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August 21, 2019

Matthew Hebert
Alberta Transportation
3rd Floor Twin Atria Building
4999 98 Avenue
Edmonton, Alberta T6B 2X3

Sent via email to: Matthew.Hebert@gov.ab.ca

SUBJECT: Outcome of the review of Alberta Transportation's responses to the federal information requests for the Springbank Off-Stream Reservoir Project, part 3

Dear Mr. Hebert:

On July 16 and August 6, 2019, the Canadian Environmental Assessment Agency (the Agency) provided you with correspondence regarding Alberta Transportation's responses to the first and second round of information requests issued by the Agency for the Springbank Off-Stream Reservoir Project (the Project). Further to this correspondence, please see Annex 1 - Gaps identified in Alberta Transportation's Responses to IR Round 1, SR1 CEAA IR Part 3, attached.

The Agency welcomes the opportunity to discuss the outcome of this review with you and provide further advice on how to best address the outstanding information required to move forward with the assessment process. To this end, the Agency proposes technical workshops with federal experts and your team to facilitate a better understanding of the expectations of the Agency and federal authorities, and to ensure complete responses to information requests. Please contact the Agency to confirm availability for a discussion during the week of September 2-6, 2019, or to suggest an alternative date. If you have any questions, please contact the undersigned at 780-495-2384 or via email at CEAA.Springbank.ACEE@canada.ca.

Sincerely,

<Original signed by>

Jennifer Howe
Project Manager
Prairie and Northern Region

Attachment (1): Annex I – Gaps identified in Alberta Transportation's Responses to IR Round 1, SR1 CEAA IR Part 3

C.c.: Barbara Pullishy, Canadian Environmental Assessment Agency
Wayne Speller, Golder Associates Ltd.
Mark Svenson, Alberta Transportation

ANNEX 1 – Gaps identified in Alberta Transportation's Responses to IR Round 1, SR1 CEAA IR Part 3

Springbank Off-Stream Reservoir Project

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List of Acronyms and Short Forms

Agency	Canadian Environmental Assessment Agency
CEAA 2012	*Canadian Environmental Assessment Act, 2012*
CRA	Commercial, Recreational, or Aboriginal
DFO	Fisheries and Oceans Canada
ECCC	Environment and Climate Change Canada
EIS	Environmental Impact Statement
EIS Guidelines	Environmental Impact Statement Guidelines
IR	Information Request
NRCan	Natural Resources Canada
VC	Valued Component

Gaps from IR3-01

Topic: Climate Change

Sources:

EIS Guidelines Part 2, Sections 6.2.2; 6.6.2

EIS Volume 1, Section 1

Tsuut'ina First Nation, Ermineskin Cree Nation, and Kainai First Nation – Technical Review of the EIS - Annexes – Combined (CEAR # 46, 47, 50)

Environment and Climate Change Canada Technical Review, June 18, 2018 (CEAR # 32)

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-01

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 3, June 14, 2019

Context and Rationale

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-01, the Agency required information on projected future changes in the regional climate and an evaluation of potential future climate change related effects on the Project. As noted in the information request, the EIS Guidelines require the proponent to describe multiple components of hydrology of the Elbow River watershed, and the effects of the environment on the Project.

In Alberta Transportation's response to IR3-01, climate change information is provided that suggests increases in precipitation could nearly double flood peaks, and increased snowmelt and peak river flow can create an increased flood risk from April to June. Although it is noted that there is a high degree of irregularity/inconsistency, Alberta Transportation acknowledges that climate change may cause floods with a return period similar to the 2013 flood to be of greater magnitude.

In IR3-01 b) i), the Agency required a flood frequency and size analysis considering future changes in regional climate. Alberta Transportation's response reiterates the flood frequency analysis that is provided in the EIS, without a rationale as to how this considers future climate change related effects.

In IR3-01 b) iv), the Agency also required an assessment of potential effects of the environment on the Project due to climate change, and associated effects to VCs. Alberta Transportation's response indicates that the Project accounts for climate change as the 2013 flood was an extreme event. However, this response does not account for the potential for a flood larger than the design flood to occur or an increased frequency of flooding due to climate change. As noted in the information request, if the frequency and size of future flooding, size of diversions, and/or likelihood of reservoir exceedance are underestimated, direct and cumulative effects to valued components (including federal lands) may be greater than predicted.

Information Requests:

a) Provide a new flood frequency analysis given the potential increase in frequency and severity of floods.
b) Provide an assessment of effects of the environment on the Project should a flood larger than the design flood occur and should flooding occur more frequently due to climate change, and associated potential effects to VCs.

Gaps from IR3-06

Topic: Hydrology – Suspended Sediment

Sources:

EIS Guidelines Part 2, Section 6.1.4; 6.2.2

EIS Volume 3B, Sections 6.4.1; 6.4.3

EIS Volume 4, Appendix J, Figure 3-12

Rocky View County – Comments on the EIS, June 15, 2018 (CEAR #571)

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-06

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 3, June 14, 2019

Context and Rationale

The EIS Guidelines require the proponent to assess changes to hydrology and water quality of the Elbow River, and direct the proponent to carry out modelling as required to present and substantiate anticipated changes.

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-06 c), the Agency required additional details on the sediment transport model, including a description of how the results for the MT and ST modules were combined.

Alberta Transportation's response to IR3-06 part c) indicates that there is no direct integration or information exchange between the MT and ST modules, which is consistent with the MIKE21 modelling system. As referenced in the information request, Rocky View County's comments note that interactions between suspended sediment and bed load transport are important in assessing degradation and aggradation in the river channel. No information is provided that addresses this concern or provides a rationale for why combining the MT and ST modules is not needed.

In IR3-06 d), the Agency required Alberta Transportation to provide a rationale for using the Meyer-Peter and Muller equation to estimate sediment transport and discuss whether the results on the sediment transport model were validated against a total load formula. Alberta Transportation's response to IR3-06 part d) indicates that the Meyer-Peter and Muller formula is used to simulate the transport and bed level changes of non-cohesive sand and gravel sediments and comparison between the sediment transport model and a total load formula has not been performed.

