



9. ENVIRONMENTAL EFFECTS OF THE PROJECT

A summary of attributes, composition and function defined in Table 5, Table 6 and Table 7 that contribute to the persistence of provincially significant and/or significant natural features, may be sensitive to development and serve as a good indicators of negative environmental effects are described below in Table 8. This summary provides key components of natural feature attributes, composition and function which will be brought forward and evaluated as part of the impact analysis.

The evaluation of potential impacts, mitigation measures and residual effects are discussed in Table 9. In Table 9, natural features are grouped together with respect to the types of activities that are taking place within the feature itself or within the 120m setback. In many cases, activities listed in Table 9 overlap (e.g., clearing and equipment lay-down). Where activities overlap, the first activity in the project construction sequence or which has the broadest impact is evaluated in Table 9.



Table 8: A Summary of Key Features and Attributes That May Serve as Indicators of Negative Environmental Effects

Natural Feature	Representative Indicator Species	Features/Attributes Necessary for Persistence (Physical and Functional)	Features Potentially Sensitive to Development	Good Indicator Features/Species
ANSI-Life Science				
Lavender Falls Life Science ANSI	Evaluated with Woodland A			
Woodlands				
Woodlands A, B, H, Q, S, T, W, Y, Z, AH, AJ, AL, AN, AP, AQ, AS, AT, AU, AV, AW, AZ, BA, BB, BE, BG, BH, BL, BP, BS BT, BV, CB, and CL	Native woodland flora	Physical: occurrence of large contiguous forest unit with low disturbance Functional: provides interior habitat, is adjacent to other significant wildlife habitat, provides habitat for woodland species	Vegetation along the edge of feature, interior habitat, woodland species richness	<ul style="list-style-type: none"> Vegetation along the edge of feature Persistence/dominance of native tree species
Wetlands				
Wetlands 1, 2, 5-10, 12, 13, 15, 16-24, 26-42, 45-48, 51-61, 64-75, 81, 82, 85-87, 88-95, 97, and 99-104	Amphibians, Wetland breeding birds, Native wetland flora	Physical: adjacent wetlands, overland flow, localized water retention, water quality, vegetation, vegetation cover Functional: connection with other natural features, species richness, wildlife habitat diversity	Water quality (riverine wetlands), vegetation along the edge of feature, species richness, wildlife habitat diversity	<ul style="list-style-type: none"> Water quality of riverine systems/breeding ponds within 15 m of project components Vegetation along the edge of feature Species richness (amphibians, colonial nesting birds,



Natural Feature	Representative Indicator Species	Features/Attributes Necessary for Persistence (Physical and Functional)	Features Potentially Sensitive to Development	Good Indicator Features/Species
				waterfowl)
Seasonal Concentration Areas				
Colonial Bird Nesting Habitat (Heron) CNH6, CNH7, and CNH12	Great Blue Heron Black-crowned Night Heron Great Egret Green Heron	Physical: occurrence of live or dead standing trees in wetlands, lakes, islands, and on peninsulas; trees of heights greater than 11-15m that can support nests Functional: nesting habitat	Nesting habitat for colonial birds	<ul style="list-style-type: none"> Species abundance and richness
Bat Maternal Roost Colony BMA 1-2, BMA 4 Includes Potential Habitat for Little Brown Bat and Northern Long-eared Bat	Northern Long-eared Bat Big Brown Bat Little Brown Bat	Physical: mature forests consisting of Maple, Oak, Poplar and White Pine with abundant tree cavities and snags Functional: foraging and cover habitats	Maternal roost habitat for bats.	<ul style="list-style-type: none"> Species abundance and richness Little Brown Bat, Northern Long-eared Bat and Big Brown (in habitat where species was previously observed)
Specialised Habitat for Wildlife				
Waterfowl Nesting Areas WNH 4, WHH	American Black Duck American Green-Teal Blue-winged Teal	Physical: occurrence of various sized swamp and marsh wetland communities with various hydrology, water quality	Nesting habitat for waterfowl	<ul style="list-style-type: none"> Species abundance and richness



Natural Feature	Representative Indicator Species	Features/Attributes Necessary for Persistence (Physical and Functional)	Features Potentially Sensitive to Development	Good Indicator Features/Species
11-14, WNH 16-18, WNH 20-24	Gadwall Hooded Merganser Northern Pintail Northern Shoveler Wood Duck Mallard	Functional: connection between upland and wetland		
Interior Forest Bird Habitat IFB3, and IFB 9 Includes Potential Habitat for Canada Warbler and Louisiana Thrush	Blackburnian Warbler Black-throated Blue Warbler Black-throated Green Warbler Blue-headed Vireo Northern Parula Ovenbird Pileated Woodpecker Red-breasted Nuthatch Scarlet Tanager Veery Winter Wren Yellow-bellied Sapsucker Canada Warbler Louisiana Thrush	Physical: occurrence of large contiguous forest patches with low disturbance Functional: connection of diverse forest habitats to maintain species richness	Nesting habitat for area sensitive forest birds.	<ul style="list-style-type: none"> Area of interior habitat Representative indicator species (in habitat where species was previously observed)
Open Country Breeding Bird Habitat –OCBB 11 Includes Potential	American Kestrel Barn Owl Eastern Kingbird Grasshopper Sparrow Northern Harrier Savannah Sparrow	Physical: occurrence of contiguous grassland habitat Functional: connection of grassland habitats to maintain species richness	Nesting habitat for area sensitive open country breeding birds.	<ul style="list-style-type: none"> Grassland bird richness and abundance based on pre-construction values Persistence of native grassland vegetation in



Natural Feature	Representative Indicator Species	Features/Attributes Necessary for Persistence (Physical and Functional)	Features Potentially Sensitive to Development	Good Indicator Features/Species
Habitat for Short-eared Owl	Short-eared Owl Upland Sandpiper Vesper Sparrow			natural vegetation communities <ul style="list-style-type: none"> • Eastern Kingbird, Northern Warrior, Savannah Sparrow, Vesper Sparrow (in habitat where species was previously observed)
Marsh Breeding Bird Habitat MBB11, MBB13, MBB17, MBB18, MBB20, MBB28, MBB31 MBB45	American Bittern Virginia Rail Sora Common Moorhen American Coot Pied-billed Grebe Marsh Wren Sedge Wren Common Loon Sandhill Crane Green Heron Trumpeter Swan	Physical: occurrence of marsh wetlands with shallow water and emergent aquatic vegetation Functional: nesting habitat	Nesting habitat for area-sensitive marsh breeding birds.	<ul style="list-style-type: none"> • Marsh bird richness and abundance based on pre-construction values • Persistence of shallow water and emergent vegetation • Green Heron
Amphibian Breeding Habitat ABH 1-3, ABH	Eastern Newt Blue-spotted Salamander Spotted Salamander American Toad Western Chorus Frog	Physical: occurrence of marsh wetland community with seasonally-inundated open water pond Functional: water quality to support	Breeding habitat for amphibians (e.g., wetlands, fringes of open water areas),	<ul style="list-style-type: none"> • Water quality of breeding ponds within 15 m of project components • Amphibian species



Natural Feature	Representative Indicator Species	Features/Attributes Necessary for Persistence (Physical and Functional)	Features Potentially Sensitive to Development	Good Indicator Features/Species
5, ABH 9, ABH12, ABH 16-19, ABH 27, ABH 31, ABH 38, ABH 48, ABH 59 Includes Potential Habitat for W. Chorus Frog	Northern Leopard Frog Green Frog American Bullfrog Mink Frog Pickerel Frog Wood Frog	breeding; connection to upland habitat	water quality of breeding ponds	richness and abundance <ul style="list-style-type: none">• Occurrence of quality wetland vegetation cover• Western Chorus Frog (in habitat where species was previously observed)

Table 9: Summary of the Construction Plan and how it addresses Potential Positive/Negative Effects and Mitigation Measures for Treated as Significant/Provincially Significant Wetlands, Significant Woodlands, and Significant Wildlife Habitats

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
Wetland 1, 2, 6, 13, (Underground Collector Circuit)									
Wetland 1, 2, 6, and 13	Construction – Underground Collector Circuit Installation	Underground Collector Circuit is 9 –81 m away from Wetlands 1, 2, 6, and 13.	<ul style="list-style-type: none"> Limited potential for increased erosion and sedimentation to enter into Wetlands units, which are 9 –81 m away 	<ul style="list-style-type: none"> Localized temporary Displacement of wildlife due to noise and vibration 	1 m deep trench dug to install electrical feeder line.	Once during construction	During construction only	<ul style="list-style-type: none"> Ensure all spoils from site are removed in a timely manner. If storage of spoils is required they should be no closer than 30m from the wetland Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Re-grade to preconstruction condition and re-vegetate using native plant species typical of the adjacent habitat Construction area adjacent to sensitive natural features should be clearly delineated by sediment or 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s)	
Wetland 5, 29, 31, 99 (Underground Collector Circuit and Horizontal Directional Drilling); Wetland 23 (Alternative Underground Collector Circuit, 230 KV Transmission Line, and Horizontal Directional Drilling)									
Wetland 5, 23, 29, 31, 99	Construction – Horizontal Directional Drilling for Underground Collector Circuit Installation and/or 230 KV Transmission Line	Wetland 5 is 50 m from the HDD needed for the placement of underground collector circuit and Wetland 23, 29, 31, and 99 will be at least 5 m from HDD.	<ul style="list-style-type: none"> Limited potential for increased erosion and sedimentation to enter into Wetlands 	<ul style="list-style-type: none"> Localized temporary displacement of wildlife due to noise and vibration Limited potential for increased erosion and sedimentation to enter into wetland Removal/or containment of spoils from HDD access/Exit Pit or trench excavation 	HDD will be in under wetlands and staging areas will need to be cleared on either side of each wetlands.	Once during construction	During construction only	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) Develop frac-out plan for HDD areas 	No Residual Effect
Wetland 7 (Access Road); Wetland 21 and Amphibian Breeding Habitat 16 and 17 (Access Road and Crane Path)									

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
Wetland 7 and 21 ABH 16 and 17	Site Preparation – Vegetation Clearing, Grubbing and Grading Note: all vegetation clearing, grubbing, and grading will only be done on previously disturbed land and not within wetland boundaries.	Access Road is 3 m from Wetland 7 and 25 m from wetland 21.	<ul style="list-style-type: none"> ▪ Potential for increased erosion and sedimentation on wetland areas adjacent to cleared areas ▪ Removal of vegetation adjacent to wetland 	<ul style="list-style-type: none"> ▪ Increased surface runoff from exposed soils ▪ Potential for change in water levels and quality of wetland area due to changes in adjacent land vegetation cover and/or topography ▪ Potential for depreciation of wetland quality ▪ Increased inputs of nutrients and contaminants to wetland vegetation when wetland buffer is temporarily minimized during construction ▪ Loss of species or avoidance of habitat by species due to adjacent construction disturbance 	<p>All areas surrounding the access roads will be cleared and graded.</p> <p>No wetlands are within the area to be built as access road..</p>	Once to facilitate construction of access road	During construction only	<ul style="list-style-type: none"> ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. ▪ Erosion and sediment control measures (i.e., silt fence and hay bales) installed for construction purposes will prevent the movement of amphibians into the construction area ▪ Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired ▪ Minimize removal /disturbance of vegetation adjacent to the wetland habitat between the buildable area and wetland boundary ▪ Maximize the distance of all construction equipment used from the wetland edge; operate machinery in the project location areas only ▪ Develop and implement a 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>stormwater management plan** which maintains pre-construction surface water flows to adjacent lands (quantity, quality, infiltrations, conveyance patterns and seasonality of water flow)</p> <ul style="list-style-type: none"> Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) Impacted areas will be reseeded with native vegetation Avoid site preparation activities during breeding season (April -June) 	
	Construction – Access Road	Access Road is 3 m from Wetland 7 and 25 m from wetland 21	<ul style="list-style-type: none"> Loss of native substrate and potential for imported gravel material to enter into immediately adjacent habitat during storm events Increased runoff during storm events as a result of reduced infiltration in local area 	<ul style="list-style-type: none"> Loss of plant richness in localized area adjacent to road Where road substrate is removed post-construction, imported soil has the potential to support the growth of non-native species 	<p>Access roads will be approximately 6.0 m wide and about 500-600 mm thick.</p> <p>Access roads will connect turbines to municipal roads</p>	During and immediately after construction as well as during storm events	1-2 months during construction	<ul style="list-style-type: none"> Design roads to promote infiltration (e.g. use of gravel materials); Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be 	Minimal Residual Effect – road area small, thus marginal decrease in localized infiltration expected; negligible change to surface water runoff volumes expected from pre-development conditions

