

Enclosure 1: Federal Authority Advice Record for the Impact Assessment

Please submit the completed form by **May 29, 2026** via email to GreatBear@iaac-aeic.gc.ca.

Department Contact Information

Submission Date	May 29, 2026
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1. Taking into account the Project Context and Targeted Questions that IAAC has shared, review Batch 2 of the Impact Statement and provide views for IAAC's consideration in the analysis of the project's effects and preparation of the Impact Assessment Report (Table 1) or identify potential outstanding information requirements in the Impact Statement (Table 2). Tables 1 and 2 (attached) provide additional guidance to support your review.
2. As per the Cooperation Plan¹, consider all the mechanisms in place to manage potential federal effects. If your department is responsible for, or aware of, any relevant federal legislative frameworks, policies, programs, or potential complementary measures² that may help manage the project's potential adverse federal effects, please specify and describe applicability to the project and any known limitations to managing effects.
3. Indicate whether your department has identified any power that it will be unable, or may be unable, to exercise to allow the project to proceed, in whole or in part as currently planned, and next steps to resolve any issues.
4. Indicate if any proponent information provided in Batch 2 of the Impact Statement changes the previous guidance provided on permitting. If yes, please provide an overview of the new permitting guidance. Please note that the Detailed Permitting Plan will be updated accordingly.

Clayton James

Name of Departmental / Agency Responder

Senior Biologist

Title of Responder

May 29, 2026

Date

¹ <https://iaac-aeic.gc.ca/050/evaluations/document/158179>

² Complementary measures are additional authorities of government officials or programs that may be used to mitigate effects that may be beyond the care and control of the proponent. They can be taken into account in decision-making.

Table 1. Views to Inform the Impact Assessment

Table 1 should be used to provide views for IAAC’s consideration in the analysis of the project’s effects³ and preparation of the Impact Assessment Report and potential conditions. Expert advisors should consider project context (see Enclosure 2 for more detail on the key issues and targeted questions) and regulatory context and provide risk-proportional, solution-oriented advice even where potential gaps in the Impact Statement are observed.

Comment ID	Reference to Impact Statement	Description of View or Concern Related to an Effect	Advice to Inform the Impact Assessment
<p>Please identify comments by organization and comment number.</p> <p>e.g.: HC-01</p>	<p>Identify the specific section of the Impact Statement to which your comment applies.</p>	<p>Provide a brief description of the view or concern for IAAC’s consideration in the analysis of effects, based on available information, such as:</p> <ul style="list-style-type: none"> a missing pathway of an adverse federal effect that may really increase the overall extent of significance; or sources of uncertainty that, in your department’s view, may weaken potential conclusions. 	<p>Considering project context (see Enclosure 2 for more detail on the key issues and targeted questions) and regulatory context, provide solution-oriented advice for the impact assessment. For example:</p> <ul style="list-style-type: none"> Characterize residual effects and the level of uncertainty with predictions in the absence of more information from the Proponent, as predicted by your department. Explain the uncertainty. Consider describing the range of possible scenarios. Suggest other mitigation and follow-up measures that may increase certainty in predictions or help manage uncertainty for adverse federal effects, including operational guidance or standards, and well-understood practices. Describe any other federal or provincial legislative frameworks, policies, programs, and potential complementary measures that may provide another means to address adverse federal effects, or considerations related to the public interest factors, including predictable outcomes and whether other tools set conditions on the Proponent. Identify those mitigation measures and project design elements that are necessary to limit the extent of significance of adverse