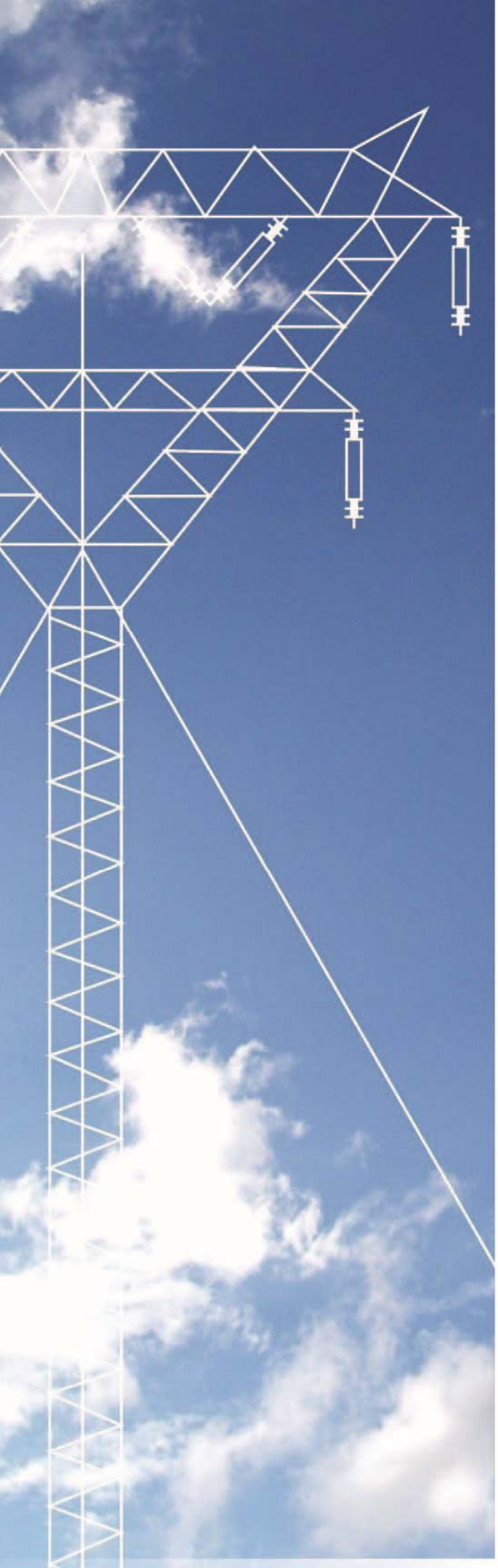

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NEXTBRIDGE INFRASTRUCTURE LP

Detailed Project Plan for Black Sturgeon River Provincial Park for the Ontario East-West Tie Transmission Line Project

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NEXTBRIDGE INFRASTRUCTURE

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1.0 INTRODUCTION

The purpose of this Detailed Project Plan (DPP) is to provide the Ministry of Environment, Conservation and Parks (MECP) with details on the activities to be undertaken within Black Sturgeon River Provincial Park during NextBridge Infrastructure LP's (NextBridge) Ontario East-West Tie Line Transmission Project ('OEWTL' or 'the Project'). Black Sturgeon River Provincial Park is located within Workfront 2, which is a priority work front to obtain permitting in order to maintain Project schedule.

This is the first of nine (9) DPPs to be provided for Project activities within protected areas, as summarized in Table 1. The purpose of these DPPs is to identify site-specific interaction(s) with known environmental values in protected areas and to describe proposed construction scope, methods, timing, limitations and mitigation measures to avoid, protect and/or restore these habitat(s).

1.1 Regulatory Context

A competitive bidding process was held by the Ontario Energy Board (OEB) and selected NextBridge to design and build the Project in August 2013. The Independent Electricity System Operator (IESO, formerly the Ontario Power Authority [OPA]1) originally identified an in-service date of 2018 for the Project, and in 2014, revised the required in-service date to 2020. Due to additional Project hearings held the OEB in the summer of 2018, the ISD was extended to the fall of 2021.

The Project has been identified as a priority project by the Province of Ontario, and a needed Project by the IESO to meet future electricity demand in northwestern Ontario. The Project's Amended Environmental Assessment (EA) application (Golder, 2018a) was approved in March 2019; the EA approval includes a set of Project EA Conditions and Commitments.

Ontario's protected areas are regulated under the *Provincial Parks and Conservation Reserves Act*, 2006 (PPCRA), which sets out the legislative framework for the formal protection of Provincial Parks (PP) and Conservation Reserves (CR) and direction for the MECP to manage these areas. Sections 20 and 21 of the PPCRA outline the Conditions of Approval for Resource Access Roads and Utility Corridors that must be considered and addressed by NextBridge during construction planning, execution, decommissioning and operations, in order to support permit approvals by MECP. Conditions of Approval are described in detail in Section 1.3 (below) and addressed throughout this DPP.

Under EA Commitment 1029 NextBridge will provide a DPP for each PP and CR where construction will occur, which should include, but not be limited to, the following information:

1. The pre-construction field reconnaissance approach (Section 6.1);
2. Construction schedule and design information (Section 5);
3. Approaches to protecting environmental values (Section 6);
4. Training and employment opportunities for Indigenous communities; and,
5. Traditional Ecological Knowledge (TEK)/Traditional Land and Resource Use (TLRU) protocol.

This DPP provides details on items 1-3 above; additional information surrounding the application of environmental Best Management Practices (BMP) and contingency plans for the Project can be found in the Project Construction Environmental Protection Plan (CEPP) (NextBridge, 2019). Details on items 4 and 5 re: indigenous training, employment, TEK and TLRU are outlined in the Project Overarching DPP (NextBridge, 2019a), and have not been included here based on regulator feedback to avoid redundancy between Project submittals.

[1] On January 1, 2015, the OPA merged with the IESO to create a new organization that combines the OPA and IESO mandates.

1.2 Land Use and Work Permits

A Land Use Permit (LUP), issued by the MECP under the PPCRA is required to allow the Project's transmission line easement or right-of-way (ROW) to exist within a protected area. A Work Permit (WP), issued by the MECP under the PPCRA, is required to develop or upgrade any temporary roads or watercourse crossings within a protected area. This DPP provides detail to support NextBridge's LUP and WP applications for Project activities in Black Sturgeon River Provincial Park; these applications will be submitted separately.

In order for land use or work permits to be issued for protected areas crossed by the Project, amendments to individual PP and CR Management Plans are required under the PPCRA, to allow the development of Project infrastructure within the respective protected area boundaries. This process was triggered by the approval of the Project's Environmental Assessment (EA) in March 2019, and is currently in progress. Additional detail on permitting for work within park boundaries is outlined in Section 9.

2.0 PPCRA CONDITIONS FOR APPROVAL

Sections 20 and 21 of the PPCRA (2006) outline the conditions under which new utilitiy corridors may be developed in protected areas. Section 21 outlines the conditions of approval, specifically: that there are no reasonable alternatives, that lowest cost is not the sole or overriding justification, that environmental impacts have been considered and that all reasonable measures will be undertaken to minimize effects. An amendment or an administrative update to each PP management plan, interim management statement, or SCI for each CR is required for MECP to issue permits (see Section 1.4) in areas where the Project crosses protected areas.

Sections 20 & 21 of the PPCRA are summarized as follows:

Section 20 (2) Utility corridors:

> (2) Subject to the policies of the Ministry and the approval of the Minister, with or without conditions, utility corridors, including but not limited to utility corridors for electrical transmission lines, are permitted in provincial parks and conservation reserves. 2006, c. 12, s. 20 (2).

Conditions for approval, resource access road, etc.

> (3) In addition to the conditions in section 21, in approving a resource access road or trail or a utility corridor, the Minister must be satisfied that when the road, trail or utility corridor is no longer required for the purpose for which it was approved or will not be used for a period of five years or more,
>
> (a) the road, trail or utility corridor will be closed and effective measures will be taken to prevent its use; and
>
> (b) rehabilitation and removal of infrastructure will be undertaken at the direction of the Minister. 2006, c. 12, s. 20 (3).

Section 21 – Conditions of Approval:

> In approving the development of a facility for the generation of electricity under subsection 19 (2), (3) or (4) or approving a resource access road or trail or a utility corridor under section 20, the Minister must be satisfied that the following conditions are met:
>
> 1. There are no reasonable alternatives.
>
> 2. Lowest cost is not the sole or overriding justification.
>
> 3. Environmental impacts have been considered and all reasonable measures will be undertaken to minimize harmful environmental impact and to protect ecological integrity. 2009, c. 12, Sched. L, s. 21.