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			Physical	Functional					
								<p>functional, they should be immediately repaired</p> <ul style="list-style-type: none"> ▪ Maintain or provide vegetative buffers; ▪ Stock piled materials necessary for construction will be placed greater than 30 m away from a wetland ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) ▪ Avoid site preparation activities during breeding season (April -June) 	
	Decommissioning – Access Road Removal (if requested by landowner)	Access Road is 3 m from Wetland 7 and 25 m from wetland 21	<ul style="list-style-type: none"> ▪ Disturbance of vegetation that has regenerated adjacent to access road during the operational period 	<ul style="list-style-type: none"> ▪ Increased vulnerability of the site to invasion by non-native species 	Localized within and immediately adjacent to disturbance	During Decommissioning (6 months)	Short-term, during decommissioning phase	<ul style="list-style-type: none"> ▪ Confine disturbance to the smallest area possible ▪ No additional disturbance footprint than that which was created during construction ▪ Re-vegetate temporarily disturbed area with fast growing competitive nurse crop; ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. 	No Residual Effect

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								<ul style="list-style-type: none"> Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) Avoid site preparation activities during breeding season (April -June) 	
Wetland 8 and 9; (Underground Collector Circuit, Access Road, and Crane Path)									
Wetland 8 and 9 ABH 16	Site Preparation – Vegetation Clearing, Grubbing and Grading Note: all vegetation clearing, grubbing, and grading will only be done on previously disturbed land and not within wetland boundaries.	Crane Path, Underground Collector Circuit and Access Road are 48 m from both Wetland units	<ul style="list-style-type: none"> Potential for increased erosion and sedimentation on wetland areas adjacent to cleared areas Removal of vegetation adjacent to wetland 	<ul style="list-style-type: none"> Increased surface runoff from exposed soils Potential for change in water levels and quality of wetland area due to changes in adjacent land vegetation cover and/or topography Potential for depreciation of wetland quality Increased inputs of nutrients and contaminants to wetland vegetation when wetland buffer is temporarily minimized during construction Loss of species or avoidance of habitat 	<p>All buildable areas surrounding the access roads will be cleared and graded.</p> <p>No wetlands are within the buildable areas.</p>	Once to facilitate construction of access road	During construction only	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control measures (i.e., silt fence and hay bales) installed for construction purposes will prevent the movement of amphibians into the construction area Erosion and sediment control 	No Residual Effect

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			Physical	Functional					
				by species due to adjacent construction disturbance				<p>structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired</p> <ul style="list-style-type: none"> ▪ Minimize removal /disturbance of vegetation adjacent to the wetland habitat between the buildable area and wetland boundary ▪ Maximize the distance of all construction equipment used from the wetland edge; operate machinery in the project location areas only ▪ Develop and implement a stormwater management plan** which maintains pre-construction surface water flows to adjacent lands (quantity, quality, infiltrations, conveyance patterns and seasonality of water flow) ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) ▪ Impacted areas will be reseeded with native vegetation 	
	Construction – Underground Collector Circuit Installation	Underground Collector Circuit is 48 m from both wetland units	<ul style="list-style-type: none"> ▪ Limited potential for increased erosion and sedimentation to enter into Wetlands units, which are 9 -50 m away 	<ul style="list-style-type: none"> ▪ Localized temporary Displacement of wildlife due to noise and vibration 	1 m deep trench dug to install electrical feeder line.	Once during construction	During construction only	<ul style="list-style-type: none"> ▪ Ensure all spoils from site are removed in a timely manner. If storage of spoils is required they should be no closer than 30m from the wetland ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> ▪ Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired ▪ Re-grade to preconstruction condition and re-vegetate using native plant species typical of the adjacent habitat ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	
	Construction – Access Road	Access Road is 48 m from both Wetland units	<ul style="list-style-type: none"> ▪ Loss of native substrate and potential for imported gravel material to enter into immediately adjacent habitat during storm events ▪ Increased runoff 	<ul style="list-style-type: none"> ▪ Loss of plant richness in localized area adjacent to road ▪ Where road substrate is removed post-construction, imported soil has the potential to support the growth of non-native species 	<p>Access roads will be approximately 6.0 m wide and about 500-600 mm thick.</p> <p>Access roads will connect turbines to municipal roads</p>	During and immediately after construction as well as during storm events	1-2 months during construction	<ul style="list-style-type: none"> ▪ Design roads to promote infiltration (e.g. use of gravel materials); ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock 	Minimal Residual Effect – road area small, thus marginal decrease in localized infiltration expected; negligible change

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			Physical	Functional					
			during storm events as a result of reduced infiltration in local area					<p>piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> ▪ Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired ▪ Maintain or provide vegetative buffers; ▪ Stock piled materials necessary for construction will be placed greater than 30 m away from a wetland ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	to surface water runoff volumes expected from pre-development conditions
	Decommissioning – Access Road Removal (if requested by landowner)	Access Road is 48 m from both Wetland units	<ul style="list-style-type: none"> ▪ Disturbance of vegetation that has regenerated adjacent to access road during the operational period 	<ul style="list-style-type: none"> ▪ Increased vulnerability of the site to invasion by non-native species 	Localized within and immediately adjacent to disturbance	During Decommissioning (6 months)	Short-term, during decommissioning phase	<ul style="list-style-type: none"> ▪ Confine disturbance to the smallest area possible ▪ No additional disturbance footprint than that which was created during construction ▪ Re-vegetate temporarily disturbed area with fast growing competitive nurse crop; ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt 	No Residual Effect

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			Physical	Functional					
								<p>fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	
Wetland 22, 32, and 33 (Underground Collector Circuit 230 KV Transmission Line (Wetland 22 only), Horizontal Directional Drilling, Access Road)									
Wetland 22, 32, and 33	<p>Site Preparation – Vegetation Clearing, Grubbing and Grading</p> <p>Note: all vegetation clearing, grubbing, and grading will only be done on previously disturbed land and not within wetland boundaries.</p>	The wetlands are 5m from the underground collector circuit.	<ul style="list-style-type: none"> Potential for increased erosion and sedimentation on wetland areas adjacent to cleared areas Removal of vegetation adjacent to wetland 	<ul style="list-style-type: none"> Increased surface runoff from exposed soils Potential for change in water levels and quality of wetland area due to changes in adjacent land vegetation cover and/or topography Potential for depreciation of wetland quality 	<p>All areas near the access roads will be cleared and graded.</p> <p>No wetlands are within these areas.</p>	Once to facilitate construction of access road	During construction only	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
				<ul style="list-style-type: none"> ▪ Increased inputs of nutrients and contaminants to wetland vegetation when wetland buffer is temporarily minimized during construction ▪ Loss of species or avoidance of habitat by species due to adjacent construction disturbance 				<p>from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> ▪ Erosion and sediment control measures (i.e., silt fence and hay bales) installed for construction purposes will prevent the movement of amphibians into the construction area ▪ Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired ▪ Minimize removal /disturbance of vegetation adjacent to the wetland habitat between the buildable area and wetland boundary ▪ Maximize the distance of all construction equipment used from the wetland edge; operate machinery in the project location areas only ▪ Develop and implement a stormwater management plan** which maintains pre-construction surface water flows to adjacent lands (quantity, quality, infiltrations, conveyance patterns and seasonality of water flow) ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) ▪ Impacted areas will be reseeded 	

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			Physical	Functional					
								with native vegetation	
	Construction – Horizontal Directional Drilling for Underground Collector Circuit Installation and/or 230 KV Transmission Line	The wetlands are at least 5m from the HDD.	<ul style="list-style-type: none"> Limited potential for increased erosion and sedimentation to enter into Wetlands 	<ul style="list-style-type: none"> Localized temporary displacement of wildlife due to noise and vibration Limited potential for increased erosion and sedimentation to enter into wetland Removal/or containment of spoils from HDD access/Exit Pit or trench excavation 	HDD will be in under wetlands and staging areas will need to be cleared on either side of each wetlands.	Once during construction	During construction only	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) Develop frac-out plan for HDD areas 	No Residual Effect
	Construction – Access Road	Access Roads will be constructed more than 100m from Wetland 22, 32, and 33	<ul style="list-style-type: none"> Loss of native substrate and potential for imported gravel material to enter 	<ul style="list-style-type: none"> Loss of plant richness in localized area adjacent to road Where road substrate is removed post- 	Access roads will be approximately 6.0 m wide and about 500-600 mm thick. Access roads will connect	During and immediately after construction as well as	1-2 months during construction	<ul style="list-style-type: none"> Design roads to promote infiltration (e.g. use of gravel materials); Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction 	Minimal Residual Effect – road area small, thus marginal decrease in

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
			<p>into immediately adjacent habitat during storm events</p> <ul style="list-style-type: none"> Increased runoff during storm events as a result of reduced infiltration in local area 	<p>construction, imported soil has the potential to support the growth of non-native species</p>	<p>turbines to municipal roads</p> <p>Minimal to no effect on wetlands due to the distance from the buildable area to the wetlands.</p>	<p>during storm events</p>		<p>practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Maintain or provide vegetative buffers; Stock piled materials necessary for construction will be placed greater than 30 m away from a wetland Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	<p>localized infiltration expected; negligible change to surface water runoff volumes expected from pre-development conditions</p>
	Decommissioning – Access Road Removal (if requested by landowner)	Access Roads will be constructed more than 100m from Wetland 22, 32, and 33	<ul style="list-style-type: none"> Disturbance of vegetation that has regenerated adjacent to access road during the operational period 	<ul style="list-style-type: none"> Increased vulnerability of the site to invasion by non-native species 	<p>Localized within and immediately adjacent to disturbance</p> <p>Minimal to no effect on wetlands due to the distance from the buildable area to the wetlands.</p>	<p>During Decommissioning (6 months)</p>	<p>Short-term, during decommissioning phase</p>	<ul style="list-style-type: none"> Confine disturbance to the smallest area possible No additional disturbance footprint than that which was created during construction Re-vegetate temporarily disturbed area with fast growing competitive nurse crop; 	<p>No Residual Effect</p>

