



**Nottawasaga Valley
Conservation Authority**

2016

Annual Report

Healthy Watershed, Healthy Communities

If you require this document in an alternative format, contact NVCA at 705-424-1479 or admin@nvca.on.ca.



2016 Board of Directors

In 2016, the NVCA board ran a successful pilot project to test operating at a reduced size, with one member per municipality. Several board members agreed to “step down” during the trial. The following members remained active on the board for the full year:

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

Stepped Down Members

Arif Khan and Sergio Morales, Barrie; Chris Vanderkruys, Clearview; Cam Ecclestone, Collingwood; Michael Smith, Essa; Rob Nicol, Innisfil; Rick Milne, New Tecumseth; Barbara Coutanche, Oro-Medonte; Perry Ritchie, Springwater; Brian Smith, 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* of 1946, 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 km² 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 Minesing 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

Volunteers remove invasive *Phragmites* from coastal marshes at the "Fight the Phrag" workday in Collingwood.

Adding value to the wellbeing of our communities

Looking through the highlights in this report, you see a common thread—that every day, NVCA adds value to the wellbeing of our communities.

- We protect life and property by delivering flood monitoring and warnings, and by providing engineering solutions that mitigate damage and loss from natural hazards.
- We enhance and restore the health of the watershed through forestry and stewardship programs.
- We protect ecologically significant lands, sources of drinking water, and monitor the health of our watershed and our Great Lakes.
- We educate students on the importance of natural spaces and provide outdoor recreational opportunities for all.

Our ability to deliver these services is due in large part to our strong partnerships. It is thanks to the contributions of our member municipalities, landowners, volunteers, community groups, businesses, academia and funders that we are able to continue our work building a healthy and resilient watershed.

Working with our member municipalities and partners, we continue to develop innovative approaches to the challenges we face as our climate and our watershed changes and grows.

In 2017, we will deliver our climate change strategy, outlining how NVCA will address this global crisis on a local level. We will seek new sources of sustainable funding and enhanced efficiencies to ensure we can provide the programs and services our communities expect. And perhaps most importantly, we will continue our efforts to bring value to our watershed communities so that we may all have a prosperous tomorrow.



Doug Lougheed
2016 Chair of the Board



D. Gayle Wood
CAO

Planning Services BY THE NUMBERS

590

applications reviewed and approved
under *Conservation Authorities Act*

40

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

108

zoning amendments, Official Plans and
Official Plan amendments reviewed

15

new subdivision plans reviewed

292

consents, variances & Niagara
Escarpment Commission reviewed

153

responses to solicitor inquiries

51

site plan reviewed

13

environmental assessments reviewed

236

pre-consultations and other planning
services offered



Planning Services

NVCA's Planning Services protects people and property from risks posed by flooding and erosion, and promotes sustainable development by regulating development in wetlands and near waterways and providing planning review and advice.

- Completed a review process that resulted in the NVCA board of directors approving an updated planning fee schedule. The new schedule includes a cap of review fees for subdivision and aggregate applications of \$100,000. Prior to the establishment of the new fees, a significant review process was carried out by the Planning and Engineering Advisory Committee charged with providing the board with recommendations for updated review fees. The committee received input from key stakeholders that included the agricultural community, development sector, aggregate producers, and customers at large.
- Continued to pursue new and updated planning service agreements with watershed municipalities. New agreements were put in place with the towns of Collingwood, Mono, Shelburne and Wasaga Beach, as well as the townships of Adajala-Tosorontio and Springwater.
- Processed 1,500 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*.
- Investigated 40 non-compliance issues under the *Conservation Authorities Act*.



Lands, Education & Stewardship Services

NVCA's Lands, Education and Stewardship Services works to protect, enhance and restore natural areas to protect watershed health and safeguard sensitive natural areas. Through outdoor education and public programming, NVCA connects and engages residents with these special places in our watershed.

