



Miawpukek First Nation  
Comments on the Valentine Gold Environmental Impact  
Statement  
December 23, 2020



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# 1.0 Introduction

## 1.1 Project Background

Marathon Gold Corporation (Marathon) is proposing to construct and operate the Valentine Gold Mine (the Project) in central Newfoundland (Figure 1). Construction is anticipated to take 16-20 months, with operations lasting for an estimated 12 years. The Project will consist of two open pit mines and associated infrastructure (Figure 2), including:

- Process plant
- Tailings management facility (TMF)
- High- and low-grade ore stockpiles
- Mine rock stockpiles
- Overburden stockpiles
- Water management infrastructure
- Transmission line
- Road access and upgrades
- Plant and project buildings
- Camp facilities
- Sanitary effluent

Mine rock and ore will be blasted and hauled from the open pits. Ore will be crushed and sent through the process plant where gold will be extracted via a cyanide carbon-in-leach circuit. Spent tailings will be sent through a cyanide destruction process which will use an air/SO<sub>2</sub> bubbler before being deposited in the TMF. Waste mine rock will be deposited in stockpiles adjacent to the open pits. Marathon intends to initially process ore at 6,850 tonnes per day, which will increase to 10,960 tonnes per day by the 4<sup>th</sup> year of operation. It should be noted that the above plans may change based on management decisions, process improvements, additional exploration results and/or other changes that may occur throughout the life of mine.

The Project is located within the traditional territory of Miawpukek First Nation (MFN). MFN has prepared this report containing comments on the Environmental Impact Statement (EIS) for submission to the Impact Assessment Agency of Canada (IAAC). Based on MFN's review of the EIS and involvement with the Project to date, MFN has substantial concerns regarding the Project including but not limited to: information gaps, deficiencies in data, underrepresentation of potential effects, inadequate monitoring, and lack of involvement of MFN. A detailed description of MFN's concerns can be found in Sections 2.0 and 3.0 of this report.





**Figure 1.** Location of the Valentine Project, from EIS Figure 1-1 (Marathon, 2020)



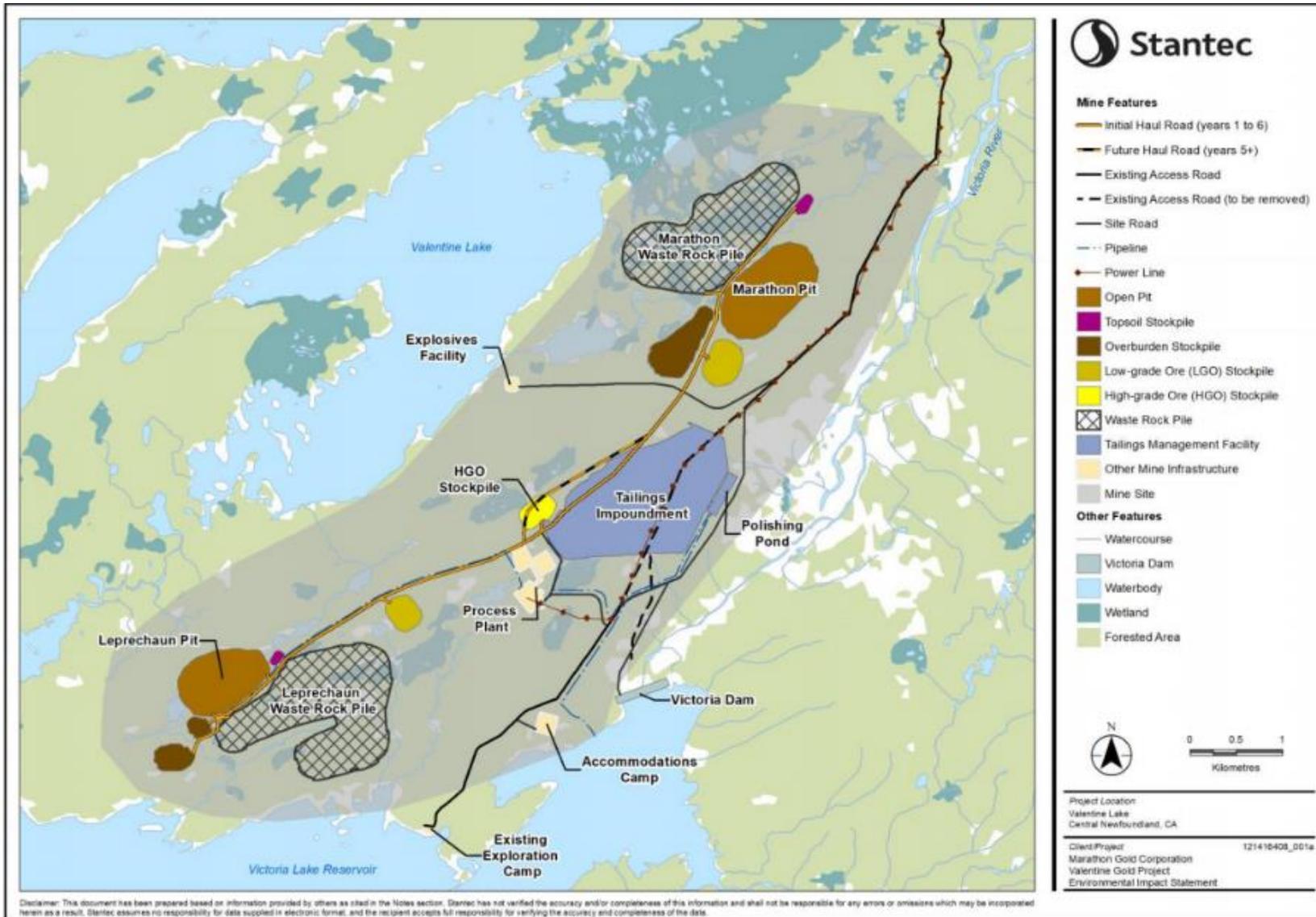


Figure 2. Mine site layout of the Valentine Project, EIS Figure 1-2 (Marathon, 2020)



## 1.2 Miawpukek First Nation



### 1.2.1 Background. Culture, and History

MFN's traditional territory—*Mi'kmaki*—encompasses a vast area, stretching from the Gaspé Peninsula in Quebec, through New Brunswick to northern Maine, across Nova Scotia, Prince Edward Island and the Island of Newfoundland. Located in Newfoundland, or *Ktaqamkuk* in our language, MFN's community members have a shared ancestry with other Mi'kmaq from across *Mi'kmaki*.

Our relationship with the land and surrounding waters of this region has existed since time immemorial. Written records show that Mi'kmaq hunters and fishers travelled to and occupied present-day Newfoundland during warmer months, at least as early as the 1600s (Pastore, 1998), although our oral histories and current research suggest that this occurred much earlier. French and English historical records posit that the Mi'kmaq didn't establish 'permanent residences' on *Ktaqamkuk* until the 1760s (Bartels & Janzen, 1990). Importantly, the concept of 'permanent residences' or 'permanent habitation' is rooted in colonial understandings of *terra nullius* and what constitutes occupation: our own understanding of our Mi'gmaq way of life and occupation differs.

Oral history passed down through generations holds that the ancestors of MFN have lived and travelled *Ktaqamkuk* since time immemorial. Our M'gmaq ancestors' lives followed seasonal patterns and involved regular travel throughout our traditional territory to access resources. This included travel between *Unamaki* (Cape Breton) and *Ktaqamkuk* for hundreds of years before the land became known as Canada, maintaining connections between the island and the mainland. While certainly not the first occurrence, one notable example of such travel occurred in the 1760s when Chief Jeannot Pequidalouet led a group of Mi'kmaq across the Cabot Strait to avoid hostility and mistreatment at the hands of the British (Martijn, 2003).

Frank Speck (1922) who completed ethnographic research on Newfoundland in the summer of 1914 alluded to the length of history our ancestors have on *Ktaqamkuk* when he wrote:



*Throughout Newfoundland the [Mi'kmaq] Indians refer to their predecessors as Sa'qawedjkik 'the ancients,' speaking of them as though they were the first inhabitants of the island [...]. The Sa'qawedjkik families are said to have become completely merged with the later [Mi'kmaq] comers from Cape Breton and Labrador. (Speck, 1922, p. 123)*

Our ancestors' lifecycles and occupation of these spaces lends credence to our assertion that the island of *Ktaqamkuk* is part of the traditional territory of the Mi'kmaq.

Over the centuries, MFN's ancestors continued to live, hunt, fish, trap, guide and make a living on the island over the centuries. During the latter part of the 18th century through the 19th century, Mi'kmaq guides helped European explorers visit and map the areas that were already being used by the Mi'kmaq. In 1822, William Cormack, the first European credited with crossing the island, was guided by Sylvester Joe, a Mi'kmaq traveller. During their journey, the two encountered several Indigenous people in areas that were thought by Europeans to be uninhabited (Pastore, 1998). Ironically and unfortunately, to earn a wage and support themselves, our Mi'kmaq ancestors worked on major projects such as the railroad, which ultimately facilitated the expansion of European colonizers.

Because Newfoundland was not part of Confederation until 1949, the Mi'kmaq of Miawpukek were not included under Canada's *Indian Act* of 1876. In many ways, this may have been beneficial because we were not subject to the harmful actions exerted by the federal government through this act. However, by being outside of the *Indian Act*, we were also not afforded the same Aboriginal rights granted to Indigenous Peoples across Canada. This lack of protection, combined with political, economic and religious pressure, led to the continuous erosion of traditional practices and ways of life (something which MFN has been rebuilding over generations).

In 1984, after years of fighting for recognition, the federal government granted status to MFN under the *Indian Act*. This was followed three years later by the allocation of a 500-hectare reserve in Conne River named by Council as the *Samiajij Miawpukek Indian Reserve*, which translates closely to "too small Indian Reserve." The larger traditional territory, known as *Mimaju'nnulkwe'kati*, covers an area greater than 17,000km<sup>2</sup> and has never been surrendered or ceded. This area has been used by the members and ancestors of MFN since time immemorial. Despite repeated land claims and court battles, this area has never been formally recognized. However, our rights have never been extinguished and our people continue the struggle for recognition to this day.

### 1.2.2 Historic Land Use and Cultural Values

From their earliest time on *Ktaqamkuk*, our ancestors relied on hunting, fishing and trapping for sustenance. Diet and preferred location changed with the seasons. Spring and summer were typically spent mostly along the coasts of the island, while the fall and winter saw our ancestors travel inland, along rivers and lakes.

Caribou played a special role for our ancestors due to their size and abundance. This species not only provided nutritious food but also hide for clothing and construction. However, the expansion of European colonizers throughout the eighteenth and nineteenth centuries pushed our Mi'kmaq



ancestors further and further away from caribou herds, making it more difficult to rely on them for sustenance. Subsequently, large-scale caribou hunting resulted in catastrophic declines of the island population. This pressure nearly caused the extinction of the herd when it declined from an estimated 40,000 individuals in 1900 to approximately 2,000 in the 1930s (Bergerud, 1969).