As noted in the information request, Rocky View County indicated that the Meyer-Peter and Muller equation is most suitable for estimating gravel transport and may underestimate sediment transport with fine sediments or high current speeds. Therefore, it may not be suitable for evaluating the fate of suspended sediment released from the reservoir and the high velocities

associated with flows released into the tributary downstream of the low level outlet. Alberta Transportation's response does not provide a rationale for the use of the equation, or address the concern raised by Rocky View County regarding the potential underestimation of sediment transport with fine sediments or high current speeds. Additionally, the response does not discuss why a comparison of the sediment transport model and total load formula was not performed and what associated limitation this may result in.

Information Requests:

a) Describe how the MIKE21 model accurately accounts for the degradation and aggradation in the river channel. Include a rationale for not combining the the MT and ST modules.
b) Provide rationale for using the Meyer-Peter and Muller equation to estimate sediment transport when the equation may underestimate sediment transport with fine sediments or high current speeds.
c) Discuss the limitation(s) of not validating the sediment transport model against a total load formula.

Gaps from IR3-08

Topic: Project Operation – Flood Frequency

Sources:

EIS Guidelines Part 2, Section 3.1; 3.2.2; 6.1.4

EIS Volume 1, Section 3.1 and 7.4

EIS Volume 3B, Section 3.2.8

Rocky View County – Comments on the EIS, June 15, 2018 (CEAR #571)

Piikani Nation – Technical Review of EIS, June 15, 2018 (CEAR #48)

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-08

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 3, June 14, 2019

Context and Rationale

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 2, IR3-08, the Agency required Alberta Transportation clarify at what flow volumes and flood frequency the Project would be in operation, and assess potential effects to each VC based on the highest frequency of Project operation. As noted in the information request, the EIS Guidelines require the proponent to describe the operation of key Project components.

Alberta Transportation's response to IR3-08 indicates the assessment of effects during the flood and post-flood phases addresses three floods: 1:10 year, 1:100 year and design (Volume 2, Section 7.1.1.2), and the rationale for selection of these floods, for both engineering design and assessment of effects, is provided in Volume 1, Section 3.1. However, no rationale is provided for the selection of these floods in Volume 1, Section 3.1.

Additionally, Alberta Transportation indicates a 1:10 year interval (200 m^3/s) is the closest flow volume to the activation flow volume of 160 m^3/s and was used in the assessment. However, the table that is referenced in the response (EIS Volume 1, Section 3-1, Table 3-1) notes that a 1:5 year flood has an estimated Peak Discharge at the Diversion Structure of 140 m^3/s. The 1:5 year flood volume is closer to 160 m^3/s than the 1:10 year flood amount. Although Alberta Transportation's response indicates the frequency of Project operation is correlated to Elbow River flood flow rates at and above 160 m^3/s, this does not demonstrate a conservative approach and may underestimate potential effects due to an actual frequency of operation of the project that is higher than the one used in the modelling.

Understanding the frequency of Project operation and when water management practices will be implemented is critical to the assessment of environmental effects.

Information Requests:

a) Provide a rationale for the selection of the three floods used in modelling: 1:10 year, 1:100 year, and design flood.
    i. Specifically discuss why the 1:5 year flood was not selected.
    ii. Describe why a 1:7 year flood, which corresponds to the activation flow volume of 160 m^3/s, was not an option.
b) Discuss what effects to VCs may be underestimated as the Project will be used more frequently than a 1:10 year flood rate.
    i. Consider long-term use of the Project at a 1:7 year frequency, rather than a 1:10 year frequency and the associated additional effects that were not considered.
    ii. Provide an analysis of the risk associated with the use of the 1:10 year flood frequency.
    iii. If no additional effects are anticipated, provide a rationale for why.

Gaps from IR3-09

Topic: Project Operation – Effects from Changes in Flood Frequency and Sediment Load and Transport on the Elbow River

Sources:

EIS Guidelines Part 2, Sections 6.1.4; 6.1.5; 6.2.2; 6.3.1; 6.3.3

EIS Volume 1, Sections 3.1; 7.4

EIS Volume 3A, Section 8.4.4

EIS Volume 3B, Sections 6.2; 6.4; 6.7; 8.2

EIS Volume 4, Appendix J, Table 3-4

Rocky View County – Comments on the EIS, June 15, 2018 (CEAR #571)

Piikani Nation – Technical Review of EIS, June 15, 2018 (CEAR #48)Samson Cree Nation – Springbank Off-Stream Reservoir Project Written Submission – June 25, 2018 (CEAR #52)

Montana First Nation – Review of Springbank Off-Stream Reservoir EIA, June 2018 (CEAR #51)

Alberta Transportation Responses to CEAA Annex 2: A) Early Technical Issues, May 11, 2018

Fisheries and Oceans Canada – Comments on the EIS, June 19, 2018 (CEAR #28)

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-09

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 3, June 14, 2019

DFO Round 1 IR Completeness Review Comments, June 28, 2019

Context and Rationale

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-09 a), the Agency required an assessment of the environmental effects of a reduced frequency of inundations of the Elbow River downstream of the Project. As noted in the information request, the EIS Guidelines require the proponent to present information on multiple components of hydrology of the Elbow River watershed, including those that affect water quality and quantity, sediment quality and quantity, and fish and fish habitat. Flows and associated sediment transport within river systems affect water quality as well as fish and fish habitat.

Alberta Transportation's response to IR3-09 indicates that the force of water released from the reservoir will mobilize bed sediments and change the morphology of the unnamed creek, but bed material is predicted to remain in the unnamed creek and minimal interaction with the Elbow River is expected (Volume 3B, Section 8.2.2, page 7.10). The proponent further quotes from the EIS on flood and post-flood effects to fish habitat and describes the potential effects to fish

habitat from the predicted gravel fan (in response to IR3-09 d). However, changes to the magnitude of aggradation and degradation in the Elbow River to fish and fish habitat are not fully understood.

