

DRAFT
BUI: *Loss of Fish and Wildlife Habitat; Degradation of Fish and Wildlife Populations*

Stage 1 Background:

Stage 1 Loss of Fish and Wildlife Habitat problem description –This use is impaired as a result of the significant physical loss of wetlands and habitat which has occurred due to industrial growth and urban development. The majority of the extensive marshland along the Michigan and Ontario shores have been filled and bulkheaded, eliminating the emergent plants and reducing the littoral zone. Dredging activities in the lower river have also resulted in habitat loss. The maintenance and protection of existing wetlands is critical to the fish and wildlife populations in the AOC.

Stage 1 Degradation of Fish and Wildlife Populations problem description – Fish: not impaired; Wildlife: decreased populations, but primarily through loss of habitat.

In the Stage 1 Report fish populations were determined to be “not impaired” and the status of wildlife populations was ambiguous. The “not impaired” determination for fish was based on what was considered healthy fish community composition and the high quality economic, social and recreational benefits provided by the current fish populations in the river. The Stage 1 acknowledged that changes in fish community structure have taken place and some degradation of fish populations had occurred, but found return to a historic fish community structure was not possible or realistic due to major disturbances such as dredging, invasive species, changes and loss of habitat and overfishing.

Current Removal Status:

Loss of Fish and Wildlife Habitat - Due to extensive historical industrial and urban development and the resulting loss of wetland habitat throughout the Detroit River connecting river system, this BUI was listed as impaired in 1991.

In accordance with the State of Michigan’s guidance for delisting, in 2009 an aquatic habitat/population restoration plan was developed for the Detroit River which identified 19 sites for restoration. In order to consider this beneficial use restored each of the sites targeted in the restoration plan must be addressed.

In 2010, restoration efforts had begun on three of the target sites. The 2009 plan also provided for a revision of the plan once additional aquatic sites were identified. Those sites were identified in 2011. A revision of the aquatic habitat/population restoration plan with a final list of target restoration sites is the necessary next step.

Degradation of Fish and Wildlife Populations – The 1996 Detroit RAP Update Report noted that in a 1992 IJC review of the Stage 1 half of the reviewers felt that the data presented in the Stage 1 did not support a "no impairment" conclusion for either fish or wildlife populations. Although the status of wildlife populations was clarified in the 1996 Update to "unknown" to reflect incomplete or inconclusive information in Stage 1, fish populations remained "not impaired" because "intense research has not identified any populations which can be considered impaired due to causes within the AOC and the fishery is fulfilling all fishery plans and goals" (1996 RAP Update, pg. 17). The 1996 Update did note that local fish populations may be impacted by loss of habitat.

Both the Stage 1 and 1996 RAP Update indicate loss of habitat was the principal factor contributing to degradation of fish and wildlife populations. Therefore, this BUI will be restored when actions identified in the aquatic habitat/population restoration plan for Loss of Fish and Wildlife Habitat are completed.

Pathway for removal (see graphic):

- Revise *Delisting Targets for Loss of Fish/Wildlife Habitat Beneficial Use Impairment of the Detroit River Area of Concern* to update and include aquatic habitat sites
- Implement projects identified in revised plan

Michigan DEQ Delisting Criteria:

Loss of Fish and Wildlife Habitat; Degradation of Fish and Wildlife Populations - Restoration of this BUI requires that a local aquatic habitat or population restoration plan be developed and implemented. The plan must be part of the RAP for the AOC.

Removal of this BUI will be based on achievement of full implementation of actions in the plan, including monitoring conducted according to site plans and showing consistent improvement in quantity or quality of habitat addressed in the criteria. Habitat values and populations need not be fully restored prior to delisting, as some may take many years to recover after actions are complete.

Ontario Delisting Criteria:

Loss of Fish and Wildlife Habitat - a) Coastal wetlands: Protect existing coastal wetland habitat and restore wetland function in priority areas of the AOC and its watershed (as identified in the 2007 Detroit River AOC Canadian Priority Habitat Sites and the 2002 Essex Region Biodiversity Conservation Strategy).

b) Aquatic & riparian habitat: Protect existing deep water, coastal spawning, and tributary fish and aquatic wildlife habitat and restore ecosystem function in priority areas in, and hydrologically connected to, the Detroit River.

c) Shoreline softening: Develop and begin to implement a shoreline management strategy to soften and naturalize Detroit River Canadian shoreline, whenever opportunities arise.

d) Terrestrial habitat: Protect existing natural terrestrial corridors and restore ecosystem function between the Detroit River and the Ojibway Prairie Complex, the LaSalle Candidate Natural Heritage sites, and other major identified habitat sites (as identified in the 2007 Detroit River AOC Canadian Priority Habitat Sites and the 2002 Essex Region Biodiversity Conservation Strategy).

Degradation of Fish and Wildlife Populations - When environmental conditions support self-sustaining and healthy communities of indicator fish (e.g., walleye, bass, lake sturgeon, brown bullhead) and wildlife (e.g., black-crowned night heron, Northern leopard frog) species.

Key Reports:

- [Stage 1 Detroit River Remedial Action Plan, 1991](#)
- [1996 Detroit River Remedial Action Plan Update Report](#)
- [Restoration Criteria Review for the Detroit River Area of Concern, 2008, Friends of Detroit River](#)
- [DETROIT RIVER CANADIAN REMEDIAL ACTION PLAN STAGE 2 REPORT, 2011](#)
- [Detroit & St. Clair River Areas of Concern Beneficial Use Impairment Canadian Workshop Report, Sept 2011](#)
- [Detroit River Canadian BUI Status overview 2011](#)
- [FINAL REPORT for the project Physical and Biological Characteristics and Changes in the St. Clair-Detroit River Waterway. 2011](#)
- [Delisting Targets for Fish/Wildlife Habitat & Population Beneficial Use Impairments for the Detroit River Area of Concern. 2009](#)