19.6 Potential Project-Environment Interaction

Potential Project-environment interactions were identified through a review of the Project Description and existing environmental and land and resource use conditions. The linkages between Project components and activities and potential effects to non-Aboriginal land and resource use are identified in Table 19-42.

Table 19-42: Project-Environment Interactions for Non-Aboriginal Land and Resource Use

Criteria	Indicator	Project Phase		Description of Potential Project-Environment Interaction (Potential Effect)
		Construction (includes access road and ROW preparation, installation, and reclamation activities)	Operation (includes operation and maintenance activities)	
Federal, provincial and local land use policies and designations	Compatibility of the Project with land use designations and bylaws	✓	✓	Incompatibility of Project construction and/or operations with land use designations, plans, and policies.
Parks and protected areas	Parks and protected areas access and use	✓	✓	Reduction and increase to access to parks and protected areas due to Project construction and operation and the resulting change in use.
	Parks and protected areas environmental setting	✓	✓	Change to environmental setting due to changing environmental conditions due to Project construction and operation activities.
	Natural, Cultural and Recreational features affecting Natural, Cultural and Recreational values	✓	✓	Change to natural, cultural and recreational features which could affect natural, cultural and recreational values within parks and protected areas due to Project construction and persisting through operation.
Linear infrastructure	Linear infrastructure access and use	✓	✓	Increase or decrease in access to linear infrastructure Projects affecting operation or maintenance due to Project construction and operation.
Non-commercial recreational land and resource use	Non-commercial recreational land and resource use and access	✓	✓	Reduction and increase to access to non-commercial recreation areas due to Project construction and operation and the resulting change in use.
	Non-commercial recreational environmental setting	✓	✓	Change to environmental setting due to changing environmental conditions due to Project construction and operation activities.
	Non-commercial recreational fish and wildlife harvest levels	✓	✓	Loss or alteration of wildlife and fish resource harvest due to changes in wildlife and fish abundance and distribution due to Project construction and operation.

Table 19-42: Project-Environment Interactions for Non-Aboriginal Land and Resource Use

Criteria	Indicator	Project Phase		Description of Potential Project-Environment Interaction (Potential Effect)
		Construction (includes access road and ROW preparation, installation, and reclamation activities)	Operation (includes operation and maintenance activities)	
Commercial land and resource use	Commercial industrial land and resource use and access (i.e., mines, aggregates, agriculture)	✓	✓	Reduction and alteration to access to commercial industry areas due to Project construction and operation and the resulting change in use.
	Commercial recreational land and resource use and access	✓	✓	Reduction and increase to access to commercial recreation areas due to Project construction and operation and the resulting change in use
	Commercial recreation environmental setting	✓	✓	Change to environmental setting due changing environmental conditions due to Project construction and operation activities.
	Commercial recreational fish and wildlife harvest levels	✓	✓	Loss or alteration of wildlife and fish resource harvest due to changes in wildlife and fish abundance and distribution due to Project construction and operation.
	Commercial forestry land and resource use and access	✓	✓	Reduction in production forest area due to area being unavailable for timber production.
		✓	✓	Change to area and spatial orientation of planned harvests due to required clearing for the Project
		✓	✓	Change to results of silviculture treatment areas due to required clearing for the project.
		✓	✓	Change to road access due to Project overlap with existing or planned forestry access roads.

✓ = A potential Project-environment interaction could result in an environmental or socio-economic effect; ROW = right-of-way

19.7 Potential Effects, Mitigation, and Net Effects

This section presents the potential effects, appropriate mitigation measures, and predicted net Project effects for non-traditional land and resource use.

19.7.1 Measurement of Potential Effects

19.7.1.1 Compatibility of the Project with Land Use Designations and Bylaws

Potential effects are measured in a binary manner where the Project is either compatible or incompatible with existing land use strategies. If an incompatibility with existing land use is discovered, it must be resolved prior to construction of each segment therefore compatibility must be achieved for the Project to be completed.

19.7.1.2 Access and Use

Potential effects are assessed quantitatively and qualitatively. Quantitative disturbance of parks and protected areas, recreation areas, infrastructure and industrial areas are assed. The quantitative disturbances are assessed qualitatively in how their disturbance will interact with the overall availability of these lands and the interaction with opportunities in close proximity to the disturbances.

19.7.1.3 Environmental Setting

Potential effects are assessed quantitatively and qualitatively. Environmental effects are measured quantitatively in disciplines referenced including noise and air quality. These quantitative effects are assessed qualitatively in their interaction with the environmental in parks and protected areas, recreation areas, infrastructure and industrial areas. The measurement of the change to environmental setting relies on the net effects of the surface water (refer to Section 7), air quality (refer to Section 9), acoustic environment (refer to Section 11), vegetation and wetlands (refer to Section 12), wildlife and wildlife habitat (refer to Section 14) and visual environment (refer to Section 20) assessments.

19.7.1.4 Natural, Cultural and Recreational Values of Parks and Protected Areas

Potential effects are assessed quantitatively and qualitatively. The Project has the potential to affect specific features that support the natural values, cultural values and recreational values found within parks and protected areas. These generally include:

- **Natural** – water bodies, unevaluated wetlands, ecosystems and significant wildlife habitat (including caribou habitat), ANSIs, representative geological formations, critical landform vegetation associations).
- **Cultural** – archaeological and cultural sites and areas; areas of archeological and/or cultural potential, traditional land use areas.
- **Recreational** –hunting, fishing and trapline areas, canoe routes, trails, campsites, campgrounds, access points, boat launches and boat caches, main lodges, outpost camps, cottages and camps, tourism establishment areas and potential tourism establishment areas.

Quantitative effects were drawn from the spatial disturbance to features contributing to natural, cultural and recreational values. Qualitative assessment of natural, cultural and recreational values was based on the Project's impact on:

- the maintenance of ecological integrity;
- the preservation, and conservation of cultural heritage and natural resources; and
- the provision of ecologically sustainable outdoor recreation opportunities.

The qualitative assessment of impacts to these values considered social, biophysical and environmental assessments of the Project's impacts.

19.7.1.5 Fish and Wildlife Harvest Levels

Effects are measured quantitatively based on the results of the wildlife (refer to Section 13) and fish and fish habitat (refer to Section 14). Anticipated effects from those sections are carried through to a discussion of how the availability of harvested species are impacted by the Project. There is also a quantitative assessment of how additional access will impact hunting and fishing activities and their ability to harvest target species.

19.7.1.6 Commercial Forestry Land and Resource Use and Access

Potential effects are assessed quantitatively and qualitatively. Reduction in production forest area is assessed quantitatively by comparing the area of production forest consumed by the Project footprint to the total area of production forest in each forest management unit. Potential effects to area and spatial orientation of planned harvests are assessed qualitatively by discussing the implications of Project activities overlapping with planned harvest areas and their access (as outlined in approved FMPs). Potential effects to silviculture treatment areas are assessed quantitatively and qualitatively based on the area of the Project footprint that has received silviculture treatments, and the implications of Project activities overlapping these treated areas. Potential effects to road access are assessed qualitatively by discussing the implications of Project activities overlapping and interacting with existing and planned forest access roads and their associated management strategies (as identified in approved FMPs).

19.7.2 Federal, Provincial and Local Land Use Policies and Designations

19.7.2.1 Compatibility of the Project with Land Use Designations and Bylaws

19.7.2.1.1 Potential Effects

The Project could be incompatible with existing land use policies, designations, direction, or guidelines. The Project must consider and adhere to land use planning guidance, including:

- federal requirements for development on reserve lands;
- CLUPA direction for the management of general use areas, conservation reserves, forest reserves, provincial parks, and enhanced management areas;
- CLUAH Project Management Guidelines for sensitive land areas, such as canoe routes;
- MNRF provincial park and conservation reserve management plans and management statements;
- the Growth Plan for Northern Ontario;
- the PPS; D-1 and D-6 environmental land use planning guides; and
- municipal official plans.

Federal, provincial, and municipal land use planning direction and guidelines generally allow for the responsible development of infrastructure, including transmission line infrastructure, where feasible alternatives are not available and where community well-being and growth will be supported. Several of these planning documents identify that transmission line infrastructure development is compatible with existing land use designations and does not require any designation amendments, provided that the necessity of the Project is established, and that the Project fulfills certain conditions around the protection of environmental and cultural heritage. It is NextBridge's intent to adhere to the requirements of existing land use planning provisions. Where necessary, consultation will be undertaken to establish consensus on appropriate adherence to land use planning direction, as outlined in Table 19-45. Prior to construction of each segment, appropriate permits, licences, and other approvals (e.g., for development on federal reserve lands) will also be acquired in order to satisfy the conditions of federal, provincial, and municipal land use planning documents.

Some municipal and provincial Crown land use planning and management documents do not provide explicit guidance or permission for transmission line development, and in some cases, land use planning provisions identify that new utility corridors will not be permitted, creating potential incompatibility issues in relation to the Project. The Black Sturgeon River Provincial Park Management Plan (MNR 2003) and the Kama Cliffs Conservation Reserve Management Plan (MNR 2001) represent two such planning documents where new utility corridor development is currently prohibited. NextBridge has been working with the MNRF to find mutually agreeable amendment solutions to establish Project compatibility with the Black Sturgeon River Provincial Park Management Plan, Kama Cliff Conservation Reserve Management Plan, and other management plans and land use planning guidance. Ontario Parks has indicated that it is open to applications to obtain park management plan amendments in relation to the Project, as applicable. On February 7, 2017, a Policy Proposal Notice on the Environmental Bill of Rights, Registry Number 012-9685, was posted by the MNRF to propose the amendment to the management direction for the Black Sturgeon River, Ruby Lake, Gravel River, Pukaskwa River, and Nimoosh provincial parks, to allow tenure to be issued for utility corridors associated with the Project.

19.7.2.1.2 Mitigation

During the Project construction phase, required federal, provincial and municipal provisions/conditions for land use policy, designation and by-law compatibility (i.e., associated with federal patent lands (external), First Nations reserve lands, the PPS, CLUPA, CLUAH Management Guidelines, D-1 and D-6 Environmental Land Use Planning Guides, municipal official plans) will be adhered to and be compatible with land use designations. Mitigation measures will be consistent with D-1 Land Use and Compatibility (Government of Ontario 1995a), D-6 Compatibility between Industrial Facilities (Government of Ontario 1995b) to the extent feasible so that the Project is compatible with planning documents. Stakeholders will continue to be consulted regarding the compatibility of the Project with existing land uses to determine mutually agreeable solutions where required. Following construction, temporary roads will be decommissioned in accordance with the MNRF's *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* (MNR 2010). These mitigation measures will be implemented so that the Project is compatible with existing land use requirements. Mitigation measures are summarized in Table 19-45. The effectiveness of mitigation will be evaluated during construction and post-construction, and measures will be modified or enhanced as necessary through adaptive management.

19.7.2.1.3 Net Effects

Through engagement with federal, provincial, and municipal land use management authorities prior to construction and with the effective implementation of the mitigation identified above and in the Construction Environmental Protection Plan (CEPP; refer to Appendix 4-II) and Operation Environmental Management Plan (OEMP; refer to Appendix 4-III), there is no anticipated net effect on the maintenance of compatibility with federal, provincial, or municipal land use designations. Therefore, this effect (conflict with land use designations and bylaws) is not carried forward to the net effects characterization (refer to Section 19.8).

19.7.3 Parks and Protected Areas Access and Use

19.7.3.1 Reduction and Increase to Access to Parks and Protected Areas

19.7.3.1.1 Potential Effects

Project construction activities (e.g., site preparation, clearing and grubbing, construction of infrastructure, assembly and erection of transmission structures, and the transportation of construction workers, equipment, and materials) will occur within limited segments of existing parks and protected areas. Project construction activities and associated access restriction in place to protect public safety could temporarily reduce or limit access to certain portions of existing parks and protected areas, particularly within the Project footprint. As a result, users would be partially displaced from land and amenities in these affected areas.

Where feasible, NextBridge has sought to avoid crossing parks and protected areas, as described in Appendix 3-IB. The overlap between the Project footprint and local parks and protected areas was measurable but small (125.6 ha) relative to the overall area of park lands and protected areas in the parks and protected areas LSA. The Project footprint overlaps the following parks and protected areas:

- 26.2 ha of five provincial parks (0.1% of the total combined area of these parks);
- 84.3 ha of three conservation reserves (0.1% of the total combined area of these reserves);
- 4.9 ha of The Lake Superior National Marine Conservation Area (equalling 0.0005% of the total Lake Superior National Marine Conservation Area);
- one candidate ANSIs (9.4 ha);
- 0.8 ha of one forest reserve;
- five research plots; and
- two Enhanced Management Areas (refer to Figure 19-2).

Access to parks and protected areas or access within parks and protected areas may also be temporarily affected by increased traffic and road restrictions during the construction stage. Highway 17 and connecting access roads will be used to transport the construction workforce, equipment, and goods to the various segments of the Project, while construction waste will be transported from the Project to regional disposal facilities. Some access roads may experience intermittent, short-term closures during clearing, tower assembly, cable stringing, and cable splicing, in order to facilitate construction and promote worker and public safety. These road closures could create the need for detours on roads that are also used to access parks and protected areas beyond the Project footprint. Existing roads and trails will be used where practical to limit disturbances resulting from the construction of new access roads and trails; however, some new access roads will be constructed.

Although access and use of these parks and protected areas may be temporarily restricted during construction, construction will be completed using a staged approach. Therefore, these disturbances will be experienced intermittently rather than continuously across the entire Project footprint for the entire construction phase.

For preliminary construction planning purposes, the preferred route ROW has been divided into six sections, ranging from 45 to 100 km in length, each with its own crew of workers to complete each construction activity. It is expected that construction activities will cover approximately 0.2 to 6 km each day, depending on the specific construction activity. It is conservatively assumed that as a worst case, flagging and clearing, access road construction, staking, geotechnical investigations, and the installation of foundations could occur at the same time within approximately 5-km segments along the preferred route, with each activity occurring within separate, approximately 1-km segments.

During the operation phase, up to a 64-m-wide preferred route ROW will be maintained. Maintenance activities, including the periodic inspection of the Project, necessary repairs, and vegetation management in the preferred route ROW, may result in short-term restricted access at areas of maintenance. However, these activities are expected to be infrequent, and park users will otherwise have continued access to the entire preferred route ROW for regular use. When access restrictions are in place, users would still be able to continue to access other areas of these same parks and protected areas to conduct similar activities.

The operation phase also provides additional access through the clearing of corridors within parks and protected areas. Linear corridors can be used for motorized and non-motorized travel within and through parks and protected areas. Areas adjacent to the linear corridor also may undergo increased access due to their proximity to the linear corridor as informal trails to potential recreation points (such as hunting areas, fishing area and viewpoints) may be created. New linear corridors are only created for 0.6 km of the ROW within provincial parks and conservation reserves.

19.7.3.1.2 Mitigation

During the Construction Phase, advanced notice of construction activities will be provided to recreational users through formal notification in local newspapers and at recreational areas, parks and campsites (e.g., notices park entrances) to notify users of access disturbances. Local route refinements or refinement of the Project footprint will be undertaken during the planning stage to avoid known species of concern and/or their habitat, if required. NextBridge will actively consult with the MNRF and other relevant stakeholders on proposed measures to minimize interruption of recreational use and access restrictions to recreational areas. NextBridge will develop the environmental and safety orientation program to be implemented by the construction Contractor. NextBridge will apply best efforts to work with the MNRF to plan construction around the peak park season (which is generally from June to September) to minimize access disturbances to users. The Contractor will adhere to these recommended construction timing windows and restrictions. If adherence to the timing windows and restrictions is not possible, the Contractor will develop a site-specific mitigation and monitoring plan in consultation with NextBridge and appropriate regulatory agencies (e.g., MNRF, LRCA).

Signage will be placed along park boundaries in the ROW during construction to note park and protected area lands. Construction activities associated with the Project is predicted to be confined to the surveyed and marked areas with all flagging, marking and signage removed after completion. Construction will use existing roads and trails where feasible. Construction activities in parks and protected areas will be staged to avoid or minimize potential effects on ecologically sensitive areas and life cycle periods, where feasible. Construction activity adjacent to sensitive land use areas (e.g., recreational uses deemed by municipality, provincial or federal agencies to be sensitive, buildings or amenity areas not directly associated with industrial use) will be minimized to the extent feasible. Specific protected area mitigations will be implemented as noted in Table 19-45 and the CEPP (refer to Appendix 4-II). NextBridge will implement the Traffic Management Plan (refer to Appendix 4-II, Section 8.5). These construction mitigations will reduce the number and spatial extent of Project-related access restrictions, and minimize spatial overlap of the Project within provincial parks and protected areas. Mitigation measures are summarized in Table 19-45. The effectiveness of mitigation will be evaluated during construction and post-construction, and measures will be modified or enhanced as necessary through adaptive management.

19.7.3.1.3 Net Effects

Changes in access to and use of parks and protected areas in the Project footprint and the parks and protected areas LSA during construction and operation are anticipated after the effective implementation of the mitigation identified above and in the CEPP (refer to Appendix 4-II) and OEMP (refer to Appendix 4-III). Access restrictions will occur during the staged construction phase and periodically during the operations stage. Additional access

corridors will be available during the operation stage for accessing and using provincial parks and protect areas along the ROW and adjacent to the ROW. This effect (restrictions to access and use of parks and protected areas) is carried forward to the net effects characterization (refer to Section 19.8.2.1).

19.7.4 Parks and Protected Areas Environmental Setting

19.7.4.1 Change to Environmental Setting of Parks and Protected Areas

19.7.4.1.1 Potential Effects

Changes to the environmental setting are confined to changes in physical and biophysical environment for the purpose of this assessment. Changes to surface water, air quality, acoustic environment, vegetation, wildlife and visual aesthetics can alter the setting in which recreational activities occur. Therefore, the net effects to the biophysical environment may impact the recreation environment setting.

The Project footprint and parks and protected areas LSA are used actively by recreationalists and tourists for a range of outdoor activities. Use is heavily driven by the concepts of “wilderness” and “remoteness.” Many provincial parks in the parks and protected LSA are non-operating, and cater to an advanced outdoor tourism and recreation clientele who are attracted by the restricted/challenging access, low noise levels, and limited industrial or infrastructure-related visual disturbances. The maintenance of this remote environmental setting is considered important to park visitors.

Where feasible, the Project has been designed to avoid parks and protected areas (refer to Appendix 3-IB); however, the Project footprint and parks and protected areas LSA overlaps with portions of parks and protected areas. The Project has the potential to result in changes to the biophysical environment (i.e., surface water, air quality, noise, wildlife, vegetation and visual aesthetics) and affect the environmental setting within parks and protected areas. The results of the surface water, air quality, noise, wildlife, vegetation and visual aesthetics assessments are summarized below.

As presented in Section 7, the surface water criterion assessment evaluates potential effects to surface water quantity and surface water quality. Net effects are identified to surface water due to the Project. Change to surface water impacts the setting of many recreation activities occurring in aquatic environments. Popular identified activities on water include fishing and canoeing which may be perceived as negatively impacted due to a reduction in surface water quality or quantity.

As described in further detail in Section 9, the Project is predicted to have a net effect on air quality during construction. Users may experience a change in environmental conditions in parks and protected areas due to potential emissions.

As described in further detail in Section 11, net effects on the acoustic environment during Project construction and operation are identified in both construction activity cases considered by the noise assessment. Acoustic environment changes will alter the environmental setting for parks users.

The vegetation and wetlands assessment (refer to Section 12) identifies net effects related to the loss and alteration of upland, wetland and riparian ecosystem distribution and composition in their LSA. Vegetation composition and distribution contributes to the remote and wilderness character previously identified as desirable by park users.

The wildlife assessment (refer to Section 14) notes net effects to myotis, moose, marten, bald eagle, bobolink, Canada warbler, eastern whip-poor-will and olive-sided flycatcher. Identified recreation activities within

provincial parks include hunting1, and wildlife viewing therefore the availability of animals to harvest or view contributes to the quality of recreational activity available. Changes in wildlife abundance or distribution as result of reduced habitat or reproduction could result in negative perceptions of the park's environmental setting for recreation activities.

The results of the visual aesthetics assessment (refer to Section 20) indicate that construction activities would create noticeable but temporary changes in visual quality by introducing construction vehicles (e.g., crew vehicles), people, equipment (e.g., mechanical harvesters, graders), material (e.g., tower steel), and construction facilities (e.g., offices, camps). Construction and operation activities would also create permanent changes in visual quality by removing vegetation, modifying landforms, and introducing built structures in previously forested areas of the Project footprint within or adjacent to parks and protected areas. These areas will remain cleared, apparent and accessible to users.

Section 20 identifies that Project components would be partially or fully obstructed by landforms and vegetation screening at most viewing locations in the visual environment LSA. The Project is more likely to be visible along the 39.1 km (8.8%) of the preferred route ROW that does not parallel existing alignments, where Project components will contrast with the existing, predominantly forested setting of the visual environment LSA. However, only a very small portion of parks and protected areas in the parks and protected areas LSA are transected by the 39.1 km of the preferred ROW that would experience new clearing (i.e., only 0.6 ha of Pukaskwa River Provincial Park). This limits the extent of effects on park and protected area users' experience due to changes to visual aesthetics.

The direct effects of Project activities on surface water, air quality, noise, vegetation, wildlife and visual aesthetics, summarized above, are expected to create disturbance and nuisance effects during construction and operation that may alter the environmental setting and user experience of existing parks and protected areas.

19.7.4.1.2 Mitigation

In specific areas where avoidance of protected areas was not feasible, specific mitigation measures for those areas as identified in Table 19-45, the CEPP (refer to Appendix 4-II) and the OEMP (refer to Appendix 4-III) will be implemented to minimize disturbances. These mitigation measures will minimize disturbance to activities within these areas.

To reduce impacts on canoe routes and portages, vegetation clearing around a canoe route and its associated portage will be limited to where necessary for safety. Further, compatible vegetation (e.g., below 2 m in height) will be retained where practicable to meet regulatory requirements and minimize visual evidence of disturbance from activities, maintain visibility of portage on either side of the ROW and access roads for recreational user accessibility, keep portages cleared of vegetation debris, and maintain the existing grade of the portage in a manner that it is safe for the recreational users. These mitigation measures on important canoe routes will limit visual nuisance effects to users preserving the quality of the canoeing experience.

Local municipal noise by-laws and the MOECC Model Municipal Noise Control Bylaw (i.e., NPC-115) will be complied with, including making sure equipment used is well maintained and operated so as not to exceed the Health Canada Noise Guidance and MOECC NPC-300 noise guideline on ambient noise levels. NextBridge or their contractor will make sure that noise abatement equipment on machinery is properly maintained and in good working order. Vehicles and equipment will be turned off when not in use to minimize idling, unless weather and/or safety conditions dictate the need for them to remain turned on and in a safe operating condition. Noise concerns will be addressed as they arise through a complaint resolution process. NextBridge will review, approve and implement an environmental and safety orientation program including details on the expectation

[1] Hunting is only expected to occur in parks and protected areas where the activity is allowed under the management documents.

that noise levels will be minimized when working near commercial tourism and recreation land use features. These mitigation measures limit noise-based disturbances to park users; however, construction noise is identified as a nuisance effect on the quality of experience.

Dust control measures will be implemented (e.g., spray dust control solution that holds moisture for a long period of time causing dust to settle) as advised by the Environmental Inspector. Dust is identified as a nuisance effect and measures reducing dust will aim to reduce air quality impacts to park users.

Mitigation outlined in the Geology, Terrain and Soils (refer to Section 6), Surface Water (refer to Section 7), Air Quality (refer to Section 9), Acoustic Environment (refer to Section 11), Vegetation and Wetlands (refer to Section 12), Fish and Fish Habitat (refer to Section 13), Wildlife and Wildlife Habitat (refer to Section 14) and Visual Environment (refer to Section 20) will be implemented, as appropriate, to limit Project effects on parks and protected areas during construction and operation. Contingency plans and environmental plans as outlined in the CEPP (refer to Appendix-4-II) will also be implemented. Impacts to the environmental setting may reduce the enjoyment of park users, therefore implementing mitigation measures aimed at reducing impacts will aim to enhance the quality of experience for users. For example, the restrictions on vegetation clearing will preserve the remote wilderness character of parks, which has been identified as an important feature of parks that is enjoyed by users.

These mitigation measures are expected to minimize the potential effects on parks and protected areas. Mitigation measures are summarized in Table 19-45. The effectiveness of mitigation will be evaluated during construction and post-construction, and measures will be modified or enhanced as necessary through adaptive management.

19.7.4.1.3 Net Effects

Net effects on surface water, visual quality, noise, air quality wildlife and vegetation could potentially affect the environmental setting for park users after mitigation measures described in Section 19.7.4.1.2 and the CEPP (refer to Appendix 4-II). Therefore, this effect to the environmental setting of parks and protected areas (refer to Section 19.7.4.1) is carried forward to the net effects characterization (refer to Section 19.8.2.2).

19.7.5 Natural, Cultural and Recreational Values of Parks and Protected Areas

19.7.5.1 Change to Natural, Cultural and Recreational Features and Effect on Natural, Cultural and Recreational Values of Parks and Protected Areas

19.7.5.1.1 Potential Effects

Summary of Features within Parks and Protected Areas Transected by the Project Footprint

The Project footprint transects small portions (0.03% to 0.7%) of provincial parks at five locations and conservation reserves at three locations. Within parks and protected areas, the Project footprint has also been aligned with existing linear corridors to the extent feasible. This design measure minimizes Project interactions with and potential effects to natural, cultural and recreational features in parks and protected areas. NextBridge has further detailed steps taken to explore alternatives and minimize interactions with parks and protected areas, as described in Appendix 3-IB.

The Project footprint transects a relatively small number (and small proportion) of natural, cultural and recreational features situated in each provincial park or protected area. The Project footprint overlaps the following:

Natural Features

- 2.1 ha to 52.9 ha of each park or protected area (for under 10 km of the ROW);

- 2.7 ha of CLVAs (in Gravel River Conservation Reserve, Gravel River Provincial Park and Kama Cliffs Conservation Reserve);
- one to nine water crossings (i.e., overlapping 0 ha to 4.9 ha of water bodies);
- 0.2 ha of category 1 caribou habitat in Lake Superior National Marine Conservation Area;
- 12.3 ha of category 3 caribou habitat; and
- 0.1 ha to 2.3 ha of wetlands (i.e., in the Lake Superior National Marine Conservation Area, Gravel River Conservation Reserve, Kwinkwaga Ground Moraine Uplands Conservation Reserve and Forest Reserve, Black Sturgeon River Provincial Park and Ruby Lake Provincial Park).

Cultural Features

- no archaeological sites
- 4.6 ha of bush camps (in Kwinkwaga Ground Moraine Upland Conservation Reserve and Forest Reserve);
- 0.3 km of trapping trails (in Gravel River Provincial Park and Nimoosh Provincial Park);
- 0.1 km of canoe route (in Pukaskwa River Provincial Park);
- 1.8 km of trapline (in Nimoosh Provincial Park); and
- 2.1 ha to 52.9 ha of traditional harvest areas.

Recreational Features

- 0.001 ha to 52.9 ha of outdoor tourism and recreation areas (BHAs, FMZs, BMAs, WMUs and traplines);
- 2.1 km of trails; and
- 0.4 km of canoe routes.

19.7.5.1.2 Summary of Potential Project Effects Occurring within Parks and Protected Areas

The factors of significance of net effects to vegetation and wetlands, surface water, geology, wildlife, fish and fish habitat, archaeology, heritage resources, non-traditional land and resource use, air quality, noise, visual quality and Indigenous land and resource use for traditional purposes have been considered with respect to effects identified as potentially occurring within parks and/or protected areas, or within the parks and protected areas, biophysical or cultural LSAs. Below is a summary of net effects identified by biophysical, cultural and historical studies in relation to the Project:

Vegetation and Wetlands

As presented in Section 12, the vegetation and wetlands assessment evaluated potential effects to the availability, distribution and composition of upland ecosystems, wetland ecosystems and riparian ecosystems. As described in Section 12.5, net effects have been identified on ecosystem availability, ecosystem distribution and ecosystem composition. These net effects were predicted to occur in the parks and protected areas transected by the Project footprint as denoted in Section 19.5.2.3.2.2. Of note is the transection of CLVAs in Kama Cliffs Conservation Reserve where 20% of a CLVA formation is disturbed. However, it should be noted less than 1.0 ha of this CLVA exists cumulatively in the eight ecodistricts considered in this effects assessment, suggesting this formation has exceeded the limits of its resilience in baseline characterization.

Surface Water

As presented in Section 7, the surface water criterion assessment evaluates potential effects to surface water quantity and surface water quality. Net effects to surface water are predicted due to the Project.

Geology

As presented in Section 6, the surficial geology criterion assessment evaluates potential effects to terrain distribution. As presented in Section 6.8.2.1 and detailed in Table 6-8, net effects are predicted due to site clearing and preparation, and blasting.

Fish and Fish Habitat

Section 13 identifies that the Project may result in minor changes to aquatic habitat availability or fish distribution or abundance; however, this is not expected result in measurable net effects to the populations of the criteria fish species (brook trout, northern pike, walleye, and lake sturgeon) or the structure and function of aquatic ecosystems. Some net effects are due to the change to abundance and distribution of brook Trout and walleye from changes to public access to recreational angling.

Archaeology

As presented in Section 15, the archeology resources criterion assessment evaluated potential loss of, or damage to, an archaeological resource from construction activities; the loss of, or damage to, an archaeological resource located downstream from the Project from erosion resulting from increased streamflows, and the potential for the operation and maintenance of the Project footprint to increase access to archaeological resources. No net effects were identified for archaeological resources as a result of the Project (refer to Section 15.8).

Heritage Resources

As presented in Section 16, the heritage resources assessment evaluated potential effects to the number, type and location of identified and potential built heritage resources and cultural heritage landscapes. No net effects were identified for heritage resources as a result of the Project.

Non-Aboriginal Land and Resource Use

As presented in this section, non-Aboriginal land and resource use assesses potential effects to land use access and use, and to the environmental setting of parks and protected areas. Net effects were identified in parks and protected areas.

Air Quality

As described in further detail in Section 9, the Project was predicted to have a net effect on air quality during construction impacting recreational features as described in Section 9.8.

Noise

As described in further detail in Section 11, net effects on the acoustic environment during Project construction and operation are assessed in both construction activity cases considered by the noise assessment. As described in Section 11.8, change to acoustic environment impacts the recreation environmental setting in parks and protected areas.

Visual Quality

As presented in Section 20, the visual quality assessment evaluates the visibility of the Project from key viewpoints to determine the visual prominence of Project components and activities, the visual contrast of the Project relative to the existing landscape, and compatibility of the Project with the existing landscape. As presented in Section 20, net effects were identified related to the visibility of the Project and the visual contrast of the Project relative to the existing landscape.

Wildlife

The wildlife assessment notes net effects to myotis, moose, marten, bald eagle, bobolink, Canada warbler, eastern whip-poor-will and olive-sided flycatcher. However, these changes are predicted to be within the resilience limits of the affected populations.

Net effects to little brown myotis and northern myotis are expected with a predicted loss of summer maternity roosting habitat resulting from RFDs, including the Project. Adverse effects to known bat hibernacula are unlikely to occur because it would result in a contravention of the *Endangered Species Act*. The primary threat affecting little brown myotis and northern myotis populations in the wildlife and wildlife habitat study areas is White-nose Syndrome. As a result of the syndrome, populations of these species are not predicted to be self-sustaining under baseline conditions. The loss of maternity roosting habitat from RFDs, including the Project is could hinder the potential for these populations to recover. Identified recreation activities within provincial parks include hunting[2], and wildlife viewing therefore the availability of animals to harvest or view contributes to the quality of recreational activity available. Changes in wildlife volume or distribution as result of lost habitat or reproduction could result in negative perceptions of the quality of the park's environmental setting for recreation activities.

Caribou in the caribou RSA are considered as not likely to be self-sustaining in the baseline characterization; therefore, combined effects from the Project and previous and existing developments are predicted despite the small incremental changes caused by the Project. Within Lake Superior National Marine Conservation Area, category 1 caribou habitat disruption represents less than 0.01% of available winter use and nursery area habitats in the Lake Superior Coast Range, which currently extend over 19,927 ha and 21,142 ha for nursery and winter use areas, respectively suggesting minimal disruption. Within provincial parks and conservation reserves, the category 3 habitat overlapped is considered discontinuous range and does not support caribou populations but rather provides a linkage between the Lake Superior Coast Range and the northern area of continuous caribou distribution, where the majority of Ontario's caribou occur. The discontinuous range is managed to provide landscapes that may support temporary caribou occupancy or movement between the areas of continuous distribution. Category 3 habitat identifies habitat features or areas anticipated to have the highest tolerance to alteration before function is compromised (MNR 2013c).