In IR3-09 b), the Agency required Alberta Transportation clarify how coarse sediments and bedload transport downstream will be maintained if discharges greater than 160 m^3/s will no longer occur/occur on a limited basis downstream of the diversion channel. Alberta Transportation's response discusses the potential for reduced mobilization on gravel bar heads and subsequent decrease in the magnitude of degradation and aggradation of those gravel bars, and the stabilization of banks and a corresponding increase in directly overhanging vegetation.

As referenced in the information request, Rocky View County noted that the minimum threshold to mobilize the thalweg armour layer is 500 m^3/s. Under existing conditions, the 500 m^3/s threshold is exceeded during the 50-year flood. As the project will divert flows above 160 m^3/s, and 600 m^3/s is diverted from the reach, the 500 m^3/s threshold would be exceeded only for flood with recurrence intervals of 200 years or longer. This suggests that general bed motion in the river downstream of the inlet will occur less frequently as flow is diverted. This concern or discussion about the effects to the thawleg armour layer are not discussed.

In IR3-09 d) the Agency further required an assessment of where sediment would be deposited downstream of the low level outlet channel, and on the type(s) of fish habitat it is predicted to settle on. Alberta Transportation's response notes that released sediment will result in a localized gravel fan at the confluence of the unnamed creek with the Elbow River. It is not clear if sediments smaller than gravel were considered, and if fine sediments will settle on suitable spawning substrates or the eggs of fall spawning fish species in the Elbow River downstream of the low level outlet channel.

Information Requests:

a) Assess Project effects of changes to the magnitude of aggradation and degradation in the Elbow River to fish and fish habitat.
b) Specifically discuss Rocky View County's concern regarding the reduced frequency of mobilization of the thalweg armour layer due to the Project diverting flood flows above 160 m^3/s.
c) Discuss how released sediment will result in a localized gravel fan at the confluence of the unnamed creek with the Elbow River.
    - Provide methodology used to make this prediction.
    - Discuss whether suspended sediments smaller than gravel were considered.

Gaps from IR3-10

Topic: Project Operation – Water Retention in the Reservoir

Sources:

EIS Guidelines Part 2, Sections 3.1; 3.2.2; 6.1.4

EIS Volume 1, Section 6.3

EIS Volume 3B, Section 6.4

Rocky View County – Comments on the EIS, June 15, 2018 (CEAR #571)

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-10

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 3, June 14, 2019

Context and Rationale

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-10, the Agency required Alberta Transportation provide the volumes, depths, and surface area of water expected to be pre-existing in depressions in the reservoir pre-diversion and remaining in the reservoir post-release for each flood scenario. As noted in the information request, the EIS Guidelines require the proponent to describe the operation of key project components and any changes from the Project to water quality and quantity.

In Alberta Transportation's response to IR3-10, Alberta Transportation acknowledges that there are some wetlands that may hold shallow water seasonally or semi-permanently, and some human-made dugouts that are likely permanently flooded, and notes that water retention in wetland communities depends on a variety of factors and cannot be easily calculated. No volumes, depths, and surface area volumes are estimated for either the wetlands or dugouts. Although it is understandable that water retention can vary, it is important to understand what could be present within the reservoir pre-diversion. The size of the wetlands and dugouts, and potential water retention can still be discussed.

As referenced in the submission, Rocky View County raised the concern that if water exists within the reservoir in depressions prior to flooding, such as in the wetlands and dugouts, resulting limitations to storage capacity should be considered.

Understanding retention within the reservoir is required to accurately assess potential effects, including effects to water quality, fish and fish habitat, land use, physical and cultural heritage, and impacts to rights.

Information Requests:

a) Provide the volumes, depths, and surface area of water expected to be pre-existing in depressions in the reservoir pre-diversion.
b) Discuss limitations to storage capacity that could occur due to water existing in the reservoir prior to diversion.

Gaps from IR3-15

Topic: Hydrogeology – Groundwater Sampling, Monitoring, and Follow-up

Sources:

EIS Guidelines Part 2, Sections 6.1.4; 6.2.2

EIS Volume 3A, Section 5.2

EIS Volume 3B, Section 5.2

EIS Volume 4, Appendix I Hydrogeology Baseline Technical Data Report, Sections 2.3, 3.1 and 3.2

Tsuut'ina First Nation, Ermineskin Cree Nation, and Kainai First Nation – Technical Review of the EIS - Annexes – Combined (CEAR # 46, 47, 50)

Natural Resources Canada – Comments on the EIS, June 19, 2018 (CEAR #45)

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-15, Appendix IR15-1

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 3, June 14, 2019

NRCan Round 1 IR Completeness Review Comments, July 2, 2019

Context and Rationale

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-15 d), the Agency required more details on monitoring and follow-up of groundwater, including a discussion of the potential for use of dedicated monitoring wells for groundwater head monitoring, use of current monitoring wells, sampling prior to construction, effects of high detection limits, and a specific follow-up and monitoring program for groundwater on Tsuut'ina IR 145. As noted in the information request, the EIS Guidelines require the proponent to present information regarding groundwater, including baseline information such as location of monitoring wells, and changes to groundwater quality and quantity resulting from the Project.

In Alberta Transportation's response to IR3-15, Alberta Transportation provides a draft groundwater monitoring plan. However, no specific discussion regarding the potential for the use of dedicated monitoring wells for groundwater head monitoring is included. As noted in the information request, the EIS only discusses the use of domestic water wells in follow-up and monitoring. The purpose of the follow-up program is to validate the results of hydrogeological modelling and domestic wells on their own are of limited value to evaluate water level predictions. The use of dedicated monitoring wells to allow groundwater head monitoring for both dry operations and flood/post-flood response should be considered.