Adapting to the changing circumstances, MFN's ancestors were forced to shift their diets (although caribou remains to this day an important cultural resource). While fish was always an important part of the Mi'kmaq diet, reduced access to the caribou caused fish—and Atlantic salmon in particular—to become much more important. More recently, with the ongoing decline of salmon, MFN has shifted our efforts to the capture of marine fishes, including shellfish, groundfish and pelagic species.

### 1.2.3 Miawpukek First Nation Rights

The proposed mining Project lies within the traditional territory of MFN, used historically and currently by community members. Recent analysis of existing land-use data by MFN's Natural Resources Department has identified known land use and fishing sites that extend from our reserve in Conne River throughout the Bay d'Espair watershed and Valentine Lake Watershed. These are areas of direct overlap with the Project. These data were collected as part of a study that was focused on our community, without any priority given to lands near the Project. It is expected that a Project-specific land use study with our community members would identify a wealth of additional current and historic land use in the area. As a result, it is clear that there are potential major environmental, cultural, health, and socio-economic risks associated with all phases of the Project that could impact MFN's rights and interests. Furthermore, the successful operation of this Project would likely spur additional exploration, and improve the economics of extracting resources in the area (i.e. by using the existing process plant and tailings facility), resulting in additional direct and indirect impacts on MFN's rights and interests.

The Crown (as represented by IAAC) has a duty to consult and accommodate First Nations pursuant to section 35 of the *Constitution Act, 1982*. This is a legal requirement that has been repeatedly upheld by the Supreme Court of Canada. Moreover, the *United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)*, which has been adopted by Canada, requires that states cooperate in good faith with Indigenous Peoples so that they obtain free, prior and informed consent. According to *UNDRIP* Section (2) and (3) of Article 32:

*2. States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free and informed consent prior to the approval of any project affecting their lands or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources.*

*3. States shall provide effective mechanisms for just and fair redress for any such activities, and appropriate measures shall be taken to mitigate adverse environmental, economic, social, cultural or spiritual impact.*



MFN wishes to be meaningfully engaged and consulted in relation to this Project as there is the potential for significant impacts to our rights and interests. To-date we have had preliminary conversations with Marathon Gold Corp. and IAAC (a representative of the Crown) about the Project and proposed consultation with MFN. However, despite this late stage of the EA process, no meaningful consultation or engagement by either the Proponent or the Crown has occurred.

## 2.0 Comments on the Valentine Project Environmental Impact Statement

### 2.1 Community, Cultural Heritage, Land Use and Rights

#### **Cultural Heritage**

Stantec Consulting Inc. (Stantec) completed a desktop assessment of archaeological potential of the Project area in 2017, which was submitted to the Provincial Archaeology Office (PAO). In response to comments from the PAO, Stantec submitted a revised version of the report in 2020.

An Indigenous Knowledge Study conducted by Qalipu as well as ongoing engagement and consultation activities with Indigenous communities helped to scope the assessment of the valued components, including heritage resources. Through engagement activities, Miawpukek identified a concern for the potential loss of historic or cultural sites.

Stantec's 2017 study consisted of a desktop review of archaeological, historic and ethnographic literature as well as topographic imagery intended to assess archaeological potential of the property, assist in Project planning and determine possible requirements for archaeological fieldwork. This assessment determined that, although there were no archaeological sites currently registered in the area, the Project site has high archaeological potential, particularly along waterways. A total of 24 specific locations were identified to potentially contain archaeological remains within the Marathon Mineral Claim area; one of these locations overlapped directly within the Project Area. However, this site is not within the current footprint of Project infrastructure.

Stantec's follow up report in 2020 considered two additional resources not available during the 2017 assessment, namely ten potential archaeological sites the PAO identified in 2018 and LiDAR imagery of the Project Area from 2019. The 2020 study identified additional locations retaining archaeological potential. The study recommended that ground assessments occur prior to construction activities in areas that overlap with identified locations of high archaeological potential. The study also recommended that ground truthing occur at the archaeological sites identified by PAO to confirm their location and ensure they will not be impacted by the Project. In addition to these mitigation measures, the Proponent plans to create a Heritage and Cultural Resources Protection Plan to mitigate the potential of adverse effects on historic resources resulting from an accidental discovery.

#### **Indigenous Groups - Land and Resource Use**

The Proponent considered impacts to Indigenous Groups in its evaluation of the Project, including an examination of the potential for the Project to affect activities, sites and resources valued by Indigenous communities. Specifically, the Proponent evaluated Project-related impacts on Indigenous health and socio-economic conditions, Indigenous physical and cultural heritage and current use of lands and resources for traditional purposes. The Federal EIS Guidelines identified Miawpukek and Qalipu as the



Indigenous communities with the potential to be impacted by the Project. With financial support from the Proponent, Qalipu conducted “The Collection of Current Land Use and Aboriginal Traditional Knowledge Study” in 2020, which has been integrated into the assessment. Additionally, the Proponent collected information from engagement sessions with Indigenous communities (including Miawpukek) and from secondary sources to help inform their assessment.

Table 1. MFN Comments on Valentine Gold Project related to community, cultural heritage and land use.

Comment #	Description	Request
<p><b>MFN Comment 1</b></p>	<p>In the 2017 and 2020 Stantec Historic Resources Baseline Studies, there is no indication that historic shorelines were considered in the evaluation of archaeological potential.</p>	<p>Please confirm whether historic shorelines overlap with the Project Area. If so, please require that these locations be further assessed in the field for any instances where the shorelines overlap with any ground-disturbing activities related to the Project.</p>
<p><b>MFN Comment 2</b></p>	<p>The Federal EIS Guidelines (Part 2, Section 5) direct Marathon to engage with Qalipu and Miawpukek to obtain their views on (among other things), “physical and cultural heritage, including any structure, site or thing that is of historical, archaeological, paleontological or architectural significance. [...] pursuant to paragraph 5(1)(c) of CEAA 20201.”</p> <p>In addition, given that most heritage resources are Indigenous in origin, it is best practice across the country for Indigenous communities to be not only engaged but to actively participate in any work related to cultural heritage in their territories.</p> <p>Miawpukek’s Indigenous Knowledge, including knowledge of historic and archaeological sites, has not been included within the Historic Resources Baseline studies, nor throughout section 18.0 of the EIS. Miawpukek has also not been adequately engaged to participate in any archaeological research.</p> <p>Miawpukek and its ancestors have occupied present-day Newfoundland for centuries, and heritage resources are integral to the community; any lack of response on Miawpukek’s part to-date has been as a result of a lack of capacity, not a lack of interest.</p>	<p>(a) The proponent should provide funds for Miawpukek to conduct an Traditional Knowledge and Land Use (TKLU) Study. The results of this study should inform any future archaeological research and field work.</p> <p>(b) The proponent’s archaeological consultant should work with Miawpukek to ground-truth and determine appropriate avoidance/mitigation measures for any cultural heritage resources identified in the Indigenous Knowledge Study that are present within the Project Area. Capacity funding should be provided for this.</p>



<p><b>MFN Comment 3</b></p>	<p>There is no indication that Project personnel will be trained in identifying the material culture and archaeological resources of Newfoundland as part of the Heritage and Cultural Resources Protection Plan. Artifacts and ecofacts are difficult to identify without training. Training for the identification of such resources is integral in ensuring that unanticipated archaeological resources will not be overlooked and will trigger the Chance Find Protocol, should they be encountered.</p>	<p>The proponent should have a training program for Project personnel and Miawpukek monitors regarding archaeological resources and material culture in Newfoundland. Capacity funding should be provided for Miawpukek monitors to participate.</p>
<p><b>MFN Comment 4</b></p>	<p>N/A</p>	<p>Miawpukek has a special interest in historic resources. The Proponent should ensure Miawpukek monitors are invited to participate in any future archaeological field work.</p>
<p><b>MFN Comment 5</b></p>	<p>N/A</p>	<p>The Proponent should provide Miawpukek with the opportunity to determine any cultural or ceremonial practices that should occur during any further investigation of the sites previously identified by PAO.</p>
<p><b>MFN Comment 6</b></p>	<p>Miawpukek has not had the opportunity to conduct a Traditional Knowledge and Land YSe Study for this Project. The documentation and incorporation of Indigenous Knowledge is critical in the fulsome development and evaluation of <u>all</u> components of the EIS, as well as in the proper assessment of the impacts the Project may have on Miawpukek's rights and interests. Scientific and Indigenous Knowledge systems must be evaluated on equal footings: the lack of Project-specific Indigenous Knowledge from Miawpukek has resulted in an insufficient, incomplete EIS.</p>	<p>The Proponent should fund a Project-specific TKLU Study for Miawpukek, the results of which should be meaningfully incorporated into the EIS. This study should be conducted by a consultant of Miawpukek's choice.</p>
<p><b>MFN Comment 7</b></p>	<p>A fulsome socio-economic study focused on Miawpukek does not seem to have been conducted for this Project. It is difficult to fully predict and assess the impacts of the Project on the community without an up-to-date and Project-specific socio-economic study.</p>	<p>The Proponent should fund a Project-specific socio-economic study for Miawpukek so there is clarity on the full scale of impacts the Project may have on the community. This study should be conducted by a consultant of Miawpukek's choice.</p>



## 2.2 Water Resources

### Water Quantity

The Project Water Management Plan (Years 1-9) will manage water in 3 independent complexes based on location and includes the Marathon Complex (including pit and waste piles), the Leprechaun Complex (including pit and waste piles), and the tailings management facility (TMF) and processing plant (PP) Complex. Three ultimate receivers of water from these complexes are Valentine Lake, Victoria River and Victoria Lake Reservoir. Contact water (runoff from Marathon and Leprechaun waste rock stockpiles and dewatering from the pits) will be processed through 17 sedimentation ponds which will treat by settling up to 80% of the solids from the water, before releasing to the 10 final discharge points (FDPs) into the environment. For the Marathon Complex, 30% will go into Valentine Lake and 70% to a tributary of the Victoria River, which flows northward in the Exploits River watershed. For the Leprechaun Complex, water will be discharged southwards into either a tributary of or into Victoria Lake Reservoir, in the Bay d'Espoir watershed. The TMF/PP Complex will generally re-use water in processing, but excess water will go through a water treatment plant (WTP) and polishing pond to settle solids with an average 5-day detention time before it releases to 2 additional FDPs into Victoria Lake Reservoir or its tributary from April-November. Non-contact water will gravity drain to local waterways (receivers) with no treatment.

While it is unavoidable that some watersheds will be overprinted by the mine components, some watercourses have considerable losses in flows, most prominently, is WS-6 or VIC-16, which will see a reduction to 65% of the summer environmental flow, calculated as 50% of its mean annual flow (MAF) and 41% of the winter environmental flow, calculated as 30% of MAF.