Indigenous Current Use of Lands and Resources for Traditional Purposes

As presented in Section 17.7, Table 17-1, potential effects on the current use of lands and resources for First Nations communities were evaluated through a combination of quantitative and qualitative changes to traditional wildlife harvesting, traditional fish harvesting, traditional plant and material harvesting, and the use of culturally important sites and areas. Potential effects on the use of lands and resources for Métis communities are evaluation through a combination of quantitative and qualitative changes to Métis way of life and Métis harvesting. As presented in Table 17-42 and Section 17.8.2, net effects to First Nations criteria and Métis criteria were anticipated. These net effects were predicted to occur, to varying extents, in the parks and protected areas transected by the Project footprint.

19.7.5.1.3 Mitigation

Mitigation outlined in the Geology, Terrain and Soils (refer to Section 6), Surface Water (refer to Section 7), Air Quality (refer to Section 9), Acoustic Environment (refer to Section 11), Vegetation and Wetlands (refer to Section 12), Fish and Fish Habitat (refer to Section 13), Wildlife and Wildlife Habitat (refer to Section 14), Archaeological Resources (refer to Section 15), Cultural Heritage (refer to Section 16), Indigenous Land Use (refer to Section 17) and Visual Environment (refer to Section 20) will be implemented to reduce effects to parks and protected areas during construction and operation. Contingency plans and environmental plans are outlined in the

[2] Hunting is only expected to occur in parks and protected areas where the activity is allowed under the management documents.

CEPP (refer to Appendix 4-II) and OEMP (refer to Appendix 4-III). Effects to these natural and environmental values may reduce the enjoyment of park users, therefore implementing mitigation measures will avoid or minimize adverse effects to maintain the quality of experience for users. For example, disturbances of CLVAs may impact the natural values of a park.

Construction activities in parks and protected areas will be staged to avoid or minimize potential effects on ecologically sensitive areas, life cycle periods, and peak visitor periods, where feasible. Construction activity adjacent to sensitive land use areas (e.g., recreational uses deemed by municipality, provincial or federal agencies to be sensitive, buildings or amenity areas not directly associated with industrial use) will be minimized to the extent feasible. These measures will aid in preserving natural and recreational values by minimizing disturbances allowing for recreational opportunities to be maximized during construction to the extent feasible and minimizing disruption to natural features.

Avoidance of the CLVA in Gravel River Conservation Reserve was not practicable as a change in routing design at that location would result in additional greenfield disturbances. The following measures will be implemented to mitigate potential effect of the Project on this CLVA:

- Obtain a work permit from the MNRF under the *Provincial Parks and Conservation Reserves Act* for development within a CLVA.
- The Owner will employ the services of qualified Environmental Inspector(s) to guide implementation, monitor and report on the effectiveness of the construction procedures and mitigation measures for minimizing potential impacts.
- Clearly mark known site-specific features (e.g., rare vegetation community, wetland, water body, SWH) and associated setbacks as shown on the Environmental Alignment Sheets (refer to Appendix 5-I) and Access and Construction Environmental Maps (refer to Appendix 5-II). The Owner will confirm the accuracy of the site-specific features locations and associated setbacks (refer to Table 1).
- Flag undisturbed adjacent areas to the extent required to protect adjacent seed sources from being affected.
- The Owner will review protective and mitigative measures with the Contractor.
- The Owner will follow weed control and management measures outlined in the Weed Management Plan (refer to Section 8.4).
- Should the Owner determine that construction activities are contravening the CEPP or the terms and conditions of a regulatory license or permit, the Owner can suspend construction until a solution that is compliant is established.
- Construction Contractor staff who show neglect for the environment or disregard for the CEPP may be removed from the Project footprint by the Owner.
- The proposed mitigation measures will be reviewed and agreed upon in consultation with MNRF.

As previously noted, CLVAs represent a natural feature of parks and protected areas contributing to their natural values. Minimizing disruptions to CLVAs will preserve natural features contributing to natural values.

Mitigation measures described in Sections 19.7.1.1.2 and 19.7.2.1.2 related to access to and use of provincial parks and the environmental setting of provincial parks will also be implemented. Access to and use of parks allows for recreation opportunities and the use of recreation features. The environmental setting contributes to the recreational experience in parks and protected areas. Therefore, minimizing disturbances to the setting may avoid adverse effects on recreational experience for some users. It should be noted individual users are highly variable in their perceptions of change to environmental setting. Mitigation measures are summarized in Table 19-45.

The effectiveness of mitigation will be evaluated during construction and post-construction, and measures will be modified or enhanced as necessary through adaptive management.

19.7.5.1.4 Net Effects

Net effects are identified for the geology, surface water, vegetation and wetlands, wildlife, Indigenous land use, air quality, noise, visual environment, fish and fish habitat and non-traditional land and resource use criteria which are predicted to have a net effect on natural, cultural and recreational features impacting natural, cultural and recreational values in parks and protected areas following the implementation of mitigation measures as described in Section 19.7.5.1.2, the CEPP (refer to Appendix 4-II) and the OEMP(refer to Appendix 4-III). This effect (change to natural, cultural and recreational features impacting natural, cultural and recreational values) is carried forward to the net effects characterization (refer to Section 19.8.2.3).

19.7.6 Linear Infrastructure Access and Use

19.7.6.1 Increase or Decrease in Access to Linear Infrastructure Projects Affecting Operation Or Maintenance

19.7.6.1.1 Potential Effects

Twenty-four utility line segments, four pipelines segments, 10 railway segments and four transformer stations are located in the Project footprint. Project construction will occur in areas where this existing linear infrastructure is located. NextBridge will be required to maintain safe access to existing linear infrastructure ROWs during the construction and operations phase of the Project. This will involve temporary area closures, the development of new access roads to linear infrastructure and/or the decommissioning of access roads to linear infrastructure that can no longer be used due to the Project. These Project construction activities as well as Project operations including line maintenance and ROW clearing could temporarily affect access to existing linear infrastructure sites and linear infrastructure operations and maintenance, given that their activities cannot be conducted in the same area as Project construction activities to protect worker and land user safety.

Access to and implementation of linear infrastructure operations and maintenance may also be temporarily affected by Project-related increases in traffic and potential temporary road restrictions during the construction stage, should the timing of construction activities and linear infrastructure activities overlap. Disturbance and restrictions in access and operational use would be experienced mainly in the Project footprint with potential effects to linear infrastructure operations in the linear infrastructure LSA due to indirect effects of Project traffic.

19.7.6.1.2 Mitigation

Prior to construction of each segment, NextBridge will enter into crossing agreements and third-party agreements with linear infrastructure operators. These agreements will outline a process for the construction contractor to notify affected parties during the construction phases of the intended Project schedule before the start of construction to prevent or reduce impacts to existing linear infrastructure operations and activities. NextBridge will implement the Traffic Management Plan (refer to Appendix 4-II, Section 8.5). Notification and access management will allow operators to adjust to Project activities to make sure they are able to access their infrastructure.

NextBridge will also provide linear infrastructure operators with information about the Project's ROW to support any future planning for additional infrastructure development. Agreements will establish processes for the construction contractor to notify affected parties during the construction phase, and will establish a protocol for how other linear operators communicate with NextBridge on their proposed projects that may interact with the Project throughout the Project lifecycle. This communication strategy will be put in place to limit potential impacts to the Project and potential impacts to projects being developed by other linear infrastructure operators. Information will also be shared with relevant stakeholders such as government (provincial and municipal), First Nations, and emergency service providers, among others. All roads, pipelines, railroads or other linear

crossings will be flagged as indicated in crossing agreements and/or as per conditions of regulatory approvals. Linear infrastructure operators will be consulted about the placement of permanent fencing and gates as applicable. The location of gates and fencing will be negotiated with the operators and where gates are installed a lock system will be agreed to with the linear infrastructure operator. The Project's construction activities will be confined to surveyed and marked areas. The development or decommissioning of any access roads used to access linear infrastructure will be done in consultation with the linear infrastructure operator and the MNRF (in accordance with the MNRF's *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* [MNR 2010]). Therefore, linear operators will still be able to access their infrastructure despite restriction associated with construction and operation.

Project personnel will avoid areas that are flagged or temporarily fenced and abide by restrictions on in/out privileges that are implemented. All local, municipal, provincial and federal licenses, permits and approvals that are required for the Project is predicted to be received prior to construction of each segment. The Project is predicted to establish agreements with linear infrastructure operators well in advance of construction activities. Mitigation measures are summarized in Table 19-45. The effectiveness of mitigation will be evaluated during construction and post-construction, and measures will be modified or enhanced as necessary through adaptive management.

19.7.6.1.3 Net Effects

With the effective implementation of the mitigation summarized in Table 19-45, the CEPP (refer to Appendix 4-II), and OEMP (refer to Appendix 4-III), it is anticipated that linear infrastructure operators will be able to continue to access and carry out operation and maintenance activities on existing infrastructure, and engage in future infrastructure development as specified through crossing and third-party agreements. Therefore, there is no net effect on linear infrastructure access and area use. This effect (changes to linear infrastructure access and area use) is not carried forward to the net effects characterization (refer to Section 19.8).

19.7.7 Non-commercial Recreational Land and Resource and Use and Access

19.7.7.1 Reduction and Increase to Access to Non-commercial Recreation Areas

19.7.7.1.1 Potential Effects

Project construction activities may occur within areas also used for non-commercial recreation and may temporarily reduce or restrict access to recreational lands used for canoeing, hiking, snowmobiling, skiing, hunting, fishing, boating, cottaging, and other activities. It is anticipated that recreationalists will be partially displaced from land and amenities in these affected areas.

The 26-month construction phase overlaps two hunting and fishing seasons for resident hunters and anglers, and two peak recreational land use seasons, as the Project construction period is scheduled to take place over 2 years. Restrictions to access and use will be most noticeable in the Project footprint and in areas where a higher proportion of the non-commercial land and resource use LSA overlaps existing recreational features. The following features overlap the non-commercial land and resource use LSA and Project footprint:

- 9 WMUs (overlapping 0.3% to 8.8% of each WMU), seven of which are in the Project footprint (0.001% to 0.1%);
- 4 FMZs (overlapping between 0.3% and 5.5% of each FMZ), all of which are in the Project footprint (0.0002% to 0.04%);
- 60 access points /boat launches (none of which are in the Project footprint);

- 10 sports fields (none of which are in the Project footprint);
- 9 picnic sites (none of which are in the Project footprint);
- 265 camp/cottage residential sites (none of which are in the Project footprint);
- 54 hiking, canoe route, ice hike, snowmobiling, and ATV trailheads (none in the Project footprint);
- 113 hiking, bridge, canoe, and portage route OTN trail segments (five in the Project footprint, including three canoe routes);
- 501 hiking, snowmobiling, ATV, canoe, and portage non-OTN trail segments (70 non-OTN trail segments in the Project footprint);
- 13.9 km of Rendezvous Ski Club's trails (1.0 km in the Project footprint);
- 55 km of Marathon Ski Club's trails (none in the Project footprint);
- 5 Category A Canoe Routes (three in the Project footprint) as identified under the CLUAH Project Management Guidelines);
- 4 Category B Canoe Routes (three in the Project footprint) as identified under the CLUAH Project Management Guidelines); and
- 137.8 km of OFSC-identified trails (11.8km of which are located in the Project footprint) (MNRF 2017a).

The Project footprint overlaps a small proportion of non-commercial recreation features available in the non-commercial land and resource use LSA and RSA. Consequently, temporary restricted access within portions of the Project footprint will affect a very small proportion of the non-commercial land and resource use LSA land based used for recreational activities. Some individual users such as hikers, cross country skiers, canoers, snowmobilers will be more affected based on the higher prevalence of recreational use areas and features within the non-commercial land and resource use LSA which support these user groups. Temporary access restrictions experienced during the construction phase will be limited by staged approach within the larger construction schedule. Imposed access restrictions will be removed as construction progresses along the Project footprint.

During the operation phase, recreational access restrictions from line maintenance and ROW clearing would be infrequent. Otherwise, the preferred route ROW will remain open and accessible to recreational users, and is expected to be actively used based on other similar ROWs in the Northwestern Ontario context. Consequently, temporary restrictions to recreational features are not predicted to considerably remove opportunities for recreational activities in the non-commercial recreational land and resource use LSA, although some individual users or uses may be affected. The ROW will provide new access during the operations phase as it can be used for motorized and non-motorized recreation activities. Areas adjacent to the ROW will also become more accessible as informal trails can be created to access potential recreation points including lakes and potential viewpoints.

Formal and resource roadways, terrestrial trails (including ski trails) and trailheads, canoe routes and navigable waterways, marinas, access points, and private boat caches can all be considered recreational features that provide a means to access other outdoor recreational features. For the purposes of this non-traditional land and resource assessment, these are referred to as recreational access features. Changes in access to these features are important, given their indirect effects on access and use of other recreational areas.

During active Project construction, recreationalists may encounter increased delays, limited access, or fully restricted access when seeking to use recreational access features that are either being used by the Project to transport equipment, construction materials or personnel, or crossed by the Project footprint, where active construction activities are taking place.

During the construction stage, the Project workforce will primarily access the Project via Highway 17 (i.e., the TransCanada Highway) and its intersecting roads, as discussed in Section 18. As the main arterial roadway through the non-commercial land and resource use LSA, Highway 17 is also the primary corridor through which recreational areas are accessed. In addition to the trails and access points (described above), the Project footprint crosses 165 formal and resource road segments that may be used by recreationalists. Road segments crossing the Project footprint belong to Highway 17, Highway 11, Peninsula Road, McKenzie Station Road, Paint Lake Road, Stewart Lake Road, Danielson Road, Wolf Lake Dam Road, Escape Road, Anjigami Lake Road, Blair Lake Road, Innes Lake Road, Michipicoten Harbour Road, MacGregor Road, Mill Road, Lofty Davis Road, Greenwich Road, Greenwich Lake Road, and High Falls Road. Resource roads in the Project footprint are managed by Enbridge Inc., Resolute Forest Products, Great West Timber Ltd., GFI, GWT, Nawiinginokiima Forest Management Corporation (NFMC), White River Forest Products, River Gold Mines Ltd., Clergue Forest Products and the MNRF where road use agreements are in place.

Formal roads would experience increased traffic or limitations during the Project's working hours (07:00 to 19:00), but specific secondary roads, resource roads, and other access features (e.g., trails, canoe routes) may experience both daytime and night-time restrictions through short-term, intermittent closures to promote user safety during active clearing, infrastructure construction and assembly, the construction of new waterbody crossings, cable stringing, and other construction activities.

However, during the operations phase, the introduction of up to 64 m of preferred route ROW and additional access roads will effectively increase the quantity of land accessible for outdoor recreational land use in the non-commercial land and resource use LSA, opening new areas to recreational users or expanding access to a broader range of individuals and groups, both on and adjacent to the preferred route ROW and new access roads. Following construction at specific sites, a limited number of restrictions will be established on these access roads (i.e., through gates and fencing), however there will be no enforcement of these access restrictions. Therefore, as construction progresses to new areas along the Project footprint, recreational land users will gain access to the new, permanently maintained ROW and access roads.

The maintained preferred route ROW will be suitable for other non-commercial recreational uses. Snowmobiling and hunting are particularly common in cleared ROWs in Northern Ontario, and occur on the ROWs of transmission lines adjacent to the Project. During construction and operation, increased access may encourage an influx of hunters, anglers, snowmobilers, ATV users, and other land users to areas that were previously inaccessible, unused, or used by a limited number of land users. New access will be most marked on the 39.0 km of the Project footprint that does not parallel an existing road or transmission line corridor, as this land will need to be cleared, constructed, and maintained.

The potential for increased access to result in an increase in non-commercial harvesting (i.e., generating increased hunting and angling pressures along the preferred route ROW and access roads) is assessed separately in Section 19.7.9.1.

The new ROW areas are not equally distributed throughout the Project ROW with some areas expected to experience new access along the ROW for considerable lengths. For example, the Loon Lake Area will experience roughly 24.9 km of new ROW providing considerable new access to opportunities to those lands and lands adjacent to the Project ROW. These areas include the Moose Lake Highlands where there are important Brook Trout spawning areas.

This increased access (and potential for increased use) along the preferred route ROW will persist indefinitely for the life of the Project and potentially beyond. Maintenance activities, including the periodic inspection of the transmission line and associated infrastructure, necessary repairs and vegetation management along the preferred route ROW, are expected to be infrequent, as identified above. Consequently, potential effect of the

Project on the access and use of recreational lands may result in a noticeable change with the introduction of new recreational access.

19.7.7.1.2 Mitigation

During the construction phase, affected parties will be notified of the planned construction schedule before the start of construction (e.g., Indigenous communities, regulatory agencies, property owners, interest holders, Crown interests and the general public). Notification will allow land users to alter plans to avoid attempting recreation in restricted access areas.

Construction activities associated with the Project is predicted to be confined to the surveyed and marked areas. Existing roads and trails will be used where feasible. Flagging, signage or other markings will be removed upon construction completion. NextBridge will implement the Traffic Management Plan (refer to Appendix 4-II, Section 8.5). Confining construction and managing access to recreation areas will minimize disturbances to the land allowing users more recreational opportunities.

Temporary access roads will be decommissioned in accordance to the MNRF's *Forest Management Guide for Conserving Biodiversity at the Stand and Site* Scales (MNR 2010). The decommissioning of roads restricts operation access expansion which has been identified as harmful to some users.

Laydown yards, storage yards, and construction camps on private lands or federal and (i.e., First Nations reserve lands) may be left in place or partially decommissioned in consultation with the landowners or communities. Decommissioning of laydown yards, storage yards and construction camps will be completed under non-frozen conditions when construction schedule allows. The fill material (e.g., gravel, shipped rock) and geotextile membrane will be removed from laydown yards, storage yards, and construction located on provincial Crown land. Any in-ground infrastructure (e.g., water line, sewage) will be removed. If in-ground infrastructure cannot be removed, in-ground infrastructure will be filled with clean sand or gravel prior to capping. Concrete pads used as temporary fuelling storage yards will be removed when removing surface infrastructure. Decommissioning laydown yards allows for more areas of the Project to return to potential recreation areas for the activities identified above.

Waterbody crossing structures will be constructed according to the crossing method identified on the Environmental Alignment Sheets and Access and Construction Environmental Maps and in accordance with regulatory approvals. Alternatives or modifications to the crossing requirements specified in approvals must be approved by NextBridge before construction begins. The number of temporary and permanent waterbody crossings required for the Project (e.g., using the proposed access road, existing waterbody crossings, or working around the waterbody, where practicable) will be minimized. Water crossings increase access over water bodies which may have dissuaded users previously from accessing certain recreational areas.

Mitigation measures are summarized in Table 19-45. The effectiveness of mitigation will be evaluated during construction and post-construction, and measures will be modified or enhanced as necessary through adaptive management. These mitigation measures are expected to minimize the potential effects on non-commercial recreation areas.

19.7.7.1.3 Net Effects

After the implementation of mitigation measures identified above, in the CEPP (refer to Appendix 4-II), and OEMP (refer to Appendix 4-III), there is still an anticipated effect to access and usage of non-commercial recreation areas from Project operations as the linear corridor is anticipated to open new lands for non-commercial recreation which can enhance and detract from potential recreation activities. Therefore, this effect (reduction and increase to access to non-commercial recreation areas) is carried forward to the net effects characterization (refer to Section 19.8.2.5).

19.7.8 Non-commercial Recreational Environmental Setting

19.7.8.1 Change to Non-commercial Recreational Environmental Setting

19.7.8.1.1 Potential Effects

Changes in the non-commercial recreational environmental setting take into consideration Project effects on the physical and biophysical environment. Project effects on non-commercial recreational land and resource access and use (which are discussed in in Section 19.7.2) can also affect the non-commercial recreational environmental setting. Changes to surface water, air quality, acoustic environment, vegetation, wildlife and visual aesthetics have been identified as interacting with the setting for recreation activities undertaken in the Project vicinity. Therefore, the effects to these physical and biophysical environments may impact the recreation environment setting.

The Project footprint and non-commercial land and resource use LSA are actively used by recreationalists for a range of outdoor activities, as described in Section 19.5.2.5. Non-commercial recreational users have identified that they value the “wilderness” and “remoteness,” of the environment in the non-commercial land and resource use LSA and Project footprint, including low noise levels, and limited industrial or infrastructure-related visual disturbances. The maintenance of this remote environmental setting is important to recreational users.

The Project has the potential to affect the non-commercial recreational environmental setting, as a result of Project construction and operation, and indirectly, through changes to elements of the physical and biophysical environment as a result of the Project (i.e., wildlife, fish and fish habitat, vegetation and wetlands, surface water, air quality, noise, and visual aesthetics).

As presented in Section 7, Section 9, Section 11, Section 20, Section 14 and Section 12 and further detailed in Section 19.7.2, net effects to surface water, air quality, acoustic environment, visual environment, wildlife and vegetation and wetlands are anticipated due to the Project. All net effects, as further described in Section 19.7.2, have the potential to influence the recreational environmental setting by impacting various recreation activities.

19.7.8.1.2 Mitigation

During the construction phase, affected parties will be notified of the planned construction schedule before the start of construction (e.g., Indigenous communities, regulatory agencies, property owners, interest holders, Crown interests and the general public) to support users’ awareness of potential temporary disturbances to aspects of the environmental setting.

Construction equipment will arrive on the Project footprint clean (i.e., free of soil and vegetative debris) in accordance with the Clean Equipment Protocol for Industry (Halloran et al. 2013) and in good working order (i.e., no oil or hydraulic fluid leaks). Equipment will be inspected for leaks routinely throughout the duration of construction. Clean, properly operating equipment aids in avoid indirect effects from contaminants entering the Project site. Contaminants may potentially impact the environmental setting compromising user experience.

To reduce impacts on canoe routes and portages, the mitigation described in Section 19.7.2.2. Table 19-45 and the CEPP (refer to Appendix 4-II) and OEMP (refer to Appendix 4-III) will be implemented. Noise and dust mitigation described in Section 19.7.2.3 will be implemented including adherence to by-laws and implementation of a noise complaint resolution system. This mitigation, as identified in Section 19.7.4.1.2, aid in reducing nuisance effects to users. As access and use are identified as potentially changing the environmental setting, all mitigation in Section 19.7.7.1.2 are considered for reducing the impact to environmental setting.

Mitigation outlined in the Geology, Terrain and Soils (refer to Section 6), Surface Water (refer to Section 7), Air Quality (refer to Section 9), Acoustic (refer to Section 11), Vegetation and Wetlands (refer to Section 12), Fish and Fish Habitat (refer to Section 13), Wildlife and Wildlife Habitat (refer to Section 14) and Visual Environment (refer to Section 20) will be implemented to reduce adverse effects to non-commercial recreation

areas during construction and operation. Contingency plans and environmental plans as outlined in the CEPP (refer to Appendix-4-II) and OEMP (refer to Appendix 4-III) will also be implemented. Mitigation measures to environmental and biophysical concerns to reduce disturbances to the land and its setting, which, if compromised, may detract from user experience. These mitigation measures are expected to minimize the potential effects on non-commercial recreation areas. Mitigation measures are summarized in Table 19-45. The effectiveness of mitigation will be evaluated during construction and post-construction, and measures will be modified or enhanced as necessary through adaptive management.

19.7.8.1.3 Net Effects

There is a predicted net effect for changes to the non-commercial recreational environmental setting based on predicted net effects for surface water, visual quality, noise, air quality wildlife and vegetation indicators, after the implementation of mitigation measures described above and identified in the CEPP (refer to Appendix 4-II). These effects are anticipated to change the recreational environmental setting in various ways depending on activity being undertaken including fishing, hunting, wildlife viewing and canoeing. The effect (change to environmental setting due changing environmental conditions) is carried forward to net effects characterization (refer to Section 19.8.2.6).

19.7.9 Non-commercial Recreational Fish and Wildlife Harvest Levels

19.7.9.1 Reduction or Increase to Harvest Levels Due to Changes in Wildlife and Fish Abundance and Distribution

19.7.9.1.1 Potential Effects

Recreational harvesting of fish and wildlife takes place throughout the non-commercial land and resource use LSA, for enjoyment and consumption. Recreational anglers harvest a number of species in the four FMZs overlapped by the non-commercial land and resource use LSA, including walleye; sauger; largemouth and smallmouth bass; Northern pike; muskellunge; yellow perch; crappie; sunfish; brook, brown, lake, and rainbow trout; splake; Pacific and Atlantic salmon; lake whitefish; lake sturgeon; and channel catfish. Anglers also access fishing locations through 60 access points located in the non-commercial land and resource use LSA (none of which are located in the Project footprint).

The recreational hunting of moose, bear, deer, ducks, geese, and other wildlife species occurs in the nine WMUs overlapped by the non-commercial land and resource use LSA. Between 2008 and 2013, there were between 290 and 2,300 resident moose hunters active in the WMUs that intersect the Project footprint. In 2013, there were between 17 and 4,383 resident deer hunters in the WMUs that intersect the Project footprint. In 2013, between 20 and 625 residents and non-resident bear hunters were also active in the WMUs that intersect the Project footprint.

Although 407.0 km out of the approximately 450 km of the preferred route ROW will be constructed to parallel existing linear disturbances (i.e., existing East-West Tie) 39.1 km of the Project (i.e., 8.8% of the preferred route ROW) involves the clearing of previously undisturbed land. Recreational harvesters actively harvesting in the Project area will experience a small increase in land access in the non-commercial land and resource use LSA during construction and operation, which could result in increased angling and hunting activity in areas along the preferred route ROW that were previously more difficult to reach. Increased harvester use of these lands could generate some additional pressures and competition for wildlife and fish resources along the preferred route ROW. However, increased hunting and trapping activities are not expected to result in a measurable decrease in the availability of local fish or game.

The new ROW areas are not equally distributed throughout the Project ROW with some areas expected to experience new access along the ROW for considerable lengths. For example, the Loon Lake Area will experience roughly 24.9 km of new ROW providing considerable new access to opportunities to those lands and lands adjacent to the Project ROW. These areas include the Moose Lake Highlands where there are important brook trout spawning areas.

During Project construction and operation, Project activities may result in changes to biophysical conditions that have the potential to affect the abundance or distribution of wildlife and fish. Changes to the abundance and distribution of wildlife and fish can subsequently affect the availability of recreationally harvested species and harvesting opportunities and levels. The evaluation of potential effects on harvesting opportunities and levels is based on the net effects assessments developed by the biophysical disciplines. Where net effects are identified for species considered to be representative of and important to recreational angling and hunting, they have been carried through for consideration of their effects on recreational angling and hunting.

The assessments of fish and wildlife abundance and distribution are presented in Section 13 (Fish and Fish Habitat) and Section 14 (Wildlife and Wildlife Habitat). Mitigation of potential effects on fish and wildlife abundance and distribution was also addressed in these sections.

Section 13 identifies that the Project may result in minor changes to aquatic habitat availability or fish distribution or abundance; however, this is not expected result in measurable net effects to the populations of the criteria fish species (brook trout, northern pike, walleye, and lake sturgeon) or the structure and function of aquatic ecosystems. Some net effects are due to the change to abundance and distribution of brook trout and walleye from changes to public access to recreational angling.

Change to the availability of recreational harvest wildlife species relies on the results of the wildlife and wildlife habitat assessment (refer to Section 14). This assessment considers potential effects on those species of importance to land users that were assessed in the wildlife and wildlife habitat section (refer to Section 14). The wildlife and wildlife habitat assessment discussed potential effects on moose and American marten, which have been identified as important wildlife species for non-traditional hunting and trapping (refer to Section 19.5.2.4.1). Moose was reported as an important large game species hunted by land users. As a result of these factors, the discussion of wildlife availability is limited to potential effects on moose and American marten. Net effects were anticipated to moose and American marten while bear, a harvested species, was not evaluated as a criterion by the wildlife assessment as they are tolerant of human disturbance and bear density estimates in the regional study area fall in the moderate to high range for the province.

19.7.9.1.2 Mitigation

During the construction phase, affected parties will be notified of the planned construction schedule before the start of construction (e.g., Indigenous communities, regulatory agencies, property owners, interest holders, Crown interests and the general public). Users will be able to move planned recreation activities away from areas disturbed by Project activities to avoid compromising their harvest.

Waterbody crossing structures will be constructed or installed in a manner that protects the banks from erosion and maintains the flows in the water body in accordance with DFO's *Measures to Avoid Causing Harm to Fish and Fish Habitat Including Aquatic Species at Risk* (DFO 2016). Equipment or structures that may temporarily impede or be a hazard to navigation for recreational users during the construction phase will be marked with yellow flashing warning lights or other similar warning signals. To minimize the duration and severity of disturbance, instream activity will be completed in the shortest timeframe practicable. All crossing materials will be removed following the completion of construction activities. Construction of water body crossing such that they minimize impact to fish and fish habitat avoids impacting the abundance and distribution of target species.

Mitigation outlined for Surface Water (refer to Section 7), Vegetation and Wetlands (refer to Section 12), Fish and Fish Habitat (refer to Section 13) and Wildlife and Wildlife Habitat (refer to Section 14) will be implemented during construction and operation to reduce potential impacts to fish and wildlife population and abundance. Changes to population and abundance of targeted harvested species could in turn affect availability of these species for harvesting and non-commercial anglers and hunters' harvest levels.

These mitigation measures are expected to minimize the potential effects on changes in wildlife and fish abundance and distribution. Mitigation measures are summarized in Table 19-45. The effectiveness of mitigation will be evaluated during construction and post-construction, and measures will be modified or enhanced as necessary through adaptive management.

19.7.9.1.3 Net Effects

With mitigation, net effects to harvested fish and wildlife species are anticipated. Based on this analysis, the reduction of available fish and wildlife resources is predicted to result in a Project net effect on non-commercial recreational harvest levels after the implementation of mitigation measures described above and identified in the CEPP (refer to Appendix 4-II). This effect (loss or alteration of wildlife and fish resource harvest due to changes in wildlife and fish abundance and distribution) is carried forward to the net effects characterization (refer to Section 19.8.2.1).

19.7.10 Commercial Industrial Land and Resource Use and Access

19.7.10.1 Reduction or Alteration to Access to Commercial Industry Areas

19.7.10.1.1 Potential Effects

Project construction activities will occur in areas with existing or potential commercial industry land and resource use (i.e., mining, aggregate development, and water power generation activities). The commercial (industry) land and resource use LSA and footprint overlaps the following:

- 1 active mine (in both the commercial industry LSA and Project footprint);
- 541 active mining claims[3] (111 in the Project footprint);
- 61 MNRF Authorized Aggregate Sites (six of which are in the Project footprint);
- 22 MTO permitted aggregate pits (four in the Project footprint);
- 72,532.7 areas of high aggregate potential as identified by geological mapping (2,583.7 in the Project footprint);
- 73.5 ha of agricultural land (none in the Project footprint), where cattle raising, horse raising and livestock grazing have been identified through the consultation program; and
- 5 waterpower generating stations (none located in the Project footprint).

There are a limited number of commercial industrial activities in the Project's commercial (industry) land and resource use LSA and footprint. Potential effects to commercial industrial activities operating in the commercial (industry) land and resource use LSA are therefore limited when considering the available area for mining and aggregate project development, or power generation activities in the commercial (industry) land and resource use RSA and Northern Ontario. Extractive and waterpower resources, however, are based on where the resource is found and cannot be necessarily moved or rerouted. Existing commercial industry users including mining claim holders, operating on the Project footprint could therefore be temporarily disrupted or permanently displaced by

[3] Per MNDM CLAIMaps dated November 9th, 2017 as cited in Section 19.5.2.5.3.2

construction and operation activities if their operations are located within or spatially affected by designated Project restricted areas such as the preferred route ROW.

The establishment and maintenance of the ROW will reduce future opportunity for waterpower development in this area, and potentially for mining and aggregate exploration or extraction. While construction activities will be coordinated with existing commercial industry land users through ongoing consultation, as identified in Table 19-32, the operation and maintenance of the Project is predicted to remove the ROW from commercial industry land and resource access and use, effectively displacing mining, aggregate and waterpower generation activities.