Additionally, the draft groundwater monitoring plan indicates that all monitoring wells to be included in the plan have been or, in the case of proposed wells, will be developed following

completion. This does not provide clarity on whether any current monitoring wells will be maintained for use in follow-up and monitoring.

Tsuut'ina IR 145 is shown in the figures for the draft groundwater and monitoring plan for reference; however, information specific to what will be occurring on Tsuut'ina IR 145 is not included. For readability and clarity purposes, a specific section of the plan on follow-up and monitoring for Tsuut'ina IR 145 is required.

In IR3-15 e), the Agency required details on initial sampling of domestic wells prior to construction in order to establish pre-project baseline conditions. Alberta Transportation's draft groundwater monitoring plan indicates that during baseline data collection, there will be highly rigourous baseline monitoring (already ongoing) prior to any Project disturbances, but no additional details are provided. Further details on initial sampling, including timing and locations, are still required to ensure that Alberta Transportation will establish accurate pre-project baseline conditions.

Information Requests:

a) Update the draft groundwater monitoring plan to include:
    - A discussion on the potential use of dedicated monitoring wells (current or new) for groundwater head monitoring (i.e. with dataloggers) for both dry and flood/post flood operations.
    - A discussion of whether current monitoring wells will be maintained for use in follow-up and monitoring.
    - Details on initial sampling of domestic wells prior to construction. Discuss how Alberta Transportation intends on ensuring appropriate baseline conditions will be obtained prior to construction.
    - A specific section regarding follow-up and monitoring for groundwater on Tsuut'ina IR 145. Include surveys and monitoring of Tsuut'ina's private water wells for water levels, prior to and during construction and during dry operations until groundwater under Project conditions reaches static conditions and well interference can be assessed.

Gaps from IR3-17

Topic: Hydrogeology – Groundwater Modelling

Sources:

EIS Guidelines Part 2, Sections 6.1.4; 6.2.2

EIS Volume 3B, Section 5

EIS Volume 4, Appendix I, Hydrogeology Baseline Technical Data Report, Section 3

EIS Volume 4, Appendix I, Groundwater Numerical Modelling Technical Data Report, Sections 2.2; 3; 4.1; 4.2; 5, 5.1; 6

Tsuut'ina First Nation, Ermineskin Cree Nation, and Kainai First Nation – Technical Review of the EIS - Annexes – Combined (CEAR #46, 47, 50)

Natural Resources Canada – Comments on the EIS, June 19, 2018 (CEAR #45)

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-17, Appendix IR14-1

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 3, June 14, 2019

NRCan Round 1 IR Completeness Review Comments, July 2, 2019

Context and Rationale

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-17, the Agency required additional details regarding the hydrogeology model. In Alberta Transportation's response to IR3-17, Alberta Transportation notes that Appendix IR14-1 provides an updated Hydrogeology Technical Data Report. Alberta Transportation's responses to IR3-17 refer to this report. However, it is not clear whether the concerns noted in IR3-17 still exist within the new model, are no longer applicable, or have been responded to in the report.

In IR3-17 a), The Agency required Alberta Transportation to apply distributed groundwater recharge across the hydrogeological model domain, or provide a rationale as to why it does not need to be considered. Alberta Transportation's response notes that distributed recharge was added over the model domain; however, NRCan noted that distributed recharge does not appear to be applied in the hydrogeology Technical Data Report update.

In IR3-17 b), the Agency required additional details on the boundary conditions used in the hydrogeology model, including a rationale for the use of prescribed boundary conditions as the main condition along the model exterior, any constraints on prescribed head boundary conditions, and a description of why intermittent streams have isolated locations of prescribed boundary conditions.

In Alberta Transportation's response to IR3-17 b), Alberta Transportation notes that Section 4 of the updated Hydrogeology Technical Data Report describes setup and calibration of the numerical model, including the implementation of various boundary conditions. However, it is unclear if the concerns regarding the prescribed boundary conditions noted in part b still exist.

In IR3-17 d) the Agency required Alberta Transportation to describe how hydraulic conditions are treated in each model layer (free, phreatic, confined or dependent). In Alberta Transportation's response to IR3-17 d), Alberta Transportation notes that Section 4 of the updated Hydrogeology Technical Data Report describes setup and calibration of the numerical model; however, it appears that a description of how hydraulic conditions are treated in each model layer is not provided.

In IR3-17 e) the Agency required Alberta Transportation to provide additional details on hydraulic conductivities. In Section 4.5.3 of the Hydrogeology Technical Data Report, Alberta Transportation provides a table that notes the various hydraulic conductivities for each hydrostratigraphic unit. However, this table does not show the initial and final (calibrated) values, and does not report the anisotropy ratio as requested in IR3-17 e). Additionally, it is unclear if the concerns regarding hydraulic conductivities noted in part e still exist.

As noted in the information request, the EIS Guidelines require the proponent to present information regarding groundwater, including baseline information and changes to groundwater quality and quantity resulting from the Project, and to carry out modelling as required to present and substantiate anticipated changes. Additional information is required to understand the potential changes to groundwater and the effects of those changes, including effects on federal lands and on Indigenous peoples.

Information Requests:

a) Describe how distributed groundwater recharge was applied across the model domain.
b) Considering the updated hydrogeology model, discuss each request below and indicate if the concerns still exist within the new model, if they are no longer applicable, or if a response has been provided. If the concerns still exist and a response has not been provided, respond or provide a rationale for not responding.
    - Provide rationale for the use of prescribed boundary conditions as the main boundary condition along the model exterior and along intermittent streams.
    - Document the use of any constraints on prescribed head boundary conditions (e.g. the use of "seepage face" boundary conditions).
    - Indicate why several of the intermittent streams have isolated locations of prescribed boundary conditions.
    - Describe how hydraulic conditions are treated in each model layer (free, phreatic, confined or dependent).
    - Provide a table that shows the initial and final (calibrated) hydraulic conductivities value for each hydrostratigraphic unit and report the anisotropy ratio.