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<ul style="list-style-type: none"> ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. ▪ Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	
Wetland 36-42, 64-70, 74, 75; Amphibian Breeding Habitat 38 (230 kV Transmission Line, Horizontal Directional Drilling); Wetland 35 90-95, 102-104 (Project Easement Area)									
Wetland 36-42, 64-70, 74, and 75 ABH 38 Within Project Easement Area (Significant)	Construction – 230 kV Power Line Installation using Horizontal Directional Drilling	230 kV line is 5m or greater from Wetland 35-42, 64-70, 74, 75, 90-95, 102-104 ABH 38	<ul style="list-style-type: none"> ▪ Limited potential for increased erosion and sedimentation to enter into adjacent wetlands 	<ul style="list-style-type: none"> ▪ Localized temporary Displacement of wildlife due to noise and vibration ▪ Removal/or containment of spoils from HDD access/Exit Pit or trench excavation 	HDD will be used to bypass PSW and unevaluated wetland units. Staging areas will need to be cleared and graded on either side of the wetland.	Once during construction	During construction only	<ul style="list-style-type: none"> ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
outcome) Wetland 35, 90-95, 102-104								<p>into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> ▪ Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) ▪ Avoid site preparation activities during breeding season (April -June) 	
Wetland 85-89 (69 kV Transmission Line)									
Wetland 85-89	Construction 69 kV Transmission Line Installation	69 kV line is adjacent (>0.1m) to Wetlands 85 – 89	<ul style="list-style-type: none"> ▪ Limited potential for increased erosion and sedimentation to enter into adjacent wetlands 	<ul style="list-style-type: none"> ▪ Localized temporary Displacement of wildlife due to noise and vibration 	New poles ranging from 15 m to 24 m in height are to be installed at a depth of 2.5 m be spaced 50–55 m apart. HDD will be used to bypass unevaluated wetland units.	Once during construction	During construction only	<ul style="list-style-type: none"> ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. ▪ Erosion and sediment control 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired	
Wetland 45-48, 51-61, 71-73, 81, 82; Amphibian Breeding Habitat 27, 48(230 kV Overhead Transmission Line); Wetland 35, 90-95, 102-104 (Project Easement Area)									
Wetland 45-48, 51-61, 71-73, 81, 82 ABH 27, 48 Within Project Easement Area (non-significant outcome) Wetland 35, 90-95, 102-104	Construction 230 kV Overhead Transmission Line Installation	230 kV line is adjacent (>0.1M) to all wetlands	<ul style="list-style-type: none"> Limited potential for increased erosion and sedimentation to enter into adjacent wetlands 	<ul style="list-style-type: none"> Localized temporary Displacement of wildlife due to noise and vibration 	New poles ranging from 15 m to 24 m in height are to be installed at a depth of 2.5 m be spaced 50-55 m apart. HDD will be used to bypass unevaluated wetland units.	Once during construction	During construction only	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Avoid site preparation activities during breeding season (April -June) 	No Residual Effect
Wetland 15 (Turbine, Underground Collector Circuit, Horizontal Directional Drilling)									
Wetland 15	Site Preparation – Vegetation Clearing, Grubbing and Grading Note: all vegetation	The nearest project component to Wetland 15 is 111m.	<ul style="list-style-type: none"> Potential for increased erosion and sedimentation on wetland areas adjacent to cleared areas 	<ul style="list-style-type: none"> Increased surface runoff from exposed soils Potential for change in water levels and quality of wetland area 	All buildable areas surrounding the turbines will be cleared and graded. No wetlands are within the buildable areas.	Once to facilitate construction of the turbine	During construction only	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
	clearing, grubbing, and grading will only be done on previously disturbed land and not within wetland boundaries.		<ul style="list-style-type: none"> Removal of vegetation adjacent to wetland 	<p>due to changes in adjacent land vegetation cover and/or topography</p> <ul style="list-style-type: none"> Potential for depreciation of wetland quality Increased inputs of nutrients and contaminants to wetland vegetation when wetland buffer is temporarily minimized during construction Loss of species or avoidance of habitat by species due to adjacent construction disturbance 				<p>waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> Erosion and sediment control measures (i.e., silt fence and hay bales) installed for construction purposes will prevent the movement of amphibians into the construction area Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Minimize removal /disturbance of vegetation adjacent to the wetland habitat between the buildable area and wetland boundary Maximize the distance of all construction equipment used from the wetland edge; operate machinery in the project location areas only Develop and implement a stormwater management plan** which maintains pre-construction surface water flows to adjacent lands (quantity, quality, infiltrations, conveyance patterns and seasonality of water flow) 	

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<ul style="list-style-type: none"> ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) ▪ Impacted areas will be reseeded with native vegetation 	
	Construction – Horizontal Directional Drilling for Underground Collector Circuit Installation	Wetland 15 is 111 m from the HDD needed for the placement of underground collector circuit	<ul style="list-style-type: none"> ▪ Limited potential for increased erosion and sedimentation to enter into Wetlands 	<ul style="list-style-type: none"> ▪ Localized temporary displacement of wildlife due to noise and vibration ▪ Limited potential for increased erosion and sedimentation to enter into wetland ▪ Removal/or containment of spoils from HDD access/Exit Pit or trench excavation 	HDD will be in under wetlands and staging areas will need to be cleared on either side of each wetlands.	Once during construction	During construction only	<ul style="list-style-type: none"> ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. ▪ Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) ▪ Develop frac-out plan for HDD areas 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
	Construction– Foundation Construction/Turbine Staging Area and Crane pad	The nearest project component to Wetland 15 is 111m.	<ul style="list-style-type: none"> Disturbance of area near wetland by heavy equipment and machinery needed to install the foundation, crane pad, turbine and the circuit. 	<ul style="list-style-type: none"> Increased vulnerability of the cleared area to invasion by non-native species Localized temporary displacement of wildlife due to noise Disturbance/incidental mortality to wildlife species 	Localized to the area nearby the wetland edge immediately adjacent to the equipment and machinery	Once during construction	Short-term during construction of foundation	<ul style="list-style-type: none"> Confine disturbance to the smallest area possible Limit use to beyond 5 m from wetland edge Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) Re-grade to preconstruction condition and re-vegetate using native plant species typical of the adjacent habitat 	No Residual Effects
Wetland 10, 16, 18, 19, 20, 30, 100, and 101; Amphibian Breeding Habitat 1, 5, 9, and 12 (Turbine, Underground Collector Circuit, Access Road, Crane Path)									
Wetland 10, 16, 18, 19, 20, 30, 100, and 101 ABH 1, 5, 9, and 12	Site Preparation – Vegetation Clearing, Grubbing and Grading Note: all vegetation clearing, grubbing, and grading will only be done on previously disturbed land and not within wetland boundaries.	The nearest project component is 5–105m away from these natural features.	<ul style="list-style-type: none"> Potential for increased erosion and sedimentation on wetland areas adjacent to cleared areas Removal of vegetation adjacent to wetland 	<ul style="list-style-type: none"> Increased surface runoff from exposed soils Potential for change in water levels and quality of wetland area due to changes in adjacent land vegetation cover and/or topography Potential for depreciation of wetland quality Increased inputs of nutrients and contaminants to wetland vegetation when wetland buffer is temporarily minimized during construction Loss of species or avoidance of habitat by species due to adjacent construction 	All buildable areas surrounding the turbines and access roads will be cleared and graded. No wetlands are within the buildable areas.	Once to facilitate construction of the turbine	During construction only	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control measures (i.e., silt fence and hay bales) installed for construction purposes will prevent the movement of amphibians into the construction area Erosion and sediment control structures should be monitored regularly to ensure that they are fully 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
				disturbance				<p>functional. Should erosion and sediment control measures not be functional, they should be immediately repaired</p> <ul style="list-style-type: none"> ▪ Minimize removal /disturbance of vegetation adjacent to the wetland habitat between the buildable area and wetland boundary ▪ Maximize the distance of all construction equipment used from the wetland edge; operate machinery in the project location areas only ▪ Develop and implement a stormwater management plan** which maintains pre-construction surface water flows to adjacent lands (quantity, quality, infiltrations, conveyance patterns and seasonality of water flow) ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) ▪ Impacted areas will be reseeded with native vegetation ▪ Avoid site preparation activities during breeding season (April -June) 	
<p>Wetland 10, 16, 18, 19, 20, 30, 100, and 101</p> <p>ABH 1, 5, 9, and 12</p>	<p>Construction– Foundation Construction/Turbine Staging Area and Crane pad/ Underground Electrical Collector Circuit Installation</p>	<p>The nearest project component is 5–105m away from these natural features.</p>	<ul style="list-style-type: none"> ▪ Disturbance of wetland edge by heavy equipment and machinery needed to install the foundation, crane pad, turbine and the circuit. 	<ul style="list-style-type: none"> ▪ Localized temporary displacement of wildlife due to noise ▪ Disturbance/incidental mortality to wildlife species 	<p>Localized to the wetland edge immediately adjacent to the equipment and machinery</p> <p>No buildable area is within these natural features</p>	<p>Once during construction</p>	<p>Short-term during construction of foundation</p>	<ul style="list-style-type: none"> ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the 	<p>No Residual Effects</p>

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> ▪ Erosion and sediment control measures (i.e., silt fence and hay bales) installed for construction purposes will prevent the movement of amphibians into the construction area ▪ Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired ▪ Minimize removal /disturbance of vegetation adjacent to the wetland habitat between the buildable area and wetland boundary ▪ Maximize the distance of all construction equipment used from the wetland edge; operate machinery in the project location areas only ▪ Develop and implement a stormwater management plan** which maintains pre-construction surface water flows to adjacent lands (quantity, quality, infiltrations, conveyance patterns and seasonality of water flow) ▪ Construction area adjacent to sensitive natural features should be 	

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) Impacted areas will be reseeded with native vegetation <ul style="list-style-type: none"> Avoid site preparation activities during breeding season (April -June) 	
Wetland 10, 16, 18, 19, 20, 30, 100, and 101 ABH 1, 5, 9, and 12	Construction – Access Road	Access Road is at least 5m away from these natural features	<ul style="list-style-type: none"> Loss of native substrate and potential for imported gravel material to enter into immediately adjacent habitat during storm events Increased runoff during storm events as a result of reduced infiltration in local area 	<ul style="list-style-type: none"> Loss of plant richness in localized area adjacent to road Where road substrate is removed post-construction, imported soil has the potential to support the growth of non-native species 	<p>Access roads will be approximately 6.0 m wide and about 500-600 mm thick.</p> <p>Access roads will connect turbines to municipal roads</p> <p>No access roads will be constructed within these natural features</p>	During and immediately after construction as well as during storm events	1-2 months during construction	<ul style="list-style-type: none"> Design roads to promote infiltration (e.g. use of gravel materials); Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Maintain or provide vegetative buffers; Stock piled materials necessary for construction will be placed greater than 30 m away from a wetland Construction area adjacent to 	Minimal Residual Effect – road area small, thus marginal decrease in localized infiltration expected; negligible change to surface water runoff volumes expected from pre-development conditions

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s)</p> <ul style="list-style-type: none"> ▪ Avoid site preparation activities during breeding season (April -June) 	
<p>Wetland 10, 16, 18, 19, 20, 30, 100, and 101</p> <p>ABH 1, 5, 9, and 12</p>	Decommissioning – Access Road Removal (if requested by landowner)	Access Road is at least 5m away from these natural features	<ul style="list-style-type: none"> ▪ Disturbance of vegetation that has regenerated adjacent to access road during the operational period 	<ul style="list-style-type: none"> ▪ Increased vulnerability of the site to invasion by non-native species 	<p>Localized within and immediately adjacent to disturbance</p> <p>No access roads will be constructed within these natural features</p>	During Decommissioning (6 months)	Short-term, during decommissioning phase	<ul style="list-style-type: none"> ▪ Confine disturbance to the smallest area possible ▪ No additional disturbance footprint than that which was created during construction ▪ Re-vegetate temporarily disturbed area with fast growing competitive nurse crop; ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. ▪ Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired ▪ Construction area adjacent to 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s)</p> <ul style="list-style-type: none"> Avoid site preparation activities during breeding season (April -June) 	
Wetlands 12, 17, 26, 27, 28, 34; Amphibian Breeding Habitat 2, 3, 18, 19 (Turbine, Underground Directional Drilling and 230 KV Transmission Line (Wetland 12 and ABH 18 only) using HDD, Access Road, Crane Path)									
<p>Wetland 12, 17, 26, 27, 28, and 34</p> <p>ABH 2, 3, 18, and 19</p>	<p>Site Preparation – Vegetation Clearing, Grubbing and Grading</p> <p>Note: all vegetation clearing, grubbing, and grading will only be done on previously disturbed land and not within wetland boundaries.</p>	<p>The nearest project component will be at least 5m away from these natural features</p>	<ul style="list-style-type: none"> Potential for increased erosion and sedimentation on wetland areas adjacent to cleared areas Removal of vegetation adjacent to wetland 	<ul style="list-style-type: none"> Increased surface runoff from exposed soils Potential for change in water levels and quality of wetland area due to changes in adjacent land vegetation cover and/or topography Potential for depreciation of wetland quality Increased inputs of nutrients and contaminants to wetland vegetation when wetland buffer is temporarily minimized during construction Loss of species or avoidance of habitat by species due to adjacent construction disturbance 	<p>All buildable areas surrounding the turbines and access roads will be cleared and graded.</p> <p>No wetlands are within the buildable areas.</p>	<p>Once to facilitate construction of the turbine</p>	<p>During construction only</p>	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control measures (i.e., silt fence and hay bales) installed for construction purposes will prevent the movement of amphibians into the construction area Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Minimize removal /disturbance of vegetation adjacent to the wetland 	<p>No Residual Effect</p>

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>habitat between the buildable area and wetland boundary</p> <ul style="list-style-type: none"> ▪ Maximize the distance of all construction equipment used from the wetland edge; operate machinery in the project location areas only ▪ Develop and implement a stormwater management plan** which maintains pre-construction surface water flows to adjacent lands (quantity, quality, infiltrations, conveyance patterns and seasonality of water flow) ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) <p>Impacted areas will be reseeded with native vegetation</p> <ul style="list-style-type: none"> ▪ Avoid site preparation activities during breeding season (April -June) 	
	Construction– Foundation Construction/Turbine Staging Area and Crane pad	The nearest project component will be at least 5m away from these natural features	<ul style="list-style-type: none"> ▪ Disturbance of wetland edge by heavy equipment and machinery needed to install the foundation, crane pad, turbine and the circuit. 	<ul style="list-style-type: none"> ▪ Localized temporary displacement of wildlife due to noise ▪ Disturbance/incidental mortality to wildlife species 	<p>Localized to the wetland edge immediately adjacent to the equipment and machinery</p> <p>No construction will occur in these natural features</p>	Once during construction	Short-term during construction of foundation	<ul style="list-style-type: none"> ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or 	No Residual Effects