After Year 9, the Leprechaun Pit will be exhausted of ore, and will then transition into permanent storage of tailings slurry by pumping the TMF into the pit. This will be accompanied by accelerated filling of both pits using water from: reclaim water from the TMF; non-contact water re-directed into the pits; but mostly from adjacent lakes of Victoria Lake Reservoir for the Leprechaun pit (at 145 L/s or 4.0Mm<sup>3</sup>/year); and Valentine Lake for the Marathon Pit (178L/s or 5.5m<sup>3</sup>/year). The water taking from Valentine Lake is approximately 21% of the mean annual flow (MAF). The accelerated filling is expected to take 8 years as opposed to approximately 40 years with natural inflows. The reduction in water supply downstream could have considerable impacts over these 8 years to downstream water users including the environment and aquatic life and the long-established hydroelectric generating stations.

### Water Quality

Baseline water quality is characterized through federal water quality stations in nearby locations, and supplemented with 26 water quality stations monitored by the Consultants for the Project for 8 years from 2011 to 2019, which provides a good baseline of data. The federal and Valentine stations both have reported some exceedances in water quality, based on the Canadian Water Quality Guidelines for the Protection of Aquatic Life (Freshwater) (CWQG-FAL), including aluminum, cadmium, copper, iron, and lead. These metals are likely derived from the local geology and may indicate that some metals are naturally elevated regionally. As the rock is mined and processed during the Project, these exceedances of metals will likely become more elevated, which has been indicated in the predictive water quality modeling.



The baseline surface water chemistry has low alkalinity, which indicates that it will have limited buffering potential for acidity coming from the mine. The Leprechaun high-grade and low-grade ore waste rock piles (WRPs) are expected to have 0.5% and 10% potentially acid generating (PAG) rock, respectively, while the percentages are 14% and 50% for the respective Marathon waste rock piles. Metals potentially leaching from the Leprechaun WRPs included aluminum, phosphorus, copper, selenium and zinc; and for the Marathon WRPs the metals leaching include aluminum, mercury, selenium and zinc.

Predictive water quality modeling suggests that exceedances of CWQG-FAL are expected for the following parameters: aluminum, arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, phosphorus, selenium, silver, uranium, zinc, nitrite, nitrogen ammonia, nitrogen unionized ammonia, fluoride and nitrate at some sediment ponds. The FDPs may affect up to 300m downstream into its ultimate receiver to assimilate the effects of these contaminants.

The Project will have many water quality issues and exceedances at many of the FDPs of their sediment ponds, yet have not proposed any water treatment at these FDPs. Additionally, there are some expected exceedances of some parameters of potential concern (POPC) from the TMF/PP even after a water treatment plant and polishing pond in their treatment train. These exceedances are predicted during operations, and post-closure.

The Proponent has also chosen to use the least conservative water quality criteria, the Metal and Diamond Mining Effluent Regulations (MDMER) mean monthly concentration (MMC), for the deleterious substances listed in this regulation. While it is within the regulations for metal mining, the minimum standard allows much higher levels of deleterious substances in the mine effluent to be released into the environment. There are other, more protective water quality guidelines and objectives including the CWQG-FAL, Ontario’s Provincial Water Quality Objectives (ON PWQO) and British Columbia Ministry of Environment (BC MOE) water quality guidelines that are available and based on science.

**Table 2.** MFN Comments on Valentine Gold Project related to water resources.

Comment #	Description	Request
<b>MFN Comment 8</b>	<p>The construction of certain structures in the Valentine Gold Project are proposed to use locally available rock. As mentioned in this section, some of the rock in both the Marathon and Leprechaun Complexes have PAG potential. It was unclear whether the Proponent will test the rock prior to using it in construction to ensure that PAG rock will not be a part of the built infrastructure for the Project.</p> <p>This is especially important in the building and raising of the TMF, which will hold tailings slurry and will have water quality issues that could exacerbate the acid generation and metal leaching if there is PAG rock in the structure.</p>	Provide certainty that rock used in construction will be tested and will not be PAG.
<b>MFN Comment 9</b>	Water quality effluent criteria: The EIS uses a variety of surface (and ground) water quality criteria and the	a) MFN requests that all water quality samples are compared to



	<p>chosen criteria is the Metal and Diamond Mining Effluent Regulations (MDMER) monthly mean concentration (MMC). However, there are significant differences in the MDMER-MMC and the long-term Canadian Water Quality Guidelines for the Protection of Aquatic Life (CWQG-FAL). Additionally, MDMER also has an allowable maximum grab sample concentration (max grab), which is usually double the MMC.</p> <p>For instance, the arsenic CWQG-FAL is 5µg/L, but the MDMER-MMC is two orders of magnitude larger, at 500 µg/L, and the max grab is twice the MDMER (at 1000 µg/L). Similarly, copper CWQG-FAL is 2-4 µg/L (based on hardness), while MDMER-MMC is 300 µg/L and max grab is again double at 600 µg/L.</p> <p>The chosen criteria are an aggregate mean of all the samples taken per month at each FDP and compared to the maximum authorized monthly mean concentration limit. This method can hide high exceedances of single grab samples, therefore is a less conservative measure of water quality effects on aquatic life.</p>	<p>both MDER and CQWG-FAL guidelines and reported exceedances are noted.</p> <p>b) MFN requests that the most protective guideline be used for the protection of aquatic life for each parameter in comparing CWQG-FAL, BC Ministry of the Environment (MOE) guidelines and Ontario's Provincial Water Quality Objectives (PWQO) guidelines, where available. The MFN does not believe the MDMER-MMC values are sufficient for the protection of aquatic life that MFN relies upon for sustenance and livelihood as it will degrade the water quality of their traditional territories.</p>
<p><b>MFN Comment 10</b></p>	<p><b>Final Discharge Points.</b></p> <p>The water management plan for contact water is to route them through sediment ponds to treat for suspended solids prior to release at the final discharge points into the environment. The plan includes 10 FDPs (5 each for the pits) from 17 sediment ponds. For the TMF/PP, there are 2 additional FDPs.</p> <p>With so many discharge points, the loadings and effects will be distributed, which would allow the Proponent to release even more contamination into all the watersheds surrounding the Project. The strategy being implemented by the Proponent appears to be to use dilution throughout the project area to hide significant consequences of contamination from the Project. This helps the Project meet water quality criteria (which are already less protective than they should be as noted in MFN Comment 9), thus avoiding the need for any meaningful water treatment. This issue is very concerning to MFN as water quality is one of their top concerns with the Project.</p>	<p>a) Consolidation of FDP must be completed to the extent feasible so that project effects are not diluted across a large assimilative area. Specifically MFN requires that the Proponent reduce the number of discharge points to a total of three. This includes one discharge for the Marathon complex, Leprechaun Complex, and the TMF.</p> <p>b) The Proponent must consult with MFN community members to evaluate the most appropriate location for the reduced number of FDP.</p> <p>c) Provide further rationale for the high number of FDPs in the WMP and how the Proponent expects to address and reduce total loadings entering the environment. It is recommended to reduce the number of FDPs and loadings to each.</p> <p>d) Monitor and report on water quality at each FDP including</p>



		<p>exceedances based on MDMER and CWQG-FAL, at a minimum.</p> <p>e) Water treatment plant(s) must be in place to treat any exceedances of MDMER and CWQG-FAL (or other appropriate criteria) (or background) prior to the point of discharge.</p>
<p><b>MFN Comment 11</b></p>	<p><b>Lack of treatment at Sediment Ponds.</b></p> <p>Aside from the treatment of suspended solids, there was no indication that other water quality parameters were being mitigated for in the sediment ponds prior to discharge to the environment.</p> <p>From the water quality modeling, many of these FDPs (all Leprechaun FDPs and the polishing pond) have exceedances mine effluent of many COPC and other parameters compared to CWQG-FAL including: Al, Ag, As, Cd, Cr, Cu, F, Fe, Hg, Mn, N-NO<sub>2</sub>, Se, N-NH<sub>3</sub> UN, N-NH<sub>3</sub> T, N-NO<sub>3</sub>, P, Pb, U and Zn.</p> <p>It is clear that additional water quality treatment is needed at the sediment ponds, as many are expected to show a high number of exceedances, however none is proposed aside from settling of sediments in the ponds. With baseline water quality already showing exceedances (using MDMER criteria) of many of these parameters, additional degradation of water quality should be minimized.</p> <p>If the contaminants are not bound to solids (i.e. cyanide, ammonia), then the sediment ponds will not be able to treat exceedances in the mine effluent, and there were no indications of additional treatment plans to address those contaminants. The Proponent is relying on the assimilative capacity of the ultimate receivers, up to 300m downstream of the confluence of the FDP receiver to the ultimate receiver, to dissipate the impact. MFN has expressed that they use much of the LAA in as part of their traditional territories, and they are very concerned with the mis-management of mine effluent and the water quality degradation in the area due to the Project. Many of these metals are contaminants of concern for aquatic life, which the MFN rely upon for their livelihood and sustenance. The degradation of up to 300m downstream of each of the 12 FDP water bodies and their ultimate receivers is a considerable amount of fish habitat to affect that is unacceptable to MFN.</p>	<p>a) Provide rationale for the lack of water quality treatment aside from suspended solids at the sediment ponds.</p> <p>b) Additional water treatment for metals and nutrients is recommended for all Leprechaun FDPs to reduce loadings and will successfully improve water quality and eliminate exceedances of contaminants in addition to suspended solids, below the CWQG-FAL prior to release into the environment.</p> <p>c) Suggest considering constructed wetlands prior to FDPs as part of the treatment train.</p> <p>d) Provide trigger levels for additional mitigation measures (i.e. lime, coagulants) to treat POPC if it is still in exceedance after the treatment.</p>