2.1 PPCRA Section 21 Alternative Assessment

Project infrastructure crosses through portions of 9 protected areas, as outlined in Table 1. Black Sturgeon River, Ruby Lake, Gravel River, Pukaskwa River and Nimoosh PPs contain utility and/or transportation corridors. Project components will also cross portions of the Kama Cliffs, Gravel River and Kwinkwaga Ground Moraine Uplands CRs, and the Kwinkwaga Ground Moraine Uplands Forest Reserve, which do not have existing linear infrastructure or utility corridors.

Project components that fall within protected area boundaries are generally limited to transmission (tower) structures, conductor (overhead wire) and/or temporary access roads. Alternative routing or engineering to avoid protected areas to the greatest extent possible was undertaken during the engineering and design and environmental assessment (EA) phase(s), as outlined in the Project's Amended EA Report (Golder, 2018a).

No reasonable alternatives to the selected (approved) Project route were determined during the original EA process (Nextbridge, 2017) and associated consultation and engagement with Indigenous communities, regulatory agencies, property owners, interest holders, Crown interests and the general public (see Section 3: Evaluation of Alternatives, Golder, 2018a). A number of alternative routes, including one that avoided PP and CR, were evaluated for their potential impact on social (i.e., proximity to communities) and environmental values.

Subsequent to this assessment, no additional analysis was completed for Black Sturgeon River PP. The approved route remains aligned with, and to the north of, the existing Hydro 1 utility corridor. The combined Hydro 1 and NextBridge utility corridor crosses the Black Sturgeon River near the southern boundary of the park. Combining these corridors reduces incremental fragmentation by linear features on the landscape, and reduces the visual impact of the infrastructure on the landscape to this location. This concentrating of energy infrastructure within the park also keeps routine maintenance activities, which are required for the operation of both lines, and their associated disturbances, confined to one area (see Section 3.0 of this document for a full description of existing utility corridors that cross the park).

To address Ministry of Natural Resources and Forestry (MNRF) concern(s) that the final route crossed sensitive environmental features in PP and CR, additional assessments of alternative routes were completed, as outlined in Section 3.3.1.6 and Appendix 3-1 and 3-II of the Amended EA report (Golder, 2018a). Six (6) alternative routes, with new start and end points, and which avoided PP and CR, were compared against a set of indicators, with the focus of determining the best compromise in terms of potential social and environmental impacts. This assessment concluded that the selected (approved) route remains the best balance of assessment criteria. Assessment results are in Appendix 3-I-B of the Amended EA (Golder, 2018a). The comparative evaluation of alternatives was completed using the method described in Appendix 3-I and discussed in Section 3.3.2 of Appendix 3-II of the Amended EA report (Golder, 2018a). Results are summarized below in Section 2.1.

Results of the alternatives assessments for each PP and CR crossed by the Project are summarized in Section 2.1.1, to demonstrate compliance with the PPCRA Section 21 Conditions of Approval.

Table 1: Protected Areas Crossed by the OEWTL Project.

Workfront	Protected Area Name	Number of Towers	Approx. Project Footprint within Protected Area (ha)
1	Ouimet Canyon PP	0	0
2	Black Sturgeon River PP	2	7.8
3	Ruby Lake PP	1	2.1
3	Kama Cliffs CR	11	32
3, 4	Gravel River CR	22	56.5
4	Gravel River PP	2	5.4
8	Kwinkwaga Ground Moraine CR	0	7.0
9	Pukaskwa River PP	2	4.0
10	Nimoosh PP	2	11.1

2.1.1 PPCRA Section 21 Compliance for Black Sturgeon River PP

The final or approved route ROW within BSRPP is considered the best route for compliance with PPCRA Section 21 Conditions of Approval. The Project crosses a narrow section of the park near the southern park boundary for approximately 1.1 km, and is parallel to the existing Hydro One utility corridor. This route concentrates linear development into a single location within the park and minimizes potential environmental and recreational effects. The initial route through BSRPP contained three towers within the park boundaries, including two structures adjacent to/visible from the Black Sturgeon River. Based on consultation feedback, NextBridge re-engineered the section within the park re-locate the structures further away from the river, which also reduced the visibility of the towers from the river and associated recreational/visual impacts. This re-design also reduced the total number of structures within the park from three (3) to two (2), reducing construction activity and the overall project footprint within the park.

An existing utility corridor (gas pipeline) is located at the south boundary of BSRPP; this likely precluded the development of an alternate route outside of the park boundary, due to operating conflicts between the different utility types (i.e.: degradation/corrosion of the pipeline can occur due to effects from the energized transmission line and cathodic protection would be required to protect the pipeline).

The final route and engineering design is considered the best alternative in accordance with PPCRA Section 21 because it maintains continuity with the existing transmission line corridor (i.e.: promotes concentration of linear infrastructure), and minimizes environmental effects to the park by crossing at a narrow point and reducing the total number of structures within the park. Lowest cost was not the sole or overriding justification for selection of the final/approved route through the park.

2.2 General Requirements and Mitigation for Working within Protected Areas

The following measures will be adhered to for work in protected areas:

- Signage will be posted at unauthorized entry points to the park created by construction access, warning the public of work activity and directing users to the nearest authorized access point.
- No blasting will occur near operating campgrounds, Ontario Trail Network trails or canoe routes on weekends and holidays beginning May Long weekend and ending Labour Day weekend, inclusive.
- Warning signs will be placed 150 m upstream and 100 m downstream of water crossings on scheduled waterways during construction.

In addition, the following mitigation measures shall be implemented for canoe routes and portages in PP and CR:

- 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 trails will be limited to where necessary for safety. Compatible vegetation (e.g., below 2 m in height) will be retained where practicable;
- Vegetation clearing within a minimum of 30 m around Category B canoe routes (i.e., White River canoe route, Michipicoten River canoe route and Magpie River canoe route) and their associated portage trails will be limited to where necessary for safety. Compatible vegetation (e.g., below 2 m in height) will be retained where practicable;
- Vegetation clearing around a canoe route or portage trail 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 impacts from activities;
- The Project shall not block or obscure portage trails or recreational access roads on either side of the ROW (e.g., no stockpiled vegetation or soils at the portage access points);
- During construction, keep portages clear of vegetation debris and maintain the existing grade of the portage such that it remains clear, safe and ready for recreational users; and,
- No disturbance of portages outside of the Project Site and access roads will be permitted.

3.0 OVERVIEW OF BLACK STURGEON RIVER PROVINCIAL PARK (PP)

The Black Sturgeon River PP is a non-operating waterway class park located northwest of the Township of Nipigon, in Workfront 2. The Black Sturgeon River begins near Lake Nipigon and flows into Black Bay on Lake Superior. The park stretches approximately 72 km over an area of 23,531 ha along the Black Sturgeon River from Lyon Township to the top end of Black Sturgeon Lake. A component of the Lake Nipigon Basin Signature Site, Black Sturgeon River is an important recreational waterway for fishing, hunting and canoeing. The rugged landscape has diverse features including a glacial spillway and scenic 'cuestas' or ridges with a gentle slope on one side, and a steep slope on the other, typical of escarpment-type landforms.

The park provides day-use opportunities for angling on its many lakes and rivers; paddling opportunities along its entire length, especially between the former Split Rapids Dam and Nonwatin Lake; as well as beach areas. During the winter, the park provides cross-country skiing and snowshoeing opportunities. There are no facilities operating at this park.

The Black Sturgeon Forest Management Unit (FMU) and the Lakehead FMU surround the park. A portion of an unpatented mining claim located on the eastern shore of Black Sturgeon Lake is designated and managed as a forest reserve. There are six mining claims located around the south shore of Black Sturgeon Bay that are designated and managed as forest reserves. Canadian Outward Bound Wilderness School has a Crown lease.

3.1 Park Classification

Provincial parks policy has evolved since the establishment of Algonquin Park in 1893. Today, PPs are governed by three key tools: *the Ontario Provincial Parks and Conservation Reserves Act* (2006), the Ontario Provincial Parks Policy Statement (1978), and Ontario Provincial Parks: Planning and Management Policies (1992). The latter was amended by the Ontario's Living Legacy Land Use Strategy (MNR, 1999), for PPs established as a result of the Lands for Life planning process.