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>waterbody.</p> <ul style="list-style-type: none"> ▪ Erosion and sediment control measures (i.e., silt fence and hay bales) installed for construction purposes will prevent the movement of amphibians into the construction area ▪ Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired ▪ Minimize removal /disturbance of vegetation adjacent to the wetland habitat between the buildable area and wetland boundary ▪ Maximize the distance of all construction equipment used from the wetland edge; operate machinery in the project location areas only ▪ Develop and implement a stormwater management plan** which maintains pre-construction surface water flows to adjacent lands (quantity, quality, infiltrations, conveyance patterns and seasonality of water flow) ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) ▪ Impacted areas will be reseeded with native vegetation 	

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<ul style="list-style-type: none"> Avoid site preparation activities during breeding season (April -June) 	
	Construction – Horizontal Directional Drilling for Underground Collector Circuit and 230 KV Transmission Line installation	The wetlands are 5m from the HDD.	<ul style="list-style-type: none"> Limited potential for increased erosion and sedimentation to enter into Wetlands 	<ul style="list-style-type: none"> Localized temporary displacement of wildlife due to noise and vibration Limited potential for increased erosion and sedimentation to enter into wetland Removal/or containment of spoils from HDD access/Exit Pit or trench excavation 	HDD will be in under wetlands and staging areas will need to be cleared on either side of each wetlands.	Once during construction	During construction only	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) Avoid site preparation activities during breeding season (April -June) Develop frac-out plan for HDD areas 	No Residual Effect
	Construction – Access Road	Access Road is at least 5m away from these natural	<ul style="list-style-type: none"> Loss of native substrate and potential for 	<ul style="list-style-type: none"> Loss of plant richness in localized area adjacent to road 	Access roads will be approximately 6.0 m wide and about 500-600 mm thick.	During and immediately after	1-2 months during construction	<ul style="list-style-type: none"> Design roads to promote infiltration (e.g. use of gravel materials); Develop and implement an erosion 	Minimal Residual Effect – road area small, thus

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
		features	<p>imported gravel material to enter into immediately adjacent habitat during storm events</p> <ul style="list-style-type: none"> Increased runoff during storm events as a result of reduced infiltration in local area 	<ul style="list-style-type: none"> Where road substrate is removed post-construction, imported soil has the potential to support the growth of non-native species 	<p>Access roads will connect turbines to municipal roads</p> <p>No access roads will be constructed within these natural features</p>	<p>construction as well as during storm events</p>		<p>and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody</p> <ul style="list-style-type: none"> Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Maintain or provide vegetative buffers; Stock piled materials necessary for construction will be placed greater than 30 m away from a wetland Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) Avoid site preparation activities during breeding season (April -June) 	<p>marginal decrease in localized infiltration expected; negligible change to surface water runoff volumes expected from pre-development conditions</p>
	Decommissioning – Access Road Removal (if requested by	Access Road is at least 5m away from these natural features	<ul style="list-style-type: none"> Disturbance of vegetation that has regenerated adjacent to access 	<ul style="list-style-type: none"> Increased vulnerability of the site to invasion by non-native species 	Localized within and immediately adjacent to disturbance	During Decommissioning (6 months)	Short-term, during decommissioning phase	<ul style="list-style-type: none"> Confine disturbance to the smallest area possible No additional disturbance footprint than that which was created during 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
	landowner)		road during the operational period					<p>construction</p> <ul style="list-style-type: none"> ▪ Re-vegetate temporarily disturbed area with fast growing competitive nurse crop; ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. ▪ Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) ▪ Avoid site preparation activities during breeding season (April -June) 	
Wetland 24 (Turbine, Underground Collector Circuit, Access Road, Crane Path, 230 KV Transmission Line)									
Wetland 24	Site Preparation – Vegetation Clearing, Grubbing	The nearest project component is 33m from Wetland 24	<ul style="list-style-type: none"> ▪ Potential for increased erosion and sedimentation 	<ul style="list-style-type: none"> ▪ Increased surface runoff from exposed soils 	All buildable areas surrounding the turbines and access roads will be cleared and graded.	Once to facilitate construction	During construction only	<ul style="list-style-type: none"> ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction 	No Residual Effect

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			Physical	Functional					
	<p>and Grading</p> <p>Note: all vegetation clearing, grubbing, and grading will only be done on previously disturbed land and not within wetland boundaries.</p>		<p>on wetland areas adjacent to cleared areas</p> <ul style="list-style-type: none"> Removal of vegetation adjacent to wetland 	<ul style="list-style-type: none"> Potential for change in water levels and quality of wetland area due to changes in adjacent land vegetation cover and/or topography Potential for depreciation of wetland quality Increased inputs of nutrients and contaminants to wetland vegetation when wetland buffer is temporarily minimized during construction Loss of species or avoidance of habitat by species due to adjacent construction disturbance 	No wetlands are within the buildable areas.	of the turbine		<p>practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody</p> <ul style="list-style-type: none"> Erosion and sediment control measures (i.e., silt fence and hay bales) installed for construction purposes will prevent the movement of amphibians into the construction area Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Minimize removal /disturbance of vegetation adjacent to the wetland habitat between the buildable area and wetland boundary Maximize the distance of all construction equipment used from the wetland edge; operate machinery in the project location areas only Develop and implement a stormwater management plan** which maintains pre-construction surface water flows to adjacent lands 	

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								(quantity, quality, infiltrations, conveyance patterns and seasonality of water flow) <ul style="list-style-type: none"> Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) Impacted areas will be reseeded with native vegetation	
	Construction– Foundation Construction/Turbine Staging Area and Crane pad/ Underground Electrical Collector Circuit Installation	The nearest project component is 33m from Wetland 24	<ul style="list-style-type: none"> Disturbance of wetland edge by heavy equipment and machinery needed to install the foundation, crane pad, turbine and the circuit. 	<ul style="list-style-type: none"> Localized temporary displacement of wildlife due to noise Disturbance/incidental mortality to wildlife species 	Localized to the wetland edge immediately adjacent to the equipment and machinery Minimal to no effect due to the distance between the wetland and the buildable area.	Once during construction	Short-term during construction of foundation	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody Erosion and sediment control measures (i.e., silt fence and hay bales) installed for construction purposes will prevent the movement of amphibians into the construction area Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be 	No Residual Effects

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<ul style="list-style-type: none"> immediately repaired ▪ Minimize removal /disturbance of vegetation adjacent to the wetland habitat between the buildable area and wetland boundary ▪ Maximize the distance of all construction equipment used from the wetland edge; operate machinery in the project location areas only ▪ Develop and implement a stormwater management plan** which maintains pre-construction surface water flows to adjacent lands (quantity, quality, infiltrations, conveyance patterns and seasonality of water flow) ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) ▪ Impacted areas will be reseeded with native vegetation 	
	Construction – Access Road	The nearest project component is 33m from Wetland 24	<ul style="list-style-type: none"> ▪ Loss of native substrate and potential for imported gravel material to enter into immediately adjacent habitat during storm events ▪ Increased runoff during storm events as a result of reduced infiltration in local area 	<ul style="list-style-type: none"> ▪ Loss of plant richness in localized area adjacent to road ▪ Where road substrate is removed post-construction, imported soil has the potential to support the growth of non-native species 	<p>Access roads will be approximately 6.0 m wide and about 500-600 mm thick.</p> <p>Access roads will connect turbines to municipal roads</p> <p>Minimal to no effect due to the distance between the wetland and the buildable area.</p>	During and immediately after construction as well as during storm events	1-2 months during construction	<ul style="list-style-type: none"> ▪ Design roads to promote infiltration (e.g. use of gravel materials); ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site 	Minimal Residual Effect – road area small, thus marginal decrease in localized infiltration expected; negligible change to surface water runoff volumes expected from pre-development

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Maintain or provide vegetative buffers; Stock piled materials necessary for construction will be placed greater than 30 m away from a wetland Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	conditions
	Decommissioning – Access Road Removal (if requested by landowner)	The nearest project component is 33m from Wetland 24	<ul style="list-style-type: none"> Disturbance of vegetation that has regenerated adjacent to access road during the operational period 	<ul style="list-style-type: none"> Increased vulnerability of the site to invasion by non-native species 	<p>Localized within and immediately adjacent to disturbance</p> <p>Minimal to no effect due to the distance between the wetland and the buildable area.</p>	During Decommissioning (6 months)	Short-term, during decommissioning phase	<ul style="list-style-type: none"> Confine disturbance to the smallest area possible No additional disturbance footprint than that which was created during construction Re-vegetate temporarily disturbed area with fast growing competitive nurse crop; Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	
Wetland 97; Amphibian Breeding Habitat 59 (Turbine, Underground Collector Circuit and 230 KV Transmission Line using HDD.)									
Wetland 97 ABH 59	Construction – Horizontal Directional Drilling for Underground Collector Circuit and 230 KV Transmission Line Installation	The nearest project component is 5m from the wetland	<ul style="list-style-type: none"> Limited potential for increased erosion and sedimentation to enter into Wetlands 	<ul style="list-style-type: none"> Localized temporary displacement of wildlife due to noise and vibration Limited potential for increased erosion and sedimentation to enter into wetland Removal/or containment of spoils from HDD access/Exit Pit or trench excavation 	HDD will be in under wetlands and staging areas will need to be cleared on either side of each wetlands.	Once during construction	During construction only	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control structures should be monitored 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired</p> <ul style="list-style-type: none"> ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) ▪ Avoid site preparation activities during breeding season (April -June) ▪ Develop frac-out plan for HDD areas 	
Woodland AH, AJ, AL, AN, AQ, AS, AT, AV, BE, BH, and BV Woodland Area-Sensitive Interior Forest Breeding Bird Habitat 9 (230 KV Transmission Line or 69 KV Transmission Line)									
Woodland BV IFB 9	Construction-69 KV Power Line installation	The 69 KV Power Line is within woodland BV	<ul style="list-style-type: none"> ▪ Disturbance of woodland edge by heavy equipment and machinery needed to install the line. 	<ul style="list-style-type: none"> ▪ Localized temporary displacement of wildlife due to noise ▪ Disturbance/incidental mortality to wildlife species 	Minimal as the line will be installed along the road right-of-way	Once during construction	During construction	<ul style="list-style-type: none"> ▪ Limit impact to the road right-of-way ▪ Re-grade to preconstruction condition and re-vegetate using native plant species typical of the adjacent habitat ▪ Re-vegetate disturbed area with fast growing woodland species ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) ▪ New edge will be monitored for negative effects of forest edge creation. Shrubs will be planted if sun scald and desiccation are observed. ▪ If construction is to occur during the core breeding bird period (May 1 to July 15), a nest search by a qualified person will be conducted in the immediate area of the potential 	None

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								disturbance	
Woodlands AH, AJ, AL, AN, AQ, AS, AT, AV, BE, BH, and BV	Construction–230 kV Power Line installation	The 230 kV Power Line is within each woodland unit The 230 kV line is along the edge of IFB9 No other Project Components are within 120 m of the Woodland units.	<ul style="list-style-type: none"> Removal of vegetation for placement of pole. Disturbance of woodland edge by heavy equipment and machinery needed to install the line. 	<ul style="list-style-type: none"> Habitat fragmentation and decreased shade cover Increased vulnerability of the cleared area to invasion by non-native species Greater exposure of wildlife to predation through the opening of interior habitat to increased predator activity Localized temporary displacement of wildlife due to noise Disturbance/incidental mortality to wildlife species 	Minimal removal of upland forest edge habitat to accommodate poles for the 230 kV Power Line. Effect will be minimized as the line will mainly be installed at the edge significant woodlands and along an open rail right-of-way	Once to facilitate construction of the 230 kV Power Line.	3-5 growing seasons until woodland vegetation is re-established	<ul style="list-style-type: none"> Re-vegetate disturbed area with fast growing woodland species Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) New edge will be monitored for negative effects of forest edge creation. Shrubs will be planted if sun scald and desiccation are observed. 	No residual effects
Woodland AW, BA, BB, BG (230 KV Transmission Line using HDD)									
Woodland AQ, BA, BB, and BG	Construction–230 KV Power Line installation completed using horizontal directional drilling.	Project components are within these woodlands	<ul style="list-style-type: none"> Disturbance of wildlife from noise of equipment 	<ul style="list-style-type: none"> Localized temporary displacement of wildlife due to noise 	Horizontal directional drilling access/exit pits (10m x 10m) will need to be cleared on either side of where the HDD will be going	Once during construction	During construction only	<ul style="list-style-type: none"> Where possible, horizontal directional drilling will be done to avoid physical damage to tree roots. Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) If vegetation clearing must occur during this period a qualified biologist will conduct nest searches prior to clearing 	No residual effects
Woodland S; Woodland Area-Sensitive Interior Forest Breeding Bird Habitat 3 (Turbine, Underground Collector Circuit using HDD, Access Road, Crane Path, 230 KV Line)									