federal effects, and those follow-up program measures that are necessary to address substantial uncertainty with the accuracy of predictions and the effectiveness of mitigation, in relation to key issues that are material to decision-making. Provide advice on risk (likelihood and severity of effects), using applicable frameworks relevant to your mandate, to support IAAC’s risk-based decisions. Provide any additional considerations in relation to the Project’s contributions to sustainability or to Canada’s environmental obligations and climate change commitments. Provide any additional considerations in relation to IAAC’s obligations under section 79 of the Species at Risk Act. <p>In the event of cross-cutting issues or a shared mandate/expertise with another agency or department, please specify the agency/department and contact persons.</p>
<p>DFO-01</p>	<p>Section 8.5 Appendix L-1 Appendix L-2 Appendix L-3</p>	<p><u>Uncertainty in Hydrological Modelling and Implications for Fish and Fish Habitat in Dixie Creek</u></p> <p>Dixie Creek runs along the southern border of the proposed mine site and supports one of the most diverse fish communities identified within the Project Area and Local Study Area, second only to the Chukuni River. While direct impacts to Dixie Creek are not proposed, the creek will be subject to changes in flow regime, water levels, and groundwater contributions resulting from project-related alterations to surface water and groundwater systems (see related comments in Table 2, and relevant ECCC and NRCan submissions).</p> <p>The Proponent has provided additional baseline information on fish and fish habitat in Dixie Creek (Appendix L-3); however, uncertainty remains regarding predicted effects to fish and fish habitat. Outstanding concerns identified by expert federal departments (ECCC and NRCan) related to the characterization and modelling of the hydrological and groundwater systems introduce uncertainty into predicted hydrological outputs, including flow and water level changes within Dixie Creek.</p> <p>This uncertainty reduces confidence in the Proponent’s conclusion that flow-related effects to Dixie Creek will not occur and introduces the potential for adverse effects to fish and fish habitat to be</p>	<p>To improve confidence in the assessment of potential effects to fish and fish habitat in Dixie Creek, DFO recommends that the Proponent continue to work with ECCC and NRCan to address outstanding technical concerns related to hydrological and groundwater model characterization, assumptions, and predictive uncertainty. Resolution of these outstanding issues would improve confidence in predicted flow and water level changes and support more reliable characterization of potential adverse effects to fish and fish habitat.</p> <p>Given the remaining uncertainty associated with predicted hydrological conditions in Dixie Creek, DFO advises that a precautionary approach be applied within the impact assessment, including consideration of the potential for greater than predicted flow-related effects to Dixie Creek. In the absence of additional certainty, residual effects predictions should be interpreted with caution.</p> <p>DFO further advises that a robust follow-up monitoring program will be necessary to verify the accuracy of hydrological predictions and assess the effectiveness of mitigation measures during project implementation. DFO recognizes that the Proponent has committed to developing a monitoring and adaptive management approach during the regulatory phase; however, sufficient detail has not yet been provided to determine whether the proposed program will be capable of detecting flow-related impacts to fish and fish habitat in Dixie Creek.</p> <p>At a minimum, follow-up monitoring should include:</p> <ul style="list-style-type: none"> pre-construction and post-construction validation of predicted flow and water level changes; monitoring capable of detecting changes to fish habitat availability, fish passage, spawning habitat suitability, and thermal conditions; and, clearly defined monitoring thresholds and triggers required to detect unanticipated effects. <p>DFO advises that uncertainty related to flow-related effects in Dixie Creek may continue to be addressed through the <i>Fisheries Act</i> regulatory process, including requirements related to monitoring, mitigation, and offsetting. Continued interdepartmental coordination</p>