The PP system incorporates six classes of parks, which are selected to meet representation targets in addition to the protection of special values. Black Sturgeon River PP is classified as a waterway park. Waterway parks are selected river and lake corridors that complement other parks by representing elements of diversity not found within the other park classes. The class target is to establish one waterway park in each ecological district.

Black Sturgeon River PP falls within ecoregion 3W and ecodistrict 3W-3 and is characterized by boreal forest. The waterway status reflects the park's natural features, as well as its important recreational values to canoeists, campers, anglers and hunters.

3.2 Black Sturgeon River Park Management Plan Summary

The Black Sturgeon River Provincial Park Management Plan (MNR, 2003) became official policy for the Park in 2003, and considers the Environmental Bill of Rights Statement of Environmental Values, which are translated into four (4) key objectives:

- To ensure the long-term health of the ecosystems by protecting and conserving our valuable soil, aquatic resources, forest and wildlife resources as well as their biological foundations;
- To ensure the continuing availability of natural resources for the long-term benefit of the people of Ontario;
- To protect natural heritage and biological features of provincial significance; and,
- To protect human life, the resource base and the physical property from the threats of forest fires, floods and erosion.

The Black Sturgeon River PP (P2250) is located within the Lake Nipigon Basin Signature site, one of 9 such areas featured in the Ontario's Living Legacy Land Use Strategy (MNR, 1999). Signature Sites are identified for their range of natural and recreational values and their potential to contribute to future recreation and tourism. Black Sturgeon River PP was regulated on May 8, 2002. A 799-hectare addition at the north end of the park will be regulated through the public consultation process for the Lake Nipigon Basin Signature Site Ecological Land Use and Resource Management Strategy (Ontario Parks, 2004). The approved park management plan (MNR, 2003) sets direction for the next 20 years by establishing policy and identifying appropriate development, consistent with the goals and objectives of Ontario Parks. Significant issues described in the management plan include:

- Camping
- Hunting and Trapping
- Garbage Disposal Site (adjacent to park)
- Access to Lake Nipigon
- Natural Abandonment of Roads and Facilities
- Sensitivity of Arctic-Alpine Disjunct Plant Communities
- Fisheries in Black Sturgeon River (migration access)
- Park Boundaries
- Ridge and Swale Community (Spruce River Boat Launch)

3.3 Black Sturgeon River Park Protection Objective Summary

The protection objective for Black Sturgeon River PP is to protect a variety of natural and cultural resources that are provincially significant. These include:

- The Nipigon Moraine remnant
- Unconsolidated transverse ridges

- Lake sturgeon (*Acipenser fulvescens*) and northern brook lamprey (*Ichthyomyzon fossor*) populations, provincially Endangered and Special Concern species under the *Endangered Species Act* (2007; ESA) respectively in the Black Sturgeon River
- Blackfin cisco (*Coregonus nigripinnis*), which is a federally listed threatened species of fish under the *Species at Risk Act* (2002; SARA) that may inhabit Black Sturgeon Lake
- Smooth woodsia (*Woodsia glabella*)
- Diabase cliffs and talus slopes
- Nesting bald eagles (*Haliaeetus leucocephalus*)

The Black Sturgeon River valley also forms a valuable southern 'arm' or extension to the Lake Nipigon Basin Signature Site. It provides a natural corridor for the movement of wildlife between the Lake Nipigon Basin and the shoreline of Lake Superior that will be critical to connecting the populations of woodland caribou from Lake Nipigon to the Slate Islands.

3.4 Black Sturgeon River Park Recreation Objective Summary

Black Sturgeon River PP provides opportunities for a variety of high quality recreational uses compatible with the character of the park; the recreation objective for the park is to provide visitors with opportunities such as whitewater canoeing and kayaking, canoe tripping, interior and car camping, fishing, hunting, rock climbing, picnicking, swimming, snowshoeing, dogsledding, and cross-country skiing.

3.5 Utility Corridor Development Zones

The park management plan includes four zones that guide the resource management and development the park: nature reserve, development, access and natural environment zones (MNR, 2003). Utility corridors fall into Development Zones within the park; six (6) have been designated in Black Sturgeon River Provincial Park, including Development Zone 3 (29 ha) (Gas Pipeline) and Development Zone 4 (7 ha) (Hydro Transmission).

The Trans-Canada Pipe Lines (TCPL) Ltd., has an easement that crosses Black Sturgeon River (CL 1376) in the Township of Cockeram. The southern border of the park abuts the TCPL Easement in the Township of Lyon. Two transmission lines cross Black Sturgeon River PP near the southern border in Lyon and Nipigon Townships. These lands are administered provincially under LUP (MNR, 2003). Utility corridor development zones within the park are limited to the facilities (e.g., hydro towers, power lines, access corridors) required to maintain their respective function. The fulfilment of conditions in Sections 20 and 21 of the PPCRA are required before any work permits will be issued. Also, according to the current management plan, existing utility corridors that pass through the park will continue to be a permitted non-conforming use and are required to remain in present locations, but new utility corridors will not be permitted. As such, an amendment to the Black Sturgeon River Park Management Plan under the PPCRA (as described in Section 1.2) is required before MECP can issue work permits for the development of the Project within the park.

3.6 Project Interaction(s) with Black Sturgeon River PP

The Project ROW crosses the park for approximately 1.1 km near its southern (downstream) boundary, paralleling an existing Hydro 1 transmission line ROW (Figure 1). Approximately 0.75 km of temporary road access is required to access two (2) new transmission tower sites (B063 and B064) within the park, which are located on the west side of Black Sturgeon River.

The transmission line conductor crosses the Black Sturgeon River between structures B064 and B065; Structure B065 is located outside of the eastern park boundary (Figure 1). The total Project footprint or easement required within the park is 7.8 ha. No permanent access roads, camps or laydown sites are proposed within the park and no waterbody crossings structures are required; roads will be decommissioned following construction and vehicle access along the transmission line will be blocked at the park boundaries. Structure B064 is set back 95 m from

the Black Sturgeon River and no work will occur between the B064 structure site and the river, except limited clearing required to maintain line safety and operational standards. The crossing between structures B064 and B065 was designed with a long span of 530 m, to place structure B065 outside of the park boundary.

4.0 ENVIRONMENTAL CONSIDERATIONS FOR BLACK STURGEON RIVER PP

Table 2 and Figures 1-3 in Attachment A outline the location and characteristics of known environmental features located within or adjacent to the Project footprint within park boundaries. These are summarized as follows:

- Three (3) CLVA are located north of the transmission line ROW and one (1) CLVA is located south of the ROW. These represent coarse colluvium/white spruce areas and are not impacted by the Project footprint or activities (Figure 1, Attachment A).
- Recent CLVA analyses for Ecodistrict 3W-3 incorporate updated enhanced Forest Resource Inventory (eFRI) vegetation data and show that the Project ROW crosses four (4) CLVA on alluvial and fluvial deposits:
    - White Birch Assn,
    - Conifer Swamp/Fen/Bog,
    - Intol Hdwd-OtherCon Mixed,
    - Thicket Swamp (Figure 1, Attachment A)
- Tower B064 and a portion of temporary access are located within the Conifer Swamp/Fen/Bog on Alluvial and Fluvial Deposits CLVA. Additionally, a portion of temporary access is located within the White Birch Assn on Alluvial and Fluvial Deposits CLVA. Although avoidance is not possible, the following mitigations will be employed to minimize the impact of Project activities on these CLVAs:
    - Construction activities associated with the Project will be confined to the surveyed and marked areas.
    - 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 removal of compatible vegetation (e.g., below 2 m in height) in CLVAs will be reduced to the extent practicable.
    - Low ground pressure equipment and/or a protective layer such as frost packing, snow, ice and matting will be used to minimize ground disturbance.
- A short section of temporary access and Structure B064 are located within a 2.9 ha wetland B-WT-46 (Fen); the Project footprint impacts approximately 1.6 ha of this habitat (Table 2, Figure 1, Attachment A).
- The Project ROW overlaps wetland B-WT-47 (swamp) by approximately 0.34 ha and wetland B-WT-48 (swamp) by 0.14 ha; no project interaction occurs within these wetlands, except limited clearing, if required to maintain operational and safety standards. The conductor crosses overhead of these wetlands (Figure 1, Attachment A).
- Structure B064 falls within an identified 8.2 ha waterfowl nesting area (H01806) (Figure 3, Attachment A).
- Two (2) seasonal concentration areas for colonial nesting bird breeding habitat (polygons H00551 and H0552) totaling 192 ha occur within the park boundary near the ROW; 5.9 ha of this habitat type (3%) overlaps with the Project footprint within the park (Table 2, Figure 3, Attachment A).