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			Physical	Functional					
Woodland S IFB 3	Site Preparation–Vegetation Clearing, Grubbing, and Grading	Woodland S is within buildable area. No interior habitat will be removed.	<ul style="list-style-type: none"> Loss of forest vegetation/area Creation of a new woodland edge Susceptibility to erosion 	<ul style="list-style-type: none"> Reduction in amount of woodland edge by removal of irregularly-shaped woodland area(s) Fragmentation of the woodland area Disturbance/displacement of interior woodland habitat Reduced foraging, cover, and breeding area for forest species Decreased vegetation roughness coefficient leading to increased surface run-off Changes in soil moisture and compaction; decreased tree cover/shade Decreased photosynthesis Disturbance/incidental mortality to wildlife species (including Five-lined Skink) 	<p>0.50 ha from the total area of Woodland S will be removed and grubbed within the project location.</p> <p>The revised total area of Woodland S will be 59.40 ha.</p>	<p>Once prior to construction</p> <p>Woodland clearing and grubbing to occur during the first 2 months of construction phase</p>	Project Lifespan	<ul style="list-style-type: none"> Minimize removal of woodland vegetation and avoid displacement of woodland interior where possible Limit vegetation clearing outside of core breeding period (May 1 to July 15) to avoid disturbance to breeding birds; If vegetation clearing must occur during this period a qualified biologist will conduct nest searches prior to clearing Commitment will be made to replace woodlands removed at 1:1 ratio Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) New edge will be monitored for negative effects of forest edge creation. Shrubs will be planted if sun scald and desiccation are observed. If vegetation clearing must occur during this period a qualified biologist will conduct nest searches prior to clearing 	<p>Mitigated effect during project lifespan that will be compensated off-site.</p> <p>No residual effect to the greater landscape through offsetting effects commitment.</p> <p>Woodland will remain significant based on all criteria (i.e., size, woodland interior, proximity to other significant natural features) for significance after clearing is completed.</p>
	Construction–230 kV Power Line installation	Woodland S is adjacent to the 230 KV Power line	<ul style="list-style-type: none"> Removal of vegetation for placement of pole. Disturbance of woodland edge by heavy equipment and machinery needed to install the line. 	<ul style="list-style-type: none"> Habitat fragmentation and decreased shade cover Increased vulnerability of the cleared area to invasion by non-native species Greater exposure of wildlife to predation through the opening of 	<p>Minimal removal of upland forest edge habitat to accommodate poles for the 230 kV Power Line.</p> <p>Effect will be minimized as the line will mainly be installed at the edge significant woodlands and along an open rail right-of-way</p>	<p>Once to facilitate construction of the 230 kV Power Line.</p>	3-5 growing seasons until woodland vegetation is re-established	<ul style="list-style-type: none"> Re-vegetate disturbed area with fast growing woodland species Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) New edge will be monitored for negative effects of forest edge creation. Shrubs will be planted if 	No residual effects

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
				<ul style="list-style-type: none"> interior habitat to increased predator activity Localized temporary displacement of wildlife due to noise Disturbance/incidental mortality to wildlife species 				<ul style="list-style-type: none"> sun scald and desiccation are observed If vegetation clearing must occur during this period a qualified biologist will conduct nest searches prior to clearing 	
	Construction– Access Roads	Woodland S is adjacent to access road.	<ul style="list-style-type: none"> Loss of native substrate and potential for imported gravel material to enter into immediately adjacent habitat during wind events 	<ul style="list-style-type: none"> Loss of plant richness in localized area adjacent to road Where road substrate is removed post-construction, imported soil has the potential to support the growth of non-native species Disturbance/incidental mortality to wildlife species 	Access road will not be constructed within the woodland and any effect to the woodland will be minimal.	During and immediately after construction as well as during storm events	1-2 months during construction	<ul style="list-style-type: none"> Design roads to promote infiltration (e.g. use of gravel materials); Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Maintain or provide vegetative buffers (e.g., silt fencing); Stock piled materials necessary for construction will be placed greater than 30 m away from woodlands. Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
	Construction– Foundation Construction/Turbine Staging Area and Crane pad/ Underground Electrical Collector Circuit Installation	Woodland S is within buildable area. No interior habitat will be removed.	<ul style="list-style-type: none"> Disturbance of woodland edge by heavy equipment and machinery needed to install the foundation, crane pad, turbine and the circuit. 	<ul style="list-style-type: none"> Increased vulnerability of the cleared area to invasion by non-native species Localized temporary displacement of wildlife due to noise Disturbance/incidental mortality to wildlife species 	Localized to the woodland edge immediately adjacent to the equipment and machinery	Once during construction	Short-term during construction of foundation	<ul style="list-style-type: none"> Confine disturbance to the smallest area possible Limit use to beyond 30 m from woodland edge Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) Re-grade to preconstruction condition and re-vegetate using native plant species typical of the adjacent habitat 	No Residual Effects
	Construction – Horizontal Directional Drilling for Underground Collector Circuit Installation	Woodland S is within buildable area. No interior habitat will be removed.	<ul style="list-style-type: none"> Limited potential for increased erosion and sedimentation to enter into habitat 	<ul style="list-style-type: none"> Localized temporary displacement of wildlife due to noise and vibration Limited potential for increased erosion and sedimentation to enter into wetland Removal/or containment of spoils from HDD access/Exit Pit or trench excavation 	HDD will be in under wetlands and staging areas will need to be cleared on either side of each wetlands. These staging areas are planned to be beyond the woodland boundaries.	Once during construction	During construction only	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Construction area adjacent to sensitive natural features should be clearly delineated by sediment or 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) <ul style="list-style-type: none"> If vegetation clearing must occur during this period a qualified biologist will conduct nest searches prior to clearing 	
	Construction–Crane Activity	Woodland S is within buildable area.	<ul style="list-style-type: none"> Disturbance of wildlife within the woodland unit 	<ul style="list-style-type: none"> Disrupted flight paths Localized temporary displacement of wildlife due to noise Disturbance/incidental mortality to avian wildlife species 	Localized to the crane path and surrounding area	During construction of turbines	Short-term during periods when the crane is present and being used	<ul style="list-style-type: none"> Confine disturbance to the smallest area possible 	No Residual Effect
	<u>Decommissioning</u> – Access Road Removal (if requested by landowner), removal of turbine, tower and foundation	Woodland S is adjacent to access road.	<ul style="list-style-type: none"> Disturbance of vegetation that has regenerated adjacent to access road during the operational period 	<ul style="list-style-type: none"> Increased vulnerability of the site to invasion by non-native species Disturbance/incidental mortality to wildlife species 	Localized within and immediately adjacent to disturbance Access road will not be constructed within the woodland and any effect to the woodland will be minimal.	During Decommissioning (6 months)	Short-term, during decommissioning phase	<ul style="list-style-type: none"> Confine disturbance to the smallest area possible No additional disturbance footprint than that which was created during construction Re-vegetate temporarily disturbed area with fast growing competitive nurse crop; Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Construction area adjacent to 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s)	
Woodland A (evaluated with Lavender Falls Life Science ANSI), H, W, BP, BT, CB, CC (Turbine, Underground Collector Circuit, Access Road, Crane Path)									
Woodland A, H, W, BP, BT, CB, and CC	Construction– Foundation Construction/Turbine Staging Area /Access Road and Crane pad/ Underground Electrical Collector Circuit Installation	Project components will not be within these woodlands	<ul style="list-style-type: none"> Disturbance of woodland edge by heavy equipment and machinery needed to install the foundation, crane pad, turbine and the circuit. 	<ul style="list-style-type: none"> Increased vulnerability of the cleared area to invasion by non-native species Localized temporary displacement of wildlife due to noise Disturbance/incidental mortality to wildlife species 	Minimum localized to the woodland edge immediately adjacent to the equipment and machinery as no project components will be within woodlands.	Once during construction	Short-term during construction of foundation	<ul style="list-style-type: none"> Confine disturbance to the smallest area possible Limit use to beyond 30 m from woodland edge Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) Re-grade to preconstruction condition and re-vegetate using native plant species typical of the adjacent habitat 	No Residual Effects
	Construction– Crane Activity	Project components will not be within these woodlands	<ul style="list-style-type: none"> Disturbance of wildlife within the woodland unit 	<ul style="list-style-type: none"> Disrupted flight paths Localized temporary displacement of wildlife due to noise Disturbance/incidental mortality to avian wildlife species 	Localized to the crane path and surrounding area	During construction of turbines	Short-term during periods when the crane is present and being used	<ul style="list-style-type: none"> Confine disturbance to the smallest area possible 	No Residual Effect
	Decommissioning – Access Road Removal (if requested by landowner), removal of turbine, tower and foundation	Project components will not be within these woodlands	<ul style="list-style-type: none"> Disturbance of vegetation that has regenerated adjacent to access road during the operational period 	<ul style="list-style-type: none"> Increased vulnerability of the site to invasion by non-native species Disturbance/incidental mortality to wildlife species 	Localized within and immediately adjacent to disturbance	During Decommissioning (6 months)	Short-term, during decommissioning phase	<ul style="list-style-type: none"> Confine disturbance to the smallest area possible No additional disturbance footprint than that which was created during construction Re-vegetate temporarily disturbed area with fast growing competitive nurse crop; Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	
Woodland AP and AU (230 KV Transmission Line)									
Woodland AP and AU	Construction–230 kV Power Line installation	<p>The 230 kV Power Line is 1 to 39m away from these woodlands</p> <p>No other Project Components are within 120 m of the Woodland units.</p>	<ul style="list-style-type: none"> Removal of vegetation for placement of pole. Disturbance of woodland edge by heavy equipment and machinery needed to install the line. 	<ul style="list-style-type: none"> Habitat fragmentation and decreased shade cover Increased vulnerability of the cleared area to invasion by non-native species Greater exposure of wildlife to predation through the opening of interior habitat to increased predator activity Localized temporary displacement of wildlife due to noise Disturbance/incidental mortality to wildlife species 	<p>Minimal removal of upland forest edge habitat to accommodate poles for the 230 kV Power Line.</p> <p>Effect will be minimized as the line will mainly be installed at the edge significant woodlands and along an open rail right-of-way</p>	Once to facilitate construction of the 230 kV Power Line.	3-5 growing seasons until woodland vegetation is re-established	<ul style="list-style-type: none"> Re-vegetate disturbed area with fast growing woodland species Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) New edge will be monitored for negative effects of forest edge creation. Shrubs will be planted if sun scald and desiccation are observed. If vegetation clearing must occur during this period a qualified biologist will conduct nest searches prior to clearing 	No residual effects