³ “Effects” means adverse effects within federal jurisdiction and direct or incidental adverse effects (as defined in section 2 of the IAA), and considerations related to the public interest factors (as defined in section 63 of the IAA). Advice is also invited in relation to IAAC’s separate obligations under section 79 of the *Species at Risk Act*.

		<p>underestimated. Given the ecological importance of Dixie Creek within the Local Study Area, uncertainty associated with predicted hydrological conditions may affect the reliability of conclusions related to habitat availability, fish passage, spawning habitat suitability, thermal conditions, and overall fish habitat function.</p> <p>While the Proponent has concluded that offsetting is not required for Dixie Creek, uncertainty in hydrological predictions limits confidence in the conclusion that project-related changes will not result in adverse effects requiring mitigation, monitoring, adaptive management, or offsetting measures.</p>	<p>among DFO, ECCC, and NRCan is recommended to support interpretation of hydrological predictions and characterization of uncertainty throughout the impact assessment and regulatory review processes.</p>
<p>DFO-02</p>	<p>Section 8.4 Appendix L-1 Appendix L-2 Appendix L-3</p>	<p><u>Fish Habitat Classification and Effects Assessment</u></p> <p>The Proponent has developed a fish habitat classification scheme to support the evaluation of project effects and offsetting requirements. While habitat classification approaches can support effects assessment and offsetting design, they require clearly defined criteria and sufficient resolution to distinguish habitat types with different functions, sensitivities, and ecological importance.</p> <p>Uncertainty remains regarding whether the habitat classification applied in the effects assessment appropriately captures ecologically meaningful differences among waterbodies and watercourses within the Project Area and Local Study Area. DFO notes that ecologically distinct systems appear to be grouped into broad habitat categories despite differences in stream size, hydrologic characteristics, fish assemblages, habitat function, and sensitivity to disturbance.</p> <p>As a result, important variation in habitat quality and ecological function may not be fully reflected within the effects assessment. This introduces uncertainty into the characterization of the extent, magnitude, and ecological significance of project-related effects to fish and fish habitat, particularly with respect to habitat-specific functions such as spawning, rearing, migration, overwintering, and refuge habitat. Reduced resolution within the classification approach may also affect confidence in the assessment of habitat losses and offsetting requirements.</p> <p>These uncertainties are particularly relevant for Dixie Creek, which is distinct within the Project Area in terms of stream size, stream order, fish community composition, and importance to Indigenous communities. Dixie Creek supports sensitive life history functions for key fish species and may be vulnerable to project-related flow changes; however, its ecological role and sensitivity may not be fully represented where it is assessed within the same habitat classification category as smaller and less complex watercourses. While the Proponent does not anticipate effects to Dixie Creek, an accurate baseline characterization is important to ensure monitoring can effectively validate predictions and capture unanticipated effects.</p> <p>Although the Proponent has revised portions of the habitat classification in response to previous DFO comments, inconsistencies remain across the Impact Statement and supporting technical documents regarding habitat categorization</p>	<p>DFO previously recommended that the Proponent:</p> <ul style="list-style-type: none"> • re-evaluate habitat classifications to ensure that ecologically distinct waterbodies and watercourses are not grouped into overly broad habitat types; • provide justification for habitat groupings based on physical, hydrological, and biological characteristics, including stream order, wetted width, depth, flow regime, and fish assemblage; • assess Dixie Creek as a stand-alone habitat type reflecting its size, stream order, ecological function, and fish community composition; • re-evaluate conclusions regarding the magnitude and extent of effects, as well as the adequacy of proposed offsetting measures, following refinement of habitat classifications; and • identify whether refined habitat classifications result in changes to predicted impacts, habitat losses, offsetting requirements, or proposed offsetting ratios. <p>While DFO acknowledges that the Proponent has made refinements to the habitat classification framework in response to previous comments, additional clarification and refinement remain necessary (see DFO-06) to improve confidence in the assessment. In the absence of further refinement, uncertainty remains regarding the baseline characterization and subsequent effects assessment for fish and fish habitat within the project area, particularly as it relates to the offsetting and monitoring requirements. For ecologically important systems such as Dixie Creek, appropriate characterization of baseline is key in validating effects and developing effective monitoring programs, including in the scenario that unanticipated effects to Dixie Creek occur. To put it plainly, DFO's view is that the risk from an effects assessment perspective is that the existing habitat may be undervalued, and some aspects of the offsetting overvalued. With respect to Dixie Creek, it hasn't been characterized from the perspective of quantifying impacts to fish habitat, as the Proponent has not predicted impacts to it (see DFO-01). However, if this conclusion is accepted, additional data collection will likely be required to ensure that the prediction of no effect to fish habitat in Dixie Creek can be verified effectively.</p> <p>DFO advises that remaining uncertainty associated with habitat classification should be acknowledged within the impact assessment report when interpreting conclusions regarding residual effects and the predicted effectiveness of offsetting measures. Additional refinement of the habitat classification framework, and linkage of that assessment to predicted effects and monitoring, will be required during the <i>Fisheries Act</i> regulatory processes to support the development and evaluation of the Fish Habitat Offset and Compensation Plan, consultation activities, and regulatory decision-making. This will include review of the sufficiency of the proposed offsetting measures relative to any refinements made to fish habitat classification and evaluation. Additional offsetting is an option that may be required to address any remaining uncertainty, pending the outcome of further technical discussions.</p>

