Environment

NextEra Energy Canada, ULC

Project Modifications Report – Goshen Wind Energy Centre

Prepared by:

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60155032

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Table of Contents

List of Figures

List of Tables

Appendices

Glossary of Terms

EIS ..... Environmental Impact Study
MNR ..... Ontario Ministry of Natural Resources
MTCS ..... Ministry of Tourism, Culture and Sport
NextEra ..... NextEra Energy Canada, ULC
O.Reg. 359/09 ..... Ontario Regulation 359/09
The Project ..... Goshen Wind Energy Centre
REA ..... Renewable Energy Approval

1. Introduction

Goshen Wind, Inc., a wholly owned subsidiary of NextEra Energy Canada, ULC (NextEra), is proposing to construct a wind energy project in the Municipalities of Bluewater and South Huron, Huron County, Ontario. The following sections of this report describe the proposed modifications to this Project and to corresponding potential environmental effects and mitigation measures. The report also summarizes the edits to be made to the draft Renewable Energy Approval (REA) reports that were circulated for this Project as part of the public and municipal consultation review.

Please note that this report has been prepared for the purpose of the final public meeting and is not a formal REA report. Therefore it will not be included in the final REA submission.

1.1 The Proponent

The Project will be owned and operated by Goshen Wind, Inc., a subsidiary of NextEra. NextEra's indirect parent company is NextEra Energy Resources, LLC. The proponent has not changed since the release of Draft REA Reports for review; however, the proponent's address has changed and is provided in the table below.

The primary contacts for the Project are as follows:

Project Proponent	Project Consultant
Nicole Geneau Project Director NextEra Energy Canada, ULC 390 Bay Street, Suite 1720 Toronto, ON M5H 2Y2 Phone:….1-416-364-9714 Email: .....Goshen.Wind@NextEraEnergy.com Website: ..www.NextEraEnergyCanada.com	Marc Rose Senior Environmental Planner AECOM 300-300 Town Centre Blvd. Markham, Ontario L3R 5Z6 Phone: .....905-477-8400 x388 Email:.....marc.rose@aecom.com

1.2 Project Study Area

The proposed Project is located in Huron County, within the Municipalities of Bluewater and South Huron (refer to Figure 2-1). The Project Study Area has not changed since the release of Draft REA Reports.

The following co-ordinates define the external boundaries of the Project Study Area:

Longitude	Latitude
-81.6753290	43.4155312
-81.3011931	43.3810955
-81.3303330	43.3036317
-81.7743607	43.2379854

2. Proposed Project Modifications

NextEra is proposing modifications to the Project design in response to landowner requests. These proposed project modifications are illustrated in Figure 2-1 and include the following:

- Realignment or relocation of the access roads to Turbines 5, 7, 23, 49, 66, 68, 75, and 77;
- Realignment or relocation of the access roads to three meteorological towers;
- Realignment or relocation of the collection lines to Turbines 7, 49, 68 and 75, and between Turbines 36, 37 and 64;
- Relocation of the laydown area for Turbine 4; and
- Relocation of the substation within the same parcel.

Tables 2-1 to 2-3 document the edits to the Draft REA reports made available for municipal and public review, specifically the Construction Plan Report, Design and Operations Report and Water Assessment and Water Body Report. Edits to the Project Description Report, which are not included in this report, reflect the edits to the other reports.

These modifications do not result in any new effects to those previously identified through the various studies conducted and documented in the Draft REA reports. Please note that the Natural Heritage Assessment and Environmental Impact Assessment Report Addendum, Stage 2 Archaeological Assessment Addendum, and the Heritage Assessment Addendum have been submitted to the Ministry of Natural Resources (MNR) and the Ministry of Tourism, Culture and Sport (MTCS), respectively, for review and sign-off.

Lake Huron

Zurich-Hensall Road
Main Street
Zurich-Hensall Road
King Street
Hensall Road
Perth 183 Road
Oak Road
Rogerville Road
Sararas Road
Pepper Road
Hurondale Road
MacDonald Road
Dashwood Road
Dashwood Road
Thames Road East
Thames Road
Huron Street
Huron Street East
Kirkton Road
Crediton Road
Crediton Road
Huron Park Road
South Road
Greenway Drive
Mount Carmel Drive
Adare Drive
Shadeview Road
Turnbull's Road
Gore Road
Gill Road
B Line
Mollard Line
Corbett Line
Grand Bend Line
Shipka Line
Centre Street
Bronson Line
Goshen Line
Blackbush Line
Parr Line
Ausable Line
Bell's Line
Airport Line
Babylon Line
Fansville Line
Blind Line
Goshen Line
Morrison Line
Victoria Drive
Coursey Line
Neil Road
Maguire Road
Brinsley Road
Cassidy Road
Creamery Road
Lieury Road
Salem Road
Cedar Swamp Road
Grand Bend Road
Bullock Road
Hutchinson Road
Hagmier Road
Blain Road
Haig Line
Greenway Road
Klondyke Road
Goosemarsh Line

Legend
- Wind Energy Centre Study Area
- Transmission Line Study Area
- Properties
- Modified 120 m Area of Investigation
- Submitted NHA and EIS 120 m Area of Investigation

Layout Modification
Infrastructure, Modification Type
- Collection Line, Added
- Collection line, No Change
- Collection Line, Removed
- Road, Added
- Roads, No Change
- Road, Removed
- Transmission Line, No Change

Turbines and Met Towers
- No Change

Modification to Disturbance Areas
Status
- Added
- Removed
- No Change

Metres
0 625 1,250 2,500
1:90,000
UTM Zone 17N, NAD 83

Goshen Wind Energy Centre
NHA Addendum Report

Project Location Layout Modifications

January 2013
Project 60155032

AECOM Figure 1

Path: N:\0-aecom\60155032\2010\Final\GISSpatial\MXDs\ReportMXDs\Change_report\GSH_NHA_Amend_Report\60155032_GSH_LayoutChangesOverview2_20120108.mxd

2.1 Edits to the Construction Plan Report

The edits made to the Construction Plan Report due to these project modifications and to comments received from review agencies including the MNR are summarized as follows:

Archaeology

- An increase in archaeological sites identified in the Stage 2 Archaeological Assessment and recommended for Stage 3 Archaeological Assessment.
- A greater number of displaced archaeological resources.

Cultural Heritage

- An increase in the number of structures identified as greater than 40 years old and with cultural heritage value or interest.

Natural Heritage

- Removal of significant valleylands as natural features requiring an Environmental Impact Study (EIS) due to a recent amendment to *O.Reg. 359/09*.
- Addition of the mitigation strategy to install sediment and erosion control fencing along edge of construction area if within 30 m of a woodland to address the potential effect of increased erosion and sedimentation resulting from clearing and grubbing, excavation, backfilling and stockpiling.
- Removal of the mitigation strategy to limit construction and decommissioning activities within 30 m of wetlands and woodlands during certain periods of the year for the potential effect of disturbance to or loss of Generalized Candidate Significant Wildlife Habitat as it was deemed unnecessary by the MNR.
- Addition of the mitigation strategy to identify locations of cavity trees and ensure clusters of cavity trees will remain present after tree removal is complete to address the potential effects on Bat Maternity Colonies and Red-headed Woodpecker habitat where vegetation removal is proposed.

Other Resources

- An increase in the distance between the Stephen landfill and proposed infrastructure; and
- An increase in the number of petroleum resources within 75 m of Project infrastructure based on a field review.

Table 2-1 documents the edits to the Construction Plan Report (September, 2012).

Table 2-1 Edits to the Construction Plan Report

Section / Page	Original Text	Revised Text
Section 3.1 / page 18	In 2011 and 2012, pedestrian surveys were conducted within the Project Study Area in support of the Stage 2 Archaeological Assessment, according to the 2011 *Standards and Guidelines for Consultant Archaeologists* issued by the Ontario Ministry of Tourism, Culture and Sport (MTCS) (Government of Ontario, 2011). A total of 61 archaeological sites were identified and 28 sites have been recommended for further Stage 3 archaeological assessment.	In 2011 and 2012, pedestrian surveys were conducted within the Project Study Area in support of the Stage 2 Archaeological Assessment, according to the 2011 *Standards and Guidelines for Consultant Archaeologists* issued by the Ontario Ministry of Tourism, Culture and Sport (MTCS) (Government of Ontario, 2011). A total of ~~61~~ 62 archaeological sites were identified and ~~28~~ 33 sites have been recommended for further Stage 3 archaeological assessment.
Section 3.1 / page 18	A Cultural Heritage Assessment (Golder, 2012) was also completed to identify built heritage and cultural heritage landscape resources related to the Euro-Canadian land use in the area dating prior to 1970. All work was carried out in accordance with the Ontario *Heritage Act*, the *Provincial Policy Statement*, and the *Environmental Assessment Act*. The report identified 98 structures (55 houses and 43 barns or barn complexes) as greater than 40 years old within the Project Study Area and as having general historical interest contributing to the character of the vernacular rural landscape. When applying the criteria set out in *Ontario Regulation 9/06*, 71 of these structures (35 houses and 36 barns) were determined to have cultural heritage value or interest. Following the evaluation of anticipated impacts, both direct and indirect, according to *InfoSheet #5* (Government of Ontario, 2006), no anticipated impacts were identified. As there are no anticipated impacts to the cultural heritage features, no further work is recommended.	A Cultural Heritage Assessment (Golder, 2012) was also completed to identify built heritage and cultural heritage landscape resources related to the Euro-Canadian land use in the area dating prior to 1970. All work was carried out in accordance with the Ontario *Heritage Act*, the *Provincial Policy Statement*, and the *Environmental Assessment Act*. The report identified ~~98~~ 135 structures (~~55~~ 67 houses and ~~43~~ 68 barns or barn complexes) as greater than 40 years old within the Project Study Area and as having general historical interest contributing to the character of the vernacular rural landscape. When applying the criteria set out in *Ontario Regulation 9/06*, ~~71~~ 99 of these structures (~~35~~ 49 houses and ~~36~~ 53 barns) were determined to have cultural heritage value or interest. Following the evaluation of anticipated impacts, both direct and indirect, according to *InfoSheet #5* (Government of Ontario, 2006), no anticipated impacts were identified. As there are no anticipated impacts to the cultural heritage features, no further work is recommended.
Section 3.1.1 / page 19	Disturbance or displacement of 28 archaeological resources identified through the Stage 2 Archaeological Assessment due to construction of project infrastructure.	Disturbance or displacement of ~~28~~ 33 archaeological resources identified through the Stage 2 Archaeological Assessment due to construction of project infrastructure.
Table 3-1 / page 19	**Potential Effect** Disturbance or displacement of 28 archaeological resources identified through Stage 2 Assessment due to construction of project infrastructure.	**Potential Effect** Disturbance or displacement of ~~28~~ 33 archaeological resources identified through Stage 2 Assessment due to construction of project infrastructure.
Table 3-1 / page 20	**Valleylands** One valleyland feature was determined to be significant and therefore included in the EIS.	**~~Valleylands~~** ~~One valleyland feature was determined to be significant and therefore included in the EIS.~~
Table 3-1 / page 20	**Significant Wildlife Habitat** The following significant wildlife habitats were confirmed or treated as significant within the 120 m Area of Investigation and within 120 m of qualifying project infrastructure, and were therefore included in the EIS. • Bat maternity colonies; • Amphibian woodland breeding habitat; • Habitat for plant species of conservation concern (multiple); • Habitat for bird species of conservation concern (Red-headed Woodpecker); • Waterfowl (Tundra Swan) stopover and staging areas; • Reptile hibernacula; • Turtle over-wintering habitat; and • Habitat for Insect Species of Conservation Concern (Azure Bluet).	**Significant Wildlife Habitat** The following significant wildlife habitats were evaluated and determined to be significant in or within the 120 m Area of Investigation and within 120 m of qualifying project infrastructure, and were therefore carried forward to the EIS. • 5 bat maternity colonies; • One colonially-nesting bird breeding habitat (tree/shrub); • 4 amphibian woodland breeding habitats; • 6 habitats for plant species of conservation concern (multiple); and, • One habitat for bird species of conservation concern (Red-headed Woodpecker). ~~The following significant wildlife habitats were confirmed or treated as significant within the 120 m Area of Investigation and within 120 m of qualifying project infrastructure, and were therefore included in the EIS.~~ ~~• Bat maternity colonies;~~ ~~• Amphibian woodland breeding habitat;~~ ~~• Habitat for plant species of conservation concern (multiple);~~ ~~• Habitat for bird species of conservation concern (Red-headed Woodpecker);~~ ~~• Waterfowl (Tundra Swan) stopover and staging areas;~~ ~~• Reptile hibernacula;~~ ~~• Turtle over-wintering habitat; and~~ ~~• Habitat for Insect Species of Conservation Concern (Azure Bluet).~~
Table 3-1 / page 20	**Significant Wildlife Habitat** N/A	**Significant Wildlife Habitat** The following features were treated as significant for the purpose of this submission and included in the EIS (in some cases, a determination as to whether the mitigation measures described herein will be applied will be made based on the outcome of pre-construction surveys): • 2 waterfowl stopover and staging areas (terrestrial); • 11 bat maternity colonies; • 2 turtle wintering areas; • 8 reptile hibernacula; • One deer wintering congregation area; • One deer movement corridor; and, • 4 amphibian woodland breeding habitats.
Table 3-1 / page 21	**Significant Wildlife Habitat** The following candidate significant wildlife habitats were identified within the 120 m Area of Investigation however not within 120 m of qualifying project infrastructure, and were therefore included in the EIS as Generalized Candidate Significant Wildlife Habitat: • Waterfowl nesting areas; • Reptile hibernacula; • Bat maternity colonies; • Amphibian woodland breeding habitat; • Amphibian wetland breeding habitat; • Mature forest stands (numerous); • Rare vegetation communities; • Turtle nesting habitat; • Turtle overwintering habitat; • Woodland raptor nesting habitat; • Colonial-nesting Bird Breeding Habitat (Tree/Shrub);	**Significant Wildlife Habitat** The following candidate significant wildlife habitats were identified within the 120 m Area of Investigation however not within 120 m of qualifying project infrastructure, and were therefore included in the EIS as Generalized Candidate Significant Wildlife Habitat: • Waterfowl nesting areas; • Reptile hibernacula; • Bat maternity colonies; • Amphibian woodland breeding habitat; • Amphibian wetland breeding habitat; • Habitats of plant species of conservation concern (numerous); • Habitat of bird species of conservation concern (numerous); • Mature forest stands; • Rare vegetation communities; • Turtle nesting area; • Turtle wintering areas;

Section / Page	Original Text	Revised Text
	• Habitat for area sensitive species: interior forest breeding birds; • Seeps and springs; and • Habitats of species of conservation concern (numerous).	• Woodland raptor nesting habitat; • Woodland area-sensitive bird breeding habitat; • Terrestrial crayfish habitat; and • Seeps and springs. ~~The following candidate significant wildlife habitats were identified within the 120 m Area of Investigation however not within 120 m of qualifying project infrastructure, and were therefore included in the EIS as Generalized Candidate Significant Wildlife Habitat:~~ • ~~Waterfowl nesting areas;~~ • ~~Reptile hibernacula;~~ • ~~Bat maternity colonies;~~ • ~~Amphibian woodland breeding habitat;~~ • ~~Amphibian wetland breeding habitat;~~ • ~~Mature forest stands (numerous);~~ • ~~Rare vegetation communities;~~ • ~~Turtle nesting habitat;~~ • ~~Turtle overwintering habitat;~~ • ~~Woodland raptor nesting habitat;~~ • ~~Colonial-nesting Bird Breeding Habitat (Tree/Shrub);~~ • ~~Habitat for area sensitive species: interior forest breeding birds;~~ • ~~Seeps and springs; and~~ • ~~Habitats of species of conservation concern (numerous).~~
Table 3-2 / page 25	**Potential Effect** • Increased erosion and sedimentation resulting from clearing and grubbing, excavation, backfilling and stockpiling. **Mitigation Strategy** • Develop and implement an erosion and sediment control plan before commencement of construction as per Ontario Provincial Standard Specifications (OPSD 219.130). • Utilize erosion blankets, erosion control fencing, straw bales, siltation bags, etc. For construction activities within 30 m of a wetland, woodland or water body, to mitigate potential excessive erosion and sedimentation. Extra erosion and sediment control materials should be kept on hand, (i.e., heavy duty silt fencing, straw bales). • Keep sediment and erosion control measures in place until disturbed areas have been stabilized (i.e., re-vegetated). • Schedule grading within 30 m of a watercourse or wetland to avoid times of high runoff volumes (spring and fall), wherever possible. Temporarily suspend work if high runoff volume is noted or excessive flows of sediment discharges occur until mitigation measures are in place. • Re-vegetate temporary roads to pre-construction conditions as soon as possible after construction activities are complete using species native to Ontario in naturally vegetated areas. **Monitoring Plan and Contingency Measures** • Monitor on-site conditions (i.e., erosion and sediment control, spills, flooding, etc.) where construction occurs within 30 m of a feature on the following basis: ▪ Weekly during active construction periods; ▪ Prior to, during and post forecasted large rainfall events (>20 millimetres in 24 hours) or significant snowmelt events (i.e., spring freshet); ▪ Daily during extended rain or snowmelt periods; ▪ Monthly during inactive construction periods, where the site is left alone for 30 days or longer. **Contingency Measures:** • Suspend work if excessive flows of sediment discharges occur until additional mitigation measures are in place.	**Potential Effect** • Increased erosion and sedimentation resulting from clearing and grubbing, excavation, backfilling and stockpiling. **Mitigation Strategy** • Develop and implement an erosion and sediment control plan before commencement of construction as per Ontario Provincial Standard Specifications (OPSD 219.130). • Utilize erosion blankets, erosion control fencing, straw bales, siltation bags, etc. For construction activities within 30 m of a wetland, woodland or water body, to mitigate potential excessive erosion and sedimentation. Extra erosion and sediment control materials should be kept on hand, (i.e., heavy duty silt fencing, straw bales). • Check that erosion control tools are in good repair and properly functioning prior to conducting daily work and re-install or repair as required prior to commencing daily construction activities. • Keep sediment and erosion control measures in place until disturbed areas have been stabilized (i.e., re-vegetated). • To avoid sedimentation in wetlands and watercourses, schedule grading within 30 m of a watercourse or wetland to avoid times of high runoff volumes, wherever possible. Temporarily suspend work if high runoff volume is noted or excessive flows of sediment discharges occur until contingency measures are in place. • Re-vegetate temporary roads to pre-construction conditions as soon as possible after construction activities are complete using species native to Ontario in naturally vegetated areas. **Monitoring Plan and Contingency Measures** • Monitor on-site conditions (i.e., erosion and sediment control, spills, flooding, etc.) where construction occurs within 30 m of a feature on the following basis: • Weekly during active construction periods; • Prior to, during and post forecasted large rainfall events (>20 millimetres in 24 hours) or significant snowmelt events (i.e., spring freshet); • Daily during extended rain or snowmelt periods; • Monthly during inactive construction periods, where the site is left alone for 30 days or longer. • Contingency Measures: • Suspend work if excessive flows of sediment discharges occur until additional mitigation measures are in place (e.g., install the extra erosion and sediment control materials kept on site, such as heavy duty silt fencing, straw bales, etc.). ~~**Potential Effect**~~ • ~~Increased erosion and sedimentation resulting from clearing and grubbing, excavation, backfilling and stockpiling.~~ ~~**Mitigation Strategy**~~ • ~~Develop and implement an erosion and sediment control plan before commencement of construction as per Ontario Provincial Standard Specifications (OPSD 219.130).~~ • ~~Utilize erosion blankets, erosion control fencing, straw bales, siltation bags, etc. For construction activities within 30 m of a wetland, woodland or water body, to mitigate potential excessive erosion and sedimentation. Extra erosion and sediment control materials should be kept on hand, (i.e., heavy duty silt fencing, straw bales).~~ • ~~Keep sediment and erosion control measures in place until disturbed areas have been stabilized (i.e., re-vegetated).~~ • ~~Schedule grading within 30 m of a watercourse or wetland to avoid times of high runoff volumes (spring and fall), wherever possible. Temporarily suspend work if high runoff volume is noted or excessive flows of sediment discharges occur until mitigation measures are in place.~~ • ~~Re-vegetate temporary roads to pre-construction conditions as soon as possible after construction activities are complete using species native to Ontario in naturally vegetated areas.~~

Section / Page	Original Text	Revised Text

		~~Monitoring Plan and Contingency Measures~~
		• ~~Monitor on-site conditions (i.e., erosion and sediment control, spills, flooding, etc.) where construction occurs within 30 m of a feature on the following basis:~~
		  ▪ ~~Weekly during active construction periods;~~
		  ▪ ~~Prior to, during and post forecasted large rainfall events (>20 millimetres in 24 hours) or significant snowmelt events (i.e., spring freshet);~~
		  ▪ ~~Daily during extended rain or snowmelt periods;~~
		  ▪ ~~Monthly during inactive construction periods, where the site is left alone for 30 days or longer.~~
		~~Contingency Measures:~~
		  ▪ ~~Suspend work if excessive flows of sediment discharges occur until additional mitigation measures are in place.~~

Table 3-2 / page 25	**Potential Effect** • Removal/disturbance of topsoil and increased soil compaction from manoeuvring of heavy machinery, excavation and backfilling. **Mitigation Strategy** • Minimize vehicle traffic on exposed soils, avoid compacting or other hardening of natural ground surface, and avoid the movement of heavy machinery on areas with sensitive slopes. • Where feasible, lighter vehicles and lighter machinery should be used in and around natural areas. • Any vehicles used within natural areas should use wide-based tires. Tracked vehicles should be avoided.	**Potential Effect** • Removal/disturbance of topsoil and increased soil compaction from manoeuvring of heavy machinery, excavation and backfilling. **Mitigation Strategy** • ~~Minimize vehicle traffic on exposed soils, avoid compacting or other hardening of natural ground surface, and avoid the movement of heavy machinery on areas with sensitive slopes.~~ • Where feasible, lighter vehicles and lighter machinery should be used in and around natural areas. • Any vehicles used within natural areas should use wide-based tires. Tracked vehicles should be avoided.
Table 3-2 / page 26	**Potential Effect** • Damage to vegetation while operating equipment. **Mitigation Strategy** • Keep vegetation removal to a minimum and limited to non-significant habitats (e.g., hedgerows). • For roadside collection line routes, vegetation removal (if any) will be kept to a minimum and will be limited to the road right-of-way. • Where construction is to occur within 30 m of natural features, install and maintain protective fencing to clearly define the construction area and prevent accidental damage to vegetation. • Trees at risk of being damaged during construction should be pruned through implementation of proper arboricultural techniques. • Where excavation for construction of access roads or collection lines is conducted within the rooting zone of trees (e.g., within 5 m of the dripline), proper root pruning measures should be implemented to protect tree roots. **Monitoring Plan and Contingency Measures** • Undertake monthly site inspections to ensure that only specified trees are removed, protective fencing is intact and that there is no damage caused to the remaining trees during construction. **Contingency Measures:** • In the event that trees are damaged during construction, damaged trees should be pruned through implementation of proper arboricultural techniques, under supervision of an Arborist or Forester. • Consultation with MNR to determine additional contingency measures if necessary.	**Potential Effect** Damage to vegetation while operating equipment. **Mitigation Strategy** • Keep vegetation removal to a minimum and limited to non-significant habitats (e.g., hedgerows), <u>where possible</u>. • For roadside collection line routes, vegetation removal (if any) will be kept to a minimum and will be limited to the road right-of-way. • Where construction is to occur within 30 m of natural features, install and maintain protective fencing to clearly define the construction area and prevent accidental damage to vegetation <u>or intrusion into the natural feature</u>. • Where excavation for construction of access roads or collection lines is conducted <u>adjacent to the dripline of woodlands (or within the dripline for collection line installation within road right-of-ways), implement proper root pruning measures to protect tree roots.</u> • ~~Keep vegetation removal to a minimum and limited to non-significant habitats (e.g., hedgerows).~~ • ~~For roadside collection line routes, vegetation removal (if any) will be kept to a minimum and will be limited to the road right-of-way.~~ • ~~Where construction is to occur within 30 m of natural features, install and maintain protective fencing to clearly define the construction area and prevent accidental damage to vegetation.~~ • ~~Where construction is to occur within 30 m of natural features, install and maintain protective fencing to clearly define the construction area and prevent accidental damage to vegetation.~~ • ~~Trees at risk of being damaged during construction should be pruned through implementation of proper arboricultural techniques.~~ • ~~Where excavation for construction of access roads or collection lines is conducted within the rooting zone of trees (e.g., within 5 m of the dripline), proper root pruning measures should be implemented to protect tree roots.~~ **Monitoring Plan and Contingency Measures** • Undertake monthly site inspections to ensure that only specified trees are removed, protective fencing is intact and that there is no damage caused to the remaining trees during construction. **Contingency Measures:** • <u>Repair protective fencing if damaged.</u> • In the event that trees are damaged during construction, damaged trees should be pruned through implementation of proper arboricultural techniques, under supervision of an Arborist or Forester. • <u>If accidental damage to habitat occurs, habitat restoration will occur using suitable native species.</u> • Consultation with MNR to determine additional contingency measures if necessary.
Table 3-2 / page 27	**Potential Effect** • Disturbance to or loss of wildlife habitat, including active bird nests. **Mitigation Strategy** • Schedule vegetation removal outside of breeding season (May 1 to July 30) where possible. • Undertake active nest surveys if clearing of vegetation must take place during this period. • Construction and decommissioning activities within 30 m of woodlands or wetlands should occur during daylight hours (7:00 am to 7:00 pm), wherever possible. **Monitoring Plan and Contingency Measures** • Undertake monthly site inspections to ensure that only specified trees are removed, protective fencing is intact and that there is no damage caused to the remaining trees during construction. • **Contingency Measures:** • In the event that trees are damaged during construction, damaged trees should be pruned through implementation of proper arboricultural techniques, under supervision of an Arborist or Forester. • Consultation with MNR to determine additional contingency measures if necessary.	**Potential Effect** Disturbance to or loss of wildlife habitat, including active bird nests. **Mitigation Strategy** • Schedule vegetation removal outside of breeding season (May 1 to July 30) where possible. • Undertake active nest surveys prior to construction if clearing of vegetation must take place during this period. • <u>Only apply herbicides (if required) when wind speeds are low and no significant precipitation is expected (does not apply to agricultural practices).</u> • <u>Only use herbicides (if required) approved for use adjacent to water bodies, riparian buffers, or woodland edges (does not apply to agricultural practices).</u> • ~~Schedule vegetation removal outside of breeding season (May 1 to July 30) where possible.~~ • ~~Undertake active nest surveys if clearing of vegetation must take place during this period.~~ • ~~Construction and decommissioning activities within 30 m of woodlands or wetlands should occur during daylight hours (7:00 am to 7:00 pm), wherever possible.~~ **Monitoring Plan and Contingency Measures** • Undertake monthly site inspections to ensure that only specified trees are removed, protective fencing is intact and that there is no damage caused to the remaining trees during construction.