<p><b>MFN Comment 12</b></p>	<p>TMF water treatment plant and polishing pond. The WTP will treat for suspended solids (sedimentation), pH and “other water quality issues”. These other treatments include a cyanide (CN) destruction circuit in the mill circuit, while the WTP will have copper and ammonia removal and coagulant polymer to remove colloids (Appendix 7). The polishing pond will help with treatment through additional solid settling with coagulant, natural degradation of ammonia and cyanide, and lime slurry for pH adjustment.</p> <p>However, the discharge from the polishing pond is still predicted to have some CWQG-FAL exceedances, despite these treatments, primarily for metals, but additionally for other parameters of potential concern (POPC)</p>	<ul style="list-style-type: none"> <li>a) Improve the WTP treatment processes to treat for POPC including metals, especially cadmium, mercury and selenium.</li> <li>b) Add in constructed wetlands prior to FDP as part of the treatment train.</li> <li>c) Use CWQG-FAL as the minimum for water quality criteria.</li> </ul>
<p><b>MFN Comment 13</b></p>	<p>While it is unavoidable that some watersheds will be overprinted by the mine components, some watercourses have considerable losses in flows, most prominently, is WS-6 or VIC-16, which will see a reduction to 65% of the summer environmental flow, calculated as 50% of its mean annual flow (MAF) and 41% of the winter environmental flow, calculated as 30% of MAF. There are no mitigation measures for the loss in water flow to these waterbodies</p>	<ul style="list-style-type: none"> <li>a) It is recommended that the Proponent assess and provide mitigation measures for the loss of flow to watercourses that have more than a 10% change in their MAF, especially if they are fish-bearing watercourses.</li> <li>b) The Proponent must have fish compensation plans for the loss of fish habitat in these watercourses.</li> </ul>
<p><b>MFN Comment 14</b></p>	<p><b>Accelerated Pit Filling</b></p> <p>Natural pit filling is predicted to take 34-38 years for the Marathon Pit and 37-42 years for the Leprechaun pit. The Proponent has suggested an accelerated filling scenario including pumping water from Victoria Lake Reservoir into the Leprechaun Pit at 178L/s (5.6 Mm<sup>3</sup>/yr) and Valentine Lake at 145L/s (4.5Mm<sup>3</sup>/yr) into the Marathon Pit for 8 years until they are full. This is a considerable amount of water being removed from these lakes, continuously for almost a decade. The estimate given is that the taking from Valentine Lake is 21% of mean annual flow (MAF).</p> <p>DFO recommendations for the protection of aquatic systems is when flow alterations are no more than 10% of the natural flow. For lakes, this 10% change could be related to the inflow contributions to the lake or MAF as there is an estimate for Valentine Lake.</p> <p>Aquatic environments and Hydro generation downstream will likely be negatively affected, especially in low flow years and in low flow seasons by this water taking.</p>	<ul style="list-style-type: none"> <li>a) MFN recommends that the pit filling using the lakes be a variable pumping rate, based on seasonal water availability and at a maximum of 10% of the mean monthly flow (MMF), not MAF. The Proponent should monitor for MMF and precipitation for each water body through their monitoring.</li> <li>b) From the monitoring results, water takings should be based on predicted mean monthly flows (instantaneous, not historic), thereby generally allowing higher rates in spring up to a maximum of 10% MMF during the freshet and lowest rates during summer low flow season, when it is critical for aquatic life not to be impacted and other water users to maintain their right to the water supply.</li> </ul>



	<p>However, as the Proponent is familiar with e-flows and Richter’s e-flows regimes, they will know that high flows are equally important in eco-hydrology and the life stages of aquatic organisms as are low flows. Therefore, while there is more water during high flow months, shaving off more than 10% of the flow during high flows is just as detrimental as a 10% change in low flows. Therefore, a maximum of 10% flow alteration is recommended year-round.</p>	<p>c) It is not recommended to divert flows from other FDPs (i.e. sediment ponds) that would reduce flows for other water bodies unless it is also less than 10% of the instantaneous flow.</p>
<p><b>MFN Comment 15</b></p>	<p>The exhausted open pits will be filled with water to become pit lakes. During predictive modeling, it was assumed that a geotextile liner would not be needed to prevent seepage from the pits entering local groundwater systems. However, with the blasting and the removal of ore and waste rock from these pits, it is possible that larger cracks could be created during operations that could allow contaminated water from entering the local and regional groundwater systems. The Proponent should continue to monitor the integrity of the pit base and walls to ensure that the isolation of groundwater systems is intact and will not become a source of potential contamination, post-closure.</p>	<p>The Proponent must ensure the water quality of the local and regional groundwater is maintained throughout the life of the mine and past post-closure through integrity checks on the pit walls and base. These integrity check should ensure that there are no preferential pathways for contamination to enter these groundwater systems.</p>
<p><b>MFN Comment 16</b></p>	<p><b>ARD Potential in Marathon low grade stockpile.</b>  The Marathon low grade stockpile is predicted to have acid rock drainage (ARD) potential in PAG pockets after approximately 6 years, based on maximum laboratory leaching rates (7.5.2). The Proponent has offered that effluent from the Marathon low-grade ore stockpile will be segregated from other min component flow streams and treat for ARD If required. Metal leaching of aluminum, phosphorus and zinc are moderately predicted.</p> <p>The operating plans also show that low-grade ore will not be processed until Years 9-12, after the high-grade ore is processed. This would mean that while waiting for processing, the low-grade ore would have sufficient time to generate acid and leach metals.</p>	<p>a) It is recommended that the Proponent closely monitor the Marathon low-grade ore stockpile for ARD/ML and take preventative steps to reducing the potential for ARD/ML prior to occurrence.</p> <p>b) It is recommended that this stockpile and its effluent be segregated hydrologically from the rest of the Marathon Complex to ensure that effluent can be properly monitored and treated prior to ARD/ML onset.</p>
<p><b>MFN Comment 17</b></p>	<p><b>Indigenous Monitoring</b>  The Project has included a water monitoring plan as part of the Project. However, there was no mention of Indigenous involvement in the design or execution of these monitoring plans. MFN have individuals that are familiar with the area, as it is part of their traditional territories and could be an asset in scouting locations as well as provide background information on qualitative assessments of the local environment, water quantity and quality.</p>	<p>It is recommended that the Proponent establish a training and hiring program for Indigenous environmental monitor positions. It is recommended that an Indigenous Environmental Monitoring Committee (IEMC) be struck to advise on monitoring activities for the Project. This oversight body would be involved in</p>



	Additionally, MFN would be an asset in the Project monitoring program going forward.	ongoing monitoring associated with the Project and could provide recommendations for improved environmental performance. Moreover, the IEMC could provide a link to the community of MFN, helping to provide education and clarity regarding ongoing project activities.
<b>MFN Comment 18</b>	<p>Considerable wetland areas are being overprinted due to the creation of the Marathon Pit in the northern portion of the Project Area. It is unclear whether these wetlands have been characterized for their importance provincially, locally or to the MFN for harvesting and other traditional practices.</p> <p>It is likely that MFN traditional medicinal plants may be present in these wetland areas and would be lost once the Marathon pit is commissioned.</p>	<p>a) It is recommended that the Proponent involve MNF in the characterization of these wetland areas to delineate areas traditionally used as gathering sites.</p> <p>b) It is recommended that the Proponent allow an assessment of these wetland areas to determine the amount of habitat will be lost for gathering by MFN.</p> <p>c) It is recommended that the Proponent allow MFN to harvest any medicinal plants prior to overprinting and to allow for access to these sites by MFN gatherers until the area is overprinted, accounting for safety of all individuals.</p> <p>d) It is recommended that Habitat Compensation is provided for traditional area lost due to the overprinting of the gathering sites.</p>

### 2.3 Fish and Fish Habitat

The Proponent has evaluated the potential effects of the Project on the valued component of fish and fish habitat due to their ecological, cultural, recreational, and economic value. The Local Assessment Area (LAA), where potential effects of the Project may occur, includes the Valentine Lake, portions of Victoria Lake Reservoir, some of their tributaries and expected mixing zones (Figure 3). The LAA also includes a 500 m buffer along the access road. The Regional Assessment Area (RAA), where cumulative effects or impacts from accidents/malfunctions are assessed, includes Valentine Lake, portions of Victoria Lake, the Victoria River, and Red Indian Lake (Figure 3).

There are many streams, rivers, ponds, lakes and bog holes in the study area. These are cold water environments. Fish species known to occur in the vicinity of the Project include landlocked Atlantic salmon (known as *Plamu* in Mi'kmaq or *Salmo salar*), brook trout (*Salvelinus fontinalis*), Arctic charr



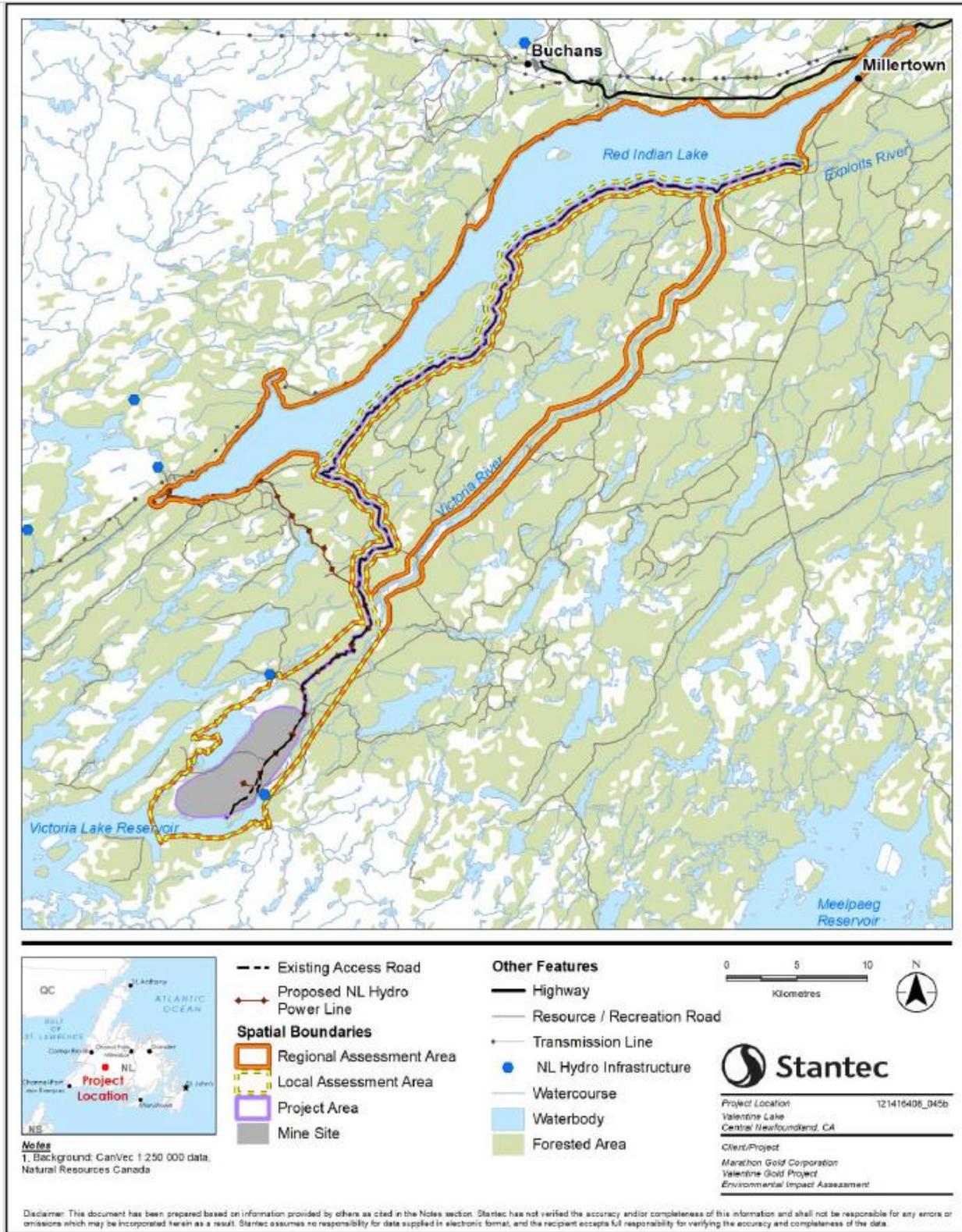
(*Salvelinus alpinus*), and threespine stickleback (*Gasterosteus aculeatus*). Historically, American eel (*Katau* in Mi'kmaq or *Anguilla rostrata*) may have also been present; however, due to construction of hydroelectric projects and other changes to the environment, these are no longer known within the RAA.