		<p>and associated effects characterization. This introduces uncertainty into the characterization of baseline fish habitat and the conclusions that project-related impacts can be effectively mitigated via offsetting.</p>	
<p>DFO-03</p>	<p>Section 8.7 & 8.8 Appendix L-2</p>	<p><u>Uncertainty in Effects Assessment and Implications for Offsetting</u></p> <p>The Proponent has proposed an area-based offsetting ratio of 1.16:1 to address impacts to fish and fish habitat. While area-based ratios can provide a useful comparison of habitat losses and gains, they may not fully account for differences in habitat quality, ecological function, connectivity, temporal loss, or uncertainty associated with impact predictions and offsetting performance.</p> <p>As identified in DFO-01 and DFO-02, there remains uncertainty in predicted project effects due to:</p> <ul style="list-style-type: none"> • limitations in hydrological and groundwater modelling, and associated flow predictions, particularly for Dixie Creek; and • limitations and inconsistencies in the fish habitat classification framework used to characterize habitat function and sensitivity. <p>These issues introduce uncertainty into the characterization of habitat losses and gains, the predicted extent and magnitude of project-related effects, as well as the predicted effectiveness of proposed offsetting measures.</p> <p>In addition to uncertainty with impact characterization, uncertainty remains regarding the long-term performance and functionality of proposed offsetting measures. This includes uncertainty related to:</p> <ul style="list-style-type: none"> • the long-term stability and performance of engineered features and water control structures (e.g. dams); • the successful establishment and stabilization of constructed or realigned habitat features (see DFO-08); • the potential for delays in habitat functionality; • assumptions regarding fish habitat colonization and use; and • the potential for instability or failure of offsetting features prior to achieving intended habitat function. <p>Collectively, these uncertainties reduce confidence that the proposed 1.16:1 offsetting ratio fully accounts for uncertainty, ecological risk, and temporal lags between habitat loss and the realization of offsetting benefits.</p>	<p>DFO has continued engagement with the Proponent regarding the proposed offsetting approach and has communicated that the proposed area-based offsetting ratio of 1.16:1 may not adequately account for the level of uncertainty associated with predicted project impacts, offsetting performance, and temporal lags in habitat functionality. Consequently, there is the potential that the currently proposed mitigation (i.e. offsetting) is not sufficient to address effects to fish and fish habitat at this time i.e., there is the potential for residual adverse effects to fish and fish habitat. That said, DFO advises that there are no ecological barriers preventing the development of sufficient offsetting measures; that is, the fish and fish habitat resources in the footprint of the project are relatively common, and offsetting for changes or loss is feasible.</p> <p>DFO recommends further refinement of hydrological modelling and habitat classification (DFO-01 and DFO-02) to improve confidence in predicted impacts and support validation of offsetting requirements.</p> <p>With respect to uncertainty in offsetting establishment and functionality, DFO guidance and published literature indicate that uncertainty and temporal delays should influence offsetting requirements. Specifically, Minns (2006) identifies that:</p> <ul style="list-style-type: none"> • delays in offsetting implementation and uncertainty in outcomes increase required offsetting levels; and • offsetting ratios of a minimum of 2:1 may be necessary to achieve no net loss of fish habitat. <p>This publication remains highly relevant, and newer publications have built on and expanded it to include tools like discount rates and multipliers to incorporate explicit consideration of uncertainty and temporal loss on a project-specific basis. To improve certainty that offsetting measures will balance project-related impacts to fish and fish habitat, DFO advises that offsetting multipliers incorporate explicit consideration of uncertainty related to offsetting effectiveness and temporal lag(s) between impact and full offsetting functionality.</p> <p>DFO also advises that offset feasibility and Indigenous community perspectives are important factors in the evaluation of offsetting measures and additional offsetting opportunities should continue to be explored, with preference given to habitat restoration and enhancement opportunities over habitat creation, where feasible and consistent with DFO's Policy for Applying Measures to Offset Adverse Effects on Fish and Fish Habitat.</p> <p>The Proponent will be required to address the issues and recommendations outlined here as part of the regulatory requirements for the <i>Fisheries Act</i> Authorization. DFO will continue to work with the Proponent on these requirements through the regulatory process.</p>

Table 2. Identification of Outstanding Information Requirements and Clarifications in Relation to the Requirements of the Tailored Impact Statement Guidelines

Table 2 should be used to identify potential outstanding information requirements in the Impact Statement where information from the proponent is **both** 1) missing or unclear as prescribed by the Tailored Impact Statement Guidelines **and** 2) necessary to formulate advice (Table 1) to IAAC on matters that are likely to be material and relevant to decision-making⁴. Expert advisors should consider project context (see Enclosure 2 for more detail on key issues and targeted questions) and regulatory context and provide risk-proportional, solution-oriented advice.

