



**Nottawasaga Valley**  
Conservation Authority



# 2018

## Annual Report

*Healthy Watershed, Healthy Communities*

## 2018 Board of Directors

- Councillor Bob Meadows  
**Township of Adjala-Tosorontio**
- Councillor Gail Little  
**Township of Amaranth**
- Councillor Rose Romita  
**City of Barrie**
- Deputy Mayor Gail Ardiel  
Chair  
**Town of The Blue Mountains**
- Councillor Ron Orr  
**Town of Bradford West Gwillimbury**
- Councillor Connie Leishman  
**Township of Clearview**
- Councillor Deb Doherty  
**Town of Collingwood**
- Councillor Keith White  
Vice Chair  
**Township of Essa**
- Councillor Terry Mokry  
**Municipality of Grey Highlands**
- Councillor Doug Lougheed  
Past Chair  
**Town of Innisfil**
- Mayor Darren White  
**Township of Melancthon**
- Councillor Fred Nix  
**Town of Mono**
- Councillor Keith Lowry  
**Township of Mulmur**
- Deputy Mayor Donna Jebb  
**Town of New Tecumseth**
- Councillor Phil Hall  
**Township of Oro-Medonte**
- Councillor Walter Benotto  
**Town of Shelburne**
- Mayor Bill French  
**Township of Springwater**
- Deputy Mayor Nina Bifolchi  
**Town of Wasaga Beach**

## Nottawasaga Valley Conservation Authority

The Nottawasaga Valley Conservation Authority (NVCA) is your public agency dedicated to creating a healthy environment and communities through innovative watershed management.

We are committed to protecting watershed communities from natural hazards like flooding and erosion. We work to preserve and enhance watershed land and water resources. We connect our community with their watershed through nature-based educational and recreational opportunities.

As one of the 36 conservation authorities legislated by the Ontario *Conservation Authorities Act*, we are governed by a board of directors appointed by our 18 member municipalities. Critical to our success is our strong partnerships with our member municipalities, government agencies, community partners and local landowners.

NVCA's jurisdiction extends over the 3,700 km<sup>2</sup> of the Nottawasaga Valley watershed, excluding the lands within CFB Borden. The Nottawasaga River and its tributaries run from highlands on the Oak Ridges Moraine, Niagara Escarpment and Oro Moraine through the internationally significant Minessing Wetlands before flowing into Georgian Bay.

### Our Vision

Innovative watershed management supporting a healthy environment, communities and lifestyles

### Our Mission

Working together to lead, promote, support and inspire innovative watershed management





# Watershed Management Services

*Watershed Management Services works to protect people and property from risks posed by flood, erosion and other natural hazards.*

*To facilitate effective decision making, NVCA advances our knowledge of the watershed through monitoring, and enacts our understanding through policy and communication.*



NVCA staff processed 2,450 planning and permit applications and inquiries in 2018.

## Planning and Regulations & Enforcement

Processed 2,450 applications and inquiries under various provincial acts: *Conservation Authority Act, Planning Act, Niagara Escarpment Planning and Development Act, Aggregate Resource Act, Green Energy Act, Drainage Act, and Environmental Assessment Act*. This is an increase of 29% over 2017 (1,900).

Began work on an updated Integrated Watershed Management Plan for the Nottawasaga Valley Watershed:

- Integrated watershed management is the process of managing human activities and natural resources on a watershed basis, taking into account social, economic and environmental issues, as well as local community interests and issues such as the impacts of growth and climate change.
- A detailed watershed characterization study was completed in June, followed by an extensive stakeholder engagement process.
- When complete, the Integrated Watershed Management Plan will provide direction on long-term (20 year) sustainability initiatives in the watershed. It will guide future strategic and business plans for the authority.

Worked with information management staff to develop an on-line planning database, allowing for more efficient file tracking and supporting the move to a paperless application process.



