Appendix E:

Supplementary Mitigation Approach for Species at Risk

Canada

U.S. Department of Transportation Federal Highway Administration

Ontario

MDOT

Canada-United States-Ontario-Michigan Border Transportation Partnership

Supplementary Mitigation Approach for Species at Risk
CEAR No: 06-01-18170

Detroit River International Crossing Study

City of Windsor, County of Essex, Town of LaSalle, Town of Tecumseh

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1.0 Introduction

1.1 Background

The Detroit River International Crossing (DRIC) Project is the result of a bi-national transportation improvement study that has been undertaken by a partnership of the federal, state and provincial governments in Canada and the United States. The Partnership is comprised of transportation authorities including: U.S. Federal Highway Administration (FHWA), U.S. Department of Transportation; Transport Canada (TC); Ontario Ministry of Transportation (MTO); and, Michigan Department of Transportation (MDOT).

In 2001, the Partnership jointly commissioned a Planning/Need and Feasibility (P/NF) Study, which was completed in 2004. Among other things, the P/NF Study confirmed the long-term need for additional border crossing capacity in the Windsor-Detroit corridor. As a result of this recommendation, the Partnership initiated a formal environmental assessment (EA) process for a new or expanded Detroit River International Crossing. A coordinated EA process was developed to meet the requirements of the respective legislation of each jurisdiction, including the *Canadian Environmental Assessment Act* (CEAA), the *Ontario Environmental Assessment Act* (OEAA), and the *U.S. National Environmental Policy Act* (NEPA).

In Canada, the study process was led by MTO to the greatest possible extent. In the U.S., the study was led by the MDOT. The Canadian and U.S. study teams coordinated their work to minimize duplication and to ensure that a single end-to-end solution would be developed. For the purposes of this report, "the Project" is used to describe the Canadian portion of the project, including the bridge, plaza and parkway.

The Project is located in the City of Windsor, the Town of Lasalle and Town of Tecumseh, in the County of Essex southwestern Ontario. In addition, the U.S. portion of the Project extends into the Detroit/Wayne County area of the State of Michigan.

The Project has followed the requirements of the *OEAA* under the Environmental Assessment EA process (Section 6.1 (2) of the *OEAA*). Key components of an Ontario EA include: consultation with members of the public, regulatory agencies, municipalities, and other stakeholders; First Nations engagement; the consideration of alternatives and their potential environmental effects; as well as the mitigation and management of environmental effects.

The provincial Environmental Assessment Report (W.O. 04-33-002) was completed in December 2008 and submitted to the Ontario Ministry of the Environment (MOE) for review and approval. The *DRIC EA Report* (December 2008) is available electronically from the study website (http://www.partnership borderstudy.com). A federal EA of the Project is also required under the provisions of the CEAA. A screening report (*DRIC Draft CEAA Screening Report* (July 2009)) has been prepared for the Project as required under the *CEAA*. The report summarizes the potential effects and mitigation associated with the projected, identified in the supporting technical documents. The report also documents the prediction of potential cumulative effects from the combination of the residual effects of other past, existing or future projects or activities. The Screening concludes that there are no likely significant adverse environmental effects on Species at Risk anticipated as a result of the Project. However, because of the sensitivity of the identified species and uncertainty with regard to the effectiveness of mitigation, monitoring and follow-up is required in order to ensure that there is no threat to the recovery and survival of the listed Species at Risk and that any Project related effects will be managed adaptively.

1.2 Purpose

Given the preliminary design stage of the proposed Project, it is not presently feasible to outline highly specific mitigation measures for Species at Risk. In addition, the majority of proposed mitigation measures pertaining to Species at Risk will be subject to Final approval by either Environment Canada (EC) or the Ontario Ministry of Natural Resources (MNR) through the federal *Species at Risk Act (SARA)* and the *Ontario* Endangered *Species Act* (OESA) permitting processes. In consideration of comments received from the public and agencies during the Federal EA consultation period (July 8 to August 7, 2009), the primary objectives of this supplementary report are to:

- Summarize how Species at Risk were identified and scoped within the immediate project footprint and the surrounding areas;
- Outline TC and MTO's commitment to a coordinated approach for the protection of Species at Risk through the establishment of a Species at Risk Coordination Committee, a commitment to an adaptive management approach and the identification of lands intended for restoration activities;
- Clarify the general Federal and Provincial permitting processes and how these processes will identify the appropriate mitigation measures to avoid significant adverse effects on Species at Risk (including detailing what is required for a submission, how the process proceeds and how mitigation measures are identified/determined); and
- Establish the framework for a contingency plan to outline the approach for any unforeseen interactions with any Species at Risk during the site preparation, construction and operation phases of the Project.

2.0 Species at Risk

Following the identification of various project alternatives, technical reports were developed which assessed potential project impacts on existing natural heritage features such as vegetation, fisheries, wildlife and designated natural heritage areas. The inventory of such features was compiled through the collection and review of existing information (ex. Natural Heritage Information Centre, Ontario Breeding Bird Atlas, Ontario Herpetofaunal Summary Atlas, Ontario Odonata Summary Atlas databases, etc), personal communications with local experts (ex. Department of Fisheries and Oceans (DFO), Environment Canada (EC), Ontario Ministry of Natural Resources (MNR), Essex County Conservation Authority (ECCA) and representatives from Walpole Island First Nations) and detailed, multi-season field investigations. Based on the inventory, the federal Species at Risk Registry and the Species at Risk in Ontario list were consulted to identify any Federally or Provincially endangered, threatened or special concern species.

2.1 Federally and Provincially Listed Species

From the secondary source information gathered, a number of Federally and Provincially regulated species were identified within the greater Windsor-Essex County area. From this extensive list of species, repeated field surveys were undertaken between 2006 and 2009, specifically targeting vegetation, fish and wildlife species, as well as natural heritage areas. Based on this work, the following species were confirmed within the maximum footprint area of the combined practical alternatives and adjacent lands located within 120 meters of the right-of-way (Project Area):

Vegetation and vegetation communities

- Eight Federally listed species (butternut, Shumard oak, climbing prairie rose, Kentucky Coffee-tree, willow aster, spiked blazing star, Riddell's goldenrod, colic root)
- 11 Provincially listed species (American chestnut, butternut, climbing prairie rose, colic root, common hoptree, dense blazing star (also known as spiked blazing star), dwarf hackberry, Kentucky coffee-tree, Riddell's goldenrod, Shumard oak, and willowleaf aster)
- 63 Provincially rare species

Insects

- One Federally regulated insect species (Monarch butterfly)
- The Ojibway Prairie Wetland Complex is the only recorded site for several insect species.

Mollusc, fish and fish habitat

- No mollusc Species at Risk were identified in Project Area watercourse crossings
- No fish Species at Risk within critical habitat were identified in the local watercourses within the Project Area
- Six Federally regulated species in the Detroit River (spotted gar (Threatened on Schedule 1), silver chub (Special Concern on Schedule 1), pugnose minnow (Special Concern on Schedule 1), bigmouth buffalo (Special Concern on Schedule 3), spotted sucker (Special Concern on Schedule 1), river redhorse (Special Concern on Schedule 1))
- Seven Provincially regulated species in the Detroit River (lake sturgeon (Not at Risk on Schedule 5), spotted gar (Threatened on Schedule 4), silver chub (Special Concern on Schedule 5), pugnose minnow (Special Concern on Schedule 5), bigmouth buffalo (Special Concern on Schedule 5), spotted sucker (Special Concern on Schedule 5), river redhorse (Special Concern on Schedule 5))

Wildlife and wildlife habitat

- Two Federally and Provincially regulated birds (Red-headed woodpecker (Special Concern on SARA Schedule 3 and OESA Schedule 5); Golden-winged warbler (Special Concern on SARA Schedule 3 and OESA Schedule 5))
- Two Federally and Provincially regulated reptiles (Eastern foxsnake and Butler's gartersnake, both listed as Threatened on Schedule 1 of SARA and Special Concern on Schedule 4 of the OESA)

Designated natural areas

- Five environmentally significant areas (ESA) identified in the Project Area (Ojibway Prairie Complex, Sandwich West Woodlot/Lasalle Woods, Ojibway Black Oak Woods, Spring Garden Road Prairie, and St. Claire College Prairie)

For the purposes of this report, the Ojibway Prairie Complex Area includes both the Ojibway Prairie Wetland Complex and the Ojibway Prairie Complex.