Conservation Lands Program

- Hosted more than 28,000 visitors at 12 conservation areas across the watershed.
- Celebrated the recognition of Fort Willow and the Nine Mile Portage as a National Historic Site by the Historic Sites and Monuments Board of Canada, under Parks Canada. On September 30, a commemorative plaque was unveiled at the fort during the annual Festival at Fort Willow.
- Partnered with Friends of Fort Willow, Friends of Minesing Wetlands, Friends of Utopia Gristmill and Park, Blue Mountains Watershed Trust, the Bruce Trail Club, Brereton Field Naturalists, and many other groups to maintain and improve recreational opportunities at NVCA conservation areas.
- Developed an Emergency Action Plan for the Minesing Wetlands Conservation Area.
- Offered 100 hunting passes, and opened two properties for exclusive hunting opportunities.
- Working with Ducks Unlimited Canada, and with funding through Environment and Climate Change Canada, created new waterfowl habitat in the Minesing Wetlands Conservation Area.
- Working with the Rotary Club of Barrie, developed a Memorial Forest Trail in honour of veterans of the War in Afghanistan at the Tiffin Centre for Conservation.
- Completed other upgrades to the Tiffin Centre, including constructing a new bridge, trailhead kiosk and trail signs, and renovating washrooms in the Jose Education Building.
- Hosted more than 35 groups and outdoor events at the Tiffin Centre (including Scouts, Girl Guides, cadets and live-action role playing groups). Also hosted 29 wedding celebrations.



Pine River Fisheries Enhancements
Township of Adjala-Tosorontio



Tree Planting
Minesing Wetlands



Stream By-Pass / Coldwater Stream Creation
Town of Mono

Community River Restoration

- Completed five large-scale stream habitat restoration construction projects in Adjala-Tosorontio (two), Clearview, Mono and New Tecumseth. Municipalities contributed \$67,000 towards these works, with NVCA applying \$145,000 in grant funding.
- With the Township of Adjala-Tosorontio and Greenlands International, stabilized 215 m of eroding stream banks and planted 1,808 stream-side trees as part of the Pine River Fisheries Enhancement Program; funded in part by Environment and Climate Change Canada's Lake Simcoe Southeastern Georgian Bay Clean-Up Fund.
- With South Simcoe Streams Network, Nottawasaga Futures and 171 volunteers, planted 2,056 trees along 0.7 km of stream in Adjala-Tosorontio, Essa and New Tecumseth.
- With the Nottawasaga Watershed Improvement Program (NWIP) and Clearview Township, plugged a large breach along the Mad River in the Minesing Wetlands, restoring a third of the river's natural flow that had been "escaping" into an artificial drain; funded in part by Environment and Climate Change Canada's Lake Simcoe Southeastern Georgian Bay Clean-Up Fund and the Province of Ontario's Great Lakes Guardian Fund.
- With South Simcoe Streams Network, Nottawasaga Futures and the Town of New Tecumseth, stabilized eroding banks along 310 m of Beeton Creek and created 1,550 m² of new floodplain habitat.
- With the Headwaters Stream Committee and the Town of Mono, created a new 140 m long brook trout stream habitat that allows coldwater to by-pass a warm artificial on-stream pond and provides for upstream migration of spawning brook trout.

Healthy Waters Program

- Leveraged \$211,460 of funding to support projects that improve water quality and restore habitat. Funders include Environment and Climate Change Canada, TD Friends of the Environment, Great Lakes Guardian, Trillium, UPS, Nature Conservancy Canada and corporate donations.
- Worked with farmers and rural landowners to reduce 488 kg/year of phosphorus runoff to streams and lakes. This will help prevent up to 244 tonnes of excessive algae growth! For a healthy watershed, total phosphorus runoff needs to be cut in half, from 47 to 25 tonnes/year.
- Worked with the Nature Conservancy Canada, Friends of Minesing Wetlands and TD Friends of the Environment to help restore swamp forest cover with the help of hundreds of volunteers.
- Worked with farmers to protect water and wetlands by installing over 390 m of fence that restricts livestock from 1.7 hectares of sensitive wetland.
- Completed seven projects with farmers, including manure storages and clean water diversion. These protect streams, beaches, lakes and groundwater from bacteria, nutrient runoff, algae blooms and nitrate contamination.
- Along with NVCA's forestry program, planted trees along 14.2 km of stream and rivers. These trees help cool the water, stabilize banks and reduce pollution runoff from entering the river.
- Engaged over 892 volunteers in hands-on habitat restoration projects.
- Conducted 76 site visits with landowners interested in stewardship projects. Answered 366 information requests. Engaged hundreds of people at dozens of fun and informative community events.



