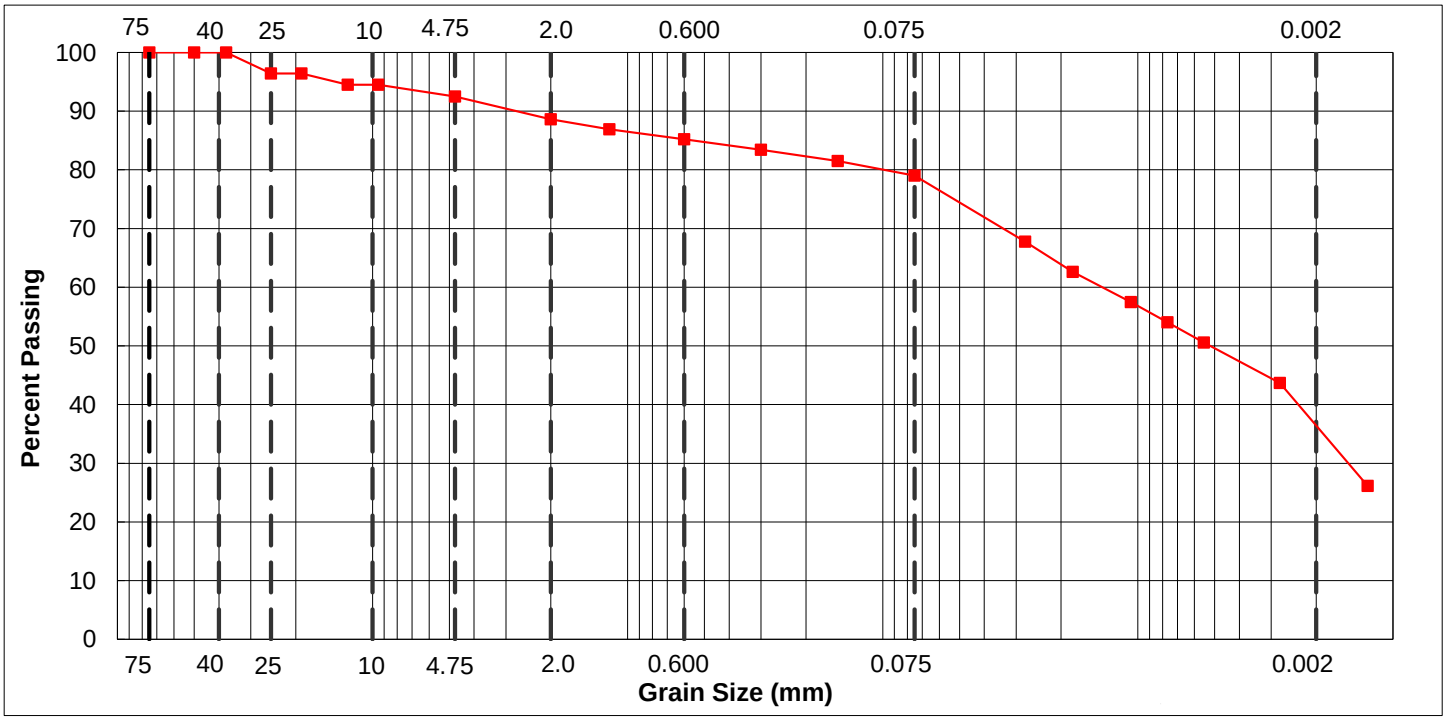
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	552AU2
Project No.:	1560-193-00	**Source:**	22BH552
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 552AU2	**Test Date:**	7-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	85.2
75.0	100.0	0.300	83.4
50.0	100.0	0.150	81.5
37.5	100.0	0.075	79.0
25.0	96.4	0.0277	67.8
19.0	96.4	0.0180	62.6
12.5	94.5	0.0107	57.4
9.5	94.5	0.0077	54.0
4.75	92.5	0.0055	50.6
2.00	88.6	0.0028	43.7
1.180	86.9	0.0013	26.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	3.6	80 mm to 20 mm
Fine Gravel	3.9	20 mm to 4.75 mm
Coarse Sand	3.9	4.75 mm to 2.00 mm
Medium Sand	3.4	2.00 mm to 425 µm
Fine Sand	6.2	425 µm to 75 µm
Silt	42.6	75 µm to 2 µm
Clay	36.4	<2 µm



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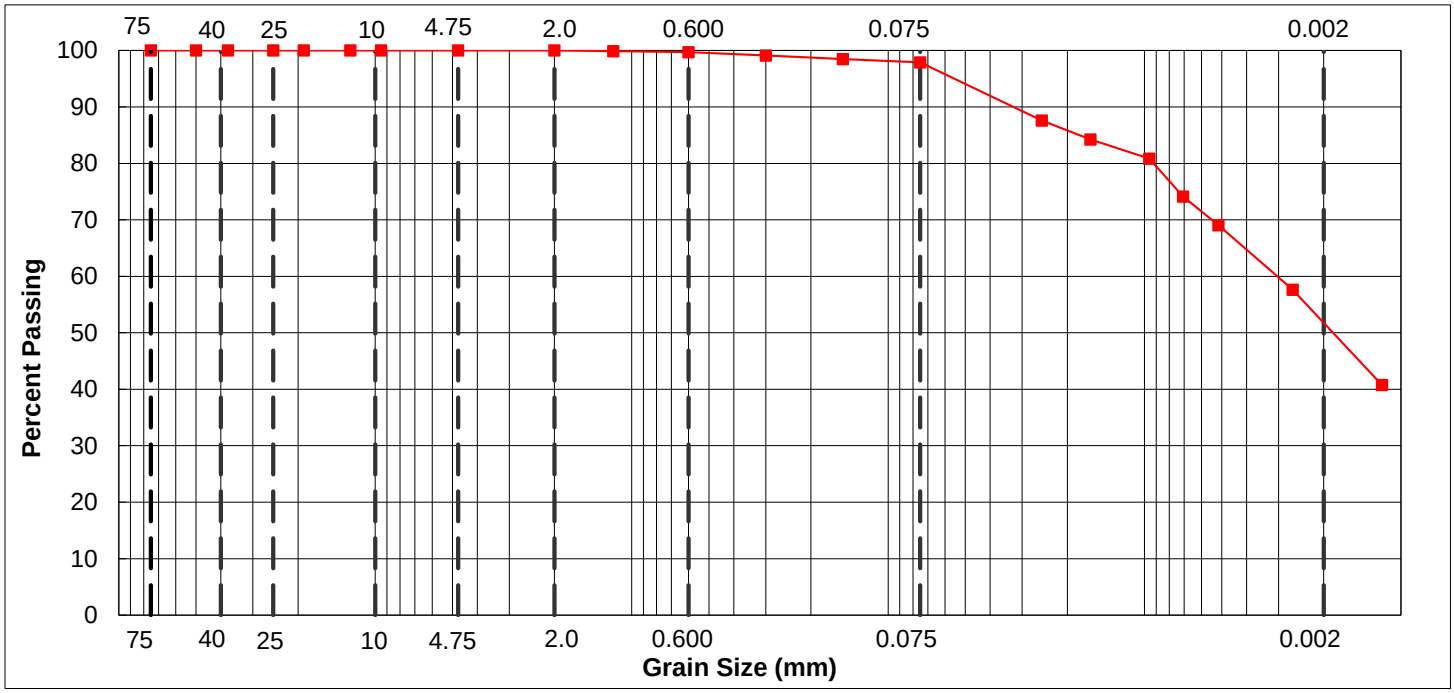
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	552AU4
Project No.:	1560-193-00	**Source:**	22BH552
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 552AU4	**Test Date:**	12-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.1
50.0	100.0	0.150	98.5
37.5	100.0	0.075	97.9
25.0	100.0	0.0252	87.6
19.0	100.0	0.0163	84.2
12.5	100.0	0.0096	80.9
9.5	100.0	0.0071	74.1
4.75	100.0	0.0052	69.1
2.00	100.0	0.0026	57.6
1.180	99.9	0.0012	40.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	1.8	425 µm to 75 µm
Silt	46.2	75 µm to 2 µm
Clay	51.7	<2 µm



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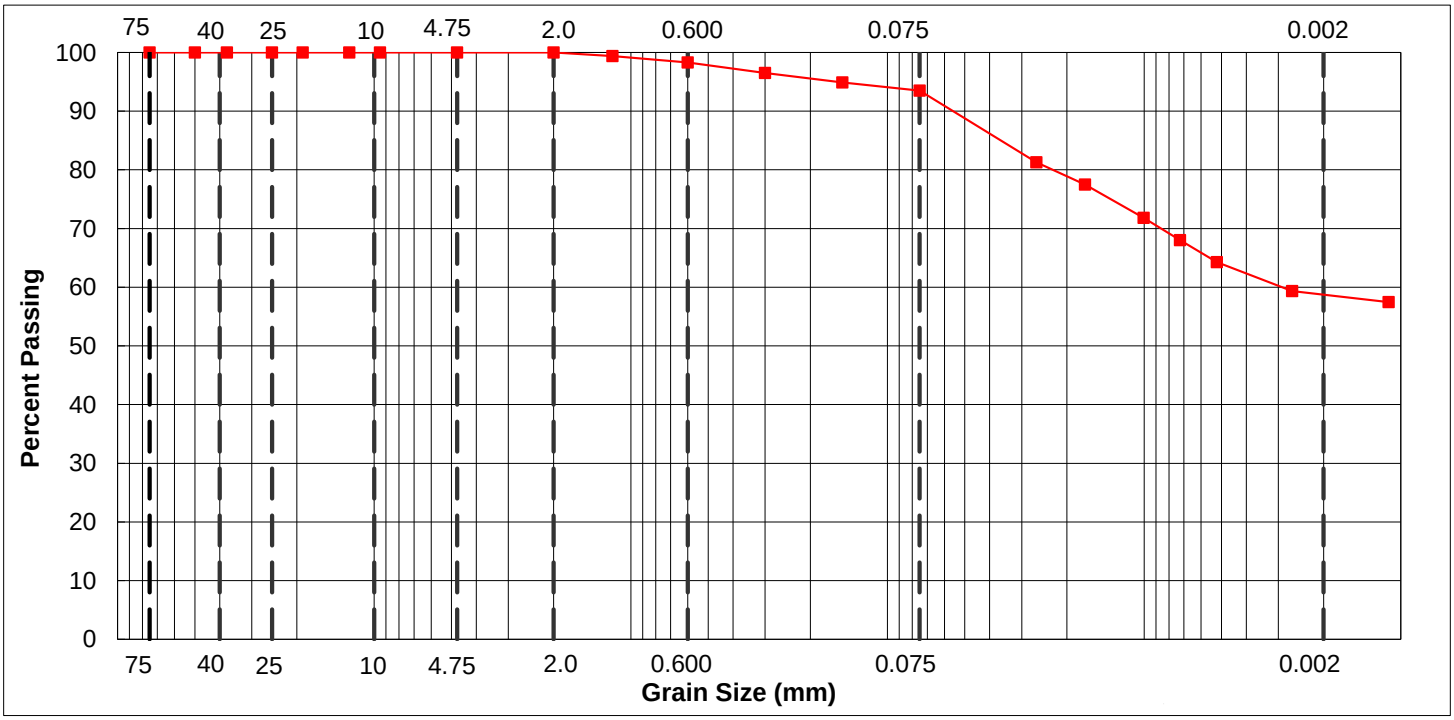
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	553AU1
Project No.:	1560-193-00	**Source:**	22BH553
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 553AU1	**Test Date:**	10-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.3
75.0	100.0	0.300	96.5
50.0	100.0	0.150	94.9
37.5	100.0	0.075	93.5
25.0	100.0	0.0263	81.3
19.0	100.0	0.0170	77.5
12.5	100.0	0.0100	71.8
9.5	100.0	0.0073	68.0
4.75	100.0	0.0052	64.3
2.00	100.0	0.0027	59.3
1.180	99.4	0.0011	57.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.7	2.00 mm to 425 µm
Fine Sand	4.8	425 µm to 75 µm
Silt	34.8	75 µm to 2 µm
Clay	58.7	<2 µm



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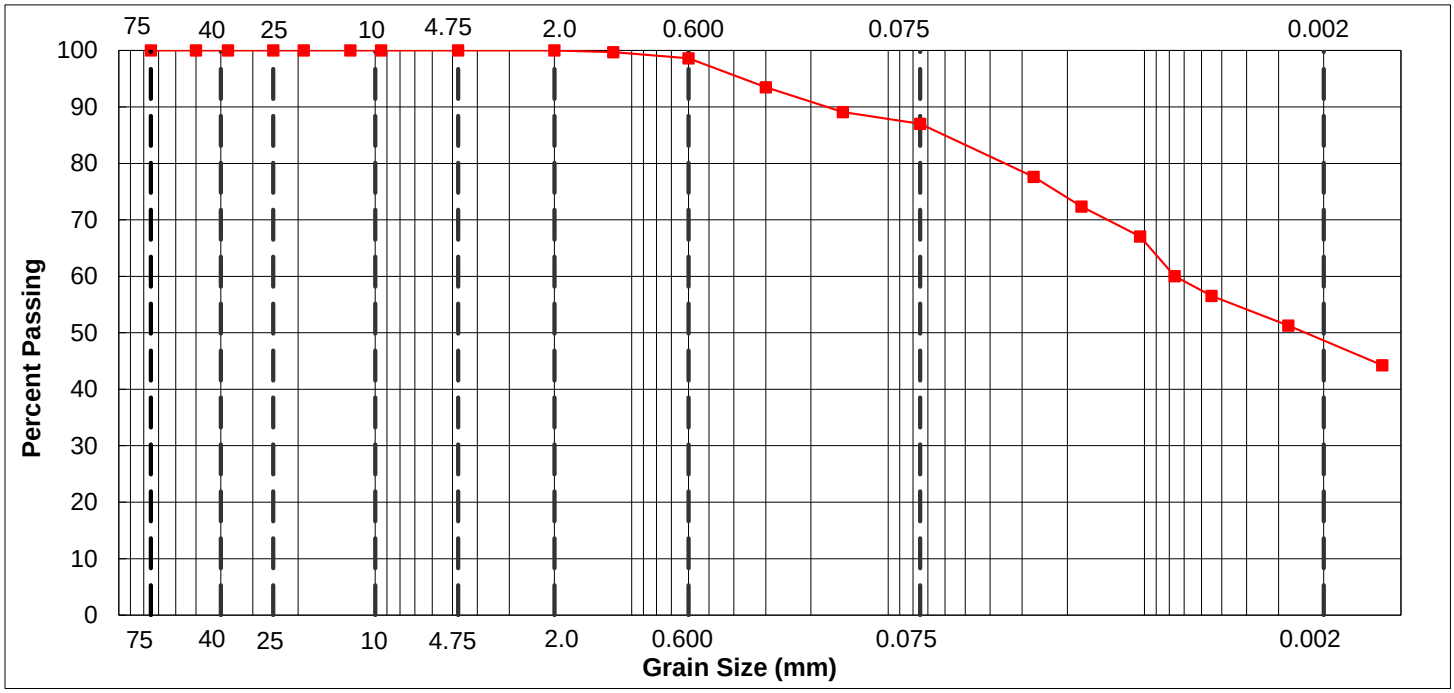
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	553AU2
Project No.:	1560-193-00	**Source:**	22BH553
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 553AU2	**Test Date:**	14-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.6
75.0	100.0	0.300	93.5
50.0	100.0	0.150	89.1
37.5	100.0	0.075	87.0
25.0	100.0	0.0271	77.6
19.0	100.0	0.0176	72.3
12.5	100.0	0.0104	67.1
9.5	100.0	0.0076	60.1
4.75	100.0	0.0055	56.5
2.00	100.0	0.0027	51.3
1.180	99.7	0.0012	44.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.4	2.00 mm to 425 µm
Fine Sand	11.6	425 µm to 75 µm
Silt	38.4	75 µm to 2 µm
Clay	48.6	<2 µm



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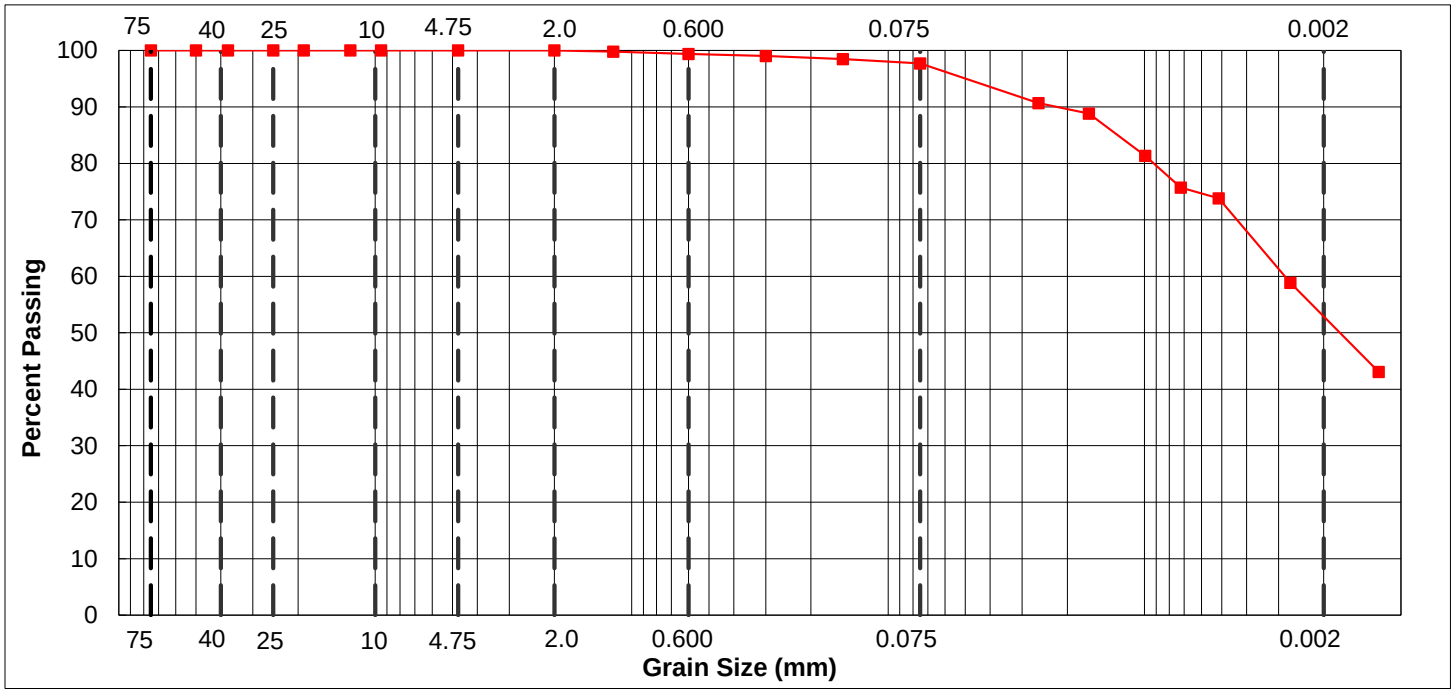
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	554AU2
Project No.:	1560-193-00	**Source:**	22BH554
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 554AU2	**Test Date:**	11-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	99.0
50.0	100.0	0.150	98.5
37.5	100.0	0.075	97.7
25.0	100.0	0.0259	90.7
19.0	100.0	0.0165	88.8
12.5	100.0	0.0099	81.3
9.5	100.0	0.0072	75.7
4.75	100.0	0.0051	73.8
2.00	100.0	0.0027	58.8
1.180	99.8	0.0012	43.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	1.7	425 µm to 75 µm
Silt	44.8	75 µm to 2 µm
Clay	52.9	<2 µm



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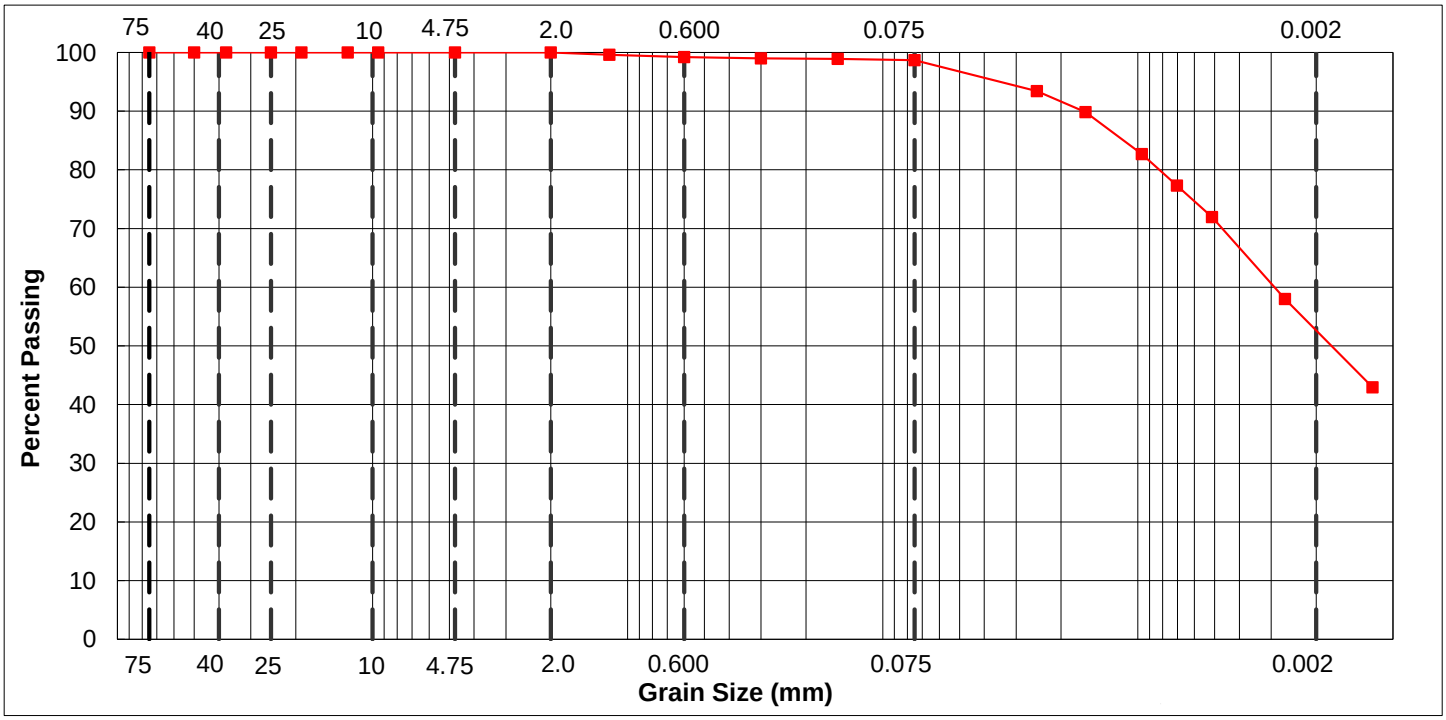
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	554AU4
Project No.:	1560-193-00	**Source:**	22BH554
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 554AU4	**Test Date:**	8-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	99.0
50.0	100.0	0.150	98.9
37.5	100.0	0.075	98.7
25.0	100.0	0.0248	93.4
19.0	100.0	0.0160	89.8
12.5	100.0	0.0096	82.7
9.5	100.0	0.0070	77.3
4.75	100.0	0.0051	71.9
2.00	100.0	0.0027	58.0
1.180	99.6	0.0012	42.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	0.5	425 µm to 75 µm
Silt	46.1	75 µm to 2 µm
Clay	52.6	<2 µm



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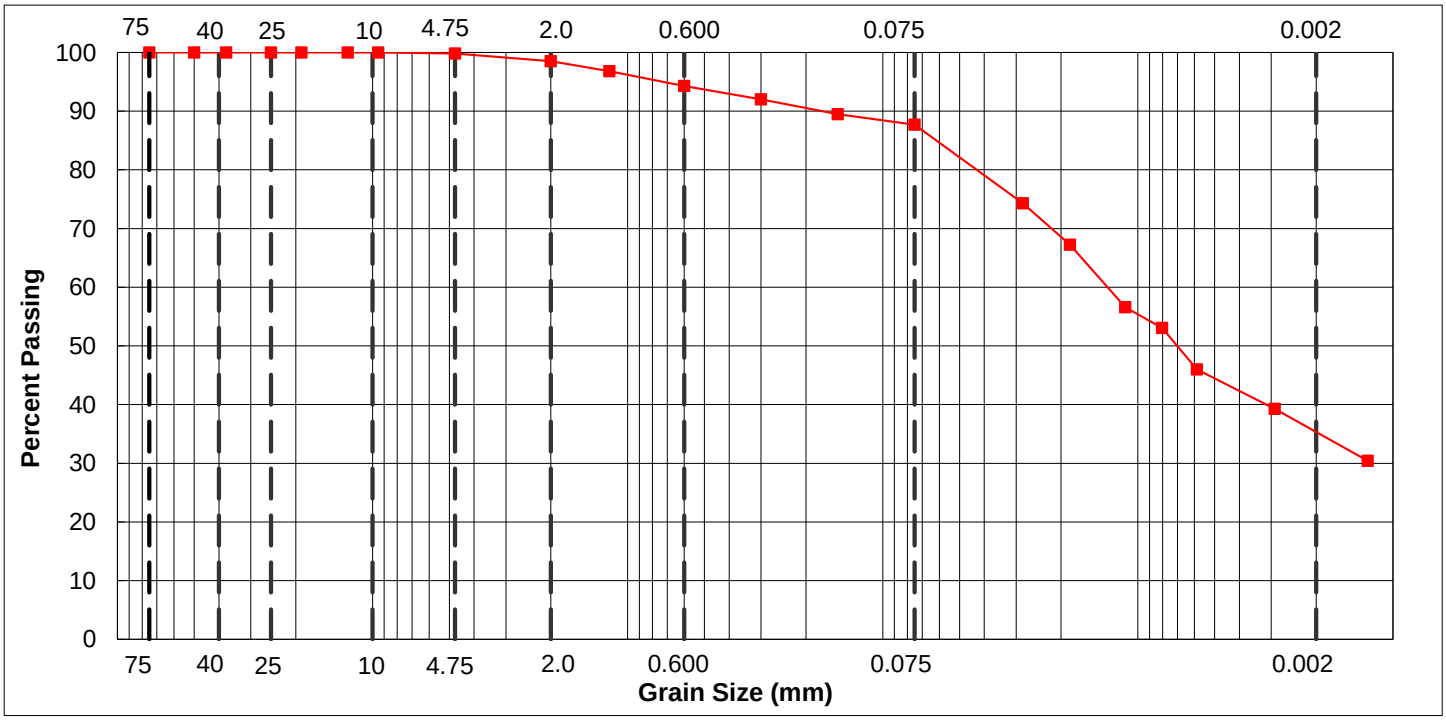
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	555AU1
Project No.:	1560-193-00	**Source:**	22BH555
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 555AU1	**Test Date:**	9-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	94.3
75.0	100.0	0.300	92.0
50.0	100.0	0.150	89.5
37.5	100.0	0.075	87.7
25.0	100.0	0.0282	74.3
19.0	100.0	0.0184	67.2
12.5	100.0	0.0112	56.6
9.5	100.0	0.0080	53.1
4.75	99.8	0.0059	46.0
2.00	98.5	0.0029	39.3
1.180	96.8	0.0013	30.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.2	20 mm to 4.75 mm
Coarse Sand	1.3	4.75 mm to 2.00 mm
Medium Sand	4.2	2.00 mm to 425 µm
Fine Sand	6.6	425 µm to 75 µm
Silt	52.4	75 µm to 2 µm
Clay	35.3	<2 µm



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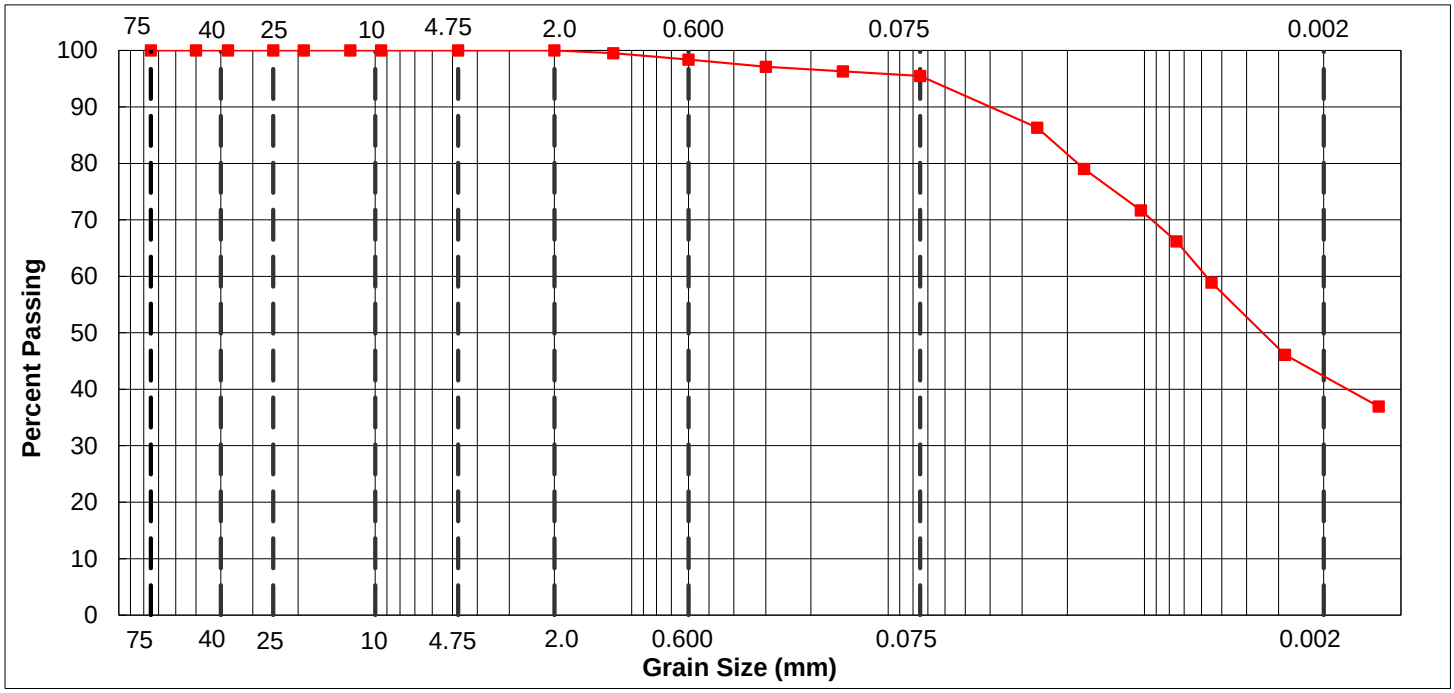
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	555AU3
Project No.:	1560-193-00	**Source:**	22BH555
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 555AU3	**Test Date:**	14-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.4
75.0	100.0	0.300	97.1
50.0	100.0	0.150	96.3
37.5	100.0	0.075	95.5
25.0	100.0	0.0262	86.3
19.0	100.0	0.0172	79.0
12.5	100.0	0.0103	71.7
9.5	100.0	0.0075	66.2
4.75	100.0	0.0055	58.9
2.00	100.0	0.0028	46.1
1.180	99.5	0.0012	37.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.6	2.00 mm to 425 µm
Fine Sand	2.9	425 µm to 75 µm
Silt	53.2	75 µm to 2 µm
Clay	42.3	<2 µm



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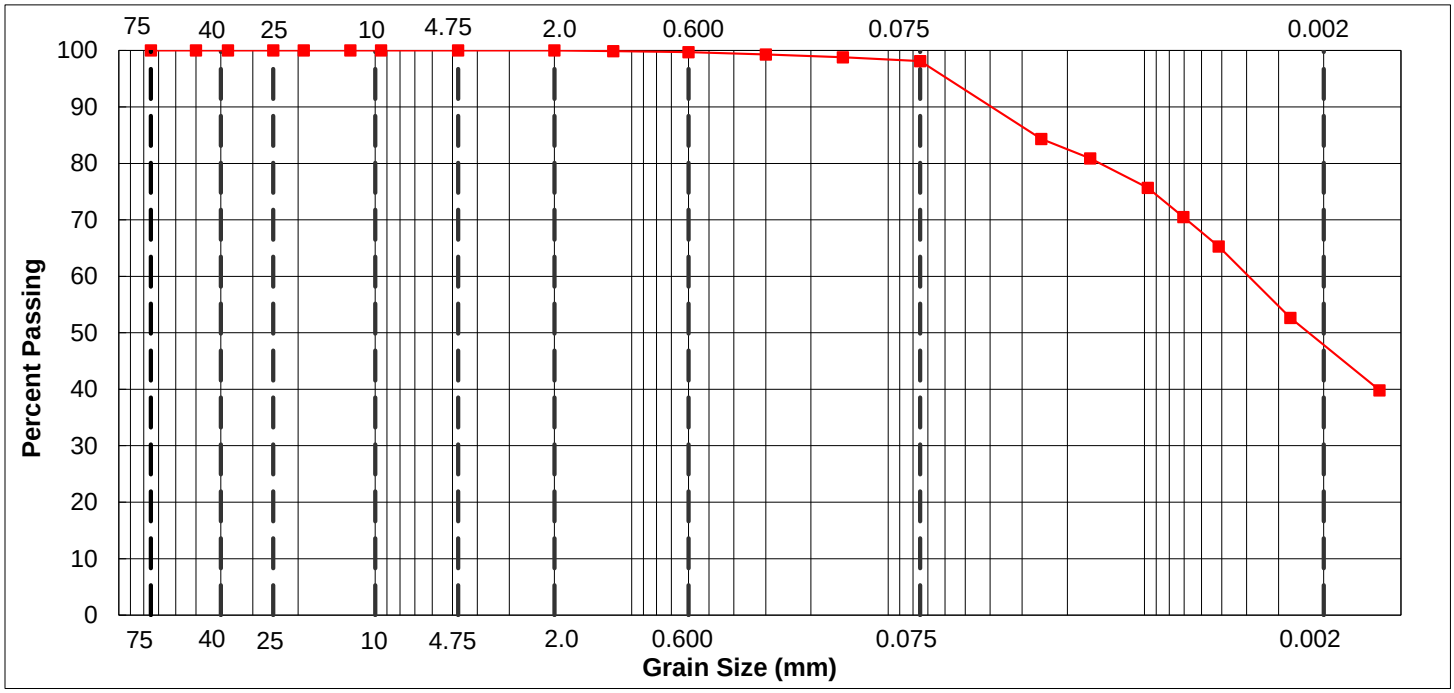
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	556AU2
Project No.:	1560-193-00	**Source:**	22BH556
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 556AU2	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.3
50.0	100.0	0.150	98.8
37.5	100.0	0.075	98.1
25.0	100.0	0.0253	84.3
19.0	100.0	0.0163	80.9
12.5	100.0	0.0097	75.7
9.5	100.0	0.0071	70.5
4.75	100.0	0.0051	65.3
2.00	100.0	0.0027	52.7
1.180	99.9	0.0012	39.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	1.6	425 µm to 75 µm
Silt	50.3	75 µm to 2 µm
Clay	47.8	<2 µm



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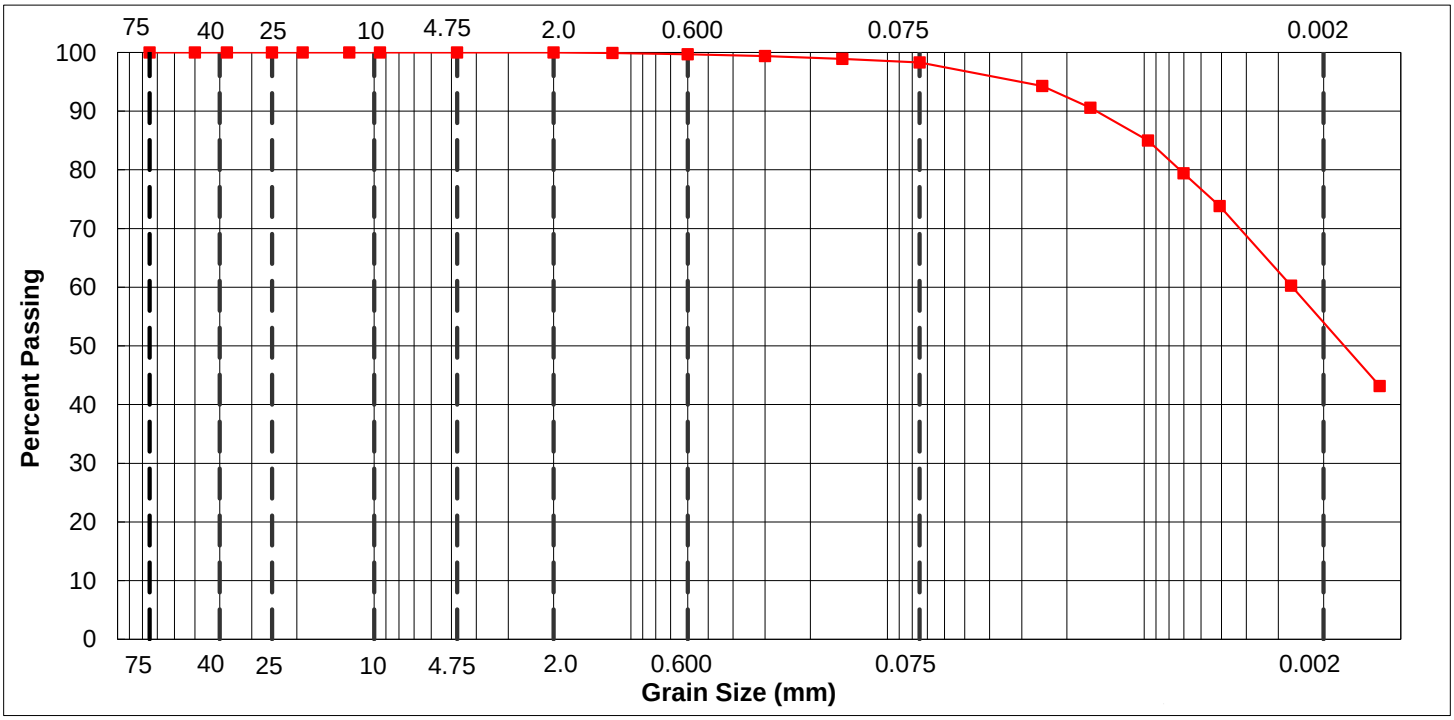
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	556AU3
Project No.:	1560-193-00	**Source:**	22BH556
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 556AU3	**Test Date:**	10-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.4
50.0	100.0	0.150	98.9
37.5	100.0	0.075	98.3
25.0	100.0	0.0249	94.3
19.0	100.0	0.0162	90.6
12.5	100.0	0.0096	85.0
9.5	100.0	0.0070	79.4
4.75	100.0	0.0051	73.8
2.00	100.0	0.0027	60.3
1.180	99.9	0.0012	43.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	1.4	425 µm to 75 µm
Silt	44.3	75 µm to 2 µm
Clay	54.0	<2 µm



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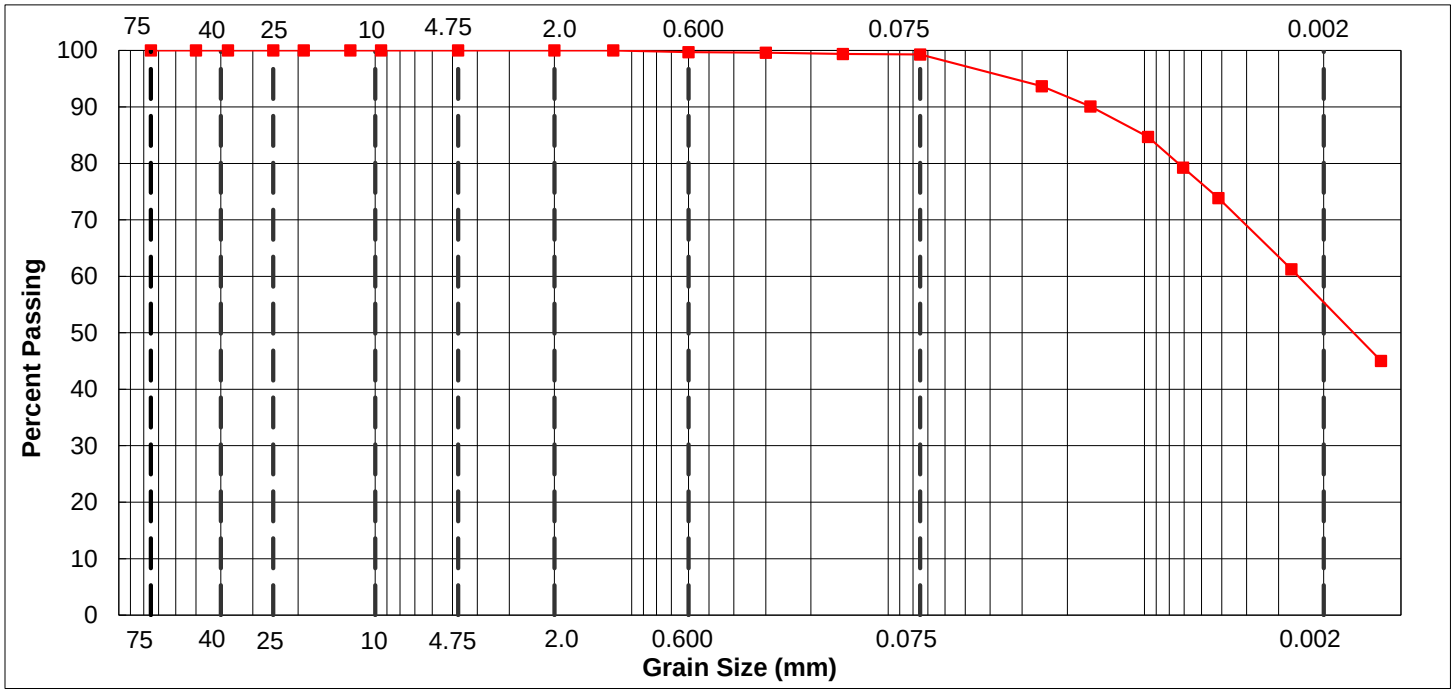
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	556AU4
Project No.:	1560-193-00	**Source:**	22BH556
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 556AU4	**Test Date:**	24-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.6
50.0	100.0	0.150	99.4
37.5	100.0	0.075	99.3
25.0	100.0	0.0252	93.7
19.0	100.0	0.0163	90.1
12.5	100.0	0.0097	84.7
9.5	100.0	0.0071	79.3
4.75	100.0	0.0052	73.9
2.00	100.0	0.0027	61.3
1.180	100.0	0.0012	45.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	43.9	75 µm to 2 µm
Clay	55.4	<2 µm



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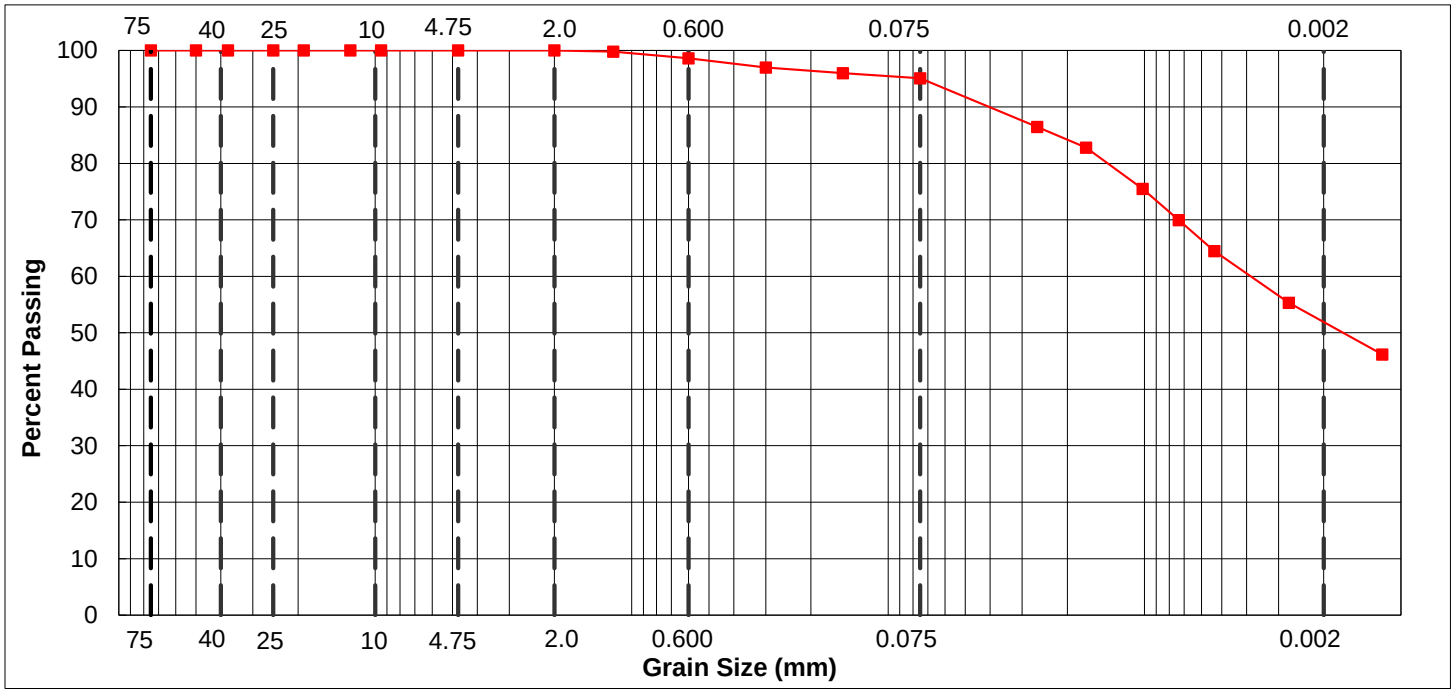
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	557AU1
Project No.:	1560-193-00	**Source:**	22BH557
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 557AU1	**Test Date:**	14-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.6
75.0	100.0	0.300	97.0
50.0	100.0	0.150	96.0
37.5	100.0	0.075	95.1
25.0	100.0	0.0262	86.5
19.0	100.0	0.0169	82.8
12.5	100.0	0.0102	75.5
9.5	100.0	0.0074	70.0
4.75	100.0	0.0053	64.5
2.00	100.0	0.0027	55.3
1.180	99.8	0.0012	46.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.4	2.00 mm to 425 µm
Fine Sand	3.5	425 µm to 75 µm
Silt	43.2	75 µm to 2 µm
Clay	51.9	<2 µm



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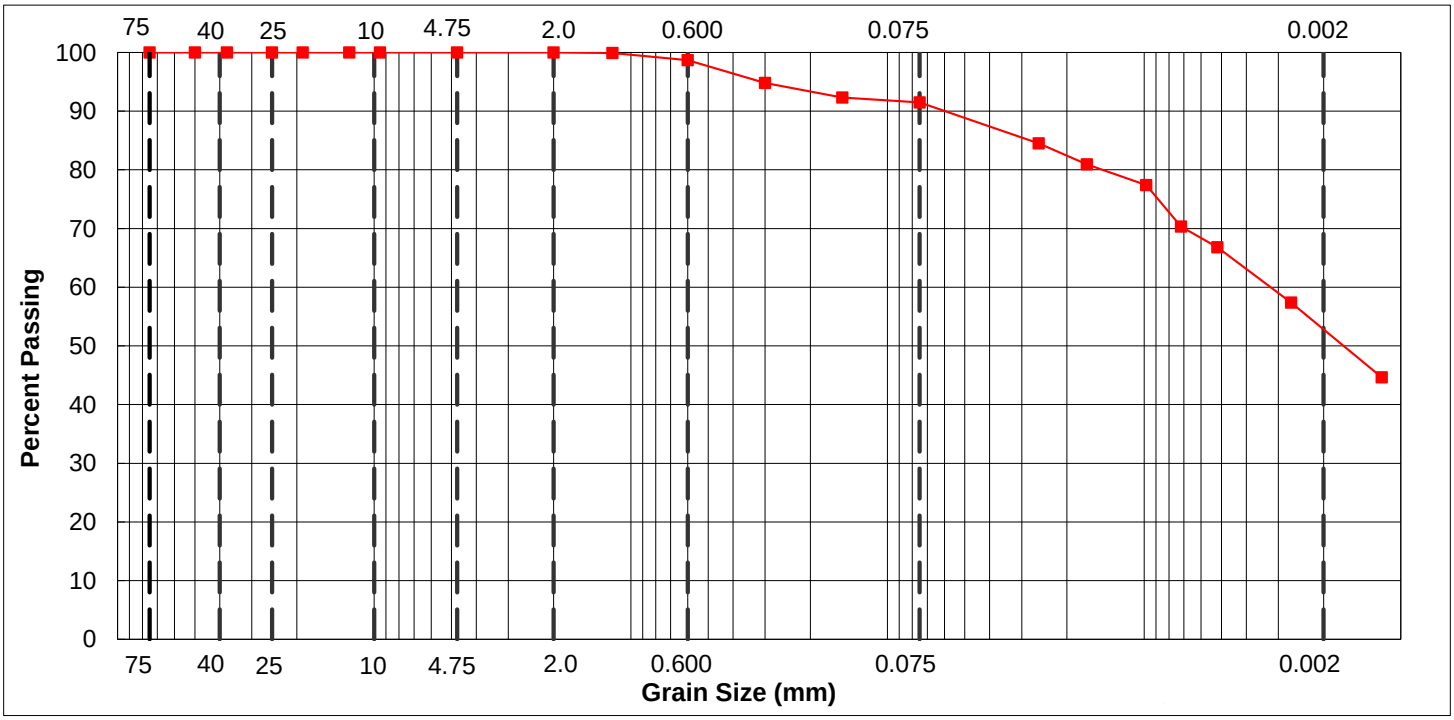
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	557AU3
Project No.:	1560-193-00	**Source:**	22BH557
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 557AU3	**Test Date:**	10-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.7
75.0	100.0	0.300	94.8
50.0	100.0	0.150	92.3
37.5	100.0	0.075	91.5
25.0	100.0	0.0258	84.5
19.0	100.0	0.0167	81.0
12.5	100.0	0.0098	77.4
9.5	100.0	0.0072	70.3
4.75	100.0	0.0052	66.8
2.00	100.0	0.0027	57.4
1.180	99.9	0.0012	44.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.3	2.00 mm to 425 µm
Fine Sand	7.2	425 µm to 75 µm
Silt	38.7	75 µm to 2 µm
Clay	52.8	<2 µm



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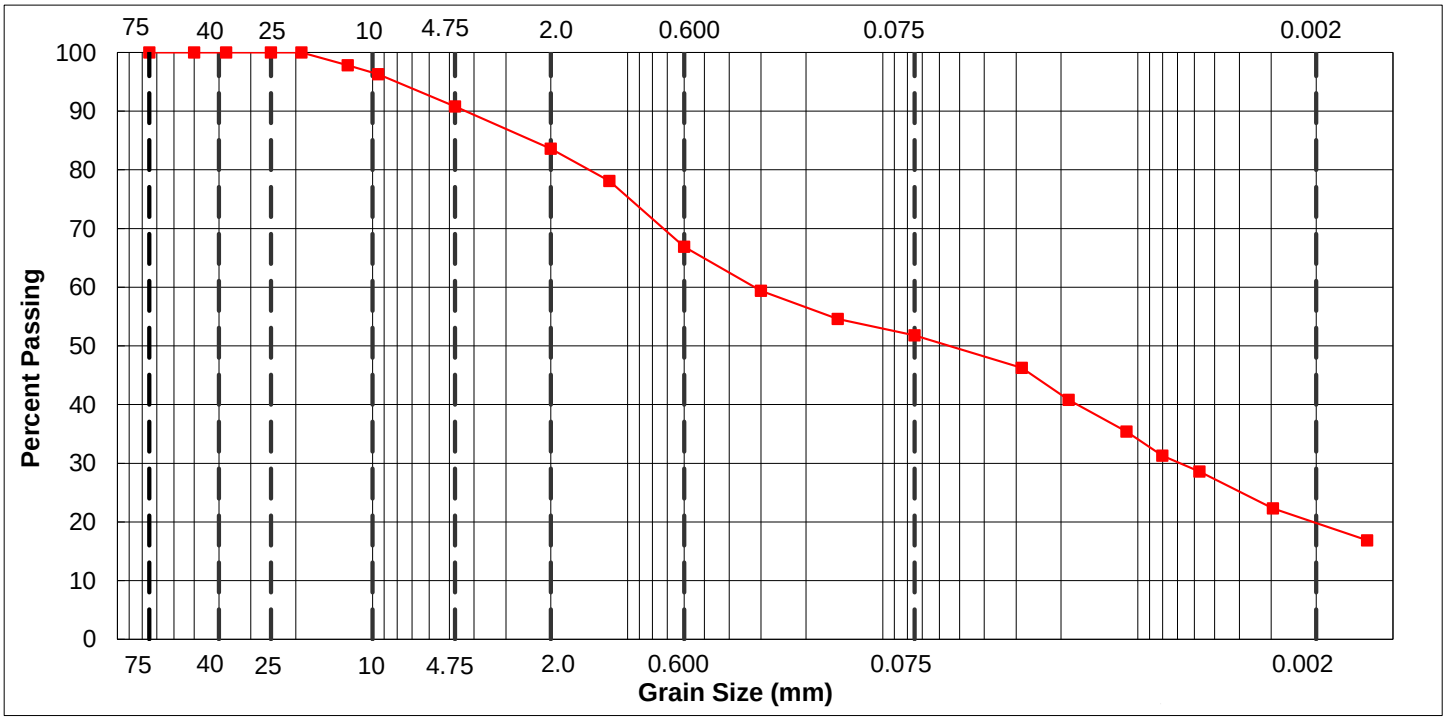
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	558AU2
Project No.:	1560-193-00	**Source:**	22BH558
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 558AU2	**Test Date:**	10-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	66.9
75.0	100.0	0.300	59.4
50.0	100.0	0.150	54.6
37.5	100.0	0.075	51.8
25.0	100.0	0.0285	46.2
19.0	100.0	0.0187	40.8
12.5	97.8	0.0111	35.4
9.5	96.3	0.0080	31.3
4.75	90.8	0.0057	28.6
2.00	83.6	0.0030	22.3
1.180	78.1	0.0013	16.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	9.2	20 mm to 4.75 mm
Coarse Sand	7.2	4.75 mm to 2.00 mm
Medium Sand	16.7	2.00 mm to 425 µm
Fine Sand	15.1	425 µm to 75 µm
Silt	32.0	75 µm to 2 µm
Clay	19.8	<2 µm



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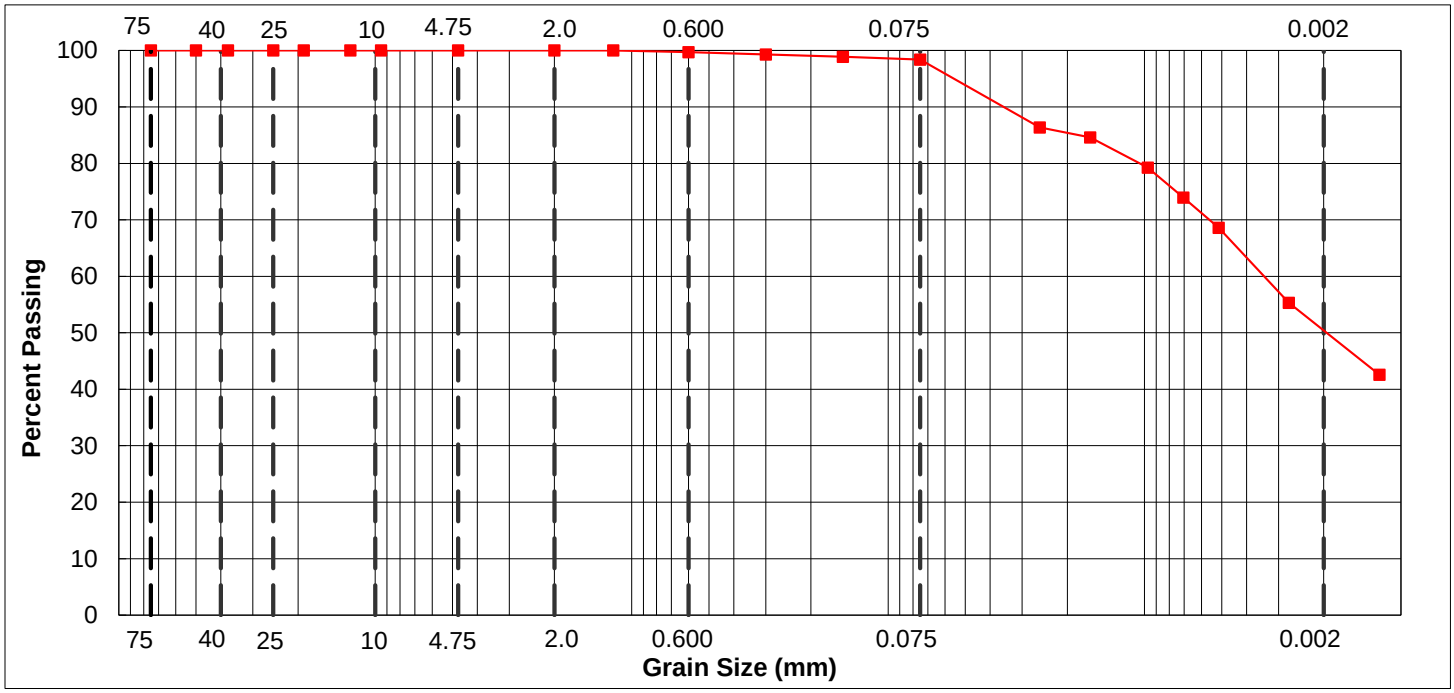
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	558AU4
Project No.:	1560-193-00	**Source:**	22BH558
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 558AU4	**Test Date:**	11-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.3
50.0	100.0	0.150	98.9
37.5	100.0	0.075	98.4
25.0	100.0	0.0256	86.4
19.0	100.0	0.0163	84.6
12.5	100.0	0.0097	79.3
9.5	100.0	0.0071	73.9
4.75	100.0	0.0051	68.6
2.00	100.0	0.0027	55.3
1.180	100.0	0.0012	42.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	1.3	425 µm to 75 µm
Silt	48.0	75 µm to 2 µm
Clay	50.4	<2 µm



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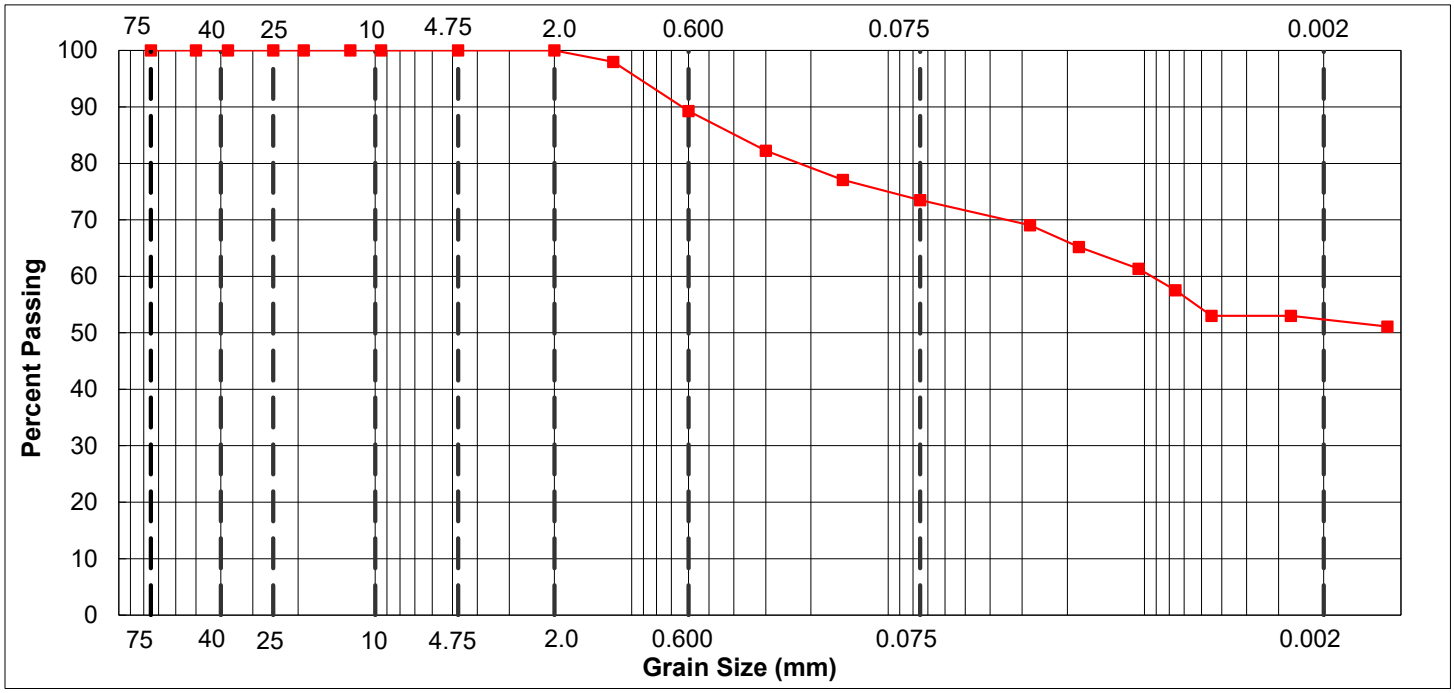
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	560AU1
Project No.:	1560-193-00	**Source:**	22BH560
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 560AU1	**Test Date:**	18-Aug-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	89.3
75.0	100.0	0.300	82.2
50.0	100.0	0.150	77.1
37.5	100.0	0.075	73.5
25.0	100.0	0.0280	69.0
19.0	100.0	0.0180	65.2
12.5	100.0	0.0106	61.4
9.5	100.0	0.0076	57.5
4.75	100.0	0.0055	53.0
2.00	100.0	0.0027	53.0
1.180	98.0	0.0011	51.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	10.7	2.00 mm to 425 µm
Fine Sand	15.8	425 µm to 75 µm
Silt	21.1	75 µm to 2 µm
Clay	52.4	<2 µm



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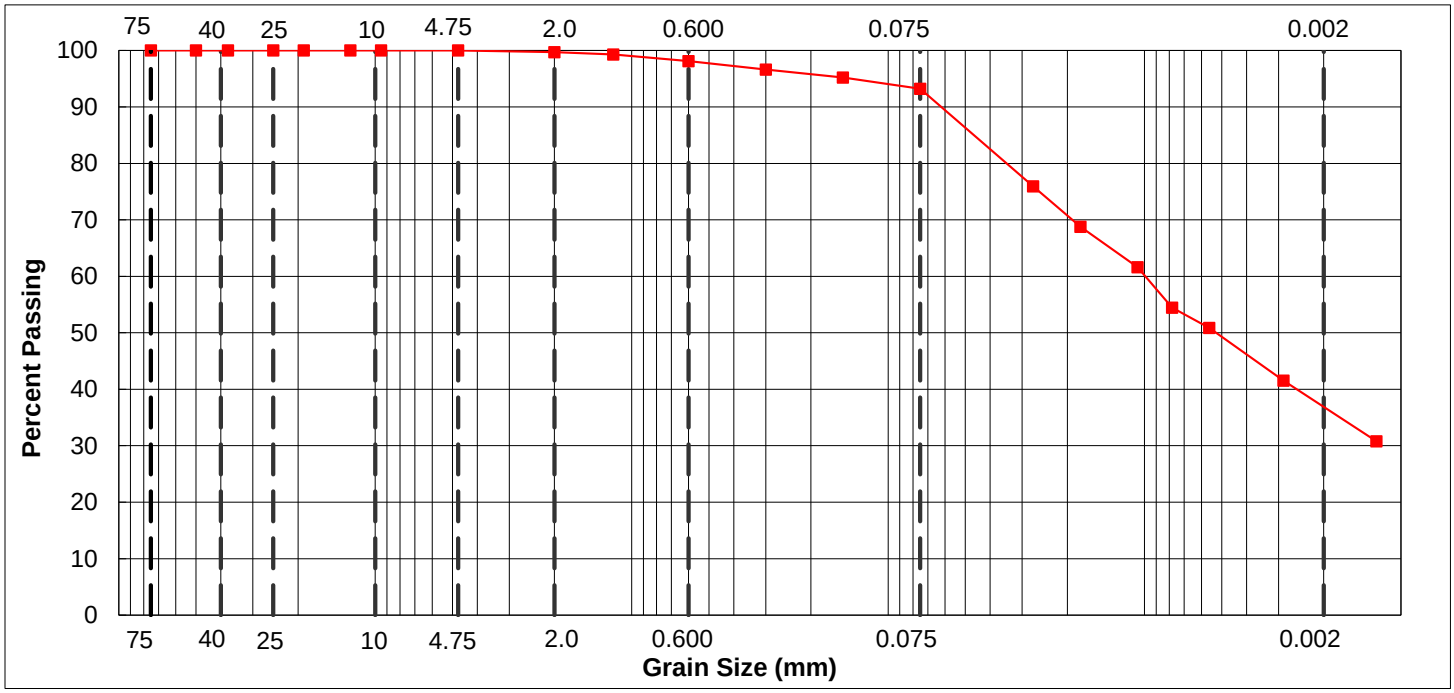
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	560AU2
Project No.:	1560-193-00	**Source:**	22BH560
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 560AU2	**Test Date:**	14-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.1
75.0	100.0	0.300	96.6
50.0	100.0	0.150	95.2
37.5	100.0	0.075	93.2
25.0	100.0	0.0272	75.9
19.0	100.0	0.0178	68.8
12.5	100.0	0.0107	61.6
9.5	100.0	0.0078	54.4
4.75	100.0	0.0056	50.9
2.00	99.7	0.0029	41.5
1.180	99.3	0.0012	30.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.3	4.75 mm to 2.00 mm
Medium Sand	1.6	2.00 mm to 425 µm
Fine Sand	4.9	425 µm to 75 µm
Silt	56.3	75 µm to 2 µm
Clay	36.9	<2 µm



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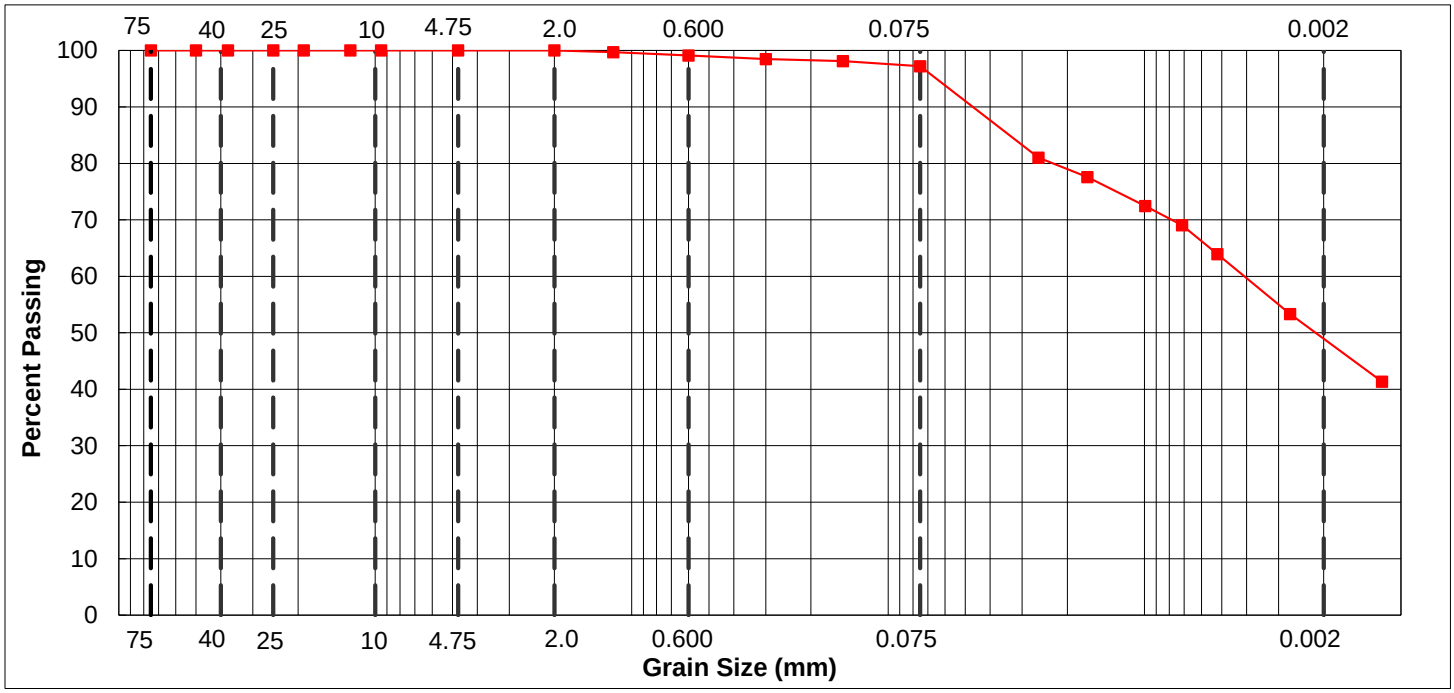
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	560AU4
Project No.:	1560-193-00	**Source:**	22BH560
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 560AU4	**Test Date:**	14-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.1
75.0	100.0	0.300	98.5
50.0	100.0	0.150	98.1
37.5	100.0	0.075	97.2
25.0	100.0	0.0259	81.0
19.0	100.0	0.0167	77.6
12.5	100.0	0.0099	72.5
9.5	100.0	0.0071	69.1
4.75	100.0	0.0052	63.9
2.00	100.0	0.0027	53.3
1.180	99.7	0.0012	41.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.9	2.00 mm to 425 µm
Fine Sand	1.9	425 µm to 75 µm
Silt	48.3	75 µm to 2 µm
Clay	48.9	<2 µm



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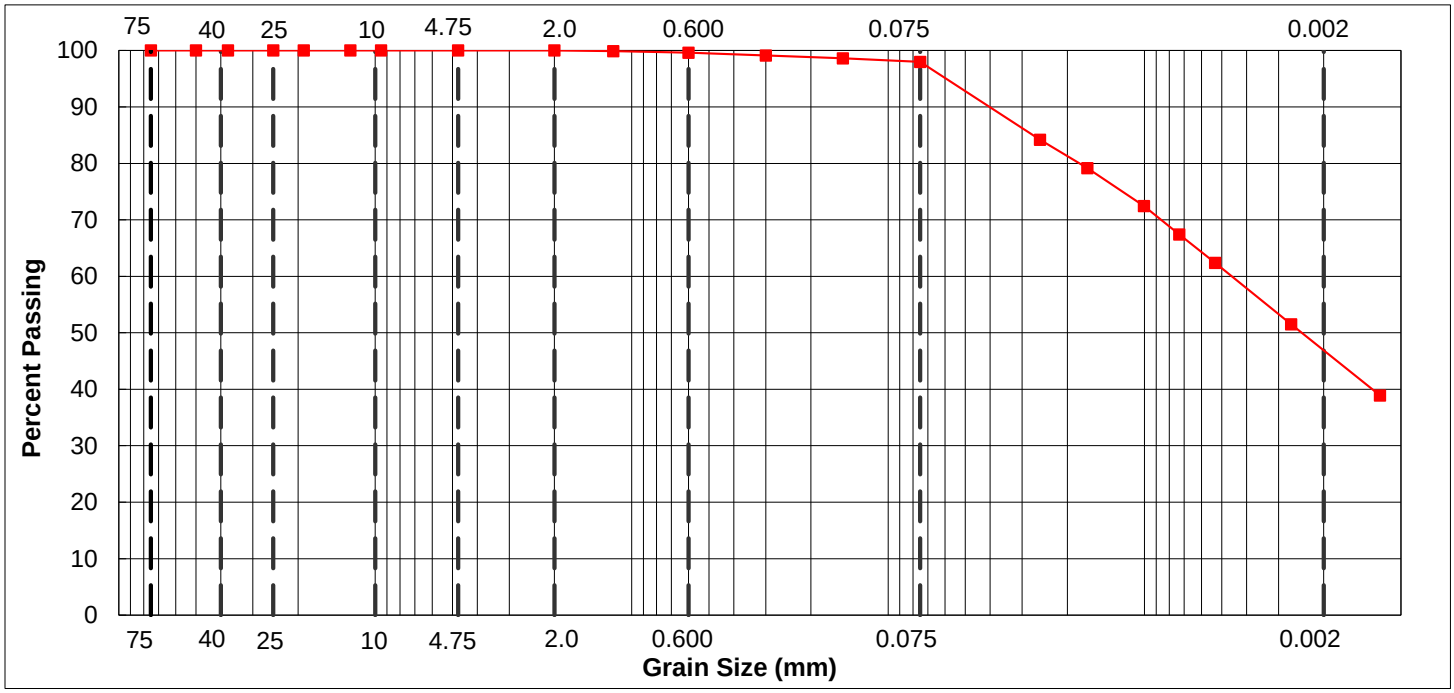
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	561AU2
Project No.:	1560-193-00	**Source:**	22BH561
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 561AU2	**Test Date:**	18-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	99.1
50.0	100.0	0.150	98.6
37.5	100.0	0.075	98.0
25.0	100.0	0.0255	84.2
19.0	100.0	0.0167	79.2
12.5	100.0	0.0101	72.5
9.5	100.0	0.0073	67.4
4.75	100.0	0.0053	62.4
2.00	100.0	0.0027	51.5
1.180	99.9	0.0012	38.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	1.6	425 µm to 75 µm
Silt	51.1	75 µm to 2 µm
Clay	46.9	<2 µm



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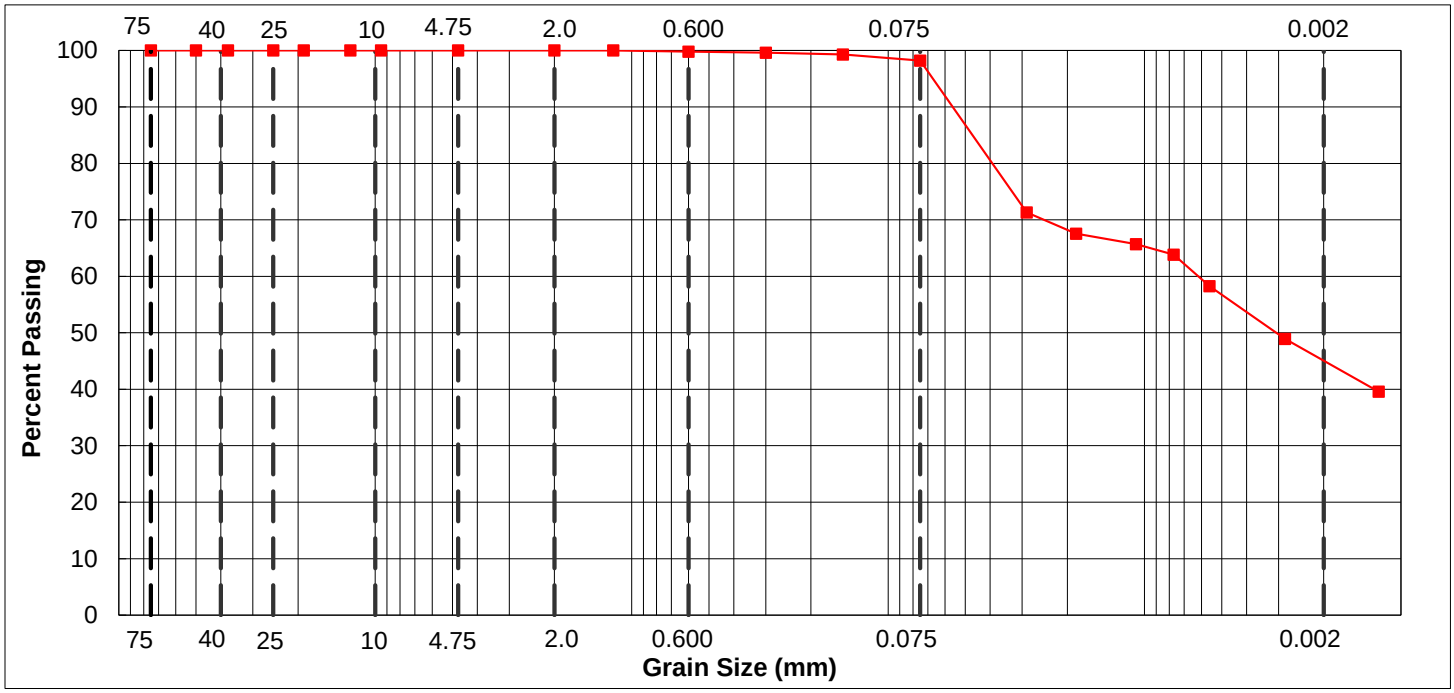
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	562AU2
Project No.:	1560-193-00	**Source:**	22BH562
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 562AU2	**Test Date:**	14-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.6
50.0	100.0	0.150	99.3
37.5	100.0	0.075	98.2
25.0	100.0	0.0288	71.3
19.0	100.0	0.0185	67.6
12.5	100.0	0.0108	65.7
9.5	100.0	0.0077	63.8
4.75	100.0	0.0056	58.2
2.00	100.0	0.0028	48.9
1.180	100.0	0.0012	39.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	1.6	425 µm to 75 µm
Silt	53.2	75 µm to 2 µm
Clay	45.0	<2 µm



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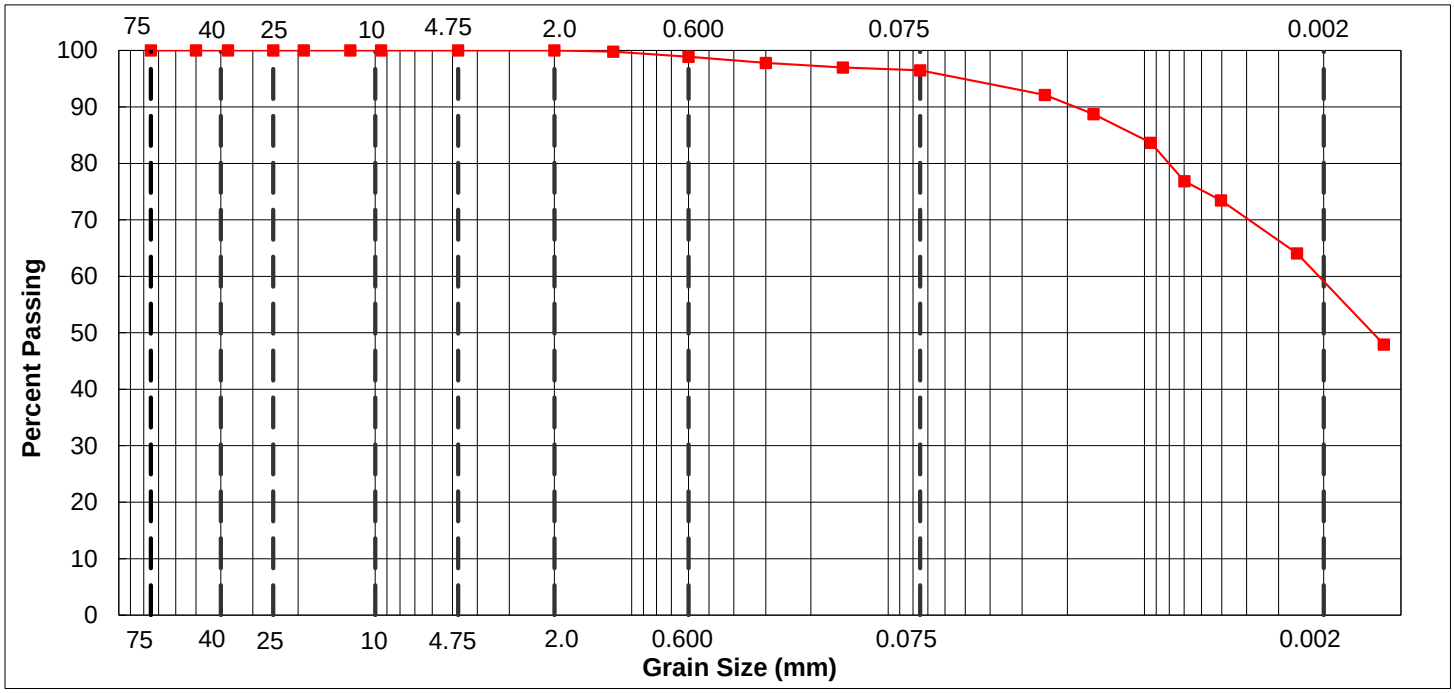
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	562AU4
Project No.:	1560-193-00	**Source:**	22BH562
Owner:	EID	**Sample Depth:**	5.0m
File No.:	GSA - 562AU4	**Test Date:**	19-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.9
75.0	100.0	0.300	97.8
50.0	100.0	0.150	97.0
37.5	100.0	0.075	96.5
25.0	100.0	0.0245	92.1
19.0	100.0	0.0158	88.7
12.5	100.0	0.0095	83.6
9.5	100.0	0.0070	76.8
4.75	100.0	0.0050	73.4
2.00	100.0	0.0025	64.1
1.180	99.8	0.0012	47.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.1	2.00 mm to 425 µm
Fine Sand	2.4	425 µm to 75 µm
Silt	37.4	75 µm to 2 µm
Clay	59.1	<2 µm



