



Nottawasaga Valley
Conservation Authority



2017

Annual Report

Healthy Watershed, Healthy Communities



2017 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, Vice 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, 2nd Vice Chair,
Township of Essa
- Councillor Terry Mokriy,
Municipality of Grey Highlands
- Councillor Doug Lougheed, Chair,
Town of Innisfil
- Councillor James Webster,
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 Bifulchi,
Town of Wasaga Beach



Students from Elmvale District High School, among the 1,550 plus volunteers engaged by NVCA's stewardship team this year, plant stream-side trees that as they grow will improve both fish habitat and water quality.

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 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.

A Time of Change and Renewal

2017 was a year of change and renewal for NVCA.

We said good-bye to several dedicated board members, without compromising good governance and oversight, as we officially reduced the size of our board to 18 members—one from each of our watershed municipalities. We also said good-bye to leadership staff at the authority, with the retirement of Gayle Wood, CAO, and Glenn Switzer, Director of Engineering.

With these changes came opportunities to renew our commitment to bringing people and organizations together to lead, promote, support and inspire innovative watershed management.

In-house, we welcomed a new CAO, Doug Hevenor, and restructured to bring planning, engineering and monitoring staff under one umbrella, watershed management services. This new department builds on existing efficiencies to ensure that the scientific data collected through our flood, water and groundwater monitoring programs informs policy and decision making for NVCA and our member municipalities.

More broadly, we continued to bring people and organizations together through the many partnerships—be they with local municipalities, funders, volunteers, community groups or industry sectors—that are critical to the success of NVCA.

It was partnerships with Georgian College and a wide range of stakeholders that allowed us to develop a well-researched and locally focused Climate Change Strategy and Action Plan for the authority.

Similarly, it was our strong ties to the agricultural community and other private landowners that saw us get “shovels-in-the-ground” for forestry and stewardship projects that will reap long-term benefits for our environment and our municipalities.

And it was through the tireless support of volunteers and service organizations like the Rotary Club of Barrie that we were able to offer recreational and educational opportunities that connected people of all ages with the beauty of this watershed.

As we move into 2018, we look forward to building on these partnerships as we engage with local stakeholders in developing a new integrated watershed management plan. This plan will set a course for our actions to protect, restore and enhance waterways, wetlands and other natural assets in our watershed in the face of increasing pressures from development and climate change.

But to implement this plan, and to provide the best possible service to our municipalities and the public, the authority must address the significant challenges ahead.

Chief among these is the increasing workload that we are already starting to see as a result of growth in many watershed municipalities. We are a lean organization, and have not added staff the past few years to keep budget increases low. That needs to change as we prepare for the pressures that significant development will bring.

We need to start taking the necessary steps to adequately staff the authority with the best and brightest—professionals that will work to ensure that development is compatible with our primary mandate, protecting people and property in our watershed.

We also need to develop a plan to expand our facilities to provide an efficient working space to accommodate growing staff, programs and administrative needs.

Continued support from our municipal members and other partners will be critical in moving forward to address these and other challenges before us. Working together, we can find innovative solutions that position the authority to continue its role in ensuring the health of the Nottawasaga Valley watershed and its communities.

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



Doug Loughheed
2017 Chair of the Board



Doug Hevenor
CAO



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's gauge network measures water flows in area streams & rivers

In 2017, NVCA's planning, regulations, engineering, monitoring and groundwater departments amalgamated to form Watershed Management Services. This new service area promotes integration and offers opportunities for improved efficiencies.

Planning and Regulations & Enforcement

Participated in various legal matters, including a Ontario Municipal board hearing and background regarding a Leave to Appeal a permit matter to the Supreme Court of Canada.

Established planning service agreements with City of Barrie, Township of Clearview and Township of Essa.

Processed 1,900 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.*

Working with GIS staff, updated the mapped erosion hazard limit to provide a more accurate assessment for application of the regulations.

Water Resources & Flood Warnings

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

Issued 15 flood messages, including a flood warning for the June 23, 100-year storm event that caused serious flooding in portions of the watershed.



Undertook repairs to the Tottenham dam, which was damaged during the June 23 storm event.

Improved the NVCA stream gauge network. Work focused on upgrading components of various stream gauges and weather stations to improve data quality and reliability. In collaboration with Ministry of Natural Resources and Forestry, work began on the installation of new sensors to federally operated gauges within NVCA watershed.

With funding through the National Disaster Mitigation Program, undertook 2-D modelling of floodplains in potential damage centres to determine the extent and costs of damage in the event of a significant flood event.