- Provide maps and cross-sections of final calibrated hydraulic conductivities values, and the three zones of calibrated bedrock hydraulic conductivity
- Provide a rationale for the range in calibrated hydraulic conductivity values for the shallow bedrock and compare them with the measured values.
- If a response has been provided in the report, provide the specific subsection in which the response can be found.

Gaps from IR3-18

Topic: Hydrogeology – Groundwater Baseline and Model Sensitivity

Sources:

EIS Guidelines Part 2, Sections 6.1.4; 6.2.2

EIS Volume 3A, Section 5

EIS Volume 3B, Section 5

EIS Volume 4, Appendix I, Groundwater Numerical Modelling Technical Data Report

Tsuut'ina First Nation, Ermineskin Cree Nation, and Kainai First Nation – Technical Review of the EIS - Annexes – Combined

Natural Resources Canada – Comments on the EIS, June 19, 2018 (CEAR #45)

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-18

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 3, June 14, 2019

NRCan Round 1 IR Completeness Review Comments, July 2, 2019

Context and Rationale

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-18, the Agency required Alberta Transportation to provide additional details on the groundwater baseline studies and hydrogeological modelling.

In Alberta Transportation's response to IR3-18, Alberta Transportation notes that Appendix IR14-1 provides an updated Hydrogeology Technical Data Report. Alberta Transportation's responses to IR3-18 refer to this report. However, it is not clear whether the concerns noted in IR3-18 still exist within the new model, are no longer applicable, or have been responded to in the report.

In IR3-18 b), the Agency required Alberta Transportation to identify all water level measurement locations used to map the potentiometric surface of unconsolidated deposits and clearly identify areas where the water table is below the unconsolidated deposits. It appears that a response to this IR is not provided.

As noted in the context and rationale, NRCan noted that the cross section figures in the EIS indicate that the unconsolidated deposits may be unsaturated along many ridges and hillslopes. The potentiometric maps for unconsolidated deposits should only indicate contours for areas where unconsolidated deposits are saturated. Areas where the water table is below the unconsolidated deposits should be clearly indicated.

As noted in the information request, the EIS Guidelines require the proponent to present information regarding groundwater, including baseline information and changes to groundwater quality and quantity resulting from the Project, and to carry out modelling as required to present and substantiate anticipated changes. Additional information is required to understand the potential changes to groundwater and the effects of those changes, including effects on federal lands and on Indigenous peoples.

Information Requests:

a) Considering the updated hydrogeology model, discuss each request below and indicate if the concerns still exist within the new model, if they are no longer applicable, or if a response has been provided. If the concerns still exist and a response has not been provided, respond or provide a rationale for not responding.
    - Identify all water level measurement locations used to map the potentiometric surface of unconsolidated deposits.
    - Clearly identify areas where the water table is below the unconsolidated deposits.

Gaps from IR3-19

Topic: Groundwater – Culturally Sensitive Groundwater Resources

Sources:

EIS Guidelines Part 2, Sections 6.1.4; 6.1.9; 6.2.2; 6.3.4

Piikani Nation – Technical Review of EIS, June 15, 2018 (CEAR #48)

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-19

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 3, June 14, 2019

Context and Rationale:

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-19, the Agency required the proponent to identify groundwater dependent traditional uses and culturally sensitive areas and describe pathways of effects, mitigation measures, and monitoring and follow-up.

As noted in the information request, the EIS Guidelines require the proponent to present information regarding groundwater, and assess effects of changes to the environment on Indigenous peoples. The cover letter to the information requests and the EIS Guidelines further direct the proponent to present points of disagreement between the views of Alberta Transportation and Indigenous groups, along with a description of efforts undertaken to reconcile these differences and a rationale for conclusions.

Alberta Transportation's response to IR3-19 presents Indigenous groups concerns on groundwater dependent traditional uses and culturally sensitive areas as discrete pieces of information. No discussion is presented regarding how these concerns were considered in the development or selection of mitigation measures or the assessment of effects. The response does not demonstrate consideration of the concerns raised by Piikani Nation in the source referenced in the information request.

Alberta Transportation's response to IR3-19 includes Appendix IR1-1. Specific Concerns and Response Tables included in this appendix list numerous concerns raised by Indigenous groups with respect to traditional uses and culturally significant resources that may be affected by changes to groundwater that are unresolved.

Information Request:

a) Identify and discuss areas of disparity between the views and conclusions of Indigenous groups and Alberta Transportation regarding groundwater dependent traditional uses and culturally sensitive areas, efforts made to reconcile the disparities, and rationale for conclusions on matters for which disparity in views remains.

Gaps from IR3-23

Topic: Fish and Fish Habitat – Effects of Noise

Sources:

EIS Guidelines Part 2, Sections 6.1.5; 6.2.1; 6.3.1

EIS Volume 3A, Section 4; 11

EIS Volume 3B, Section 4; 11

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-23

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 3, June 14, 2019

DFO Round 1 IR Completeness Review Comments, June 28, 2019

Context and Rationale:

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-23, the Agency required the proponent to provide an assessment of the effects of noise and vibration to fish and fish habitat from construction and to describe associated mitigation measures. As noted in the information request, the EIS Guidelines require the proponent to provide baseline information on and assess the effects of changes to the environment on fish and fish habitat.

Alberta Transportation's response to IR3-23 notes that construction will not occur instream. Alberta Transportation identifies that the references cited in the Agency's information request primarily consider the effects of construction within aquatic environments. An assessment of effects of noise and vibration from dry construction adjacent to fish habitat is not provided. The response does not present alternative studies or information as rationale for not conducting an effects assessment.

Information Request:

a) Provide an assessment of the effects of noise and vibration to fish and fish habitat during construction.
b) Describe mitigation measures to reduce or eliminate the effects of noise and vibration on fish and fish habitat.