Access to existing commercial industry operations in the commercial (industry) land and resource use LSA may also be temporarily disrupted by Project-related increases in traffic and temporary road restrictions during the construction stage, should timing of construction and other commercial land use activities overlap. Intermittent, short-term road closures for clearing, tower assembly, cable stringing, and cable splicing could also result in detours on roads that are also used for accessing commercial industry lands, resources, and amenities beyond the preferred route ROW. Although Project construction may affect access to commercial operating sites and/or operational activities during the construction phase, temporary road disturbances and restrictions will not be continuous, as construction will be completed using a staged approach. The Project is predicted to use existing road and trail infrastructure where practical to limit disturbances resulting from the construction of new access roads and trails. In some circumstances, new access roads may be constructed to alleviate additional pressure on roadways used by existing commercial industrial operations. Disruption of access to commercial operating sites and/or operational activities due to Project-related traffic would be most noticeable during construction, and in the Project footprint, but may be experienced in the commercial (industry) land and resource use LSA as well. Project road use would be limited during the operation phase to maintenance activities in both the footprint and the commercial (industry) LSA. Project use of roads (traffic and road infrastructure effects) is not expected to measurably affect access to commercial industry or operational activities.

19.7.10.1.2 Mitigation

Before the commencement of construction all Crown interest holders (e.g., mining lease holders, unpatented claim holders, aggregate permit holders, non-freehold disposition holders, and other interest holders) will be notified of the overall construction schedule. Where applicable, affected parties will be notified with respect to crossing agreements and third-party agreements (and the list of crossing agreements and third-party agreements will be determined prior to construction of each segment). Notification and third-party agreements will allow users opportunity to adjust operations to reflect changes to access and land use.

The construction activities will be coordinated with commercial industry land users through ongoing engagement, and property owners will also be engaged regarding the placement of permanent fencing. NextBridge will continue to engage with and use best practices to minimize effects to nearby potential claim holders, licence holders and other tenure holders to the extent practical. These measures will include, but are not limited to:

- respect of property boundaries; and
- pursuit of synergies with other companies for cost advantages, such as exchange of information for mutual benefit.

The Project is predicted to use existing road and trail infrastructure to transport and distribute personnel, equipment and materials associated with construction where possible. The use of existing roads and trails will limit disturbances to industrial users' properties, but may also increase increased traffic on those routes. NextBridge will implement the Traffic Management Plan (refer to Appendix 4-II, Section 8.5), and will flag site-specific commercial industrial land use features of concern, so that subsequent traffic can avoid these areas to the extent

feasible. Signage will be established to notify road users of road closures, lane closures, and other disturbances to local roadways, and Project vehicles will be confined to the approved ROW, workspaces and access roads or trails. The development and upgrading of existing and new access roads will be conducted through engagement with land owners, industrial land users (e.g., mining or aggregate users/operators) and in compliance with applicable legislation, regulations and requirements identified in permits and authorizations. These mitigation measures will reduce traffic congestion due to Project activities and provide notification to road users about change to access due to Project activities. Mitigation related to traffic congestion is used to reduce disturbance to industrial operations.

NextBridge has a compensation policy that includes compensation to directly affected mining, aggregate, and unpatented claims. Therefore, directly affected commercial industrial operators who lose access to their businesses (mining claims or aggregate pits) because it falls within the Project footprint will be compensated for lost revenue due to the Project.

These mitigation measures are expected to minimize the potential effects on access to commercial industry areas. Mitigation measures are summarized in Table 19-45. The effectiveness of mitigation will be evaluated during construction and post-construction, and measures will be modified or enhanced as necessary through adaptive management.

19.7.10.1.3 Net Effects

As presented in Section 19.7.11.1, NextBridge will meet all regulatory requirements and adhere to best practices to address potential effects on commercial industrial users and tenure holders by consulting, negotiating, and developing mutually beneficial agreements that address the removal of the land base for other commercial industry land and resource use, including compensation, where relevant. After the implementation of mitigation measures presented above, in the CEPP (refer to Appendix 4-II), and the OEMP (refer to Appendix 4-III), there is a predicted net effect for industrial land users during construction and operation due to the loss of land potential for industrial development and changes to access during construction. This effect (reduction or alteration to access to commercial industry areas) is carried forward to the net effects characterization (refer to Section 19.8.2.8).

19.7.11 Commercial Recreational Land and Resource Use and Access

19.7.11.1 Reduction and Increase to Access to Commercial Recreation Areas

19.7.11.1.1 Potential Effects

As identified in Section 19.7.7, Project construction activities may temporarily reduce or restrict access to lands actively used for consumptive and non-consumptive recreational activities. This section addressed how commercial operators such as guided outfitters, tourism operators, bait harvesters and trappers may be affected by the Project.

The construction phase overlaps at least two peak tourism seasons, and two hunting, trapping and fishing seasons for non-resident hunters and anglers. Land and resource use and access may be disrupted for commercial operators, particularly in the Project footprint where existing commercial land use features are overlapped. The commercial (consumptive and non-consumptive) land and resource use LSA and Project footprint overlap the following features:

- 7 consumptive main base lodge locations and five outpost camp locations (none of which are in the Project footprint);
- 80 active trapline areas (55 of which are in the Project footprint);
- 49 BMAs (32 of which are in the Project footprint);

- 77 BHAs (42 of which are in the Project footprint);
- 7 commercial boat caches (none of which are in the Project footprint)
- 2 horse-riding stables (none of which are in the Project footprint);
- 10 recreation camps (none of which are in the Project footprint);
- 34 designated campsites (none are in the Project footprint);
- 3 shooting ranges (none are in the Project footprint);
- 3 golf courses (one of which is in the Project footprint);
- 9 WMUs (overlapping 0.3% to 8.8% of each WMU), seven of which are in the Project footprint (0.001% to 0.1%);
- 4 FMZs (overlapping between 0.3% and 5.5% of each FMZ), all of which are in the Project footprint (0.0002% to 0.04%);
- 60 access points /boat launches (none of which are in the Project footprint);
- 10 sports fields (none of which are in the Project footprint);
- 9 picnic sites (none of which are in the Project footprint);
- 265 camp/cottage residential sites (none of which are in the Project footprint);
- 54 hiking, canoe route, ice hike, snowmobiling, and ATV trailheads (none in the Project footprint);
- 113 hiking, bridge, canoe, and portage route OTN trail segments (five in the Project footprint, including three canoe routes);
- 501 hiking, snowmobiling, ATV, canoe, and portage non-OTN trail segments (70 non-OTN trail segments in the Project footprint);
- 13.9 km of Rendezvous Ski Club's trails (1.0 km in the Project footprint);
- 55 km of Marathon Ski Club's trails (none in the Project footprint);
- 5 Category A Canoe Routes (three in the Project footprint) as identified under the CLUAH Project Management Guidelines);
- 4 Category B Canoe Routes (three in the Project footprint) as identified under the CLUAH Project Management Guidelines); and
- 137.8 km of OFSC-identified trails (11.8km of which are located in the Project footprint) (MNRF 2017a).

As presented above, the Project footprint overlaps a small number of commercial features compared to the number of features available in the commercial (consumptive and non-consumptive) land and resource use LSA. Although the Project footprint may be restricted temporarily during the construction phase, it will not considerably remove opportunities for commercial recreation and tourism operations in the commercial (consumptive and on-consumptive) land and resource use LSA. Some individual users (e.g., trappers, guided outfitters, golf course users, bait fish harvesters) may be affected. Moreover, temporary access restrictions experienced during the construction phase will be intermittent and short-term within the larger construction schedule, as staged Project construction progresses along the Project footprint.

During the operation phase, access restrictions to tourism and commercial (consumptive and non-consumptive) features would be infrequent, related to periodic maintenance activities. Otherwise, the preferred route ROW will remain open and accessible to commercial (consumptive and non-consumptive) land users, and is expected to be actively used based on existing ROW use in northwestern Ontario.

Roadways, terrestrial trails, trailheads, canoe routes, navigable waterways, marinas, access points, and commercial boat caches can be considered commercial (consumptive and non-consumptive) land use features that provide a means to access other outdoor tourism and commercial features. The potential Project effects on recreation access features and potential effects of new access on non-commercial recreational users as presented in Section 19.7.2.7 similarly apply to this effects assessment as commercial tourism and recreational users will experience similar access and use effects as non-commercial recreational users.

The potential for increased access due to the additional ROW created by the Project may result in an increase in the number of harvesters using commercial tourism features that are more easily accessible due to the Project. This may have potential effects on harvest levels of fish and wildlife species. The potential effects to commercial tourism from changes in harvest levels are assessed in Section 19.7.13.

19.7.11.1.2 Mitigation

During the construction phase, affected parties will be notified of the planned construction schedule before the start of construction (e.g., Indigenous communities, regulatory agencies, property owners, interest holders, Crown interests and the general public). The MNRF and/or trail and canoe route operators will continue to be consulted to develop appropriate strategies to facilitate continued, uninterrupted use and access to parks and protected areas. Should any affected trails be considered to be key trail resource for access to other areas, NextBridge will develop an alternate trail route to allow land users to navigate around the temporary construction-based trail closure. Notification of access restrictions and adjustments to access trails allow commercial operators to utilize lands that reflect their consumers' values of remoteness and wilderness and avoid construction activities that may negatively impact their operation.

Technically and economically feasible mitigation measures (i.e., control, reduce or eliminate) negative effects on hunting, guiding and outfitting will be implemented. Guided outfitters and trapline area, BMA and BHA license holders will be engaged with, and, where required, mutually beneficial agreements will be developed with the affected tenure holders through the MNRF.

Disturbances will be avoided and/or minimized and access restrictions on trapline areas will be implemented where possible. Construction routes will be designed so as to avoid key access roads /entrances to parks and protected areas, tourism establishment areas, campsites, boat launches and caches, aquatic access points, and trailheads. Access for maintenance will be gated, fenced, ditched or bermed to be to limit travel to construction traffic and to prevent unplanned/undesired recreational access during the operation and maintenance stage in consultation with landowners and at the request of the regulator. All Project construction activities will be confined to surveyed and marked areas, and the Traffic Management Plan (refer to Appendix 4-II, Section 8.5) will be implemented. Temporary access roads will be decommissioned in accordance to the MNRF's *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* (MNR 2010).

Mitigation related to laydown yards as described in Section 19.7.6.1.2 will be undertaken to minimize disturbances to lands with outdoor tourism potential. As access and use are identified as changing the environmental setting, all mitigation in Section 19.7.2.2 is considered as reducing adverse effects to environmental setting.

During the operations phase, existing roads and trails will be used where possible with affected trails repaired and rehabilitated. The use of existing roadways will limit the expansion of access within the Project footprint and adjacent areas.

Mitigation related to construction activities including access, laydown yards, traffic and physical disturbances are designed to limit the amount of land utilized by the Project. By limiting the Project's impact to land and access to that land, more lands remain available to commercial operators to utilize for their operations. Therefore, these mitigation measures restrict the Project's disruption of land use. These mitigation measures are expected to

minimize the potential effects on access to commercial recreation areas. Mitigation measures are summarized in Table 19-45. The effectiveness of mitigation will be evaluated during construction and post-construction, and measures will be modified or enhanced as necessary through adaptive management.

19.7.11.1.3 Net Effects

The Project is expected to result in changes in access for commercial recreational land and resource users due to the Project construction and ROW during operation. The construction stage will result in decreased access due to construction restrictions while the operations phase will expand access by introducing new access roads and the ROW, thereby allowing users to reach new areas or access certain areas easier. After the implementation of mitigation measures identified above, in the CEPP (refer to Appendix 4-II), and OEMP (refer to Appendix 4-III), an effect to access and usage of non-commercial recreation areas is still anticipated. Therefore, this effect (reduction and increase to access to commercial recreation areas) is carried forward to the net effects characterization (refer to Section 19.8.2.9).

19.7.12 Commercial Recreational Environmental Setting

19.7.12.1 Change to Commercial Recreational Environmental Setting

19.7.12.1.1 Potential Effects

Change to the commercial recreational environmental setting takes into consideration Project effects on the physical and biophysical environment. Project effects on commercial recreational land and resource access and use (refer to Section 19.7.2) can also affect the commercial recreational environmental setting. Changes to air quality, acoustic environment, surface water, fish, wildlife and visual aesthetics have been identified as interacting with the setting for recreation activities undertaken in the Project vicinity. Therefore, the net effects of to these physical and biophysical environments may affect the commercial recreation environment setting.

The Project footprint and commercial (consumptive and non-consumptive) land and resource use LSA are actively used by guided outfitters, tourism operators, trappers, baitfish harvesters, and other commercial (consumptive and non-consumptive) operators for a range of outdoor activities, as presented in Sections 19.5.2.5.1 and 19.5.2.5.2.

Tourists are attracted to the commercial (consumptive and non-consumptive) land and resource use LSA due to its sense of “wilderness” and “remoteness,” and the unique tourism experiences that are possible as a result of these distinctive environmental conditions, where low noise levels and limited industrial or infrastructure-related visual disturbances are typically experienced. Guided outfitting and other tourism operations are more sensitive to changes in perceptions of remoteness than other users due to their existing commercial infrastructure and knowledge base associated with their operations in the area. The maintenance of this remote environmental setting is a critical component of the guided outfitter and outdoor tourism industry of the commercial (consumptive and non-consumptive) land and resource use LSA and RSA.

Project effects on the environmental setting are anticipated to be the same for commercial and non-commercial outdoor recreation and tourism users. The Project effects on non-commercial recreational environmental setting as described in Section 19.7.2.8 also apply to Project effects to commercial recreational and tourism environmental setting.

Project effects on the commercial recreation and tourism environmental setting will be localized; nearby water bodies, provincial and federal Crown land, provincial park land and private land will not be affected by Project activities and will be available for commercial outdoor tourism activities. However, it is recognized that tourism establishment areas, guided outfitters, trappers, and tourism operators may have less flexibility and mobility in terms of their areas of active use than non-commercial land users. Commercial operators may feel the need or desire to relocate segments of their operations (e.g., taking tourists to other land and resource locations to avoid

interacting with the Project, particularly during periods of greater project activity [e.g., localized construction work). The degree to which user and operator experience will be disturbed due to changes in the commercial recreation and tourism environmental setting will vary based on individual perceptions.

19.7.12.1.2 Mitigation

Mitigation identified in Section 19.7.6.1.2 for the non-commercial recreational environmental settings will be implemented for commercial recreational environmental settings. Additionally, during the construction phase, affected parties will be notified of the planned construction schedule before the start of construction (e.g., Indigenous communities, regulatory agencies, property owners, interest holders, Crown interests and the general public). Advance notice of construction activities will be also provided to commercial tourism and recreation operators through formal notification in local newspapers. Notice will allow operators to adjust their activities to avoid nuisance effects from construction disturbances. These mitigation measures are expected to minimize the potential effects on commercial recreational environmental setting. Mitigation measures are summarized in Table 19-45. The effectiveness of mitigation will be evaluated during construction and post-construction, and measures will be modified or enhanced as necessary through adaptive management.

19.7.12.1.3 Net Effects

There is a predicted net effect for changes to the commercial (consumptive and non-consumptive) environmental setting based on identified net effects on surface water, visual quality, noise, air quality wildlife and vegetation criteria, after the implementation of mitigation measures described above and identified in the CEPP (refer to Appendix 4-II). These effects are anticipated to change the commercial recreational environmental setting in various ways depending on activity being undertaken including fishing, hunting, trapping and canoeing. The effect (change to environmental setting due changing environmental condition) is carried forward to net effects characterization in Section 19.8.2.10.

19.7.13 Commercial Recreational Fish and Wildlife Harvest Levels

19.7.13.1 Loss or Alteration of Wildlife and Fish Resource Harvest due to Changes in Wildlife and Fish Abundance and Distribution

19.7.13.1.1 Potential Effects

The potential effects to commercial harvest opportunities and levels (due to change in fish and wildlife resources) are similar to those described non-commercial recreational fish and wildlife harvesting (refer to Section 19.7.9).

Commercial fish harvesting takes place in the commercial (consumptive and non-consumptive) land and resource use LSA through guided outfitters, tourism operators, tourist charters, boat rental facilities, fishing tournaments and derbies, and tourism establishments targeting anglers (i.e., main bases and outpost camps). The FMZs, and fish species harvested by commercial land and resource users are consistent with those identified for recreational users above, however baitfish harvesting (typically for sale) is also conducted through 77 BHAs in the commercial (consumptive and non-consumptive) land and resource use LSA. The Project footprint overlaps 42 of these BHAs. Among the 12 tourist lodges and camps in the commercial (consumptive and non-consumptive) land and resource use LSA, five are identified as catering to anglers. Anglers also access fishing locations through the 60 access points located in the commercial (consumptive and non-consumptive) land and resource use LSA.

The commercial harvesting of wildlife takes place in the commercial (consumptive and non-consumptive) land and resource use LSA through guided outfitting, tourism establishments targeting hunters, and trapper activity. In addition to the WMUs identified above (refer to Section 19.7.11), there are 49 BMAs and 80 traplines in the commercial (consumptive and non-consumptive) land and resource use LSA for the commercial harvesting of furbearers and bear. Among them, the Project footprint overlaps 32 BMAs and 55 traplines.

Most of the preferred route ROW parallels existing linear disturbances for approximately 407.0 km (91.2%); however, 39.1 km (8.8%) of the preferred route ROW involves the clearing of previously undisturbed land. Increased access could result in an increase in the number of recreational and tourism harvesters along the preferred route ROW, which in turn could generate some additional pressures and competition for wildlife and fish resources among commercial and recreational land users. However, potential increased hunting and trapping activities are not expected to result in a measurable decrease in the availability of local fish or game for commercial users or operators.

Net effects to fish (refer to Section 13) and wildlife (refer to Section 14) were identified for targeted species as identified in Section 19.7.2.9. With mitigation, direct Project effects to fish population, abundance and distribution in the commercial (consumptive and non-consumptive) land and resource use LSA are anticipated to brook trout and walleye. With mitigation, moose and marten populations would continue to be self-sustaining in the commercial (consumptive and non-consumptive) land and resource use LSA although possibly at a lower abundance. Changes to the populations and distribution of harvested species may impact the ability of commercial operators and their clients to harvest these species.

19.7.13.1.2 Mitigation

During the construction phase, affected parties will be notified of the planned construction schedule before the start of construction (e.g., Indigenous communities, regulatory agencies, property owners, interest holders, Crown interests and the general public). Advance notice of construction activities will be also provided to commercial tourism and recreation operators through formal notification in local newspapers. Notification will allow users to adjust behaviour to avoid reduction in harvest levels.

Technically and economically feasible impact management measures proposed to address (i.e., control, reduce or eliminate) negative effects on hunting, guiding and outfitting will be implemented. Measures identified for Wildlife (refer to Section 14) will also be implemented to reduce potential effects to wildlife availability for hunting. Guided outfitters, trapline area, BMA and BHA license holders will be engaged with, and, where appropriate, develop mutually beneficial agreements with the affected tenure holders. Disturbance to will be avoided and minimized and access restrictions on trapline areas will be implemented where possible. Many guided outfitter operations, trappers BMAs operators and BHAs operators require the ability to harvest to successfully utilize their tenure, therefore limiting disturbances to the wildlife will allow them to maintain successful commercial harvests. Should the project impact their ability to successfully harvest, mutually beneficial agreements can mitigate the potential loss of revenue.

Construction routes will be designed to avoid key access roads /entrances to parks and protected areas, tourism establishment areas, campsites, boat launches and caches, aquatic access points, and trailheads. Avoidance aims to reduce disturbance to their operation and thus their land use.

Mitigation measures identified in the Fish and Fish Habitat section of the assessment (refer to Section 13) designed to limit effects on recreational and commercial fisheries will be implemented. Blasting operations will follow DFO's *Measures to Avoid Causing Harm to Fish and Fish Habitat Including Aquatic Species at Risk* (DFO 2016) and *Guidelines for the Use of Explosives in or Near Canadian Fisheries Waters* (Wright and Hopky 1998), including setback distances from fish-bearing water bodies; and avoiding use of explosives in or near water. The environmental and safety orientation program developed and implemented by NextBridge will also include information about wildlife and species at risk awareness. Mitigation reducing the negative impacts to abundance and distribution of fish are used to maintain the occurrence of those species for harvesting.

These mitigation measures are expected to minimize the potential effects on wildlife and fish resource harvest. Mitigation measures are summarized in Table 19-45. The effectiveness of mitigation will be evaluated during construction and post-construction, and measures will be modified or enhanced as necessary through adaptive management.

19.7.13.1.3 Net Effects

With mitigation, net effects to harvested fish and wildlife species are anticipated. Based on this analysis, the reduction of available fish and wildlife resources is predicted to result in a Project net effect on non-commercial recreational harvest levels after the implementation of mitigation measures described above and identified in the CEPP (refer to Appendix 4-II). This effect (loss or alteration of wildlife and fish resource harvest due to changes in wildlife and fish abundance and distribution) is carried forward to the net effects characterization (refer to Section 19.8.2).

19.7.14 Commercial Forestry Land and Resource Use and Access

19.7.14.1 Reduction in Production Forest Area

19.7.14.1.1 Potential Effects

Permanent Project components (i.e., the preferred route ROW and permanent access roads) will result in a permanent reduction in production forest area and therefore available harvest area which could affect the forest industry at the commercial forestry land and resource use RSA scale. Conservative estimates of production forest area being removed have been calculated for the entirety of the footprint (refer to Table 19-43). Estimates are considered to be conservative since there will be portions of the Project footprint that are temporary in nature (e.g., construction camps, laydown yards, access roads), however, these have been considered permanent for the purposes of the assessment since they are to be further refined during detailed design of the Project. Additionally, in the case of the Lakehead FMU, the most current production forest area value includes production forest areas that are already not available for harvest (i.e., designated management reserves and protection forest), since the split between the three classifications of production forest area was not available for these two forests.

Currently, of the 3,484 ha of Project footprint that crosses FMUs, 25% is not currently classified as production forest area, meaning that it has already been removed from the land base on which commercial forestry is practiced. The remaining 2,602 ha (75%) of production forest area predicted to be affected by the Project footprint is distributed between the eight FMUs. Production forest area affected by the Project as a percent of total production forest area for each FMU is shown in Table 19-43.

Minimal effects are expected to the Big Pic, Black Spruce, Kenogami and Lake Nipigon FMUs where the Project is predicted to only remove 0.02% of the production forest from each FMU. Effects are expected to be slightly greater for the Algoma FMU with 0.06% of production forest being removed. The Lakehead, Pic River and White River FMUs will see just over 0.1%of their respective production forest areas being removed.

Given that historical harvest levels in all FMUs have been well below planned levels, it is unlikely that this reduction in production forest area will significantly affect the industry's ability to continue operating. That said, there is uncertainty associated with these predictions for a variety of reasons including the inability to predict the future demand for wood types and amounts, and the resulting inability to accurately quantify effects to future harvest levels based on permanent reductions in production forest area.

Table 19-43: Forestry Management Units and Production Forest Area Overlap with Project Footprint and the Commercial (Industry) Land and Resource Use Regional Study Area

Forest Management Unit	Total Production Forest Area (ha)	Production Forest Area in Project Footprint (ha)	Production Forest Area in Project Footprint as % of Total Production Forest Area of FMU (%)
Algoma	707,735	391.9	0.06
Big Pic	518,100	100.9	0.02
Black Spruce	1,010,765	182.6	0.02
Kenogami	1,473,865	283.9	0.02
Lake Nipigon Forest	1,139,453	230.3	0.02
Lakehead	317,728	348.4*	0.11
Pic River	406,463	507.7	0.12
White River	444,735	556.2	0.13
Total	6,018,844	2601.7	0.04

* Number includes production forest - regular (RP), production forest - designated management reserve (MR), and protection forest (PF).
Some of the numbers are rounded for presentation purposes. Therefore it may appear that the totals do not equal the sum of the individual values.
FMU = Forestry Management Units; ha = hectares; % = percent.

19.7.14.1.2 Mitigation

Before the commencement of construction all Crown interest holders (e.g., SFL holders and other interest holders) will be notified of the overall construction schedule. Where applicable, affected parties will be notified with respect to crossing agreements and third-party agreements (and the list of crossing agreements and third-party agreements will be determined prior to construction of each segment). Notification and third-party agreements will allow users opportunity to adjust operations to reflect changes to access and land use.

NextBridge and the construction contractor will continue engagement with SFL holders to:

- Review planned harvest allocations from approved FMPs as they relate to Project construction activities including clearing of the ROW and use of land for temporary Project components such as construction camps and laydown yards.
- Coordinate harvesting where possible in areas where there is overlap between the Project and planned harvest allocations, including the negotiation of Forest Resource Licenses with the SFL holders and their overlapping licensees in circumstances where NextBridge and its contractors are carrying out clearing activities.
- Stockpile merchantable timber at landings near the edge of the boundaries in a manner that is accessible to hauling trucks. Timber is not to be piled within the 30-m water body buffer or other overhead or underground utility or crossing unless specified by SFL holder.

In addition to SFL holders, NextBridge will continue to consult with local First Nations and the MNO to address potential effects of Project-related wood harvesting, including the use of merchantable timber and wood fiber. NextBridge will commit to ongoing discussions with MNO, however the Province of Ontario has clear regulations regarding merchantable timber and NextBridge is committed to following established regulatory oversight. Discussions regarding rights to harvest firewood should be addressed to MNRF.

Temporary workspaces that are not required for Project operation will be decommissioned following completion of Project construction. This will include the decommissioning of laydown yards, storage yards, construction camps, construction easement, temporary access roads and temporary water body crossing structures. No temporary

buildings or structures associated with the temporary infrastructure will be left on the transmission line ROW upon completion of decommissioning, unless in accordance with third-party agreements. The goals of decommissioning temporary infrastructure are to remove the temporary infrastructure and then stabilize and revegetate disturbed areas while maintaining access and appropriate drainage to support operation and maintenance standards.

These mitigation measures are expected to minimize the potential effects on the production of forest area. Mitigation measures are summarized in Table 19-45. The effectiveness of mitigation will be evaluated during construction and post-construction, and measures will be modified or enhanced as necessary through adaptive management.

19.7.14.1.3 Net Effects

There is a predicted net effect of a permanent reduction in production forest area after implementation of the mitigation described above and in Table 19-45 due to the permanent clearing of land and therefore removal of production forest area. This effect (Reduction in production forest area due to area being unavailable for timber production) is carried forward to the net effects characterization (refer to Section 19.8.2).

19.7.14.2 Change to Area and Spatial Orientation of Planned Harvests

19.7.14.2.1 Potential Effects

Project construction and operation may affect current planned harvest in approved FMPs. In circumstances where planned harvest blocks overlap with the Project footprint, portions of these harvest blocks will require clearing for the Project. Depending on the spatial orientation of the blocks, this could result in harvest blocks being bisected by the line, with resulting implications to accessibility and harvest efficiency due to the potential requirement for additional access. There is also the possibility that some of these blocks are planned for harvest during the same time frame as proposed construction activities, which may affect the ability of the industry to access them in accordance with their current harvesting schedule. This could result in the need to alter FMP planned harvest schedules with possible effects to the amount of harvest (area) that is feasible within a given year and/or planning term. A comprehensive assessment of these effects would require access to spatial planned harvest data which was unavailable at the time of assessment.

19.7.14.2.2 Mitigation

Before the commencement of construction all Crown interest holders (e.g. SFL holders and other interest holders) will be notified of the overall construction schedule. Where applicable, affected parties will be notified with respect to crossing agreements and third-party agreements (and the list of crossing agreements and third-party agreements will be determined prior to construction of each segment). Notification and third-party agreements will allow users opportunity to adjust operations to reflect changes to access and land use.

NextBridge and the construction contractor will continue engagement with SFL holders to:

- Review planned harvest allocations from approved FMPs as they relate to Project construction activities including clearing of the ROW and use of land for temporary Project components such as construction camps and laydown yards.
- Coordinate harvesting where possible in areas where there is overlap between the Project and planned harvest allocations, including the negotiation of Forest Resource Licenses with the SFL holders and their overlapping licensees in circumstances where NextBridge and its contractors are carrying out clearing activities.
- Discuss Project access as it relates to planned access road construction and access management strategies (including decommissioning) in approved FMPs to reduce effects to SFL holders and eliminate the need for amendments to forest management plans where possible.

- Negotiate Road Use Agreements to clarify access road use and management strategies including upgrading, use, maintenance, monitoring, decommissioning and ownership of roads and water crossings.

Approval will be obtained from MNRF prior to clearing activities and NextBridge will establish agreements with forest managers that overlap the Project well in advance of construction activities. NextBridge will work with SFL holders to arrange for harvesting of crops prior to construction of each segment, if practicable. Merchantable timber will be stockpiled at landings near the edge of the boundaries in a manner that is accessible to hauling trucks. Timber is not to be piled within the 30-m water body buffer or other overhead or underground utility or crossing unless specified by SFL holder.

In addition to SFL holders, NextBridge will continue to consult with local First Nations and the MNO to address potential effects of Project-related wood harvesting, including the use of merchantable timber and wood fiber. NextBridge will commit to ongoing discussions with MNO, however the Province of Ontario has clear regulations regarding merchantable timber and NextBridge is committed to following established regulatory oversight. Discussions regarding rights to harvest firewood should be addressed to MNRF.

NextBridge will notify SFL holders of the planned construction schedule and planned access restrictions and detours before the start of construction to prevent or reduce impacts to their operations or activities. Crossing agreements will be established during the construction phase to allow forestry operations to proceed. Prior to construction of each segment, NextBridge will provide the Contractor with a Construction Line List that describes special requirements requested by landowner and Crown interest holders. Construction activities will be confined to the surveyed and marked areas.

Construction camps, laydown yards, and other temporary project components will be rehabilitated as soon as practical once they are no longer needed for construction. Clean-up and rehabilitation will follow the measures identified in Section 9.3.1.17 Clean-up and Reclamation Plan.

Follow applicable measures from MNRF's *Environmental Guidelines for Access Roads and Water Crossings* (refer to Appendix 4-II, Appendix H2; 1990), and *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* (refer to Appendix 4-II, Appendix H3; 2010a) and its associated Background Rationale document (2010b), *Ontario's Provincial Standards for Temporary Erosion and Sediment Control Measures* (refer to Appendix 4-II, Appendix H4; Government of Ontario 2015a), G*eneral specifications for Environmental Protection for Construction in Waterbodies and on Waterbody Banks* (refer to Appendix 4-II, Appendix H5; Government of Ontario 2015b), and *Construction Specifications for Control of Water from Dewatering Operations* (refer to Appendix 4-II, Appendix H6; Government of Ontario 2006b).

Existing roads and trails will be used where feasible as identified on the Access and Construction Environmental Maps and will comply with conditions outlined in road use agreements. The development of upgraded existing and new access roads will be planned in consultation with SFL holders and in compliance with applicable legislation, regulations and requirements identified in forest management plans, permits and authorizations. Temporary access roads will be decommissioned in accordance with the MNRF's *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* (MNR 2010), and relevant commitments in approved FMPs.

These mitigation measures are expected to minimize the potential effects on area and spatial orientation of planned harvests. Mitigation measures are summarized in Table 19-45. The effectiveness of mitigation will be evaluated during construction and post-construction, and measures will be modified or enhanced as necessary through adaptive management.

19.7.14.2.3 Net Effects

Through negotiations with SFL holders, it is likely that Project construction and forestry activities can be coordinated such that there will be no net effect on the area and spatial orientation of planned harvest. For example, there may be the opportunity for SFL holders to adjust their harvesting schedules, so that harvest blocks that intersect with the Project could be harvested in their entirety in advance of Project construction. This effect (Change to area and spatial orientation of planned harvests) is not carried forward to the net effects characterization.

19.7.14.3 Change to Results of Silviculture Treatment Areas

19.7.14.3.1 Potential Effects

In addition to permanently removing production forest area as discussed above, Project construction and operation may also result in the clearing of silviculturally treated areas. These have received treatments funded by SFL holders through the payment of Crown timber charges; specifically, either the Forest Renewal Trust Charge (FRT) or the Forestry Futures Trust (FFT) Charge. The FRT provides dedicated funding for forest renewal based on volumes harvested and anticipated renewal costs, representing an investment in the future forest. The FFT is an insurance policy for the government to make sure renewal can be carried out in unanticipated situations (fire, insect damage, insolvency).

Silviculture treatments are designed to control the establishment, composition and growth of forest vegetation. This is an important part of forest management since it contributes to achieving forest management objectives. Removal of silviculturally treated areas could affect the achievement of FMP management objectives including (but not limited to) future industry objectives (e.g. plans to harvest stands in the future), and wildlife habitat objectives.

