

Comments on Marten Falls Community Access Road Project (Project) revised Surface Water Study Plan – September 8, 2021

It is essential that the Impact Statement for the Marten Falls Community Access Road Project (the Project) address all requirements outlined in the Tailored Impact Statement Guidelines (the Guidelines), and that the study plans outline a clear approach to achieving these requirements. The Impact Assessment Agency of Canada (the Agency) has highlighted sections of the Guidelines where requirements for the Impact Statement may not be met, based on content of the study plan submitted to the Agency. Note that this table does not provide an exhaustive list of the requirements described in the Guidelines. The Guidelines should be reviewed in their entirety, including the sections identified below.

General Comments from the Impact Assessment Agency of Canada on the Marten Falls Community Access Road Draft Study Plans – July 2, 2020					
#	Tailored Impact Statement Guidelines Section¹	Required Action for Proponent	Proponent Response	Final Study Plan Section Reference	Agency comments on June 3, 2021 - Surface Water Study Plan
GC-01	Section 5 - Public Participation and views (including 5.1, 5.2)	<p>Provide a clear description in the study plans of how public engagement opportunities have been and/or will be integrated into the impact statement phase. This must include detail on how the public will have opportunities to provide input to contribute to the development of the Impact Statement, as required in Section 5 of the Guidelines.</p> <p>Describe what engagement with the members of the public listed in the Public Participation Plan has been done in the development of the study plans, and/or any planned engagement with members of the public on the proposed study plans.</p>	<p>Section 4: describes how the Proponent will provide Project notices and opportunities with members of the public listed in the Public Partnership Plan. This will also include the opportunity to provide input on the existing environment, VCs, effects assessment methods, effects assessment results, and mitigation and follow-up program measures as applicable. A variety of activities will be offered so that members of the public are informed of the IS / EA Report as it progresses and are aware of the opportunities and means to provide their input.</p> <p>The study plans have recognized public and agency input received on the Project to date.</p>	Section 4.1 “A variety of activities will be offered so that members of the public are informed of the IS / EA Report as it progresses and are aware of the opportunities and means to provide their input.”	<p>Section 4.1 of the study plan mentions that “a variety of activities will be offered”, however, no details on the likely engagement activities are provided.</p> <p>As required by Section 5 of the Guidelines, the Impact Statement must provide a record of engagement that describes all efforts taken to seek the views of local communities and other stakeholders with respect to the Project, including on the study plans. This record of engagement is to include all engagement activities undertaken prior to the submission of the Impact Statement, including prior to and during the planning phase, and in the preparation of the Impact Statement.</p> <p>Provide details on the timeline for public engagement relative to the project workplan, including engagement relative to the schedule for baseline work, and in consideration of the project team’s timeline for the development of the Impact Statement.</p> <p>Demonstrate in the Impact Statement that comments provided by members of the public on surface water were taken into consideration. Comments provided to the Agency are available on the Canadian Impact Assessment Registry Internet site at: https://iaac-aeic.gc.ca/050/evaluations/proj/80184/contributions</p>
GC-02	Section 6 - Description of Engagement with Indigenous Groups (including 6.1, 6.2, 6.3)	<p>Provide a clear description in the study plans of how all Indigenous groups listed in the Indigenous Engagement and Partnership Plan will have opportunities to provide Indigenous knowledge, including the validation of how information they provided was applied. The study plan should include a description of the proposed methods for data collection, management of confidentiality, and information storage. This should also include a methodology for tracking information that has been approved by the group, to demonstrate that the guidance outlined in Section 6.2 of the Guidelines has been incorporated into the study plans.</p> <p>Describe what engagement with all the Indigenous groups listed in the Indigenous Engagement and Partnership Plan has</p>	<p>In Section 4.2 it is noted that the Proponent will provide Project notices and opportunities for consultation and engagement with Indigenous communities identified in the Indigenous Partnership and Engagement Plan. A variety of activities will be offered so that Indigenous communities are informed of the IS / EA Report as it progresses and are aware of the opportunities, means and timelines to provide their input.</p> <p>Section 2.1.1 outlines the approach to handling confidential information, by means of permission from Indigenous communities to include Indigenous Knowledge in the IS / EA Report, regardless of the source of the Indigenous Knowledge.</p> <p>The study plans have recognized Indigenous community input received on the Project to date.</p>	Section 4.2 “...A variety of activities will be offered so that Indigenous communities are informed of the IS / EA Report as it progresses and are aware of the opportunities, means and timelines to provide their input...” “...Indigenous communities will have the opportunity to comment on components of the study plans throughout the IS / EA Report consultation and engagement process...”	<p>Section 4.2 of the study plan states that “a variety of activities will be offered”, however, no details on the planned engagement activities are provided.</p> <p>Section 4.2 of the study plan also states that “Indigenous communities will have the opportunity to comment on components of the study plans throughout the IS / EA Report consultation and engagement process”, however, it is unclear on which components of the study plans the project team plans to engage. It is also unclear whether Indigenous groups will be provided with a meaningful opportunity to provide input on a preliminary approach/method for baseline data collection, as required in Section 6 of the Guidelines, or if engagement will take place after the baseline data collection is complete. Provide details on the timeline for Indigenous engagement on the Surface Water study plan, including engagement relative to the schedule for baseline work, and spatial and temporal boundaries determinations, and particularly in relation to collection of Indigenous knowledge, and in consideration of the project team’s timeline for the development of the Impact Statement.</p> <p>Demonstrate in the Impact Statement that comments provided by Indigenous groups on surface water were taken into consideration. Comments provided to the Agency are available on the Canadian Impact</p>

¹ Refer to complete sections of the Guidelines for more context.