## Planning & Regulations

*by the numbers*

767

applications reviewed & approved under *Conservation Authorities Act*

424

consents, variances, zoning, Niagara Escarpment Commission & official plan amendments reviewed

22

subdivision plans reviewed

45

site plans reviewed

10

environmental assessments reviewed

63

non-compliance issues investigated under the *Conservation Authorities Act*

776

responses to general planning & permitting questions

240

consultations, solicitor inquires & other services offered



In 2018, NVCA began work on an updated Integrated Watershed Management Plan for the Nottawasaga Valley watershed.

### Water Resources & Flood Warnings

Monitored flood conditions and issued 13 flood messages, including a flood watch for the early spring melt and rain event in February. NVCA remained out of low-water conditions.

Inspected and operated flood and erosion control structures, including Utopia, New Lowell and Tottenham dams.

Continued with ongoing improvements to the NVCA stream and weather gauge network to improve data quality and reliability. Working with Water Survey of Canada, developed plans to install new sensors at the new Pretty River federal gauge in Collingwood.

### Watershed Science

Monitored the health of the aquatic environment, looking at:

- water chemistry – 32 sites
- benthic invertebrates (water "bugs" that are an indicator of water quality) – 72 sites
- water temperature – 45 sites
- water baseflow (water depth and speed) – 13 sites
- fisheries – 12 sites

Monitored groundwater at 47 drilled wells in the watershed for water levels and ambient water quality as part of the Provincial Groundwater Monitoring Network and other well networks.

Provided ecological and natural heritage review in support of planning applications.



Initiated work on a new Watershed Monitoring Strategy.

Produced a Watershed Report Card for the Nottawasaga Valley to align with province-wide initiative by Conservation Ontario.

Continued support for the Ministry of the Environment, Conservation and Park's benthic invertebrate research project.

Continued to support academic research in the watershed.

Continued Marsh Bird Monitoring Program (Minesing) and Forest Breeding Bird Monitoring Program (Tiffin).

Completed special projects focusing on:

- integrated habitat-groundwater modelling in support of the Hine's Emerald Dragonfly (endangered species) habitat
- hydrologic function considerations and developing an approach to subwatershed baseline characterization
- water quality monitoring in the Hockley Valley
- water quality monitoring associated with the New Tecumseth Waste Water Treatment Plant Project

### Drinking Water Source Protection

Provided ongoing local support efforts for the implementation of the South Georgian Bay Lake Simcoe Source Protection Plan.

As the Risk Management Official for Essa, Clearview, Innisfil, Melancthon, Mono, Mulmur, New Tecumseth and Shelburne, completed risk management plans for significant drinking water threats as identified through the source protection process.

## Watershed Monitoring *by the numbers*

**47**  
drilled wells  
monitored for  
groundwater  
level & quality

**13**  
sites  
monitored  
for stream  
baseflow

**72**  
sites  
monitored  
for benthic  
macro-  
invertebrates,  
a measure of  
stream health

**18**  
sites  
monitored as  
part of the  
Provincial  
Water Quality  
Monitoring  
Program

**13**  
flood messages issued



NVCA scientists monitored groundwater at 47 drilled wells in the watershed for water levels and ambient water quality as part of the Provincial Groundwater Monitoring Network and other networks.



## Conservation Services

*Conservation Services works to enhance, restore and safeguard sensitive environmental areas, and through outdoor education and public programming, connect and engage residents with the natural-side of the watershed.*

### Conservation Lands Program

Hosted 50,000 visitors at 12 conservation areas across the watershed.

Partnered with Friends of Fort Willow, Friends of Minesing Wetlands, Friends of Utopia Gristmill and Park, Friends of Pine River, Blue Mountains Watershed Trust, the Bruce Trail Club, Nature Barrie, Rotary Club of Barrie and many other groups to maintain and improve recreational opportunities at NVCA conservation areas.

Welcomed thousands of guests to two signature public events—the Spring Tonic Maple Syrup Festival at the Tiffin Centre for Conservation, and the Festival at Fort Willow.