Fish and fish habitat were characterized by drawing on existing datasets and through field studies. This included field sampling on bogs, ponds, lakes, streams and rivers within the study area. The Proponent also carried out field studies to evaluate primary productivity (phytoplankton), secondary productivity (benthic invertebrates), fish, and fish habitat. Water quality and quantity was assessed through related investigations.

The Project may impact fish and fish habitat through all phases. During construction clearing and grubbing may cause erosion and sedimentation, leading to negative effects on fish habitat. In-water works and overprinting of waterbodies will also result in harmful alteration, disruption, or destruction (HADD). During operations and closure, discharge, runoff and seepage from project infrastructure into Victoria Lake Reservoir, Valentine Lake and other receiving water bodies may impair water quality, resulting in increased total suspended solids (TSS), unionized ammonia, cyanide, dissolved metals, and/or other contaminants. Other potential pathways for effects include impingement and entrainment of fish on water intakes; loss of flow due to dewatering of open pits and reductions in watershed size; increased pressure from angling; and spills or accidents.

Any of the above impacts on fish or fish habitat would negatively affect MFN's rights and interests in the area. Firstly, community members of MFN hold all living (e.g. fish, benthic invertebrates) and non-living (e.g. water, sediment) components of the ecosystem to be sacred and deserving of respect. Secondly, there are cultural, recreational, and economic activities which depend on a healthy aquatic environment. These include fishing, guiding, travelling, and scouting throughout the project area and downstream.





**Figure 3.** Geographic boundaries for fish and fish habitat assessment areas (EIS, Figure 8-1: Marathon, 2020).



**Table 3.** MFN Comments on Valentine Gold Project related to fish and fish habitat.

Comment #	Description	Request
<p><b>MFN Comment 19, Figure 8.1</b></p>	<p>The size of the LAA and RAA for fish/fish habitat are exceedingly small given the footprint of the potential and cumulative effects of the Project. The LAA and RAA appear to have been chosen in a manner that is not conservative and assumes that the potential effects predicted are the worst-case scenario. This is not reasonable, as the predicted effects should be based on the most likely scenario. Further, the RAA should be scoped to an area where the effects of accidents/malfunctions and cumulative effects could occur. Specific issues with the LAA and RAA include:</p> <ul style="list-style-type: none"> <li>• the LAA does not include the full area of Victoria Lake Reservoir, despite being a receiver for discharge/runoff/seepage from the Leprechaun Pit, mine rock stockpile and TMF. Fish in these areas are highly mobile and thus the direct effects on fish and fish habitat must include the full Victoria Lake Reservoir.</li> <li>• The LAA does not include areas of Victoria River downstream of the Victoria Dam, despite the potential impacts of spills and seepage from the TMF. This includes a substantial stretch of river from the Victoria Dam to the confluence with stream 35. These areas are immediately downstream of project infrastructure and may be impacted by reduced flows, seepage, runoff, and spills, necessitating inclusion in the LAA. It appears that this area was only observed using fly-overs.</li> <li>• The RAA does not include area downstream of Victoria Lake Reservoir which may be impacted by contaminants from TMF discharge (operations/closure), spills/accidents/malfunctions from equipment or infrastructure at the Leprechaun complex (operations), runoff/seepage from the Leprechaun complex (operations and closure) and effluent/tailings from the filled Leprechaun pit (during closure).</li> </ul>	<p>The Proponent must expand the LAA and RAA as requested. This expansion should also be reflected in all parts of the EIS including:</p> <ul style="list-style-type: none"> <li>• Additional baseline studies necessary to characterize habitats within the LAA</li> <li>• Expanded effects assessment covering the larger LAA</li> <li>• Expanded monitoring programs, which would cover the LAA in areas in Valentine Lake, Victoria Lake Reservoir and Victoria River.</li> <li>• Increase the RAA to include Victoria Lake Reservoir and areas downstream to the Bay d’Espoir hydroelectric station.</li> </ul>
<p><b>MFN Comment 20, 8.5.2.2 Residual Effects</b></p>	<p>The Project is predicted to exceed water quality guidelines (e.g. CWQG -FAL) during all phases. This includes many contaminants which may accumulate in fish tissues. For example, in Section 8.5.2.2, the Proponent lists several parameters which will exceed guidelines in receiving environments (<b>bold text added by MFN for emphasis</b>):</p> <p style="text-align: center;"><i>“In general for the regulatory scenario (i.e., “worst case”), the Assimilative Capacity Assessment</i></p>	<p>a) It is predicted that the Project will result in exceedances of water quality guidelines for several parameters, including some that are known to be highly toxic to fish and/or bioaccumulate (e.g. cadmium, cyanide,</p>



	<p><i>(Appendix 7C) suggests <b>that all parameters except WAD cyanide will exceed the CWQG-FAL 100 and 250 m downstream of the effluent discharge points within stream receiving environments. These parameters are predicted to generally meet the guidelines within 100 m of mixing within a larger receiving body (i.e., Victoria Lake Reservoir, Valentine Lake) for the majority of sedimentation pond discharge points</b></i> (Marathon, 2020; pp 8.68)</p> <p><b><i>“Seepage from the TMF is predicted to have exceedances of the CWQG-FAL for copper and cyanide WAD once mixed with Victoria River.”</i></b> (Marathon, 2020; pp 8.69)</p> <p><b><i>“Outflowing water from the Leprechaun pit lake [during closure] is predicted to meet MDMER for the parameters of potential concern during closure. Exceedances of the CWQG-FAL are predicted for aluminum, copper, zinc, ammonia, unionized ammonia, fluoride and sulphate”</i></b> (Marathon, 2020; pp 8.69)</p> <p><b><i>“The seepage water quality [from Leprechaun waste rock pile] is anticipated to exceed the CWQG-FAL for parameters of potential concern including aluminum, arsenic, cadmium, copper, iron, lead, manganese, zinc, fluoride and sulphate. The seepage is expected to mix with the Victoria Lake Reservoir.</i></b> (Marathon, 2020; pp 8.69)</p> <p>The above instances are just some of the exceedances of water quality guidelines that will occur throughout the life of mine and will affect multiple waterbodies. Despite these serious exceedances, there is no additional plans to treat (other than to allow contaminants to dilute).</p> <p>In addition to the risks associated with harm to fish health that is posed by the contaminants, there is also a risk that these contaminants may accumulate in fish tissues; and yet there has been no fish tissue baseline measurements. This information is critical for understanding existing conditions and for comparing to future monitoring results. As active users of the land and consumers of fish, MFN community members stand to bear the brunt of the impacts from this</p>	<p>unionized ammonia, arsenic and lead). These will be discharged through multiple discharge points to multiple receivers. This is absolutely unacceptable for any modern mining project. MFN requires that water treatment plant(s) must be in place to treat any exceedances of MDMER and CWQG-FAL (or other appropriate criteria) (or background) prior to the point of discharge.</p> <p>b) In addition to water treatment, the Proponent must undertake additional baseline studies for characterizing the current body burden of contaminants within fish species in the LAA. MFN recommends the use of brook trout and stickleback as sentinel species.</p> <p>c) During operations the Proponent must commit to undertaking a Country Foods survey in collaboration with MFN for evaluating the potential effects of the Project on concentrations of contaminants in fish (and other country foods).</p>
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	project and do not believe the measures being taken to mitigate concerns around contaminants are sufficient.	
<b>MFN Comment 21, Table 8.12</b>	<p>The Proponent indicates in Table 8.12 that a change in habitat quality from the project may occur due to the release of deleterious substances. Under the measurable parameters column, the Proponent specifically lists “total suspended solids (TSS) (mg/L); dissolved oxygen (DO) (mg/L); water temperature (°C); pH; and trace metals”. Not included in this list are some highly important contaminants that could negatively impact fish habitat, including those that are predicted to be above CWQG-FAL in effluent, seepage, or other discharge (MFN Comment #20 above). Specifically missing from the list are:</p> <ul style="list-style-type: none"> <li>• nutrients (e.g. nitrogen and phosphorus)</li> <li>• cyanide species; and</li> <li>• ammonia (including unionized ammonia).</li> </ul>	The Proponent must include these contaminants in the list of measurable parameters. Water monitoring plans must ensure that these parameters are monitored as part of regular operations during all phases of the Project.
<b>MFN Comment 22, Table 8.7, Table 8.9, and Table 8.12</b>	<p>Abundance (numbers of fish) and Mortality (numbers of fish) are included as measurable parameters for evaluating the potential effects of the Project on fish health and survival (EIS, Table 8.12). Yet, the effort expended on fish capture in several waterbodies is not adequate for providing any reference to determine change in abundance. This is especially true for most ponds and lakes in the study area where very little effort was expended for capturing fish. For example, less than 8 hours of soak time was used for all gear types at all lakes and ponds, with the exception of Valentine Lake and Victoria Lake Reservoir. Even in Valentine Lake and Victoria Lake, where greater effort was expended, only 2 locations were fished, making it impossible to compare data to the full habitat available.</p> <p>With such a small data set, the results will be subject to extreme uncertainty and sample bias, making it difficult to evaluate any potential change in abundance.</p> <p>Further, it is unclear how the Proponent plans to observe any change in mortality at any locations in the LAA. Will this be completed using targeted surveys or inferred using other indicators?</p>	The Proponent must provide additional information on how any change in abundance or mortality can be measured due to effects of the project given the paucity of baseline data.
<b>MFN Comment 23</b>	Historic records indicate that Arctic char previously inhabited Victoria Lake and potentially other areas within the RAA. The dearth of sampling (MFN Comment 22) and small geographic scope (MFN Comment 19) of fish sampling makes it difficult to conclusively determine that Arctic char are no longer present within the LAA or RAA. This is a meaningful gap that does not appear to have been addressed by the Proponent.	a) The Proponent must conduct additional baseline sampling in Valentine Lake and Victoria Lake Reservoir focused on identifying the potential presence of Arctic char. This sampling can be



	<p>It is probable that MFN community members will have historic and current knowledge of Arctic char within the study area, however, no meaningful attempt to gather this knowledge has been undertaken by the Proponent to date.</p>	<p>synchronized with that which is suggested above.</p> <p>b) The Proponent must engage with MFN for the collection of Indigenous traditional and ecological knowledge regarding Arctic char and other aquatic species within the RAA (and beyond). This can be accomplished through the funding of a comprehensive study that is led by MFN (see MFN Comment 24 below).</p>
<p><b>MFN Comment 24</b></p>	<p>MFN community members have been using the waterways in the Project area for at least hundreds of years. Recent analysis by the MFN Natural Resources Department of Traditional Knowledge and Land Use (TKLU) data collected from previous studies shows that community members have documented land use, including fishing, in the area of the Project. This information provides a snapshot that must be updated with a more meaningful project-specific study. This would provide additional information on current and historic TLU. Moreover, this study would be able to identify important cultural and ecological areas which must be protected. Lastly, a fulsome TKLU study could also inform baseline information on species that may have been extirpated from the area (e.g. Arctic char) and species at risk (e.g. American eel).</p>	<p>The Proponent must agree to fund a comprehensive TKLU study that is led by MFN. The results of this study must be meaningfully incorporated into baselines, effects assessment and mitigation measures. As part of this TKLU study MFN can undertake actions to synthesize and share some of the data from historic records (subject to community approval and the development of a data-sharing agreement).</p>
<p><b>MFN Comment 25; Table 8.15</b></p>	<p>The amount of fish habitat that is predicted to be lost from the Project is considerable, an estimated 186,705 m<sup>2</sup>. This will require a substantial investment in fish habitat compensation, as required under the Fisheries Act. Should the Project move forward with additional approvals after the EA is completed, MFN has a keen interest in being involved in the development, implementation, and monitoring associated with the Fish Habitat Compensation Plan.</p>	<p>MFN has a keen interest in being involved in the development, implementation, and monitoring associated with the Fish Habitat Compensation Plan. MFN requests that the Proponent involve MFN in the discussions regarding fish habitat compensation at the earliest practicable time. Furthermore, our involvement should be supported with meaningful capacity funding to support involvement of our staff and advisors.</p>



