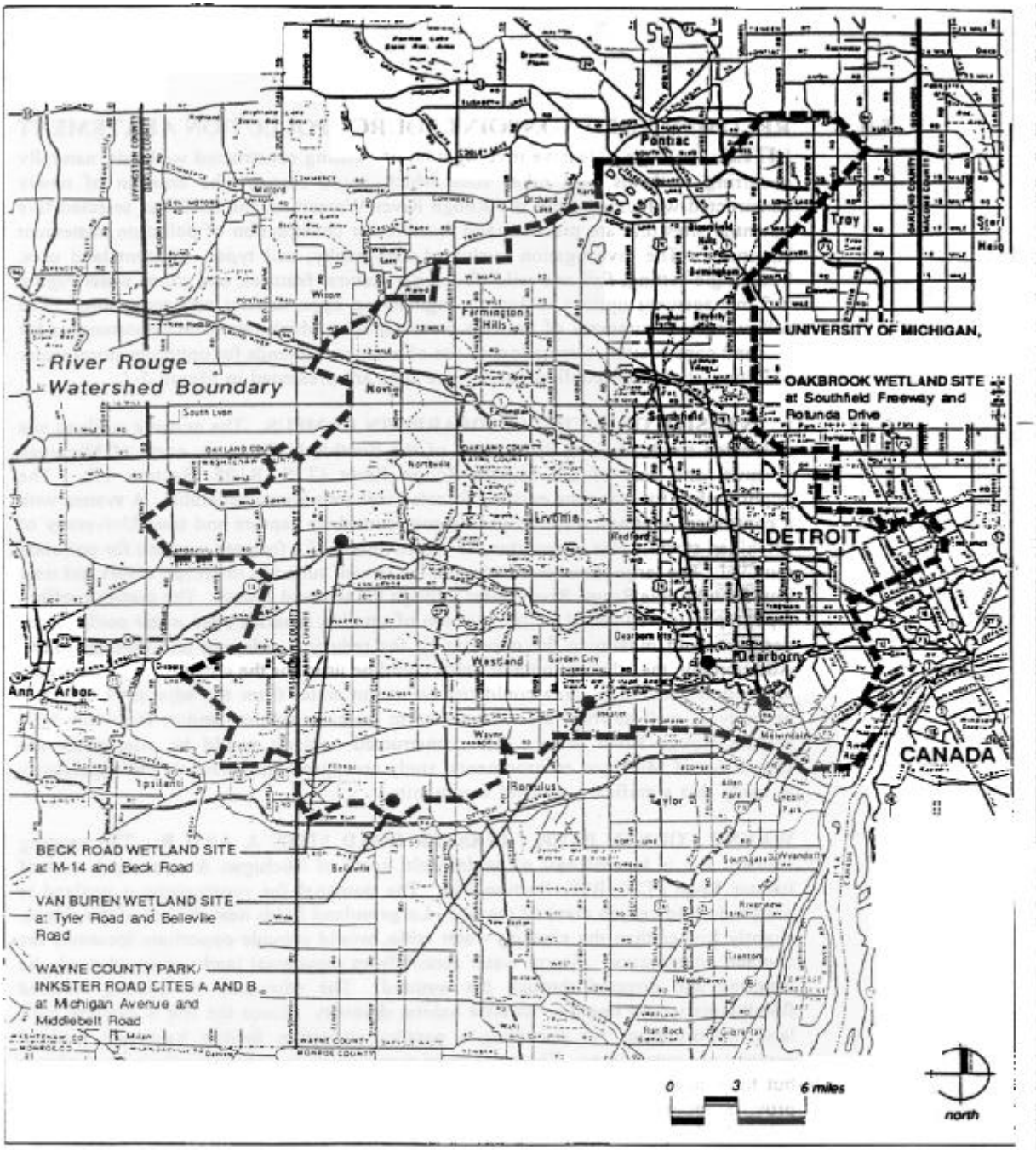
5.0 RECOMMENDED NONPOINT SOURCE POLLUTION ABATEMENT SITES.

After an extensive investigation of existing constructed wetlands, naturally occurring wetlands, and other sites which could support the creation of newly constructed wetlands within the Rouge River Watershed, the RPO has selected five potential sites that are practical and feasible for construction of pollution abatement structures. The investigation evaluated topography, soil types, adjacent land uses, hydrologic setting, fish and wildlife habitat, natural features, and storm water *Figure 4-5* management options including engineering opportunities and constraints. The following is a summary of the five potential sites which represent opportunities for wetland construction, restoration, or use of existing wetlands for optimum storm water pollution abatement configuration. The sites are presented in *Figure 5-1*.

5.1 UNIVERSITY OF MICHIGAN, DEARBORN CAMPUS. The existing wetland site is located south of Ford Road, west of the Southfield Freeway, north of Michigan Avenue, and east of the Middle Rouge River (T2S, R10E, Section 15). The opportunities for using the existing forested wetlands are considerable. A system with a controlled inlet and outlet could be constructed, to capture and treat University of Michigan storm water to monitor the effectiveness of a forested wetland for pollutant removal. The large forest wetland complex is well suited to intercept, divert and treat low-flow Middle Rouge River water through the wetland system. The system's rolling topography is well suited for the creation of smaller, separate open water pools. Such designs could maximize the opportunity for reducing sediment and nutrient loads. Additionally, the adjacent upland fields could be used for the creation of an emergent wetland system. This area could receive storm water from the adjacent University property as well as from the existing storm water sewer line and/or from low-flow Middle Rouge River water. The constructed wetland would be unique for the University of Michigan environmental study area, providing students the opportunity to study this significant wetland community.

5.2 WAYNE COUNTY PARK / INKSTER ROAD SITES A AND B. The existing wetland site is located east of Middlebelt, north of Michigan Avenue, and west of Inkster Road (T2S, R9E, Section 25). The potential for constructing a wetland is outstanding in certain areas of the site. Large upland fields near the toe of the slopes, slightly higher than the existing water table, would provide opportune locations for wetland construction. Storm water runoff from residential land use could easily be captured and directed through the wetland. The adjacency to existing forested floodplains would improve wildlife habitat diversity. Since the site is existing park land, opportunities for providing a passive recreation facility based on wetland ecology are outstanding. There are some areas which have historically been wetlands but have been filled, disturbed or are managed as turf for park land. These areas provide opportunities for enhancement by restoring the lost hydrology from storm water discharge, Rouge River overflow, or groundwater discharge.



Regional Setting - 5 Candidate Sites **Figure 5-1**

Site Selection Study for Wetland Nonpoint Source Pollution Abatement

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5.3 VAN BUREN WETLAND. The constructed wetland is located south of Tyler Road and east of Van Buren Road in Van Buren Township (T3S, R8E, Section 15). The wetland provides a desirable interspersion of hydrophytic vegetation distributed over approximately 4.5 acres of open water zones and 2.0 acres of emergent zone.

Although only three years old, the wetland supports an impressive array of plant species; fifty-nine species were recorded. The open water areas compose the majority of the wetland, however 100% of the bottom land is covered by submergent vegetation.

The water level is maintained by an outlet pipe through the berm which discharges into the McClaughrey Drain, a well defined drain of the Lower Rouge. Immediately downstream from the discharge of the Van Buren Wetland, the drain broadens out into a naturally existing emergent wetland system of approximately 4 acres of predominantly cattails, with a defined open channel into and out of the natural wetland. This may present an opportunity to monitor both a constructed wetland with good diversity and a naturally occurring monotypical wetland.

5.4 OAKBROOK WETLAND. The constructed wetland site is located south of Rotunda Drive and east of the Southfield Freeway in the City of Dearborn (T2S, R10E). The constructed wetland appears to function more as a wet detention watershed with primarily open water, ranging from one foot in the south and central portion to approximately five feet towards the north end. A narrow band of emergent vegetation exists around the perimeter of the site. A planting program using submergent and floating leave plants has recently been completed. The wetland has been monitored since 1990 documenting qualitative vegetation and wildlife surveys, limited water quality analysis, and series photographs.

5.5 BECK ROAD WETLAND. The constructed wetland site is located north of M-14 and west of Beck Road (T1S, R8E, Section 20). The site is approximately two acres of emergent cattail wetland with no open water. The wetland receives storm water runoff from entry roads and light industrial and office complexes. The wetland is a good example of a more monotypic emergent wetland system with no open water. The wetland has not been historically monitored but if selected for further study, will be thoroughly evaluated.