- Approximately 2.9 ha of high potential bat maternity roosting habitat occurs within the project footprint in the park (Table 2, Figure 2, Attachment A).
- Approximately 7.5 ha (1.2%) of the Project footprint falls within a larger bear management area NG-01-308 that covers 612 ha inside park boundaries. Bear management areas are Crown land zones licensed annually to a tourist operator (i.e.: guide outfitter) for providing bear hunting (guiding) services to non-residents of Ontario (Table 2, Figure 2, Attachment A).
- One (1) known raptor nest (H01189) is located approximately 2 km south of the ROW and is not impacted by project activities (Figure 4).
- There are no identified water crossings within the park. Drainage culverts and/or cross-ditching may be required to control road surface run-off and will be installed as required during construction.
- The EA identified candidate hibernaculum BH019 at the western edge of the Park boundary; however, follow-up acoustic monitoring concluded that the site was not used, and therefore this site was not carried forward into SAR permitting or considered for mitigation herein (as per Project Information Gathering Form (IGF) submitted by NextBridge to MECP for Bat Hibernacula, May 24, 2019).

Table 2: Summary of Environmental Considerations in Black Sturgeon River PP

Feature ID	Environmental Feature	Figure Reference	Area Within Park (ha)	Area within Project ROW (ha)	Area within 4m Offset (ha)	New Temp Road Access (ha)
High	Bat Maternity Roost Potential	2	UNK	2.71	0.19	0.00
NG-01-308	Bear Management Area	2	612.61	7.09	0.44	0.31
H01189	Raptor Nest – Bald Eagle	3	22.14	0.00	0.00	0.00
H00551	Seasonal Concentration Area – Colonial Nesting Bird Breeding Habitat	3	97.61	3.53	0.22	0.00
H00552	Seasonal Concentration Area – Colonial Nesting Bird Breeding Habitat	3	89.34	1.99	0.12	0.00
H01806	Significant Wildlife Habitat – Waterfowl Nesting Area	3	8.22	1.92	0.12	0.00
H01807	Significant Wildlife Habitat – Waterfowl Nesting Area	3	8.70	0.00	0.00	0.00
2707	Vegetation – CLVA, Thicket Swamp	1	1.36	0.02	0.13	0
2710	Vegetation – CLVA, Intol Hdwd – Other Con Mixed	1	2.95	1.53	0.11	0
2716	Vegetation – CLVA, Conifer Swamp/Fen/Bog	1	2.77	1.53	0.10	0.01
2717	Vegetation – CLVA, White Birch Assn	1	57.89	1.28	0.10	0.01
CLVA-08	Vegetation – CLVA, White Birch-Aspen	1	0.13	0.00	0.00	0.00
CLVA-09	Vegetation – CLVA, White Spruce	1	4.34	0.00	0.00	0.00
CLVA-21	Vegetation – CLVA, White Spruce	1	3.05	0.00	0.00	0.00
B-WT-46	Wetland – Fen	1	2.86	1.60	0.09	0.42
B-WT-47	Wetland - Swamp	1	7.91	0.32	0.02	0.00
B-WT-48	Wetland - Swamp	1	N/A	0.014	0	0.00

5.0 CONSTRUCTION ACTIVITIES AND SCHEDULE IN BLACK STURGEON RIVER PP

5.1 Proposed Construction Timing

Proposed construction timing for Workfront 2 and Black Sturgeon River PP (located between structures B062 and B065) is outlined in Table 3; all work proceeds from west to east.

As per EA Condition #90 (Table 9), construction activities have been scheduled, as much as possible, to avoid or minimize potential effects on known sensitive areas and features, Restricted Activity Periods (RAP) and peak visitor periods (typically June to September) while meeting the mandated Project In-Service Date (ISD). A screening exercise was completed to compare known environmental features within park boundaries and the proposed construction schedule to RAPs (Section 5.2).

Clearing and access development is planned for late fall (November) 2019, followed by foundation installation, assembly and erection during late fall/early winter 2019/2020. Stringing is scheduled in Black Sturgeon River PP in late August 2020 and will be brief in duration, lasting approximately 1 week between towers B063 and B065 (Table 3). Reclamation/road decommissioning will occur as soon as possible after stringing is completed, and is scheduled for approximately 4 days in October 2020.

Table 3: Construction Activity Timing for Workfront 2 and Black Sturgeon River PP (B063 - B064/65)

Workfront 2: B013 to B077			Approximate Dates	
			Structure B063	Structures B064/5
Clearing	November 1, 2019	November 30, 2019	November 15, 2019	November 20, 2019
Road Building & Access	November 1, 2019	November 30, 2019	November 15, 2019	November 20, 2019
Foundations and Anchors	December 1, 2019	January 15, 2019	January 3, 2020	January 10, 2020
Assembly	January 03, 2020	February 15, 2020	February 1, 2020	February 12, 2020
Erection	February 15, 2020	April 1, 2020	March 12, 2020	March 25, 2020
Stringing	July 23, 2020	August 25, 2020	August 15, 2020	August 20,2020
Decommissioning and Reclamation	August 1, 2020	November 15, 2020	October 8, 2020	October 12, 2020

5.2 Restricted Activity Period Screening

Table 5 outlines the results of RAP screening against the proposed Project schedule for the key environmental features found within Black Sturgeon River PP (as described in Section 4).

Based on a November 2019 clearing start date, work requiring vegetation removal and ground disturbance within the park (i.e., vegetation clearing, road access development, foundation installation and tower erection) are planned for completion outside of the RAPs for migratory birds, waterfowl and bat maternity roosting (Table 4). These activities are scheduled during late fall and winter 2019 and early 2020, with the highest potential for frozen ground conditions, to minimize potential for impacts to wetlands, water quality, amphibians, vegetation and/or rare plant communities within the park. Conductor stringing between structures B063 and B065 is planned for completion in late-August 2020 which avoids RAPs for migratory birds and waterfowl, and overlaps with the high park use period by approximately one week.

The current schedule of activity within the PP avoids the RAP for amphibian breeding habitat (typically associated with wetlands or wet areas), but overlaps with amphibian hibernation period (October 1 to March 15). Pre-construction surveys of the Project footprint within the park will be conducted in conjunction with wetland surveys, to identify any potential amphibian hibernation microsites and develop appropriate mitigation (i.e.: application of a suitable avoidance buffer).

5.3 Construction Details: Access Roads

Temporary access roads within the Black Sturgeon River Provincial Park will be planned and constructed to minimize impacts to the park within topographical constraints. Approximately 750 m of new temporary road access is required within the PP, as outlined in Table 4 and Figures 1-4. The distance of new temporary road required between B063 and B064 is approximately 580 m, with 220 m being within a wetland (B-WT-46) and 360 m located outside the wetland boundary.

Table 4: Type and Length of Road Access required in Black Sturgeon River PP

Road Type	Definition	Length within PP (km)
AE1, AE2	Existing roads - no improvements required	0.00
AU1, AU2	Existing roads – improvements required	0.00
AN	New temporary roads to connect with existing roads along the ROW	0.75
	Total Road Length:	**0.75**

Access to Structure B063

Structure B-is located on an exposed ridge with very steep topography to the east and west; bedrock is very close to the surface and therefore limited soil management (stripping) and some blasting is required to establish construction access. Road grades near Structure B063 have been increased to reduce the total footprint of road development within the park. Blasting is required to establish access approximately 175 m to the west and 110 m to the east of Structure B063. Limited blasting will also be required at the footprint of Structure B063 to level the work site for tower erection.

Project requirements for conducting blasting operations are detailed in the Blast Management Plan of the CEPP (Section 8.3 and Appendix L) (Golder 2018a). All blasting activities will be conducted in accordance with the Ministry of Labour's *Occupational Health and Safety Act (1990)*. Blasting plans will be developed by a qualified professional, with blast patterns designed to restrict or limit the total ground disturbance to only the area required for access and construction. Blasting delays (staggered detonation) and blast mats will be used to control noise and reduce fly rock associated with blasting activities, and the potential for impacts outside of the ROW corridor (see Blast Management Plan, Project CEPP (NextBridge, 2019)).