<p><b>MFN Comment 26, Section 8.2.2.4</b></p>	<p>The Proponent indicates that sea-run Atlantic salmon in the Exploits River are part of the Northeast Newfoundland Atlantic Salmon population and are designated as Not-at-Risk by COSEWIC. This is technically true, however it overlooks significant data that shows serious declines in the returns of Atlantic salmon in recent years, with 30% of rivers assessed in 2018 showing declines (DFO, 2019). Specifically, the Exploits River showed a decline in adult returns of 33% compared to previous years. The situation is even more dire for salmon in Salmon Fishing Area (SFA) 11 (which includes the Bay d’Espoir watershed). These recent declines in salmon must be incorporated into the effects assessment of the Project, in particular the cumulative effects assessment.</p>	<p>MFN requests that the Proponent:</p> <ul style="list-style-type: none"> <li>• Update background information on Atlantic salmon.</li> <li>• Provide more info on recent population status of Atlantic Salmon in Exploits and SFA 11.</li> <li>• Expand baseline study area into Bay d’Espoir watershed (see MFN Comment 19)</li> <li>• Revise effects assessment and cumulative effects as appropriate</li> </ul>
<p><b>MFN Comment 27, Appendix 2A – Water Management Plan</b></p>	<p>As noted in MFN comment 10 above, the Proponent plans to discharge effluent at 12 Final Discharge Points (FDPs). This effluent will ultimately drain to receiving water in Valentine Lake and Victoria River (Marathon complex) or Victoria Lake Reservoir (Leprechaun Complex and TMF).</p> <p>With so many discharge points, the loadings and effects will be distributed, which would allow the Proponent to release even more contamination into all the watersheds surrounding the Project. The strategy being implemented by the Proponent appears to be to use dilution throughout the project area to hide significant consequences of contamination from the Project. This helps the Project meet water quality criteria within the mixing zones (which are already less protective than they should be as noted in MFN Comment 9), thus avoiding the need for any meaningful water treatment. This issue is very concerning to MFN as water quality is one of their top concerns with the Project. Especially as fish in the LAA are highly mobile and likely to be exposed to contaminants within multiple mixing zones. The potential consequences of this dilution plan has not been adequately mitigated and the potential effects are significant.</p> <p>To provide better control and improve ability to treat water, the number of FDPs must be reduced to a total of 3. This includes one discharge for the Marathon complex, Leprechaun Complex, and the TMF. Each of these must be monitored based on MDMER and CWQG-FAL, at a minimum. Water treatment plant(s) must be in place to treat any</p>	<p>a) Consolidation of FDP must be completed to the extent feasible so that project effects are not diluted across a large assimilative area. Specifically, MFN requires that the Proponent reduce the number of discharge points to a total of three. This includes one discharge for the Marathon complex, Leprechaun Complex, and the TMF.</p> <p>b) The Proponent must consult with MFN community members to evaluate the most appropriate location for the reduced number of FDP.</p> <p>c) Provide further rationale for the high number of FDPs in the WMP and how the Proponent expects to address and reduce total loadings entering the environment. It is recommended to reduce the number of FDPs and loadings to each.</p>



	<p>exceedances of these criteria (or background) prior to the point of discharge.</p> <p>Any changes that the above will have on water quantity in receiving environments must be adequately considered and offset. For example, if effluent will no longer be discharged to a receiving water body, it is possible that this will reduce the flows below the ecological threshold required for maintaining the existing life histories of all species present.</p>	<p>d) Monitor and report on water quality at each FDP including exceedances based on MDMER and CWQG-FAL, at a minimum.</p> <p>e) Water treatment plant(s) must be in place to treat any exceedances of MDMER and CWQG-FAL (or other appropriate criteria) (or background) prior to the point of discharge.</p> <p>f) Any changes that the above recommendations have on water quantity in receiving environments must be adequately considered and offset.</p>
<p><b>MFN Comment 28</b></p>	<p><b>Lack of investigation into potential production and impacts of mercury and methyl mercury.</b></p> <p>Mercury is not included as a parameter of potential concern (Appendix 2A, Table 7.1) despite predicted exceedance of CWQG-FAL for Hg at the Marathon complex, Leprechaun complex, and TMF (Appendix 2A, Section 7.2.2). This is a glaring oversight. Mercury is a contaminant of extreme concern to MFN due to its extreme toxicity (especially in its methylated form) and ability to bioaccumulate in fish, which may be consumed by members of MFN.</p> <p>The discharge of any contaminants above MDMER, CWQG-FAL or other applicable guidelines (e.g. ON PWQO, BC MOE) is not acceptable to MFN, but mercury is of special concern. MFN believes that no level of mercury is safe (Zahir, Rizwi, Haq, &amp; Khan, 2005), and all mercury must be removed from water using water quality treatment.</p> <p>With the construction of the Victoria Lake Reservoir in the 1960s, it is possible that there may have been several issues regarding the mobilization and methylation of mercury (Mailman, Stepnuk, Cicek, &amp; Bodaly, 2006). Despite this risk and potential concern, the Proponent has not discussed any interactions between the project and mercury associated with the development of the Victoria Lake Reservoir in the cumulative effects</p>	<p>a) The Proponent must present a detailed assessment of the potential for mercury contamination in all discharge, effluent, seepage and runoff for the Project.</p> <p>b) The Proponent must undertake and present a detailed assessment of the potential for production of methylmercury associated with the project. This includes mercury produced from mine rock leaching, tailings, and wet-dry cycling in wetlands. This should be linked to potential accumulation within the aquatic ecosystem.</p> <p>c) A detailed monitoring protocol for surface water, groundwater, sediment and fish tissues must be developed and implemented for the entire project area. This protocol</p>



		<p>should be developed in collaboration with MFN. Furthermore, it is necessary for MFN members to be included as environmental monitors, with appropriate training provided.</p> <p>The Proponent must provide information and discussion of the potential for cumulative effects of the project with mercury in the Victoria Lake Reservoir and downstream areas.</p>
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### 2.4 Birds, Wildlife and Species at Risk

The woodland caribou of Newfoundland are of utmost environmental, cultural and economic importance to MFN. All beings are important, but caribou are an integral part of Newfoundland Mi'kmaq culture and heritage. Miawpukek Mi'kmaq are known as the people of the deer (deer = caribou). The survival of caribou is essential for Miawpukek Mi'kmaq as they are a keystone species for the region, a critical food resource and a source of sustainable economic activity from hunt-guiding.

Newfoundland's woodland caribou (*Rangifer tarandus caribou*) have been in decline for the past 20 years and their population has been reduced by 60% (Weir et al., 2014). High rates of predation from the recently introduced coyote (*Canis latrans*), and ever-increasing habitat loss and fragmentation, has resulted in low calf recruitment across the island (Weir et al., 2014). Climate change is also expected to exacerbate the effects of the introduced cerebrospinal elaphostrongylosis (CSE) disease (Weir et al., 2014) and create uncoupling effects between the phenology of calving, optimal forage availability, and biting insects (Mallory, 2020).

These historic, and novel impacts create an uncertain future, which is why the caribou of Newfoundland have been designated a *Special Concern* species at risk (SAR) by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC, 2014). With this backdrop of massive and ongoing caribou decline, and with current calf survival rate too low to enable population growth (recruitment ~11%; Weir et al., 2014), the predicted impacts to caribou from the proposed valentine gold project are unacceptable.



**Table 4.** MFN Comments on Valentine Gold Project related to birds, wildlife, and species at risk.

Comment #	Description	Request
<p><b>MFN Comment 29</b></p>	<p><b>Highly significant negative impacts to woodland caribou: Buchans Herd</b></p> <p>The EIS ranks the proposed project’s impacts to the Buchans herd as: significant, high magnitude, adverse, long-term and irreversible. It also acknowledges the tremendous uncertainty about what these impacts – in particular, the severe disruption of the core migration route – will mean for the herd (11.6; Figures 11-5; 11-12).</p> <p>The proposed project design would create physical barriers and sensory disturbances that have the potential to effectively close-off the Buchans herd’s current core migration route.</p> <p>Twice a year, during sensitive life stages (i.e. after the low resource availability of the winter, and during post-calving with juveniles in tow), the Buchans herd crosses the isthmus of land between Victoria Lake reservoir and Red Indian Lake. The proposed project design may force some, a majority, or all of herd, to reroute &gt;100km to the east or west through potentially suboptimal movement habitat.</p> <p>Members of the herd that do continue to migrate directly through the proposed project area, will face significant, high magnitude, adverse and long-term impacts. These will be in the form of physical barriers, sensory disturbances, increased predation, habitat loss and fragmentation, and occasional road mortality.</p> <p>The increased energetic demands of rerouting and the stress from sensory disturbances, will result in degraded body condition for pregnant female caribou arriving at the calving grounds (Ewacha, 2016). It is known that diminished adult caribou have lower evolutionary fitness, and exhibit multi-generational reduced calf survival (Johnson et al., 2015).</p> <p>This migration disruption is also likely to increase the herd’s susceptibility to calf predation. This would occur through a combination of reduced body condition, and an increase in local predator density (Benítez-López et al., 2010). Predator density increase is predicted in the EIS due to predator movement efficiencies along existing and proposed linear developments, and trophic disruptions</p>	<p>The Newfoundland caribou possess tremendous value to the community of MFN for cultural reasons and the impacts of the Project are not justified. The Proponent must include significant enhancement to proposed project design to reduce the predicted significant impacts to the Buchans herd. This should include improved and specific mitigations, larger buffers, enforced work stoppages and more.</p> <p>Additional field GPS-collar and desktop studies to reduce uncertainty about potential impacts to the Buchans herd must be included (details on specific requested field studies are detailed in MFN Comments 31, 32, &amp; 35)</p> <p>MFN community members must be included in the planning, execution, and analysis of the caribou monitoring.</p>