Watershed Monitoring

Monitored water quality and quantity in local streams and rivers throughout the watershed, including monitoring at 18 sites as part of the Provincial Water Quality Monitoring Network.

Continued support of the Marsh Monitoring Program in the Minesing Wetlands and the Forest Bird Monitoring Program at the Tiffin Centre for Conservation.

Conducted reviews and updated information on wetlands in Mono, Innisfil, Collingwood, Wasaga, Amaranth, Bradford West Gwillimbury, Barrie, Shelburne, Melancthon, Grey Highlands, Town of the Blue Mountains, Essa, Caledon, New Tecumseth and Clearview.

Provided ecological review for planning matters.

Completed local wetland mapping updates in other municipalities based on environmental impact studies and site inspections.

Conducted aquatic studies on Pine River in support of Everett Assimilative Capacity Study.



During the winter months, NVCA staff monitor the snowpack every two weeks to aid in forecasting spring flood potential and track climate trends.

Planning & Regulations

by the numbers

533

applications reviewed & approved
under *Conservation
Authorities Act*

342

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

10

subdivision
plans reviewed

17

site plans
reviewed

12

environmental assessments
reviewed

20

non-compliance issues
investigated under the
Conservation Authorities Act

737

responses
to general
planning &
permitting
questions

182

consultations,
solicitor
inquires &
other services
offered



Watershed Monitoring

by the numbers

92

wells
monitored for
groundwater
level & quality

112

sites
monitored
for stream
baseflow

57

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

18

sites
monitored as
part of the
Provincial
Water Quality
Monitoring
Program

15

flood messages issued

Drinking Water Source Protection

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

As Risk Management Official for Amaranth, Essa, Collingwood, Innisfil, Melancthon, Mono, Mulmur, New Tecumseth and Shelburne, completed 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. Through this initiative and with the support of several municipal partners, created locally specific promotional materials, including several videos, infographics and primers.

Developed an online system to allow local risk management officials to easily generate source protection annual reports.

Groundwater Monitoring

Monitored groundwater at 92 wells in the watershed for water levels and ambient water quality 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.

Undertook the Ministry of Environment and Climate Change-funded Hydrologic Function project in the Minesing Wetlands.

Partnered with the Ontario Geological Survey to add 8 new monitoring wells at 7 location as part of the OGS-lead Central Simcoe Project.



NVCA staff monitor and study groundwater sources in our watershed to provide data for informed decision making related to both planning and source water protection.



Lands, Education & Stewardship Services

Lands, Education & Stewardship 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.



High school volunteers learn how to stabilize eroding stream banks

Conservation Lands Program

Hosted 25,500 visitors at 12 conservation areas across the watershed.

Partnered with Friends of Fort Willow, Friends of Minesing Wetlands, Friends of Utopia Gristmill and Park, Blue Mountain Watershed Trust, the Bruce Trail Club, Brereton Field Naturalists, Rotary Club of Barrie, Barrie Photography Club and many other groups to maintain and improve recreational opportunities at NVCA conservation areas.

Offered 100 hunting passes for Minesing and Osprey Wetlands, and secured hunters for exclusive hunting opportunities.

Updated interpretive signs, created an accessible trail and provided additional benches and picnic tables at Fort Willow Conservation Area, thanks to a grant from Infrastructure Canada.

Continued tree planting efforts within the Afghanistan Memorial Forest with the Rotary Club of Barrie.

Hosted more than 30 groups and outdoor events at the Tiffin Centre (including Scouts, Girl Guides, cadets and live-action role playing groups). Also hosted 20 wedding celebrations and a celebration of life.

Completed the construction of a new washroom facility at the Tiffin Conservation Area, with funding from the Rotary Club of Barrie.

Increased maple syrup production by installing sap lines throughout the Tiffin Conservation Area.

Renewing lease with Ontario Heritage Trust for the "Tiffin East" property.



Lands, Stewardship & Forestry

by the numbers

13,001

acres of conservation
lands managed

142

stewardship
& forestry
projects
completed

12.45

km
of stream
enhanced or
rehabilitated

\$873,269

of funding applied to watershed
stewardship & forestry projects

231,857

trees planted in all programs

1,550

volunteers engaged in
hands-on stewardship projects



Restoring floodplain and stream
habitat along Lamont Creek



Protecting water quality
through on-farm stewardship



Enhancing streams and
wetlands through tree planting

Stewardship & Restoration

Completed a large-scale stream habitat restoration construction project at the Clearview EcoPark on Lamont Creek. The project saw 235 m of stream restored, two gravel riffles installed for rainbow trout spawning habitat, three wetland cells created for frog habitat, and construction of 2,250m² of floodplain habitat. More than 185 student and public volunteers assisted with the project. Supported by Clearview Township, Environment and Climate Change Canada, Province of Ontario and the Nottawasaga Watershed Improvement Program (N-WIP).

