

## Watershed Flora and Fauna

When you explore local parks and natural areas in the Black/Harmony/Farewell Creek Watershed, look for these flora and fauna. You can cut these into cards to create a handy identification kit.



Alternate-leaved  
Dogwood *Cornus alternifolia*

Status  
Common



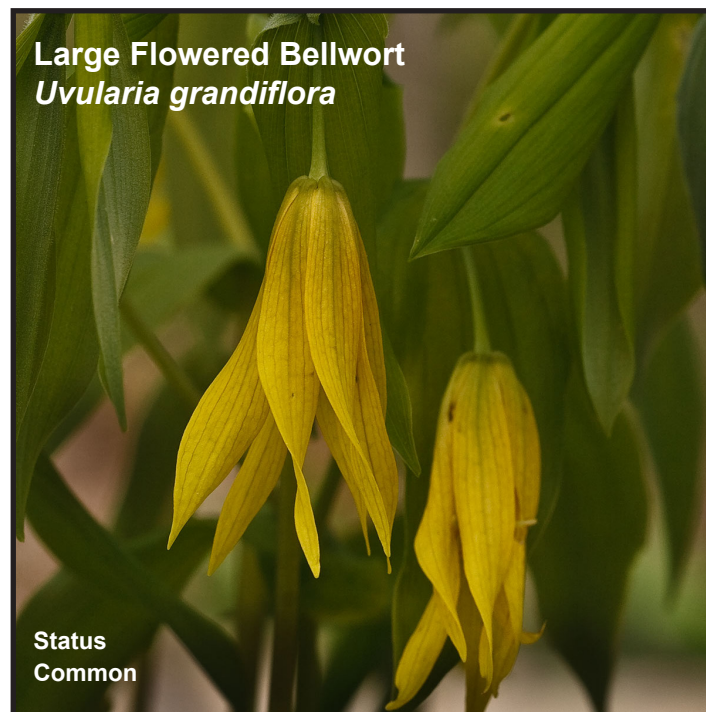
Green Frog  
*Lithobates clamitans*

Status  
Common



Barred Owl  
*Strix varia*

Status  
Common



Large Flowered Bellwort  
*Uvularia grandiflora*

Status  
Common

## What is a Watershed?

A watershed is an area of land drained by a river or creek and its' tributaries into a body of water like a lake. In the Central Lake Ontario Conservation (CLOCA) jurisdiction, an area of 627 square kilometres, we manage 24 watersheds, each one associated with a specific creek. The Black/Harmony/Farewell Creek Watershed is shown on the map below.



## Black/Harmony/Farewell Creek Watershed and Subwatersheds

The tributaries that make up the Black/Harmony/Farewell Creek Watershed drain an area of approximately 108 km<sup>2</sup>. A significant portion of this watershed traverses through the Provincial Greenbelt in the City of Oshawa and Municipality of Clarington.

There are 7 sub-watersheds that make up the larger watershed including Harmony Creek tributaries 1) Ritson, 2) Wilson, 3) Grandview, 4) Taunton, and 5) Mitchell along with 6) Farewell and 7) Black.



# Black/Harmony/Farewell Creek Watershed Plan

A unique geographical feature found in the mid-reaches of this watershed, is the historic glacial shoreline known as the Lake Iroquois Beach. This was created approximately 13,000 years ago during the retreat of the last glacier, resulting in a large band of sand and gravel deposits. Today this porous feature helps to refresh groundwater, creek and wetland features through recharging the local aquifers found underground.

CLOCA's role in maintaining healthy watersheds ensures municipalities and their residents receive important ecological services and benefits. When a watershed functions well, we can mitigate climate change impacts, control flooding, improve drinking water quality, provide critical wildlife habitat for common and endangered species and green space to benefit people's mental and physical wellbeing. The creeks in this watershed are further enhanced by natural features like forests, meadows, thickets, wetlands and valleys. Land uses across the watershed include urban, agriculture, transportation and greenspace, all of which require sound environmental management practices to directly benefit watershed health.



Baby Snapping Turtle

Healthy Watersheds for Today and Tomorrow

## Watershed Plans

**Since 1958, CLOCA has been a leader in watershed management planning, working collaboratively to balance human activities and the natural environment, ensuring watershed health for today and tomorrow.**

**Watershed plans provide a framework to guide our decisions and actions to protect, restore and enhance natural resources to support healthy and resilient communities. The current Black/Harmony/Farewell Creek Watershed Plan is a living document that requires regular review in a constantly changing environment.**

**To find out more details about our watershed plans and progress on this undertaking, please visit us online at [cloca.com](http://cloca.com) or contact the conservation office.**



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# Black/Harmony/Farewell Creek Watershed Plan

## Monitoring

At CLOCA we have an Integrated Watershed Monitoring Program to measure watershed health using targets for natural resources to better understand land use impacts imposed by human activity on the natural system. The table below highlights some of the targets and our monitoring results from 2012 to 2017 for this specific watershed.

Black/Harmony/Farewell Creek Watershed	Target	2012	2017
Natural Cover	30.00%	24.00%	25.71% ↑
Wetland Cover	12.00%	12.00%	13.41% ↑
Riparian Cover	75.00%	Not Comparable	41.00%
Imperviousness	>10.00%	15.00%	15.70% ↑

## Success Story: Courtice Phragmites Management Pilot

Invasive Phragmites (pronounced Frag-mite-eez) or European Common Reed, is an aggressive plant that spreads quickly and out competes native species for water and nutrients. It can grow in dense patches, as many as 200 stems in a square metre and reach heights of up to 5 metres.

The Courtice Phragmites Management Site is a pilot project in the George Reynolds Drive and Nash Road area. This site is registered with the Phragmites Adaptive Management Framework (PAMF), a collaborative tool with partners from all over the Great Lakes basin. This partnership allows land managers, such as CLOCA, to share monitoring and management efforts using a computer model to provide valuable guidance on treatment recommendations that are specific to the site conditions present.

In 2016, baseline monitoring was completed to understand the existing conditions of the site. This was followed by an herbicide application, and post-control monitoring to quantify the results

Healthy Watersheds for Today and Tomorrow

of the treatment. The monitoring concluded that there was an 88% decline in stem density and an increase in native species richness at the site after the first year of treatment. In 2016 and 2018 an herbicide was applied to the plants as part of an Integrated Pest Management plan.

In 2018, a technique referred to as 'spading' was completed with 15 volunteers, removing 50 kg of Phragmites that had re-sprouted from the herbicide treatments. There are two populations within this site that will continue to be monitored and managed. One of the populations showed no phragmites stems in 2018 and 14 native plant species re-established. The second site had a larger population and will take longer to achieve our goal for no phragmites within the stem count. A planting of additional native plants already established on site, was conducted in August 2018 by community volunteers. This project was completed in partnership with the Municipality of Clarington, TD Friends of the Environment, Courtice Eco Projects and many community partners and volunteers.