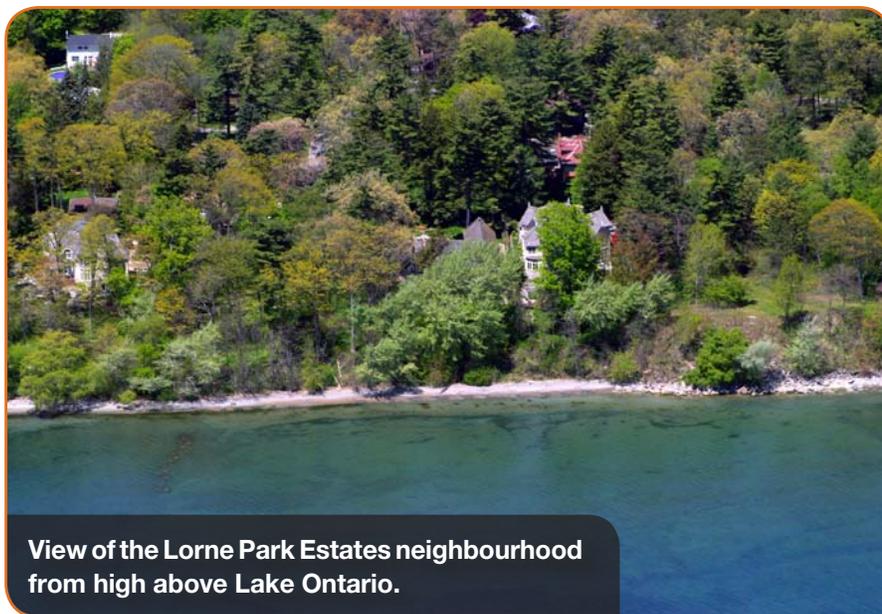


Living by the Lake

LAKE ONTARIO INTEGRATED SHORELINE STRATEGY - NEWSLETTER - ISSUE THREE - FEBRUARY 2013



View of the Lorne Park Estates neighbourhood from high above Lake Ontario.

NEIGHBOURHOOD RESTORATION

The Lorne Park Estates shoreline in Mississauga has one of the few remaining natural stretches of bluff habitat and cobble and sand beach within the LOISS study area. This is an excellent example of the important role that individual landowners can play in both protecting and enhancing natural habitat along the Lake Ontario shoreline.

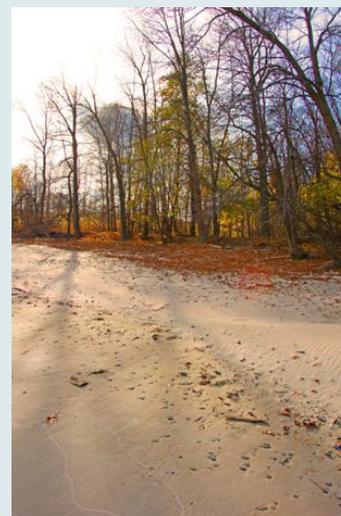
Lorne Park Estates Association (LPEA) is currently working with CVC to explore restoration opportunities. In September 2012, members of the LPEA Board met with staff from CVC and Dr. Robin Davidson-Arnott, a coastal processes expert and Professor (Emeritus) with the University of Guelph, to discuss restoration opportunities for the Lorne Park Estates shoreline. Plans are underway by the LPEA to continue

to explore restoration opportunities such as strategic plantings with native vegetation, invasive species' control, and an assessment of opportunities to restore and/or enhance Moore Creek.

LPEA board members meet with Dr. Robin Davidson-Arnott



SUNCOR LEADING THE WAY



One of the few remaining natural stretches of sand beach habitat within the LOISS study area can be found on the Suncor Energy property in Mississauga. This is an excellent example of the important role that corporate landowners can play in both protecting and enhancing natural habitat along the Lake Ontario shoreline.

Suncor Energy is currently working with CVC through the Greening Corporate Grounds program on a naturalization project along Orr Road that will increase the variety of trees and shrubs, while providing screening and much needed habitat for birds and butterflies.