Collected fish community and stream temperature baseline data for future projects along the Black Ash Creek in The Blue Mountains, Clearview and Collingwood, and Beeton Creek in New Tecumseth. Supported by Bruce Power and the South Simcoe Streams Network.

Constructed rock riffle habitats in Coates Creek, Clearview, to enhance water quality and provide fish spawning habitat, with funding through Environment and Climate Change Canada.

Stabilized two channels along the Mad River to maintain critical water flows that had been “escaping” into an artificial drain. Supported by Clearview Township, Environment and Climate Change Canada, Natural Conservancy of Canada (NCC) and N-WIP.

Working with the Headwaters Streams Committee and the Town of Mono, created a 25 m long berm in order to complete the restoration of 165 m of cold water brook trout stream habitat.

Mapped stands and removed more than 7,500 kg of invasive *Phragmites* in Collingwood and Wasaga Beach, with support from Blue Mountain Watershed Trust, Georgian Bay Forever, Environment and Climate Change Canada, the Province of Ontario, the Town of Collingwood, and the Ontario Federation of Anglers and Hunters.

Leveraged \$107,000 of funding and donations to support \$492,000 worth of 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, NCC and other corporate donations.

Worked with farmers and rural landowners to reduce 81 kg/year of phosphorus runoff to streams and lakes, helping to prevent up to 40 tonnes of excessive algae growth.

Engaged more than 1,550 volunteers and partner groups in hands-on habitat restoration projects.



Worked with farmers to protect rivers and wetlands by installing over 400 m of fencing to restrict livestock from headwaters wetlands. In addition, completed 20 on-farm stewardship projects, including manure storages, clean water diversion and planting stream-side buffers that will protect waterways and groundwater from bacteria, nutrient runoff, algae blooms and nitrate contamination.

With NVCA's forestry program, planted trees along 6.8 km of stream and rivers.

Conducted 54 site visits with landowners interested in stewardship projects. Answered 229 information requests. Engaged hundreds of people at community events and volunteer habitat restoration days.

Forestry Program

Planted 218,780 trees on 31 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 \$410,557.

Managed 1,969 acres of forest; worked with landowners to develop 37 Managed Forest Plans.

Conducted Arbour Day sales in three municipalities, selling 4,800 tree seedlings to urban and rural landowners.

Environmental Education & Public Events

Provided quality outdoor and environmental education to 11,617 youth in all initiatives combined. This includes welcoming 362 youth over the summer as part of the Camp Tiffin day camp program. New this year, a special one-week camp was offered to youth new to Canada, with funding through the Rotary Club of Barrie.

Offered public programming across all seasons:

- Christmas Bird Count for Kids
- March Break Family Day
- Spring Tonic Maple Syrup Festival (with Rotary Club of Barrie)
- Festival at the Fort (with Friends of Fort Willow, Rotary Club of Barrie and Springwater Township)

Environmental Education

by the numbers

189

school & group
visits to the
Tiffin Centre

362

youth at Camp
Tiffin Summer
Camp

11,617

youth participated in education
program at the Tiffin Centre



With funding from TD Friends of the Environment, NVCA created the new "Free Play Forest" at the Tiffin Centre, allowing young children an opportunity to independently explore the woodland environment.



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.



Stakeholders provide guidance on NVCA's Climate Change Action Plan

Governance

Working with the Board of Directors, completed implementation of recommendations from the 2014 Service Delivery and Operational Review.

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

Developed NVCA's Climate Change Strategy and Action Plan.

Corporate Support

Updated the NVCA volunteer strategy.

Processed 6 Freedom of Information requests.

Undertook a corporate culture process with staff.