The Project footprint will have a minimal effect on silviculturally treated areas in the Algoma, Black Spruce, Kenogami, Lake Nipigon and Pic River FMUs where less than 20 ha of the Project footprint overlaps with treated areas (refer to Table 19-44). Effects to silviculturally treated areas will be greater in the Big Pic, Lakehead and White River forests where 44.6 ha, 46.0 ha and 56.0 ha of treated area will be overlapped by the Project footprint, the majority consisting of plantations. In the case of the White River Forest, in the aftermath of a fire in 1999 (the Crocker Lake fire), there were several intensive silviculture projects funded by the FFT to renew sites destroyed by the fire including:

- Project 322-2-R9 – $858,000 to artificially regenerate young plantations without the seed source to regenerate themselves.
- Project 399-2-R13 – $746,000 to salvage timber and artificially regenerate areas with unsuccessful natural regeneration.
- Project 50-2-R18 – $29,000 for tending of areas artificially regenerated in the prior two projects.

Table 19-44: Silvicuture Treatment Area Overlapped by the Project Footprint for Each Forest Management Unit

Forest Management Unit	Silviculture Treatment Area Overlapped by the Project Footprint			
	Planted (ha)	Seeded (ha)	Thinned (ha)	Total (ha)
Algoma	3.4	0.0	0.0	3.4
Big Pic	32.4	8.6	3.6	44.6
Black Spruce	9.2	0.2	0.0	9.4
Kenogami	4.6	2.0	0.0	6.7
Lakehead	46.0	0.0	0.0	46.0
Lake Nipigon	1.9	0.0	0.0	1.9
Pic River	18.8	0.0	0.0	18.8
White River	51.9	1.7	2.4	56.0
Total	**168.2**	**12.5**	**6.0**	**186.8**

Some of the numbers are rounded for presentation purposes. Therefore it may appear that the totals do not equal the sum of the individual values.

FMU = Forestry Management Units; ha = hectares.

19.7.14.3.2 Mitigation

Before the commencement of construction all Crown interest holders (e.g., SFL holders and other interest holders) will be notified of the overall construction schedule. Where applicable, affected parties will be notified with respect to crossing agreements and third-party agreements (and the list of crossing agreements and third-party agreements will be determined prior to construction of each segment). Notification and third-party agreements will allow users opportunity to adjust operations to reflect changes to access and land use. NextBridge and the construction contractor will continue engagement with SFL holders to identify silviculturally treated areas and negotiate compensation for investments (to FRT or FFT) where required. These mitigation measures are expected to minimize the potential effects on the results of siliviculture treatment areas. Mitigation measures are summarized in Table 19-45. The effectiveness of mitigation will be evaluated during construction and post-construction, and measures will be modified or enhanced as necessary through adaptive management.

19.7.14.3.3 Net Effects

Through negotiations with SFL holders, it is likely that agreements can be reached such that there will be no net effect on silviculturally treated areas. Compensation for silviculture expenditures may be negotiated, and/or consideration could be given to in-kind contributions elsewhere on the forest, for example contributing to the improvement of inadequately regenerated areas with the FMU. This effect (Change to results of silviculture treatment areas) is not carried forward to the net effects characterization.

19.7.14.4 Change to Road Access due to Project Overlap with Existing or Planned Forestry Access Roads

19.7.14.4.1 Potential Effects

Effects to access during the construction phase will occur where existing and planned forest access roads overlap the Project footprint and the commercial forestry land and resource use LSA. To protect worker and land user safety, access to existing/planned forest industry activities may be temporarily affected by temporary road restrictions, should the timing of construction activities and planned forestry activities overlap.

During the operation phase, there is the potential for the Project to affect the forest industry's access to future harvest blocks where crossing of the transmission line would require crossing agreements to be in place. The industry's ability to extract wood from harvest blocks may also be affected by the presence of the transmission line in areas where line height could place restrictions on the types of equipment that are able to pass underneath the line. In addition, road management strategies in FMPs may call for activities that are incompatible with the planned use of roads to access the transmission line. For example, an FMP may prescribe the decommissioning of a road that the Project has identified for use as permanent access to the line for maintenance purposes. Maintaining the road as a permanent feature for the Project could affect commitments made in the FMP related to values that were relying on the decommissioning of the road.

19.7.14.4.2 Mitigation

Before the commencement of construction all Crown interest holders (e.g., SFL holders and other interest holders) will be notified of the overall construction schedule. Where applicable, affected parties will be notified with respect to crossing agreements and third-party agreements (and the list of crossing agreements and third-party agreements will be determined prior to construction of each segment). Notification and third-party agreements will allow users opportunity to adjust operations to reflect changes to access and land use.

NextBridge and the construction contractor will continue engagement with SFL holders to:

- Discuss Project access as it relates to planned access road construction and access management strategies (including decommissioning) in approved FMPs to reduce effects to SFL holders and eliminate the need for amendments to forest management plans where possible.
- Negotiate Road Use Agreements to clarify access road use and management strategies including upgrading, use, maintenance, monitoring, decommissioning and ownership of roads and water crossings.

Temporary workspaces that are not required for Project operation will be decommissioned following completion of Project construction. This will include the decommissioning of laydown yards, storage yards, construction camps, construction easement, temporary access roads and temporary water body crossing structures. No temporary buildings or structures associated with the temporary infrastructure will be left on the Project footprint upon completion of decommissioning, unless in accordance with third-party agreements. The goals of decommissioning temporary infrastructure are to remove the temporary infrastructure and then stabilize and revegetate disturbed areas while maintaining access and appropriate drainage to support operation and maintenance standards.

Existing roads and trails will be used where feasible as identified on the Access and Construction Environmental Maps and will comply with conditions outlined in road use agreements. The development of upgraded existing and new access roads will be planned in consultation with SFL holders and in compliance with applicable legislation, regulations and requirements identified in forest management plans, permits and authorizations. Unless approved by the appropriate regulatory agency, all access roads will be set back 30 m from all water bodies, except at water body crossing locations as identified in the crossing lists (i.e., access roads will not cross into the 30-m water body buffer).

Temporary access roads will be decommissioned in accordance with the MNRF's *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* (MNR 2010), and relevant commitments in approved FMPs. New access in caribou ranges will be minimized. Where new access is required, only winter grade access (snow roads) will be constructed when practicable, and roads will be decommissioned after construction by implementing clean-up and reclamation measures in Section 6.8 and installing rollback. The construction of bends will be considered in the temporary access roads in caribou ranges to restrict the line of sight along the road in a manner that it is safe for vehicle travel.

Follow applicable measures from MNRF's *Environmental Guidelines for Access Roads and Water Crossings* (refer to Appendix 4-II, Appendix H2; 1990), and *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* (refer to Appendix 4-II, Appendix H3; 2010a) and its associated Background Rationale document (2010b), *Ontario's Provincial Standards for Temporary Erosion and Sediment Control Measures* (refer to Appendix 4-II, Appendix H4; Government of Ontario 2015a), *General specifications for Environmental Protection for Construction in Waterbodies and on Waterbody Banks* (refer to Appendix 4-II, Appendix H5; Government of Ontario. 2015b), and *Construction Specifications for Control of Water from Dewatering Operations* (refer to Appendix 4-II, Appendix H6; Government of Ontario 2006b).

These mitigation measures are expected to minimize the potential effects on the road access due to project overlap with existing or planned forestry access roads. Mitigation measures are summarized in Table 19-45. The effectiveness of mitigation will be evaluated during construction and post-construction, and measures will be modified or enhanced as necessary through adaptive management.

19.7.14.4.3 Net Effects

Through negotiations with SFL holders, it is likely that access management strategies (including upgrading, use, maintenance, monitoring, decommissioning and ownership of roads and water crossings) can be developed that are consistent with direction in FMPs, resulting in no net effect on road access for the forest industry. In addition, conductors will be at a height that interactions with logging trucks and other equipment are unlikely. This effect (Change to road access due to Project overlap with existing or planned forestry access roads) is not carried forward to the net effects characterization.

19.7.15 Summary of Potential Effects, Mitigation and Net Effects

A summary of the potential effects assessment is provided in Table 19-45, which is based on the assessment discussion and the implementation of mitigation measures identified above and further supplemented in the table below.

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
Provincial and local land use policies and designations	Compatibility of the Project with land use designations and bylaws	Project activities during the construction phase, including: ■ site access development, site preparation and soil salvage (e.g., surveying and flagging, clearing and grubbing, and topsoil stripping and grading); ■ construction of temporary workspaces; ■ decommissioning of temporary infrastructures; and ■ clean-up and reclamation. Project activities during the operation phase, including: ■ Maintenance of access roads, transmission line, and preferred route ROW.	Incompatibility of Project construction and/or operations with land use designations, plans, and policies	**Construction Phase:** <u>Land and Resource Use Mitigation:</u> ■ Local, municipal, provincial and federal licences, permits and approvals will be obtained that are necessary for this Project. The Owner, its authorized representatives, contractor(s), and subcontractors, will comply with the conditions as presented to the Owner on permits, approvals, licences, certificates and Project-specific management plans. Inconsistencies between conditions of different licenses, permits, and approvals will be resolved prior to construction of each segment. ■ Obtain third party agreements with landowners and other affected parties prior to construction of each segment. ■ Consult with property owners about the placement of permanent fencing and gates as applicable. The location of gates and fencing will be negotiated with the property owner and where gates are installed a lock system will be agreed to with the property owner. ■ The Owner, its authorized representatives, contractor(s), and subcontractors, will comply with the conditions outlined in the third-party agreements (e.g., crossing agreements, road use agreements, and landowner agreements). ■ The list of third party agreements (e.g., crossing agreements, road use agreements, and landowner agreements) will be determined by the Owner prior to construction of each segment. ■ Prior to construction of each segment, the Owner will provide the Contractor with a Construction Line List that describes special requirements requested by landowners and Crown interest holders (e.g., timber salvage, restoration measures, fencing requirements). ■ Notify landowners along the route of the planned construction schedule before the start of construction to fulfill land agreements and prevent or reduce impacts to their operations or activities. ■ Notify road authorities (e.g., local roads boards, municipalities, Ministry of Transportation of Ontario, the Crown managed, landowners and other authorities) of the planned construction schedule and planned access restrictions and detours before start of construction to prevent or reduce impacts to their operations or activities. ■ Notify appropriate authorities and licensees, if required by approval conditions, prior to a permitted use of water, if applicable. ■ Notify Indigenous communities of the overall construction schedule before the start of construction. ■ Notify Crown interest holders (e.g. mining lease holders, unpatented claim holders, aggregate permit holders, non-freehold disposition holders, Sustainable Forest Licence (SFL) holders, and other interest holders) of the overall construction schedule before the start of construction. ■ Construction activities associated with the Project will be confined to the surveyed and marked areas. ■ Roads, pipelines, railroad or other crossings will be flagged so that they are crossed as indicated in crossing agreements and/or as per conditions of regulatory approvals. ■ Project personnel will avoid areas that are flagged or temporarily fenced and abide by restrictions on in/out privileges that are implemented in areas requiring special protection due to environmentally sensitive features. ■ Flagging, signage or other markings will be removed upon construction completion. ■ Use existing roads and trails as identified on the Access and Construction Environmental Maps and comply with conditions outlined in road use agreements. ■ Construct upgraded existing and new access roads in consultation with landowners, industrial land users (e.g., forestry, mining) and in compliance with applicable legislation, regulations and requirements identified in permits and authorizations. ■ Implement the traffic measures outlined in the Traffic Management Plan (refer to Appendix 4-II, Section 8.5). ■ Temporary access roads will be decommissioned in accordance with regulatory approvals and will follow MNRF's *Environmental Guidelines for Access Roads and Water Crossings* (refer to Appendix 4-II, Appendix H2; MNR 1990). ■ Reclaim temporary access roads after decommissioning by implementing clean-up and reclamation measures in Section 6.9. <u>Land Use Planning Mitigation</u> ■ Adhere to required federal, provincial and municipal provisions/conditions for land use policy, designation and by-law compatibility (i.e., associated with federal patent lands (external), First Nations reserve lands, the PPS, CLUPA, CLUAH Management Guidelines, D-1 and D-6 Environmental Land Use Planning Guides, municipal official plans). ■ Mitigation measures and buffers will seek to be consistent with D-1 Land Use and Compatibility (Government of Ontario 1995a), D-6 Compatibility between Industrial Facilities (Government of Ontario 1995b) to the extent feasible. <u>Canoe Routes and Portages Mitigation:</u> ■ No blasting near operating campgrounds, Ontario Trail Network trails or canoe routes on weekends and holidays beginning May Long weekend and ending Labour Day weekend, inclusive. ■ Place warning signs 150 m upstream and 100 m downstream of water crossings on scheduled waterways during construction. ■ Vegetation clearing within a minimum of 90 m around Category A canoe routes (i.e., Pukaskwa River canoe route, White River canoe route and Dog River canoe route) and their associated portage will be limited to where necessary for safety and compatible vegetation (e.g., below 2 m in height) will be retained where practicable (MNRF 2015). ■ Vegetation clearing within a minimum of 30 m Category B canoe route (i.e., White River canoe route, Michipicoten River canoe route and Magpie River canoe route) and their associated portage will be limited to where necessary for safety and compatible vegetation (e.g., below 2 m in height) will be retained where practicable (MNRF 2015).	**Construction Phase:** ■ The Owner will employ the services of qualified Environmental Inspector(s) to guide implementation, monitor and report on the effectiveness of the construction procedures and mitigation measures for minimizing potential impacts. ■ The Owner will conduct visual inspection of the construction area and Project access roads to monitor adherence to traffic protocols and speed limits by all Project personnel. ■ Environmental Inspectors will be on-site during construction to monitor the removal of temporary equipment water body crossing structures. ■ Post-construction monitoring of the Project footprint will begin following reclamation, within one growing season, and annually during operations to identify and address any reclamation concerns. **Operation Phase:** NextBridge will oversee implementation of the environmental management measures described in the OEMP during operation and maintenance.	No net effect

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
				■ Vegetation clearing around a canoe route will be limited to where necessary for safety and compatible vegetation (e.g., below 2 m in height) will be retained where practicable to meet regulatory requirements and minimize visual evidence of disturbance from activities. ■ Retain compatible vegetation (e.g., below 2 m in height) around a portage, where practicable to meet regulatory requirements. ■ Maintain visibility of portage on both side of the ROW (e.g., no stockpiled vegetation or soils at the portage access points) and access roads for recreational user accessibility. ■ During construction, keep portages cleared of vegetation debris and maintain the existing grade of the portage in a manner that it is safe for the recreational users. ■ No disturbance of portages outside of the Project Site and access roads will be permitted. **Operation Phase:** <u>Land and Resource Use Mitigation:</u> ■ Existing roads and trails identified in Access and Construction Environmental Maps will be used. ■ Access roads required during the operation of the Project will be maintained by NextBridge and used to access the Project area for maintenance. <u>Canoe Routes and Portages Mitigation:</u> ■ Compatibility of Project construction and/or operations with land use designations, plans, and policies ■ Vegetation clearing within a minimum of 90 m around Category A canoe routes (i.e., Pukaskwa River canoe route, White River canoe route and Dog River canoe route) and their associated portage will be limited to where necessary for safety and compatible vegetation (e.g., below 2 m in height) will be retained where practicable (MNRF 2015). ■ Vegetation clearing within a minimum of 30 m around Category B canoe route (i.e., White River canoe route, Michipicoten River canoe route and Magpie River canoe route) and their associated portage will be limited to where necessary for safety and compatible vegetation (e.g., below 2 m in height) will be retained where practicable (MNRF 2015). ■ Vegetation clearing around a canoe route will be limited to where necessary for safety and compatible vegetation (e.g., below 2 m in height) will be retained where practicable to meet regulatory requirements and minimize visual evidence of disturbance from activities. ■ Retain compatible vegetation (e.g., below 2 m in height) around a portage, where practicable to meet regulatory requirements. ■ No disturbance of portages outside of the Project footprint and access roads will be permitted.		

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
Parks and Protected Areas	Parks and protected areas access and use	Project activities during the construction phase, including: ■ site access development, site preparation and soil salvage (e.g., surveying and flagging, clearing and grubbing, and topsoil stripping and grading); ■ construction of temporary workspaces; ■ decommissioning of temporary infrastructures; and ■ clean-up and reclamation. Project activities during the operation phase, including: ■ Maintenance of access roads, transmission line, and preferred route ROW.	Reduction and increase to access to parks and protected areas due to Project construction and operation and the resulting change in use.	**Construction Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. In addition, implement the following measures in Parks and Protected Areas: ■ The Owner will provide advance notice of construction activities to recreational users through formal notification in local newspapers and at recreational areas, parks and campsites locations (e.g., park entrances). ■ Construction activities will be staged in Parks and protected areas to avoid or minimize potential effects on ecologically sensitive areas, life cycle periods, and peak visitor periods, when construction schedule allows. <u>Provincial Parks Mitigation:</u> ■ Work Permits and Land Use Permits will be obtained from MNRF within provincial parks as applicable. ■ The Owner will actively consult with the MNRF on proposed measures to minimize interruption of recreational use and access restrictions to provincial parks. ■ The Owner will apply best efforts to work with the MNRF to plan construction around the peak park season, generally from June to September, where the Project Site is located within a provincial park. ■ Limit unauthorized access to provincial parks by installing signage on access roads where permissible by MNRF. <u>Provincially Significant Wetlands Mitigation:</u> Avoidance of the Nipigon River PSW was achieved via Project design. Although the transmission line is shown as crossing the Nipigon River PWS on the Environmental Alignment Sheets, the Project is not expected to disturb this PWS as the transmission structures will be placed at the setback distance of approximately 30 m from the PWS. <u>Water Body Crossing Mitigation:</u> ■ Obtain regulatory approvals as required from applicable regulatory agencies (MNRF, DFO, and/or LRCA) prior to installation of water body crossing structures. The Owner will consult with the appropriate regulatory agency to discuss any alternatives or modifications to the crossing requirements specified in approvals before construction begins. ■ It is anticipated that regulatory approval under the *Navigation Protection Act* will be required at scheduled navigable waters crossed by the Project (Lake Superior and Nipigon River) and may be required at non-scheduled navigable waters. The Owner will provide *Navigation Protection Act* approval conditions prior to construction of each segment, which may include notifications. ■ Construct water body crossing structures according to the crossing method identified on the Environmental Alignment Sheets and Access and Construction Environmental Maps and summarized in the water body crossing lists (refer to Appendix 4-II, Appendix I) and in accordance with regulatory approvals. ■ Remove temporary water body crossing structures and associated fill materials when the crossing is no longer required after construction, unless otherwise agreed upon in third-party agreements. <u>Canoe Routes, Portages and Ontario Trail Network Mitigation:</u> ■ Place warning signs 150 m upstream and 100 m downstream of water crossings on scheduled waterways during construction. ■ Maintain visibility of portage on both side of the row (e.g., no stockpiled vegetation or soils at the portage access points) and access roads for recreational user accessibility. ■ During construction, keep portages cleared of vegetation debris and maintain the existing grade of the portage in a manner that it is safe for the recreational users. ■ No disturbance of portages outside of the Project Site and access roads will be permitted. **Operation Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. <u>Canoe Routes and Portages Mitigation:</u> No disturbance of portages outside of the Project footprint and access roads will be permitted.	**Construction Phase:** ■ The Owner will employ the services of qualified Environmental Inspector(s) to guide implementation, monitor and report on the effectiveness of the construction procedures and mitigation measures for minimizing potential impacts. ■ The Owner will conduct visual inspection of the construction area and Project access roads to monitor adherence to traffic protocols and speed limits by all Project personnel. ■ Environmental Inspectors will be on-site during construction to monitor the removal of temporary equipment water body crossing structures. ■ Post-construction monitoring of the Project footprint will begin following reclamation, within one growing season, and annually during operations to identify and address any reclamation concerns. **Operation Phase:** ■ NextBridge will oversee implementation of the environmental management measures described in the OEMP during operation and maintenance. ■ Culverts will be periodically (e.g., before and/or after spring freshet) inspected and maintained to prevent blockages from forming and causing ponding or backwater effects. Where culverts are installed at fish-bearing water bodies, debris removal activities will follow DFO's guidance (i.e., gradual removal such that flooding downstream, extreme flows downstream, release of suspended sediment, and fish stranding can be avoided).	Net effect - Reduction and increase to access to parks and protected areas

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
Park and Protected Areas	Parks and protected areas environmental setting	Project activities during the construction phase, including: ■ site access development, site preparation and soil salvage (e.g., surveying and flagging, clearing and grubbing, and topsoil stripping and grading); ■ construction of temporary workspaces; ■ decommissioning of temporary infrastructures; and ■ clean-up and reclamation. Project activities during the operation phase, including: ■ Maintenance of access roads, transmission line, and preferred route ROW.	Change to environmental setting due to changing environmental conditions due to Project construction and operation activities	**Construction Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. In addition, implement the following measures in Parks and Protected Areas: ■ The Owner will provide advance notice of construction activities to recreational users through formal notification in local newspapers and at recreational areas, parks and campsites locations (e.g., park entrances). ■ Construction activities will be staged in Parks and protected areas to avoid or minimize potential effects on ecologically sensitive areas, life cycle periods, and peak visitor periods, when construction schedule allows. <u>Provincial Parks Mitigation:</u> Implement Provincial Parks Mitigation listed in the potential effect for "Reduction and increase to access to parks and protected areas due to Project construction and operation and the resulting change in use" above. In addition, implement the following mitigation measures in Provincial Parks: ■ Clearly mark the boundaries of provincial parks and recreational areas along the ROW. ■ Construction equipment, including rig mats, will arrive on the Project Site clean (i.e., free of soil and vegetative debris). ■ Confine grubbing and stripping to the structure locations and new access roads. ■ Seed areas prone to erosion with a native cover crop (e.g., cereal crop) and certified seed mix approved by the applicable regulatory agency as soon as feasible after construction. ■ Plant conifers when reclaiming laydown yards, construction camps, and storage yards and other disturbances located off of the transmission line ROW and in consultation with the landowner or communities and applicable regulatory authority. ■ Project footprint. The use of herbicides during construction is prohibited. ■ When construction schedule allows, plan construction activities in wet areas during frozen conditions. ■ The Owner will follow weed control and management measures outlined in the Weed Management Plan (refer to Appendix 4-II, Section 8.4). ■ The Contractor will follow weed control and management measures outlined in the Weed Management Plan (refer to Appendix 4-II, Section 8.4). ■ The Contractor will adhere to the Spill Prevention and Response Contingency Plan (refer to Appendix 4-II, Section 7.1) to prevent spills and/or release. ■ The Contractor will follow fire prevention measures outlined in the Fire Prevention Contingency Plan (refer to Appendix 4-II, Section 7.3). ■ The Contractor will adhere to the preliminary Waste Management Plan (refer to Appendix 4-II, Section 8.2). ■ Follow measures outlined in the Soil Handling Contingency Plan (refer to Appendix 4-II, Section 7.2) when working under wet conditions. ■ Install, monitor and manage appropriate erosion and sedimentation controls as outlined in the preliminary Erosion and Sedimentation Control Management Plan (refer to Appendix 4-II, Section 8.1). ■ Turn off vehicles and equipment when not in use and minimize idling, unless weather and/or safety conditions dictate the need for them to remain turned on and in a safe operating condition. ■ Noise abatement, emission and pollution control equipment on machinery should be in place, properly maintained and in good working order. ■ Near residential and recreational areas, parks or campsites, schedule noisy activities in accordance with municipal bylaws or MOECC *Noise Guideline* NPC-300 (MOECC 2013). ■ No blasting near provincial parks and conservation reserves on weekends and holidays beginning May Long weekend and ending Labour Day weekend, inclusive. ■ Address noise concerns as they arise through a noise complaint process. ■ Construction activities will occur during the daytime period from 07:00 to 19:00. In the event construction will occur beyond the daytime period, the Owner will re-evaluate the potential Project-related effects and if required, review mitigation requirements. ■ Project personnel who disregard requirements in the CEPP may be removed from the Project Site. <u>Environmentally Significant Features Mitigation:</u> ■ Clearly mark known site-specific features (e.g., rare plant, wetland, water body, SWH) and associated setbacks as shown on the Environmental Alignment Sheets and Access and Construction Environmental Maps. ■ Construction equipment will arrive on the Project Site clean (i.e., free of soil and vegetative debris) in accordance with the *Clean Equipment Protocol for Industry* (refer to Appendix H1; Halloran et al. 2013) and in good working order (i.e., no oil or hydraulic fluid leaks). Equipment will be inspected for leaks routinely throughout the duration of construction. ■ Construction will be completed as quickly and efficiently as possible near environmentally sensitive features to minimize the disturbance to fish and wildlife. ■ The Contractor will adhere to the recommended construction timing windows and restrictions (refer to Appendix 4-II, Table 4-II-1).	**Construction Phase:** ■ The Owner will employ the services of qualified Environmental Inspector(s) to guide implementation, monitor and report on the effectiveness of the construction procedures and mitigation measures for minimizing potential impacts. ■ The Owner will monitor the Project Site during construction for incidental sensitive features (e.g., water body, rare plant, rare vegetation community, wildlife species of concern, archaeological resources) that have not been previously identified on the Project Site. ■ The Owner will conduct visual inspection of the construction area and Project access roads to monitor adherence to traffic protocols and speed limits by all Project personnel. Environmental Inspectors will be on-site during construction to monitor the installation of temporary equipment water body crossing structures. ■ Environmental Inspectors will be on-site during construction to monitor the removal of temporary equipment water body crossing structures. ■ NextBridge will implement monitoring and inspection commitments as identified in Surface Water (refer to Section 7), Air Quality (refer to Section 9), Acoustic Environment (refer to Section 11), Vegetation and Wetlands (refer to Section 12), Fish and Fish Habitat (refer to Section 13), Wildlife (refer to Section 14), and Visual Environment (refer to Section 20). ■ Post-construction monitoring of the Project Site will begin following reclamation, within one growing season, and annually during operations to identify and address any reclamation concerns. **Operation Phase:** ■ NextBridge will oversee implementation of the environmental management measures described in the OEMP during operation and maintenance. ■ Culverts will be periodically (e.g., before and/or after spring freshet) inspected and maintained to prevent blockages from forming and causing ponding or backwater effects. Where culverts are installed at fish-bearing water bodies, debris removal activities will follow DFO's guidance (i.e., gradual removal such that flooding downstream, extreme flows downstream, release of suspended sediment, and fish stranding can be avoided).	Net effect - Change to environmental setting due to changing environmental conditions

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
				■ If adherence to the timing windows and restrictions is not possible, the Contractor will develop a site-specific mitigation and monitoring plan in consultation with the Owner and appropriate regulatory agencies (e.g., MNRF, LRCA). ■ Report wildlife sightings, issues and incidents with wildlife or nuisance wildlife as soon as it is safe to do so to the Owner, who shall determine corrective and/or emergency action to be taken in the field. The Owner will determine what regulatory reporting is required. Discuss recent wildlife sightings and appropriate mitigation measures during daily tailgate meetings. ■ In the event that sensitive wildlife, a previously unidentified active nest, burrow or den are found during construction, implement Wildlife Features of Concern Discovery Contingency Plan (refer to Appendix 4-II, Section 7.5). ■ In the event that a previously unidentified rare plant species or a rare vegetation community are suspected or encountered unexpectedly, implement the Rare Plant Discovery Contingency Plan (refer to Appendix 4-II, Section 7.6). ■ In the event that a previously unidentified water body is suspected or encountered, implement the Undocumented Water Body Discovery Contingency Plan (refer to Appendix 4-II, Section 7.7). ■ In the event that a previously unidentified heritage or archaeological resources (e.g., arrow heads, modified bone, pottery fragments, fossils) are suspected or encountered unexpectedly during construction, follow the Discovery of Heritage and Archaeological Resources Contingency Plan (refer to Appendix 4-II, Section 7.4). ■ In the event that a previously unidentified Indigenous land and resource use site is suspected or encountered during construction, follow the Indigenous Land and Resource Use Site Contingency Plan (refer to Appendix 4-II, Section 7.8). ■ Implement mitigation outlined in the Geology, Terrain and Soils (refer to Section 6), Surface Water (refer to Section 7), Air Quality (refer to Section 9), Acoustic (refer to Section 11), Vegetation and Wetlands (refer to Section 12), Fish and Fish Habitat (refer to Section 13), Wildlife and Wildlife Habitat (refer to Section 14), Archaeological Resources (refer to Section 15), Cultural Heritage Resources (refer to Section 16), Indigenous Land and Resource Use (refer to Section 17) and Visual Environment (refer to Section 20) to reduce effects to parks and protected areas during construction and operation. <u>Provincially Significant Wetlands Mitigation:</u> Implement mitigation for Provincially Significant Wetlands Mitigation listed in the potential effect for “Reduction and increase to access to parks and protected areas due to Project construction and operation and the resulting change in use” above. In addition, implement the following mitigation measures for Provincially Significant Wetlands: ■ If additional transmission structures are required, avoid locating the structures within a PSW or within its associated 30 m setback. ■ If additional temporary workspaces are required, avoid locating the workspaces within a PSW or within its associated 30 m setback. ■ Install, monitor and manage appropriate erosion and sedimentation controls as outlined in the Erosion and Sedimentation Control Management Plan (refer to Appendix 4-II, Section 8.1) to prevent sediment and other material entering the Nipigon River. <u>Significant Wildlife Habitat Mitigation:</u> ■ Avoid disturbance to SWH (MNR 2000, 2010b, 2014) and their associated setbacks to the extent practicable. Where avoidance is not practicable, adhere to the recommended construction timing windows and restrictions (refer to Appendix 4-II, Table 4-II-1). ■ Flag undisturbed adjacent areas to the extent required to protect adjacent seed sources from being affected. ■ The Owner will follow weed control and management measures outlined in the Weed Management Plan (refer to Appendix 4-II, Section 8.4). ■ The Contractor will adhere to the Spill Prevention and Response Contingency Plan (refer to Appendix 4-II, Section 7.1) to prevent spills and/or release. ■ The Contractor will follow the fire prevention measures outlined in the Fire Prevention Contingency Plan (refer to Appendix 4-II, Section 7.3). ■ The Contractor will adhere to the preliminary Waste Management Plan (refer to Appendix 4-II, Section 8.2). ■ Follow measures outlined in the Soil Handling Contingency Plan (refer to Appendix 4-II, Section 7.2) when working under wet conditions. ■ Install, monitor and manage appropriate erosion and sedimentation controls as outlined in the Erosion and Sedimentation Control Management Plan (refer to Appendix 4-II, Section 8.1) to prevent sediment and other material entering the SWH. ■ Reduce the removal of compatible vegetation (e.g., below 2 m in height) within SWH and associated setbacks to the extent possible. ■ Conduct ground level cutting/mowing/mulching of vegetation instead of grubbing. Confine grubbing and stripping to the transmission structure locations and new access roads. ■ Retain snags (i.e., standing or partially fallen dead trees) to provide wildlife habitat, where retention is not considered a safety hazard. ■ Use low ground pressure equipment and prevent ground disturbance by using a protective layer such as frost packing, snow, ice or matting (refer to Appendix 4-II, Figure B-13) or biodegradable geotextile and clay ramps between root/seed bed and construction equipment. <u>Areas of Natural and Scientific Interest Mitigation:</u> ■ Avoidance of the Magpie River /Terraces Area of Natural and Scientific Interest (ANSI) was achieved via Project design. ■ If additional transmission structures are required, avoid locating the structures within an ANSI or within its associated 50 m setback.		

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
				■ The Contractor will develop a site-specific Erosion and Sedimentation Control Plan for review and approval by the Owner to prevent sediment and other material entering the Magpie River. <u>Critical Landform/Vegetation Association Mitigation:</u> ■ Avoidance of the Critical Landform/Vegetation Association (CLVA) in Gravel River Conservation Reserve was not practicable as a change in routing design at that location would result in additional greenfield disturbances. The following measures will be implemented to mitigate potential effect of the Project on this CLVA: ▪ Obtain a work permit from the MNRF under the *Provincial Parks and Conservation Reserves Act* for development within a CLVA. ▪ Flag undisturbed adjacent areas to the extent required to protect adjacent seed sources from being affected. ▪ The Owner will review protective and mitigative measures with the Contractor. ▪ The Owner will follow weed control and management measures outlined in the Weed Management Plan (refer to Appendix 4-II, Section 8.4). ■ The proposed mitigation measures will be reviewed and agreed upon in consultation with MNRF. ■ Reduce the removal of compatible vegetation (e.g., below 2 m in height) in CLVA to the extent practicable. ■ Use equipment that minimizes surface disturbance, soil compaction and topsoil loss (e.g., equipment with low ground pressure tires, or wide pad tracks), when working in wet areas, under wet conditions, or during spring break-up. ■ Use a protective layer such as matting (refer to Appendix 4-II, Figure B-13) if wet conditions are anticipated or encountered. ■ Mechanical clearing and other equipment activity will be minimized within a CLVA. ■ Clearing may be accomplished by harvesting equipment, mulchers, and hand cutting. Clear merchantable timber by hand, where practicable. <u>Research Plots Mitigation:</u> ■ Avoid disturbance to research plots to the extent practicable. ■ The Owner will consult with Crown interested holders (e.g. mining lease holders, unpatented claim holders, aggregate permit holders, non-freehold disposition holders, SFL holders, and other interest holders) forestry, mining claim and aggregate licence holders and, where appropriate, to develop mutually beneficial agreements with the affected tenure holders. <u>Rare Plants/Rare Vegetation Communities Mitigation:</u> ■ Avoidance to known rare plant vegetation communities was achieved via Project design. ■ Avoidance to two provincially imperiled (S2) rare plant species, alpine woodsia (*Woodsia alpina*) and purple bluejoint (*Calamagrostis purpurascens*), was not achieved during Project design. The following measures will be implemented to mitigate potential effect of the Project on these two rare plant occurrences: ▪ Prior to construction of each segment, the Owner may contact a resource specialist to assess the known species or habitat and identify the magnitude of disturbance to the vegetation feature. ▪ Depending on the species or habitat and the magnitude of disturbance, the resources specialist will determine a suitable course of action in consultation with the Owner and, if necessary, the appropriate regulatory agencies. ▪ A search for potential rare plant and rare vegetation community in the Project Site should be completed prior to construction of each segment, in order to document incidences. ▪ In the event that a previously unidentified rare plant species or a rare vegetation community are suspected or encountered unexpectedly, implement the Rare Plant Discovery Contingency Plan (refer to Section 7.6). ▪ Install, monitor and manage appropriate erosion and sedimentation controls as outlined in the Erosion and Sedimentation Control Management Plan (refer to Section 8.1) to protect rare plant habitat and/or rare vegetation community from runoff water and sediments as directed by the Environmental Inspector. ▪ The Contractor will follow weed control and management measures outlined in the Weed Management Plan (refer to Section 8.4). <u>Wetlands Mitigation:</u> ■ Transmission structures will be located to avoid environmentally sensitive features (e.g., rare plant, wetland, archaeological sites) that were identified during pre-construction surveys, to the extent practicable. ■ Avoid placement of transmission structures or any other construction materials within a wetland or within the 30 m water body buffer. ■ Avoid the construction of temporary workspaces in wetlands, to the extent practicable. ■ Reduce the removal of compatible vegetation (e.g., below 2 m in height) in wetlands and associated setbacks to the extent possible. ■ Conduct ground level cutting/mowing/mulching of wetland vegetation instead of grubbing. Confine grubbing and stripping to the transmission structure locations and new access roads.		

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
				■ Retain snags (i.e., standing or partially fallen dead trees) to provide wildlife habitat, where retention is not considered a safety hazard. ■ Install berms, cross ditches and/or silt fences between wetlands and disturbed areas when there is a risk of sedimentation into the wetland (refer to Appendix 4-II, Figure B-3 and Figure B-4). ■ When the wetland organic layer is salvaged, store the layer separately from upland soils for restoration. ■ Use low ground pressure equipment and prevent ground disturbance by using a protective layer such as frost packing, snow, ice or matting (refer to Appendix 4-II, Figure B-13) or biodegradable geotextile and clay ramps between wetland root/seed bed and construction equipment. ■ Re-fueling or equipment maintenance activities will follow mitigation measures outlined in the Spill Prevention and Response Plan (refer to Appendix 4-II, Section 7.1). ■ Natural recovery is the preferred method of reclamation in wetlands. Do not seed wetland areas unless re-vegetation is needed to avoid weed invasion. <u>Water Body Crossing Mitigation:</u> Implement Water Body Crossing Mitigation listed in the potential effect for "Reduction and increase to access to parks and protected areas due to Project construction and operation and the resulting change in use" above. In addition, implement the following mitigation measures: ■ Fording of a water body is not permitted for construction or clearing to prevent direct injury or mortality to eggs or fish unless otherwise approved by the appropriate regulatory agency. ■ Necessary equipment and materials required for water body crossing structures will be on site and ready for installation prior to commencing instream work. Clean construction equipment in accordance with the *Clean Equipment Protocol for Industry* (refer to Appendix H1; Halloran et al. 2013) prior to constructing water body crossings. ■ Repair the water body crossing structures, if warranted, as soon as practicable after noticing repairs are necessary. ■ Install, monitor and manage appropriate erosion and sedimentation controls as outlined in the Erosion and Sedimentation Control Management Plan (refer to Appendix 4-II, Section 8.1). ■ Follow applicable measures from Ontario's *Provincial Standards for Temporary Erosion and Sediment Control Measures* (refer to Appendix H4; Government of Ontario 2015a). ■ Erosion and sedimentation control measures will be implemented to prevent site runoff from reaching the water body. Specific measures such as the use of berms or check dams, sediment fences, sumps or settling ponds will be undertaken as required to prevent sediment laden water from entering a water body. <u>Canoe Routes and Portages Mitigation:</u> Implement Canoe Routes and Portages Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above <u>Acoustic Environment Mitigation:</u> ■ Comply with local municipal noise by-laws or MOECC *Noise Guideline* NPC-300 (MOECC 2013) and the MOECC *Model Municipal Noise Control Bylaw* NPC-115 (MOECC 1978). ■ The Owner will apply best efforts to work with the MNRF to plan construction around the peak park season, generally from June to September, where the Project Site is located within a provincial park. ■ Notify landowners along the route of the planned construction schedule before the start of construction to fulfill agreements and prevent or reduce impacts to their operations or activities. ■ Notify applicable federal and provincial regulatory agencies and local municipal officials, and other affected parties prior to blasting and implosion operations as required by approval conditions. ■ Noise abatement, emission and pollution control equipment on machinery should be in place, properly maintained and in good working order. ■ Where occupied residences are confirmed within 100 m of construction, schedule activities within 5 km radius in a manner that reduces the number of construction activities occurring at the same time. ■ No blasting near operating campgrounds, Ontario Trail Network trails or canoe routes on weekends and holidays beginning May Long weekend and ending Labour Day weekend, inclusive. ■ No blasting near provincial parks on weekends and holidays beginning May Long weekend and ending Labour Day weekend, inclusive. ■ Construction activities will occur during the daytime period from 07:00 to 19:00. In the event construction will occur beyond the daytime period, the Owner will re-evaluate the potential Project-related effects and if required, review mitigation requirements. ■ In the event construction will occur beyond the daytime period, NextBridge and its contractors will re-evaluate the potential Project-related effects and if required, review mitigation requirements.		

				Air Quality/Emission Mitigation: ■ Turn off vehicles and equipment when not in use and minimize idling, unless weather and/or safety conditions dictate the need for them to remain turned on and in a safe operating condition. ■ Noise abatement, emission and pollution control equipment on machinery should be in place, properly maintained and in good working order. ■ Keep equipment well-maintained. ■ Implement dust control measures (e.g., spray dust control solution that holds moisture for a long period of time causing dust to settle) as advised by the Environmental Inspector. ■ To minimize drifting soils and loss of topsoil in areas prone to wind or water erosion stabilize the disturbed area as soon as practicable by: ▪ spreading wood chips or straw crimping (weed-free straw); sowing a fast growing ground cover (e.g., cereal crop); ▪ installing erosion control blankets; or ▪ walking down tree and shrub debris over exposed soils (rollback). ■ Retain compatible vegetation (e.g., below 2 metres (m) in height) where practicable on areas prone to wind erosion, steep slopes, drainage ways or next to a water body. ■ Tackify, cover, seed, apply water or pack the topsoil stockpiles and windrows with approved equipment, if soils prone to wind erosion. Visual Environment Mitigation: ■ Site preferred route ROW to take advantage of existing screening offered by topography and/or vegetation. ■ Vegetation clearing around a canoe route will be limited to where necessary for safety and compatible vegetation (e.g., below 2 m in height) will be retained where practicable to meet regulatory requirements and minimize visual evidence of disturbance from activities. ■ Consider adjusting locations of transmission structures along the preferred route ROW to reduce effects to visual quality, where possible. ■ Use of lattice transmission structures. **Operation Phase:** Land and Resource Use Mitigation: Implement Land and Resource Use Mitigation listed in the potential effect for “Compatibility of Project construction and/or operations with land use designations, plans, and policies” above. Environmentally Sensitive Features Mitigation: ■ Contractors will report issues and incidents with wildlife or nuisance wildlife as soon as it is safe to do so to NextBridge, who shall determine corrective and/or emergency action to be taken in the field. NextBridge will determine what regulatory reporting is required. ■ NextBridge will post signs warning Project personnel of high use wildlife areas to the extent practicable. ■ NextBridge may provide the appropriate resource specialist, if required, to assess sensitive features and to inspect or monitor Project activities at or near sensitive areas. ■ Avoid physical disturbance to existing anthropogenic structures located outside of the ROW and access roads that could be roosts for bats (e.g., sheds, barns, houses, buildings, and bridges). Critical Landform/Vegetation Association Mitigation: ■ Reduce the removal of compatible vegetation (e.g., below 2 m in height) in CLVA to the extent practicable. ■ Use clearing equipment that minimizes surface disturbance, soil compaction and topsoil loss (e.g., equipment with low ground pressure tires, or wide track), when working in wet areas, under wet conditions, or during spring break-up. Clearing may be accomplished by harvesting equipment, mulchers, and hand cutting. Clear merchantable timber by hand, where required. ■ Mechanical clearing and other equipment activity will be minimized and no turning of equipment, or vehicles (i.e., straight in, straight out) to the extent practicable. ■ Restrict the general application of herbicide in CLVAs to the extent practicable. Rare Plants/Rare Vegetation Communities Mitigation: ■ In the event that a rare plant species or a rare vegetation community are suspected or encountered unexpectedly, implement the Rare Plant Discovery Contingency Plan (refer to Appendix 4-II, Section 7.6). ■ Restrict the general application of herbicide near rare plants or rare ecological communities. Spot spraying, wicking, mowing, or hand-picking are acceptable measures for weed control in these areas. Water Body Crossing Mitigation: ■ Follow applicable measures from DFO’s Measures to Avoid Causing Harm to Fish and Fish Habitat Including Aquatic Species at Risk (DFO 2016). ■ Follow applicable measures from MNRF’s Environmental Guidelines for Access Roads and Water Crossings (MNR 1990), Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales (MNR 2010a) and its associated Background Rationale document (MNR 2010b).		

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
				■ Vehicles and equipment will cross water bodies using existing and/or approved equipment crossings. ■ Fording of water bodies is not permitted, unless approved by the regulatory agencies. ■ Travel in the 30-m water body buffer at water body crossing will be perpendicular to the water body. No turning of vehicles and equipment will be allowed in the 30-m water body buffer to minimize soil disturbance. ■ Re-fuelling or equipment maintenance activities are not to occur within 100 m of a water body. ■ Specific measures such as installing temporary sediment barriers (e.g., berms, silt fences) will be undertaken as required to prevent sediment laden water from entering a water body. <u>Canoe Routes and Portages Mitigation:</u> Implement Canoe Routes and Portages Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. <u>Acoustic Environment Mitigation:</u> ■ Maintenance activities will typically occur during the daytime period from 07:00 to 19:00. In the event maintenance will occur beyond the daytime period, NextBridge will re-evaluate the potential Project-related effects and if required, review mitigation requirements. ■ Ensure that noise abatement equipment on machinery is properly maintained and in good working order. ■ Comply with local municipal noise by-laws and the MOECC *Model Municipal Noise Control Bylaw* NPC-115 (MOECC 1978). ■ Address noise concerns as they arise through a noise complaint process.		
	Natural, cultural, and recreational values of parks and protected areas		Change to natural, cultural and recreational features which could affect natural, cultural and recreational values within parks and protected areas due to Project construction and persisting through operation	Implement the same mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above.	Implement the same Inspection and Monitoring Details listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above.	Net effect – Change to natural, cultural and recreational features which could affect natural, cultural and recreational values within parks and protected areas
Linear Infrastructure	Linear infrastructure access and use	Project activities during the construction phase, including: ■ site access development; ■ decommissioning of temporary infrastructures; and ■ clean-up and reclamation. Project activities during the operation phase, including: ■ Maintenance of access roads, transmission line, and preferred route ROW.	Increase or decrease in access to linear infrastructure Projects affecting operation or maintenance due to Project construction and operation	**Construction Phase:** <u>Land and Resource Use Mitigation:</u> ■ Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. In addition, implement the following measures in Parks and Protected Areas: ▪ Implement road weight restriction and road bans during the spring break up period as regulated by the applicable regulatory authority. **Operation Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above.	**Construction Phase:** ■ The Owner will employ the services of qualified Environmental Inspector(s) to guide implementation, monitor and report on the effectiveness of the construction procedures and mitigation measures for minimizing potential impacts. ■ The Owner will conduct visual inspection of the construction area and Project access roads to monitor adherence to traffic protocols and speed limits by all Project personnel. ■ Environmental Inspectors will be on-site during construction to monitor the removal of temporary equipment water body crossing structures. ■ Post-construction monitoring of the Project footprint will begin following reclamation, within one growing season, and annually during operations to identify and address any reclamation concerns. **Operation Phase:** NextBridge will oversee implementation of the environmental management measures described in the OEMP during operation and maintenance.	No net effect

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
Non-commercial recreational land and resource use ■ consumptive recreational land and resource use such as hunting and fishing; ■ non-consumptive recreational land use such as snowmobiling, hiking, and boating; and ■ non-commercial recreational land and resource access and use.	Non-commercial recreational land and resource use and access.	Project activities during the construction phase, including: ■ site access development, site preparation and soil salvage (e.g., surveying and flagging, clearing and grubbing, and topsoil stripping and grading); ■ construction of temporary workspaces; ■ decommissioning of temporary infrastructures; and ■ clean-up and reclamation. Project activities during the operation phase, including: ■ Maintenance of access roads, transmission line, and preferred route ROW.	Reduction and increase to access to non-commercial recreation areas due to Project construction and operation and the resulting change in use	**Construction Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. <u>Water Body Crossing Mitigation:</u> Implement Water Body Crossing Mitigation listed in the potential effect for "Reduction and increase to access to parks and protected areas due to Project construction and operation and the resulting change in use" above. <u>Canoe Routes and Portages Mitigation:</u> Implement Canoe Routes and Portages Mitigation listed in the potential effect for "Reduction and increase to access to parks and protected areas due to Project construction and operation and the resulting change in use" above. **Operation Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. <u>Canoe Routes and Portages Mitigation:</u> Implement Canoe Routes and Portages Mitigation listed in the potential effect for "Reduction and increase to access to parks and protected areas due to Project construction and operation and the resulting change in use" above.	**Construction Phase:** ■ The Owner will employ the services of qualified Environmental Inspector(s) to guide implementation, monitor and report on the effectiveness of the construction procedures and mitigation measures for minimizing potential impacts. ■ The Owner will conduct visual inspection of the construction area and Project access roads to monitor adherence to traffic protocols and speed limits by all Project personnel. ■ Environmental Inspectors will be on-site during construction to monitor the removal of temporary equipment water body crossing structures. ■ Post-construction monitoring of the Project footprint will begin following reclamation, within one growing season, and annually during operations to identify and address any reclamation concerns. **Operation Phase:** ■ NextBridge will oversee implementation of the environmental management measures described in the OEMP during operation and maintenance. ■ Culverts will be periodically (e.g., before and/or after spring freshet) inspected and maintained to prevent blockages from forming and causing ponding or backwater effects. Where culverts are installed at fish-bearing water bodies, debris removal activities will follow DFO's guidance (i.e., gradual removal such that flooding downstream, extreme flows downstream, release of suspended sediment, and fish stranding can be avoided).	Net effect – Reduction and increase to access to non-commercial recreation areas

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
Non-commercial recreational land and resource use ■ consumptive recreational land and resource use such as hunting and fishing; ■ non-consumptive recreational land use such as snowmobiling, hiking, and boating; and ■ non-commercial recreational land and resource access and use.	Non-commercial recreational environmental setting	Project activities during the construction phase, including: ■ site access development, site preparation and soil salvage (e.g., surveying and flagging, clearing and grubbing, and topsoil stripping and grading); ■ construction of temporary workspaces; ■ decommissioning of temporary infrastructures; and ■ clean-up and reclamation. Project activities during the operation phase, including: ■ Maintenance of access roads, transmission line, and preferred route ROW.	Change to environmental setting due to changing environmental conditions due to Project construction and operation activities	**Construction Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. In addition, implement the following measures: ■ On federal land, provincial Crown land or municipal land, approval will be obtained from MNRF prior to clearing of each segment, as appropriate (e.g., Work Permit, Land Use Permit, and supporting consents from impacted Crown interest holders). ■ On private land, approval will be obtained from the landowner prior to clearing of each segment. Crown Patent will also be obtained from the local registry office or MNRF to confirm if any trees on private lands are reserved to the Crown. If there is Crown reservation on any tree, the Owner will consult with MNRF and approval may be required prior to clearing of each segment. <u>Environmentally Sensitive Features Mitigation:</u> Implement the Environmentally Sensitive Features Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Provincially Significant Wetlands Mitigation:</u> Implement the Provincially Significant Wetlands Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Significant Wildlife Habitat Mitigation:</u> Implement the Significant Wildlife Habitat Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Areas of Natural and Scientific Interest Mitigation:</u> Implement the Areas of Natural and Scientific Interest Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. Critical Landform/Vegetation Association Mitigation: Implement the Critical Landform/Vegetation Association Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Research Plots Mitigation:</u> Implement the Research Plots Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Rare Plants/Rare Vegetation Communities Mitigation:</u> Implement the Rare Plants/Rare Vegetation Communities Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Wetlands Mitigation:</u> Implement the Wetlands Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Water Body Crossing Mitigation:</u> Implement the Water Body Crossing Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Canoe Routes and Portages Mitigation:</u> Implement the Canoe Routes and Portages Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Acoustic Environment Mitigation:</u> Implement the Acoustic Environment Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Air Quality/Emission Mitigation:</u> Implement the Air Quality/Emission Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above.	**Construction Phase:** ■ The Owner will employ the services of qualified Environmental Inspector(s) to guide implementation, monitor and report on the effectiveness of the construction procedures and mitigation measures for minimizing potential impacts. ■ The Owner will monitor the Project Site during construction for incidental sensitive features (e.g., water body, rare plant, rare vegetation community, wildlife species of concern, archaeological resources) that have not been previously identified on the Project Site. ■ The Owner will conduct visual inspection of the construction area and Project access roads to monitor adherence to traffic protocols and speed limits by all Project personnel. ■ Environmental Inspectors will be on-site during construction to monitor the removal of temporary equipment water body crossing structures. ■ Post-construction monitoring of the Project Site will begin following reclamation, within one growing season, and annually during operations to identify and address any reclamation concerns. ■ NextBridge will implement monitoring and inspection commitments as identified in Surface Water (refer to Section 7), Air Quality (refer to Section 9), Acoustic Environment (refer to Section 11), Vegetation and Wetlands (refer to Section 12), Fish and Fish Habitat (refer to Section 13), Wildlife (refer to Section 14), and Visual Environment (refer to Section 20). **Operation Phase:** ■ NextBridge will oversee implementation of the environmental management measures described in the OEMP during operation and maintenance. ■ Culverts will be periodically (e.g., before and/or after spring freshet) inspected and maintained to prevent blockages from forming and causing ponding or backwater effects. Where culverts are installed at fish-bearing water bodies, debris removal activities will follow DFO's guidance (i.e., gradual removal such that flooding downstream, extreme flows downstream, release of suspended sediment, and fish stranding can be avoided).	Net effect – Change to environmental setting due changing environmental conditions

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
				Visual Environment Mitigation: Implement the Visual Environment Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. **Operation Phase:** Land and Resource Use Mitigation: Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. In addition, implement the following measures: ■ Specific plant and/or material harvesting sites such as blueberry patches identified by First Nation communities will be allowed to naturally revegetate (i.e., will not be removed as incompatible vegetation) in the ROW. ■ In the event that a previously unidentified Indigenous land and resource use site is suspected or encountered during operation, follow the Indigenous Land and Resource Use Site Contingency Plan (refer to Appendix 4-II, Section 7.8). ■ Restrict the general application of herbicide near rare plants or rare ecological communities. Spot spraying, wicking, mowing, or hand-picking are acceptable measures for weed control in these areas. Environmentally Sensitive Features Mitigation: Implement the Environmentally Sensitive Features Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. Critical Landform/Vegetation Association Mitigation: Implement the Critical Landform/Vegetation Association Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. Rare Plants/Rare Vegetation Communities Mitigation: Implement the Rare Plants/Rare Vegetation Communities Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. Water Body Crossing Mitigation: Implement the Water Body Crossing Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. Canoe Routes and Portages Mitigation: Implement the Canoe Routes and Portages Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. Acoustic Environment Mitigation: Implement the Acoustic Environment Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above.		

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
Non-commercial recreational land and resource use ■ consumptive recreational land and resource use such as hunting and fishing; ■ non-consumptive recreational land use such as snowmobiling, hiking, and boating; and ■ non-commercial recreational land and resource access and use.	Non-commercial recreational fish and wildlife harvest levels	Project activities during the construction phase, including: ■ site access development, site preparation and soil salvage (e.g., surveying and flagging, clearing and grubbing, and topsoil stripping and grading); ■ construction of temporary workspaces; ■ decommissioning of temporary infrastructures; and ■ clean-up and reclamation. Project activities during the operation phase, including: ■ Maintenance of access roads, transmission line, and preferred route ROW.	Loss or alteration of wildlife and fish resource harvest due to changes in wildlife and fish abundance and distribution due to Project construction and operation	**Construction Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. In addition, implement the following measures: ■ On federal land, provincial Crown land or municipal land, approval will be obtained from MNRF prior to clearing of each segment, as appropriate (e.g., Work Permit, Land Use Permit, and supporting consents from impacted Crown interest holders). ■ On private land, approval will be obtained from the landowner prior to clearing of each segment. Crown Patent will also be obtained from the local registry office or MNRF to confirm if any trees on private lands are reserved to the Crown. If there is Crown reservation on any tree, the Owner will consult with MNRF and approval may be required prior to clearing of each segment. <u>Wildlife and Wildlife Habitat Mitigation:</u> ■ Obtain necessary environmental permits and approvals prior to the construction of each segment in environmentally sensitive areas. ■ The Contractor will follow all environmental permitting approval conditions. ■ The Owner will arrange for pre-construction environmental surveys as required in the approval conditions or as per federal or provincial requirements. ■ Clearly mark known site-specific features (e.g., rare plant, wetland, water body, SWH) and associated setbacks as shown on the Environmental Alignment Sheets and Access and Construction Environmental Maps. ■ Project personnel will avoid areas that are flagged or temporarily fenced and abide by restrictions on in/out privileges that are implemented in areas requiring special protection due to environmentally sensitive features. ■ The Contractor will adhere to the recommended construction timing windows and restrictions (refer to Appendix 4-II, Table 4-II-1). ■ If adherence to the timing windows and restrictions is not possible, the Contractor will develop a site-specific mitigation and monitoring plan in consultation with the Owner and appropriate regulatory agencies (e.g., MNRF, LRCA). ■ Post signs warning of high use wildlife areas as shown on the Environmental Alignment Sheets and Access and Construction Environmental Maps to the extent practicable. ■ The Owner may provide the appropriate resource specialist, if required, to assess sensitive features and to inspect or monitor Project activities at or near sensitive areas. ■ Construction will be completed as quickly and efficiently as possible near environmentally sensitive features to minimize the disturbance to fish and wildlife. ■ Hunting and fishing on the Project Site by Project personnel is prohibited. ■ Do not harass or feed wildlife. ■ Recreational use of all-terrain vehicles by Project personnel is prohibited in the Project Site. Vehicles, including all-terrain vehicles, are to be driven in a responsible and environmentally respectful manner. ■ Vehicles will not exceed speed limits established by the Owner and will lower speeds in specific conditions such as areas of high erosion hazard and blind corners. Clearly mark speed limits along the access roads. ■ Schedule Project clean-up and reclamation to avoid or minimize interference to wildlife, migratory birds and fish spawning as much as possible. Refer to the Environmental Alignment Sheets and Access, Construction Environmental Maps and CEPP (refer to Appendix 4-II, Table 4-II-1) for timing restrictions. ■ The Owner will review protective and mitigative measures with the Contractor. ■ The Contractor will adhere to the Spill Prevention and Response Contingency Plan (refer to Appendix 4-II, Section 7.1) to prevent spills and/or release. ■ Follow measures outlined in the Soil Handling Contingency Plan (refer to Appendix 4-II, Section 7.2) when working under wet conditions. ■ The Contractor will follow the fire prevention measures outlined in the Fire Prevention Contingency Plan (refer to Appendix 4-II, Section 7.3). ■ The Contractor will adhere to the preliminary Waste Management Plan (refer to Appendix 4-II, Section 8.2). ■ The Contractor will follow weed control and management measures outlined in the Weed Management Plan (refer to Appendix 4-II, Section 8.4). ■ Salvage and retain coarse woody debris at select locations (e.g., temporary disturbed area in mature/old growth forest or caribou high use area) and as needed to establish or re-establish suitable wildlife habitat after construction such as to add structural complexity or to limit movement of predators and hunters particularly in the caribou high use areas. ■ Reclaim temporary access roads, temporary water body crossings, and temporary workspaces after decommissioning by implementing clean-up and reclamation measures of the CEPP (refer to Appendix 4-II, Section 6.9). ■ Re-contour disturbed areas to restore drainage patterns and the approximate preconstruction profile. ■ Stabilize disturbed areas (e.g., cover exposed areas with erosion control blankets or tarps to keep the soil in place and prevent erosion) or cover disturbed areas with mulch (e.g., wood chips, slash debris) to prevent erosion. ■ Other mitigation outlined in the geology, soils and terrain assessment (refer to Section 6.7).	**Construction Phase:** ■ The Owner will employ the services of qualified Environmental Inspector(s) to guide implementation, monitor and report on the effectiveness of the construction procedures and mitigation measures for minimizing potential impacts. ■ The Owner will monitor the Project Site during construction for incidental sensitive features (e.g., water body, rare plant, rare vegetation community, wildlife species of concern, archaeological resources) that have not been previously identified on the Project Site. ■ The Owner will conduct visual inspection of the construction area and Project access roads to monitor adherence to traffic protocols and speed limits by all Project personnel. ■ Environmental Inspectors will be on-site during construction to monitor the removal of temporary equipment water body crossing structures. ■ NextBridge will implement monitoring and inspection commitments as identified in Fish and Fish Habitat (refer to Section 13), and Wildlife (refer to Section 14). ■ Post-construction monitoring of the Project Site will begin following reclamation, within one growing season, and annually during operations to identify and address any reclamation concerns. **Operation Phase:** ■ NextBridge will oversee implementation of the environmental management measures described in the OEMP during operation and maintenance. ■ Culverts will be periodically (e.g., before and/or after spring freshet) inspected and maintained to prevent blockages from forming and causing ponding or backwater effects. Where culverts are installed at fish-bearing water bodies, debris removal activities will follow DFO's guidance (i.e., gradual removal such that flooding downstream, extreme flows downstream, release of suspended sediment, and fish stranding can be avoided).	Net effect – Reduction or increase to harvest levels due to changes in wildlife and fish abundance and distribution

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
				■ Other mitigation outlined in the vegetation and wetlands assessment (refer to Section 12.7). <u>Significant Wildlife Habitat Mitigation:</u> Implement the Significant Wildlife Habitat Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Critical Landform/Vegetation Association Mitigation:</u> Implement the Critical Landform/Vegetation Association Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Fish and Fish Habitat Mitigation:</u> ■ Use existing bridges to cross water bodies and comply with conditions outlined in road use agreements. ■ Construct water body crossing structures according to the crossing method identified on the Environmental Alignment Sheets and the Access and Construction Environmental Maps and summarized in the water body crossing lists (refer to Appendix 4-II, Appendix I) and in accordance with regulatory approvals. Alternatives or modifications to the crossing requirements specified in approvals must be approved by the Owner before construction begins. ■ Water body crossing structures will be designed and constructed in accordance with permits and approvals through LRCA and/or MNRF, if applicable, recognizing that all newly installed or upgraded crossing structure at mapped or unmapped water bodies are expected to require permitting through one or more of O. Reg. 239/13 under the *Public Lands Act* (administered by MNRF for water body crossings on Public/Crown land), O. Reg. 454/96 under the *Lakes and Rivers Improvements Act* (administered by MNRF for water body crossings on Private or Crown Land) and O. Reg. 180/06 for the Development, Interference with Wetlands and Alterations to Shorelines and Watercourses under the *Conservation Authorities Act* (administered by LRCA for water body crossings in LRCA jurisdiction). ■ Follow applicable measures from DFO's Measures to Avoid Causing Harm to Fish and Fish Habitat Including Aquatic Species at Risk (DFO 2016). ■ A reconnaissance for undocumented water bodies within the Project Site will be completed prior to construction to document water bodies not included on the water body crossing list (refer to Appendix 4-II, Appendix I). ■ In the event that a previously unidentified water body is suspected or encountered, the Undocumented Water Body Discovery Contingency Plan (refer to Appendix 4-II, Section 6.6) will be implemented. ■ Install, monitor and manage appropriate erosion and sedimentation controls as outlined in the Erosion and Sedimentation Control Management Plan (refer to Appendix 4-II, Section 8.1). ■ Install, monitor and manage appropriate erosion and sedimentation control measures to minimize or avoid sediment mobilization from the disturbed areas to environmentally sensitive features (drainages or water bodies, rare plants, wetlands). ■ Maintain an adequate supply of erosion and sedimentation control materials on site prior to commencement of construction at site specific locations and train Project personnel on the use of this equipment. ■ Erosion and sedimentation controls will remain in place until the construction activities are completed and the disturbed area has been stabilized, restored and revegetated. ■ Regulatory approvals will be obtained as required from applicable regulatory agencies (MNRF, DFO, and/or LRCA) prior to installation of water body crossing structures. NextBridge will consult with the appropriate regulatory agency to discuss any alternatives or modifications to the crossing requirements specified in approvals before construction begins. ■ Temporary access roads and temporary workspaces will be reclaimed, or in accordance with the line list, following mitigation measures for reclamation in Appendix 4-II (refer to Section 6.9). ■ Follow applicable measures from MNRF's Environmental Guidelines for Access Roads and Water Crossings (MNR 1990), Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales (MNR 2010a) and its associated Background Rationale document (MNR 2010b), Ontario's Provincial Standards for Temporary Erosion and Sediment Control Measures (Government of Ontario 2015a), General Specifications for Environmental Protection for Construction in Waterbodies and on Waterbody Banks (Government of Ontario 2015b), and Construction Specifications for Control of Water from Dewatering Operations (Government of Ontario 2006b). ■ Construct or install water body crossing structures in a manner that protects the banks from erosion and maintains the flows in the water body in accordance with DFO's Measures to Avoid Causing Harm to Fish and Fish Habitat Including Aquatic Species at Risk (DFO 2016). ■ Locate temporary workspaces outside the 30 m water body buffer, wherever practicable. If Project activities requiring equipment (e.g., line stringing) must occur within the 30-m water body buffer (e.g., line stringing), the Contractor will notify the Owner to obtain the appropriate regulatory approvals.		