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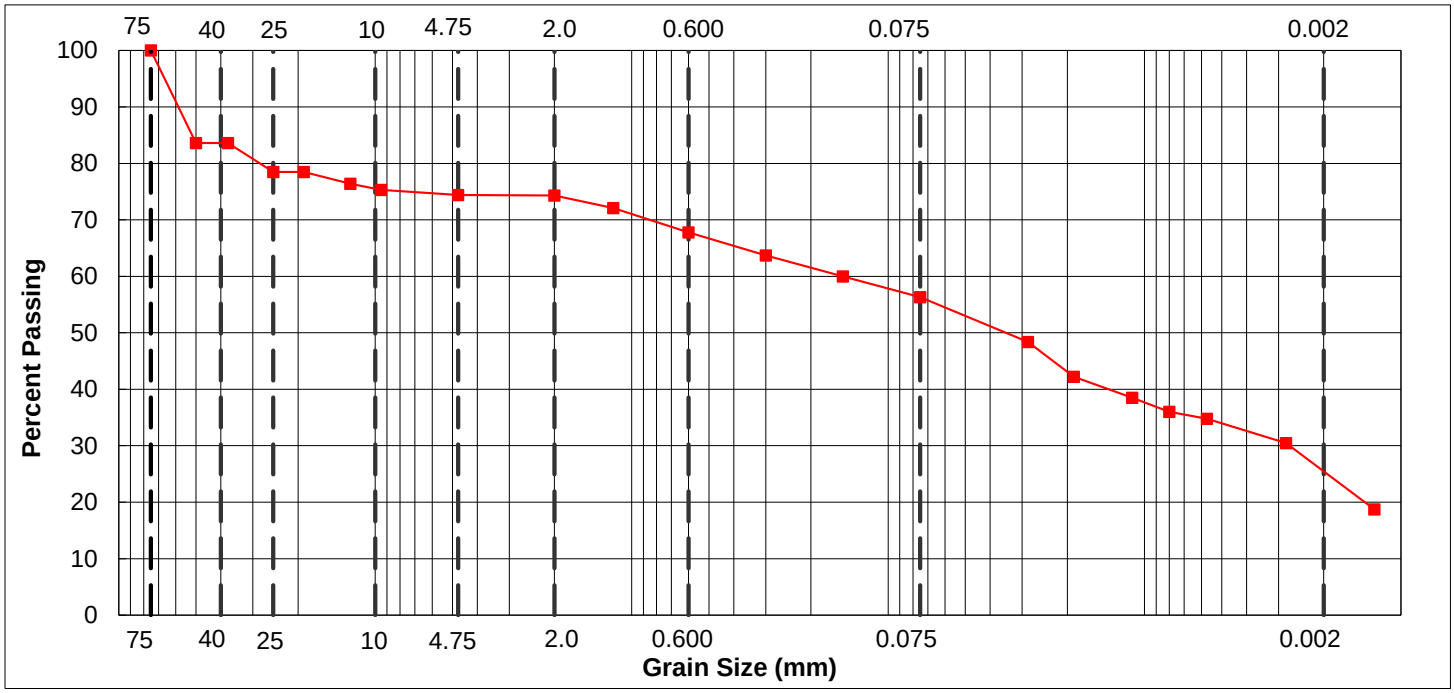
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	563AU1
Project No.:	1560-193-00	**Source:**	22BH563
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 563AU1	**Test Date:**	19-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	67.8
75.0	100.0	0.300	63.7
50.0	83.6	0.150	60.0
37.5	83.6	0.075	56.3
25.0	78.5	0.0285	48.4
19.0	78.5	0.0189	42.2
12.5	76.4	0.0112	38.5
9.5	75.3	0.0080	36.0
4.75	74.4	0.0057	34.8
2.00	74.3	0.0028	30.5
1.180	72.1	0.0013	18.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	21.5	80 mm to 20 mm
Fine Gravel	4.1	20 mm to 4.75 mm
Coarse Sand	0.1	4.75 mm to 2.00 mm
Medium Sand	6.5	2.00 mm to 425 µm
Fine Sand	11.5	425 µm to 75 µm
Silt	30.8	75 µm to 2 µm
Clay	25.5	<2 µm



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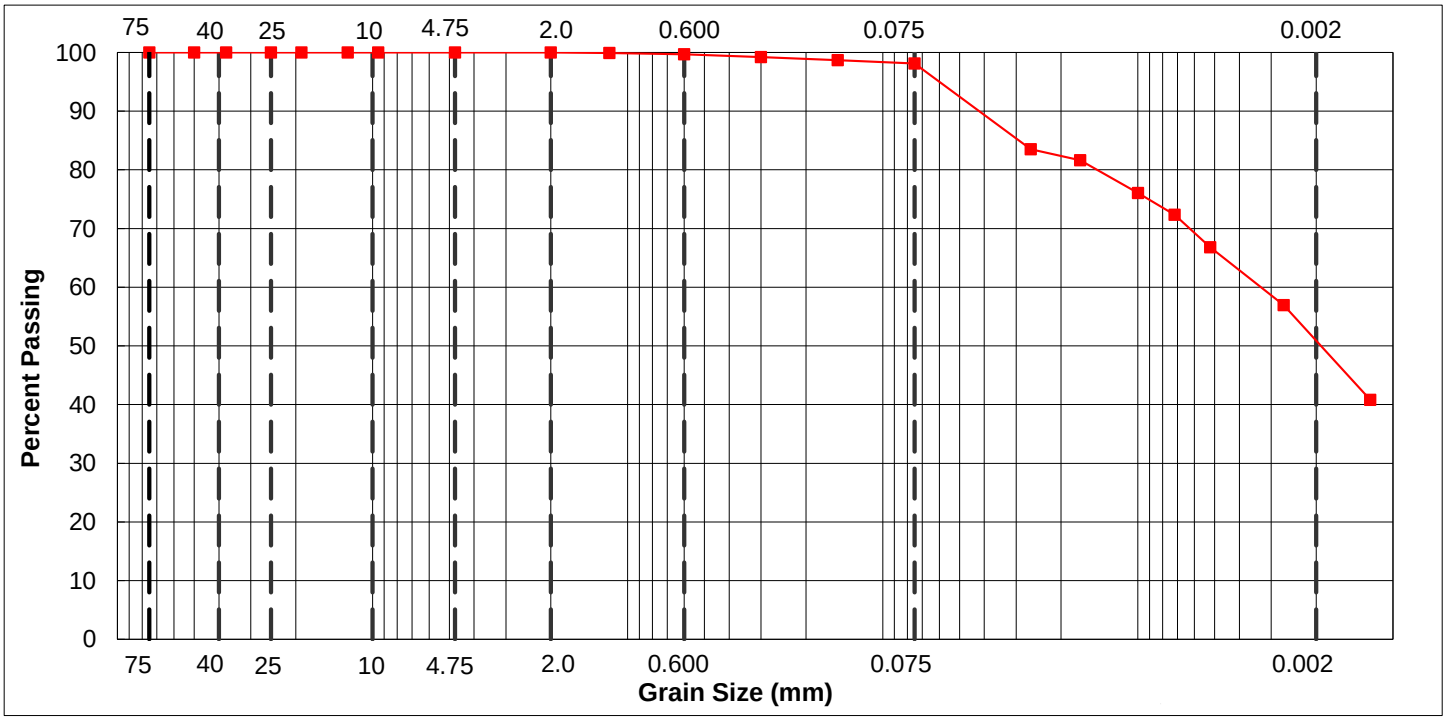
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	563AU3
Project No.:	1560-193-00	**Source:**	22BH563
Owner:	EID	**Sample Depth:**	4.0 m
File No.:	GSA - 563AU3	**Test Date:**	5-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.2
50.0	100.0	0.150	98.7
37.5	100.0	0.075	98.1
25.0	100.0	0.0263	83.5
19.0	100.0	0.0168	81.6
12.5	100.0	0.0100	76.1
9.5	100.0	0.0072	72.4
4.75	100.0	0.0052	66.8
2.00	100.0	0.0027	57.0
1.180	99.9	0.0012	40.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	1.6	425 µm to 75 µm
Silt	47.2	75 µm to 2 µm
Clay	50.9	<2 µm



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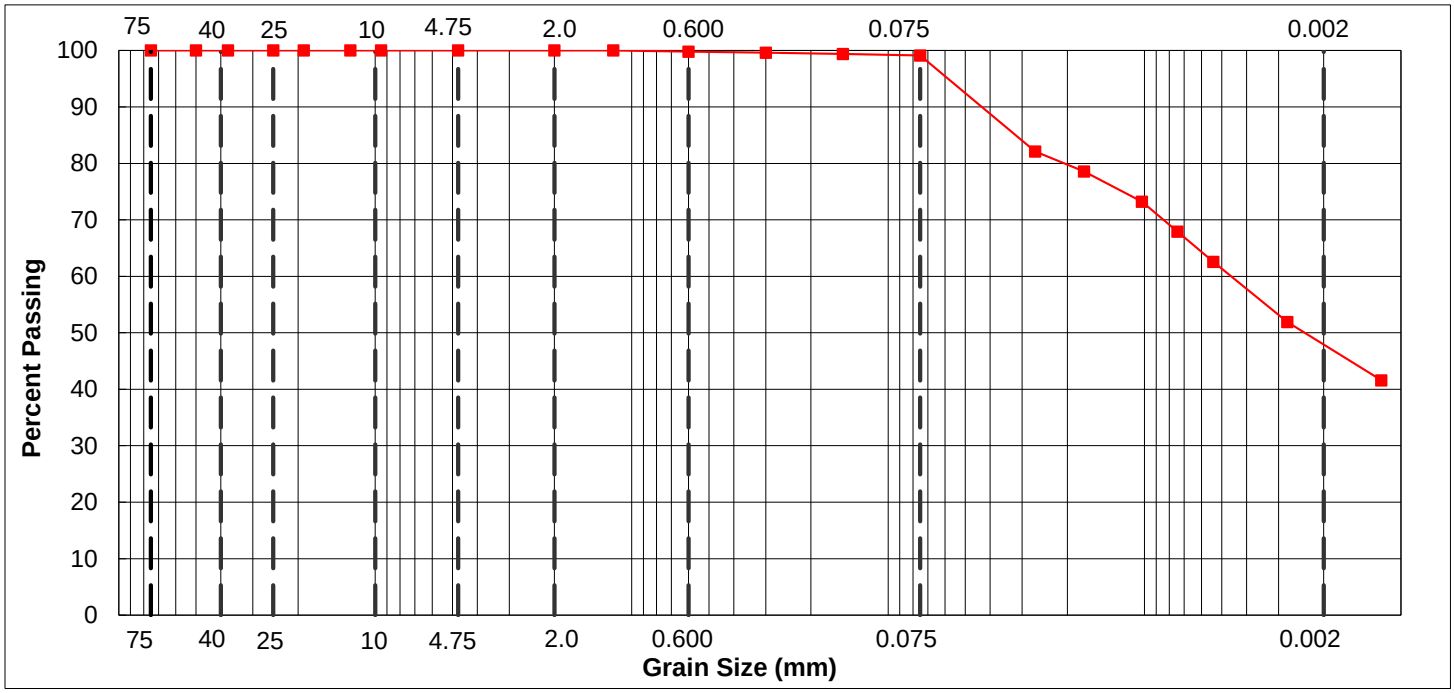
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	564AU2
Project No.:	1560-193-00	**Source:**	22BH564
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 564AU2	**Test Date:**	12-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.6
50.0	100.0	0.150	99.4
37.5	100.0	0.075	99.1
25.0	100.0	0.0267	82.1
19.0	100.0	0.0172	78.6
12.5	100.0	0.0102	73.2
9.5	100.0	0.0074	67.9
4.75	100.0	0.0054	62.6
2.00	100.0	0.0028	51.9
1.180	100.0	0.0012	41.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	0.7	425 µm to 75 µm
Silt	51.2	75 µm to 2 µm
Clay	47.9	<2 µm



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Lethbridge, Alberta T1H 5J3
Tel: (403)892-6036

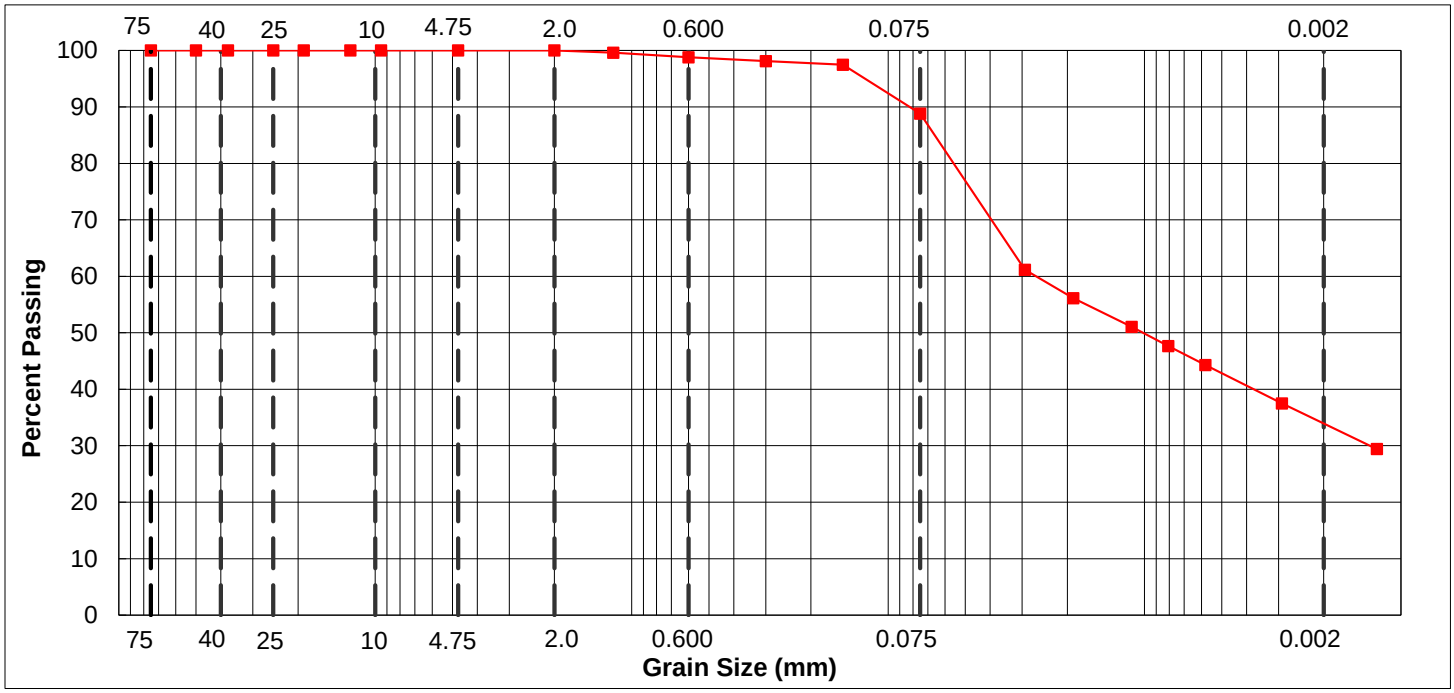
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	564AU4
Project No.:	1560-193-00	**Source:**	22BH564
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 564AU4	**Test Date:**	12-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.8
75.0	100.0	0.300	98.1
50.0	100.0	0.150	97.5
37.5	100.0	0.075	88.8
25.0	100.0	0.0292	61.2
19.0	100.0	0.0190	56.1
12.5	100.0	0.0112	51.0
9.5	100.0	0.0081	47.7
4.75	100.0	0.0058	44.3
2.00	100.0	0.0029	37.5
1.180	99.6	0.0012	29.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.2	2.00 mm to 425 µm
Fine Sand	10.0	425 µm to 75 µm
Silt	54.8	75 µm to 2 µm
Clay	34.0	<2 µm



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Reviewed By: Kasz Leavitt, P.Tech. (Eng.)

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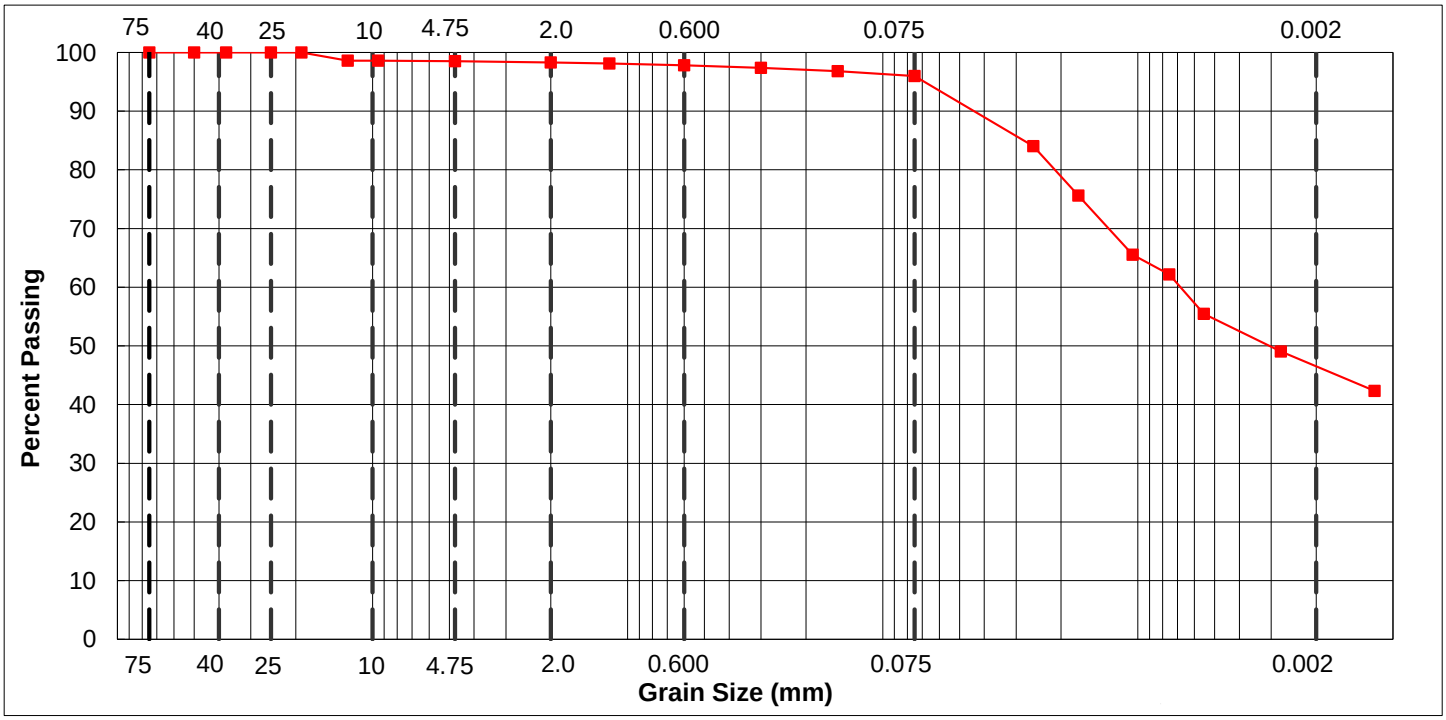
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	567AU1
Project No.:	1560-193-00	**Source:**	22BH567
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 567AU1	**Test Date:**	9-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.8
75.0	100.0	0.300	97.4
50.0	100.0	0.150	96.8
37.5	100.0	0.075	96.0
25.0	100.0	0.0257	84.0
19.0	100.0	0.0171	75.6
12.5	98.6	0.0105	65.5
9.5	98.6	0.0075	62.2
4.75	98.5	0.0055	55.4
2.00	98.3	0.0027	49.1
1.180	98.1	0.0012	42.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	1.5	20 mm to 4.75 mm
Coarse Sand	0.2	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	1.8	425 µm to 75 µm
Silt	49.5	75 µm to 2 µm
Clay	46.5	<2 µm



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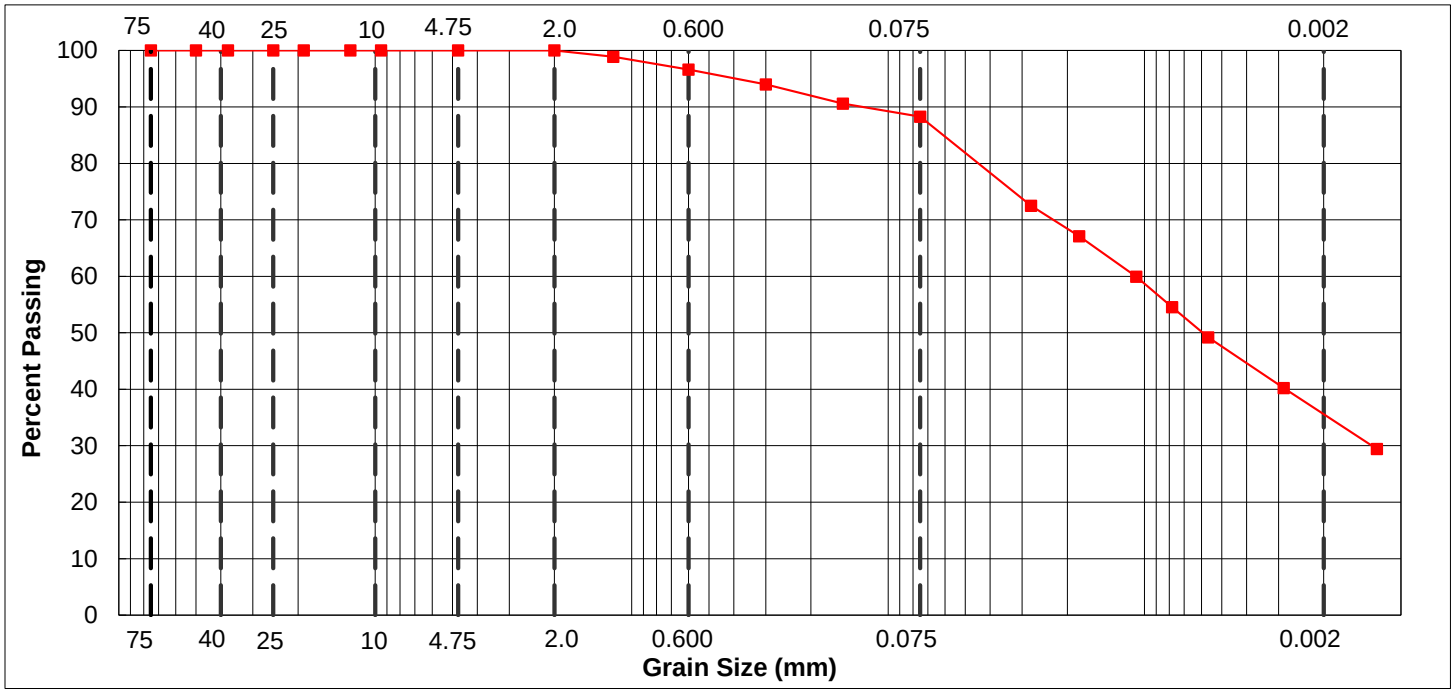
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	567AU3
Project No.:	1560-193-00	**Source:**	22BH567
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 567AU3	**Test Date:**	3-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	96.6
75.0	100.0	0.300	94.0
50.0	100.0	0.150	90.6
37.5	100.0	0.075	88.3
25.0	100.0	0.0277	72.5
19.0	100.0	0.0180	67.1
12.5	100.0	0.0108	59.9
9.5	100.0	0.0078	54.6
4.75	100.0	0.0056	49.2
2.00	100.0	0.0029	40.2
1.180	98.9	0.0012	29.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	3.4	2.00 mm to 425 µm
Fine Sand	8.3	425 µm to 75 µm
Silt	52.7	75 µm to 2 µm
Clay	35.6	<2 µm



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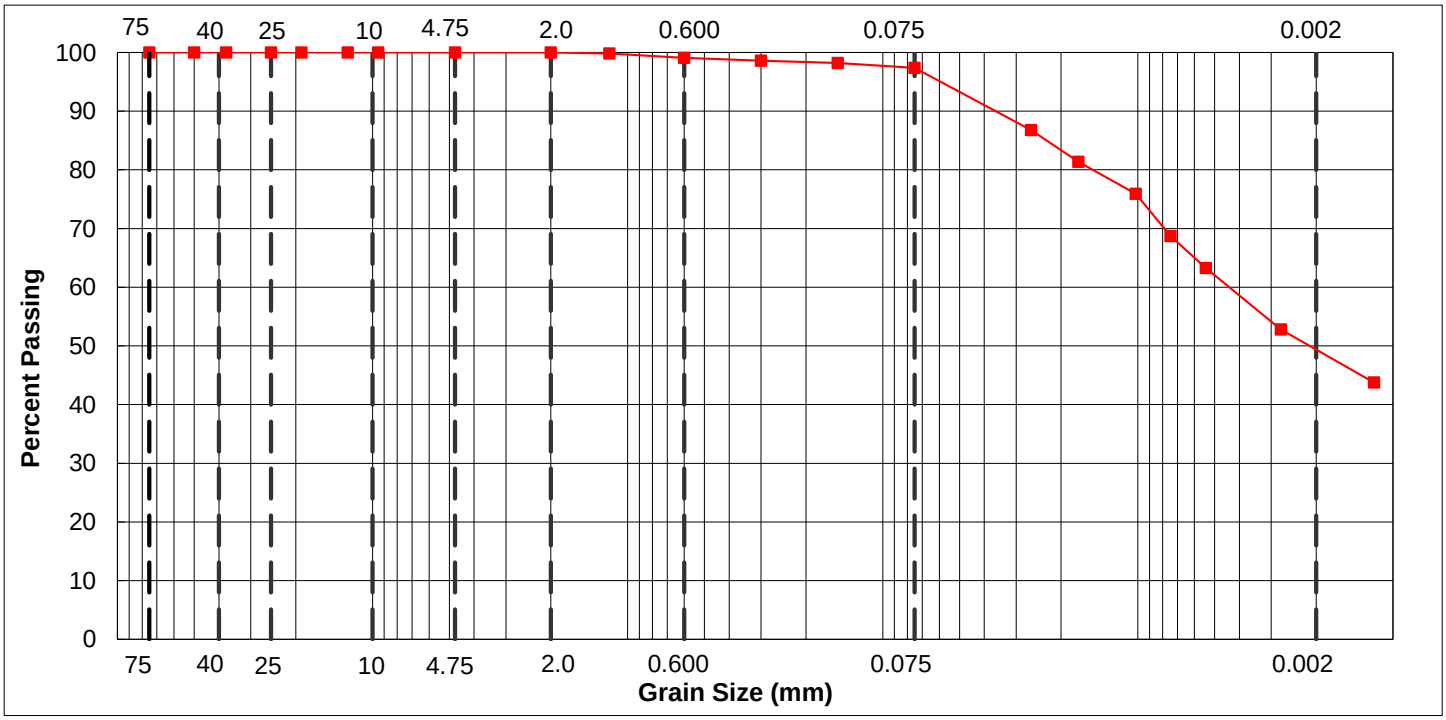
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	568AU2
Project No.:	1560-193-00	**Source:**	22BH568
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 568AU2	**Test Date:**	9-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.1
75.0	100.0	0.300	98.6
50.0	100.0	0.150	98.2
37.5	100.0	0.075	97.4
25.0	100.0	0.0262	86.8
19.0	100.0	0.0171	81.4
12.5	100.0	0.0102	75.9
9.5	100.0	0.0074	68.7
4.75	100.0	0.0054	63.3
2.00	100.0	0.0027	52.8
1.180	99.8	0.0012	43.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.9	2.00 mm to 425 µm
Fine Sand	1.7	425 µm to 75 µm
Silt	48.0	75 µm to 2 µm
Clay	49.4	<2 µm



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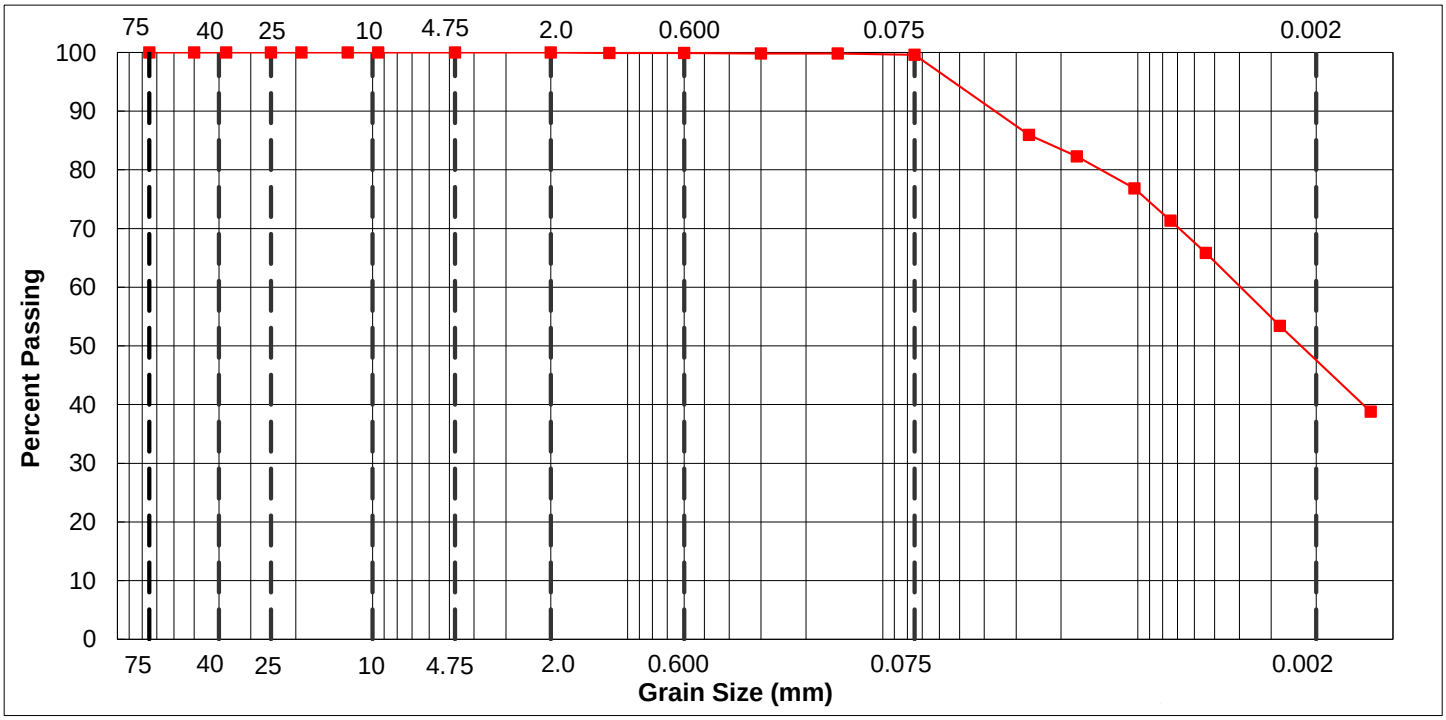
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	568AU4
Project No.:	1560-193-00	**Source:**	22BH568
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 568AU4	**Test Date:**	9-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.6
25.0	100.0	0.0267	86.0
19.0	100.0	0.0173	82.3
12.5	100.0	0.0103	76.8
9.5	100.0	0.0074	71.3
4.75	100.0	0.0054	65.8
2.00	100.0	0.0028	53.4
1.180	99.9	0.0012	38.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.3	425 µm to 75 µm
Silt	52.0	75 µm to 2 µm
Clay	47.6	<2 µm



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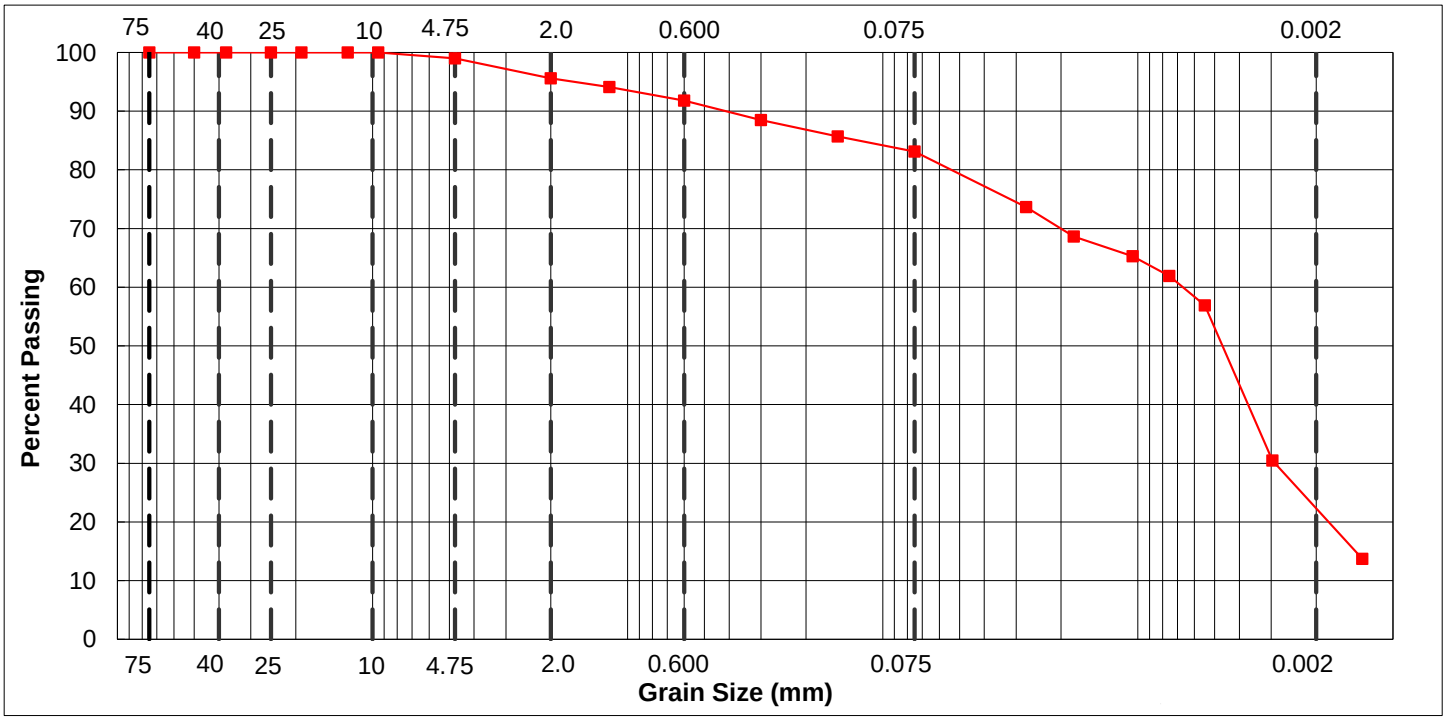
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	569AU1
Project No.:	1560-193-00	**Source:**	22BH569
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 569AU1	**Test Date:**	9-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	91.8
75.0	100.0	0.300	88.5
50.0	100.0	0.150	85.7
37.5	100.0	0.075	83.1
25.0	100.0	0.0274	73.6
19.0	100.0	0.0178	68.6
12.5	100.0	0.0105	65.3
9.5	100.0	0.0075	61.9
4.75	99.0	0.0055	56.9
2.00	95.6	0.0030	30.5
1.180	94.1	0.0013	13.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	1.0	20 mm to 4.75 mm
Coarse Sand	3.4	4.75 mm to 2.00 mm
Medium Sand	3.8	2.00 mm to 425 µm
Fine Sand	8.7	425 µm to 75 µm
Silt	60.8	75 µm to 2 µm
Clay	22.3	<2 µm



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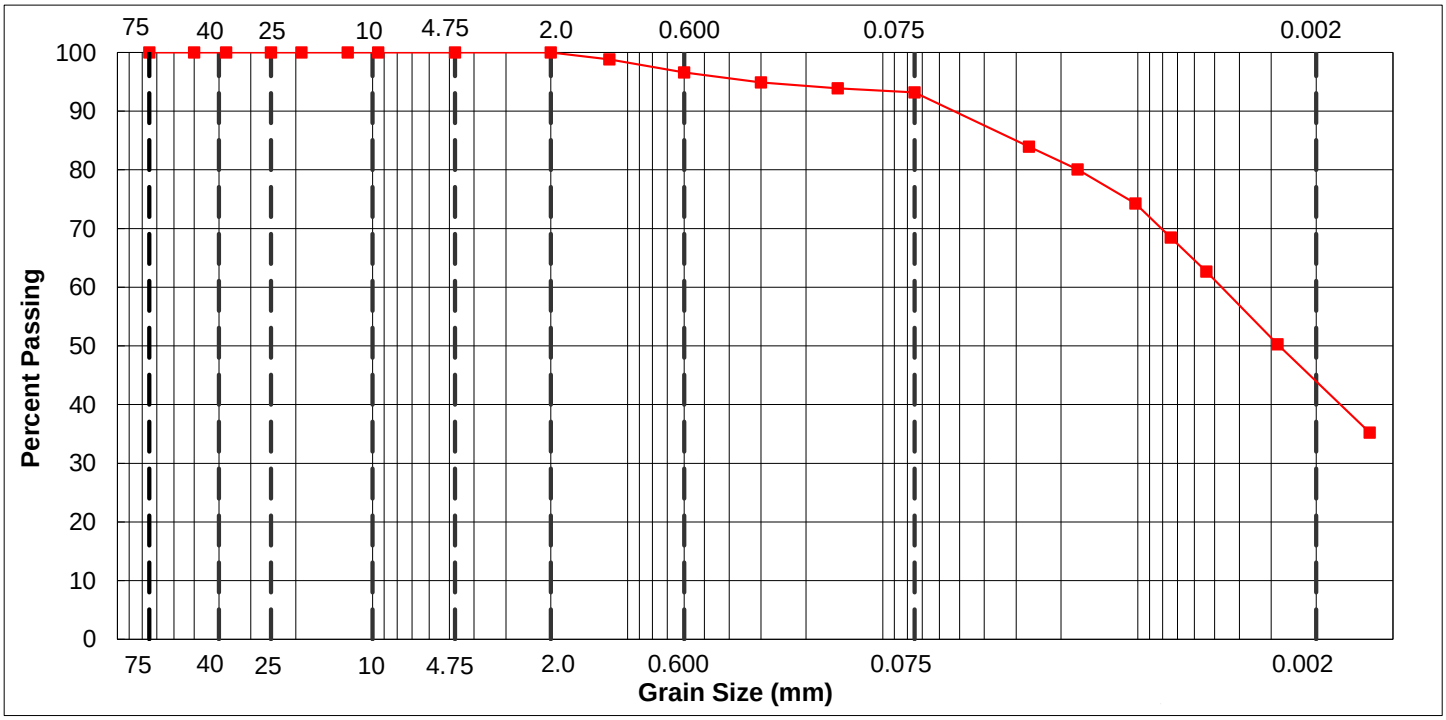
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	569AU3
Project No.:	1560-193-00	**Source:**	22BH569
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 569AU3	**Test Date:**	6-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	96.6
75.0	100.0	0.300	94.9
50.0	100.0	0.150	93.9
37.5	100.0	0.075	93.2
25.0	100.0	0.0267	83.9
19.0	100.0	0.0172	80.1
12.5	100.0	0.0102	74.3
9.5	100.0	0.0074	68.5
4.75	100.0	0.0054	62.7
2.00	100.0	0.0028	50.3
1.180	98.8	0.0012	35.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	3.4	2.00 mm to 425 µm
Fine Sand	3.4	425 µm to 75 µm
Silt	49.2	75 µm to 2 µm
Clay	44.0	<2 µm



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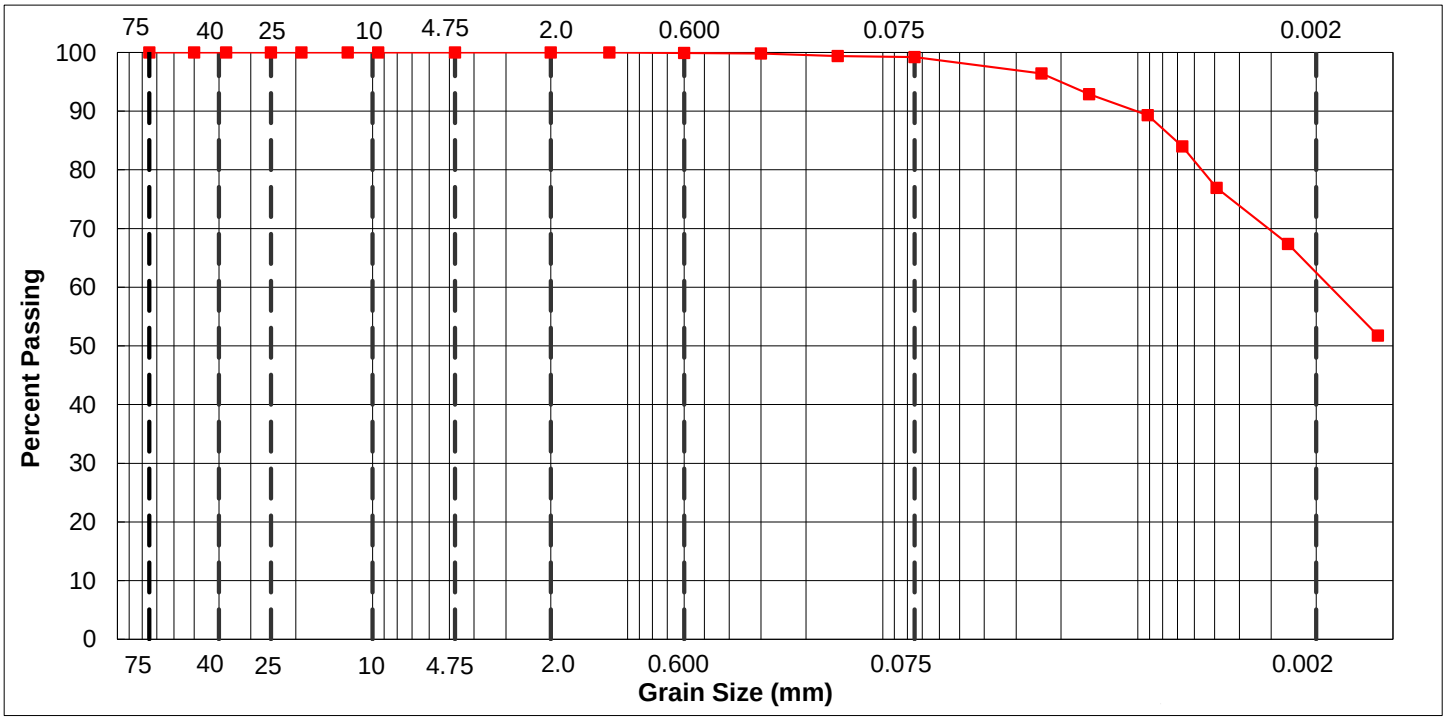
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	570AU2
Project No.:	1560-193-00	**Source:**	22BH570
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 570AU2	**Test Date:**	9-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.4
37.5	100.0	0.075	99.2
25.0	100.0	0.0238	96.4
19.0	100.0	0.0155	92.9
12.5	100.0	0.0092	89.3
9.5	100.0	0.0067	84.0
4.75	100.0	0.0049	76.9
2.00	100.0	0.0026	67.3
1.180	100.0	0.0011	51.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.7	425 µm to 75 µm
Silt	36.7	75 µm to 2 µm
Clay	62.5	<2 µm



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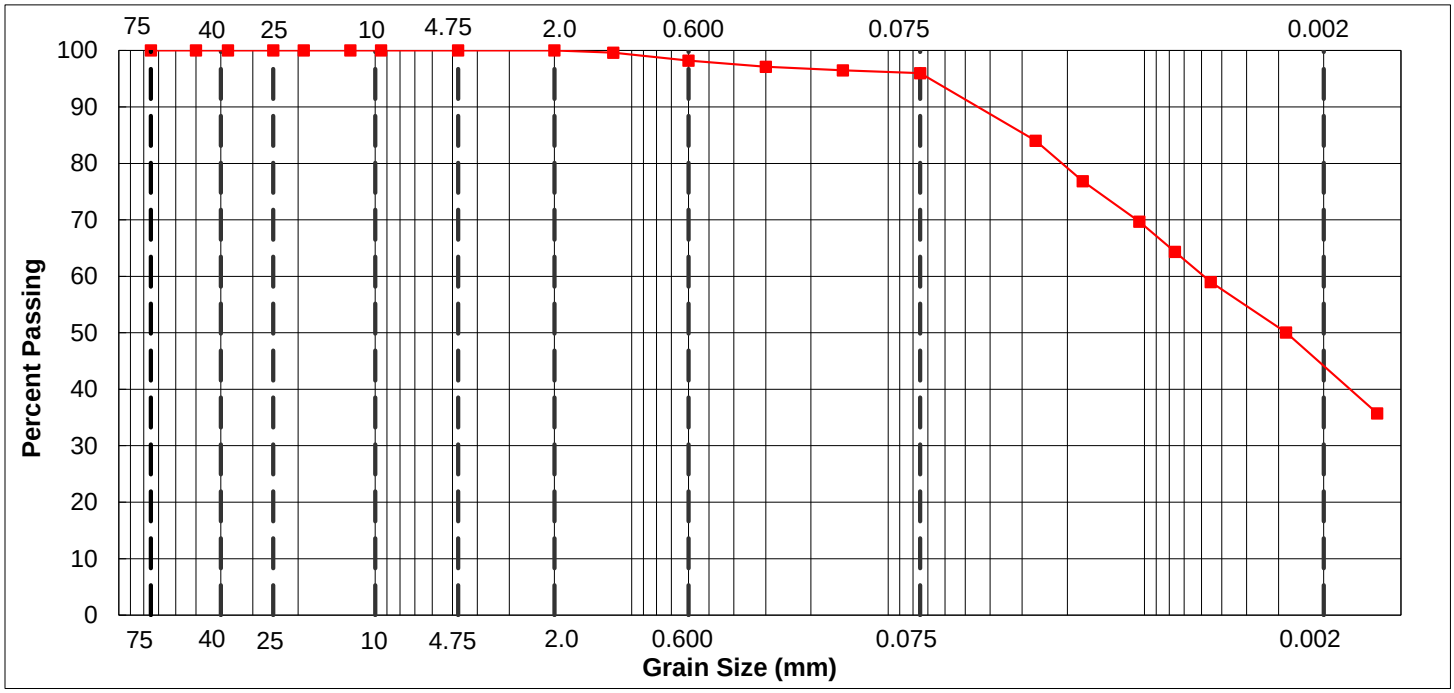
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	570AU4
Project No.:	1560-193-00	**Source:**	22BH570
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 570AU4	**Test Date:**	24-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.2
75.0	100.0	0.300	97.1
50.0	100.0	0.150	96.5
37.5	100.0	0.075	96.0
25.0	100.0	0.0266	84.0
19.0	100.0	0.0174	76.9
12.5	100.0	0.0105	69.7
9.5	100.0	0.0076	64.3
4.75	100.0	0.0055	59.0
2.00	100.0	0.0028	50.0
1.180	99.6	0.0012	35.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.8	2.00 mm to 425 µm
Fine Sand	2.2	425 µm to 75 µm
Silt	51.9	75 µm to 2 µm
Clay	44.1	<2 µm



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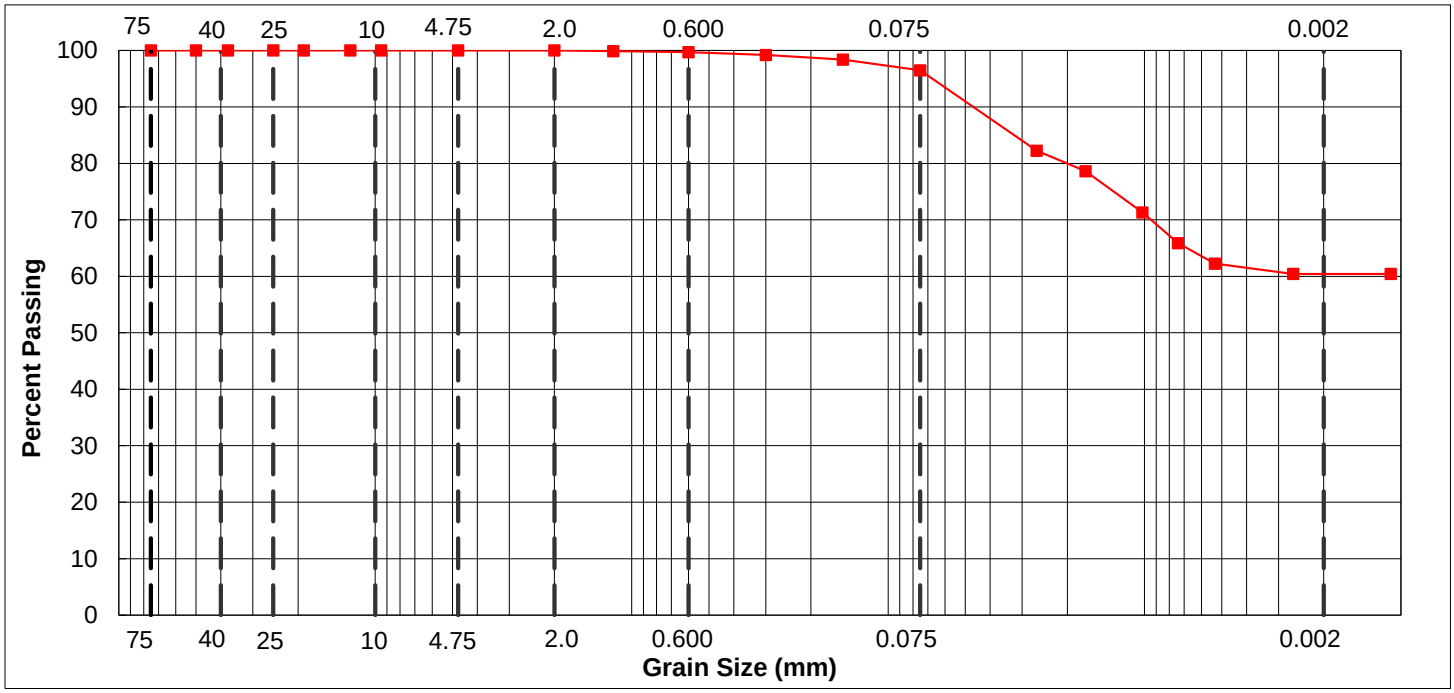
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	573AU1
Project No.:	1560-193-00	**Source:**	22BH573
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 573AU1	**Test Date:**	14-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.2
50.0	100.0	0.150	98.4
37.5	100.0	0.075	96.5
25.0	100.0	0.0263	82.3
19.0	100.0	0.0170	78.6
12.5	100.0	0.0102	71.3
9.5	100.0	0.0074	65.9
4.75	100.0	0.0053	62.2
2.00	100.0	0.0026	60.4
1.180	99.9	0.0011	60.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	3.2	425 µm to 75 µm
Silt	36.1	75 µm to 2 µm
Clay	60.4	<2 µm



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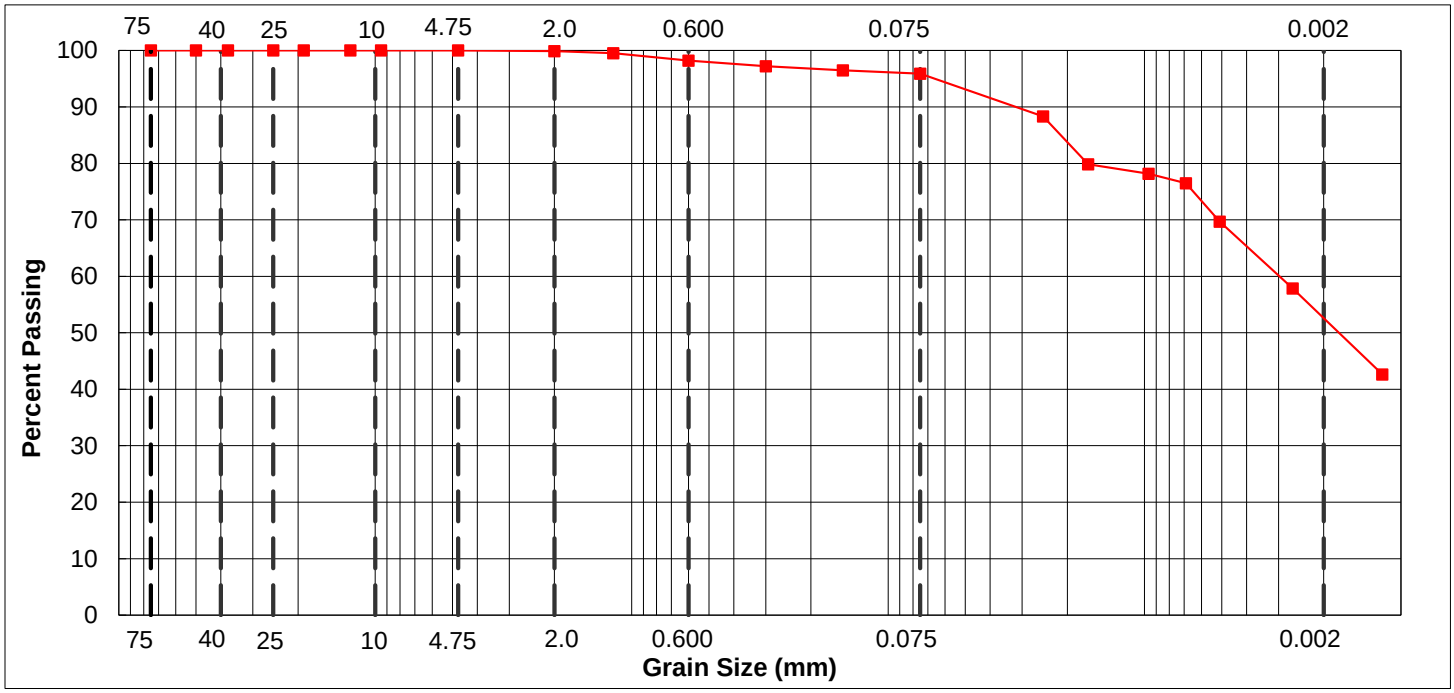
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	573AU3
Project No.:	1560-193-00	**Source:**	22BH573
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 573AU3	**Test Date:**	16-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.2
75.0	100.0	0.300	97.2
50.0	100.0	0.150	96.5
37.5	100.0	0.075	95.9
25.0	100.0	0.0248	88.3
19.0	100.0	0.0166	79.9
12.5	100.0	0.0096	78.2
9.5	100.0	0.0069	76.5
4.75	100.0	0.0051	69.7
2.00	99.9	0.0026	57.9
1.180	99.5	0.0012	42.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.1	4.75 mm to 2.00 mm
Medium Sand	1.7	2.00 mm to 425 µm
Fine Sand	2.3	425 µm to 75 µm
Silt	43.3	75 µm to 2 µm
Clay	52.6	<2 µm



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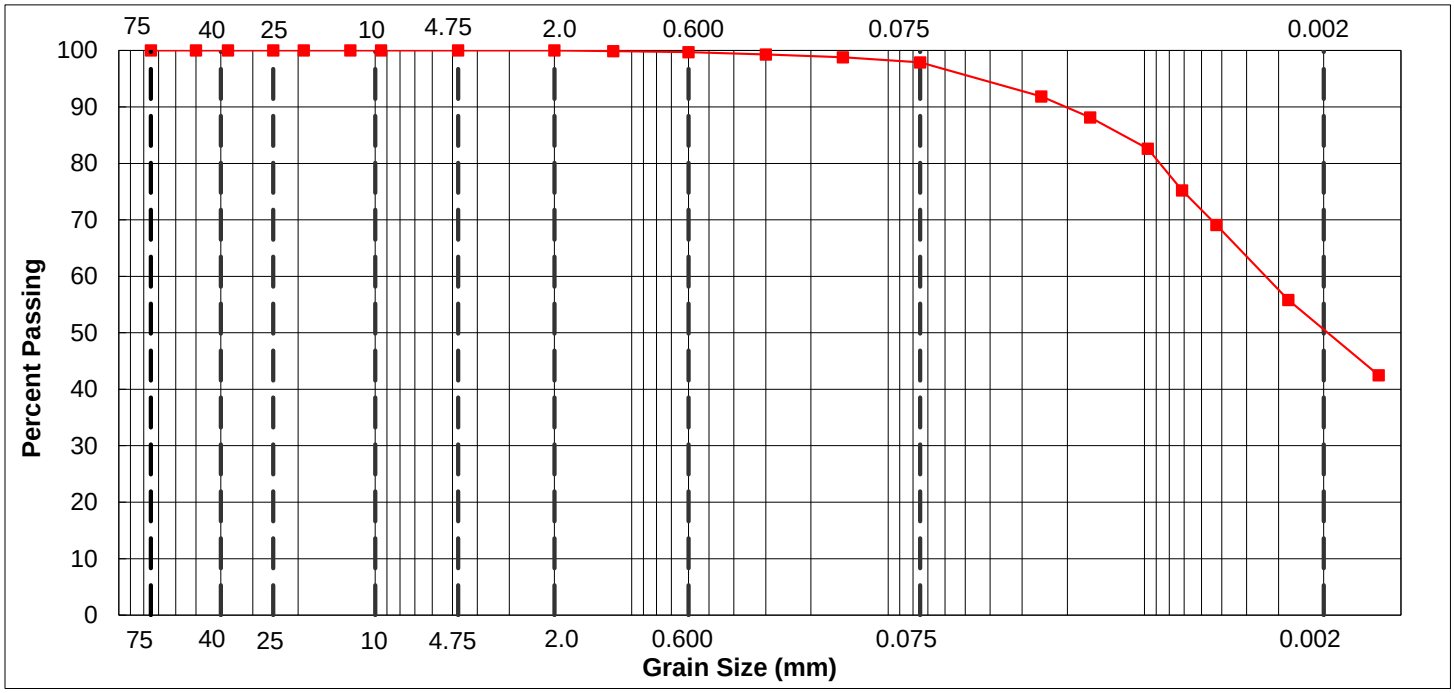
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	574AU2
Project No.:	1560-193-00	**Source:**	22BH574
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 574AU2	**Test Date:**	21-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.3
50.0	100.0	0.150	98.8
37.5	100.0	0.075	97.9
25.0	100.0	0.0253	91.8
19.0	100.0	0.0163	88.2
12.5	100.0	0.0097	82.6
9.5	100.0	0.0071	75.2
4.75	100.0	0.0052	69.1
2.00	100.0	0.0027	55.8
1.180	99.9	0.0012	42.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	1.8	425 µm to 75 µm
Silt	47.3	75 µm to 2 µm
Clay	50.6	<2 µm



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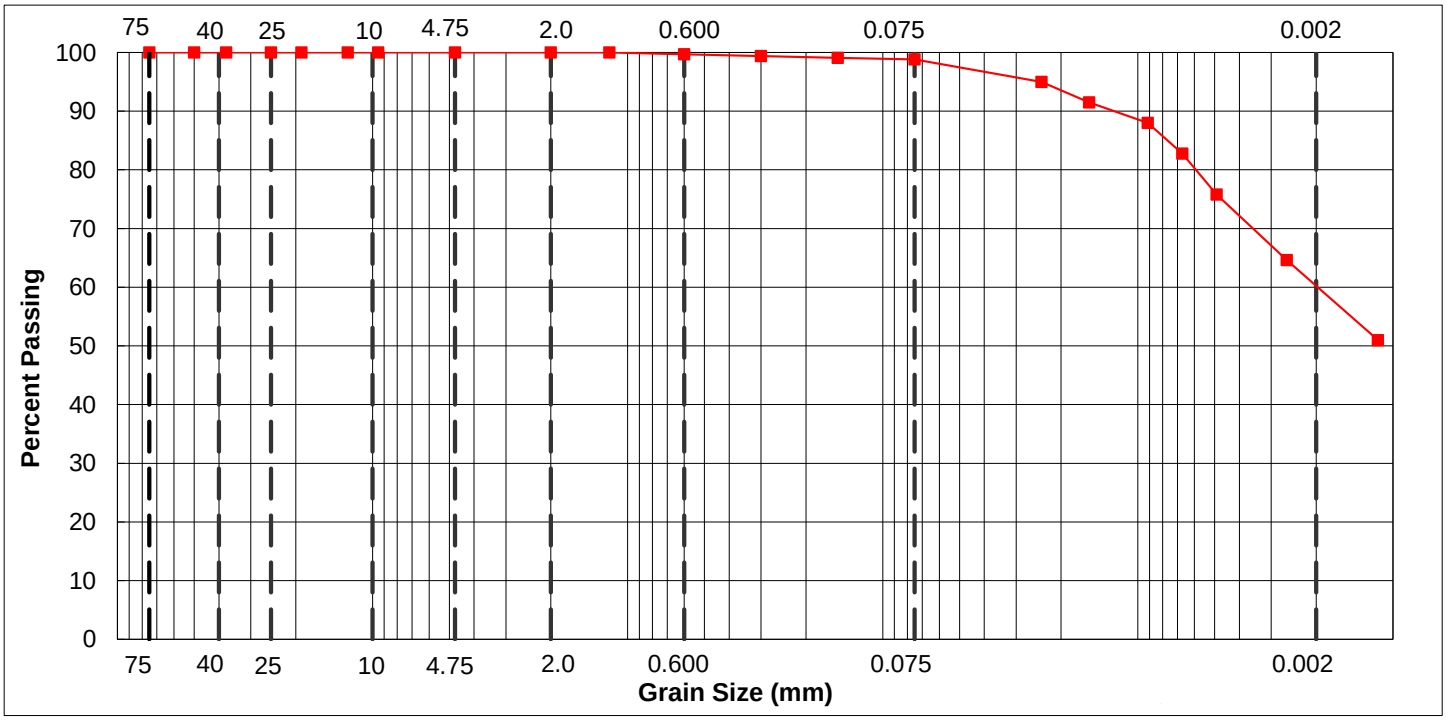
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	574AU4
Project No.:	1560-193-00	**Source:**	22BH574
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 574AU4	**Test Date:**	9-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.4
50.0	100.0	0.150	99.1
37.5	100.0	0.075	98.8
25.0	100.0	0.0238	95.0
19.0	100.0	0.0155	91.5
12.5	100.0	0.0092	88.0
9.5	100.0	0.0067	82.8
4.75	100.0	0.0049	75.8
2.00	100.0	0.0026	64.6
1.180	100.0	0.0011	51.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	0.9	425 µm to 75 µm
Silt	38.6	75 µm to 2 µm
Clay	60.2	<2 µm



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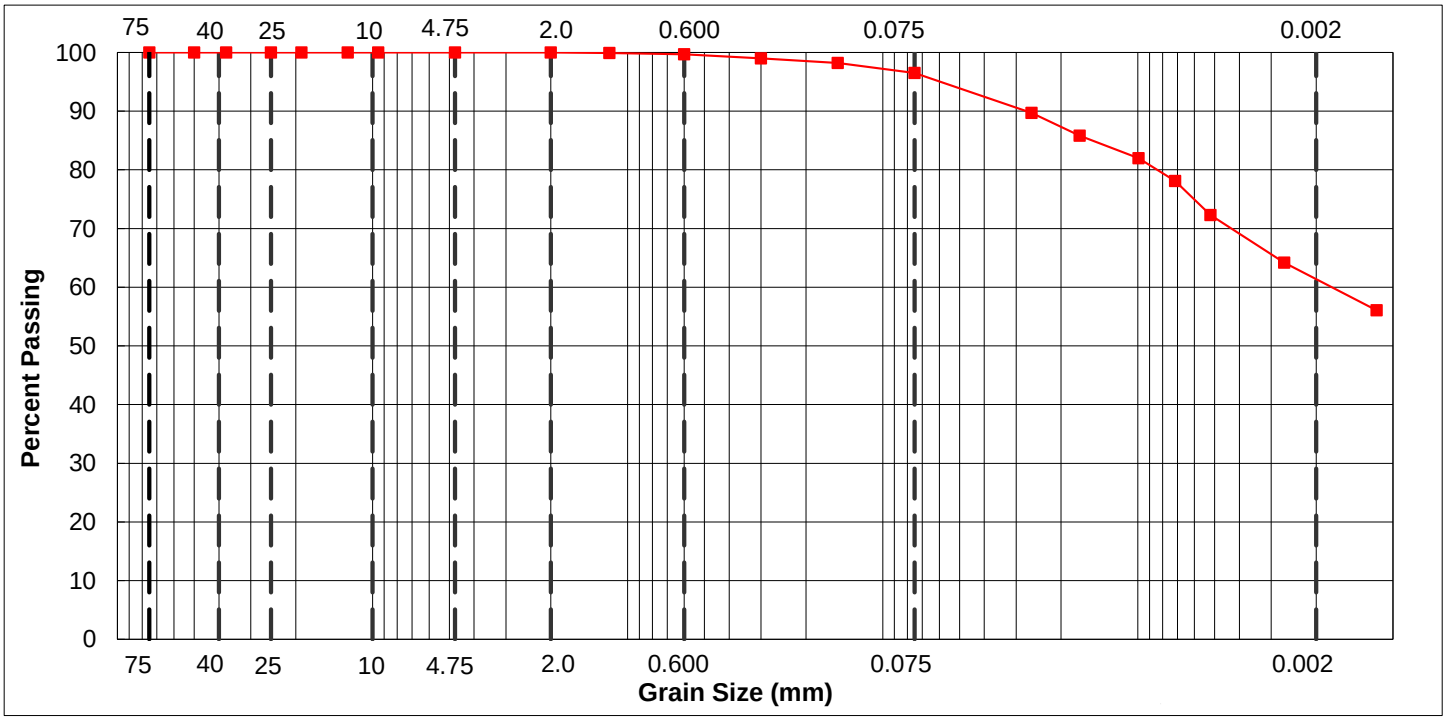
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	575AU1
Project No.:	1560-193-00	**Source:**	22BH575
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 575AU1	**Test Date:**	10-Jun-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.0
50.0	100.0	0.150	98.2
37.5	100.0	0.075	96.5
25.0	100.0	0.0261	89.7
19.0	100.0	0.0169	85.8
12.5	100.0	0.0099	82.0
9.5	100.0	0.0071	78.1
4.75	100.0	0.0052	72.3
2.00	100.0	0.0027	64.2
1.180	99.9	0.0012	56.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	3.2	425 µm to 75 µm
Silt	35.1	75 µm to 2 µm
Clay	61.4	<2 µm



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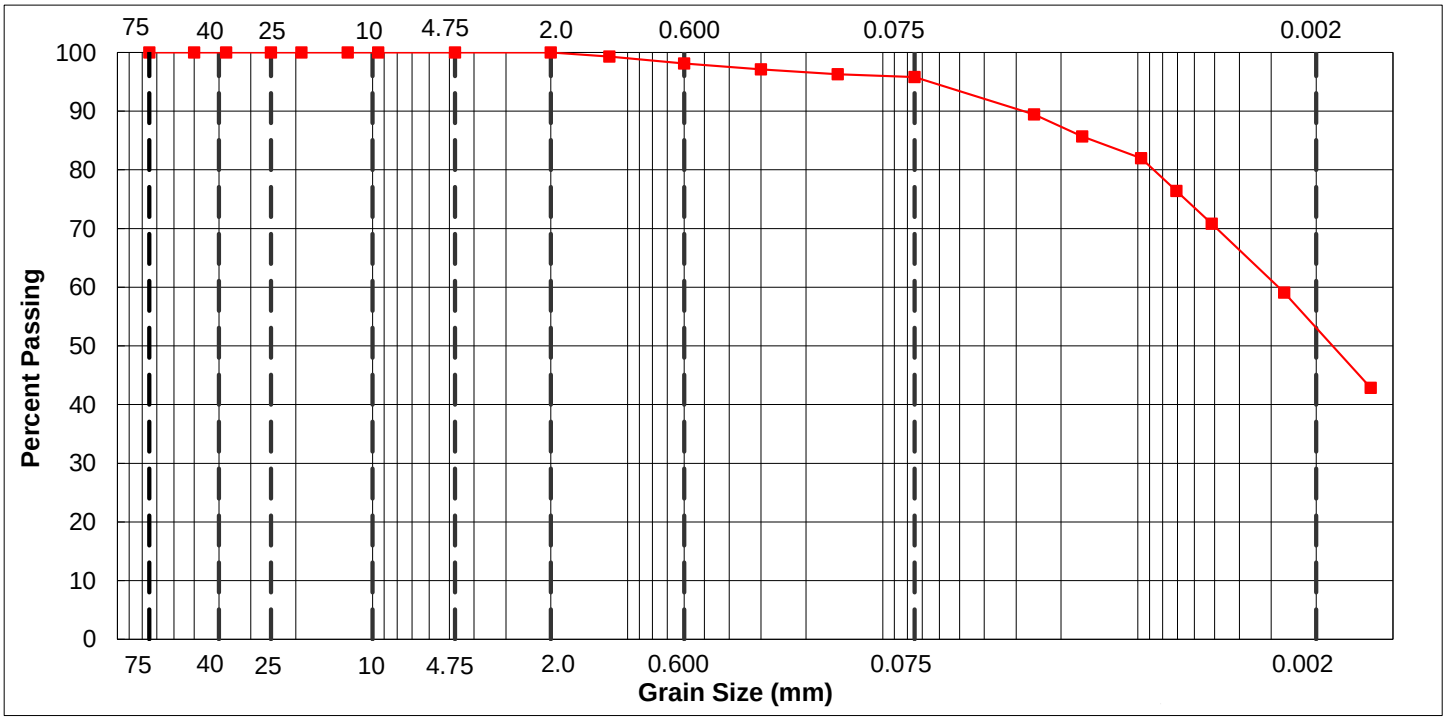
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	575AU3
Project No.:	1560-193-00	**Source:**	22BH575
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 575AU3	**Test Date:**	7-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.1
75.0	100.0	0.300	97.1
50.0	100.0	0.150	96.3
37.5	100.0	0.075	95.8
25.0	100.0	0.0255	89.4
19.0	100.0	0.0165	85.7
12.5	100.0	0.0097	82.0
9.5	100.0	0.0071	76.4
4.75	100.0	0.0051	70.8
2.00	100.0	0.0027	59.1
1.180	99.3	0.0012	42.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.9	2.00 mm to 425 µm
Fine Sand	2.3	425 µm to 75 µm
Silt	42.7	75 µm to 2 µm
Clay	53.1	<2 µm



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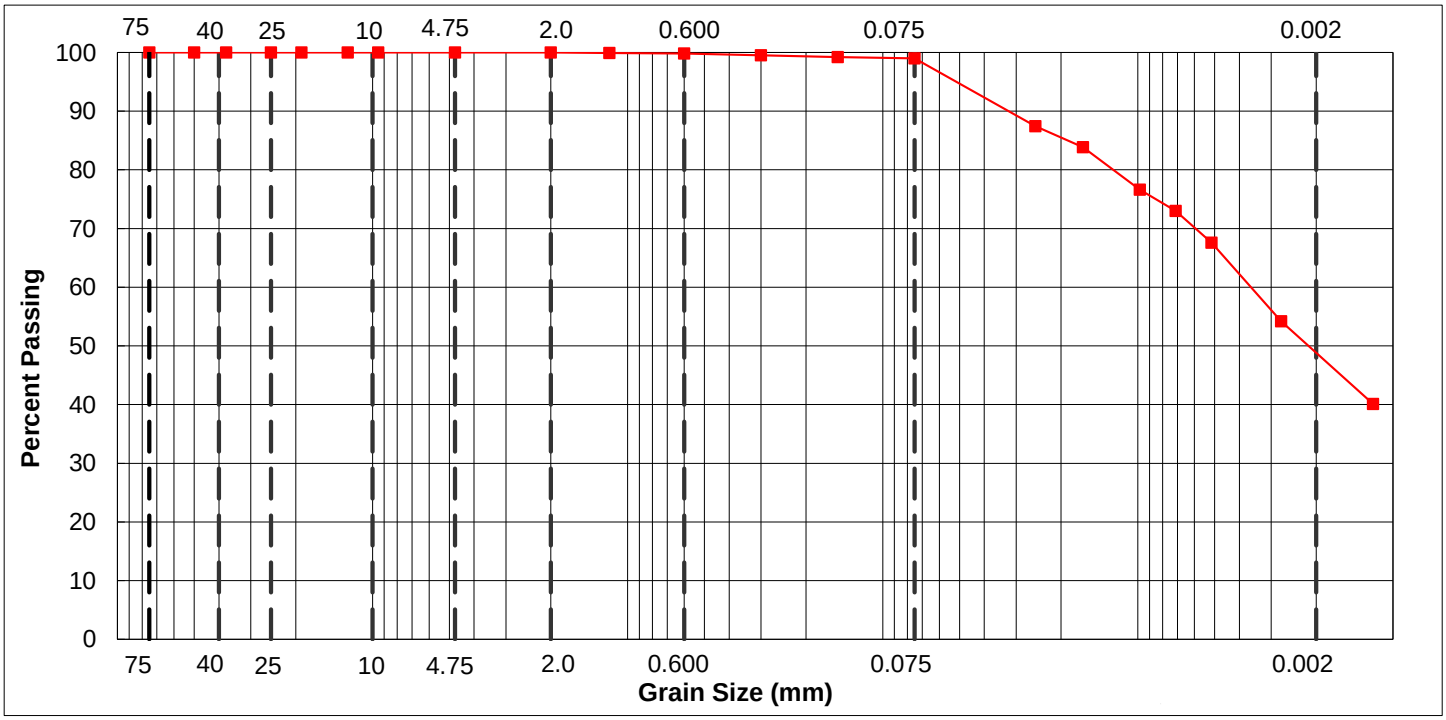
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	576AU2
Project No.:	1560-193-00	**Source:**	22BH576
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 576AU2	**Test Date:**	6-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.2
37.5	100.0	0.075	99.0
25.0	100.0	0.0252	87.5
19.0	100.0	0.0164	83.8
12.5	100.0	0.0098	76.6
9.5	100.0	0.0071	73.0
4.75	100.0	0.0051	67.6
2.00	100.0	0.0027	54.2
1.180	99.9	0.0012	40.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	0.8	425 µm to 75 µm
Silt	50.2	75 µm to 2 µm
Clay	48.8	<2 µm



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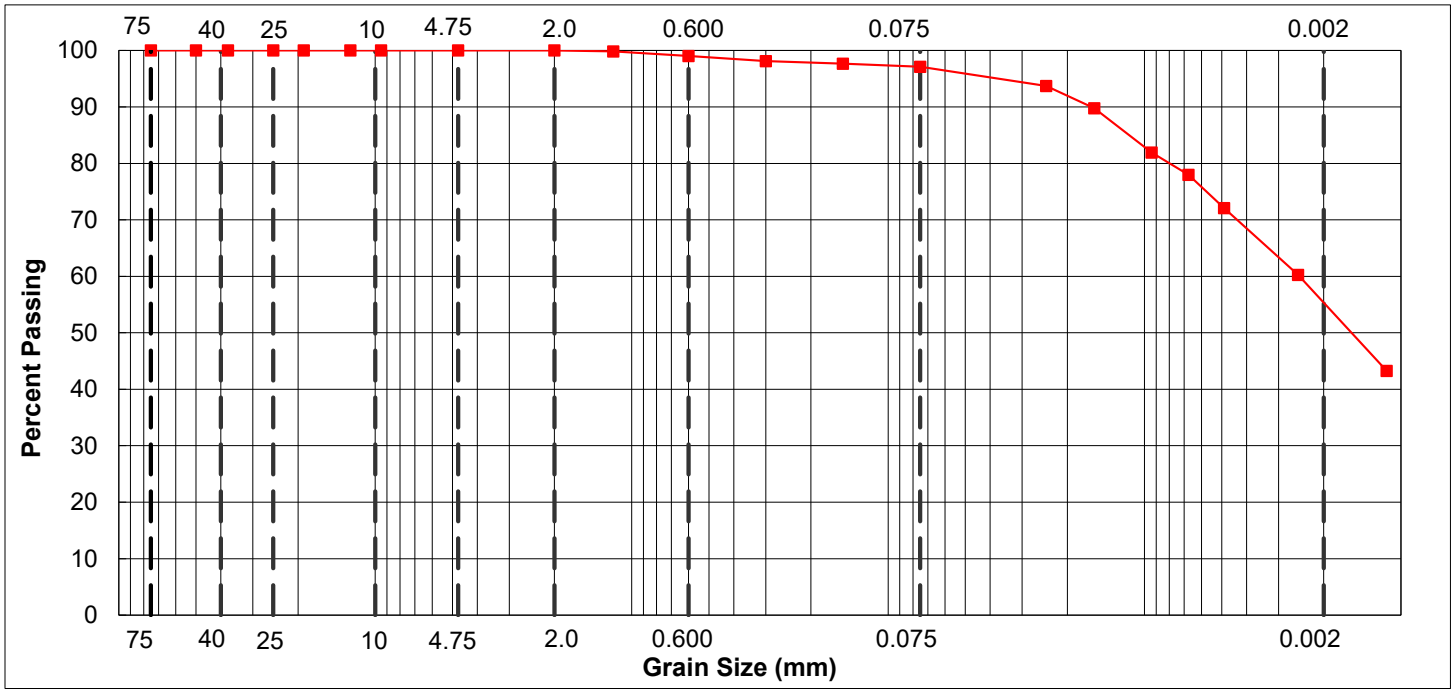
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	576AU3
Project No.:	1560-193-00	**Source:**	22BH576
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 576AU3	**Test Date:**	1-Aug-19

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.0
75.0	100.0	0.300	98.1
50.0	100.0	0.150	97.6
37.5	100.0	0.075	97.1
25.0	100.0	0.0242	93.7
19.0	100.0	0.0157	89.8
12.5	100.0	0.0094	81.9
9.5	100.0	0.0067	78.0
4.75	100.0	0.0049	72.1
2.00	100.0	0.0025	60.3
1.180	99.8	0.0011	43.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.0	2.00 mm to 425 µm
Fine Sand	1.9	425 µm to 75 µm
Silt	41.8	75 µm to 2 µm
Clay	55.3	<2 µm



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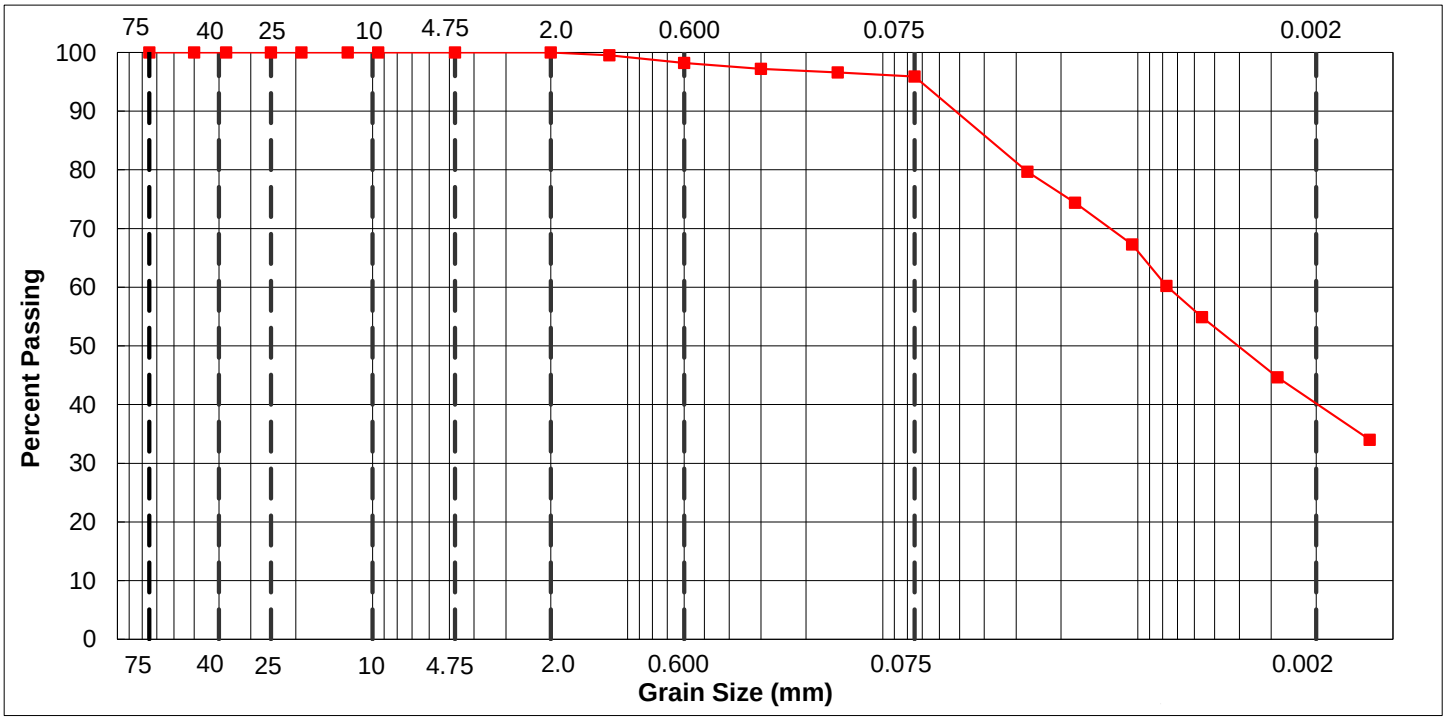
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	576AU4
Project No.:	1560-193-00	**Source:**	22BH576
Owner:	EID	**Sample Depth:**	5.5m
File No.:	GSA - 576AU4	**Test Date:**	9-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.2
75.0	100.0	0.300	97.2
50.0	100.0	0.150	96.6
37.5	100.0	0.075	95.9
25.0	100.0	0.0271	79.7
19.0	100.0	0.0176	74.4
12.5	100.0	0.0105	67.3
9.5	100.0	0.0077	60.2
4.75	100.0	0.0056	54.9
2.00	100.0	0.0028	44.6
1.180	99.5	0.0012	34.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.8	2.00 mm to 425 µm
Fine Sand	2.3	425 µm to 75 µm
Silt	55.7	75 µm to 2 µm
Clay	40.2	<2 µm