Hosted more than 30 groups and outdoor events at the Tiffin Centre (including Scouts, Girl Guides, cadets and live-action role playing groups). Additionally, hosted 20 wedding celebrations and other events such as celebrations of life and corporate meetings.

Offered 100 hunting passes for Minesing and Osprey Wetlands, and secured hunters for exclusive hunting properties. Increased staff presence during the hunting season at all conservation areas.

Assisted with development of the Utopia Conservation Area Master Plan, and oversaw further restoration and clean-up of the historic Bells Gristmill at the site.

Purchased a new, higher efficiency evaporator for Tiffin's maple syrup program. Increased volunteer opportunities for maple syrup production and increased security of the sugar shack.



New "fore" 2018 – Goldilocks nine-basket disc golf course at the Tiffin Centre.



Undertook significant upgrades at the John L. Jose Education Learning Centre at the Tiffin Centre, including kitchen and washroom improvements.

Conducted an ash tree inventory at conservation areas and a hazard tree inventory program to ensure visitor safety at the Tiffin Centre.

### Forestry Program

Planted 133,200 trees on 30 properties across the watershed.

Received financial contributions (outside of levy) from provincial and municipal governments, Forests Ontario, corporations and private landowners totaling \$267,347.

Managed 1,374 acres of forest; worked with 39 landowners to develop their Managed Forest Plans.

Conducted Arbour Day sales in three municipalities, selling 4,750 tree seedlings to urban and rural landowners.

### Stewardship & Restoration

Restored a fish migration route and eliminated a stagnant head pond that was reducing water quality in Beeton Creek. The project saw three blocked pipes in an ice control structure removed and a new, larger-diameter culvert installed, and included a comprehensive stream temperature and fish community study. This project has been described as "transformational" for the health of Beeton Creek and represents the culmination of 20 years of work by NVCA and South Simcoe Streams Network. Project partners: Nottawasaga Futures, South Simcoe Streams Committee, Bruce Power, Fisheries and Oceans Canada, Town of New Tecumseth, Priestly Demolition and local landowners.

Restored 1 km of trout habitat in Beeton Creek and improved streamside municipal trails by removing log jams that were blocking flows and creating barriers to fish migration in New Tecumseth's Coventry Park. Project partners: Nottawasaga Futures and Nottawasaga Steelheaders

**Lands,  
Stewardship  
& Forestry**  
*by the numbers*

**13,001**  
acres of conservation  
lands managed

**146**  
stewardship  
& forestry  
projects  
completed

**40.34**  
km  
of stream  
enhanced or  
rehabilitated

**\$576,522**  
of funding applied to watershed  
stewardship & forestry projects

**133,200**  
trees planted by  
NVCA's Forestry Program

**2,237**  
volunteers engaged in  
hands-on stewardship projects



NVCA's Forestry Program employs mechanical and hand planting crews during the short tree planting season (April/May). The forestry initiative is part of Forests Ontario's 50 Million Tree Program.



Completed a new fishway along Beeton Creek, marking the culmination of 20 years of restoration work!

Collected fish community and stream temperature assessment data for Black Ash Creek in The Blue Mountains, Clearview and Collingwood. This data is part of a performance monitoring program for the proposed decommissioning of the Petun Dam and for completion of the next phase of the Urban Trout Stream Project in the Black Ash Creek Floodway. Project Partners: Town of the Blue Mountains, Bruce Power, and local landowners

Retrofitted a dam to improve fish passage on Black Ash Creek. Project partners: Town of the Blue Mountains and local landowners

Removed a barrier to fish migration on the Black Ash Creek Floodway. Project partners: Environment and Climate Change Canada and the Town of Collingwood

Completed a stream temperature and fish community study on the Upper Nottawasaga River and Sheldon Creek in Adjala-Tosorontio. Project partners: Ministry of Natural Resources and Forestry (MNR), Credit Valley Conservation, and Fisheries and Oceans Canada.