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		been done in the development of the study plans, and/or any planned engagement with Indigenous groups on the proposed study plans, particularly in relation to collection of Indigenous knowledge (i.e. develop the work plan in collaboration with those Indigenous groups that would need to provide knowledge).			Assessment Registry Internet site at: https://iaac-aeic.gc.ca/050/evaluations/proj/80184/contributions
GC-03	Section 6.2 - Analysis and response to questions, comments, and issues raised	Revise the study plans to include an approach to handling confidential information that demonstrates adherence to the guidance provided in Section 6.2 of the Guidelines.	<p>Section 2.1.1: Section has been updated to include information regarding both confidentiality and permission information on all collected Indigenous Knowledge, regardless of the source.</p> <p>This section also includes how information regarding the Indigenous Knowledge Sharing Agreements will be established by the Proponent and Indigenous community participating in the Program.</p>	Section 2.1.1 “...Sensitive and / or confidential information collected through Indigenous Knowledge Sharing Agreements will be protected from public or third-party disclosure and will be established between the Proponent and Indigenous communities participating in the Indigenous Knowledge Program prior to the sharing and use of any sensitive information. Instances where Indigenous Knowledge sharing has taken place during consultation activities (e.g., meetings) will be recorded in the Record of Consultation and Engagement, including where Indigenous Knowledge was incorporated into Project decisions and into the IS / EA Report (i.e., specifics will not be included in the Record of Consultation and Engagement given the potential sensitivity and / or confidentiality of the information shared)...”	<p>As required in Section 6 of the Guidelines, incorporate in the Impact Statement content that describes the confidential information provided by each Indigenous group. Present the content in sufficient detail to support understanding of the potential effects and impacts on rights, while also protecting confidential/sensitive specifics and respecting stipulations in the confidentiality agreements (e.g, use buffer areas instead of specific locations, etc.).</p> <p>Provide to the Agency, in the form of a letter from the Indigenous group that shared confidential information, a letter confirming that:</p> <ul style="list-style-type: none"> the Indigenous group that provided confidential information is satisfied with the way the Impact Statement was informed; the Indigenous group that provided confidential information is satisfied with the way the issue was solved or addressed.
GC-04	Study plans spatial boundaries	<p>Describe the approach to be implemented to demonstrate how the definitions of the proposed study area boundaries:</p> <ul style="list-style-type: none"> encompass the anticipated boundaries of the Project's effects, including all potentially impacted local communities, municipalities and all Indigenous groups listed in the Indigenous Engagement and Partnership Plan; and take into account community knowledge and Indigenous knowledge; current or traditional land and resource use by Indigenous groups; exercise of Aboriginal and Treaty rights of Indigenous peoples, including cultural and spiritual practices; physical, ecological, technical, social, health, economic and cultural considerations; and the size, nature and location of past, present and foreseeable future projects and activities. 	<p>Section 6.2: General information on study areas for the Project, including a detailed list of what was considered to develop the discipline-specific local and region study areas, is included in each study plan. Each study area has been proposed taking into consideration community knowledge and Indigenous Knowledge, current or traditional land and resource use by Indigenous communities, and the exercise of Aboriginal and Treaty Rights of Indigenous peoples, including cultural and spiritual practices, physical, ecological, technical, social, health, economic and cultural considerations available at this time.</p> <p>The proposed discipline-specific study areas are preliminary. The proposed study areas will be consulted and engaged on early in the IA / EA process. In addition, the Indigenous Knowledge Program provides additional opportunities for community knowledge and Indigenous Knowledge, current or traditional land and resource use by Indigenous communities, and the exercise of Aboriginal and Treaty Rights of Indigenous peoples to be shared in greater detail.</p>	Section 6.2 The PDA encompasses the 100 metre-wide CAR right-of-way (ROW), temporary construction access roads, work areas, worker camps, and pits, quarries and associated access roads. The preliminary LSA currently being considered within the scope of the ongoing provincial regulatory review process generally includes the area within 2.5 km of the centreline of Alternative 1 and Alternative 4.... ... The LSA for Surface Water is consistent with the general LSA considered for the Project that generally includes the area within 2.5 km of the PDAs of Alternative 1 and Alternative 4, but is expanded to include a 2.5 km buffer around temporary infrastructure (e.g., pits and quarries, work camps). The buffer will account for waterbodies where direct interaction with Project components are not proposed, but where there is the potential for off-site direct or indirect Project effects that are measurable. The LSA for Surface Water encompasses the LSA for the other VCs that may affect surface water....	<p>As required in Section 7 of the Guidelines, provide details to demonstrate that the surface water Regional Study Area encompasses the anticipated boundaries of the Project's effects, including all potentially impacted local communities, municipalities and all Indigenous groups listed in the Indigenous Engagement and Partnership Plan. Note that the Regional Study Area must encompass the spatial boundary of cumulative effects.</p> <p>As required in Section 7.4.1 of the Guidelines, provide information regarding how the following were/will be taken into account in defining the spatial boundaries: community knowledge and Indigenous knowledge; current and traditional land and resource use by Indigenous groups; exercise of Aboriginal and Treaty rights, including cultural and spiritual practices; physical, ecological, technical, social, health, economic and cultural considerations; and the size, nature and location of past, present and reasonably foreseeable future projects and activities.</p> <p>Provide the above information in a way that allows those who provided the knowledge to the proponent and the Agency to see their input reflected in the Impact Statement. It is not sufficient to state that “input from participants will be/was taken into account”.</p>

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				... The RSA for Surface Water encompasses 21 quaternary watersheds crossed by the LSA. This area includes the area where surface water could potentially be affected by Project effects within the PDA and LSA as water flows downstream, and by regional indirect Project effects (e.g., potential regional-scale changes in groundwater-surface water interactions, changes to wetlands and peatland that could affect surface water, air quality changes resulting in long-distance transport and deposition of pollutants;...	
GC-05	Section 7 - Baseline Methodologies (Including 7.1, 7.2, 7.3, 7.4)	<p>Provide clear descriptions in the study plans of the proposed study areas and the criteria used to define the study areas for each valued component.</p> <p>Provide clear descriptions of the timing of previously collected data (days/month/year) and future approximate (month/year or season/year) for every field work planned and the criteria used to tailor the temporal boundaries to the valued components under consideration.</p> <p>Describe how all Indigenous groups listed in the Indigenous Engagement and Partnership Plan will be, or have been, engaged to provide input on spatial and temporal boundaries.</p> <p>Explain how the Agency will be provided opportunities to validate spatial and temporal boundaries.</p>	<p>Local Study Area (LSA) and Regional Study Area (RSA) for each valued component are described in Table 6-1, including rationale used to define the area.</p> <p>Study plans have been designed considering historical information, where applicable and available. Study plans will be updated with appended Work Plans, to be submitted at a future date, which will detail upcoming planned field activities.</p> <p>As detailed in both Section 4.2 and Section 6.2 the Proponent will continue to provide opportunities for neighbouring Indigenous communities and interested persons to provide input and inform the effects assessment, including the LSAs and RSAs.</p> <p>Government agencies and interested persons will have the opportunity to comment on component of the study plans throughout the IS / EA Report consultation and engagement process</p>	Sections 4.2 and 6	This comment has been partially addressed through the study plan and work plan. See comments SW-01 and SW-06 in the table below for detail about the outstanding information still required in relation to Surface Water study plan area boundaries and baseline data.
GC-06		Provide further details in the study plans on how GBA+ has been integrated into all aspects of data collection methodology, as per Section 7.1 of the Guidelines, and into the assessment of effects and impacts, as mentioned in Sections 13, 20, 21, and others, related to effects assessments of the Guidelines	Section 4.3 has been updated to include the consideration of Identity and Gender-Based Analysis Plus (GBA+) including both Indigenous communities and their relevant subpopulations and non-Indigenous communities and their subpopulations. During consultation and engagement activities these groups (and any others defined during consultation) will be engaged with on targeted input.	Section 4.3	<p>Describe how GBA+ has been or will be applied to the consideration of engagement activities. Identify specific methods targeted to specific subgroups.</p> <p>Provide detail on how GBA+ has been integrated into all aspects of data collection methodology, as per Section 7.1 of the Guidelines, and into the assessment of effects and impacts, as mentioned in Sections 13, 20, 21, and others, related to effects assessments of the Guidelines.</p> <p>It is not sufficient to mention that Gender-Based Analysis Plus will be applied to the assessment. Clear descriptions of how GBA+ was integrated (including to which variables, method, and how it influenced results' interpretation) are needed in the Impact Statement.</p>
GC-07	Section 13 - Effects Assessment	Provide details to demonstrate how the Project's potential effects will be considered, as per the requirements in	Project environmental interaction are separated into Project phases, and Project activities for each	Throughout the study plan, Section 9	As required in Sections 7 and 13 of the Guidelines, ensure that the effects assessment considers the effects of each of the project components (including but not limited to all alternative routes brought forward in the