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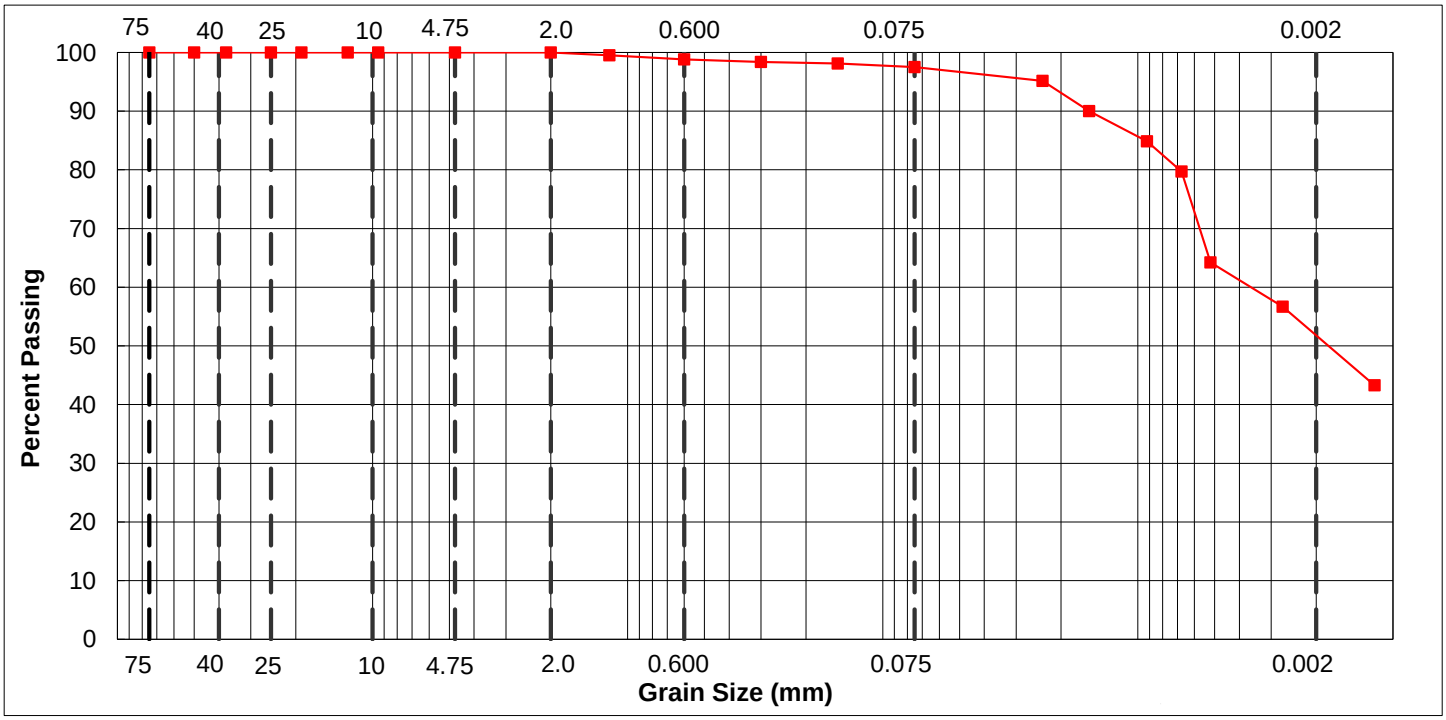
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	580AU2
Project No.:	1560-193-00	**Source:**	22BH580
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 580AU2	**Test Date:**	9-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.8
75.0	100.0	0.300	98.4
50.0	100.0	0.150	98.1
37.5	100.0	0.075	97.5
25.0	100.0	0.0237	95.2
19.0	100.0	0.0155	90.0
12.5	100.0	0.0092	84.8
9.5	100.0	0.0067	79.7
4.75	100.0	0.0052	64.2
2.00	100.0	0.0027	56.7
1.180	99.5	0.0012	43.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.2	2.00 mm to 425 µm
Fine Sand	1.3	425 µm to 75 µm
Silt	45.7	75 µm to 2 µm
Clay	51.8	<2 µm



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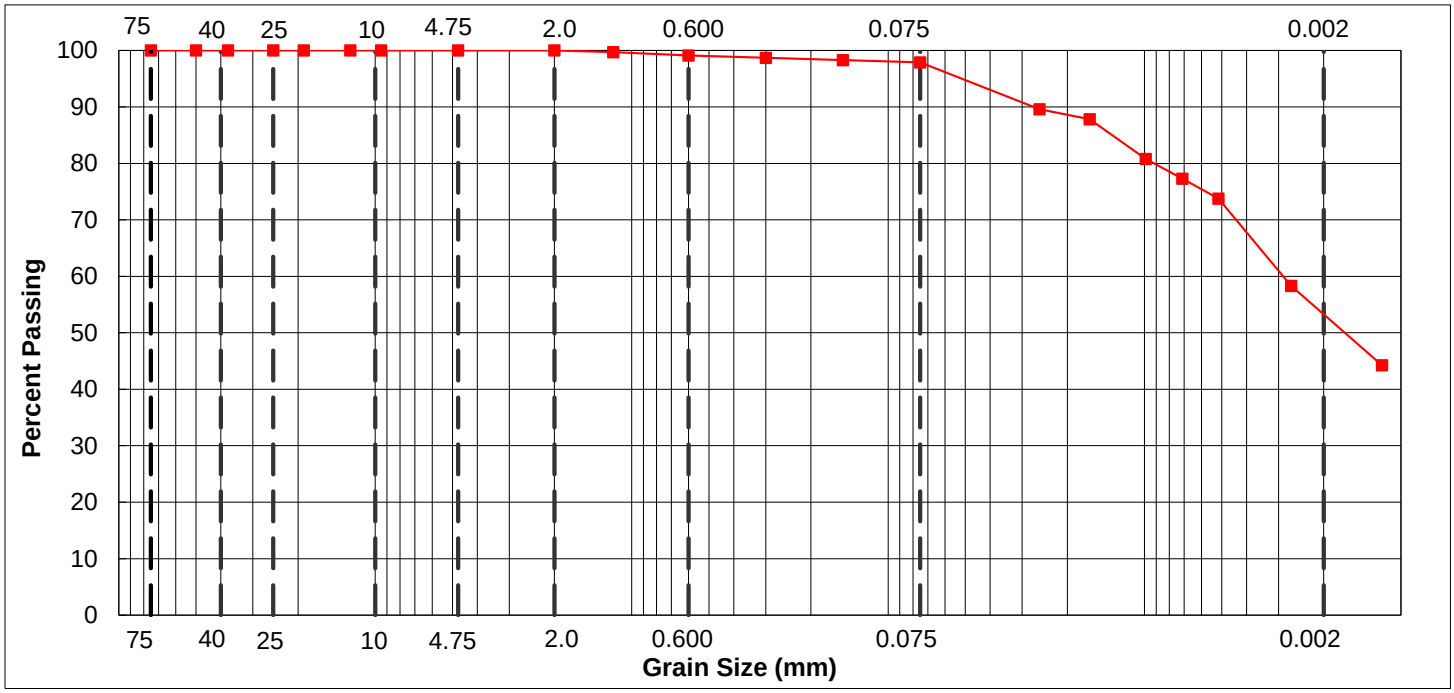
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	580AU4
Project No.:	1560-193-00	**Source:**	22BH580
Owner:	EID	**Sample Depth:**	5.0m
File No.:	GSA - 580AU4	**Test Date:**	9-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.1
75.0	100.0	0.300	98.7
50.0	100.0	0.150	98.3
37.5	100.0	0.075	97.9
25.0	100.0	0.0257	89.6
19.0	100.0	0.0164	87.8
12.5	100.0	0.0099	80.8
9.5	100.0	0.0071	77.3
4.75	100.0	0.0052	73.8
2.00	100.0	0.0027	58.3
1.180	99.7	0.0012	44.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.9	2.00 mm to 425 µm
Fine Sand	1.2	425 µm to 75 µm
Silt	44.6	75 µm to 2 µm
Clay	53.3	<2 µm



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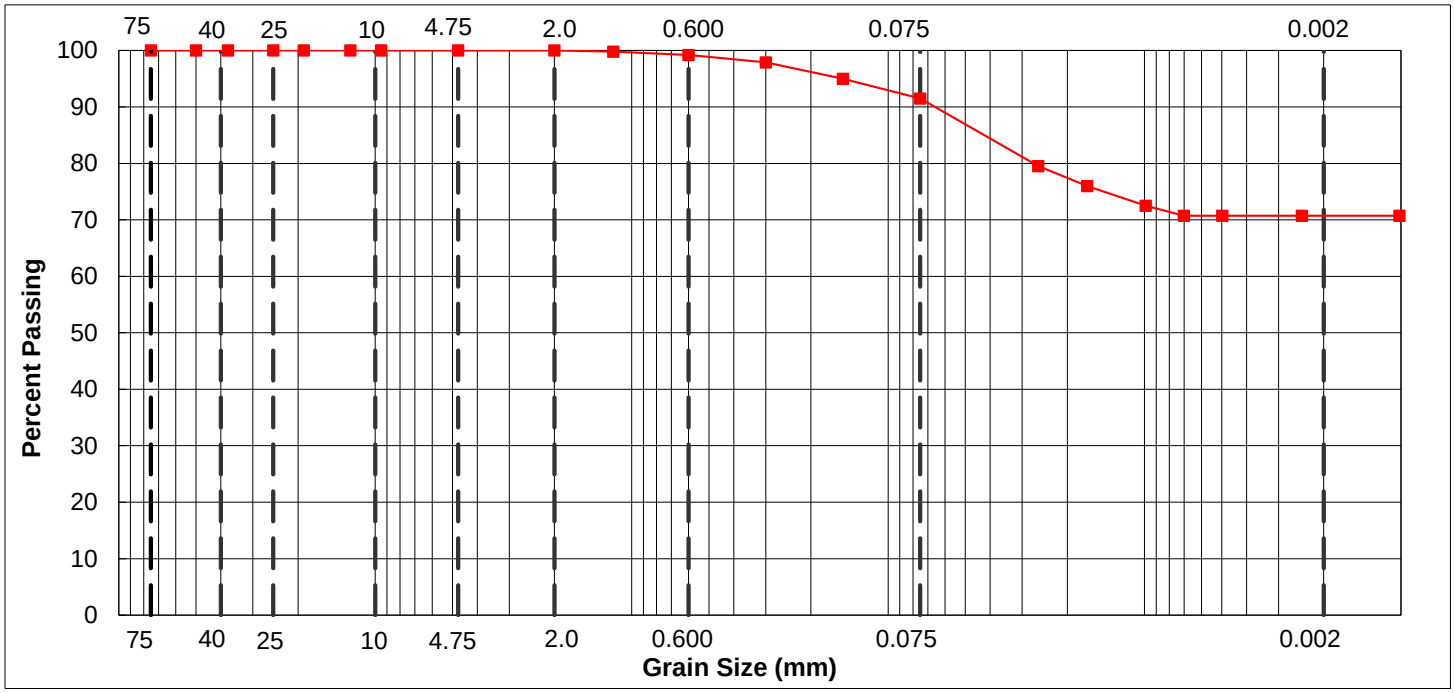
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	581AU1
Project No.:	1560-193-00	**Source:**	22BH581
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 581AU1	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	97.9
50.0	100.0	0.150	95.0
37.5	100.0	0.075	91.5
25.0	100.0	0.0260	79.5
19.0	100.0	0.0167	76.0
12.5	100.0	0.0099	72.5
9.5	100.0	0.0070	70.7
4.75	100.0	0.0050	70.7
2.00	100.0	0.0024	70.7
1.180	99.8	0.0010	70.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	7.7	425 µm to 75 µm
Silt	20.8	75 µm to 2 µm
Clay	70.7	<2 µm



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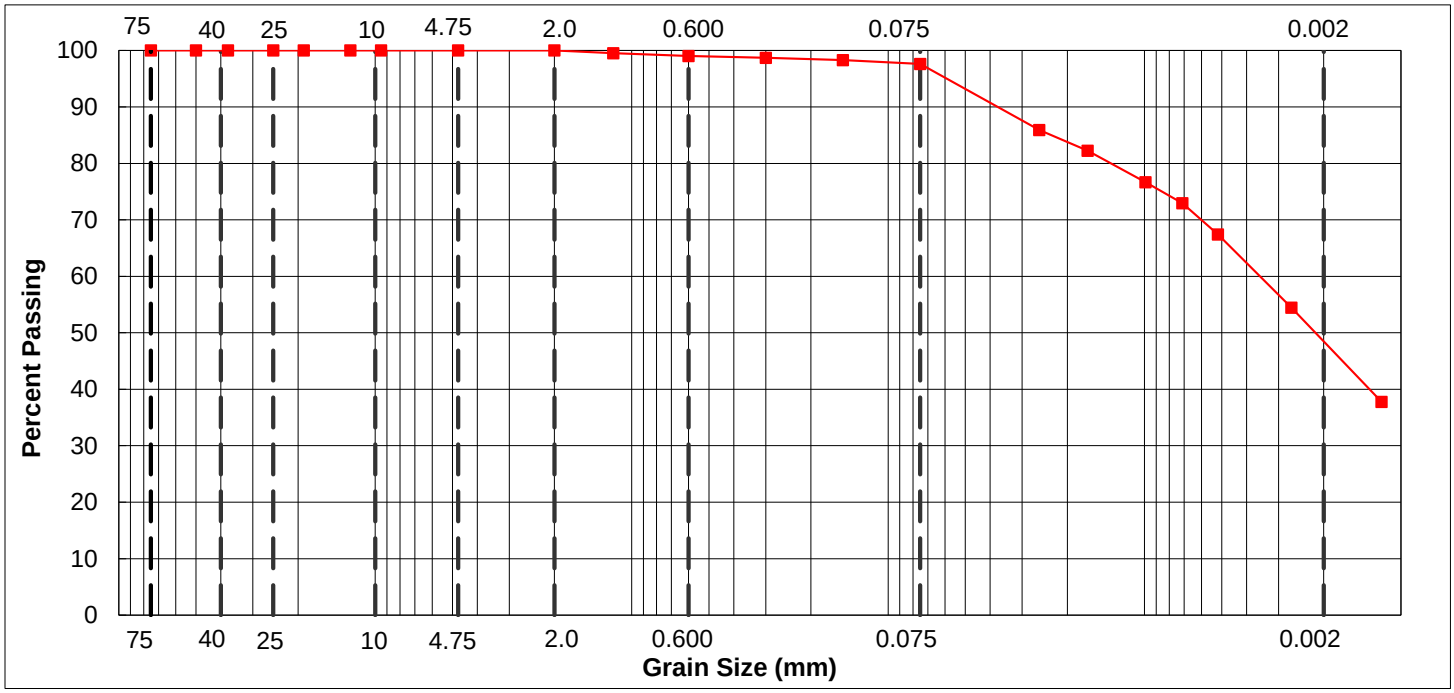
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	581AU3
Project No.:	1560-193-00	**Source:**	22BH581
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 581AU3	**Test Date:**	3-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.0
75.0	100.0	0.300	98.7
50.0	100.0	0.150	98.3
37.5	100.0	0.075	97.6
25.0	100.0	0.0257	85.9
19.0	100.0	0.0167	82.2
12.5	100.0	0.0099	76.7
9.5	100.0	0.0071	73.0
4.75	100.0	0.0052	67.4
2.00	100.0	0.0027	54.5
1.180	99.5	0.0012	37.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.0	2.00 mm to 425 µm
Fine Sand	1.4	425 µm to 75 µm
Silt	49.1	75 µm to 2 µm
Clay	48.5	<2 µm



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Reviewed By: Kasz Leavitt, P.Tech. (Eng.)

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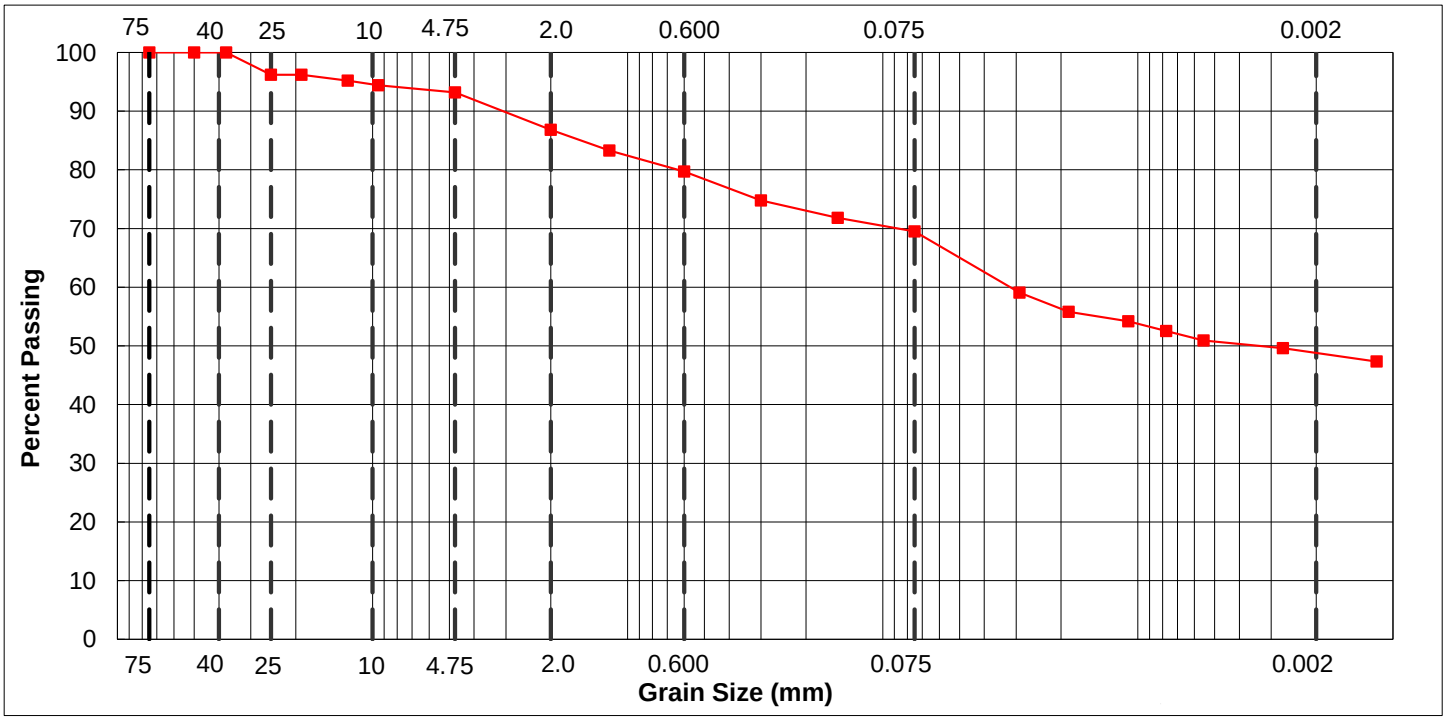
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	585AU1
Project No.:	1560-193-00	**Source:**	22BH585
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 585AU1	**Test Date:**	9-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	79.7
75.0	100.0	0.300	74.8
50.0	100.0	0.150	71.8
37.5	100.0	0.075	69.5
25.0	96.2	0.0291	59.1
19.0	96.2	0.0187	55.8
12.5	95.2	0.0109	54.2
9.5	94.4	0.0077	52.5
4.75	93.2	0.0055	50.9
2.00	86.8	0.0027	49.6
1.180	83.3	0.0012	47.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	3.8	80 mm to 20 mm
Fine Gravel	3.0	20 mm to 4.75 mm
Coarse Sand	6.4	4.75 mm to 2.00 mm
Medium Sand	7.1	2.00 mm to 425 µm
Fine Sand	10.2	425 µm to 75 µm
Silt	20.7	75 µm to 2 µm
Clay	48.8	<2 µm



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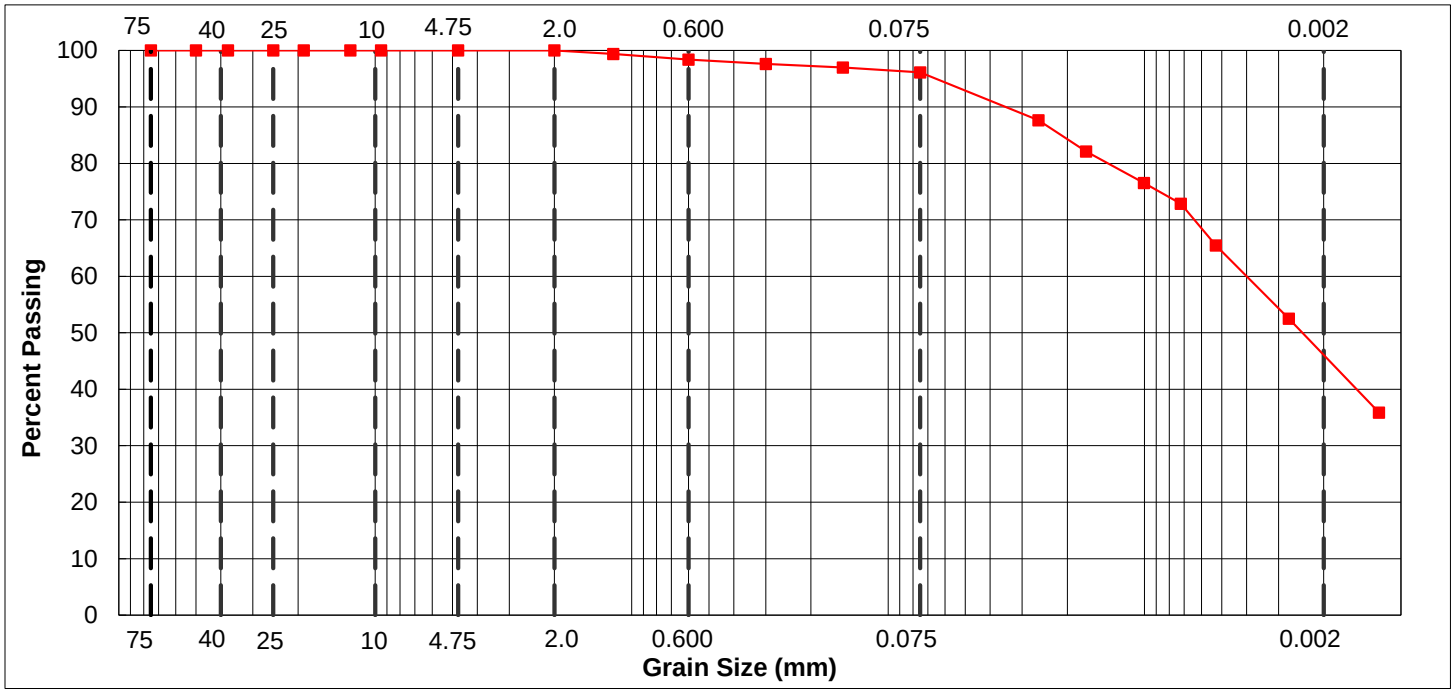
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	585AU3
Project No.:	1560-193-00	**Source:**	22BH585
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 585AU3	**Test Date:**	3-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.4
75.0	100.0	0.300	97.6
50.0	100.0	0.150	97.0
37.5	100.0	0.075	96.1
25.0	100.0	0.0259	87.6
19.0	100.0	0.0169	82.1
12.5	100.0	0.0100	76.6
9.5	100.0	0.0072	72.9
4.75	100.0	0.0053	65.5
2.00	100.0	0.0027	52.5
1.180	99.4	0.0012	35.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.6	2.00 mm to 425 µm
Fine Sand	2.3	425 µm to 75 µm
Silt	50.0	75 µm to 2 µm
Clay	46.1	<2 µm



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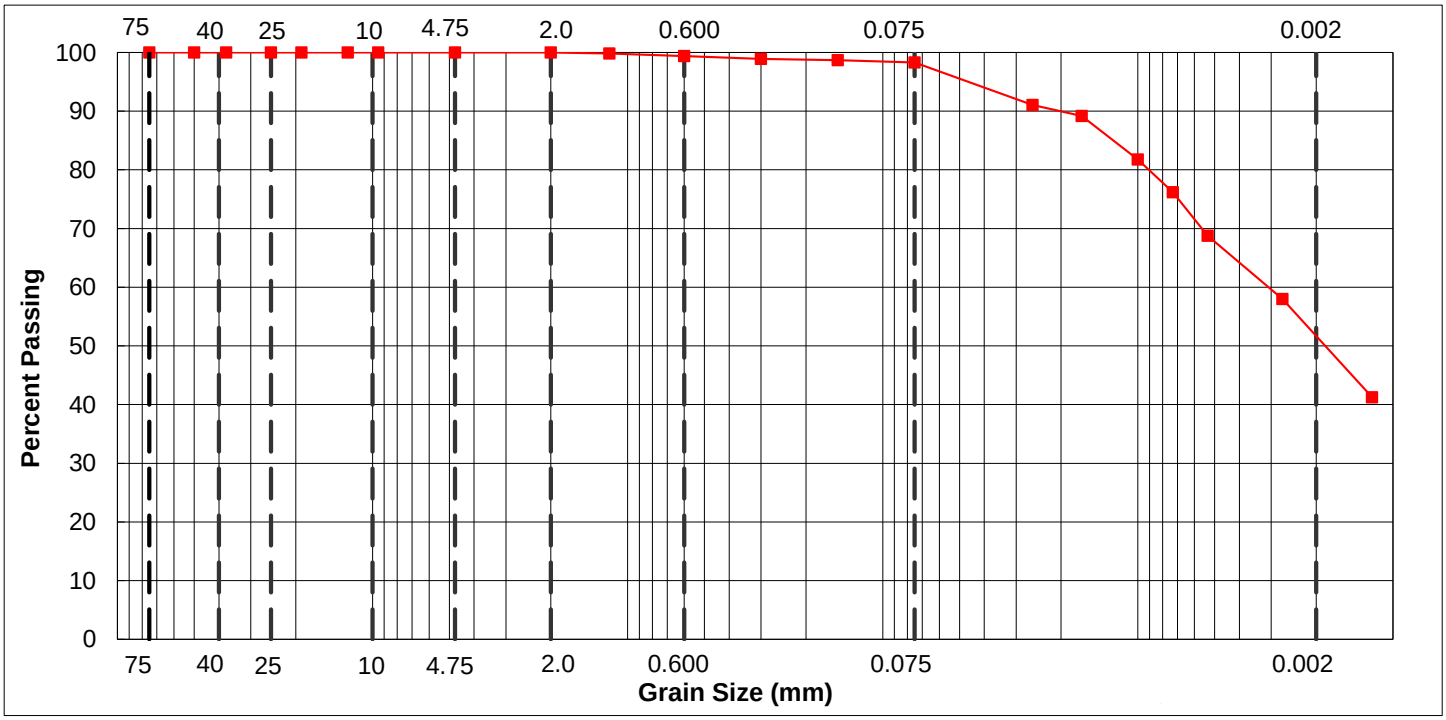
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	586AU2
Project No.:	1560-193-00	**Source:**	22BH586
Owner:	EID	**Sample Depth:**	2.5m
File No.:	GSA - 586AU2	**Test Date:**	9-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	98.9
50.0	100.0	0.150	98.7
37.5	100.0	0.075	98.3
25.0	100.0	0.0259	91.0
19.0	100.0	0.0166	89.2
12.5	100.0	0.0100	81.8
9.5	100.0	0.0073	76.2
4.75	100.0	0.0053	68.8
2.00	100.0	0.0027	58.0
1.180	99.8	0.0012	41.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	1.1	425 µm to 75 µm
Silt	46.6	75 µm to 2 µm
Clay	51.7	<2 µm



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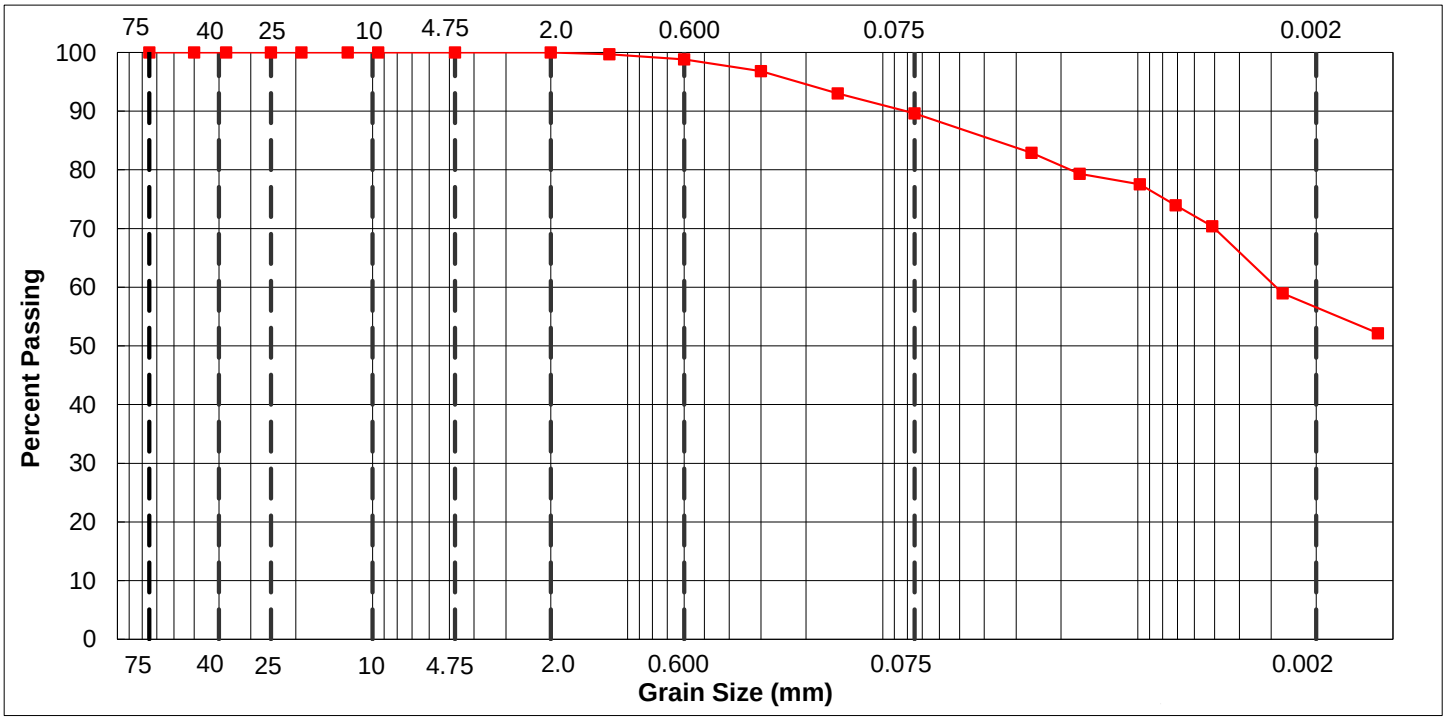
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	587AU1
Project No.:	1560-193-00	**Source:**	22BH587
Owner:	EID	**Sample Depth:**	1.0m
File No.:	GSA - 587AU1	**Test Date:**	9-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.8
75.0	100.0	0.300	96.8
50.0	100.0	0.150	93.0
37.5	100.0	0.075	89.6
25.0	100.0	0.0261	82.9
19.0	100.0	0.0169	79.3
12.5	100.0	0.0098	77.5
9.5	100.0	0.0071	74.0
4.75	100.0	0.0051	70.4
2.00	100.0	0.0027	58.9
1.180	99.7	0.0011	52.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.2	2.00 mm to 425 µm
Fine Sand	9.2	425 µm to 75 µm
Silt	33.0	75 µm to 2 µm
Clay	56.6	<2 µm



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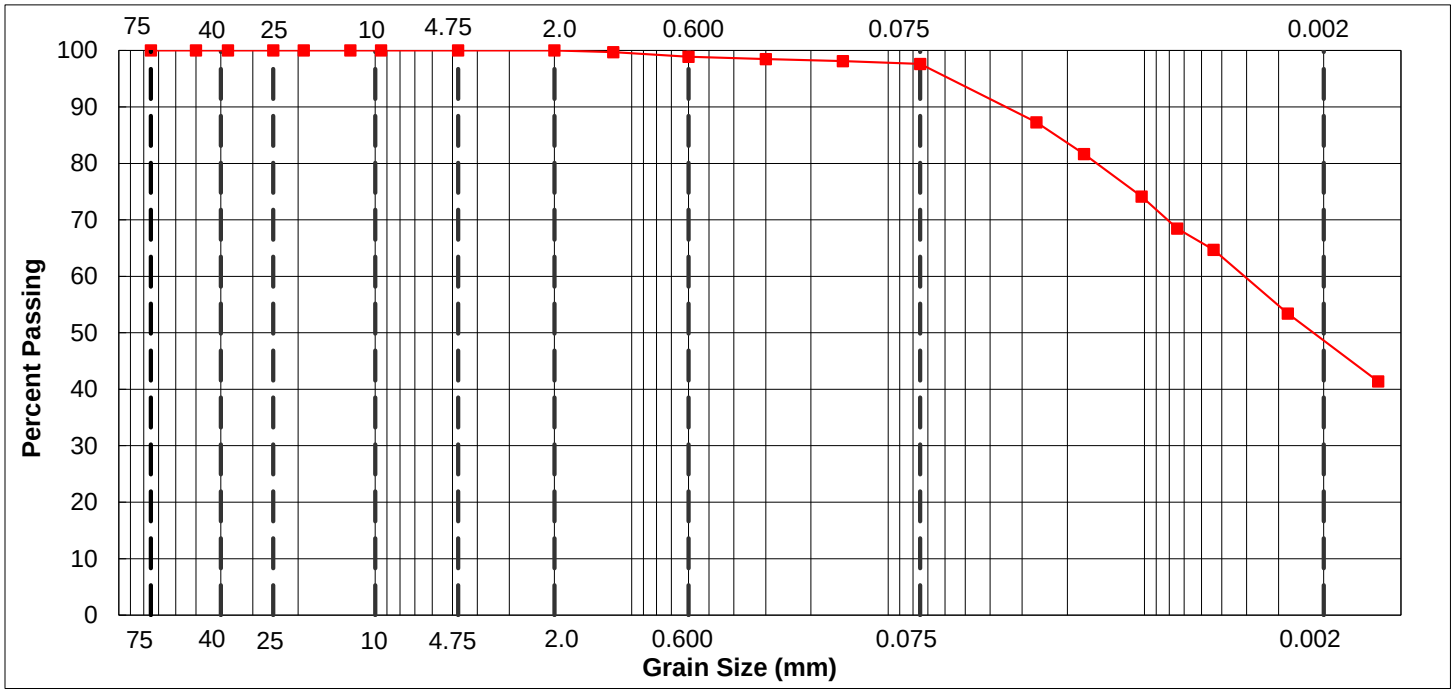
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	587AU3
Project No.:	1560-193-00	**Source:**	22BH587
Owner:	EID	**Sample Depth:**	4.0m
File No.:	GSA - 587AU3	**Test Date:**	11-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.9
75.0	100.0	0.300	98.5
50.0	100.0	0.150	98.1
37.5	100.0	0.075	97.6
25.0	100.0	0.0264	87.3
19.0	100.0	0.0172	81.7
12.5	100.0	0.0103	74.1
9.5	100.0	0.0075	68.5
4.75	100.0	0.0054	64.7
2.00	100.0	0.0028	53.4
1.180	99.7	0.0012	41.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.1	2.00 mm to 425 µm
Fine Sand	1.3	425 µm to 75 µm
Silt	49.0	75 µm to 2 µm
Clay	48.6	<2 µm



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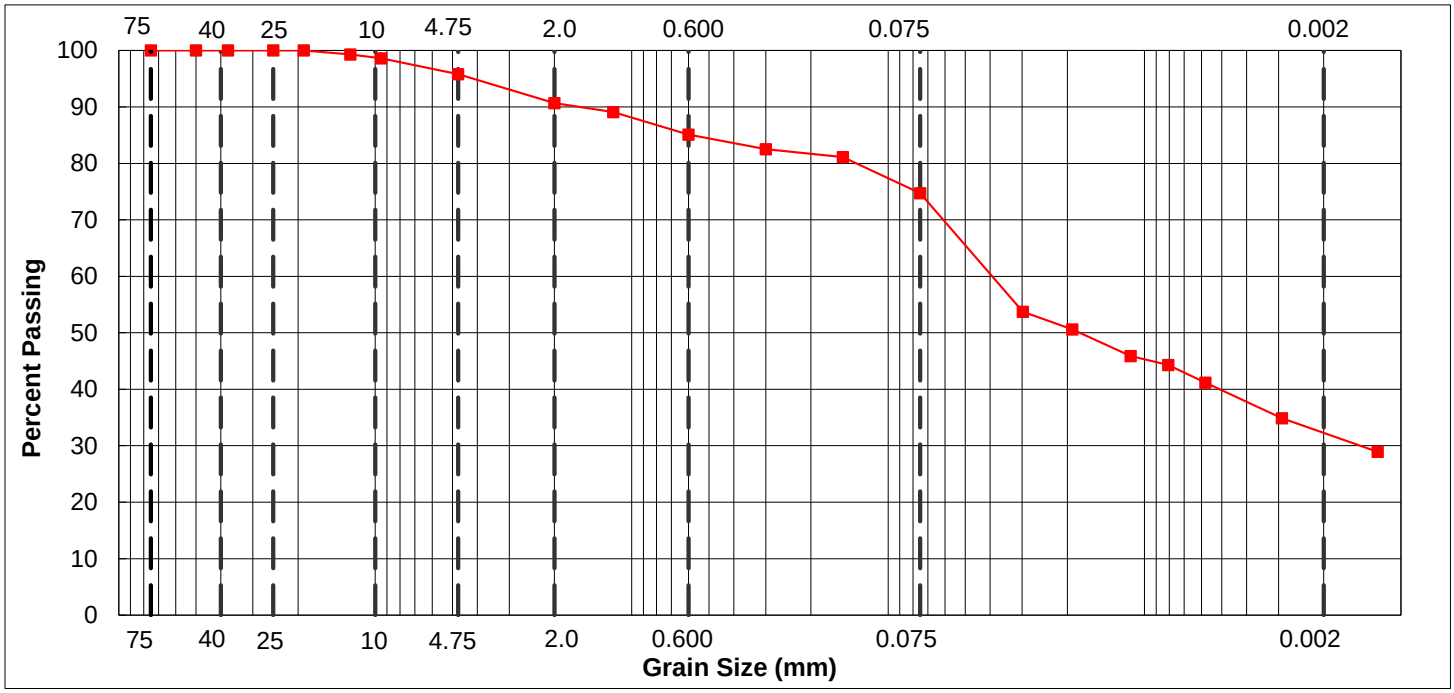
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	588AU2
Project No.:	1560-193-00	**Source:**	22BH588
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 588AU2	**Test Date:**	12-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	85.1
75.0	100.0	0.300	82.5
50.0	100.0	0.150	81.1
37.5	100.0	0.075	74.7
25.0	100.0	0.0298	53.7
19.0	100.0	0.0192	50.6
12.5	99.3	0.0113	45.9
9.5	98.6	0.0081	44.3
4.75	95.8	0.0058	41.2
2.00	90.7	0.0029	34.9
1.180	89.1	0.0012	28.9

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	4.2	20 mm to 4.75 mm
Coarse Sand	5.1	4.75 mm to 2.00 mm
Medium Sand	5.6	2.00 mm to 425 µm
Fine Sand	10.4	425 µm to 75 µm
Silt	42.4	75 µm to 2 µm
Clay	32.3	<2 µm



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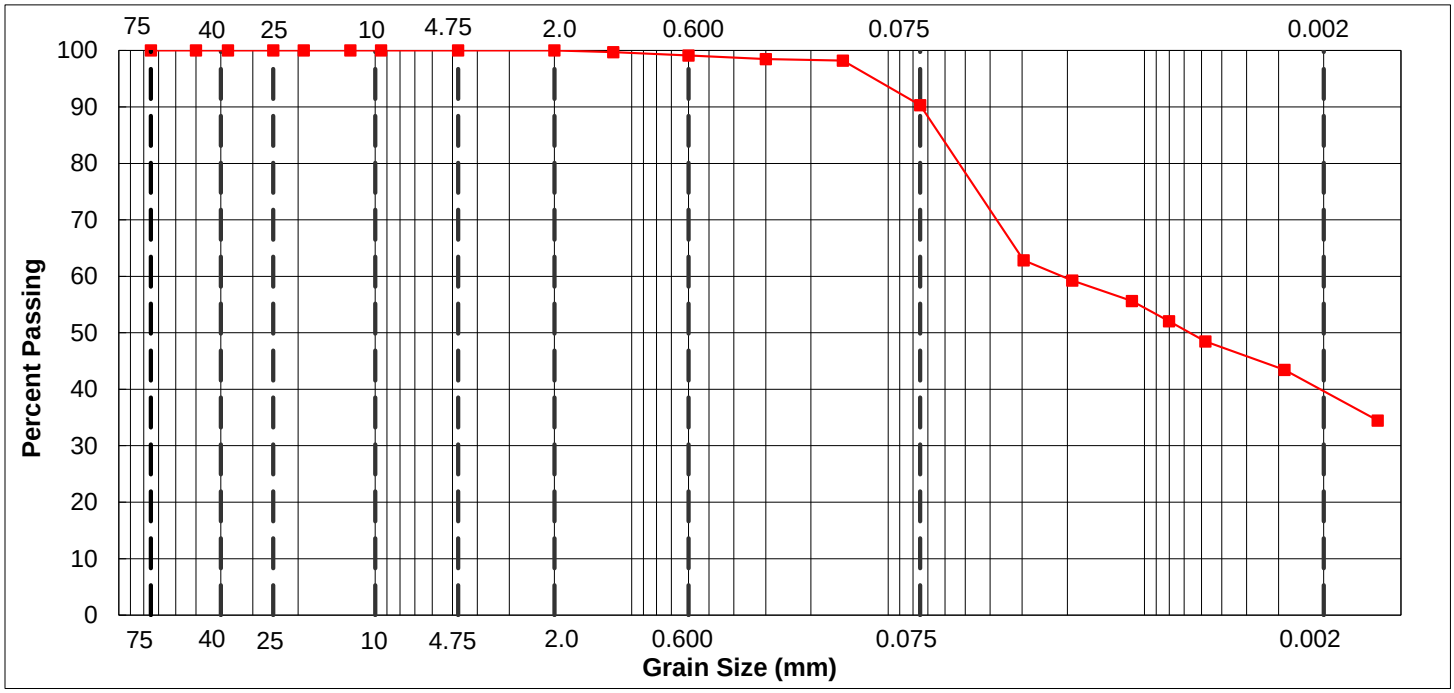
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	588AU4
Project No.:	1560-193-00	**Source:**	22BH588
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 588AU4	**Test Date:**	12-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.1
75.0	100.0	0.300	98.5
50.0	100.0	0.150	98.2
37.5	100.0	0.075	90.3
25.0	100.0	0.0296	62.8
19.0	100.0	0.0191	59.2
12.5	100.0	0.0112	55.7
9.5	100.0	0.0080	52.1
4.75	100.0	0.0058	48.5
2.00	100.0	0.0028	43.4
1.180	99.7	0.0012	34.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.9	2.00 mm to 425 µm
Fine Sand	8.8	425 µm to 75 µm
Silt	50.6	75 µm to 2 µm
Clay	39.7	<2 µm



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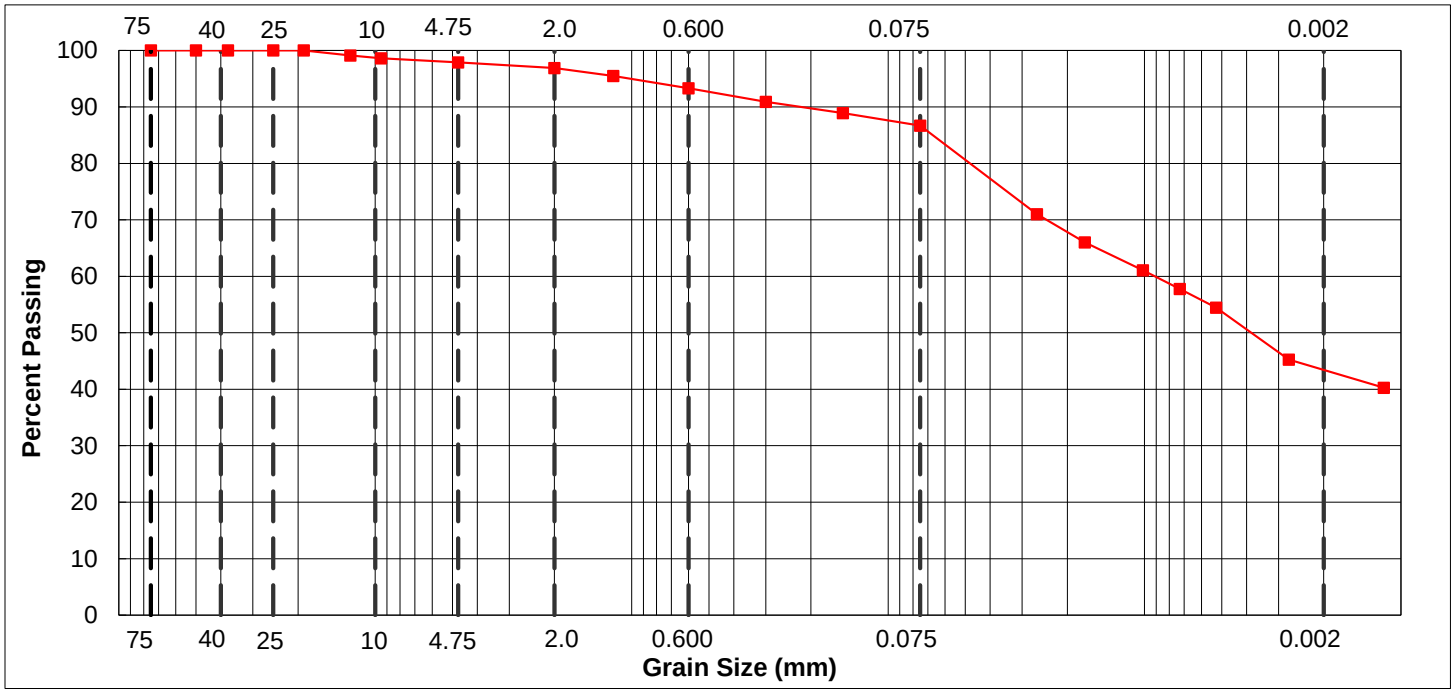
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	589AU1
Project No.:	1560-193-00	**Source:**	22BH589
Owner:	EID	**Sample Depth:**	0.6m
File No.:	GSA - 589AU1	**Test Date:**	10-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	93.3
75.0	100.0	0.300	90.9
50.0	100.0	0.150	88.9
37.5	100.0	0.075	86.7
25.0	100.0	0.0263	71.0
19.0	100.0	0.0171	66.0
12.5	99.1	0.0101	61.1
9.5	98.6	0.0073	57.8
4.75	97.9	0.0053	54.5
2.00	96.9	0.0027	45.2
1.180	95.5	0.0012	40.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	2.1	20 mm to 4.75 mm
Coarse Sand	1.0	4.75 mm to 2.00 mm
Medium Sand	3.6	2.00 mm to 425 µm
Fine Sand	6.6	425 µm to 75 µm
Silt	43.3	75 µm to 2 µm
Clay	43.4	<2 µm



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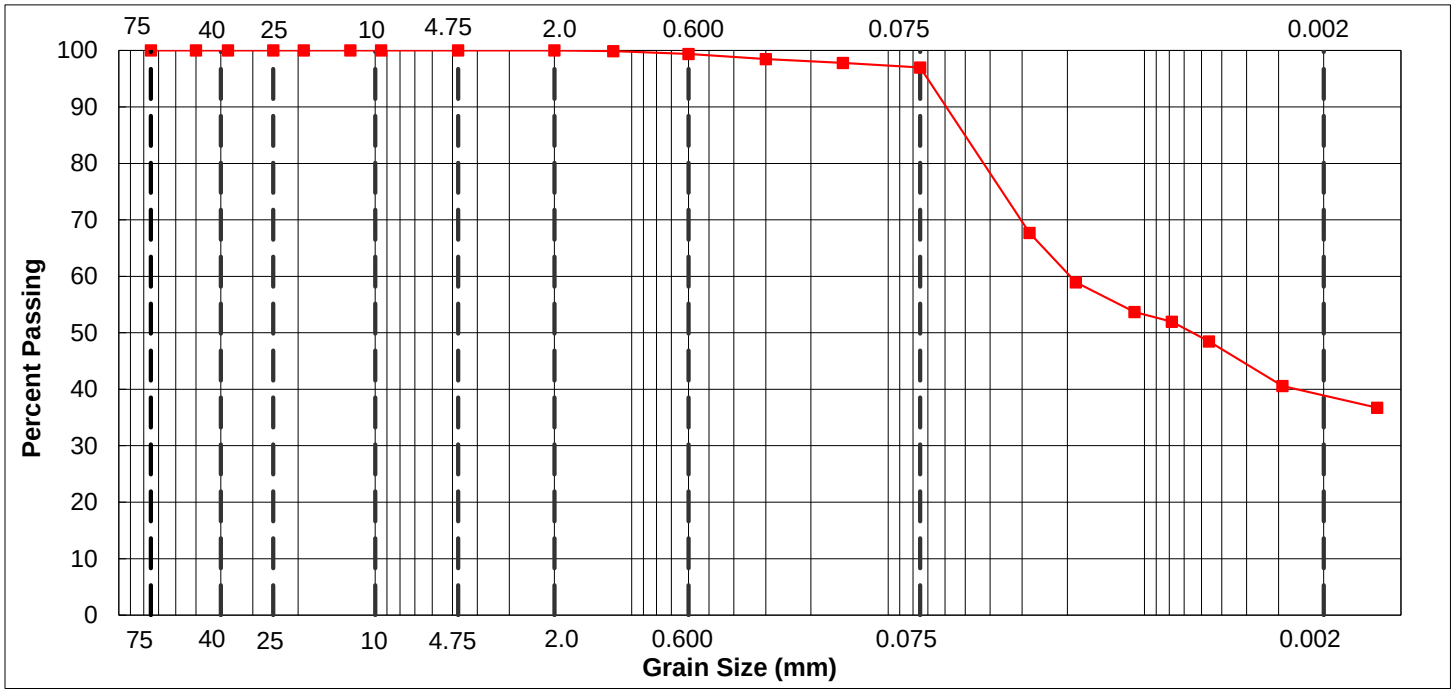
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	589AU3
Project No.:	1560-193-00	**Source:**	22BH589
Owner:	EID	**Sample Depth:**	2.1m
File No.:	GSA - 589AU3	**Test Date:**	11-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.4
75.0	100.0	0.300	98.5
50.0	100.0	0.150	97.8
37.5	100.0	0.075	97.0
25.0	100.0	0.0281	67.7
19.0	100.0	0.0185	58.9
12.5	100.0	0.0110	53.7
9.5	100.0	0.0078	51.9
4.75	100.0	0.0056	48.5
2.00	100.0	0.0029	40.6
1.180	99.9	0.0012	36.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.6	2.00 mm to 425 µm
Fine Sand	2.4	425 µm to 75 µm
Silt	58.1	75 µm to 2 µm
Clay	38.9	<2 µm



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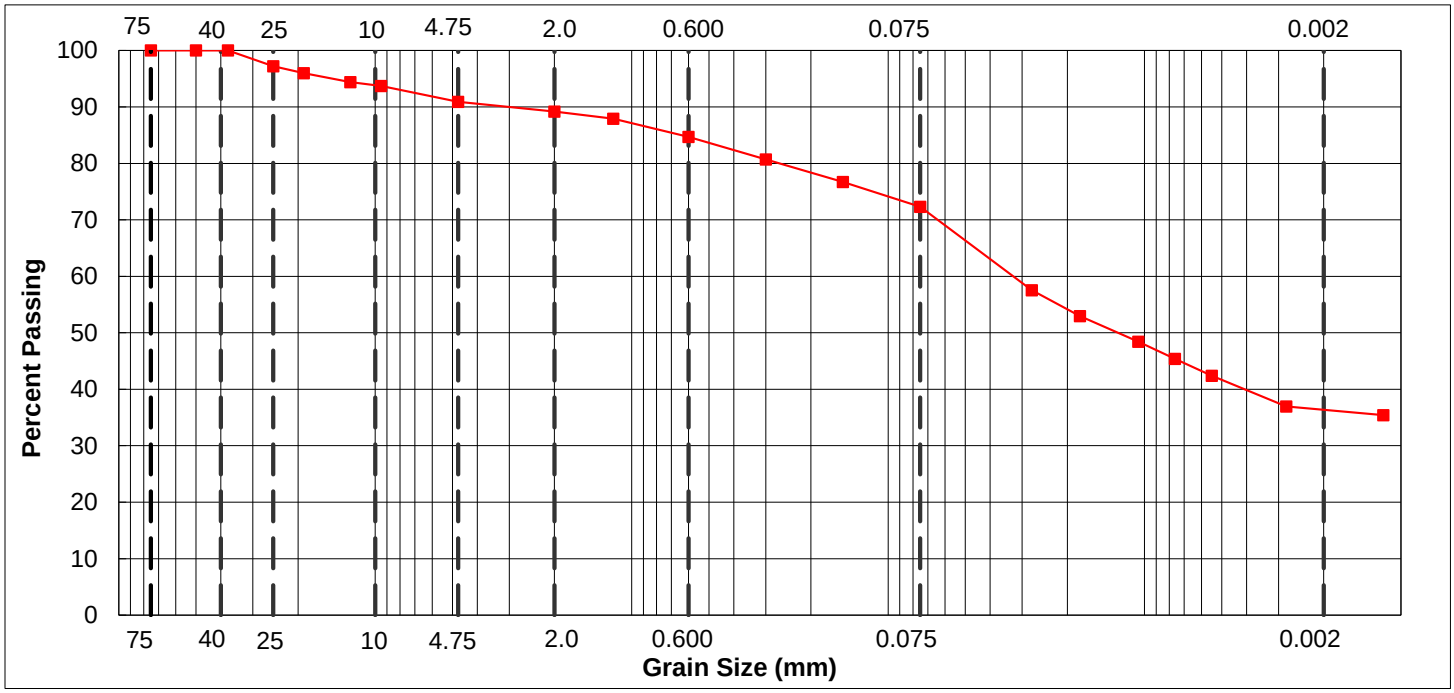
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	590AU2
Project No.:	1560-193-00	**Source:**	22BH590
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 590AU2	**Test Date:**	10-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	84.7
75.0	100.0	0.300	80.7
50.0	100.0	0.150	76.7
37.5	100.0	0.075	72.3
25.0	97.2	0.0275	57.5
19.0	96.0	0.0179	53.0
12.5	94.4	0.0106	48.4
9.5	93.7	0.0076	45.4
4.75	90.9	0.0055	42.4
2.00	89.2	0.0028	36.9
1.180	87.9	0.0012	35.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	2.8	80 mm to 20 mm
Fine Gravel	6.3	20 mm to 4.75 mm
Coarse Sand	1.7	4.75 mm to 2.00 mm
Medium Sand	4.5	2.00 mm to 425 µm
Fine Sand	12.4	425 µm to 75 µm
Silt	36.0	75 µm to 2 µm
Clay	36.3	<2 µm



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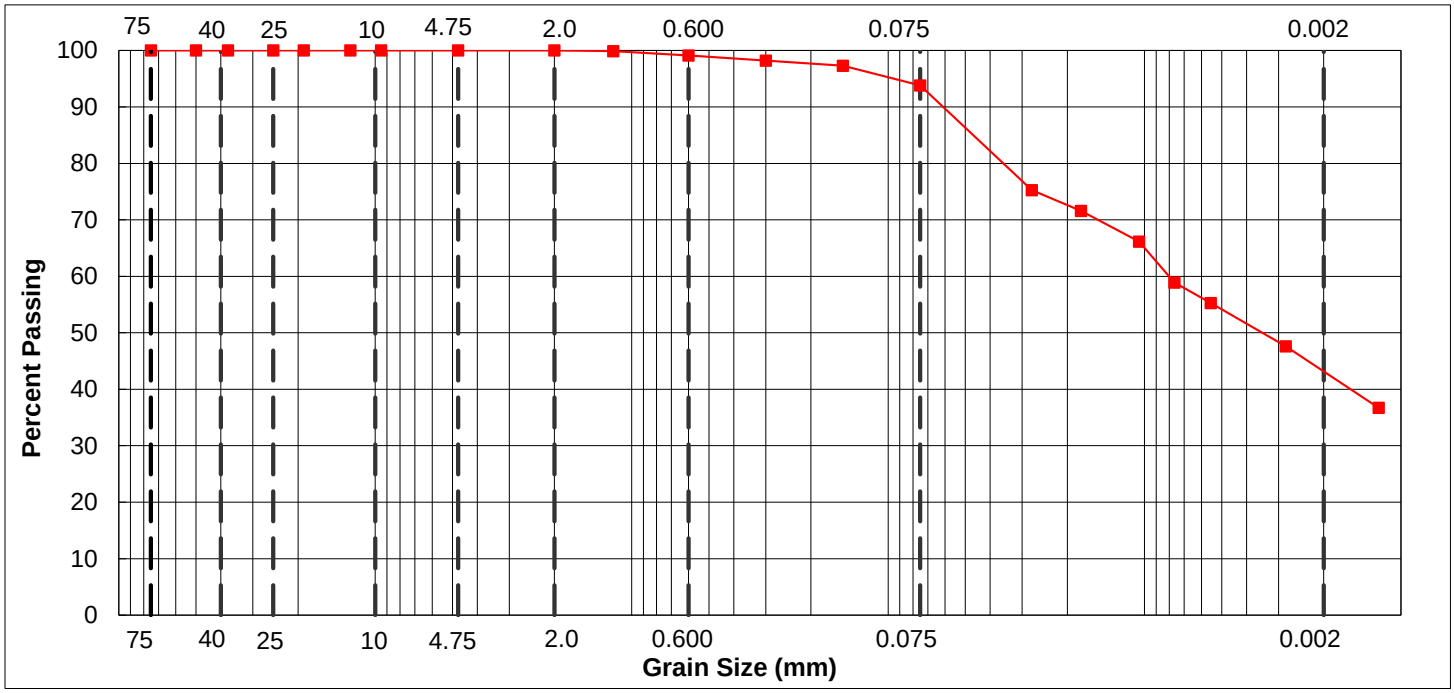
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	590AU4
Project No.:	1560-193-00	**Source:**	22BH590
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 590AU4	**Test Date:**	14-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.1
75.0	100.0	0.300	98.2
50.0	100.0	0.150	97.3
37.5	100.0	0.075	93.8
25.0	100.0	0.0275	75.2
19.0	100.0	0.0177	71.6
12.5	100.0	0.0105	66.2
9.5	100.0	0.0077	58.9
4.75	100.0	0.0055	55.3
2.00	100.0	0.0028	47.6
1.180	99.9	0.0012	36.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.9	2.00 mm to 425 µm
Fine Sand	5.3	425 µm to 75 µm
Silt	50.6	75 µm to 2 µm
Clay	43.2	<2 µm



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Reviewed By: Kasz Leavitt
Kasz Leavitt, P.Tech. (Eng.)

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	505AU1
Project No.:	1560-193-00	**Source:**	22BH505
Owner:	EID	**Sample Depth:**	1.0m
File No.:	DT - 505AU1	**Date:**	7-Oct-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI — Inorganic clays of medium plasticity, silty clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1829.5	kg/m^3	**Classification:**	ND2	
Moisture Content (before):	11.5	%	**Hydraulic Head:**	1020	mm
Moisture Content (After):	14.7	%	**Flow Rate:**	3.44	ml/s
Length of Sample:	38.7	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	526AU2
Project No.:	1560-193-00	**Source:**	22BH526
Owner:	EID	**Sample Depth:**	2.5m
File No.:	DT - 526AU2	**Date:**	23-Aug-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI — Inorganic clays of medium plasticity, silty clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1661.6	kg/m^3	**Classification:**	D2	
Moisture Content (before):	13.1	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	14.2	%	**Flow Rate:**	1.19	ml/s
Length of Sample:	40.6	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	556AU3
Project No.:	1560-193-00	**Source:**	22BH556
Owner:	EID	**Sample Depth:**	4.0m
File No.:	DT - 556AU3	**Date:**	23-Aug-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI — Inorganic clays of medium plasticity, silty clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1537.9	kg/m^3	**Classification:**	D2	
Moisture Content (before):	19.5	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	15.4	%	**Flow Rate:**	1.48	ml/s
Length of Sample:	41.6	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	561AU1
Project No.:	1560-193-00	**Source:**	22BH561
Owner:	EID	**Sample Depth:**	1.0m
File No.:	DT - 561AU1	**Date:**	6-Oct-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description: CI — Inorganic clays of medium plasticity, silty clays
Sample Type: Remolded

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1718.2	kg/m^3	**Classification:**	ND4	
Moisture Content (before):	18.8	%	**Hydraulic Head:**	50	mm
Moisture Content (After):	20.4	%	**Flow Rate:**	0.89	ml/s
Length of Sample:	39.3	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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Dispersivity of Clay Soil by the Pinhole Test

Project:	Snake Lake Reservoir Expansion	**Sample #:**	570AU2
Project No.:	1560-193-00	**Source:**	22BH570
Owner:	EID	**Sample Depth:**	2.5m
File No.:	DT - 570AU2	**Date:**	26-Sep-22

Tested in accordance with ASTM D4647 (Identification and Classification of Dispersive Clay Soils by the Pinhole Test

Sample Description:	CH	Inorganic clays of high plasticity, fat clays
Sample Type:	Remolded	

Course Material >2mm:	0.0	%	**Test Method:**	Method A	
Specimen Density:	1695.9	kg/m^3	**Classification:**	ND3	
Moisture Content (before):	19.7	%	**Hydraulic Head:**	180	mm
Moisture Content (After):	22.9	%	**Flow Rate:**	1.42	ml/s
Length of Sample:	38.4	mm			

Dispersive Classification	Head (mm)	Test time (min)	Final flow rate through specimen (ml/s)	Cloudiness of flow at end of test From Side	Cloudiness of flow at end of test From Top	Hole size after test (mm)
D1	50	5	1.0 - 1.4	Dark	Very Dark	>=2.0
D2	50	10	1.0 - 1.4	Moderately Dark	Dark	>1.5
ND4	50	10	0.8 - 1.0	Slightly Dark	Moderately Dark	<=1.5
ND3	180	5	1.4 - 2.7	Barely Visible	Slightly Dark	>=1.5
ND3	380	5	1.8 - 3.2	Barely Visible	Slightly Dark	>=1.5
ND2	1020	5	>3.0	Clear	Barely	<1.5
ND1	1020	5	<=3.0	Perfectly Clear	Perfectly Clear	1.0
-	-	-	-	-	-	-

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

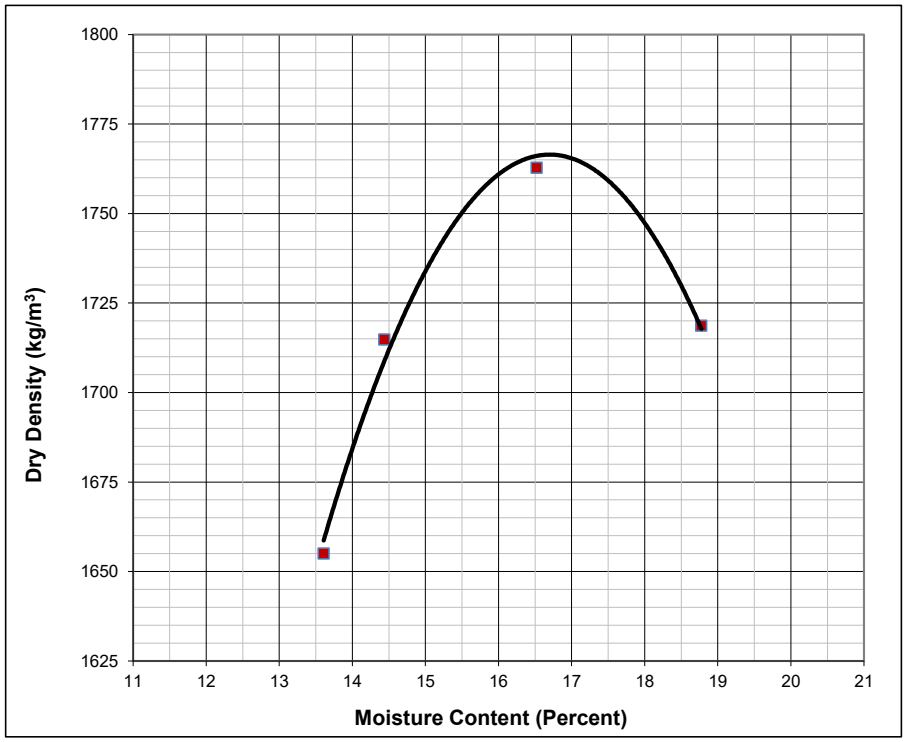
Project:	Snake Lake Reservoir Expansion	**Sample No:**	401B1
Project No.:	1560-193-00	**Source:**	22TP401
Owner:	EID	**Sampled Depth:**	1.0 m
File No.:	MDR - 401B1	**Date:**	August 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1766 **Optimum Moisture Content (%): 16.7**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	0.0%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	August 15, 2022	**Insitu Moisture Content (%):**	6.6
Tested By:	Matt Veldman	**Preparation Method:**	Moist

Soil Description CL Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1655	13.6
2	1715	14.4
3	1763	16.5
4	1719	18.8
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1808	16.3%
10%	1849	15.9%
15%	1891	15.6%
20%	1933	15.3%
25%	1975	14.9%
30%	2016	14.6%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

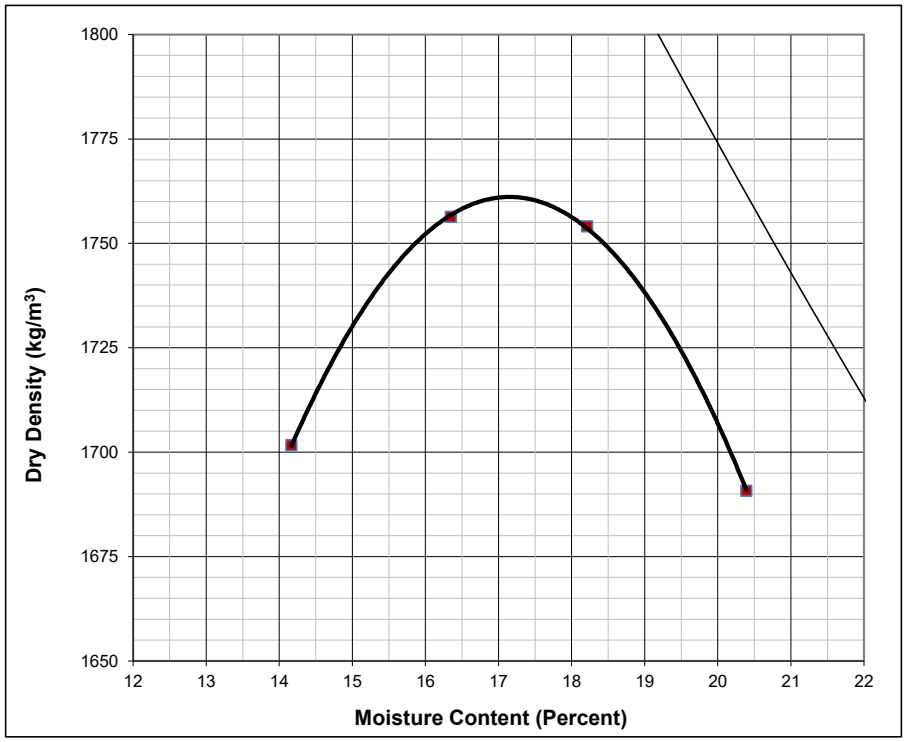
Project:	Snake Lake Reservoir Expansion	**Sample No:**	403B1
Project No.:	1560-193-00	**Source:**	22TP403
Owner:	EID	**Sampled Depth:**	1.3m
File No.:	MDR - 403B1	**Date:**	August 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1761 **Optimum Moisture Content (%): 17.3**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	40.4%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	August 15, 2022	**Insitu Moisture Content (%):**	6.6
Tested By:	Matt Veldman	**Preparation Method:**	Moist

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1702	14.2
2	1756	16.3
3	1754	18.2
4	1691	20.4
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1803	16.9%
10%	1845	16.5%
15%	1887	16.1%
20%	1929	15.8%
25%	1971	15.5%
30%	2013	15.1%

Comments:

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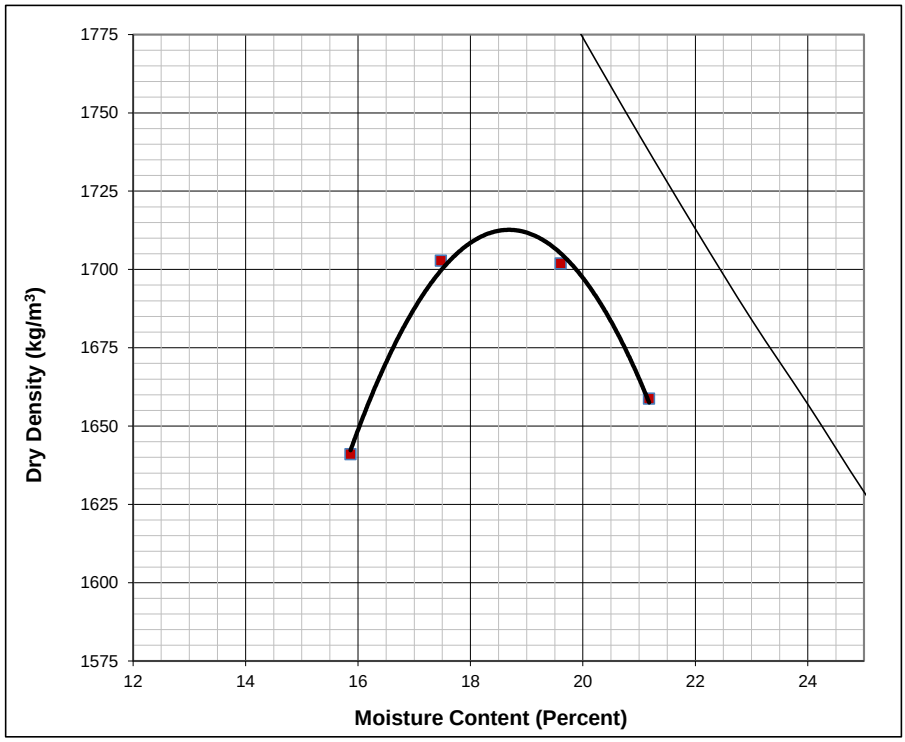
MOISTURE - DENSITY RELATIONSHIP REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No:**	404B1
Project No.:	1560-193-00	**Source:**	22TP404
Owner:	EID	**Sampled Depth:**	1.0 m
File No.:	MDR - 404B1	**Date:**	October 14, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1713 **Optimum Moisture Content (%): 18.7**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	1.3%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	October 14, 2022	**Insitu Moisture Content (%):**	0.0
Tested By:	CT	**Preparation Method:**	Dry
Soil Description	CI Inorganic clays of medium plasticity, silty clays		



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1641	15.9
2	1703	17.5
3	1702	19.6
4	1659	21.2
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1757	18.2%
10%	1802	17.8%
15%	1846	17.4%
20%	1890	16.9%
25%	1935	16.6%
30%	1979	16.2%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

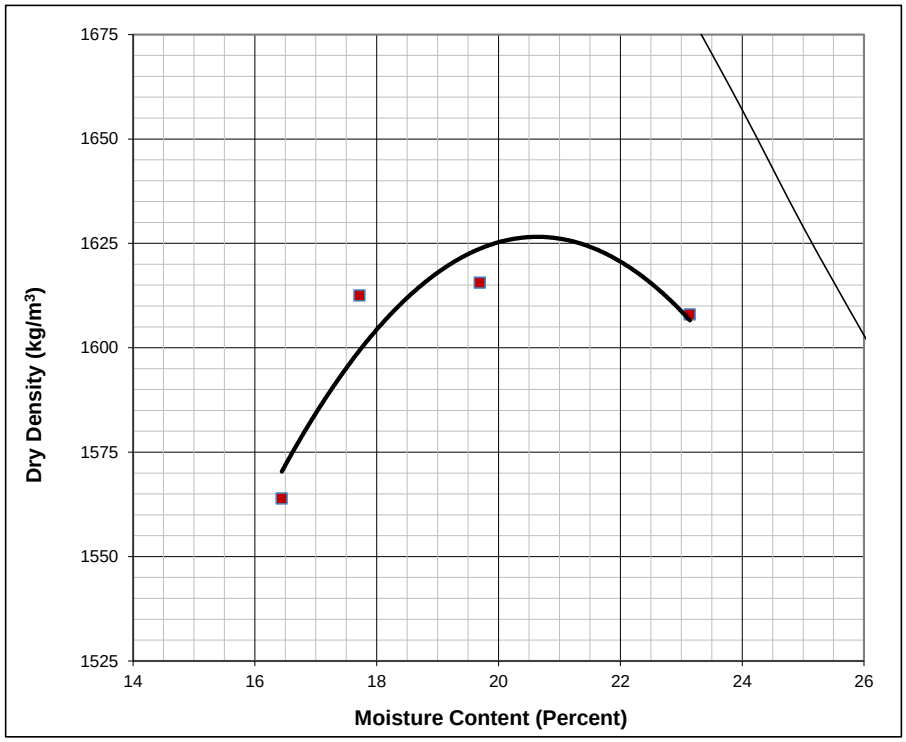
Project:	Snake Lake Reservoir Expansion	**Sample No:**	404B2
Project No.:	1560-193-00	**Source:**	22TP404
Owner:	EID	**Sampled Depth:**	3.6m
File No.:	MDR - 404B2	**Date:**	October 28, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1627 **Optimum Moisture Content (%): 20.7**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	0.0%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	October 28, 2022	**Insitu Moisture Content (%):**	-
Tested By:	Adam	**Preparation Method:**	Dry

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1564	16.4
2	1613	17.7
3	1616	19.7
4	1608	23.1
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1676	20.1%
10%	1724	19.5%
15%	1773	19.0%
20%	1822	18.5%
25%	1870	18.0%
30%	1919	17.6%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

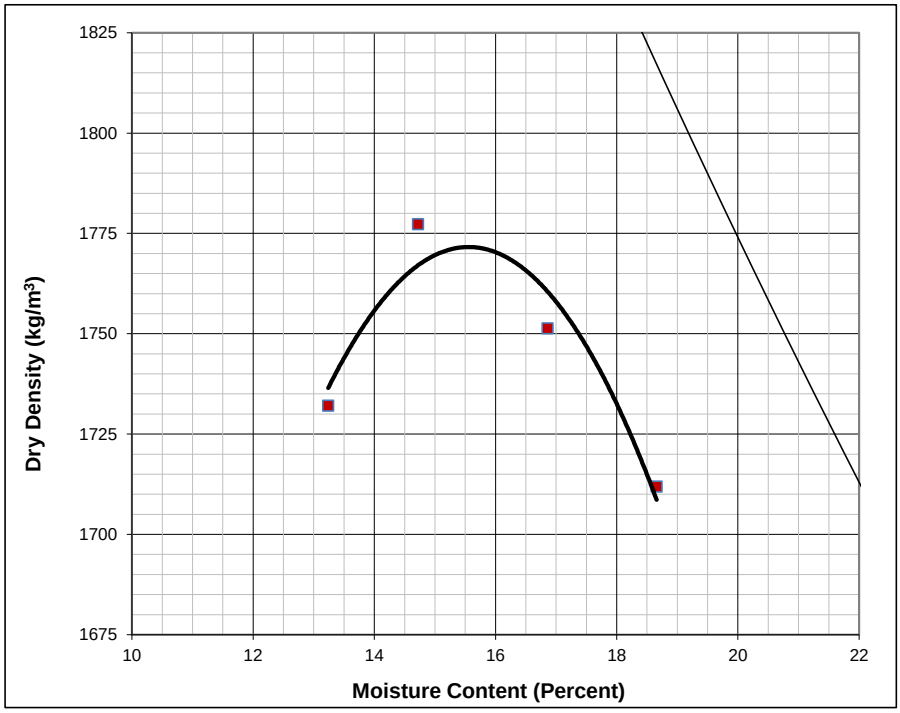
Project:	Snake Lake Reservoir Expansion	**Sample No:**	405B1
Project No.:	1560-193-00	**Source:**	22TP405
Owner:	EID	**Sampled Depth:**	1.0m
File No.:	MDR - 405B1	**Date:**	October 21, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1771 **Optimum Moisture Content (%): 15.6**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	20.9%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	October 21, 2022	**Insitu Moisture Content (%):**	13.8
Tested By:	Eugene Voloshyn	**Preparation Method:**	Dry

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1732	13.2
2	1777	14.7
3	1751	16.9
4	1712	18.7
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1812	15.2%
10%	1854	14.9%
15%	1895	14.6%
20%	1937	14.3%
25%	1978	14.0%
30%	2020	13.7%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

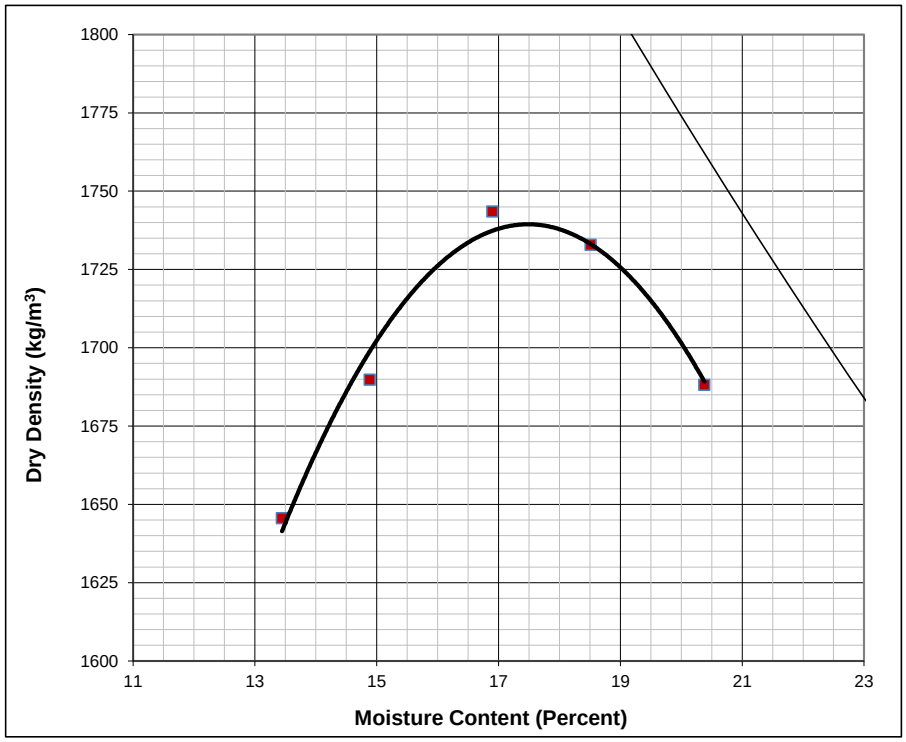
Project:	Snake Lake Reservoir Expansion	**Sample No:**	406B1
Project No.:	1560-193-00	**Source:**	22TP406
Owner:	EID	**Sampled Depth:**	1.0m
File No.:	MDR - 406B1	**Date:**	September 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1740 **Optimum Moisture Content (%): 17.5**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	15.8%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	September 14, 2022	**Insitu Moisture Content (%):**	2.9
Tested By:	Kurt Baker	**Preparation Method:**	Dry

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1646	13.4
2	1690	14.9
3	1743	16.9
4	1733	18.5
5	1688	20.4
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1783	17.1%
10%	1826	16.7%
15%	1869	16.3%
20%	1912	15.9%
25%	1955	15.6%
30%	1998	15.2%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

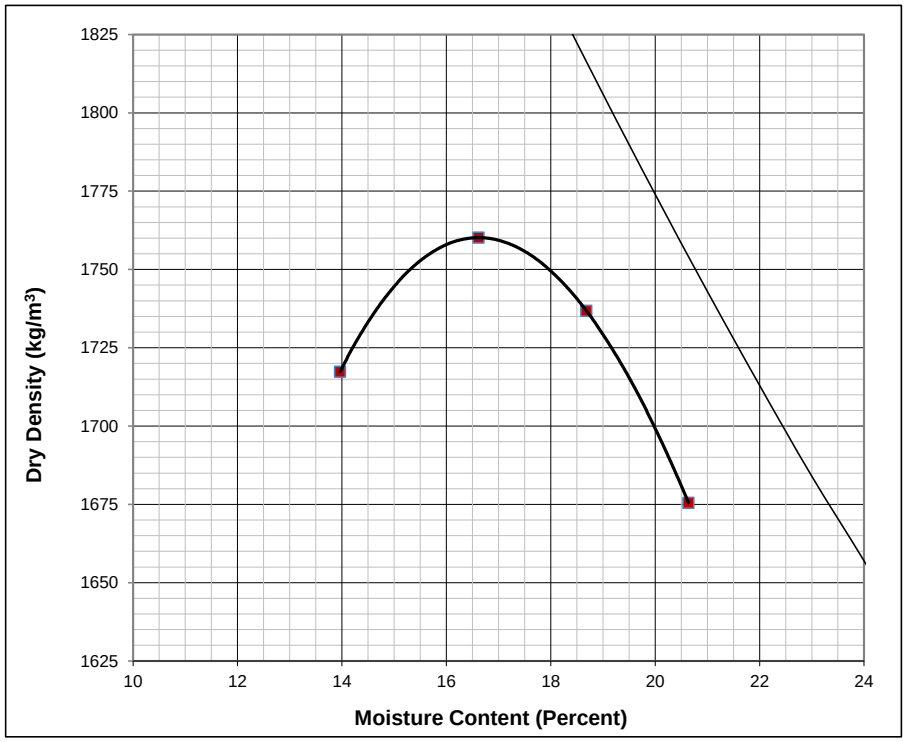
Project:	Snake Lake Reservoir Expansion	**Sample No:**	407B1
Project No.:	1560-193-00	**Source:**	22TP407
Owner:	EID	**Sampled Depth:**	1.0m
File No.:	MDR - 407B1	**Date Sampled:**	June 22, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1760 **Optimum Moisture Content (%): 16.7**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	<5
Mold size:	101.6mm	**Oversize rock density (kg/m^3):**	2600
Test Date:	September 28, 2022	**Insitu Moisture Content (%):**	4.9
Tested By:	B.Tataryn		

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1717	14.0
2	1760	16.6
3	1737	18.7
4	1675	20.6

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1802	16.3%
10%	1844	15.9%
15%	1886	15.6%
20%	1928	15.2%
25%	1970	14.9%
30%	2012	14.6%

Comments:

Checked By: Kasz Leavitt

Kasz Leavitt, Engineering Licensee

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MOISTURE - DENSITY RELATIONSHIP REPORT

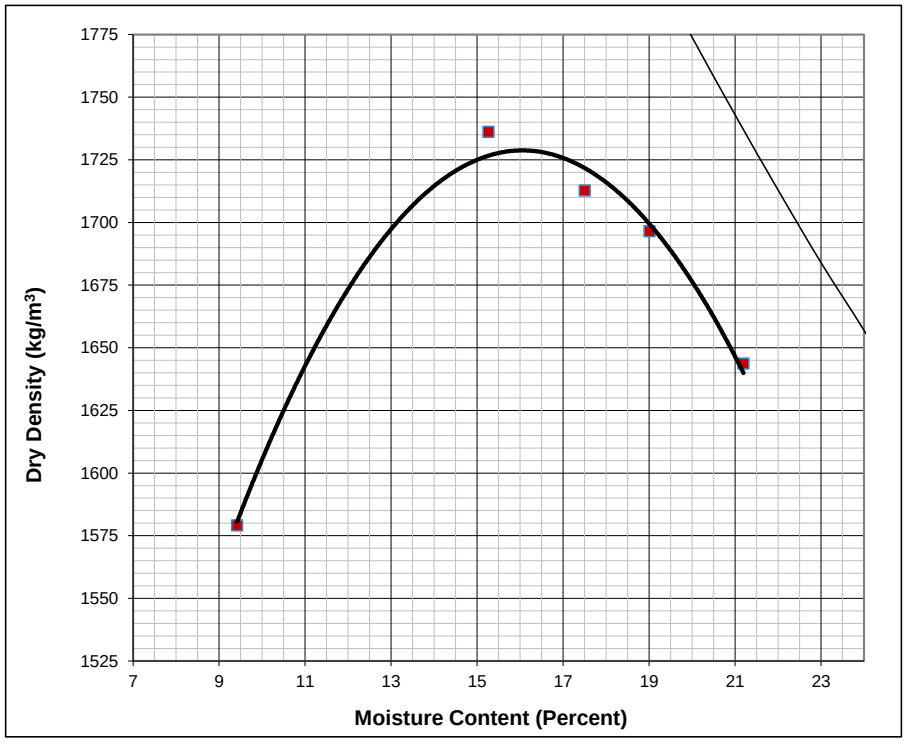
Project:	Snake Lake Reservoir Expansion	**Sample No:**	408B2
Project No.:	1560-193-00	**Source:**	22TP408
Owner:	EID	**Sampled Depth:**	2.8 m
File No.:	MDR - 408B2	**Date:**	August 30, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1729 **Optimum Moisture Content (%): 16.1**

Method used:	Method C (< 30% retained on 20mm)	**Oversize rock in sample (%):**	9.5%
Equipment:	152.4 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	August 30, 2022	**Insitu Moisture Content (%):**	-
Tested By:	Matt Veldman	**Preparation Method:**	Moist

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1579	9.4
2	1736	15.3
3	1713	17.5
4	1696	19.0
5	1644	21.2
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1773	15.7%
10%	1816	15.3%
15%	1860	15.0%
20%	1903	14.6%
25%	1947	14.3%
30%	1990	14.0%

Comments:

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Checked By: Kasz Leavitt, P.Tech. (Eng.)