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
Woodland BL (Turbine, Underground Collector Circuit, Access Road, 69 KV Transmission Line)									
Woodland BL	Site Preparation–Vegetation Clearing, Grubbing, and Grading	Woodland BL is adjacent to buildable area.	<ul style="list-style-type: none"> ▪ Loss of forest vegetation/area ▪ Creation of a new woodland edge ▪ Susceptibility to erosion 	<ul style="list-style-type: none"> ▪ Increased vulnerability of the cleared area to invasion by non-native species ▪ Localized temporary displacement of wildlife due to noise ▪ Disturbance/incidental mortality to wildlife species 	Minimum localized to the woodland edge immediately adjacent to the equipment and machinery as no project components will be within woodlands.	Once prior to construction Woodland clearing and grubbing to occur during the first 2 months of construction phase	Project Lifespan	<ul style="list-style-type: none"> ▪ Minimize removal of woodland vegetation and avoid displacement of woodland interior where possible ▪ Limit vegetation clearing outside of core breeding period (May 1 to July 15) to avoid disturbance to breeding birds; If vegetation clearing must occur during this period a qualified biologist will conduct nest searches prior to clearing ▪ Commitment will be made to replace woodlands removed at 1:1 ratio ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) ▪ New edge will be monitored for negative effects of forest edge creation. Shrubs will be planted if sun scald and desiccation are observed. ▪ If vegetation clearing must occur during this period a qualified biologist will conduct nest searches prior to clearing 	No Residual Effect
	Construction–Access Roads	Woodland BL is adjacent to buildable area.	<ul style="list-style-type: none"> ▪ Loss of native substrate and potential for imported gravel material to enter into immediately adjacent habitat during wind events 	<ul style="list-style-type: none"> ▪ Loss of plant richness in localized area adjacent to road ▪ Where road substrate is removed post-construction, imported soil has the potential to support the growth of non-native species ▪ Disturbance/incidental mortality to wildlife 	Access road will not be constructed within the woodland and any effect to the woodland will be minimal.	During and immediately after construction as well as during storm events	1-2 months during construction	<ul style="list-style-type: none"> ▪ Design roads to promote infiltration (e.g. use of gravel materials); ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
				species				<p>into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> ▪ Maintain or provide vegetative buffers (e.g., silt fencing); ▪ Stock piled materials necessary for construction will be placed greater than 30 m away from woodlands. ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	
	Construction– Foundation Construction/Turbine Staging Area and Crane pad/ Underground Electrical Collector Circuit Installation	Woodland BL is adjacent to buildable area.	<ul style="list-style-type: none"> ▪ Disturbance of woodland edge by heavy equipment and machinery needed to install the foundation, crane pad, turbine and the circuit. 	<ul style="list-style-type: none"> ▪ Increased vulnerability of the cleared area to invasion by non-native species ▪ Localized temporary displacement of wildlife due to noise ▪ Disturbance/incidental mortality to wildlife species 	Localized to the woodland edge immediately adjacent to the equipment and machinery	Once during construction	Short-term during construction of foundation	<ul style="list-style-type: none"> ▪ Confine disturbance to the smallest area possible ▪ Limit use to beyond 30 m from woodland edge ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) ▪ Re-grade to preconstruction condition and re-vegetate using native plant species typical of the adjacent habitat 	No Residual Effects
	Construction–69 kV Power Line installation	The 69 kV Power Line is separated from the woodland by a 3 rd Line Road	<ul style="list-style-type: none"> ▪ Disturbance of woodland edge by heavy equipment and machinery needed to install the line. 	<ul style="list-style-type: none"> ▪ Localized temporary displacement of wildlife due to noise ▪ Disturbance/incidental mortality to wildlife species 	Minimal as the line will be installed along the road right-of-way	Once during construction	During construction	<ul style="list-style-type: none"> ▪ Limit impact to the road right-of-way ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) ▪ Re-grade to preconstruction 	None

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								condition and re-vegetate using native plant species typical of the adjacent habitat	
	Construction–Crane Activity	Woodland BL is adjacent to buildable area.	<ul style="list-style-type: none"> Disturbance of wildlife within the woodland unit 	<ul style="list-style-type: none"> Disrupted flight paths Localized temporary displacement of wildlife due to noise Disturbance/incidental mortality to avian wildlife species 	Localized to the crane path and surrounding area	During construction of turbines	Short-term during periods when the crane is present and being used	<ul style="list-style-type: none"> Confine disturbance to the smallest area possible 	No Residual Effect
	Decommissioning – Access Road Removal (if requested by landowner), removal of turbine, tower and foundation	Woodland BL is adjacent to buildable area.	<ul style="list-style-type: none"> Disturbance of vegetation that has regenerated adjacent to access road during the operational period 	<ul style="list-style-type: none"> Increased vulnerability of the site to invasion by non-native species Disturbance/incidental mortality to wildlife species 	Localized within and immediately adjacent to disturbance	During Decommissioning (6 months)	Short-term, during decommissioning phase	<ul style="list-style-type: none"> Confine disturbance to the smallest area possible No additional disturbance footprint than that which was created during construction Re-vegetate temporarily disturbed area with fast growing competitive nurse crop; Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								similar boundary, to avoid impacting the adjacent feature(s)	
Woodland CL (Underground Collector Circuit using HDD)									
Woodland CL	Construction – Horizontal Directional Drilling for Underground Collector Circuit Installation	Woodland CL is separated from the activity by Sideroad 240	<ul style="list-style-type: none"> Limited potential for increased erosion and sedimentation to enter into habitat 	<ul style="list-style-type: none"> Localized temporary displacement of wildlife due to noise and vibration Limited potential for increased erosion and sedimentation to enter into wetland Removal/or containment of spoils from HDD access/Exit Pit or trench excavation 	HDD will be in under wetlands and staging areas will need to be cleared on either side of each wetlands. Woodland should not be impacted as it is separated by the activity by Sideroad 240	Once during construction	During construction only	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) If vegetation clearing must occur during this period a qualified biologist will conduct nest searches prior to clearing 	No Residual Effect
Woodland AZ (230 KV Transmission Line using HDD)									

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
Woodland AZ	Construction – Horizontal Directional Drilling for 230 KV Transmission Line	Woodland CL is separated from the activity by 30m	<ul style="list-style-type: none"> Limited potential for increased erosion and sedimentation to enter into habitat 	<ul style="list-style-type: none"> Localized temporary displacement of wildlife due to noise and vibration Limited potential for increased erosion and sedimentation to enter into wetland Removal/or containment of spoils from HDD access/Exit Pit or trench excavation 	HDD will be in under wetlands and staging areas will need to be cleared on either side of each wetlands.	Once during construction	During construction only	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) If vegetation clearing must occur during this period a qualified biologist will conduct nest searches prior to clearing 	No Residual Effect
Woodland B, Y (Underground Collector Circuit using HDD, Access Road, Crane Path)									
Woodland B and Y	Construction – Horizontal Directional Drilling for Underground Collector Circuit Installation	Woodlands B and Y are separated by the activity by at least 5 m	<ul style="list-style-type: none"> Limited potential for increased erosion and sedimentation to enter into habitat 	<ul style="list-style-type: none"> Localized temporary displacement of wildlife due to noise and vibration Limited potential for increased erosion and 	HDD will be in under wetlands and staging areas will need to be cleared on either side of each wetlands.	Once during construction	During construction only	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
				<ul style="list-style-type: none"> sedimentation to enter into wetland Removal/or containment of spoils from HDD access/Exit Pit or trench excavation 				<ul style="list-style-type: none"> waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) If vegetation clearing must occur during this period a qualified biologist will conduct nest searches prior to clearing 	
	Construction- Access Roads	Woodlands B and Y are separated by the activity by at least 5 m	<ul style="list-style-type: none"> Loss of native substrate and potential for imported gravel material to enter into immediately adjacent habitat during wind events 	<ul style="list-style-type: none"> Loss of plant richness in localized area adjacent to road Where road substrate is removed post-construction, imported soil has the potential to support the growth of non-native species Disturbance/incidental mortality to wildlife species 	Access road will not be constructed within the woodland and any effect to the woodland will be minimal.	During and immediately after construction as well as during storm events	1-2 months during construction	<ul style="list-style-type: none"> Design roads to promote infiltration (e.g. use of gravel materials); Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> ▪ Maintain or provide vegetative buffers (e.g., silt fencing); ▪ Stock piled materials necessary for construction will be placed greater than 30 m away from woodlands. ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	
	Decommissioning – Access Road Removal (if requested by landowner), removal of turbine, tower and foundation	Woodlands B and Y are separated by the activity by at least 5 m	<ul style="list-style-type: none"> ▪ Disturbance of vegetation that has regenerated adjacent to access road during the operational period 	<ul style="list-style-type: none"> ▪ Increased vulnerability of the site to invasion by non-native species ▪ Disturbance/incidental mortality to wildlife species 	Localized within and immediately adjacent to disturbance	During Decommissioning (6 months)	Short-term, during decommissioning phase	<ul style="list-style-type: none"> ▪ Confine disturbance to the smallest area possible ▪ No additional disturbance footprint than that which was created during construction ▪ Re-vegetate temporarily disturbed area with fast growing competitive nurse crop; ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stockpiled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>waterbody.</p> <ul style="list-style-type: none"> Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	
Woodland Q (Access Road)									
Woodland Q	Construction– Access Roads	Woodlands Q is 10m from the access road	<ul style="list-style-type: none"> Loss of native substrate and potential for imported gravel material to enter into immediately adjacent habitat during wind events 	<ul style="list-style-type: none"> Loss of plant richness in localized area adjacent to road Where road substrate is removed post-construction, imported soil has the potential to support the growth of non-native species Disturbance/incidental mortality to wildlife species 	Access road will not be constructed within the woodland and any effect to the woodland will be minimal.	During and immediately after construction as well as during storm events	1-2 months during construction	<ul style="list-style-type: none"> Design roads to promote infiltration (e.g. use of gravel materials); Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Maintain or provide vegetative buffers (e.g., silt fencing); Stock piled materials necessary for construction will be placed greater than 30 m away from woodlands. Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
	<u>Decommissioning</u> – Access Road Removal (if requested by landowner), removal of turbine, tower and foundation	Woodlands Q is 10m from the access road	<ul style="list-style-type: none"> Disturbance of vegetation that has regenerated adjacent to access road during the operational period 	<ul style="list-style-type: none"> Increased vulnerability of the site to invasion by non-native species Disturbance/incidental mortality to wildlife species 	Localized within and immediately adjacent to disturbance	During Decommissioning (6 months)	Short-term, during decommissioning phase	<ul style="list-style-type: none"> Confine disturbance to the smallest area possible No additional disturbance footprint than that which was created during construction Re-vegetate temporarily disturbed area with fast growing competitive nurse crop; Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	No Residual Effect
Woodland T and Z (Turbine, Underground Collector Circuit and 230 KV Transmission Line (Woodland T only) using HDD, Access Road, and Crane Path)									
Woodland T and Z	Construction–Crane Activity	Woodland T and Z are adjacent to project components	<ul style="list-style-type: none"> Disturbance of wildlife within the woodland unit 	<ul style="list-style-type: none"> Disrupted flight paths Localized temporary displacement of wildlife due to noise Disturbance/incidental mortality to avian wildlife species 	Localized to the crane path and surrounding area	During construction of turbines	Short-term during periods when the crane is present and being used	<ul style="list-style-type: none"> Confine disturbance to the smallest area possible 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
	Construction – Horizontal Directional Drilling for Underground Collector Circuit and 230 KV Transmission Line Installation	Woodland T and Z are adjacent to project components	<ul style="list-style-type: none"> Limited potential for increased erosion and sedimentation to enter into habitat 	<ul style="list-style-type: none"> Localized temporary displacement of wildlife due to noise and vibration Limited potential for increased erosion and sedimentation to enter into wetland Removal/or containment of spoils from HDD access/Exit Pit or trench excavation 	HDD will be in under wetlands and staging areas will need to be cleared on either side of each wetlands.	Once during construction	During construction only	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) If vegetation clearing must occur during this period a qualified biologist will conduct nest searches prior to clearing 	No Residual Effect
	Construction– Access Roads	Woodland T and Z are adjacent to project components	<ul style="list-style-type: none"> Loss of native substrate and potential for imported gravel material to enter into immediately adjacent habitat 	<ul style="list-style-type: none"> Loss of plant richness in localized area adjacent to road Where road substrate is removed post–construction, imported 	Access road will not be constructed within the woodland and any effect to the woodland will be minimal.	During and immediately after construction as well as during storm	1-2 months during construction	<ul style="list-style-type: none"> Design roads to promote infiltration (e.g. use of gravel materials); Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
			during wind events	soil has the potential to support the growth of non-native species <ul style="list-style-type: none"> Disturbance/incidental mortality to wildlife species 		events		fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. <ul style="list-style-type: none"> Maintain or provide vegetative buffers (e.g., silt fencing); Stock piled materials necessary for construction will be placed greater than 30 m away from woodlands. Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	
	<u>Decommissioning</u> – Access Road Removal (if requested by landowner), removal of turbine, tower and foundation	Woodland T and Z are adjacent to project components	<ul style="list-style-type: none"> Disturbance of vegetation that has regenerated adjacent to access road during the operational period 	<ul style="list-style-type: none"> Increased vulnerability of the site to invasion by non-native species Disturbance/incidental mortality to wildlife species 	Localized within and immediately adjacent to disturbance	During Decommissioning (6 months)	Short-term, during decommissioning phase	<ul style="list-style-type: none"> Confine disturbance to the smallest area possible No additional disturbance footprint than that which was created during construction Re-vegetate temporarily disturbed area with fast growing competitive nurse crop; Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	
Woodland BS (Underground Collector Circuit, Access Road, and Crane Path)									
Woodland BS	Construction– Underground Electrical Collector Circuit Installation	Woodland BS is 34 m from the project components	<ul style="list-style-type: none"> Disturbance of woodland edge by heavy equipment and machinery needed to install the circuit. 	<ul style="list-style-type: none"> Increased vulnerability of the cleared area to invasion by non-native species Localized temporary displacement of wildlife due to noise Disturbance/incidental mortality to wildlife species 	Underground Electrical Collector Circuit will not be within the woodland and any effect to the woodland will be minimal.	Once during construction	Short-term during construction of foundation	<ul style="list-style-type: none"> Confine disturbance to the smallest area possible Limit use to beyond 30 m from woodland edge Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) Re-grade to preconstruction condition and re-vegetate using native plant species typical of the adjacent habitat 	No Residual Effects
	Construction– Access Roads	Woodland BS is 34 m from the project components	<ul style="list-style-type: none"> Loss of native substrate and potential for imported gravel material to enter into immediately adjacent habitat during wind events 	<ul style="list-style-type: none"> Loss of plant richness in localized area adjacent to road Where road substrate is removed post-construction, imported soil has the potential to support the growth of non-native species Disturbance/incidental mortality to wildlife 	Access road will not be constructed within the woodland and any effect to the woodland will be minimal.	During and immediately after construction as well as during storm events	1-2 months during construction	<ul style="list-style-type: none"> Design roads to promote infiltration (e.g. use of gravel materials); Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
				species				<p>into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> ▪ Maintain or provide vegetative buffers (e.g., silt fencing); ▪ Stock piled materials necessary for construction will be placed greater than 30 m away from woodlands. ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	
	Decommissioning – Access Road Removal (if requested by landowner), removal of turbine, tower and foundation	Woodland BS is 34 m from the project components	<ul style="list-style-type: none"> ▪ Disturbance of vegetation that has regenerated adjacent to access road during the operational period 	<ul style="list-style-type: none"> ▪ Increased vulnerability of the site to invasion by non-native species ▪ Disturbance/incidental mortality to wildlife species 	Localized within and immediately adjacent to disturbance	During Decommissioning (6 months)	Short-term, during decommissioning phase	<ul style="list-style-type: none"> ▪ Confine disturbance to the smallest area possible ▪ No additional disturbance footprint than that which was created during construction ▪ Re-vegetate temporarily disturbed area with fast growing competitive nurse crop; ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stockpiled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	
Colonial Nesting Habitat (Herons) 6, 7, and 12; Marsh Breeding Bird Habitat 28, 31, and 45 (230 KV Overhead Transmission Line)									
CNH6, 7, and 12	Construction – Overhead 230 kV Power Line	<p>The transmission line will go through CNH6, 7, and 12 and MBB 28, 31, and 45</p> <p>No other Project Components are within 120 m of the habitat unit</p>	<ul style="list-style-type: none"> Removal of vegetation for placement of pole. Disturbance of woodland edge by heavy equipment and machinery needed to install the line. Limited potential for increased erosion and sedimentation to enter into adjacent wetlands 	<ul style="list-style-type: none"> Greater exposure of herons and marsh birds to predation through the opening of interior habitat to increased predator activity Localized temporary displacement of herons and marsh birds due to noise Disturbance/incidental mortality to heron and marsh bird species 	<p>Installation of new poles with foundations at base.</p> <p>Effect will be minimized as the line will mainly be installed at the edge significant woodlands and along an open rail right-of-way</p>	Once to facilitate construction of the 230 KV Power Line.	3-5 growing season until vegetation is re-established	<ul style="list-style-type: none"> Re-vegetate disturbed area with fast growing woodland species Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting 	No residual effects