Comment #	Description	Request
	<p>from proposed habitat loss, fragmentation and degradation (i.e. increased local moose numbers, supporting higher densities of predators, which would in turn predate caribou at a higher rate)(EIS, 11.5.3).</p> <p>Geographic bottlenecking of the Buchans herd due to the proposed project’s physical barriers and sensory disturbances, may lead to overgrazing in suboptimal habitat (EC, 2011), increased predation levels, and increased calf mortality (EIS, 11.5.3). Migration delays caused by the proposed project, may also result in the creation, or exacerbation, of a disadvantageous mispairing between caribou calving, optimal forage availability, and biting insect phenology (Mallory, 2020).</p>	
<p><b>MFN Comment 30</b></p>	<p><b>Significant negative Impacts to woodland caribou: Grey River Herd</b></p> <p>The EIS asserts that impacts to the already embattled Grey River herd will not be significant. However, the proposed project would directly remove important Grey River herd calving habitat (EIS; Figure 11-9).</p> <p>The overall Grey River habitat range is spread across a large diffuse section of southern and western Newfoundland (EIS Figure 11-9) but the majority of known occupancy for Grey River herd calving and post-calving, is concentrated to several key sites (EIS, Figure 11-9). One of the most prominent of these occupied calving areas, would be directly developed by the proposed project footprint. In addition to the footprint, effective habitat loss would be incurred due to caribou sensory disturbance avoidance (6 km on calving grounds; EIS Table 11.14).</p> <p>The impacts of this destruction and encroachment on a major Grey River Herd calving ground may result in significant impacts to the herd: reduced pregnant female body condition, multi-generational fitness reduction, overgrazing on remaining calving habitat, a shift to suboptimal calving habitat and ultimately – reduced calf survival.</p>	<p>The Proponent must describe significant enhancement to proposed project design to reduce the predicted significant impacts to the Grey River herd. This should include improved and specific mitigations, larger buffers, enforced work stoppages and more.</p> <p>The Proponent must refine information related to the proposed overlap of the project footprint and Grey River calving habitat, including detailed mapping of proposed site design displaying avoidance buffers (i.e. 6 km).</p>
<p><b>MFN Comment 31</b></p>	<p><b>Unaddressed negative impacts to woodland caribou: adjacent and contiguous herds</b></p> <p>The EIS acknowledges that increased predator density, resulting from project-induced habitat loss and alteration, may impact adjacent herds. There may be other mechanisms of impact to nearby herds as well.</p>	<p>MFN request that the EIS report includes an examination/discussion of inter-herd dynamics, and potential cascading impacts to the contiguous and adjacent herds of the region (Lapoile, Buchans,</p>



Comment #	Description	Request
	<p>The caribou herds of Newfoundland present low genetic differentiation from each other due to ongoing gene flow from inter-herd immigration (Wilkerson, 2010). Herd overlap and gene flow has been detected in several Canadian caribou herds with varying migration strategies (Boulet et al., 2007). The predicted project-induced population decline and demographic changes of the Buchans herd, may result in negative impacts to adjacent herds.</p> <p>As such, the EIS report should include an examination of how these inter-herd dynamics may cascade into impacts for all the surrounding herds of the region: Lapoile, Buchans, Grey River, Gaff Topsails, Pot Hill, Mt. Peyton and Middle Ridge.</p>	<p>Grey River, Gaff Topsails, Pot Hill, Mt. Peyton and Middle Ridge).</p>
<p><b>MFN Comment 32</b></p>	<p><b>Lack of understanding about demographics and body condition for Buchans and Grey River herds</b></p> <p>Both the Buchans (acknowledged by the EIS) and Grey River (asserted in MFN Comment 30) herds will be significantly and adversely impacted by the proposed project. The extent and character of these impacts is uncertain (acknowledged by the EIS). This uncertainty is exacerbated by the lack of demographic data (age, and sex ratios) about the Buchans and Grey River herds. Specifically, information about body condition and population numbers of pregnant female caribou utilizing a) the Buchans core migration corridor and b) the Grey River calving ground, which overlaps with proposed project design.</p> <p>Without baseline information about body condition and demographics for the Buchans and Grey River herds, long-term monitoring will not be able to identify changes induced by the proposed project. Furthermore, a lack of body condition and demographic information amplifies the uncertainty about potential adverse outcomes of the project.</p>	<p>We request that additional field, GPS-collar, and desktop analysis are completed in order to establish baseline body condition and demographics of the Bucans and Grey River herds.</p> <p>We request this information to reduce the massive uncertainty about predicted adverse impacts.</p> <p>MFN community members must be included in the planning, execution, and analysis of the caribou monitoring.</p>
<p><b>MFN Comment 33, EIS Table 11.12/11.17, Section 11.5.4</b></p>	<p><b>All lost habitat, and physical or sensory barriers would be linked to an adverse change in mortality for caribou</b></p> <p>EIS tables 11.12 and 11.17 categorize various project components based on predicted changes to habitat, movement, and mortality.</p>	<p>We request that these tables and associated text, are updated to reflect the established – and acknowledged throughout the EIS – direct connection between habitat and/or movement impacts with caribou mortality.</p>



Comment #	Description	Request
	<p>We assert that any project component that removes or degrades caribou habitat and/or alters or disturbs caribou movement, is directly associated with adverse impacts to caribou mortality risk.</p>	
<p><b>MFN Comment 34</b></p>	<p><b>Reporting of percent habitat loss for caribou misrepresents true habitat occupancy and the significance of known and unknown negative impacts acknowledged in the EIS</b></p> <p>EIS section 11.14 (and table 11.16) reports that the proposed project overlaps with 1% of the Buchans herd seasonal range, and 2% of the Grey River herd seasonal range. However, these percentages are out of context and misrepresent the actual impact of proposed habitat loss.</p> <p>The EIS acknowledges that the residual effects to the Buchans herd will result in adverse, long-term and significant impacts (EIS, 11.6). This assessment of significance is, therefore not based on the 1% percent of overall habitat loss, but rather the specific importance of the critical habitat that will be affected.</p> <p>Although not acknowledged in the EIS, we assert that the residual effects to the Grey River herd will result in similarly adverse, long-term and significant impacts (see MFN comment 3).</p>	<p>We request that EIS reporting of “percent caribou habitat loss” be written into context of the specific quality of the critical habitats that will be affected (i.e. the closing of a pinchpoint of the Buchans migration route, and loss of significant Grey River calving habitat)</p>
<p><b>MFN Comment 35</b></p>	<p><b>Buffers used for impact assessment and proposed mitigation measures are inconsistent with caribou avoidance literature</b></p> <p>The EIS provides a detailed literature review of caribou disturbance avoidance in Table 11.14. Caribou median avoidance distances of mine and linear developments are in the multiple km range. All but one of the studies presented show at least a 2 km avoidance of mine sites, with on study showing avoidance as high as 23km.</p> <p>Despite this large avoidance distance commonly reported, the majority of the project’s proposed mitigation and monitoring for caribou suggest the utilization of a 500 m buffer: inconsistent with the best available knowledge and not based on the precautionary principle.</p>	<p>MFN request that proposed caribou mitigation, avoidance, work stoppage and monitoring is triggered by the presence of caribou within a minimum of 2 km from the mine site, road and all related structures and activities.</p>
<p><b>MFN Comment 36</b></p>	<p><b>Impacts to wildlife from the expansion of the access road is a non-negligible impact</b></p> <p>Page 11.70 of the EIS states that the road feature already exists and therefore enlargement and increased activity</p>	<p>MFN requests that the Proponent present information about current and projected access road activity levels as part of the effects assessment for</p>



Comment #	Description	Request
	<p>along this road will be a ‘negligible impact’. However, justification for this statement is lacking.</p> <p>Better established, busier roads present a much higher risk for wildlife road mortality and sensory disturbance levels. They may be associated with increased wildlife avoidance and/or exacerbate significant adverse impacts to caribou movement.</p>	<p>woodland caribou. This should include an associated literature review, comparing the impacts of different road use intensities. This information can then be integrated into existing effects assessment of impacts to caribou (and other wildlife).</p>
<p><b>MFN Comment 37</b></p>	<p><b>Reporting lacks field information about black bear occurrence within the project footprint</b></p> <p>The EIS acknowledges occupancy and high suitability habitat for black bear within the LAA. The EIS lacks reporting of field observations of black bear (and sign) use of the project area (Figure 12-5)</p>	<p>MFN requests that the Proponent provide any additional field observations about black bear tracks and sign within the LAA from the field program.</p>
<p><b>MFN Comment 38</b></p>	<p><b>Proposed mitigation measures insufficient to prevent significant negative impact for SAR pine marten</b></p> <p>The pine marten is a species of cultural importance to the community of MFN. We have previously undertaken projects (in partnership with government) focused on understanding and improving habitat for pine marten in our territory. The EIS acknowledges a “moderate adverse impact” to pine marten due to habitat loss, sensory disturbances and potential increases in mortality events. However, it states that this impact is not significant (12.5.1.3).</p> <p>With less than 500 individuals, the <i>Threatened</i> SAR pine marten population of Little Grand Lake/Red Indian Lake is at significant risk of extinction vortex factors (Benson et al., 2019). The low numbers and correspondingly low genetic diversity of this isolated population makes it susceptible to predicted project-induced impacts such as habitat fragmentation, increased forest fire risk, road mortality, increased density of competitors/predators and more (COSEWIC, 2007).</p> <p>As acknowledged in the EIS, pine marten is associated with large contiguous patches of suitable forest habitat (EIS, 12.2.2.3). The proposed project will – as stated in the EIS – permanently alter and fragment this high suitability habitat.</p> <p>The EIS also reports that only a small percentage of suitable pine marten habitat in the RAA will be lost from proposed project activities. However, the majority of</p>	<p>a) MFN requests that the Proponent include additional information in the EIS on reporting of SAR pine marten occupancy within the RAA.</p> <p>b) We request additional justification for the determination of ‘not significant’ for the acknowledged moderate, adverse, mid- to long-term impacts to pine marten</p> <p>c) We request additional, specific mitigation and monitoring measures, which include – among other things – the reporting of pine marten observations and mortality events.</p> <p>d) MFN community members must be included in the planning, execution, and analysis of the pine marten monitoring.</p>