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MOISTURE - DENSITY RELATIONSHIP REPORT

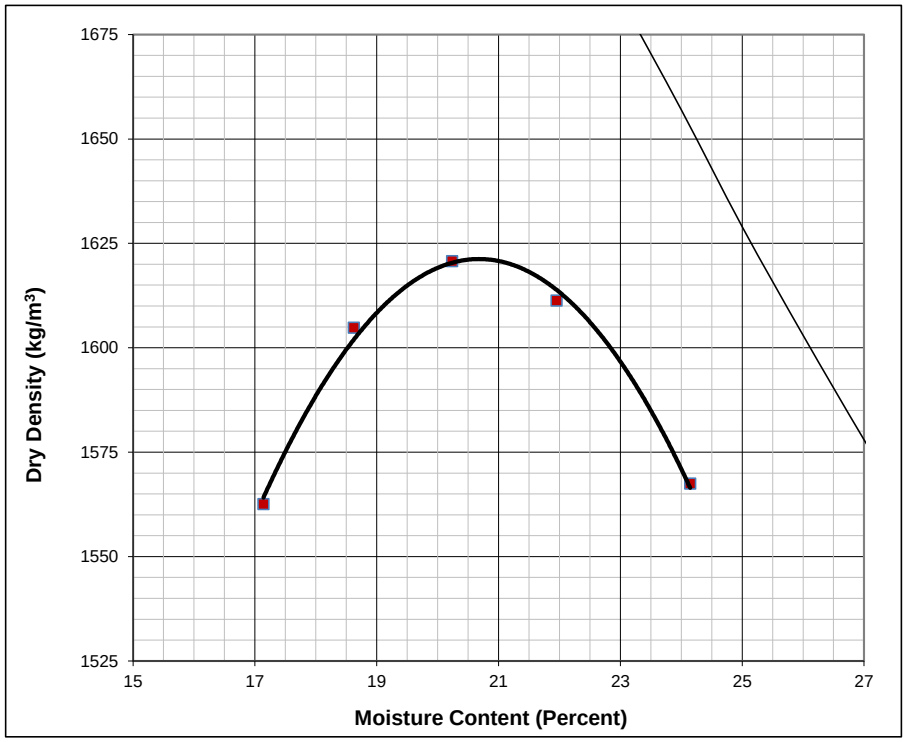
Project:	Snake Lake Reservoir Expansion	**Sample No:**	410B2
Project No.:	1560-193-00	**Source:**	22TP410
Owner:	EID	**Sampled Depth:**	4.5m
File No.:	MDR - 410B2	**Date:**	September 16, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1622 **Optimum Moisture Content (%): 20.8**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	#DIV/0!
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	September 16, 2022	**Insitu Moisture Content (%):**	14.6
Tested By:	Angelo Sultan	**Preparation Method:**	Dry

Soil Description CH Inorganic clays of high plasticity, fat clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1563	17.1
2	1605	18.6
3	1621	20.2
4	1611	22.0
5	1567	24.1
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1671	20.2%
10%	1720	19.6%
15%	1769	19.1%
20%	1818	18.6%
25%	1867	18.1%
30%	1915	17.6%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

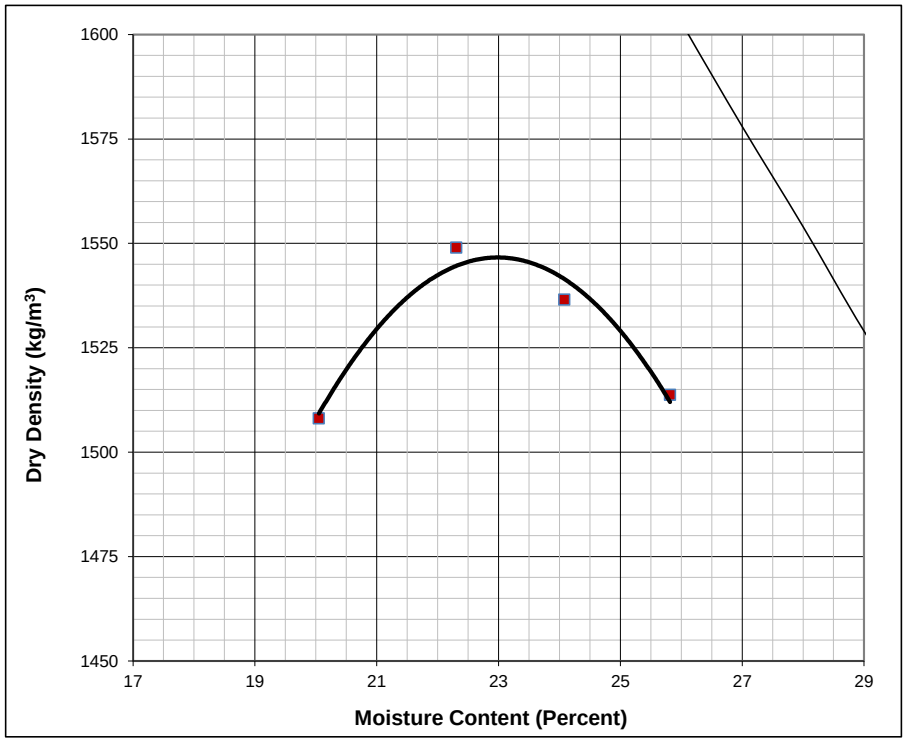
Project:	Snake Lake Reservoir Expansion	**Sample No:**	412B2
Project No.:	1560-193-00	**Source:**	22TP412
Owner:	EID	**Sampled Depth:**	4.0m
File No.:	MDR - 412B2	**Date:**	September 16, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1547 **Optimum Moisture Content (%): 23.0**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	0.0%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	September 16, 2022	**Insitu Moisture Content (%):**	21.9
Tested By:	Adam Wojcik	**Preparation Method:**	Dry

Soil Description CH Inorganic clays of high plasticity, fat clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1508	20.1
2	1549	22.3
3	1537	24.1
4	1514	25.8
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1600	22.2%
10%	1652	21.5%
15%	1705	20.9%
20%	1758	20.2%
25%	1810	19.7%
30%	1863	19.1%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

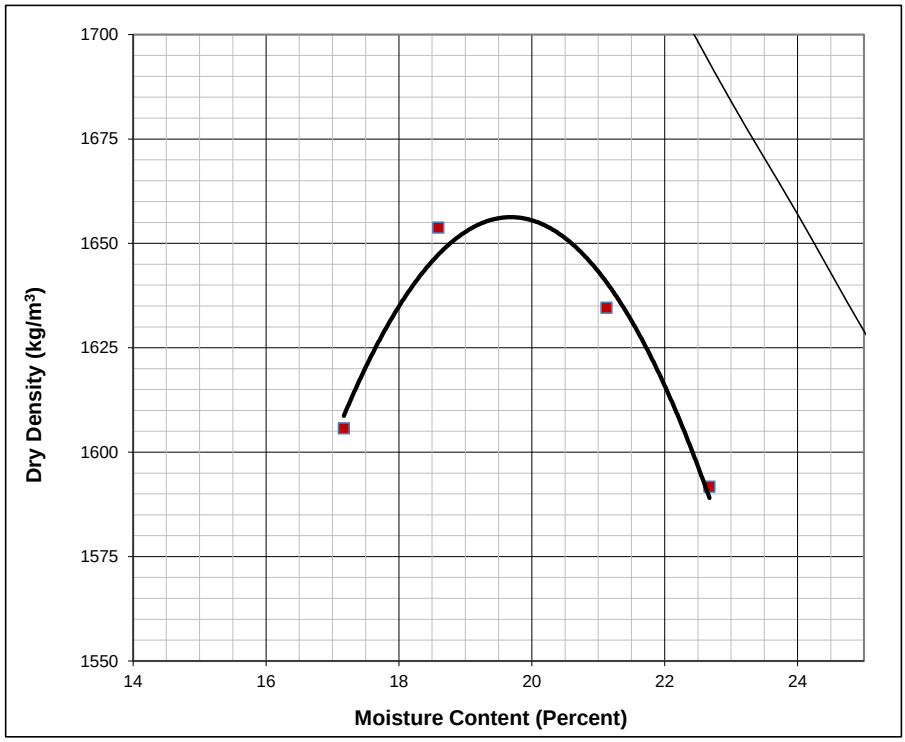
Project:	Snake Lake Reservoir Expansion	**Sample No:**	413B1
Project No.:	1560-193-00	**Source:**	122TP413
Owner:	EID	**Sampled Depth:**	1.0m
File No.:	MDR - 413B1	**Date:**	September 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1656 **Optimum Moisture Content (%): 19.7**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	0.0%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	September 14, 2022	**Insitu Moisture Content (%):**	3.2
Tested By:	Kurt Baker	**Preparation Method:**	Dry

Soil Description CH Inorganic clays of high plasticity, fat clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1606	17.2
2	1654	18.6
3	1635	21.1
4	1592	22.7
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1703	19.2%
10%	1750	18.6%
15%	1798	18.1%
20%	1845	17.7%
25%	1892	17.2%
30%	1939	16.8%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

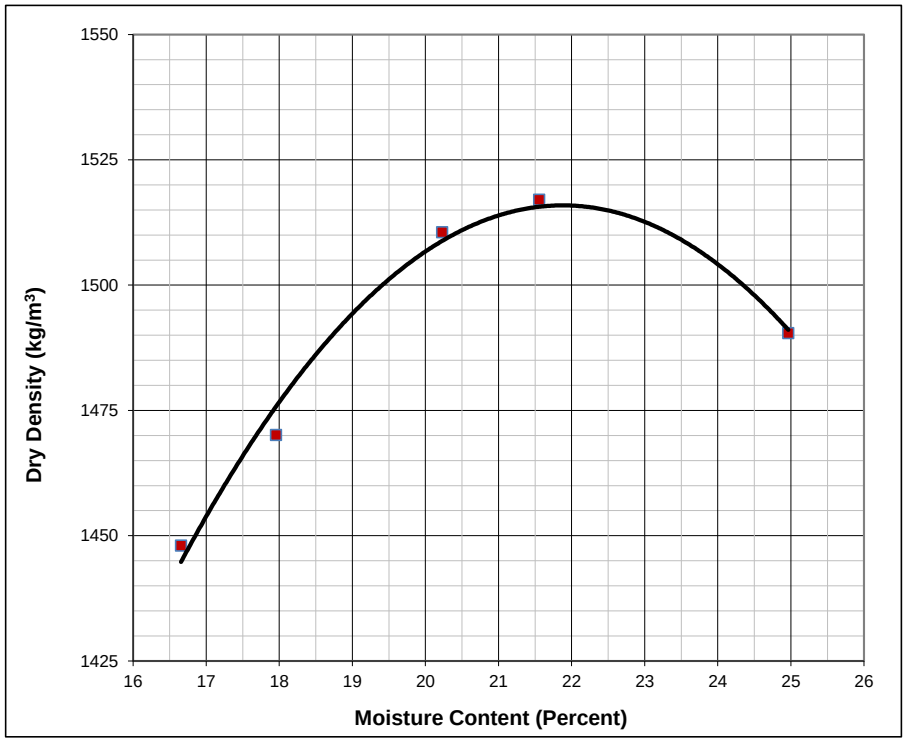
Project:	Snake Lake Reservoir Expansion	**Sample No:**	413B2
Project No.:	1560-193-00	**Source:**	22TP413
Owner:	EID	**Sampled Depth:**	2.5m
File No.:	MDR - 413B2	**Date:**	September 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1516 **Optimum Moisture Content (%): 21.8**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	0.0%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	September 14, 2022	**Insitu Moisture Content (%):**	3.5
Tested By:	Kurt Baker	**Preparation Method:**	Dry

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1448	16.7
2	1470	18.0
3	1511	20.2
4	1517	21.6
5	1490	25.0
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1570	21.0%
10%	1624	20.3%
15%	1679	19.7%
20%	1733	19.1%
25%	1787	18.5%
30%	1841	17.9%

Comments:

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MOISTURE - DENSITY RELATIONSHIP REPORT

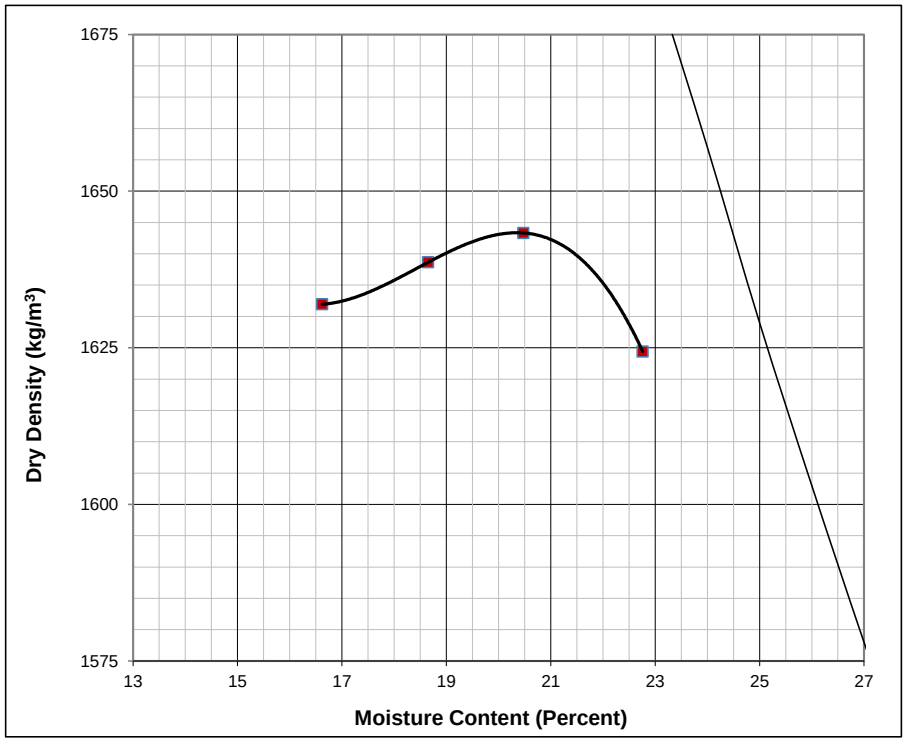
Project:	Snake Lake Reservoir Expansion	**Sample No:**	414B3
Project No.:	1560-193-00	**Source:**	22TP414
Owner:	EID	**Sampled Depth:**	4.5m
File No.:	MDR - 414B3	**Date Sampled:**	July 6, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1643 **Optimum Moisture Content (%): 20.5**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	<5.0%
Mold size:	101.6mm	**Oversize rock density (kg/m^3):**	2600
Test Date:	September 9, 2022	**Insitu Moisture Content (%):**	14.9
Tested By:	B.Tataryn		

Soil Description CH Inorganic clays of high plasticity, fat clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1632	16.6
2	1639	18.7
3	1643	20.5
4	1624	22.8
5		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1691	19.9%
10%	1739	19.4%
15%	1787	18.9%
20%	1834	18.4%
25%	1882	17.9%
30%	1930	17.5%

Comments:

Checked By: Kasz Leavitt, Engineering Licensee

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MOISTURE - DENSITY RELATIONSHIP REPORT

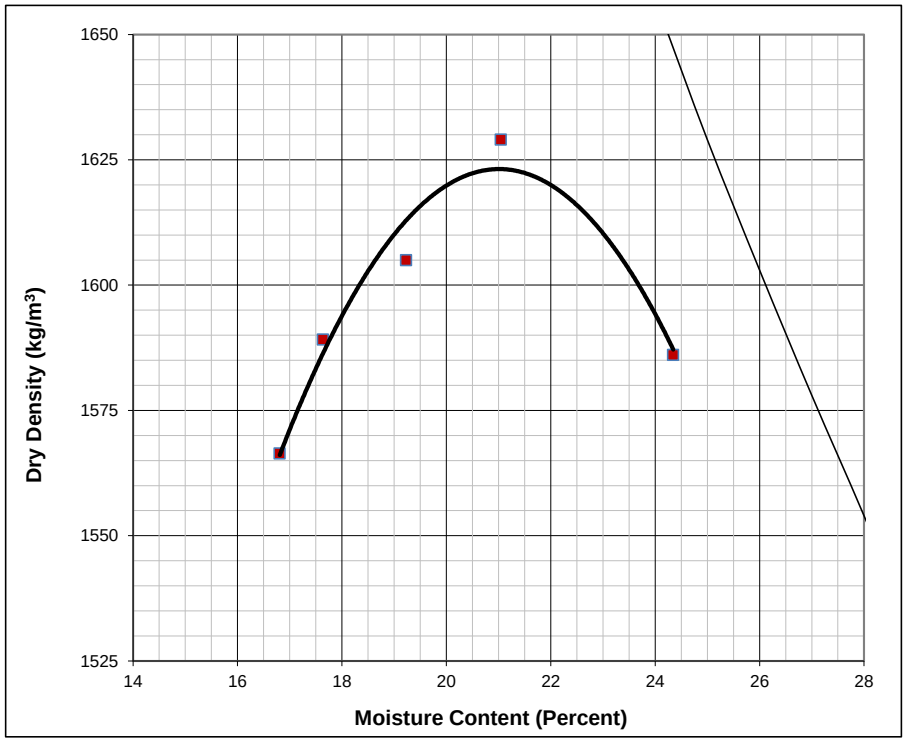
Project:	Snake Lake Reservoir Expansion	**Sample No:**	415B2
Project No.:	1560-193-00	**Source:**	22TP415
Owner:	EID	**Sampled Depth:**	3.5m
File No.:	MDR - 415B2	**Date:**	September 17, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1623 **Optimum Moisture Content (%): 21.5**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	-
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	September 17, 2022	**Insitu Moisture Content (%):**	18.9
Tested By:	Angelo Sultan	**Preparation Method:**	Dry

Soil Description CH Inorganic clays of high plasticity, fat clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1566	16.8
2	1589	17.6
3	1605	19.2
4	1629	21.0
5	1586	24.3
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1672	20.9%
10%	1721	20.3%
15%	1770	19.7%
20%	1818	19.2%
25%	1867	18.7%
30%	1916	18.2%

Comments:

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Checked By: Kasz Leavitt, P.Tech. (Eng.)

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MOISTURE - DENSITY RELATIONSHIP REPORT

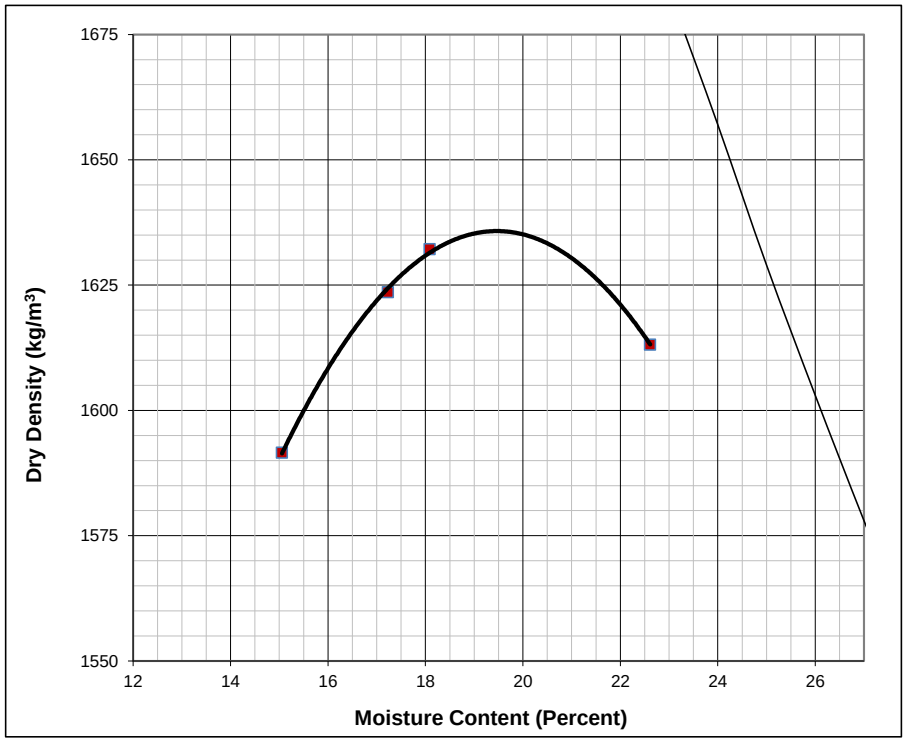
Project:	Snake Lake Reservoir Expansion	**Sample No:**	415B3
Project No.:	1560-193-00	**Source:**	22TP415
Owner:	EID	**Sampled Depth:**	4.0m
File No.:	MDR - 415B3	**Date:**	September 16, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1636 **Optimum Moisture Content (%): 19.5**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	0.0%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	September 16, 2022	**Insitu Moisture Content (%):**	17.8
Tested By:	Angelo Sultan	**Preparation Method:**	Dry

Soil Description CH Inorganic clays of high plasticity, fat clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1592	15.1
2	1624	17.2
3	1632	18.1
4	1613	22.6
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1684	18.9%
10%	1732	18.4%
15%	1781	17.9%
20%	1829	17.4%
25%	1877	17.0%
30%	1925	16.6%

Comments:

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Checked By: Kasz Leavitt, P.Tech. (Eng.)

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MOISTURE - DENSITY RELATIONSHIP REPORT

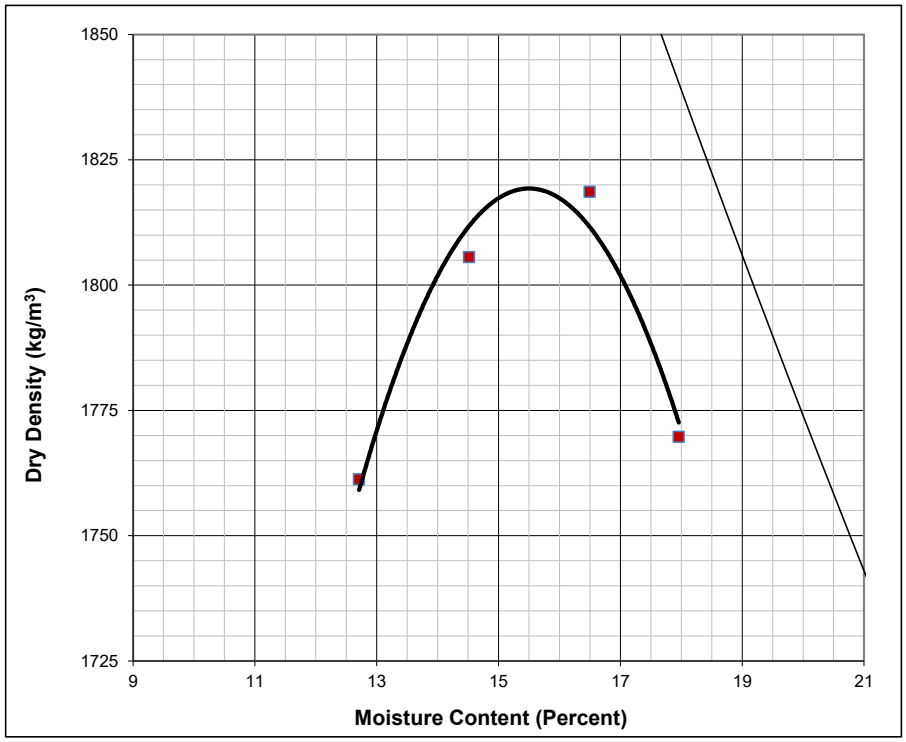
Project:	Snake Lake Reservoir Expansion	**Sample No:**	417B1
Project No.:	1560-193-00	**Source:**	22TP417
Owner:	EID	**Sampled Depth:**	1.1 m
File No.:	MDR - 417B1	**Date:**	August 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1820 **Optimum Moisture Content (%): 15.5**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	9.5%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	August 15, 2022	**Insitu Moisture Content (%):**	0.0
Tested By:	Matt Veldman	**Preparation Method:**	Moist

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1761	12.7
2	1806	14.5
3	1819	16.5
4	1770	18.0
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1859	15.2%
10%	1898	14.9%
15%	1937	14.6%
20%	1976	14.3%
25%	2015	14.0%
30%	2054	13.7%

Comments:

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Checked By: Kasz Leavitt, P.Tech. (Eng.)

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MOISTURE - DENSITY RELATIONSHIP REPORT

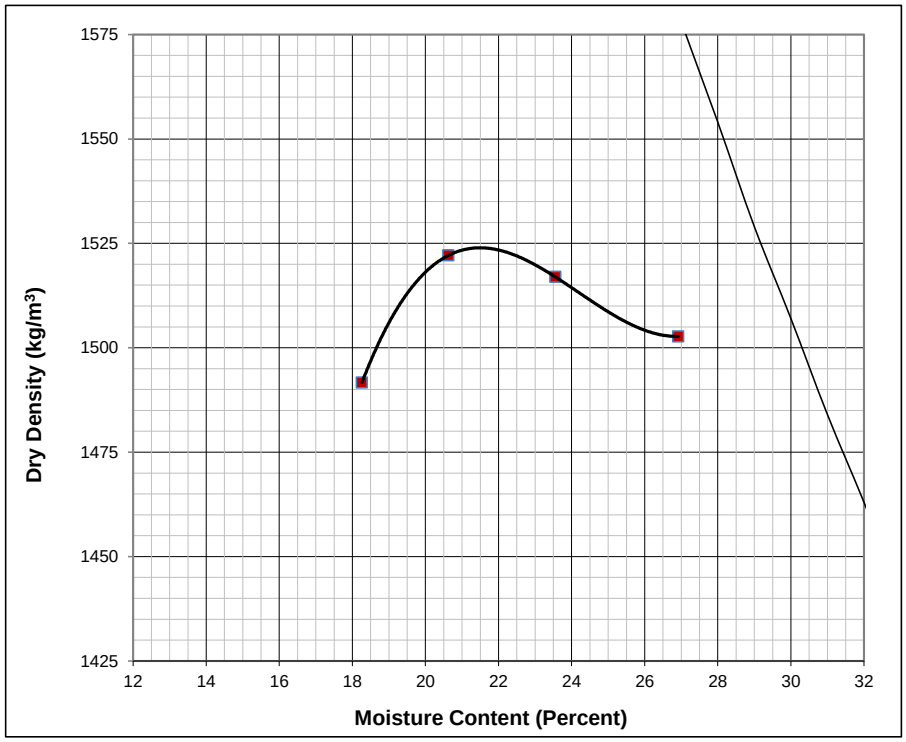
Project:	Snake Lake Reservoir Expansion	**Sample No:**	422B2
Project No.:	1560-193-00	**Source:**	22TP422
Owner:	EID	**Sampled Depth:**	3.8m
File No.:	MDR - 422B2	**Date Sampled:**	July 7, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1524 **Optimum Moisture Content (%): 21.5**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	<5.0%
Mold size:	101.6mm	**Oversize rock density (kg/m^3):**	2600
Test Date:	October 12, 2022	**Insitu Moisture Content (%):**	-
Tested By:	B.Tataryn		

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1492	18.3
2	1522	20.6
3	1517	23.6
4	1503	26.9

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1578	20.8%
10%	1632	20.1%
15%	1685	19.4%
20%	1739	18.8%
25%	1793	18.3%
30%	1847	17.7%

Comments:

Checked By: Kasz Leavitt

Kasz Leavitt, Engineering Licensee

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MOISTURE - DENSITY RELATIONSHIP REPORT

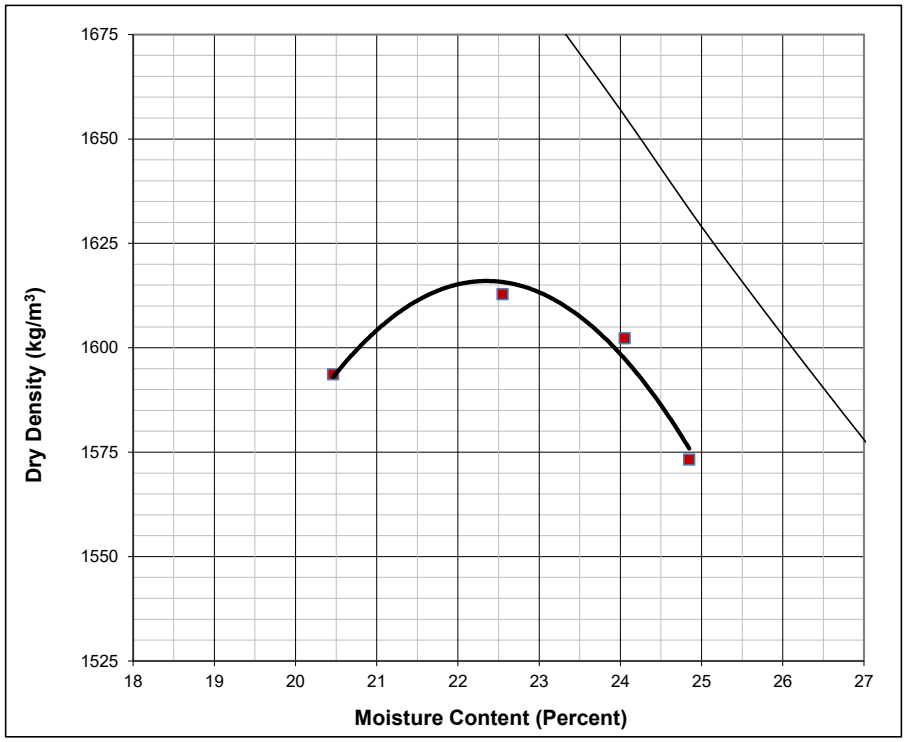
Project:	Snake Lake Reservoir Expansion	**Sample No:**	424B2
Project No.:	1560-193-00	**Source:**	22BH424
Owner:	EID	**Sampled Depth:**	1.2 m
File No.:	MDR - 424B2	**Date:**	August 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1616 **Optimum Moisture Content (%): 22.4**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	9.8%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	August 15, 2022	**Insitu Moisture Content (%):**	11.5
Tested By:	Matt Veldman	**Preparation Method:**	Moist

Soil Description CH Inorganic clays of high plasticity, fat clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1594	20.5
2	1613	22.5
3	1602	24.1
4	1573	24.8
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1665	21.7%
10%	1714	21.1%
15%	1764	20.5%
20%	1813	20.0%
25%	1862	19.4%
30%	1911	18.9%

Comments:

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Checked By: Kasz Leavitt, P.Tech. (Eng.)

Reporting of these results constitutes a testing service only. Engineering interpretation or evaluation of the results is provided only on written request.

MPE Engineering Ltd.
1, 3320 18 Avenue North
Lethbridge, Alberta T1H 5J3
Tel: (403)892-6036

MOISTURE - DENSITY RELATIONSHIP REPORT

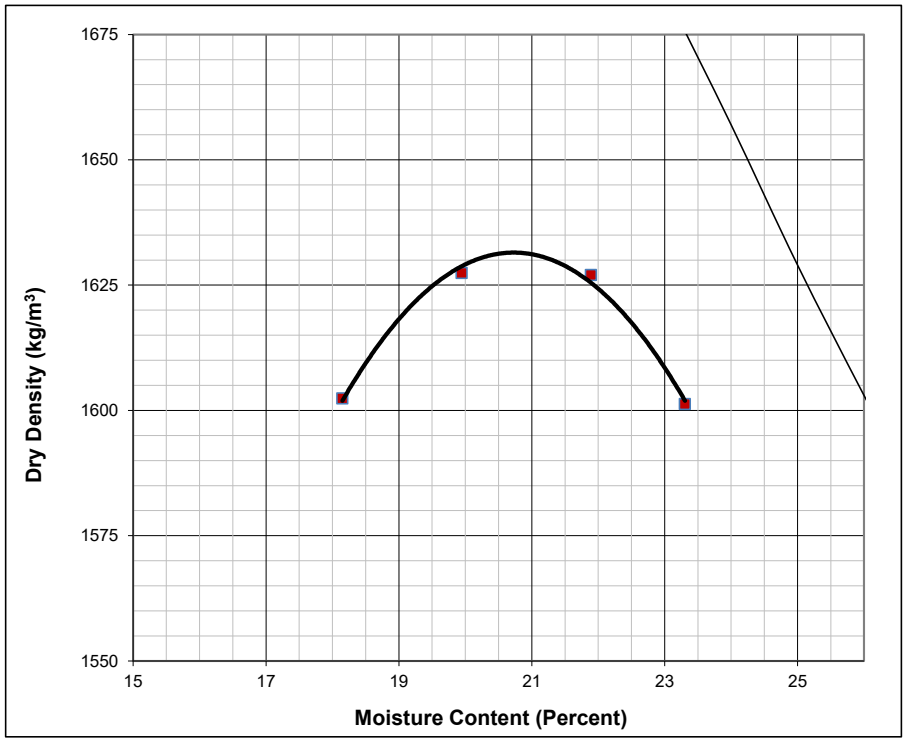
Project:	Snake Lake Reservoir Expansion	**Sample No:**	425B1
Project No.:	1560-193-00	**Source:**	22TP425
Owner:	EID	**Sampled Depth:**	1.0 m
File No.:	MDR - 425B1	**Date:**	August 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1631 **Optimum Moisture Content (%): 20.7**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	0.0%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	August 15, 2022	**Insitu Moisture Content (%):**	11.4
Tested By:	Matt Veldman	**Preparation Method:**	Moist

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1602	18.1
2	1627	19.9
3	1627	21.9
4	1601	23.3
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1679	20.1%
10%	1728	19.5%
15%	1776	19.0%
20%	1825	18.5%
25%	1873	18.0%
30%	1922	17.6%

Comments:

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Checked By: Kasz Leavitt, P.Tech. (Eng.)

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MOISTURE - DENSITY RELATIONSHIP REPORT

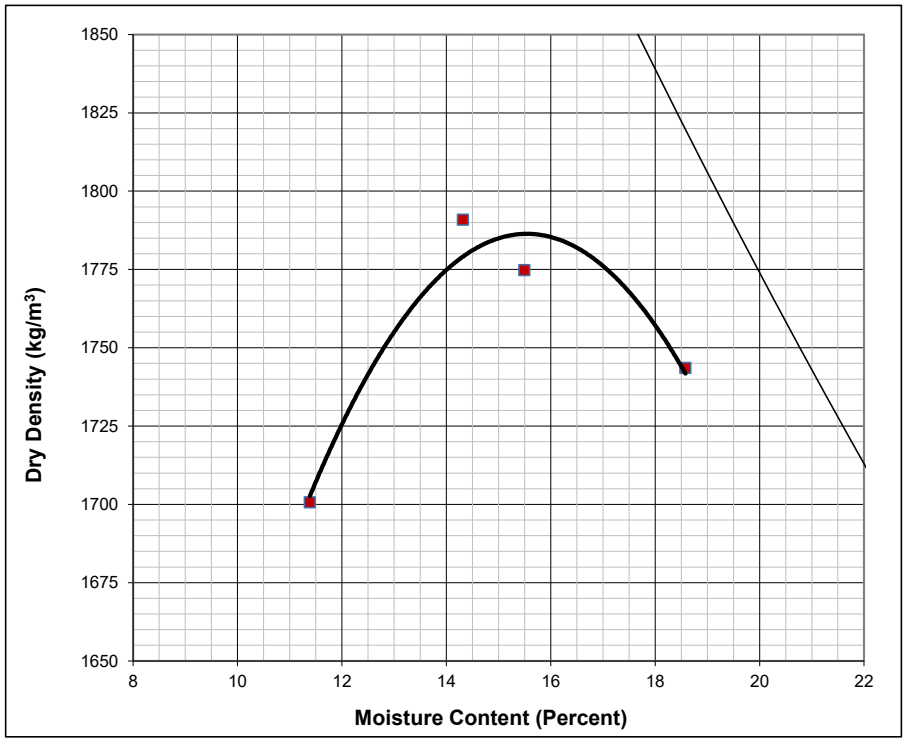
Project:	Snake Lake Reservoir Expansion	**Sample No:**	428B1
Project No.:	1560-193-00	**Source:**	22BH428
Owner:	EID	**Sampled Depth:**	1.0 m
File No.:	MDR - 428B1	**Date:**	August 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1786 **Optimum Moisture Content (%): 15.5**

Method used:	Method B (< 25% retained on 10mm)	**Oversize rock in sample (%):**	9.8%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	August 15, 2022	**Insitu Moisture Content (%):**	11.7
Tested By:	Matt Veldman	**Preparation Method:**	Moist

Soil Description CL Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1701	11.4
2	1791	14.3
3	1775	15.5
4	1744	18.6
5		
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1827	15.2%
10%	1867	14.8%
15%	1908	14.5%
20%	1949	14.2%
25%	1990	13.9%
30%	2030	13.6%

Comments:

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Checked By: Kasz Leavitt, P.Tech. (Eng.)

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MOISTURE - DENSITY RELATIONSHIP REPORT

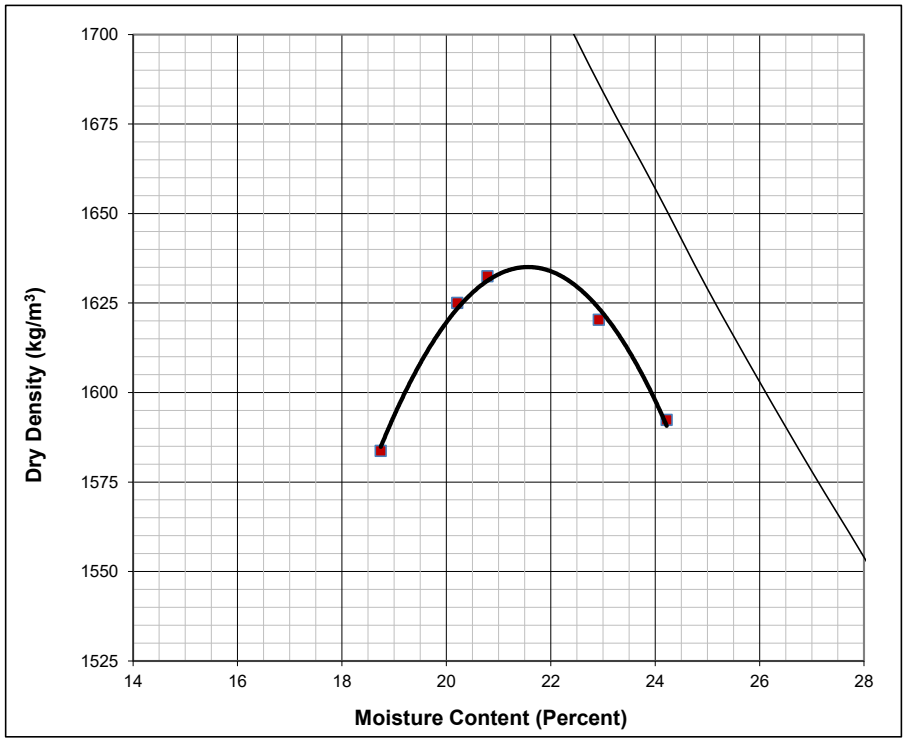
Project:	Snake Lake Reservoir Expansion	**Sample No:**	429B1
Project No.:	1560-193-00	**Source:**	22TP429
Owner:	EID	**Sampled Depth:**	1.0 m
File No.:	MDR - 429B1	**Date:**	August 15, 2022

Tested in accordance with ASTM D698/D1557 and D4718 (Standard /Modified Proctor with rock correction)

Maximum Dry Density (kg/m^3): 1635 **Optimum Moisture Content (%): 21.6**

Method used:	Method A (< 25% retained on 5mm)	**Oversize rock in sample (%):**	9.5%
Equipment:	101.6 mm mold and Manual Hammer	**Oversize rock density (kg/m^3):**	2600
Test Date:	August 15, 2022	**Insitu Moisture Content (%):**	21.4
Tested By:	Matt Veldman	**Preparation Method:**	Moist

Soil Description CI Inorganic clays of medium plasticity, silty clays



Test Data

Trail No.	Dry Density kg/m3	Moisture Content (%)
1	1584	18.7
2	1625	20.2
3	1632	20.8
4	1620	22.9
5	1592	24.2
6		

Field oversize correction values:

(where applicable)

Oversize	Corrected Dry Density (kg/m^3)	Adjusted Moisture
5%	1683	21.0%
10%	1732	20.4%
15%	1780	19.8%
20%	1828	19.3%
25%	1876	18.8%
30%	1925	18.4%

Comments:

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Checked By: Kasz Leavitt, P.Tech. (Eng.)

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THURBER ENGINEERING LTD.

PIN HOLE TEST ASTM 4647

Date: Oct 3/22

Client: MPE Engineering Ltd.
Project No.: 30871

Project: Snake Lake Reservoir Expansion
Tech: JS

Sample Location: 22CH126 UD1 @ 8.61 - 8.78 m
MDD: NA

Sample Description: SHALE, highly weathered, very weak, trace oxides, grey
Opt. WC: NA

Compactive effort: 6 Lifts, 16mm diameter tamping rod.
Field WC: NA

Clock Time	Head (mm)	Flow ml	Flow sec	Flow Rate	Turbidity from Side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from Top	Remarks
2:19	50	2.5	-					✓			no	flow stopped, remade hole twice
2:07	50	10	127	0.08			✓				no	grains on bottom
3:51	50	10	231	0.04			✓				no	grains on bottom
3:27	50	10	207	0.05			✓				no	grains on bottom
2:29	50	10	149	0.07			✓				no	grains on bottom
6:45	50	64.52	405	0.16			✓				no	grains on bottom

Summary:

Method	A
Hydraulic Head	50 mm
Rate of Flow	0.2 ml/sec
Cloud. of Flow	Moderately Dark
Hole Dia. & Shape	Straight, 1-1.5 mm
Dispersive Class.	ND4

Note: the results of this test do not fit into an ASTM dispersive category, but the ND4 classification was selected as being representative of the material

Specimen

Height	7.623 cm
Diameter	3.507 cm
Wt cyl.	119.0 g
Wt cyl. & Soil	259.13 g
Soil	140.15 g
Density wet	1903.8 kg/m^3
Density dry	1580 kg/m^3

Water Content (start)

Wet Wt	21.5
Dry Wt	17.85
Tare	1.03
WC	20.5%

Water Content (end)

Wet Wt	151.07
Dry Wt	127.52
Tare	12.7
WC	20.5%

THURBER ENGINEERING LTD.

PIN HOLE TEST ASTM 4647

Date: Oct 3/22

Client: MPE Engineering Ltd.
Project No.: 30871

Project: Snake Lake Reservoir Expansion
Tech: JS

Sample Location: 22CH137 UD2 @ 8.5 m
MDD: NA

Sample Description: SHALE, unweathered, strong, grey
Opt. WC: NA

Compactive effort: 6 Lifts, 16mm diameter tamping rod.
Field WC: 9.8%

Clock Time	Head (mm)	Flow ml	Flow sec	Flow Rate	Turbidity from Side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from Top	Remarks
1:30	50	1	-					✓			no	flow stopped, remade hole twice
3:40	50	10	220	0.05			✓	✓			no	grains on bottom
2:30	50	10	150	0.07			✓	✓			no	grains on bottom
1:00	50	10.9	60	0.18				✓			no	grains on bottom
3:46	50	62.73	226	0.28				✓			no	grains on bottom

Summary:

Method	A
Hydraulic Head	50 mm
Rate of Flow	0.3 ml/sec
Cloud. of Flow	Moderately Dark
Hole Dia. & Shape	Straight, ~1mm
Dispersive Class.	ND4

Note: the results of this test do not fit into an ASTM dispersive category, but the ND4 classification was selected as being representative of the material

Specimen

Height	7.623 cm
Diameter	3.507 cm
Wt cyl.	119.0 g
Wt cyl. & Soil	258.3 g
Soil	139.3 g
Density wet	1892.3 kg/m^3
Density dry	1581 kg/m^3

Water Content (start)

Wet Wt	25.31
Dry Wt	21.31
Tare	1.02
WC	

Water Content (end)

Wet Wt	149.88
Dry Wt	127.05
Tare	12.64
WC	20.0%

THURBER ENGINEERING LTD.

PIN HOLE TEST ASTM 4647

Date: Oct 4/22

Client: MPE Engineering Ltd.
Project No.: 30871

Project: Snake Lake Reservoir Expansion
Tech: JS

Sample Location: 22CH213 RC3 @ 6.82 - 6.97 m
MDD: NA

Sample Description: Shale - medium weathered, very weak to weak, grey
Opt. WC: NA

Compactive effort: 6 Lifts, 16mm diameter tamping rod.
Field WC: NA

Clock Time	Head (mm)	Flow ml	Flow sec	Flow Rate	Turbidity from Side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from Top	Remarks
3:00	50	3.2	-	-				✓			no	Flow stopped, remade hole
3:33	50	10	213	0.05		✓	✓				no	Grains on bottom
1:44	50	10	104	0.10			✓				no	Grains on bottom
1:04	50	12.72	64	0.20			✓	✓			no	Grains on bottom
0:38	50	10	38	0.26				✓			no	Grains on bottom
3:16	50	52.79	196	0.27			✓	✓			no	Grains on bottom
4:20	50	35.53	260	0.14			✓	✓			no	Grains on bottom
	Ave flow rate =			0.22								
1:01	180	10	61	0.16			✓	✓			no	Lots of grain on bottom
1:55	180	10	115	0.09			✓				no	Lots of grain on bottom
3:02	180	58.99	182	0.32			✓				no	Lots of grain on bottom

Summary:

Method	A
Hydraulic Head	50 mm
Rate of Flow	0.2 ml/sec
Cloud. of Flow	Moderately Dark
Hole Dia. & Shape	Straight, >1.5mm
Dispersive Class.	ND4

Note: the results of this test do not fit into an ASTM dispersive category, but the ND4 classification was selected as being representative of the material

Specimen

Height	7.623 cm
Diameter	3.507 cm
Wt cyl.	119.0 g
Wt cyl. & Soil	258.3 g
Soil	139.3 g
Density wet	1892.3 kg/m^3
Density dry	1581 kg/m^3

Water Content (start)

Wet Wt	26.93
Dry Wt	22.65
Tare	0.98
WC	19.8%

Water Content (end)

Wet Wt	149.16
Dry Wt	126.77
Tare	12.65
WC	19.6%

THURBER ENGINEERING LTD.

PIN HOLE TEST ASTM 4647

Date: Oct 4/22

Client: MPE Engineering Ltd.

Project No.: 30871

Project: Snake Lake Reservoir Expansion

Tech: JS

Sample Location: 22CH302 UD2 @ 9.0 m

MDD: NA

Sample Description: Shale - highly weathered, very weak, brown to grey

Opt. WC: NA

Compactive effort: 6 Lifts, 16mm diameter tamping rod.

Field WC: NA

Clock Time	Head (mm)	Flow ml	Flow sec	Flow Rate	Turbidity from Side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from Top	Remarks
~3:00	50	1.8	-	-				✓				Flow Stopped, remade hole twice
-	50	0	-	-								No flow, dismantled
-	50	0	-	-								No flow, remade hole
1:16	50	10	76	0.13			✓				no	Grains on Bottom
1:24	50	10	84	0.12			✓				no	Grains on Bottom
1:19	50	10	79	0.13			✓				no	Grains on Bottom
0:50	50	10	50	0.20			✓				no	Grains on Bottom
0:49	50	10	49	0.20			✓	✓			no	Grains on Bottom
5:00	50	63.55	300	0.21			✓	✓			no	Grains on Bottom

Summary:

Method	A
Hydraulic Head	50 mm
Rate of Flow	0.2 ml/sec
Cloud. of Flow	Moderately Dark
Hole Dia. & Shape	Straight >1.5mm
Dispersive Class.	ND4

Note: the results of this test do not fit into an ASTM dispersive category, but the ND4 classification was selected as being representative of the material.

Specimen

Height	7.623 cm
Diameter	3.507 cm
Wt cyl.	119 .0 g
Wt cyl. & Soil	258.5 g
Soil	139.3 g
Density wet	1892.3 kg/m^3
Density dry	1577 kg/m^3

Water Content (start)

Wet Wt	27.14
Dry Wt	22.78
Tare	0.98
WC	20.0%

Water Content (end)

Wet Wt	150.94
Dry Wt	127.95
Tare	12.7
WC	19.9%

THURBER ENGINEERING LTD.

PIN HOLE TEST ASTM 4647

Date: Oct 4/22

Client: MPE Eng Ltd

Project No.: 30871

Project: Snake Lake Dam

Tech: JS

Sample Location: 22CH-318 @ 5.61 - 5.75 m

MDD: NA

Sample Description: Clay Shale (CH), very silty, grey.

Opt. WC: NA

Compactive effort: 6 Lifts, 16mm diameter tamping rod.

Field WC: NA

Clock Time	Head (mm)	Flow ml	Flow sec	Flow Rate	Turbidity from Side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from Top	Remarks
3:00	50	-	-	-								No flow, remade hole
3:00	50	3	-	-				✓				Flow stopped, remade hole
2:56	50	10	176	0.06			✓	✓			no	Grains on bottom
1:45	50	10.7	105	0.10			✓	✓			no	Grains on bottom
1:03	50	10	63	0.16			✓	✓			no	Grains on bottom
5:08	50	67.75	308	0.22			✓	✓			no	Grains on bottom

Summary:

Method	A
Hydraulic Head	50 mm
Rate of Flow	0.2 ml/min
Cloud. of Flow	Moderately Dark
Hole Dia. & Shape	Straight, 1 - 1.5 mm
Dispersive Class.	ND4

Note: this does not fit into an ASTM dispersive category but I believe ND4 is the closest.

Specimen

Height	7.621 cm
Diameter	3.507 cm
Wt cyl.	119.0 g
Wt cyl. & Soil	258.9 g
Soil	139.9 g
Density wet	1900.4 kg/m^3
Density dry	1579 kg/m^3

Water Content (start)

Wet Wt	31.18
Dry Wt	26.08
Tare	1.00
WC	20.3%

Water Content (end)

Wet Wt	148.34
Dry Wt	125.28
Tare	12.83
WC	20.5%

THURBER ENGINEERING LTD.

PIN HOLE TEST ASTM 4647

Date: Oct 7/22

Client: MPE Engineering Ltd
Project No.: 30871

Project: Snake Lake Reservoir Expansion
Tech: JS

Sample Location: 22CH202 UD1 @ 6.41 - 6.60 m
MDD: NA

Sample Description: Clay Shale (CI), tr. Calcareous inclusions, grey
Opt. WC: NA

Compactive effort: 6 Lifts, 16mm diameter tamping rod.
Field WC: NA

Clock Time	Head (mm)	Flow ml	Flow sec	Flow Rate	Turbidity from Side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from Top	Remarks
~6:00	50	0.8	-	-				✓			no	Flow stops, remake hole
5:23	50	10.8	323	0.03		✓	✓				no	Grains on bottom
1:58	50	10	118	0.08		✓	✓				no	Grains on bottom
1:00	50	10	60	0.17		✓	✓				no	Grains on bottom
:50	50	10	50	0.20			✓				no	Grains on bottom
:39	50	10	39	0.26			✓				no	Grains on bottom
:37	50	10.4	37	0.28			✓				no	Grains on bottom
:33	50	10	33	0.30			✓				no	Grains on bottom
2:30	50	58.34	150	0.39			✓				no	Grains on bottom
2:30	50	63.17	150	0.42			✓				no	Grains on bottom
	Ave flow Rate =			**0.41**								

Summary:

Method	A
Hydraulic Head	50 mm
Rate of Flow	0.4 ml/sec
Cloud. of Flow	Moderately Dark
Hole Dia. & Shape	Straight, ~1.5 mm
Dispersive Class.	ND4

Note: The results of this test do not fit into an ASTM dispersive category, but the ND4 classification was

Specimen

Height	7.621 cm
Diameter	3.507 cm
Wt cyl.	119.0 g
Wt cyl. & Soil	258.54 g
Soil	139.54 g
Density wet	1895.5 kg/m^3
Density dry	1580 kg/m^3

Water Content (start)

Wet Wt	16.43
Dry Wt	13.87
Tare	1.06
WC	12.0%

Water Content (end)

Wet Wt	149.9
Dry Wt	127.07
Tare	13.91
WC	20.2%

THURBER ENGINEERING LTD.

PIN HOLE TEST ASTM 4647

Date: Oct 7/22

Client: MPE Engineering Ltd
Project No.: 30871

Project: Snake Lake Reservoir Expansion
Tech: JS

Sample Location: 22CH202 UD2 @ 9.88 - 9.91 m
MDD: NA

Sample Description: Clay Shale/Siltstone (CI), grey.
Opt. WC: NA

Compactive effort: 6 Lifts, 16mm diameter tamping rod.
Field WC: NA

Clock Time	Head (mm)	Flow ml	Flow sec	Flow Rate	Turbidity from Side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from Top	Remarks
~4:00	50	0.6					✓				no	Flow stops, remake hole
5:36	50	10	336	0.03		✓					no	Grains on bottom
1:33	50	10	93	0.11		✓	✓				no	Grains on bottom
1:00	50	10	60	0.17		✓	✓				no	Grains on bottom
:37	50	10	37	0.27			✓				no	Grains on bottom
:35	50	10	35	0.29			✓				no	Grains on bottom
2:35	50	60.4	155	0.39			✓				no	Grains on bottom
2:47	50	60.62	167	0.36			✓				no	Grains on bottom

Summary:

Method	A
Hydraulic Head	50 mm
Rate of Flow	0.4 ml/sec
Cloud. of Flow	Moderately Dark
Hole Dia. & Shape	Slightly Irregular, >1.5mm
Dispersive Class.	ND4

Note: The results of this test do not fit into an ASTM dispersive category, but the ND4 classification was

Specimen

Height	7.621 cm
Diameter	3.507 cm
Wt cyl.	119.0 g
Wt cyl. & Soil	258.54 g
Soil	139.54 g
Density wet	1895.5 kg/m^3
Density dry	1580 kg/m^3

Water Content (start)

Wet Wt	17.8
Dry Wt	14.95
Tare	1.00
WC	20.4%

Water Content (end)

Wet Wt	152.4
Dry Wt	128.62
Tare	14.42
WC	20.8%

THURBER ENGINEERING LTD.

PIN HOLE TEST ASTM 4647

Date: Oct 7/22

Client: MPE Engineering Ltd
Project No.: 30871
Project: Snake Lake Reservoir Expansion
Tech: JS

Sample Location: 22CH207 UD2 @ 10.32 - 10.53 m
Sample Description: Clay Shale (CH), silty, siltstone inclusions, grey.
Compactive effort: 6 Lifts, 16mm diameter tamping rod.

MDD: NA
Opt. WC: NA
Field WC: NA

Clock Time	Head (mm)	Flow ml	Flow sec	Flow Rate	Turbidity from Side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from Top	Remarks
~3:00	50	1	-	-				✓			no	Flow stops, remake hole
3:24	50	10	204	0.05		✓					no	Grains on bottom
1:35	50	10	95	0.11		✓	✓				no	Grains on bottom
1:25	50	12.92	85	0.15		✓	✓				no	Grains on bottom
:48	50	10	48	0.21			✓				no	Grains on bottom
:48	50	10	48	0.21			✓				no	Grains on bottom
:48	50	10	48	0.21			✓				no	Grains on bottom
5:00	50	46.77	300	0.16		✓	✓				no	Grains on bottom

Summary:

Method	A
Hydraulic Head	50 mm
Rate of Flow	0.2 ml/sec
Cloud. of Flow	Moderately Dark
Hole Dia. & Shape	Straight, ~2.0 mm
Dispersive Class.	ND4

Note: The results of this test do not fit into an ASTM dispersive category, but the ND4 classification was

Specimen

Height	7.623 cm
Diameter	3.057 cm
Wt cyl.	119.0 g
Wt cyl. & Soil	258.45 g
Soil	139.45 g
Density wet	1894.3 kg/m^3
Density dry	1581 kg/m^3

Water Content (start)

Wet Wt	38.44
Dry Wt	34.18
Tare	12.68
WC	19.8%

Water Content (end)

Wet Wt	150.23
Dry Wt	128
Tare	14.4
WC	19.6%

THURBER ENGINEERING LTD.

PIN HOLE TEST ASTM 4647

Date: Oct 11/22

Client: MPE Engineering Ltd
Project No.: 30871

Project: Snake Lake Reservoir Expansion
Tech: JS

Sample Location: 22CH225 UD2 @ 9.74 - 9.91 m
MDD: NA

Sample Description: Siltstone (ML-CL), clayey, clay shale laminations, grey
Opt. WC: NA

Compactive effort: 6 Lifts, 16mm diameter tamping rod.
Field WC: NA

Clock Time	Head (mm)	Flow ml	Flow sec	Flow Rate	Turbidity from Side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from Top	Remarks
~3:00	50	0	-	-								No flow,remake hole, and again
~5:00	50	0	-	-								No flow, dismantle, remake hole
6:00	50	10	360	0.03		✓					no	Grains on bottom
1:51	50	10	111	0.09		✓	✓				no	Grains on bottom
1:12	50	10	72	0.14			✓				no	Grains on bottom
1:04	50	10	64	0.16			✓				no	Grains on bottom
1:08	50	10	68	0.15			✓				no	Grains on bottom
3:36	50	40	216	0.19			✓				no	Grains on bottom
1:54	50	40	114	0.35			✓				no	Grains on bottom
1:56	50	40	116	0.34			✓				no	Grains on bottom

Summary:

Method	A
Hydraulic Head	50 mm
Rate of Flow	0.3 ml/sec
Cloud. of Flow	Moderately Dark
Hole Dia. & Shape	Straight, ~1.5mm
Dispersive Class.	ND4

Note: The results of this test do not fit into an ASTM dispersive category, but the ND4 classification was

Specimen

Height	7.623 cm
Diameter	3.057 cm
Wt cyl.	119.0 g
Wt cyl. & Soil	258.14 g
Soil	139.14 g
Density wet	1890.1 kg/m^3
Density dry	1579 kg/m^3

Water Content (start)

Wet Wt	37.22
Dry Wt	33.2
Tare	12.75
WC	19.7%

Water Content (end)

Wet Wt	150.72
Dry Wt	128.12
Tare	13.91
WC	19.7%

THURBER ENGINEERING LTD.

PIN HOLE TEST ASTM 4647

Date: Oct 11/22

Client: MPE Engineering Ltd
Project No.: 30871

Project: Snake Lake Reservoir Expansion
Tech: JS

Sample Location: 22CH309 UD1 @ 6.0 m
MDD: NA

Sample Description: Weathered Clay Shale (CH), silty, trace oxides, grey
Opt. WC: NA

Compactive effort: 6 Lifts, 16mm diameter tamping rod.
Field WC: NA

Clock Time	Head (mm)	Flow ml	Flow sec	Flow Rate	Turbidity from Side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from Top	Remarks
~4:00	50	-	-	-								No flow, remake hole
3:37	50	~5	-	-								Flow stops, remake hole
4:21	50	10	261	0.04								A few grains on bottom
10:00	50	5.4	-	-								flow almost stops, remake hole
1:44	50	10	104	0.10								Grains on bottom
2:01	50	10	121	0.08								Grains on bottom
1:52	50	10	112	0.09								Grains on bottom
6:00	50	88.7	360	0.25								Grains on bottom

Summary:

Method	A
Hydraulic Head	50 mm
Rate of Flow	0.2 ml/sec
Cloud. of Flow	Slightly Dark
Hole Dia. & Shape	Straight, 1.75 mm
Dispersive Class.	ND4

Note: The results of this test do not fit into an ASTM dispersive category, but the ND4 classification was

Specimen

Height	7.623 cm
Diameter	3.057 cm
Wt cyl.	119.0 g
Wt cyl. & Soil	139.45 g
Soil	139.45 g
Density wet	1894.3 kg/m^3
Density dry	1581 kg/m^3

Water Content (start)

Wet Wt	34.79
Dry Wt	31.12
Tare	12.76
WC	20.0%

Water Content (end)

Wet Wt	151.76
Dry Wt	128.27
Tare	12.64
WC	20.3%

JAR SLAKE TEST REPORT

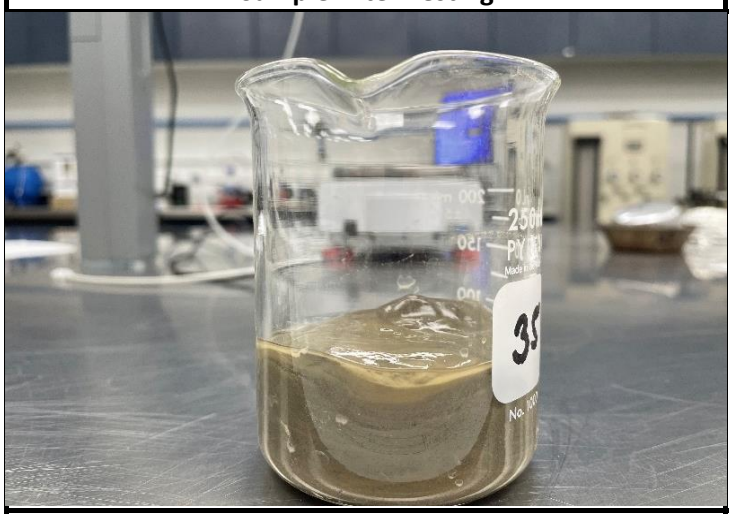
THURBER ENGINEERING LTD.

Suite 350, 7330 Fisher Street S.E., CALGARY, AB T2H 2H8 T. (403) 253-9217 F. (403) 252-8159 www.thurber.ca

Client:	MPE Engineering Ltd.	Date Sampled:	June 3, 2022
Project:	Snake Lake Reservoir Expansion	Date Tested:	September 14, 2022
Project No.:	30871	Tested By:	PGL
		Test Method:	FWHA DOT Jar Slake Test Procedure
Initial Moisture Content:	14.28%		
Sample Location:	22CH126	Rock Type:	Shale - highly weathered, very weak
Sample No.:	UD1	Moisture Condition:	OVEN DRIED
Sample Depth:	8.61 m - 8.78 m	Water Used:	Tap Water

Sample Prior to Testing

Sample After Testing



Results	
Jar Durability Class (I_J)	1
Material Slaking Observation:	Mud
Slaking Potential:	Highly Prone to Slaking
Durability Against Slaking:	Very Low
Swellling Potential	Yes

Remarks:

Sample swelled above water level, water was slightly murky upon completion of test.

Checked By: CJS

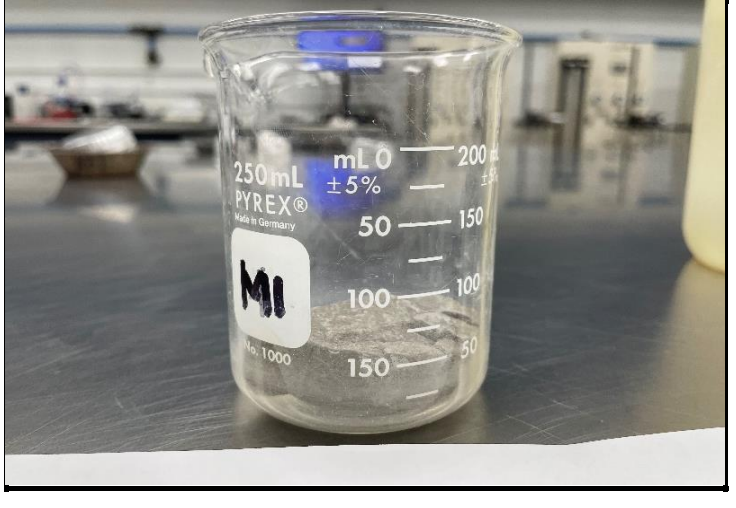
JAR SLAKE TEST REPORT

THURBER ENGINEERING LTD.

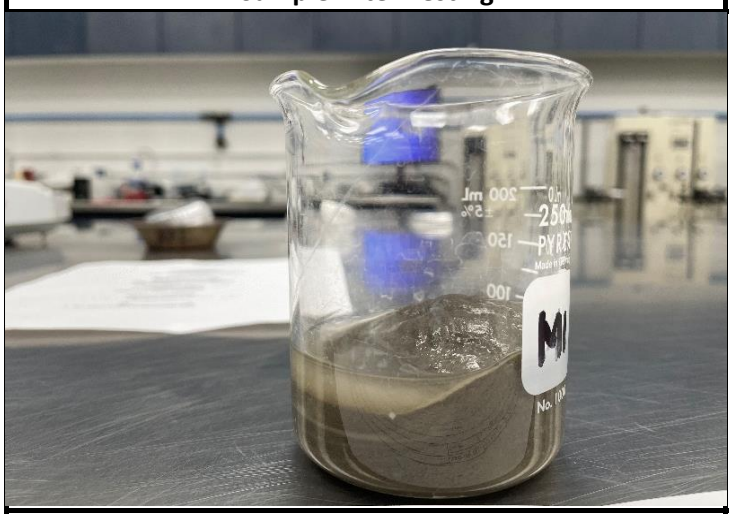
Suite 350, 7330 Fisher Street S.E., CALGARY, AB T2H 2H8 T. (403) 253-9217 F. (403) 252-8159 www.thurber.ca

Client:	MPE Engineering Ltd.	Date Sampled:	June 9, 2022
Project:	Snake Lake Reservoir expansion	Date Tested:	September 14, 2022
Project No.:	30871	Tested By:	PGL
		Test Method:	FWHA DOT Jar Slake Test Procedure
Initial Moisture Content:	10.18%		
Sample Location:	22CH137	Rock Type:	Shale - unweathered, strong
Sample No.:	UD2	Moisture Condition:	OVEN DRIED
Sample Depth:	8.50 m	Water Used:	Tap Water

Sample Prior to Testing



Sample After Testing



Results	
Jar Durability Class (I_J)	1
Material Slaking Observation:	Mud
Slaking Potential:	Highly Prone to Slaking
Durability Against Slaking:	Very Low
Swellling Potential	Yes

Remarks:

Sample swelled above water level, water was slightly murky upon completion of the test.

Checked By: CJS

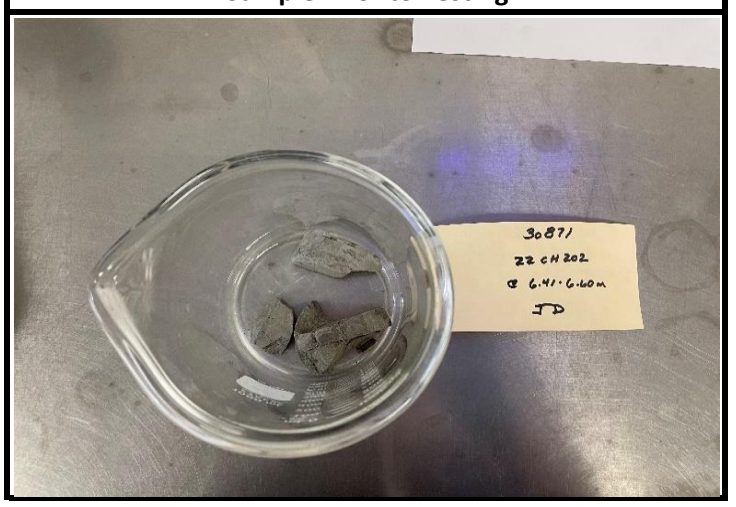
THURBER ENGINEERING LTD.

Suite 350, 7330 Fisher Street S.E., CALGARY, AB T2H 2H8 T. (403) 253-9217 F. (403) 252-8159 www.thurber.ca

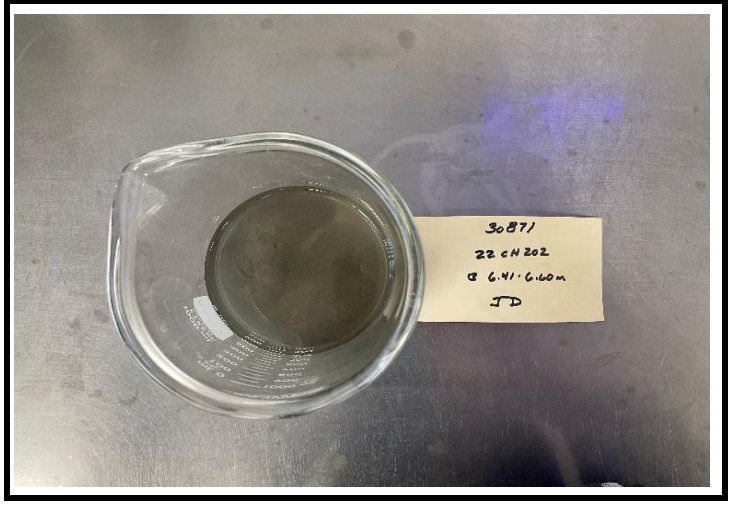
JAR SLAKE TEST REPORT

Client:	MPE Engineering Ltd.	Date Sampled:	June 11, 2022
Project:	Snake Lake Reservoir Expansion	Date Tested:	October 11, 2022
Project No.:	30871	Tested By:	JAP
		Test Method:	FHWA DOT Jar Slake Test Procedure
Initial Moisture Content:	12.2%		
Sample Location:	22CH202	Rock Description:	SHALE, medium weathered, strong, grey
Sample No.:	UD1	Moisture Condition:	OVEN DRIED
Sample Depth:	6.41 - 6.60 m	Water Used:	Distilled Water

Sample Prior to Testing



Sample After Testing



Results	
Jar Durability Class (I_J)	1
Material Slaking Observation:	Mud
Slaking Potential:	Highly Prone to Slaking
Durability Against Slaking:	Very Low
Swellling Potential	Low

Remarks:

Some minor sample swelling was noted
Water was slighly murky

Checked By: MAM

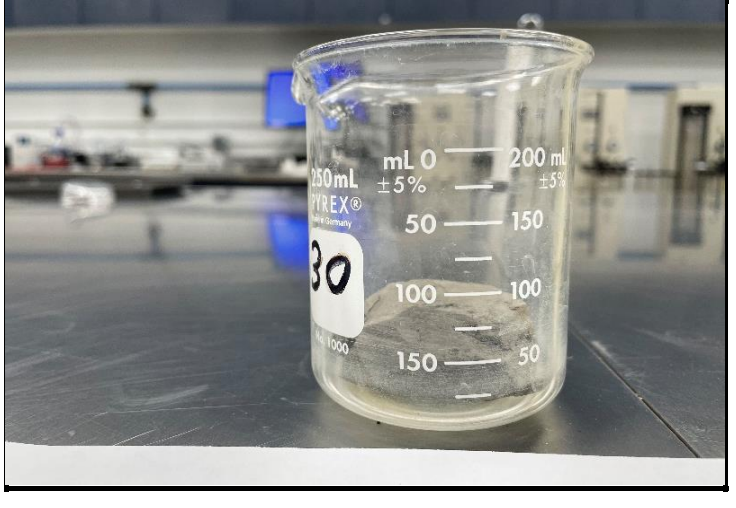
JAR SLAKE TEST REPORT

THURBER ENGINEERING LTD.

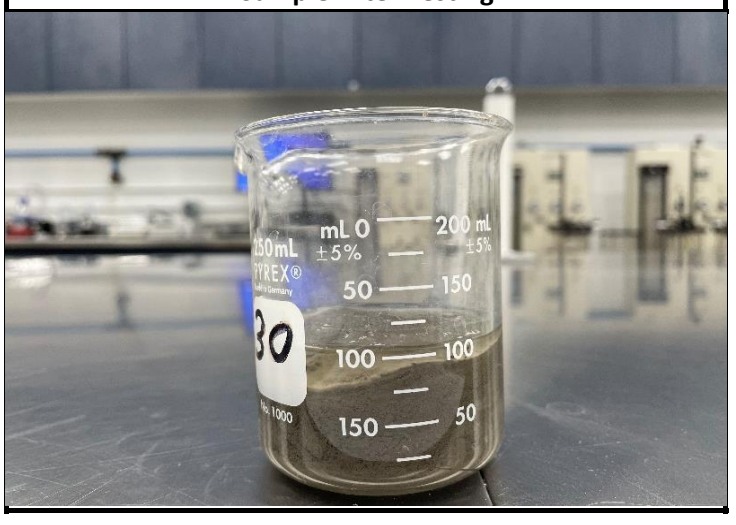
Suite 350, 7330 Fisher Street S.E., CALGARY, AB T2H 2H8 T. (403) 253-9217 F. (403) 252-8159 www.thurber.ca

Client:	MPE Engineering Ltd.	Date Sampled:	June 11, 2022
Project:	Snake Lake Reservoir Expansion	Date Tested:	September 14, 2022
Project No.:	30871	Tested By:	PGL
		Test Method:	FWHA DOT Jar Slake Test Procedure
Initial Moisture Content:	13.91%		
Sample Location:	22CH202	Rock Type:	Shale - mod. weathered, med. strong
Sample No.:	UD2	Moisture Condition:	OVEN DRIED
Sample Depth:	9.88 m - 10.07m	Water Used:	Tap Water

Sample Prior to Testing



Sample After Testing



Results	
Jar Durability Class (I_J)	1
Material Slaking Observation:	Mud
Slaking Potential:	Highly Prone to Slaking
Durability Against Slaking:	Very Low
Swellling Potential	Yes

Remarks:

Sample swelled abover water level, water was clear upon completion of test.

Checked By: CJS

JAR SLAKE TEST REPORT

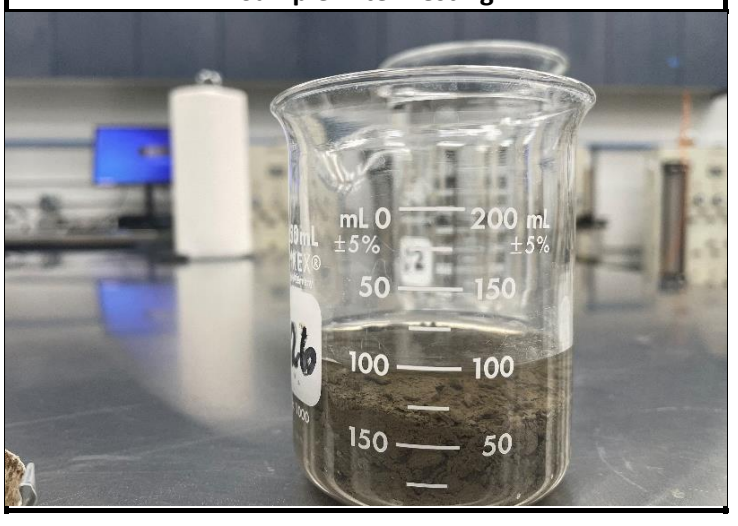
THURBER ENGINEERING LTD.

Suite 350, 7330 Fisher Street S.E., CALGARY, AB T2H 2H8 T. (403) 253-9217 F. (403) 252-8159 www.thurber.ca

Client:	MPE Engineering Ltd.	Date Sampled:	June 17, 2022
Project:	Snake Lake Reservoir Expansion	Date Tested:	September 14, 2022
Project No.:	30871	Tested By:	PGL
		Test Method:	FWHA DOT Jar Slake Test Procedure
Initial Moisture Content:	13.51%		
Sample Location:	22CH207	Rock Type:	Shale - moderately weathered, very weak
Sample No.:	UD2	Moisture Condition:	OVEN DRIED
Sample Depth:	10.32 m - 10.53 m	Water Used:	Tap Water

Sample Prior to Testing

Sample After Testing



Results	
Jar Durability Class (I_J)	1
Material Slaking Observation:	Mud
Slaking Potential:	Highly Prone to Slaking
Durability Against Slaking:	Very Low
Swellling Potential	Yes

Remarks:

Sampled exhibited slight swelling, water was clear upon completion of test.