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
				Operation Phase: <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. In addition, implement the following measures: ■ Specific plant and/or material harvesting sites such as blueberry patches identified by First Nation communities will be allowed to naturally revegetate (i.e., will not be removed as incompatible vegetation) in the ROW. ■ In the event that a previously unidentified Indigenous land and resource use site is suspected or encountered during operation, follow the Indigenous Land and Resource Use Site Contingency Plan (refer to Appendix 4-II, Section 7.8). ■ Restrict the general application of herbicide near rare plants or rare ecological communities. Spot spraying, wicking, mowing, or hand-picking are acceptable measures for weed control in these areas. <u>Wildlife and Wildlife Habitat Mitigation:</u> ■ NextBridge will post signs warning Project personnel of high use wildlife areas to the extent practicable. ■ Allow compatible vegetation in the ROW to grow back to a maximum height of 2 m to provide cover and reduce line-of-sight for predators.		
Commercial land and resource use ■ consumptive commercial land and resource use such as trapping and guide outfitting; ■ non-consumptive outdoor commercial recreation and tourism such as camping, ATV tours, eco-tours, snowmobiling and skiing tours, canoe trips, and hiking; and ■ commercial industry land and resource uses such as mining and aggregate, forestry.	Commercial industrial land and resource use and access	Project activities during the construction phase, including: ■ site access development, site preparation and soil salvage (e.g., surveying and flagging, clearing and grubbing, and topsoil stripping and grading); ■ construction of temporary workspaces; ■ decommissioning of temporary infrastructures; and ■ clean-up and reclamation. Project activities during the operation phase, including: ■ Maintenance of access roads, transmission line, and preferred route ROW.	Reduction and alteration to access to commercial industry areas due to Project construction and operation and the resulting change in use	**Construction Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. In addition, implement the following measures: ■ In addition to tenure holders, NextBridge will continue to consult with local First Nations and the MNO that address potential effects of Project-related wood harvesting. Ongoing discussions with First Nations and the MNO on the use of merchantable timber and wood fiber will continue. NextBridge will commit to ongoing discussions with MNO, however the Province of Ontario has clear regulations regarding merchantable timber and NextBridge is committed to following established regulatory oversight. Discussions regarding rights to harvest firewood should be addressed to MNRF. ■ NextBridge has a compensation policy that includes compensation to directly affected mining, aggregate, and unpatented claims. Therefore, directly affected commercial industrial operators who lose access to their businesses (mining claims or aggregate pits) because it falls within the Project footprint will be compensated for lost revenue due to the Project. Mining, aggregate and unpatented claimholder compensation policies are provided in Attachment MNRF-OG-13 to Appendix 1-IV-A. **Operation Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above.	**Construction Phase:** ■ The Owner will employ the services of qualified Environmental Inspector(s) to guide implementation, monitor and report on the effectiveness of the construction procedures and mitigation measures for minimizing potential impacts. ■ The Owner will conduct visual inspection of the construction area and Project access roads to monitor adherence to traffic protocols and speed limits by all Project personnel. ■ Environmental Inspectors will be on-site during construction to monitor the removal of temporary equipment water body crossing structures. ■ Post-construction monitoring of the Project footprint will begin following reclamation, within one growing season, and annually during operations to identify and address any reclamation concerns. **Operation Phase:** NextBridge will oversee implementation of the environmental management measures described in the OEMP during operation and maintenance.	Net effect – Reduction and alteration to access to commercial industry areas

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
Commercial land and resource use ■ consumptive commercial land and resource use such as trapping and guide outfitting; ■ non-consumptive outdoor commercial recreation and tourism such as camping, ATV tours, eco-tours, snowmobiling and skiing tours, canoe trips, and hiking; and ■ commercial industry land and resource uses such as mining and aggregate, forestry.	Commercial recreational land and resource use and access	Project activities during the construction phase, including: ■ site access development, site preparation and soil salvage (e.g., surveying and flagging, clearing and grubbing, and topsoil stripping and grading); ■ construction of temporary workspaces; ■ decommissioning of temporary infrastructures; and ■ clean-up and reclamation. Project activities during the operation phase, including: ■ Maintenance of access roads, transmission line, and preferred route ROW.	Reduction and increase to access to commercial recreation areas due to Project construction and operation and the resulting change in use	**Construction Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. In addition, implement the following measures: ■ On federal land, provincial Crown land or municipal land, approval will be obtained from MNRF prior to clearing of each segment, as appropriate (e.g., Work Permit, Land Use Permit, and supporting consents from impacted Crown interest holders). ■ On private land, approval will be obtained from the landowner prior to clearing of each segment. Crown Patent will also be obtained from the local registry office or MNRF to confirm if any trees on private lands are reserved to the Crown. If there is Crown reservation on any tree, the Owner will consult with MNRF and approval may be required prior to clearing of each segment. ■ In addition to tenure holders, NextBridge will continue to consult with local First Nations and the MNO that address potential effects of Project-related wood harvesting. Ongoing discussions with First Nations and the MNO on the use of merchantable timber and wood fiber will continue. NextBridge will commit to ongoing discussions with MNO, however the Province of Ontario has clear regulations regarding merchantable timber and NextBridge is committed to following established regulatory oversight. Discussions regarding rights to harvest firewood should be addressed to MNRF. ■ Continue to consult with forestry, mining claim and aggregate licence holders and develop mutually beneficial agreements with the affected tenure holders. ■ Negotiate with the affected outdoor tourism operators to develop appropriate strategies to facilitate continued, uninterrupted use and access to outdoor tourism and recreation resources, to the extent feasible. <u>BMA, BHA and Trapline Holders:</u> ■ Notify affected parties of the planned construction schedule before the start of construction (e.g., registered trapline holders, and registered BMA and BHA clubs along the route). ■ Negotiate with affected BMA licence holders and/or the MNRF to develop a mutually agreeable solution to offset any identified access or harvest effects on tenured BMAs (e.g., compensation or relocation of BMAs for affected outfitters and operators). ■ Negotiate with affected baitfish harvesters, to develop a mutually agreeable solution with tenue holders to off-set any identified access or harvest effect (e.g., compensation or relocation). ■ Negotiate with affected registered trapline holders who would no longer are able to trap within the Project Site, or whose trapline areas will be severed or isolated as a result of the Project (e.g., compensation or relocation). Where feasible, coordinate the relocation of traps in advance of construction and maintain ongoing communication with local trapping groups and associations. **Operation Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above.	**Construction Phase:** ■ The Owner will employ the services of qualified Environmental Inspector(s) to guide implementation, monitor and report on the effectiveness of the construction procedures and mitigation measures for minimizing potential impacts. ■ The Owner will conduct visual inspection of the construction area and Project access roads to monitor adherence to traffic protocols and speed limits by all Project personnel. ■ Environmental Inspectors will be on-site during construction to monitor the removal of temporary equipment water body crossing structures. ■ Post-construction monitoring of the Project footprint will begin following reclamation, within one growing season, and annually during operations to identify and address any reclamation concerns. **Operation Phase:** NextBridge will oversee implementation of the environmental management measures described in the OEMP during operation and maintenance.	Net effect – Reduction and increase to access to commercial recreation areas

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
Commercial land and resource use ■ consumptive commercial land and resource use such as trapping and guide outfitting; ■ non-consumptive outdoor commercial recreation and tourism such as camping, ATV tours, eco-tours, snowmobiling and skiing tours, canoe trips, and hiking; and ■ commercial industry land and resource uses such as mining and aggregate, forestry.	Commercial recreational environmental setting	Project activities during the construction phase, including: ■ site access development, site preparation and soil salvage (e.g., surveying and flagging, clearing and grubbing, and topsoil stripping and grading); ■ construction of temporary workspaces; ■ decommissioning of temporary infrastructures; and ■ clean-up and reclamation. Project activities during the operation phase, including: ■ maintenance of access roads, transmission line, and preferred route ROW.	Change to environmental setting due changing environmental conditions due to Project construction and operation activities	**Construction Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. In addition, implement the following measures: ■ On federal land, provincial Crown land or municipal land, approval will be obtained from MNRF prior to clearing of each segment, as appropriate (e.g., Work Permit, Land Use Permit, and supporting consents from impacted Crown interest holders). ■ On private land, approval will be obtained from the landowner prior to clearing of each segment. Crown Patent will also be obtained from the local registry office or MNRF to confirm if any trees on private lands are reserved to the Crown. If there is Crown reservation on any tree, the Owner will consult with MNRF and approval may be required prior to clearing of each segment. ■ In addition to tenure holders, NextBridge will continue to consult with local First Nations and the MNO that address potential effects of Project-related wood harvesting. Ongoing discussions with First Nations and the MNO on the use of merchantable timber and wood fiber will continue. NextBridge will commit to ongoing discussions with MNO, however the Province of Ontario has clear regulations regarding merchantable timber and NextBridge is committed to following established regulatory oversight. Discussions regarding rights to harvest firewood should be addressed to MNRF. ■ Continue to consult with forestry, mining claim and aggregate licence holders and develop mutually beneficial agreements with the affected tenure holders. ■ Negotiate with the affected outdoor tourism operators to develop appropriate strategies to facilitate continued, uninterrupted use and access to outdoor tourism and recreation resources, to the extent feasible. <u>BMA, BHA and Trapline Holders:</u> ■ Notify affected parties of the planned construction schedule before the start of construction (e.g., registered trapline holders, and registered BMA and BHA clubs along the route). ■ Negotiate with affected BMA licence holders and/or the MNRF to develop a mutually agreeable solution to offset any identified access or harvest effects on tenured BMAs (e.g., compensation or relocation of BMAs for affected outfitters and operators). ■ Negotiate with affected baitfish harvesters, to develop a mutually agreeable solution with tenue holders to off-set any identified access or harvest effect (e.g., compensation or relocation). ■ Negotiate with affected registered trapline holders who would no longer are able to trap within the Project Site, or whose trapline areas will be severed or isolated as a result of the Project (e.g., compensation or relocation). Where feasible, coordinate the relocation of traps in advance of construction and maintain ongoing communication with local trapping groups and associations. <u>Environmentally Sensitive Features Mitigation:</u> Implement the Environmentally Sensitive Features Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Provincially Significant Wetlands Mitigation:</u> Implement the Provincially Significant Wetlands Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Significant Wildlife Habitat Mitigation:</u> Implement the Significant Wildlife Habitat Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Areas of Natural and Scientific Interest Mitigation:</u> Implement the Areas of Natural and Scientific Interest Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Critical Landform/Vegetation Association Mitigation:</u> Implement the Critical Landform/Vegetation Association Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Research Plots Mitigation:</u> Implement the Research Plots Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Rare Plants/Rare Vegetation Communities Mitigation:</u> Implement the Rare Plants/Rare Vegetation Communities Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above.	**Construction Phase:** ■ The Owner will employ the services of qualified Environmental Inspector(s) to guide implementation, monitor and report on the effectiveness of the construction procedures and mitigation measures for minimizing potential impacts. ■ The Owner will conduct visual inspection of the construction area and Project access roads to monitor adherence to traffic protocols and speed limits by all Project personnel. ■ Environmental Inspectors will be on-site during construction to monitor the removal of temporary equipment water body crossing structures. ■ Post-construction monitoring of the Project footprint will begin following reclamation, within one growing season, and annually during operations to identify and address any reclamation concerns. ■ NextBridge will implement monitoring and inspection commitments as identified in Surface Water (refer to Section 7), Air Quality (refer to Section 9), Acoustic Environment (refer to Section 11), Vegetation and Wetlands (refer to Section 12), Fish and Fish Habitat (refer to Section 13), Wildlife (refer to Section 14), and Visual Environment (refer to Section 20). **Operation Phase:** NextBridge will oversee implementation of the environmental management measures described in the OEMP during operation and maintenance.	Net effect – Change to commercial recreational environmental setting due changing environmental conditions

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
				Wetlands Mitigation: Implement the Wetlands Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. Water Body Crossing Mitigation: Implement the Water Body Crossing Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. Canoe Routes and Portages Mitigation: Implement the Canoe Routes and Portages Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. Acoustic Environment Mitigation: Implement the Acoustic Environment Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. Air Quality/Emission Mitigation: Implement the Air Quality/Emission Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. Visual Environment Mitigation: Implement the Visual Environment Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. **Operation Phase:** Land and Resource Use Mitigation: ■ Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. In addition, implement the following measures: ■ Specific plant and/or material harvesting sites such as blueberry patches identified by First Nation communities will be allowed to naturally revegetate (i.e., will not be removed as incompatible vegetation) in the ROW. ■ In the event that a previously unidentified Indigenous land and resource use site is suspected or encountered during operation, follow the Indigenous Land and Resource Use Site Contingency Plan (refer to Appendix 4-II, Section 7.8). ■ Restrict the general application of herbicide near rare plants or rare ecological communities. Spot spraying, wicking, mowing, or hand-picking are acceptable measures for weed control in these areas. Environmentally Sensitive Features Mitigation: Implement the Environmentally Sensitive Features Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. Critical Landform/Vegetation Association Mitigation: Implement the Critical Landform/Vegetation Association Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. Rare Plants/Rare Vegetation Communities Mitigation: Implement the Rare Plants/Rare Vegetation Communities Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. Water Body Crossing Mitigation: Implement the Water Body Crossing Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. Canoe Routes and Portages Mitigation: Implement the Canoe Routes and Portages Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. Acoustic Environment Mitigation: Implement the Acoustic Environment Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above.		

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
Commercial land and resource use ■ consumptive commercial land and resource use such as trapping and guide outfitting; ■ non-consumptive outdoor commercial recreation and tourism such as camping, ATV tours, eco-tours, snowmobiling and skiing tours, canoe trips, and hiking; and ■ commercial industry land and resource uses such as mining and aggregate, forestry.	Commercial recreational fish and wildlife harvest levels	Project activities during the construction phase, including: ■ site access development, site preparation and soil salvage (e.g., surveying and flagging, clearing and grubbing, and topsoil stripping and grading); ■ construction of temporary workspaces; ■ decommissioning of temporary infrastructures; and ■ clean-up and reclamation. Project activities during the operation phase, including: ■ Maintenance of access roads, transmission line, and preferred route ROW.	Loss or alteration of wildlife and fish resource harvest due to changes in wildlife and fish abundance and distribution due to Project construction and operation	**Construction Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. In addition, implement the following measures: ■ On federal land, provincial Crown land or municipal land, approval will be obtained from MNRF prior to clearing of each segment, as appropriate (e.g., Work Permit, Land Use Permit, and supporting consents from impacted Crown interest holders). ■ On private land, approval will be obtained from the landowner prior to clearing of each segment. Crown Patent will also be obtained from the local registry office or MNRF to confirm if any trees on private lands are reserved to the Crown. If there is Crown reservation on any tree, the Owner will consult with MNRF and approval may be required prior to clearing of each segment. ■ In addition to tenure holders, NextBridge will continue to consult with local First Nations and the MNO that address potential effects of Project-related wood harvesting. Ongoing discussions with First Nations and the MNO on the use of merchantable timber and wood fiber will continue. NextBridge will commit to ongoing discussions with MNO, however the Province of Ontario has clear regulations regarding merchantable timber and NextBridge is committed to following established regulatory oversight. Discussions regarding rights to harvest firewood should be addressed to MNRF. ■ Continue to consult with forestry, mining claim and aggregate licence holders and develop mutually beneficial agreements with the affected tenure holders. ■ Negotiate with the affected outdoor tourism operators to develop appropriate strategies to facilitate continued, uninterrupted use and access to outdoor tourism and recreation resources, to the extent feasible. <u>BMA, BHA and Trapline Holders:</u> ■ Notify affected parties of the planned construction schedule before the start of construction (e.g., registered trapline holders, and registered BMA and BHA clubs along the route). ■ Negotiate with affected BMA licence holders and/or the MNRF to develop a mutually agreeable solution to offset any identified access or harvest effects on tenured BMAs (e.g., compensation or relocation of BMAs for affected outfitters and operators). ■ Negotiate with affected baitfish harvesters, to develop a mutually agreeable solution with tenue holders to off-set any identified access or harvest effect (e.g., compensation or relocation). ■ Negotiate with affected registered trapline holders who would no longer are able to trap within the Project Site, or whose trapline areas will be severed or isolated as a result of the Project (e.g., compensation or relocation). Where feasible, coordinate the relocation of traps in advance of construction and maintain ongoing communication with local trapping groups and associations. <u>Wildlife and Wildlife Habitat Mitigation:</u> Implement the Wildlife and Wildlife Habitat Mitigation listed in the potential effect for "Loss or alteration of wildlife and fish resource harvest due to changes in wildlife and fish abundance and distribution due to Project construction and operation" above. <u>Significant Wildlife Habitat Mitigation:</u> Implement the Significant Wildlife Habitat Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Critical Landform/Vegetation Association Mitigation:</u> Implement the Critical Landform/Vegetation Association Mitigation listed in the potential effect for "Change to environmental setting due to changing environmental conditions due to Project construction and operation activities" above. <u>Fish and Fish Habitat Mitigation:</u> Implement the Fish and Fish Habitat Mitigation listed in the potential effect for "Loss or alteration of wildlife and fish resource harvest due to changes in wildlife and fish abundance and distribution due to Project construction and operation" above. **Operation Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Loss or alteration of wildlife and fish resource harvest due to changes in wildlife and fish abundance and distribution due to Project construction and operation" above. <u>Wildlife and Wildlife Habitat Mitigation:</u> Implement the Wildlife and Wildlife Habitat Mitigation listed in the potential effect for "Loss or alteration of wildlife and fish resource harvest due to changes in wildlife and fish abundance and distribution due to Project construction and operation" above.	**Construction Phase:** ■ The Owner will employ the services of qualified Environmental Inspector(s) to guide implementation, monitor and report on the effectiveness of the construction procedures and mitigation measures for minimizing potential impacts. ■ The Owner will conduct visual inspection of the construction area and Project access roads to monitor adherence to traffic protocols and speed limits by all Project personnel. ■ Environmental Inspectors will be on-site during construction to monitor the removal of temporary equipment water body crossing structures. ■ Post-construction monitoring of the Project footprint will begin following reclamation, within one growing season, and annually during operations to identify and address any reclamation concerns. **Operation Phase:** NextBridge will oversee implementation of the environmental management measures described in the OEMP during operation and maintenance.	Net effect – Loss or alteration of wildlife and fish resource harvest due to changes in wildlife and fish abundance and distribution

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
Commercial land and resource use	Commercial forestry land and resource use and access	Project activities during the construction phase, including: ■ site access development, site preparation and soil salvage (e.g., surveying and flagging, clearing and grubbing, and topsoil stripping and grading); ■ construction of temporary workspaces; ■ decommissioning of temporary infrastructures; and ■ clean-up and reclamation. Project activities during the operation phase, including: ■ Maintenance of access roads, transmission line, and preferred route ROW.	Reduction in production forest area due to area being unavailable for timber production.	**Construction Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. In addition, implement the following measures: ■ On federal land, provincial Crown land or municipal land, approval will be obtained from MNRF prior to clearing of each segment, as appropriate (e.g., Work Permit, Land Use Permit, and supporting consents from impacted Crown interest holders). ■ NextBridge and the construction contractor will continue engagement with SFL holders to: ▪ review planned harvest allocations from approved FMPs as they relate to Project construction activities including clearing of the ROW and use of land for temporary Project components such as construction camps and laydown areas; and ▪ coordinate harvesting where possible in areas where there is overlap between the Project and planned harvest allocations, including the negotiation of Forest Resource Licenses with the SFL holders and their overlapping licensees in circumstances where Nextbridge and its contractors are carrying out clearing activities. **Operation Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above.	**Construction Phase:** ■ The Owner will employ the services of qualified Environmental Inspector(s) to guide implementation, monitor and report on the effectiveness of the construction procedures and mitigation measures for minimizing potential impacts. ■ The Owner will conduct visual inspection of the construction area and Project access roads to monitor adherence to traffic protocols and speed limits by all Project personnel. ■ Environmental Inspectors will be on-site during construction to monitor the removal of temporary equipment water body crossing structures. ■ Post-construction monitoring of the Project footprint will begin following reclamation, within one growing season, and annually during operations to identify and address any reclamation concerns. **Operation Phase:** NextBridge will oversee implementation of the environmental management measures described in the OEMP during operation and maintenance.	Reduction in production forest area due to area being unavailable for timber production.
		Project activities during the construction phase, including: ■ site access development, site preparation and soil salvage (e.g., surveying and flagging, clearing and grubbing, and topsoil stripping and grading); ■ construction of temporary workspaces; ■ decommissioning of temporary infrastructures; and ■ clean-up and reclamation. Project activities during the operation phase, including: ■ Maintenance of access roads, transmission line, and preferred route ROW.	Change to area and spatial orientation of planned harvests due to required clearing for the Project.	**Construction Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. In addition, implement the following measures: ■ On federal land, provincial Crown land or municipal land, approval will be obtained from MNRF prior to clearing of each segment, as appropriate (e.g., Work Permit, Land Use Permit, and supporting consents from impacted Crown interest holders). ■ NextBridge and the construction contractor will continue engagement with SFL holders to: ▪ review planned harvest allocations from approved FMPs as they relate to Project construction activities including clearing of the ROW and use of land for temporary Project components such as construction camps and laydown areas; ▪ coordinate harvesting where possible in areas where there is overlap between the Project and planned harvest allocations, including the negotiation of Forest Resource Licenses with the SFL holders and their overlapping licensees in circumstances where NextBridge and its contractors are carrying out clearing activities; ▪ discuss Project access as it relates to planned access road construction and access management strategies (including decommissioning) in approved FMPs to reduce effects to SFL holders and eliminate the need for amendments to forest management plans where possible; and ▪ negotiate Road Use Agreements to clarify access road use and management strategies including upgrading, use, maintenance, monitoring, decommissioning and ownership of roads and water crossings. **Operation Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Reduction in production forest area due to area being unavailable for timber production." above.	**Construction Phase:** ■ The Owner will employ the services of qualified Environmental Inspector(s) to guide implementation, monitor and report on the effectiveness of the construction procedures and mitigation measures for minimizing potential impacts. ■ The Owner will conduct visual inspection of the construction area and Project access roads to monitor adherence to traffic protocols and speed limits by all Project personnel. ■ Environmental Inspectors will be on-site during construction to monitor the removal of temporary equipment water body crossing structures. ■ Post-construction monitoring of the Project footprint will begin following reclamation, within one growing season, and annually during operations to identify and address any reclamation concerns. **Operation Phase:** NextBridge will oversee implementation of the environmental management measures described in the OEMP during operation and maintenance.	No net effect

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
Commercial land and resource use	Commercial forestry land and resource use and access	Project activities during the construction phase, including: ■ site access development, site preparation and soil salvage (e.g., surveying and flagging, clearing and grubbing, and topsoil stripping and grading); ■ construction of temporary workspaces; ■ decommissioning of temporary infrastructures; and ■ clean-up and reclamation. Project activities during the operation phase, including: ■ Maintenance of access roads, transmission line, and preferred route ROW.	Change to results of silviculture treatment areas due to required clearing for the project.	**Construction Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. In addition, implement the following measures: ■ On federal land, provincial Crown land or municipal land, approval will be obtained from MNRF prior to clearing of each segment, as appropriate (e.g., Work Permit, Land Use Permit, and supporting consents from impacted Crown interest holders). ■ NextBridge and the construction contractor will continue engagement with SFL holders to identify silviculturally treated areas and negotiate compensation for investments (to FRT or FFT) where required. **Operation Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Reduction in production forest area due to area being unavailable for timber production." above.	**Construction Phase:** ■ The Owner will employ the services of qualified Environmental Inspector(s) to guide implementation, monitor and report on the effectiveness of the construction procedures and mitigation measures for minimizing potential impacts. ■ The Owner will conduct visual inspection of the construction area and Project access roads to monitor adherence to traffic protocols and speed limits by all Project personnel. ■ Environmental Inspectors will be on-site during construction to monitor the removal of temporary equipment water body crossing structures. ■ Post-construction monitoring of the Project footprint will begin following reclamation, within one growing season, and annually during operations to identify and address any reclamation concerns. **Operation Phase:** NextBridge will oversee implementation of the environmental management measures described in the OEMP during operation and maintenance.	No net effect

Table 19-45: Potential Effects, Mitigation, and Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicators	Project Component or Activity	Potential Effect	Mitigation	Inspection and Monitoring Details	Net Effect
Commercial land and resource use	Commercial forestry land and resource use and access	Project activities during the construction phase, including: ■ site access development; ■ decommissioning of temporary infrastructures; and ■ clean-up and reclamation. Project activities during the operation phase, including: ■ Maintenance of access roads, transmission line, and preferred route ROW.	Change to road access due to Project overlap with existing or planned forestry access roads.	**Construction Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Compatibility of Project construction and/or operations with land use designations, plans, and policies" above. In addition, implement the following measures: ■ NextBridge and the construction contractor will continue engagement with SFL holders to: ▪ discuss Project access as it relates to planned access road construction and access management strategies (including decommissioning) in approved FMPs to reduce effects to SFL holders and eliminate the need for amendments to forest management plans where possible; and ▪ negotiate Road Use Agreements to clarify access road use and management strategies including upgrading, use, maintenance, monitoring, decommissioning and ownership of roads and water crossings. ■ Temporary access roads will be decommissioned in accordance with regulatory approvals and will follow MNRF's *Environmental Guidelines for Access Roads and Water Crossings* (refer to Appendix H2; MNR 1990). ■ Reclaim temporary access roads, temporary water body crossings, and temporary workspaces after decommissioning by implementing cleanup and reclamation measures of the CEPP (refer to Appendix 4-II, Section 6.9). ■ When undesired public access is a possibility, consider placing woody debris, planting conifers or other vegetation to limit public access. ■ On federal land, provincial Crown land or municipal land, allow for natural regeneration or use certified native seed in consultation with appropriate Land Administrator. Natural recovery is the preferred method of reclamation on level terrain where erosion is not expected. ■ Where necessary, seed the disturbed areas using certified native seed mix and seed application rate appropriate for the final land use. ■ Seed areas prone to erosion with a native cover crop (e.g., cereal crop) and certified seed mix approved by the applicable regulatory agency as soon as feasible after construction. ■ Do not accept seed that contains noxious weeds. ■ Natural recovery is the preferred method of reclamation in wetlands. ■ Plant conifers when reclaiming laydown yards, construction camps, and storage yards located off of the transmission line ROW and in consultation with the landowner or communities and applicable regulatory authority. ■ Implement remedial measures to achieve the goal of the reclamation that is to stabilize and revegetate disturbed areas, while maintaining access and appropriate drainage to support operation and maintenance standards. **Operation Phase:** <u>Land and Resource Use Mitigation:</u> Implement Land and Resource Use Mitigation listed in the potential effect for "Reduction in production forest area due to area being unavailable for timber production." above.	**Construction Phase:** ■ The Owner will employ the services of qualified Environmental Inspector(s) to guide implementation, monitor and report on the effectiveness of the construction procedures and mitigation measures for minimizing potential impacts. ■ The Owner will conduct visual inspection of the construction area and Project access roads to monitor adherence to traffic protocols and speed limits by all Project personnel. ■ Environmental Inspectors will be on-site during construction to monitor the removal of temporary equipment water body crossing structures. ■ Post-construction monitoring of the Project footprint will begin following reclamation, within one growing season, and annually during operations to identify and address any reclamation concerns. **Operation Phase:** NextBridge will oversee implementation of the environmental management measures described in the OEMP during operation and maintenance.	No net effect

BHA = Bait Harvesting Area; BMA = Bear Management Area; CEPP = Construction Environmental Protection Plan; CLUPA = Crown Land Use Policy Atlas; CLUAH = Crown Land Use Atlas Harmonization; DFO = Fisheries and Oceans Canada; EA = environmental assessment; ESMP = Environmental and Social Management Plan; FMP = Forest Management Plan; FFT = Forest Futures Trust; FRT = Forest Renewal Trust; FMU = Forest Management Unit; km = kilometre; LRCA = Lakehead Region Conservation Authority; MNO = Métis Nation of Ontario; MNDM = Ministry of Northern Development and Mines; MNRF = Ministry of Natural Resources and Forestry; MOECC = Ontario Ministry of the Environment and Climate Change; OEMP = Operation Environmental Management Plan; PPS = Provincial Policy Statement; PSW = Provincial Significant Wetland; ROW = right-of-way; SFL = Sustainable Forest Licence; SWH = significant wildlife habitat; m = metre.

19.8 Net Effects Characterization

19.8.1 Approach

The effects assessment approach followed the general process described in Section 5.5 (Methods section). Potential effects with no predicted net effect after implementation of mitigation measures identified in Table 19-45 are not carried forward to the net effects assessment. Net effects are described using the factors of significance identified in Section 5.5.4 (refer to Table 5-5). Effects levels are defined for the magnitude of effects characteristics for non-Aboriginal land and resource use in Table 19-46.

Table 19-46: Magnitude Effect Levels for Non-Aboriginal Land and Resource Use

Indicator	Magnitude Level Definition			
	Negligible	**Low**	**Moderate**	**High**
■ Parks and protected areas access and use. ■ Parks and protected areas environmental setting. ■ Natural, cultural and recreational values of parks and protected areas. ■ Non-commercial recreational land and resource use and access. ■ Non-commercial recreation environmental setting. ■ Non-commercial recreational fish and wildlife harvest levels. ■ Commercial industrial land and resource use and access. ■ Commercial recreation land and resource use and access. ■ Commercial recreational fish and wildlife harvest levels. ■ Commercial recreational environmental setting. ■ Commercial forestry land and resource use and access.	The effect is small such that it is not discernible and is within normal historic variability from baseline conditions and within the system's capacity to respond.	A small discernible effect within normal historic variability from baseline conditions and within the system's capacity to respond.	A demonstrable effect beyond normal historic variability from baseline conditions i, but within the system's capacity to respond.	A demonstrable effect beyond normal historic variability from baseline conditions, and not within the system's capacity to respond.

19.8.2 Results

Net effects are described after the implementation of effective mitigation, and summarized according to direction, magnitude, geographic extent, duration/reversibility, frequency/timing, and likelihood of the effect occurring following the methods described in Section 5.5.4. Effective implementation of mitigation summarized in Table 19-45, the CEPP (refer to Appendix 4-II), and the OEMP (refer to Appendix 4-III) is expected to reduce the magnitude and duration of net effects on non-traditional land and resource use.

19.8.2.1 Parks and Protected Areas Access and Use

19.8.2.1.1 Reduction and Increase to Access to Parks and Protected Areas

During the construction phase, access restrictions to the portions of the Project footprint located within parks and protected areas will negatively affect park users who will not be able to access these areas. The effect was anticipated to be of low to moderate magnitude based on the following considerations:

- a limited measurable proportion of parks and protected areas would be affected relative to the total area of parks and protected lands in the parks and protected areas LSA, with a portion of the affected areas not experiencing reduced access in the past (a low measurable discernable change, in some instances beyond historical norms);
- 91.2% of the preferred route ROW is adjacent to existing access corridors to the extent feasible; and
- small sections of the footprint would be disturbed for relatively short periods of time and users would have continued access to a range of other areas of these same parks and protected areas throughout the construction and operation stages (the effect would not be beyond the system's capacity to respond).

The effect was anticipated to be continuous during the period where construction is occurring in the park or protected area. This net effect was predicted to be local in geographic extent (i.e., experienced primarily within the Project footprint and limited areas of the parks and protected areas LSA); and short-term in duration, given the temporary, short-term nature of the access restrictions. The effect was anticipated to be frequent (i.e., periodic) during construction; although access to and use of these parks and protected areas may face temporary restrictions during the construction stage. These disturbances to access, parks and associated roads will not be continuously in effect for the entire construction stage across the entire Project footprint, as construction will be completed using a staged approach. Temporary access restrictions are only anticipated to be put in place for a few weeks to a few months in segmented areas within the larger construction schedule, as Project construction progresses along the ROW. This effect was considered to be certain to occur.

During the operation phase, periodic infrequent access restrictions associated with maintenance activities were expected to occur along portions of the line located in parks and protected areas. The portion of the completed operating linear corridors located within provincial parks (i.e., 0.6 km in Pukaskwa River Provincial Park) is small relative to the total length of the line and the size of the parks and protected areas. As with construction, the effect was considered to be low in magnitude, periodic, local in geographical extent, and certain to occur. Restricted access was expected to occur permanently until decommissioning of the Project.

19.8.2.2 Parks and Protected Areas Environmental Setting

19.8.2.2.1 Change to Environmental Setting of Parks and Protected Areas

The net effect of the Project on the environmental setting of parks and protected areas during construction and operation was anticipated to be of low to moderate magnitude. As discussed in Section 19.8.2.1, a very small proportion of each park and protected area falls within the Project footprint (0.03 to 0.7%) where Project effects on environmental setting would be most prominent. The magnitude of anticipated indirect net effects of the Project on biophysical aspects that contribute to the environmental setting of parks and protected areas were identified as:

- negligible for water quality;
- negligible for vegetation and wetlands;
- low to moderate for visual aesthetics;

- negligible to moderate for noise for a short duration, depending on the proximity to and types of construction activities underway;
- moderate to high within 100 m of construction, and low to moderate at distances greater than 100 m, for air quality; and
- a small net effect on wildlife species.

