

Niagara River Coastal Wetland Restoration Project

The Niagara Parks Commission (NPC), in collaboration with the Ministry of Natural Resources and Forestry (MNR), is creating fish habitat along the Niagara River shoreline. This project contributes to the goals of the Niagara River Area of Concern – Remedial Action Plan, specifically addressing the loss of fish and wildlife habitat. This project also builds on NPC’s previous shoreline restoration projects which utilized bio-engineering techniques to mitigate shoreline erosion.

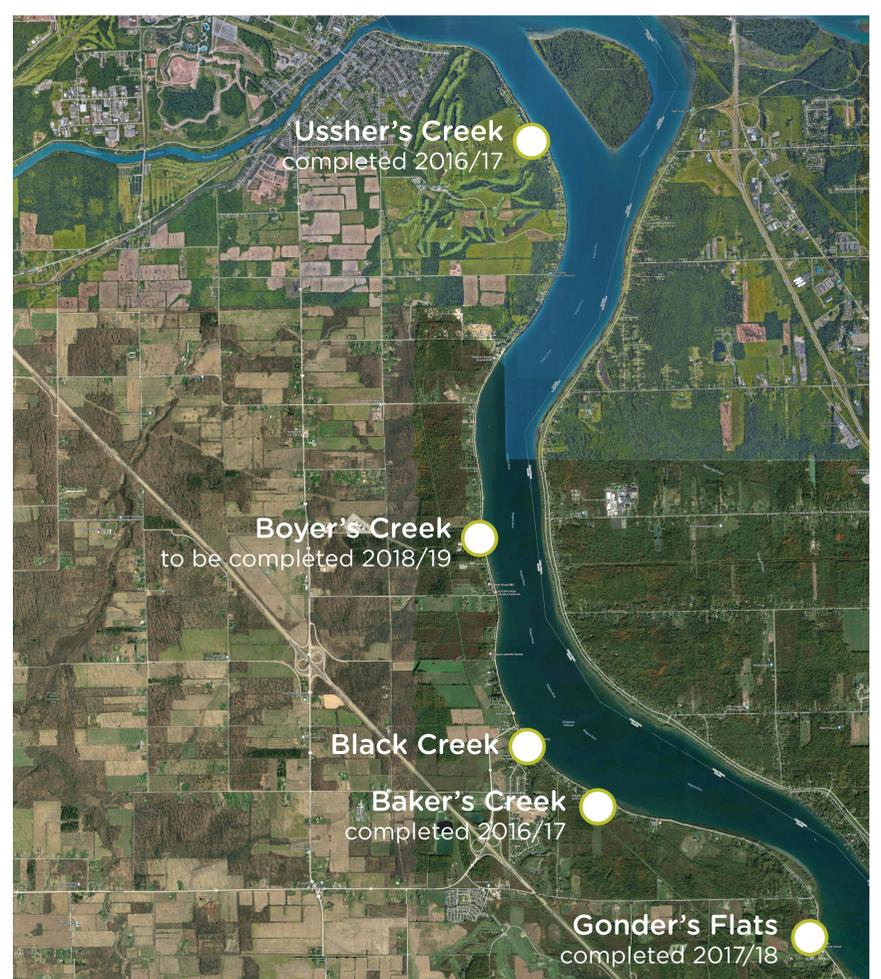
Niagara Parks has identified seven sites along the Upper Niagara River for habitat restoration. During the winter of 2016/17, Niagara Parks restored coastal wetlands at the mouths of Ussher’s Creek and Baker’s Creek, and in the fall/winter of 2017/18 developed a large coastal wetland along the shoreline of Gonder’s Flats in Fort Erie.

Historically, the Niagara River shoreline would have been lined with coastal wetlands. Vegetation assessments completed by the MNR in 2015 determined that over 75% of these coastal wetlands have been lost on the Canadian side of the Niagara River. Coastal wetlands are essential ‘nursery’ habitat for numerous fish species found within the Niagara River, including Lake Sturgeon, a species at risk (threatened). These coastal wetlands typically consist of aquatic and semi-aquatic plants which provide refuge habitat for ‘young-of-the-year’ fish and various prey species; critical for increasing fish populations for the Niagara River.

To date, much of the upper Niagara River shoreline has been ‘hardened’ using large boulders and concrete to prevent erosion. While these techniques have limited erosion along the banks of the river, it has resulted in the scouring of the near-shore riverbed, resulting in a loss of most near-shore aquatic vegetation. The creation of coastal wetlands will provide two key benefits: it will replace essential fish habitat that has been lost due to previous shoreline works and provide continued shoreline protection utilizing a more naturalized approach.

The development of coastal wetland fish habitat will involve the following:

- Topographic Surveying of shoreline and riverbed
- Development of construction drawings
- Installation of sediment control fencing
- Regrading of the river bank to a gentler/stable slope
- Installation of aggregate and woody debris (Ash Trees), anchored into the river bed to slow wave action and create calmer near shore habitat
- Planting of shoreline vegetation (shrubs, aquatic and semi-aquatic plants)
- Ongoing monitoring

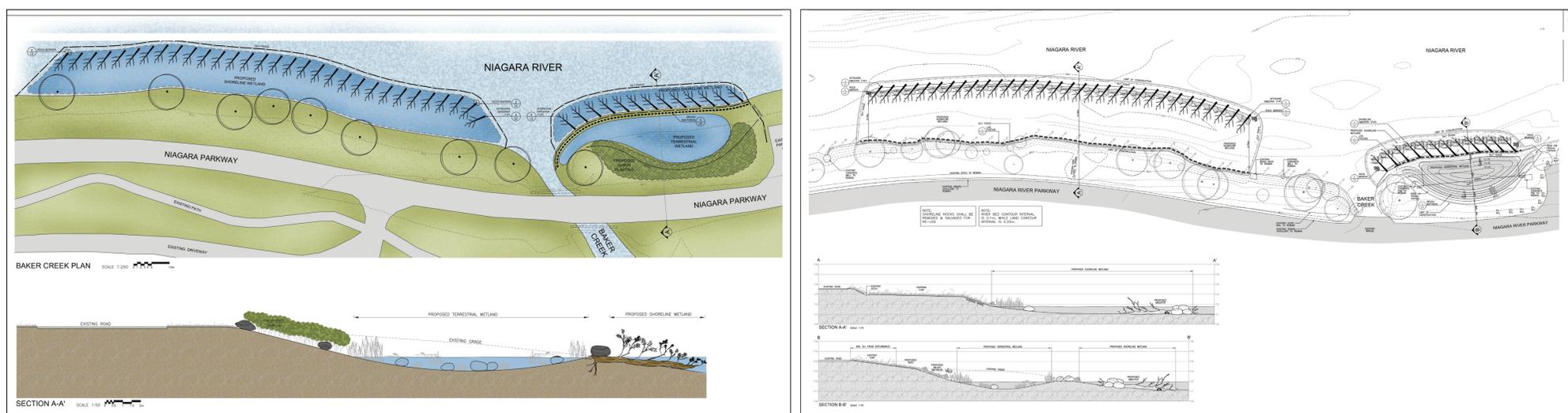


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To build on the fish habitat work done by the New York State Department of Environmental Conservation and in response to the Niagara River Remedial Action Plan, the MNRF prepared several concept designs for potential fish habitat development sites along the Canadian side of the Niagara River.

These concepts included designs for all creeks/tributaries running into the upper Niagara River, including the Baker's Creek site which was implemented in the winter 2017. The same design principles were used for the coastal wetland development along Gonder's Flats in 2017/18.

From Concept to Implementation



Concept design

Implementation in progress

Completed coastal wetland