Checked By: CJS/SAP

JAR SLAKE TEST REPORT

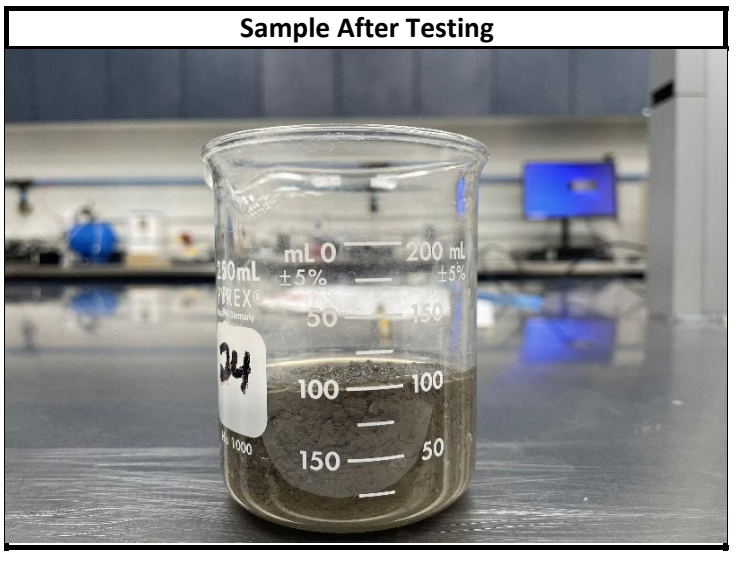
THURBER ENGINEERING LTD.

Suite 350, 7330 Fisher Street S.E., CALGARY, AB T2H 2H8 T. (403) 253-9217 F. (403) 252-8159 www.thurber.ca

Client:	MPE Engineering Ltd.	Date Sampled:	June 27, 2022
Project:	Snake Lake Reservoir Expansion	Date Tested:	September 14, 2022
Project No.:	30871	Tested By:	PGL
		Test Method:	FWHA DOT Jar Slake Test Procedure
Initial Moisture Content:	12.51%		
Sample Location:	22CH225	Rock Type:	Shale - slightly weathered, very weak
Sample No.:	UD2	Moisture Condition:	OVEN DRIED
Sample Depth:	9.74 m - 9.91m	Water Used:	Tap Water

Sample Prior to Testing

Sample After Testing



Results	
Jar Durability Class (I_J)	2
Material Slaking Observation:	Flakes
Slaking Potential:	Highly Prone to Slaking
Durability Against Slaking:	Low
Swellling Potential	Yes

Remarks:

Sample swelled above water level, water was clear upon completion of test.

Checked By: CJS

JAR SLAKE TEST REPORT

THURBER ENGINEERING LTD.

Suite 350, 7330 Fisher Street S.E., CALGARY, AB T2H 2H8 T. (403) 253-9217 F. (403) 252-8159 www.thurber.ca

Client:	MPE Engineering Ltd.	Date Sampled:	July 7, 2022
Project:	Snake Lake Reservoir Expansion	Date Tested:	September 14, 2022
Project No.:	30871	Tested By:	PGL
		Test Method:	FWHA DOT Jar Slake Test Procedure
Initial Moisture Content:	15.17%		
Sample Location:	22CH302	Rock Type:	Shale - highly weathered, weak
Sample No.:	UD2	Moisture Condition:	OVEN DRIED
Sample Depth:	9.00 m	Water Used:	Tap Water

Sample Prior to Testing

Sample After Testing

Results	
Jar Durability Class (I_J)	1
Material Slaking Observation:	Mud
Slaking Potential:	Highly Prone to Slaking
Durability Against Slaking:	Very Low
Swellling Potential	Yes

Remarks:

No sample swelling noted, water was slightly murky upon completion of test.

Checked By: CJS

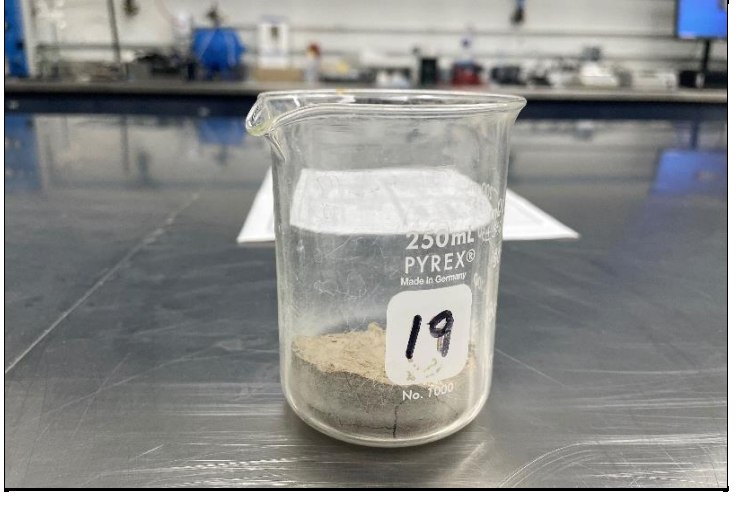
JAR SLAKE TEST REPORT

THURBER ENGINEERING LTD.

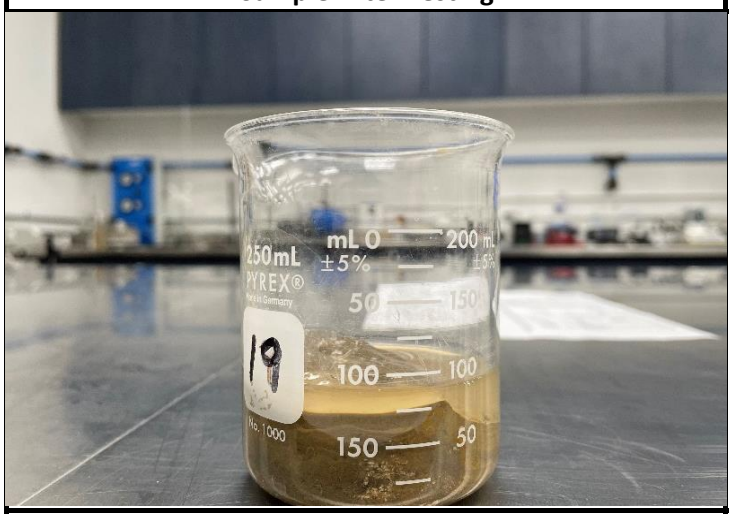
Suite 350, 7330 Fisher Street S.E., CALGARY, AB T2H 2H8 T. (403) 253-9217 F. (403) 252-8159 www.thurber.ca

Client:	MPE Engineering Ltd.	Date Sampled:	July 11, 2022
Project:	Snake Lake Reservoir Expansion	Date Tested:	September 14, 2022
Project No.:	30871	Tested By:	PGL
		Test Method:	FWHA DOT Jar Slake Test Procedure
Initial Moisture Content:	17.30%		
Sample Location:	22CH309	Rock Type:	Shale - highly weathered, weak
Sample No.:	UD1	Moisture Condition:	OVEN DRIED
Sample Depth:	6.00 m - 6.12 m	Water Used:	Tap Water

Sample Prior to Testing



Sample After Testing



Results	
Jar Durability Class (I_J)	1
Material Slaking Observation:	Mud
Slaking Potential:	Highly Prone to Slaking
Durability Against Slaking:	Very Low
Swellling Potential	Yes

Remarks:

Swelling abover water level, water turned brown/murky upon completion of test.

Checked By: CJS/SAP

JAR SLAKE TEST REPORT

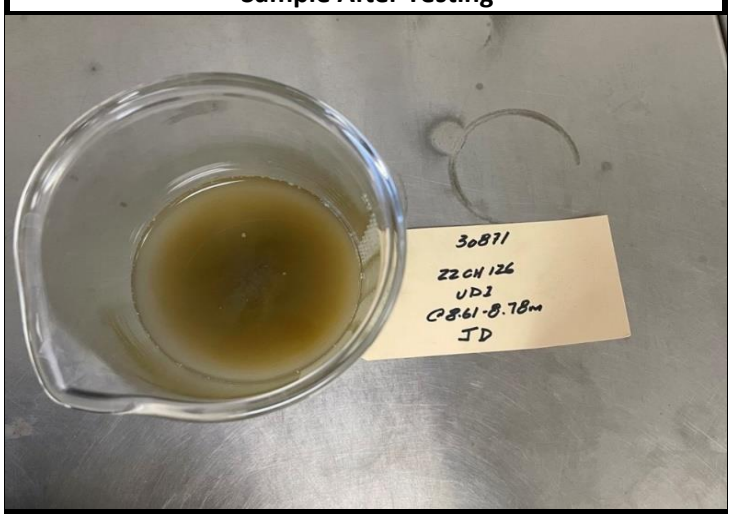
THURBER ENGINEERING LTD.

Suite 350, 7330 Fisher Street S.E., CALGARY, AB T2H 2H8 T. (403) 253-9217 F. (403) 252-8159 www.thurber.ca

Client:	MPE Engineering Ltd.	Date Sampled:	June 3, 2022
Project:	Snake Lake Reservoir Expansion	Date Tested:	October 11, 2022
Project No.:	30871	Tested By:	NM
		Test Method:	FHWA DOT Jar Slake Test Procedure
Initial Moisture Content:	13.7%		
Sample Location:	22CH126	Rock Description:	E, clayey, silty, highlyweathered, light brown to darkgrey
Sample No.:	UD1	Moisture Condition:	OVEN DRIED
Sample Depth:	8.61 - 8.78 m	Water Used:	Distilled Water

Sample Prior to Testing

Sample After Testing



Results	
Jar Durability Class (I_J)	1
Material Slaking Observation:	Mud
Slaking Potential:	Highly Prone to Slaking
Durability Against Slaking:	Very Low
Swellling Potential	Low

Remarks:

Checked By: MAM

THURBER ENGINEERING LTD.

METHYLENE BLUE INDEX TEST REPORT

Client:	MPE				
Project No.:	30871				
Project Name:	Snake Lake Reservoir Expansion6/30/2022				
Test date:	2017-10-18	Tested by:	WG	Reviewed by:	CJS/SAP

Sample Information

Sample Name:	22CH204 UD3	Notes:
Sample Date:	2022-06-16	
Depth:	15.43-15.5 m	
Location:	N/A	

Test Data

Trial No.	1	2	3	4	5
Sample pH adjustment (Yes or No) =	Yes				
Normality of methylene blue =	0.006				
Solids content (%) =	19.45				
Total mass of sample used (g) =	1.01				
Mass of solids in sample (g) =	0.20				
Mass of water in sample (g) =	0.81				
Mass of water added (g) =	48.24				
Mass of 1M $NaHCO_3$ used (g) =	0.74				
Volume of methylene blue used (mL) =	22.5				
MBI (meq/100g) =	68.7				
Average MBI (meq/100g) =	68.7				

Standard/Reference: Modified AST Methylene Blue Procedure March 20, 2013

Revised: 2019-04-05

MPE Engineering Ltd.
1, 3320 18 Avenue North
Lethbridge, Alberta T1H 5J3
Tel: (403)892-6036

ATTERBERG LIMITS

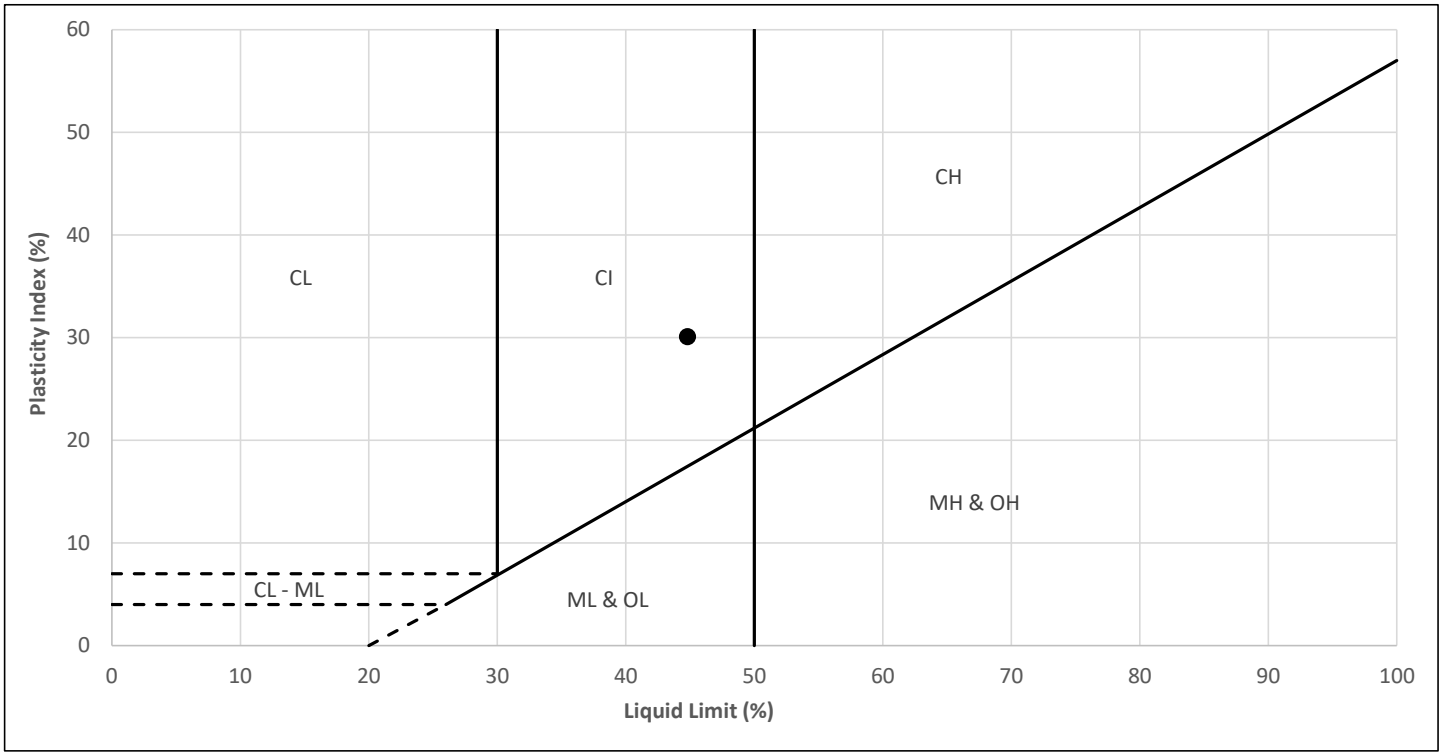
Project:	Snake Lake Reservoir Expansion	**Sample #:**	1AU1
Project No.:	1560-193-00	**Source:**	22VWP-01
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 1AU1	**Test Date:**	13-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.8
Plastic Limit (PL)	14.7
Plasticity Index (PI)	30.1

Soil Plasticity	Medium
Soil Classification	CI



Comments:

CERTIFIED BY CCIL Canadian Council of Independent Laboratories For specific tests as listed on www.ccil.com

Reviewed By: Kasz Leavitt, P.Tech. (Eng.)

Reporting of these results constitutes a testing service only. Engineering interpretation or evaluation of the results is provided only on written request.

MPE Engineering Ltd.
1, 3320 18 Avenue North
Lethbridge, Alberta T1H 5J3
Tel: (403)892-6036

ATTERBERG LIMITS

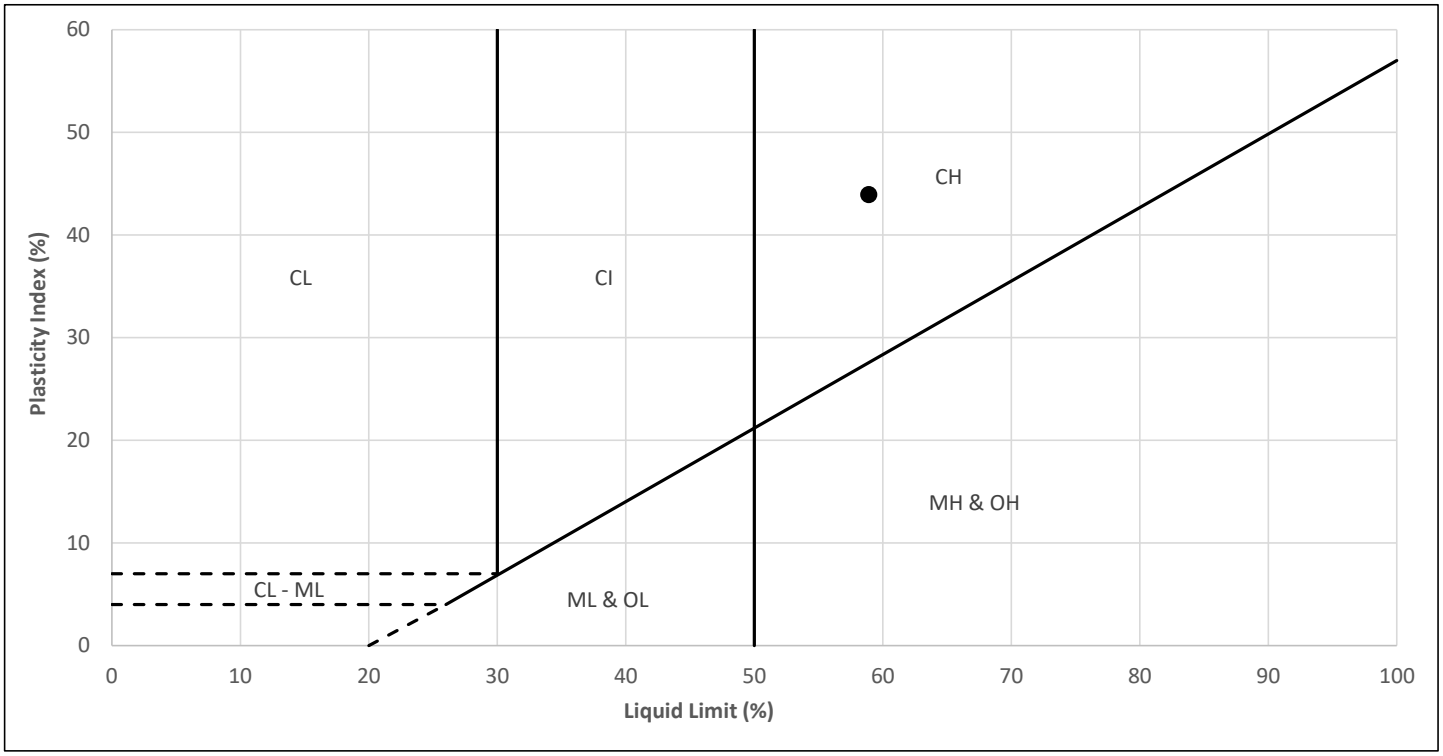
Project:	Snake Lake Reservoir Expansion	**Sample #:**	1AU3
Project No.:	1560-193-00	**Source:**	22VWP-01
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 1AU3	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	58.9
Plastic Limit (PL)	15.0
Plasticity Index (PI)	43.9

Soil Plasticity	High
Soil Classification	CH



Comments:

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Reviewed By: _____
Kasz Leavitt, P.Tech. (Eng.)

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MPE Engineering Ltd.
1, 3320 18 Avenue North
Lethbridge, Alberta T1H 5J3
Tel: (403)892-6036

ATTERBERG LIMITS

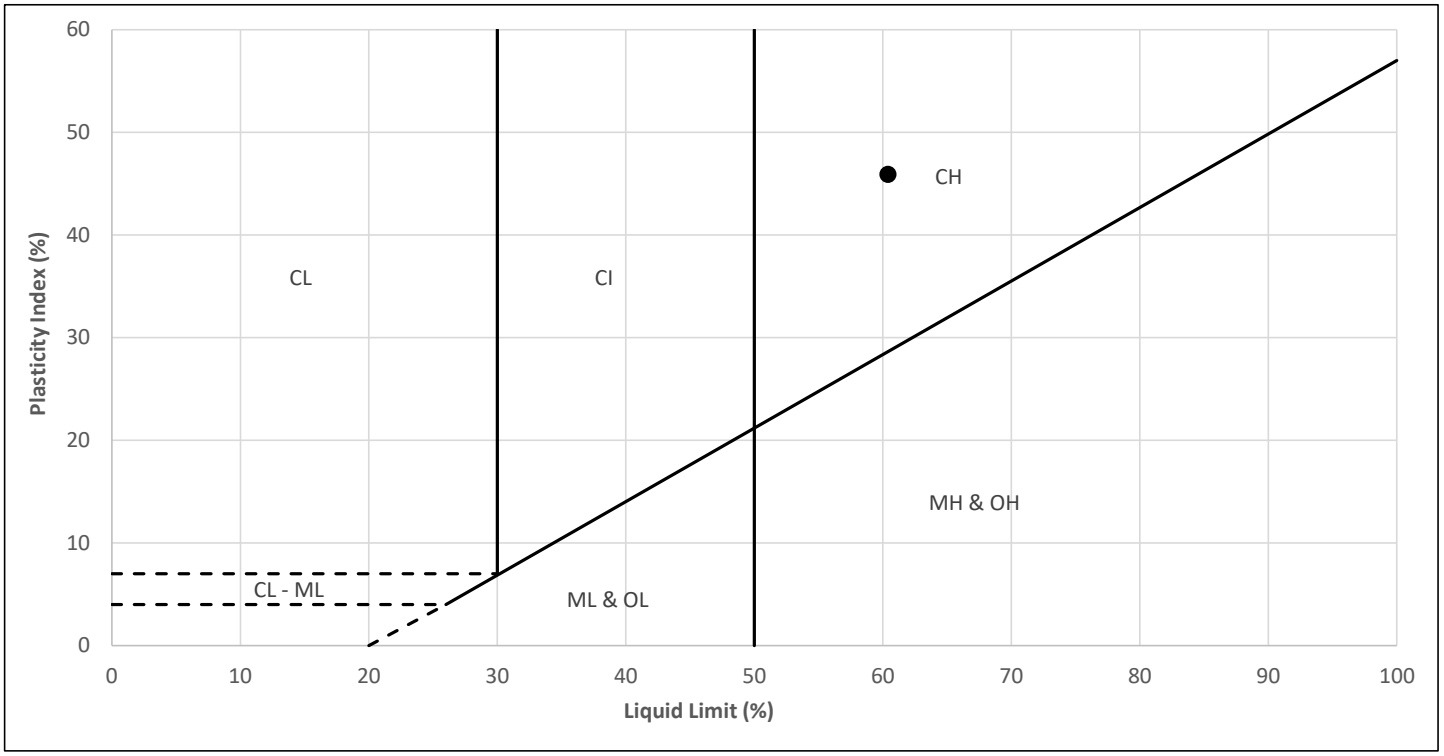
Project:	Snake Lake Reservoir Expansion	**Sample #:**	1AU5
Project No.:	1560-193-00	**Source:**	22VWP-01
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 1AU5	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	60.4
Plastic Limit (PL)	14.5
Plasticity Index (PI)	45.9

Soil Plasticity	High
Soil Classification	CH



Comments:

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Reviewed By: Kasz Leavitt, P.Tech. (Eng.)

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MPE Engineering Ltd.
1, 3320 18 Avenue North
Lethbridge, Alberta T1H 5J3
Tel: (403)892-6036

ATTERBERG LIMITS

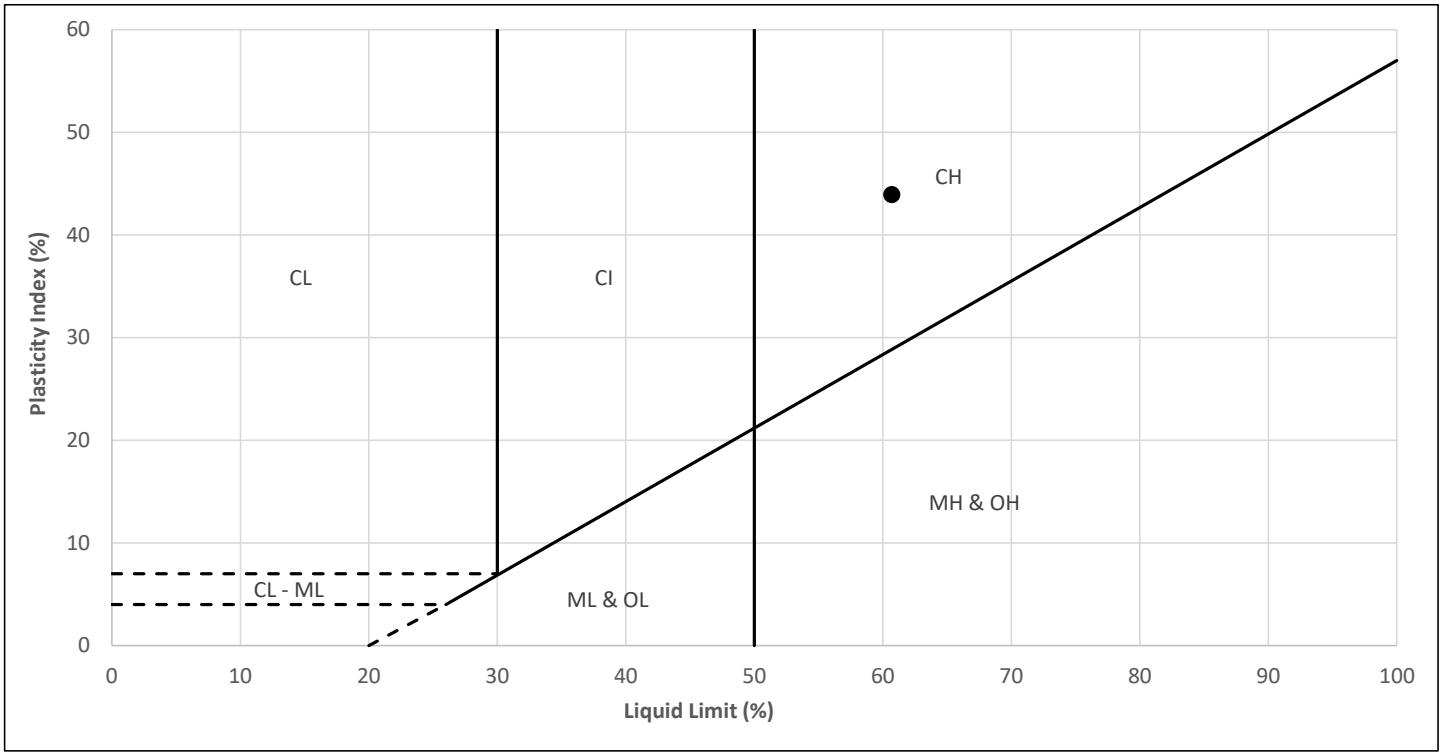
Project:	Snake Lake Reservoir Expansion	**Sample #:**	1AU7
Project No.:	1560-193-00	**Source:**	22VWP-01
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 1AU7	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	60.7
Plastic Limit (PL)	16.7
Plasticity Index (PI)	44.0

Soil Plasticity	High
Soil Classification	CH



Comments:

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Reviewed By: _____
Kasz Leavitt, P.Tech. (Eng.)

Reporting of these results constitutes a testing service only. Engineering interpretation or evaluation of the results is provided only on written request.

MPE Engineering Ltd.
1, 3320 18 Avenue North
Lethbridge, Alberta T1H 5J3
Tel: (403)892-6036

ATTERBERG LIMITS

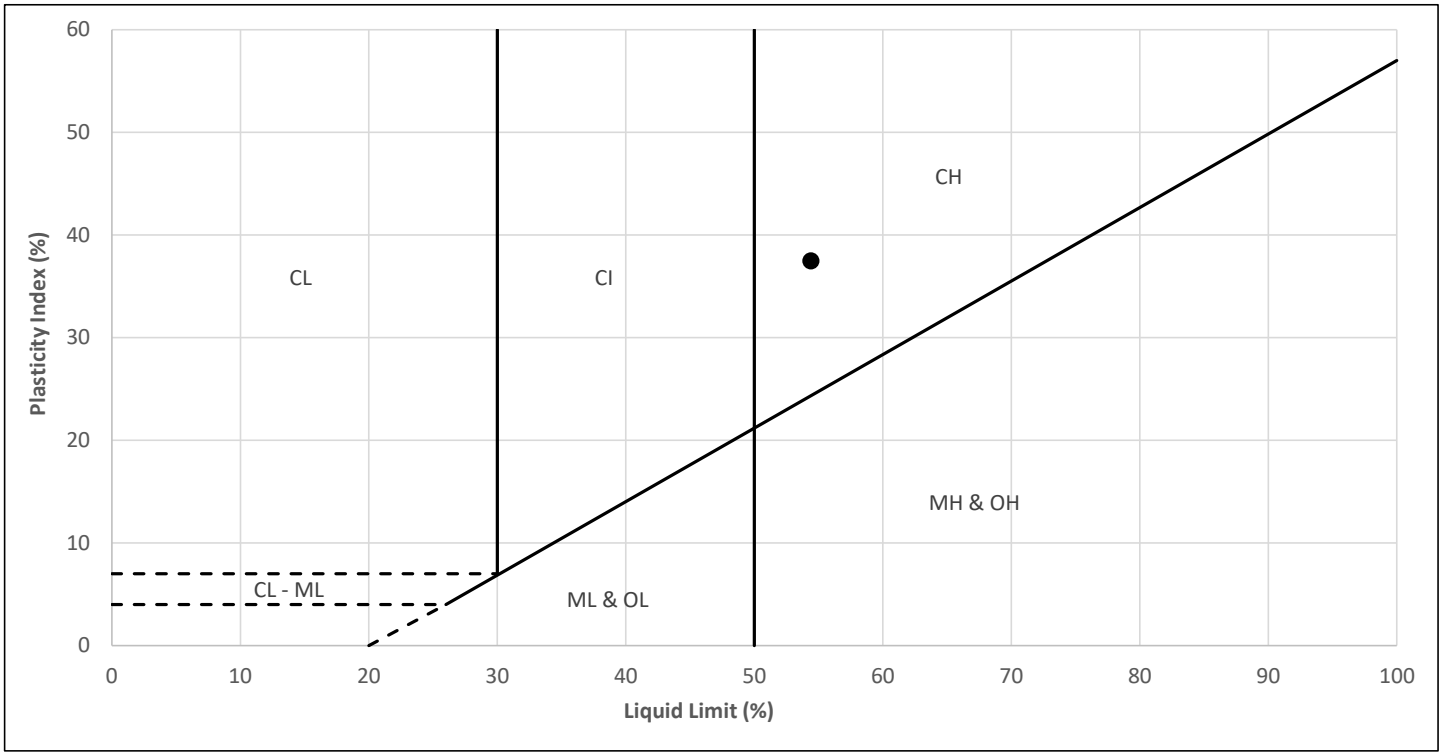
Project:	Snake Lake Reservoir Expansion	**Sample #:**	2AU2
Project No.:	1560-193-00	**Source:**	22VWP-02
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 2AU2	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	54.4
Plastic Limit (PL)	16.9
Plasticity Index (PI)	37.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

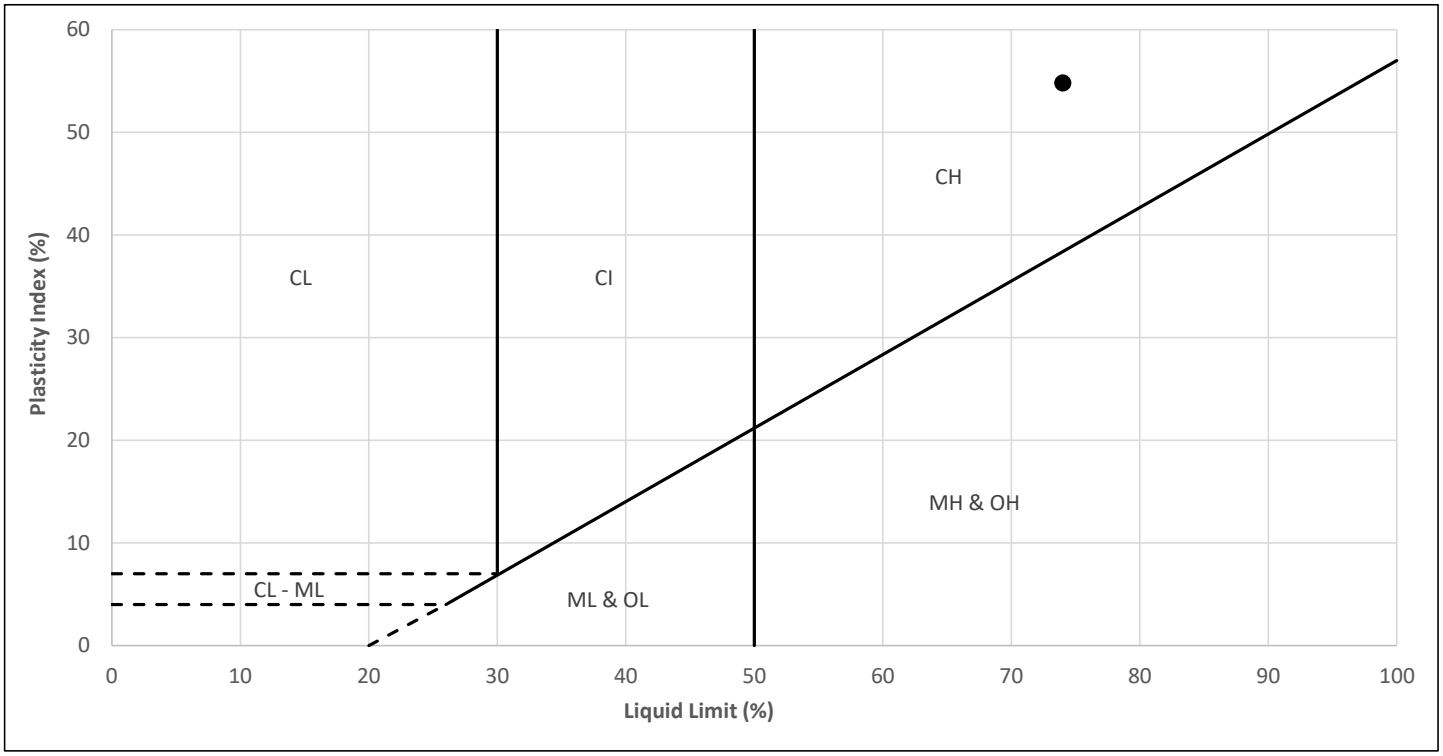
Project:	Snake Lake Reservoir Expansion	**Sample #:**	2AU5
Project No.:	1560-193-00	**Source:**	22VWP-02
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 2AU5	**Test Date:**	13-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	74.0
Plastic Limit (PL)	19.2
Plasticity Index (PI)	54.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

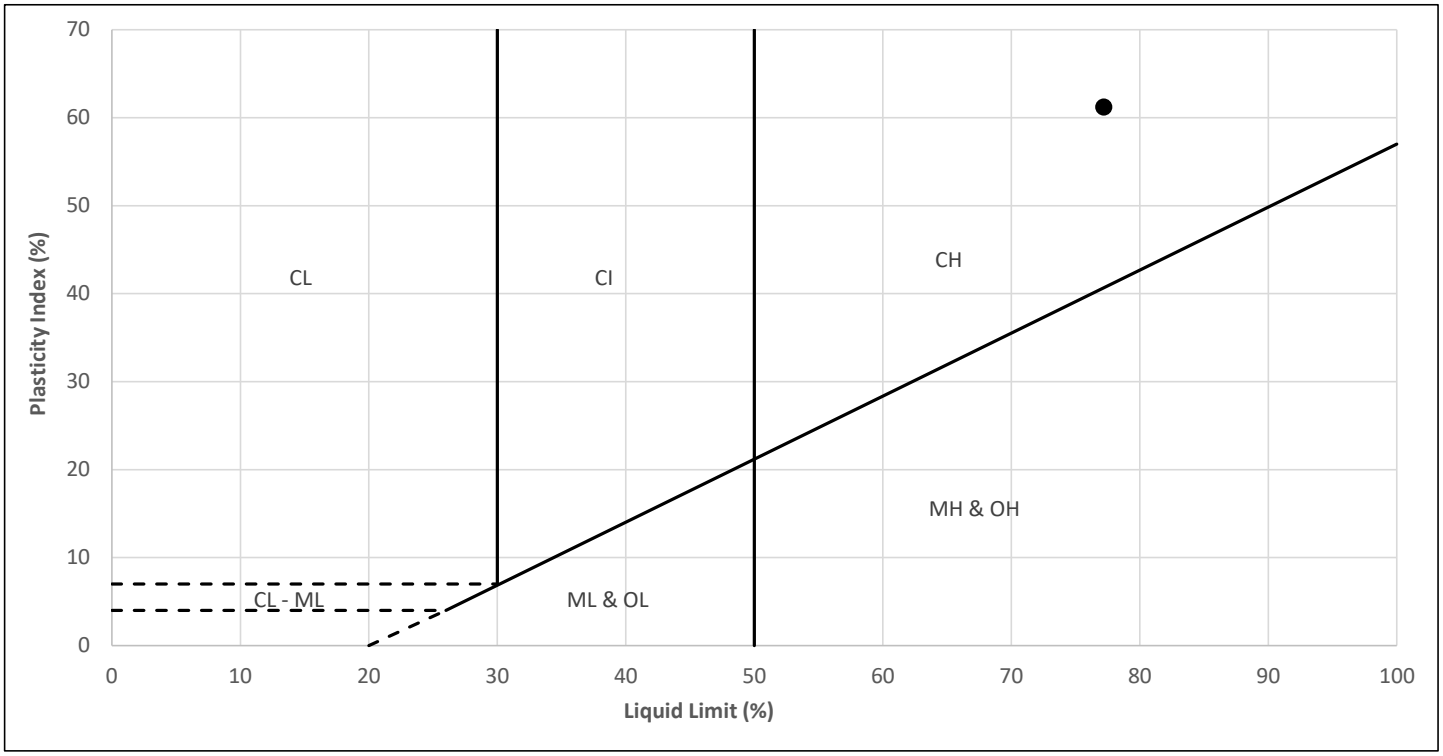
Project:	Snake Lake Reservoir Expansion	**Sample #:**	2AU8
Project No.:	1560-193-00	**Source:**	22VWP-02
Owner:	EID	**Sample Depth:**	5.8m
File No.:	AL - 2AU8	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	77.2
Plastic Limit (PL)	16.0
Plasticity Index (PI)	61.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

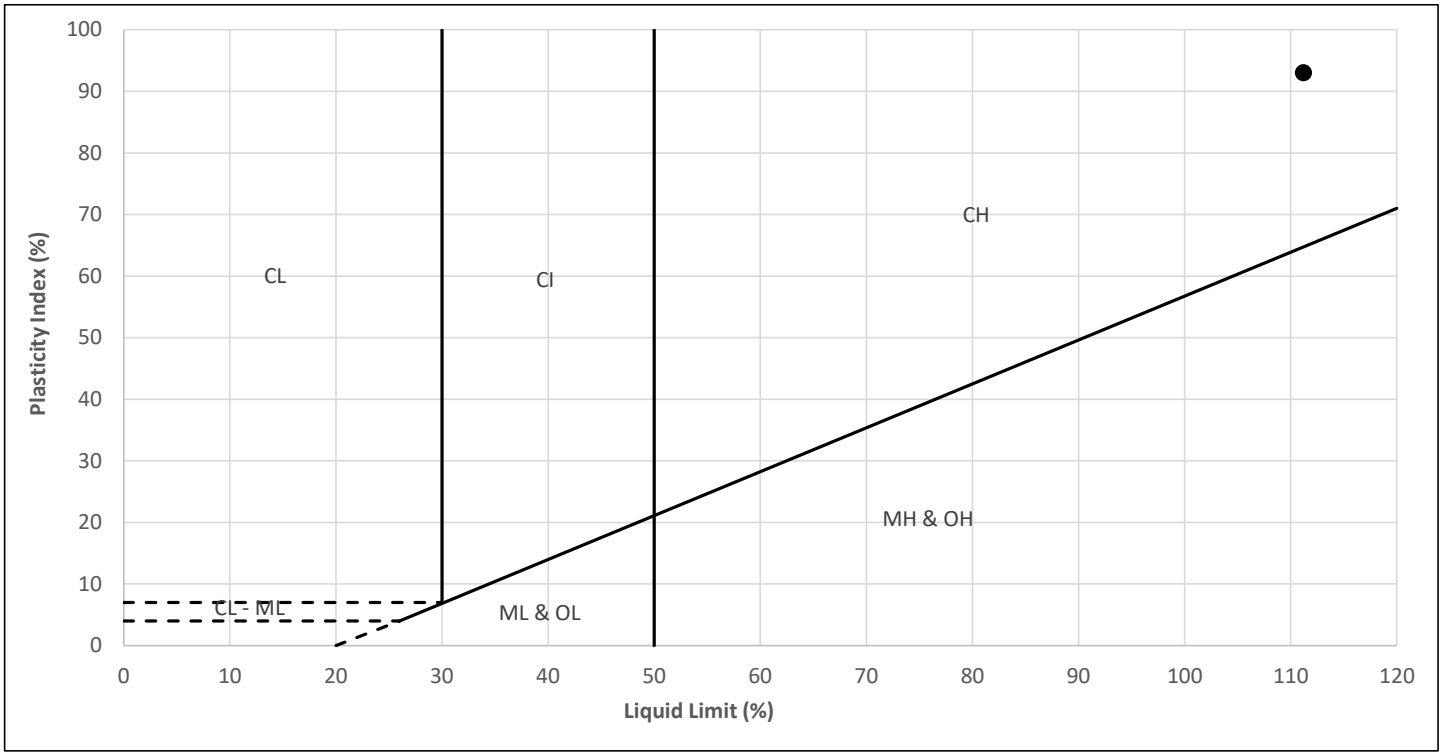
Project:	Snake Lake Reservoir Expansion	**Sample #:**	2AU11
Project No.:	1560-193-00	**Source:**	22VWP-02
Owner:	EID	**Sample Depth:**	8.2m
File No.:	AL - 2AU11	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	111.2
Plastic Limit (PL)	18.2
Plasticity Index (PI)	93.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

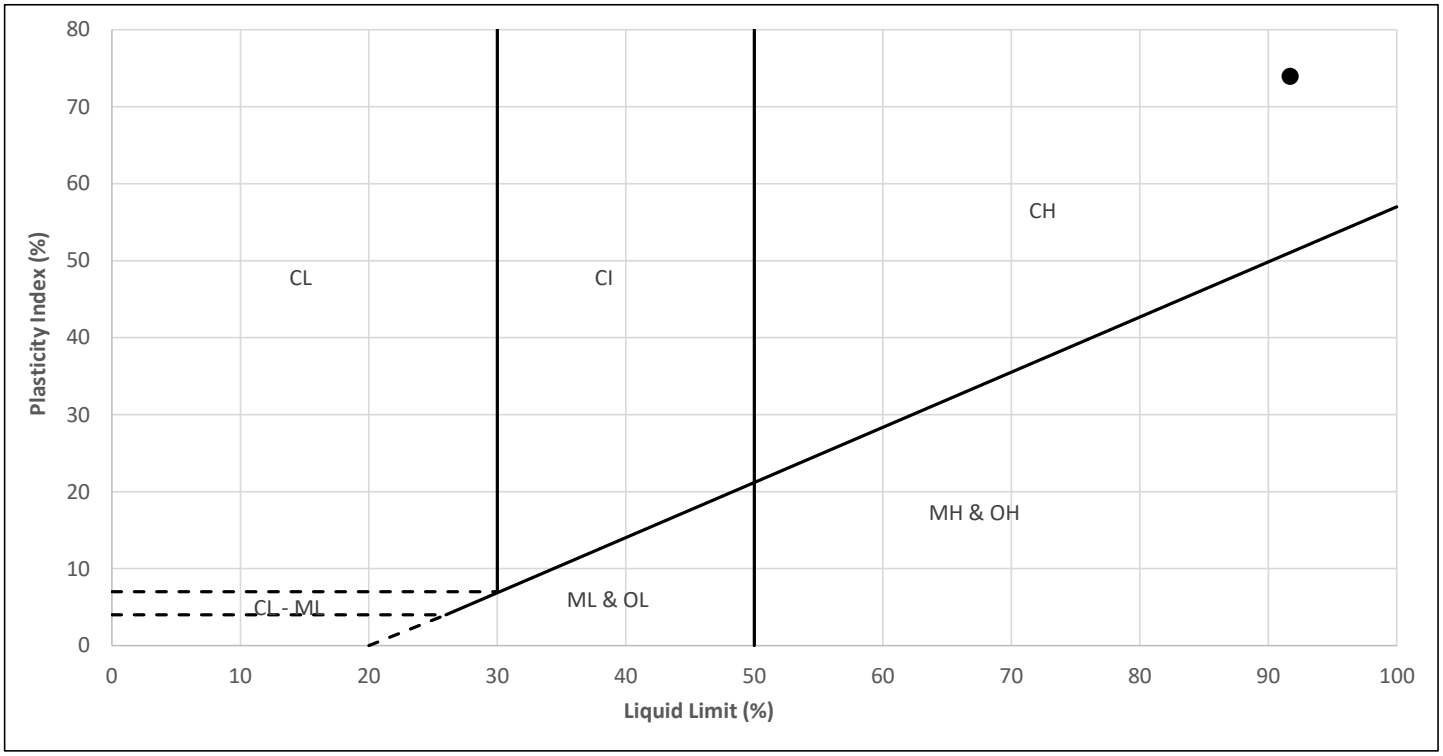
Project:	Snake Lake Reservoir Expansion	**Sample #:**	3AU2
Project No.:	1560-193-00	**Source:**	22VWP-03
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 3AU2	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	91.7
Plastic Limit (PL)	17.7
Plasticity Index (PI)	74.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

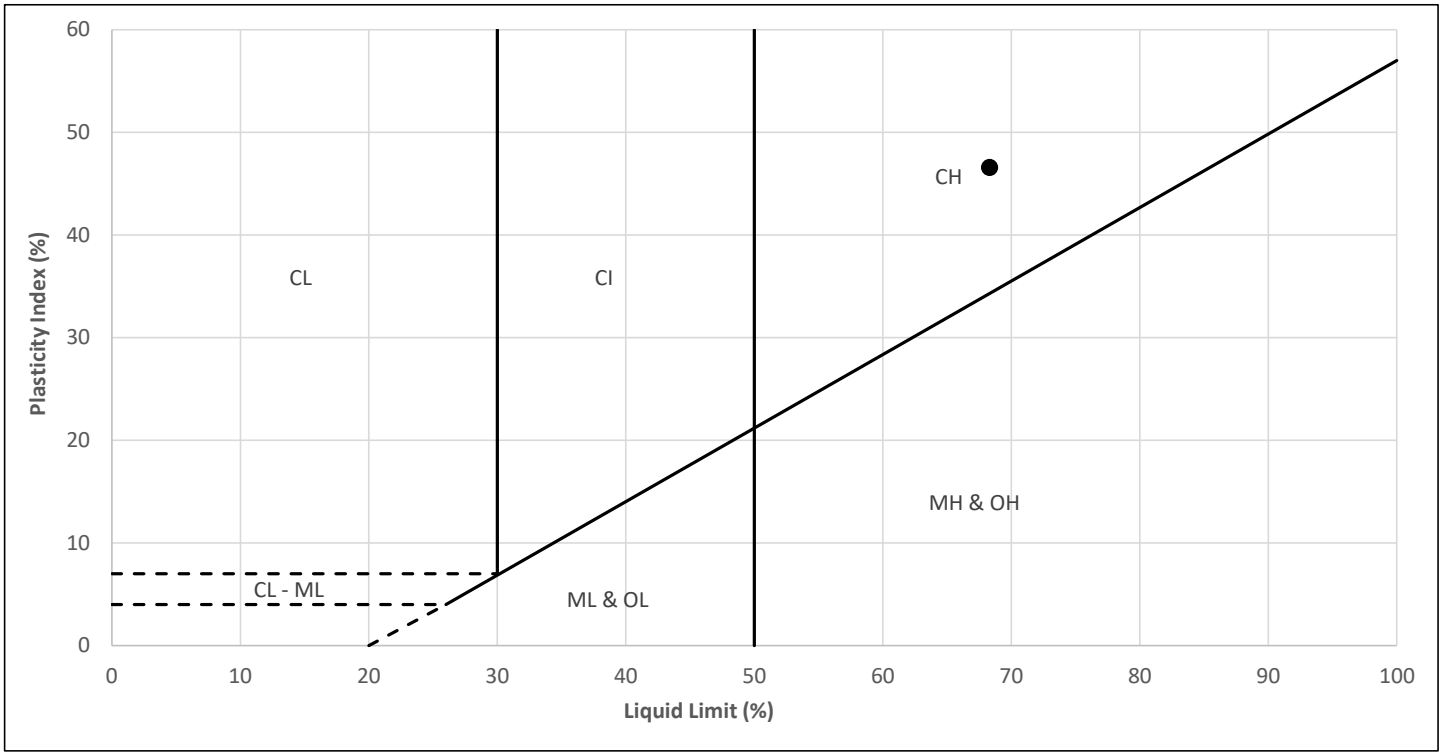
Project:	Snake Lake Reservoir Expansion	**Sample #:**	3AU6
Project No.:	1560-193-00	**Source:**	22VWP-03
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 3AU6	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	68.3
Plastic Limit (PL)	21.7
Plasticity Index (PI)	46.6

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

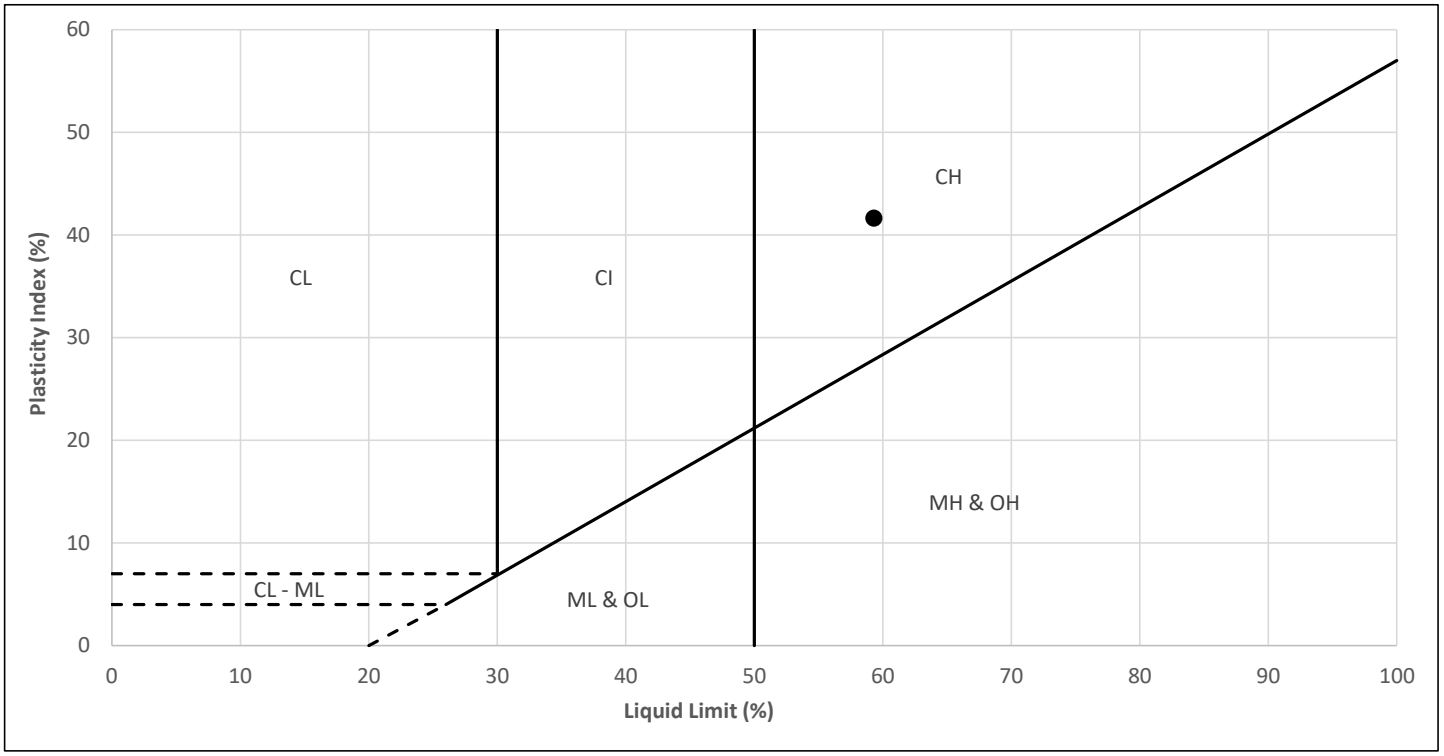
Project:	Snake Lake Reservoir Expansion	**Sample #:**	3AU8
Project No.:	1560-193-00	**Source:**	22VWP-03
Owner:	EID	**Sample Depth:**	5.8m
File No.:	AL - 3AU8	**Test Date:**	13-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	59.3
Plastic Limit (PL)	17.6
Plasticity Index (PI)	41.7

Soil Plasticity	High
Soil Classification	CH



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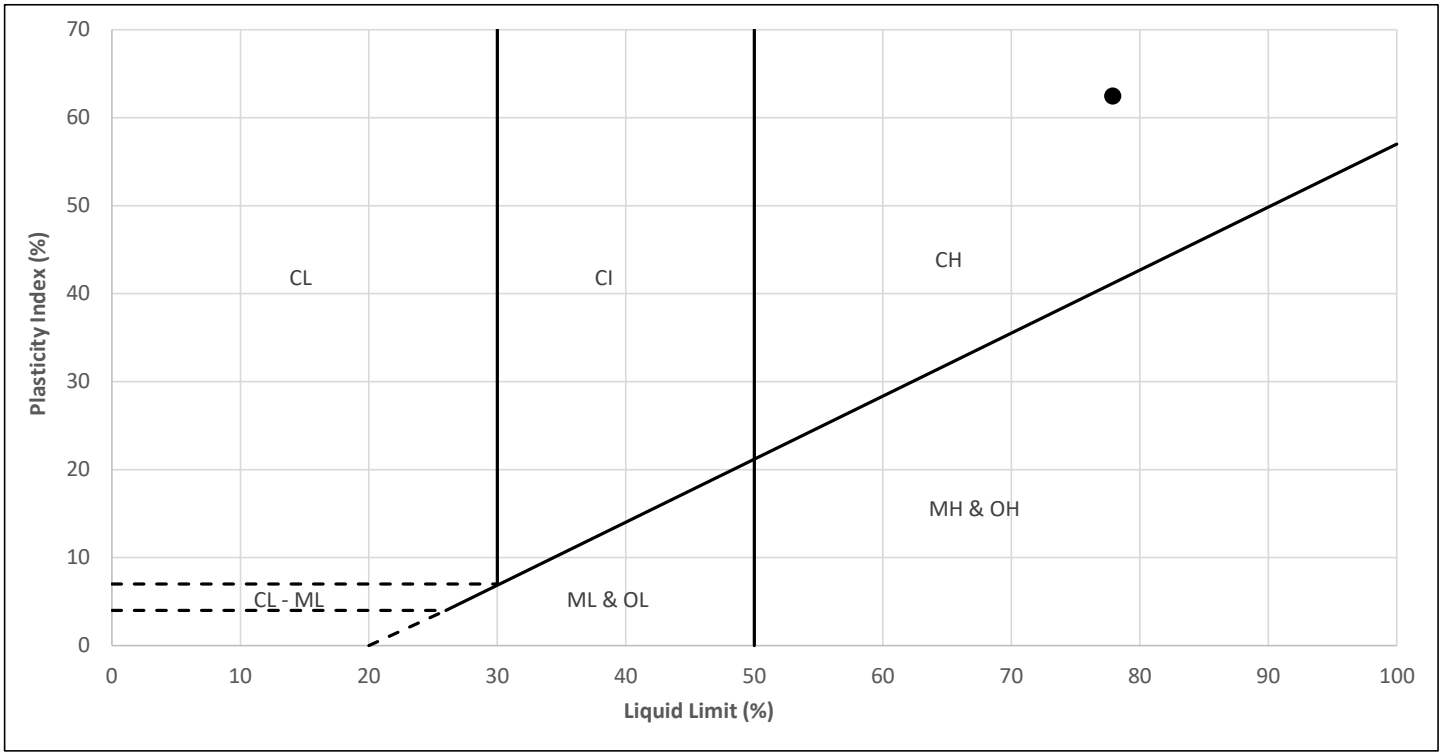
Project:	Snake Lake Reservoir Expansion	**Sample #:**	3AU11
Project No.:	1560-193-00	**Source:**	22VWP-03
Owner:	EID	**Sample Depth:**	8.2m
File No.:	AL - 3AU11	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	77.9
Plastic Limit (PL)	15.4
Plasticity Index (PI)	62.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

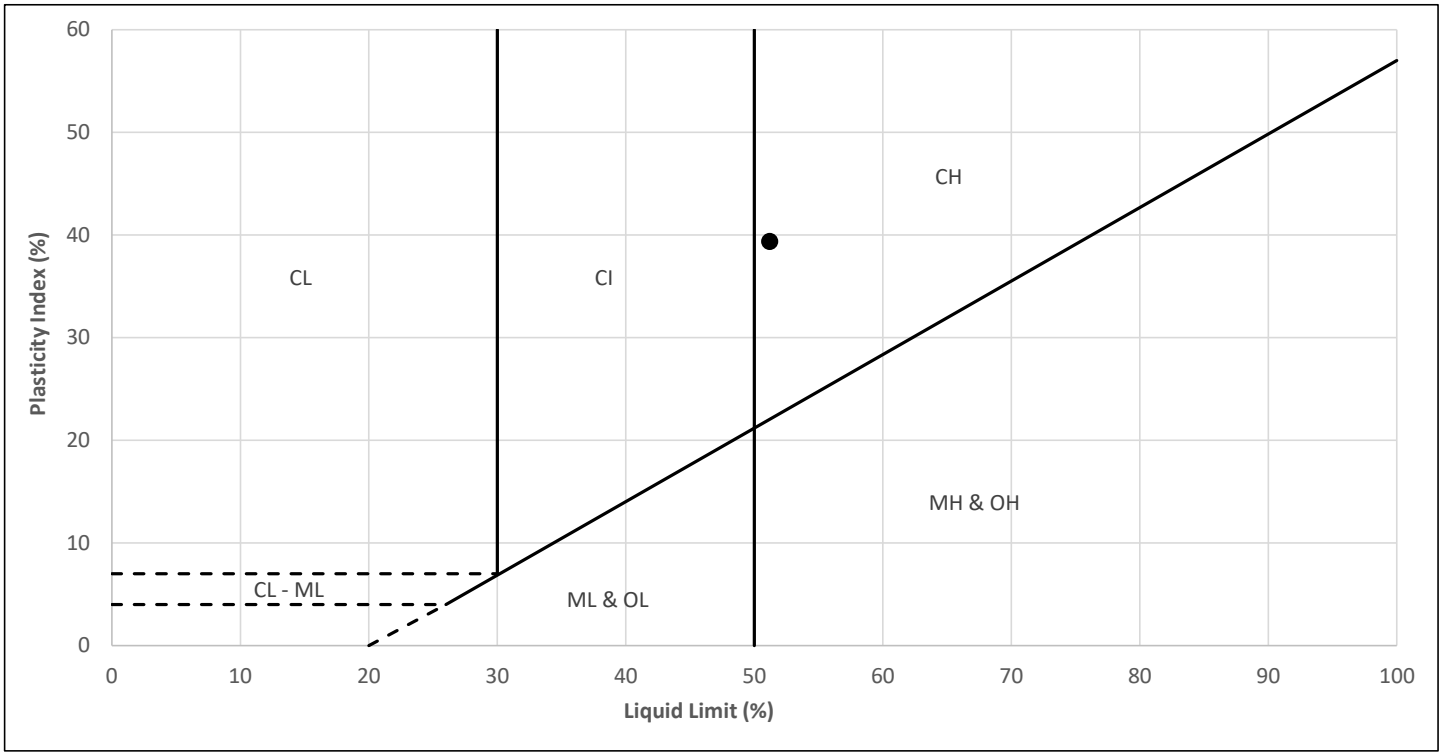
Project:	Snake Lake Reservoir Expansion	**Sample #:**	4AU2
Project No.:	1560-193-00	**Source:**	22VWP-04
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 4AU2	**Test Date:**	21-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.2
Plastic Limit (PL)	11.8
Plasticity Index (PI)	39.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

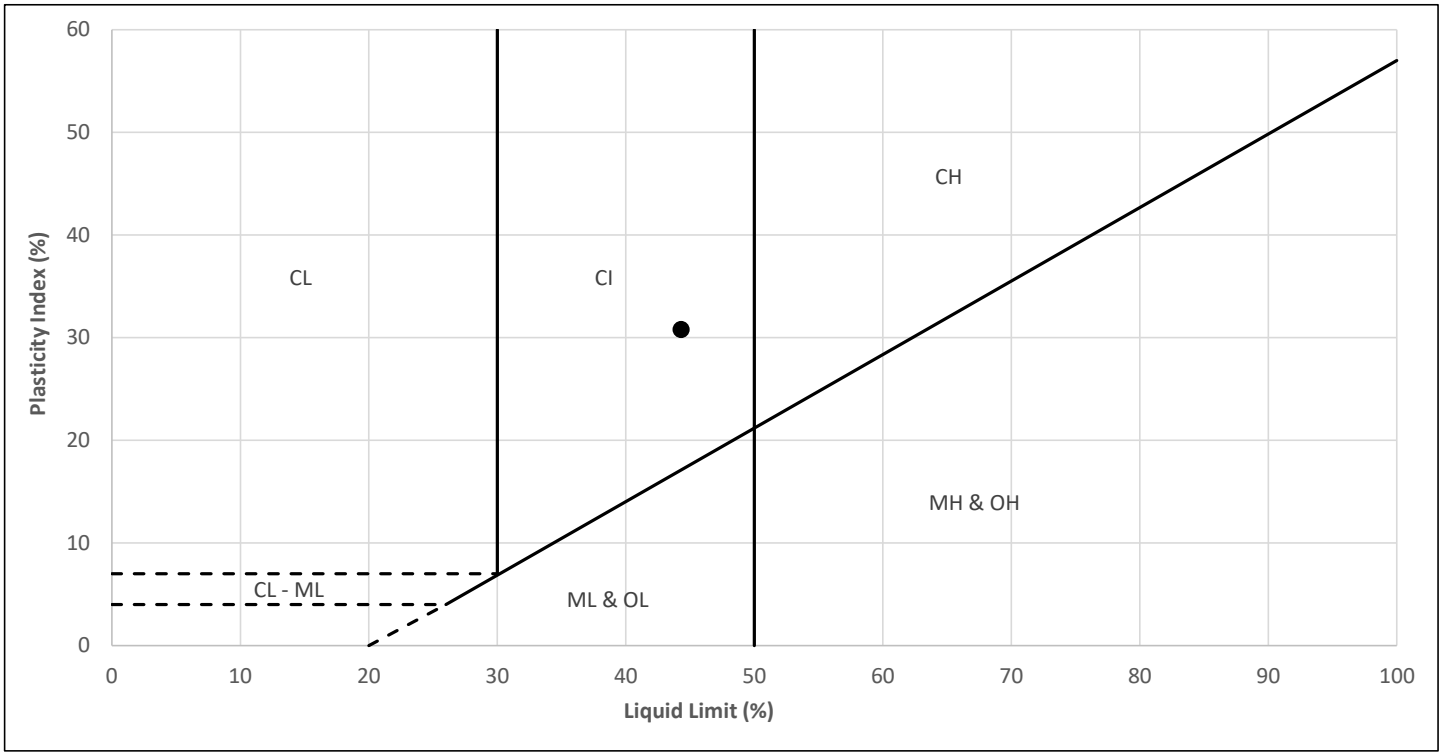
Project:	Snake Lake Reservoir Expansion	**Sample #:**	4AU7
Project No.:	1560-193-00	**Source:**	22VWP-04
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 4AU7	**Test Date:**	25-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.3
Plastic Limit (PL)	13.5
Plasticity Index (PI)	30.8

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

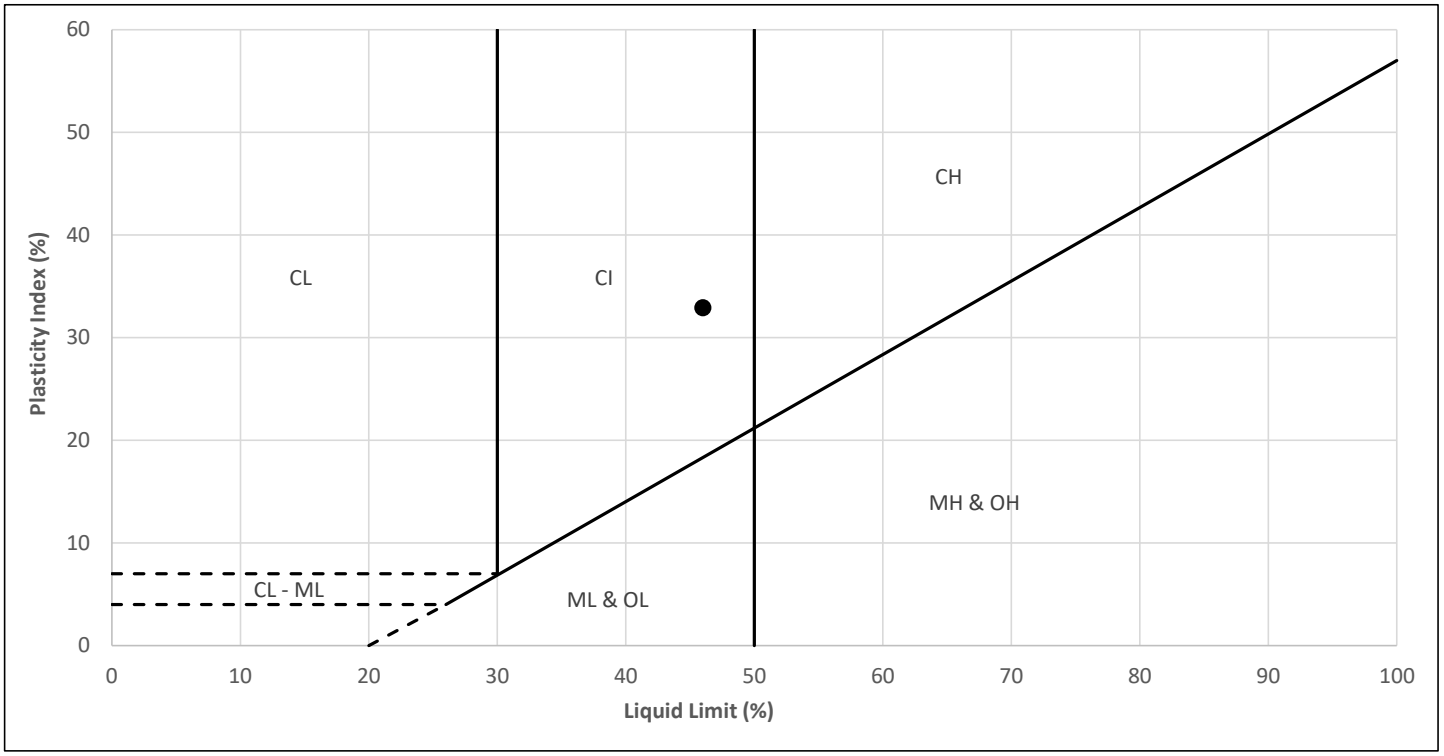
Project:	Snake Lake Reservoir Expansion	**Sample #:**	4AU8
Project No.:	1560-193-00	**Source:**	22VWP-04
Owner:	EID	**Sample Depth:**	5.8m
File No.:	AL - 4AU8	**Test Date:**	13-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	46.0
Plastic Limit (PL)	13.1
Plasticity Index (PI)	32.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

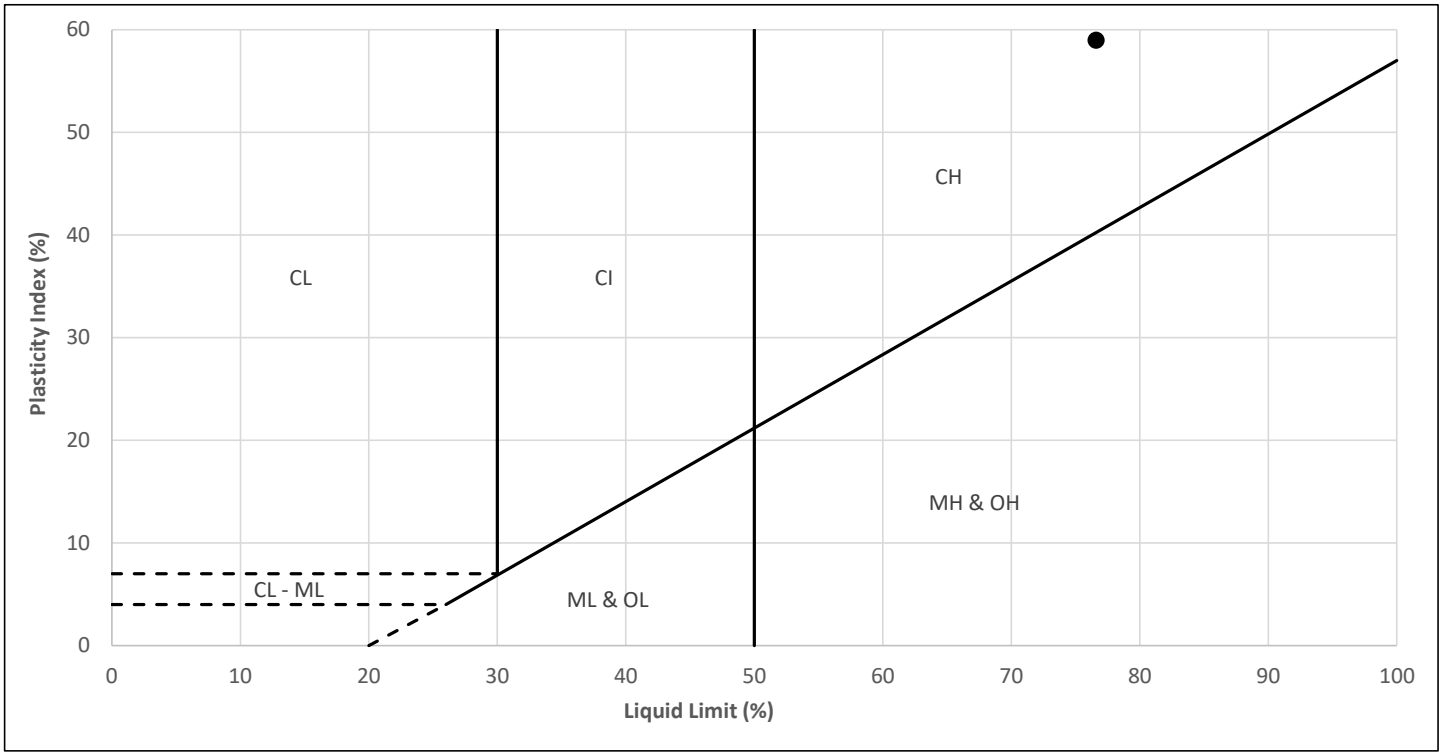
Project:	Snake Lake Reservoir Expansion	**Sample #:**	4AU11
Project No.:	1560-193-00	**Source:**	22VWP-04
Owner:	EID	**Sample Depth:**	8.2m
File No.:	AL - 4AU11	**Test Date:**	13-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	76.6
Plastic Limit (PL)	17.6
Plasticity Index (PI)	59.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

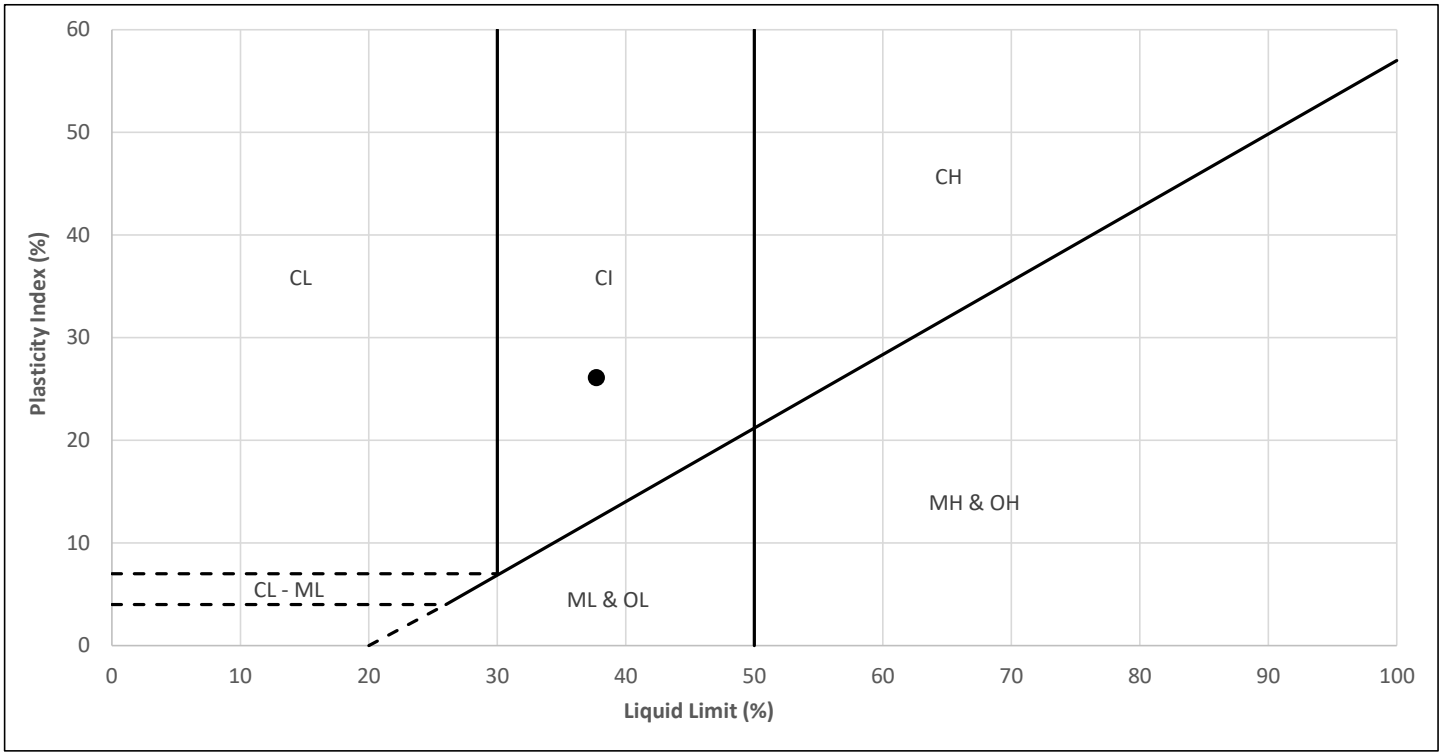
Project:	Snake Lake Reservoir Expansion	**Sample #:**	5AU1
Project No.:	1560-193-00	**Source:**	22VWP-05
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 5AU1	**Test Date:**	13-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	37.7
Plastic Limit (PL)	11.6
Plasticity Index (PI)	26.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

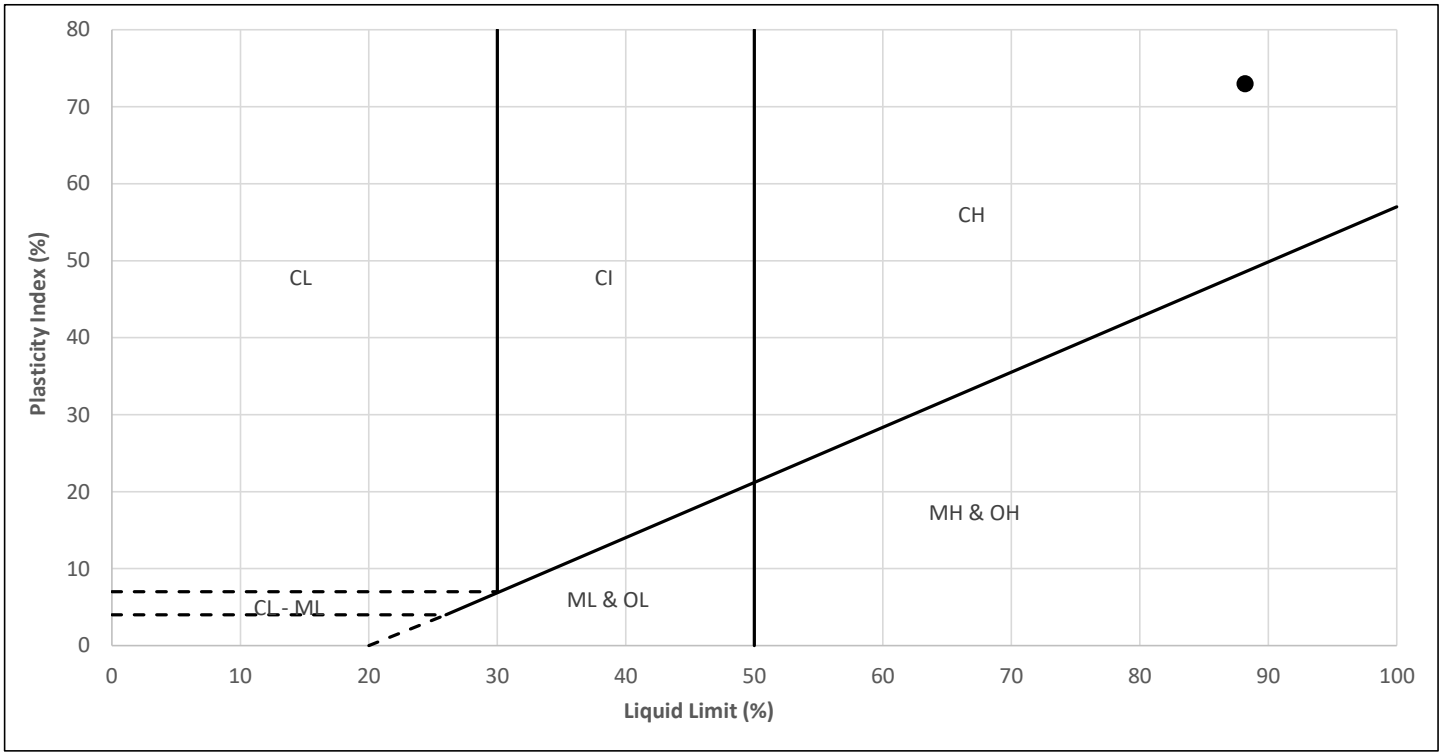
Project:	Snake Lake Reservoir Expansion	**Sample #:**	5AU4
Project No.:	1560-193-00	**Source:**	22VWP-05
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 5AU4	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	88.2
Plastic Limit (PL)	15.2
Plasticity Index (PI)	73.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

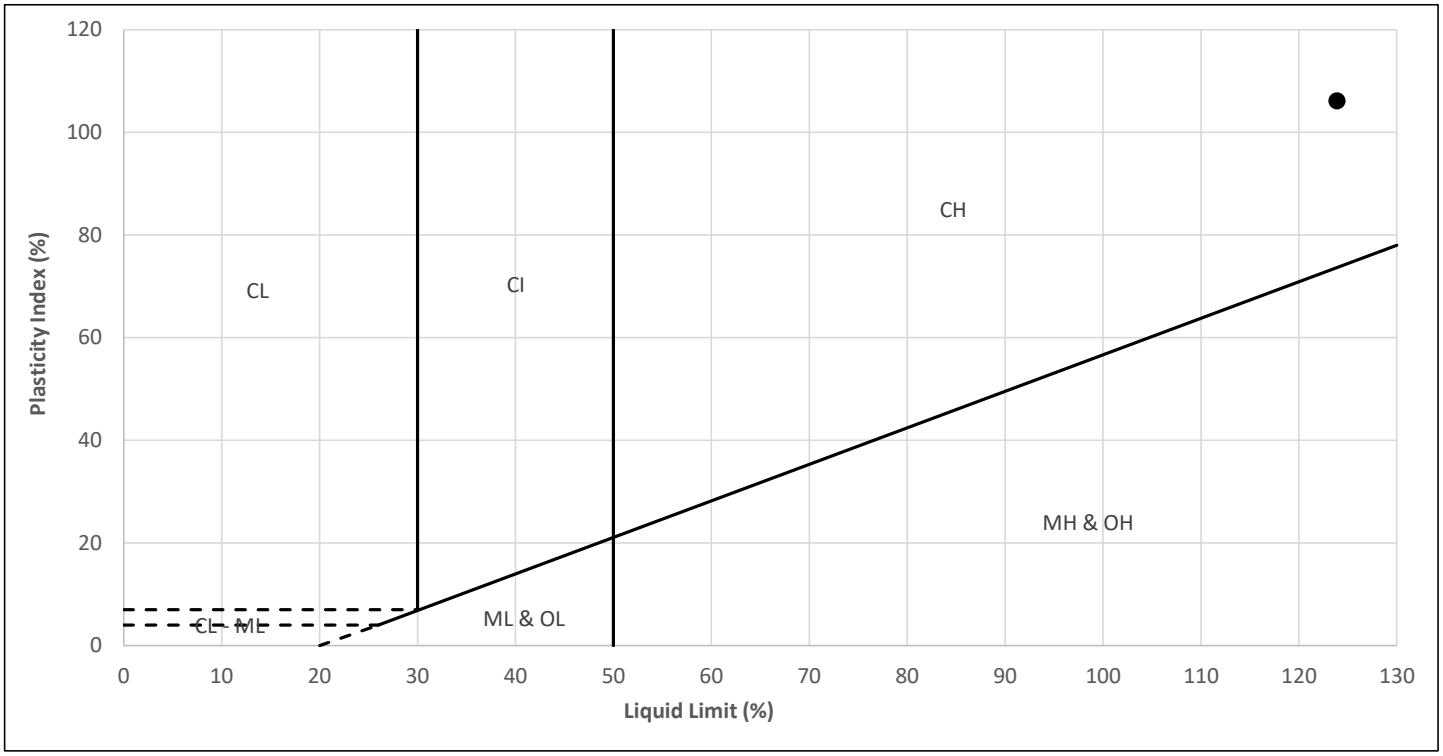
Project:	Snake Lake Reservoir Expansion	**Sample #:**	5AU6
Project No.:	1560-193-00	**Source:**	22VWP-05
Owner:	EID	**Sample Depth:**	4.3m
File No.:	AL - 5AU6	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	123.9
Plastic Limit (PL)	17.8
Plasticity Index (PI)	106.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

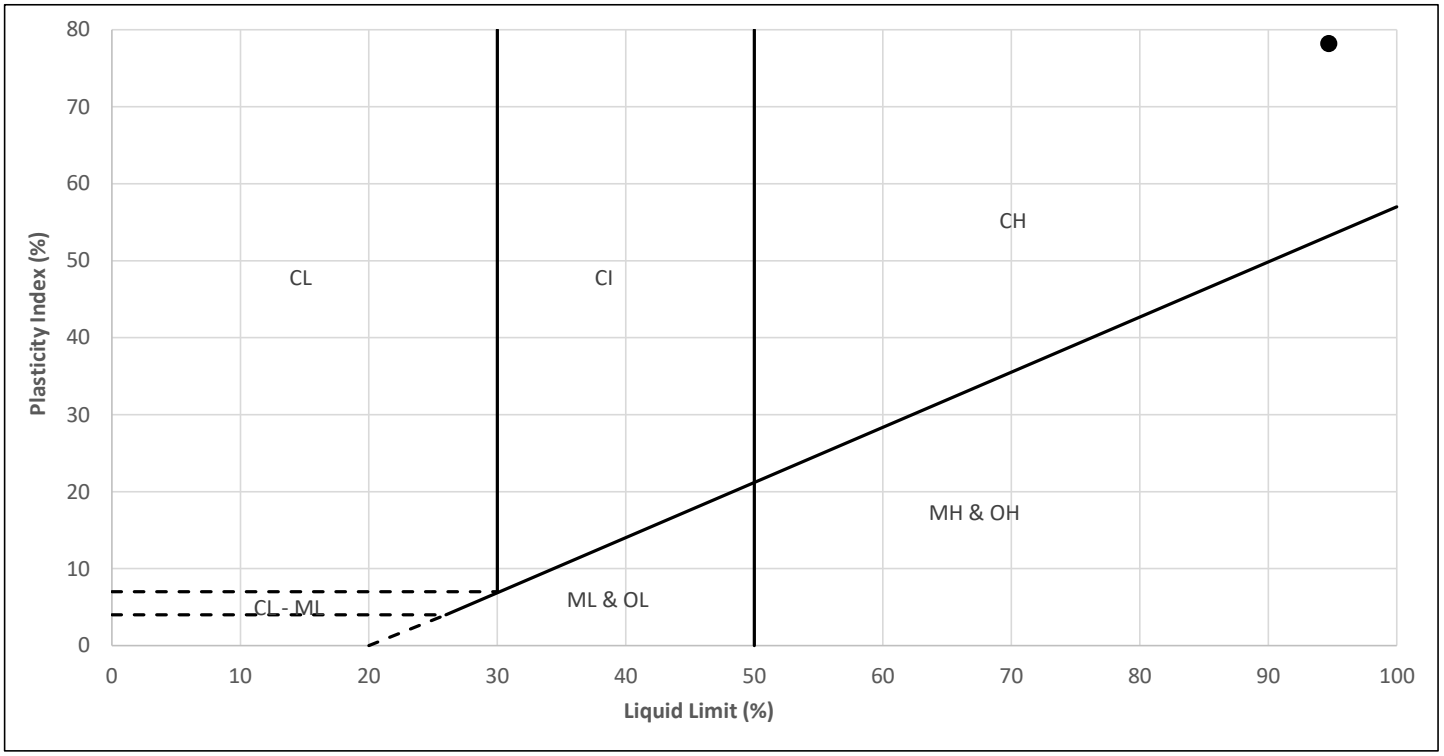
Project:	Snake Lake Reservoir Expansion	**Sample #:**	5AU7
Project No.:	1560-193-00	**Source:**	22VWP-05
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 5AU7	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	94.7
Plastic Limit (PL)	16.5
Plasticity Index (PI)	78.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

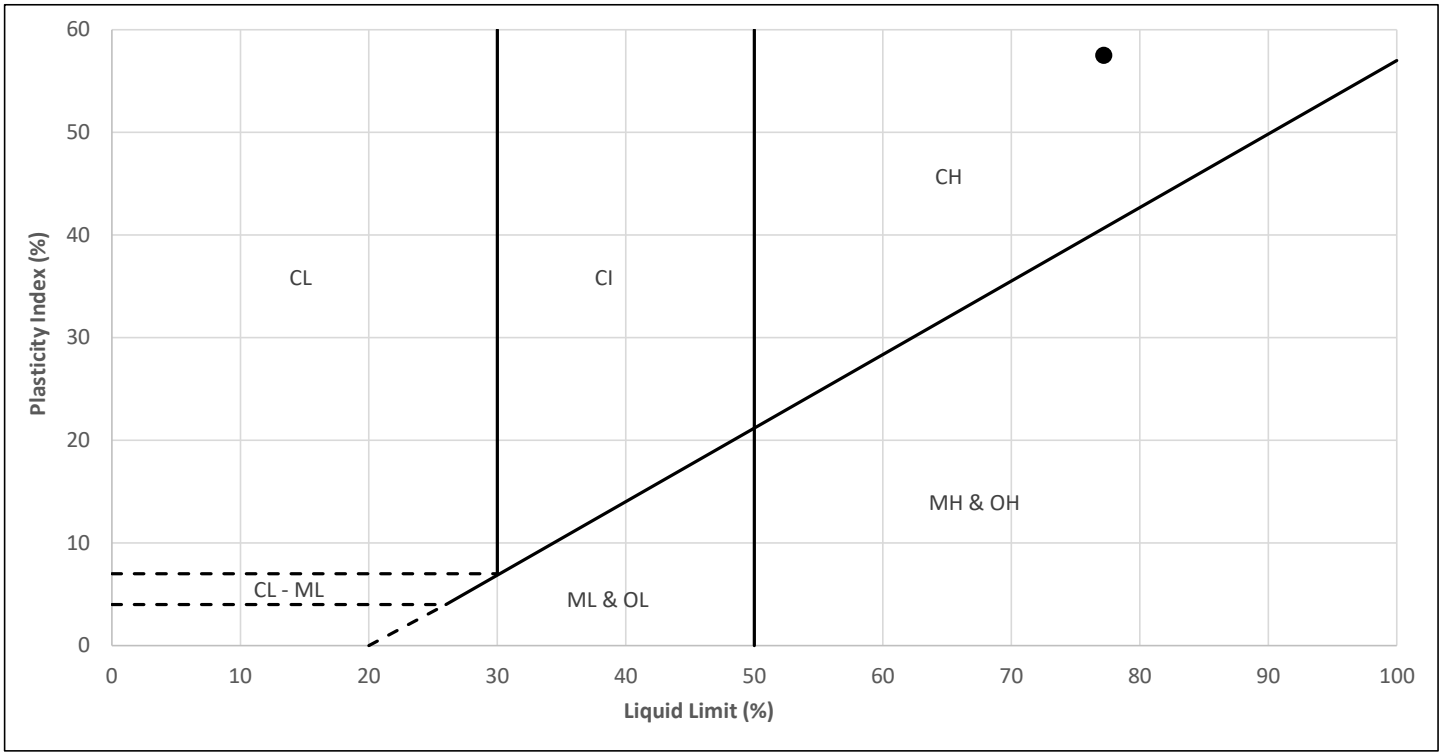
Project:	Snake Lake Reservoir Expansion	**Sample #:**	6AU2
Project No.:	1560-193-00	**Source:**	22VWP-06
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 6AU2	**Test Date:**	13-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	77.2
Plastic Limit (PL)	19.7
Plasticity Index (PI)	57.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

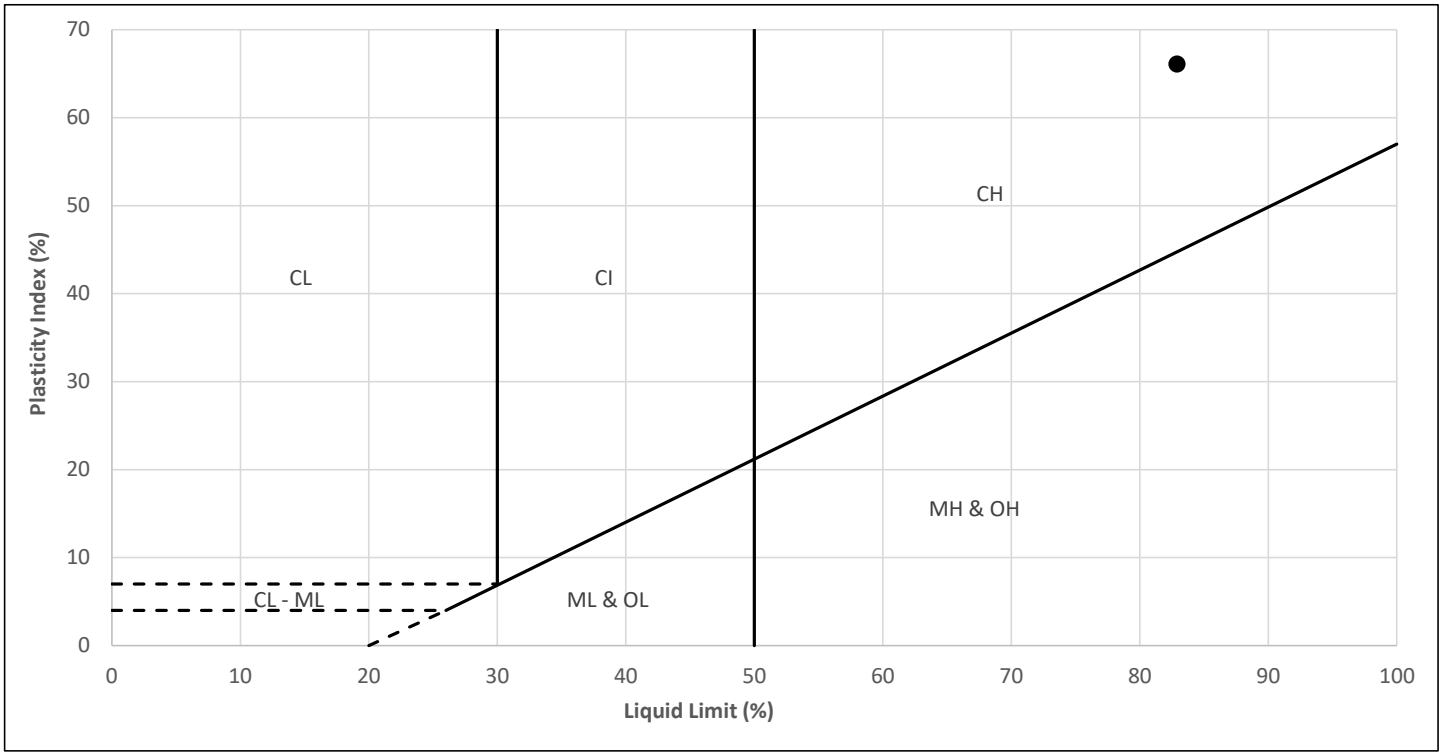
Project:	Snake Lake Reservoir Expansion	**Sample #:**	6AU5
Project No.:	1560-193-00	**Source:**	22VWP-06
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 6AU5	**Test Date:**	24-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	82.9
Plastic Limit (PL)	16.8
Plasticity Index (PI)	66.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

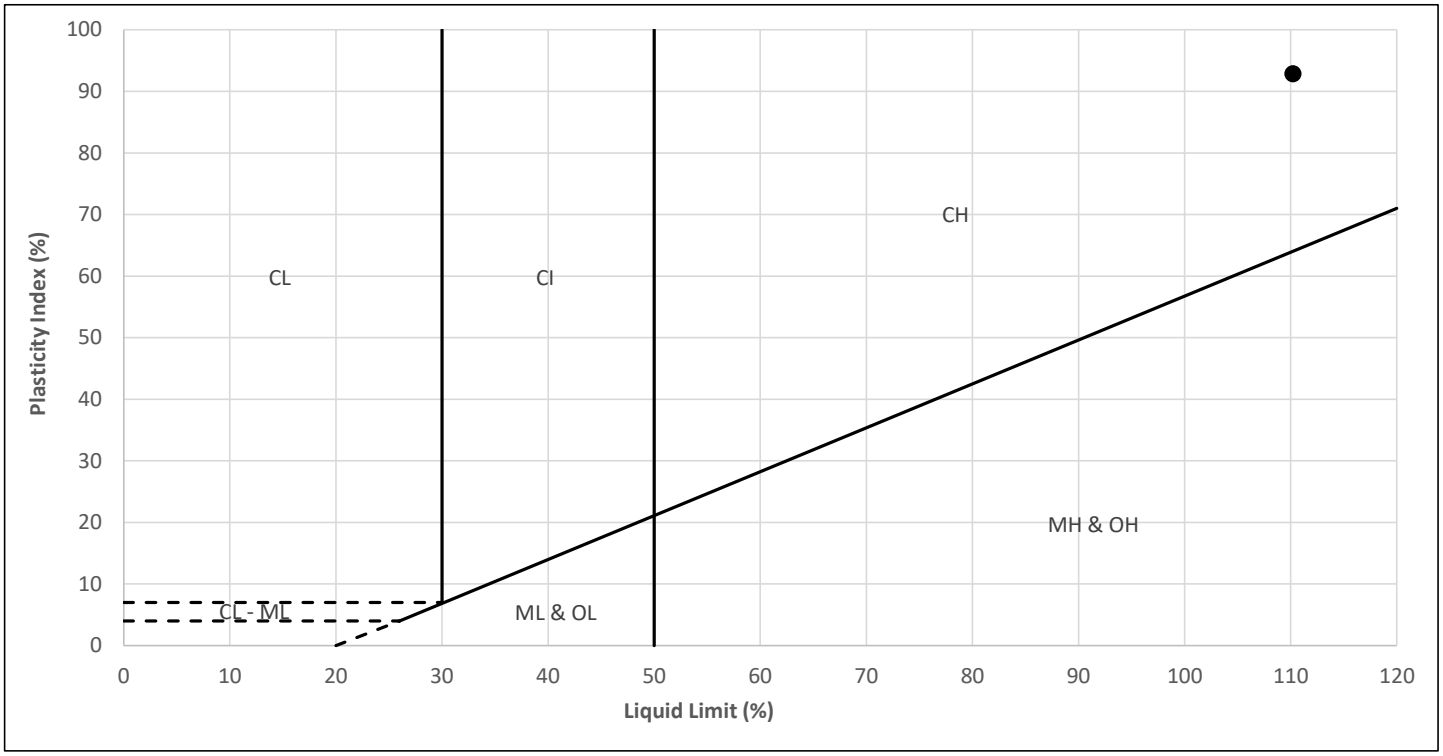
Project:	Snake Lake Reservoir Expansion	**Sample #:**	6AU7
Project No.:	1560-193-00	**Source:**	22VWP-06
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 6AU7	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	110.2
Plastic Limit (PL)	17.4
Plasticity Index (PI)	92.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

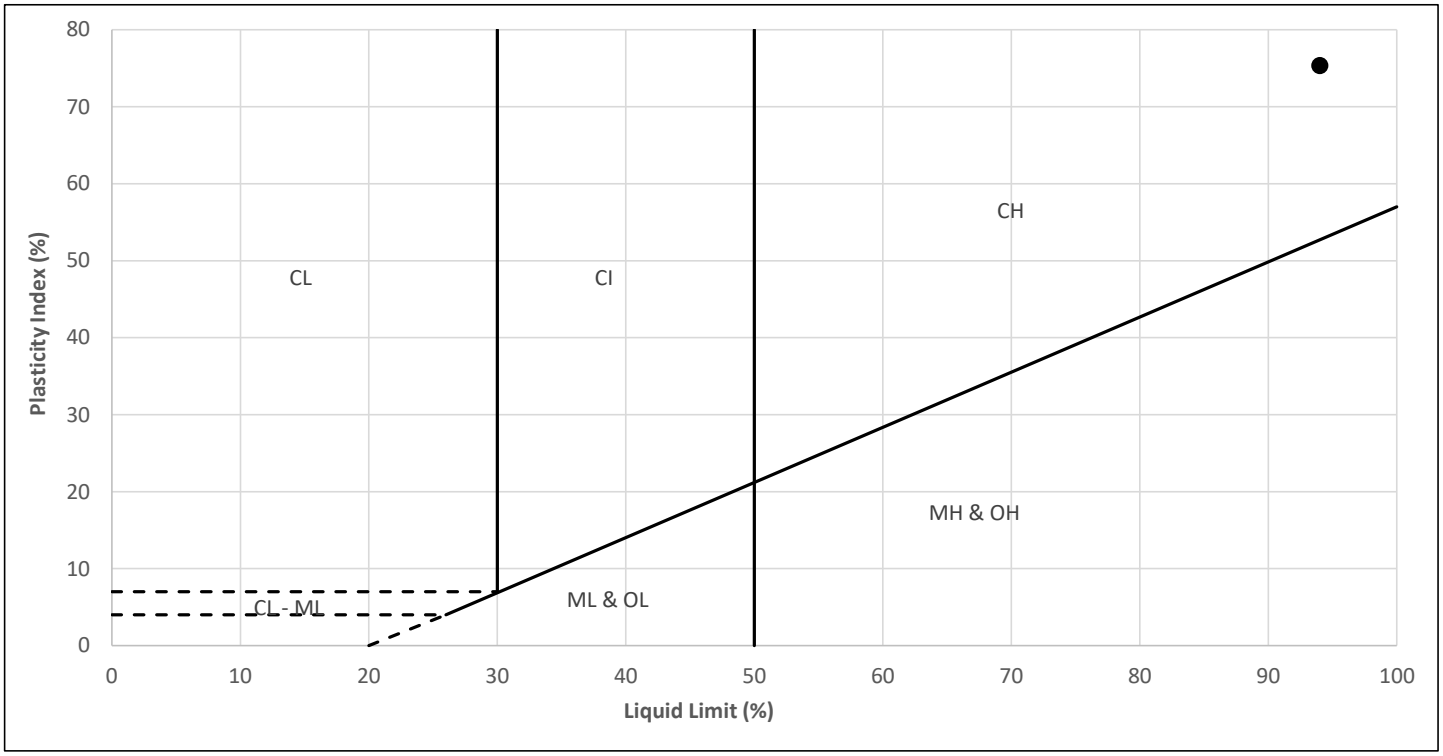
Project:	Snake Lake Reservoir Expansion	**Sample #:**	6AU9
Project No.:	1560-193-00	**Source:**	22VWP-06
Owner:	EID	**Sample Depth:**	6.7m
File No.:	AL - 6AU9	**Test Date:**	13-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	94.0
Plastic Limit (PL)	18.6
Plasticity Index (PI)	75.4

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

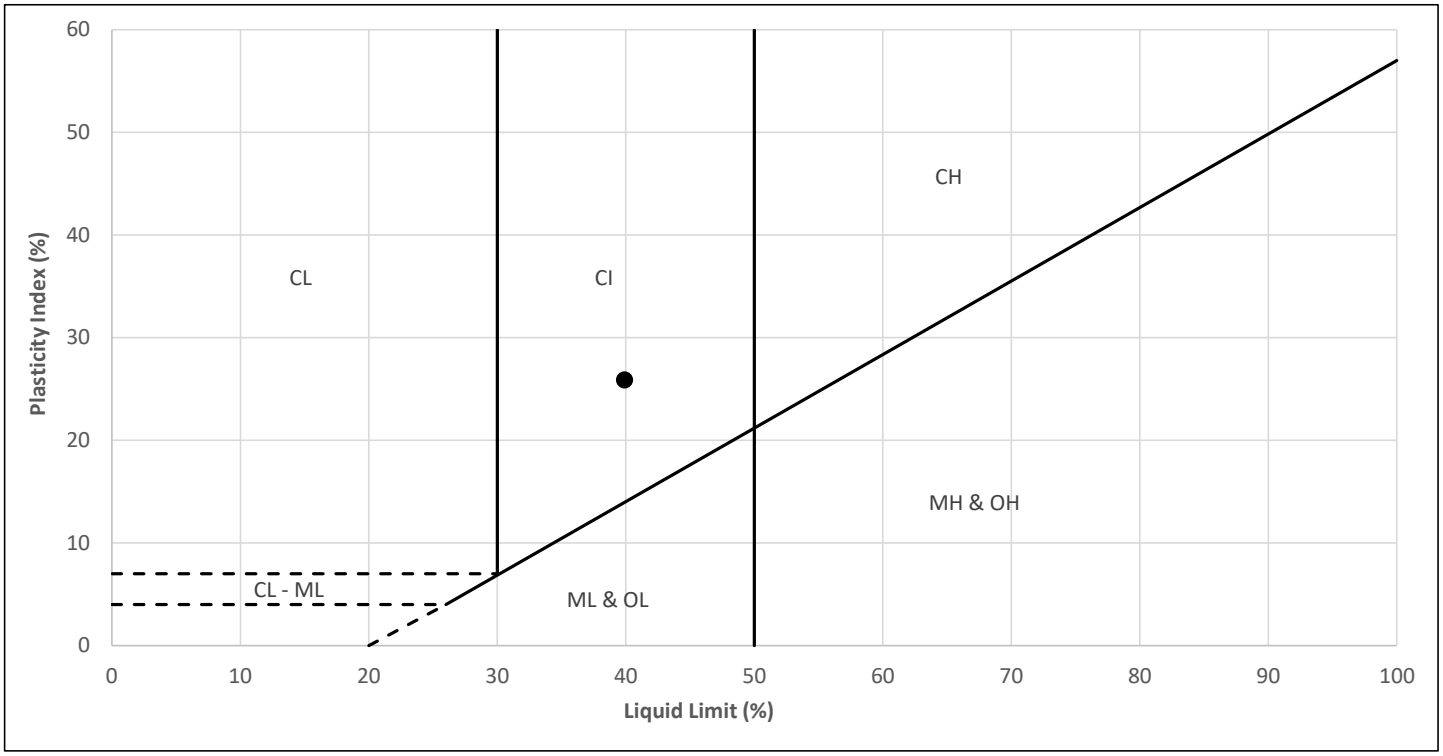
Project:	Snake Lake Reservoir Expansion	**Sample #:**	7AU2
Project No.:	1560-193-00	**Source:**	22VWP-07
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 7AU2	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	39.9
Plastic Limit (PL)	14.0
Plasticity Index (PI)	25.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

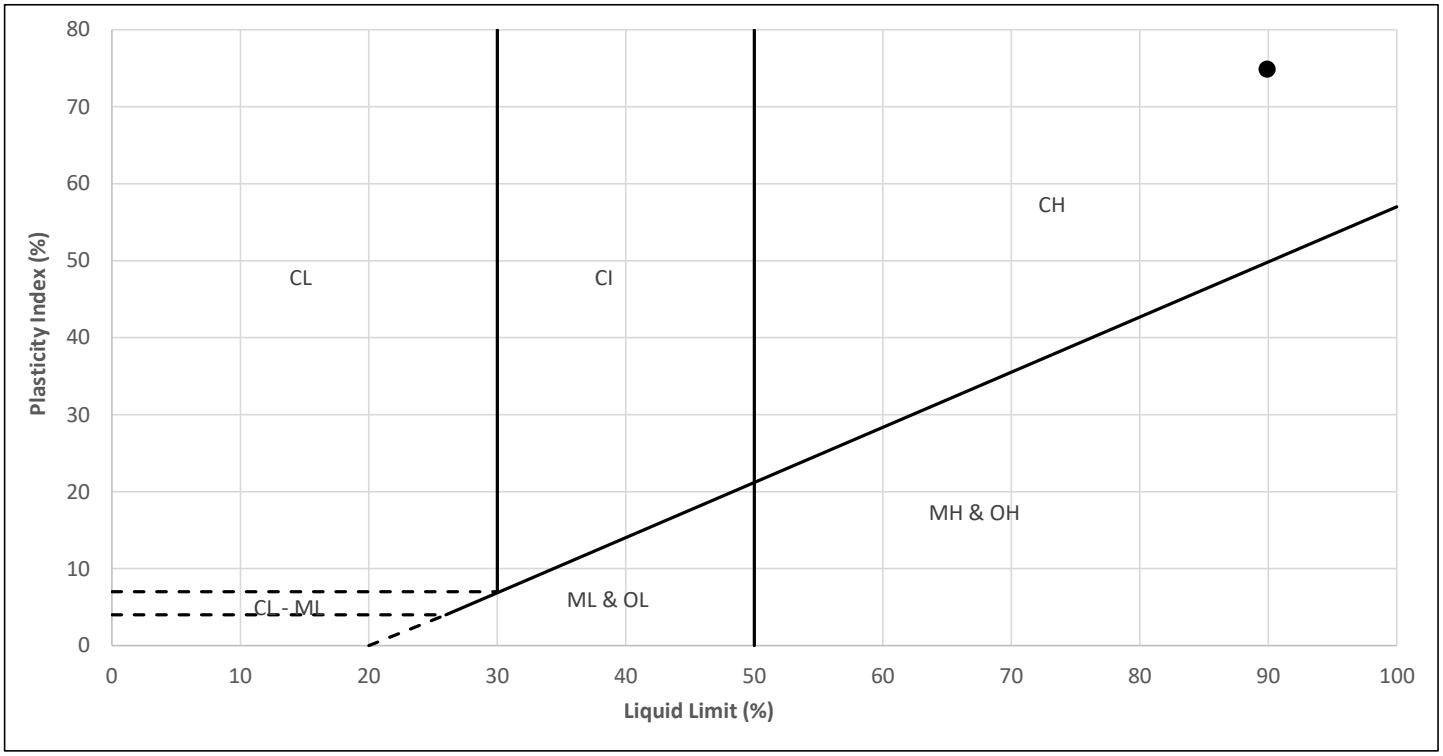
Project:	Snake Lake Reservoir Expansion	**Sample #:**	7AU3
Project No.:	1560-193-00	**Source:**	22VWP-07
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 7AU3	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	89.9
Plastic Limit (PL)	15.0
Plasticity Index (PI)	74.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

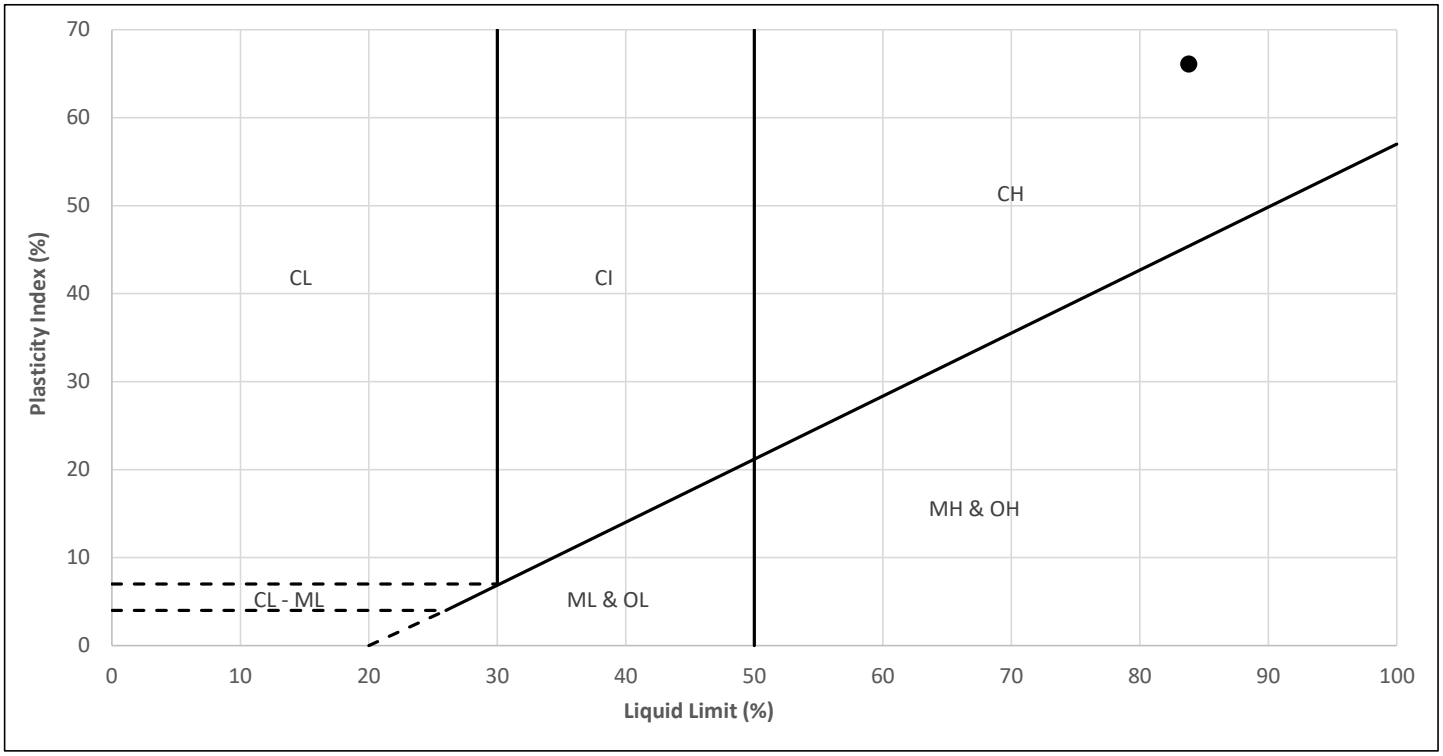
Project:	Snake Lake Reservoir Expansion	**Sample #:**	7AU4
Project No.:	1560-193-00	**Source:**	22VWP-07
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 7AU4	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	83.8
Plastic Limit (PL)	17.7
Plasticity Index (PI)	66.1

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

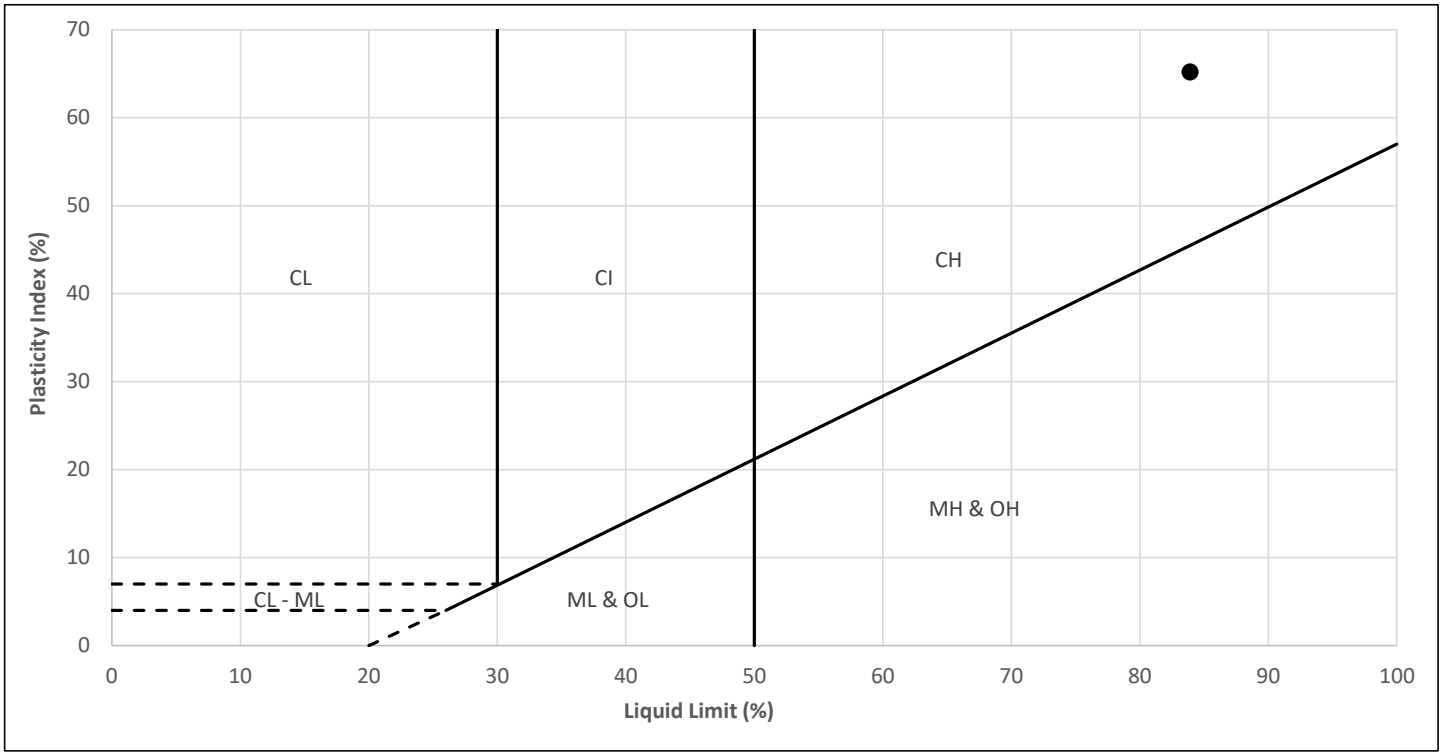
Project:	Snake Lake Reservoir Expansion	**Sample #:**	7AU5
Project No.:	1560-193-00	**Source:**	22VWP-07
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 7AU5	**Test Date:**	13-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	83.9
Plastic Limit (PL)	18.7
Plasticity Index (PI)	65.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

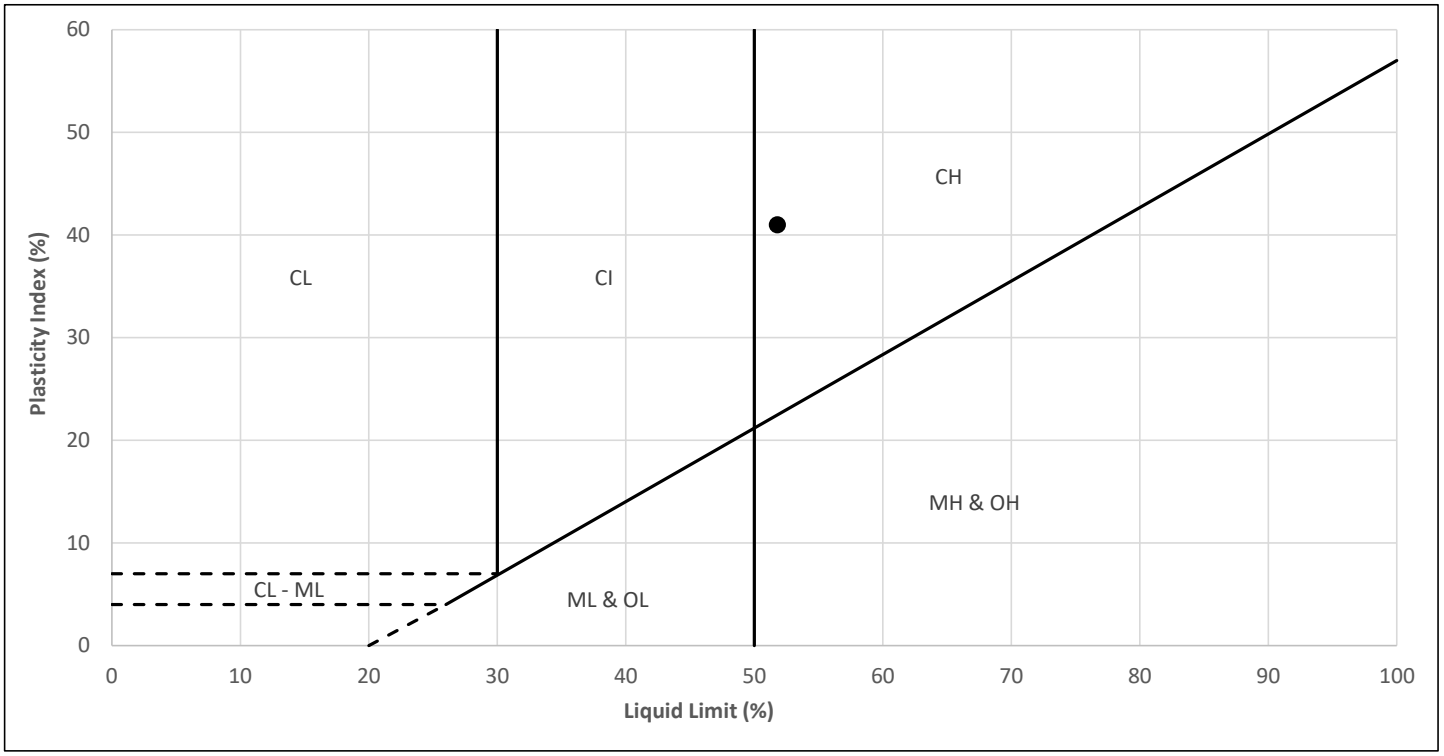
Project:	Snake Lake Reservoir Expansion	**Sample #:**	8AU2
Project No.:	1560-193-00	**Source:**	22VWP-08
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 8AU2	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.8
Plastic Limit (PL)	10.8
Plasticity Index (PI)	41.0

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

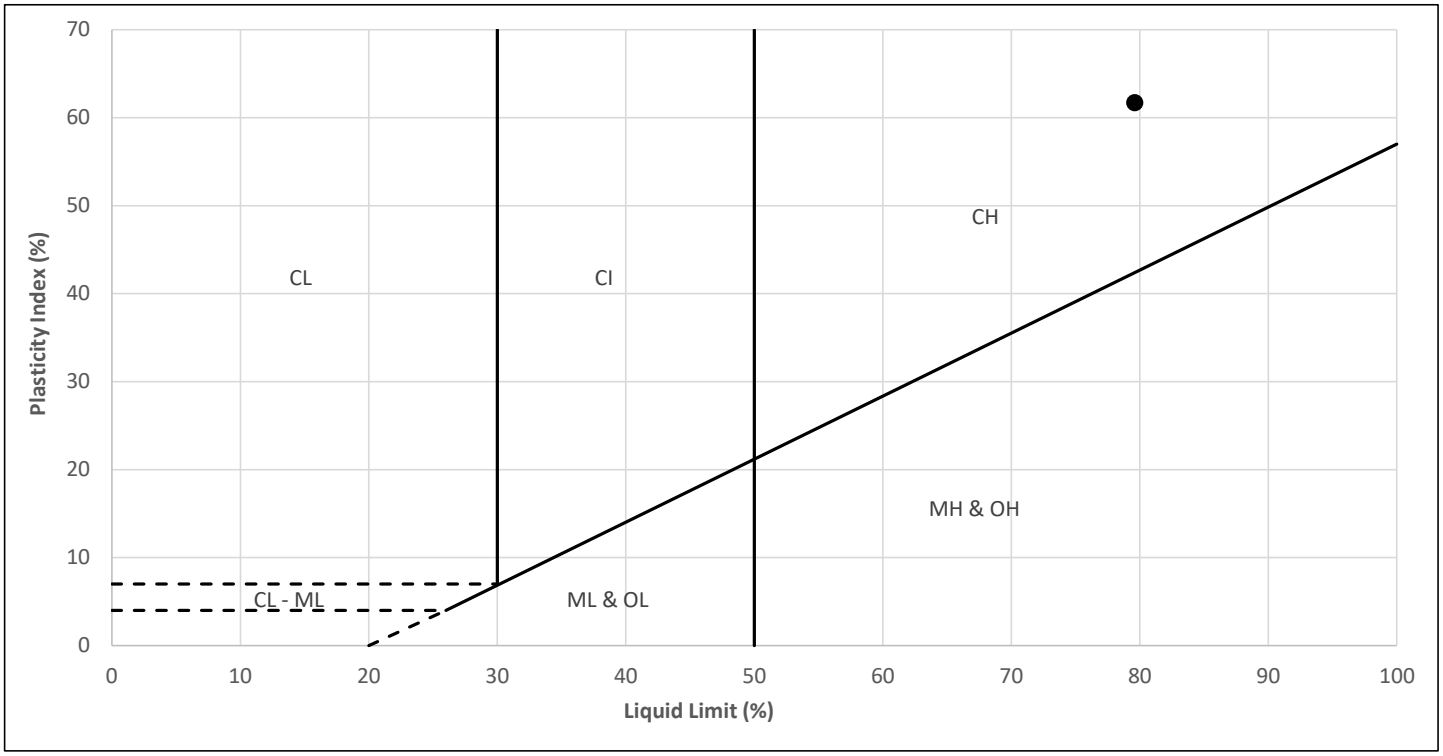
Project:	Snake Lake Reservoir Expansion	**Sample #:**	8AU3
Project No.:	1560-193-00	**Source:**	22VWP-08
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 8AU3	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	79.6
Plastic Limit (PL)	17.9
Plasticity Index (PI)	61.7

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

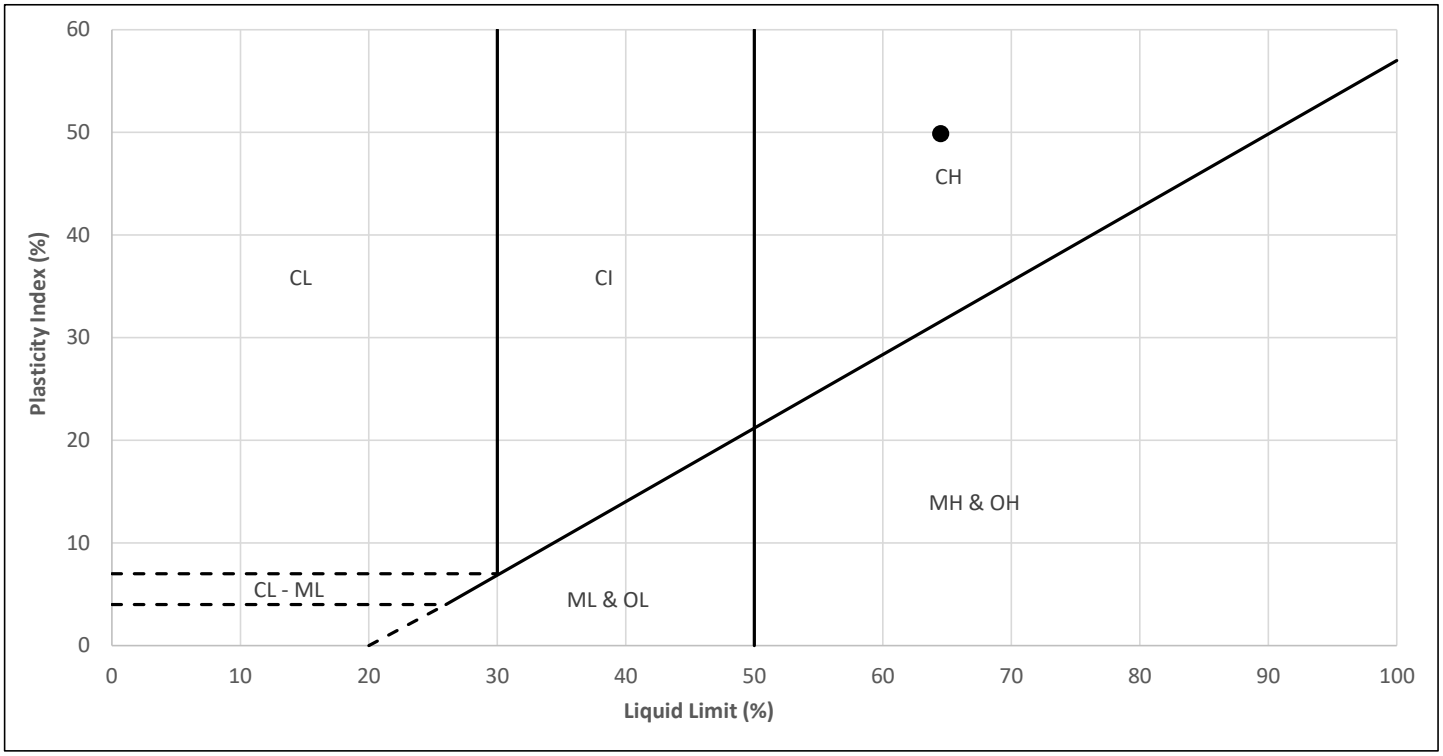
Project:	Snake Lake Reservoir Expansion	**Sample #:**	8AU5
Project No.:	1560-193-00	**Source:**	22VWP-08
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 8AU5	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	64.5
Plastic Limit (PL)	14.6
Plasticity Index (PI)	49.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

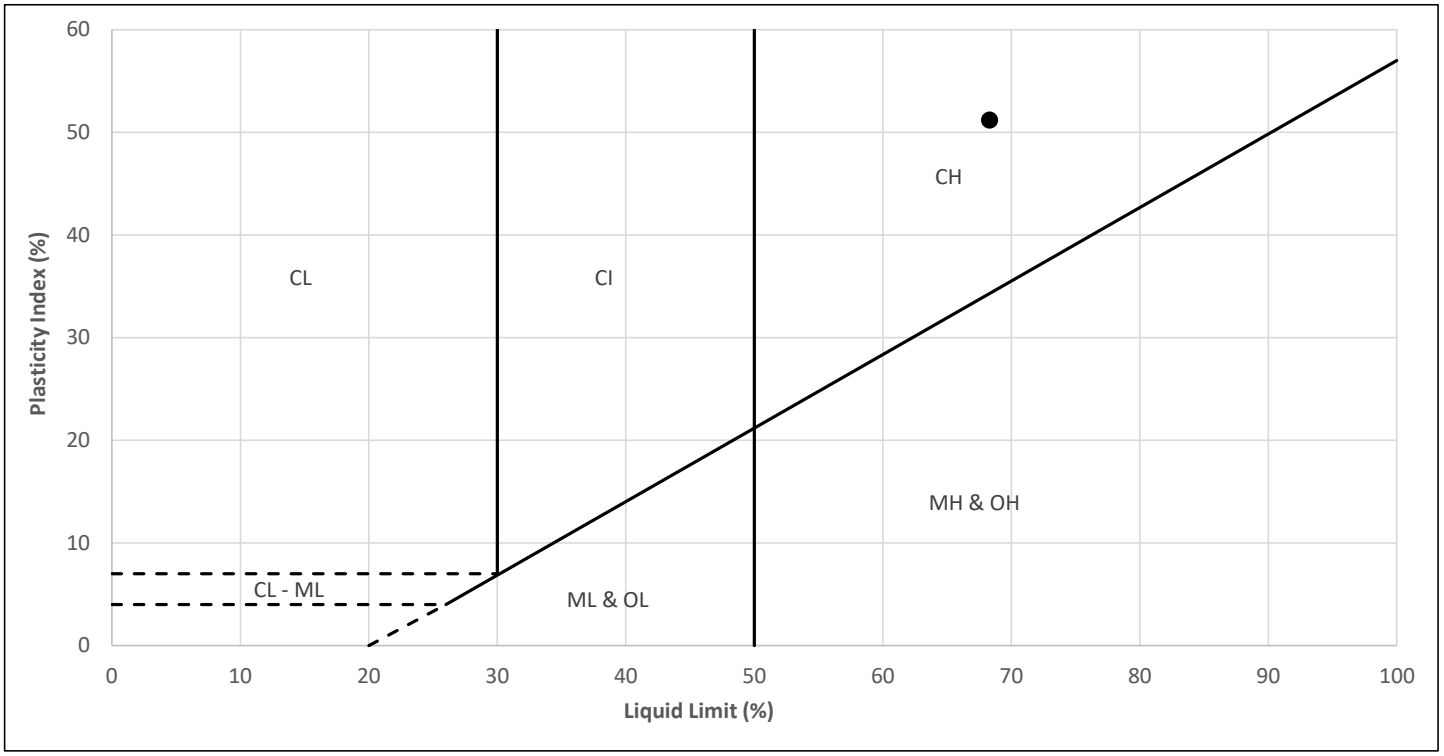
Project:	Snake Lake Reservoir Expansion	**Sample #:**	8AU7
Project No.:	1560-193-00	**Source:**	22VWP-08
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 8AU7	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	68.3
Plastic Limit (PL)	17.1
Plasticity Index (PI)	51.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

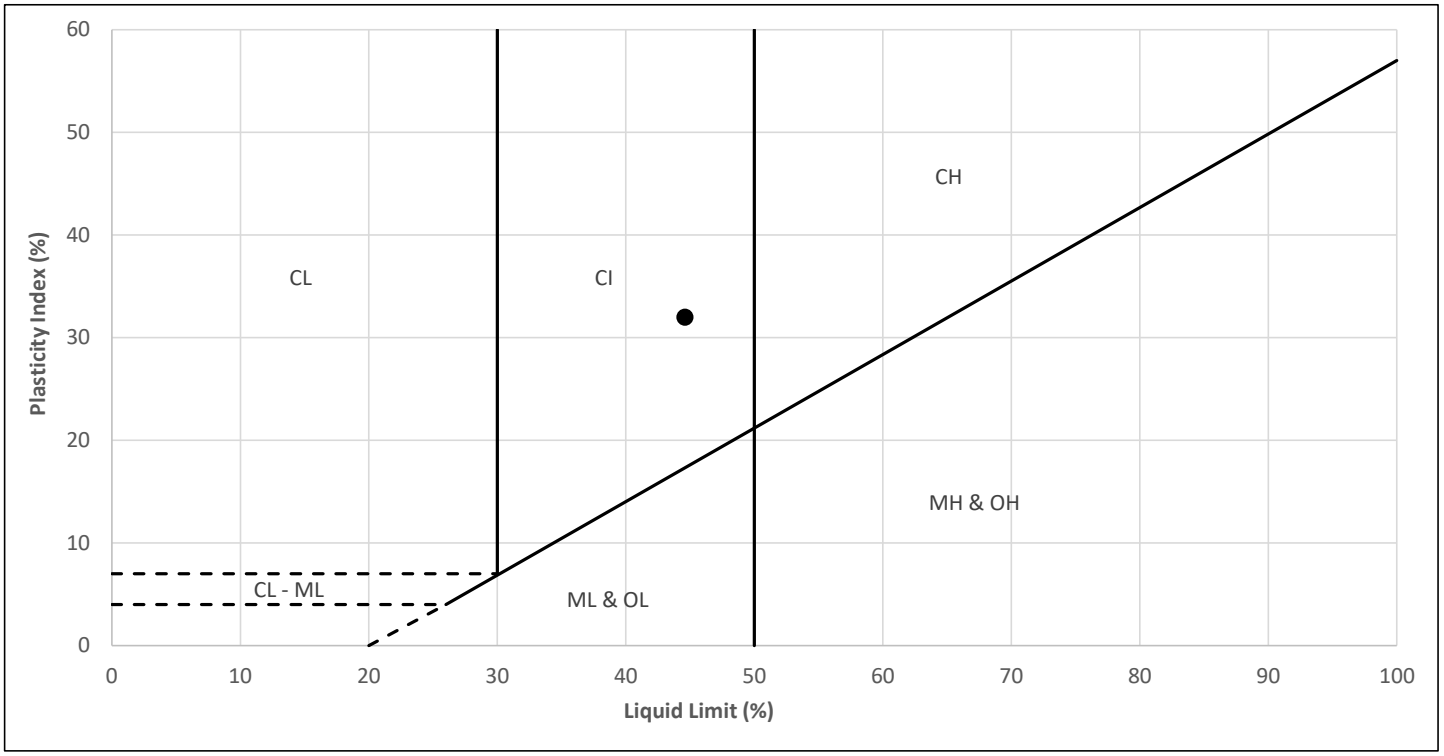
Project:	Snake Lake Reservoir Expansion	**Sample #:**	9AU1
Project No.:	1560-193-00	**Source:**	22VWP-09
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 9AU1	**Test Date:**	13-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.6
Plastic Limit (PL)	12.6
Plasticity Index (PI)	32.0

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

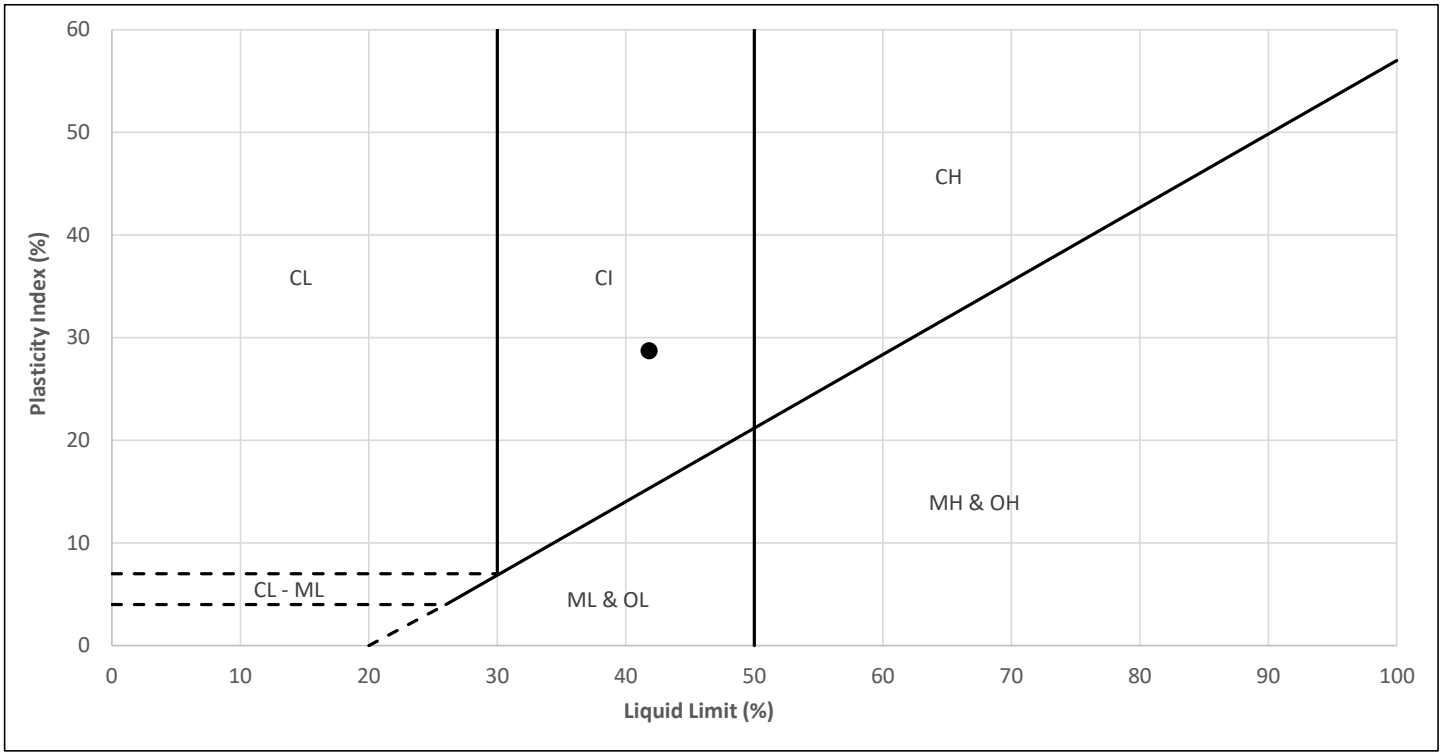
Project:	Snake Lake Reservoir Expansion	**Sample #:**	9AU4
Project No.:	1560-193-00	**Source:**	22VWP-09
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 9AU4	**Test Date:**	13-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	41.8
Plastic Limit (PL)	13.1
Plasticity Index (PI)	28.7

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

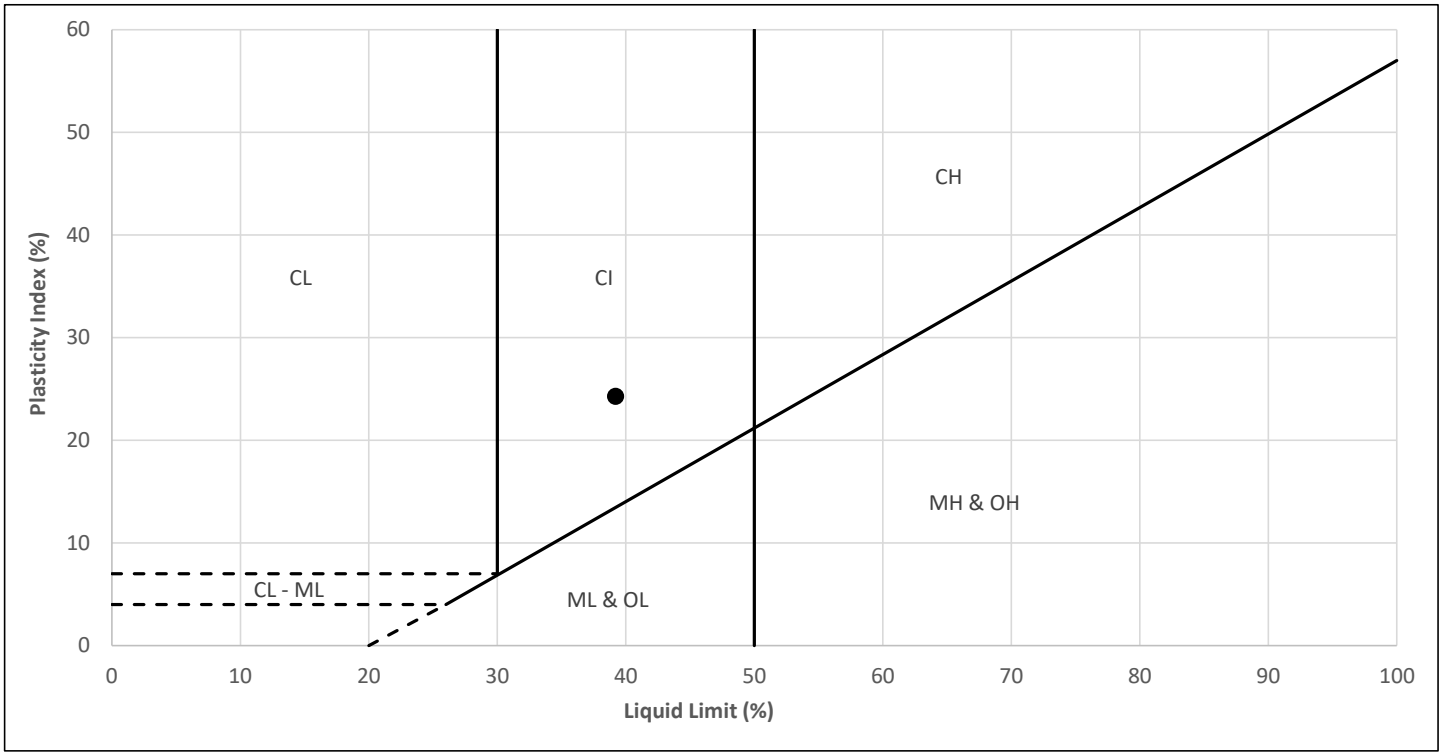
Project:	Snake Lake Reservoir Expansion	**Sample #:**	9AU5
Project No.:	1560-193-00	**Source:**	22VWP-09
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 9AU5	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	39.2
Plastic Limit (PL)	14.9
Plasticity Index (PI)	24.3

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

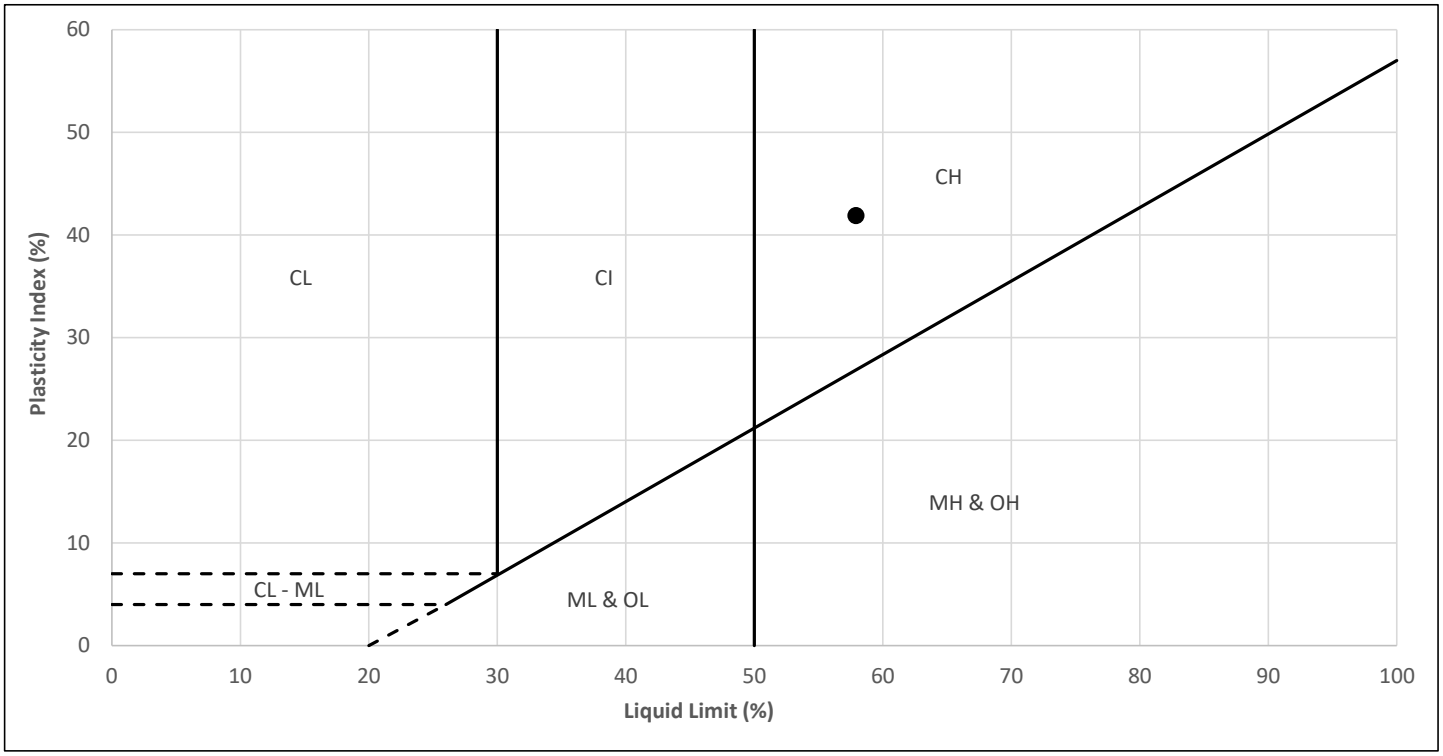
Project:	Snake Lake Reservoir Expansion	**Sample #:**	9AU8
Project No.:	1560-193-00	**Source:**	22VWP-09
Owner:	EID	**Sample Depth:**	5.8m
File No.:	AL - 9AU8	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	57.9
Plastic Limit (PL)	16.0
Plasticity Index (PI)	41.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

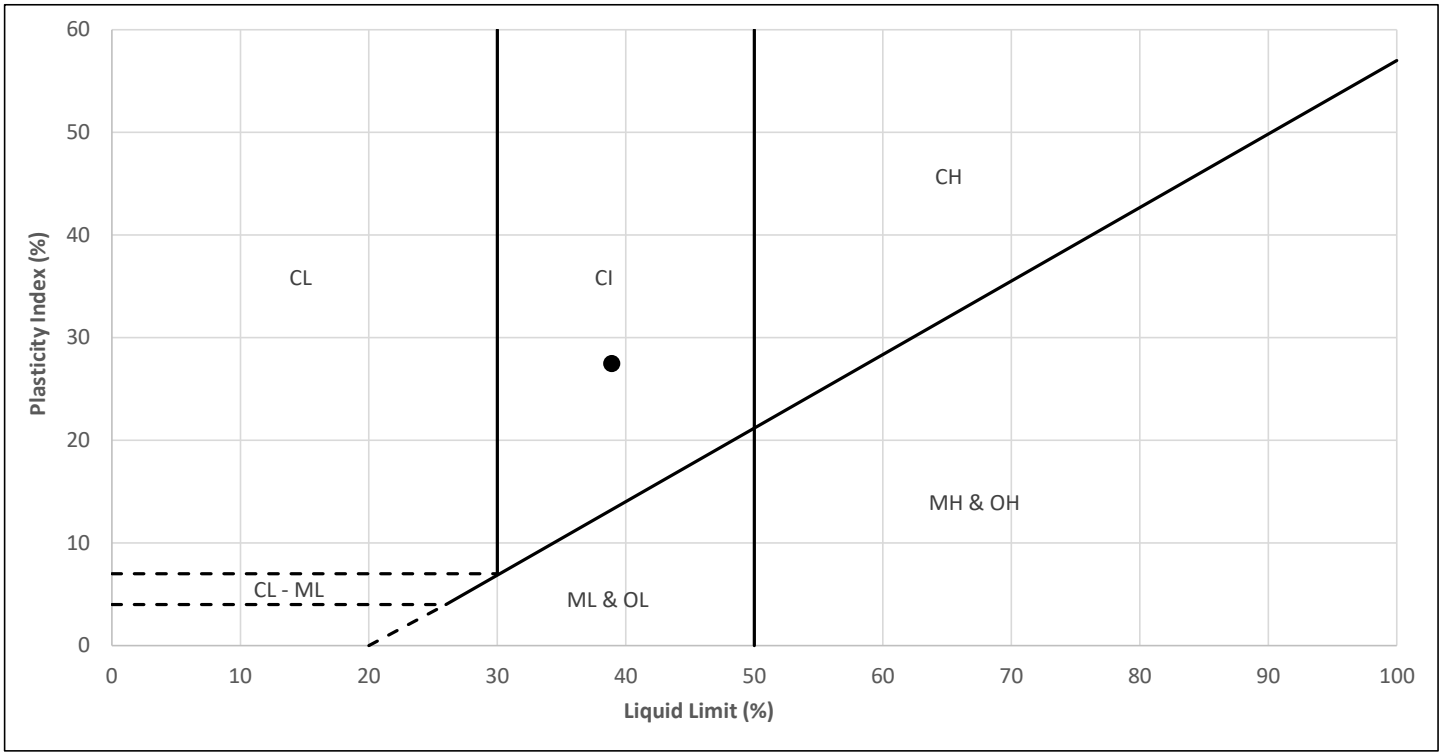
Project:	Snake Lake Reservoir Expansion	**Sample #:**	10AU2
Project No.:	1560-193-00	**Source:**	22VWP-10
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 10AU2	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	38.9
Plastic Limit (PL)	11.4
Plasticity Index (PI)	27.5

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

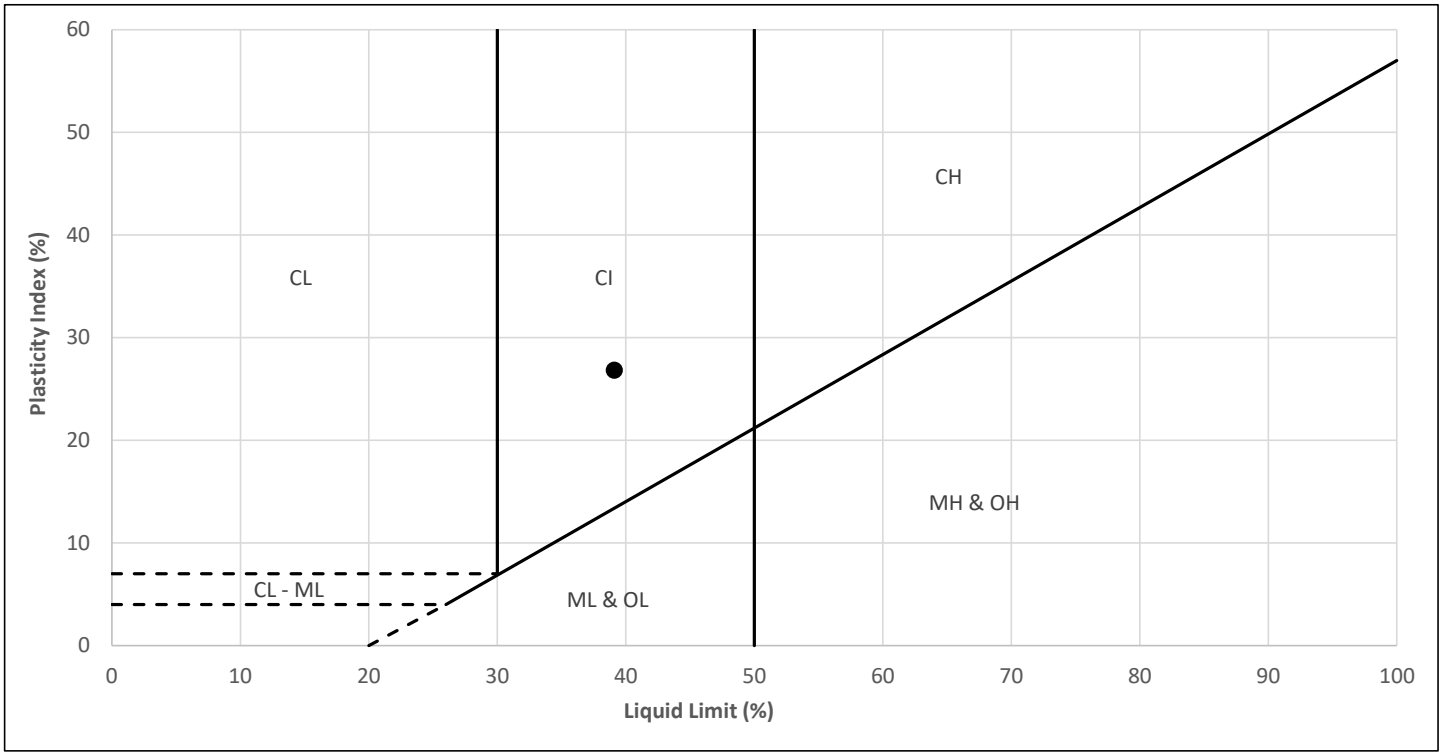
Project:	Snake Lake Reservoir Expansion	**Sample #:**	10AU3
Project No.:	1560-193-00	**Source:**	22VWP-10
Owner:	EID	**Sample Depth:**	2.1m
File No.:	AL - 10AU3	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	39.1
Plastic Limit (PL)	12.3
Plasticity Index (PI)	26.8

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

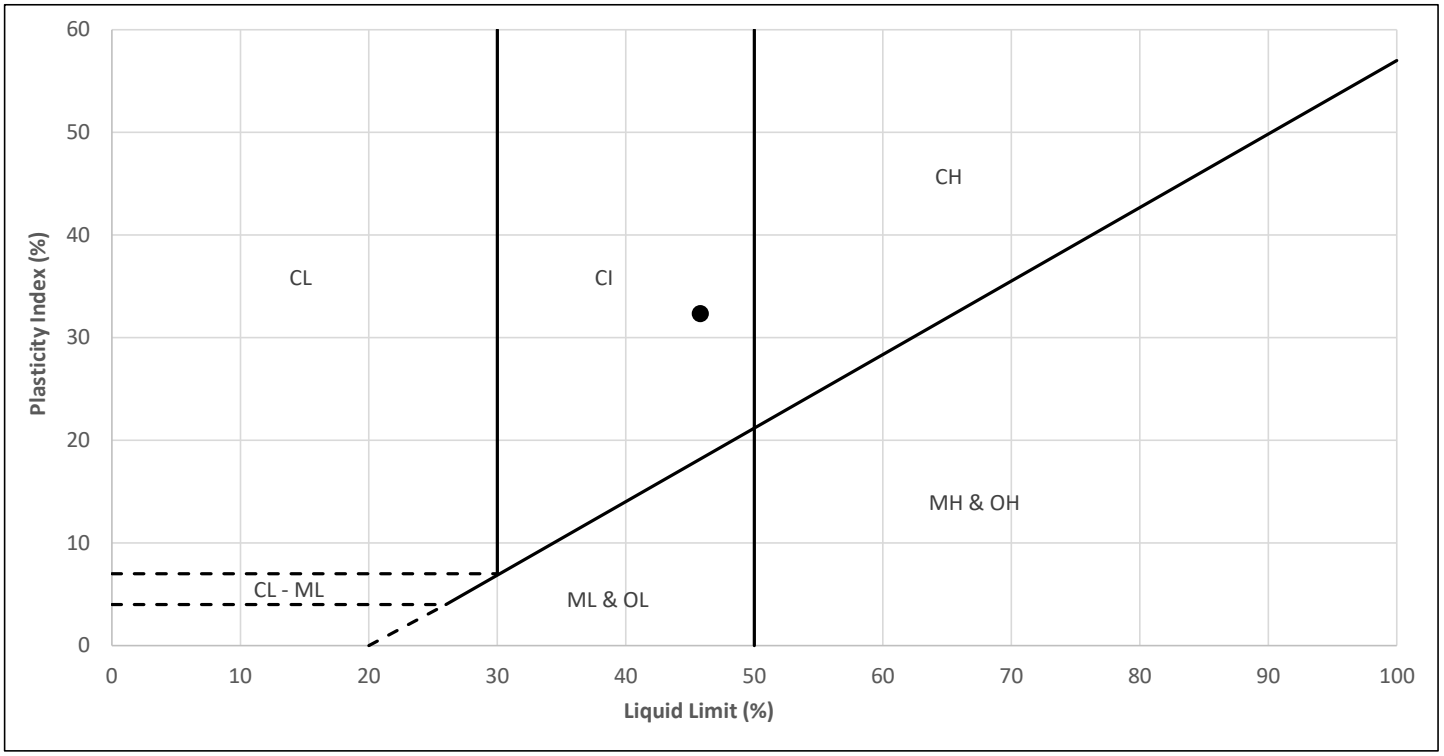
Project:	Snake Lake Reservoir Expansion	**Sample #:**	10AU5
Project No.:	1560-193-00	**Source:**	22VWP-10
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 10AU5	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	45.8
Plastic Limit (PL)	13.4
Plasticity Index (PI)	32.4

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

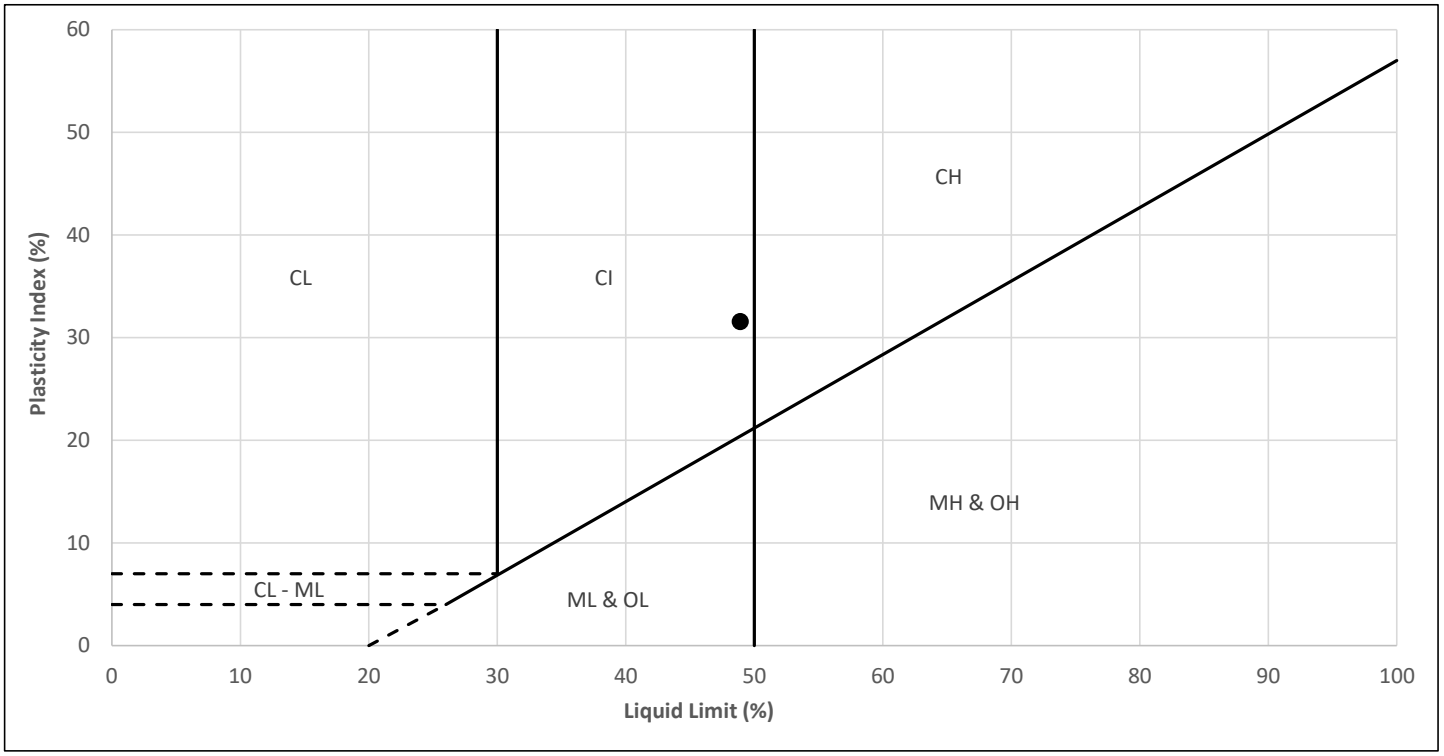
Project:	Snake Lake Reservoir Expansion	**Sample #:**	10AU8
Project No.:	1560-193-00	**Source:**	22VWP-10
Owner:	EID	**Sample Depth:**	5.8m
File No.:	AL - 10AU8	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	48.9
Plastic Limit (PL)	17.3
Plasticity Index (PI)	31.6

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

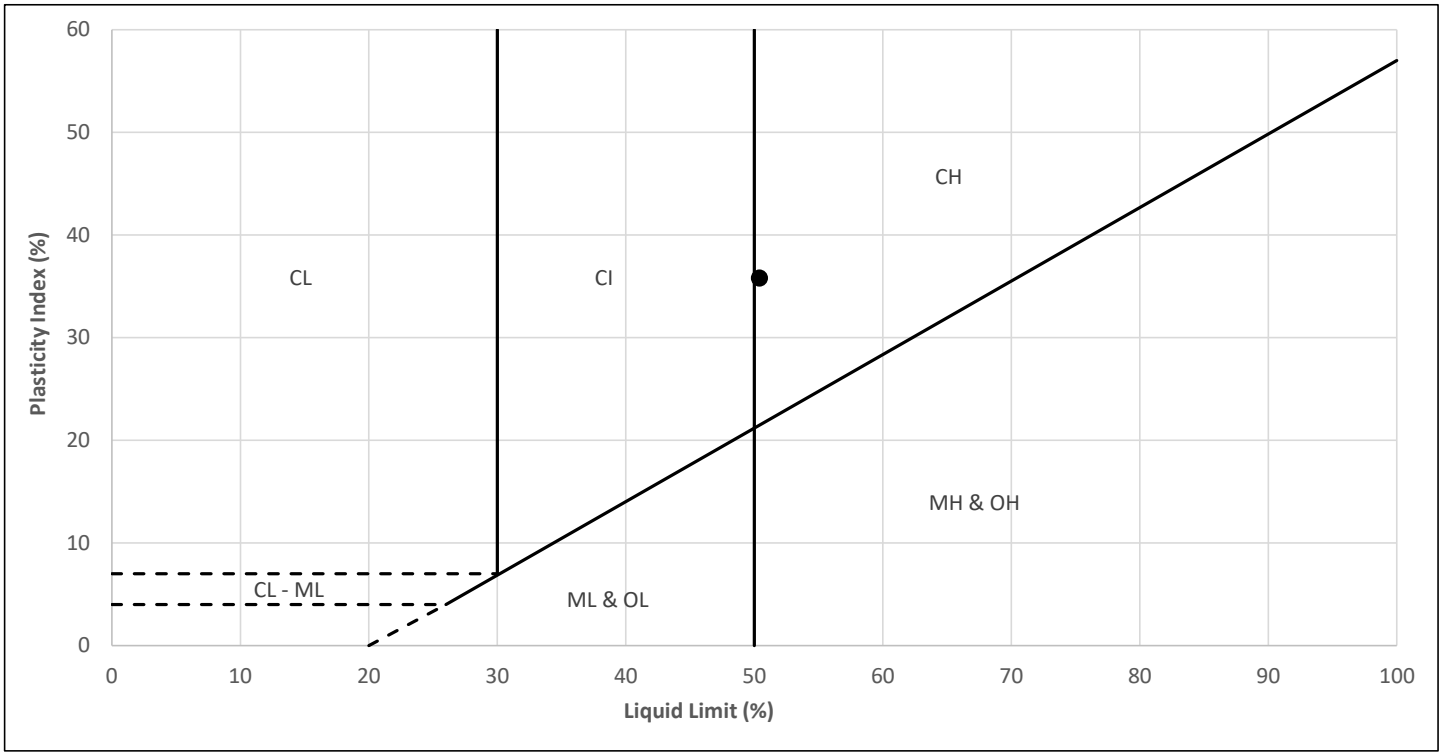
Project:	Snake Lake Reservoir Expansion	**Sample #:**	11AU1
Project No.:	1560-193-00	**Source:**	22VWP-11
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 11AU1	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	50.4
Plastic Limit (PL)	14.6
Plasticity Index (PI)	35.8