These net effect characterizations apply to biophysical changes that would occur within the small portions of the parks and protected areas transected by the Project, which would collectively result in a discernable measurable change in the parks and protected areas environmental setting. The assessment assumes that change to environmental setting could be experienced in portions of parks and protected areas that represent a pristine non-developed environment potentially resulting in change being beyond historic norms. The effect was predicted to be experienced in localized areas, for short periods of time though some changes such as vegetation clearing will provide a permanent change to environmental setting. Users were expected, however, to have continued access to a range of other areas of these same parks and protected areas throughout the construction and operation stages, implying that the effects would not be beyond the system's capacity to respond.

This low to moderate net effect on environmental setting of parks and protected areas was considered to be local in geographic extent (i.e., experienced primarily within the Project footprint and limited areas of the parks and protected areas LSA), continuous in frequency and probable to occur. The effect was considered short-term and reversible and permanent/irreversible in duration, given that the Project is predicted to remain visible and cleared throughout the operation phase (i.e., changes to visual aesthetics for existing users will persist) but effects to air quality and noise will subsist following the construction phase. Overall, the effect was considered probable to occur due to the variance in likelihood of occurrence for anticipated effects including acoustic and air quality effects.

19.8.2.3 Parks and Protected Areas Natural, Cultural and Recreational Values

19.8.2.3.1 Change to Natural, Cultural and Recreational Values

The net effect of the Project on the natural, cultural and recreational values during construction and operation was assessed as negligible in magnitude. As described in Section 19.7.5.1.1, there are only a limited number of natural, cultural and recreational features transected by the Project footprint. The magnitude of anticipated indirect net effects of the Project on biophysical aspects that are assessed to the natural, cultural and recreational values of parks and protected areas were identified as:

- negligible for geology;
- negligible for water quality;
- negligible for vegetation and wetlands;
- low to moderate for visual aesthetics;
- negligible to moderate for noise for a short duration, depending on the proximity to and types of construction activities underway;
- moderate to high for air quality within 100 m of construction, and low to moderate at distances greater than 100 m;
- negligible to low for fish and fish habitat;
- a small net effect on wildlife species;

- negligible to moderate for Indigenous current use of lands and resources for traditional purposes depending on the community and activity undertaken; and
- low to moderate for non-traditional land and resource use within parks and protected areas depending on the park and protected area and the land use being transected.

Through the spatial assessment of feature transected by the Project footprint, key identified features include CLVAs in Kama Cliff Conservation Reserve, category 1 caribou habitat in Lake Superior National Marine Conservation Area, and canoe and trail routes. There is less than 1.0 ha of the CLVA transected by the Project in Kama Cliffs Conservation Reserve exists cumulatively, throughout the Project study area. As identified in Section 19.7.5.1.2, the CLVA is likely beyond its resilience limits at the baseline characterization. Caribou was identified as a not likely to be self-sustaining at baseline characterization and category 1 caribou habitat disruption represents less than 0.01% of available winter use and nursery area habitats in the Lake Superior Coast Range and has been assessed to have a minimal impact. Trails and canoe routes are transected by the Project footprint and represent a small amount (2.5 ha) of the total available trails and canoe routes within the parks and protected areas LSA. In addition, Project activities were not assessed to permanently remove the use of these features. Therefore, impact to these trails and canoe routes was anticipated to be minimal.

These net effect characterizations described above apply to biophysical changes that are anticipated to occur within the small portions of the parks and protected areas transected by the Project. The net effect was assessed such that it is not discernible and is within normal historic variability from baseline conditions and within the system's capacity to respond. While net effects have been assessed as having magnitudes ranging from negligible to high, these effects were assessed for the entire Project footprint. The small number of natural, cultural and recreational features transected by the Project footprint imply the disturbances to these parks and protected areas will be minimal. The negligible effect on natural, cultural and recreational values of parks and protected areas was considered to be local in geographic extent as it was expected to occur predominantly in parks and protected areas transected by the Project footprint where direct impacts will occur. However, indirect disturbances were also assessed with respect to the noise, air quality and visual experience of parks and protected areas in the parks and protected areas LSA. Net effects were considered to be short-term and reversible in some cases. This includes predicted net effects to geology, the noise environment, and air quality. Permanent net effects are predicted for fish and fish habitat, vegetation and wetlands and wildlife and may extend over the life of the Project. The permanent net effects were, however, assessed to negligible in magnitude in most cases. Due to the disruption caused by clearing, these effects were anticipated to be continuous in the construction and operations phase. The net effect on natural, cultural and recreational values was considered certain to occur.

19.8.2.4 Non-commercial Recreational Land and Resource Use and Access

19.8.2.4.1 Reduction and Increase to Access to Non-commercial Recreation Areas

The net effect was considered to be both negative and positive in direction, depending on the land user in question. Snowmobilers, hunters, and anglers, for example, were considered likely to perceive new, additional land base access to areas of the non-commercial land and resource use LSA as beneficial, creating new opportunities for them to increase harvesting activities. However, localized and temporary restricted access and use particularly during the construction period would result in a negative effect. Recreationalists who have chosen to visit specific areas in the Project footprint due to its remoteness (e.g., wooded area hiking) were considered likely to perceive increased access to be negative.

Similar to that of parks and protected areas, the net effect on non-commercial recreational land access and use was considered to be low to moderate in magnitude, as the effect was considered discernable within areas where there is currently no disturbance, such as Loon Lake. However, as a large proportion of the preferred route ROW (91.2%) parallels existing corridors, the net effect was considered to be manageable within the current

system to respond. The effect was assessed as local in geographic extent as increased access is limited to the Project footprint and adjacent areas, and to be permanent and irreversible (i.e., as increased access will be maintained indefinitely through construction and operation phases and potentially after decommissioning). Increased recreational land access was considered to be continuous, and certain to occur due to the clearing, construction, and maintenance activities.

19.8.2.5 Non-commercial Recreational Environmental Setting

19.8.2.5.1 Change to Non-commercial Recreational Environmental Setting

While it was recognized that some small net effects on biophysical conditions were predicted (refer to Section 19.8.2.2), only a small proportion of lands available for non-commercial recreation hunting, fishing, recreational trail use, aquatic recreation and tourism (canoeing, kayaking and boating), motorized recreation, camp, cabin and cottage use, tourist lodges, camps and support services in the non-commercial land and resource use LSA occur within the Project footprint (refer to Section 19.7.6).

Change to biophysical conditions was anticipated to be localized with the assumption that these changes and resultant effect on the non-commercial recreational setting would be most discernable within areas where there is currently no disturbance. Crown land, provincial park land and private land would be available for these activities where direct Project activities and indirect biophysical effects are not visible, audible or otherwise perceptible. With the implementation of mitigation measures, continued non-commercial recreation opportunities are expected to be maintained within the non-commercial land and resource use LSA and the effects manageable within the current non-commercial recreational system. Based on these assessment results, direct Project activity disturbances, as well as indirect disturbances to surface water, air quality, vegetation, visual aesthetics, noise, and wildlife from construction and operation activities were expected to have a net effect of low to moderate magnitude on the non-commercial recreation environmental setting. This net effect was considered to be local in geographic extent (i.e., experienced primarily within the Project footprint and limited areas of the non-commercial recreation LSA), continuous in frequency and probable to occur. The effect was considered to be short-term to permanent in duration, as changes to environmental setting due to noise or air quality were expected to only occur over the short-term and that the Project is predicted to remain visible and cleared throughout the operation and maintenance stage (i.e., changes to visual aesthetics for existing outdoor recreation users will persist).

19.8.2.6 Non-commercial Recreational Fish and Wildlife Harvest Levels

19.8.2.6.1 Reduction or Increase to Harvest Levels Due to Changes in Wildlife and Fish Abundance and Distribution

As Section 13 identifies, the Project was not expected to result in a direct change to fish distribution or abundance; however, an indirect change to fish abundance could occur due to additional fishing opportunities provided by the Project through increased access to harvesting areas and increased fish harvesting activity. This effect was expected to be localized. It was assumed that the MNRF will implement population sustaining measures including shortening seasons, introducing catch limits and implementing access restrictions to manage fish populations. The assessment of wildlife (refer to Section 14) identified moose populations (considered an indicator species for deer) and marten populations would continue to be self-sustaining within the wildlife and wildlife habitat LSA and at a regional scale, possibly at a lower abundance. Changes to bear were not assessed as part of the wildlife assessment as indicated in Section 14.

Based on these results, Project effects on availability of fish and wildlife and in turn on non-recreational harvest opportunity and harvest levels were considered to be of negligible magnitude as the change is likely not to be discernable and within normal historical variability and within the system's capacity to respond. This net effect was predicted to be local and regional in geographic extent, given the disturbances to certain wildlife and fish species are anticipated at a regional scale. Due to the construction activities and permanent nature of the Project

construction including clearings and associated infrastructure, these changes are expected to be short-term and permanent in duration through construction into operations as identified in the wildlife and fish assessments. The changes to resource availability for harvesting were expected to be continuous in frequency as target species disturbances are also predicted to be continuous. The effect was considered possible as all target species are identified as possibly facing changes to their survival and reproduction in the case of wildlife and abundance and distribution in the case of fish. The effect is considered negative as increased harvesting will negatively impact harvesters due to stricter regulations on the volume of harvest and reduction in seasons to protect species. The effect was considered to be indirect as it is the result of changes to target species abundance.

19.8.2.7 Commercial Industrial Land and Resource Use and Access

19.8.2.7.1 Reduction or Alteration to Access to Commercial Industry Areas

Concurrent industrial activities cannot be conducted in the same location as Project construction, operations or maintenance. Restricted access, particularly within the Project footprint, the Project's development and use of access roads, and the installation and maintenance of the preferred route ROW could result in reduced access to and availability of lands available for commercial industrial land and resource uses in the Project area. With the implementation of mitigation measures presented in Section 19.7.2.10 (including that NextBridge has a compensation policy that includes compensation to directly affected mining, aggregate, and unpatented claims); and given that a relatively low number of commercial industrial tenures or features are in the Project footprint, this net effect was predicted to be of negligible magnitude. Net change to commercial industrial land and resource use and access were predicted to be local in geographic extent (i.e., primarily within the Project footprint and limited areas of the commercial industry land and resource use LSA) and permanent/irreversible, given that other commercial industry harvesting or extraction including mining cannot be undertaken while the Project is operational. As a result, industrial uses in the Project footprint (e.g., mining and aggregate claims, forestry, and waterpower operations) will require a mutually beneficial agreement due to the loss of access to undertake industrial activities. The effect was anticipated to be continuous in order to maintain the integrity and safety of the transmission line and certain to occur.

19.8.2.8 Commercial Recreational Land and Resource Use and Access

19.8.2.8.1 Reduction and Increase to Access to Commercial Recreation Areas

The net effect on commercial (consumptive and non-consumptive) land use and access was considered both negative and positive in direction, depending on the land user in question. For example, tourists visiting the area for commercially provided snowmobiling and hunting opportunities (e.g., tours) were considered likely to perceive new, additional land access as beneficial, creating new opportunities to increase their consumptive and non-consumptive commercial recreation activities. However, guided outfitters and tourism operators whose businesses and expeditions are founded on concepts of remoteness, wilderness, and limited access were considered likely to perceive increased access along the preferred route ROW and access roads to be negative. Users in areas such as Loon Lake with considerable greenfield ROW are likely to be more affected. Commercial users will potentially be more negatively impacted than non-commercial users as they are more likely to have fixed infrastructure and knowledge of certain areas upon which their commercial operation is based.

The net effect on commercial (consumptive and non-consumptive) land access and use was assessed to be of moderate magnitude, as the effect is anticipated to be discernable (i.e., with the potential to result in measurable change), but manageable within the current system. The effect was considered to be local in geographic extent, and occur over a permanent duration and irreversible (with increased access extending through construction and operation) as the ROW will be permanent establishing access to these areas though access expansion will be confined to the Project footprint and adjacent areas within the commercial (consumptive and non-consumptive) land and resource use LSA. Increased commercial (consumptive and non-consumptive) land access would be

continuous, and certain to occur due to the clearing, construction, and maintenance activities expected to take place.

19.8.2.9 Commercial Recreational Environmental Setting

19.8.2.9.1 Change to Commercial Recreational Environmental Setting

While it was recognized that some small net effects on biophysical conditions were predicted (refer to Section 19.8.2.2), only a small proportion of lands available for commercial hunting, fishing, trapping, motorized recreation, camp, cabin and cottage use, tourist lodges, camps and support services in the commercial (consumptive and non-consumptive) land and resource use LSA are located in the Project footprint (refer to Section 19.7.11).

Changes to biophysical conditions were anticipated to be localized with the assumption that these changes and resultant effect on the commercial recreational setting would be discernable within areas where there is currently no disturbance. Crown land, provincial park land and private land would be available for these activities where direct Project activities and indirect biophysical effects are not visible, audible or otherwise perceptible. With the implementation of mitigation measures, continued commercial recreation opportunities were expected to be maintained within the commercial (consumptive and non-consumptive) land and resource use LSA and the effects manageable within the current commercial recreational system. Based on these assessment results, direct Project disturbances and indirect disturbances to surface water, air quality, vegetation, visual aesthetics, noise, and wildlife from construction and operation activities were expected to have a net effect of low to moderate magnitude on the commercial recreation environmental setting. This net effect was considered to be local in geographic extent (i.e., experienced primarily within the Project footprint and limited areas of the non-commercial recreation LSA), continuous in frequency and probable to occur. The effect was considered to be short-term to permanent in duration, given that changes to air quality and noise were expected to occur in the short-term and that the Project is predicted to remain visible and cleared throughout the operation and maintenance stage impacting the visual environment (Permanent).

19.8.2.10 Commercial Recreational Fish and Wildlife Harvest Levels

19.8.2.10.1 Loss or Alteration of Wildlife and Fish Resource Harvest Due to Changes in Wildlife and Fish Abundance and Distribution

Given the similarities in harvested species and locations by commercial and non-commercial harvesters, and that the effects of the Project on fish and wildlife abundance and distribution, and availability for harvest would be similarly experienced across both harvesting groups, the characterization of the Project net effect on non-commercial harvest levels due to change in fish and wildlife resources (refer to Section 19.8.2.7) was applicable to the Project effect on commercial harvest levels. In the case of fish, brook trout and walleye were identified as having a negative and low magnitude of impact to abundance distribution. Change to moose and marten populations were anticipated to be small and their populations may be self-sustaining at a lower abundance. While the change to target species from the Project was considered small, commercial users may experience these effects more severely as they have fewer target species, rely on harvest levels as a source of income and have less flexibility in their range.

The net effect to commercial harvest was predicted to be low in magnitude as the effect may be discernable but within normal historical variability and within the system's capacity to respond. The effect was anticipated to be negative occurring at a local or regional scale as assessments of fish and wildlife are conducted at a regional scale. The effect was considered to range from short-term and reversible to permanent, and its occurrence possible as described in Section 19.8.2.7.

19.8.2.11 Commercial Forestry Land and Resource Use and Access

19.8.2.11.1 Reduction of Production Forest Area

Permanent Project components were predicted to result in a permanent reduction in production forest area and therefore available harvest area and this could affect the forest industry in the commercial forestry land and resource use RSA. This direct effect was predicted to be of negligible magnitude given that the percentages of total production forest area being removed by the Project are small compared to total production forest area in each of the FMUs, and historical harvest levels in all FMUs have been well below planned levels. As such, it is unlikely that this reduction in production forest area will affect the industry's ability to continue operating. The effect of the Project on available harvest area was assessed to be regional in scale (since it has the potential to affect entire forest management units); long-term and reversible for temporary Project components until they are adequately rehabilitated, and permanent and irreversible for permanent Project components (preferred route ROW and permanent access roads); continuous and certain given that the cleared ROW will remain cleared in perpetuity.

19.8.3 Summary of Net Effects Characterization

A summary of the characterization of net effects of the Project on the non-traditional land and resource use criteria is provided in Table 19-47.

Table 19-47: Characterization of Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicator	Net Effect	Direct/ Indirect	Direction	Factors of Significance				
					Magnitude	Geographic Extent	Duration/ Irreversibility	Frequency	Likelihood of Occurrence
Parks and protected areas	Parks and protected areas access and use	Reduction and increase to access to parks and protected areas	Direct	Negative	Low to Moderate	Local – LSA	Short–term – reversible/ Permanent – irreversible	Continuous	Certain
Parks and protected areas	Parks and protected areas environmental setting	Change to environmental setting due changing environmental conditions	Direct/Indirect	Negative	Low to Moderate	Local – LSA	Short–term – reversible/ Permanent – irreversible	Continuous	Probable
Parks and protected areas	Natural, cultural and recreational values of parks and protected areas	Change to natural, cultural and recreational features which could affect natural, cultural and recreational values within parks and protected areas	Direct/Indirect	Negative	Negligible	Local – LSA	Short–term – reversible/ Permanent – irreversible	Continuous	Certain
Non-commercial recreational land and resource use	Non-commercial recreational land and resource use and access	Reduction and increase to access to non-commercial recreation areas	Direct	Positive/Negative	Low to Moderate	Local – LSA	Permanent – irreversible	Continuous	Certain
Non-commercial recreational land and resource use	Non-commercial recreational environmental setting	Change to environmental setting due changing environmental conditions	Direct/ Indirect	Negative	Low to Moderate	Local – LSA	Short–term – reversible/ Permanent – irreversible	Continuous	Probable
Non-commercial recreational land and resource use	Non-commercial recreational fish and wildlife harvest levels	Reduction or increase to harvest levels due to changes in wildlife and fish abundance and distribution	Indirect	Negative	Negligible	Local – LSA/ Regional– RSA	Short–term – reversible/ Permanent – irreversible	Continuous	Possible
Commercial land and resource use	Commercial industrial land and resource use and access	Reduction or alteration to access to commercial industry areas	Direct	Negative	Negligible	Local – LSA	Permanent – irreversible	Continuous	Certain

Table 19-47: Characterization of Predicted Net Effects for Non-Aboriginal Land and Resource Use

Criteria	Indicator	Net Effect	Direct/ Indirect	Direction	Factors of Significance				
					Magnitude	Geographic Extent	Duration/ Irreversibility	Frequency	Likelihood of Occurrence
Commercial land and resource use	Commercial recreational land and resource use and access	Reduction and increase to access to commercial recreation areas	Direct	Positive/Negative	Moderate	Local – LSA	Permanent – irreversible	Continuous	Certain
Commercial land and resource use	Commercial recreational environmental setting	Change to environmental setting due changing environmental conditions	Direct/Indirect	Negative	Low to Moderate	Local – LSA	Short–term – reversible/ Permanent – irreversible	Continuous	Probable
Commercial land and resource use	Commercial recreational fish and wildlife harvest levels	Loss or alteration of wildlife and fish resource harvest due to changes in wildlife and fish abundance and distribution	Indirect	Negative	Low	Local – LSA/ Regional– RSA	Short–term – reversible/ Permanent – irreversible	Continuous	Possible
Commercial land and resource use	Commercial forestry land and resource use and access	Reduction in production forest area due to area being unavailable for timber production	Direct	Negative	Negligible	Regional – RSA	Long–term –reversible/ Permanent – irreversible	Continuous	Certain

LSA = local study area; RSA = regional study area.

19.9 Assessing Significance

An assessment of significance was made based on an assessment of combined effects of previous and existing developments described in the baseline characterization and the addition of the Project. The assessment of significance for each non-traditional land and resource use criterion is informed by the interaction between the factors of significance, with magnitude, duration and geographic extent being the most important factors. The assessment also incorporates the concepts of land use maintenance and resilience. It considers the land use system capacity to respond and land users' capacity to respond at the community level.

The factors considered in the assessment of significance of net effects for the non-traditional land and resource use criteria are outlined in Table 19-48. For all non-traditional land and resource use criteria, a net adverse effect was considered significant if it was high in magnitude, medium to long-term in duration, and of any geographic extent, whereby the effect would cause the capacity of a non-traditional land and resource use system to be exceeded on an ongoing and consistent basis, with the non-traditional land and resource use system (and its users and operations, at the community level) being unlikely to be able to respond in a timely manner.

Table 19-48: Factors Considered in the Assessment of Significance of Net Effects on Criteria

Criteria	Indicators	Significance	Magnitude	Duration	Extent	Frequency	Likelihood	Context /Sustainability
Parks and protected areas	■ Parks and protected areas access and use ■ Parks and protected areas environmental setting ■ Natural, cultural and recreational values of parks and protected areas	Significant	High	■ medium-long ■ continuous	■ local ■ regional ■ beyond regional	Any frequency	■ certain ■ probable ■ possible ■ unlikely	The Project would result in a demonstrable and high change that is beyond the capacity of the system to respond. Reflects an existing vulnerability and/or low resilience of the system to manage/address the effect.
		Not Significant	■ moderate, ■ Low ■ negligible	■ short ■ medium ■ long ■ continuous	■ local ■ regional ■ beyond regional	Any frequency	■ certain ■ probable ■ possible ■ unlikely	Project would result in a non-discernible or discernible low or demonstrable change that is not beyond the capacity of the system to respond. Reflects low vulnerability and/or high resilience of the system to manage/address the effect.
Non-commercial recreational land and resource use	■ Non-commercial recreational land and resource use and access ■ Non-commercial recreational environmental setting ■ Non-commercial recreational fish and wildlife harvest levels	Significant	High	■ medium-long ■ continuous	■ local ■ regional ■ beyond regional	Any frequency	■ certain ■ probable ■ possible ■ unlikely	The Project would result in a demonstrable and high change that is beyond the capacity of the system to respond. Reflects an existing vulnerability and/or low resilience of the system to manage/address the effect.
		Not Significant	■ moderate ■ low ■ negligible	■ short ■ medium ■ long ■ continuous	■ local ■ regional ■ beyond regional	Any frequency	■ certain ■ probable ■ possible ■ unlikely	Project would result in a non-discernible or discernible low or demonstrable change that is not beyond the capacity of the system to respond. Reflects low vulnerability and/or high resilience of the system to manage/address the effect.
Commercial land and resource use	■ Commercial recreational land and resource use and access	Significant	High	■ medium-long ■ continuous	■ local ■ regional ■ beyond regional	Any frequency	■ certain ■ probable ■ possible ■ unlikely	The Project would result in a demonstrable and high change that is beyond the capacity of the system to respond. Reflects an existing vulnerability and/or low resilience of the system to manage/address the effect.

Table 19-48: Factors Considered in the Assessment of Significance of Net Effects on Criteria

Criteria	Indicators	Significance	Magnitude	Duration	Extent	Frequency	Likelihood	Context /Sustainability
	■ Commercial recreational environmental conditions ■ Commercial recreational fish and wildlife harvest levels ■ Commercial industrial land and resource use and access ■ Commercial forestry land and resource use and access	Not Significant	■ moderate ■ low ■ negligible	■ short ■ medium ■ long ■ continuous	■ local ■ regional ■ beyond regional	Any frequency	■ certain ■ probable ■ possible ■ unlikely	Project would result in a non-discernible or discernible low or demonstrable change that is not beyond the capacity of the system to respond. Reflects low vulnerability and/or high resilience of the system to manage/address the effect.

19.9.1 Parks and Protected Areas

For provincial parks and protected areas, the net effect was determined to be low to moderate in magnitude and of local geographic extent with both long and short-term considerations. This characterization does not meet the criteria for a significant effect as defined in Section 19.8.1. Effective implementation of mitigation measures results in this net effect considered to be within the park and protected area users' capacity to respond. Therefore, the net effect was not considered significant.

The net effect on the environmental setting in parks was assessed to be of low to moderate magnitude; local (i.e., experienced in small proportions of existing parks and protected area lands available in the parks and protected LSA); and long-term, and therefore do not meet the criteria set out in Section 19.8.1 to constitute a significant effect. With effective implementation of mitigation measures, this net effect was considered within park and protected area users' capacity to respond. Therefore, the net effect was not assessed to be significant.

The net effect on natural, cultural and recreational values in parks was assessed to be of negligible magnitude; local and permanent, and therefore do not meet the criteria set out in Section 19.8.1 to constitute a significant effect. With effective implementation of mitigation measures, this net effect was considered within park and protected area historical variability and not discernable. Therefore, the net effect was not assessed to be significant.

19.9.2 Non-commercial Recreation Land and Resource Use

For the non-commercial recreational land and resource use criterion, the net effect on recreational land access and use was anticipated to be discernable and of low to moderate magnitude, and therefore does not meet the criteria in Section 19.7.1.3 to constitute a significant effect. These changes would only occur within the non-commercial land and resource use LSA, and while net effects may be measurable at the individual user or feature level, potential increases in land access will still allow for existing users to continue hunting, angling, hiking, and conducting other recreational opportunities at the local level. As these activities can be maintained, following the implementation of mitigation measures outlined in Table 19-45 and the CEPP (Refer to Appendix 4-II), the net effect on this criterion were, therefore, considered to be not significant.

The net effect on non-commercial recreational environmental setting due to a change to environmental conditions (i.e., noise, air quality, visual resources) were considered to be of low to moderate magnitude, local (i.e., experienced in small proportions of existing non-commercial recreational lands available in the non-commercial land and resource use LSA), and long-term (i.e., extending through construction and operation). Therefore, the change to recreational user experience do not meet the criteria in Section 19.8.1 to constitute a significant effect. Following the effective implementation of mitigation measures, and considering that effects are anticipated to be experienced in small proportions of existing recreational lands available in the non-commercial land and resource use LSA, this net effect was considered to be within recreational users' capacity to respond and to be not significant.

The net effect on non-commercial resource harvest was anticipated to be of negligible magnitude and long-term in duration. The changes to resource harvest do not meet the criteria in Section 19.8.1 to constitute a significant effect. Following the effective implementation of mitigation measures, and considering that effects were anticipated to be experienced in small proportions of existing recreational lands available in the non-commercial land and resource use LSA, this net effect was considered within recreational users' capacity to respond and assessed to be not significant.

19.9.3 Commercial Land and Resource Use

For commercial industry land and resource use, negative effects were expected to be negligible in magnitude and of regional extent. This assessment does not meet the criteria for a significant effect as outlined in Section 19.8.1. The effect may or may not be discernible to commercial industry users, and if discernible, it was anticipated at the individual level only. This minimal change falls within the system's capacity to respond. These activities can be maintained, following the implementation of mitigation measures outlined in Table 19-45 and the CEPP (Refer to Appendix 4-II), the net effect on this criterion was considered to be not significant.

For the commercial (consumptive and non-consumptive) land and resource use criterion, the net effect on change to land and resource access and use was considered to be of moderate magnitude. However, the effect does not meet the criteria set out in Section 19.7.1.3 to constitute a significant effect. These changes would be limited to the commercial (consumptive and non-consumptive) land and resource use LSA, and while the net effect may be measurable at the individual user level, potential increases in land access will still allow for existing users to conduct commercial land and resource use activities at the commercial (consumptive and non-consumptive) land and resource use LSA level. As these activities can be maintained, following the implementation of mitigation measures outlined in Table 19-45 and the CEPP (Refer to Appendix 4-II), the net effect on this criterion was considered to be not significant.

The net effect on commercial (consumptive and non-consumptive) environmental setting due to changes in noise, air quality, and visual resources was considered to be of low to moderate magnitude, and therefore does not meet the criteria set out in Section 19.7.1.3 to constitute a significant effect. Following the effective implementation of mitigation, and considering that effects were anticipated to be experienced in small proportions of existing lands available in the commercial (consumptive and non-consumptive) land and resource use LSA, this net effect was considered to be within commercial users' capacity to respond and to be not significant.

The net effect on commercial resource harvest was expected to be similar to the effect on non-commercial resource harvest as described above as the species targeted are the similar. However, some species impacted are targeted by commercial operators suggesting a slightly larger impact to commercial operators due their reliance on the resource as a source of income and their limited flexibility. The effect was considered of low magnitude occurring over the long-term. The effect was considered discernable and within historical variation therefore it was not considered to be significant.

The net effect on production forest area was assessed to be of negligible magnitude; regional; long-term; continuous and certain. The negligible magnitude combined with the conservative approach taken in the calculation of production forest area to be removed by the Project are such that the effect is within the system's capacity to respond.

19.10 Cumulative Effects Assessment

The cumulative effects assessment describes and measures cumulative effects on non-traditional land and resource use resulting from the addition of the Net Effects and certain/planned and reasonably foreseeable developments (RFDs) to the Baseline Characterization (refer to Section 5.7). The cumulative effects assessment also determines the significance of cumulative effects from the Project and past, present and RFDs.

19.10.1 Approach

For the purpose of non-traditional land and resource use assessment, past and present developments are determined to be part of the existing environment, and thus are already considered in the assessment of the Projects potential and net effects. For a certain, planned, or RFD project to be considered in the assessment,

they must overlap temporally with Project construction from late 2018 to late 2020. (i.e., the period in which the Project's land use effects are concentrated), and spatially (i.e., within criterion-specific regional study areas).

For a Project to be considered an RFD for non-traditional land and resource use assessment, it must be reasonably expected to be in pursuit by a proponent. Typically, projects in advanced development (e.g., those that have conducted feasibility studies, filed a NI[4] 43-101 report) are considered reasonable to carry forward for cumulative assessment. Abandoned projects, or those that have not secured or are unlikely to secure the necessary financial backing are not reasonably carried forward for cumulative effects assessment, as they are not expected to move forward in a timely manner that could interact with Project construction. Table 19-49 outlines projects that are certain to move forward and Tier 1 Projects that are reasonably foreseeable to move forward. Both categories of projects will be assessed within the cumulative effects assessment for non-Aboriginal land and resource use. Tier 2 developments include Projects that have not yet been formally proposed and/or do not have detailed information that is publicly available at this time have not been included in the cumulative effects assessment for the non-traditional land and resource use.

Table 19-49: Summary of Cumulative Effects Case Interactions for Non-traditional Land and Resource Use

Projects/Activities	Potential Incremental Effect	Rationale for Potential Cumulative Effect	Corresponding Number (refer to Figure 5-3)
Certain/Planned Projects and Activities			
Highway 11/17 Expansion	■ potential to result in adverse change to environmental conditions (i.e., noise, air quality, and visual resources) and effects on non-commercial recreation, commercial recreation, and park users' environmental setting; and ■ potential to reduce or expand lands available for non-commercial recreational and commercial (consumptive and non-consumptive land and resource access and use.	Potential incremental effects of certain/planned projects are consistent with those predicted for the Project case and RFD projects; together, these effects could be amplified.	CP01
Nipigon River Bridge			CP02
Prairie River Bridge			CP03
Planned Forestry Roads			—
Reasonably Foreseeable Projects and Activities – Tier 1 Development			
Whites and First Nation Cogeneration and Pellet Mill Project	■ potential to result in adverse change to environmental conditions (i.e., noise, air quality, and visual resources) and effects on non-commercial recreation, commercial recreation, and park users' environmental setting; and ■ potential to reduce or expand lands available for non-commercial recreational and commercial (consumptive and non-consumptive land/resource access and use.	Potential incremental effects of RFD projects are consistent with those predicted for the Project case and certain/planned projects; together, these effects could be amplified.	RF01
Magino Gold Project – Prodigy Gold Incorporated			RF03
Hardrock Gold Mine – Greenstone Gold Mines			RF04

RFD = Reasonably Foreseeable Developments

The following net effects were carried forward to the cumulative effects assessment based on the criteria outlined in Section 5.7:

- reduction and increase to access to parks and protected areas;
- change to environmental setting due to changing environmental conditions in parks and protected areas;

[4] National Instrument.

- reduction and increase to access to non-commercial recreation areas;
- change to environmental setting due to changing environmental conditions in non-commercial recreation areas;
- reduction and increase to access to commercial recreation areas;
- change to environmental setting due to changing environmental conditions; and
- reduction in production forest area due to area being unavailable for timber production.

These effects are identified as interacting both temporally and spatially with the effects from one or more past, present, or RFDs or activities.

A potential effect for which a net effect was not predicted was not carried forward to the cumulative effects assessment. The cumulative effects assessment focuses on net effects that are likely to occur. Therefore, net effects assessed as having a likelihood of occurrence of 'probable' and 'certain' were carried forward while net effects assessed as 'unlikely' and 'possible' were not considered to be likely net effects and were not carried forward to the cumulative effects assessment. Net effects that were considered to have the potential to contribute additively or synergistically to other past, present and RFDs were carried forward to the cumulative effects assessment.

The net effect for natural, cultural and recreational values was not carried forward to the cumulative effects assessment because the level of change of the net effect to natural, cultural and recreational values from the Project compared to baseline conditions or values was considered to be negligible such that it is not discernible and is within normal historic variability from baseline conditions and within the system's capacity to respond. Therefore, it was considered unlikely that this net effect could contribute additively or synergistically to other past, present and RFDs. Also, there is insufficient information available on the natural, cultural and recreational features that may overlap with the RFD projects. While the natural, cultural and recreational features in the Project footprint and parks and protected areas LSA are available, the features in the parks and protected areas RSA that may overlap with RFD projects are not available. Therefore, the cumulative effects to natural, cultural and recreational values cannot be effectively assessed.

19.10.2 Analysis of Cumulative Effects

The cumulative effects assessment considers all of the past, existing and RFDs. Cumulative effects of the Project and RFDs on the baseline are defined based on the temporal and/or spatial relationships between these proposed projects. With respect to temporal relationships, the Project is predicted to interact with all of the RFD projects, given that the operation and maintenance stage is considered to be indefinite following the estimated 2-year construction phase. From a spatial perspective, the RFD projects may overlap the non-traditional land and resource use RSAs but not the non-traditional land and resource use LSAs

19.10.2.1 Parks and Protected Areas Access and Use

The construction and operation of the road, mining, and cogeneration projects identified in Table 19-49, combined with Project construction and operation activities, could potentially result in the following cumulative effects on land and resource access and use within parks and protected areas:

- reduced access to park and protected area lands and resources due to the introduction of limited or restricted areas by these proposed projects (i.e., to promote public/user safety during active construction and maintenance activities; and other restricted areas collectively established for all Projects); and
- increased access and use of park and protected area lands and resources through newly established ROWs cleared for new roadways, ancillary transmission lines, access roads or other ancillary infrastructure.

As is the case with the Project, it is assumed construction and operations of the roads and infrastructure associated with mining and cogeneration operations, short-term temporary area restrictions would be imposed to promote public/user safety during active construction and maintenance activities; and other restricted access areas collectively established for all projects. This, in turn, would limit or remove access to and use of park land areas and features located within designated restricted areas. Cumulative reductions in access from the Project combined with RFD projects could displace park users and activities in the parks and protected areas RSA, with displacement effects being experienced most heavily within each Project footprint. Depending on which of the RFD projects that are approved and moved forward, the area of restricted access imposed by each Project and collectively by all projects, and spatial timing when restricted access occurs for RFD projects (with maximum potential cumulative restricted access occurring during the construction phase of the Project) an unquantifiable cumulative amount of land base would be removed and access restrictions imposed on recreational land use and access in the parks and protected areas RSA. For some of the RFD projects (e.g., road and bridge construction), these restrictions would be temporary and localized (some restrictions may or may not overlap spatially for all projects). However, access restrictions may extend through operation.

During the construction stage and further into operations, noticeable cumulative opening up of new areas and access roads for park use would be created through the establishment of newly established ROWs cleared for new roadways, ancillary transmission lines, access roads or other ancillary infrastructure. Some amount of additional area and access roads would become available within the parks and protected areas RSA, opening new areas to recreation users or expanding access to a broader range of individuals and groups. It is difficult to quantify this net cumulative effect with respect to the increase on area and access roads available, increase in number of park users into the parks and protected areas RSA, and spatial extend of increased park activities occurring within the parks and protected areas RSA. However, there are extensive park and protected area lands and resources available at the parks and protected areas RSA level that will not be affected by changes in access, despite the potential cumulative access restrictions of proposed mining, cogeneration, and road projects, in combination with the Project.

19.10.2.2 Parks and Protected Areas Environmental Setting

Cumulative effects on parks and protected area environmental setting were predicted during construction and operation, as planned forestry roads and two gold mines have the potential to amplify noise, change visual aesthetic, vegetation, wildlife and air quality in regional parks and protected areas. Parks and protected areas are used actively by recreationalists and tourists for a range of outdoor activities. Use is driven by the concepts of “wilderness” and “remoteness.” Many provincial parks in the parks and protected RSA cater to an advanced outdoor tourism and recreation users who are attracted by the restricted/challenging access, low noise levels and limited industrial or infrastructure-related visual disturbances. The maintenance of this remote environmental setting is considered important to park visitors.

Increased development during the construction and operation of RFD projects has the potential to change the remote wilderness environment in parks and protected areas. Construction activities may result in increased noise, air quality disturbances, and effects on presence of wildlife and/or visual environment changes due to construction activities. These cumulative activities and disturbances could result in changes in the environmental setting that may impact park users. The movement of goods or other disturbances related to the cumulative operation of RFD projects may result in continued impacts to the environmental setting in parks and protected areas. However, there is a high number of parks in the parks and protected areas RSA and many RFD projects cannot be operated within parks and protected areas due to restrictions on linear infrastructure and commercial operations in many protected area management documents.

Quantifying impacts to the parks and protected area environmental setting was not possible due to the uncertainty of the spatial location, exact timing and magnitude of the cumulative changes to noise, surface water, air quality,

wildlife, vegetation and visual environment from RFD projects, and in turn cumulative effects on the environmental setting in parks and protected areas RSA.

19.10.2.3 Non-commercial Recreational Land and Resource Use and Access

The construction and operation of the road, mining, and cogeneration projects identified above, combined with Project construction and operation activities, could potentially result in two differential cumulative effects;

- reduced non-commercial recreational access and use due to the introduction of limited or restricted areas by these proposed projects; and
- increased access and use (e.g., expanded recreation opportunities) through newly established ROWs cleared for new roadways, ancillary transmission lines, access roads or other ancillary infrastructure, decreasing exclusive access for existing recreational land users.

As is the case with the Project, it was assumed construction and operations of the road, mining and cogeneration, short-term temporary area restrictions (and in some cases, such as mining operations, longer-term) would be imposed to promote public/user safety during active construction and maintenance activities; as a result of newly-established property boundaries (in the case of mine or cogeneration sites) and other restricted access areas collectively established for all Projects. This in turn would limit or remove access to and use of recreational land areas and features located within designated restricted areas. Cumulative reductions in access from the Project combined with RFD projects could displace non-commercial recreation users and activities in the recreational land use RSA, with displacement effects being experienced most heavily within each Project footprint. Depending on which of the RFD projects that are approved and moved forward, the area of restricted access imposed by each Project and collectively by all projects, and spatial timing when restricted access occurs for RFD projects (with maximum potential cumulative restricted access occurring during the construction phase of the Project) an unquantifiable cumulative amount of land base would be removed and access restrictions imposed in non-commercial recreational land use and access in the non-commercial land and resource use RSA. For some of the RFD projects (e.g., road and bridge construction), these restrictions would be temporary and localized (some restrictions may or may not overlap spatially across projects). However, access restrictions may extend through operation and remediation for projects such mines and the co-generation sites, where safety precautions require more pronounced restrictions on land (e.g., through the presence of a permanent feature used by vehicles, by fencing, and the use of security personnel, etc.)

During the construction stage and further into operations, noticeable cumulative opening up of new areas and access roads for non-commercial recreation use would be created through the establishment of newly established ROWs cleared for new roadways, ancillary transmission lines, access roads or other ancillary infrastructure/Some amount of additional area and access roads would become available within the non-commercial land and resource use RSA, opening new areas to recreation users or expanding access to a broader range of individuals and groups. One the one hand, this could result in a positive effect on outdoor recreation and tourism (particularly for non-commercial recreational users) by increasing tourism and recreational opportunities within the recreational land use RSA. However, exclusive access for existing recreational land users (e.g., advanced recreational trail or canoe route users) could be decreased through increase in hunters, trappers, anglers and other outdoor tourism and recreation land users to areas within and adjacent to new ROWs, resulting in some additional, and potentially competing recreational land use activity (e.g., game hunting). Increased active use resulting from expanded ROWs and ancillary infrastructure could also further and cumulatively reduce the remote, wildness character and values of the non-commercial land and resource use RSA during overlapping construction and operation and maintenance stages of these projects. It is difficult to quantify this net cumulative effect with respect to the increase on area and access roads available, increase in number of outdoor tourism and recreational users into the non-commercial land and resource use RSA, and spatial extend of increased tourism and recreational activities occurring within the non-commercial land and resource use RSA.

19.10.2.4 Non-commercial Recreational Environmental Setting

Cumulative effects on recreational environmental setting would be similar to those identified for parks and protected areas users (refer to Section 19.10.2.2). The Highway 11/17 Expansion, Planned Forestry Roads, Whitesand First Nation Cogeneration and Pellet Mill Project, Magino Gold project, and Hardrock Gold Mine project have the potential to result in additional adverse effects on recreational environmental setting due to the effects of construction and operation on the visual, acoustic, vegetation, wildlife and air quality environment. These potential changes may result in further losses in the perceived “wilderness” and “remoteness” of the non-commercial land and resource use RSA. However, these disturbances were expected to occur in a small proportion of the recreational areas available to land users in the non-commercial land and resource use RSA; most recreational lands in the non-commercial land and resource use RSA would remain undisturbed.

Increased development during the construction and operation of RFD projects has the potential to change the remote wilderness environment in recreation areas. Construction activities may result in increased noise, air quality disturbances, effects on presence of wildlife, and visual environment changes while due to construction activities. These activities and disturbances could result in changes in the environmental setting that may impact user experience of recreation areas. During operation, the movement of goods or other disturbances related to the operation RFD projects may allow for continued impacts to the environmental setting in recreation areas. However, it should be noted there is a high number of recreation opportunities in the region and RFD projects may use similar design measures to avoid identified recreation areas.

Quantifying impacts to the non-commercial recreation environmental setting is not possible due to the uncertainty of the spatial location, exact timing and magnitude of the cumulative changes to noise, surface water, air quality, wildlife, vegetation and visual environment from RFD projects, and in turn cumulative effects on the environmental setting in the non-commercial land and resource use RSA.

19.10.2.5 Commercial Recreational Land and Resource Use and Access

Cumulative effects on commercial (consumptive and non-consumptive) land and resource access and use were similar to those identified in Section 19.10.2.3. Commercial users may experience reduced access and use of commercial lands and resources, due to limitations or restrictions to protect public/user safety, to maintain property boundaries, or to establish other project-related restrictions, established during RFD projects’ construction and/or operations.

Commercial users may also be affected by increased access and use of the commercial (consumptive and non-consumptive) land and resource use RSA. Once cumulative project areas are cleared for roadways, transmission lines, or other ancillary infrastructure, users such as guided outfitters and tourism operators may lose exclusive or uncompetitive access to certain areas. Some commercial users have less mobility or ability to avoid restricted use areas. However, there are extensive commercial (consumptive and non-consumptive) lands and resources available at the commercial (consumptive and non-consumptive) land and resource use RSA level where access will not be affected, despite the potential cumulative access restrictions of proposed mining, cogeneration, and road projects, in combination with the Project.

While the cumulative effect on commercial and non-commercial users may be similar, the magnitude of the effect differs as identified in Section 19.8.2.8 as commercial users are less flexible in their range and rely on their operations as a source of income. Therefore, changes to access and use, identified as key competitive advantages, have the potential of positively or negatively impacting revenue for some regional operators depending on their operation. For example, a snowmobile rental or tour operator may see increased revenue as increased corridors, particularly those which are connect, allow the region to be more attractive as a tourist destination for snowmobiling. However, a hunting or fishing operator utilizing remote hard to access areas may be negatively impacted by reductions in those areas due to the Project and additional RFD projects.

Overall, cumulative effects on tourist operators are dependent on the nature of operators' competitive advantage. For all operators, limitation during construction will reduce access and operation to various Project footprints and associated areas. During operation, additional footprints will reduce the availability of land to all commercial operators negatively impacting them.

19.10.2.6 Commercial Recreational Environmental Setting

Changes in commercial (consumptive and non-consumptive) environmental setting were expected to be similar to those identified in Section 19.10.2.2 and 19.10.2.4. The activities of the road, cogeneration, and mining projects outlined above, combined with Project construction and operation activities, have the potential to affect commercial user experience by increasing changes to air quality, acoustic, vegetation, wildlife and visual environment. Guided outfitters, tourism operators, and other users whose operations are sensitive to perceived concepts of "remoteness" and "wilderness" are most likely to experience these disturbance effects.

Disturbances would be particularly noticeable to users where new areas are cleared that do not parallel or overlap existing ROWs or are adjacent to existing developments, resulting in a greater perceived loss of value or quality of these lands. These disturbances are expected to occur in a small proportion of the total areas available for commercial land use in the commercial (consumptive and non-consumptive) land and resource use RSA, although it is recognized some individual commercial users such as guided outfitters and tourism operators may lack mobility to avoid nuisance effects due to their infrastructure and knowledge base. Due to the lack of mobility and the reliance on these activities for income, it is assumed the potential effect could be more severe for commercial operators than non-commercial users.

Quantifying impacts to the commercial recreation environmental setting is not possible due to the uncertainty of the spatial location, exact timing and magnitude of the cumulative changes to noise, surface water, air quality, wildlife, vegetation and visual environment from RFD projects, and in turn cumulative effects on the environmental setting in the commercial land and resource use RSA.

19.10.2.7 Commercial Forestry Land and Resource Use and Access

Cumulative effects on production forest area are assessed at the commercial forestry land and resource use RSA/FMU scale only for those FMUs that overlap with RFDs (refer to Table 19-49). The expansion of Highway 11/17 overlaps with the Lakehead FMU. This project is already approved and would have been accounted for in the most recent FMP prepared by Greenmantle Forest Inc. for the Lakehead Forest. In addition, the highway expansion traverses a combination of private and already disturbed land such that reductions to production forest area as a result of the expansion would be negligible. The Lakehead FMU also overlaps with the Nipigon River Bridge project which is also being constructed in an already disturbed area. There will be no cumulative effects to production forest area in this FMU.

The Kenogami Forest overlaps with the Hardrock Gold Mine Project which has a project development area of 2,200 ha (Stantec, 2017), not all of which is currently production forest given that this project is situated in a historical mine site, overlaps patent land including residences and a golf course, and is also intersected by the Trans-Canada highway. In the absence of data to quantify the total area of production forest currently in the project development area (PDA), this assessment will assume that half of the PDA is production forest that will be permanently removed, and the other half is either not production forest, or will be rehabilitated back to production forest upon closure of the mine. This area of 1,100 ha represents 0.07% of the total production forest area for this FMU. The Kenogami Forest will experience the smallest effect from the Project on production forest area (0.02% of total production forest area for the FMU). Combined, the two projects will result in a permanent reduction of 0.1% of the current production forest area.

None of the other RFDs overlap with FMUs that are affected by the Project.

19.10.3 Cumulative Effects Characterization

A summary of the assessment of cumulative effects from the Project and past, present and RFDs on parks and protected areas, non-commercial outdoor tourism and recreation, and commercial land and resource use is provided for each indicator in Table 19-50. Project-specific mitigation is provided in Table 19-45. It is expected that RFDs will be required to implement similar mitigation measures that will limit cumulative effects on parks and protected areas; non-commercial outdoor tourism and recreation; and commercial land and resources use.

19.10.3.1 Parks and Protected Areas Access and Use

The cumulative effect on park and protected area land and resource access and use was predicted to be negative in direction where access is reduced. Changes to park and protected area land and resource access and use were predicted to be low in magnitude, as the clearing of vegetation for forestry road developments and ancillary mining infrastructure development (combined with the Project) will result in a discernable effect within the parks and protected areas RSA, while not materially changing park users' access and use, given the extensive park and protected area lands and resources still available in the parks and protected areas RSA. The cumulative effect on access and use is predicted to be regional in geographic extent, permanent and irreversible in duration, and continuous in frequency, given that once areas are cleared for linear development, they will be maintained and accessible for the length of their operations. The cumulative effect on access and use are probable, as new, additional road and ROW development are expected.

19.10.3.2 Parks and Protected Areas Environmental Setting

The cumulative effect on parks and protected area environmental setting was predicted to be negative in direction and of negligible magnitude, as the RFD projects are expected to create minimal disturbances in regional parks and protected areas considering the size of the parks and protected areas RSA and frequency of protected areas within it. The number (and area) of parks and protected areas transected by these projects were expected to be small compared to the total number (and area) of parklands available in the parks and protected areas RSA. The magnitude of these effects would also be dependent on the level of dust, noise, disturbance to wildlife presence from RFD project operations, the proximity and visibility of the operations to existing park features and operations, and the mitigation established for proposed projects to minimize environmental setting disturbance effects on park users. Given the extensive parks and protected area resources that will remain undisturbed, the cumulative effect was assessed to be small, not discernable and within users' capacity to respond.

This cumulative effect was anticipated to be regional in geographic extent, permanent/irreversible, and continuous, given that areas cleared for road and ancillary mine infrastructure development will remain cleared and apparent in the visual landscape through both construction and operation. The likelihood of these cumulative effects were probable, given that effects on visual aesthetics (i.e., vegetation clearing) are anticipated to occur as a result of these combined project construction activities.

19.10.3.3 Non-Commercial Recreational Land and Resource Use and Access

The cumulative effect of Project access restrictions on non-commercial recreation access and area use was assessed as low in magnitude, with cumulative access restrictions for RFD projects noticeably affecting areas where recreational users can carry out their activities, but was not expected to materially affect non-commercial recreation land access and use in the non-commercial land and resource use RSA to the point where recreational opportunities and activities were beyond the current system's capacity to respond. As described in Section 19.5.2.4, there are extensive outdoor recreational and land use features in the non-commercial recreation RSA, which would serve to provide locations for recreational and tourism land use outside of these construction areas with the non-commercial land and resource use RSA. The effect was considered to be regional in spatial

extent occurring within the non-commercial land and resource use RSA, short-term and reversible (mainly during the duration of Project construction), continuous, and probable to occur.

It could be expected that any influx in numbers of recreational users due to opening of areas and access routings would be manageable, given the large spatial area for recreational use within the non-commercial land and resource use RSA. This additional effect was also considered to be low in magnitude whereby the effect would be discernable to users, but was not expected to materially affect recreation land use in the non-commercial land and resource use RSA to the point where recreational opportunities and activities are noticeably affected (i.e., within the current system's capacity to respond). Assuming the spatial extent of new areas available for recreation from new ROWs, project footprints and access roads created by RFD projects would be relatively small in relation to overall available recreational use areas within the non-commercial land and resource use RSA, there would be continued recreation opportunities for users at the RSA level (the effect would be within the system capacity to respond). However, it is recognized that in certain areas changes would be more dramatic considering the amount of greenfield disturbance caused by individual projects or multiple projects in the same previously undisturbed areas. The effect was considered to be regional in spatial extent occurring within the non-commercial land and resource use RSA, short-term (mainly during the duration of Project construction), continuous, and probable.

19.10.3.4 Non-Commercial (Consumptive and Non-consumptive) Recreational Environmental Setting

The cumulative effect on recreational environmental setting was predicted to be negative in direction and negligible in magnitude, as six additional projects may create visual, acoustic and air-quality related disturbances to recreational users. However, these disturbances were expected to occur in a small proportion of the recreational areas available to land users in the non-commercial land and resource use RSA. Given the extensive lands available for recreational use that will remain undisturbed, the cumulative effect was predicted be discernable at an individual level and while still considered adverse, remain within users' capacity to respond. This cumulative effect was predicted to be regional in geographic extent, permanent in duration, and continuous, given that areas cleared for Project infrastructure development will remain visible and apparent through construction and operation, while wildlife, vegetation, air and noise effects of mine and cogeneration facilities may persist through the operation phase. The likelihood of the cumulative effect was anticipated to be probable, given that the effect on visual aesthetics was anticipated for certain/planned projects. However, it is important to note that the actual level of disturbance would depend on the specific construction activities and mitigation measures established for each RFD project, as well as their ultimate construction and operation schedules.

19.10.3.5 Commercial Recreational Land and Resource Use and Access

Similar to non-commercial users, the cumulative effect of Project access restrictions on commercial recreation access and area use was assessed as low in magnitude, with cumulative access restrictions for RFD projects noticeably affecting areas where commercial users can carry out their activities in the commercial (consumptive and non-consumptive) land and resource use RSA. As described in Section 19.8.1, the cumulative effect is not expected to be beyond the user's capacity to respond and will remain within historical variability. The effect was considered to be regional in spatial extent occurring within the commercial (consumptive and non-consumptive) land and resource use RSA, short-term and reversible (mainly during the duration of Project construction), continuous, and probable to occur.

The cumulative effect on commercial (consumptive and non-consumptive) land and resource access and use was predicted to be positive or negative in direction, adversely affecting certain users whether access increases or decreases while also benefiting other users due to access increases. This cumulative effect was predicted to range from low to moderate in magnitude, as potential effects would be dependent on where the user is on the ROW. In areas where the Project footprint will be adjacent to existing corridors, the cumulative effect was predicted to be

low. In areas where the ROW opens up a new linear corridor, for example in Loon Lake, the effect was assessed as being moderate in magnitude. Commercial recreational users were assumed to have less mobility or spatial flexibility to avoid Project access and use effects, compared to non-commercial recreational land users due to their existing commercial infrastructure, and knowledge base and use of areas that support key commercial interests (such as prime wildlife viewing or game hunting areas). Furthermore, the remote wilderness character may be compromised by the additional projects coupled with the Project ROW due to increased access allowing more non-commercial recreational access. Although individual commercial users may be affected (e.g., individual guided outfitting/tourist operations, trappers, baitfish harvesters) the cumulative effect was predicted to remain within commercial recreational system's capacity to respond. The cumulative effect was assessed as being regional in geographic extent, short-term/reversible and permanent in duration, and continuous in frequency, given that increases in access will be established upon vegetation clearing and maintained through operation.

19.10.3.6 Commercial Recreational (Consumptive and Non-consumptive) Environmental Setting

The cumulative effect on commercial (consumptive and non-consumptive) experience due to changes in environmental conditions was predicted to be negative in direction and low in magnitude, as six additional projects may create visual, acoustic, and air quality-related disturbances to commercial (consumptive and non-consumptive) users. These disturbances to environmental setting were expected to occur in a relatively small proportion of the total areas available for commercial recreational land use in the commercial (consumptive and non-consumptive) land and resource use RSA, although individual commercial users such as guided outfitters and tourism operators may lack mobility to avoid environmental disturbance effects. The cumulative effect was anticipated to be discernable and while still considered adverse, within commercial recreational system's capacity to respond.

The cumulative effect on the commercial recreational environmental setting was predicted to be regional in geographic extent, permanent in duration (i.e., extending from construction through operation), and continuous, given that once areas are cleared during construction, visual disturbance effects will be maintained indefinitely. The cumulative effect was considered to be probable; however, the level of disturbance will depend on the specific construction activities and mitigation measures established for each certain and RFD project, as well as their ultimate construction and operation schedules.

19.10.3.7 Commercial Forestry Land and Resource Use and Access

The cumulative effect on park and protected area land and resource access and use was predicted to be negative in direction where access is reduced. The cumulative effect was predicted to be low in magnitude, as the clearing of vegetation for forestry road developments and ancillary mining infrastructure development (combined with the Project) will result in a discernable effect within the commercial forestry land and resource use RSA, while not materially changing park users' access and use, given the extensive park and protected area lands and resources still available at the commercial forestry land and resource use RSA level. The cumulative effect will be regional in geographic extent, long-term in duration, and continuous in frequency, given that once areas are cleared for linear development, they will be maintained and accessible for the length of their operations. The cumulative effect was considered to be probable, as new, additional road and ROW development are expected.

Permanent Project components (i.e., preferred route ROW and permanent access roads) in combination with the Hardrock Gold Mine project near Geraldton will result in a cumulative permanent reduction in production forest area and therefore available harvest area on the Kenogami Forest. This direct effect was predicted to be of negligible magnitude given that the percentages of total production forest area being removed by both projects are small compared to total production forest area in the FMU. In addition, historical harvest levels in the Kenogami Forest have been well below planned levels and are likely to remain so for the duration of the Hardrock Gold

Mine Project which is anticipated to be just over 15 years (Stantec, 2017). As such, it is unlikely that this reduction in production forest area will affect the industry's ability to continue operating. The cumulative effect on available harvest area will be: regional in scale (since it affects the entire FMU); long-term for temporary transmission line Project components and mining activities until sites are adequately regenerated, and permanent for permanent transmission line Project components; continuous; and certain for the Project given that the cleared ROW will remain cleared in perpetuity, and probable for the Hardrock Gold Mine project given that the mine project has yet to be approved and implementation relies on both regulatory approvals, and the market for gold.

19.10.4 Summary of Cumulative Effects Characterization

A summary of the characterization of cumulative effects from the Project and past, present and RFDs on the non-traditional land and resource use criteria is provided for each indicator in Table 19-50.

19.10.5 Assessing Significance

The assessment of significance for cumulative effects was completed using the same framework as described in Section 19.9. For the non-traditional land and resource use criteria, a cumulative adverse effect was considered significant if it was high in magnitude, medium to long-term in duration, and of any geographic extent. For an effect to be considered significant, it would have to exceed the capacity of the system to respond. Further description of the assessment of significance approach is provided in Table 19-48. The assessment has not identified any high magnitude cumulative effects on non-traditional land and resource use criteria. Cumulative effects identified in Section 19.10.2 and characterized in Section 19.10.3 are, therefore, assessed as not significant.

19.11 Prediction Confidence in the Assessment

Prediction confidence is discussed qualitatively for the overall non-traditional land and resource use effects assessment results, after accounting for the steps used to reduce uncertainty. Level of confidence is typically based on expert judgement and is characterized as follows:

- **Low –** judgement hampered by an incomplete understanding of cause-effect relationship or lack of data.
- **Moderate –** reasonable understanding of cause-effect relationship and adequate data.
- **High –** good understanding of cause-effect relationship and ample data.

Primary factors affecting confidence in the predictions made in the non-traditional land and resource use assessment include:

- the availability and accuracy of local and regional data;
- level of understanding of the strength of Project-environment interactions (i.e., mechanisms) in terms of the effects they are likely to have on each criterion;
- level of understanding of the drivers of change in indicators and associated effects on assessment endpoints; and
- level of certainty associated with the effectiveness of mitigation measures.

Table 19-50: Characterization of Predicted Cumulative Effects on Non-traditional Land and Resource Use Criteria

Criteria	Indicators	Cumulative Effect Description	Effects Characteristics					
			Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Probability of Occurrence
Parks and protected areas	Change to access and use of parks and protected areas	The Project combined with other developments may act to change access and use of provincial parks and protected areas.	Negative	Low	Regional	Permanent – Irreversible	Continuous	Probable
	Change to parks and protected area experience due to changes in environmental conditions (e.g., noise, air quality, visual resources)	The Project combined with other developments may act to change the visual environment, acoustic environment, or air quality environment to affect park and protected areas users' experience.	Negative	Negligible	Regional	Permanent – Irreversible	Continuous	Probable
Non-commercial recreational land and resource use	Change to non-commercial recreational land and resource access and use	The Project combined with other developments may act to reduce and/or expand lands available for recreational land and resource use.	Positive and Negative	Low	Regional	■ Short-term and reversible ■ Permanent and irreversible	Continuous	Probable
	Change to non-commercial recreational experience due to changes in environmental conditions (e.g., visual resources, noise, air quality)	The Project combined with other developments may act to change the visual environment, acoustic environment, or air quality environment to adversely affect recreational land and resource use experience.	Negative	Negligible	Regional	Permanent – Irreversible	Continuous	Probable
Commercial land and resource use	Change to commercial (consumptive and non-consumptive) land and resource use and access	The Project combined with other developments may act to reduce and/or expand lands available for commercial (consumptive and non-consumptive) land and resource use.	Positive and Negative	Low to Moderate	Regional	■ Short-term and reversible ■ Permanent and irreversible	Continuous	Probable
	Change to commercial experience due to changes in environmental conditions (e.g., noise, air quality, visual resources)	The Project combined with other developments may act to change the visual environment, acoustic environment, or air quality environment to affect commercial (consumptive or non-consumptive) land user experience.	Negative	Low	Regional	Permanent – Irreversible	Continuous	Probable
	Commercial forestry land and resource use and access	The Project combined with other developments will result in a reduction in production forest area in the Kenogami Forest Management Unit.	Negative	Negligible	Regional	■ Long-term and reversible ■ Permanent and irreversible	Continuous	Certain

The confidence in the predicted effects assessment for the non-traditional land and resource use environment is rated as moderate, considering the quality and availability of data defining the Project components and surrounding landscape used for assessment, and the effectiveness of mitigation based on accepted and proven best management practices that have been applied to transmission line projects throughout North America. There is also considerable knowledge from publicly available sources of existing provincial and local land use policies and designations, parks and protected areas, linear infrastructure, non-commercial recreational land and resource use (consumptive and non-consumptive) and commercial land and resource use (consumptive, non-consumptive and industry) in the various non-traditional land and resource use LSAs and RSAs that has been captured through the Project consultation program. Spatial land use features, public access roads and modes, and the availability of land and resource use opportunities in the non-traditional land and resource use LSAs are well understood based on available data. There is moderate confidence in the data provided from secondary sources; the MNRF LIO and CANVEC datasets used are the most comprehensive public land and resource use datasets available in the Province of Ontario. However, information on where and how recreational and commercial use occurs in the non-traditional land and resource use LSAs and Project footprint (i.e., specific knowledge of the potential activity of recreationalists and commercial operators) is limited and less certain. As a result, there are limits for interpreting existing conditions and future levels of use related to non-commercial recreational and commercial land and resource use in these corresponding non-traditional land and resource use LSAs. Consequently, stated levels of participation at the regional level are assumed to be generally indicative of use patterns in the non-traditional land and resource use LSAs.

Some of the uncertainty in the assessment has been reduced by collecting local and regional spatial and qualitative data to facilitate an understanding of the non-traditional land and resource use context. This information provides some numerical data about activities, harvests, use rates, or frequencies of occurrence. Experiential information including the results of interviews with guided outfitters and consultation results also provide information about how people are using the lands and resources near the Project area for non-commercial and commercial activities. Data sources include:

- consultation and engagement input *to identify environmental concerns and more accurately predict future developments*;
- government databases (MNRF LIO, CANVEC, and CLUPA);
- provincial management plans;
- municipal official plans; and
- data sourced from outdoor tourism and recreation organizations (qualitative, quantitative, and spatial).

Uncertainty was also addressed by adopting a conservative approach in the effects assessment assumptions, in accordance with EA best practice. For example, where participation levels, frequency, and exact location of commercial and non-commercial land and resource use activities are uncertain, it has been assumed that land and resource use activities at known designated land use areas, amenities, and/or features located within the Project footprint would occur at some point during the Project, and hence potentially interact with the Project. Adopting this approach, the net effects characterization for non-traditional land and resource use criteria relates to a general understanding about access and use, and general land use activity and opportunities in the non-traditional land and resource use LSAs, rather than levels of participation within specific spatially delineated land and resource use areas.

19.12 Follow-Up, Inspection, and Monitoring Programs

The objectives of follow-up, inspection, and monitoring programs include:

- evaluate the effectiveness of mitigation and reclamation, and modify or enhance measures as necessary through adaptive management;
- identify unanticipated potentially negative effects, including possible accidents and malfunctions; and
- contribute to continual improvement.

Monitoring and post-monitoring activities are described in Section 23 and the CEPP (refer to Appendix 4 II). A summary of the monitoring activities relevant to the protection of the visual environment are described below:

- The Owner will employ the services of qualified Environmental Inspector(s) to guide implementation, monitor and report on the effectiveness of the construction procedures and mitigation measures for minimizing potential impacts.
- The Owner will monitor the Project Site during construction for incidental sensitive features (e.g., water body, rare plant, rare vegetation community, wildlife species of concern, archaeological resources) that have not been previously identified on the Project Site.
- Environmental Inspectors will be on-site during construction to monitor the removal of temporary equipment water body crossing structures.
- The Owner will conduct visual inspection of the construction area and Project access roads to monitor adherence to traffic protocols and speed limits by all Project personnel.
- Post-construction monitoring of the Project Site will begin following reclamation, within one growing season, and annually during operations to identify and address any reclamation concerns.
- NextBridge will oversee implementation of the environmental management measures described in the OEMP during operation and maintenance.
- Culverts will be periodically (e.g., before and/or after spring freshet) inspected and maintained to prevent blockages from forming and causing ponding or backwater effects. Where culverts are installed at fish bearing water bodies, debris removal activities will follow DFO's guidance (i.e., gradual removal such that flooding downstream, extreme flows downstream, release of suspended sediment, and fish stranding can be avoided).

19.13 Information Passed on to Other Components

Results of the non-traditional land and resource use environment assessment were reviewed and incorporated into the following components of the EA:

- Indigenous Current Use of Lands and Resources for Traditional Purposes (refer to Section17);
- Socio-economics (refer to Section 18); and
- Visual Environment (refer to Section 20).