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	(including 13.1, 13.2)	Sections 13 to 19 of the Guidelines. Ensure that the effects assessment considers the effects of each of the project components and physical activities, in all phases, and that it is based on a comparison to the proposed baseline work. Provide detail on how engagement with all Indigenous groups listed in the Indigenous Engagement and Partnership Plan and the public will inform the effects assessment and the selection of mitigation measures and follow-up program measures.	environmental discipline in their VC-specific study plan listed as Table 9-1. Information collected through the various activities (e.g., field studies and programs, effects assessments) of each discipline area (e.g., wildlife, vegetation, cultural heritage) will be shared with the Indigenous Knowledge Program leads. This will support the establishment of the existing environment and the effects assessment for the Aboriginal and Treaty Rights and Interests environmental discipline, as well as the identification of potential mitigation measures and monitoring programs.		Impact Statement, all aggregates sources, access roads, etc.) and physical activities, in all phases, and that the assessment is based on a comparison to the data and information gathered during the proposed baseline work. Clarify the level of information that will be shared with, and explained to, the Indigenous Knowledge Program leads and whether study plans will be made available to all Indigenous groups listed in the Indigenous Engagement and Partnership Plan.
GC-08	Section 13.1	Provide clear descriptions of the rationale behind the assumptions, including but not limited to the assumed average daily traffic and vehicles composition during the construction and operation phases that will be considered for the effects assessment and the cumulative effects assessment.	Section 10: Current assumptions to be used in the effects assessment have been identified. Any additional assumptions will be identified and rationale will be provided in the IS / EA Report.	Section 10 “Any assumption used in the effects assessment, for example the assumed average daily traffic on the CAR, will be clearly identified and a rationale provided in the IS / EA Report.”	Before conducting the effects assessment analysis, the Agency advises the proponent to seek the Federal Review Team’s confirmation of the assumptions that will be used in the analysis or, at a minimum, to discuss the type of assumptions that will be considered. As required by Section 13.1 of the Guidelines, ensure that the Impact Statement clearly outlines the assumptions used for the assessment of effects, including cumulative effects, on each valued component.
GC-09	Section 19.2 - Impacts on the Exercise of Aboriginal and Treaty Rights	Describe an approach for identifying the potentially impacted rights of Indigenous peoples of Canada that are recognized and affirmed by section 35 of the <i>Constitution Act, 1982</i> , and for integrating the potential impacts on those rights into the collection of baseline information and the effects assessment.	All study plans reference how potential effects on Indigenous rights will be assessed in the Aboriginal and Treaty Rights and Interests Study Plan. Impacts on Rights considerations are explained in the rationale for defining a Local Study Area and Regional Study Area for Aboriginal and Treaty Rights and Interests VCs. Further information for this is listed in Section 6.2.2 in the Aboriginal and Treaty Rights and Interests Study Plan.	Section 5, and Section 6.2.2 in the Aboriginal and Treaty Rights and Interests Study Plan	Feedback will be provided in the Federal Review Team’s comments package on the Aboriginal and Treaty Rights and Interests Study Plan.
GC-10	Section 20 - Mitigation and enhancement measures	Provide detail on the approach to meeting the requirements of Section 20 of the Guidelines regarding the identification of mitigation and enhancement measures.	Section 9: Approach to mitigation and enhancement measures, specifically noting that once potential effects have been identified, the effects assessment will explore technically and economically feasible mitigation measures to avoid or minimize the identified negative effects and enhancement measures to increase positive effects.	Section 9.5.1 “Mitigation requirements will be provided in the IS / EA Report and will include the general requirements for all VCs in addition to requirements that are specific to Surface Water as set out in Section 20 of the TISG (the Agency 2020c). The requirements specific to Surface Water are as follows...” (lists relevant requirements)	Section 9.5.1 of the study plan is listing the requirements outlined in Section 20 of the Guidelines. Ensure that the Impact Statement provides a description of the method or approach followed to meet the requirements of Section 20 of the Guidelines.
GC-11	Section 25 – Description of the Project’s contribution to sustainability	Provide detail on the approach to meeting the requirements of Section 25 of the Guidelines regarding the description of the Project’s contribution to sustainability.	Section 9: the sustainability assessment for the Project will be undertaken on the preferred alternative and will characterize the Project’s contribution to sustainability incorporating the requirements set out in Section 25 of the TISG.	Section 9.7	Section 9.7 of the study plan is listing the requirements outlined in Section 25 of the Guidelines. Ensure that the Impact Statement provides a description of the method or approach followed to meet the requirements of Section 25 of the Guidelines.

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GC-15	Concordance with Federal Guidance	Provide a separate concordance table containing all requirements of the Guidelines. This is required to show how all requirements of the Guidelines, including the interactions of effects and interconnectedness of valued components, would be addressed.	Please refer to Table 11-1, Table 11-3 and the General Comments Table Response.	Section 11	<p>Multiple requirements from Section 8.6 that are related to surface water are not included in the concordance table for the Surface Water study plan.</p> <p>Examples of missing Section 8.6 requirements include:</p> <ul style="list-style-type: none"> • provide the delineation of drainage basins, at appropriate scales (water bodies and watercourses), including intermittent streams, flood risk areas and wetlands, boundaries of the watershed and sub-watersheds, in relation to key project components; • provide written description and maps of primary, secondary and tertiary watersheds and major and minor rivers and lakes; • provide the design flood at each water crossing; • provide details on the hydraulic design of the water crossings; • quantify the effects of the Project on the hydrological regime of both the local and regional study area; in particular, in case of any watercourse diversions, describe the effects on the flow upstream and downstream of the diversion; <p>Include in the concordance table all relevant requirements. If they are covered in a separate plan, provide a cross reference to specify where the information is found.</p>