Section / Page	Original Text	Revised Text
		Contingency Measures: • In the event that trees are damaged during construction, damaged trees should be pruned through implementation of proper arboricultural techniques, under supervision of an Arborist or Forester. ▪ If accidental damage to habitat occurs, habitat restoration will occur using suitable native species. ▪ Consultation with MNR to determine additional contingency measures if necessary.
Table 3-2 / page 28	**Potential Effect** • Soil / water contamination by oils, gasoline, grease and other materials from spills during directional drilling. **Mitigation Strategy** • Conduct all drilling by licensed drillers in accordance with Regulation 903 under Ontario Water Resources Act, R.S.O. 1990. • Develop and implement emergency spills plan outlining steps to contain any chemicals or to avoid contamination of adjacent features. • Collect drill cuttings as they are generated and place in a soil bin or bag for off-site disposal. • Ensure drill depth is at an appropriate depth below feature to reduce the risk of a "frac-out". • Install protective fencing around vegetation to prevent accidental damage.	**Potential Effect** • Soil / water contamination by oils, gasoline, grease and other materials from spills during directional drilling. **Mitigation Strategy** • Conduct all drilling by licensed drillers in accordance with Regulation 903 under Ontario Water Resources Act, R.S.O. 1990. • Develop Frac-Out" Contingency Plan ~~and implement emergency spills plan~~ outlining steps to contain any chemicals or to avoid contamination of adjacent features. • Collect drill cuttings as they are generated and place in a soil bin or bag for off-site disposal. • Ensure drill depth is at an appropriate depth below feature to reduce the risk of a "frac-out". Drilling depth will be determined based on site-specific geotechnical conditions and will take into account soil type, soil variances and porosity, as derived from exploratory borehole information. • Install protective fencing around vegetation to prevent accidental damage.
Table 3-2 / page 28	**Potential Effect** • Changes in surface water drainage patterns. • Obstruction of lateral flows in surface water to wetlands. **Mitigation Strategy** • Minimize changes in land contours and natural drainage; maintain timing and quantity of flows. • Any grading of lands adjacent to natural features should match existing grades at the identified set-back, or buffer from the features.	**Potential Effect** • Changes in surface water drainage patterns. • Obstruction of lateral flows in surface water to wetlands. **Mitigation Strategy** • Minimize changes in land contours and natural drainage; maintain timing and quantity of flows. • Any grading of lands adjacent to natural features should match existing grades at the identified set-back, or buffer from the features. • Control quantity and quality of stormwater discharge using best management practices (e.g., use of a permeable surface for access roads, complete a Stormwater Pollution Prevention Study to address any potential effects associated with stormwater runoff for the Operations and Maintenance Building prior to construction).
Table 3-3 / page 30	**Potential Effect** • Accidental intrusion resulting in damage to vegetation or wildlife habitat form or function within significant wetlands, woodlands and / or wildlife habitat. **Performance Objectives** • Minimize potential for accidental intrusion into significant features. **Mitigation Strategy** • Maintain 30 m setback from significant wetlands and woodlands, where possible or a minimum 5 m setback (measured from the dripline of trees or wetland edge if trees are absent). • Install and maintain protective fencing to clearly define the construction area and prevent accidental damage to vegetation. • Clearly delineate habitat boundaries using protective fencing to ensure that construction activities occur outside the habitat boundaries. **Residual Effects** • Damage to vegetation or wildlife habitat minimized through application of mitigation measures. • Low likelihood and limited magnitude of effect as a result. **Monitoring Plan and Contingency Measures** • Undertake monthly site inspections to ensure that protective fencing is intact and that there is no damage caused during construction. **Contingency Measures:** • In the event that trees are damaged during construction, damaged trees should be pruned through implementation of proper arboricultural techniques, under supervision of an Arborist or Forester.	**Potential Effect** • Accidental intrusion into natural features resulting in damage to the form or function of significant wetlands and / or woodlands. • ~~Accidental intrusion resulting in damage to vegetation or wildlife habitat form or function within significant wetlands, woodlands and / or wildlife habitat.~~ **Performance Objectives** • Avoid accidental intrusion into significant features. ~~Minimize potential for accidental intrusion into significant features.~~ **Mitigation Strategy** • Maintain 30 m setback from significant features, where possible, or a minimum 5 m setback (measured from the dripline of trees or feature edge if trees are absent). • Limit vegetation removal for the transmission line to the existing road right-of-way at WET-053. • Establish 30 m setback to significant wetlands from new transmission line pole locations, where possible. • Where construction occurs within 30 m, install and maintain protective fencing to clearly define the construction area and prevent accidental damage to vegetation. • ~~Maintain 30 m setback from significant wetlands and woodlands, where possible or a minimum 5 m setback (measured from the dripline of trees or wetland edge if trees are absent).~~ • Install ~~and maintain protective fencing to clearly define the construction area and prevent accidental damage to vegetation.~~ • ~~Clearly delineate habitat boundaries using protective fencing to ensure that construction activities occur outside the habitat boundaries.~~ **Residual Effects** • Accidental intrusion will be avoided through clear delineation of boundaries and protective fencing. • Negligible residual effects. • ~~Damage to vegetation or wildlife habitat minimized through application of mitigation measures.~~ • Low ~~likelihood and limited magnitude of effect as a result.~~ **Monitoring Plan and Contingency Measures** • Undertake weekly site inspection by an Environmental Monitor to ensure that protective fencing is intact and that there is no damage caused during construction. **Contingency Measures:** • Repair protective fencing if damaged. • Any damaged trees will be pruned through the implementation of proper arboricultural techniques, under supervision of an Arborist or Forester. • If any wetland/woodland vegetation is damaged, habitat restoration will occur utilizing suitable native species. • ~~Undertake monthly site inspections to ensure that protective fencing is intact and that there is no damage caused during construction.~~

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		~~• **Contingency Measures:**~~ • ~~In the event that trees are damaged during construction, damaged trees should be pruned through implementation of proper arboricultural techniques, under supervision of an Arborist or Forester.~~
Table 3-3 / page 30	**N/A**	**Potential Effect** • Accidental intrusion into bat maternity colonies causing habitat damage. **Performance Objectives** • Avoid accidental intrusion into natural features. **Mitigation Strategy** • Clearly delineate construction boundaries where construction will occur within 10 m using protective fencing to ensure that construction activities occur outside the habitat boundaries. **Residual Effects** • Habitat damage will be avoided through clear delineation of boundaries and protective fencing. • Negligible residual effects. **Monitoring Plan and Contingency Measures** • Undertake weekly site inspections by an Environmental Monitor to ensure that protective fencing is intact and that there is no damage caused during construction. **Contingency Measures:** • Repair protective fencing if damaged. • Any damaged trees will be pruned through implementation of proper arboricultural techniques, under supervision of an Arborist or Forester. • If accidental damage to habitat occurs, habitat restoration will occur using suitable native species.
Table 3-3 / page 30	**N/A**	**Potential Effect** • Accidental intrusion into turtle wintering areas causing habitat damage. **Performance Objectives** • Avoid accidental intrusion into habitat. **Mitigation Strategy** • Clearly delineate habitat boundaries within 10 m of the habitat boundary using protective fencing to ensure that construction activities occur outside the habitat boundaries. **Residual Effects** • Disruption to turtle wintering habitats avoided through habitat delineation and fencing. • Negligible residual effects. **Monitoring Plan and Contingency Measures** • Undertake weekly site inspections by an Environmental Monitor to ensure that protective fencing is intact and that there is no damage caused during construction. **Contingency Measures:** • Repair protective fencing if damaged. • Consultation with MNR to determine additional contingency measures if necessary.
Table 3-3 / page 30	**N/A**	**Potential Effect** • Accidental intrusion into reptile hibernacula causing habitat damage. **Performance Objectives** • Avoid accidental intrusion into natural feature. • Avoid damage to rock pile(s). **Mitigation Strategy** • Clearly delineate habitat boundaries where construction will occur within 10 m using protective fencing to ensure that construction activities occur outside the natural feature and avoid direct disturbance to the feature (e.g., rock pile). **Residual Effects** • Habitat damage will be avoided and mortality minimized through clear habitat delineation. • Negligible residual effects. **Monitoring Plan and Contingency Measures** • Undertake weekly site inspections by an Environmental Monitor to ensure that protective fencing is intact and that there is no damage caused during construction.

Section / Page	Original Text	Revised Text
		Contingency Measures: • Repair protective fencing if damaged. • Consultation with MNR to determine additional contingency measures if necessary.
Table 3-3 / page 31	**N/A**	**Potential Effect** • Risk of soil or water contamination resulting from accidental spills of fuel, etc. **Performance Objectives** • Minimize soil or water contamination. **Mitigation Strategy** • Develop and implement emergency spills plan outlining steps to contain any chemicals or to avoid contamination of adjacent wetland features. **Residual Effects** • Soil and water contamination minimized through application of mitigation measures. • Low likelihood and limited magnitude of effect as a result. **Monitoring Plan and Contingency Measures** • Contractor to conduct routine inspections of construction equipment for leaks / spills. • Develop an emergency spills plan. **Contingency Measures**: • In the event of a spill, immediately stop all work until the spill is cleaned up. • Notify MOE's Spills Action Centre of any leaks or spills. • Assess and remediate affected soils and water by using spill kit kept on site. • If a spill enters a wetland, collect and analyze water samples for appropriate parameters. • Monitor daily until cleanup is completed.
Table 3-3 / page 31	**N/A**	**Potential Effect** • Increased dust accumulation on peripheral wetland vegetation, causing damage to wetland plants. **Performance Objectives** • Minimize dust accumulation on peripheral vegetation. **Mitigation Strategy** • Use of water as a dust suppressant within the construction footprint along areas where construction is located within 5 m of a significant wetland. **Residual Effects** • Accumulation of dust on peripheral vegetation will be minimized through the application of mitigation measures. • Some residual effects of limited magnitude likely. **Monitoring Plan and Contingency Measures** • Daily monitoring of areas where active construction is occurring within 5 m of a significant wetland by Environmental Monitor. **Contingency Measures**: • If dust accumulation on wetland plants occurs, spray down plants with water.

Table 3-3 / page 32	**Potential Effect**
	• Increased erosion and sedimentation resulting from clearing and grubbing, excavation, backfilling and stockpiling
	
	Monitoring Plan and Contingency Measures
	• Monitor on-site conditions (i.e., erosion and sediment control, spills, flooding, etc.) where construction occurs within 30 m of a feature on the following basis:
	  • Weekly during active construction periods;
	  • Prior to, during and post forecasted large rainfall events (>20 millimetres in 24 hours) or significant snowmelt events (i.e., spring freshet);
	  • Daily during extended rain or snowmelt periods;
	  • Monthly during inactive construction periods, where the site is left alone for 30 days or longer.
	
	Contingency Measures:
	• Suspend work if excessive flows of sediment discharges occur until additional mitigation measures are in place.
	• For construction of the transmission line at Azure Bluet Habitat Feature, Turtle Over-Wintering Habitat Feature and Amphibian Woodland Breeding Habitat Features:
	• Monitor condition of the pond during on-site monitoring events at frequency described above.
	• Analyze water samples for general chemistry (e.g., temperature, pH, dissolved oxygen, and conductivity), suspended solids, turbidity,
		Potential Effect
		• Increased erosion and sedimentation resulting from clearing and grubbing, excavation, backfilling and stockpiling near significant wetlands and/or woodlands.
		
		Monitoring Plan and Contingency Measures
		• Monitor on-site conditions (i.e., erosion and sediment control, flooding, etc.) where construction occurs within 5 m of a wetland feature by an Environmental Monitor on the following basis:
		  • Daily during active construction periods;
		  • Prior to, during and post forecasted large rainfall events (>20 millimetres in 24 hours) or significant snowmelt events (i.e., spring freshet);
		  • Daily during extended rain or snowmelt periods;
		  • Monthly during inactive construction periods, where the site is left alone for 30 days or longer.
		• Monitor on-site conditions (i.e., erosion and sediment control, spills, flooding, etc.) where construction occurs within 30 m of a wetland or woodland feature on the following basis:
		  • Weekly during active construction periods;
		  • Prior to, during and post forecasted large rainfall events (>20 millimetres in 24 hours) or significant snowmelt events (i.e., spring freshet);
		  • Daily during extended rain or snowmelt periods;

Section / Page	Original Text	Revised Text
	nutrients and total metals (e.g., copper, iron, zinc and aluminum) during and after construction. **Contingency Measures:** • If negative effects to the pond are detected, corrective measures will be taken, to be determined through consultation with MNR. These habitat compensation or restoration measures will be described in a Compensation Plan, to be submitted to MNR.	• Monthly during inactive construction periods, where the site is left alone for 30 days or longer. **Contingency Measures:** • Suspend work if excessive flows of sediment discharges occur until additional mitigation measures are in place (e.g., installation of extra erosion and sediment control materials kept on site such as silt fencing, straw bales, etc.). • ~~Monitor on-site conditions (i.e., erosion and sediment control, spills, flooding, etc.) where construction occurs within 30 m of a feature on the following basis:~~ • ~~Weekly during active construction periods;~~ • ~~Prior to, during and post forecasted large rainfall events (>20 millimetres in 24 hours) or significant snowmelt events (i.e., spring freshet);~~ • ~~Daily during extended rain or snowmelt periods;~~ • ~~Monthly during inactive construction periods, where the site is left alone for 30 days or longer.~~ • ~~**Contingency Measures:**~~ • ~~Suspend work if excessive flows of sediment discharges occur until additional mitigation measures are in place.~~ • ~~For construction of the transmission line at Azure Bluet Habitat Feature, Turtle Over-Wintering Habitat Feature and Amphibian Woodland Breeding Habitat Features:~~ • ~~Monitor condition of the pond during on-site monitoring events at frequency described above.~~ • ~~Analyze water samples for general chemistry (e.g., temperature, pH, dissolved oxygen, and conductivity), suspended solids, turbidity, nutrients and total metals (e.g., copper, iron, zinc and aluminum) during and after construction.~~ ~~**Contingency Measures:**~~ • ~~If negative effects to the pond are detected, corrective measures will be taken, to be determined through consultation with MNR. These habitat compensation or restoration measures will be described in a Compensation Plan, to be submitted to MNR.~~
Table 3-3 / page 33	**Potential Effect** • Soil/water contamination resulting from accidental spills. **Performance Objectives** • Minimize soil/water contamination. **Mitigation Strategy** • Develop and implement emergency spills plan outlining steps to contain any chemicals or to avoid contamination of adjacent wetland features. **Residual Effects** • Water contamination minimized through application of mitigation measures. • Low likelihood and limited magnitude of effect as a result. **Monitoring Plan and Contingency Measures** • Conduct daily inspections of construction equipment for leaks / spills. • Implement contingency measures in the event of a spill. **Contingency Measures:** • In the event of a spill, immediately stop all work until the spill is cleaned up. • Install a spill collection pad for refuelling and maintenance. • Notify MOE's Spills Action Centre of any leaks or spills. • Assess and remediate affected soils and water by using spill kit kept on site. • For spills near wetlands, analyze water samples for general chemistry (e.g., temperature, pH, dissolved oxygen, and conductivity), suspended solids, turbidity, nutrients and total metals (e.g., copper, iron, zinc and aluminum). • Monitor daily to ensure proper cleanup is completed.	~~**Potential Effect**~~ • ~~Soil/water contamination resulting from accidental spills.~~ ~~**Performance Objectives**~~ • ~~Minimize soil/water contamination.~~ ~~**Mitigation Strategy**~~ • ~~Develop and implement emergency spills plan outlining steps to contain any chemicals or to avoid contamination of adjacent wetland features.~~ ~~**Residual Effects**~~ • ~~Water contamination minimized through application of mitigation measures.~~ • ~~Low likelihood and limited magnitude of effect as a result.~~ ~~**Monitoring Plan and Contingency Measures**~~ • ~~Conduct daily inspections of construction equipment for leaks / spills.~~ • ~~Implement contingency measures in the event of a spill.~~ ~~**Contingency Measures:**~~ • ~~In the event of a spill, immediately stop all work until the spill is cleaned up.~~ • ~~Install a spill collection pad for refuelling and maintenance.~~ • ~~Notify MOE's Spills Action Centre of any leaks or spills.~~ • ~~Assess and remediate affected soils and water by using spill kit kept on site.~~ • ~~For spills near wetlands, analyze water samples for general chemistry (e.g., temperature, pH, dissolved oxygen, and conductivity), suspended solids, turbidity, nutrients and total metals (e.g., copper, iron, zinc and aluminum).~~ • ~~Monitor daily to ensure proper cleanup is completed.~~
Table 3-3 / page 33	**Potential Effect** • Increased dust accumulation on peripheral wetland vegetation, causing damage to wetland plants resulting from construction of access roads where the minimum 5 m setback from dripline will be applied to Significant Wetland Features. **Performance Objectives** • Minimize dust accumulation on peripheral vegetation. **Mitigation Strategy** • Use of water as a dust suppressant along areas where construction is located within 5 m of a significant wetland. **Residual Effects** • Accumulation of dust on peripheral vegetation will be minimized through the application of mitigation measures. • Residual effects likely however limited magnitude of effect as a result given the application of mitigation measures. **Monitoring Plan and Contingency Measures** • Daily monitoring of areas where active construction is occurring within 5 m of a significant wetland by Environmental Monitor. **Contingency Measures:** • If dust accumulation on wetland plants occurs, spray down plants with water.	~~**Potential Effect**~~ • ~~Increased dust accumulation on peripheral wetland vegetation, causing damage to wetland plants resulting from construction of access roads where the minimum 5 m setback from dripline will be applied to Significant Wetland Features.~~ ~~**Performance Objectives**~~ • ~~Minimize dust accumulation on peripheral vegetation.~~ ~~**Mitigation Strategy**~~ • ~~Use of water as a dust suppressant along areas where construction is located within 5 m of a significant wetland.~~ ~~**Residual Effects**~~ • ~~Accumulation of dust on peripheral vegetation will be minimized through the application of mitigation measures.~~ • ~~Residual effects likely however limited magnitude of effect as a result given the application of mitigation measures.~~ ~~**Monitoring Plan and Contingency Measures**~~ • ~~Daily monitoring of areas where active construction is occurring within 5 m of a significant wetland by Environmental Monitor.~~ ~~**Contingency Measures:**~~ • ~~If dust accumulation on wetland plants occurs, spray down plants with water.~~

Section / Page	Original Text	Revised Text
Table 3-3 / page 34	**Potential Effect** • Changes in surface water drainage patterns resulting in effects to soil moisture and species composition of vegetation where the minimum 5 m setback from dripline will be applied to Significant Wetland Features. **Performance Objectives** • No effects to soil moisture and species composition of vegetation. **Mitigation Strategy** • Ensure Best Management Practices are used to maintain current drainage patterns. **Residual Effects** • Changes in surface water drainage patterns will be minimized through the application of mitigation measures. • Low likelihood and limited magnitude of effect as a result. **Monitoring Plan and Contingency Measures** • Daily monitoring of areas where active construction is occurring within 5 m of a significant wetland by Environmental Monitor. **Contingency Measures:** • If surface water drainage alterations are detected, undertake corrective measures to restore drainage patterns.	~~**Potential Effect**~~ ~~• Changes in surface water drainage patterns resulting in effects to soil moisture and species composition of vegetation where the minimum 5 m setback from dripline will be applied to Significant Wetland Features.~~ ~~**Performance Objectives**~~ ~~• No effects to soil moisture and species composition of vegetation.~~ ~~**Mitigation Strategy**~~ ~~• Ensure Best Management Practices are used to maintain current drainage patterns.~~ ~~**Residual Effects**~~ ~~• Changes in surface water drainage patterns will be minimized through the application of mitigation measures.~~ ~~• Low likelihood and limited magnitude of effect as a result.~~ ~~**Monitoring Plan and Contingency Measures**~~ ~~• Daily monitoring of areas where active construction is occurring within 5 m of a significant wetland by Environmental Monitor.~~ ~~**Contingency Measures:**~~ ~~• If surface water drainage alterations are detected, undertake corrective measures to restore drainage patterns.~~
Table 3-3 / page 34	**Potential Effect** • Unplanned intrusion into significant woodlands/wetlands in event of equipment malfunction due to directional drilling and risk of sedimentation or erosion into significant wetlands when directionally drilling. **Performance Objectives** • Minimize potential for accidental intrusion and sedimentation or erosion into significant features. **Mitigation Strategy** • Where feasible, wetland/woodland crossings will be within existing right-of-ways adjacent to wetland/woodland areas. • Where features cannot be avoided, crossings will be completed via horizontal directional drilling as per O. Reg. 359/09. • Locate entrance and exit pits at least 30 m from feature edge. • Install protective fencing around vegetation to prevent accidental damage. • Ensure drill depth is at an appropriate depth below wetland to reduce the risk of a “frac-out”. • Restore drilling sites to pre-construction conditions once construction is complete. • Develop and implement an emergency spills plan outlining steps to contain any chemicals and avoid contamination of adjacent wetland features. As part of this plan, “frac-out” provisions will be provided. • Install sediment and erosion control fencing along edge of wetland if within 30 m as per Ontario Provincial Standard Specifications (OPSD 219.130). **Residual Effects** • Risk of unplanned intrusion and sedimentation or erosion into feature due to directional drilling will be minimized through the use of mitigation measures. • Moderate likelihood; if accidental damage occurs, negative effects may be measurable but would represent a small change relative to existing conditions. **Monitoring Plan and Contingency Measures** • See directional drilling above.	**Potential Effect** • Unplanned intrusion into significant wetlands and / or woodlands in event of equipment malfunction during directional drilling. • Risk of soil or water contamination from spills during directional drilling under wetlands and/or woodlands. • Risk of sedimentation or erosion into significant wetlands and/or woodlands wetlands when directionally drilling. ~~• Unplanned intrusion into significant woodlands/wetlands in event of equipment malfunction due to directional drilling and risk of sedimentation or erosion into significant wetlands when directionally drilling.~~ **Performance Objectives** • Minimize potential for accidental intrusion into significant features. • Minimize soil or water contamination. • Minimize erosion, sedimentation and turbidity during directional drilling. ~~• Minimize potential for accidental intrusion and sedimentation or erosion into significant features.~~ **Mitigation Strategy** • Where feasible, wetland crossings will be within existing right-of-ways adjacent to wetland areas. • Crossings will be completed via horizontal directional drilling. • Locate entrance and exit pits at least 30 m from feature edge. • Install sediment fencing as per Ontario Provincial Standard Specifications (OPSD 219.130). • Ensure drill depth is at an appropriate depth below feature to reduce the risk of a “frac-out”. • Restore drilling sites to pre-construction conditions once construction is complete. • Develop Frac-Out” Contingency Plan outlining steps to contain any chemicals and avoid contamination of features**.** ~~• Where feasible, wetland/woodland crossings will be within existing right-of-ways adjacent to wetland/woodland areas.~~ ~~• Where features cannot be avoided, crossings will be completed via horizontal directional drilling as per O. Reg. 359/09.~~ ~~• Locate entrance and exit pits at least 30 m from feature edge.~~ ~~• Install protective fencing around vegetation to prevent accidental damage.~~ ~~• Ensure drill depth is at an appropriate depth below wetland to reduce the risk of a “frac-out”.~~ ~~• Restore drilling sites to pre-construction conditions once construction is complete.~~ ~~• Develop and implement an emergency spills plan outlining steps to contain any chemicals and avoid contamination of adjacent wetland features. As part of this plan, “frac-out” provisions will be provided.~~ ~~• Install sediment and erosion control fencing along edge of wetland if within 30 m as per Ontario Provincial Standard Specifications (OPSD 219.130).~~ **Residual Effects** • Risk of unplanned intrusion into wetland due to directional drilling, resulting in soil or water contamination and / or sedimentation and erosion, minimized through the application of mitigation measures. • Moderate likelihood; if unplanned intrusion occurred, negative effects may be measurable but would likely represent a small change relative to existing conditions. ~~• Risk of unplanned intrusion and sedimentation or erosion into feature due to directional drilling will be minimized through the use of mitigation measures.~~ ~~• Moderate likelihood; if accidental damage occurs, negative effects may be measurable but would represent a small change relative to existing conditions.~~