Comment #	Description	Request
	<p>reported known sightings (from within 5 km of the proposed project) occur in a distinct core occupancy area near to the south shore of Red Indian lake (12-10). Information is lacking about actual pine marten occupancy within the rest of the RAA, and therefore the statement that there is ‘ample habitat elsewhere’ lacks justification.</p> <p>The mitigation measures proposed do not make reference to any specific monitoring or reporting of pine marten observations or road mortality. Pine marten are also known to be attracted to anthropogenic waste, which could increase potential mortality events (COSEWIC, 2007).</p>	
<p><b>MFN Comment 39</b></p>	<p><b>Absence of any information about SAR bat hibernacula (little brown &amp; northern myotis) within the study area, precludes EIS ability to comment on impacts to bats or propose meaningful avoidance and mitigation</b></p> <p>The EIS acknowledges that the proposed project area overlaps with high suitability habitat for two SAR bat species. It also acknowledges that fragmentation of forest habitat is associated with a known decrease in suitability for northern myotis (COSEWIC, 2013).</p> <p>The report states that the RAA contains large amounts of high suitability summer roosting and foraging habitat for both of these SAR bats. However, no studies have been conducted to search for the presence of hibernacula within the LAA or the proposed project footprint.</p> <p>Destruction of hibernacula may result in devastating local impacts to SAR bats. In the absence of any field investigations to determine the presence of hibernacula, the EIS cannot provide meaningful assessment of the potential impact to SAR bats.</p> <p>Various unknown risks to overwintering bats exist such as: direct eradication of hibernacula; adverse bat interactions with tailings, process water, and other mine water; increased bat predator density; critical habitat loss from development; and effective critical habitat loss near hibernacula due to sensory disturbances.</p>	<p>a) MFN requests additional field studies to examine the LAA for the presence of SAR bat occupancy and hibernacula sites.</p> <p>b) These additional field studies – and their associated analyses – must inform the development of additional bat related mitigation measures specifically relating to known occupancy areas.</p> <p>c) MFN community members must be included in the planning, execution, and analysis of the bat monitoring.</p>
<p><b>MFN Comment 40</b></p>	<p><b>Significant risk of impact to local and migratory waterfowl from habitat loss, alteration or degradation</b></p>	<p>a) MFN requests that the EIS proposes additional, enhanced avoidance and mitigation measures to ensure long term habitat</p>



Comment #	Description	Request
	<p>Waterfowl are an important food resource for MFN and it is important that waterfowl productivity is retained and waterfowl contamination is avoided.</p> <p>The proposed mine pits would be flooded during decommissioning. This has the potential to alter nearby hydrological regimes and could destroy or degrade wetland, river and lake habitats of the Victoria Steadies Sensitive Wildlife Area (VSSWA).</p> <p>The EIS avifauna mitigation measures do not provide any details concerning proposed measures to prevent habitat loss, alteration or degradation in the VSSWA (which encompasses the entire proposed mine site), as a result of altered hydrology from construction, operations, decommissioning, seepage or accidental releases.</p> <p>As acknowledged in the EIS (Table 10.18), waterfowl are particularly sensitive to sensory disturbances during their breeding period (May to mid-July).</p> <p>The proposed avifauna mitigation measures do not provide adequate detail (i.e. the EIS vaguely states “efforts will be made to reduce impacts”) about avoiding, or responding to, waterfowl effective habitat loss from sensory disturbances.</p>	<p>integrity and waterfowl productivity in the VSSWA.</p> <p>b) MFN requests that the EIS proposes additional, enhanced avoidance and mitigation measures to ensure that sensory disturbances to breeding waterfowl are minimized.</p> <p>c) During operations the Proponent must commit to undertaking a Country Foods survey in collaboration with MFN for evaluating the potential effects of the Project on concentrations of contaminants in fish (and other country foods).</p>
<p><b>MFN Comment 41</b></p>	<p><b>Significant risk of impacts to local and migratory waterfowl from interactions with TMFs</b></p> <p>As acknowledged in the EIS, waterfowl are at specific risk of interaction with TMFs and other industrial water containment areas (10.18).</p> <p><i>“If problematic avifauna use [of TMFs] occurs adaptive management measures will be implemented.”</i></p> <p>This statement is unclear and we request additional details.</p>	<p>a) MFN requests further refinement of waterfowl (and other avifauna) mitigations to prevent impacts from interactions with TMFs and other industrial water containment areas. Specifically, what constitutes “problematic use” and what specific deterrents or other exclusionary measures would be used? What reporting will be completed if there is waterfowl/TMF interaction? And what monitoring will be carried out?</p> <p>b) MFN community members must be included in the planning, execution, and</p>



Comment #	Description	Request
		analysis of the waterfowl monitoring.
<b>MFN Comment 42</b>	<p><b>Significant local impacts to the <i>Threatened SAR olive-sided flycatcher</i></b></p> <p>Olive-sided flycatcher – a provincially and federally designated Threatened Species at Risk (SAR) – has specific high interspersed structural requirements for habitat suitability, and is uncommon throughout its overall range (EC, 2015).</p> <p>This species was detected in two locally restricted areas within the LAA (EIS Figure 10-8). The EIS (section 10.2.4.5) acknowledges that the proposed project footprint would remove a relatively high concentration of occupied, high suitability olive-sided flycatcher habitat.</p> <p>The habitat loss from the proposed project design represents a locally significant impact to a Threatened SAR and – in contravention for the Species at Risk Act – would contribute to the olive-sided flycatcher's ongoing decline.</p> <p>The EIS statement (10.63) that avifauna displaced by the proposed development are “<i>likely to find breeding habitat elsewhere in the LAA</i>” is unjustified. There is no evidence presented that nearby suitable habitats are below carrying capacity for SAR birds (or other species).</p> <p>Displaced birds may try to establish in adjacent areas – however those adjacent habitats, in all likelihood, already contain a near maximum occupancy of breeding territories and forage capacity.</p>	<p>a) MFN requests additional information about how the proposed project plans to prevent contravention of the Species at Risk Act, and avoid and mitigate population decline of olive-sided flycatcher: a federally and provincially designated Threatened SAR.</p> <p>b) The Proponent must remove all unsupported statements related to “<i>displaced wildlife being likely find breeding habitat elsewhere</i>”, from the EIS.</p>

### 3.0 Concluding Remarks

The Project is located within the traditional territory of MFN, and the comments we have prepared on the EIS are for submission to IAAC. Based on MFN’s review of the EIS and involvement with the Project to date, our community has numerous concerns including but not limited to: information gaps, deficiencies in data, underrepresentation of potential effects, inadequate monitoring, and lack of



involvement of our community. These are described in detail in the tables above, but include the following key concerns:

- A. **Miawpukek's Indigenous Knowledge and land use, including knowledge of historic and archaeological sites, has not been gathered in any meaningful way.** This information is critical for informing all aspects of the Project. MFN is aware of current and historic land use that will be potentially impacted by the Project. The Proponent must provide funds for Miawpukek to conduct an Indigenous Knowledge and Land Use Study. This data can then be integrated into all aspects of the Project by MFN and the Proponent through a mutually agreed upon, collaborative process.
- B. **The woodland caribou of Newfoundland have a high environmental, cultural and economic importance to MFN.** All beings are important, but caribou are an integral part of Newfoundland Mi'kmaq culture and heritage. Miawpukek Mi'kmaq are known as the people of the deer (deer = caribou). The survival of caribou is essential for Miawpukek Mi'kmaq as they are a keystone species for the region, a critical food resource and a source of sustainable economic activity from hunt-guiding. In addition to the significant negative effects to the Buchans Herd, MFN asserts that there may be significant negative effects on the Grey River Herd and adjacent/contiguous herds. These issues are exacerbated by lack of understanding about demographics and body condition for Buchans and Grey River herds. These issues must be addressed (see specific recommendations in this report) and the people of MFN must be involved in any monitoring/studies of the woodland caribou going forward. Our people have significant expertise and knowledge of the caribou which should be considered with respect.
- C. MFN does not believe the Metal and Diamond Mining Effluent Regulations (MDMER) monthly mean concentration (MMC) values are sufficient for the protection of aquatic life that MFN relies upon for sustenance and livelihood as it will degrade the water quality of their traditional territories. **A more protective guideline must be used for the protection of aquatic life.**
- D. **The use of multiple mixing zones for the dilution of contaminants from the Project is inappropriate and lessens the Proponent's responsibility for adequate treatment.** The Proponent must consolidate the current Final Discharge points to a maximum of three: one for Marathon Complex, one for Leprechaun complex, and one for the TMF. In all instances, water treatment should be in place so that water quality meets or exceeds the most appropriate guideline **prior to discharge** to the environment.
- E. The EIS does not describe any Indigenous involvement in the design or execution of monitoring plans. MFN community members are familiar with the area and have valuable skills that would be an asset as environmental monitors. **It is recommended that the Proponent establish a training and hiring program for Indigenous environmental monitor positions.**
- F. **It is recommended that an Indigenous Environmental Monitoring Committee (IEMC) be struck to advise on monitoring activities for the Project.** This oversight body would be involved in ongoing monitoring associated with the Project and could provide recommendations for improved environmental performance. Moreover, the IEMC could provide a link to the



community of MFN, helping to provide education and clarity regarding ongoing project activities. MFN envisions that the IEMC (or a similar committee) will provide a joint forum for the Proponent, regulators, and MFN to discuss a range of topics relevant to the management and operation of the mine.

It is necessary for Marathon to remedy these concerns in their EIS and their approach to development. Until such time, MFN will remain strongly opposed to the Project. Furthermore, it is MFN's position that the duty to consult has not been met by the Crown and should this Project advance through the Environmental Assessment with approval, this will be challenged by MFN. The legal obligation for the duty is upheld by the Supreme Court of Canada and is a requirement of *UNDRIP*, which has been adopted by Canada. *UNDRIP* requires that the Crown cooperate in good faith with Indigenous Peoples to obtain free, prior and informed consent (FPIC).

MFN has not been adequately informed and does not give consent to this Project. If Marathon and the Crown are willing to engage with MFN in a meaningful and respectful manner, demonstrated by committing to a mutually-agreed-upon consultation process which offers MFN confidence that our rights and interests will be respected and accommodated, then we will continue to engage in discussion in good faith. In addition to the specific recommendations provided in this report, MFN provides the following important guidance:

1. MFN has identified 42 specific comments, along with the associated recommendations. MFN requests that IAAC provide written confirmation of how these comments have been incorporated into their assessment and informed the development of Information requests. MFN requests that the Proponent engage our community in an impact mitigation dialogue to demonstrate that our concerns are being addressed. This should include reasonable capacity funding for involvement of MFN staff, advisors, and community members.
2. The EA is just one step towards the development and operation of the Project. Should the Project proceed to additional stages of permitting and approvals, it will be critical for the Crown and Proponent to actively engage with MFN. This process should include meaningful capacity support for the involvement of MFN staff, advisors and our community. One means by which this could be achieved is through the development of the IEMC, as proposed.
3. Meaningful involvement of MFN by the Proponent should occur via the development of an **MFN-specific Consultation Agreement**. This would clearly define a meaningful consultation and accommodation process, which *may* lead to MFN's free, prior, and informed consent for the Project. This must include support for our full participation throughout the Environmental Assessment (EA) process and equitable accommodation for any impacts of the Project on our inherent rights and interests. At the time of writing MFN is in the process of developing a draft of this agreement, which will be shared with the Proponent for further discussion. Moreover, MFN expects that if the Project goes forward, the Proponent will negotiate in good faith an **Impacts and Benefits Agreement** that meets or exceeds Industry standards in Canada.
4. The concerns and issues that have been identified by MFN herein are not an exhaustive list. These have been developed based on our limited capacity, based on the funding provided by IAAC under the Participant Funding Program. Furthermore, there has been no meaningful



inclusion of our Indigenous Knowledge and land use and community membership. It is expected that given additional opportunity to review the Project, with the input of Project-specific Indigenous Knowledge study data and community members, there would be many other issues which MFN would identify.



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