Federal Review Team comments on the Marten Falls Community Access Road Project Draft Surface Water Study Plan – August 31, 2020						
#	Draft Study Plan Section	Tailored Impact Statement Guidelines Section ²	Required Action for Proponent	Proponent Response	Final Study Plan Section Reference	Agency comments on June 3, 2021 - Surface Water Study Plan
Editorial Comment	Section 4.2.2: Surface Water Quality Figure 4-1: Proposed Surface Water Survey Locations	Editorial Comment	Provide a clear description of Figure 4-1 and reference the figure in the body of the study plan.	A location plan for the proposed surface water monitoring program (proposed water body crossing locations for ground-based field studies of water quantity and quality) has been included in the updated version of the Surface Water Study Plan.		This comment has been addressed.
Editorial Comment	Section 4.2.2: Surface Water Quality “Proposed locations for surface water sampling are illustrated on Figure 4-2.... In situ parameters and water samples will be collected at the subset of watercrossings (Figure 4-2)”	Editorial Comment	Provide Figure 4-2 to clearly indicate the proposed locations for future surface water sampling and in situ parameter measurements.	The reference in Section 4.2.2 of the Draft Study Plan should have been Figure 4-1 (rather than Figure 4-2). Note as well that a location plan for the proposed surface water monitoring program has been included in the updated version of the Surface Water Study Plan.		This comment has been addressed.
SW-01	Section 3: Spatial Boundaries: Study Areas “The boundaries of the LSA will be confirmed and refined during the Baseline Study to consider flows in rivers and dilution and assimilation in water bodies, as may be required to capture the extent of direct and indirect project-related effects on surface water (Section 4.1). The RSA for the Water Quality VC encompasses Quaternary subwatersheds crossed by route Alternative 1 and Alternative 4 downstream of the PSA and LSA. This area includes the area where water bodies could potentially be affected by project effects within the PSA and LSA as water flows downstream, and by broad-scale indirect project effects (e.g., potential regional-scale changes in groundwater-surface water interactions and changes to wetlands and peatland hydrology that could affect surface water).”	Section 7.1 “...Considerations in assigning appropriate study areas or boundaries would include, but not be limited to: - areas potentially effected by changes to water quality and quantity or changes in flow in the watershed and hydrologically connected waters; - areas potentially effected by airborne emissions or odours; - areas determined by dispersion and deposition modelling; - areas within the range of vision, light and sound and the locations and characteristics of the most sensitive receptors; - species habitat areas, usage timing and migratory patterns; - emergency planning and emergency response zones; - the geographic extent of local and regional services; - any impacted local communities, including municipalities; - all potentially impacted Indigenous groups;	Provide details to demonstrate how the RSA spatial boundary was defined, given that water continues to flow further downstream. Provide detail to demonstrate how Indigenous knowledge has been, or will be, incorporated into the design of the field studies, including site selection. All Indigenous groups listed in the IEPP must be provided opportunities to: <ul style="list-style-type: none">• provide Indigenous knowledge during baseline data collection;• comment on the list of valued components and indicators;• inform the effects assessment and review its conclusions; and• inform the development of mitigation measures and follow-up programs.	The Surface Water Study Plan has updated to provide additional details on the RSA for Surface Water, with the understanding that the LSA and RSA are preliminary and cover the extent to which surface water could potentially be affected by Project activities. Provisions have been included to refine the LSA and RSA based on the results of the baseline studies, as well as future input from communities and Indigenous groups through consultation and engagement. As identified in Section 4.2 , the Proponent will provide opportunities for consultation and engagement with Indigenous communities (identified in Table 4-1), which is inclusive of all Indigenous communities identified in the <i>Indigenous Partnership and Engagement Plan for the Marten Falls Community Access Road Project Impact Assessment</i> (the Agency 2020a). Further information on how Indigenous Knowledge will be considered in the IS / EA Report has been included in Section 5 of the Surface Water Study Plan. This includes further details on the two concurrent and complementary avenues for Indigenous communities and groups to be engaged with, and provide input on, the Project, i.e. the Indigenous Knowledge Program	Section 4.2 Indigenous Communities “Indigenous communities will be provided the opportunity to be involved at critical decision-making points throughout the IS / EA Report so that the Proponent can consider and incorporate, where appropriate Indigenous Knowledge and Indigenous land and resource use information into the Project as it pertains to the existing environment, VCs, effects assessment methods, effects assessment results, and mitigation and follow-up program measures.” Section 6.2.2 “The boundaries of the LSA and RSA will be confirmed and refined based on findings of the Baseline Study to consider flows in rivers and dilution and assimilation in water bodies, as well as the potential extent of Project effects on other VCs that may indirectly affect Surface Water”	This comment has been partially addressed. The Surface Water study plan does not clarify whether Indigenous Knowledge and Indigenous land and resource use data will inform the definition of the spatial boundaries of the surface water study areas. Provide a workplan that clearly outlines the approach to engage Indigenous groups listed in the Indigenous Engagement and Partnership Plan in determining the spatial and temporal boundaries specifically for the surface water valued component. See also comments GC-02, GC-03, GC-04 and GC-05.

² Refer to complete sections of the Guidelines for more context

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	<p>Section 4.2.2: Surface Water Quality “Water quality and sediment quality monitoring (...). The sites will be selected based on findings of the Desktop Assessment, field surveys conducted in 2019, and in consultation with MFFN. The sites selected will aim to capture the range of waterbody types and to consider important features such as fish and fish habitat, areas of groundwater-surface water interactions, and areas of Indigenous cultural importance for consumption.”</p> <p>Section: 6.1 Indicators and Expression of Change “The indicators have been determined for the Surface Water through consideration of the following: • consultation with Indigenous stakeholders, communities and Indigenous Knowledge;”</p>	<p>- areas of known Indigenous land, cultural, spiritual and resource use; and - existing effected infrastructure...”</p> <p>Section 7.4.1 “...Spatial boundaries are defined taking into account the appropriate scale and spatial extent of potential effects and impacts of the Project; community knowledge and Indigenous knowledge; current or traditional land and resource use by Indigenous groups; exercise of Aboriginal and Treaty rights of Indigenous peoples, including cultural and spiritual practices; and physical, ecological, technical, social, health, economic and cultural considerations...”</p> <p>Section 8.6 “The Impact Statement must: ... • identify all springs and any other potable surface water resources within the local and regional project areas and describe their current use, potential for future use, and whether their consumption has Indigenous cultural importance; • describe the surface water quality baseline characterization program, including sampling site selection, monitoring duration and frequency, sampling protocol, and analytical protocol, including quality assurance and quality control measures;...”</p>		and the Consultation and Engagement Program.		
SW-02	<p>Section 4.1: Desktop Assessment “The desktop assessment will include identification potable</p>	<p>Section 7.2 “...The Impact Statement must provide detailed descriptions of specific data</p>	Provide detail to demonstrate how the desktop assessment will determine whether consumption of	The identification and characterization of surface water drinking sources is captured in the Surface Water VC, with the understanding that Project-related	<p>Section 7.1 Desktop Assessment “The desktop review will include descriptions of the data sources,</p>	The Agency notes that the requirement to describe potable surface water resources current use, potential for future use, and whether their consumption has Indigenous cultural

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	<p>surface water sources within the local and regional project areas and a description of their current use, potential for future use, and whether their consumption has Indigenous cultural importance.”</p>	<p>sources, data collection, sampling, survey and research protocols and methods followed for each baseline environmental, health, social and economic condition that is described, in order to corroborate the validity and accuracy of the baseline information collected...”</p> <p>Section 8.6 “The Impact Statement must:... • identify all springs and any other potable surface water resources within the local and regional project areas and describe their current use, potential for future use, and whether their consumption has Indigenous cultural importance;...”</p>	<p>potable surface water sources has Indigenous cultural Importance.</p> <p>Describe in the study plan how Indigenous groups will have opportunities to provide Indigenous knowledge on potable surface water sources and validate the baseline data collected.</p>	<p>effects on these drinking water sources will be addressed in the Human Health and Community Safety VC. The identification and characterization of springs (and other groundwater-based potable water sources) is included in the study plan for the Groundwater VC.</p>	<p>data collection, sampling, survey and research protocols and methods for the existing relevant information sources as they relate to baseline conditions of surface water..... Potable surface water sources within the local and regional study areas will be identified and characterized as part of the background review for the surface water component (including a description of their current use, potential for future use, and whether their consumption has Indigenous cultural importance), with the understanding that Project-related effects on potable surface water sources will be assessed as part of the Human Health and Community Safety VC.”</p> <p>Table 11.1, ID#3 “The identification and characterization of springs is included in the study plan for the Groundwater VC. The identification and characterization of surface water drinking sources is captured in the Surface Water VC, with the understanding that Project-related effects on these drinking water sources will be addressed in the Human Health and Community Safety VC.”</p>	<p>importance, as indicated in Section 8.6 of the Guidelines, is also included in the Aboriginal and Treaty Rights (ATRI) study plan. The ATRI plan indicates that the Indigenous Knowledge program will be used to determine water sources that are culturally important.</p> <p>Describe, in the Surface Water study plan and in other, associated study plans, how the Section 8.6 requirements of the Guidelines will be met in relation to potable water resources.</p> <p>In each study plan, include cross references to the other plans (including ATRI study plan) where information on potable water resources is found.</p>
<p>SW-03</p>	<p>Section 4.1: Desktop Assessment “The information will include extensive field records that were obtained from the Cliffs Chromite Project Environmental Assessment project in 2011-2012 (Golder 2014) and other publicly available sources... ...A preliminary list of applicable information sources has been included in Appendix A and reflects</p>	<p>Section 7.2 “...The Impact Statement must provide detailed descriptions of specific data sources, data collection, sampling, survey and research protocols and methods followed for each baseline environmental, health, social and economic condition that is described, in order to corroborate the validity and accuracy of the</p>	<p>Provide detailed descriptions of specific data sources that will be used to identify gaps and inform baseline characterization of surface water. Sources should be listed and clearly correlated to the criteria and indicators that they will inform.</p> <p>Provide justifications to demonstrate that each data source is relevant in spatial and temporal coverage to the Project.</p>	<p>A preliminary list of background materials to support the surface water baseline characterization has been included in the updated version of the Surface Water Study Plan. Information on specific data sources and their relevance to the Project will be included in the IS / EA Report.</p>		<p>This comment has been partially addressed. Refer to comment SW-06 for detail about the outstanding information still required in relation the use of the Cliffs Chromite Project data.</p>