Section / Page	Original Text	Revised Text
		Monitoring Plan and Contingency Measures • Monitor directional drilling for the duration of such activities by an Environmental Monitor to ensure that "frac-out" or accidental intrusion does not occur, and if it does, to ensure that there are no effects on surface or groundwater. **Contingency Measures:** • In the event of a "frac-out", immediately stop all work, including the recycling of drilling mud / lubricant. • Monitor "frac-out" for 4 hours to determine if the drilling mud congeals. If drilling mud congeals, take no other action that would potentially suspend sediments in the water column. If drilling mud does not congeal, erect isolation/containment environment (underwater boom and curtain). • If the fracture becomes excessively large, engage a spill response team to contain and clean up excess drilling mud in the water. • If the spill affects an area that is vegetated, the area will be seeded and/or replanted using species similar to those in the adjacent area, or allowed to re-grow from existing vegetation. Revegetated areas will be monitored twice per year for two years subsequent to "frac-out" to confirm revegetation is successful. • Document post-cleanup conditions with photographs and prepare "frac-out" incident report describing time, place, actions taken to remediate "frac-out" and measures implemented to prevent recurrence. Provide incident report to MNR and MOE forthwith. • ~~See directional drilling above~~.
Table 3-3 / page 34	**Potential Effect** • Unintended damage to adjacent vegetation due to proximity of transmission line to significant wetlands/woodlands, small size of the right-of-way and constrained work area. **Performance Objectives** • Minimize potential for unintended damage to significant wetlands/woodlands. **Mitigation Strategy** • Limit vegetation removal within significant wetlands to the existing right-of-way. • Maintain 30 m setback from significant wetlands and woodlands, where possible or a minimum 5 m setback (measured from the dripline of trees or wetland edge if trees are absent). • Install protective fencing around vegetation to prevent accidental damage. **Residual Effects** • Damage to vegetation will be minimized through the application of mitigation measures. • Construction effects unlikely; if accidental damage occurred, negative effects may be measurable but would represent a small change relative to existing conditions. **Monitoring Plan and Contingency Measures** • Undertake monthly site inspections to ensure that protective fencing is intact and that there is no damage caused during construction. **Contingency Measures:** • In the event that trees are damaged during construction, damaged trees should be pruned through implementation of proper arboricultural techniques, under supervision of an Arborist or Forester.	~~**Potential Effect**~~ ~~• Unintended damage to adjacent vegetation due to proximity of transmission line to significant wetlands/woodlands, small size of the right-of-way and constrained work area.~~ ~~**Performance Objectives**~~ ~~• Minimize potential for unintended damage to significant wetlands/woodlands.~~ ~~**Mitigation Strategy**~~ ~~• Limit vegetation removal within significant wetlands to the existing right-of-way.~~ ~~• Maintain 30 m setback from significant wetlands and woodlands, where possible or a minimum 5 m setback (measured from the dripline of trees or wetland edge if trees are absent).~~ ~~• Install protective fencing around vegetation to prevent accidental damage.~~ ~~**Residual Effects**~~ ~~• Damage to vegetation will be minimized through the application of mitigation measures.~~ ~~• Construction effects unlikely; if accidental damage occurred, negative effects may be measurable but would represent a small change relative to existing conditions.~~ ~~**Monitoring Plan and Contingency Measures**~~ ~~• Undertake monthly site inspections to ensure that protective fencing is intact and that there is no damage caused during construction.~~ ~~**Contingency Measures:**~~ ~~• In the event that trees are damaged during construction, damaged trees should be pruned through implementation of proper arboricultural techniques, under supervision of an Arborist or Forester.~~
Table 3-3 / page 36	**Potential Effect** • Loss of up to 2.86 ha of forest cover within Significant Woodland Features from clearing for transmission line. **Residual Effects** • Clearing of vegetation will occur for the transmission line. • Moderate residual effects. **Monitoring Plan and Contingency Measures** • Daily monitoring of areas where active vegetation removal is occurring by Environmental Monitor. **Contingency Measures:** • In the event that trees are damaged during construction, damaged trees should be pruned through implementation of proper arboricultural techniques, under supervision of an Arborist or Forester.	**Potential Effect** • Clearing of vegetation resulting in loss of up to 2.6 ha of forest cover for transmission line construction within significant woodlands. • ~~Loss of up to 2.86 ha of forest cover within Significant Woodland Features from clearing for transmission line.~~ **Residual Effects** • Clearing of vegetation will occur for the transmission line. • Loss of forest cover minimized through afforestation; however there will be a time delay for the planted area to reach the same function as the cleared forest. • ~~Moderate residual effects.~~ **Monitoring Plan and Contingency Measures** • Daily monitoring of areas where active vegetation removal is occurring by Environmental Monitor. • Monitor establishment of planted area and replant/fill plant if required (may be undertaken by partner organization). **Contingency Measures:** • Any damaged trees will be pruned through implementation of proper arboricultural techniques, under supervision of an Arborist or Forester. • ~~In the event that trees are damaged during construction, damaged trees should be pruned through implementation of proper arboricultural techniques, under supervision of an Arborist or Forester.~~

Section / Page	Original Text	Revised Text
Table 3-3 / page 36	**Potential Effect** • Changes to surface water hydrology resulting from turbine construction near Significant Valleyland Feature. **Performance Objectives** • Minimize changes to surface water hydrology. **Mitigation Strategy** • Limit changes in land contours. • Maintain streams and timing and quantity of flow. **Residual Effects** • Changes in surface water drainage patterns and obstruction of lateral flows minimized through mitigation measures. • Low likelihood and limited magnitude of effects as a result. **Monitoring Plan and Contingency Measures** • Inspect locations following completion of construction to ensure no grade changes. **Contingency Measures:** • If surface water drainage alterations are detected, undertake corrective measures to restore drainage pattern.	**Potential Effect** • ~~Changes to surface water hydrology resulting from turbine construction near Significant Valleyland Feature.~~ **~~Performance Objectives~~** • ~~Minimize changes to surface water hydrology.~~ **~~Mitigation Strategy~~** • ~~Limit changes in land contours.~~ • ~~Maintain streams and timing and quantity of flow.~~ **~~Residual Effects~~** • ~~Changes in surface water drainage patterns and obstruction of lateral flows minimized through mitigation measures.~~ • ~~Low likelihood and limited magnitude of effects as a result.~~ **~~Monitoring Plan and Contingency Measures~~** • ~~Inspect locations following completion of construction to ensure no grade changes.~~ **~~Contingency Measures:~~** • ~~If surface water drainage alterations are detected, undertake corrective measures to restore drainage pattern.~~
Table 3-3 / page 36	**N/A**	**Potential Effect** • Disruption of Tundra Swans in stopover and staging habitat due to construction/ decommissioning activities in waterfowl stopover and staging areas. **Performance Objectives** • Avoid disruption of Tundra Swan during migration. **Mitigation Strategy** • Schedule construction activities within 300 m of the stopover and staging habitat to occur outside the important period of staging Tundra Swan (March 1 to April 15). If this is not possible, MNR will be consulted regarding mitigation measures that may be required. • Clearly delineate work area using erosion fencing or similar barrier to avoid accidental damage to staging habitat. • Restore temporary construction areas to pre-construction conditions as soon as possible (e.g., re-vegetate formerly naturally vegetated areas with native plants). **Residual Effects** • Disruption of Tundra Swans will be minimized through the application of mitigation measures. • Negligible residual effects. **Monitoring Plan and Contingency Measures** • No monitoring or contingency measures required as long as construction occurs outside migration period.
Table 3-3 / page 36	**Potential Effect** • Changes to surface water drainage patterns resulting from turbine and access road construction causing indirect effects on Waterfowl (Tundra Swan) Stopover and Staging Area Features. **Mitigation Strategy** • Minimize land contour changes. **Residual Effects** • Habitat damage will be minimized through the application of mitigation measures. • Construction effects temporary and minor. **Monitoring Plan and Contingency Measures** • Inspect locations following completion of construction to ensure no grade changes. **Contingency Measures:** • If surface water drainage alterations are detected, undertake corrective measures to restore drainage pattern.	**Potential Effect** • Changes to surface water drainage patterns resulting in indirect effects on waterfowl stopover and staging areas. • ~~Changes to surface water drainage patterns resulting from turbine and access road construction causing indirect effects on Waterfowl (Tundra Swan) Stopover and Staging Area Features.~~ **Mitigation Strategy** • Ensure Best Management Practices are used to maintain current drainage patterns, including: • Implement infiltration techniques to the maximum extent possible. • Minimize paved surfaces and design roads to promote infiltration. • Limit changes in land contours. • ~~Minimize land contour changes.~~ **Residual Effects** • Habitat damage avoided through maintaining surface water drainage patterns. • Low likelihood and limited magnitude of effect as a result. • ~~Habitat damage will be minimized through the application of mitigation measures.~~ • ~~Construction effects temporary and minor.~~ **Monitoring Plan and Contingency Measures** • Site inspection by Environmental Monitor following grading activities within 30 m of stopover and staging area. • ~~Inspect locations following completion of construction to ensure no grade changes.~~ **Contingency Measures:** • If surface water drainage alterations are detected, undertake corrective measures to restore drainage pattern.

Section / Page	Original Text	Revised Text
Table 3-3 / page 37	**Potential Effect** • Disruption of Tundra Swan use of Waterfowl (Tundra Swan) Stopover and Staging Area Features resulting from turbine, access road and collection line construction. **Performance Objectives** • Avoid disruption of Tundra Swan during migration. **Mitigation Strategy** • Construction activities within 300 m of the stopover and staging habitat should be timed to avoid migration timing windows (typically early to late March). **Residual Effects** • Disruption of Tundra Swans will be minimized through the application of mitigation measures. • Negligible residual effects. **Monitoring Plan and Contingency Measures** • No monitoring or contingency measures required as long as construction occurs outside migration period.	~~**Potential Effect**~~ ~~• Disruption of Tundra Swan use of Waterfowl (Tundra Swan) Stopover and Staging Area Features resulting from turbine, access road and collection line construction.~~ ~~**Performance Objectives**~~ ~~• Avoid disruption of Tundra Swan during migration.~~ ~~**Mitigation Strategy**~~ ~~• Construction activities within 300 m of the stopover and staging habitat should be timed to avoid migration timing windows (typically early to late March).~~ ~~**Residual Effects**~~ ~~• Disruption of Tundra Swans will be minimized through the application of mitigation measures.~~ ~~• Negligible residual effects.~~ ~~**Monitoring Plan and Contingency Measures**~~ ~~• No monitoring or contingency measures required as long as construction occurs outside migration period.~~
Table 3-3 / page 37	**N/A**	**Potential Effect** • Displacement and/or mortality of nursing female and juvenile bats resulting from vegetation clearing for the transmission line. • Removal of confirmed significant cavity trees or other suitable, but not studied, cavity trees resulting from vegetation clearing for the transmission line. **Performance Objectives** • No displacement and/or mortality of nursing female and juvenile bats. • Maintain sufficient clusters of cavity trees within the woodland for ongoing bat maternity colony habitat use. **Mitigation Strategy** • Identify locations of cavity trees within the bat maternity colony habitat and ensure clusters of cavity trees will remain present within the habitat after tree removal is complete. A "cluster" is defined based on relative cavity tree density within a habitat. If these habitats are surveyed to contain a relatively high cavity tree density (≥10 cavity trees/ha), a cluster is defined as 4 suitable cavity trees within any 0.05 ha circular area (12.6 m in radius). If this mitigation measure is not possible, MNR will be consulted regarding mitigation measures that may be required. • Prepare a tree preservation plan which identifies specific trees to be removed and whether each tree contains a cavity suitable for potential use as a bat maternity colony. • Schedule tree removal to occur outside of the bat maternal period of May 1 to July 31, wherever possible. If this is not possible, MNR will be consulted regarding mitigation measures that may be required. • Restoration of habitat temporarily disturbed during construction using suitable native tree species, if possible. **Residual Effects** • Significance of residual effects will be determined based on the results of post-construction monitoring. **Monitoring Plan and Contingency Measures** • Supervision of tree removal by a qualified Environmental Monitor. **Contingency Measures** • Any damaged trees will be pruned through implementation of proper arboricultural techniques, under supervision of an Arborist or Forester.
Table 3-3 / page 37	**N/A**	**Potential Effect** • Noise disturbance and/or avoidance behaviour of bats during construction of the transmission line. **Performance Objectives** • Minimize noise disturbance and/or avoidance behaviour during construction. **Mitigation Strategy** • Schedule tree removal to occur outside of the bat maternal period of May 1 to July 31, wherever possible. If this is not possible, MNR will be consulted regarding mitigation measures that may be required. • Schedule tree removal to occur during daylight hours. **Residual Effects** • Disturbance avoided through timing of construction activities. • No residual effects anticipated. **Monitoring Plan and Contingency Measures** • No monitoring or contingency measures required.

Section / Page	Original Text	Revised Text
Table 3-3 / page 38	**N/A**	**Potential Effect** • Disruption or possible mortality of turtles moving between wintering ponds and other areas. **Performance Objectives** • Minimize disruption of turtle movement. **Mitigation Strategy** • Fence area as far from pond and as close to proposed road as possible. • Post speed limits (30 km/hr) and turtle crossing signage along relevant construction access roads. • To avoid collisions with turtles, schedule construction activities within 30 m to occur during daylight hours and not during the period of emergence (March 15 to May 31). If construction must occur during this timing window, conduct area searches for turtles daily prior to construction activities. **Residual Effects** • Disruption and/or mortality minimized through construction timing and speed limits. • Low likelihood of occurring and limited magnitude. **Monitoring Plan and Contingency Measures** • If construction occurs within 30 m of a turtle wintering area (if determined to be significant) between March 15 and May 31, conduct area searches for turtles by a qualified Biologist prior to soil stripping or grubbing, as well as daily prior to construction activities by the Contractor within the construction footprint. **Contingency Measures:** • Turtles encountered within the construction area will be moved to a safe location (nearby pond) under the direction of the Environmental Monitor or a qualified Biologist.
Table 3-3 / page 38	**N/A**	**Potential Effect** • Increased erosion and sedimentation resulting from clearing and grubbing, backfilling and stockpiling resulting from access road construction near turtle wintering areas. **Performance Objectives** • Minimize erosion and sedimentation in wintering pond. **Mitigation Strategy** • Install sediment and erosion control fencing along edge of construction area if within 30 m of habitat feature as per Ontario Provincial Standards Specifications (OPSD 219.130). **Residual Effects** • Erosion and sedimentation mitigated through sediment and erosion control fencing. • Moderate likelihood; if erosion and sedimentation occur, negative effects may be measurable but would likely represent a small change relative to existing conditions. **Monitoring Plan and Contingency Measures** • Monitor on-site conditions (i.e., erosion and sediment control, spills, flooding, etc.) by an Environmental Monitor where construction occurs within 30 m of a feature on the following basis: • Weekly during active construction periods; • Prior to, during and post forecasted large rainfall events (>20 millimetres in 24 hours) or significant snowmelt events (i.e., spring freshet); • Daily during extended rain or snowmelt periods; • Monthly during inactive construction periods, if the site is left alone for 30 days or longer. **Contingency Measures:** • Suspend work if excessive flows of sediment discharges occur until additional mitigation measures are in place (e.g., install the extra erosion and sediment control materials kept on site, such as heavy duty silt fencing, straw bales, etc.).
Table 3-3 / page 38	**N/A**	**Potential Effect** • Changes to surface water drainage patterns causing indirect effects on turtle wintering areas. **Performance Objectives** • Minimize indirect effects on wintering habitat through changes to surface water drainage patterns. **Mitigation Strategy** • Ensure no grade changes within 30 m of pond. **Residual Effects** • Indirect effects to habitat minimized by maintaining grade. • Low likelihood of occurring and limited magnitude.

Section / Page	Original Text	Revised Text
		Monitoring Plan and Contingency Measures • Inspect locations following completion of access roads by an Environmental Monitor to ensure no grade changes. • Monitor condition of the pond during on-site monitoring events at frequency described for sediment and erosion control. **Contingency Measures:** • If surface water drainage alterations are detected, undertake corrective measures to restore drainage pattern.
Table 3-3 / page 39	**N/A**	**Potential Effect** • Risk of snake mortality from construction equipment. **Performance Objectives** • Avoid mortality from equipment. **Mitigation Strategy** • Schedule construction activities within 30 m of the hibernaculum to avoid timing windows during which snakes emerge (April 1 - May 15) and return (September 1 – October 15) to hibernacula. • If construction must take place within 30 m of hibernacula during these timing windows: • Erect temporary drift fence where within 30 m; and • Conduct area searches for snake species within the construction area daily prior to construction activities. **Residual Effects** • Mortality minimized through construction timing or drift fencing. • Low likelihood of occurring and limited magnitude (i.e., no or limited mortality expected). **Monitoring Plan and Contingency Measures** • If construction occurs within 30 m of a reptile hibernaculum (if determined to be significant) between April 15 and May 31 or between September 1 and October 15, conduct area searches for snakes by a qualified Biologist prior to soil stripping or grubbing, as well as daily prior to construction activities by the Contractor within the construction footprint. • Weekly inspection of drift fence while construction is occurring during specified timing windows. **Contingency Measures:** • Snakes encountered within the construction area will be moved to a safe location under the direction of the Environmental Monitor or a qualified Biologist.
Table 3-3 / page 39	**N/A**	**Potential Effect** • Noise disturbance and/or avoidance behaviour of colonially-nesting birds during construction. **Performance Objectives** • Minimize disturbance to colonially-nesting birds (Great Blue Herons). **Mitigation Strategy** • Schedule construction activities within 120 m (of 300 m buffer) to occur outside the sensitive breeding period of March 15 to August 1. If this is not possible, MNR will be consulted regarding mitigation measures that may be required. **Residual Effects** • Disturbance to colonially-nesting birds will be avoided through construction timing. • Negligible residual effects. **Monitoring Plan and Contingency Measures** • No monitoring or contingency measures required.
Table 3-3 / page 39	**N/A**	**Potential Effect** • Noise disturbance and/or avoidance behaviour of deer during construction. **Performance Objectives** • Minimize disturbance to wintering deer. **Mitigation Strategy** • Schedule construction activities within 120 m of deer winter congregation areas to occur before December 1 or after March 31 when the snow depth is greater than 20 cm or there is evidence of yarding. • In years where environmental conditions are not favourable for yarding, contact MNR to determine if construction activities may proceed between December 1 and March 31. **Residual Effects** • Disturbance to wintering deer will be minimized through construction timing. • Negligible residual effects.

Section / Page	Original Text	Revised Text
		Monitoring Plan and Contingency Measures • No monitoring or contingency measures required if construction does not occur between December 1 and March 31. • If construction is scheduled to occur between December 1 and March 31, undertake survey to determine snow depth and evidence of yarding (e.g., concentrations of tracks) by a qualified Biologist. Contact MNR to determine if construction activities may proceed.
Table 3-3 / page 39	**Potential Effect** • Disruption of amphibians moving to breeding pools and home range resulting from access road construction near Amphibian Woodland Breeding Habitat Features. **Monitoring Plan and Contingency Measures** • No monitoring required if timing windows are applied. **Contingency Measures:** • If construction occurs after dark within the specified timing windows, amphibian mortality surveys will be conducted the following day.	**Potential Effect** • Risk of mortality from construction equipment to amphibians moving to breeding pools and home range. • ~~Disruption of amphibians moving to breeding pools and home range resulting from access road construction near Amphibian Woodland Breeding Habitat Features.~~ **Monitoring Plan and Contingency Measures** • No monitoring required if timing windows are applied. • If construction occurs within 30 m of amphibian breeding habitat (if determined to be significant) after dark within the specified timing windows, amphibian mortality surveys will be conducted the following day by a qualified Biologist. **Contingency Measures:** • Restrict work to daylight hours if significant amphibian mortality is detected through mortality surveys. • ~~No monitoring required if timing windows are applied.~~ ~~**Contingency Measures:**~~ • ~~If construction occurs after dark within the specified timing windows, amphibian mortality surveys will be conducted the following day.~~
Table 3-3 / page 40	**N/A**	**Potential Effect** • Increased erosion and sedimentation resulting from clearing and grubbing, backfilling and stockpiling resulting from access road construction near amphibian woodland breeding habitat. **Performance Objectives** • Minimize erosion and sedimentation to breeding habitat. **Mitigation Strategy** • Install sediment and erosion control fencing along edge of construction area if within 30 m of habitat feature as per Ontario Provincial Standards Specifications (OPSD 219.130). **Residual Effects** • Erosion and sedimentation mitigated through sediment and erosion control fencing. • Moderate likelihood; if erosion and sedimentation occur negative effects may be measurable but would likely represent a small change relative to existing conditions. **Monitoring Plan and Contingency Measures** • Monitor on-site conditions (*i.e.*, erosion and sediment control, spills, flooding, etc.) by an Environmental Monitor where construction occurs within 30 m of a feature on the following basis: ▪ Weekly during active construction periods; ▪ Prior to, during and post forecasted large rainfall events (>20 millimetres in 24 hours) or significant snowmelt events (*i.e.*, spring freshet); ▪ Daily during extended rain or snowmelt periods; ▪ Monthly during inactive construction periods, where the site is left alone for 30 days or longer. • Contingency Measures: • Suspend work if excessive flows of sediment discharges occur until additional mitigation measures are in place (e.g., install the extra erosion and sediment control materials kept on site, such as heavy duty silt fencing, straw bales, etc.). • ~~No monitoring or contingency measures required if construction does not occur between December 1 and March 31.~~ • ~~If construction is scheduled to occur between December 1 and March 31, undertake survey to determine snow depth and evidence of yarding (e.g., concentrations of tracks) by a qualified Biologist. Contact MNR to determine if construction activities may proceed.~~
Table 3-3 / page 40	**Potential Effect** • Risk of mortality to amphibians moving between breeding pool and home range. **Performance Objectives** • Minimize amphibian mortality along access road. **Mitigation Strategy** • Avoid construction in proximity to this feature at night between April 1st and June 30th and any rainy nights from spring to early autumn, wherever possible. • Enforce slow vehicle speeds. Post and maintain speed limit signs. **Residual Effects** • Risk of amphibian mortality reduced through mitigation measures. • Operation effects minor (i.e., no or limited mortality expected).	~~**Potential Effect**~~ • ~~Risk of mortality to amphibians moving between breeding pool and home range.~~ ~~**Performance Objectives**~~ • ~~Minimize amphibian mortality along access road.~~ ~~**Mitigation Strategy**~~ • ~~Avoid construction in proximity to this feature at night between April 1st and June 30th and any rainy nights from spring to early autumn, wherever possible.~~ • ~~Enforce slow vehicle speeds. Post and maintain speed limit signs.~~ ~~**Residual Effects**~~ • ~~Risk of amphibian mortality reduced through mitigation measures.~~ • ~~Operation effects minor (i.e., no or limited mortality expected).~~