Identified blasting areas will be stripped of all overburden, snow or soil to expose the rock. The driller will mark a drill pattern and load the drilled holes in a manner designed to minimize fly rock, reduce sound levels, prevent over blasting and produce usable blast rock for road construction. All blasting material packaging will be disposed outside the park and according to regulatory requirements and best management practices.

Warning signage, notification(s) and standard blasting warning signals will be used to ensure safe blasting operations for the public. There is low potential for impacts to park users associated with blasting, due to proposed timing of access development, which will occur in November 2019, outside of peak park use periods of June to September.

Blasting magazines will be located and managed as per stipulations outlined in the *Explosives Act* (1985), and no magazines will be located within park boundaries. A federal Magazine Licence will be acquired for each magazine on the Project; associated permit requirements for security, access and inventory control shall be met.

To decommission blasting areas, blast material will be pulled back to re-contour the slopes. Stockpiled overburden will be spread on top of the blast rock; however, this material maybe limited as soils are anticipated to be shallow over the bedrock areas. The area will be seeded with an MECP approved and certified seed mix to encourage a cover crop; however, re-vegetation success may be limited due to the substrate. Post construction reclamation assessments will be conducted to assess the status of decommissioning efforts. Consultation with MECP may be required to ensure decommissioning meets expectations.

Access to Structure B064

Structure B064 is located within wetland B-WT-46 (fen) (Figure 1) which will require construction of overland access in November, 2019. Depending on the weather (frozen or non-frozen conditions), type of soils and

associated load bearing capacity, the most appropriate overland construction method, as described below, will be implemented.

Wetland crossing methods will be selected following pre-construction field reconnaissance, in consideration of the primary goal of minimizing impacts within park boundaries, and facilitating future reclamation/decommissioning of the road. The aggregate used for fill will be clean and obtained from an approved source.

The 3 construction options to build access roads over wetland habitat within Black Sturgeon River PP include:

1. **Mat Access Construction:**
    - Mat access will be selected for equipment access during non-frozen conditions to prevent rutting and admixing of the wet soils and damage to vegetation; matting maintains the vegetative mat and root system, which allows for fast natural regeneration of vegetation once removed.
    - Interlocking wooden mats (8' x 14' x 5 ¼ ") are installed double wide to provide a flat stable surface which ensures weight distribution and connectivity. If required, geotextile is placed between the ground and mats. Mat access roads must be able to support all construction equipment up to 65000 kg.
    - Stripping of the overburden will be avoided in wetlands as much as possible.
    - If stump heights interfere with the placement of the mats, then stumps will be cut flat at or near ground level or inverted and pushed into the ground.
2. **Overland Construction:**
    - A layer of double wide geotextile is placed directly on the ground with a 1 m overlap, and should be staked down to prevent movement; care will be taken to avoid tearing or puncturing the fabric. Stripping of the overburden is avoided in wetlands as much as possible.
    - Clean aggregate fill is placed to a depth (typically 30 cm) that is adequate to support construction equipment up to 65000 kg.
    - If stump heights interfere with the placement of the geo fabric, they will be cut at or near ground level to allow temporary road construction.
3. **Corduroy Construction:**
    - A layer of double wide geotextile is placed directly on the ground with a 1 m overlap, and should be staked down to prevent movement; care will be taken to avoid tearing or puncturing the fabric. Stripping of the overburden is avoided in wetlands as much as possible.
    - Corduroy logs will be placed over the geotextile in an alternating butt and top orientation to eliminate voids. Brush mats may be used in place of logs. Site conditions (soil saturation, frozen or thawed ground) will determine the depth of corduroy required.
    - If stump heights interfere with placement of the corduroy, then stumps will be cut flat at or near ground level or inverted and pushed into the ground.
    - Clean imported aggregate will be placed on top of the corduroy; fill is placed to a depth (typically 30 cm) that is enough to support the construction equipment up to 65000 kg.
    - The 'corduroy reporting form' will be completed.

Road maintenance work will take place throughout clearing and construction. Geotechnical, Foundation, and Assembly/Erection crews are scheduled from November 2019 to mid-March 2020. The road network within the

PP will remain open until completion of stringing activities in August 2020. During this time, ongoing inspection and maintenance of the road network and erosion and sediment control (ESC) devices will be completed, as required. Activities may include grading, surfacing, ditch clean up, brushing, ESC or drainage management. The access network will be kept open for the efficient flow of workers and equipment to complete the Project on schedule. Access will be restricted at the park boundaries following reclamation.

Table 5: Construction Timing and Restricted Activity Period Screening for Key Environmental Features in BSRPP

Identified Feature, Habitat, or Species	Timing Restrictions	Recommended Mitigation	Timing Conflict (Y/N) and Mitigation
Migratory birds	Migratory bird nesting period: **April 15 to August 31**[(a)]	Avoid clearing activities during the migratory bird nesting period; recommended setbacks from nesting sites varies from 20 m to 300 m depending on the species	N - No clearing anticipated during RAP for birds
Water bodies[(b)]	**September 1 to June 20** (fall and spring spawning; and. **September 1 to July 15** (fall and spring extended spawning).	Avoid construction activities below the high-water mark (e.g., clearing vegetation, installing or removing equipment crossing structures or fill) during the restricted activity timing window	N – No new waterbody crossings within park boundaries
SWH – Bat maternity roost habitat	May 15 to August 31* *Recent discussions with MECP regarding timing restrictions for SAR, defined the appropriate bat maternity roosting (low tolerance) period as May 15 to August 31 for the Project (see Project Information Gathering Form (IGF) submitted to MECP for bat maternity roosting, May 24, 2019).	Avoid clearing activities during the maternity roosting period,	N - No clearing anticipated during RAP.
SWH – Bat Hibernacula	October 1 to April 1	Avoid clearing activities within a minimum of 400 m from a known bat hibernaculum entrance. Setbacks for each hibernaculum known to be occupied must be determined in consultation with MECP on a case by case basis. Conduct pre-construction surveys in suitable habitat affected by the Project to determine whether candidate hibernacula are occupied	N – acoustic monitoring confirmed candidate site BH019 is inactive (Golder, 2018a).
SWH – Sharp-tailed grouse's lek	General mating season: **March to June**	Recommended setbacks from lek is 200 m all year round	N - No known grouse leks.
SWH – Raptor nesting sites	Nesting period: March 5 to August 31 ■ Bald eagle: March 5 to August 31 ■ Osprey: April 1 to August 15 ■ Northern goshawk: March to June ■ Cooper's Hawk: March to July ■ Sharp-shinned Hawk: April to July ■ Red-shouldered Hawk: March to July	Recommended setbacks from a raptor nesting site varies from 50 m to 800 m depending on the species	No known raptor nesting sites within 2 km of construction.
SWH – Amphibian breeding habitat	Breeding period: March 15 to June 7 Hibernation Period: October 1 to March 15	Recommended setbacks from breeding sites varies from 30 m to 120 m depending on the type of habitat and species	Y – pre-construction amphibian surveys, mitigation and/or monitoring will be employed as required.
SWH – Moose aquatic feeding areas	Aquatic feeding period: May 1 to June 30	Avoid clearing activities within 120 m from a known aquatic feeding area	N – no known Moose Aquatic Feeding Areas (MAFA)

Identified Feature, Habitat, or Species	Timing Restrictions	Recommended Mitigation	Timing Conflict (Y/N) and Mitigation
SWH – Denning site	Denning period varies per species.	Recommended setbacks from denning sites varies from 20 m to 300 m depending on the species	N – no known den sites; pre-construction wildlife surveys and mitigation as required.
Research Plots	N/A	Setback distances of 0 m, 50 m, 75 m, 78 m, 120 m, 150 m and 1,000 m and protection levels 1 (highest level of protection) to 5 (lowest level of protection).	N – no known Research Plots

5.4 Clearing Plan

Table 6 and Figure 4 describe the proposed clearing methods and associated areas within Black Sturgeon River PP, which total approximately 7.09 ha, including 5.51 ha of merchantable timber and 1.22 ha of non-merchantable (including retention areas). Clearing methods will be consistent with the commitments outlined in the Amended Environmental Assessment (EA) Report (Golder, 2018a).

To determine clearing categories, a GIS/Lidar analysis was completed to define areas as containing merchantable or non-merchantable timber values. Non-Productive areas have no vegetation to remove, such as previously disturbed sites (e.g., existing roads) or grass dominated wetlands. Retention areas are located within the ROW boundaries and represent locations where vegetation is not considered a hazard to the transmission line or in direct conflict with access roads or structure sites. Retention includes low, slow growing (< 2 m height, or < 3 m mature height) vegetation, and is also referred to as 'compatible' (e.g., compatible with the operational standards for transmission lines).