NVCA's forestry program planted 218,280 trees in 2016. These future forests will help to moderate the effects of both drought and flooding, reduce soil erosion, provide habitat for wildlife, and mitigate climate change.

Forestry Program

- Planted 218,280 trees on 32 properties across the watershed. This is the most trees planted by NVCA's forestry program in a single year to date and one of the largest plants by a conservation authority.
- Received financial contributions (outside of levy) from provincial and municipal governments, corporations and private landowners totaling \$404,577.
- Managed 1,147 acres of forest; worked with landowners to develop 35 Managed Forest Plans.
- Conducted Arbour Day sales in three municipalities, selling 4,000 tree seedlings to support tree-planting programs.
- Planted two Living Snow Fences in the Township of Melancthon through a partnership with the Dufferin County Roads Department. These snow fences total 480 m in length and are designed to minimize drifting and white out conditions on Highway 124.

Environmental Education & Public Events

- Provided quality outdoor and environmental education to 13,957 youth in all initiatives combined. This includes welcoming 320 youth over the summer as part of the Camp Tiffin day camp program.
- Offered public programming across all seasons:
 - Christmas Bird Count for Kids
 - Family Day Nature Festival
 - March Break Family Day
 - Spring Tonic Maple Syrup Festival (with Barrie Rotary)
 - Festival at the Fort (with Friends of Fort Willow, Barrie Rotary and Springwater Township)

Lands & Stewardship BY THE NUMBERS

12,961

acres of conservation lands managed in total

158

stewardship and forestry projects completed

\$777,536

awarded to watershed landowners for stewardship and forestry projects

233,529

trees planted in all programs

1,147

forest acres managed

23

km stream protected or rehabilitated

Environmental Education BY THE NUMBERS

252

school/group visits to Tiffin Centre

13,957

youth participated in education programming at Tiffin Centre



Engineering & Technical Services

NVCA's Engineering and Technical Services cultivate our scientific knowledge of the watershed to advance effective decision making related to flood and low water conditions, watershed resources, groundwater management and drinking water source protection.

Water Resources & Flood Warnings

- Inspected and operated flood and erosion control structures, including Utopia, New Lowell and Tottenham dams.
- Issued eight flood messages and six low water messages; NVCA was in a Level 1 Low Water Condition from July 18 to November 14.
- Continued work on the Nottawasaga Watershed phosphorus management tool, with funding from Environment and Climate Change Canada.

- Improved the NVCA stream gauge network: installed new Pine River and Wye River gauges; upgraded the Innisfil Creek at the 5th Sideroad gauge; and added wind monitoring at the Melancthon gauge.

Watershed Monitoring

- Working with Georgian Bay Forever, Blue Mountain Watershed Trust Foundation, the Town of Collingwood and local condo associations, removed 5,179 kg of invasive *Phragmites* along the Georgian Bay shoreline. Other work under the West Collingwood *Phragmites* Community Action Plan included mapping and tracking the spread of *Phragmites*. Funding was provided by Environment and Climate Change Canada.
- Continued work on the Mapping of Dynamic Beach, Flood Hazard Limit, Nearshore Bathymetry and Biodiversity for the Wasaga Beach and Collingwood Shoreline Project, with funding from Environment and Climate Change Canada.