Since the time of the completion of the draft natural heritage study in 2007, there have been regulatory updates to the SARA and the status of 11 species has since changed, including:

- Red-headed woodpecker (presently listed as Threatened on Schedule 1 of SARA and Special Concern on Schedule 4 of OESA)
- Golden-winged warbler (presently listed as Threatened on Schedule 1 of SARA and Special Concern on Schedule 4 of OESA)
- Eastern foxsnake, Butler's gartersnake, spotted gar (presently listed Threatened on Schedule 3 of OESA)
- Lake sturgeon (presently listed as Special Concern on Schedule 4 of OESA)
- Silver chub (presently listed as Special Concern on Schedule 1 of OESA)
- Pugnose minnow, bigmouth buffalo, spotted sucker, river redhorse (presently listed as Special Concern on Schedule 4 of OESA)

Other species listed on Schedule 1 of SARA and/or on Schedules 1,2,3 or 4 on OESA are known to occur in the Ojibway Prairie Complex adjacent to the parkway. These species include eastern hog-nosed snake, massasauga and the gray fox. Throughout extensive, species-targeted surveys and scientific fieldwork were undertaken across different seasons between 2006 and 2009, these additional species have not been recorded within the Project Area. Nonetheless, a general approach for contingency plans is being further

developed to address the potential for interaction with Species at Risk, such as these, which have not previously been identified within the Project Area.

Following detailed field work carried out over numerous seasons in the project area, only those Species at Risk confirmed present within the Project Area, were further considered throughout the Federal and Provincial EA processes. Specifically, the Federally and Provincially listed vegetative species, as well as the eastern foxsnake and Butler's gartersnake.

3.0 Species at Risk Habitat

Together the Environmentally Sensitive Areas (ESA) and candidate natural heritage areas (identified in the Environmental Overview Paper, 2005) throughout the Windsor-Essex County Area provide the majority of the habitat areas for a variety of floral and faunal species. Specific habitat requirements for various stages of their life cycles have been identified for each Species at Risk. Although some of this habitat is located within ESAs, some of the species have also been found in habitats such as roadside shoulders and drainage ditches. Overall, both the quality and quantity of habitat are important for wildlife, particularly near urban areas. In addition, the linkage between habitat features is recognized as being an important component of conservation biology and species survivability.

ESA greenspace habitats that currently support Species at Risk which are anticipated to be affected by the Project include:

- Black Oak Woods
- Ojibway Park
- TC2 (a candidate natural heritage site) and
- Ojibway Prairie Complex (including portions of the provincially significant wetlands (PSW)).

On a regional scale, the proposed Project is predicted to enhance connections between green spaces rather than negatively affect any existing wildlife corridors. With respect to the habitat associated with listed vegetative and snake species, mitigation approaches for any potential effects have been identified through the OESA permitting process (as outlined below) and are currently being reviewed by the MNR. These measures will be further refined in subsequent design stages minimizing any risk of adverse effects. The anticipated loss of habitat within the Ojibway Prairie Complex is noteworthy; however, the development of a wetland compensation plan which achieves no net loss of area of function of the PSW will be developed prior to construction, in accordance with the Federal Policy on Wetland Conservation (1991) as well as Provincial wetland policies. This, coupled with the creation of additional wildlife corridors through the development of the Project suggests that overall, there will be no significant adverse effects on wildlife habitat.

It should be noted that the proposed project will not require changes or modifications to the Detroit River or its shores, and no potential interactions are anticipated. Therefore, no Federally or Provincially listed fish species or aquatic SAR habitats are anticipated to be impacted.