Section / Page	Original Text	Revised Text
	Monitoring Plan and Contingency Measures • No monitoring required if timing windows are applied. **Contingency Measures:** • If construction occurs after dark in or near identified movement corridors between April 1st and June 30th and rainy nights from spring to early autumn, amphibian mortality surveys will be conducted the following day.	~~**Monitoring Plan and Contingency Measures**~~ ~~• No monitoring required if timing windows are applied.~~ ~~**Contingency Measures:**~~ • ~~If construction occurs after dark in or near identified movement corridors between April 1st and June 30th and rainy nights from spring to early autumn, amphibian mortality surveys will be conducted~~ the following day.
Table 3-3 / page 40	**Potential Effect** • Mortality to reptiles from construction equipment for construction of access roads near Reptile Hibernaculum Feature. **Performance Objectives** • Minimize mortality from equipment. **Mitigation Strategy** • Construction activities within 60 m of the hibernaculum should be timed to avoid timing windows during which snakes emerge (April 15 - May 31) and return (September 1 – October 15) to hibernaculum. • If construction must take place during these timing windows, erect temporary drift fence between edge of habitat and road if hibernaculum is within 60 m of road. **Residual Effects** • Habitat damage will be avoided and mortality minimized through the application of mitigation measures. • Construction effects temporary and minor (i.e., no or limited mortality expected). **Monitoring Plan and Contingency Measures** • No monitoring required if timing windows are applied. **Contingency Measures:** • Weekly inspection of drift fence if construction occurs during specified timing windows.	~~**Potential Effect**~~ ~~• Mortality to reptiles from construction equipment for construction of access roads near Reptile Hibernaculum Feature.~~ ~~**Performance Objectives**~~ ~~• Minimize mortality from equipment.~~ ~~**Mitigation Strategy**~~ ~~• Construction activities within 60 m of the hibernaculum should be timed to avoid timing windows during which snakes emerge (April 15 - May 31) and return (September 1 – October 15) to hibernaculum.~~ ~~• If construction must take place during these timing windows, erect temporary drift fence between edge of habitat and road if hibernaculum is within 60 m of road.~~ ~~**Residual Effects**~~ ~~• Habitat damage will be avoided and mortality minimized through the application of mitigation measures.~~ ~~• Construction effects temporary and minor (i.e., no or limited mortality expected).~~ ~~**Monitoring Plan and Contingency Measures**~~ ~~• No monitoring required if timing windows are applied.~~ ~~**Contingency Measures:**~~ ~~• Weekly inspection of drift fence if construction occurs during specified timing windows.~~
Table 3-3 / page 41	**Potential Effect** • Disruption of turtles moving between over-wintering ponds and other areas or turtle mortality resulting from access road and transmission line construction near or within Turtle Over-wintering Habitat Features. **Performance Objectives** • Minimize disruption of turtle movement. • Minimize turtle mortality. **Mitigation Strategy** • Fence area as far from pond and as close to proposed road or transmission line clearing as possible. Post speed limits and turtle crossing signage along relevant construction access roads. **Residual Effects** • Disruption to turtle movement and risk of turtle mortality minimized with the application of mitigation measures. • Construction effects temporary and minor (i.e., no or limited mortality expected). **Monitoring Plan and Contingency Measures** • Undertake monthly site inspections to ensure that protective fencing is intact and that there is no damage caused during construction. • No contingency measures required.	~~**Potential Effect**~~ ~~• Disruption of turtles moving between over-wintering ponds and other areas or turtle mortality resulting from access road and transmission line construction near or within Turtle Over-wintering Habitat Features.~~ ~~**Performance Objectives**~~ ~~• Minimize disruption of turtle movement.~~ ~~• Minimize turtle mortality.~~ ~~**Mitigation Strategy**~~ ~~• Fence area as far from pond and as close to proposed road or transmission line clearing as possible. Post speed limits and turtle crossing signage along relevant construction access roads.~~ ~~**Residual Effects**~~ ~~• Disruption to turtle movement and risk of turtle mortality minimized with the application of mitigation measures.~~ ~~• Construction effects temporary and minor (i.e., no or limited mortality expected).~~ ~~**Monitoring Plan and Contingency Measures**~~ ~~• Undertake monthly site inspections to ensure that protective fencing is intact and that there is no damage caused during construction.~~ ~~• No contingency measures required.~~
Table 3-3 / page 41	**Potential Effect** Changes to surface water drainage patterns resulting from access road construction causing indirect effects on Turtle Over-wintering Habitat Features. **Performance Objectives** • Minimize indirect effects on over-wintering habitat through changes to surface water drainage patterns. **Mitigation Strategy** • Ensure no grade changes within 30 m of pond. **Residual Effects** • Indirect effects to habitat minimized with the application of mitigation measures. • Construction effects temporary and minor. **Monitoring Plan and Contingency Measures** • Monitor condition of the pond during on-site monitoring events at frequency described for sediment and erosion control. **Contingency Measures:** • If surface water drainage alterations are detected, undertake corrective measures to restore drainage pattern.	~~**Potential Effect**~~ ~~Changes to surface water drainage patterns resulting from access road construction causing indirect effects on Turtle Over-wintering Habitat Features.~~ ~~**Performance Objectives**~~ ~~• Minimize indirect effects on over-wintering habitat through changes to surface water drainage patterns.~~ ~~**Mitigation Strategy**~~ ~~• Ensure no grade changes within 30 m of pond.~~ ~~**Residual Effects**~~ ~~• Indirect effects to habitat minimized with the application of mitigation measures.~~ ~~• Construction effects temporary and minor.~~ ~~**Monitoring Plan and Contingency Measures**~~ ~~• Monitor condition of the pond during on-site monitoring events at frequency described for sediment and erosion control.~~ ~~**Contingency Measures:**~~ ~~If surface water drainage alterations are detected, undertake corrective measures to restore drainage pattern.~~

Section / Page	Original Text	Revised Text
Table 3-3 / page 41	**Potential Effect** • Removal of vegetation within significant features resulting in habitat damage from clearing for transmission line within Azure Bluet Habitat Feature and Turtle Over-wintering Habitat Feature. **Performance Objectives** • Minimize disturbance to significant wildlife habitat. • No destruction of pond. **Mitigation Strategy** • Maintain a 10 m buffer around the breeding pond within which no vegetation removal will occur. • Fence area as far from pond and as close to transmission line disturbance area as possible. • Minimize the area of tree removal within the natural area to the extent possible. • Re-vegetate disturbed areas as soon as possible after construction activities are complete using species native to Ontario in naturally vegetated areas. **Residual Effects** • Clearing of vegetation will occur for the transmission line. • Disruption to significant wildlife habitat minimized through setback and protective fencing. • Moderate residual effects. **Monitoring Plan and Contingency Measures** • Monitor condition of the pond during on-site monitoring events at frequency described for sediment and erosion control. **Contingency Measures:** • If negative effects to the pond are detected, corrective measures will be taken, to be determined through consultation with MNR. These habitat compensation or restoration measures will be described in a Compensation Plan, to be submitted to MNR.	~~**Potential Effect**~~ ~~Removal of vegetation within significant features resulting in habitat damage from clearing for transmission line within Azure Bluet Habitat Feature and Turtle Over-wintering Habitat Feature.~~ ~~**Performance Objectives**~~ • ~~Minimize disturbance to significant wildlife habitat.~~ • ~~No destruction of pond.~~ ~~**Mitigation Strategy**~~ • ~~Maintain a 10 m buffer around the breeding pond within which no vegetation removal will occur.~~ • ~~Fence area as far from pond and as close to transmission line disturbance area as possible.~~ • ~~Minimize the area of tree removal within the natural area to the extent possible.~~ • ~~Re-vegetate disturbed areas as soon as possible after construction activities are complete using species native to Ontario in naturally vegetated areas.~~ ~~**Residual Effects**~~ • ~~Clearing of vegetation will occur for the transmission line.~~ • ~~Disruption to significant wildlife habitat minimized through setback and protective fencing.~~ • ~~Moderate residual effects.~~ ~~**Monitoring Plan and Contingency Measures**~~ • ~~Monitor condition of the pond during on-site monitoring events at frequency described for sediment and erosion control.~~ ~~**Contingency Measures:**~~ ~~If negative effects to the pond are detected, corrective measures will be taken, to be determined through consultation with MNR. These habitat compensation or restoration measures will be described in a Compensation Plan, to be submitted to MNR.~~
Table 3-3 / page 41	**Potential Effect** • Changes to surface water drainage patterns resulting from transmission line construction causing indirect effects on Azure Bluet Habitat Feature, Turtle Over-wintering Habitat Feature and Amphibian Woodland Breeding Habitat Features. **Performance Objectives** • Minimize indirect effects on pond through changes to surface water drainage patterns. **Mitigation Strategy** • Ensure no grade changes within 30 m of pond. **Residual Effects** • Indirect effects to significant wildlife habitat minimized with the application of mitigation measures. • Construction effects temporary and minor. **Monitoring Plan and Contingency Measures** • Monitor condition of the pond during on-site monitoring events at frequency described for sediment and erosion control. **Contingency Measures:** • If negative effects to the pond are detected, corrective measures will be taken, to be determined through consultation with MNR. These habitat compensation or restoration measures will be described in a Compensation Plan, to be submitted to MNR	~~**Potential Effect**~~ ~~Changes to surface water drainage patterns resulting from transmission line construction causing indirect effects on Azure Bluet Habitat Feature, Turtle Over-wintering Habitat Feature and Amphibian Woodland Breeding Habitat Features.~~ ~~**Performance Objectives**~~ • ~~Minimize indirect effects on pond through changes to surface water drainage patterns.~~ ~~**Mitigation Strategy**~~ ~~Ensure no grade changes within 30 m of pond.~~ ~~**Residual Effects**~~ • ~~Indirect effects to significant wildlife habitat minimized with the application of mitigation measures.~~ • ~~Construction effects temporary and minor.~~ ~~**Monitoring Plan and Contingency Measures**~~ • ~~Monitor condition of the pond during on-site monitoring events at frequency described for sediment and erosion control.~~ ~~**Contingency Measures:**~~ ~~If negative effects to the pond are detected, corrective measures will be taken, to be determined through consultation with MNR. These habitat compensation or restoration measures will be described in a Compensation Plan, to be submitted to MNR~~
Table 3-3 / page 41	**Potential Effect** • Removal of vegetation within significant features resulting in habitat damage from clearing for transmission line within Amphibian Woodland Breeding Habitat Features. **Mitigation Strategy** • Focus construction activities within the woodland to outside April 1st and June 30th (for significant frog breeding habitats) or March 15th and April 30th (for significant salamander breeding habitat), to avoid disturbance to breeding amphibians and vehicle caused mortality. • Maintain a 10 m buffer around the breeding pond within which no vegetation removal will occur. • Minimize the area of tree removal within the natural area to the extent possible. • Re-vegetate disturbed areas as soon as possible after construction activities are complete using species native to Ontario in naturally vegetated areas.	**Potential Effect** Removal of vegetation ~~within significant features~~ resulting in habitat damage from clearing for transmission line within Amphibian Woodland Breeding Habitat Features. **Mitigation Strategy** • Clearing of vegetation will not take place between April 1 and June 30. If this is not possible, MNR will be consulted regarding mitigation measures that may be required. • Schedule construction activities within the woodland to outside April 1st and June 30th (for significant frog breeding habitats) or March 15th and April 30th (for significant salamander breeding habitat), to avoid disturbance to breeding amphibians and vehicle caused mortality. Work within 30 m of amphibian breeding habitats will not occur after dusk during the breeding season (as above). If this is not possible, MNR will be consulted regarding mitigation measures that may be required. • Maintain a 10 m buffer around the breeding pond within which no vegetation removal will occur, where possible. Install wildlife fencing (sediment fencing) prior to any earth movement, stockpiling or other activities on the site, to prevent any impact or disturbance to the breeding pool or pond. • Minimize the area of tree removal within the natural area to the extent possible. • Re-vegetate temporarily disturbed areas as soon as possible after construction activities are complete using species native to Ontario in naturally vegetated areas. • ~~Focus construction activities within the woodland to outside April 1st and June 30th (for significant frog breeding habitats) or March 15th and April 30th (for significant salamander breeding habitat), to avoid disturbance to breeding amphibians and vehicle caused mortality.~~

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		~~• Maintain a 10 m buffer around the breeding pond within which no vegetation removal will occur.~~ ~~• Minimize the area of tree removal within the natural area to the extent possible.~~ ~~• Re-vegetate disturbed areas as soon as possible after construction activities are complete using species native to Ontario in naturally vegetated areas.~~
Table 3-3 / page 42	**N/A**	**Potential Effect** Disruption or possible mortality of amphibians moving between breeding pools and home range resulting from transmission line construction within amphibian woodland breeding habitat. **Performance Objectives** • Minimize disruption to amphibians. **Mitigation Strategy** • Schedule construction activities within the woodland to outside April 1 and June 30 (for significant frog breeding habitats) or March 15 and April 30 (for significant salamander breeding habitat), to avoid disturbance to breeding amphibians and vehicle caused mortality. Work within 30 m of amphibian breeding habitats will not occur after dusk during the breeding season (as above). If this is not possible, MNR will be consulted regarding mitigation measures that may be required. • Post speed limits along construction access roads (30 km/hr). **Residual Effects** • Disruption mitigated through construction timing and speed limits. • Low likelihood of occurring and limited magnitude (*i.e.*, no or limited mortality expected). **Monitoring Plan and Contingency Measures** • No monitoring or contingency measures required if timing windows are applied. • If construction occurs within 30 m of an amphibian breeding habitat (if determined to be significant) between April 1 and June 30, conduct area searches for amphibians by a qualified Biologist prior to soil stripping or grubbing.
Table 3-3 / page 42	**N/A**	**Potential Effect** Increased erosion and sedimentation resulting from clearing and grubbing, backfilling and stockpiling resulting from transmission line construction within amphibian woodland breeding habitats. **Performance Objectives** • No disturbance to breeding amphibians. • No destruction (including erosion and sedimentation) of breeding sites. **Mitigation Strategy** • Install sediment and erosion control fencing along edge of construction area if within 30 m of habitat feature as per Ontario Provincial Standards Specifications (OPSD 219.130). • Remove trees by hand-held equipment and drag them out of the natural area to minimize soil disturbance. • Lighter vehicles and lighter machinery should be used in and around the natural area. Any vehicles used within the natural area should have wide-based tires. Tracked vehicles should be avoided. • Re-vegetate disturbed areas as soon as possible after construction activities are complete using species native to Ontario in naturally vegetated areas. **Residual Effects** • Erosion and sedimentation mitigated through sediment and erosion control fencing. • Low likelihood and limited magnitude of effect as a result. **Monitoring Plan and Contingency Measures** • Fencing must be keyed in correctly and monitored for proper installation and maintenance by an Environmental Monitor. • Monitor on-site conditions (*i.e.*, erosion and sediment control, spills, flooding, etc.) by an Environmental Monitor where construction occurs within 30 m of a feature on the following basis: • Weekly during active construction periods; • Prior to, during and post forecasted large rainfall events (>20 millimetres in 24 hours) or significant snowmelt events (*i.e.*, spring freshet); • Daily during extended rain or snowmelt periods; • Monthly during inactive construction periods, where the site is left alone for 30 days or longer. **Contingency Measures:** Suspend work if excessive flows of sediment discharges occur until additional mitigation measures are in place (e.g., install the extra erosion and sediment control materials kept on site, such as heavy duty silt fencing, straw bales, etc.).

Section / Page	Original Text	Revised Text
Table 3-3 / page 43	**N/A**	**Potential Effect** Possible indirect effects on amphibian breeding pool condition through changes to surface water drainage patterns resulting from transmission line construction within amphibian woodland breeding habitats. **Performance Objectives** • No disturbance to breeding amphibians. • No destruction (including erosion and sedimentation) of breeding sites. **Mitigation Strategy** • Install sediment and erosion control fencing along edge of construction area if within 30 m of habitat feature as per Ontario Provincial Standards Specifications (OPSD 219.130). • Remove trees by hand-held equipment and drag them out of the natural area to minimize soil disturbance. • Lighter vehicles and lighter machinery should be used in and around the natural area. Any vehicles used within the natural area should have wide-based tires. Tracked vehicles should be avoided. • Re-vegetate disturbed areas as soon as possible after construction activities are complete using species native to Ontario in naturally vegetated areas. **Residual Effects** • Erosion and sedimentation mitigated through sediment and erosion control fencing. • Low likelihood and limited magnitude of effect as a result. **Monitoring Plan and Contingency Measures** • Fencing must be keyed in correctly and monitored for proper installation and maintenance by an Environmental Monitor. • Monitor on-site conditions (*i.e.*, erosion and sediment control, spills, flooding, etc.) by an Environmental Monitor where construction occurs within 30 m of a feature on the following basis: • Weekly during active construction periods; • Prior to, during and post forecasted large rainfall events (>20 millimetres in 24 hours) or significant snowmelt events (*i.e.*, spring freshet); • Daily during extended rain or snowmelt periods; • Monthly during inactive construction periods, where the site is left alone for 30 days or longer. **Contingency Measures:** Suspend work if excessive flows of sediment discharges occur until additional mitigation measures are in place (e.g., install the extra erosion and
Table 3-3 / page 43	**Potential Effect** • Disruption of amphibians moving between breeding pools and home range resulting from transmission line construction within Amphibian Woodland Breeding Habitat Features. **Performance Objectives** • Minimize disruption to amphibian movement. **Mitigation Strategy** • Focus construction activities within the woodland to outside April 1st and June 30th (for significant frog breeding habitats) or March 15th and April 30th (for significant salamander breeding habitat), to avoid disturbance to breeding amphibians and vehicle caused mortality. **Residual Effects** • Disruption to amphibians minimized with the application of mitigation measures. • Construction effects temporary and minor. **Monitoring Plan and Contingency Measures** • No monitoring or contingency measures required if timing windows are applied.	**~~Potential Effect~~** ~~Disruption of amphibians moving between breeding pools and home range resulting from transmission line construction within Amphibian Woodland Breeding Habitat Features.~~ **~~Performance Objectives~~** ~~• Minimize disruption to amphibian movement.~~ **~~Mitigation Strategy~~** ~~• Focus construction activities within the woodland to outside April 1st and June 30th (for significant frog breeding habitats) or March 15th and April 30th (for significant salamander breeding habitat), to avoid disturbance to breeding amphibians and vehicle caused mortality.~~ **~~Residual Effects~~** ~~• Disruption to amphibians minimized with the application of mitigation measures.~~ ~~• Construction effects temporary and minor.~~ **~~Monitoring Plan and Contingency Measures~~** ~~No monitoring or contingency measures required if timing windows are applied.~~
Table 3-3 / page 43	**Potential Effect** • Removal of vegetation within significant feature resulting in habitat damage from clearing for transmission line within Red-headed Woodpecker Habitat Feature. **Performance Objectives** • Minimize disturbance to breeding habitat. • No destruction of nest site. **Mitigation Strategy** • Focus construction activities within habitat to outside the breeding season of May 1st to July 31st. • Maintain a 10 m buffer around the nest within which no vegetation removal will occur. • Clearly delineate habitat boundaries (i.e., 10 m buffer) using protective fencing to ensure that construction activities occur outside the habitat boundaries. • Minimize the area of tree removal within the natural area to the extent possible.	**Potential Effect** Removal of vegetation within significant feature resulting in habitat damage resulting from transmission line construction within Red-headed Woodpecker Habitat. Red-headed Woodpecker breeding habitat may be disturbed by noise from construction. ~~Removal of vegetation within significant feature resulting in habitat damage from clearing for transmission line within Red-headed Woodpecker Habitat Feature.~~ **Performance Objectives** • Minimize disturbance to breeding habitat. • Avoid disturbance to breeding birds. ~~• No destruction of nest site.~~ **Mitigation Strategy**

Section / Page	Original Text	Revised Text
	• Remove trees by hand-held equipment and drag them out of the natural area to minimize soil disturbance. If possible, leave some woody debris to decompose naturally. • Lighter vehicles and lighter machinery should be used in and around the natural area. Any vehicles used within the natural area should have wide-based tires. Tracked vehicles should be avoided. **Monitoring Plan and Contingency Measures** • Supervision of vegetation removal by a qualified Biologist to ensure no destruction of nesting habitat. • No additional monitoring or contingency measures required if timing window is applied.	• Identify locations of cavity trees within the Red-headed Woodpecker habitat and ensure suitable snag trees will remain present within the habitat after vegetation removal is complete. If this is not possible, MNR will be consulted regarding mitigation measures that may be required. • Schedule vegetation clearing within habitat to occur outside the breeding season of May 1 to July 31. • Maintain a 10 m buffer around the nest within which no vegetation removal will occur. • Clearly delineate habitat boundaries (i.e., 10 m buffer) using protective fencing to ensure that construction activities occur only within prescribed areas. • Minimize the area of tree removal within the natural area to the extent possible. • Nest searches will be conducted by a qualified Biologist prior to vegetation clearing. • Remove trees by hand-held equipment and drag them out of the natural area to minimize soil disturbance. If possible, leave some woody debris to decompose naturally. • Lighter vehicles and lighter machinery should be used in and around the natural area. Any vehicles used within the natural area should have wide-based tires. Tracked vehicles should be avoided. • Use single poles for the transmission line, if possible. ~~• Focus construction activities within habitat to outside the breeding season of May 1st to July 31st.~~ ~~• Maintain a 10 m buffer around the nest within which no vegetation removal will occur.~~ ~~• Clearly delineate habitat boundaries (i.e., 10 m buffer) using protective fencing to ensure that construction activities occur outside the habitat boundaries.~~ ~~• Minimize the area of tree removal within the natural area to the extent possible.~~ ~~• Remove trees by hand-held equipment and drag them out of the natural area to minimize soil disturbance. If possible, leave some woody debris to decompose naturally.~~ ~~Lighter vehicles and lighter machinery should be used in and around the natural area. Any vehicles used within the natural area should have wide-based tires. Tracked vehicles should be avoided.~~ **Monitoring Plan and Contingency Measures** • Supervision of vegetation removal by a qualified Environmental Monitor to limit removal of habitat to the extent possible. • **Contingency Measures** • Prune any damaged trees through implementation of proper arboricultural techniques, under supervision of an Arborist or Forester. ~~• Supervision of vegetation removal by a qualified Biologist to ensure no destruction of nesting habitat.~~ ~~No additional monitoring or contingency measures required if timing window is applied~~.
Table 3-3 / page 43	**Potential Effect** Noise disturbance to breeding Red-headed Woodpeckers during transmission line construction within Red-headed Woodpecker Habitat Feature. **Performance Objectives** • Minimize disturbance to breeding birds. **Mitigation Strategy** Focus construction activities within habitat to outside the breeding season of May 1st to July 31st. **Residual Effects** • Disturbance avoided through timing of construction activities. • No residual effects anticipated. **Monitoring Plan and Contingency Measures** No monitoring or contingency measures required if timing window is applied.	~~**Potential Effect**~~ ~~Noise disturbance to breeding Red-headed Woodpeckers during transmission line construction within Red-headed Woodpecker Habitat Feature.~~ ~~**Performance Objectives**~~ ~~• Minimize disturbance to breeding birds.~~ ~~**Mitigation Strategy**~~ ~~Focus construction activities within habitat to outside the breeding season of May 1st to July 31st.~~ ~~**Residual Effects**~~ ~~• Disturbance avoided through timing of construction activities.~~ ~~• No residual effects anticipated.~~ ~~**Monitoring Plan and Contingency Measures**~~ ~~No monitoring or contingency measures required if timing window is applied.~~
Table 3-3 / page 44	**Potential Effect** Displacement and/or mortality of nursing female and juvenile bats resulting from vegetation clearing for transmission line construction within Bat Maternity Colony Features. **Performance Objectives** • No displacement and/or mortality of nursing female and juvenile bats. **Mitigation Strategy** • Prepare a tree preservation plan which identifies specific trees to be removed and whether each tree contains a cavity suitable for potential use as a bat maternity colony. • Tree removal will occur outside of the maternity and summer swarming period of May 15 to August 31, wherever possible. If this is not possible, MNR will be consulted regarding any additional mitigation measures that may be required. **Residual Effects** • Significance of residual effects will be determined based on the results of post-construction monitoring. **Monitoring Plan and Contingency Measures** No monitoring or contingency measures required during construction.	~~**Potential Effect**~~ ~~Displacement and/or mortality of nursing female and juvenile bats resulting from vegetation clearing for transmission line construction within Bat Maternity Colony Features.~~ ~~**Performance Objectives**~~ ~~• No displacement and/or mortality of nursing female and juvenile bats.~~ ~~**Mitigation Strategy**~~ ~~• Prepare a tree preservation plan which identifies specific trees to be removed and whether each tree contains a cavity suitable for potential use as a bat maternity colony.~~ ~~• Tree removal will occur outside of the maternity and summer swarming period of May 15 to August 31, wherever possible. If this is not possible, MNR will be consulted regarding any additional mitigation measures that may be required.~~ ~~**Residual Effects**~~ ~~• Significance of residual effects will be determined based on the results of post-construction monitoring.~~ ~~**Monitoring Plan and Contingency Measures**~~ ~~No monitoring or contingency measures required during construction.~~