Outstanding Information Requirement ID	Reference to Impact Statement	Reference to Tailored Impact Statement Guidelines	Description of Outstanding Information Requirement (Context and Rationale)	Advice to Proponent for Resolving the Outstanding Information Requirements
<p>Please identify information requirement by organization and comment number</p> <p>e.g.: HC-02</p>	<p>Identify the specific section of the Impact Statement related to the information requirement</p>	<p>Identify the specific section of the Tailored Impact Statement Guidelines related to the information requirement</p>	<p>Provide a brief description of the outstanding information requirement in the Impact Statement, including:</p> <ul style="list-style-type: none"> why the information or studies are required to formulate advice to IAAC on matters that are likely to be material and relevant to decision-making. <p>Include, where relevant:</p> <ul style="list-style-type: none"> how the outstanding information requirement relates to an adverse federal effect or to a public interest factor including outlining the relevant pathway of effect (see Enclosure 2 for more detail on the key effects and targeted questions); identify the level of concern about the outstanding information and implications or consequences for strength of conclusions; and advice to IAAC on risk (likelihood and severity of effects), using applicable frameworks relevant to your mandate. <p>Identify if the outstanding information requirement links to specific advice provided to IAAC in Table 1.</p>	<p>Provide a clear and precise description of the missing information or clarification that would resolve the issue detailed at left.</p> <p>Also provide, where applicable, other commitments the proponent can make to respond to the issue, such as:</p> <ul style="list-style-type: none"> offsetting or mitigation to compensate for uncertainty in baseline; follow-up to verify the accuracy of predictions and effectiveness of mitigation; applicable guides, standards and thresholds the proponent intends to meet; and measures the proponent intends to take to comply with other legislative frameworks that provide a means to address effects.
<p>DFO-04</p>	<p>Appendix L-3</p>	<p>Section 8.8.2 Effects to fish and fish habitat [p. 72/164]</p> <p>“...changes in groundwater and surface water conditions and their effects on aquatic habitat and life cycle activities (e.g. reproduction rearing, feeding, migration and habitat connectivity, summer and winter refuge)...”</p>	<p>In the ‘Fish and Fish Habitat Supplemental Report – Dixie Creek’ (Appendix L-3) which was provided by the Proponent to address concerns previously brought up by DFO surrounding sampling and effects assessment uncertainties, it states on page 13 that ‘Dixie Creek exhibits average temperatures consistent with a cool water thermal regime suitable for the thermal preferences of Walleye and Lake Whitefish; however, maximum summer temperature reaches and exceeds the thermal tolerance of Lake Whitefish for periods of each year. This suggests that although Walleye are capable of residing in the creek year-round, Lake Whitefish would need to leave the creek during portions of the year.’</p> <p>Current flow model predictions for Dixie Creek identify anticipated flow reductions exceeding 10% annually and up to 13% monthly within the watercourse. DFO notes that the Proponent does not appear to have evaluated how these anticipated reductions in flow may alter the existing thermal regime within Dixie Creek, including whether reduced flows may increase the frequency, duration, or spatial extent of thermal conditions that could restrict or prohibit Lake Whitefish access and use of the creek. This includes potential implications to migration and spawning behaviour.</p> <p>As currently presented, DFO is unable to determine whether the Proponent’s conclusion regarding the continued use of Dixie Creek by Lake Whitefish remains valid under the predicted flow reduction scenarios. This uncertainty limits DFO’s ability to fully characterize potential adverse effects to fish and fish habitat, including the potential for indirect impacts resulting from altered thermal conditions.</p>	<p>The Proponent should provide an assessment of how the predicted flow reductions within Dixie Creek may alter existing thermal conditions and whether these changes may create or increase thermal barriers to Lake Whitefish movement, habitat use, or spawning access. The assessment should describe the methods, assumptions, thresholds, and supporting rationale used to characterize thermal suitability for Lake Whitefish under predicted future flow conditions.</p> <p>At a minimum, the Proponent should:</p> <ul style="list-style-type: none"> describe how reduced flows may influence water temperature, thermal connectivity, and the duration and spatial extent of thermally unsuitable conditions within Dixie Creek; identify thermal thresholds and habitat suitability criteria applied to Lake Whitefish; assess whether predicted thermal conditions under reduced flow scenarios remain consistent with the conclusion that Lake Whitefish can continue to access and utilize Dixie Creek for spawning and other life history functions; describe the level of confidence and uncertainty associated with the assessment and resulting conclusions; and identify any proposed mitigation or monitoring measures intended to address any potential thermal impacts. <p>If the Proponent is unable to quantitatively assess potential thermal changes associated with predicted flow reductions, provide the rationale for why the existing conclusions regarding Lake Whitefish use of Dixie Creek remain appropriate and precautionary in the absence of this information. Monitoring measures should be proposed to verify the prediction.</p>

⁴ Outstanding information requirements must be limited to information or clarifications that are necessary to formulate or substantially strengthen a conclusion related to decision-making, such as the extent to which federal effects are significant, the identification of appropriate mitigation and follow-up measures, and whether the federal effects are justified in the public interest. “Federal effects” means effects within federal jurisdiction and adverse direct or incidental effects (as defined in section 2 of the IAA). Public interest considerations are outlined in section 63 of the IAA. Comments can also be provided in relation to IAAC’s obligations under section 79 of the *Species at Risk Act*.

<p>DFO-05</p>	<p>Appendix L-3</p>	<p>Section 17.2 Follow-up program monitoring [p. 129/163]</p> <p>“...identification of regulatory instruments that include a monitoring requirement for the VCs...”</p> <p>“...description of the characteristics of monitoring where foreseeable (e.g. location of interventions, planned protocols, list of measured parameters, analytical methods employed, schedule, data management, human and financial resources required)...”</p>	<p>In the ‘Fish and Fish Habitat Supplemental Report – Dixie Creek’, on page 31, the Proponent commits to additional monitoring intended to address DFO’s concerns related to Dixie Creek habitat use by Walleye and Lake Whitefish following predicted flow reductions, including validation of Walleye and Lake Whitefish spawning use within Dixie Creek. DFO supports the overall concept of additional monitoring and will require the implementation of the proposed monitoring plan as part of the regulatory process.</p> <p>However, as currently presented, the monitoring program requires further detail regarding implementation schedule, study design, baseline data collection, methods, and analytical approach to determine whether the program will be capable of detecting changes to fish use of Dixie Creek or validate current conclusions of no effects. Specifically, it is unclear whether baseline data collection for nighttime visual spawning surveys and spring and fall deployment of egg mats will occur prior to anticipated flow reductions.</p> <p>DFO notes that the ability to detect changes in spawning activity or habitat use is dependent on the collection of adequate pre-impact baseline information and the implementation of a monitoring design capable of distinguishing natural variability from project-related effects. As currently presented, DFO is unable to determine whether the proposed monitoring program would be sufficient to validate the Proponent’s conclusions regarding continued use of Dixie Creek by Walleye and Lake Whitefish under reduced flow conditions.</p>	<p>The Proponent should provide additional detail regarding the proposed monitoring program for Walleye and Lake Whitefish within Dixie Creek, including the schedule, methodology, baseline data collection requirements, and implementation approach associated with nighttime visual spawning surveys and spring and fall deployment of egg mats.</p> <p>At a minimum, the Proponent should:</p> <ul style="list-style-type: none"> • identify whether baseline monitoring will occur prior to anticipated project-related flow reductions and provide the proposed timing and duration of baseline data collection; • provide detailed study designs and methodologies for nighttime visual spawning surveys and egg mat deployment, including survey frequency, sampling locations, timing, and rationale; • describe how eggs collected during monitoring will be identified to species; • describe how the monitoring program will distinguish natural variability from project-related changes in habitat use or spawning activity; • provide proposed thresholds, triggers, or criteria that would be used to identify potential deviations from predicted conditions; and, • clarify whether fish movement studies, telemetry, tagging, or other methods have been considered to better characterize seasonal habitat use, spawning site fidelity, and potential changes in fish movement patterns over time in response to altered flow conditions.
<p>DFO-06</p>	<p>Section 8 Appendix L-1 Appendix L-2 (FHOCP)</p>	<p>Section 8.8.1 Baseline conditions [p. 70/164]</p> <p>“...or each potentially affected waterbody or watercourse that has the potential to be frequented by fish, provide the location and area of potential and confirmed fish habitat and a detailed assessment of physical and biological habitat characteristics.”</p>	<p>Section 8 of the Impact Statement, Appendix L-1 (Aquatic Resources Baseline Report), and Appendix L-2 (FHOCP) includes a project-specific fish habitat classification scheme to support evaluation of effects and offsets. However, as noted in Table 1, DFO-02, DFO has concerns with the classification methodology that introduces uncertainty in the characterization of fish habitat, the ecological distinctions between habitat types, and the representation of habitat function and sensitivity within the effects assessment.</p> <p>Consequently, these discrepancies also introduce uncertainty into the evaluation of habitat losses, offsetting requirements, and the predicted effectiveness of proposed offsetting measures (See DFO-03 in Table 1).</p> <p>This outstanding information requirement is linked to DFO-02 in Table 1 regarding habitat classification and effects characterization, particularly with respect to the ecological uniqueness and importance of Dixie Creek within the Project Area. Clarification and resolution of these inconsistencies are required to support confidence in the effects assessment, offsetting evaluation, and future <i>Fisheries Act</i> regulatory decision-making.</p>	<p>The Proponent should resolve inconsistencies related to habitat classification and associated fish assemblage information across the Impact Statement, FHOCP, and supporting Aquatics Baseline Report. Habitat classifications, habitat descriptions, fish assemblage data, and associated analyses should be consistent across all tables, figures, appendices, and supporting text.</p> <p>In a previous response to DFO regarding concerns related to habitat classification over-simplification, the Proponent indicated that the main channel of Unnamed Watercourse 3 (WC-3) had been re-evaluated and reassigned as habitat type F to distinguish it from Dixie Creek, and that Dixie Creek would be treated as a stand-alone habitat type H to better distinguish it from smaller watercourses (see Table 1, DFO-02). However, DFO was unable to identify where this re-classification has been consistently applied within the Impact Statement or supporting appendices.</p> <p>The following discrepancies require clarification and resolution:</p> <ul style="list-style-type: none"> • Table 4-1 in the FHOCP identifies WC-3 as habitat type “HG,” which is the only combined-letter habitat type reported and appears inconsistent with the Proponent’s previous response to DFO. No rationale is provided for combining WC-3 into two habitat types. • In Section 3.7.6 and Table 2-3 in Appendix L-1, WC-3 is classified as habitat type H (same as Dixie Creek), despite being described in Section 4.5.6 as a ‘small, forested stream’ and supporting only five small-bodied fish species and White Sucker. Table 2-3 describes type H habitat as a moderate river with a broad floodplain. • In Table 8.4-1 in Section 8 of the Impact Statement, WC-3 is classified as habitat type G. • In Tables 8.4-3 and 8.4-5, habitat types G and H are analyzed separately; however, Table 8.4-4 combines habitat types G and H without rationale. This is the only instance where habitat types are combined for analysis. • Table 4-3 reports an average species richness of 7.7 for habitat type H. If Dixie Creek is intended to represent the stand-alone type H watercourse, this value does not align with species richness reported for Dixie Creek in Table 4-1, which