Federal Review Team comments on the Marten Falls Community Access Road Project Draft Surface Water Study Plan – August 31, 2020

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	federal and provincial guidance received to date.”	<p>baseline information collected...</p> <p>If using existing data sources, the Impact Statement must provide justification to show that the data sources are relevant in spatial and temporal coverage to the Project. Some data sources may have good coverage in Southern Ontario or existing road networks but be unsuitable as a baseline for these northern areas where there are not roads...”</p>				
SW-04	<p>Section 4.2.1.1: Introduction and Objectives “Based on a preliminary review of the alignment for Alternatives 1 and 4 (provided by AECOM on May 30, 2019) relative to available mapping and imagery, 164 waterbodies were identified as potentially being crossed by the Project. On-the-ground field data collection was completed at a subset of the identified waterbody crossings from the aerial reconnaissance to verify or augment the results and assumptions from the desktop analysis.”</p> <p>Section 4.2.3: Hydrology “Additional bathymetric information will only be collected at larger water crossings where more detailed hydraulic modelling is required. Location of bathymetry collection will be determined during detailed design phase and will generally be limited to locations where it has been determined that fish passage requirements must be met.”</p>	<p>Section 8.6 “...The Impact Statement must:...</p> <ul style="list-style-type: none"> - provide the design flood at each water crossing; - provide details on the hydraulic design of the water crossings; - quantify the effects of the Project on the hydrological regime of both the local and regional study area; in particular, in case of any watercourse diversions, describe the effects on the flow upstream and downstream of the diversion; - provide the timing of freeze/thaw cycles, ice cover, and ice conditions for surface water bodies in the Project area; <p>provide for each water body potentially effected by the Project, the total surface area, bathymetry, bank and bottom features, biological components, flows, maximum and mean depths, and type of substrate (sediments); ...”</p>	<p>Describe the information that will be determined during the desktop assessment for each waterbody crossing in a manner that demonstrates the requirements of Section 8.6 of the Guidelines will be met.</p> <p>Provide details on the rationale for the selection of the list of waterbody crossings that were selected during the 2019 on-the-ground field surveys.</p> <p>Provide the list of selected water crossings.</p> <p>Provide details to demonstrate how the effects on the hydrological regime of both the local and regional study area will be quantified, including upstream and downstream effects of any watercourse diversion, as per the requirement in Section 8.6 of the Guidelines.</p>	<p>The development of the preliminary water body crossing list for the Project, coupled with the site selection process for the surface water field program, has been detailed in the updated version of the Surface Water Study Plan and aligns with Section 8.6 of the TISG (the Agency 2020c) and past communications with the regulatory agencies. Of particular note, streamflow and water quality monitoring will be conducted at a subset of water body crossing locations (approximately 40% of the total number of crossing locations) over multiple seasons and varying catchment scales to characterize the natural variation in flow and water quality conditions, as well as to inform the preliminary design efforts.</p> <p>The effects assessment for the surface water VC will include an evaluation of Project-related changes on flow/runoff volumes, as well as for water diversion activities (e.g., dam and pump bypass to support the installation of water body crossing structures.</p>	<p>Section 7.2.1 Site Selection and Multi-Season Field Campaigns “The site selection process will be based primarily on a ‘scaled approach’, with the objective of selecting a representative number of waterbody crossings under different categories of watershed size (i.e., four categories for watersheds: greater than 500 km², between 50 and 500 km², between 2 and 50 km², and less than 2 km²).... Future field monitoring is anticipated to be completed at 35% to 40% of the waterbody crossings identified during the desktop assessment. This ratio of crossing locations aligns with recent planning experience and regulator feedback on other EAs in northwestern Ontario. It also considers that the site-specific data would be used, to the extent possible, to extrapolate results from surveyed locations to non-surveyed sites...”</p>	<p>Section 7.2.1 of the Surface Water study plan describes how the proponent plans to select 35 to 40% of the waterbody crossings for field surveys, and that the proponent plans to extrapolate results to non-surveyed sites.</p> <p>It is unclear how the proponent intends to extrapolate field results to non-surveyed sites. This may be particularly important as watersheds with significant wetland areas will not have a comparable flood response to forested watersheds. This would also be the case for watersheds of significantly different sizes.</p> <p>When extrapolating results from surveyed to non-surveyed sites, consider grouping watersheds with similar dominant landcover type (e.g. forest, swamp, fen, bog, etc.) and of similar size (i.e. the four watershed size categories described in the text of 7.2.1). To avoid extrapolating to water body sizes outside of the surveyed sample, ensure that water bodies selected for surveying encompass the extremes in terms of watershed size.</p> <p>Update the Surface Water study plan to provide details to demonstrate how field results will be extrapolated for non-surveyed sites, taking into account factors such as landcover type, flood response and watershed size.</p> <p>Update the Surface Water study plan to clarify why there are <u>four</u> categories of watershed sizes defined in the text, but only <u>three</u> categories in Table 7-1 Category of Water Body Size.</p>