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

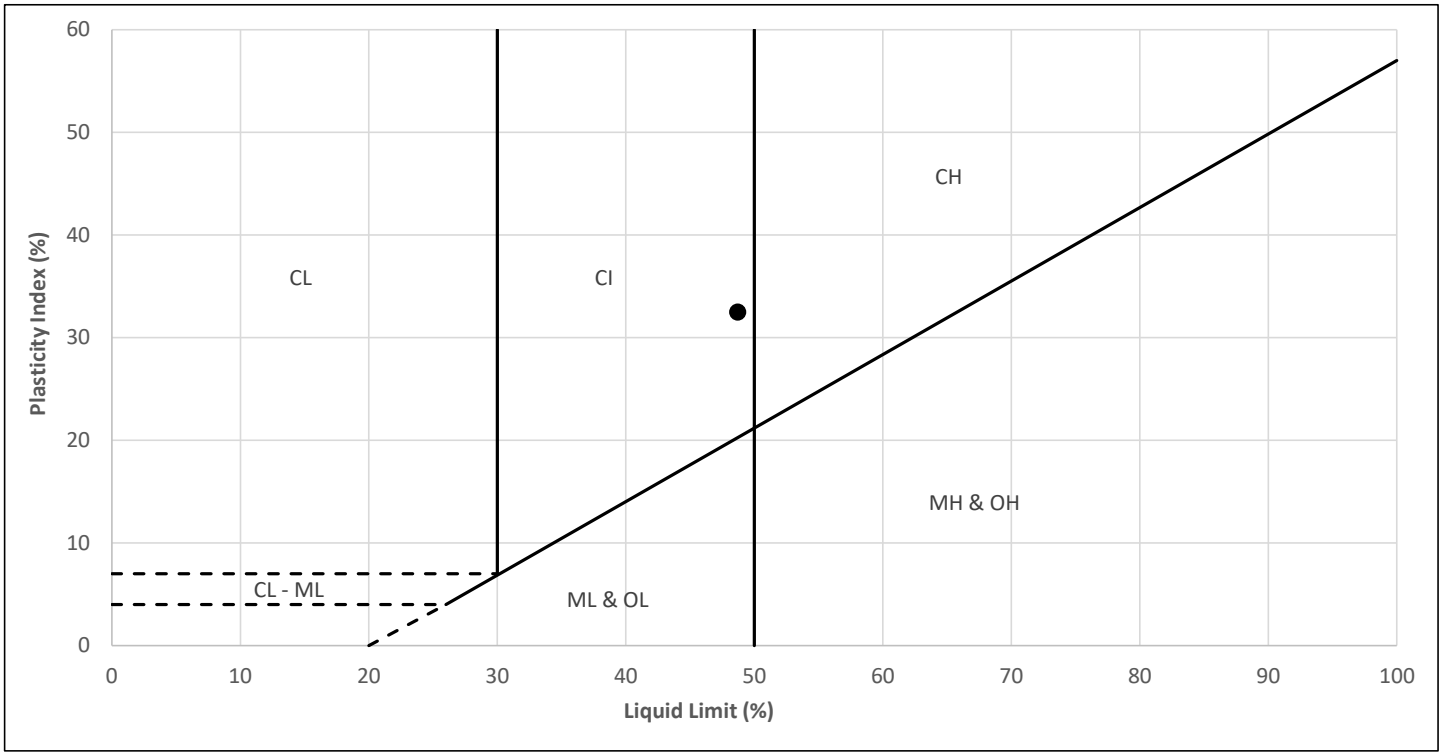
Project:	Snake Lake Reservoir Expansion	**Sample #:**	11AU2
Project No.:	1560-193-00	**Source:**	22VWP-11
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 11AU2	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	48.7
Plastic Limit (PL)	16.2
Plasticity Index (PI)	32.5

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

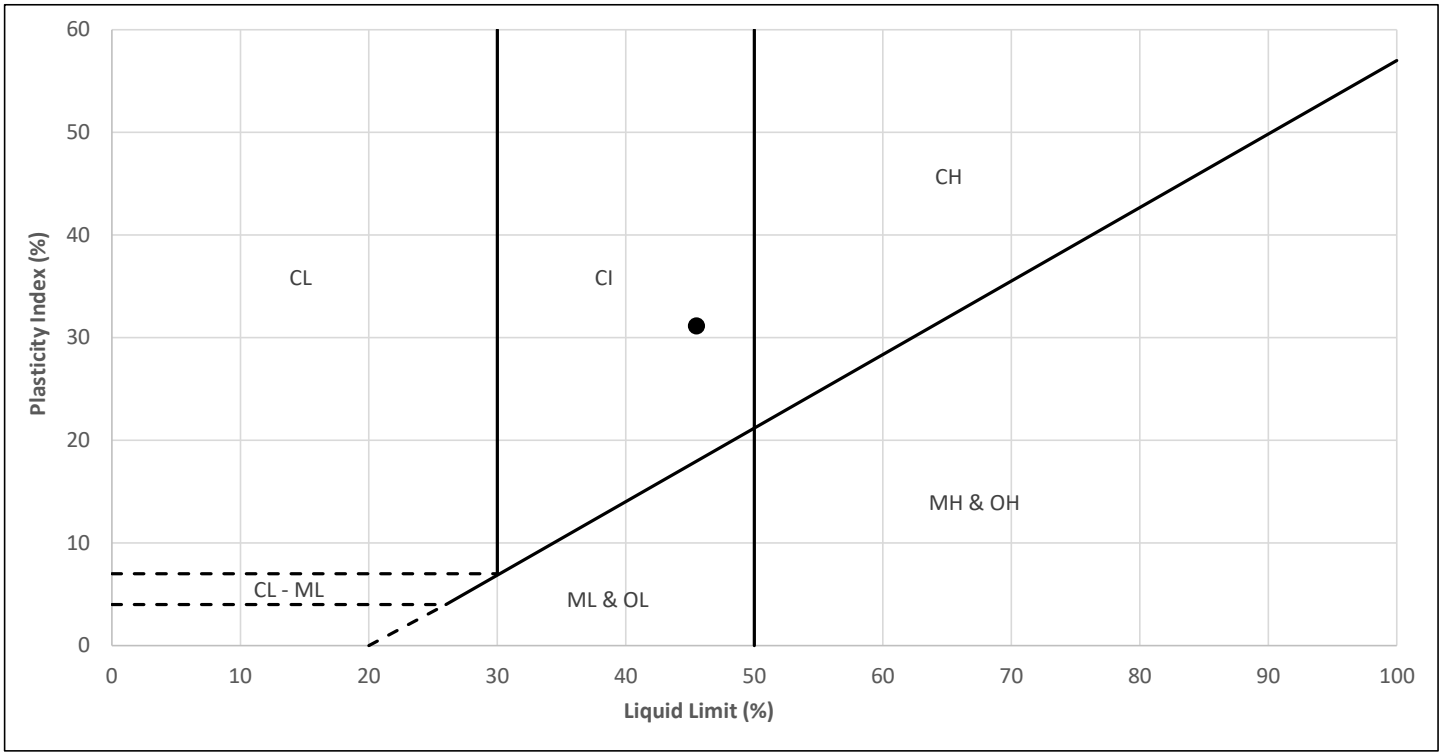
Project:	Snake Lake Reservoir Expansion	**Sample #:**	11AU7
Project No.:	1560-193-00	**Source:**	22VWP-11
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 11AU7	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	45.5
Plastic Limit (PL)	14.3
Plasticity Index (PI)	31.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

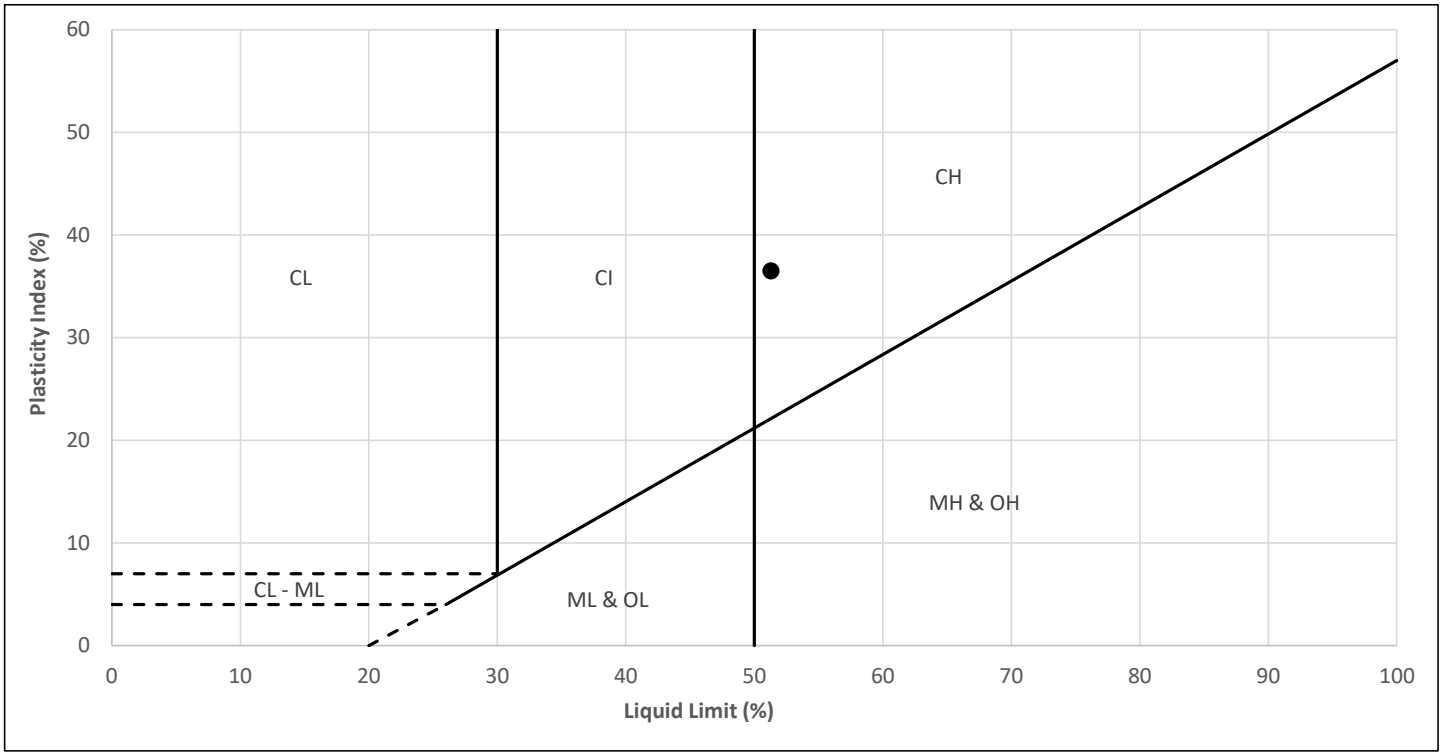
Project:	Snake Lake Reservoir Expansion	**Sample #:**	11AU10
Project No.:	1560-193-00	**Source:**	22VWP-11
Owner:	EID	**Sample Depth:**	7.3m
File No.:	AL - 11AU10	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	51.3
Plastic Limit (PL)	14.8
Plasticity Index (PI)	36.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

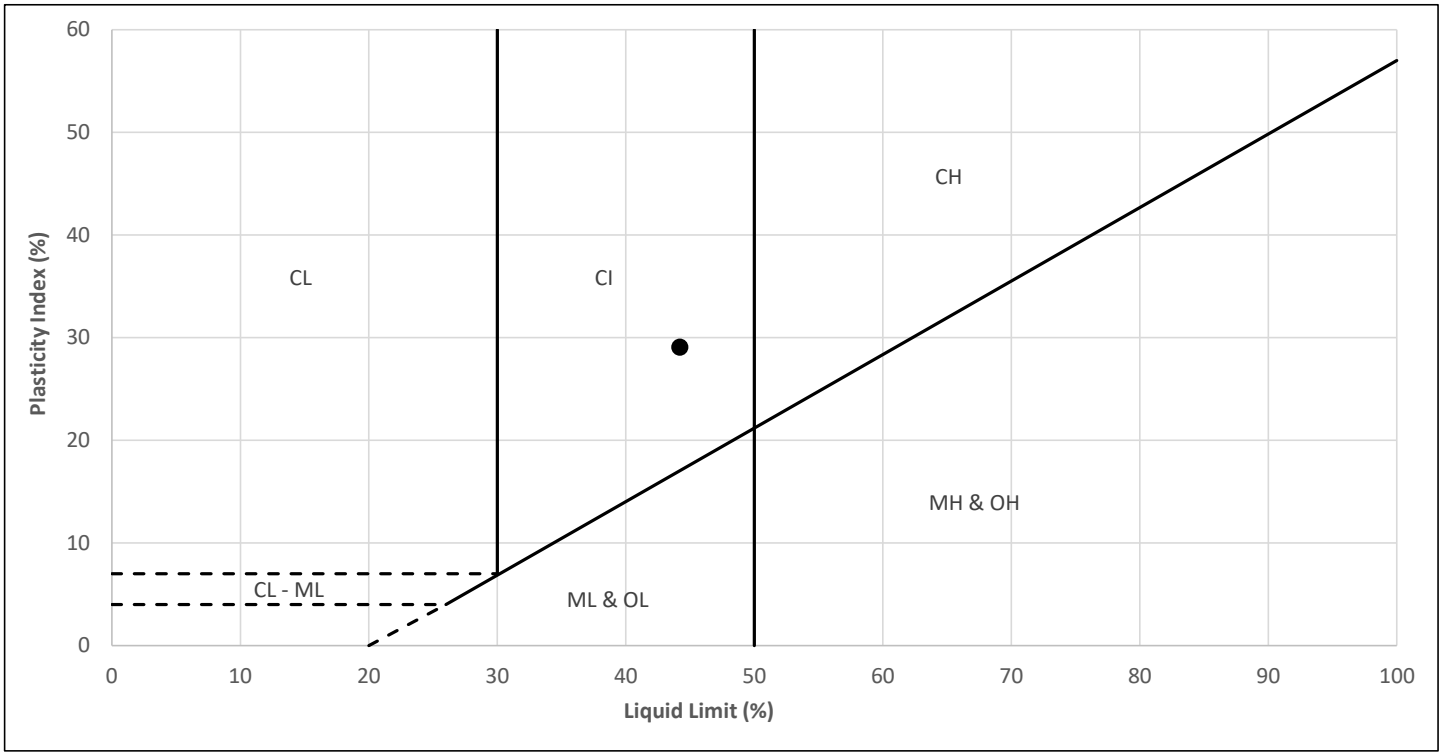
Project:	Snake Lake Reservoir Expansion	**Sample #:**	11AU12
Project No.:	1560-193-00	**Source:**	22VWP-11
Owner:	EID	**Sample Depth:**	8.8m
File No.:	AL - 11AU12	**Test Date:**	13-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.2
Plastic Limit (PL)	15.1
Plasticity Index (PI)	29.1

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

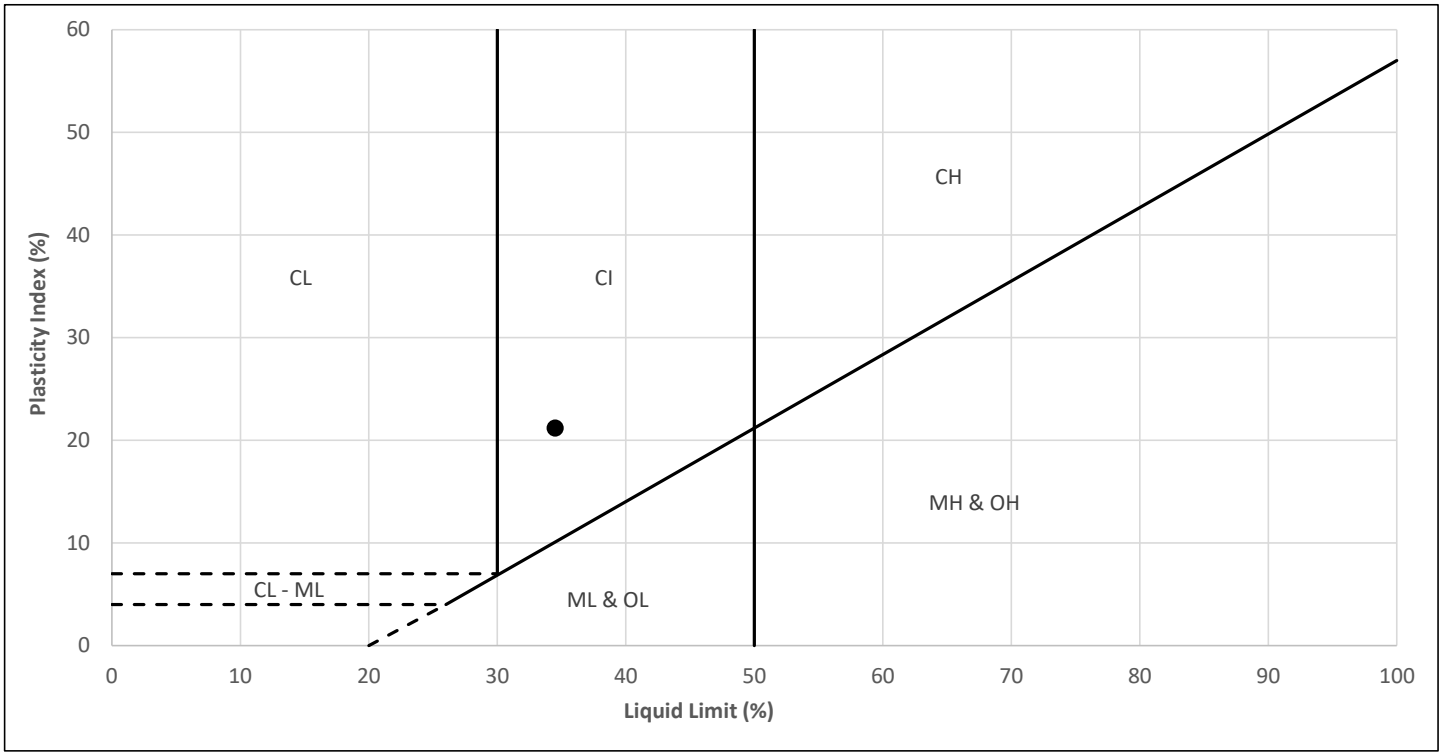
Project:	Snake Lake Reservoir Expansion	**Sample #:**	12AU1
Project No.:	1560-193-00	**Source:**	22VWP-12
Owner:	EID	**Sample Depth:**	0.6m
File No.:	AL - 12AU1	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	34.5
Plastic Limit (PL)	13.3
Plasticity Index (PI)	21.2

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

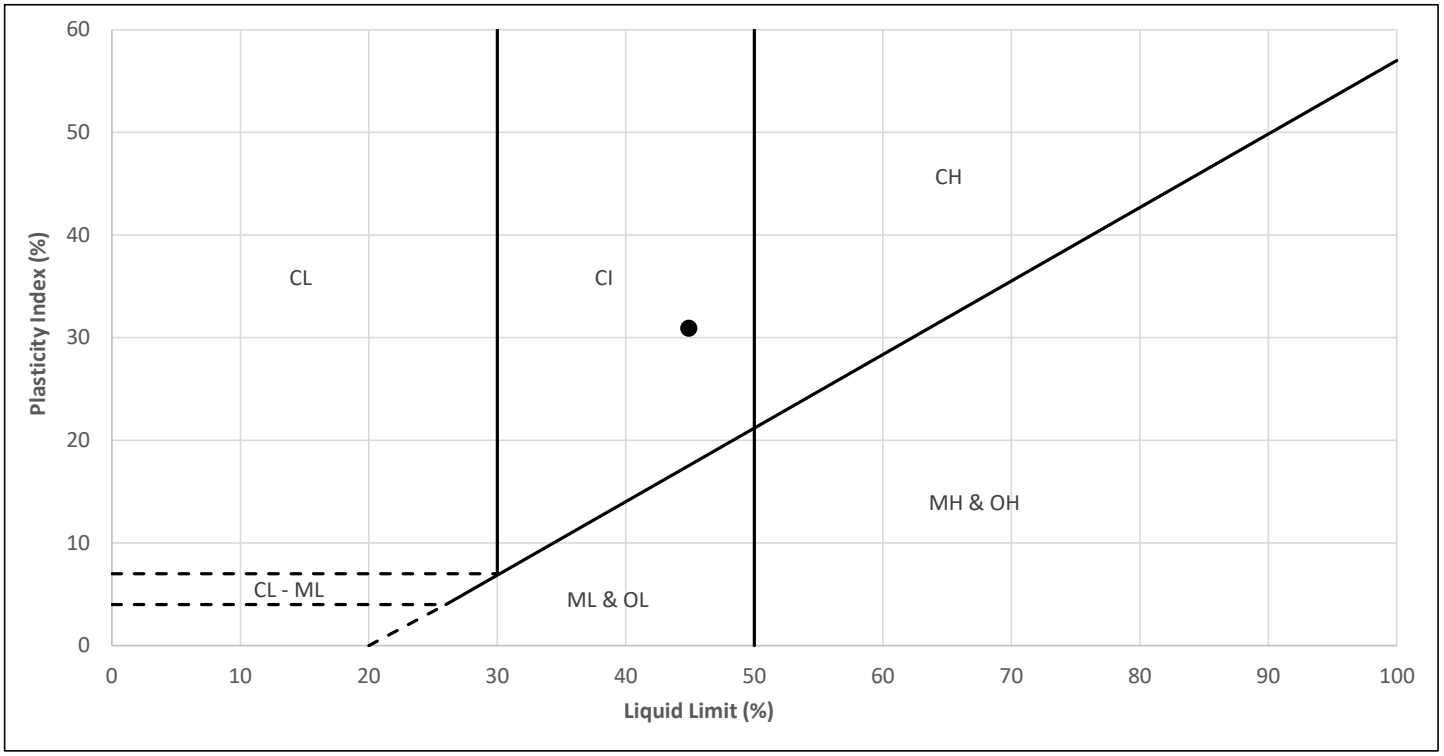
Project:	Snake Lake Reservoir Expansion	**Sample #:**	12AU4
Project No.:	1560-193-00	**Source:**	22VWP-12
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 12AU4	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of medium plasticity, silty clays

Liquid Limit (LL)	44.9
Plastic Limit (PL)	14.0
Plasticity Index (PI)	30.9

Soil Plasticity	Medium
Soil Classification	CI



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ATTERBERG LIMITS

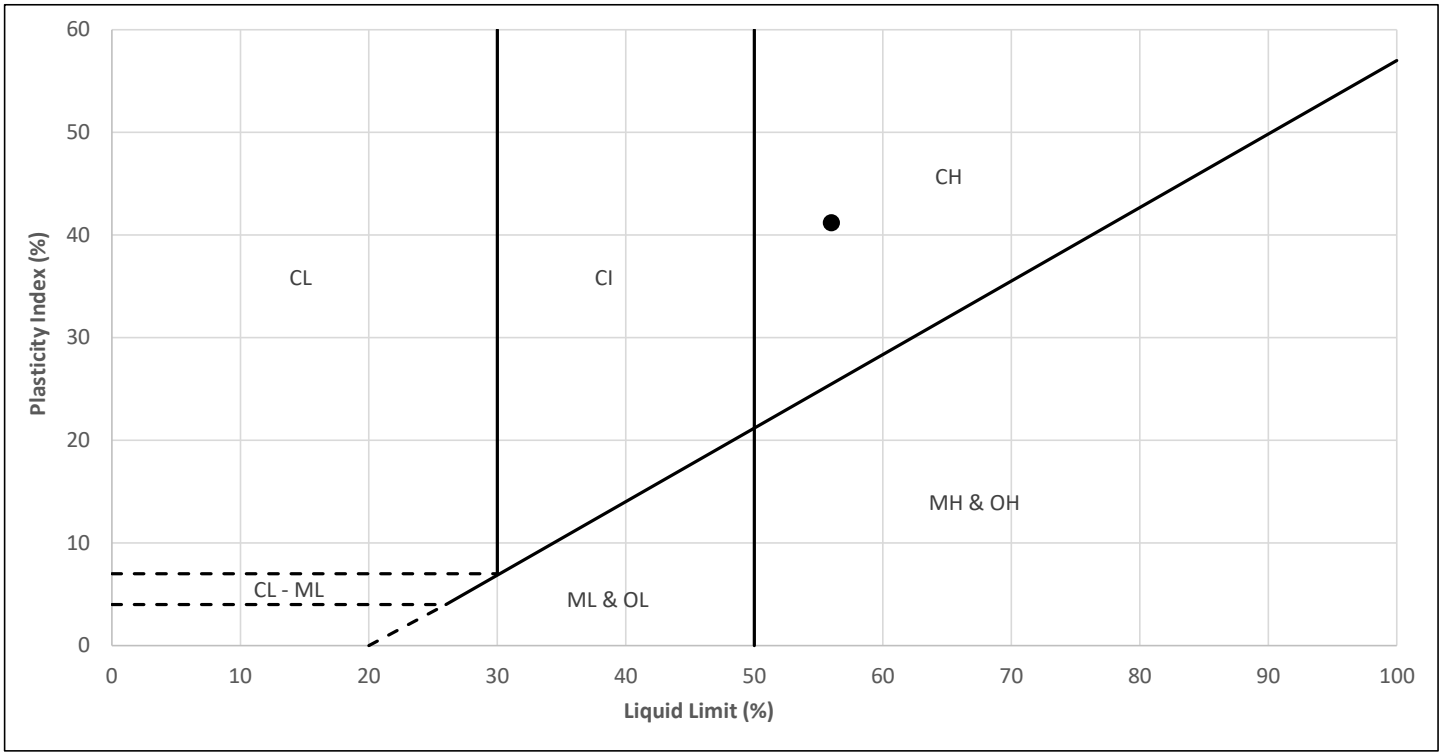
Project:	Snake Lake Reservoir Expansion	**Sample #:**	12AU5
Project No.:	1560-193-00	**Source:**	22VWP-12
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 12AU5	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	56.0
Plastic Limit (PL)	14.8
Plasticity Index (PI)	41.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

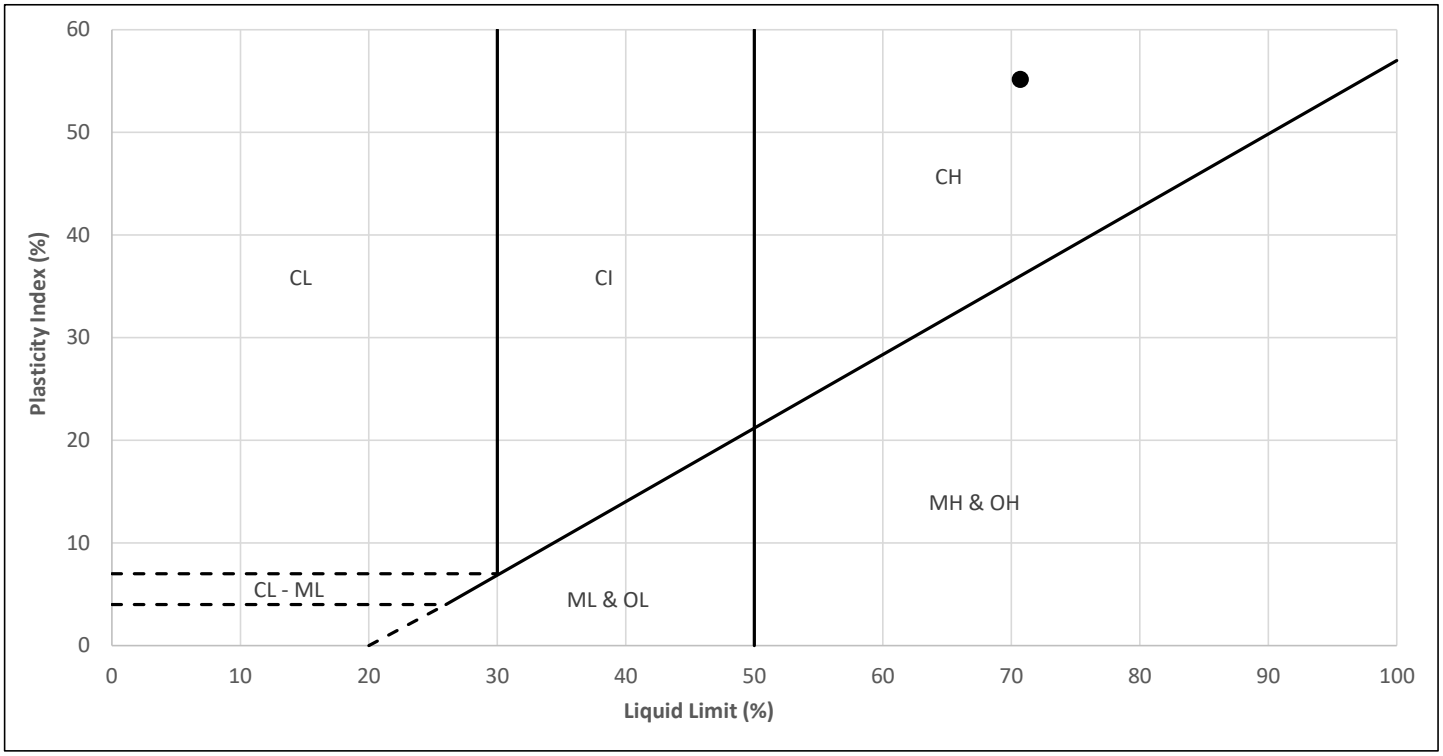
Project:	Snake Lake Reservoir Expansion	**Sample #:**	12AU7
Project No.:	1560-193-00	**Source:**	22VWP-12
Owner:	EID	**Sample Depth:**	5.2m
File No.:	AL - 12AU7	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	70.7
Plastic Limit (PL)	15.5
Plasticity Index (PI)	55.2

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

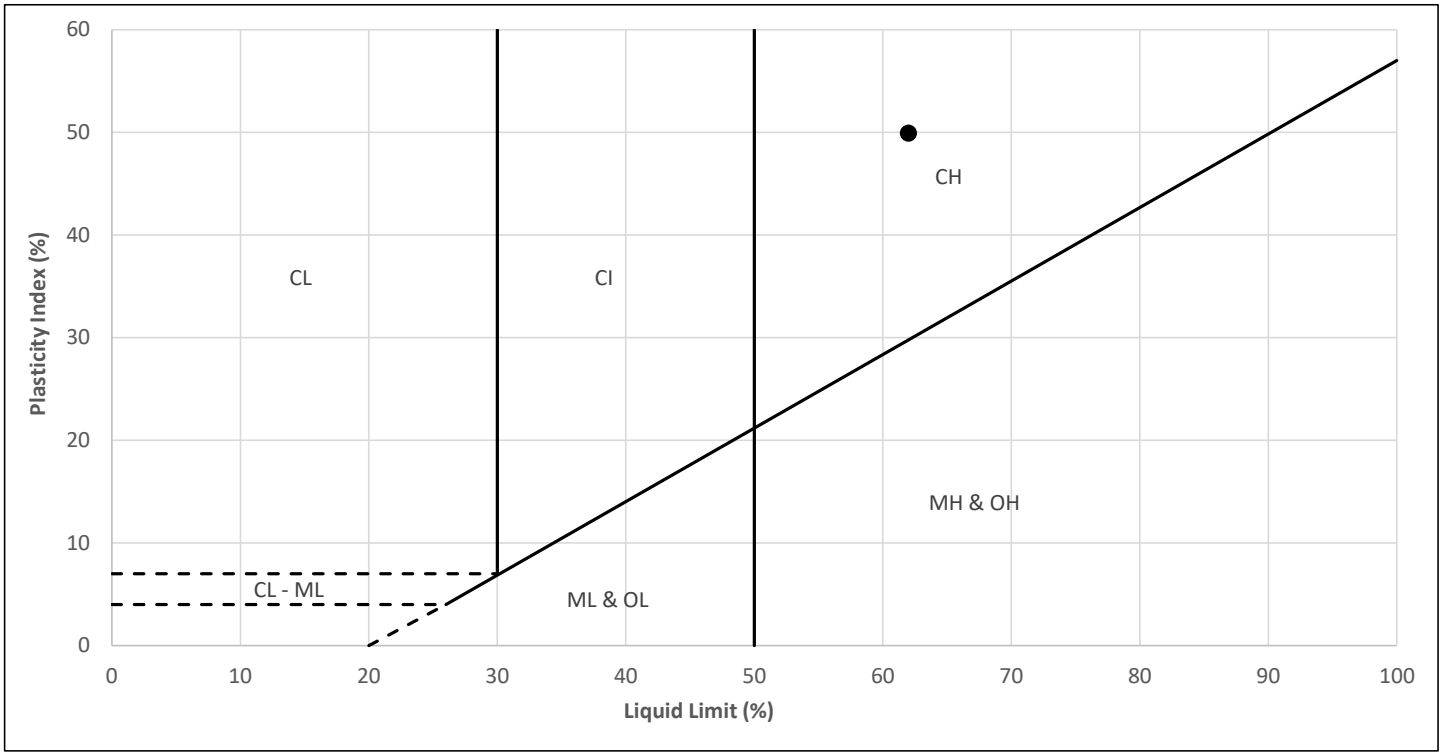
Project:	Snake Lake Reservoir Expansion	**Sample #:**	13AU2
Project No.:	1560-193-00	**Source:**	22VWP-13
Owner:	EID	**Sample Depth:**	1.2m
File No.:	AL - 13AU2	**Test Date:**	13-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	62.0
Plastic Limit (PL)	12.1
Plasticity Index (PI)	49.9

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

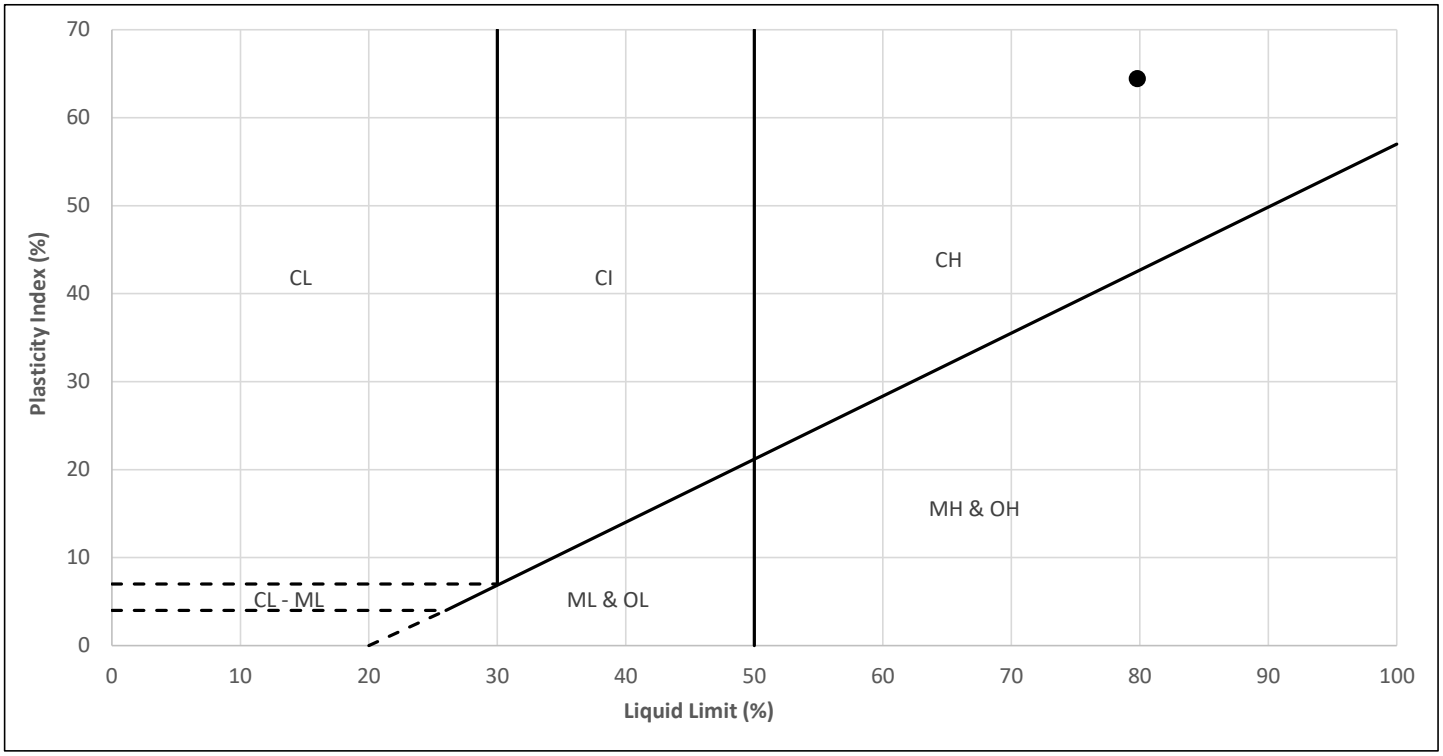
Project:	Snake Lake Reservoir Expansion	**Sample #:**	13AU4
Project No.:	1560-193-00	**Source:**	22VWP13
Owner:	EID	**Sample Depth:**	2.7m
File No.:	AL - 13AU4	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	79.8
Plastic Limit (PL)	15.3
Plasticity Index (PI)	64.5

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

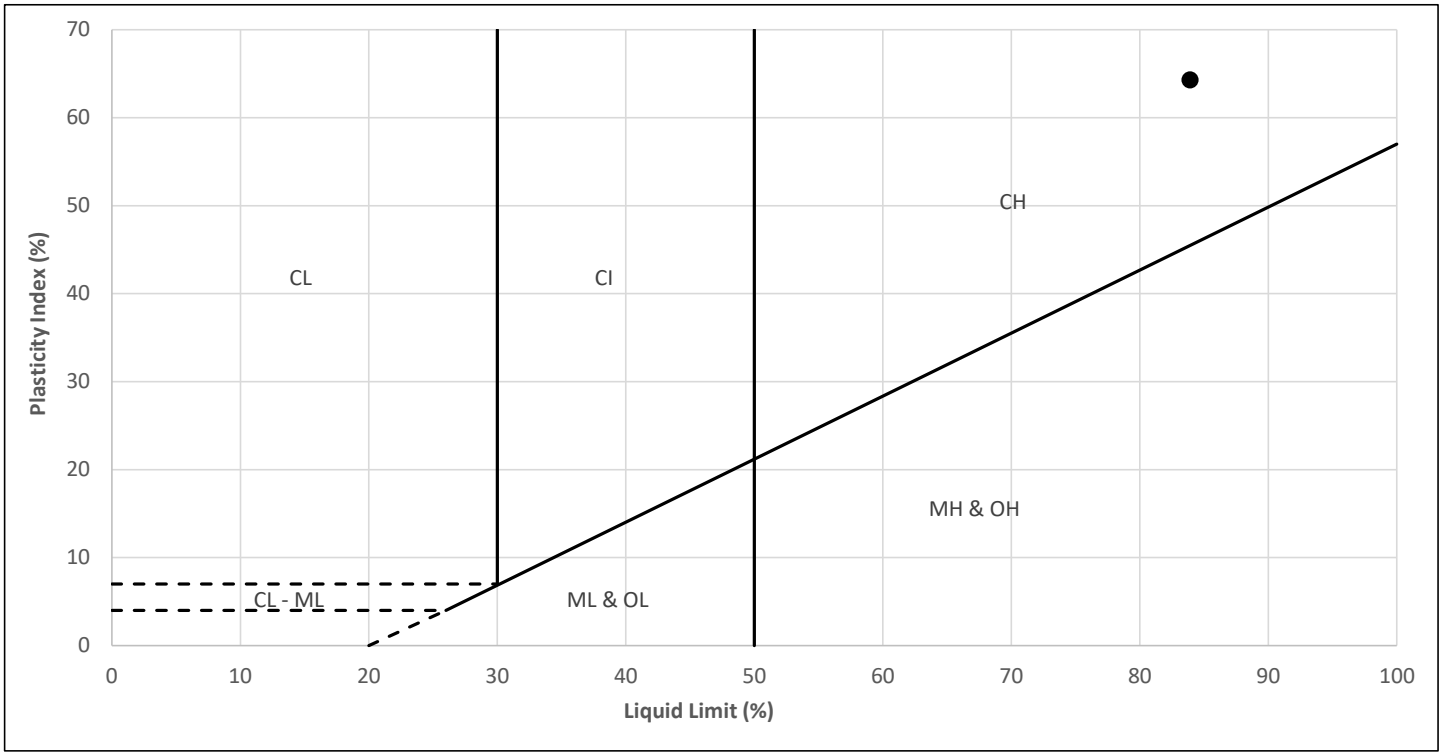
Project:	Snake Lake Reservoir Expansion	**Sample #:**	13AU5
Project No.:	1560-193-00	**Source:**	22VWP-13
Owner:	EID	**Sample Depth:**	3.7m
File No.:	AL - 13AU5	**Test Date:**	20-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	83.9
Plastic Limit (PL)	19.6
Plasticity Index (PI)	64.3

Soil Plasticity	High
Soil Classification	CH



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ATTERBERG LIMITS

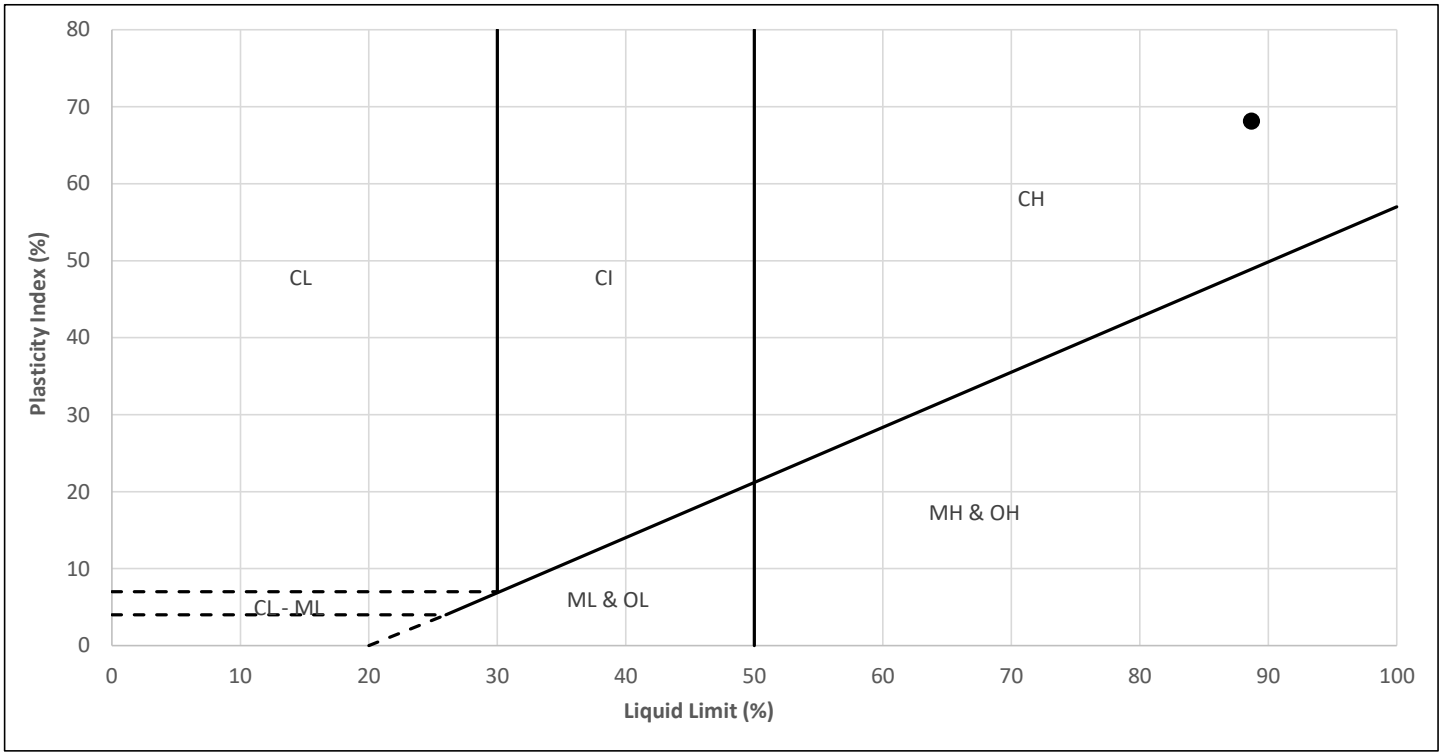
Project:	Snake Lake Reservoir Expansion	**Sample #:**	13AU8
Project No.:	1560-193-00	**Source:**	22VWP-13
Owner:	EID	**Sample Depth:**	5.8m
File No.:	AL - 13AU8	**Test Date:**	12-Oct-22

Tested in accordance with ASTM D4318 (Liquid Limit, Plastic Limit, and Plasticity of Soils). Additional test information available upon request.

Sample Description: Inorganic clays of high plasticity, fat clays

Liquid Limit (LL)	88.7
Plastic Limit (PL)	20.6
Plasticity Index (PI)	68.1

Soil Plasticity	High
Soil Classification	CH



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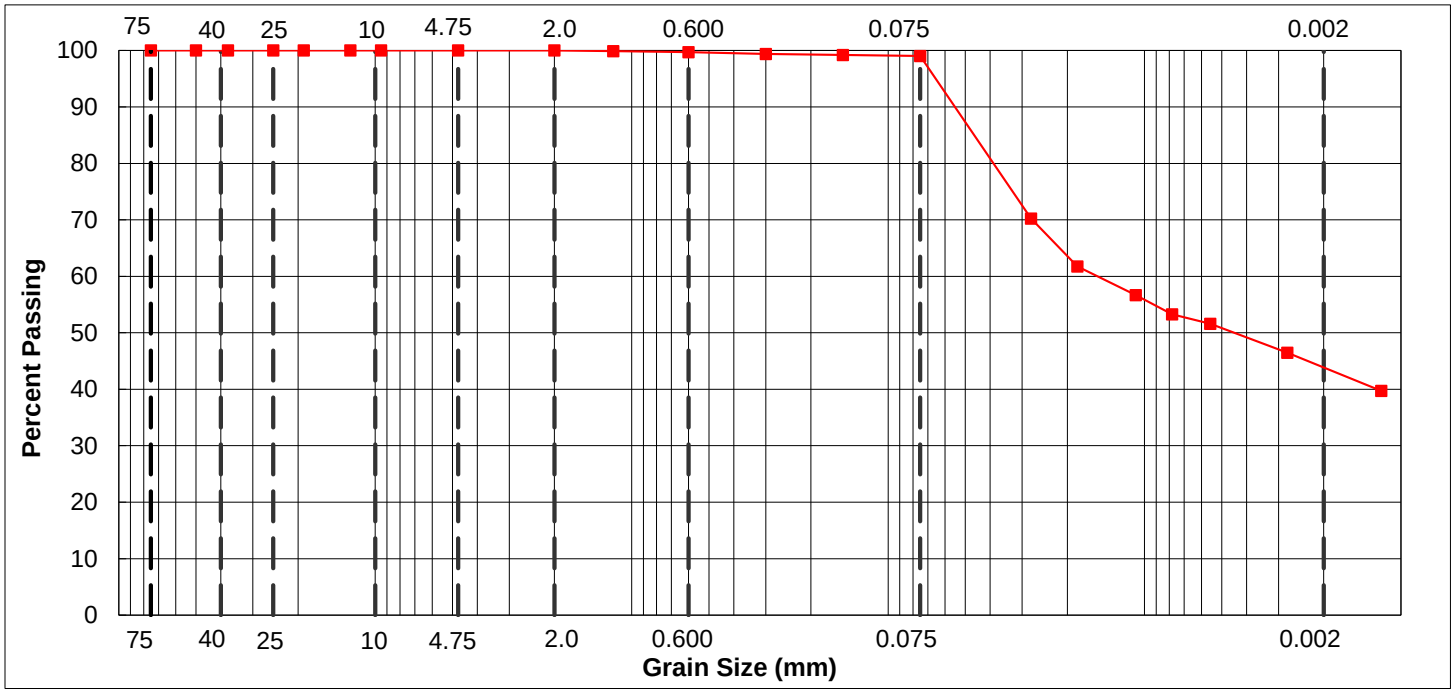
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	1AU3
Project No.:	1560-193-00	**Source:**	22VWP-01
Owner:	EID	**Sample Depth:**	2.1m
File No.:	GSA - 1AU3	**Test Date:**	11-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.7
75.0	100.0	0.300	99.4
50.0	100.0	0.150	99.2
37.5	100.0	0.075	99.0
25.0	100.0	0.0277	70.3
19.0	100.0	0.0183	61.8
12.5	100.0	0.0108	56.7
9.5	100.0	0.0078	53.3
4.75	100.0	0.0055	51.6
2.00	100.0	0.0028	46.5
1.180	99.9	0.0012	39.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.3	2.00 mm to 425 µm
Fine Sand	0.7	425 µm to 75 µm
Silt	55.1	75 µm to 2 µm
Clay	43.9	<2 µm



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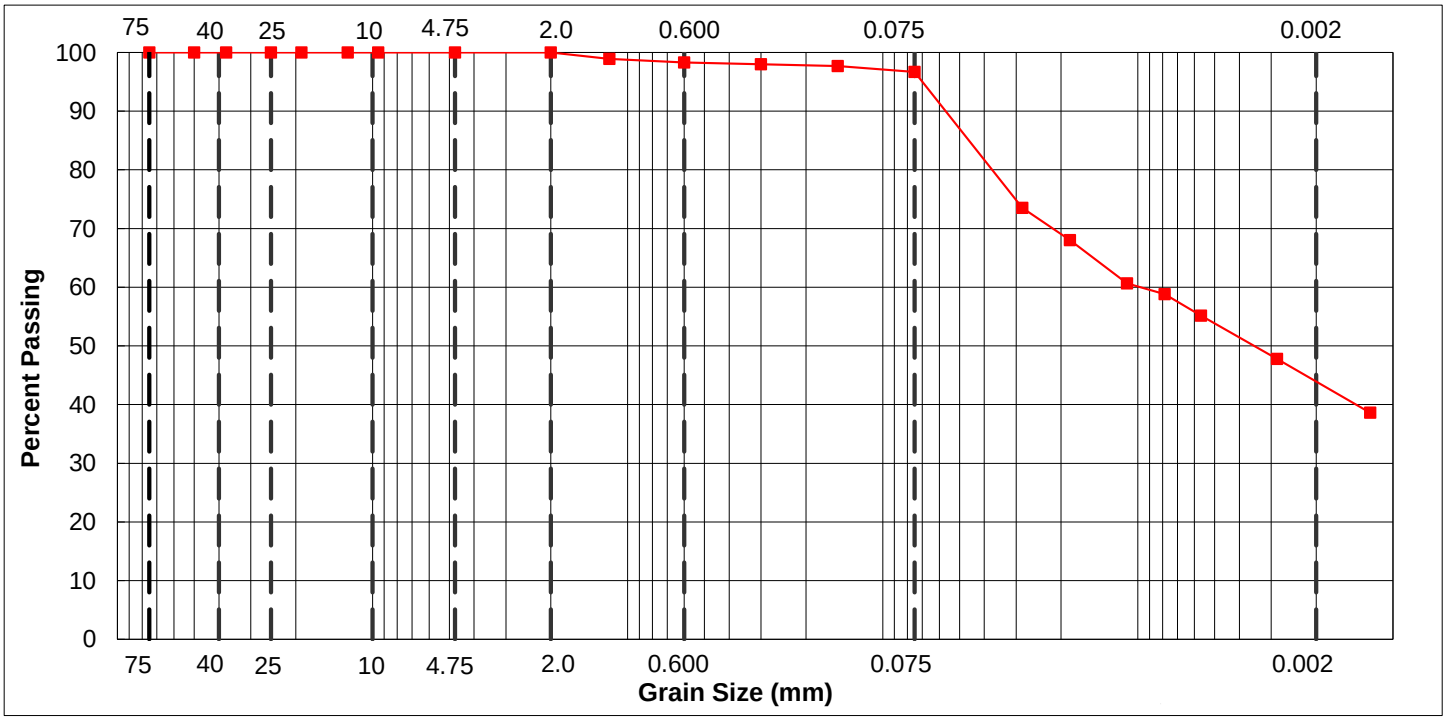
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	1AU10
Project No.:	1560-193-00	**Source:**	22VWP-01
Owner:	EID	**Sample Depth:**	7.3m
File No.:	GSA - 1AU10	**Test Date:**	24-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.3
75.0	100.0	0.300	98.0
50.0	100.0	0.150	97.7
37.5	100.0	0.075	96.7
25.0	100.0	0.0284	73.5
19.0	100.0	0.0184	68.0
12.5	100.0	0.0110	60.7
9.5	100.0	0.0078	58.8
4.75	100.0	0.0057	55.1
2.00	100.0	0.0028	47.8
1.180	98.9	0.0012	38.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.7	2.00 mm to 425 µm
Fine Sand	1.6	425 µm to 75 µm
Silt	52.8	75 µm to 2 µm
Clay	43.9	<2 µm



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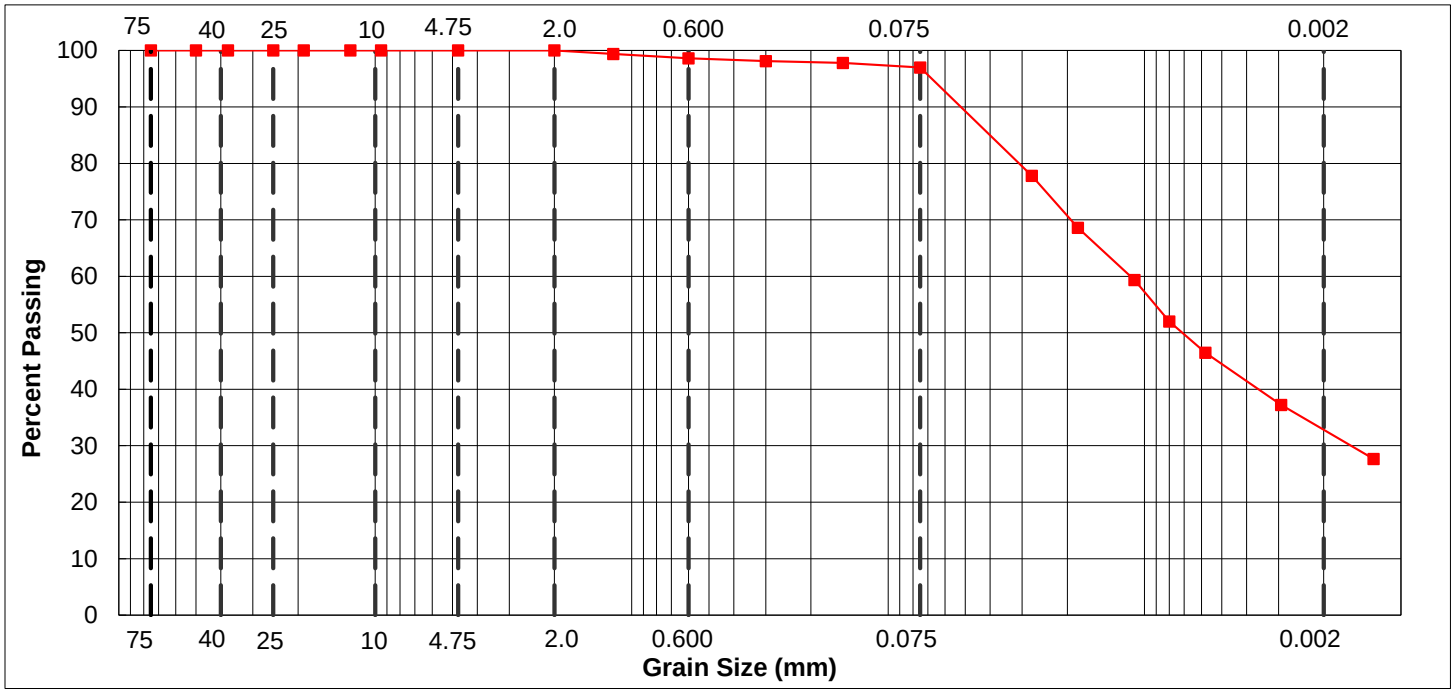
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	2AU5
Project No.:	1560-193-00	**Source:**	22VWP-02
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 2AU5	**Test Date:**	26-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.6
75.0	100.0	0.300	98.1
50.0	100.0	0.150	97.8
37.5	100.0	0.075	97.0
25.0	100.0	0.0275	77.8
19.0	100.0	0.0182	68.6
12.5	100.0	0.0110	59.4
9.5	100.0	0.0080	52.0
4.75	100.0	0.0058	46.5
2.00	100.0	0.0029	37.2
1.180	99.4	0.0013	27.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.4	2.00 mm to 425 µm
Fine Sand	1.6	425 µm to 75 µm
Silt	64.2	75 µm to 2 µm
Clay	32.8	<2 µm



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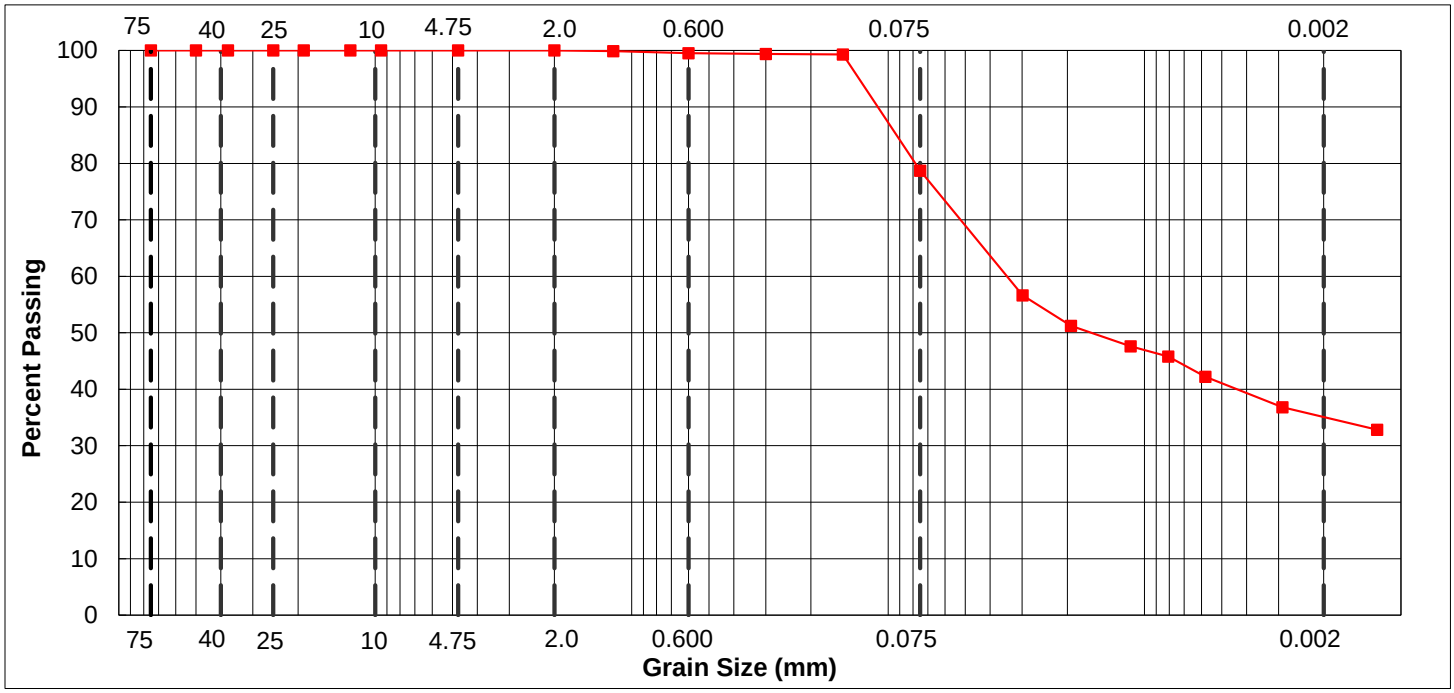
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	2AU8
Project No.:	1560-193-00	**Source:**	22VWP-02
Owner:	EID	**Sample Depth:**	5.8m
File No.:	GSA - 2AU8	**Test Date:**	11-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.4
50.0	100.0	0.150	99.3
37.5	100.0	0.075	78.7
25.0	100.0	0.0299	56.6
19.0	100.0	0.0194	51.2
12.5	100.0	0.0113	47.6
9.5	100.0	0.0081	45.8
4.75	100.0	0.0058	42.2
2.00	100.0	0.0029	36.8
1.180	99.9	0.0012	32.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	20.8	425 µm to 75 µm
Silt	43.6	75 µm to 2 µm
Clay	35.1	<2 µm



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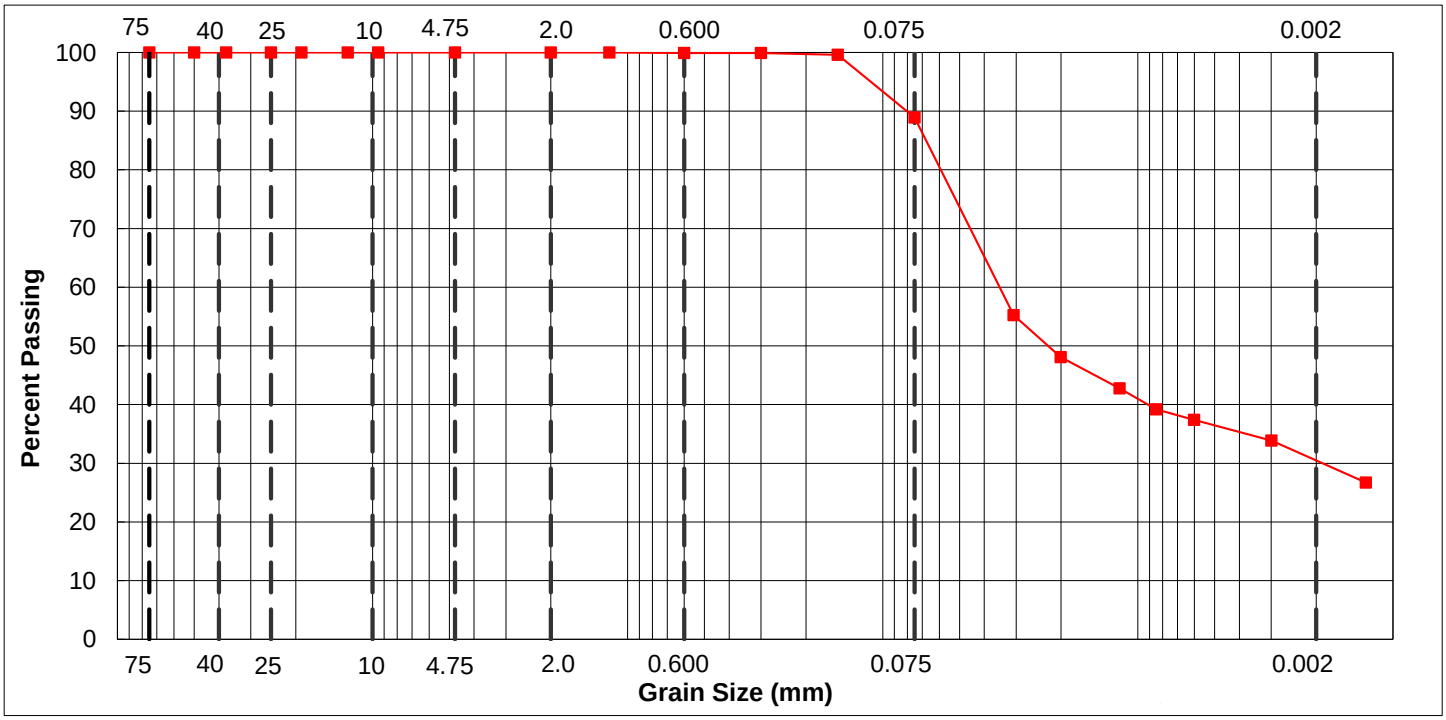
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	2AU12
Project No.:	1560-193-00	**Source:**	22VWP-02
Owner:	EID	**Sample Depth:**	8.8m
File No.:	GSA - 2AU12	**Test Date:**	24-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.6
37.5	100.0	0.075	88.9
25.0	100.0	0.0307	55.2
19.0	100.0	0.0200	48.1
12.5	100.0	0.0118	42.7
9.5	100.0	0.0085	39.2
4.75	100.0	0.0060	37.4
2.00	100.0	0.0030	33.8
1.180	100.0	0.0013	26.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	11.0	425 µm to 75 µm
Silt	58.4	75 µm to 2 µm
Clay	30.5	<2 µm



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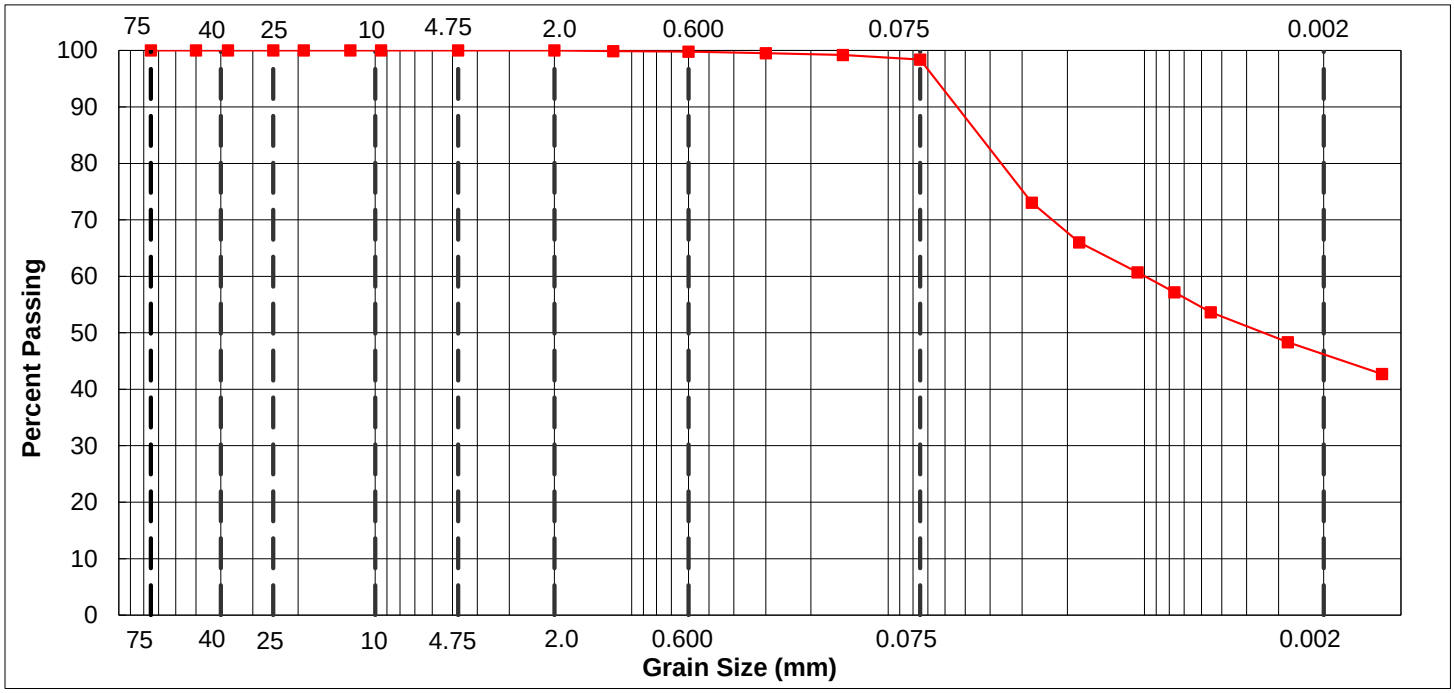
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	3AU2
Project No.:	1560-193-00	**Source:**	22VWP-03
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 3AU2	**Test Date:**	11-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.2
37.5	100.0	0.075	98.4
25.0	100.0	0.0275	73.1
19.0	100.0	0.0180	66.0
12.5	100.0	0.0107	60.7
9.5	100.0	0.0077	57.2
4.75	100.0	0.0055	53.6
2.00	100.0	0.0028	48.4
1.180	99.9	0.0012	42.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	1.4	425 µm to 75 µm
Silt	52.2	75 µm to 2 µm
Clay	46.2	<2 µm



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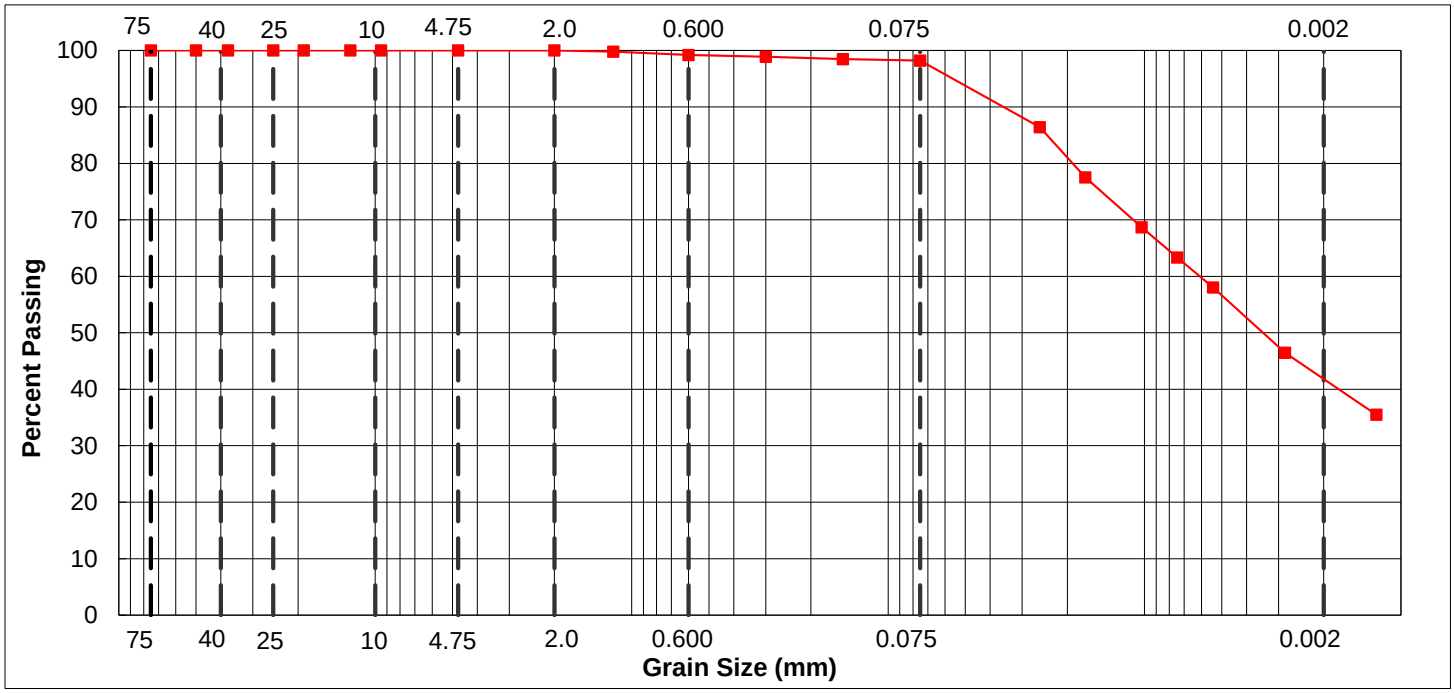
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	3AU6
Project No.:	1560-193-00	**Source:**	22VWP-03
Owner:	EID	**Sample Depth:**	4.3m
File No.:	GSA - 3AU6	**Test Date:**	11-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	98.9
50.0	100.0	0.150	98.5
37.5	100.0	0.075	98.2
25.0	100.0	0.0256	86.4
19.0	100.0	0.0170	77.5
12.5	100.0	0.0103	68.7
9.5	100.0	0.0075	63.4
4.75	100.0	0.0054	58.0
2.00	100.0	0.0028	46.5
1.180	99.8	0.0012	35.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	1.0	425 µm to 75 µm
Silt	56.4	75 µm to 2 µm
Clay	41.8	<2 µm



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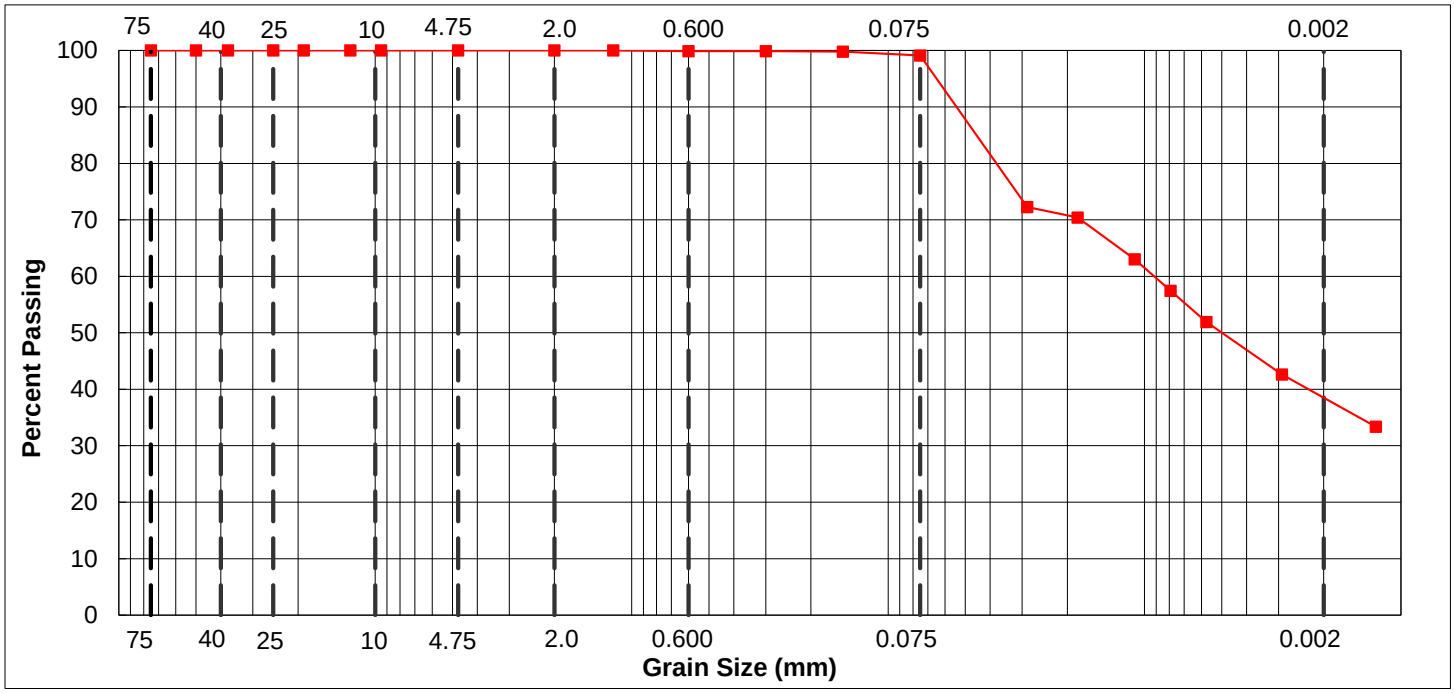
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	3AU12
Project No.:	1560-193-00	**Source:**	22VWP-03
Owner:	EID	**Sample Depth:**	8.8m
File No.:	GSA - 3AU12	**Test Date:**	24-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.8
37.5	100.0	0.075	99.1
25.0	100.0	0.0287	72.3
19.0	100.0	0.0182	70.4
12.5	100.0	0.0109	63.0
9.5	100.0	0.0079	57.5
4.75	100.0	0.0057	51.9
2.00	100.0	0.0029	42.6
1.180	100.0	0.0013	33.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.8	425 µm to 75 µm
Silt	60.6	75 µm to 2 µm
Clay	38.5	<2 µm



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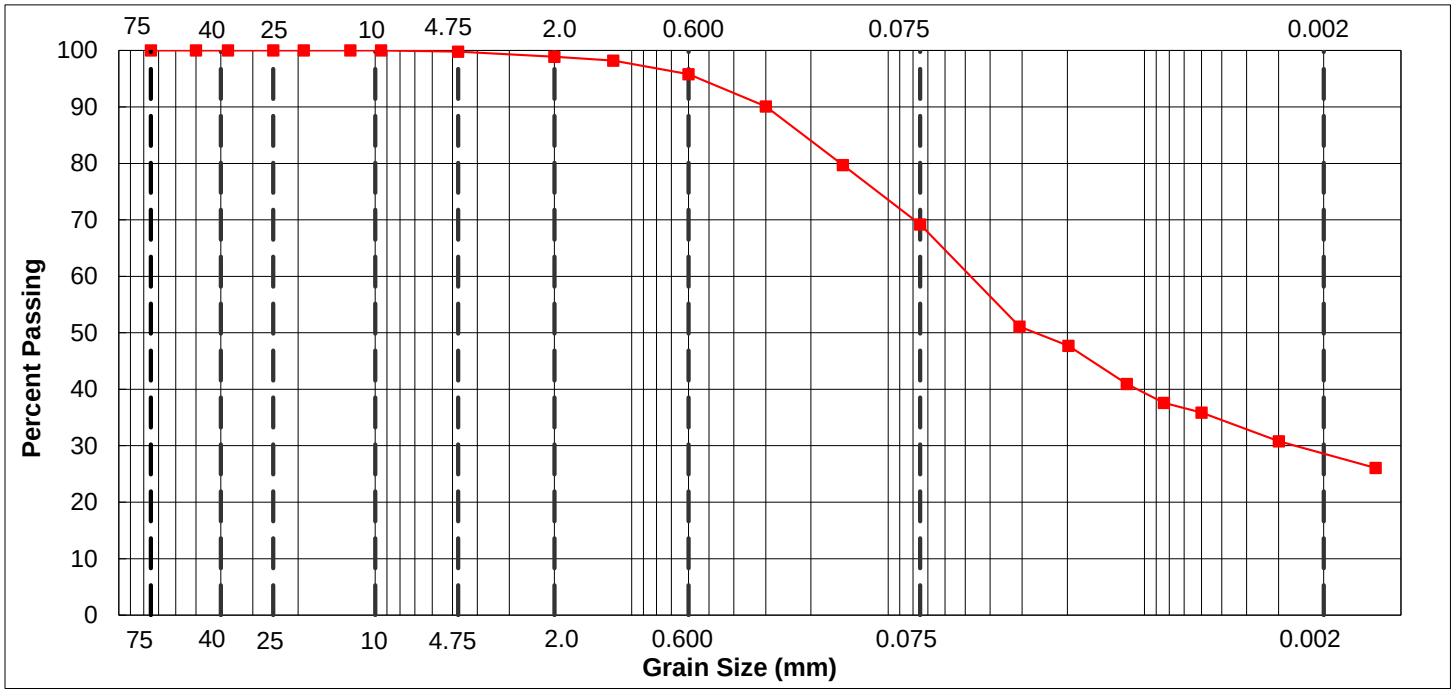
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	4AU2
Project No.:	1560-193-00	**Source:**	22VWP-04
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 4AU2	**Test Date:**	12-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	95.8
75.0	100.0	0.300	90.1
50.0	100.0	0.150	79.7
37.5	100.0	0.075	69.2
25.0	100.0	0.0307	51.1
19.0	100.0	0.0198	47.7
12.5	100.0	0.0117	41.0
9.5	100.0	0.0084	37.6
4.75	99.8	0.0060	35.9
2.00	98.9	0.0030	30.8
1.180	98.2	0.0013	26.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.2	20 mm to 4.75 mm
Coarse Sand	0.9	4.75 mm to 2.00 mm
Medium Sand	3.1	2.00 mm to 425 µm
Fine Sand	26.6	425 µm to 75 µm
Silt	40.6	75 µm to 2 µm
Clay	28.6	<2 µm



