Detroit River
INTERNATIONAL CROSSING
S T U D Y

Protection of Natural Environment: Natural Heritage Features Impact Assessment

Assessing the project impacts to natural features such as fish and fish habitat, vegetation and vegetation communities and wildlife and wildlife habitat is an important part of the Detroit River International Crossing (DRIC) Environmental Assessment. The analysis of natural heritage features entailed a three-season program of field investigations, as well as research and interviews.

FISH AND FISH HABITAT

The DRIC study team investigated all watercourses and waterbodies located within the Area of Continued Analysis (ACA) to confirm the presence/absence of fish and fish habitat and species at risk.

How the Analysis was Done

Background information was obtained from Fisheries and Oceans Canada, Ontario Ministry of Natural Resources (MNR) and Essex Region Conservation Authority (ERCA). Field investigations were performed in May, September and October 2006. The fish community was investigated at 58 stations using backpack electrofishing equipment, minnow traps, dip nets or direct observation. Fish habitat along 38 watercourse reaches was characterized and photographed. The Detroit River bed was also videotaped using underwater video camera and sediment was sampled.

Results to Date

Most watercourses in the ACA are designated as agricultural municipal drains and are altered by agricultural or urban development. No watercourses or waterbodies in the ACA support coolwater or coldwater fish communities. The Detroit River, Turkey Creek, Lennon Drain, McKee Creek and Cahill Drain directly support warmwater sportfish communities (i.e. bass, sunfish, etc.). Remaining fish habitat supports warmwater baitfish communities (i.e. minnows, chubs, etc.). Many watercourses function as drains and do not support fish habitat. No critical fish habitat or fish species at risk were identified in the ACA.

VEGETATION AND VEGETATION COMMUNITIES

The DRIC study team investigated all vegetation communities located within the ACA to classify vegetation communities, inventory plants and confirm the presence/absence of species at risk.

How the Analysis was Done

Background information was obtained from MNR, ERCA and local field naturalists. Field investigations were performed in April, May, June, July, August and September 2006, throughout the growing season. Vegetation communities were delineated on air photos and refined through ground truthing. The Ecological Land Classification (ELC) system was used to describe vegetation communities.

A plant survey was conducted in each vegetation community to identify composition, structure and function. Representative photographs were taken. Species at risk were identified in the field where possible or photographs or samples were taken for identification or verification purposes. The locations of species at risk were recorded using a Global Positioning System (GPS).

Results to Date

- Seven types of vegetation communities located in the ACA are considered rare, very rare or extremely rare in Ontario and very rare, imperiled or critically imperiled globally.
- Fifty-five plant species located in the ACA are considered rare, very rare or extremely rare in Ontario.
- Three plant species (dense blazing star, colicroot and climbing prairie rose) are regulated as "threatened."
- One plant species (butternut) is regulated as "endangered" in Schedule 1 of the *Species at Risk Act*.

Access Road Alternatives

Among the access road alternatives:

- Alternative 2A (at-grade with parallel service road) impacts a greater area of tallgrass prairie and deciduous swamp (between 1.54 and 1.98 ha) than the other access road alternatives.
- Alternative 2B (depressed with parallel service road) impacts between 0.92 and 1.36 ha.
- Alternatives 1A (at-grade with one way service roads) and 1B (depressed with one way service roads) and Alternative 3 (cut and cover tunnel) impact between 0.38 and .092 ha.
- Access roads connecting to Plaza A impact a greater area of tallgrass prairie than those connecting to Plazas B, B1 or C, reflecting the presence of tallgrass prairies in the Spring Garden Road/Malden Road area.

Between 70 and 159 specimens/colonies of provincially rare plants are impacted by the access road alternatives, with minor differences among the alternatives in terms of impacts.

Plaza Alternatives

Among the plaza alternatives:

- Plaza A impacts approximately 3 ha of tallgrass prairie.
- Plazas B and B1 impact between 1.1 and 1.4 ha.
- Plaza C impacts 1 ha.

The impacts with Plaza B and C alternatives result primarily from the roadway connections into the plazas from the Malden Road area.

Practical Alternative	Impacts to tallgrass prairie and deciduous swamp	Impact to specimens/ colonies
Access Road 1A	Between 0.38 – 0.92 ha	
Access Road 1B	Between 0.43 and 0.86 ha	
Access Road 2A	Between 1.54 – 1.98 ha	
Access Road 2B	Between 0.92 and 1.36 ha	
Plaza A	3 ha	Up to 149
Plaza B	Between 1.1 – 1.4 ha	Up to 79
Plaza B1	Between 1.1 – 1.4 ha	Up to 79
Plaza C	1 ha	Up to 79

Similarly, Plaza A results in a greater impact to specimens/colonies of provincially rare plants (up to 149 specimens/colonies impacted) in comparison to Plaza B/B1 (both up to 79 specimens/colonies impacted) and Plaza C (up to 79 specimens/colonies impacted).

WILDLIFE AND WILDLIFE HABITAT

The study team investigated all wildlife habitats located in the ACA to identify important habitat for wildlife, inventory wildlife and confirm the presence/absence of species at risk.

How the Analysis was Done

Background information was obtained from the MNR, ERCA and local field naturalists. Field investigations were performed in March, April, May, June, July, August, September, October and November 2006. Wildlife habitat was delineated on air photos and refined through ground truthing. The Ecological Land Classification (ELC) system was used to describe wildlife habitat, where appropriate.

Wildlife was identified through direct observation, vocalizations, tracks, scats and browse. One hundred and twenty point-count breeding bird surveys were performed at 60 stations. Species at risk were identified in the field and a photograph was taken for verification purposes. The locations of species at risk were recorded using a GPS.

Results to Date

One hundred and twenty-one wildlife habitat units were identified and fifty species of breeding birds were recorded in the ACA. Three eastern foxsnake and four Butler's gartersnake were recorded in the ACA. Both species are regulated as "threatened" in Schedule 1 of the *Species at Risk Act*.

One notable potential impact among the alternatives is to the habitat of the Butler's gartersnake. The area between Malden Road and Matchette Road alongside E.C. Row Expressway has been identified as habitat for Butler's gartersnake. This area is more highly impacted by Plaza A, although the access road into Plazas B, B1 and C also impacts this area to a lesser extent.

Remaining Activities

Information collected from background sources and through field investigations will be compiled and used to compare Practical Alternatives. No further field investigations are planned at this time.

The results of this assessment will be reviewed with appropriate government agencies following the Public Information Open Houses.