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						Describe in an updated study plan how the four watershed size categories compare to the three categories in Table 7-1. Specify if the sizes in Table 7-1 are qualitative estimates, or based on watershed delineation.
SW-05	<p>Section 4.2.2: Surface Water Quality “The sites selected will aim to capture the range of waterbody types and to consider important features such as fish and fish habitat, areas of groundwater-surface water interactions, and areas of Indigenous cultural importance for consumption. Sites will include rivers that will require more substantial water crossings or requiring longer construction times (i.e., Albany River, Ogoki River, Dusey River, Wabassi River, Buffaloskin River, and Gourlie Creek) and approximately 10% of the wadeable water bodies crossed by the route alternatives. Proposed locations for surface water sampling are illustrated on Figure 4-2.”</p>	<p>Section 8.6 “...The Impact Statement must:... describe the surface water quality baseline characterization program, including sampling site selection, monitoring duration and frequency, sampling protocol, and analytical protocol, including quality assurance and quality control measures...”</p>	<p>Provide the number of surface water sampling locations and a description of each of these locations for each of the alternative routes in the surface water study plan.</p>	<p>The site selection process for the surface water field program has been detailed in the updated version of the Surface Water Study Plan and aligns with Section 8.6 of the TISG and past communications with the regulatory agencies. Note that streamflow and water quality monitoring will be conducted at a subset of water body crossing locations (approximately 40% of the total number of crossing locations) over multiple seasons and varying catchment scales to characterize the natural variation in flow and water quality conditions. Further to the above, a location plan for the proposed surface water monitoring program (proposed water body crossing locations for ground-based field studies of water quantity and quality) has been included in the updated version of the Surface Water Study Plan.</p>		<p>This comment has been addressed.</p>
SW-06	<p>Section 4.2.2: Surface Water Quality “The monitoring will be conducted to provide seasonal baseline surface water quality data for a duration of one year. Sampling will occur in spring (during high-flow conditions), and fall (during low-flow conditions). Winter sampling is not proposed due to winter access and safety concerns.”</p>	<p>Section 7.2 Sources of Baseline Information “...With regard to field studies, survey work must be planned to include multiple sampling locations and multiple visits to each location to support all required assessment analyses...”</p> <p>Section 8.6 “The Impact Statement must:... provide baseline surface water quality data, for a minimum of two years, for physicochemical parameters (temperature, pH, electrical conductivity, dissolved oxygen, turbidity, suspended solids) and relevant chemical constituents (major and minor ions, trace metals, radionuclides, nutrients, and</p>	<p>Provide details to demonstrate how baseline surface water quality data will be collected for a minimum of two years to illustrate inter-annual variability in baseline surface water quality, including possible changes due to groundwater-surface water interactions.</p> <p>Provide details to demonstrate how summer sampling will be conducted to illustrate seasonal variability in baseline surface water quality, including possible changes due to groundwater-surface water interactions.</p>	<p>A comprehensive surface water baseline monitoring / investigation program is proposed for the Surface Water VC. The details of this program are described in the updated version of the Surface Water Study Plan. Note that streamflow and water quality monitoring for future field studies will be conducted at a subset of water body crossing locations in the spring and summer to further characterize the natural variation in flow and water quality conditions. The results from the completed and future field studies over multiple seasons and years are expected to provide a means to define the characteristic range of natural variation in flows and water quality, recognizing that, to the extent possible, data from surveyed crossing locations will be extrapolated to non-surveyed sites with similar catchment areas, physiography, and flow regimes. In addition, it is anticipated that the ground-based field surveys conducted in 2011-</p>	<p>7.2.1 Site Selection and Multi-Season Field Campaigns “Waterbody crossings will be sampled and monitored in the spring and summer to characterize the seasonal patterns in flow and water quality, with the understanding that the spring field survey will be targeted during a period of high flow, while the summer field survey will be timed with a period of low flow. The existing field survey results from 2019 and 2020 (i.e., field data from 11 waterbody crossing locations in the summer of 2019 and 30 waterbody crossing locations in the fall of 2020), coupled with the previous field monitoring records from the Cliffs Chromite Project, will be relied on to further define the characteristic variability in surface water quantity and quality conditions.”</p>	<p>If the 2019 to 2021 field sampling results are significantly different from those of the Cliffs Chromite Project conducted by Golder in 2011-2012, the proponent may be required to conduct an additional year of baseline monitoring.</p> <p>Provide a Surface Water workplan that includes the status and timing of the spring and summer field survey for 2021, and details about when the sampling results will be available.</p> <p>When the sampling results are available, provide them to the Federal Review Team to determine if an additional year of baseline monitoring is required.</p>

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		organic compounds, including those of potential concern); the data should illustrate the seasonal and inter-annual variability in baseline surface water quality, including possible changes due to groundwater–surface water interactions;...”		2012 by Golder in support of the Cliffs Chromite Project (Project EA since terminated) will help to further augment this understanding of natural fluctuations of baseline surface water and aquatic conditions, both on an inter- and intra-annual basis, given that these previous studies occurred in a similar geographic setting as the Project, and, in many cases, the locations of waterbody crossings overlap.		
SW-07	<p>Section 4.2.2: Surface Water Quality “The surface water quality monitoring will include field measurements of physicochemical parameters (i.e., temperature, pH, electrical conductivity, dissolved oxygen, turbidity) and the collection of surface water grab samples for laboratory analysis of relevant constituents including alkalinity, total suspended solids, major and minor ions, total metals, nutrients (total phosphorus, total ammonia, total Kjeldahl nitrogen), and total and dissolved organic carbon.</p> <p>Field monitoring protocols will follow the Protocols Manual for Water Quality Sampling in Canada (CCME 2011) and the sample collection methods will be adjusted on a site-specific basis to consider characteristics of the water body being sampled and to ensure safety of the sampling crew.”</p>	<p>Section 8.6 “The Impact Statement must:... - provide baseline surface water quality data, for a minimum of two years, for physicochemical parameters (temperature, pH, electrical conductivity, dissolved oxygen, turbidity, suspended solids) and relevant chemical constituents (major and minor ions, trace metals, radionuclides, nutrients, and organic compounds, including those of potential concern); the data should illustrate the seasonal and inter-annual variability in baseline surface water quality, including possible changes due to groundwater–surface water interactions;...”</p>	<p>Provide details to demonstrate that all of the physicochemical parameters listed in the Guidelines, including pH, conductivity, and turbidity, will be analyzed in the surface water grab samples in the laboratory.</p> <p>Provide details to demonstrate that surface water grab samples will be analyzed in the laboratory for both total and dissolved metals.</p>	<p>A comprehensive surface water and sediment quality baseline monitoring / investigation program is proposed for the Surface Water VC. The details of this program are described in the updated version of the Surface Water Study Plan. Of particular note, the surface water quality sampling will be conducted at a subset of water body crossing locations over multiple seasons and catchment scales to characterize the natural variation in water quality conditions. The testing of these water quality samples (in-situ and laboratory-based) has considered the requested water quality parameters from Section 8.6 of TISG and includes plans to obtain measurements of pH, conductivity, and turbidity both in the field and in the lab. The proposed parameter suite for the laboratory-based tests of water quality samples will be focused on total metals alone (for direct comparison to Provincial Water Quality Objectives).</p>	<p>7.2.3 Surface Water and Sediment Quality “The surface water quality monitoring will include field measurements of physicochemical parameters (i.e., temperature, pH, electrical conductivity, dissolved oxygen, turbidity) and the collection of surface water grab samples for laboratory analysis of relevant constituents identified in the TISG including pH, electrical conductivity, turbidity, alkalinity, hardness, total suspended solids, cations (H⁺, Mg²⁺, Na⁺, Ca²⁺, K⁺, NH₄⁺, CH₃Hg⁺), anions (Cl⁻, SO₄²⁻, F⁻, NO₃⁻, HCO₃⁻, CO₃²⁻, PO₄³⁻), total metals, oil and grease, nutrients (total phosphorus, total Kjeldahl nitrogen), and total and dissolved organic carbon (the Agency 2020c). Dissolved metals will not be included in the parameter list as total metals are used for direct assessment against water quality guidelines.”</p>	<p>Section 7.2.3 of the Surface Water study plan indicates that dissolved metals will not be included in the parameter list as total metals are used for direct assessment against water quality guidelines. Section 21 of the Guidelines indicates that where relevant, or where best practice or evidence-based thresholds exist, effects should be described using criteria to quantify adverse effects.</p> <p>The <i>Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life</i> (found here: https://ccme.ca/en/summary-table) provides long-term benchmarks for dissolved zinc, not total zinc. Furthermore, there are also <i>Federal Environmental Quality Guidelines (FEQGs)</i> for various total and dissolved metals. Information on the FEQGs can be found via the following link: https://www.canada.ca/en/health-canada/services/chemical-substances/fact-sheets/federal-environmental-quality-guidelines.html#a6</p> <p>Add to the parameter list in Section 7.2.3 of the Surface Water study plan total and dissolved metal concentrations for metals, as applicable for assessment against the <i>Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life</i> and the FEQGs.</p>
SW-08	<p>Section 4.2.2: Surface Water Quality “Triplicate sediment samples will be collected at each monitoring site for laboratory analysis of grain size, total metals and nutrients (total organic carbon, total phosphorus, total Kjeldahl nitrogen) on a single sampling</p>	<p>Section 8.6 “The Impact Statement must:... describe the surface water quality baseline characterization program, including sampling site selection, monitoring duration and frequency, sampling protocol, and analytical</p>	<p>Clarify whether triplicate sediment samples will be collected at all monitoring sites.</p>	<p>Triplicate samples will be obtained at the sediment quality sampling locations.</p>	<p>Section 7.2.3 Surface Water and Sediment Quality “The sediment quality sampling will involve the collection of triplicate sediment samples for laboratory analysis of grain size, total metals and nutrients (total organic carbon, total phosphorus, total Kjeldahl nitrogen) on a single</p>	<p>Section 7.2.3 and Appendix B of the Surface Water study plan state that triplicate samples will be obtained at the sediment quality sampling locations. However, it is still unclear whether triplicate sediment samples will be collected at all monitoring locations listed in Table 7-1 or at a selection of the locations. More information is required to determine at which locations listed in Table 7-1 triplicate sediment samples will be</p>