Developed a brook trout habitat restoration plan for Bear Creek in Barrie. Project Partner: Rotary Club of Barrie

Added sod mats with native vegetation along the Baker Pond bypass channel in order to decrease water temperatures and improve brook trout habitat. Further, completed fish community and water temperature studies for the Upper Nottawasaga River, Sheldon Creek, Mono Centre Creek and Baker Creek. Project Partners: Headwaters Streams Committee, the Town of Mono, and MNR Stewardship Rangers

Through the Healthy Waters Program, leveraged \$221,203 of funding and donations to support projects that improve water quality and restore habitat worth a total of \$508,220 (includes in-kind contributions). Project funders: Environment and Climate Change Canada, TD Friends of the Environment, Great Lakes Guardian, World Wildlife Fund, Loblaws, UPS, Nature Conservancy Canada, Blue Mountain Watershed Trust, Georgian Bay Forever, Dufferin County Rural Water Quality Program, Somerville Nursery, and corporate donations



Engaged more than 2,200 volunteers in hands-on habitat restoration projects across the watershed.

Working with farmers and rural landowners, reduced 79 kg/year of phosphorus runoff to streams and lakes. This will help prevent up to 39.5 tonnes of excessive algae growth.

Protected rivers and wetlands by installing over 3 km of fence that restricts 240 livestock from sensitive streams, lakes and wetland.

Completed 26 on-farm projects, including manure storages, clean water diversion and planting stream-side buffers. These protect streams, beaches, lakes and groundwater from bacteria, nutrient runoff, algae blooms and nitrate contamination.

Increased 12 km of Mad River channel capacity. Enhanced fish habitat connectivity and recreational canoe access.



Removed 3.9 tonnes of invasive *Phragmites* to protect globally rare Great Lakes Coastal wetlands.





Together with NVCA's forestry program, planted trees along 5.1 km of streams and rivers. These trees help cool the water—creating resilience to global warming, stabilize banks and reduce pollution runoff from entering the river.

Removed 3.9 tonnes of invasive *Phragmites* in Wasaga Beach and Collingwood to protect globally rare Great Lakes Coastal wetlands. Also protected the internationally significant Minesing Wetlands by treating *Phragmites* in a 2.8 hectare area and along 160 km of adjacent roads. Project partners: Loblaws, W. Garfield Weston Foundation, Ontario Federation of Anglers and Hunters, Blue Mountain Watershed Trust, Nature Conservancy Canada

Conducted 83 site visits with landowners interested in stewardship projects. Answered 302 information requests. Engaged hundreds of people at dozens of fun and informative community events and hands-on volunteer habitat restoration days.

Engaged 2,237 volunteers in hands-on habitat restoration projects! Volunteer partner groups include Nature Conservancy Canada, TD Friends of the Environment, local schools, Georgian Bay Forever, MNRF Stewardship Rangers, Blue Mountain Watershed Trust, South Simcoe Streams Network, and World Wildlife Fund

### Environmental Education

Provided quality outdoor and environmental education to 14,550 youth in all initiatives combined. This includes welcoming 436 youth over the summer as part of the Camp Tiffin day camp program.

Received the first Rekindle the Sparks Outdoor Education Conference Innovation Award for the Free Play Forest at the Tiffin Centre, a safe place for young students to explore and engage with nature.