Installing safety booms at New Lowell Dam

- Monitored and reported on the health of the Silver Creek watershed in the Collingwood and Blue Mountains area in support of the Blue Mountain Watershed Trust Foundation's "Save the Silver" project.
- Conducted two studies along Georgian Bay: the Nottawasaga Bay Shoreline Monitoring Project and the Nottawasaga River Plume Monitoring Project. These projects looked to monitor the health of the Lake Huron shoreline and nearshore waters. Funding was provided by Environment and Climate Change Canada.
- Completed a study looking at Hine's Emerald Dragonfly Integrated Habitat-Groundwater Modelling.
- Participated in the Marsh Monitoring Program at the Tiffin Centre (tenth year) and Minesing Wetlands.

Geographic Information Systems (GIS) & Information Technology

- Reassessed the mapped erosion hazard limit to provide a more accurate assessment for application of the regulations.
- Developed a web-based GIS application to provide staff and partners with better access to NVCA mapping data.

Source Water Protection

- Ongoing local support efforts for the implementation of the South Georgian Bay Lake Simcoe Source Protection Plan.
- As Risk Management Official for Essa, Collingwood, Innisfil, Mono, Melancthon, Amaranth, Mulmur, New Tecumseth and Shelburne, completed ongoing work on risk management plans for significant drinking water threats as identified through the source protection process.
- Participated on the regional working group in support of the source water protection education and outreach strategy.

Groundwater Monitoring

- Monitored groundwater at 36 locations in the watershed for water levels and ambient water quality both as part of the Provincial Groundwater Monitoring Network and other well networks.
- Completed the Drought Management Pilot Project for the Innisfil Creek Sub-watershed, a project for the Ministry of Natural Resources and Forestry.
- Partnered with the Holland Marsh Growers Association to research water quality improvements for de-dirted applications for muck crops.
- Partnered with the Ontario Geological Survey to add four new monitoring wells as part of the OGS-lead Central Simcoe Project.

Engineering & Tech Services BY THE NUMBERS

8

flood messages issued

6

low water messages issued

66

stormwater management plans reviewed

18

sites monitored for water quality as part of the Provincial Water Quality Monitoring program

62

sites monitored for benthic macroinvertebrates, a measure of stream health

109

sites monitored for stream baseflow

36

wells monitored for groundwater quality and water level



Monitoring groundwater wells with the Geological Survey of Canada



Corporate Services

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

Governance

- Acted on recommendations in the 2014 Service Delivery and Operational Review. Of the review's 26 recommendations, 23 have been completed and 6 are underway. Highlights of those recommendations addressed in 2016 include:
 - Reducing the size of the NVCA board of directors to 18—one member from each watershed municipality—from 27, increasing decision-making efficiency and reducing the cost of board meetings;
 - Developing and implementing an asset management plan, including the introduction of a capital cost levy to finance the plan; and
 - Continuing to build closer working relationships with all member municipalities through initiatives such as the NVCA's CAO roundtable.
- Celebrated conservation champions, volunteers, and partners at the annual Evening of Thanks.

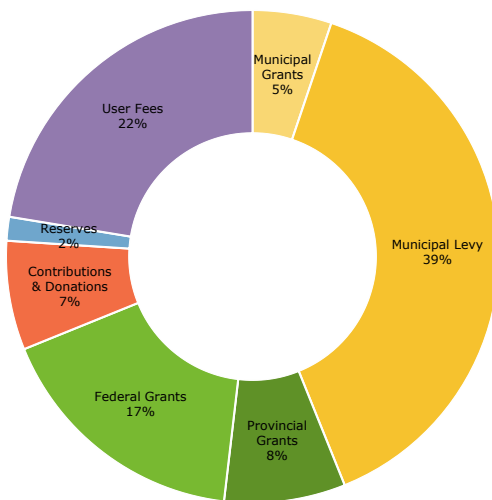
- Hosted a delegation from Henan Province, China, sharing information on NVCA's watershed monitoring and regulations services.
- Adopted a Watershed Climate Change Charter, and began work to develop NVCA's Climate Change Strategy and Action Plan.

Corporate Support

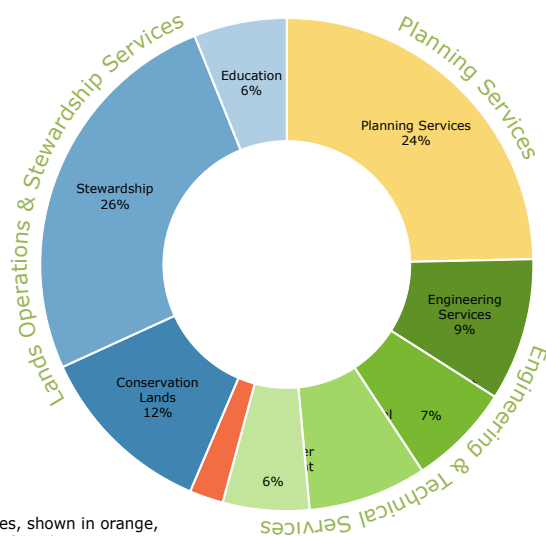
- Updated the NVCA volunteer strategy.
- Processed six Freedom of Information requests.
- Maintained and further enhanced NVCA website and social media presence.
- Undertook a corporate culture process with staff.
- Provided financial, human resources, communications and administrative support to the board of directors and all NVCA departments.

Financial Summary

Revenues



Expenses



Corporate Services, shown in orange, represented 2% of total expenses.

In 2016, NVCA had a total budget of \$5,508,605. Revenue came from diverse sources, including member municipalities, provincial and federal governments, local non-governmental partners, and user fees for programs and services.

The 2016 balanced budget as approved required the use of \$185,123 from NVCA's reserves. With solid revenue performance including new funding partnerships and expenditure control, NVCA ended the year requiring the use of \$84,781.

Find full financial statements at 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 2016.

NVCA Staff

Permanent and contract staff as of December 31, 2016.

Office of the CAO

D. Gayle Wood, Chief Administrative Officer • Laurie Barron, Coordinator, CAO and Corporate Services

Corporate Services

Sheryl Flannagan, Director, Corporate Services • Heather Kepran, Communications Coordinator • Christine Knapp, General Accountant • Debbie Swindells, Accounts Receivable/Payroll Specialist • Kimberly Winder, Receptionist/Administrative Assistant