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	event during the monitoring period.”	protocol, including quality assurance and quality control measures;...”			sampling event (in the spring or the summer).”	collected, and why those locations were chosen (if not proposed for all locations). Clarify, in an updated Surface Water study plan, at which locations listed in Table 7-1 triplicate sediment samples will be collected, and why those locations were chosen (if not proposed for all locations).
SW-09	<p>Section 4.2.2: Surface Water Quality “The surface water quality monitoring will include field measurements of physicochemical parameters (i.e., temperature, pH, electrical conductivity, dissolved oxygen, turbidity) and the collection of surface water grab samples for laboratory analysis of relevant constituents including alkalinity, total suspended solids, major and minor ions, total metals, nutrients (total phosphorus, total ammonia, total Kjeldahl nitrogen), and total and dissolved organic carbon.”</p> <p>Section 5.1.2: Data Analysis “Water quality parameters will also be compared to Ontario Drinking Water Quality Standards (O. reg. 169/03 under the Safe Drinking Water Act, 2002, S.O. 2002, c. 32) for water bodies used or potentially used as a source of potable water including sources of Indigenous cultural importance for consumption.”</p>	<p>Section 8.6 “The Impact Statement must:... - provide baseline surface water quality data, for a minimum of two years, for physicochemical parameters (temperature, pH, electrical conductivity, dissolved oxygen, turbidity, suspended solids) and relevant chemical constituents (major and minor ions, trace metals, radionuclides, nutrients, and organic compounds, including those of potential concern);...”</p> <p>Section 16.1 “With respect to biophysical determinants of health, the Impact Statement must:... identify predicted effects of the Project on the quality and quantity of ground or surface water used for domestic uses based on the most stringent guideline values of the following criteria; Canadian Drinking Water Quality Guidelines (CDWQG), Ontario Drinking Water Quality Standards (ODWQS), or Ontario Soil, Groundwater and Sediment Standards (SGSS);...”</p>	<p>Update the study plan to provide a full list of COPCs to be addressed in the surface water study, including radionuclides and organic contaminants, as per Section 8.6 of the Guidelines.</p> <p>Revise the study plan to confirm that the most stringent guideline values will be used to compare data, as per Section 16.1 of the Guidelines.</p>	The updated version of the Surface Water Study Plan includes the full list of relevant Chemicals of Potential Concern, with the understanding that the most stringent guideline value will be considered as part of the baseline studies and effects assessment.		This comment has been addressed.
SW-10	Section 5.1.2: Data Analysis “Water quality data will be summarized by site, season, and year using descriptive statistics...”	Section 8.6 “The Impact Statement must:... - provide baseline surface water quality data, for a minimum of two years, for physicochemical parameters (temperature, pH, electrical	Update the study plan to provide detail regarding the water quality and sediment quality data that will be gathered and provided in the Impact Statement, per Section 8.6 of the Guidelines.	The updated version of the Surface Water Study Plan includes the full details of the proposed surface water field program. The specific monitoring locations, frequency and duration of sampling activities and measurements, and the relevant parameter list for water and sediment quality testing has been	Sections 7 and 8	Provide all water and sediment sample results from their respective monitoring programs in a revised aquatics work plan, as appendices. If it is not possible to provide this information in the revised Aquatics work plan, the Federal Review Team requires an opportunity to review the collected baseline data/baseline reports prior

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	Sediment quality data will be summarized by site using descriptive statistics.”	conductivity, dissolved oxygen, turbidity, suspended solids) and relevant chemical constituents (major and minor ions, trace metals, radionuclides, nutrients, and organic compounds, including those of potential concern); the data should illustrate the seasonal and inter-annual variability in baseline surface water quality, including possible changes due to groundwater–surface water interactions;...”		aligned with Section 8.6 of the TISG (the Agency 2020c) and past communications with the regulatory agencies, noting, in particular, that streamflow and water quality monitoring will be conducted at a subset of water body crossing locations (approximately 40% of the total number of crossing locations) over multiple seasons and varying catchment scales to characterize the natural variation in flow and water quality conditions, as well as to inform the preliminary design efforts.		to the preparation of the Impact Statement documentation.
SW-11	<p>Table 6-2: Magnitude Definition</p> <p>“Negligible <u>Definition:</u> There is little to no variation predicted in measurable parameters and is within the range of natural variation. <u>Rationale:</u> No discernable change to surface water therefore no impact on aquatic life or potable use.</p> <p>Low <u>Definition:</u> There is a small variation predicted in measurable parameters, that are outside the range of natural variation and below the applicable guideline/objective or threshold value or within 20% of existing condition values. <u>Rationale:</u> Change to surface water is discernable but remains protective of aquatic life and potable water sources.</p> <p>Medium <u>Definition:</u> There is a modest variation predicted in measurable parameters, is significantly different from existing conditions and is below the applicable guideline/objective or threshold value, or is between</p>	<p>Section 21 “...Proponents must describe the extent to which residual effects are adverse. Where relevant, or where best practice or evidence-based thresholds exist, effects should be described using criteria to quantify adverse effects. This includes criteria such as whether the effects are high or low in magnitude, the geographical extent, timing, frequency, duration and reversibility of the effects, taking into account any important contextual factors. Where the potential for human health effects exist due to exposure to a particular contaminant at any level (e.g., non-threshold air pollutants, including particulate matter and nitrogen dioxide, and water pollutants, such as but not limited to arsenic and lead) mitigation measures should aim to reduce the residual effects to as low as reasonably achievable.</p> <p>In addition, effects should be characterized using language most appropriate for the effect (for example, impacts on the exercise of Aboriginal and Treaty rights and social</p>	<p>Update the study plan to include, in the definitions for magnitude, criteria that are relevant to the protection of human health.</p> <p>Describe the approach that will be used to ensure that these criteria are appropriate for the human health impact assessment.</p>	<p>The updated version of the Surface Water Study Plan includes added details and rationale for the magnitude definition and residual effects.</p> <p>The identification and characterization of surface water drinking sources is captured in the Surface Water VC, with the understanding that Project-related effects on these drinking water sources will be addressed in the Human Health and Community Safety Study Plan.</p>	<p>Table 9-4: Magnitude Definition for Surface Water Quantity</p> <p>Table 9-5: Magnitude Definition for Surface Water and Sediment Quality</p>	<p>This comment regarding the magnitude definition has been addressed.</p> <p>Refer to the Human Health and Community Safety comment table for comments related to drinking water sources.</p>

