TOMMY THOMPSON PARK
Master Plan Implementation Project
Community Newsletter

Spring 2011

UPDATE: NATURAL AREA ENHANCEMENT PLAN IMPLEMENTATION

Park's embayments are set to receive more improvements in 2011

Embayment A

Embayment A once lacked diversity in its physical features and contained few aquatic plants, both necessary components to an ecologically healthy shoreline. But over the past year its shoreline has been enhanced with backwater lagoons, spawning channels, wet pockets, rock shoals and log habitat piles. These changes were accomplished by first surcharging the embayment with sand and strategically adding rocks, logs and stumps.

Following the implementation of the non-biological structures, native wildflowers and grasses were seeded, and aquatic and riparian vegetation planted. The vegetation established quickly and now provides critical ecological services, including increased primary productivity and water filtration.

Overall, enhancements to Embayment A have created encouraging habitat opportunities for fish, mammals, invertebrates, amphibians and waterfowl. Toronto and Region Conservation will continue to monitor the area for the arrival of new species and other ecological impacts of recent work.

(Before) Embayment A after the initial implementation of plants and habitat structures, summer 2009.

(After) Embayment A after a full season of growth, summer 2010.

Embayment B

Shoreline enhancements to Embayment B took place this past winter in a 1.1-hectare backwater area behind a previously installed artificial island. The existing shoreline was surcharged with sand and in-water structures, such as logs and stumps, and a variety of substrates were strategically placed. The sand was graded to levels that will promote the growth of emergent and submergent aquatic vegetation.

The main objectives of this work are to protect the embayment from excessive wave action; create a shallower, more productive littoral zone; and provide improved spawning and foraging opportunities for warm and cool water fish species.

Over the coming spring and summer months, the area will be seeded and planted to increase the vegetation cover and diversity of species in the embayment, as well as provide habitat to a number of fish and wildlife.

Embayment B undergoing enhancements, Winter 2010/2011.

Embayment C

The southeast shoreline of Embayment C was significantly improved this past winter as well. Shoreline enhancements focused on increasing the littoral zone and the amount of vegetation, improving structural habitat and creating sheltered backwater habitat. Embayment C comprises about 24 hectares and is generally characterized as a warm water zone with deeper cool water areas.

Along the eastern shoreline at the northeast corner of the embayment, an earth berm was constructed that connects to the mainland and includes a fish gate to restrict the entry of large common carp. Another earth berm was constructed along the eastern shoreline to establish a sheltered wetland habitat. Since a fish gate was not installed in this second area, it will be possible to compare the effects of carp on coastal wetlands. Logs and boulders were placed on the outside of the berms to protect them from erosion and create underwater shoals.

The topography of the interior of the berms includes pockets of deep water, open backwater channels and areas to support the growth of emergent wetland plants. Logs, stumps and underwater aggregates were added to create basking opportunities for turtles, improved fish spawning and nursery habitat, and to enhance habitat for mammals, birds and amphibians. This spring the restoration area will be planted with native terrestrial and aquatic plants.

Adjacent to the pedestrian bridge, a smaller berm was created to protect previous habitat enhancement work from wave action and generate conditions suitable for the establishment of aquatic vegetation. A viewing node was created overlooking this habitat feature that provides excellent views of the embayment and a great meeting point for park visitors.

In the northwestern sections of the emerged forests of Embayment C, submerged rock piles, underwater shoals, anchored log tangles and anchored stumps have been strategically placed to protect the shoreline. They will also provide underwater habitat for aquatic species and above water habitat for semi-aquatic or terrestrial species.

Some of last year's shoreline enhancements to Embayment C.

Embayment C habitat structures placed on the ice during the winter will sink underwater as the ice thaws.

Infrastructure Updates: Foundation settles for environmental shelter and trail improvements resume

A preloading berm was constructed this past winter in anticipation of the new Environmental Shelter. The berm will sit for the next five to seven months, creating the compaction required for the final structure to be built. Nested within this 'hill,' the Environmental Shelter will provide panoramic views from an accessible green roof and sheltered views from the covered outdoor classroom below.

The shelter is one of a series of small pavilions designed by Toronto's Montgomery Sisam Architects to support the management, enjoyment and interpretation of the park. Construction on the other infrastructure projects is expected to begin this summer and be completed by late fall. More information is expected to be released soon.

In addition, trail improvements will resume again this summer at the park. A new pedestrian bridge will be built on Peninsula D, and general improvements made on existing trails.

A berm will act as the foundation for the park's new Environmental Shelter, February 2011.

BIOENGINEERING PROJECT SEEKS TO PROTECT SHORELINES

In conjunction with the embayment enhancements, a special planting technique called bioengineering will be applied to add stability and control erosion along the park's newly enhanced shorelines. This technique exploits the willow plant's ability to grow extensive root systems and hold soil in place. Bunches of willow canes will be densely wrapped and buried in the earth. Single cuttings of willow will then be densely planted with buds up. The buried willow will form a dense mass of roots, which the cuttings will eventually grow into. A total of 5,000 cuttings and 45 cubic metres of bulk willow canes are to be planted.

More than 3,500 trees and shrubs will be planted throughout Tommy Thompson Park this spring as part of the implementation of the Natural Area Enhancement Plan. An additional 800 trees and shrubs will be placed around the various infrastructure projects.

TRCA staff plant at Tommy Thompson Park.

ABOUT THE NATURAL AREA ENHANCEMENT PLAN

The Natural Area Enhancement Plan for Tommy Thompson Park is based on the principles of *Conservation by Design* - an approach aimed at facilitating natural succession by creating suitable conditions for the growth and natural development of native plant and animal communities in the park.