No clearing occurs in retention areas, which are comprised of low and slow growing vegetation (< 2 m height, or < 3 m mature height), also referred to as 'compatible' vegetation (e.g., compatible with the operational standards for transmission lines). The practice of 'stubbing' or leaving stumps of mature or larger diameter timber will be completed in areas where mechanical clearing occurs to retain wildlife tree values, in accordance with the Hazard Trees and Ecological Integrity Best Management Practices Primer (V2.1) (Ontario Parks, 2018).

Table 6: Clearing Metrics for Black Sturgeon River Provincial Park

Clearing Method	Total Area	Total Area	
Hand fall	2.31	Merchantable	5.51
Mechanical	3.20	Non-Merchantable	1.22
Non-Productive	0.36	Non-Treed	0.36
Retention	1.22	**Total**	**7.09**

6.0 ENVIRONMENTAL PROTECTION AND MITIGATION

The following sections describe site-specific mitigation for features that are not avoided/mitigated through application of RAPs (Table 4, Section 5.2) and how we plan to mitigate.

6.1 Pre-Construction Field Reconnaissance Approach

To protect known or discovered environmentally sensitive features and/or SWH at the site level, pre-construction environmental surveys will be completed by qualified Resource Specialists in advance of clearing or construction operations to identify and/or confirm sensitive features and guide the development and implementation of appropriate site-specific mitigation and monitoring protocols to be developed, as required, in consultation with MECP. Pre-construction environmental surveys shall focus on, but not be limited to:

- Wetlands
- Rare plants
- Migratory birds/nesting areas
- Waterfowl nesting areas
- Known and potential bat maternity roosting habitat

- Fish and Fish Habitat (for undocumented stream crossings, or to fill information gaps)
- Other SWH Features – amphibian breeding, reptiles, den sites, etc.

Where previously undocumented SWH or species are identified, these will be reported to the Valard Environment Lead to initiate avoidance and/or site-specific mitigation planning (if not addressed herein) and associated communications with the Owner, Construction Management and MECP. The Biologist/Resource Specialist will provide input on appropriate mitigation, work methods, travel routes and recommended buffer zones. In addition:

- Critical habitats and 'No-go' zones will be identified on site plans and environmental alignment sheets;
- Contingency plans, as outlined in the Project CEPP (NextBridge, 2019) shall be implemented, as appropriate;
- Access or structures may be adjusted away from previously unidentified or microhabitat features, streams or wetlands, if feasible;
- Work crews will be oriented and aware of work activity restrictions associated with SWH;
- 'No-go' zones will be clearly flagged in the field and monitored during construction to ensure work activities avoid identified habitat or features;
- Construction activities may be re-scheduled to avoid RAPs or additional mitigation measures, including construction monitoring, may be required to allow construction to proceed under certain conditions.
- Approved mitigation measures, such as relocation of the species/feature (if feasible), may be implemented proactively if complete avoidance or work outside of the RAP or recommended buffer zone is not possible.

Throughout construction, Valard's EMS process shall be implemented, which aims to:

- Identify and document critical or sensitive habitats, species or features (known or discovered during pre-construction surveys);
- Screen against construction work plans (based on the 3 week look ahead schedule);
- Identify potential work or timing conflicts;
- Schedule or re-schedule work according to site conditions and/or timing windows;
- Consult with MECP on proposed mitigation, monitor work and implement additional mitigation as required.
- Document and report to MECP results of any additional mitigation and/or monitoring programs.

6.2 Mitigation for Wetlands

Table 7 outlines ways in which project activities may impact wetlands. The highest potential for negative effects to wetlands is associated with activities that involve vegetation removal and ground disturbance during non-frozen ground conditions (in the spring, summer and early fall).

Clearing and access development within Black Sturgeon River PP will occur in late fall 2019, when, depending on annual weather patterns, frozen ground conditions are possible. Foundation installation occurs in the winter and will likely coincide with frozen conditions, which will reduce the potential for impacts to wetland habitat.

Stringing operations and reclamation/access decommissioning are planned during non-frozen ground conditions; however, the risk of damage associated with these activities will be minimized by following Project environmental requirements and implementing standard best management practices during work. The completion of environmental pre-construction surveys prior to stringing and reclamation operations, and monitoring of work occurring in non-frozen wetland habitat(s), will reduce the potential for Project-related impacts.

Permanent effects to wetlands may occur where towers are located within mapped wetland boundaries. Temporary effects to wetlands may be associated with all project activities that overlap with wetlands outside of

the frozen/winter period. Puller and/or tensioner sites will be located outside of park boundaries and will not be located on wetlands.

Except where permanent infrastructure is placed within wetland boundaries, all effects to wetlands are expected to be short term in duration, and reversible following decommissioning of roads and reclamation of the Project ROW. Post-construction wetland monitoring will be completed to assess impacts to wetlands and the effectiveness of mitigation measures. Remediation will be prescribed where wetland function has been compromised.

Table 7: Potential Interactions with Wetlands by Project Phase

Project Phase	Duration	Potential Interaction
Construction (Clearing, Access, Foundations, Erection)	November 2019 to February 2020	• Alteration of hydrology or water quality • Compaction or damage/alteration of vegetation • Impacts associated with malfunctions / accidents of equipment • Introduction of invasive species
Stringing	July-August 2020	• Limited potential interaction, assess during pre-construction surveys.
Decommissioning/ Reclamation	August – November 2020	• Sedimentation and erosion from site reclamation activities • Spills or mobile equipment releases
Operations and Maintenance	after 2022 ISD	• Spills or mobile equipment releases.

6.3 Clearing and Vegetation Management

Recent analyses and updates to the provincial eFRI data (MECP 2019) include CLVAs that were not previously identified within the Project footprint (as shown in Figure 1, Attachment A). As outlined in Section 4, the Project ROW crosses 4 different CLVA on alluvial and fluvial deposits:

- White Birch Assn,
- Conifer Swamp/Fen/Bog,
- Intol Hdwd - Other Con Mixed,
- Thicket Swamp

Tower B064 is located within Conifer/Swamp/Fen/Bog on Alluvial & Fluvial Deposits. The ROW and part of the temporary road for construction also crosses this CLVA. Although avoidance is not possible, the following mitigations will be employed to minimize the impact of Project activities on these CLVAs:

- Construction activities associated with the Project will be confined to the surveyed and marked areas.
- 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 removal of compatible vegetation (e.g., below 2 m in height) in CLVAs will be reduced to the extent practicable.
- Low ground pressure equipment and/or a protective layer such as frost packing, snow, ice and matting will be used to minimize ground disturbance.

No water bodies are crossed within Black Sturgeon River PP boundaries; stringing operations shall be planned and conducted to avoid any contact with the bed or banks of the Black Sturgeon River. Vegetation clearing within the park shall follow the following Best Management Practices and procedures outlined in the Project CEPP (NextBridge, 2019), Workfront 2 DPP, and Hazard Trees and Ecological Best Management Practices Primer (V2.1) (Ontario Parks, 2018). Hand falling will be implemented around Structure B-063 on steep terrain.

Vegetation clearing within 30 m of the Black Sturgeon River will be limited to what is necessary for construction safety and NERC operations standards; mechanical clearing is preferred and will be implemented if supported by site conditions (i.e., frozen ground conditions and appropriate soils).

- Compatible vegetation (e.g., conifers below 2 m in height and low growing shrub species) will be retained to minimize visual evidence of disturbance from activities;
- Stubbing of mature or larger diameter trees will be completed as possible to maintain wildlife values;
- Large vegetation debris shall be removed from the site if mechanical clearing is possible; smaller vegetation debris or slash will be left as coarse woody debris to decompose on site. If hand falling is required within the 30-m setback of Black Sturgeon River, all coarse woody debris will be left in place on site.
- Clearing within the wetland area(s) will be completed using low ground pressure equipment to reduce compaction and facilitate natural recovery.