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	<p>20% to 50% of existing condition values. <u>Rationale:</u> Change to surface water is significant but remains protective of aquatic life and potable water sources</p> <p>High <u>Definition:</u> There is a large variation predicted in measurable parameters, exceeds an applicable guideline/objective or threshold value, or is greater than 50% of existing condition values. <u>Rationale:</u> Change to surface water is discernable and can potentially impair aquatic life or potable uses of water.”</p>	<p>effects may be described differently from biophysical effects)...</p> <p>The Impact Statement must:</p> <ul style="list-style-type: none"> • characterize the residual effects using criteria most appropriate for the effect; • characterize residual effects for human health using human health-related criteria most appropriate for the carcinogenic and non-carcinogenic health effects of non-threshold contaminants;... • provide the rationale for the choice of criteria used to determine the extent to which the predicted effects are adverse. The information provided must be clear and sufficient to enable the Agency, review panel, technical and regulatory agencies, Indigenous groups, and the public to review the proponent's analysis of effects;...” 				
SW-12	<p>Section 7: Conformance with Federal and Provincial Guidance “The hydrologic analysis will include changes to the runoff characteristics and drainage patterns on a watershed basis. Hydrologic analyses will be conducted as a high-level, quantitative assessment, given that information on watershed boundaries and runoff characteristics will be coarse....</p> <p>...Runoff rates will be calculated for the pre-construction (existing), during construction, and post construction conditions.”</p>	<p>Section 8.6 “The Impact Statement must:... - develop a quantitative surface water balance for components of the Project that may result in significant changes to surface water flow patterns (e.g., large quarry/aggregate extraction/stockpiles)...”</p> <p>Section 14.2 “...With respect to potential project effects on water quality in the receiving environment, the Impact Statement must: - present estimates of surface water runoff rates for major project components, including aggregate and overburden stockpiles;...”</p>	<p>Update the study plan to provide further detail to demonstrate how the requirements in Sections 8.6 and 14.2 of the Guidelines regarding the development of a surface water balance for components of the Project and the estimates of surface water runoff rates for major components of the Project, will be met.</p>	<p>Water balance analyses will be advanced to support groundwater studies at a discrete set of the proposed pits and quarries. The scope of work to conduct these water balance assessments has been documented in the Groundwater Study Plan. The baseline studies and effects assessments for the Surface Water VC will be used to evaluate the characteristic flow / runoff rates at a range of watershed scales and under existing and proposed conditions.</p>	Section 8.2	This comment has been addressed.

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SW-13	<p>Section 6: Effects Assessment Scoping</p> <p>Section 7: Conformance with Federal and Provincial Guidance “Monitoring programs will be identified as part of the EA.”</p>	<p>Section 14.2 “...With respect to potential project effects on water quality in the receiving environment, the Impact Statement must:...</p> <ul style="list-style-type: none"> - describe any applicable water quality treatment measures and provide evidence supporting the effectiveness of these measures; - compare the quality of all effluent streams to the Canadian Council of Ministers of the Environment (CCME) Water Quality Guidelines for the Protection of Aquatic Life, and to provincial water quality objectives for contaminants of concern (e.g., arsenic, chromium, mercury) that do not have CCME guidelines. CCME’s Water Quality Guideline values are national science-based voluntary guidelines developed collaboratively among provincial, territorial, and federal jurisdictions for the protection of freshwater and marine life; - describe any changes to groundwater quality that could affect surface water quality; - provide an assessment for off-site migration pathways for impacted groundwater, and an analysis of contaminant attenuation capacities within the hydrogeological units of the project study area; and 	<p>Provide more detail on the methodology for the effects assessment, and how it will meet the requirements described in Section 14.2 of the Guidelines.</p>	<p>The study plan is updated to provide additional detail on methodology for the Effects Assessment per Section 14.2 of the TISG (the Agency 2020c).</p> <p>Additional information specific to groundwater quality is included in the Groundwater Study Plan.</p>	<p>Section 9</p>	<p>This comment has been addressed.</p>

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		describe groundwater and surface water monitoring programs during the construction, operation and decommissioning and abandonment...”				
SW-14	Section 6: Effects Assessment Scoping	<p>Section 14.2 “...If the proponent undertakes quarrying activities to extract aggregate material that may results in effects on groundwater and surface water levels (i.e., quarrying below the water table), the Impact Statement must:</p> <ul style="list-style-type: none"> - present an integrated site water balance model incorporating surface and groundwater fluxes for the construction, operation and decommissioning of large quarrying sites; - describe the risk to the receiving environment related to effects to the quantity and quality of all effluent streams released from the site, including surface runoff from aggregate and overburden stockpiles, and dewatering discharge;... - identify potential risks to surface and seepage water quality from the aggregate and overburden stockpiles and project infrastructure during construction, and operation, decommissioning and abandonment; - provide aggregate sources, volumes and tonnage, and extraction construction methods;...” 	Provide more detail on the methodology for the effects assessment, and how it will meet the requirements described in Section 14.2 of the Guidelines.	<p>The study plan is updated to provide additional detail on Project-environment Interactions and methodology for the Effects Assessment per Section 14.2 of the TISG (the Agency 2020c).</p> <p>Additional information specific to groundwater quality is included in the Groundwater Study Plan.</p>	Section 9	This comment has been addressed.

New comments from the Federal Review Team on the Marten Falls Community Access Road Project Surface Water Study Plan submitted in June 2021				
#	Study Plan Section	Tailored Impact Statement Guidelines Section	Context	Required Action for the Proponent
SW-15	Sections 7 and 8	Section 10 Navigation: <ul style="list-style-type: none"> - existing navigable waterways and navigation use including type, volume, seasonality, manoeuvrability, and physical characteristics (e.g., width, depth, etc.), - bank/bottom features, biological components, flow/tides, etc.; - describe past, current, and anticipated future use of all waterways and waterbodies, including recreational uses by Indigenous groups and the public (including special events, fishing, cottagers, etc.); - describe the use of water-ways with Indigenous cultural importance (e.g., Albany River, Ogoki River and Attawapiskat Rivers); and - potential of obstructions, restrictions, or expansions of access to navigable waterways (e.g., portage routes and access roads). 	Sections 7 and 8 of the Surface Water study plan do not provide enough information to determine if all the requirements of Section 10 and 17.3 of the Guidelines related to navigation will be met. Additional detail regarding baseline data collection and effect assessment related to navigation is required to ensure the requirements will be met.	Include in the Impact Statement detail regarding baseline data collection and effect assessment for navigation for the waterways interacting with the Project, to meet the requirements of Section 10 and 17.3 of the Guidelines.
SW-16	Footnote 7, Section 9.2 “In February 2020 a regional assessment of the Ring of Fire region commenced; however, it is not sufficiently advanced at this time to inform the Project VCs. The VCs will be consulted and engaged on early in the IA/EA process and finalized taking into consideration the input received. Therefore, only information relevant to the Project that arises from the regional assessment of the Ring of Fire within an appropriate timeline will inform the VCs for the Project.”	Editorial comment	The statement in the footnote 7 in Section 9.2 “ <i>In February 2020 a regional assessment of the Ring of Fire region commenced; however, it is not sufficiently advanced at this time to inform the Project VCs.</i> ” is inaccurate. A this time the Regional Assessment in the Ring of Fire area has not yet begun.	Replace the text in footnote 7 with “ <i>In February 2020, the Minister of Environment and Climate Change determined that a regional assessment will be conducted in an area centred on the Ring of Fire mineral deposits in northern Ontario. Relevant information available in relation to the Regional Assessment in the Ring of Fire area would be considered in the impact assessment of the Project.</i> ”
SW-17	Table 11-1: Study Plan Federal Concordance – Conformance with Requirements “Study Plan Reference: Section 8.1.2”	Editorial Comment	The concordance table references a “Section 8.1.2” multiple times. However, this section does not exist. Please update the reference with the correct section number.	
SW-18	Table 11-3: Study Plan Federal and Provincial Concordance – Requirement Deviations		Proposed amendments and/or deviations from the Guidelines will not be reviewed or approved during the study plans review process. The Agency will provide guidance on the process to propose amendments and/or deviations to the Guidelines to the project team.	