Projects completed so far include some of the best examples of Great Lakes coastal habitat restoration in North America and are serving as a template for other projects outside the Toronto region. Among the enhancements:

- Erosion protection, aquatic vegetation and underwater habitat structures along the shoreline;
- Contouring of upland areas to provide a variety of dry, seasonally flooded and mudflat habitats;
- Tree planting to enhance existing vegetation communities, increase rates of succession and improve biodiversity;
- Wildflower and native grass planting to diversify TTP's meadow communities; and
- Installation of essential habitat structures for wildlife such as habitat piles, snake hibernacula, turtle basking and nesting areas, bird nesting boxes, Common Tern reef rafts, and raptor perching poles.

Future projects will consist of shoreline and coastal wetland enhancements in Embayment D, continued meadow improvements, installation of essential habitat features, and creation of deep water fish habitat structures.

ENSURING THE FUTURE HEALTH OF THE CELL ONE WETLAND

A fish and water level control structure will be installed in Cell One this spring for the final phase of the Cell One Wetland Creation Project. The structure will help to ensure a healthy, functioning ecosystem by allowing the free passage of fish in and out of the wetland and the Cell One wetland to be hydrologically isolated from Lake Ontario, if necessary. It will be placed in the cofferdam that separates Cell One from Cell Two and the primary pedestrian trail extended over top.

Cell One was isolated from the surrounding waters of Lake Ontario in 2004 and its bottom capped with a clay liner to contain any contaminated sediments. As a result, a 7-hectare coastal wetland was created, providing habitat for fish, birds, amphibians and mammals.

Following construction, TRCA will install monitoring equipment to record the movements of tagged fish in and out of Cell One. This sensor is one of a network of sensors that provides data on the distribution, movement and habitat usage of fish species around the Toronto waterfront.

HABITAT INTERVENTIONS CREATE HOMES FOR BANK SWALLOWS AND COMMON TERNS

On the east side of Cell One, a series of earth banks will be created to provide nesting opportunities for Bank Swallows. Bank Swallows use their tiny bills and feet to dig long burrows in sandy banks where they build a nest and incubate their eggs. The proximity of the banks to the Cell One wetland and surrounding fields will provide better foraging opportunities for nesting birds and viewing opportunities for park visitors.

Commons Terns will also be getting improved habitats later this year. Two new Common Tern reef rafts were constructed this past winter and will soon be deployed at the park. The reef rafts will be anchored in open water, functioning essentially as floating islands. Common Terns were one of the first species to colonize the park, but their habitat and population have declined as the park's plant life has matured. Reef-rafts offer the birds an alternative habitat.

Common Terns perch on one of the existing reef rafts. (Photograph: Ann Gray.)

This Whip-poor-will was banded at the Tommy Thompson Park Bird Research Station in October 2010.

RARE WHIP-POOR-WILL SPOTTED

Staff and volunteers at the Tommy Thompson Park Bird Research Station received a special treat one morning in October when they caught and banded a Whip-poor-will bird.

Although Whip-poor-wills were once widespread throughout the central Great Lakes region of Ontario, they are now listed as a Species at Risk and hold a threatened status both provincially and nationally. Their population decline has been tied to habitat loss and degradation.

Camouflaged by their mottled brown and grey feathers, Whip-poor-wills are almost impossible to find, let alone band. Moreover, the birds rest during the day and only become active at dusk. A huge mouth and whisker-like bristles around the eyes and bill allow them to hone in on their insect prey and funnel insects into the mouth as they forage throughout the night.

The Tommy Thompson Park Bird Research Station was established by TRCA in 2003 and is dedicated to the understanding, protection and awareness of birds in Toronto. For more information, visit **www.ttpbrs.ca**

WINTER THE BEST SEASON FOR OWL SIGHTINGS

This past winter, the park was once again a great place to see owls. Long-eared Owls are typically the most abundant species at that time of year, although Great Horned Owls are spotted regularly. Northern Saw-whet Owls are also present, but in low numbers.

Owl boxes have been installed at the park to provide roosting and nesting opportunities and nodes of planted conifer trees will soon mature into suitable owl habitat. Since rodents and small mammals form an owl's main diet, log tangles and stump piles have been added to terrestrial areas as part of park enhancements to help provide them with habitat.

Toronto and Region Conservation would like to remind visitors that they should always keep a good distance from the owls to avoid disturbing them. Most owls are nocturnal and must rest during the day so they can hunt at night. Without the proper amount of rest, they are more susceptible to disease and starvation.

UPCOMING EVENT

11TH ANNUAL SPRING BIRD FESTIVAL

Saturday, May 14, 2011, 7:00 a.m. – 4:00 p.m.

Join us on May 14th to celebrate International Migratory Bird Day at the Tommy Thompson Park Spring Bird Festival.

The annual spring bird festival offers something for everyone, regardless of age or birding ability. Take part in a guided birding hike, bird banding demonstration, tree tending and other workshops. Or enjoy a host of kid's activities, educational displays, and the Bird Studies Canada Baillie Birdathon - the oldest sponsored bird count in North America.

Tommy Thompson Park is Toronto's largest waterfront greenspace that provides critical stopover habitat for migratory birds. Over 320 species have been recorded to date at the park.

For more information or to register for an activity, visit **www.springbirdfestival.ca**

For more information about Tommy Thompson Park, visit **www.tommythompsonpark.ca** or **www.waterfrontoronto.ca**
If you have specific questions about the Master Plan Implementation Project or if you would like to be added to the project's mailing list, please contact:

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