As per EA Commitment 131, the following additional mitigation measures will be in place for construction and reclamation activities in PP:

- Construction equipment, including rig mats, will arrive on the Project Site clean (i.e., free of soil and vegetative debris) and be inspected by an Environmental Monitor before entering the park (as per guidance provided in the *Clean Equipment Protocol for Industry* (Halloran *et. al*, 2013).
- Grubbing and stripping will be limited to the transmission structure locations (tower and crane pad sites) and temporary access roads.
- Areas prone to erosion will be seeded with an MECP approved, certified seed mix/native cover crop (e.g., cereal crop) as soon as feasible after construction;
- Conifers will be planted as required at any Project-related disturbance off the transmission line ROW in consultation with MECP.
- Herbicides will not be used during construction or post-completion maintenance. Also, herbicides will not be used within 60 meters of any protected areas near the park boundary.

6.4 Erosion and Sediment Control for Construction Activities

Standard or site-specific erosion control measures will be implemented for all work within the park, as required. This may include but is not limited to the following:

- **Preservation of existing vegetation-** retain compatible (low-growing) vegetation at erosion-prone sites where practical. Limit clearing to the minimal area required to complete the proposed work(s);
- **Just-in-Time Grading –** grade only in areas needed for immediate construction activities. This will leave the existing ground cover in place for as long as possible, minimizing the time that soil is exposed to potential erosion; seeding or mulching should be done ASAP once the work is completed to re-establish ground cover;

- **Shut Down Considerations –** inspect and maintain erosion and sediment control during shut down periods related to seasonal stoppages, weather-related delays or other issues. Stabilize erosion prone sites prior to planned shut-downs to prevent sediment mobilization
- **Slope Treatments –** surface roughening is a slope treatment in which depressions or grooves are provided on slopes to help trap seed, reduce runoff velocity and increase infiltration;
- **Seeding –** carried out to stabilize disturbed areas and to establish a temporary cover. Seeding may be either a temporary or permanent practice;
- **Erosion Control Blankets –** typically used on short, steep slopes where there is a high erosion potential and slow vegetation establishment. They typically consist of degradable netting enclosed straw, wood fibre or coconut fibre.
- **Grass lined swales –** shaped sloped depressions constructed to convey run-off. The drainage area should be 2 ha or less and a grade of 1-5%;
- **Buffer strips –** used around construction site perimeters, above steep slopes and around protected/sensitive areas. Often accompanies silt fencing;
- **Silt fences –** used for controlling sedimentation from sheet and/or rill erosion on relatively short slopes; should not be used where the flow exceeds 0.03 m^3/s and should not be used to accommodate a drainage area of more than 0.1 ha per 30 m of fencing; and
- **Check dams –** temporary or permanent berms used to divert channel runoff to a desired location (not a watercourse or wetland). They should be limited to drainage areas of less than 1 ha and channel slopes of less than 10%.
- **Sediment traps –** temporary sediment containment installations constructed by excavating and/or embanking an area and diverting sediment laden run-off to said area. Outlets must be stabilized and sediment should be removed when it reaches half the design depth of the trap. Drainage area should be less than 2 ha and storage volumes should be at least 25 m^3/ha; berms should not be more than 1.5 m high with a minimum top width of 1.5 m and slopes no steeper than 3:1;
- **Inlet protection measures –** considered the last line of defense; installation consists of a permeable barrier installed around an inlet to reduce sediment content in the water before it enters the inlet; and
- **Dewatering –** happens most often when dealing with water during a diversion event; which may be associated with culvert installations, etc.

7.0 DECOMMISSIONING ACTIVITIES AND SCHEDULE

Reclamation will commence after stringing activities and commissioning (QA/QC). Complete reclamation and decommissioning of the roads within the park is planned for October 2020, and is anticipated to be completed within one week (Table 3). All temporary access roads will be decommissioned.

Reclamation crews will re-contour structure sites to ensure positive drainage. Any berms over 1 m and steep excavated slopes will be re-sloped to a stable angle of repose. Reclamation crews will inspect the ROW and ensure construction waste has been cleaned up and removed from the park. All imported gravel for overland roads within identified wetlands will be removed and taken to appropriate disposal sites. Geotextile fabric and corduroy material will also be removed. All construction materials will be removed from of the park. All access roads will be fully restored and re-contoured to pre-construction profiles/grade.

Decommissioning of temporary access roads in wetlands follows the reverse process outlined in Section 5.3. Natural re-vegetation is the preferred method of re-vegetation for wetlands, but any exposed/erodible upland areas will be seeded with an MECP-approved, certified native seed mix to encourage natural site recovery.

- Areas prone to erosion will be seeded with an MECP approved, certified seed mix/native cover crop (e.g., cereal crop) as soon as feasible after construction;
- Conifers will be planted as required at any Project-related disturbance off the transmission line ROW in consultation with MECP.

On federal land, provincial Crown land or municipal land, natural regeneration will be undertaken; noting that this is the preferred method of reclamation where erosion is not expected. Erosion prone areas within the Provincial Parks and/or Conservation Reserves, will be seeded with a native cover crop (e.g., cereal crop) or certified seed mix approved by the applicable regulatory agency as soon as feasible after construction.

7.1 Environmental Considerations for Decommissioning

Environmental features within or adjacent to the Project footprint in Black Sturgeon River PP and associated RAPs were described in Section 5; mitigation is described in Section 6. Based on the proposed decommissioning timing (October 2020), the following features may require special consideration (assessment, mitigation planning and/or environmental monitoring) before and during reclamation work:

- **Wetlands –** reclamation and decommissioning is scheduled during non-frozen conditions, but outside of RAPs for birds; mitigation may require the use (and subsequent removal) of access mats to support equipment completing reclamation work within the PP. Mats will be pulled out behind the work as individual areas are reclaimed.
- **Public Access Restriction –** access restriction features (rock, or earth berms) will be placed to block public access at eastern and western park boundaries to prevent use of the ROW corridor by vehicles or ATVs.
- **Signage** indicating public access restriction will be installed at park boundaries on the ROW, with wording approved by the Park Superintendent.

8.0 OPERATIONS ACTIVITIES AND SCHEDULE

Two transmission towers (B063 and B064) will remain within park boundaries following construction. Routine operations and maintenance activities will include tower, insulator and conductor inspections and maintenance as well as manual vegetation maintenance, as required to meet operational safety standards. During operations and maintenance activities, the following general procedures apply to all ROW access (refer to Section 1.4 of the Project Overarching DPP (NextBridge, 2019a) for additional information):

- Inspections will be performed via truck, all-terrain vehicle, foot, helicopter, unmanned aerial vehicle, or snowmobile, as appropriate, depending on available access.
- Herbicides will not be used to control vegetation in or within 60 m of the protected area boundary during operations and vegetation maintenance activities; manual clearing is required within the protected area boundaries;
- Where needed, ground access will be conducted with one pick-up truck or all-terrain vehicle using the ROW and existing access roads only. Ground access patrols will likely be conducted by a single person. Personnel will drive on the ROW where terrain permits; however, a dedicated road that follows a direct path from structure to structure in the ROW will not be built, used or maintained during operations.

- Operations personnel will access the ROW using permanent access roads intersecting the ROW. Once on the ROW, personnel will traverse along the ROW using the appropriate vehicle in compliance with required permits or authorizations. It is expected that there will be sufficient access on the ROW to traverse using an all-terrain vehicle, Argo, pickup truck or snowmobile, where terrain allows.
- Personnel may use existing water body crossings where they exist on access roads; however, new permanent crossing structures are not expected to be built for the sole purpose of operations. Therefore, personnel will travel down the ROW until a water body with no crossing structure is encountered, and then turn around and return to the access road used to enter the ROW.
- If operations personnel determine that an additional water body crossing will be necessary, this will be discussed with the appropriate regulatory authority and required permits or authorizations will be obtained prior to proceeding with the work.
- Operations personnel will not ford water bodies without a permit. If the need for a ford is identified and approved by the appropriate regulatory agency, it will occur if an existing crossing at another location is not available or practicable to use, and in accordance with the conditions of the regulatory approval.
- If there is a maintenance or emergency response activity that requires additional access or additional permitting requirements NextBridge will identify these requirements and consult with the appropriate regulatory authorities, as required. If necessary, NextBridge will coordinate or obtain permission for access from property owners for the use of gates, bridges, and roads.

Access to specific structure sites (B063 and B064) in Black Sturgeon River PP for maintenance and operations activities will likely be by helicopter or by foot from the edge of the park boundaries; approval and/or Work Permits from MECP will be obtained to conduct routine infrastructure or vegetation maintenance activities within the park boundaries and NextBridge will apply for these in advance of proposed activities.

Details on schedule, methods, mitigation and BMPs for routine transmission line and vegetation maintenance activities are outlined in the Operational Environmental Management Plan (OEMP, Golder 2018b and Overarching DPP (NextBridge, 2019a) for the Project.