				<p>identifies 16 species through traditional capture methods and 31 species through eDNA.</p> <ul style="list-style-type: none"> The FHOCP describes habitat type F as supporting primarily small-bodied, resilient species associated with intermittent or low-flow systems. However, Table 4-1 indicates that Unnamed Watercourses 4 (WC-4) and 8 (WC-8), classified as type F, support relatively high species richness (8–9 species), including larger-bodied and recreational fish species such as Burbot, Northern Pike, Rock Bass, White Sucker, and Yellow Perch. Both WC-4 and WC-8 support more diverse fish assemblages, including several large-bodied fish species, whereas WC-3 was identified as supporting only small-bodied fish species and White Sucker. <p>DFO recommends the Proponent:</p> <ul style="list-style-type: none"> provide updated and consistent habitat classifications across all project documents; provide clear, robust rationale for habitat groupings and any combined habitat categories; clarify how habitat classifications align with physical habitat characteristics, stream order, fish assemblages, and ecological function; identify and correct discrepancies between habitat descriptions across documents and associated fish community data; and update any associated analyses where revised habitat classifications alter habitat valuation, predicted effects, or offsetting requirements. <p>DFO will continue to work with the Proponent to ensure the information meets the regulatory requirements of a <i>Fisheries Act</i> Authorization application.</p>
DFO-07	Appendix L-2 (FHOCP)	<p>Section 7.1 Baseline Methodology [p. 33/164]</p> <p>“...provide detailed descriptions of data sources and data collection methods, including sampling, survey and research protocols, modelling methods, sources of uncertainty, error estimates and any assumptions or biases, and an explanation of why these are the most appropriate sources and methods for the Project;”</p> <p>“...describe modelling methods and include assumptions, calculations of margins of error, and other relevant statistical information. Models should be validated using field data from the appropriate LSA and RSA;”</p>	<p>As described in DFO-01 (Table 1), there is the potential for impacts to fish and fish habitat in Dixie Creek as a result of changes to surface water and groundwater.</p> <p><u>Groundwater model concerns:</u> NRCan has indicated its concerns regarding the application of the groundwater model (see comments from NRCan). Namely, the need for better integration of groundwater model results to support the assessment of surface water quantity. This information is needed to assess the confidence in the results of the groundwater model, including groundwater drawdown for Dixie Creek and the subsequent impacts to fish and fish habitat.</p> <p><u>Surface water model concerns:</u> ECCC has noted concerns with the lack of validation of the baseline flow characterization against on-site flow data to ensure the receiver water balance model is representative of on-site field measurements, in addition to other model assumption and input concerns (see comments from ECCC). This introduces uncertainty into the flow change and water level predictions, and consequently into the effects predictions for fish and fish habitat in Dixie Creek.</p> <p>The lack of model validation and uncertainty it introduces into the effects predictions limits the Proponent’s ability to understand and make conclusions regarding effects to fish and fish habitat in Dixie Creek with sufficient confidence.</p>	<p>In addition to requests made by NRCan and ECCC, DFO recommends that the Proponent:</p> <ul style="list-style-type: none"> Re-evaluate effects to water quantity and fish and fish habitat as a result of model refinements and/or validation, if necessary. Provide a discussion on plans to refine the model through on-going monitoring, including timelines relative to project plans. Ensure that uncertainty in predictions is carried through conservatively in estimates of potential impacts to fish and fish habitat. <p>During the regulatory phase for this project, it will be necessary for the Proponent to provide predictions describing harmful alteration, disruption, and destruction of fish habitat. For pathways of effects related to groundwater and surface water, it will be necessary for the assessment to be based on an understanding of how local fish species utilize habitat areas and in what ways they depend on timing and quantity of flow. The Proponent will also be required to provide adequate baseline data and a monitoring plan that allows for the validation of effects predictions for flow and fish and fish habitat endpoints in Dixie Creek.</p> <p>DFO will continue to work with the Proponent as plans are refined to meet the regulatory requirements of the <i>Fisheries Act</i> Authorization application.</p>
DFO-08	Appendix L-2 (FHOCP)	<p>Appendix 1 – Additional Guidance, Compensation and Offset Plans [p. 136/164]</p> <p>“...where feasible, identify the location and timing of</p>	<p>The Proponent proposes to construct the East Pond and associated East Pond Channel to support offsetting objectives, with channel construction completed in Q2 2029 and the pond completed in Q3 2029. Based on the proposed construction schedule and Proponent communication regarding construction sequencing, it is anticipated that East Pond would begin to fill following construction, likely during freshet conditions in 2030. This would provide</p>	<p>DFO requires additional information to demonstrate that the East Pond Channel will achieve sufficient stability and functional performance prior to exposure to peak flow conditions and sustained hydraulic loading.</p> <p>Given the importance of channel stability to the long-term functionality and effectiveness of the proposed offsetting measures, the Proponent should provide additional information</p>