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								the adjacent feature(s) <ul style="list-style-type: none"> If vegetation clearing must occur during this period a qualified biologist will conduct nest searches prior to clearing 	
Marsh Breeding Bird Habitat 11, 13, 17, 18, (Turbine, Underground Collector Circuit, Access Road, and Crane Path)									
MBB 11, 13, 17, and 18	Construction – Turbine/Underground Collector Circuit/Access road	Project components are 1–5 m away from MBB 11, 13, 17, and 18	<ul style="list-style-type: none"> Limited potential for increased erosion and sedimentation into these natural features 	<ul style="list-style-type: none"> Localized temporary Displacement of wildlife due to noise and vibration 	Project components will be build adjacent to these habitats and minimal to no effect on habitat should occur.	During and immediately after construction as well as during storm events	1–2 months during construction	<ul style="list-style-type: none"> Design roads to promote infiltration (e.g. use of gravel materials); Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Maintain or provide vegetative buffers; Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) Stock piled materials necessary for 	

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>construction will be placed greater than 30 m away from WNH.</p> <ul style="list-style-type: none"> If vegetation clearing must occur during this period a qualified biologist will conduct nest searches prior to clearing 	
	Decommissioning – Access Road Removal (if requested by landowner), Rotor, Generator, Tower Disassembly, Foundation Removal	Project components are 1–5 m away from MBB 11, 13, 17, and 18	<ul style="list-style-type: none"> Disturbance of vegetation that has regenerated adjacent to access road and turbine during the operational period 	<ul style="list-style-type: none"> Increased vulnerability of the site to invasion by non-native species 	Localized within and immediately adjacent to disturbance	During Decommissioning Phase	Decommissioning Phase only	<ul style="list-style-type: none"> Disturbance to the smallest area possible No additional disturbance footprint than that which was created during construction Re-vegetate temporarily disturbed area with fast growing competitive nurse crop; Where possible, avoid decommissioning in core breeding period (April 15 to July 1) for waterfowl Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	No Residual Effect
Marsh Breed Bird Habitat 20 (Turbine, Underground Collector Circuit, Access Road, and Crane Path)									
MBB 20	Site Preparation – Vegetation Clearing, Grubbing and Grading	Within project location	<ul style="list-style-type: none"> Removal of a small portion of habitat along the edge of feature Localized disturbance/displacement/mortality of waterfowl 	<ul style="list-style-type: none"> Greater exposure of wildlife (marsh birds) to predation and parasitism Reduced recruitment 	<p>Minimal removal of MBB 20 habitat edge to accommodate access road</p> <p>Vegetation clearing where the access road will be installed.</p>	Once to facilitate construction of access road	During construction only	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away 	Minimal Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> ▪ Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired ▪ Minimize removal /disturbance of vegetation adjacent to the WNH habitat between the buildable area and habitat boundary ▪ Maximize the distance of all construction equipment used from the wetland edge; operate machinery in the project location areas only ▪ Develop and implement a stormwater management plan** which maintains pre-construction surface water flows to adjacent lands (quantity, quality, infiltrations, conveyance patterns and seasonality of water flow) ▪ Re-grade to preconstruction condition and re-vegetate using native plant species typical of the adjacent habitat ▪ Where possible, avoid site preparation in core breeding period (April 15 to July 1) for waterfowl ▪ If vegetation clearing must occur during this period a qualified biologist will conduct nest searches prior to clearing 	

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
	<u>Construction</u> – Access road	Within project location	<ul style="list-style-type: none"> Limited potential for increased erosion and sedimentation into MBB20 	<ul style="list-style-type: none"> Localized temporary Displacement of wildlife due to noise and vibration 	<p>Access road will be approximately 6.0 m wide and about 500-600 mm thick.</p> <p>Access road will connect turbine to municipal road</p>	During and immediately after construction as well as during storm events	1-2 months during construction	<ul style="list-style-type: none"> Design roads to promote infiltration (e.g. use of gravel materials); Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired Maintain or provide vegetative buffers; Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) Stock piled materials necessary for construction will be placed greater than 30 m away from WNH. 	
	<u>Decommissioning</u> – Access Road Removal (if	Within project location	<ul style="list-style-type: none"> Disturbance of vegetation that has regenerated 	<ul style="list-style-type: none"> Increased vulnerability of the site to invasion by non-native species 	Localized within and immediately adjacent to disturbance	During Decommissioning Phase	Decommissioning Phase only	<ul style="list-style-type: none"> Disturbance to the smallest area possible No additional disturbance footprint 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
	requested by landowner), Rotor, Generator, Tower Disassembly, Foundation Removal		adjacent to access road and turbine during the operational period					<p>than that which was created during construction</p> <ul style="list-style-type: none"> Re-vegetate temporarily disturbed area with fast growing competitive nurse crop; Where possible, avoid decommissioning in core breeding period (April 15 to July 1) for waterfowl Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	
Waterfowl Nesting Habitat 4 (Turbine, Underground Collector Circuit, Access Road and Crane Path)									
WNH 4	Site Preparation – Vegetation Clearing, Grubbing and Grading	Within project location	<ul style="list-style-type: none"> Removal of a small portion of habitat along the edge of feature Localized disturbance/displacement/mortality of waterfowl 	<ul style="list-style-type: none"> Greater exposure of wildlife (birds) to predation and parasitism Reduced recruitment 	<p>Minimal removal of WNA 4 habitat edge adjacent to accommodate T30</p> <p>Vegetation clearing where the trench and access road will be installed.</p>	Once to facilitate construction of turbine T30 and associated access road and collector circuit	During construction only	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired 	Minimal Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<ul style="list-style-type: none"> ▪ Minimize removal /disturbance of vegetation adjacent to the WNH habitat between the buildable area and habitat boundary ▪ Maximize the distance of all construction equipment used from the wetland edge; operate machinery in the project location areas only ▪ Develop and implement a stormwater management plan** which maintains pre-construction surface water flows to adjacent lands (quantity, quality, infiltrations, conveyance patterns and seasonality of water flow) ▪ Re-grade to preconstruction condition and re-vegetate using native plant species typical of the adjacent habitat ▪ Where possible, avoid site preparation in core breeding period (April 15 to July 1) for waterfowl ▪ If vegetation clearing must occur during this period a qualified biologist will conduct nest searches prior to clearing 	
	Construction – Access road	Within project location	<ul style="list-style-type: none"> ▪ Limited potential for increased erosion and sedimentation into WNH 4 	<ul style="list-style-type: none"> ▪ Localized temporary Displacement of wildlife due to noise and vibration 	<p>Access road will be approximately 6.0 m wide and about 500-600 mm thick.</p> <p>Access road will connect turbine to municipal road</p>	During and immediately after construction as well as during storm events	1-2 months during construction	<ul style="list-style-type: none"> ▪ Design roads to promote infiltration (e.g. use of gravel materials); ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff 	