Gaps from IR3-24

Topic: Fish and Fish Habitat – Habitat Destruction

Sources:

EIS Guidelines Part 2, Sections 6.1.4; 6.1.5; 6.2.2; 6.3.1

EIS Volume 3A, Sections 8.3; 8.4; 8.7

EIS Volume 3B, Section 8.2.5

Fisheries and Oceans Canada – Comments on the EIS, June 19, 2018 (CEAR #28)

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-24

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 3, June 14, 2019

DFO Round 1 IR Completeness Review Comments, June 28, 2019

Context and Rationale:

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-24, the Agency required the proponent to provide a detailed breakdown of areas of fish habitat to be affected by the Project, areas of each temporary or permanent structure, and a rationale for the characterization of residual effects from the destruction of fish habitat. As noted in the information request, the EIS Guidelines require the proponent to provide baseline information on and assess the effects of changes to the environment on fish and fish habitat.

Alberta Transportation's response to IR3-24 states that an analysis of the habitat footprint associated with the planned diversion structure and Highway 22 bridge has not been completed and will be generated for an application for authorization to Fisheries and Oceans Canada (DFO). The response quotes the EIS and does not offer additional rationale for the characterization of residual effects. Sufficient information is required within the environmental assessment process to support a full understanding of potential effects of the Project to fish and fish habitat.

Alberta Transportation's response identifies, to the extent possible given the design completed to date, an overview of the habitat types that overlap with project components and physical activities and the associated permanent alteration or destruction of fish habitat. The response does provide not an equivalent breakdown of areas to be affected by Project operations or describe the interconnection between the placement of temporary or permanent structures, the operations of these structures, and effects to fish and fish habitat. For example, the response states that the diversion structure will affect Class 3 run and riffle habitats within the thalweg of the Elbow river; however, the response does not explain how the operation of the diversion structure, specifically the obermeyer gates, and the design of fish passage mitigation measures to

constrict flow to the thalweg on the north bank of the river may affect potential spawning riffle downstream of the diversion structure.

Understanding the destruction and permanent alteration of fish habitat from project components and project operations is necessary to support a full understanding of potential effects to fish and fish habitat.

Information Request:

a) Provide table summarizing all destruction and permanent alternation to fish habitat resulting from all project components and project operations.
b) Explain potential effects of operation of the obermeyer gates and design of fish passage mitigation measures to constrict flow to the thalweg on the north bank of the river on the potential spawning riffle downstream of the diversion structure.

Gaps from IR3-25

Topic: Fish and Fish Habitat – Mapping

Sources:

EIS Guidelines Part 2, Sections 6.1.5; 6.3.1.

EIS Volume 3A Section 8, Figure 8.2-2; Table 8-5

Louis Bull Tribe – EIS Review Submission, July 18, 2018 (CEAR #49)

Fisheries and Oceans Canada – Comments on the EIS, June 19, 2018 (CEAR #28)

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-25

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 3, June 14, 2019

DFO Round 1 IR Completeness Review Comments, June 28, 2019

Context and Rationale:

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-25, the Agency required maps of fish habitat that is consistent with the definition of fish habitat provided in the EIS and the requirements in the EIS Guidelines. As noted in the information request, the EIS Guidelines require maps indicating the surface area of potential or confirmed fish habitat for spawning, nursery, feeding, overwintering, migration routes, etc.

Alberta Transportation's response to IR3-25 presents maps using the habitat features as defined in Alberta Transportation's 2009 Fish Habitat Manual Guidelines and Procedures for Watercourse Crossings in Alberta, stating this approach is most efficient. It is unclear from the response provided how the approach used supports an equivalent understanding of effects to fish and fish habitat as would be achieved my mapping consistent with the definition of fish and fish habitat in the EIS and the requirements of the EIS Guidelines.

Information Request:

a) Present a comparison of the fish habitat features as defined in Alberta Transportation's 2009 Fish Habitat Manual Guidelines and Procedures for Watercourse Crossings in Alberta and fish habitat as defined in the EIS and requirements of the EIS Guidelines. Explain how the mapping approach taken supports a full understanding of potential effects on fish habitat as described in the EIS Guidelines.

Gaps from IR3-29

Topic: Fish and Fish Habitat – Fish Stranding

Sources:

EIS Guidelines Part 2, Sections 6.1.5; 6.3.1

EIS Volume 3B, Section 8.2.4

EIS Volume 3C, Section 1.3.5.1

Samson Cree Nation – Springbank Off-Stream Reservoir Project Written Submission – June 25, 2018 (CEAR #52)

Piikani Nation – Technical Review of EIS, June 15, 2018 (CEAR #48)

Fisheries and Oceans Canada – Comments on the EIS, June 19, 2018 (CEAR #28)

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-29

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 3, June 14, 2019

DFO Round 1 IR Completeness Review Comments, June 28, 2019

Context and Rationale:

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-29, the Agency required the proponent to provide additional detail related to fish stranding, including information on potential effects to fish trapped in the reservoir (specifically sensitive salmonid species), mitigation measures to reduce effects to fish should stranding occur, natural law implications, and follow up and monitoring programs.

As noted in the information request, the EIS Guidelines require the proponent to assess the effects of changes to the environment on fish and fish habitat and on Indigenous peoples. The cover letter to the information requests and the EIS Guidelines further direct the proponent to present points of disagreement between the views of Alberta Transportation and Indigenous groups, along with a description of efforts undertaken to reconcile these differences and a rationale for conclusions.

Alberta Transportation's response to IR3-29 does not provide additional evidence to support findings related to potential effects to fish trapped in the reservoir and does not demonstrate that the full suite of pathways of effects to fish trapped in the reservoir have been considered. The response does not demonstrate consideration of potential effects to sensitive salmonid species. The response identifies mitigation measures associated with monitoring and fish rescue. Mitigation measures specific to the full suite of pathways of effects to fish trapped in the reservoir are not identified.