## Environmental Education

*by the numbers*

230  
school & group  
visits to the  
Tiffin Centre

436  
youth at Camp  
Tiffin Summer  
Camp

14,550  
youth participated in  
NVCA education programs

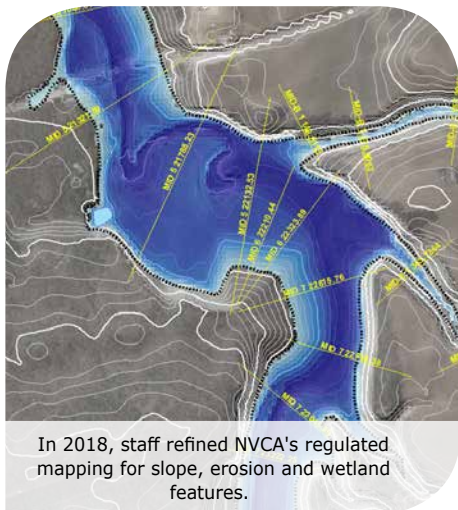


NVCA's Environmental Education team brought learning to the classroom and the school yard with the "Habitats in your Community" program for students in Grades 3 to 8.



## Corporate Services

*Corporate Services plays a critical supportive role to the board of directors and across the organization, providing finance, human resources, communications and administrative leadership.*



In 2018, staff refined NVCA's regulated mapping for slope, erosion and wetland features.

### Governance & Corporate Support

Provided financial, human resources, communications and administrative support to the board of directors and all NVCA departments.

Processed five Freedom of Information Requests.

Shared information about NVCA through website (95,200 visitors), social media (556,000 impressions), traditional media, e-newsletter (1,040 subscribers) and other channels and venues.

Celebrated conservation champions, volunteers, and partners at the annual Evening of Thanks.

Started the paperless initiative to reduce our environmental impact.

### Geographic Information Systems (GIS) & Information Management

Completed a slope and meander/erosion hazard update to NVCA's mapping, and updated the wetlands area of interference.

Supported NVCA's plan review and permitting role with improvements to the planning database and file uploading tool.

Updated CAMaps (the on-line platform for NVCA's GIS/mapping) with current data and services.

Implemented continuous improvements to various database products, including the Source Water Annual Reporting system and the NVCA staff intranet.



# Financial Summary

## NVCA Staff

Permanent and contract staff as of December 31, 2018.

**Doug Hevenor,**  
**Chief Administrative Officer**

**Office of the CAO**—Heather Kepran,  
Communications Coordinator

**Corporate Services**  
**Sheryl Flannagan, Director**

**Finance & Administration**—Haleigh Ferguson, Administrative Assistant • Christine Knapp, General Accountant • Debbie Swindells, Accounts Receivable/Payroll Specialist • Kimberly Winder, Receptionist/Administrative Assistant

**GIS/IT**—Hendrik Amo, Manager GIS/IT • Robert Bettinelli, Information Management and Technology Specialist • Lyle Wood, GIS Analyst

**Conservation Services**  
**Byron Wesson, Director**

**Lands & Operations**—Kyra Howes, Manager, Lands & Operations • Mike Bacon, Lands & Operations Technician Assistant • Clint Collis, Lands & Operations Technician • Spencer Macdonald, Lands & Operations Technician • Henry Pelley, Tiffin Maintenance Technician

**Environmental Education**—Naomi Saunders, Environmental Education Facilitator • Maegan McConnell, Environmental Educator • Grant Wilson, Environmental Educator • Environmental Education Associates: Taryn Arsenault, Bob Cole, Charlotte Driscoll, Pam Green, Susan Hall (on leave), Aryanne Hawke, Aleigha Oosterhuis, Jo-Ann White-McKenna

**Forestry**—Rick Grillmayer, Manager, Forestry • Jonathan Cortese, Forestry Technician • Alisha Tobola, Forestry Technician (on leave)

**Stewardship**—Fred Dobbs, Manager, Stewardship Services • Sarah Campbell, Aquatic Biologist • Shannon Stephens, Healthy Waters Program Coordinator