Section / Page	Original Text	Revised Text
Table 3-3 / page 45	**Potential Effect** Removal of confirmed significant cavity trees or other suitable, but not studied, cavity trees resulting from vegetation clearing for transmission line construction within Bat Maternity Colony Features. **Performance Objectives** • Successful relocation of any significant maternity colonies that may be removed (if applicable). **Mitigation Strategy** • For each suitable cavity tree to be removed, a bat house will be installed in the closest suitable woodland habitat (the remainder of the woodland for each of the affected habitats). • Details of bat box construction and placement will be provided to MNR for approval prior to installation. • If a significant maternity colony must be removed, timing, location, and bat house design will be of utmost importance for the colony to successfully re-establish, and will be discussed with the MNR. **Residual Effects** • Significance of residual effects will be determined based on the results of post-construction monitoring. **Monitoring Plan and Contingency Measures** No monitoring or contingency measures required during construction.	~~**Potential Effect**~~ ~~Removal of confirmed significant cavity trees or other suitable, but not studied, cavity trees resulting from vegetation clearing for transmission line construction within Bat Maternity Colony Features.~~ ~~**Performance Objectives**~~ ~~• Successful relocation of any significant maternity colonies that may be removed (if applicable).~~ ~~**Mitigation Strategy**~~ ~~• For each suitable cavity tree to be removed, a bat house will be installed in the closest suitable woodland habitat (the remainder of the woodland for each of the affected habitats).~~ ~~• Details of bat box construction and placement will be provided to MNR for approval prior to installation.~~ ~~• If a significant maternity colony must be removed, timing, location, and bat house design will be of utmost importance for the colony to successfully re-establish, and will be discussed with the MNR.~~ ~~**Residual Effects**~~ ~~• Significance of residual effects will be determined based on the results of post-construction monitoring.~~ ~~**Monitoring Plan and Contingency Measures**~~ ~~No monitoring or contingency measures required during construction.~~
Table 3-3 / page 45	**Potential Effect** Noise disturbance and/or avoidance behaviour to bats during transmission line construction within Bat Maternity Colony Features. **Performance Objectives** • Minimize noise disturbance and/or avoidance behaviour during construction. **Mitigation Strategy** • Tree removal should occur outside of the summer swarming and roosting period of local bat species (May 15th-August 31st). **Residual Effects** • Disturbance avoided through timing of construction activities. • No residual effects anticipated. **Monitoring Plan and Contingency Measures** No monitoring or contingency measures required during construction.	~~**Potential Effect**~~ ~~Noise disturbance and/or avoidance behaviour to bats during transmission line construction within Bat Maternity Colony Features.~~ ~~**Performance Objectives**~~ ~~• Minimize noise disturbance and/or avoidance behaviour during construction.~~ ~~**Mitigation Strategy**~~ ~~• Tree removal should occur outside of the summer swarming and roosting period of local bat species (May 15th-August 31st).~~ ~~**Residual Effects**~~ ~~• Disturbance avoided through timing of construction activities.~~ ~~• No residual effects anticipated.~~ ~~**Monitoring Plan and Contingency Measures**~~ ~~No monitoring or contingency measures required during construction.~~
Table 3-4 / page 44	**Residual Effects** • Temporary disruption of substrates/habitat associated with in-water works minimized through application of mitigation measures. • Moderate likelihood and magnitude of effect occurring due to number of watercourse crossings.	**Residual Effects** • Temporary disruption of substrates/habitat associated with in-water works minimized through application of mitigation measures. • Moderate likelihood of effect occurring due to number of watercourse crossings; however, magnitude of effect limited due to marginal habitat and common species; as such fish passage will be maintained and will continue to provide habitat.
Table 3-4 / page 46	**Potential Effect** Loss of riparian habitat adjacent to watercourses for installation of hydro poles.	**Potential Effect** Loss of riparian habitat adjacent to watercourses for installation of ~~hydro~~ transmission line poles.
Section 3.9.1 / page 52	There are five closed landfills within the Project Study Area (as shown on Figure 2-3), all of which are municipally-owned. The Stephen landfill (South Huron) is located within the Wind Energy Centre Study Area approximately 550 m south of the collection line between Turbines 42 and 78. Due to the distance between the landfill and Project infrastructure, construction activities are not anticipated to have an effect upon the closed landfill. The Usborne landfill (South Huron) is located within the Transmission Line Study Area, directly south of the breaker switch station and across the other side of Dump Road. Construction activities are not anticipated to have an effect upon the closed landfill because there is sufficient separation between the landfill and the Project infrastructure due to the presence of the road.	There are five closed landfills within the Project Study Area (as shown on Figure 2-3), all of which are municipally-owned. The Stephen landfill (South Huron) is located within the Wind Energy Centre Study Area approximately ~~550~~ 650 m south of the collection line between Turbines 42 and 78. Due to the distance between the landfill and Project infrastructure, construction activities are not anticipated to have an effect upon the closed landfill. The Usborne landfill (South Huron) is located within the Transmission Line Study Area, directly south of the breaker switch station and across the other side of Dump Road. Construction activities are not anticipated to have an effect upon the closed landfill because there is sufficient separation between the landfill and the Project infrastructure due to the presence of the road.
Section 3.9.4 / page 54	One petroleum resource was identified within 75 m of Project infrastructure based on the MNR's Oil, Gas and Salt Resources Library. Specifically, the access road and collection line between Turbines 54 and 84 is approximately 60 m from a petroleum resource. There are no oil and gas companies operating pipelines within the Project Study Area.	One petroleum resource was identified within 75 m of Project infrastructure based on the MNR's Oil, Gas and Salt Resources Library. Specifically, the access road and collection line between Turbines 54 and 84 is approximately 60 m from ~~a petroleum resource~~ an active oil producing well. Three other resources were identified based on ground-truthing of the Project Location. There is a storage tank and natural gas line 9 m from the collection line between Turbines 53 and 55, and a natural gas line 7 m from the collection line between Turbines 14 and 31. ~~There are no oil and gas companies operating pipelines within the Project Study Area.~~
Section 3.9.5 / page 54	No effects on open or closed landfills, aggregate resources, forest resources or petroleum wells are anticipated as a result of the construction phase of the Project due to the distance between the Project and these resources. An Engineer's Report will be submitted to the MNR prior to construction to confirm that there are no effects on the one petroleum resource located within 75 m of Project infrastructure.	No effects on open or closed landfills, aggregate resources, forest resources or petroleum wells are anticipated as a result of the construction phase of the Project due to the distance between the Project and these resources. An Engineer's Report will be submitted to the MNR prior to construction to confirm that there are no effects on the ~~one~~ four petroleum resources located within 75 m of Project infrastructure.

2.2 Edits to the Design and Operations Report

The edits made to the Design and Operations Report due to these project modifications and to comments received from review agencies including the MNR are summarized as follows:

Archaeology

- An increase in archaeological sites identified in the Stage 2 Archaeological Assessment and recommended for Stage 3 Archaeological Assessment.

Cultural Heritage

- An increase in the number of structures identified as greater than 40 years old and with cultural heritage value or interest.

Natural Heritage

- An increase in the number of years of post-construction monitoring for specific Bat Maternity Colonies, snake populations.
- An increase in number of years of reporting reptile hibernacula findings to MNR.
- Replacement of the potential effect of the absence of confirmed significant cavity trees or other suitable, but not studied, cavity trees removed during construction with disturbance and/or avoidance behaviour during operation, as the goal during the construction phase will be to leave enough cavity trees in place to allow continued Bat Maternity Colony habitat use.
- Addition of the mitigation strategy to conduct post-construction monitoring of Bat Maternity Colonies in the vicinity of the transmission line to ensure continued use of the habitat.
- Removal of installation and monitoring of bat houses/boxes as a mitigation strategy and monitoring plan and contingency measure as cavity trees are intended to be left intact.
- Addition of the following regarding the potential effect on colonially-nesting birds due to noise from operation of turbines:
  - Performance objective: Minimize disturbance to colonially-nesting birds (Great Blue Herons).
  - Mitigation strategy: Post-construction monitoring to ensure continued use of the habitat.
  - Residual effects: Significance of residual effects will be determined based on the results of post-construction monitoring.
  - Monitoring plan and contingency measures: Conduct 3 years of post-construction colonially-nesting bird monitoring; report the findings of the colonially-nesting bird monitoring program to MNR on an annual basis for the first 3 years of operation; if significant declines or disappearance of species is detected, determine whether this is likely to have been caused by the Project. If so, implement corrective measures that are developed through consultation with MNR.

Surface Water

- Removal of obstruction of lateral flows in watercourses and other waterbodies due to design of culverts and debris build-up at water crossings as a potential surface water effect as this effect and its mitigation are addressed elsewhere;

Other Resources

- An increase in the distance between the Stephen landfill and proposed infrastructure; and
- An increase in the number of petroleum resources within 75 m of Project infrastructure based on a field review.

Table 2-2 documents the edits to the Design and Operations Report (September, 2012).

Table 2-2 Edits to the Design and Operations Report

Section / Page	Original Text	Revised Text
Section 6.1 / page 18	In 2011 and 2012, pedestrian surveys were conducted within the Project Study Area in support of the Stage 2 Archaeological Assessment, according to the 2011 *Standards and Guidelines for Consultant Archaeologists* issued by the Ontario Ministry of Tourism, Culture and Sport (MTCS) (Government of Ontario, 2011). A total of 61 archaeological sites were identified and 28 sites have been recommended for further Stage 3 archaeological assessment.	In 2011 and 2012, pedestrian surveys were conducted within the Project Study Area in support of the Stage 2 Archaeological Assessment, according to the 2011 *Standards and Guidelines for Consultant Archaeologists* issued by the Ontario Ministry of Tourism, Culture and Sport (MTCS) (Government of Ontario, 2011). A total of ~~61~~ 62 archaeological sites were identified and ~~28~~ 33 sites have been recommended for further Stage 3 archaeological assessment.
Section 6.1 / page 18	A Cultural Heritage Assessment (Golder, 2012) was also completed to identify built heritage and cultural heritage landscape resources related to the Euro-Canadian land use in the area dating prior to 1970. All work was carried out in accordance with the *Ontario Heritage Act*, the *Provincial Policy Statement*, and the *Environmental Assessment Act*. The report identified 98 structures (55 houses and 43 barns or barn complexes) as greater than 40 years old within the Project Study Area and as having general historical interest contributing to the character of the vernacular rural landscape. When applying the criteria set out in *Ontario Regulation 9/06*, 71 of these structures (35 houses and 36 barns) were determined to have cultural heritage value or interest. Following the evaluation of anticipated impacts, both direct and indirect, according to *InfoSheet #5* (Government of Ontario, 2006), no anticipated impacts were identified. As there are no anticipated impacts to the cultural heritage features, no further work is recommended.	A Cultural Heritage Assessment (Golder, 2012) was also completed to identify built heritage and cultural heritage landscape resources related to the Euro-Canadian land use in the area dating prior to 1970. All work was carried out in accordance with the *Ontario Heritage Act*, the *Provincial Policy Statement*, and the *Environmental Assessment Act*. The report identified ~~98~~ 135 structures (~~55~~ 67 houses and ~~43~~ 68 barns or barn complexes) as greater than 40 years old within the Project Study Area and as having general historical interest contributing to the character of the vernacular rural landscape. When applying the criteria set out in *Ontario Regulation 9/06*, ~~71~~ 99 of these structures (~~35~~ 46 houses and ~~36~~ 53 barns) were determined to have cultural heritage value or interest. Following the evaluation of anticipated impacts, both direct and indirect, according to *InfoSheet #5* (Government of Ontario, 2006), no anticipated impacts were identified. As there are no anticipated impacts to the cultural heritage features, no further work is recommended.
Table 6-1 / page 20	**Valleylands** One valleyland feature was determined to be significant and therefore included in the EIS.	**~~Valleylands~~** ~~One valleyland feature was determined to be significant and therefore included in the EIS.~~
Table 6-1 / page 20	**Significant Wildlife Habitat** The following significant wildlife habitats were confirmed or treated as significant within the 120 m Area of Investigation and within 120 m of qualifying project infrastructure, and were therefore included in the EIS. • Bat maternity colonies; • Amphibian woodland breeding habitat; • Habitat for plant species of conservation concern (multiple); • Habitat for bird species of conservation concern (Red-headed Woodpecker); • Waterfowl (Tundra Swan) stopover and staging areas; • Reptile hibernacula; • Turtle over-wintering habitat; and • Habitat for Insect Species of Conservation Concern (Azure Bluet).	**Significant Wildlife Habitat** The following significant wildlife habitats were evaluated and determined to be significant in or within the 120 m Area of Investigation and within 120 m of qualifying project infrastructure, and were therefore carried forward to the EIS. • 5 bat maternity colonies; • One colonially-nesting bird breeding habitat (tree/shrub); • 4 amphibian woodland breeding habitats; • 6 habitats for plant species of conservation concern (multiple); and, • One habitat for bird species of conservation concern (Red-headed Woodpecker). ~~The following significant wildlife habitats were confirmed or treated as significant within the 120 m Area of Investigation and within 120 m of qualifying project infrastructure, and were therefore included in the EIS.~~ ~~• Bat maternity colonies;~~ ~~• Amphibian woodland breeding habitat;~~ ~~• Habitat for plant species of conservation concern (multiple);~~ ~~• Habitat for bird species of conservation concern (Red-headed Woodpecker);~~ ~~• Waterfowl (Tundra Swan) stopover and staging areas;~~ ~~• Reptile hibernacula;~~ ~~• Turtle over-wintering habitat; and~~ ~~Habitat for Insect Species of Conservation Concern (Azure Bluet).~~
Table 6-1 / page 20	**Significant Wildlife Habitat** N/A	**Significant Wildlife Habitat** The following features were treated as significant for the purpose of this submission and included in the EIS (in some cases, a determination as to whether the mitigation measures described herein will be applied will be made based on the outcome of pre-construction surveys): • 2 waterfowl stopover and staging areas (terrestrial); • 11 bat maternity colonies; • 2 turtle wintering areas; • 8 reptile hibernacula; • One deer wintering congregation area; • One deer movement corridor; and, • 4 amphibian woodland breeding habitats.
Table 6-1 / page 21	**Significant Wildlife Habitat** The following candidate significant wildlife habitats were identified within the 120 m Area of Investigation however not within 120 m of qualifying project infrastructure, and were therefore included in the EIS as Generalized Candidate Significant Wildlife Habitat: • Waterfowl nesting areas; • Reptile hibernacula; • Bat maternity colonies; • Amphibian woodland breeding habitat; • Amphibian wetland breeding habitat; • Mature forest stands (numerous); • Rare vegetation communities; • Turtle nesting habitat; • Turtle overwintering habitat; • Woodland raptor nesting habitat; • Colonial-nesting Bird Breeding Habitat (Tree/Shrub); • Habitat for area sensitive species: interior forest breeding birds; • Seeps and springs; and • Habitats of species of conservation concern (numerous).	**Significant Wildlife Habitat** The following candidate significant wildlife habitats were identified within the 120 m Area of Investigation however not within 120 m of qualifying project infrastructure, and were therefore included in the EIS as Generalized Candidate Significant Wildlife Habitat: • Waterfowl nesting areas; • Reptile hibernacula; • Bat maternity colonies; • Amphibian woodland breeding habitat; • Amphibian wetland breeding habitat; • Habitats of plant species of conservation concern (numerous); • Habitat of bird species of conservation concern (numerous); • Mature forest stands; • Rare vegetation communities; • Turtle nesting area; • Turtle wintering areas; • Woodland raptor nesting habitat; • Woodland area-sensitive bird breeding habitat; • Terrestrial crayfish habitat; and • Seeps and springs.

Section / Page	Original Text	Revised Text
		~~The following candidate significant wildlife habitats were identified within the 120 m Area of Investigation however not within 120 m of qualifying project infrastructure, and were therefore included in the EIS as Generalized Candidate Significant Wildlife Habitat:~~ • ~~Waterfowl nesting areas;~~ • ~~Reptile hibernacula;~~ • ~~Bat maternity colonies;~~ • ~~Amphibian woodland breeding habitat;~~ • ~~Amphibian wetland breeding habitat;~~ • ~~Mature forest stands (numerous);~~ • ~~Rare vegetation communities;~~ • ~~Turtle nesting habitat;~~ • ~~Turtle overwintering habitat;~~ • ~~Woodland raptor nesting habitat;~~ • ~~Colonial-nesting Bird Breeding Habitat (Tree/Shrub);~~ • ~~Habitat for area sensitive species: interior forest breeding birds;~~ • ~~Seeps and springs; and~~ ~~Habitats of species of conservation concern (numerous).~~
Table 6-2 / page 21-30	**Potential Effect** **Risk of bird collisions with turbines (Project-wide).** **Risk of bat collisions with turbines (Project-wide).** **Residual Effects** • Significance of residual effects will be determined based on the results of post-construction monitoring. • Risk of bird collisions with turbine minimized through mitigation. • Risk of bat collisions with turbine minimized through mitigation.	**Potential Effect** **~~Risk of bird collisions with turbines (Project-wide).~~** **~~Risk of bat collisions with turbines (Project-wide).~~** **Risk of bird mortality caused by turbines (Project-wide).** **Risk of bat mortality caused by turbines (Project-wide).** **Residual Effects** • ~~Significance of residual effects will be determined based on the results of post-construction monitoring.~~ • ~~Risk of bird collisions with turbine minimized through mitigation.~~ • ~~Risk of bat collisions with turbine minimized through mitigation.~~ • Risk of bird and bat collisions with turbine minimized through mitigation. • Significance of residual effects will be determined based on the results of post-construction monitoring.
Table 6-2 / page 21-30	**Potential Effect** **Soil / water contamination by oils, gasoline, grease and other materials (e.g., turbine lubricant, maintenance personnel) resulting from turbine operation and maintenance, substation operation and maintenance, or transmission line maintenance.** **Mitigation Strategy** • Control soil / water contamination through Best Management Practices. • Ensure machinery arrives on site in a clean, washed condition and is maintained free of fluid leaks. • Develop a spill response plan outlining steps to contain any spills during maintenance activities to avoid contamination of valleyland and wetland features. Train staff on associated procedures and maintain emergency spill kits on site. • Dispose of any waste material from maintenance activities by authorized and approved off-site vendors. • Site maintenance, vehicle washing and refuelling stations where contaminants are handled at least 30 m away from natural features including water bodies and significant woodlands, wetlands, and wildlife habitat. • Implement vehicle and equipment cleaning procedures and practices to minimize or eliminate the discharge of pollutants from vehicle / equipment cleaning operations to watercourses or natural areas. • Store any stockpiled materials away from natural features to prevent deleterious substances from inadvertently discharging to the environment. • Only apply herbicides (if required) when wind speeds are low and no significant precipitation is expected (does not apply to agricultural practices). • Only use herbicides (if required) approved for use adjacent to water bodies, riparian buffers, or woodland edges (does not apply to agricultural practices). **Residual Effects** • Soil / water contamination will be minimized through the application of mitigation measures. • Low likelihood and limited magnitude of effects on surface water and groundwater as a result. **Monitoring Plan and Contingency Measures** • Conduct regular site inspections and monitoring of turbines by a designated on-site Environmental Monitor(s). • **Contingency Measures:** ▪ Notify MOE's Spills Action Centre of any spills. ▪ Assess and remediate affected soils and water. ▪ In the event that a spill occurs, the details of the spill will be reported back to MOE, including a description of any assessment and remediation undertaken.	**Potential Effect** **~~Soil / water contamination by oils, gasoline, grease and other materials (e.g., turbine lubricant, maintenance personnel) resulting from turbine operation and maintenance, substation operation and maintenance, or transmission line maintenance.~~** **Risk of soil or water contamination from oil, gas, etc. during maintenance activities where access roads, turbines or the transmission line are within 30 m of significant wetlands** **Mitigation Strategy** • ~~Control soil / water contamination through Best Management Practices.~~ • ~~Ensure machinery arrives on site in a clean, washed condition and is maintained free of fluid leaks.~~ • ~~Develop a spill response plan outlining steps to contain any spills during maintenance activities to avoid contamination of valleyland and wetland features. Train staff on associated procedures and maintain emergency spill kits on site.~~ • ~~Dispose of any waste material from maintenance activities by authorized and approved off-site vendors.~~ • ~~Site maintenance, vehicle washing and refuelling stations where contaminants are handled at least 30 m away from natural features including water bodies and significant woodlands, wetlands, and wildlife habitat.~~ • ~~Implement vehicle and equipment cleaning procedures and practices to minimize or eliminate the discharge of pollutants from vehicle / equipment cleaning operations to watercourses or natural areas.~~ • ~~Store any stockpiled materials away from natural features to prevent deleterious substances from inadvertently discharging to the environment.~~ • ~~Only apply herbicides (if required) when wind speeds are low and no significant precipitation is expected (does not apply to agricultural practices).~~ ~~Only use herbicides (if required) approved for use adjacent to water bodies, riparian buffers, or woodland edges (does not apply to agricultural practices).~~ • Develop and implement an emergency spills plan outlining steps to contain any spills during maintenance activities to avoid contamination of significant wetlands. **Residual Effects** • ~~Soil / water contamination will be minimized through the application of mitigation measures.~~ ~~Low likelihood and limited magnitude of effects on surface water and groundwater as a result.~~ • Residual effects considered negligible. **Monitoring Plan and Contingency Measures** • ~~Conduct regular site inspections and monitoring of turbines by a designated on-site Environmental Monitor(s).~~

Section / Page	Original Text	Revised Text
		~~• **Contingency Measures:**~~ ~~▪ Notify MOE's Spills Action Centre of any spills.~~ ~~▪ Assess and remediate affected soils and water.~~ ~~In the event that a spill occurs, the details of the spill will be reported back to MOE, including a description of any assessment and remediation undertaken.~~ • No monitoring required. • **Contingency Measures:** ▪ Report the details of the spill to MOE, including a description of any assessment and remediation undertaken.
Table 6-2 / page 21-30	**Potential Effect** **Changes in surface water drainage patterns resulting in effects to soil moisture and species composition of vegetation from access road operation and maintenance** **Performance Objective** • No effects to soil moisture and species composition of vegetation. • Minimize changes in surface water drainage patterns. **Mitigation Strategy** • Implement infiltration techniques to the maximum extent possible. • Minimize paved surfaces and design roads to promote infiltration. **Residual Effects** • Effects to soil moisture and species composition of vegetation minimized through application of mitigation measures. • Low likelihood and limited magnitude of effects as a result. **Monitoring Plan and Contingency Measures** • Inspect locations within 30 m of wetlands following completion of access roads to ensure no grade changes. • **Contingency Measures:** ▪ If surface water drainage alterations are detected, undertake corrective measures to restore drainage pattern.	~~**Potential Effect**~~ ~~**Changes in surface water drainage patterns resulting in effects to soil moisture and species composition of vegetation from access road operation and maintenance**~~ ~~**Performance Objective**~~ ~~• No effects to soil moisture and species composition of vegetation.~~ ~~Minimize changes in surface water drainage patterns.~~ ~~**Mitigation Strategy**~~ ~~• Implement infiltration techniques to the maximum extent possible.~~ ~~• Minimize paved surfaces and design roads to promote infiltration.~~ ~~**Residual Effect**~~ ~~• Effects to soil moisture and species composition of vegetation minimized through application of mitigation measures.~~ ~~Low likelihood and limited magnitude of effects as a result.~~ ~~**Monitoring Plan and Contingency Measures**~~ ~~• Inspect locations within 30 m of wetlands following completion of access roads to ensure no grade changes.~~ ~~• **Contingency Measures:**~~ ~~▪ If surface water drainage alterations are detected, undertake corrective measures to restore drainage pattern.~~
Table 6-2 / page 21-30	**Potential Effect** **Potential introduction of invasive species into Significant Wetlands communities resulting from access road operation and maintenance.** **Mitigation Strategy** • A restoration plan should be implemented to re-vegetate the 5 m buffer between the turbine and wetland. This should include the 1 year application of an approved herbicide to eradicate invasive species followed by the cultivation and seeding of the area with a native seed mix as well as the planting of native shrubs along the edge consistent with existing wetland vegetation composition **Monitoring Plan and Contingency Measures** • Monitor twice per year for two years to confirm survival of seed mix. • **Contingency Measures:** • Should seed mix and/or plantings not survive, additional seeding and/or plantings will be undertaken.	**Potential Effect** ~~**Potential introduction of invasive species into Significant Wetlands communities resulting from access road operation and maintenance.**~~ **Potential introduction of invasive species into wetland communities adjacent to access roads** **Mitigation Strategy** ~~A restoration plan should be implemented to re-vegetate the 5 m buffer between the turbine and wetland. This should include the 1 year application of an approved herbicide to eradicate invasive species followed by the cultivation and seeding of the area with a native seed mix as well as the planting of native shrubs along the edge consistent with existing wetland vegetation composition~~ • Develop and implement a restoration plan to re-vegetate the 5 m buffer between the access road and the wetland. This will include the 1 year application of an approved herbicide (as per Ausable Bayfield Conservation Authority) to eradicate invasive species followed by seeding with a native seed mix and the planting of native shrubs along the edge consistent with existing vegetation composition. **Monitoring Plan and Contingency Measures** ~~• Monitor twice per year for two years to confirm survival of seed mix.~~ ~~• **Contingency Measures:**~~ ~~Should seed mix and/or plantings not survive, additional seeding and/or plantings will be undertaken.~~ • Monitor re-vegetated areas once per growing season for two years to confirm survival of plantings and/or seed mix. • **Contingency Measures:** • Should seed mix and/or plantings not survive, additional seeding and/or plantings will be undertaken.
Table 6-2 / page 21-30	**Potential Effect** **Loss of forest cover (up to 2.8 ha) through vegetation clearing in Significant Woodlands due to transmission line establishment** **Mitigation Strategy** • Establish an area of forest equal in area to the cleared area (up to 2.8 ha; to be determine d through a post-construction site inspection) through tree planting and management (e.g., in partnership with a local Conservation Authority). Details of the afforestation plan will be provided to MNR in a Compensation Plan. **Residual Effects** • Clearing of vegetation will occur for the transmission line. • Loss of forest cover minimized through afforestation over time. • Moderate residual effects.	**Potential Effect** ~~**Loss of forest cover (up to 2.8 ha) through vegetation clearing in Significant Woodlands due to transmission line establishment**~~ **Loss of forest cover (up to 2.6 ha) through vegetation clearing in Significant Woodlands due to transmission line establishment.** **Mitigation Strategy** ~~Establish an area of forest equal in area to the cleared area (up to 2.8 ha; to be determine d through a post-construction site inspection) through tree planting and management (e.g., in partnership with a local Conservation Authority). Details of the afforestation plan will be provided to MNR in a Compensation Plan.~~ • Establish an area of forest equal in area to the cleared area (up to 2.6 ha) through tree planting and management (e.g., in partnership with a local Conservation Authority). Details of the afforestation plan will be described in a Compensation Plan to be developed in consultation with MNR.