Alberta Transportation's response to IR3-29 presents no discussion of Indigenous groups' views pertaining to the Project's implications for interspecies relationships and natural law and associated effects of the Project on Indigenous peoples.

Information Request:

a) Present evidence to support findings related to the potential effects of changes in water quality and threats of predation. Include a discussion of mitigation measures associated with each of the pathways of effects to fish trapped within the reservoir and the effectiveness of these mitigation measures.
    - Present a discussion specific to potential effects to and mitigation for sensitive salmonid species of fish that could be trapped in the reservoir.

b) Identify and discuss areas of disparity between the views and conclusions of Indigenous groups and Alberta Transportation regarding the Project's implications for interspecies relationships and natural law and associated effects of the Project on Indigenous peoples, efforts made to reconcile the disparities, and rationale for conclusions on matters for which disparity in views remains.

Gaps from IR3-30

Topic: Fish and Fish Habitat - Westslope Cutthroat Trout

Sources:

EIS Guidelines Part 2, Sections 6.1.5; 6.3.1

EIS Volume 3A, Section 8.2.2.3

Métis Nation British Columbia – Technical Review (CEAR #1153)

Samson Cree Nation – Springbank Off-Stream Reservoir Project Written Submission – June 25, 2018 (CEAR #52)

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-30

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 3, June 14, 2019

DFO Round 1 IR Completeness Review Comments, June 28, 2019

Context and Rationale:

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-30, the Agency required the proponent to present additional information regarding westslope cutthoat trout.

As noted in the information request, the EIS Guidelines require the proponent to assess the effects of changes to the environment on fish and fish habitat and on Indigenous peoples. The cover letter to the information requests and the EIS Guidelines further direct the proponent to present points of disagreement between the views of Alberta Transportation and Indigenous groups, along with a description of efforts undertaken to reconcile these differences and a rationale for conclusions.

Alberta Transportation's response to IR3-30 does not demonstrate consideration of the concerns raised and information presented by Samson Cree Nation. As referenced in the information request, Samson Cree Nation noted that the PDA has historically provided habitat for westslope cutthroat trout and they remain present in the upper Elbow River and its tributaries, outside of the PDA. Additional information is required to assess effects on fish and effects on Indigenous peoples.

Information Request:

a) Identify and discuss areas of disparity between the views and conclusions of Indigenous groups and Alberta Transportation regarding historic and current habitat for westslope cutthroat trout, potential effects of the Project on westslope cutthroat trout, and associated effects on Indigenous peoples, efforts made to reconcile the disparities, and rationale for conclusions on matters for which disparity in views remains.

Gaps from IR3-31

Topic: Fish and Fish Habitat – Assessment of Effects

Sources:

EIS Guidelines Part 2, Sections 6.1.5; 6.3.1; 6.6.3

EIS Volume 3C, Section 1.3.5.1

EIS Volume 4, Appendix M, Section 2.2.2

Fisheries and Oceans Canada – Comments on the EIS, June 19, 2018 (CEAR #28)

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-31

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 3, June 14, 2019

DFO Round 1 IR Completeness Review Comments, June 28, 2019

Context and Rationale:

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-31, the Agency required the proponent to describe potential effects to fish that support CRA fisheries and to revise the cumulative effects assessment for fish and fish habitat. The information request identifies that there is fish spawning habitat that has not been considered in the cumulative effects assessment. As noted in the information request, the EIS Guidelines require the proponent to provide baseline information on and assess the effects of changes to the environment on fish and fish habitat, and identify and assess the Project's cumulative effects.

Alberta Transportation's response does not demonstrate consideration of fish species that contribute to the productivity of CRA fisheries. The response lists pathways of effects associated with proposed works and lists supporting CRA fish species. However, pathways of effects specific to species that support the productivity of CRA fisheries, and related mitigation measures, are not identified or discussed.

Alberta Transportation's response does not present a revised cumulative effects assessment. The response states that the assessment includes all life stages (e.g. spawning) but does not explain how all fish spawning habitat, including fish spawning habitat downstream of the low level outlet channel, was considered in the cumulative effects assessment.

Information Requests:

a) Describe potential effects to fish that support CRA fisheries considering fish species that contribute to the productivity of CRA fisheries.
b) Revise the cumulative effects assessment for effects to fish and fish habitat to:
    - Demonstrate how fish spawning habitat has been considered in the cumulative effects assessment;
    - Specifically account for potential effects identified in part a).

Gaps from IR3-41

Topic: Cumulative Effects – Hydrology

Sources:

EIS Guidelines Part 2, Section 6.6.3

EIS Volume 3C, Section 1

Tsuut'ina First Nation, Ermineskin Cree Nation, and Kainai First Nation – Technical Review of the EIS - Annexes - Combined (CEAR # 46, 47, 50)

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-41

Alberta Transportation Responses to IR Round 1, SRI CEAA IR Package 3

Context and Rationale:

In CEAA information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-41, the Agency required additional information to support its understanding of how cumulative effects to hydrology, surface water quality, and aquatic ecology interact with other VCs such as wildlife use patterns and culture/sense of place and whether the updated cumulative effects assessment affects conclusions for direct or cumulative effects to these VCs. As noted in the information request, the EIS Guidelines require the proponent to identify and assess the Project's cumulative effects, including an assessment of cumulative effects to the Elbow River, its hydrology and seasonal flood process, water quality, and aquatic ecology. The cover letter to the information requests and the EIS Guidelines further direct the proponent to present points of disagreement between the views of Alberta Transportation and Indigenous groups, along with a description of efforts undertaken to reconcile these differences and a rationale for conclusions.

Alberta Transportation's response to IR3-41 notes that wildlife use patterns and culture/sense of place are assessed as relevant and appropriate for the wildlife VC and the traditional land and resource use VC, respectively. Additionally, Alberta Transportation indicates that effects from surface water quality, aquatic ecology and hydrology on wildlife use patterns and cultural/sense of place were not assessed because there are no such effects. The response does not provide an understanding of the potential cumulative effects to wildlife use patterns and cultural/sense of place.

Additional information is required to understand the cumulative effects of the Project on hydrology, surface water quality and aquatic ecology, the interactions of these effects with other factors, and related effects on Indigenous peoples.

Information Request:

a) Discuss how cumulative effects to hydrology, surface water quality, and aquatic ecology, interact with other factors such as wildlife use patterns and culture/sense of place as it relates to Indigenous peoples.
   - Discuss whether the updated cumulative effects assessment affects conclusions for direct or cumulative effects to these factors.
   - Identify and discuss areas of disparity between Indigenous groups' and Alberta Transportation's views and conclusions regarding how cumulative effects to hydrology, surface water quality, and aquatic ecology, interact with other factors such as wildlife use patterns and culture/sense of place, efforts made to reconcile these, and rationale for conclusions on matters for which disparity in views remains.

Gaps from IR3-42

Topic: Cumulative Effects – Water Management

Sources:

EIS Guidelines Part 2, Section 6.6.3

EIS Volume 1, Section 2

EIS Volume 3B, Section 18

EIS Volume 3C, Section 1

Tsuut'ina First Nation, Ermineskin Cree Nation, and Kainai First Nation – Technical Review of the EIS - Annexes - Combined (CEAR # 46, 47, 50)

Context and Rationale:

In CEAA information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-42, the Agency required additional information to support the its understanding of Tsuut'ina Nation's interest in developing flood mitigation infrastructure, including for the protection of Redwood Meadows, on its reserve lands, considering the scope of flood mitigation activities in the region.

As noted in the information request, The EIS Guidelines require the proponent to identify and assess the Project's cumulative effects, taking into consideration regional flood mitigation works and strategies. The cover letter to the information requests and the EIS Guidelines further direct the proponent to present points of disagreement between the views of Alberta Transportation and Indigenous groups, along with a description of efforts undertaken to reconcile these differences and a rationale for conclusions.

Alberta Transportation's response to IR3-42 indicates that potential and reasonably foreseeable flood mitigation measures contemplated for Tsuut'ina Nation Reserve lands were not considered in the cumulative effects assessment because information was not available describing any such project prior to filing of the EIA. Additionally, Alberta Transportation notes that based on currently available information, a potential cumulative effect between the Project and flood mitigation proposed for Redwood Meadows is unlikely. The response does not demonstrate consideration of Tsuut'ina Nation's concerns regarding water management, governance, and decision making.

Additional information is required to understand cumulative effects and the effects of changes to the environment on Indigenous peoples.

Information Requests:

a) Describe how potential and reasonably foreseeable flood mitigation measures contemplated for Tsuut'ina Nation reserve lands were considered in the cumulative effects assessment.
b) Identify how the Project may interact with or restrict the flood mitigation options available to Tsuut'ina Nation and how this impacts Tsuut'ina Nation's ability to exercise its governance and decision-making regarding its lands.
c) Identify and discuss areas of disparity between Indigenous groups' and Alberta Transportation's views regarding cumulative effects, water management, governance, and decision-making, efforts made to reconcile these, and rationale for conclusions on matters for which disparity in views remains.

Gaps from IR3-45

Topic: Alternative Means

Sources:

EIS Guidelines Part 2, Section 2.2

EIS Volume 1, Section 1.0; 2.2.1.1; 2.2.1.3,

Rocky View County – Comments on the EIS, June 15, 2018 (CEAR #571)

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-45

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 3, June 14, 2019

Context and Rationale

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 3, IR3-45, the Agency required Alberta Transportation to evaluate whether the Micro-Watershed Impounding Concept is a feasible alternative means of meeting the Project's purpose and to consider potential environmental effects in this evaluation. As noted in the information request, the EIS Guidelines require the proponent to identify and consider the effects of alternative means of carrying out the project, and to provide an analysis of alternative means of meeting the project purposes or objectives that considers environmental effects as per CEAA 2012.

In Alberta Transportation's response to IR3-45, Alberta Transportation notes that details on the Micro-Watershed Impounding scheme have not been provided and the only available information that Alberta Transportation is aware of is on the TRJR website. Additionally, the response indicates that Alberta Transportation does not know who its proponent is, nor does Alberta Transportation have any details to evaluate its merit, or feasibility. However, Alberta Transportation does note that the Micro-Watershed Impounding scheme refers to a series of low-head dams or weirs placed throughout Elbow River and its tributaries which would require significant disruption to the Elbow River system as a whole with the installation of multiple low-head dams that would be required to meet the active flood storage capacity requirements for flood control on Elbow River.

Alberta Transportation's response does not provide an understanding of the Micro-Watershed Impounding concept, accurately evaluate the concept, or provide a consideration of potential environmental effects.

As referenced in the information request, CEAR 1037 refers to the Micro-Watershed Impounding Concept. Additional references include CEAR 1237, 1236, and 1139. Additionally, Mr. Charles Hansen (the proponent - as noted in the referenced submission), has confirmed that he has been in contact with both Alberta Transportation and Stantec regarding this concept since 2013, with presentations to the Flood Mitigation Advisory Panel, direct communication with

Stantec, and direct submissions regarding the concept to Alberta Transportation through open houses and online submissions.

Alberta Transportation's response to IR3-45 further notes that potential concerns regarding the Micro Watershed Impounding Concept include limited flood storage, barriers to fish, impassibility of the river, and disruptions from road and utility access to each of the micro-impoundment facilities. However, Mr. Hansen notes that the flood storage capacity of the concept was estimated to accommodate the 2013 flood amount and is demonstrated in numerous submissions (for example, CEAR 1237). Additionally, he indicates that the concept requires no new roads. Existing roads allow equipment access to dry riverbeds to allow access to dams.

Information Requests:

a) Re-evaluate whether the Micro-Watershed Impounding Concept is a feasible alternative means of meeting the Project's purpose and consider potential environmental effects in this evaluation.