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

Geographic Information Systems (GIS) & Information Technology

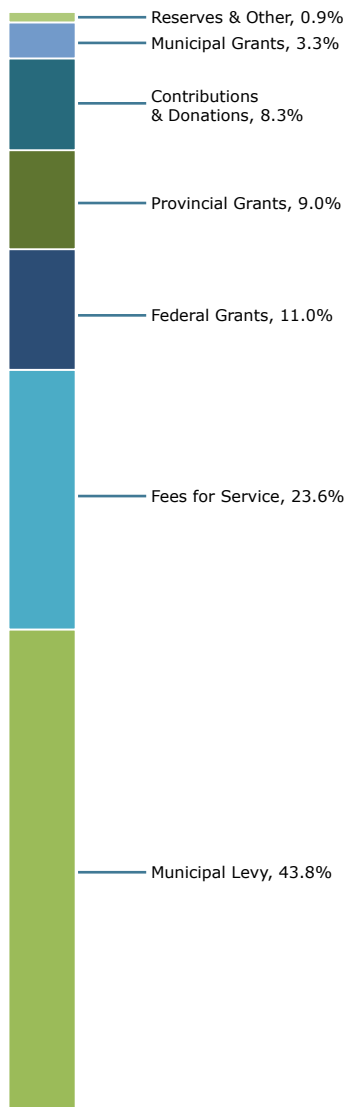
Reassessed the mapped erosion hazard limit to provide a more accurate assessment for application of the regulations.

Developed a web-based GIS application to provide staff and partners with better access to NVCA mapping data.

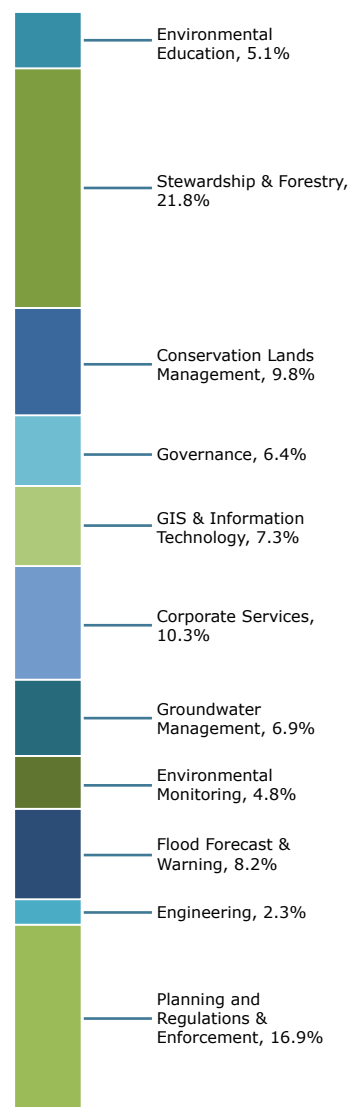


Financial Summary

Revenues



Expenses



In 2017, NVCA had a total budget of \$5,099,049. Revenue came from diverse sources, including member municipalities, provincial and federal governments, local non-governmental partners, and user fees for programs and services.

The 2017 balanced budget as approved required the use of \$108,535 from NVCA's reserves. With solid revenue performance including new funding partnerships and expenditure control, NVCA ended the year requiring the use of \$20,872.

This financial information is condensed from our year-end, unaudited, statements. The completed auditors report for the year ending December 31, 2017, is anticipated to be available in May 2018, copies of which will be posted to our website 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 2017.

NVCA Staff

Permanent and contract staff as of December 31, 2017.

Doug Hevenor, Chief Administrative Officer

Office of the CAO—Laurie Barron, Coordinator, CAO and Corporate Services • Heather Kepran, Communications Coordinator

Corporate Services Sheryl Flannagan, Director

Finance & Administration—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 • Kristopher Robinson, GIS Technologist • Lyle Wood, GIS Analyst

Lands, Education & Stewardship 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 Education Assistant • Grant Wilson, Environmental Education Assistant • Environmental Education Associates: Lesley Boughner, Bob Cole, Charlotte Driscoll, Susan Hall, Aleigha Oosterhuis, Tiara Rycroft

Forestry—Rick Grillmayer, Manager, Forestry • Alisha Tobola, Forestry Technician

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—Peter Alm, Water Resource Engineer • Michael Saunders, Engineering Technologist • Sheri Steinginga, Flood Operations Field Specialist

Groundwater & Source Water—Ryan Post, Lead Hydrogeologist • Angela Mills, Project Analyst

Monitoring—David Featherstone, Manager, Watershed Monitoring • Ian Ockenden, Watershed Monitoring Specialist

Planning—Lee Bull, Manager, Planning Services • Logan Juffermans, Planning Assistant

Regulation & Enforcement—Barbara Perreault, Manager, Regulations & Enforcement • Andrew Fera, Regulations Technician • Julie Panovski, Regulations Assistant