		implementation of compensation projects;"	<p>approximately one year for the East Pond Channel to stabilize prior to elevated flow conditions.</p> <p>DFO is concerned this limited stabilization period introduces risk and uncertainty regarding the ability of the constructed channel to achieve sufficient geomorphic and vegetative stability prior to being exposed to peak flow conditions. Insufficient stabilization time increases the likelihood of channel erosion or failure, which may result in sediment mobilization and downstream deposition, degradation of fish habitat quality, and failure of the proposed offsetting measure.</p> <p>Stable channel performance is necessary to maintain habitat function, support fish use, and ensure connectivity. Uncertainty in channel stability represents a potential adverse effect to fish and fish habitat and may compromise the functionality and effectiveness of the offsetting works. This introduces uncertainty in the conclusion that offsetting measures will perform as intended. This issue is linked to broader concerns regarding offset effectiveness and timing identified in Table 1 (DFO-03).</p>	<p>regarding channel stabilization assumptions, construction sequencing, and early operational risk management.</p> <p>Specifically, the Proponent should:</p> <ul style="list-style-type: none"> clarify the anticipated timing of East Pond filling and initiation of flow through the East Pond Channel, including assumptions regarding freshet-driven loading, expected flow volumes, and whether flows may be introduced prior to full channel stabilization; provide details regarding proposed stabilization measures intended to promote rapid establishment and reduce the risk of erosion, sediment mobilization, or channel instability during early operational periods, including measures such as channel armouring, grade control, bioengineering treatments, riparian vegetation establishment, erosion protection, and sediment control measures; assess whether staged, controlled, or adaptive introduction of flows could be implemented to allow progressive channel stabilization prior to exposure to peak freshet conditions; and, describe proposed monitoring, inspection, and adaptive management measures that would be implemented during the early operational period to identify and respond to instability, erosion, sediment transport, or channel performance issues. <p>This information will be required to satisfy regulatory requirements as part of a <i>Fisheries Act</i> Authorization application. DFO will continue to work with the Proponent as plans are refined to meet the regulatory requirements of the <i>Fisheries Act</i> Authorization application.</p>
DFO-09	Appendix F Appendix L-1	<p>Section 8.8.2 Effects to Fish and Fish Habitat [p. 73/164]</p> <p>"...risk of fish mortality, including that associated with noise and vibrations caused by project activities (e.g. blasting above and underground) in or near the aquatic environment;"</p>	<p>While mitigation measures are proposed to restrict blasting during "spawning seasons," this term is not defined and associated timing windows are unclear. Baseline information identifies Dixie Creek as potential spawning habitat for both Walleye and Lake Whitefish, which spawn in different seasons (spring and fall, respectively), with Lake Whitefish eggs overwintering. The absence of species-specific spawning windows creates uncertainty as to whether blasting-related effects on spawning adults and incubating eggs have been adequately avoided or mitigated.</p>	<p>DFO recommends the Proponent clearly define species-specific spawning and egg incubation windows for fish present in Dixie Creek (including Walleye and Lake Whitefish), and revise blasting mitigation measures to explicitly address these periods, including any seasonal restrictions, buffers, or monitoring required to avoid or minimize effects on spawning and overwintering eggs.</p> <p>Detailed mitigation plans, including for blasting, will be required to satisfy regulatory requirements of the <i>Fisheries Act</i> Authorization application.</p>

Please insert additional rows as necessary.