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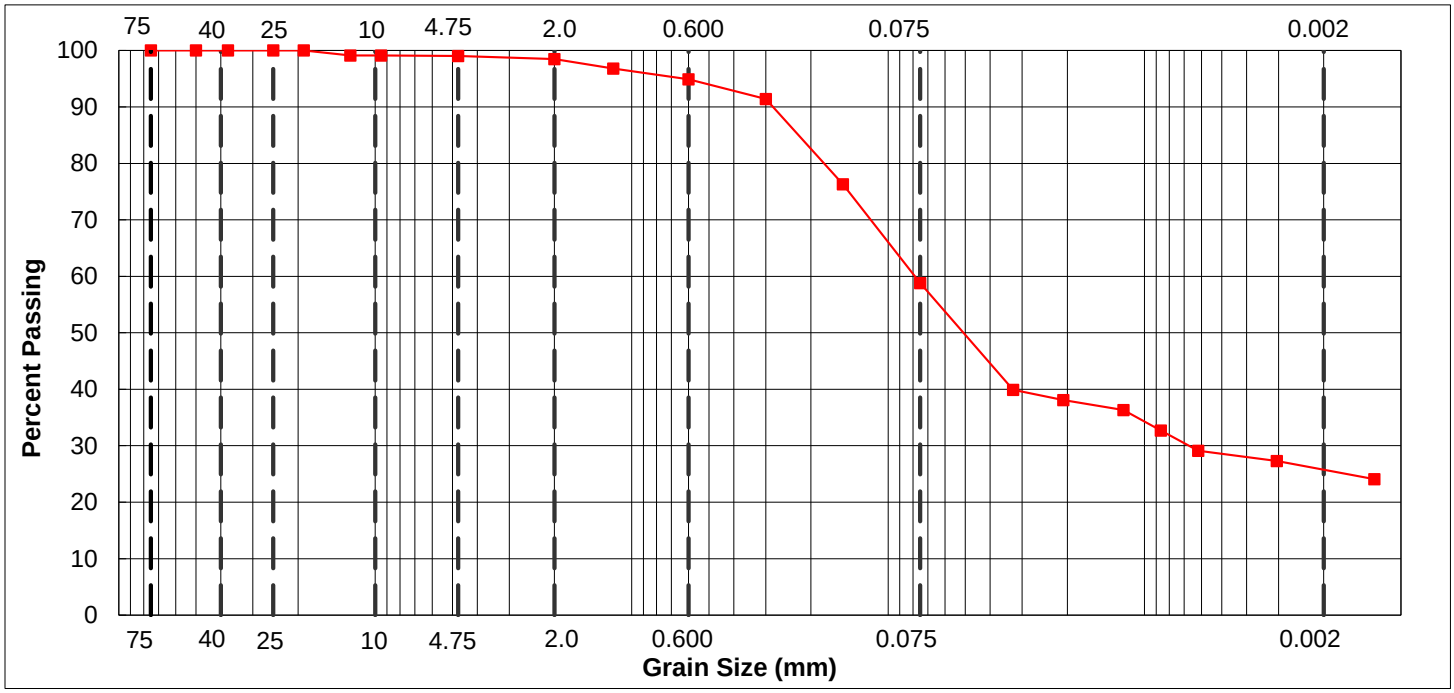
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	4AU7
Project No.:	1560-193-00	**Source:**	22VWP-04
Owner:	EID	**Sample Depth:**	5.2m
File No.:	GSA - 4AU7	**Test Date:**	12-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	94.9
75.0	100.0	0.300	91.4
50.0	100.0	0.150	76.3
37.5	100.0	0.075	58.8
25.0	100.0	0.0325	39.9
19.0	100.0	0.0207	38.1
12.5	99.1	0.0121	36.3
9.5	99.1	0.0086	32.7
4.75	99.0	0.0062	29.1
2.00	98.5	0.0031	27.3
1.180	96.8	0.0013	24.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	1.0	20 mm to 4.75 mm
Coarse Sand	0.5	4.75 mm to 2.00 mm
Medium Sand	3.6	2.00 mm to 425 µm
Fine Sand	36.1	425 µm to 75 µm
Silt	33.0	75 µm to 2 µm
Clay	25.8	<2 µm



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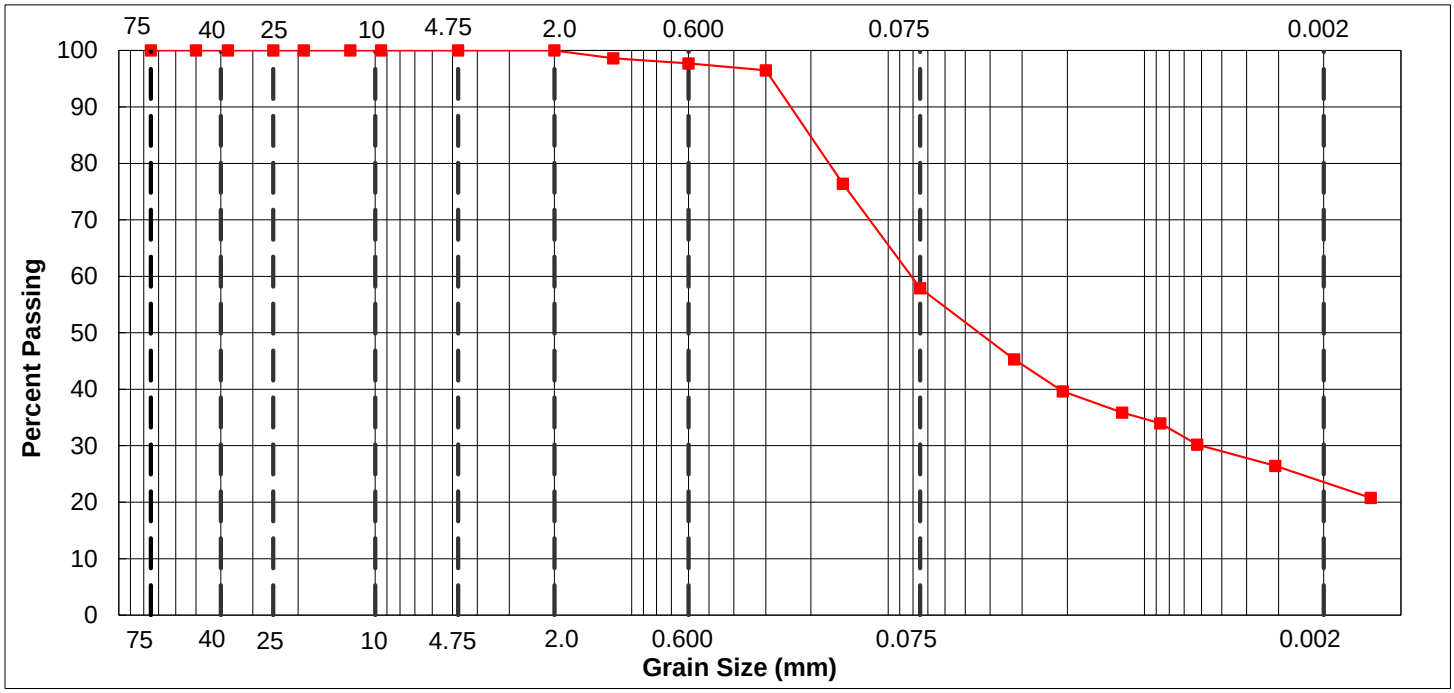
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	4AU12
Project No.:	1560-193-00	**Source:**	22VWP-04
Owner:	EID	**Sample Depth:**	8.8m
File No.:	GSA - 4AU12	**Test Date:**	24-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	97.7
75.0	100.0	0.300	96.5
50.0	100.0	0.150	76.4
37.5	100.0	0.075	57.9
25.0	100.0	0.0323	45.3
19.0	100.0	0.0208	39.7
12.5	100.0	0.0122	35.9
9.5	100.0	0.0087	34.0
4.75	100.0	0.0062	30.2
2.00	100.0	0.0031	26.4
1.180	98.6	0.0013	20.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	2.3	2.00 mm to 425 µm
Fine Sand	39.8	425 µm to 75 µm
Silt	34.3	75 µm to 2 µm
Clay	23.6	<2 µm



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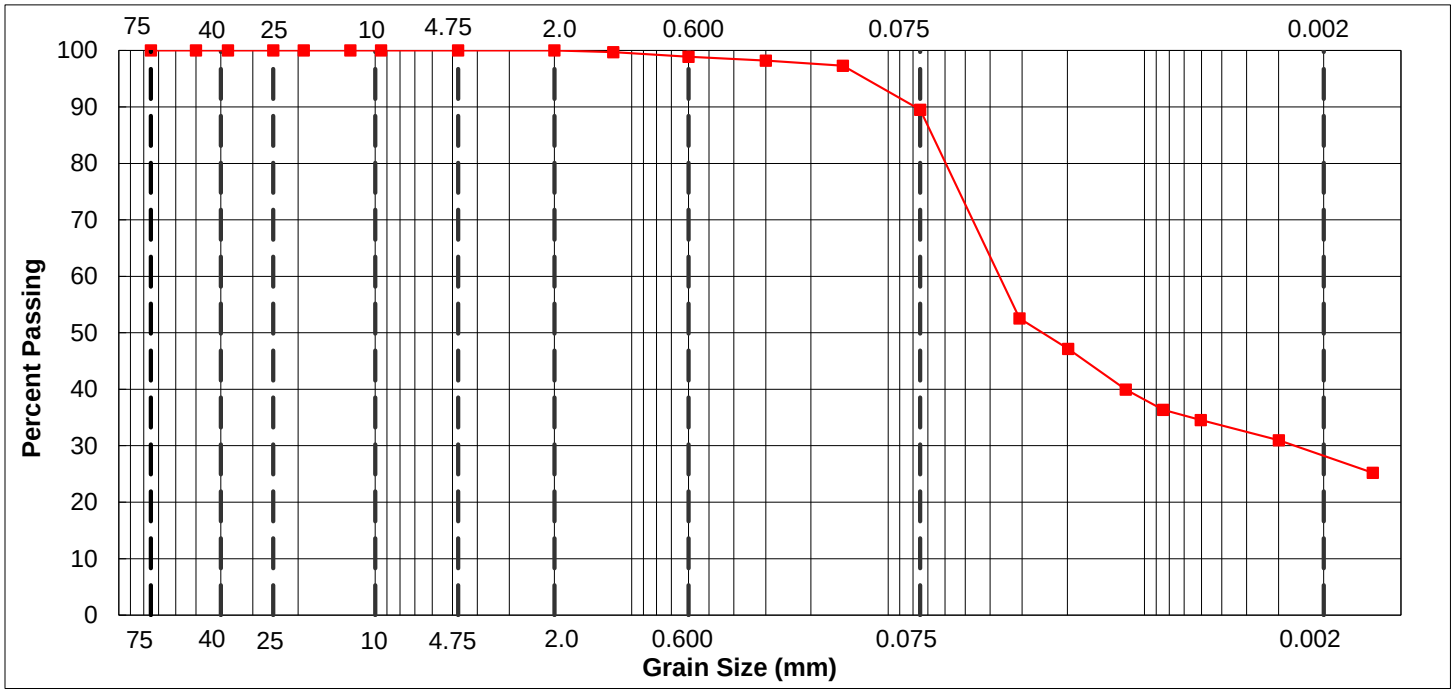
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	5AU4
Project No.:	1560-193-00	**Source:**	22VWP-05
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 5AU4	**Test Date:**	26-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.9
75.0	100.0	0.300	98.2
50.0	100.0	0.150	97.3
37.5	100.0	0.075	89.5
25.0	100.0	0.0307	52.6
19.0	100.0	0.0199	47.2
12.5	100.0	0.0118	40.0
9.5	100.0	0.0085	36.4
4.75	100.0	0.0060	34.6
2.00	100.0	0.0030	31.0
1.180	99.7	0.0013	25.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.1	2.00 mm to 425 µm
Fine Sand	9.4	425 µm to 75 µm
Silt	61.3	75 µm to 2 µm
Clay	28.2	<2 µm



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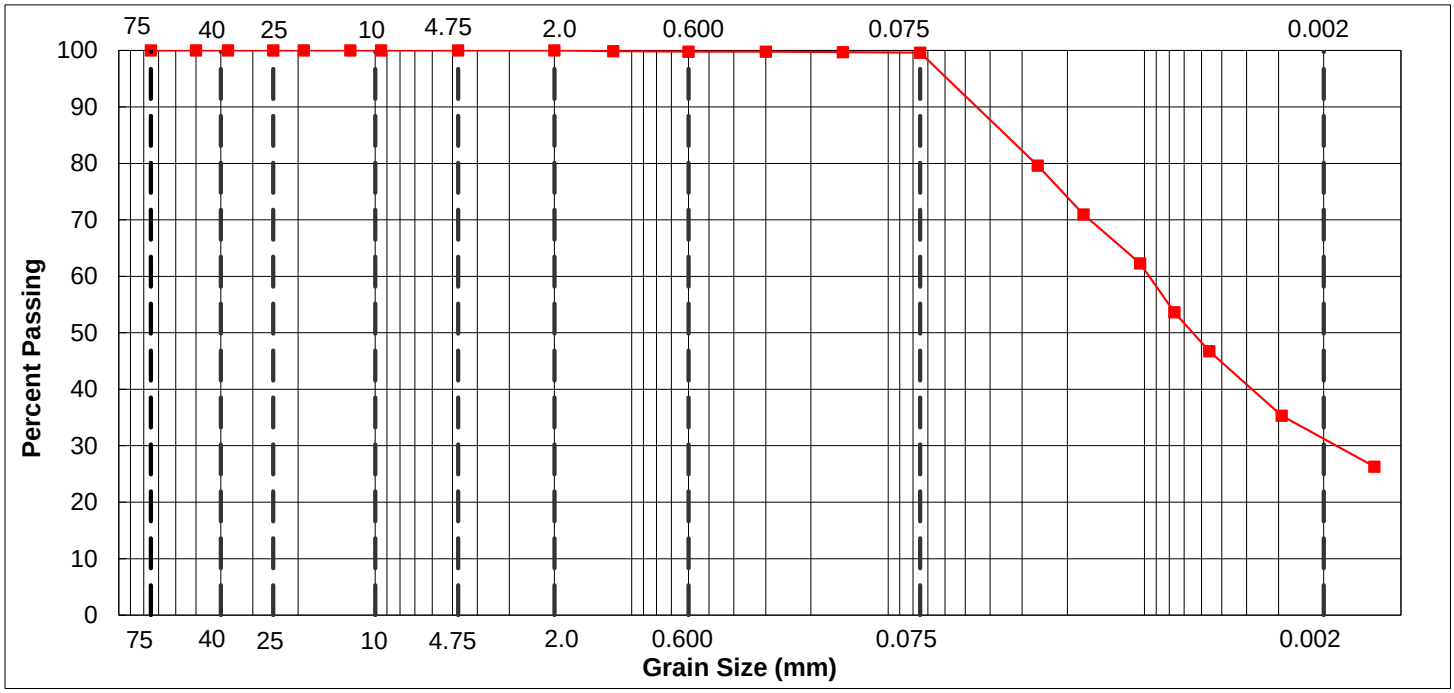
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	5AU10
Project No.:	1560-193-00	**Source:**	22VWP - 05
Owner:	EID	**Sample Depth:**	7.3m
File No.:	GSA - 5AU10	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.6
25.0	100.0	0.0261	79.6
19.0	100.0	0.0173	71.0
12.5	100.0	0.0104	62.3
9.5	100.0	0.0077	53.7
4.75	100.0	0.0056	46.7
2.00	100.0	0.0029	35.3
1.180	99.9	0.0013	26.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	68.4	75 µm to 2 µm
Clay	31.2	<2 µm



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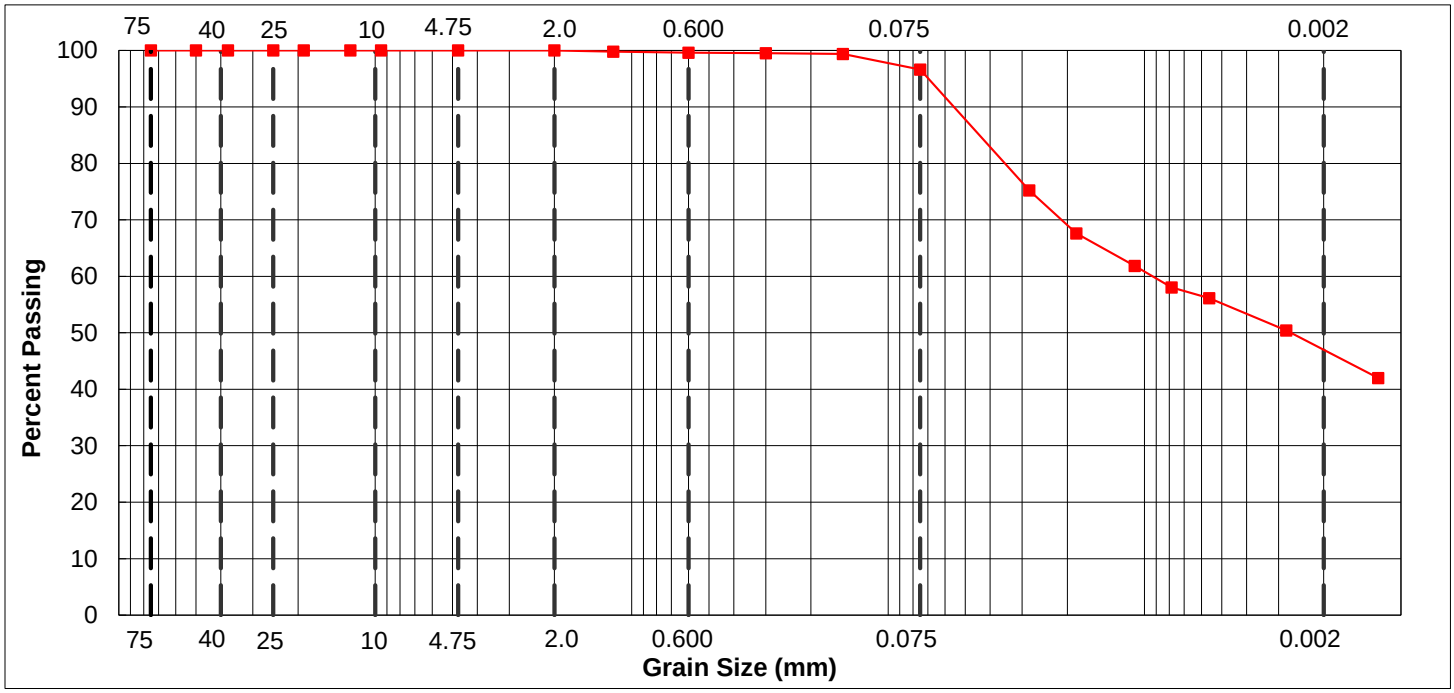
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	6AU7
Project No.:	1560-193-00	**Source:**	22VWP-06
Owner:	EID	**Sample Depth:**	5.2m
File No.:	GSA - 6AU7	**Test Date:**	11-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.6
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.4
37.5	100.0	0.075	96.6
25.0	100.0	0.0281	75.2
19.0	100.0	0.0185	67.6
12.5	100.0	0.0109	61.9
9.5	100.0	0.0078	58.0
4.75	100.0	0.0056	56.1
2.00	100.0	0.0028	50.4
1.180	99.8	0.0012	42.0

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.4	2.00 mm to 425 µm
Fine Sand	3.0	425 µm to 75 µm
Silt	49.6	75 µm to 2 µm
Clay	47.0	<2 µm



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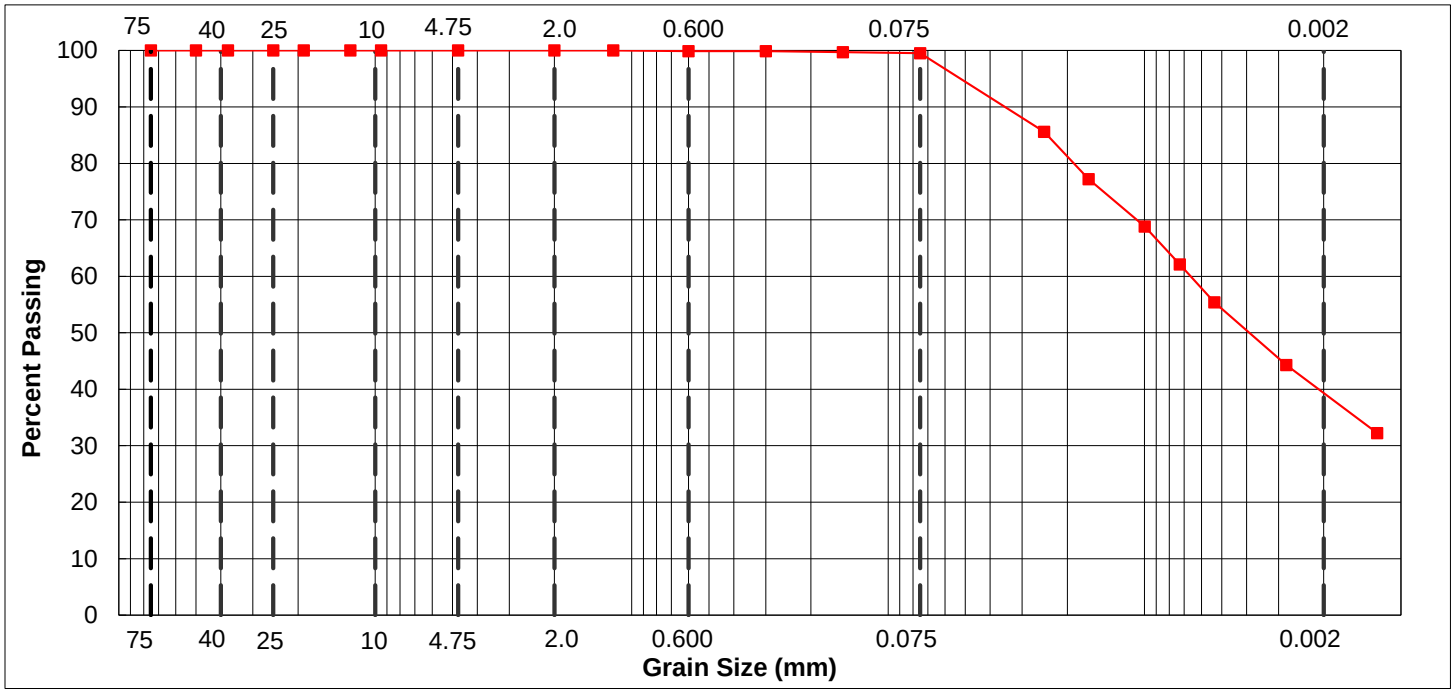
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	6AU12
Project No.:	1560-193-00	**Source:**	22VWP-06
Owner:	EID	**Sample Depth:**	8.8m
File No.:	GSA - 6AU12	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.5
25.0	100.0	0.0247	85.6
19.0	100.0	0.0165	77.2
12.5	100.0	0.0100	68.8
9.5	100.0	0.0073	62.1
4.75	100.0	0.0053	55.4
2.00	100.0	0.0028	44.3
1.180	100.0	0.0012	32.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.4	425 µm to 75 µm
Silt	60.2	75 µm to 2 µm
Clay	39.3	<2 µm



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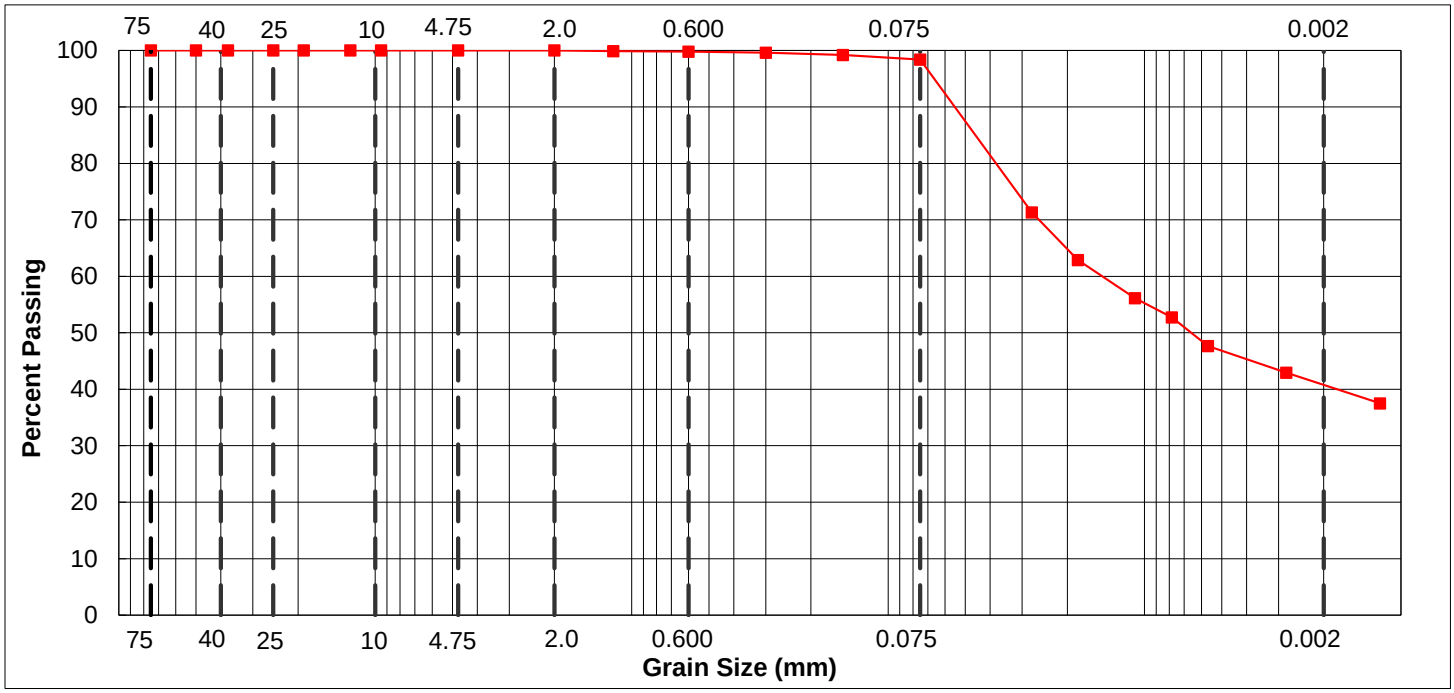
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	7AU4
Project No.:	1560-193-00	**Source:**	22VWP-07
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 7AU4	**Test Date:**	11-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.6
50.0	100.0	0.150	99.2
37.5	100.0	0.075	98.4
25.0	100.0	0.0275	71.3
19.0	100.0	0.0182	62.9
12.5	100.0	0.0109	56.1
9.5	100.0	0.0078	52.7
4.75	100.0	0.0057	47.7
2.00	100.0	0.0028	42.9
1.180	99.9	0.0012	37.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	1.4	425 µm to 75 µm
Silt	57.6	75 µm to 2 µm
Clay	40.8	<2 µm



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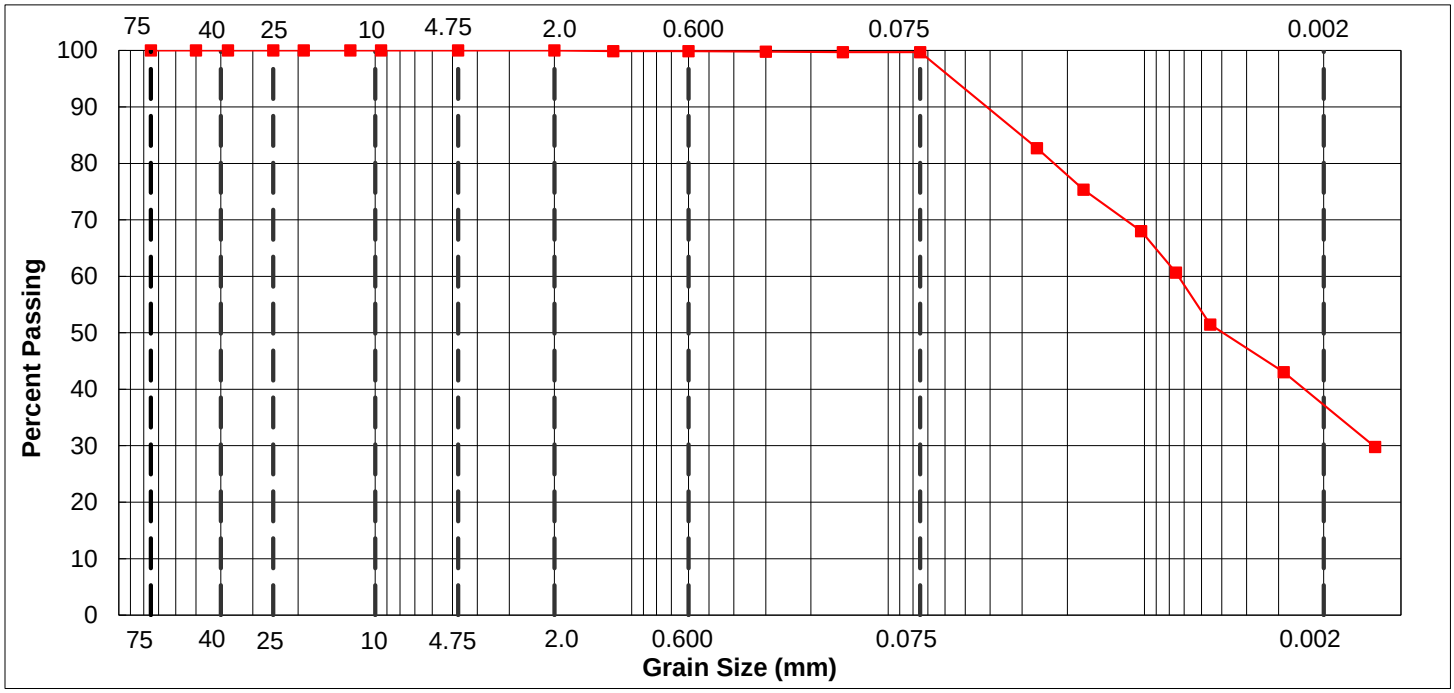
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	7AU8
Project No.:	1560-193-00	**Source:**	22VWP - 07
Owner:	EID	**Sample Depth:**	5.8m
File No.:	GSA - 7AU8	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.7
25.0	100.0	0.0263	82.7
19.0	100.0	0.0173	75.4
12.5	100.0	0.0103	68.0
9.5	100.0	0.0075	60.7
4.75	100.0	0.0055	51.5
2.00	100.0	0.0029	43.0
1.180	99.9	0.0013	29.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.2	425 µm to 75 µm
Silt	62.5	75 µm to 2 µm
Clay	37.2	<2 µm



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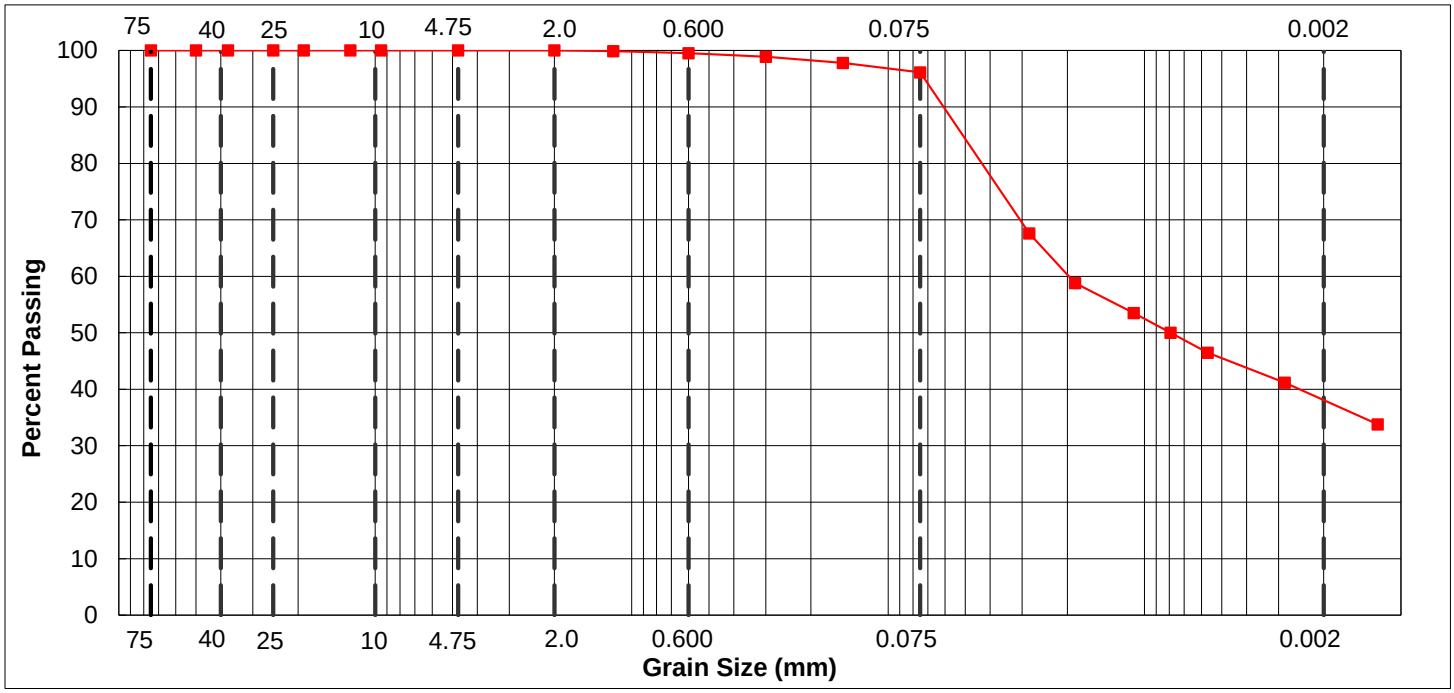
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	8AU3
Project No.:	1560-193-00	**Source:**	22VWP-08
Owner:	EID	**Sample Depth:**	2.1m
File No.:	GSA - 8AU3	**Test Date:**	11-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	98.9
50.0	100.0	0.150	97.8
37.5	100.0	0.075	96.1
25.0	100.0	0.0281	67.6
19.0	100.0	0.0186	58.8
12.5	100.0	0.0110	53.5
9.5	100.0	0.0079	50.0
4.75	100.0	0.0057	46.5
2.00	100.0	0.0028	41.2
1.180	99.9	0.0012	33.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	3.4	425 µm to 75 µm
Silt	58.0	75 µm to 2 µm
Clay	38.1	<2 µm



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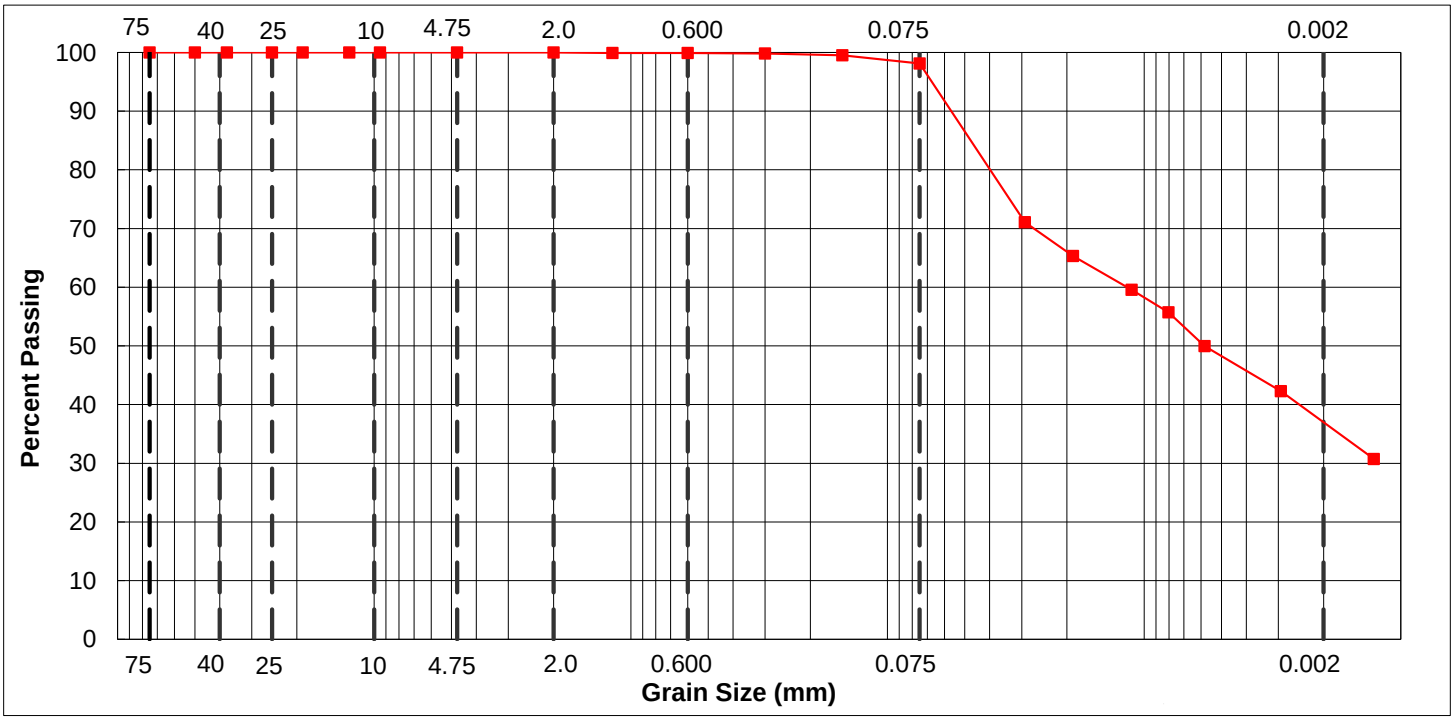
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	8AU8
Project No.:	1560-193-00	**Source:**	22VWP-08
Owner:	EID	**Sample Depth:**	5.8m
File No.:	GSA - 8AU8	**Test Date:**	24-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.5
37.5	100.0	0.075	98.1
25.0	100.0	0.0292	71.1
19.0	100.0	0.0189	65.3
12.5	100.0	0.0112	59.6
9.5	100.0	0.0080	55.7
4.75	100.0	0.0058	50.0
2.00	100.0	0.0029	42.3
1.180	99.9	0.0013	30.7

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	1.8	425 µm to 75 µm
Silt	61.1	75 µm to 2 µm
Clay	37.0	<2 µm



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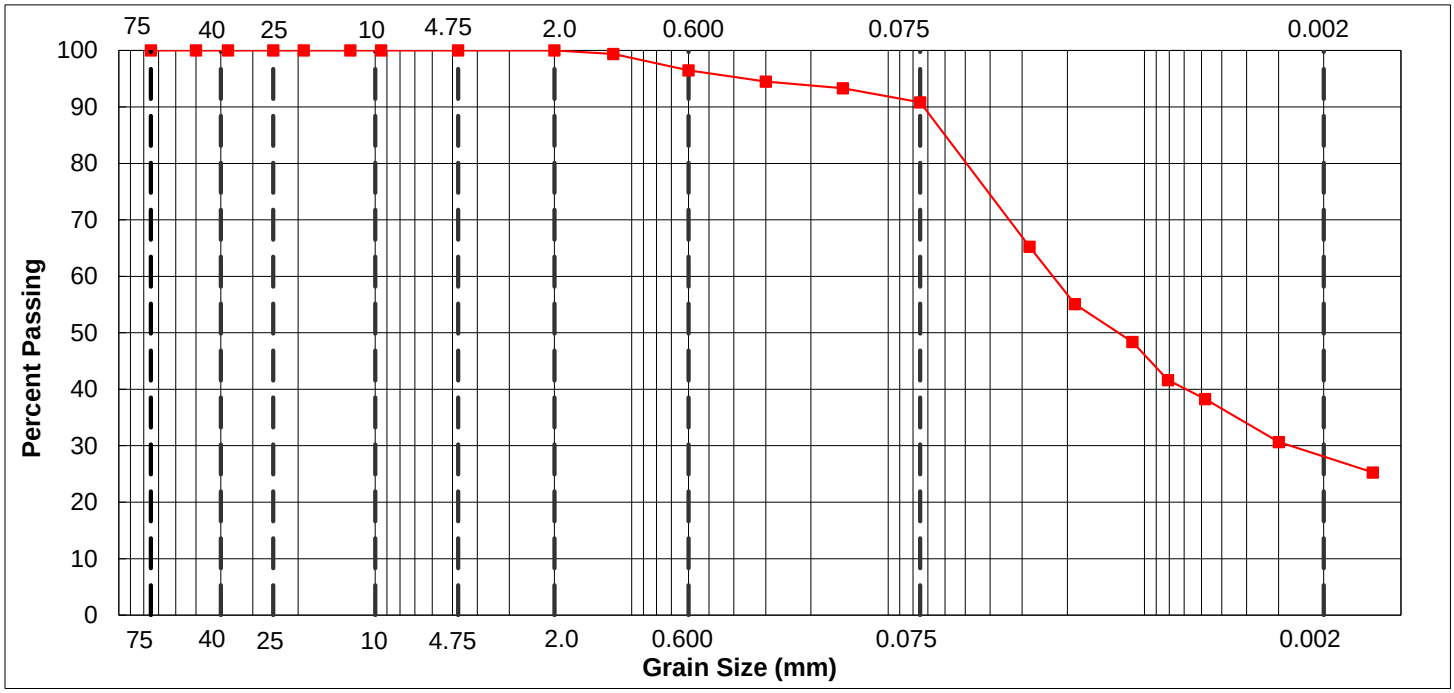
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	9AU5
Project No.:	1560-193-00	**Source:**	22VWP-09
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 9AU5	**Test Date:**	11-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	96.5
75.0	100.0	0.300	94.5
50.0	100.0	0.150	93.3
37.5	100.0	0.075	90.8
25.0	100.0	0.0281	65.2
19.0	100.0	0.0187	55.1
12.5	100.0	0.0112	48.4
9.5	100.0	0.0081	41.6
4.75	100.0	0.0058	38.3
2.00	100.0	0.0030	30.7
1.180	99.4	0.0013	25.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	3.5	2.00 mm to 425 µm
Fine Sand	5.7	425 µm to 75 µm
Silt	62.7	75 µm to 2 µm
Clay	28.1	<2 µm



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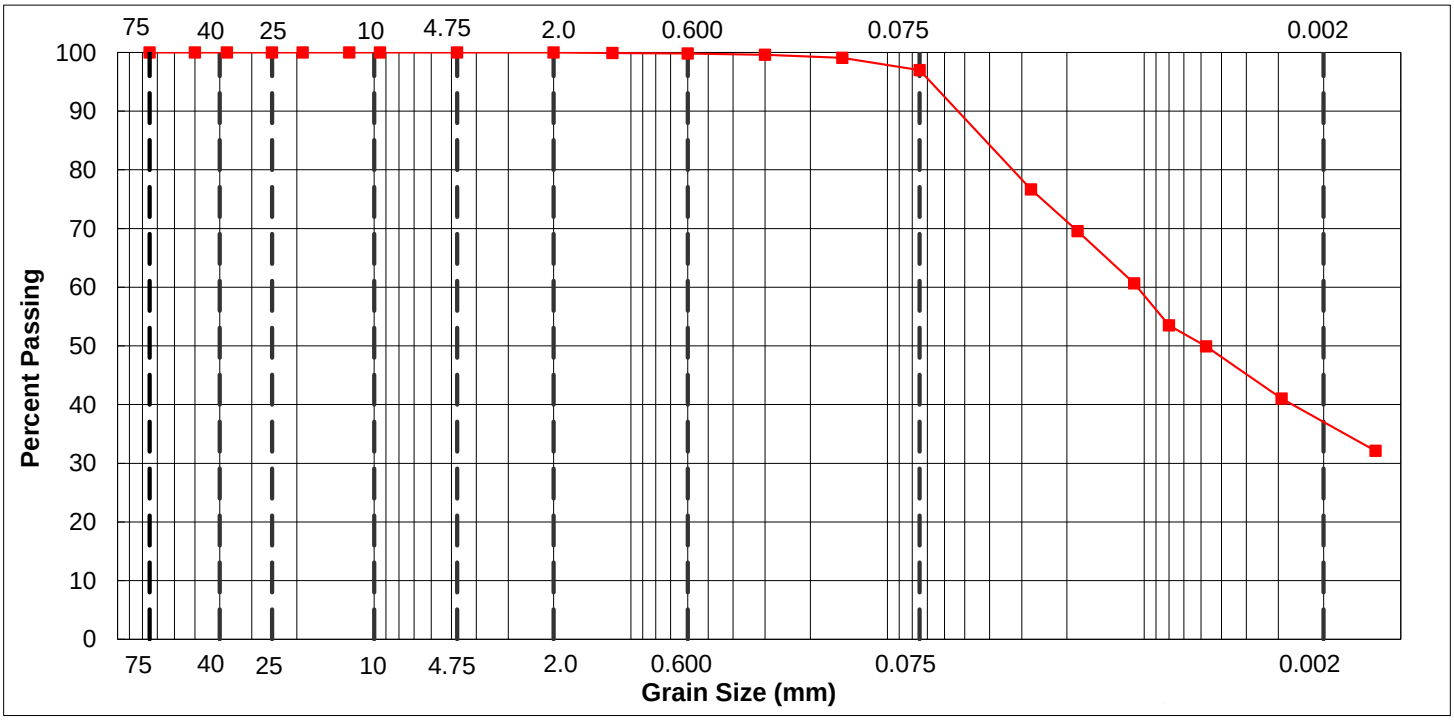
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	9AU10
Project No.:	1560-193-00	**Source:**	22VWP-09
Owner:	EID	**Sample Depth:**	7.3m
File No.:	GSA - 9AU10	**Test Date:**	24-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.6
50.0	100.0	0.150	99.1
37.5	100.0	0.075	97.0
25.0	100.0	0.0276	76.7
19.0	100.0	0.0181	69.5
12.5	100.0	0.0109	60.6
9.5	100.0	0.0080	53.5
4.75	100.0	0.0057	49.9
2.00	100.0	0.0029	41.0
1.180	99.9	0.0013	32.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	2.8	425 µm to 75 µm
Silt	60.0	75 µm to 2 µm
Clay	37.0	<2 µm



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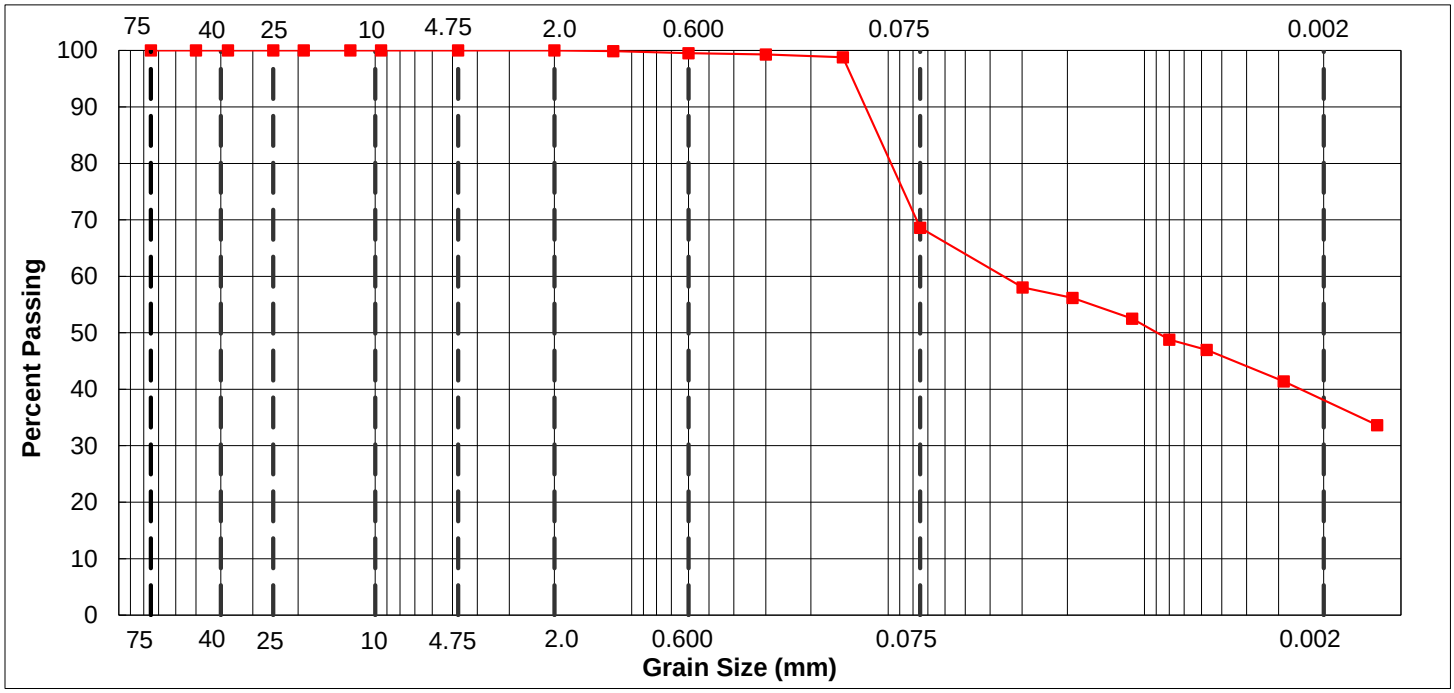
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	10AU5
Project No.:	1560-193-00	**Source:**	22VWP-10
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 10AU5	**Test Date:**	11-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.3
50.0	100.0	0.150	98.8
37.5	100.0	0.075	68.6
25.0	100.0	0.0299	58.1
19.0	100.0	0.0191	56.2
12.5	100.0	0.0112	52.5
9.5	100.0	0.0080	48.8
4.75	100.0	0.0057	47.0
2.00	100.0	0.0029	41.4
1.180	99.9	0.0012	33.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	30.9	425 µm to 75 µm
Silt	30.5	75 µm to 2 µm
Clay	38.1	<2 µm



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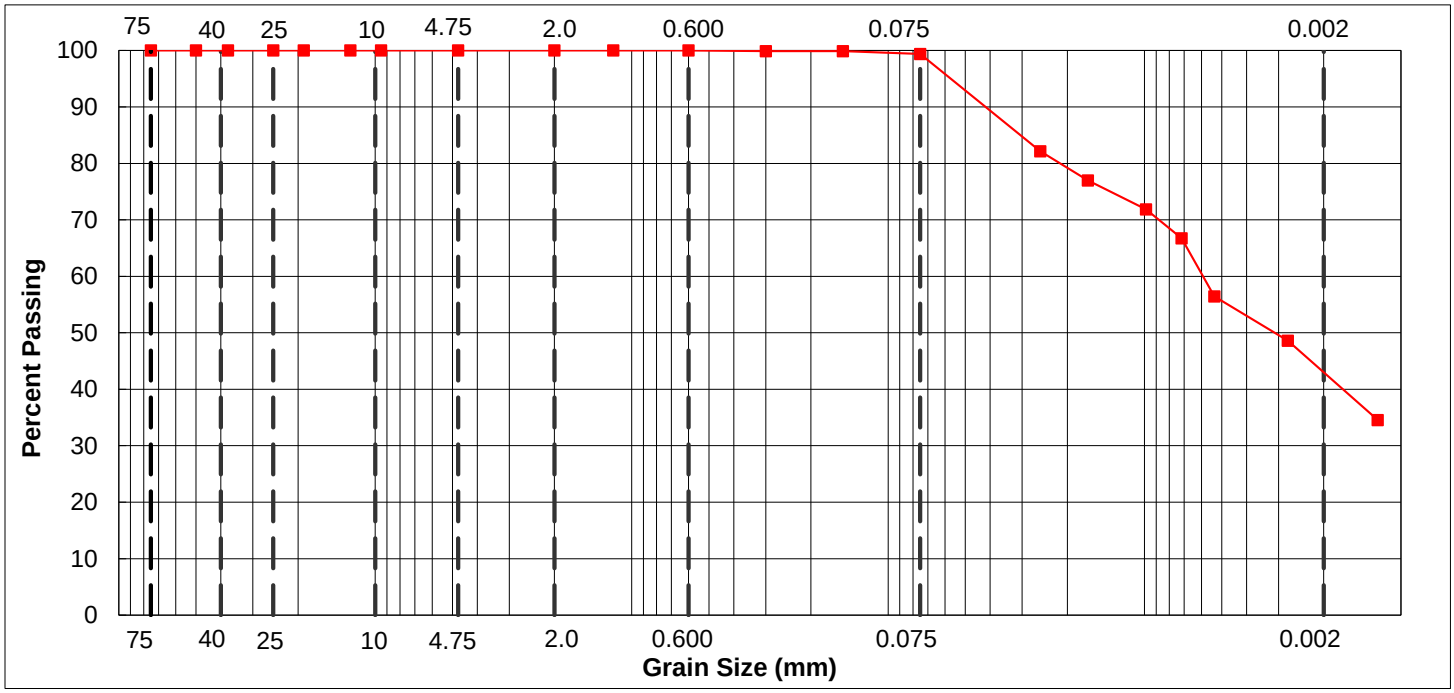
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	10AU9
Project No.:	1560-193-00	**Source:**	22VWP - 10
Owner:	EID	**Sample Depth:**	6.7m
File No.:	GSA - 10AU9	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	100.0
75.0	100.0	0.300	99.9
50.0	100.0	0.150	99.9
37.5	100.0	0.075	99.4
25.0	100.0	0.0255	82.1
19.0	100.0	0.0166	77.0
12.5	100.0	0.0099	71.9
9.5	100.0	0.0072	66.7
4.75	100.0	0.0053	56.5
2.00	100.0	0.0028	48.6
1.180	100.0	0.0012	34.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.0	2.00 mm to 425 µm
Fine Sand	0.6	425 µm to 75 µm
Silt	56.4	75 µm to 2 µm
Clay	43.0	<2 µm



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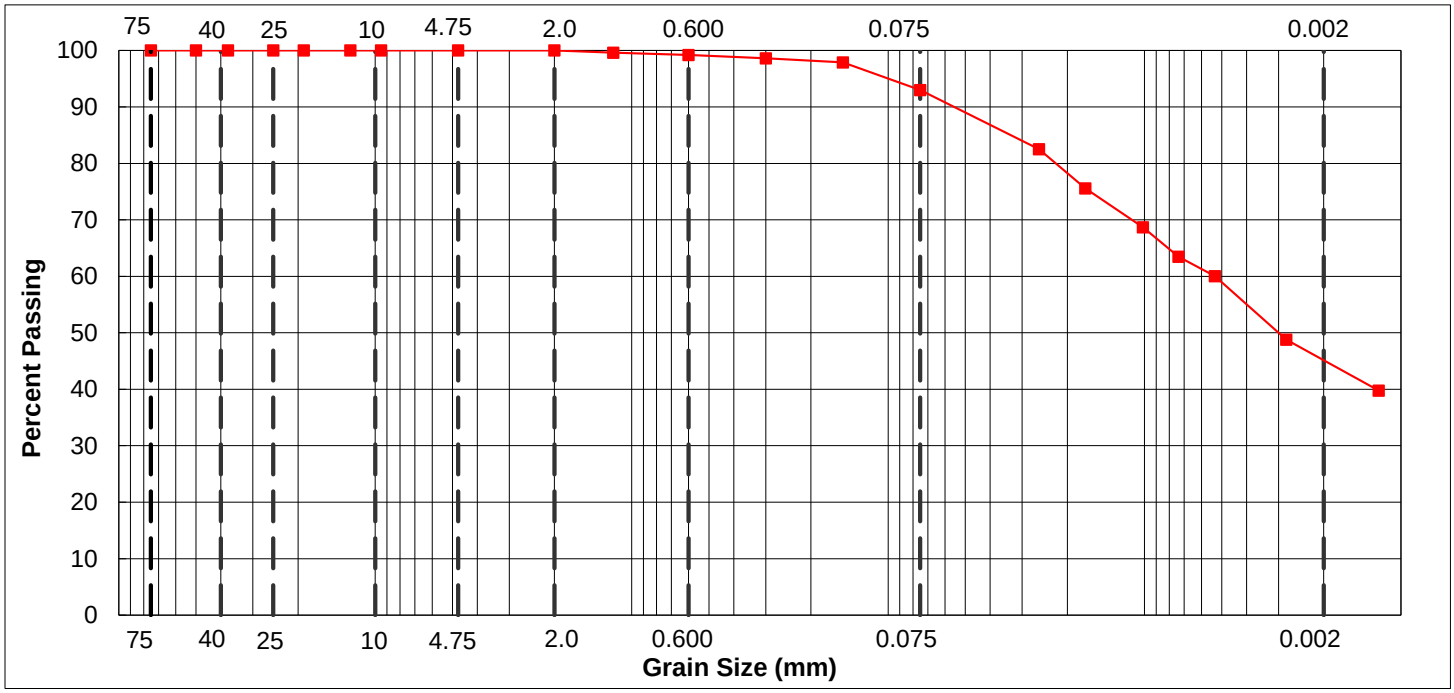
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	11AU2
Project No.:	1560-193-00	**Source:**	22VWP-11
Owner:	EID	**Sample Depth:**	1.2m
File No.:	GSA - 11AU2	**Test Date:**	11-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.2
75.0	100.0	0.300	98.6
50.0	100.0	0.150	97.9
37.5	100.0	0.075	93.0
25.0	100.0	0.0258	82.5
19.0	100.0	0.0170	75.6
12.5	100.0	0.0102	68.7
9.5	100.0	0.0074	63.5
4.75	100.0	0.0053	60.0
2.00	100.0	0.0028	48.8
1.180	99.6	0.0012	39.8

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.8	2.00 mm to 425 µm
Fine Sand	6.2	425 µm to 75 µm
Silt	47.9	75 µm to 2 µm
Clay	45.1	<2 µm



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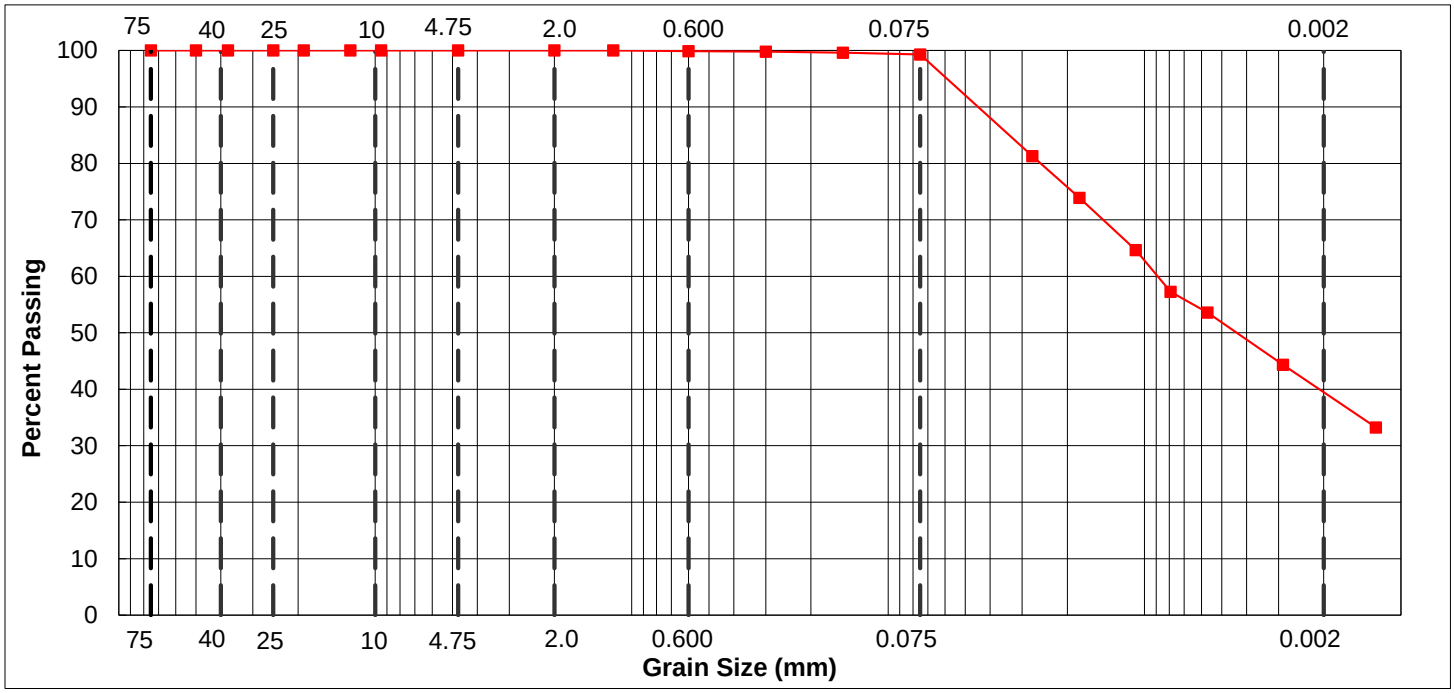
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	11AU8
Project No.:	1560-193-00	**Source:**	22VWP-11
Owner:	EID	**Sample Depth:**	5.8m
File No.:	GSA - 11AU8	**Test Date:**	24-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.6
37.5	100.0	0.075	99.3
25.0	100.0	0.0274	81.3
19.0	100.0	0.0179	73.9
12.5	100.0	0.0108	64.7
9.5	100.0	0.0079	57.3
4.75	100.0	0.0057	53.6
2.00	100.0	0.0029	44.3
1.180	100.0	0.0013	33.3

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.6	425 µm to 75 µm
Silt	59.8	75 µm to 2 µm
Clay	39.5	<2 µm



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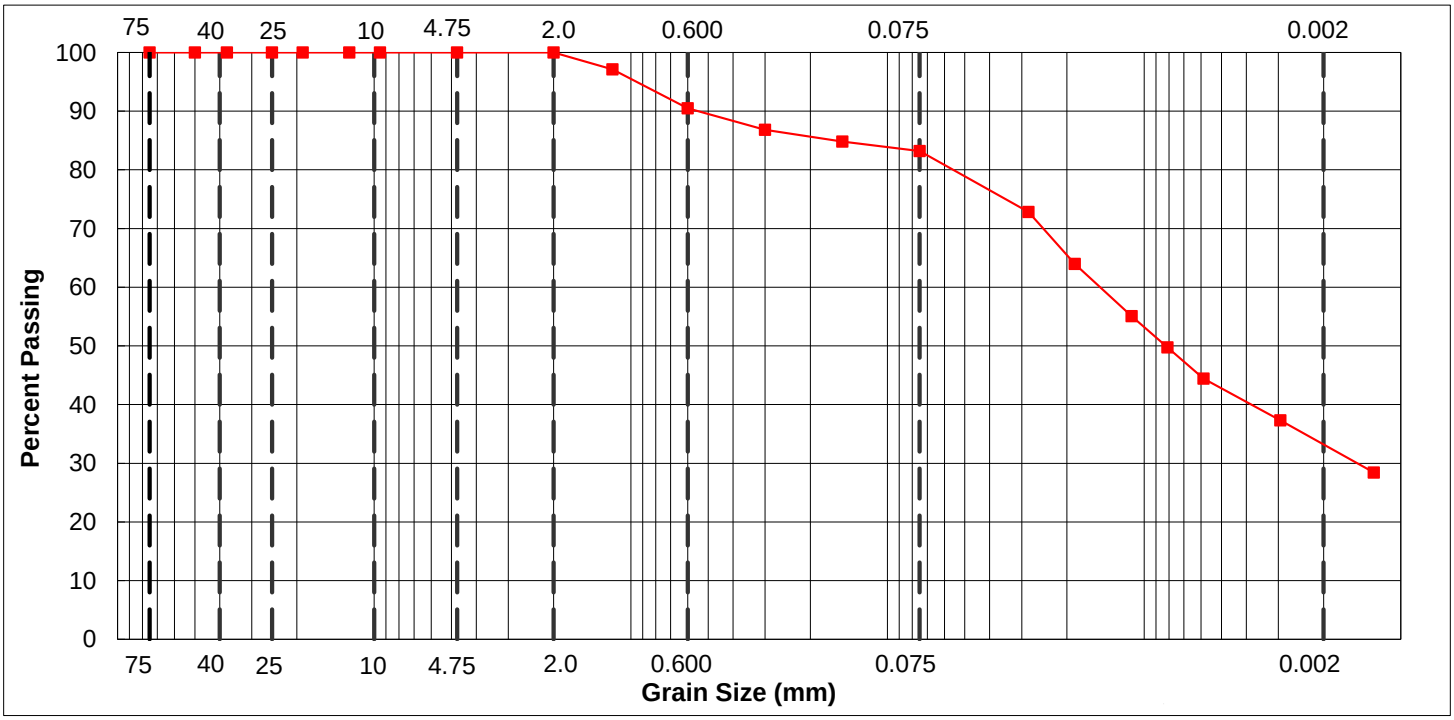
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	11AU11
Project No.:	1560-193-00	**Source:**	22VWP-11
Owner:	EID	**Sample Depth:**	8.2m
File No.:	GSA - 11AU11	**Test Date:**	24-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	90.5
75.0	100.0	0.300	86.8
50.0	100.0	0.150	84.8
37.5	100.0	0.075	83.2
25.0	100.0	0.0282	72.8
19.0	100.0	0.0186	64.0
12.5	100.0	0.0112	55.1
9.5	100.0	0.0081	49.7
4.75	100.0	0.0059	44.4
2.00	100.0	0.0029	37.3
1.180	97.1	0.0013	28.4

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	9.5	2.00 mm to 425 µm
Fine Sand	7.3	425 µm to 75 µm
Silt	50.0	75 µm to 2 µm
Clay	33.2	<2 µm



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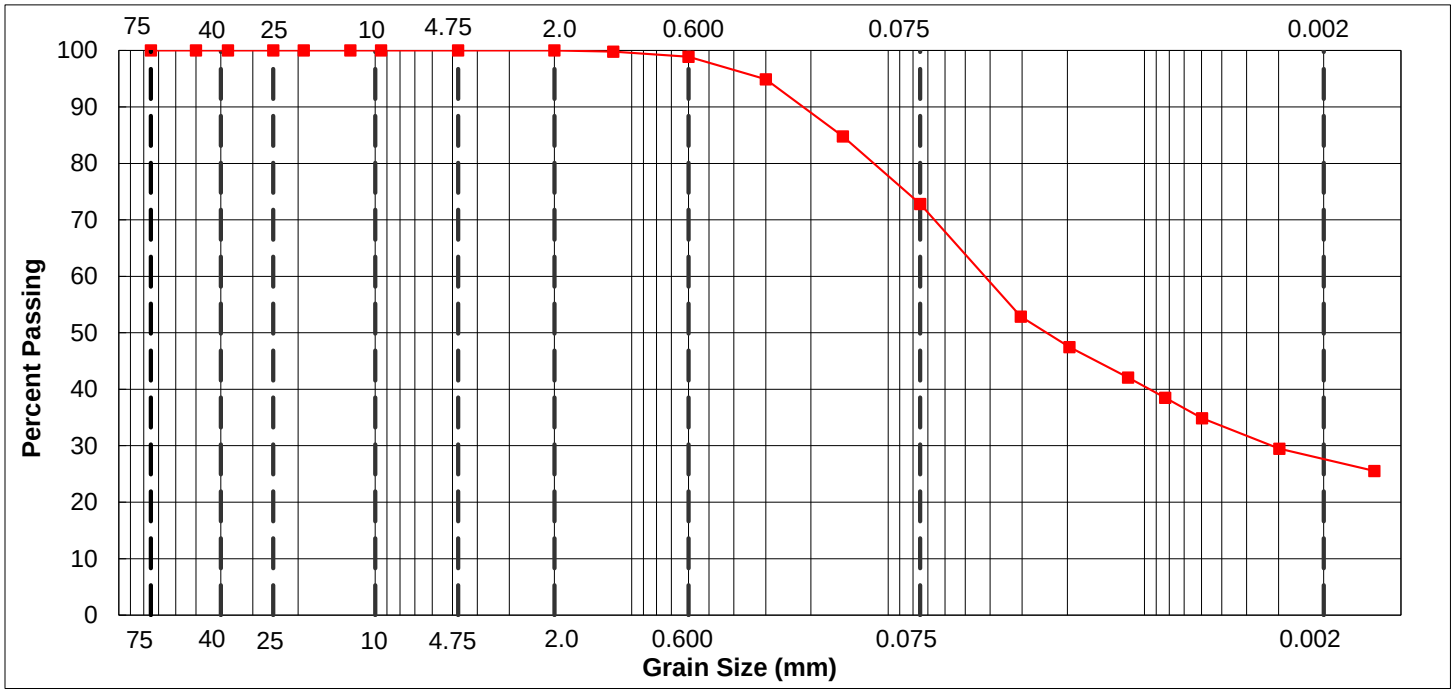
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	12AU4
Project No.:	1560-193-00	**Source:**	22VWP-12
Owner:	EID	**Sample Depth:**	2.7m
File No.:	GSA - 12AU4	**Test Date:**	11-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	98.9
75.0	100.0	0.300	94.9
50.0	100.0	0.150	84.8
37.5	100.0	0.075	72.8
25.0	100.0	0.0303	52.9
19.0	100.0	0.0196	47.5
12.5	100.0	0.0116	42.1
9.5	100.0	0.0083	38.5
4.75	100.0	0.0060	34.9
2.00	100.0	0.0030	29.5
1.180	99.8	0.0013	25.5

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	1.1	2.00 mm to 425 µm
Fine Sand	26.1	425 µm to 75 µm
Silt	45.2	75 µm to 2 µm
Clay	27.6	<2 µm



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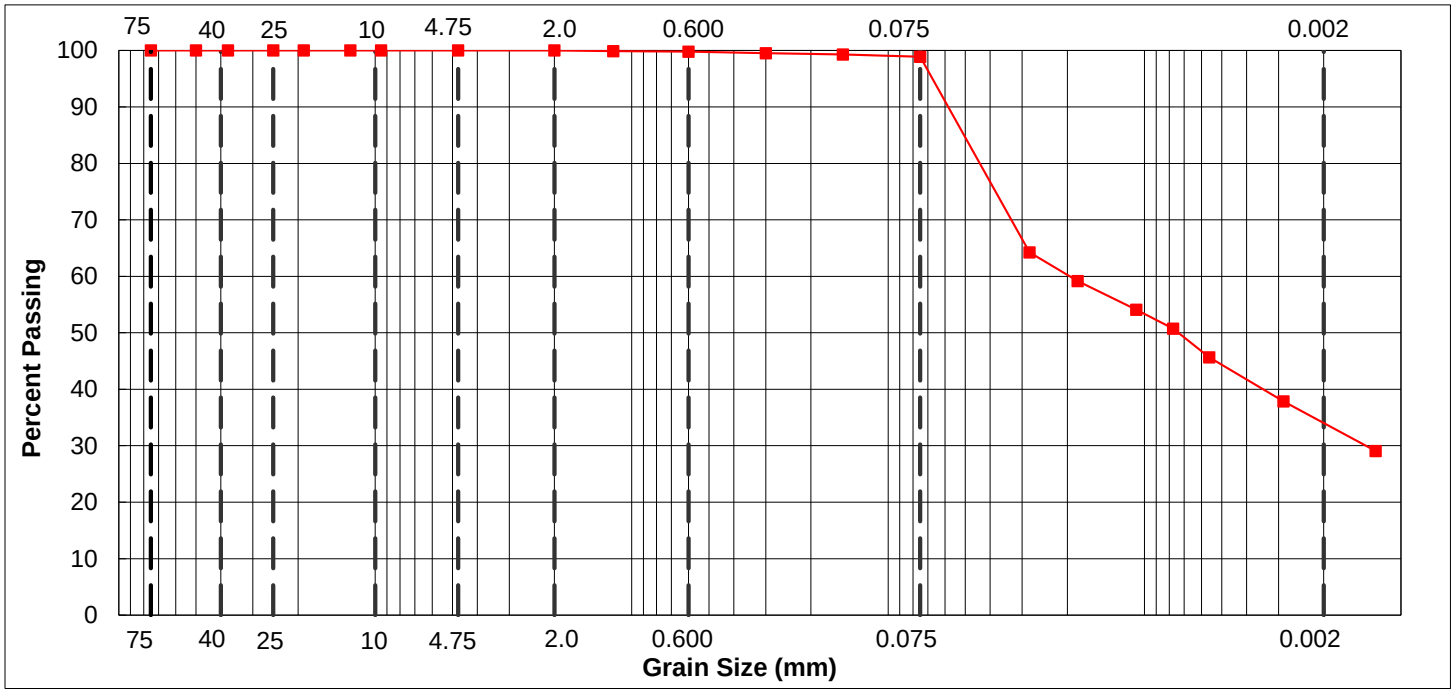
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	12AU8
Project No.:	1560-193-00	**Source:**	22VWP-12
Owner:	EID	**Sample Depth:**	5.8m
File No.:	GSA - 12AU8	**Test Date:**	20-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.8
75.0	100.0	0.300	99.5
50.0	100.0	0.150	99.3
37.5	100.0	0.075	98.9
25.0	100.0	0.0281	64.3
19.0	100.0	0.0182	59.2
12.5	100.0	0.0108	54.1
9.5	100.0	0.0077	50.7
4.75	100.0	0.0056	45.7
2.00	100.0	0.0029	37.9
1.180	99.9	0.0013	29.1

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.2	2.00 mm to 425 µm
Fine Sand	0.9	425 µm to 75 µm
Silt	64.9	75 µm to 2 µm
Clay	34.0	<2 µm



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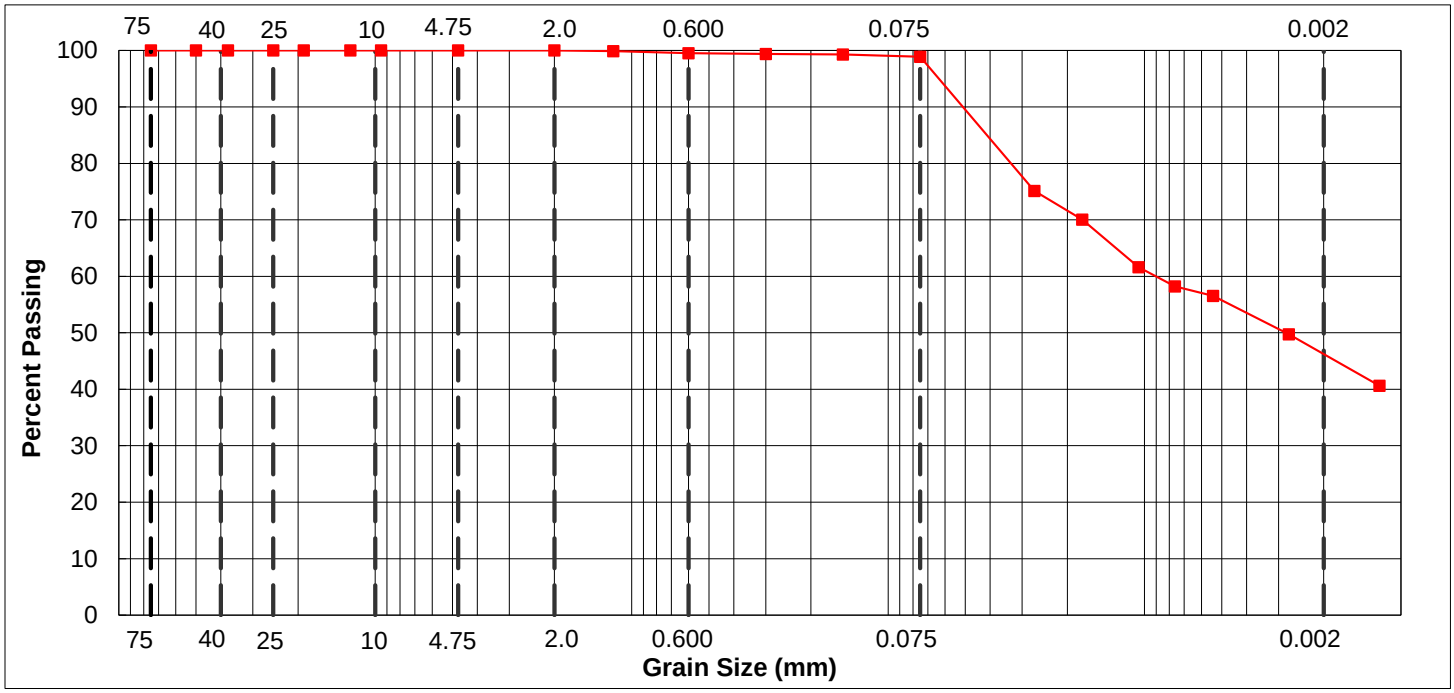
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	13AU5
Project No.:	1560-193-00	**Source:**	22VWP-13
Owner:	EID	**Sample Depth:**	3.7m
File No.:	GSA - 13AU5	**Test Date:**	11-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.5
75.0	100.0	0.300	99.4
50.0	100.0	0.150	99.3
37.5	100.0	0.075	98.9
25.0	100.0	0.0269	75.1
19.0	100.0	0.0175	70.1
12.5	100.0	0.0106	61.6
9.5	100.0	0.0076	58.2
4.75	100.0	0.0054	56.5
2.00	100.0	0.0027	49.8
1.180	99.9	0.0012	40.6

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.5	2.00 mm to 425 µm
Fine Sand	0.6	425 µm to 75 µm
Silt	52.7	75 µm to 2 µm
Clay	46.2	<2 µm



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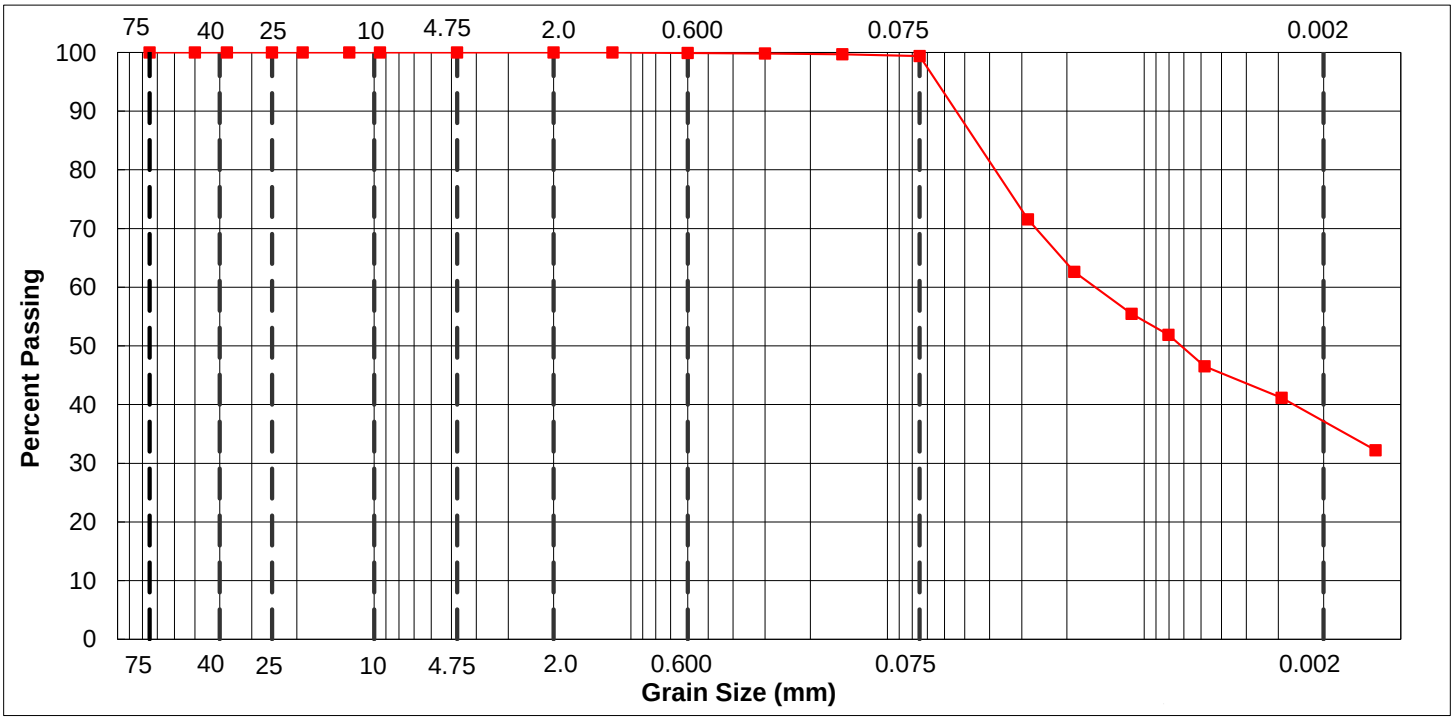
GRAIN SIZE ANALYSIS REPORT

Project:	Snake Lake Reservoir Expansion	**Sample No.:**	13AU9
Project No.:	1560-193-00	**Source:**	22VWP-13
Owner:	EID	**Sample Depth:**	6.7m
File No.:	GSA - 13AU9	**Test Date:**	24-Oct-22

Tested in accordance with AASHTO T 88 (Particle Size Analysis of Soils)

Grain Size (mm)	Percent Finer	Grain Size (mm)	Percent Finer
		0.600	99.9
75.0	100.0	0.300	99.8
50.0	100.0	0.150	99.7
37.5	100.0	0.075	99.4
25.0	100.0	0.0284	71.6
19.0	100.0	0.0187	62.6
12.5	100.0	0.0112	55.5
9.5	100.0	0.0080	51.9
4.75	100.0	0.0058	46.5
2.00	100.0	0.0029	41.2
1.180	100.0	0.0013	32.2

Material Description Proportion		
Type	**%**	**Particle Size Range**
Boulders	0.0	>300 mm
Cobbles	0.0	300 mm to 75 mm
Coarse Gravel	0.0	80 mm to 20 mm
Fine Gravel	0.0	20 mm to 4.75 mm
Coarse Sand	0.0	4.75 mm to 2.00 mm
Medium Sand	0.1	2.00 mm to 425 µm
Fine Sand	0.5	425 µm to 75 µm
Silt	62.2	75 µm to 2 µm
Clay	37.2	<2 µm



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