4.0 Species at Risk Permitting Processes

Species at Risk listed under SARA and OESA were identified through a review of secondary information, consultations with regulatory agencies and field investigations. Existing data sources, such as inventory reports for Areas of Natural and Scientific Interest, ESAs, Candidate Natural Heritage Sites, Natural Heritage Information Centre occurrence records, DFO species at risk mapping, wildlife atlases, etc. were reviewed to identify Species at Risk and habitat areas potentially present in the Project Area. Discussions were also held with Species at Risk biologists and ecologists from DFO and EC, as well as MNR at the Provincial level, and the Essex Region Conservation Authority and Ojibway Prairie Nature Centre to

establish known occurrences of individuals.

Based on the information collected from secondary sources and consultation with regulatory agencies, detailed, season-appropriate field investigations were carried out over several years to inventory natural heritage features and conduct Species at Risk surveys. Species at Risk investigations included detailed population and distribution surveys for vegetative species, molluscs, fish, reptiles, amphibians, birds and mammals. Investigations followed standardized protocols and included stem count surveys, point-count surveys, capture-mark-recapture surveys, radio-telemetry surveys, electrofishing surveys, visual encounter surveys and reconnaissance level mollusc surveys.

From these investigations, three SARA listed species were confirmed on Federal lands (plaza site). These include: dense blazing star, Kentucky coffee-tree and willowleaf aster. In addition, six vegetative species (colic root, common hoptree, dense blazing star, dwarf hackberry, Kentucky coffee-tree and willowleaf aster) and two snake species (eastern foxsnake and Butler's gartersnake) have been identified within the footprint of the proposed Windsor-Essex Parkway. The proposed removal (and relocation of substantial portions of Species at Risk populations wherever possible) associated with the development of the Windsor-Essex Parkway have been identified to require a permit under the OESA and the development of the proposed plaza site is anticipated to result in the requirement for a permit under Section 73 of SARA. The required mitigation, detailed in any issued permits, coupled with best management practices such as those listed in section 8, will ensure that there are no significant environmental effects on Species at Risk for the Project as a whole.

4.1 Federal Considerations

The CEAA requires the consideration of any change that a project may cause on the environment, including any change it may cause to a listed wildlife species, its critical habitat or the residences of individuals of that species, as defined in the SARA.

CEAA also requires that the potential adverse effects on listed species be identified and measures undertaken to avoid or lessen effects and to monitor any such efforts. In addition, the measures must be consistent with any applicable recovery strategies, action plans and management plans for each particular species.

Although there are three major components (the access road, the plaza and the bridge) as part of the DRIC Project, only SAR located on Federal lands are subject to the SARA. As it is anticipated that TC will be in ownership of the plaza and crossing land, official notification under SARA was provided to the Minister of Environment on March 24, 2009. Notification included the identification of three Species at Risk listed on Schedule 1 of the SARA and located on the proposed plaza site as well as an indication of the intent to remove any identified specimens prior to the commencement of construction. SAR identified along the access road and in adjacent areas are not located on Federal lands and are not subject to the requirements of SARA. Nonetheless, consideration for all Species at Risk was included as part of the Federal Screening and Cumulative Effects Assessment. In addition, Species at Risk which are not located on Federal lands are still afforded similar protection under the OESA which is further described below.

4.1.1 Federally Listed Species

Three Federally listed and regulated Species at Risk (dense blazing star, Kentucky coffee-tree and willowleaf aster) have been identified on Federal lands (the plaza site). In addition, two listed but unregulated Special Concern Species at Risk (climbing prairie rose and Riddell's goldenrod) have been identified on the proposed plaza site. Based on field investigations conducted in 2008, no listed vascular plant species at risk were identified in the proposed location of the crossing. As a result of the presence of these species, which are anticipated to be affected by the Project, a SARA permit will be required prior to the commencement of any works on the proposed plaza site.

4.1.2 Federal Permitting Process

EC will make the permitting decision for Federally listed and regulated Species at Risk. In accordance with Section 73 of the SARA, a permit or authorization will likely be required for the construction of the border plaza, on Federal lands, as there will likely incidentally affect the three listed Threatened species under Schedule 1 of SARA.