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> ▪ Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired ▪ Maintain or provide vegetative buffers; ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) ▪ Stock piled materials necessary for construction will be placed greater than 30 m away from WNH. 	
	Decommissioning – Access Road Removal (if requested by landowner), Rotor, Generator, Tower Disassembly, Foundation Removal	Within project location	<ul style="list-style-type: none"> ▪ Disturbance of vegetation that has regenerated adjacent to access road and turbine during the operational period 	<ul style="list-style-type: none"> ▪ Increased vulnerability of the site to invasion by non-native species 	Localized within and immediately adjacent to disturbance	During Decommissioning Phase	Decommissioning Phase only	<ul style="list-style-type: none"> ▪ Disturbance to the smallest area possible ▪ No additional disturbance footprint than that which was created during construction ▪ Re-vegetate temporarily disturbed area with fast growing competitive nurse crop; ▪ Where possible, avoid decommissioning in core breeding period (April 15 to July 1) for waterfowl ▪ Construction area adjacent to sensitive natural features should be 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s)	
Waterfowl Nesting Habitat 11-14, 16, 17, 18, 20-24 (230 KV Overhead Transmission Line, 230 KV Transmission Line using HDD, 69 KV Overhead Transmission Line)									
WFN 11-14, 16, 17, 18, 20-24	Site Preparation – Vegetation Clearing, Grubbing and Grading	WNH 11-14, 16, 17, 21-24 Within 230 kV Line location WNH 20 within 69 kV Line location	<ul style="list-style-type: none"> ▪ Removal of a small portion of habitat along the edge of feature ▪ Limited potential for increased erosion and sedimentation into WNH 	<ul style="list-style-type: none"> ▪ Localized temporary Displacement of wildlife due to noise and vibration 	Vegetation clearing along sides of the rail line easement	Once during construction	During construction only	<ul style="list-style-type: none"> ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. ▪ Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired ▪ Minimize removal /disturbance of vegetation adjacent to the WNH habitat between the buildable area and habitat boundary ▪ Maximize the distance of all construction equipment used from the wetland edge; operate machinery in the project location areas only ▪ Develop and implement a stormwater management plan** 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>which maintains pre-construction surface water flows to adjacent lands (quantity, quality, infiltrations, conveyance patterns and seasonality of water flow)</p> <ul style="list-style-type: none"> ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) ▪ Re-grade to preconstruction condition and re-vegetate using native plant species typical of the adjacent habitat ▪ Where possible, avoid site preparation in core breeding period (April 15 to July 1) for waterfowl ▪ If vegetation clearing must occur during this period a qualified biologist will conduct nest searches prior to clearing 	
	Construction – Overhead 230 kV Line	WNH 11-14, 16, 17, 21-24 Within 230 kV Line location	<ul style="list-style-type: none"> ▪ Limited potential for increased erosion and sedimentation into WNH 	<ul style="list-style-type: none"> ▪ Localized temporary Displacement of wildlife due to noise and vibration 	Installation of new poles with foundations at the base	Once during construction	During construction only	<ul style="list-style-type: none"> ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. ▪ Erosion and sediment control 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired</p> <ul style="list-style-type: none"> Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	
	Construction–230 KV Power Line installation completed using horizontal directional drilling.	HDD will be used to install the 230 KV transmission line in parts of WNH 11, 12, 18, 23	<ul style="list-style-type: none"> Disturbance of wildlife from noise of equipment 	<ul style="list-style-type: none"> Localized temporary displacement of wildlife due to noise 	Horizontal directional drilling access/exit pits (10m x 10m) will need to be cleared on either side of where the HDD will be going.	Once during construction	During construction only	<ul style="list-style-type: none"> Where possible, horizontal directional drilling will be done to avoid physical damage to tree roots. Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) Develop frac-out plan for HDD areas 	No residual effects
	Construction – Overhead 69 kV Line	WNH 20 within 69 kV Line location	<ul style="list-style-type: none"> Limited potential for increased erosion and sedimentation into WNH 	<ul style="list-style-type: none"> Localized temporary Displacement of wildlife due to noise and vibration 	Installation of with foundations at the base	Once during construction	During construction only	<ul style="list-style-type: none"> Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody. Erosion and sediment control 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
								<p>structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired</p> <ul style="list-style-type: none"> Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	
Bat Maternal Roost Colony 1, 2 and 4 (Turbine, Underground Collector Circuit, Horizontal Directional Drilling, Access Road, and Crane Path)									
BMA 1, 2, and 4	Site Preparation – Vegetation Clearing, Grubbing and Grading	<p>BMA 1 and 4 is 5 m from project components.</p> <p>BMA 2 is 20m project components</p> <p>No BMA habitat is located in area to be cleared</p>	<ul style="list-style-type: none"> Encroachment of heavy machinery and equipment 	<ul style="list-style-type: none"> Localized temporary Displacement of bats due to noise and vibration 	Disturbance of forest edge by heavy machinery and equipment	Once during construction	Only during construction	<ul style="list-style-type: none"> Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	No Residual Effect
	Construction– Access Road/ Foundation Construction/Turbine Staging Area and Crane pad/ Underground Electrical Collector Circuit Installation	<p>BMA 1 and 4 is 5 m from project components.</p> <p>BMA 2 is 20m project components</p> <p>No BMA habitat is located in area to be cleared</p>	<ul style="list-style-type: none"> Encroachment of heavy machinery and equipment 	<ul style="list-style-type: none"> Localized temporary Displacement of bats due to noise and vibration 	Disturbance of forest edge by heavy machinery and equipment constructing project components	Once during construction	Only during construction	<ul style="list-style-type: none"> Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
	Construction–Crane Activity	BMA 1 and 4 is 5 m from project components. BMA 2 is 20m project components No BMA habitat is located in area to be cleared	<ul style="list-style-type: none"> Incidental contact and mortality of bats due to crane activity 	<ul style="list-style-type: none"> Localized temporary Displacement of bats due to noise and vibration Altered flight paths 	Site-specific and dependent on the density of bats during construction	During the period of time that the crane is erected and in use	Only during construction	<ul style="list-style-type: none"> Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	No Residual Effect
	Decommissioning – Access Road Removal (if requested by landowner), removal of turbine, tower and foundation	BMA 1 and 4 is 5 m from project components. BMA 2 is 20m project components No BMA habitat is located in area to be cleared	<ul style="list-style-type: none"> Encroachment of heavy machinery and equipment 	<ul style="list-style-type: none"> Localized temporary Displacement of bats due to noise and vibration 	Disturbance of forest edge by heavy machinery and equipment constructing project components	Once during construction	During construction only	<ul style="list-style-type: none"> Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) 	No Residual Effect
Open Country Breeding Bird Habitat 11									
OCBB 11	Construction – Overhead 230 kV Power Line	OCBB 11 is within the project easement area No other project components are within 120 m of the wildlife habitat unit	<ul style="list-style-type: none"> Loss of vegetation communities associated with open country breeding bird habitat Limited potential for increased erosion and sedimentation on adjacent lands 	<ul style="list-style-type: none"> Removal of breeding habitat leading to potential for reduced recruitment and reduction in feeding area Reduction of habitat size will reduce number of breeding pairs to be supported (i.e., reduction in number of territories) Localized disturbance/displacement/mortality of 	<p>Minimal removal of open previously undisturbed pasture, hayfields and meadows associated with Open Country Breeding Bird Habitat.</p> <p>Vegetation clearing is limited to areas where poles will be erected.</p> <p>Installation of new poles with foundations at the base</p>	Once during construction	During construction only	<ul style="list-style-type: none"> To the degree possible, the project location has been designed to reduce potential disturbance of Open Country Breeding Bird Habitat Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site 	Mitigated Effect during project lifespan.

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
				areas sensitive grassland birds				<p>preparation. Any stockpiled material will be stored more than 30m away from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> ▪ Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired ▪ Vegetate areas surrounding turbine with grassland species ▪ Stormwater management plan** implemented to prevent changes in soil moisture regimes and ensure re-vegetation of project location favours appropriate grassland species based on the moisture regime ▪ If vegetation clearing must occur during this period a qualified biologist will conduct nest searches prior to clearing 	
Generalized Candidate Significant Wildlife Habitat									
Generalized Candidate Significant Wildlife Habitat	<u>All project activities– Site Preparation including Vegetation clearing, grubbing and grading. Construction and installation of Access Road/Crane pad, Turbines, Underground Electrical Circuit /</u>	>0.1m; potential for various project components near suitable habitat	<ul style="list-style-type: none"> ▪ Potential for increased erosion and sedimentation on adjacent lands during vegetation clearing, grubbing and grading ▪ Removal of vegetation adjacent to Generalized Candidate Significant Wildlife Habitat 	<ul style="list-style-type: none"> ▪ Increased surface runoff from exposed soils ▪ Potential for change in water levels and quality of wetland area due to changes in adjacent land vegetation cover and/or topography ▪ Potential for depreciation of wetland quality ▪ Increased inputs of 	Localized within and immediately adjacent to disturbance	Once during construction	During construction only	<ul style="list-style-type: none"> ▪ Develop and implement an erosion and sediment control (ESC) plan* (based on standard construction practices) which will include silt fencing around work area if within 30m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation, construction, decommissioning. Any stockpiled material will be stored more than 	No Residual Effect

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
	230 and 69 KV Line, Crane Activity, Access Road Removal (if requested by landowner), Rotor, Generator, Tower Disassembly, Foundation			<p>nutrients and contaminants to wetland vegetation when wetland buffer is temporarily minimized during construction</p> <ul style="list-style-type: none"> ▪ Loss of species or avoidance of habitat by species due to adjacent construction disturbance 				<p>30m away from a wetland, woodland or waterbody.</p> <ul style="list-style-type: none"> ▪ Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired ▪ Minimize removal /disturbance of vegetation adjacent to wetland/aquatic habitat ▪ Maximize the distance of all construction equipment used from the wetland edge; operate machinery in the project location areas only ▪ Develop and implement a stormwater management plan which maintains pre-construction surface water flows to adjacent lands (quantity, quality, infiltrations, conveyance patterns and seasonality of water flow) ▪ Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing, or other similar boundary, to avoid impacting the adjacent feature(s) ▪ Re-grade to preconstruction condition and re-vegetate using native plant species typical of the adjacent habitat ▪ No heavy machinery traffic on sensitive slopes. 	

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
		>0.1m metres; potential for various project components near suitable habitat	<ul style="list-style-type: none"> Disturbance to wildlife, within the generalized candidate significant wildlife habitat during construction, and decommissioning Disturbance of wildlife from noise of equipment 	<ul style="list-style-type: none"> Localized temporary displacement of wildlife due to noise 	Minor due to setback from feature and frequency and duration of effect.	Short term during Construction Project Activities	During Construction	<ul style="list-style-type: none"> Confine disturbance to the smallest area possible Limit crane use to day time periods Where possible, horizontal directional drilling will be done to avoid physical damage to tree roots. Post construction speed limits to limit potential wildlife road mortalities 	No Residual Effect
		>0.1m metres; potential for various project components near suitable habitat	Damage or removal of vegetation adjacent to project location	<ul style="list-style-type: none"> Increased vulnerability of the cleared area to invasion by non-native species Localized temporary displacement of wildlife due to noise Disturbance/incidental mortality to wildlife species 	Minor due to setback from feature and frequency and duration of effect.	During Construction	During Construction	<ul style="list-style-type: none"> Where construction activity occurs within 30m of a naturally vegetated feature (ie a significant woodland or wetland), the construction area should be clearly delineated with protective fencing, such as silt fencing, Damaged trees should be pruned through implementation of proper arboricultural techniques 	No Residual Effect
		>0.1m metres; potential for various project components near suitable habitat	Soil or water contamination from chemical spills or accidental fluid release (ie oil, gasoline, grease, etc)	<ul style="list-style-type: none"> Localized temporary displacement of wildlife due to pollution Incidental injury and/or mortality of wildlife and vegetation 	Minor due to setback from feature and frequency and duration of effect	Sporadic during Construction	During Construction	<ul style="list-style-type: none"> Implement best management practices, Develop a spill response plan and train staff on appropriate procedures, Keep emergency spill kits on site, Vehicle washing, refueling stations, and chemical storage will all be located more than 30m from natural features or water bodies, Dispose of waste material by authorized and approved offsite vendors 	No Residual Effect
		>0.1m metres; potential for various project components near suitable habitat	Installation of impervious surfaces resulting in Increase surface run-off and changes in surface	<ul style="list-style-type: none"> Increased likelihood of erosion and sediment release Changes in water quality 	Anywhere within project location where access roads and turbines have been constructed	During periods of increased precipitation.	Project Lifespan	<ul style="list-style-type: none"> Maintain vegetative buffers around water bodies, Control quantity and quality of stormwater discharge using best management practices, 	No Residual Effects

Significant Natural Feature Affected by Activity	Project Phase & Activity within 120 m of Natural Feature	Distance to Nearest Project Component and Components within 120m	Potential Negative/Positive Effect(s)		Magnitude of Effect	Frequency of Effect	Duration of Effect	Mitigation Measures	Residual Effects
			Physical	Functional					
			water drainage					<ul style="list-style-type: none"> Minimize grading activities to maintain existing drainage patterns as much as possible 	

*All erosion and sediment control plans will be developed with the contractor and be based on Ontario Provincial Standard Specification 577 and the Greater Golden Horseshoe Area Conservation Authorities' Erosion and Sediment Control Guideline for Urban Construction (2006); ** All stormwater management plans will be designed using the Ministry of Environments' Stormwater Management Planning and Design Manual (2003).



9.1 Commitments to Offset Effects of Habitat Loss and Disturbance

In order to construct and operate the Dufferin Wind Power Project, two small areas of significant woodland edge vegetation is required to be removed. Woodland removals proposed will not affect the evaluation of the woodland as significant, the area of interior woodland habitat, nor will it fragment significant woodlands. The proponent intends to replace woodland form and function in suitable habitat in the general area of the project location. The proponent reserves the right to explore other effect offsetting opportunities that will have the same objectives and meet the same end as the above mentioned plan if a suitable agreement cannot be reached with a local landowner. Any methods for offsetting the effects of habitat loss and disturbance will be submitted to the MNR for approval prior to proceeding.