FIGHTING THE INVASION OF RATTRAY MARSH

Rattray Marsh needs restoration, according to ecologists at Credit Valley Conservation (CVC). Known to many as Mississauga's ecological gem, the marsh has seen a steady invasion of non-native carp over the decades, destroying the native ecosystem. This spring, CVC, with support provided by the Government of Ontario, will begin blocking carp from the marsh to help return it to its former health.

Carp are native to the rivers and lakes of Europe and Asia and were introduced to the Great Lakes as early as 1879. They impact the marsh in three ways. Carp compete with native fish like catfish and suckers for food. They uproot underwater plants that predatory fish like pike and bass use to hide and ambush their prey. Carp kick up a lot of sediment, making the water murky, reducing the amount of sunlight and limiting the growth of new underwater plants required by fish, amphibians and birds.

"Blocking carp from the marsh is a big task," said Bob Morris, Manager of Natural Heritage at CVC, who has been working on the project since 2007. "Our plan is to use proven methods to make sure only carp are excluded and native fish can still move freely between the marsh and the lake."

Controlling carp

CVC plans to control the invading fish by installing a number of traps and barriers where the marsh meets Lake Ontario. Each fish species in the marsh has a different spawning and migration period. CVC ecologists monitor the movement of different fish species and can predict when carp will move in and out of the marsh. The control measures will only be used when carp are known to be on the move.

CVC's plan comes as welcome news to residents near the marsh who have complained about its degrading state for years. CVC, the Region of Peel and the Rattray Marsh Protection Association met with local residents on November 28 to discuss plans to restore the marsh. CVC presented a multi-year plan to tackle the most pressing environmental concerns.

"Controlling invasive species like carp is one front in our fight to restore the marsh," said Pat Mullin, CVC Chair and Regional Councillor for Mississauga's Ward Two. "We're working to remove the sediment that's burying the marsh and partnering with like-minded organizations upstream to stop more sediment and pollutants from entering."

Changes from development

Over the decades, upstream development around Sheridan Creek has changed the marsh by contributing excess sediment, burying the native marsh ecosystem. This has resulted in poor water quality and loss of water depth, making it difficult for native fish to survive. Carp thrive in these conditions. Visitors to the marsh will notice the surrounding habitats appear quite healthy. The real

ecological problems lay just below the water's surface.

CVC is seeking volunteers to help set up some of the carp traps and barriers this spring. Those interested in volunteer opportunities at Rattray Marsh are asked to contact Annabel Krupp, Volunteer Program Coordinator, at 905-670-1615 ext.446 or akrupp@creditvalleyca.ca.

Restoring Rattray Marsh coincides with a number of environmental restoration initiatives along Mississauga's shoreline. Naturalization projects at Lakeside Park, Marie Curtis Park, Rattray Marsh and the proposed waterfront park at Lakeview all tie into CVC's comprehensive strategy to restore the Mississauga shoreline. CVC's Lake Ontario Integrated Shoreline Strategy (LOISS) engages governments, agencies, environmental NGOs, residents and businesses to build awareness of the environmental challenges facing the shoreline to find ways to restore it. More information on LOISS is available at www.creditvalleyca.ca/loiss.



EROSION: A NATURAL PROCESS



Most of the time people think that erosion is a bad thing - a wearing or washing away of sediment that we must prevent. Erosion is a natural process that moves soil and rock with the power of wind and water. On the shoreline, waves move sediment along the coast in the direction of the prevailing current. This ensures a steady supply of materials that are vital to habitats like beaches and dunes.

While erosion is a natural process, human activity has increased its rate and scale. Deforestation, farming and urban growth, which increase storm water run-off, all upset the natural rate of erosion. Too much erosion causes a host of problems, as land is lost and waterways become clogged with sediment.

A modern problem with historical roots

Along the Lake Ontario shoreline, from the early 1800s to the post-World War I era, sand, gravel, stone and blocks of shale were mined from nearshore of the lake. Port Credit became the centre of this new trade, known as “stonehooking”, involving small vessels known as stonehookers. This stone was used to construct buildings and cobblestone roads. Many of the

small villages in York (now the City of Toronto) depended almost entirely on stonehooking as a source of stone.

CVC has estimated that as much as four million tonnes of stone was removed from the Mississauga shoreline (CVC 2012 Unpublished). By the mid-1800s, there was evidence that stonehooking was resulting in excessive erosion and loss of arable land. The removal of these stones, which sheltered fish and aquatic life, led to significant loss in habitat diversity. It also left the shoreline much more susceptible to erosion and was one of the reasons behind the subsequent “artificial armouring” of the shoreline using a range of engineered and informal protection measures.

Approximately 80 per cent of the shoreline within the LOISS study area, extending from Oakville to Toronto, is now estimated to be armoured with some form of engineered structure. This has translated into what is known as a ‘sediment starved’ system, with no source of sediment to replenish the remaining cobble and sand beaches.

CVC is working with partner agencies and private landowners to look at opportunities to restore the shoreline to better mimic natural processes.

CALLING ALL STUDENTS

CVC is working with local students to build a youth-led shoreline environmental awareness campaign.

To kick off the campaign, CVC is hosting a youth environmental leadership seminar in the spring (date to be determined). Students will learn ways to engage their communities and peers, and promote the environmental significance of the shoreline. Students can choose their preferred way to create awareness. CVC will provide them with tools to reach out to their communities and peers.

“We’re looking for the next generation of environmental champions,” said Kate Hayes, Project Leader, Restoration and Stewardship. “We want local youth to make this campaign their own. Students can generate awareness in ways that are meaningful to them, be it art, sport, technology or anything they’re passionate about.”

This is an opportunity to gain extracurricular experience, have a positive impact in the community and add to a resume or university application.

Interested students are asked to contact Katie Mendonca, CVC Student Volunteer, by February 28 at 905-670-1615 ext. 216 or kmendonca@creditvalleyca.ca.

LAKEVIEW WATERFRONT CONNECTION



The goal of the Lakeview Waterfront Connection project is to transform a degraded and inaccessible area of shoreline into an inviting naturalized park with public access and habitat for wildlife. This goal is one step closer to reality with the approval of the project's Terms of Reference in December 2012 and the beginning of a formal Environmental Assessment (EA).

Over 100 local residents attended a public meeting at the Mississauga Seniors' Centre on January 22. The meeting was the first in the formal EA process. Attendees got a first look at what the new park could look like.

The shoreline stretching from Etobicoke Creek to the eastern edge of the Ontario Power Generation lands has degraded over decades. It offers almost no habitat for fish or migrating birds and other wildlife.

The new park will bring the waterfront trail to the eastern Mississauga waterfront. When the park is completed, it will allow the waterfront trail to connect around the G.E. Booth Wastewater Treatment Plant.

Five different design alternatives were presented at the public meeting. The designs address how roughly two million cubic metres of clean fill, reused from Region of Peel capital works projects, could be used to construct the park.

Instead of trucking and dumping the fill material outside the city, the fill can be reused responsibly. The millions saved in trucking and dumping fees will be used to help build the park.

Design alternatives feature wetlands, treed swamps, forests, meadows and cobble beaches. A number of designs feature off-shore islands that would block intense wave action from

eroding the shoreline.

Environmental assessments are usually done to reduce a project's impact on the environment. The Lakeview Waterfront Connection EA is doing the opposite. It is looking at a degraded property and choosing the design alternative that restores and naturalizes the land the most. It aims to provide the most public access in a fiscally-responsible manner by seeking efficiencies with other existing and proposed infrastructure projects throughout the Region.

Plans to reveal the Preferred Alternative are currently scheduled for April 2013.

The Lakeview Waterfront Connection is a project of The Region of Peel and Credit Valley Conservation, with support from the City of Mississauga and Toronto and Region Conservation. More information on the project is available at www.creditvalleyca.ca/lwc.



For more information visit: www.creditvalleyca.ca or contact:
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