Any decision under SARA is science-based and evaluates what, if any, risk the proposed activity poses to the recovery of the species and if it can be tolerated without compromising the survival or recovery of the species. Mitigation is required to ensure the protection of the species, minimize the impact and provide for its recovery.

4.1.3 Federal Permitting Requirements

A SARA permit application requires the following:

- A description of the project purpose;
- A summary of the qualifications of the applicant (the individual undertaking or supervising the undertaking of the proposed activity);
- A list of the Species at Risk affected and any critical habitat and/or residence of individuals that will be affected, either directly or indirectly, by the proposed activities and the estimated number of individuals or residences;
- A list of any other species affected and the estimated number of individuals;
- The location and a description of the area of activities, as well as the dates of the proposed activities;
- A summary of the activities, including a detailed description with specific reference to the purposes of the activities;
- The method and site for disposal of biological material (if required);
- A list of animals that will be in captivity, including a description of the area, pen, methods and duration;
- Documentation indicating that all reasonable alternatives to the proposed activity were considered, why the current proposal was considered the best solution, what measures will be taken to minimize the impact of the activity on the species, its critical habitat or the residences of its individuals and how the proposal demonstrates that the activity will not jeopardize the survival or recovery of the species.

Based on this information and any other information requested by EC and the Canadian Wildlife Service (CWS), and subsequent to all potentially significant effects on Species at Risk being addressed, a scientifically derived decision is made regarding the issuance of a permit. Along with the permit come strict conditions, which are developed on a species and site-specific basis to ensure the survival or recovery of the species in question. In addition, the permit typically details conditions for monitoring and follow-up. These measures, coupled with best management practices such as those listed in section 8, will ensure that there are no significant environmental effects on Species at Risk for the Project as a whole. It should be acknowledged that the permitting process itself is not a mitigation measure for Species at Risk; however, specific mitigation measures will be developed throughout the permitting process.

4.1.4 Future Steps

A permit application will be submitted to EC and a detailed approach to mitigation for Species at Risk will be developed during future design stages prior to commencement of construction on the plaza site but may

include: collection and propagation of seed, the physical relocation of vegetative species, the planting of seedlings etc.

4.2 Provincial Considerations

MTO is seeking permits under the OESA to address the impacts to six plant species and two snake species potentially affected by the construction of the Windsor-Essex Parkway component of the project. A permit under Section 17(2)(d) of the Act is being sought on the basis that the main purpose of the activity authorized by the permit will not assist in the protection or recovery of the species specified; however, the activity will result in a significant social or economic benefit to Ontario.

4.2.1 Provincial Permitting Process

Based on the information collected from secondary sources and consultation with regulatory agencies, detailed, season-appropriate field investigations were carried out over several years to inventory natural heritage features and conduct Species at Risk surveys. Species at Risk investigations included detailed population and distribution surveys for plants, molluscs, fish, reptiles, amphibians, birds and mammals.

Investigations followed provincially recognized protocols and included stem count surveys, point-count surveys, capture-mark-recapture surveys, radio-telemetry surveys, electrofishing surveys, visual encounter surveys and reconnaissance level mollusc surveys. Much of this information is presented in the Draft Practical Alternatives Evaluation Working Paper – Natural Heritage (Border Transportation Partnership 2008).

A total of 14 species at risk were confirmed as present in the area of investigation including 11 plant species (American chestnut, butternut, climbing prairie rose, colic root, common hoptree, dense blazing star, dwarf hackberry, Kentucky coffee-tree, Riddell's goldenrod, Shumard oak, and willowleaf aster), two snake species (Butler's Gartersnake and Eastern Foxsnake) and one insect species (Monarch butterfly).

4.2.2 Endangered Species Act (S.O. 2007)

In order to obtain an OESA Section 17(2)(d):

- MNR must consult with a person who is considered by the Minister to be an expert on the possible effects of the activity on the species and to be independent of the person who would be authorized by the permit to engage in the activity;
- A written report must be submitted by the expert to the Minister on the possible effects of the activity on the species, including the person's opinion on whether the activity will jeopardize the survival or recovery of the species in Ontario;
- The Minister must be of the opinion that the activity will not jeopardize the survival or recovery of the species in Ontario;
- The Minister must be of the opinion that reasonable alternatives have been considered, including alternatives that would not adversely affect the species, and the best alternative has been adopted;
- The Minister must be of the opinion that reasonable steps to minimize adverse effects on individual members of the species are required by conditions of the permit; and
- The Lieutenant Governor in Council must approve the issuance of the permit.

In order to address the requirements of the 17(2)(d) application, MTO prepared and submitted extensive documentation regarding the impacts to the affected species, the consideration of reasonable alternatives including alternatives that would not adversely affect the species as well as detailed mitigation plans to minimize potential adverse effects.

MTO is also seeking permits under Section 17(2)(b) and 17(2)(c) of the OESA. A Section17(2)(b) permit can

be issued where the Minister is of the opinion that the main purpose of the activity authorized by the permit is to assist, and that the activity will assist, in the protection or recovery of the species specified in the permit. In the case of the project this involves the removal of invasive plant species that are threatening the survival of listed plants generally located in an area located south of the E.C. Row Expressway and west of Malden Road in Windsor, ON.

A Section 17(2)(c) permit can be issued where the MNR is of the opinion that the main purpose of the activity authorized by the permit is not to assist in the protection or recovery of the species specified in the permit, but,

- The Minister is of the opinion that an overall benefit to the species will be achieved within a reasonable time through requirements imposed by conditions of the permit;
- The Minister is of the opinion that reasonable alternatives have been considered, including alternatives that would not adversely affect the species, and the best alternative has been adopted; and
- The Minister is of the opinion that reasonable steps to minimize adverse effects on individual members of the species are required by conditions of the permit.

In the case of the project, MTO is seeking a Section 17(2)(c) permit to address impacts to one plan species (Willowleaf Aster) that will be affected by initial construction works in the general area of the new Highway 3/Highway 401 Windsor-Essex Parkway interchange.

Permits issued under section 17(2) may contain such conditions, as the MNR considers appropriate. The required mitigation, detailed in any issued permits, coupled with best management practices such as those listed in section 8, will ensure that there are no significant environmental effects on Species at Risk for the Project as a whole.

5.0 Landscape Plan

In order to ensure that Species at Risk could feasibly be transplanted or relocated, a review of the 120 ha of potential greenspace locations within the Project footprint was undertaken. As a result, a conceptual landscape plan was developed (Appendix B of the Provincial EA) and included candidate areas for ecological restoration/enhancement. Additional areas located adjacent to the Windsor-Essex Parkway property that are already in public ownership or that may be considered for acquisition to undertake ecological restoration were also identified in supplemental mitigation documentation prepared for the section 17(2)(d) permit application (detailed above). Following the Species at Risk permitting process at the Provincial and Federal level, which will identify the specific mitigation measures, required in association with the Windsor-Essex Parkway, Plaza and bridge portion of the Project, a detailed landscape plan will be developed in subsequent design stages that will include a detailed mitigation approach for each Species at Risk in context of the overall Project.

6.0 Coordinated Approach

The partnership (TC and MTO) as public funding and proponent agencies, along with EC and MNR as regulating agencies under SARA and OESA respectively, have committed to a collaborative approach to Species at Risk mitigation, monitoring and follow-up during future design stages and project implementation. Collaboration will also ensure a consistent approach to adaptive management strategies (defined below) and will consider the results of monitoring and follow-up from an overall Project perspective to include the potential for cumulative effects on Species at Risk within the scope of the monitoring and follow-up program.

6.1 Species at Risk Coordination Committee

A Coordination Committee will be established to specifically address Species at Risk from an overall Project

perspective. The committee will be composed of technical representatives from agencies including TC, MTO, EC, and MNR with support from additional expert technical advisors as required.

The goals and objectives, which will guide the committee, will be:

- Ensure the effective implementation of Species at Risk mitigation commitments for the Project as a whole;
- Ensure a coordinated approach to mitigation and permitting requirements for the Project as a whole;
- Provide a forum for the exchange of technical and management information, particularly as it relates to the implementation of mitigation and adaptive management techniques;
- Effective implementation of Species at Risk monitoring and follow-up programs for the Project as a whole;
- Harmonize requirements for monitoring and reporting; and
- Ensure a consistent approach to adaptive management strategies.

For the purposes of the Species at Risk Coordination Committee, adaptive management is intended to reflect a commitment to take actions based on monitoring and follow-up results that will ensure the effective implementation of mitigation throughout the life cycle of the Project and confirm the conclusions of the EA.

6.2 Commitment to Adaptive Management

Adaptive management in the context of mitigation involves using continued research and monitoring information to modify mitigation approaches where deemed necessary to ensure success. MTO is committed to the use of adaptive management strategies to assist in ensuring the success of its mitigation measures. Elements of the strategy will vary somewhat depending on the species involved but will generally consist of:

- Continued surveys of the features and functions in the affected areas of habitat to better understand needs for creation of new habitat. In the case of snake species this involves continuing to document locations and movements of individuals;
- Gathering information on best practices from other jurisdictions; and
- Monitoring and reporting on the success of practices and modifying mitigation approaches as necessary.

7.0 Best Management Practices

In addition to the mitigation, monitoring and follow-up approaches for Species at Risk, several standard best management practices (BMPs) have been identified in the Provincial and Federal EAs, including but not limited to:

- If technically feasible, areas that should be protected during construction will be delineated prior to construction start using construction fencing and no activities will be permitted in these areas;
- Construction fencing should also be used around the perimeter of the inspection plaza to mark the limit of construction areas and sensitive off-site areas including the Black Oak Woods;
- Erosion and sediment control will be used on-site during construction to prevent the migration of sediment and stormwater from the work area;
- Good housekeeping practices will be employed to prevent the contamination of habitat adjacent to the work area;

- Vegetation removals should occur outside the growing season to the extent possible;
- If vegetation removals are required during bird nesting periods, a nest survey should be conducted by a qualified avian biologist immediately prior to commencement of construction to identify and locate active nests and to develop a mitigation plan;
- A snake barrier will be installed along side portions of the construction area to prevent snakes from entering the work zone and redirect snake movements to safer areas;
- Wildlife salvages should be performed on-site by a qualified biologist prior to vegetation removals; and
- If feasible, removed species will be relocated to a preselected area in a manner approved in consultation with Technical experts. If removal is not feasible, other approved strategies will be developed in consultation with technical experts such as seed harvesting and propagation opportunities.

8.0 Contingency Plans

Other Species at Risk have been reported in the general vicinity of the area of investigation but were not confirmed as present based on detailed field investigations including: gray fox, massasauga, eastern hognose, Blanding's turtle and numerous plant species. Based on the type, timing, level of detail and level of effort of field investigations for Species at Risk, it was considered reasonable to conclude that these species were not present in the Project Area. However, fish and wildlife species are mobile and may be encountered within the Project Area. Plant species may also be encountered in the area of investigation through various dispersal methods, they may be present in the seed bank and released through natural succession or disturbance regimes, or may be identified due to changes in management practices such as mowing. As a result, contingency measures are required to manage Species at Risk if they are encountered during later design stages or during construction.

Should a new Species at Risk be encountered during later design stages, the following actions will occur:

- Identification of the species at risk will be confirmed with regulatory agencies, universities or naturalists.
- Regulatory agencies will be advised of the discovery of the species at risk.
- The design will be reviewed to determine if avoidance is possible through design modifications.
- If avoidance is not possible, an authorization will be sought under the SARA and OESA as applicable.
- Further investigations will be carried out, as required, to determine the population and distribution of the species at risk.

Should a new species at risk be encountered during construction, the following actions will occur:

- The species will be protected from immediate harm by ceasing/modifying the construction activity or moving the species at risk to safety.
- Regulatory agencies will be advised of the discovery of the species at risk.
- If warranted, further permitting may be required under the SARA and OESA.