8.1 Environmental Considerations for Operations

Routine maintenance activities shall be planned and conducted in consideration of known environmental features and timing restrictions (as outlined in Sections 4 and 5), and in consideration of the park's peak operating season(s), typically June – September.

8.2 Permitting Approach and schedule

For Project development within protected areas, all easements and WP are processed by the MECP under the PPCRA. As outlined in Sections 1.2 and 3.5, a park management plan amendment is required in to issue permits for development of Project infrastructure within PP boundaries. This process was triggered by regulatory approval of the Amended EA submission in March 2019, and is currently in progress by MECP. Permits required from MECP for Project activities within Black Sturgeon River PP (Table 8) include:

- **LUP –** required for the transmission line ROW easement
- **WPs –** required for temporary access roads, watercourse crossings a WP is required for installation or repair, and for removal/decommissioning
- **Research Authorization Letter –** for fish salvage or preconstruction surveys (amphibian re-location, etc.)

- **Species at Risk -** Overall Benefit Permit or Letter of Authorization for SAR habitat present (i.e.: bat maternity roost habitat)
- **Forest Resource License -** (includes License to Haul and Scaling Agreement)

Table 8: Required Permits, Authorizations and Timing for Black Sturgeon River PP

Permit or Authorization	Issuing Authority	Proposed Submission Timing	Review Period	Date Required to support Project Construction Schedule
Management Plan Amendment (PPCRA)	MECP under the PPCRA	In Progress by MECP	Unknown	August 15, 2019
LUP – ROW Easement	MECP	September 15, 2019	30 days, concurrent with DPP review	October 31, 2019
WP – Temporary Roads	MECP	September 15, 2019	30 days, concurrent with DPP review	October 31, 2019
Research Permit for Pre-Construction Surveys	MECP	August 15, 2019	30 days, concurrent with DPP review	October 31, 2019
Species at Risk Permit Process	MECP	August 15, 2019	Min 30 days - IGF Min 30 days - AAF Min 90 days - OBP	October 31, 2019

*Note: Date Required is based on current TILOs and is subject to change pending regulatory approval.

8.3 EA Commitments

Commitments associated with PP and CR outlined in the Amended Environmental Assessment are summarized in Table 9. It should be noted that many of the instances where MNRF is identified as the regulator, it is now MECP.

Table 9: EA Commitments Related to Protected Areas

EA Commitment #	Commitment
14	The Owner will provide at least 45 days advanced notice of construction activities to recreational users through formal notification in local newspapers and at protected parks and campsites locations (e.g., park entrances).
20	Work Permits and Land Use Permits will be obtained from MNRF within provincial parks as applicable.
36	The Owner will actively consult with the MNRF, MECP, and other relevant stakeholders on proposed measures to minimize interruption of recreational use and access restrictions to protected areas.
37	Clearly mark the boundaries of protected areas along the right-of-way (ROW).
73	The Owner will work with the Ontario Parks to plan construction around the peak park season, from June to September, where the Project Site is located within a provincial park.
76	No blasting near provincial parks on weekends and holidays beginning May Long weekend and ending Labour Day weekend, inclusive.
79	Implement the following mitigation measures for canoe routes and portages: • vegetation clearing within a minimum of 90 m around Category A canoe routes (i.e., Pukaskwa River canoe route, White River canoe route and Pukaskwa 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 2m in height) around a portage where practicable to meet regulatory requirements; • maintain visibility of portage on either 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; and • no disturbance of portages outside of the Project Site and access roads will be permitted."
90	Construction activities will be staged in protected areas to avoid or minimize potential effects on ecologically sensitive areas, life cycle periods, and peak visitor periods, when construction schedule allows. Mitigation will be applied to reduce negative effects on protected areas.
99	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; • 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 plant, wetland, water body, SWH) and associated setbacks as shown on the Environmental Alignment Sheets and the Access and Construction Environmental Maps. • 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 General Contractor (Valard). • The Owner will follow weed control and management measures outlined in the Weed Management Plan (refer to Section 8.4 of the CEPP)
EA Commitment #	**Commitment**
130	Reduce unauthorized users and access to protected areas by installing signage and other appropriate barriers on access roads where permissible by MNRF/MECP.
131	Implement the following mitigation measures when construction is required in provincial parks: • 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 transmission 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. • the use of herbicides during construction is prohibited.
283	Water body crossings will be designed and constructed in compliance with LRCA, DFO and/or MNRF regulatory permits and approvals, 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), • *Provincial Parks and Conservation Reserves Act* (PPCRA) (administered by MNRF for water body crossings within provincial parks and conservation reserves), • the *Fisheries Act* and *Species at Risk Act* (administered by DFO), and • O. Reg. 180/06 for the Development, Interference with Wetlands and Alterations to Shorelines and Watercourses under the *Conservation Authorities Act* (Government of Ontario 1990a; administered by LRCA for water body crossings in LRCA jurisdiction).
1029	NextBridge commits to providing a DPP for each construction workfront and each provincial park and conservation reserve where construction will occur. Per the tables of contents agreed upon with the MECP and MNRF, the DPPs will include, but not be limited to, the following information: • the pre-construction field reconnaissance approach; • detailed construction schedule and design information; • approaches to protecting environmental values; • training and employment opportunities for Indigenous communities; and • Traditional Ecological Knowledge (TEK)/Traditional Land and Resource Use (TLRU) protocol. The DPPs will be submitted to the MECP and MNRF for review prior to the submission of MNRF permit applications.
1038	NextBridge commits to install the structure at this location (the Kama Cliffs Conservation Reserve) via helicopter and to remove the access road overlapping the Mazukama Falls area from the Project footprint.
1052	Where there are no reasonable alternatives to avoid the CLVA in Gravel River Conservation Reserve, NextBridge will use low-pressure tread equipment and rig mats, and other mitigation measures agreed upon with the MNRF

9.0 REFERENCES AND BIBLIOGRAPHY

Endangered Species Act. 2007. [Accessed May 15, 2019]. https://www.ontario.ca/laws/statute/07e06

Golder, 2018a Amended Environmental Assessment Report for the East-West Tie Transmission Project. Consultant's report prepared for NextBridge Infrastructure LP. September 2018.

Golder, 2018b Operational Environmental Management Plan for the East-West Tie Transmission Project. Consultant's report prepared for NextBridge Infrastructure LP. June 2018.

Government of Canada. 1985. Explosives Act. [Accessed July 15, 2019]. https://laws-lois.justice.gc.ca/eng/acts/E-17/

Government of Ontario Provincial Parks and Conservation Reserves Act S.O. 2006, c. 12 https://www.ontario.ca/laws/statute/06p12

Government of Ontario Public Lands Act. R.S. 1990. C. P43 [Accessed May 15, 2019]. https://www.ontario.ca/laws/statute/90p43

Halloran, Joe, Anderson, Hayley and Tassie, Danielle. 2013. Clean Equipment Protocol for Industry. Peterborough Stewardship Council and Ontario Invasive Plant Council. Peterborough, ON.

MNR. (Ontario Ministry of Natural Resources). 2003. Black Sturgeon River Provincial Park Management Plan (Accessed July 20, 2019): https://www.ontario.ca/page/black-sturgeon-river-provincial-park-management-plan

MNR. 1999 Ontario's Living Legacy Land Use Strategy (Lands for Life). (Accessed July 20, 2019): https://www.ontario.ca/page/mnr-provincial-parks-and-conservation-reserves-under-living-legacy-strategy-mnr-65

NextBridge Infrastructure LP (2019) Construction Environmental Protection Plan (CEPP) for the East-West Tie Transmission Project. July 2019.

NextBridge Infrastructure LP (2019a) Detail Project Plan (Overarching DPP) for the East West Tie Transmission Project. June 2019.

NextBridge Infrastructure LP (2019b) Project Information Gathering Form (IGF) submitted by NextBridge to MECP for Bat Hibernacula, May 24, 2019.

NextBridge Infrastructure LP (2017) East-West Tie Transmission Project Environmental Assessment Report. http://www.nextbridge.ca/project_info/Archived-Documents.aspx

Ontario Parks (2004) Lake Nipigon Basin Signature Site. Ecological Land Use and Resource Management Strategy. Queen's Printer for Ontario. 423p.

Ontario Parks (2018) the Hazard Trees and Ecological Integrity Best Management Practices Primer (V2.1) (Ontario Parks, 2018).

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