Section / Page	Original Text	Revised Text
		Residual Effects ~~• Clearing of vegetation will occur for the transmission line.~~ ~~• Loss of forest cover minimized through afforestation over time.~~ ~~Moderate residual effects.~~ • Clearing of vegetation will occur for the transmission line. • Loss of forest cover minimized through afforestation; however there will be a time delay for the planted area to reach the same function as the cleared forest.
Table 6-2 / page 21-30	**Potential Effect** **Clearing of vegetation for maintenance of the transmission line, resulting in accidental damage to Significant Woodlands.** **Performance Objective** • Minimize accidental damage to significant woodlands **Mitigation Strategy** • Perform vegetation clearing outside of the breeding bird season (May 1st to July 31st). Undertake active nest surveys if vegetation removal must take place during this period. • Clearly stake area to be cleared. • Limit size of machines to minimize soil compaction **Residual Effects** • Minimal effects to significant woodlands during maintenance. **Monitoring Plan and Contingency Measures** • Removal of tree limbs on adjacent trees being retained should be carried out under supervision of an Arborist or Forester	~~**Potential Effect**~~ ~~**Clearing of vegetation for maintenance of the transmission line, resulting in accidental damage to Significant Woodlands.**~~ ~~**Performance Objective**~~ ~~Minimize accidental damage to significant woodlands~~ ~~**Mitigation Strategy**~~ ~~• Perform vegetation clearing outside of the breeding bird season (May 1st to July 31st). Undertake active nest surveys if vegetation removal must take place during this period.~~ ~~• Clearly stake area to be cleared.~~ ~~Limit size of machines to minimize soil compaction~~ ~~**Residual Effects**~~ ~~Minimal effects to significant woodlands during maintenance.~~ ~~**Monitoring Plan and Contingency Measures**~~ ~~Removal of tree limbs on adjacent trees being retained should be carried out under supervision of an Arborist or Forester~~
Table 6-2 / page 21-30	**Potential Effect** **Avoidance by Tundra Swans of stopover and staging habitats during migration due to proximity of turbines.** **Mitigation Strategy** • Implement contingency mitigation measures if disturbance effects are detected through post-construction monitoring. Mitigation techniques for Tundra Swans may include: ▪ Temporary shut-down of select turbines during migration period (typically early to late March); ▪ If necessary, work with MNR to develop other appropriate mitigation measures. **Monitoring Plan and Contingency Measures** • Conduct 3 years of post-construction Tundra Swan monitoring at Features, including: ▪ Conduct surveys on three occasions approximately one week apart during the peak migratory period, which typically occurs in March but can range from mid-February to mid-April. ▪ Conduct surveys between sunrise and noon, and under calm, clear weather conditions, to the extent possible. ▪ One survey station will be placed per 0.5 km of candidate Tundra Swan stopover and staging habitat and be monitored for approximately 15 minutes. ▪ All observed waterfowl will be recorded along with their approximate location, age and behaviour. • The findings of the Tundra Swan monitoring programs will be reported back to MNR on an annual basis for the first 3 years of operation. **Contingency Measures:** • Institute changes to turbine operation if disturbance effects are detected through post-construction monitoring (see mitigation strategy in this table).	**Potential Effect** **Avoidance by Tundra Swans of stopover and staging habitats during migration due to proximity of turbines.** **Mitigation Strategy** ~~• Implement contingency mitigation measures if disturbance effects are detected through post-construction monitoring. Mitigation techniques for Tundra Swans may include:~~ ~~• Temporary shut-down of select turbines during migration period (typically early to late March);~~ ~~• If necessary, work with MNR to develop other appropriate mitigation measures.~~ • Implement contingency mitigation measures if disturbance effects are detected through post-construction monitoring (contingency measures). **Monitoring Plan and Contingency Measures** ~~• Conduct 3 years of post-construction Tundra Swan monitoring at Features, including:~~ ~~• Conduct surveys on three occasions approximately one week apart during the peak migratory period, which typically occurs in March but can range from mid-February to mid-April.~~ ~~• Conduct surveys between sunrise and noon, and under calm, clear weather conditions, to the extent possible.~~ ~~• One survey station will be placed per 0.5 km of candidate Tundra Swan stopover and staging habitat and be monitored for approximately 15 minutes.~~ ~~• All observed waterfowl will be recorded along with their approximate location, age and behaviour.~~ ~~• The findings of the Tundra Swan monitoring programs will be reported back to MNR on an annual basis for the first 3 years of operation.~~ ~~**Contingency Measures:**~~ ~~Institute changes to turbine operation if disturbance effects are detected through post-construction monitoring (see mitigation strategy in this table).~~ • Conduct 3 years of post-construction Tundra Swan monitoring at Features WSST-15 and WSST-36 (if determined to be significant) by a qualified Biologist, including: ▪ Conduct surveys on three occasions approximately one week apart during the peak migratory period, which typically occurs in March but can range from mid-February to mid-April. ▪ One survey station will be placed per 0.5 km of candidate Tundra Swan stopover and staging habitat and be monitored for approximately 15 minutes. ▪ All observed waterfowl will be recorded along with their approximate location, age and behaviour. • The findings of the Tundra Swan monitoring programs will be reported back to MNR on an annual basis for the first 3 years of operation. **Contingency Measures:** • If significant declines or disappearance of species is detected, determine whether this is likely to have been caused by the Project. If so, implement corrective measures that are developed through consultation with MNR.

Section / Page	Original Text	Revised Text
Table 6-2 / page 21-30	**Potential Effect** **Disturbance to Tundra Swan stopover and staging habitats due to vehicular traffic on access roads.** **Mitigation Strategy** • Avoid using access roads adjacent to Tundra Swan stopover and staging habitats during migration period (typically early to late March), to the extent possible.	**Potential Effect** **Disturbance to Tundra Swan stopover and staging habitats due to vehicular traffic on access roads.** **Mitigation Strategy** ~~Avoid using access roads adjacent to Tundra Swan stopover and staging habitats during migration period (typically early to late March), to the extent possible.~~ • Schedule regular (non-critical) maintenance activities to occur outside of the important period of staging Tundra Swan (March 1 to April 15), to the extent possible. • Maintain wildlife crossing signs and limit speed of vehicles (30 km/hr) near stopover and staging areas
Table 6-2 / page 21-30	**Potential Effect** **Bats may be disturbed by noise from operation of turbines.** **Mitigation Strategy** • Implement mitigation when disturbance effects are detected through post-construction monitoring (refer to mitigation measures for bat collisions with turbines above). **Monitoring Plan and Contingency Measures** • Conduct 3 years of post-construction acoustic monitoring for Feature BMC-757 according to protocol described for pre-construction survey (as described in March 2010 Draft version of *Bats and Bat Habitats: Guidelines for Wind Power Projects*) including: ▪ Through the night acoustic monitoring stations to be positioned within 10 m of the potential roost. ▪ Survey same stations as pre-construction survey. ▪ Visual monitoring to be conducted at dusk in June. ▪ Acoustic monitoring to begin at dusk and continue for 5 hours, for up to 10 nights, or until roost is confirmed. ▪ Monitoring to occur between June 1 and June 30. • Conduct 1 year of post-construction acoustic monitoring for Features BMC-189, BMC-229, BMC-326, and BMC-342 according to protocol described for pre-construction survey, as described in the March 2010 Draft version of *Bats and Bat Habitats: Guidelines for Wind Power Projects* (see above). • If the first year of post-construction monitoring indicates that this Feature may no longer be significant, an additional 2 years of post-construction monitoring will occur following pre-construction methods. • If a significant habitat is still significant after the first year of post-construction monitoring, no further monitoring will occur as the habitat will be considered to be unaffected. • Conduct 1 year of post-construction acoustic monitoring for Features BMC-235, BMC-242, BMC-249, BMC-267, BMC-282, BMC-352, BMC-358 and BMC-372 (if deemed to be significant) according to protocol described for pre-construction survey (as described in July 2011 version of *Bats and Bat Habitats: Guidelines for Wind Power Projects*) including: ▪ Conduct monitoring of roost trees through exit surveys through June. ▪ Conduct active visual and acoustic monitoring at the cavity opening or crevice from 30 minutes before dusk until 60 minutes after dusk in June. • If this first year of post-construction monitoring indicates that a Feature may no longer be significant, an additional 2 years of post-construction monitoring will occur following pre-construction methods to determine if a change may represent normal variation in population or if the project has had an effect. • If a significant habitat is still significant after the first year of post-construction monitoring, no further monitoring will occur as the habitat will be considered to be unaffected. • The findings of all acoustic monitoring programs will be reported back to MNR on an annual basis for the first 3 years of operation. • **Contingency Measures:** ▪ Institute changes to turbine operation if disturbance effects are detected through post-construction monitoring (see mitigation strategy in this table). ▪ Consultation with MNR to determine additional contingency measures if necessary	**Potential Effect** **Bats may be disturbed by noise from operation of turbines.** **Mitigation Strategy** ~~Implement mitigation when disturbance effects are detected through post-construction monitoring (refer to mitigation measures for bat collisions with turbines above).~~ • Implement contingency mitigation measures (as per consultation with MNR) if disturbance effects are detected through post-construction monitoring. **Monitoring Plan and Contingency Measures** • ~~Conduct 3 years of post-construction acoustic monitoring for Feature BMC-757 according to protocol described for pre-construction survey (as described in March 2010 Draft version of *Bats and Bat Habitats: Guidelines for Wind Power Projects*) including:~~ ~~▪ Through the night acoustic monitoring stations to be positioned within 10 m of the potential roost.~~ ~~▪ Survey same stations as pre-construction survey.~~ ~~▪ Visual monitoring to be conducted at dusk in June.~~ ~~▪ Acoustic monitoring to begin at dusk and continue for 5 hours, for up to 10 nights, or until roost is confirmed.~~ ~~▪ Monitoring to occur between June 1 and June 30.~~ • ~~Conduct 1 year of post-construction acoustic monitoring for Features BMC-189, BMC-229, BMC-326, and BMC-342 according to protocol described for pre-construction survey, as described in the March 2010 Draft version of *Bats and Bat Habitats: Guidelines for Wind Power Projects* (see above).~~ • ~~If the first year of post-construction monitoring indicates that this Feature may no longer be significant, an additional 2 years of post-construction monitoring will occur following pre-construction methods.~~ • ~~If a significant habitat is still significant after the first year of post-construction monitoring, no further monitoring will occur as the habitat will be considered to be unaffected.~~ • ~~Conduct 1 year of post-construction acoustic monitoring for Features BMC-235, BMC-242, BMC-249, BMC-267, BMC-282, BMC-352, BMC-358 and BMC-372 (if deemed to be significant) according to protocol described for pre-construction survey (as described in July 2011 version of *Bats and Bat Habitats: Guidelines for Wind Power Projects*) including:~~ ~~▪ Conduct monitoring of roost trees through exit surveys through June.~~ ~~▪ Conduct active visual and acoustic monitoring at the cavity opening or crevice from 30 minutes before dusk until 60 minutes after dusk in June.~~ • ~~If this first year of post-construction monitoring indicates that a Feature may no longer be significant, an additional 2 years of post-construction monitoring will occur following pre-construction methods to determine if a change may represent normal variation in population or if the project has had an effect.~~ • ~~If a significant habitat is still significant after the first year of post-construction monitoring, no further monitoring will occur as the habitat will be considered to be unaffected.~~ ~~The findings of all acoustic monitoring programs will be reported back to MNR on an annual basis for the first 3 years of operation.~~ • ~~**Contingency Measures:**~~ ~~▪ Institute changes to turbine operation if disturbance effects are detected through post-construction monitoring (see mitigation strategy in this table).~~ ~~Consultation with MNR to determine additional contingency measures if necessary~~ • Conduct 3 years of post-construction monitoring for Features BMC-757, BMC-189, BMC-229, BMC-326, and BMC-342 according to protocol described for pre-construction survey (as described in March 2010 Draft version of *Bats and Bat Habitats: Guidelines for Wind Power Projects*) including: ▪ Through the night acoustic monitoring stations to be positioned within 10 m of the potential roost. ▪ Survey same stations as pre-construction survey. ▪ Visual monitoring to be conducted at dusk in June. ▪ Acoustic monitoring to begin at dusk and continue for 5 hours, for up to 10 nights, or until roost is confirmed. ▪ Monitoring to occur between June 1 and June 30. • Conduct 3 years of post-construction monitoring for Features BMC-235, BMC-242, BMC-249, BMC-267, BMC-282, BMC-352, and BMC-358 (if deemed to be significant) according to protocol described for pre-construction survey (as described in July 2011 version of *Bats and Bat Habitats: Guidelines for Wind Power Projects*) including: ▪ Conduct monitoring of roost trees during exit surveys throughout June. ▪ Conduct active visual and acoustic monitoring at the cavity opening or crevice from 30 minutes before dusk until 60 minutes after dusk in June.

Section / Page	Original Text	Revised Text
		• The findings of all monitoring programs will be reported to MNR on an annual basis for the first 3 years of operation. • **Contingency Measures:** ▪ Institute changes to turbine operation if disturbance effects are detected through post-construction monitoring. ▪ Consultation with MNR to determine additional contingency measures if necessary.
Table 6-2 / page 21-30	**Potential Effect** **Bats may display avoidance behaviour caused by turbine lighting.** **Monitoring Plan and Contingency Measures** • Conduct 3 years of post-construction acoustic monitoring for Feature BMC-757 according to protocol described for pre-construction survey (as described in March 2010 Draft version of *Bats and Bat Habitats: Guidelines for Wind Power Projects*) including: ▪ Through the night acoustic monitoring stations to be positioned within 10 m of the potential roost. ▪ Survey same stations as pre-construction survey. ▪ Visual monitoring to be conducted at dusk in June. ▪ Acoustic monitoring to begin at dusk and continue for 5 hours, for up to 10 nights, or until roost is confirmed. ▪ Monitoring to occur between June 1 and June 30. • Conduct 1 year of post-construction acoustic monitoring for Features BMC-189, BMC-229, BMC-326, and BMC-342 according to protocol described for pre-construction survey, as described in the March 2010 Draft version of *Bats and Bat Habitats: Guidelines for Wind Power Projects* (see above). • If the first year of post-construction monitoring indicates that this Feature may no longer be significant, an additional 2 years of post-construction monitoring will occur following pre-construction methods to determine if a change may represent normal variation in population or if the project has had an effect. • If a significant habitat is still significant after the first year of post-construction monitoring, no further monitoring will occur as the habitat will be considered to be unaffected. • Conduct 1 year of post-construction acoustic monitoring for Features BMC-235, BMC-242, BMC-249, BMC-267, BMC-282, BMC-352, BMC-358 and BMC-372 (if deemed to be significant) according to protocol described for pre-construction survey (as described in July 2011 version of *Bats and Bat Habitats: Guidelines for Wind Power Projects*) including: ▪ Conduct monitoring of roost trees through exit surveys through June. ▪ Conduct active visual and acoustic monitoring at the cavity opening or crevice from 30 minutes before dusk until 60 minutes after dusk in June. • If this first year of post-construction monitoring indicates that a Feature may no longer be significant, an additional 2 years of post-construction monitoring will occur following pre-construction methods to determine if a change may represent normal variation in population or if the project has had an effect. • If a significant habitat is still significant after the first year of post-construction monitoring, no further monitoring will occur as the habitat will be considered to be unaffected. • The findings of all acoustic monitoring programs will be reported back to MNR on an annual basis for the first 3 years of operation. • **Contingency Measures:** ▪ Institute changes to turbine operation if disturbance effects are detected through post-construction monitoring (see mitigation strategy in this table). ▪ Consultation with MNR to determine additional contingency measures if necessary.	**Potential Effect** **Bats may display avoidance behaviour caused by turbine lighting.** **Monitoring Plan and Contingency Measures** • ~~Conduct 3 years of post-construction acoustic monitoring for Feature BMC-757 according to protocol described for pre-construction survey (as described in March 2010 Draft version of *Bats and Bat Habitats: Guidelines for Wind Power Projects*) including:~~ ~~▪ Through the night acoustic monitoring stations to be positioned within 10 m of the potential roost.~~ ~~▪ Survey same stations as pre-construction survey.~~ ~~▪ Visual monitoring to be conducted at dusk in June.~~ ~~▪ Acoustic monitoring to begin at dusk and continue for 5 hours, for up to 10 nights, or until roost is confirmed.~~ ~~▪ Monitoring to occur between June 1 and June 30.~~ • ~~Conduct 1 year of post-construction acoustic monitoring for Features BMC-189, BMC-229, BMC-326, and BMC-342 according to protocol described for pre-construction survey, as described in the March 2010 Draft version of *Bats and Bat Habitats: Guidelines for Wind Power Projects* (see above).~~ • ~~If the first year of post-construction monitoring indicates that this Feature may no longer be significant, an additional 2 years of post-construction monitoring will occur following pre-construction methods to determine if a change may represent normal variation in population or if the project has had an effect.~~ • ~~If a significant habitat is still significant after the first year of post-construction monitoring, no further monitoring will occur as the habitat will be considered to be unaffected.~~ • ~~Conduct 1 year of post-construction acoustic monitoring for Features BMC-235, BMC-242, BMC-249, BMC-267, BMC-282, BMC-352, BMC-358 and BMC-372 (if deemed to be significant) according to protocol described for pre-construction survey (as described in July 2011 version of *Bats and Bat Habitats: Guidelines for Wind Power Projects*) including:~~ ~~▪ Conduct monitoring of roost trees through exit surveys through June.~~ ~~▪ Conduct active visual and acoustic monitoring at the cavity opening or crevice from 30 minutes before dusk until 60 minutes after dusk in June.~~ • ~~If this first year of post-construction monitoring indicates that a Feature may no longer be significant, an additional 2 years of post-construction monitoring will occur following pre-construction methods to determine if a change may represent normal variation in population or if the project has had an effect.~~ • ~~If a significant habitat is still significant after the first year of post-construction monitoring, no further monitoring will occur as the habitat will be considered to be unaffected.~~ • ~~The findings of all acoustic monitoring programs will be reported back to MNR on an annual basis for the first 3 years of operation.~~ • ~~**Contingency Measures:**~~ ~~▪ Institute changes to turbine operation if disturbance effects are detected through post-construction monitoring (see mitigation strategy in this table).~~ ~~Consultation with MNR to determine additional contingency measures if necessary.~~ • Conduct 3 years of post-construction monitoring for Features BMC-757, BMC-189, BMC-229, BMC-326, and BMC-342 according to protocol described for pre-construction survey (as described in March 2010 Draft version of *Bats and Bat Habitats: Guidelines for Wind Power Projects*) including: ▪ Through the night acoustic monitoring stations to be positioned within 10 m of the potential roost. ▪ Survey same stations as pre-construction survey. ▪ Visual monitoring to be conducted at dusk in June. ▪ Acoustic monitoring to begin at dusk and continue for 5 hours, for up to 10 nights, or until roost is confirmed. ▪ Monitoring to occur between June 1 and June 30. • Conduct 3 years of post-construction monitoring for Features BMC-235, BMC-242, BMC-249, BMC-267, BMC-282, BMC-352, and BMC-358 (if deemed to be significant) according to protocol described for pre-construction survey (as described in July 2011 version of *Bats and Bat Habitats: Guidelines for Wind Power Projects*) including: ▪ Conduct monitoring of roost trees during exit surveys throughout June. ▪ Conduct active visual and acoustic monitoring at the cavity opening or crevice from 30 minutes before dusk until 60 minutes after dusk in June. • The findings of all monitoring programs will be reported to MNR on an annual basis for the first 3 years of operation. • **Contingency Measures:** ▪ Institute changes to turbine operation if disturbance effects are detected through post-construction monitoring. ▪ Consultation with MNR to determine additional contingency measures if necessary.

Section / Page	Original Text	Revised Text
Table 6-2 / page 21-30	**Potential Effect** **Removal of confirmed significant cavity trees or other suitable, but not studied, cavity trees in Bat Maternity Colony Features as a result of vegetation removal for the transmission line.** **Performance Objective** • Protection of bat roosting habitat. **Mitigation Strategy** • For each suitable cavity tree to be removed, a bat house will be installed in the closest suitable woodland habitat (the remainder of the woodland for each of the affected habitats). • Details of bat box construction and placement will be provided to MNR for approval prior to installation. • If a significant maternity colony must be removed, timing, location, and bat house design will be of utmost importance for the colony to successfully re-establish, and will be discussed with the MNR. **Monitoring Plan and Contingency Measures** • Conduct 3 years of post-construction acoustic monitoring of all remaining cavity trees for Features BMC-648 and BMC-720 (if deemed to be significant) according to protocol described for pre-construction survey (as described in July 2011 version of *Bats and Bat Habitats: Guidelines for Wind Power Projects*) including: ▪ Conduct monitoring of roost trees through exit surveys through June. ▪ Conduct active visual and acoustic monitoring at the cavity opening or crevice from 30 minutes before dusk until 60 minutes after dusk in June. • Conduct post-construction visual monitoring of any bat boxes installed for 3 years after construction, to determine the success of the implemented mitigation measures. • The findings of all acoustic monitoring programs will be reported back to MNR on an annual basis for the first 3 years of operation. • **Contingency Measures:** ▪ If a permanent and significant disturbance has been noted within these Features, the MNR will be contacted to determine whether additional mitigation measures will be needed.	**Potential Effect** **~~Removal of confirmed significant cavity trees or other suitable, but not studied, cavity trees in Bat Maternity Colony Features as a result of vegetation removal for the transmission line.~~** **Bats may be disturbed or avoid woodlands where tree removal will occur for the transmission line.** **Performance Objective** ~~• Protection of bat roosting habitat.~~ • Continued use of habitat. **Mitigation Strategy** ~~• For each suitable cavity tree to be removed, a bat house will be installed in the closest suitable woodland habitat (the remainder of the woodland for each of the affected habitats).~~ ~~• Details of bat box construction and placement will be provided to MNR for approval prior to installation.~~ ~~If a significant maternity colony must be removed, timing, location, and bat house design will be of utmost importance for the colony to successfully re-establish, and will be discussed with the MNR.~~ • Post-construction monitoring to ensure continued use of habitat. **Monitoring Plan and Contingency Measures** ~~• Conduct 3 years of post-construction acoustic monitoring of all remaining cavity trees for Features BMC-648 and BMC-720 (if deemed to be significant) according to protocol described for pre-construction survey (as described in July 2011 version of *Bats and Bat Habitats: Guidelines for Wind Power Projects*) including:~~ ~~▪ Conduct monitoring of roost trees through exit surveys through June.~~ ~~▪ Conduct active visual and acoustic monitoring at the cavity opening or crevice from 30 minutes before dusk until 60 minutes after dusk in June.~~ ~~• Conduct post-construction visual monitoring of any bat boxes installed for 3 years after construction, to determine the success of the implemented mitigation measures.~~ ~~• The findings of all acoustic monitoring programs will be reported back to MNR on an annual basis for the first 3 years of operation.~~ ~~• **Contingency Measures:**~~ ~~If a permanent and significant disturbance has been noted within these Features, the MNR will be contacted to determine whether additional mitigation measures will be needed.~~ • Conduct 3 years of post-construction monitoring of all remaining cavity trees for Features BMC-648 and BMC-720 (if deemed to be significant) according to protocol described for pre-construction survey (as described in July 2011 version of *Bats and Bat Habitats: Guidelines for Wind Power Projects*) including: ▪ Conduct monitoring of roost trees through exit surveys through June. ▪ Conduct active visual and acoustic monitoring at the cavity opening or crevice from 30 minutes before dusk until 60 minutes after dusk in June. • The findings of all post-construction monitoring programs will be reported back to MNR on an annual basis for the first 3 years of operation. • **Contingency Measures:** ▪ If a permanent and significant disturbance has been noted within these Features, the MNR will be contacted to determine whether additional mitigation measures will be needed.
Table 6-2 / page 21-30	**N/A**	**Potential Effect** **Risk of road mortality to turtles moving between wintering ponds and other areas.** **Performance Objective** • Minimize turtle mortality along access roads. **Mitigation Strategy** • Maintain wildlife crossing signs and limit speed of vehicles (30 km/hr) near turtle wintering areas. **Residual Effects** • Risk of turtle road mortality reduced through mitigation measures. • Low likelihood of occurring and limited magnitude due to limited volume of maintenance vehicles. **Monitoring Plan and Contingency Measures** ▪ No monitoring or contingency measures required

Section / Page	Original Text	Revised Text
Table 6-2 / page 21-30	**Potential Effect** **Red-Headed Woodpecker Breeding Habitat may be disturbed by routine maintenance of the transmission line corridor.** **Performance Objective** • No displacement of breeding Red-Headed Woodpeckers from habitat. • No destruction of nesting habitat. **Mitigation Strategy** • Perform maintenance operations such as vegetation clearing outside the breeding season of May 1st to July 31st. • Implement contingency mitigation measures (as per consultation with MNR) if disturbance effects are detected through post-construction monitoring **Residual Effects** • If routine maintenance operations such as vegetation trimming and clearing are conducted outside the breeding season of May 1st to July 31st there should be minimal residual effects from maintenance of the transmission line. • Nesting in utility poles has been recorded for Red-Headed Woodpecker, thus there is a possibility that the poles could provide future nesting habitat. **Monitoring Plan and Contingency Measures** • Supervision of vegetation removal by a qualified Biologist to ensure no destruction of nesting habitat. • No additional monitoring or contingency measures required if timing window is applied.	**Potential Effect** ~~**Red-Headed Woodpecker Breeding Habitat may be disturbed by routine maintenance of the transmission line corridor.**~~ **Possible mortality to snakes from vehicles using access roads.** **Performance Objective** ~~• No displacement of breeding Red-Headed Woodpeckers from habitat.~~ ~~No destruction of nesting habitat.~~ • Minimize snake mortality along access road. **Mitigation Strategy** ~~• Perform maintenance operations such as vegetation clearing outside the breeding season of May 1st to July 31st.~~ ~~Implement contingency mitigation measures (as per consultation with MNR) if disturbance effects are detected through post-construction monitoring~~ • Advise operations staff to take extra care while driving access roads near features RH-01, RH-02, RH-03 and RH-05, particularly during timing windows when snakes emerge (April 15 - May 31) and return (September 1 – October 15) to hibernacula. • Maintain wildlife crossing signs and limit speed of vehicles near crossings (30 km/hr). • Erect long term drift fence between edge of habitat (RH-02, RH-03, RH-04 and RH-05) and road if hibernaculum determined to be large (>25 snakes). **Residual Effects** ~~• If routine maintenance operations such as vegetation trimming and clearing are conducted outside the breeding season of May 1st to July 31st there should be minimal residual effects from maintenance of the transmission line.~~ ~~Nesting in utility poles has been recorded for Red-Headed Woodpecker, thus there is a possibility that the poles could provide future nesting habitat.~~ • Risk of snake mortality minimized through the application of mitigation measures. • Low likelihood of occurring and limited magnitude (i.e., no or limited mortality expected) due to limited volume of maintenance vehicles. **Monitoring Plan and Contingency Measures** ~~• Supervision of vegetation removal by a qualified Biologist to ensure no destruction of nesting habitat.~~ ~~• No additional monitoring or contingency measures required if timing window is applied.~~ • Conduct reptile hibernacula surveys at reptile hibernacula within 120 m of access roads (RH-01, RH-02, RH-03 and RH-05; if determined to be significant) by a qualified Biologist annually for 3 years post-construction to assess any potential changes in snake populations or species composition using protocol described for pre-construction survey, including: ▪ Examination of rock piles and vicinity on three occasions between mid-April and mid-May. ▪ Identify species and count individuals. • Report the findings of the reptile hibernacula monitoring program to MNR on an annual basis for the first 3 years of operation. • **Contingency Measures:** ▪ If significant declines or disappearance of species is detected, determine whether likely to have been caused by the Project. If so, corrective measures will be taken, to be determined through consultation with MNR.
Table 6-2 / page 21-30	**Potential Effect** **Removal of vegetation within Red-Headed Woodpecker Breeding Habitat resulting from clearing for the transmission line.** **Performance Objective** • No displacement of breeding Red-headed Woodpeckers from habitat. • No destruction of nesting habitat. Mitigation Strategy • Implement contingency mitigation measures (as per consultation with MNR) if disturbance effects are detected through post-construction monitoring. **Residual Effects** • Some permanent vegetation removal within the woodland containing the Red-Headed Woodpecker nesting site will occur. • Significance of residual effects will be determined based on the results of post-construction monitoring. **Monitoring Plan and Contingency Measures** • Conduct 3 years of post-construction monitoring for Feature SCB-03, according to protocol described for pre-construction surveys following the *Forest Bird Monitoring Protocol* including: ▪ Point counts within the woodlot on three separate visits during the period of May 15 – July 10. ▪ Conduct monitoring and evaluation of Red-Headed Woodpecker nest site to measure the use of the nesting location, and the success of breeding efforts.	**Potential Effect** ~~**Removal of vegetation within Red-Headed Woodpecker Breeding Habitat resulting from clearing for the transmission line.**~~ **Colonially-nesting birds may be disturbed by noise from operation of turbines.** **Performance Objective** ~~• No displacement of breeding Red-headed Woodpeckers from habitat.~~ ~~No destruction of nesting habitat.~~ • Minimize disturbance to colonially-nesting birds (Great Blue Herons). Mitigation Strategy ~~• Implement contingency mitigation measures (as per consultation with MNR) if disturbance effects are detected through post-construction monitoring.~~ • Post-construction monitoring to ensure continued use of the habitat. **Residual Effects** ~~• Some permanent vegetation removal within the woodland containing the Red-Headed Woodpecker nesting site will occur.~~ ~~Significance of residual effects will be determined based on the results of post-construction monitoring.~~

Section / Page	Original Text	Revised Text
	▪ Examine utility poles for signs of nesting by Red-Headed Woodpecker. • The findings of post-construction monitoring will be reported back to MNR on an annual basis for the first 3 years of operation. **Contingency Measures** ▪ If significant declines or disappearance of species is detected, determine whether likely to have been caused by the project. If so, corrective measures will be taken, to be determined through consultation with MNR. Habitat compensation or restoration measures will be described in a Compensation Plan, to be submitted to MNR.	• Significance of residual effects will be determined based on the results of post-construction monitoring. **Monitoring Plan and Contingency Measures** • ~~Conduct 3 years of post-construction monitoring for Feature SCB-03, according to protocol described for pre-construction surveys following the *Forest Bird Monitoring Protocol* including:~~ ▪ ~~Point counts within the woodlot on three separate visits during the period of May 15 – July 10.~~ ▪ ~~Conduct monitoring and evaluation of Red-Headed Woodpecker nest site to measure the use of the nesting location, and the success of breeding efforts.~~ ▪ ~~Examine utility poles for signs of nesting by Red-Headed Woodpecker.~~ • ~~The findings of post-construction monitoring will be reported back to MNR on an annual basis for the first 3 years of operation.~~ **~~Contingency Measures~~** ~~If significant declines or disappearance of species is detected, determine whether likely to have been caused by the project. If so, corrective measures will be taken, to be determined through consultation with MNR. Habitat compensation or restoration measures will be described in a Compensation Plan, to be submitted to MNR.~~ • Include Turbines 55 and 56 in post-construction mortality monitoring program. • Conduct 3 years of post-construction colonially-nesting bird monitoring at feature CNB-01 by a qualified Biologist, including: ▪ Conduct surveys on two occasions per year, in April and June. ▪ One vantage point will be placed along the fence line north of Turbine 56 and be monitored for approximately 15 minutes. ▪ All observed colonially-nesting birds will be recorded along with their approximate location, age and behaviour. • Report the findings of the colonially-nesting bird monitoring program to MNR on an annual basis for the first 3 years of operation. • **Contingency Measures:** ▪ If significant declines or disappearance of species is detected, determine whether this is likely to have been caused by the Project. If so, implement corrective measures that are developed through consultation with MNR.
Table 6-2 / page 21-30	**Potential Effect** **Removal of vegetation within Azure Bluet Habitat and Turtle Over-wintering Habitat resulting from clearing for the transmission line.** **Performance Objective** • Minimize disturbance to Azure Bluet habitat and turtle over-wintering habitat. • No destruction of pond. **Mitigation Strategy** • Implement contingency mitigation measures (as per consultation with MNR) if disturbance effects are detected through construction monitoring. **Residual Effects** • Clearing of vegetation will occur for the transmission line. • Disruption to Azure Bluet habitat and turtle over-wintering habitat avoided or minimized through mitigation measures applied during construction. • Moderate residual effects. **Monitoring Plan and Contingency Measures** • If negative effects to the pond are detected through construction monitoring, corrective measures will be taken, to be determined through consultation with MNR. These habitat compensation or restoration measures will be described in a Compensation Plan, to be submitted to MNR.	**Potential Effect** **~~Removal of vegetation within Azure Bluet Habitat and Turtle Over-wintering Habitat resulting from clearing for the transmission line.~~** **Risk of road mortality to amphibians moving between breeding pools and home range.** **Performance Objective** • ~~Minimize disturbance to Azure Bluet habitat and turtle over-wintering habitat.~~ ~~No destruction of pond.~~ • Minimize amphibian mortality along access roads. **Mitigation Strategy** • ~~Implement contingency mitigation measures (as per consultation with MNR) if disturbance effects are detected through construction monitoring.~~ • Advise operations staff to avoid driving roads in proximity to these features at night between April 1 and June 30, and any rainy nights from spring to early autumn, wherever possible. • Most access road traffic will be confined to daytime hours. Avoid access road use at night. • Maintain wildlife crossing signs and limit speed of vehicles near crossings (30 km/hr). **Residual Effects** • ~~Clearing of vegetation will occur for the transmission line.~~ • ~~Disruption to Azure Bluet habitat and turtle over-wintering habitat avoided or minimized through mitigation measures applied during construction.~~ ~~Moderate residual effects.~~ • Risk of amphibian mortality reduced through mitigation measures. • Low likelihood of mortality due to infrequent use of access roads by maintenance vehicles. **Monitoring Plan and Contingency Measures** ~~If negative effects to the pond are detected through construction monitoring, corrective measures will be taken, to be determined through consultation with MNR. These habitat compensation or restoration measures will be described in a Compensation Plan, to be submitted to MNR.~~ • Conduct 3 years post-construction amphibian call surveys (frogs and toads) and egg mass or adult surveys (salamanders) to assess any potential changes in amphibian breeding populations or species distribution (if Features deemed to be significant) at features AWO-02, AWO-25, AWO-27 and AWO-30 by a qualified Biologist, including: ▪ Call surveys at each Feature three times between April 1st and June 30th, as per the *Marsh Monitoring Protocol*. Conduct surveys between one half-hour after sunset and 2:00 am and, to the extent possible, on nights that are clear, cloudy, damp, foggy, or have light rain and minimum night air temperatures of 5°C (41°F), 10°C (50°F) and 14°C (57°F) for each of the three respective survey periods. Complete a 3-minute listening survey at each station.

Section / Page	Original Text	Revised Text
		▪ Conduct surveys to target non-vocalizing amphibians (i.e., salamanders) using one of the following three protocols: o Nocturnal survey for adult salamanders in late March to early April; o Surveys for salamander egg masses on two occasions in March and April; o Surveys for larval salamanders in May or June. • The findings of post-construction monitoring will be reported back to MNR on an annual basis for the first 3 years of operation. **Contingency Measures** ▪ If significant declines or disappearance of species is detected, determine whether likely to have been caused by the project. If so, corrective measures will be taken, to be determined through consultation with MNR.
Table 6-2 / page 21-30	**Potential Effect** **Removal of vegetation within Amphibian Woodland Breeding Habitats resulting from clearing for the transmission line.** **Performance Objective** • Minimize disturbance to amphibian breeding habitat. • No destruction of breeding pond. **Mitigation Strategy** • Implement contingency mitigation measures (as per consultation with MNR) if disturbance effects are detected through post-construction monitoring. **Residual Effects** • Some permanent vegetation removal within woodlands containing amphibian breeding habitat will occur. Breeding habitat should remain undisturbed. • Significance of residual effects will be determined based on the results of post-construction monitoring.	**Potential Effect** ~~**Removal of vegetation within Amphibian Woodland Breeding Habitats resulting from clearing for the transmission line.**~~ **Breeding amphibians may be disturbed by routine maintenance of the transmission line corridor.** **Performance Objective** ~~• Minimize disturbance to amphibian breeding habitat.~~ ~~No destruction of breeding pond.~~ • Minimize disturbance due to maintenance activities. **Mitigation Strategy** ~~• Implement contingency mitigation measures (as per consultation with MNR) if disturbance effects are detected through post-construction monitoring.~~ • Advise operations staff to avoid maintenance activities in proximity to these features between April 1 and June 30 (for significant frog breeding habitats), or between March 15 and April 30 (for significant salamander breeding habitats) and any rainy nights from spring to early autumn. • Conduct area searches for amphibians prior to beginning maintenance activities if required to take place within the above timing windows. **Residual Effects** ~~• Some permanent vegetation removal within woodlands containing amphibian breeding habitat will occur. Breeding habitat should remain undisturbed.~~ ~~Significance of residual effects will be determined based on the results of post-construction monitoring.~~ • Risk of disturbance reduced through mitigation measures including maintenance timing. • Low likelihood of occurring and limited magnitude of residual effects.
Table 6-2 / page 21-30	**Potential Effect** **Possible mortality of turtles moving between over-wintering ponds and other areas due to access road operation and maintenance near Turtle Over-wintering Habitats.** **Performance Objective** • Minimize turtle mortality along access roads **Mitigation Strategy** • Maintain wildlife crossing signs and limit speed of vehicles near over-wintering ponds. **Residual Effect** • Risk of turtle mortality reduced through mitigation measures. • Low likelihood of occurring and limited magnitude due to limited volume of maintenance vehicles. **Monitoring Plan and Contingency Measures** • No monitoring or contingency measures required.	~~**Potential Effect**~~ ~~**Possible mortality of turtles moving between over-wintering ponds and other areas due to access road operation and maintenance near Turtle Over-wintering Habitats.**~~ ~~**Performance Objective**~~ ~~Minimize turtle mortality along access roads~~ ~~**Mitigation Strategy**~~ ~~Maintain wildlife crossing signs and limit speed of vehicles near over-wintering ponds.~~ ~~**Residual Effect**~~ ~~• Risk of turtle mortality reduced through mitigation measures.~~ ~~Low likelihood of occurring and limited magnitude due to limited volume of maintenance vehicles.~~ ~~**Monitoring Plan and Contingency Measures**~~ ~~• No monitoring or contingency measures required.~~
Table 6-2 / page 21-30	**Potential Effect** **Possible mortality of turtles moving between over-wintering ponds and other areas due to transmission maintenance within Turtle Over-wintering Habitat.** **Performance Objective** • Minimize turtle mortality along transmission line. **Mitigation Strategy** • Advise operations staff to avoid maintenance activities in proximity to this feature in May, June, September or October. • Fence area as far from pond and as close to transmission line as possible during maintenance activities. • Maintain wildlife crossing signs and limit speed of vehicles near over-wintering pond.	**Potential Effect** ~~**Possible mortality of turtles moving between over-wintering ponds and other areas due to transmission maintenance within Turtle Over-wintering Habitat.**~~ **Risk of mortality to amphibians moving between breeding pools and home range resulting from maintenance of the transmission line corridor.** **Performance Objective** ~~Minimize turtle mortality along transmission line.~~ • No amphibian mortality due to maintenance activities.

Section / Page	Original Text	Revised Text
	Residual Effects • Risk of turtle mortality reduced through mitigation measures. • Low likelihood of occurring and limited magnitude due to limited volume of maintenance vehicles.	**Mitigation Strategy** ~~• Advise operations staff to avoid maintenance activities in proximity to this feature in May, June, September or October.~~ ~~• Fence area as far from pond and as close to transmission line as possible during maintenance activities.~~ ~~Maintain wildlife crossing signs and limit speed of vehicles near over-wintering pond.~~ • Advise operations staff to avoid, where possible, maintenance activities in proximity to these features between April 1st and June 30th (for significant frog breeding habitats) or between March 15th and April 30th (for significant salamander breeding habitat), and any rainy nights from spring to early autumn. • Maintain wildlife crossing signs and limit speed of vehicles near crossings (30 km/hr). **Residual Effects** ~~• Risk of turtle mortality reduced through mitigation measures.~~ ~~Low likelihood of occurring and limited magnitude due to limited volume of maintenance vehicles.~~ • Risk of amphibian mortality reduced through maintenance timing. • Low likelihood of occurring and limited magnitude of residual effects.
Table 6-2 / page 21-30	**Potential Effect** **Increased erosion and sedimentation to Amphibian Woodland Breeding Habitat, Azure Bluet Habitat and Turtle Over-wintering Habitat resulting from vegetation removal for maintenance of the transmission line.** **Performance Objective** • Minimize disturbance to pond. **Mitigation Strategy** • Fence area as far from pond and as close to transmission line as possible. • Install sediment and erosion control fencing at fenced area location before commencing maintenance activities and maintain in place until disturbed areas are stabilized and re-vegetated. **Residual Effects** • Erosion and sedimentation mitigated through sediment and erosion control fencing. • Operational maintenance effects temporary and minor. **Monitoring Plan and Contingency Measures** • Monitor on-site conditions (i.e., erosion and sediment control, spills, flooding, etc.) where construction occurs within 30 m of a feature on the following basis: ▪ Weekly during active construction periods; ▪ Prior to, during and post forecasted large rainfall events (>20 millimetres in 24 hours) or significant snowmelt events (i.e., spring freshet); ▪ Daily during extended rain or snowmelt periods; ▪ Monthly during inactive construction periods, where the site is left alone for 30 days or longer. • In the event that a spill / flooding occurs, the details of the event will be reported back to MOE, including a description of any assessment and remediation undertaken. • **Contingency Measures:** ▪ Suspend work if excessive flows of sediment discharges occur until additional mitigation measures are in place.	~~**Potential Effect**~~ ~~**Increased erosion and sedimentation to Amphibian Woodland Breeding Habitat, Azure Bluet Habitat and Turtle Over-wintering Habitat resulting from vegetation removal for maintenance of the transmission line.**~~ ~~**Performance Objective**~~ ~~Minimize disturbance to pond.~~ ~~**Mitigation Strategy**~~ ~~• Fence area as far from pond and as close to transmission line as possible.~~ ~~Install sediment and erosion control fencing at fenced area location before commencing maintenance activities and maintain in place until disturbed areas are stabilized and re-vegetated.~~ ~~**Residual Effect**~~ ~~• Erosion and sedimentation mitigated through sediment and erosion control fencing.~~ ~~Operational maintenance effects temporary and minor.~~ ~~**Monitoring Plan and Contingency Measures**~~ ~~• Monitor on-site conditions (i.e., erosion and sediment control, spills, flooding, etc.) where construction occurs within 30 m of a feature on the following basis:~~ ~~▪ Weekly during active construction periods;~~ ~~▪ Prior to, during and post forecasted large rainfall events (>20 millimetres in 24 hours) or significant snowmelt events (i.e., spring freshet);~~ ~~▪ Daily during extended rain or snowmelt periods;~~ ~~▪ Monthly during inactive construction periods, where the site is left alone for 30 days or longer.~~ ~~• In the event that a spill / flooding occurs, the details of the event will be reported back to MOE, including a description of any assessment and remediation undertaken.~~ ~~• **Contingency Measures:**~~ ~~Suspend work if excessive flows of sediment discharges occur until additional mitigation measures are in place.~~
Table 6-2 / page 21-30	**Potential Effect** **Mortality to amphibians moving between breeding pools and home range resulting from access road operation and maintenance.** **Performance Objective** • Minimize amphibian mortality along access roads **Mitigation Strategy** • Advise operations staff to avoid driving roads in proximity to these features at night between April 1st and June 30th, and any rainy nights from spring to early autumn, wherever possible. • Maintain wildlife crossing signs and limit speed of vehicles near crossings. **Residual Effects** • Risk of amphibian mortality reduced through mitigation measures. • Low likelihood of mortality due to infrequent use of access roads by maintenance vehicles.	**Potential Effect** ~~**Mortality to amphibians moving between breeding pools and home range resulting from access road operation and maintenance.**~~ **Removal of vegetation within Amphibian Woodland Breeding Habitats resulting from clearing for the transmission line.** **Performance Objective** ~~Minimize amphibian mortality along access roads~~ • Minimize disturbance to amphibian breeding habitat. • No destruction of breeding pond. **Mitigation Strategy** ~~• Advise operations staff to avoid driving roads in proximity to these features at night between April 1st and June 30th, and any rainy nights from spring to early autumn, wherever possible.~~ ~~Maintain wildlife crossing signs and limit speed of vehicles near crossings.~~ • Schedule vegetation clearing within woodland to outside April 1 and June 30. • Implement contingency mitigation measures (as per consultation with MNR) if disturbance effects are detected through post-construction monitoring. **Residual Effects** ~~• Risk of amphibian mortality reduced through mitigation measures.~~

Section / Page	Original Text	Revised Text
		~~Low likelihood of mortality due to infrequent use of access roads by maintenance vehicles.~~ • Some permanent vegetation removal within woodlands containing amphibian breeding habitat will occur. Breeding pond should remain undisturbed. • Significance of residual effects will be determined based on the results of post-construction monitoring.
Table 6-2 / page 21-30	**Potential Effect** **Breeding amphibians may be disturbed by routine maintenance of the transmission line corridor.** **Performance Objective** • Minimize disturbance due to maintenance activities. **Mitigation Strategy** • Advise operations staff to avoid maintenance activities in proximity to these features between April 1st and June 30th (for significant frog breeding habitats), or between March 15th and April 30th (for significant salamander breeding habitats) and any rainy nights from spring to early autumn. **Residual Effects** • Risk of disturbance reduced through mitigation measures. • Low likelihood of occurring and limited magnitude of residual effects. **Monitoring Plan and Contingency Measures** • No additional monitoring or contingency measures required.	**~~Potential Effect~~** **~~Breeding amphibians may be disturbed by routine maintenance of the transmission line corridor.~~** **~~Performance Objective~~** ~~Minimize disturbance due to maintenance activities.~~ **~~Mitigation Strategy~~** ~~Advise operations staff to avoid maintenance activities in proximity to these features between April 1st and June 30th (for significant frog breeding habitats), or between March 15th and April 30th (for significant salamander breeding habitats) and any rainy nights from spring to early autumn.~~ **~~Residual Effect~~** ~~• Risk of disturbance reduced through mitigation measures.~~ ~~Low likelihood of occurring and limited magnitude of residual effects.~~ **~~Monitoring Plan and Contingency Measures~~** ~~No additional monitoring or contingency measures required.~~
Table 6-2 / page 21-30	**Potential Effect** **Risk of disturbance to and/or mortality of amphibians from herbicide spraying along transmission line.** **Mitigation Strategy** • Minimize aerial extent of herbicide spraying along transmission line. • Only apply herbicides when wind speeds are low and no significant precipitation is expected. • Maintain 10 m buffer to pond where no herbicides area applied.	**Potential Effect** **Risk of disturbance to and/or mortality of amphibians from herbicide spraying along transmission line.** **Mitigation Strategy** • Minimize aerial extent of herbicide spraying along transmission line. • Only apply herbicides when wind speeds are low and no significant precipitation is expected. • Maintain 10 m buffer to pond where no herbicides area applied. • Apply only herbicides approved for use adjacent to water bodies within riparian buffer areas. • A dye solution will be used in herbicide mix to visually detect uniform coverage of spray area. • Conduct area searches for amphibians prior to herbicide application.
Table 6-2 / page 21-30	**N/A**	**Potential Effect** **Red-Headed Woodpecker Breeding Habitat may be disturbed by routine maintenance of the transmission line corridor.** **Performance Objective** • No displacement of breeding Red-Headed Woodpeckers from habitat. • No destruction of nesting habitat. **Mitigation Strategy** • Perform maintenance operations such as vegetation clearing outside the breeding season of May 1st to July 31st. • Implement contingency mitigation measures (as per consultation with MNR) if disturbance effects are detected through post-construction monitoring. **Residual Effect** • If routine maintenance operations such as vegetation trimming and clearing are conducted outside the breeding season of May 1st to July 31st there should be minimal residual effects from maintenance of the transmission line. • Nesting in utility poles has been recorded for Red-Headed Woodpecker, thus there is a possibility that the poles could provide future nesting habitat. **Monitoring Plan and Contingency Measures** • Supervision of vegetation removal by a qualified Biologist to ensure no destruction of nesting habitat. • No additional monitoring or contingency measures required if timing window is applied.
Table 6-2 / page 21-30	**Potential Effect** **Possible reptile mortality from vehicles using access road.** **Performance Objective** • Minimize snake mortality along access road. **Mitigation Strategy** • Erect long term drift fence between edge of habitat and road if hibernaculum determined to be large (>25 snakes). • Advise operations staff to take extra care while driving near Feature RH-01 **Residual Effects** • Risk of snake mortality minimized through the application of mitigation measures.	**Potential Effect** **~~Possible reptile mortality from vehicles using access road.~~** **Absence of vegetation within Red-Headed Woodpecker Breeding Habitat resulting from clearing for the transmission line.** **Performance Objective** ~~Minimize snake mortality along access road.~~ • No displacement of breeding Red-headed Woodpeckers from habitat. • No destruction of nesting habitat.

Section / Page	Original Text	Revised Text
	• Low likelihood of occurring and limited magnitude (i.e., no or limited mortality) due to limited volume of maintenance vehicles. **Monitoring Plan and Contingency Measures** • Conduct reptile hibernaculum survey annually for 2 years post-construction to assess any potential changes in snake populations or species composition using protocol described for pre-construction survey (if Feature deemed to be significant), including: ▪ Examination of rock piles and vicinity on three occasions between mid-April and mid-May. ▪ Identify species and count individuals. • The findings of the reptile hibernaculum monitoring programs will be reported back to MNR on an annual basis for the first 2 years of operation. • **Contingency Measures:** ▪ If significant declines or disappearance of species is detected, determine whether likely to have been caused by the project. If so, corrective measures will be taken, to be determined through consultation with MNR.	**Mitigation Strategy** ~~• Erect long term drift fence between edge of habitat and road if hibernaculum determined to be large (>25 snakes).~~ ~~Advise operations staff to take extra care while driving near Feature RH-01~~ • Implement contingency mitigation measures (as per consultation with MNR) if disturbance effects are detected through post-construction monitoring. • Consideration of Red-headed Woodpecker habitat requirements in development of Compensation Plan for tree removal in significant woodland. **Residual Effects** ~~• Risk of snake mortality minimized through the application of mitigation measures.~~ ~~Low likelihood of occurring and limited magnitude (i.e., no or limited mortality) due to limited volume of maintenance vehicles.~~ • Some permanent vegetation removal within the woodland containing the Red-Headed Woodpecker nesting site will occur. • Significance of residual effects will be determined based on the results of post-construction monitoring. **Monitoring Plan and Contingency Measures** ~~• Conduct reptile hibernaculum survey annually for 2 years post-construction to assess any potential changes in snake populations or species composition using protocol described for pre-construction survey (if Feature deemed to be significant), including:~~ ~~▪ Examination of rock piles and vicinity on three occasions between mid-April and mid-May.~~ ~~▪ Identify species and count individuals.~~ ~~• The findings of the reptile hibernaculum monitoring programs will be reported back to MNR on an annual basis for the first 2 years of operation.~~ ~~• **Contingency Measures:**~~ ~~If significant declines or disappearance of species is detected, determine whether likely to have been caused by the project. If so, corrective measures will be taken, to be determined through consultation with MNR.~~ • Conduct 3 years of post-construction monitoring for Feature SCB-03, according to protocol described for pre-construction surveys following the *Forest Bird Monitoring Protocol* including: ▪ Point counts within the woodlot on three separate visits during the period of May 15 – July 10. ▪ Conduct monitoring and evaluation of Red-Headed Woodpecker nest site to measure the use of the nesting location, and the success of breeding efforts. ▪ Examine utility poles for signs of nesting by Red-Headed Woodpecker. • The findings of post-construction monitoring will be reported back to MNR on an annual basis for the first 3 years of operation. **Contingency Measures** ▪ If significant declines or disappearance of species is detected, determine whether likely to have been caused by the project. If so, corrective measures will be taken, to be determined through consultation with MNR. Habitat compensation or restoration measures will be described in a Compensation Plan, to be submitted to MNR.
Table 6-2 / page 21-30	**N/A**	**Potential Effect** **Risk of road mortality to deer moving through corridor.** **Performance Objective** • Minimize road mortality to deer. **Mitigation Strategy** • Advise operations staff to avoid driving roads in proximity to this feature at night between November 15 and December 15, and between April 1 and April 30 where possible. • Encourage slow vehicle speeds. Post and maintain speed limit signs (30 km/hr) and wildlife crossing signs on access roads. **Residual Effects** • Risk of deer mortality reduced through mitigation measures. • Low likelihood of occurring and limited magnitude due to limited volume of maintenance vehicles. **Monitoring Plan and Contingency Measures** • No monitoring or contingency measures required.

Section / Page	Original Text	Revised Text
Table 6-3 / page 36-37	**Potential Effect** Obstruction of lateral flows in watercourses and other waterbodies due to design of culverts and debris build-up at water crossings. **Performance Objective** • No obstructions of lateral flows. **Mitigation Strategy** • Design culverts to accommodate high flows of the watercourse. • Inspect culverts during routine maintenance activities for buildup of debris. **Residual Effects** • Obstruction of lateral flows in watercourses and other waterbodies will be avoided through culvert design and maintenance activities. • No likelihood of effect occurring. **Monitoring Plan and Contingency Measures** • No monitoring or contingency measures required.	~~**Potential Effect**~~ ~~Obstruction of lateral flows in watercourses and other waterbodies due to design of culverts and debris build-up at water crossings.~~ ~~**Performance Objective**~~ ~~• No obstructions of lateral flows.~~ ~~**Mitigation Strategy**~~ ~~• Design culverts to accommodate high flows of the watercourse.~~ ~~• Inspect culverts during routine maintenance activities for buildup of debris.~~ ~~**Residual Effects**~~ ~~• Obstruction of lateral flows in watercourses and other waterbodies will be avoided through culvert design and maintenance activities.~~ ~~• No likelihood of effect occurring.~~ ~~**Monitoring Plan and Contingency Measures**~~ ~~• No monitoring or contingency measures required.~~
Table 6-5 / page 39	**Mitigation Strategy** • Adhere to noise setbacks (greater than 1,000 m). • Repair equipment in a timely manner. • Install a 5 m high noise barrier around the transformer substation to comply with MOE noise limits.	**Mitigation Strategy** • Adhere to noise setbacks (greater than 1,000 m). • Repair equipment in a timely manner. • Install a ~~5~~ 6 m high noise barrier around the transformer substation to comply with MOE noise limits.
Section 6.7.1 / page 42	There are five closed landfills within the Project Study Area (as shown on Figure 2-3), all of which are municipally-owned. The Stephen landfill (South Huron) is located within the Wind Energy Centre Study Area approximately 550 m south of the collection line between Turbines 42 and 78. Due to the distance between the landfill and Project infrastructure, construction activities are not anticipated to have an effect upon the closed landfill. The Usborne landfill (South Huron) is located within the Transmission Line Study Area, directly south of the breaker switch station and across the other side of Dump Road. Construction activities are not anticipated to have an effect upon the closed landfill because there is sufficient separation between the landfill and the Project infrastructure due to the presence of the road.	There are five closed landfills within the Project Study Area (as shown on Figure 2-3), all of which are municipally-owned. The Stephen landfill (South Huron) is located within the Wind Energy Centre Study Area approximately ~~550~~ 650 m south of the collection line between Turbines 42 and 78. Due to the distance between the landfill and Project infrastructure, construction activities are not anticipated to have an effect upon the closed landfill. The Usborne landfill (South Huron) is located within the Transmission Line Study Area, directly south of the breaker switch station and across the other side of Dump Road. Construction activities are not anticipated to have an effect upon the closed landfill because there is sufficient separation between the landfill and the Project infrastructure due to the presence of the road.
Section 6.7.4 / page 43	One petroleum resource was identified within 75 m of Project infrastructure based on the MNR's Oil, Gas and Salt Resources Library. Specifically, the access road and collection line between Turbines 54 and 84 is approximately 60 m from a petroleum resource. There are no oil and gas companies operating pipelines within the Project Study Area.	One petroleum resource was identified within 75 m of Project infrastructure based on the MNR's Oil, Gas and Salt Resources Library. Specifically, the access road and collection line between Turbines 54 and 84 is approximately 60 m from ~~a petroleum resource~~ an active oil producing well. Three other resources were identified based on ground-truthing of the Project Location. There is a storage tank and natural gas line 9 m from the collection line between Turbines 53 and 55, and a natural gas line 7 m from the collection line between Turbines 14 and 31. ~~There are no oil and gas companies operating pipelines within the Project Study Area.~~
Section 6.7.5 / page 43	No effects on open or closed landfills, aggregate resources, forest resources or petroleum wells are anticipated as a result of the construction phase of the Project due to the distance between the Project and these resources. An Engineer's Report will be submitted to the MNR prior to construction to confirm that there are no effects on the one petroleum resource located within 75 m of Project infrastructure.	No effects on open or closed landfills, aggregate resources, forest resources or petroleum wells are anticipated as a result of the ~~construction~~ design and operations phase of the Project due to the distance between the Project and these resources. An Engineer's Report will be submitted to the MNR prior to construction to confirm that there are no effects on the ~~one~~ four petroleum resources located within 75 m of Project infrastructure.
Appendix A	**(Transformer Substation UTM Co-ordinates)** **Easting** 454558 **Northing** 4794974	**(Transformer Substation UTM Co-ordinates)** **Easting** ~~454558~~ 454556 **Northing** ~~4794974~~ 4794883

2.3 Edits to the Water Assessment and Water Body Report

The edits made to the Water Assessment and Water Body Report due to these project modifications are summarized as follows:

- Increase in number of locations where the Project Location overlapped with a water body or potential water body;
- Decrease in the number of potential ponds identified;
- Addition of Feature ID D58 to Site Investigations;
- Addition of Feature ID D15 to Seepage Areas within 120 m of Project Location; and
- Addition of Feature ID D58 to the Summary of Corrections to Records Review.

Table 2-3 documents the edits to the Water Assessment and Water Body Report (September, 2012).

Table 2-3 Edits to the Water Assessment and Water Body Report

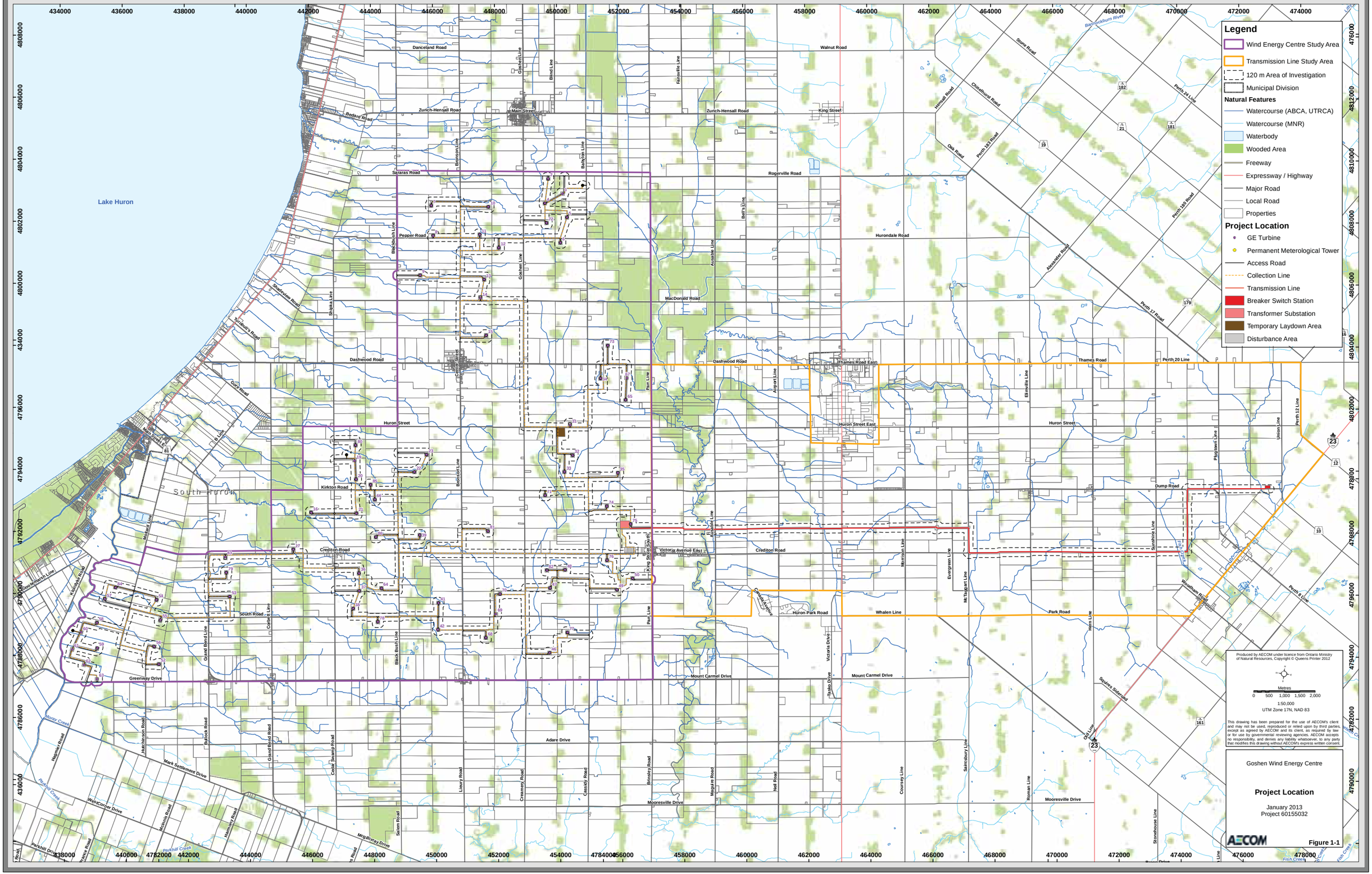
Section / Page	Original Text	Revised Text
Section 3.3 / page 21	Data collected during the Records Review stage, in particular the NRVIS layer mapping overlaid with natural features mapping and the locations of project components, as well as air photo interpretation, determined that there were a total of 98 locations where the Project Location overlapped with a water body or potential water body. Of these 98 sites, 80 locations were identified as permanent or intermittent streams within the Project Location. In addition, 18 potential ponds were identified and an additional 6 potential swales were identified through air photo interpretation. These were included in the mapping for site investigations as it is important to assess their current ecological function and to determine whether they meet the criteria for REA water body after field assessment. Therefore a total of 104 sites were carried forward to field investigations as shown in Table 3-9.	Data collected during the Records Review stage, in particular the NRVIS layer mapping overlaid with natural features mapping and the locations of project components, as well as air photo interpretation, determined that there were a total of ~~98~~99 locations where the Project Location overlapped with a water body or potential water body. Of these ~~98~~ 99 sites, 80 locations were identified as permanent or intermittent streams within the Project Location. In addition, ~~18~~ 17 potential ponds were identified and an additional 6 potential swales were identified through air photo interpretation. These were included in the mapping for site investigations as it is important to assess their current ecological function and to determine whether they meet the criteria for REA water body after field assessment. Therefore a total of 104 sites were carried forward to field investigations as shown in Table 3-9.
Table 4-3 / page 148	**Feature ID** P7 **Project Component** Collection Line Buffer Road Buffer **Investigation Date** December 15, 2011 **Description of Site** The pond could not be assessed as access was not granted and it could not be seen from the road. **Feature Description** From aerial photo interpretation it appears this pond is a low lying feature in a parking lot of an agricultural business. **Feature Sensitivity** Not Sensitive	**Feature ID** ~~P7~~ D58 **Project Component** Collection Line Buffer Road Buffer **Investigation Date** ~~December 15, 2011~~ November 22, 2012 **Description of Site** ~~The pond could not be assessed as access was not granted and it could not be seen from the road.~~ The feature is located in an agricultural field. No water body is present, it has been ploughed through. **Feature Description** ~~From aerial photo interpretation it appears this pond is a low lying feature in a parking lot of an agricultural business.~~ The water body may be tiled drained. It is classified as tiled by ABCA. **Feature Sensitivity** Not Sensitive
Table 4-5 / page 154	N/A	**Feature ID** D15 **Project Component (associated Infrastructure)** Collection Line and Road Buffer **Indicators Found** Water Speedwell **Description of Site Where Found (water body or terrestrial feature – ELC code)** Water body
Table 4-6 / page 155	N/A	**Feature #** D58 **Correction** Not as mapped **Reason for Correction** Tile drain feature – no surface channel
Section 14.3 / page 156	Of the 117 features investigated, 33 were identified as non-REA water bodies (16 ponds, 6 swales and 11 watercourse features) because they did not fit the REA definition of a water body as outlined in Section 1.3 of this report. In addition, one feature could not be confirmed because of lack of access to the property to complete a site investigation. In total, 83 REA water bodies were carried forward to the Effects Assessment. This is summarized below in Table 4-7.	Of the 117 features investigated, 33 were identified as non-REA water bodies (~~16~~ 15 ponds, 6 swales and ~~11~~ 12 buried ~~watercourse~~ features) because they did not fit the REA definition of a water body as outlined in Section 1.3 of this report. In addition, one feature could not be confirmed because of lack of access to the property to complete a site investigation. In total, 83 REA water bodies were carried forward to the Effects Assessment. This is summarized below in Table 4-7.
Table 5-8 / page 184	**Residual Effects** • Temporary disruption of substrates/habitat associated with in-water works minimized through application of mitigation measures. • Moderate likelihood and magnitude of effect occurring due to number of watercourse crossings.	**Residual Effects** • Temporary disruption of substrates/habitat associated with in-water works minimized through application of mitigation measures. • Moderate likelihood of effect occurring due to number of watercourse crossings; however, magnitude of effect limited due to marginal habitat and common species; as such fish passage will be maintained and will continue to provide habitat.

3. Summary and Conclusions

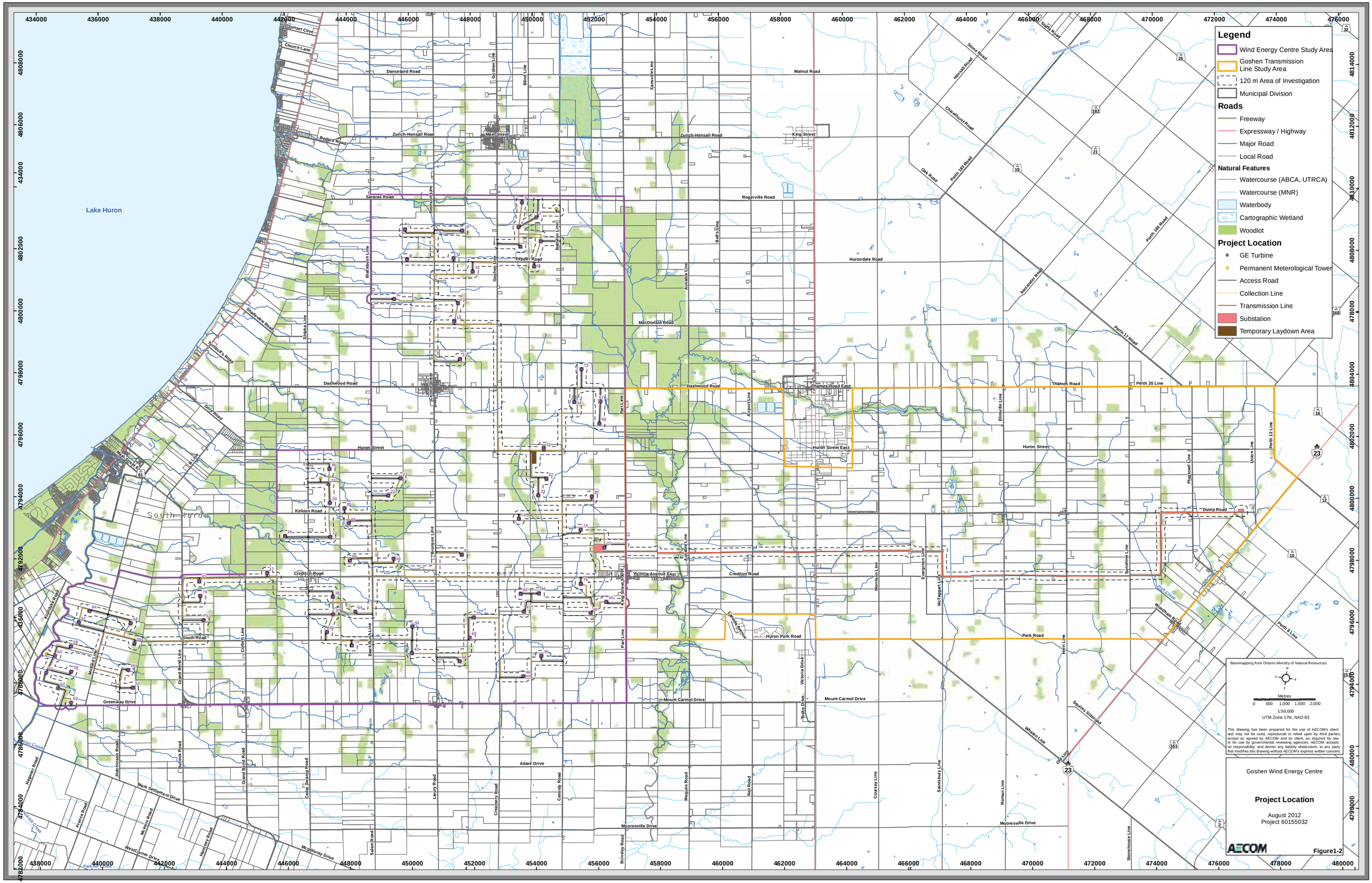
The overall conclusion of this report is that the Project modifications listed above do not result in any new effects to those previously identified through the various studies conducted and documented in the Draft REA reports. The Project can be constructed, installed and operated without any significant adverse residual effects to the environment.

Appendix A

Original Project Location and Modified Project Location



Map Document: (N:\projects\0-aecom\60155032\2010\Final\GIS\Spatial\MXDs\ReportMXDs\WindTurbineSpecs)



Map Document: (N:\projects\0-aecom\60155032\2010\Final\GIS\SpatialMXD\sIReport\MXD\sIHA_Mapping\60155032_Bluewater_NaturalFeatureRecReview.mxd)
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