Engineering & Technical Services

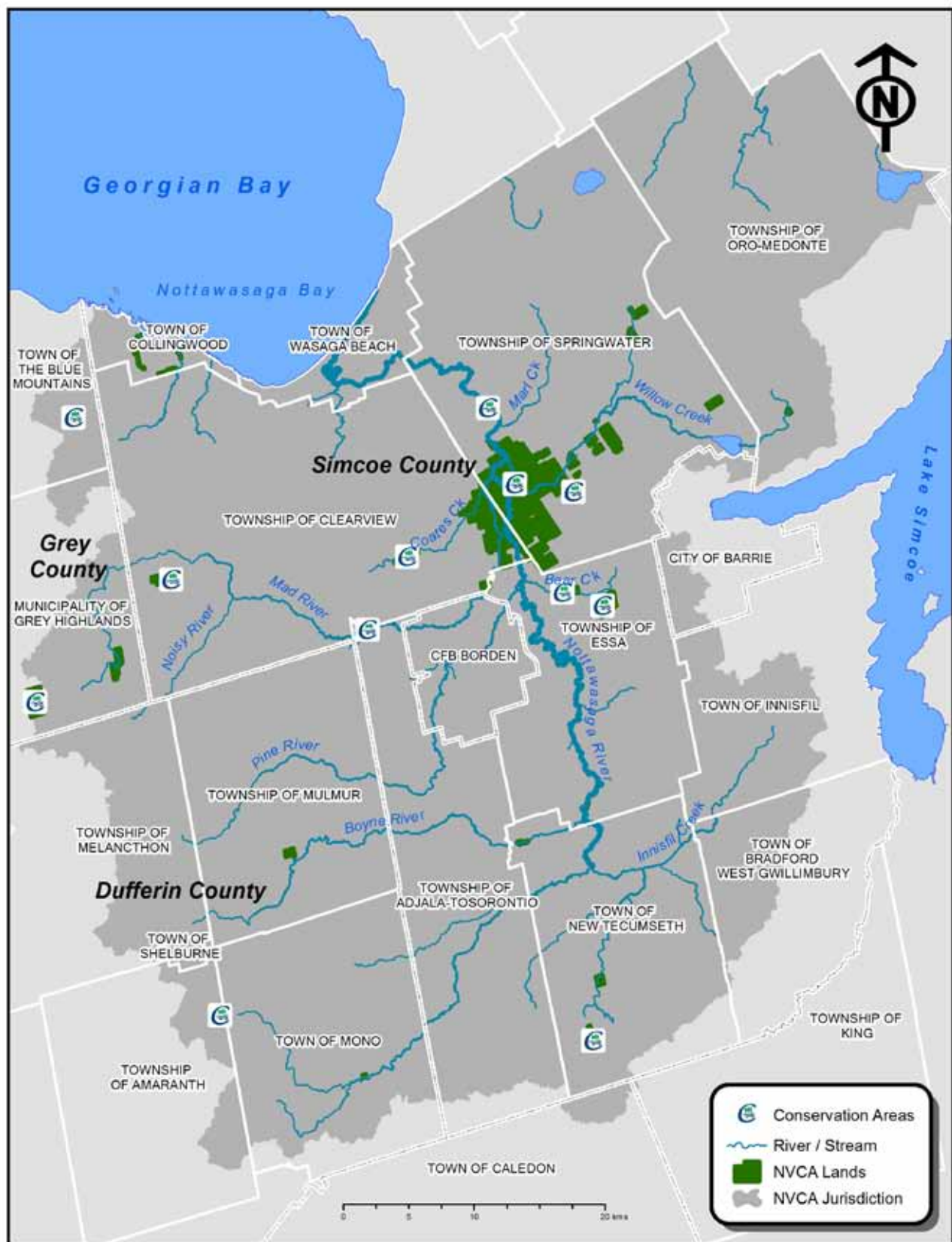
Glenn Switzer, Director, Engineering & Technical Services • Peter Alm, Water Resource Engineer • Hendrik Amo, Manager GIS/IT • Robert Bettinelli, Information Management Specialist • David Featherstone, Manager, Watershed Monitoring • Ian Ockenden, Watershed Monitoring Specialist • Ryan Post, Lead Hydrogeologist • Tom Reeve, Senior Manager, Engineer Services • Michael Saunders, Agricultural Water Technologist • Sheri Steinginga, Flood Operations Field Specialist • Lyle Wood, GIS Technician • Yi Wang, Water Resources Specialist

Lands, Education & Stewardship Services

Byron Wesson, Director, Lands, Education & Stewardship Services • Mike Bacon, Lands & Operations Technician Assistant • Sarah Campbell, Aquatic Biologist • Clint Collis, Lands & Operations Technician • Fred Dobbs, Manager, Stewardship Services • Rick Grillmayer, Manager, Forestry • Kyra Howes, Manager, Lands & Operations • Rebecca Huskinson, Environmental Education Associate • Spencer Macdonald, Lands & Operations Technician • Maegan McConnell, Environmental Education Assistant • Heather McRae, Environmental Education Associate • Aleigha Oosterhuis, Environmental Education Associate • Henry Pelley, Tiffin Maintenance Technician • Linda Raeburn, Manager, Environmental Education • Tiffany Rutter, Environmental Education Associate • Naomi Saunders, Environmental Education Assistant • Shannon Stephens, Healthy Waters Program Coordinator • Alisha Tobola, Forestry Technician • Grant Wilson, Environmental Education Assistant

Planning Services

Chris Hibberd, Director, Planning Services • Jeff Andersen, Regulations Technician • Lee Bull, Manager, Planning Services • Logan Juffermans, Planning Assistant • Barbara Perreault, Manager, Regulations & Enforcement • Tim Salkeld, Resource Planner



Nottawasaga Valley Conservation Authority

John Hix Administration Centre
8195 8th Line, Utopia, ON, L0M 1T0
705-424-1479 • nvca.on.ca



A member of:

