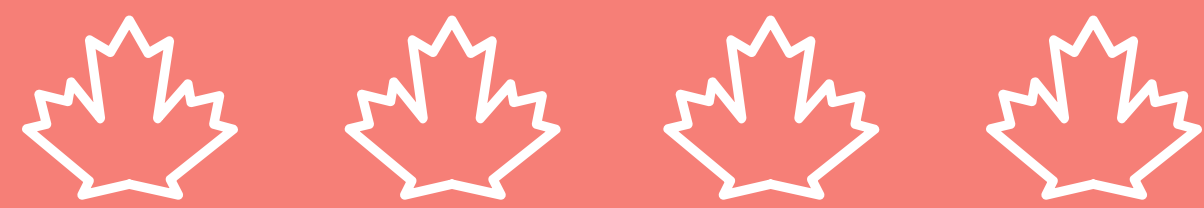


WHAT WAS DONE IN CANADA?



In 2015, a vegetation assessment by the Ontario Ministry of Natural Resources and Forestry determined that about 75% of the coastal wetlands along the Niagara River's Canadian shoreline were lost due to shoreline hardening. As a result, 7 sites along the Upper Niagara River were identified as candidates for habitat restoration to fulfill goals of the Niagara River (CAN) Remedial Action Plan.

Four habitat creation projects have been completed on the Canadian side of the Niagara River led by the Niagara Parks Commission in partnership with Environment and Climate Change Canada, Ministry of Natural Resources and Forestry, and with support from the New York State Department of Environmental Conservation.

To date, the completed projects resulted in 2.6 ha (6.3 ac) of wetland habitat, 3 km (1.9 mi) of improved shoreline, and thousands of native plants. The Niagara Parks Commission has targeted having 75% of the Canadian Niagara River shoreline covered in native vegetation by 2028.



Wetland vegetation established quickly. Wildlife and anglers seen using sites indicate project success.
© Niagara Parks



Restoration work in progress at Boyer's Creek (#4).
© Niagara Parks



Projects incorporated rock and woody debris (ash trees that succumbed to the Emerald Ash Borer and repurposed Christmas trees) anchored to the riverbed for spawning material and structure.

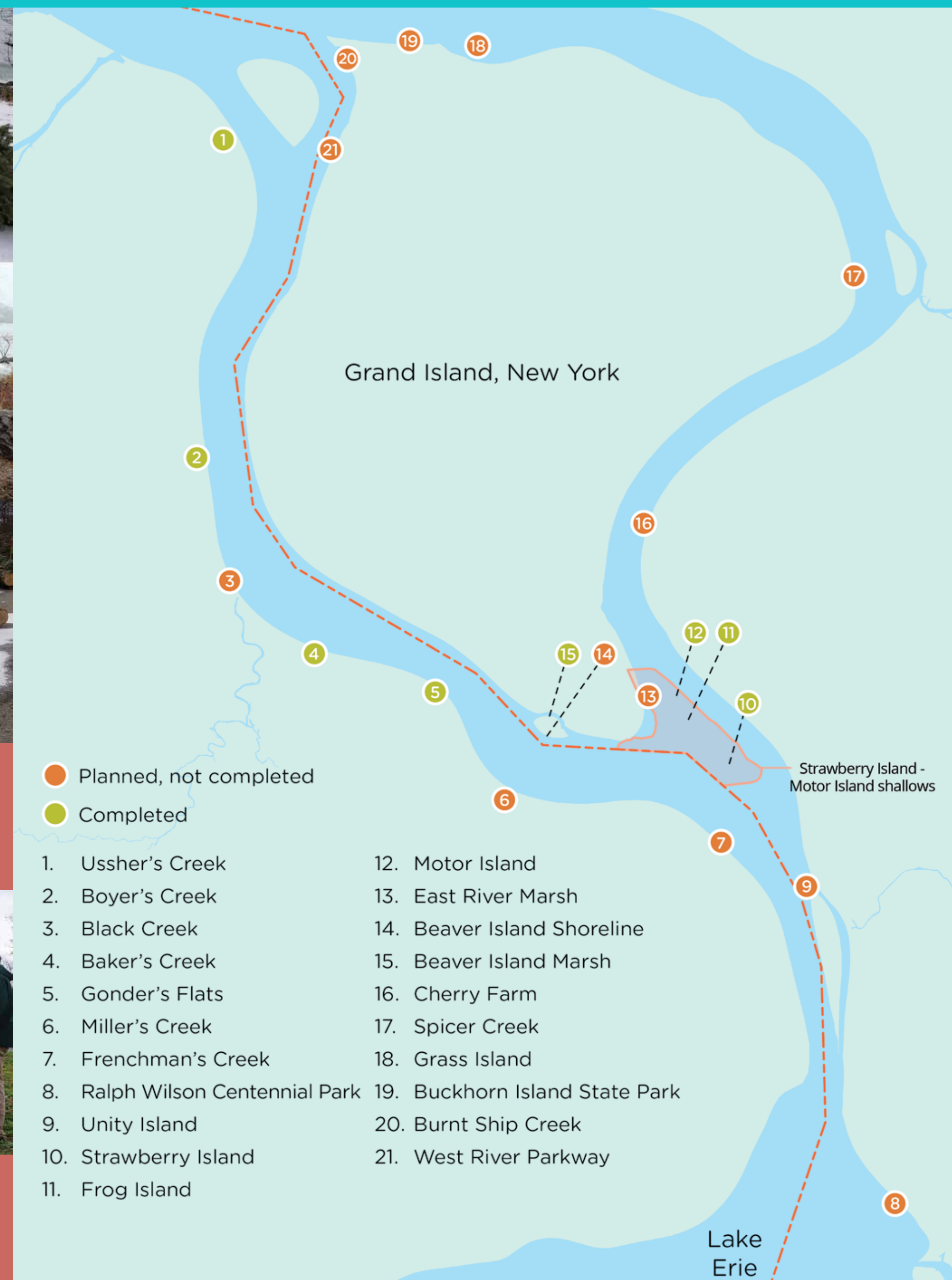
Public consultation is critical to ensure information is shared and concerns are heard. Projects continue to receive positive feedback.

RESTORING OUR RIVER TOGETHER!

BI-NATIONAL HABITAT RESTORATION EFFORTS TO IMPROVE THE NIAGARA RIVER ECOSYSTEM

The Niagara River is a 56 KM connecting channel that links Lake Erie to Lake Ontario. It is identified as one of five bi-national Great Lakes' Areas of Concern due to historical water quality problems and habitat loss which are being addressed through separate, yet complementary, Remedial Action Plan (RAP) efforts.

Over the past few years, RAP partners on both sides of the border have taken similar approaches to restore and improve fish and wildlife habitat in the Upper Niagara River. Thanks to these restoration efforts, the Niagara River supports a diverse ecosystem reliant on healthy waters such as bald eagles, herons, egrets, cormorants, terns, turtles, mink, river otters, lake sturgeon and muskellunge.



Disposal of dredge spoils occurred in the Upper Niagara River from about 1815 to 1910. Extensive sand and gravel mining followed from 1912 to 1953 which altered the size, shape, and number of islands over time.



After dredging stopped, river flows caused significant erosion. Frog Island (#11) disappeared by 1985. Photo shows restoration activities in progress.
© Paul Leuchner



Strawberry Islands (foreground), Frog Island and Motor Island (2016). © Paul Leuchner



Habitat construction on Motor Island (2011). © Paul Leuchner



Great Egret © NewEarth Ecological Consulting

WHAT WAS DONE IN THE USA?



The Strawberry Island-Motor Island Shallows (#10-12) is part of one of the most important waterfowl wintering areas in the northeastern United States (especially for diving ducks) and one of the most important fish spawning areas in the upper Niagara River.

Strawberry Island

Multiple phases of restoration began in 1993 with the repair of a breach that threatened to accelerate erosion, followed later by strengthening other portions of the perimeter and bringing in soils to re-establish 3 ac (1.2 ha) of wetlands completed in 2002. The most recent project extended shoreline protection measures and added 8 ac (3 ha) of diverse wetland and upland habitat.

Frog Island

Re-graded the river bottom to create variation in the bathymetry, allowing for more complex emergent wetland and submerged aquatic vegetation habitat and added shoreline protection around the island to dissipate wave energy.

Motor Island

Added gradual shoreline transitions to increase ecological diversity; added shoreline protection (low-profile berms) to dissipate wave energy and prevent ice damage; increased topographic variability for greater habitat diversity.