**Watershed Management Service**  
**Chris Hibberd, Director**

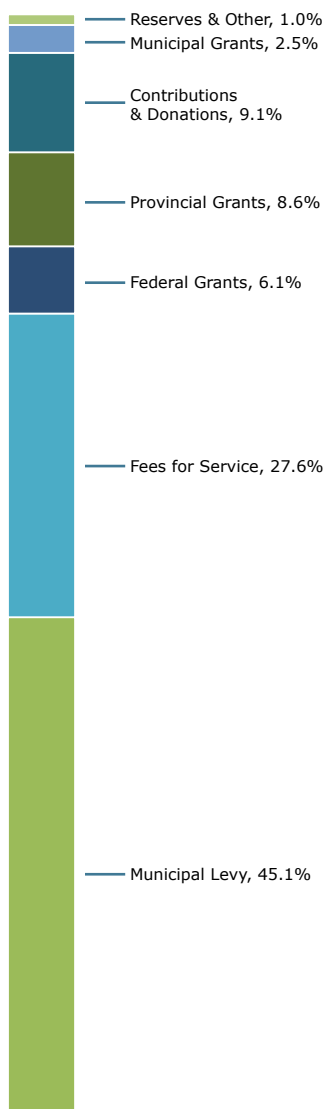
**Engineering & Flood Program**—Mark Hartely, Senior Engineer • Peter Alm, Water Resource Engineer • Alison Edwards, Water Resource Engineer • Michael Saunders, Engineering Technologist • Sheri Steingina, Flood Operations Field Specialist

**Watershed Science**—David Featherstone, Manager, Watershed Monitoring (on leave) • Alyssa Deurwaarder, Watershed Monitoring Technician • Angela Mills, Hydrogeology Assistant • Ian Ockenden, Watershed Monitoring Specialist • Ryan Post, Senior Hydrogeologist • Kate Thomson, Risk Management Official

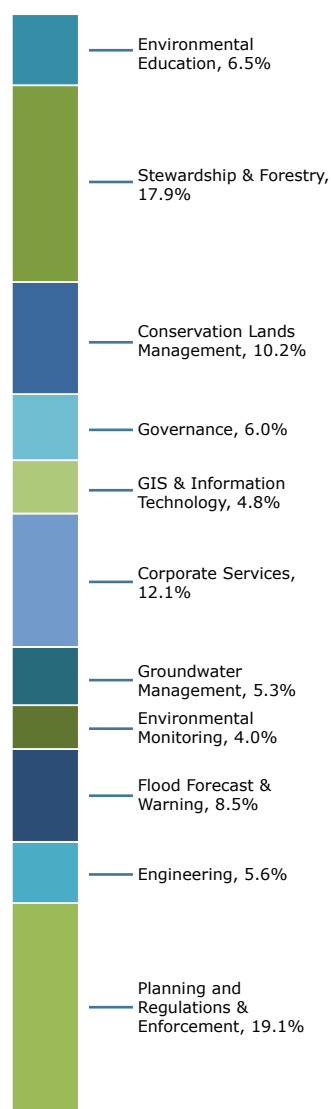
**Planning**—Lee Bull, Manager, Planning Services • Mike Francis, Planning Ecologist • Amy Knapp, Planner • Emma Perry, Planner

**Regulation & Enforcement**—Daniel Dyce, Regulations Technician • Andrew Fera, Regulations Technician • Julie Prentice, Regulations Assistant

## Revenues



## Expenses



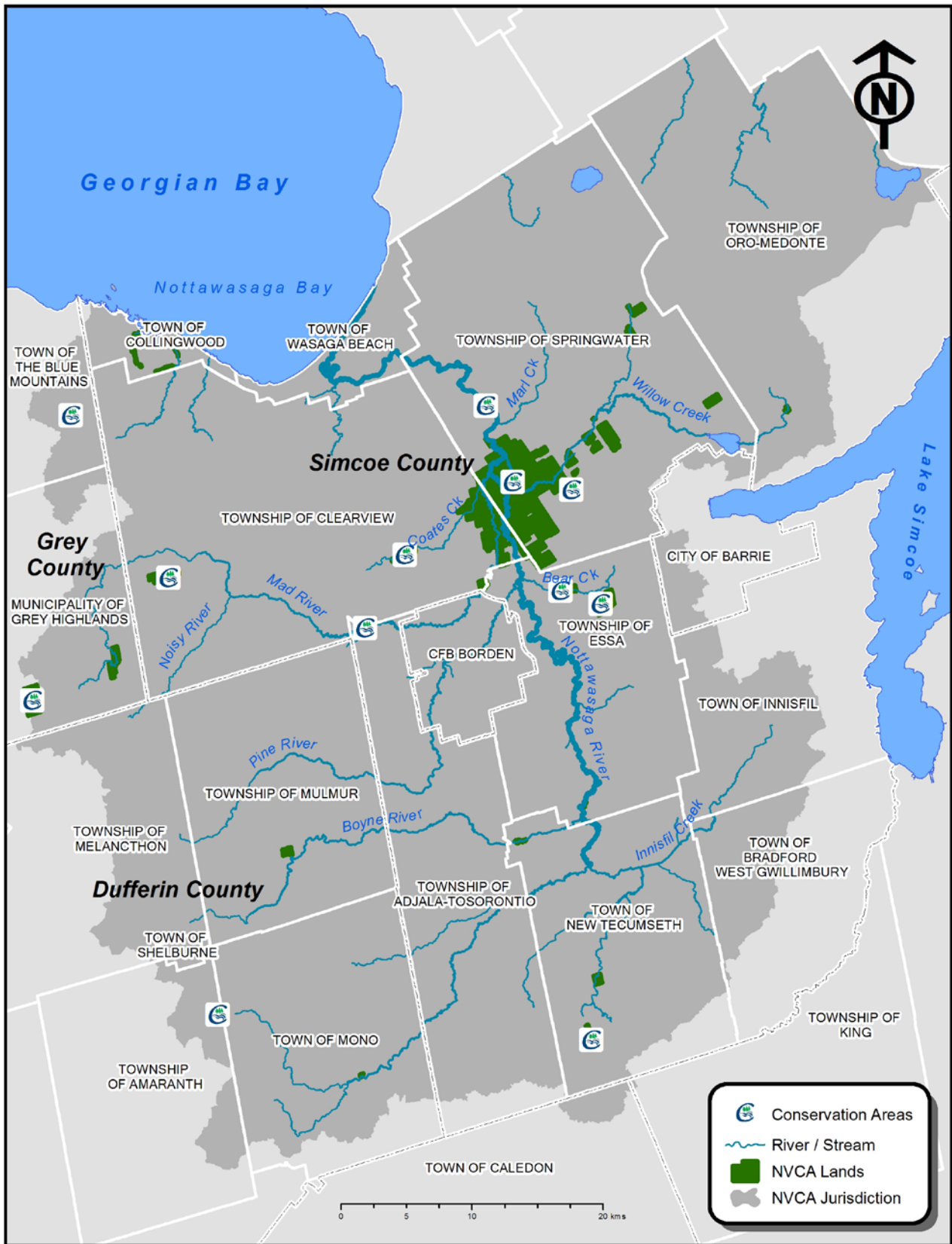
NVCA's total 2018 budget was \$5,067,549. Revenue came from diverse sources, including member municipalities, provincial and federal governments, local non-governmental partners, and user fees for programs and services.

The 2018 balanced operational budget as approved required the use of \$49,511 from NVCA's reserves. Additional board approvals for the use of operational reserves throughout the year brought the total to \$257,941. With solid revenue performance including funding partnerships and expenditure control, NVCA ended the year requiring the use of \$68,630.

In 2018, NVCA purchased \$192,942 in capital assets (from an approved capital budget of \$219,925).

This financial information is condensed from year-end, unaudited, statements. The auditor's report for the year ending December 31, 2018, is posted on the NVCA website at [nvca.on.ca](http://nvca.on.ca).

The NVCA Board of Directors and staff extend a heartfelt thank-you to all our watershed partners for their volunteer and financial support throughout 2018.



**Nottawasaga Valley Conservation Authority**

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A member of:

