



Nottawasaga Valley
Conservation Authority



2021
Annual
Report

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Our Vision

A sustainable watershed that is resilient to the effects of climate change, urban growth and other stressors and provides for safe, healthy and prosperous people and communities.

Our Mission

Working together to deliver innovative, integrated watershed management that is responsive to the environmental, economic and social sustainability of the Nottawasaga Watershed.

What We Value

An abundance of clean water, clean air and fertile soils that provide for healthy people and ecosystems.

Natural heritage systems and the ecosystem services they provide, particularly as they support resilience to the effects of a changing climate.

Distinctive landforms and waterways including the Georgian Bay coastline, Niagara Escarpment, Minesing Wetlands and others that give our watershed a unique sense of place.

Quality recreational opportunities that our hills, forests, meadows, wetlands, waterways and coastline provide for residents and tourists alike.

A wealth of resources within the capacity of our watershed to provide for thriving communities, successful economies and sustainable agriculture, now and in the future.

Message from Chair and CAO

It is safe to say that we have had an incredible 2021. We have started to implement changes to the *Conservation Authorities Act (CA Act)* while at the same time, continuing on the path on the 20-year Integrated Watershed Management Plan.

There is much to be proud of across our watershed. Nottawasaga Valley Conservation Authority (NVCA) staff worked hard to protect lives and properties from the risk of flooding and erosion. They were dedicated to creating resilient habitats and strived to maintain high quality recreational opportunities for visitors inside and outside our watershed. Our next generation is blessed to have devoted educators who show them the importance of protecting our environment. And this was all accomplished under the pressure of climate change, urbanization and many other stressors. The passion and commitment of our professional staff cannot be surpassed.

All of this would not have been possible without the support of our watershed municipalities as well as our dedicated Board Members, federal and provincial governments, foundations, private businesses and volunteers. Of course, we give thanks to the local residents who provide their lands, and often dollars, to help restore the environment in our watershed.

We are pleased to highlight our work in this 2021 NVCA Annual Report and we look forward to continued progress in 2022 as we work collaboratively to meet the changes to the *CA Act*.



Mariane McLeod
Chair



Doug Hevenor
Chief Administrative Officer

The Nottawasaga Watershed

The NVCA jurisdiction is 3,600 km² and spans from Wasaga Beach in the northeast to Moonstone and Bass Lake, south through Barrie and Bond Head to Highway 9, west to Orangeville then heading north through Collingwood to Nottawasaga Bay. It consists of the Nottawasaga Watershed, the Blue Mountain subwatershed and the Severn Sound Tributary headwaters.

The Nottawasaga Watershed is shaped like a bowl. The rim, or the highest areas of the watershed, are the Niagara Escarpment (a World Biosphere Reserve) to the west, the Oak Ridges Moraine to the south, and the Oro Moraine to the east. The Simcoe Lowlands lie at the bottom of the bowl in the north where the Nottawasaga River flows into Georgian Bay at Wasaga Beach.

The Blue Mountain Watershed encompass approximately 222 km². Here, four rivers form above the Niagara Escarpment, and flow directly into Nottawasaga Bay along the Town of Collingwood shoreline.

Benefits of Having a Healthy Watershed

Our watershed is home to approximately 200,000 people and thousands of farms and businesses. A healthy watershed helps protect and enhance our lives in many different ways.

Developing in a watershed sustainably requires a well thought out plan. NVCA and its partner municipalities work together to manage human activities and natural resources on a watershed-wide basis while considering social, economic and environmental issues.



Human Health

Our well-being depends on a healthy watershed. For example, healthy streams provide clean water for drinking and cooking, agricultural irrigation, waste water dilution, and recreational enjoyment.

When we spend time outside, we look for clean rivers, lush forests and areas with abundant wildlife. Activities like exercising, fishing, boating, hiking and bird watching are best enjoyed in these healthy environments. A healthy Nottawasaga Watershed also provides habitat for countless wildlife as well as prized sports fish such as trout, salmon, walleye, pike and bass.

Economic Health

Local economies are strongly tied to a healthy watershed.

Agriculture is the economic engine of the Nottawasaga Watershed and relies on clean water for irrigation as well as healthy soils and pollinators.

Urban areas also rely on healthy environments as it provides neighbourhoods with access to greenspaces. Our rivers also receive and dilute waste from wastewater treatment plants.

Our strong tourism industry depends on a healthy environment. For example, the Nottawasaga River hosts one of Georgian Bay's largest salmon runs. Wasaga Beach, the world's longest fresh water beach is also situated in the watershed.

Ecological Health

The composition of local plants, animals and their surrounding environment is fundamentally linked to the health of the watershed. Local environments are interconnected and rely on each other. If one or more of these pieces become unhealthy, the entire system can suffer, and affect our health as well as the economy. Healthy ecosystems and species diversity can also increase resiliency to climate change.

For example, rivers and streams and their surrounding environments help link natural areas across the watershed and are an important part of natural heritage systems. When rivers and streams flood, it helps fertilize the soil and disperse seeds from native plants, greatly benefiting land animals and landscapes. River systems help with nutrient management and flood attenuation.



Our Natural Heritage

Natural heritage features include woodlands, wetlands, watercourses and the plant and animal life that live within them. When linked together, natural heritage features form natural heritage systems

Together, these systems provide important ecosystem services that support our health, economy and community sustainability, including resiliency in the face of climate change.

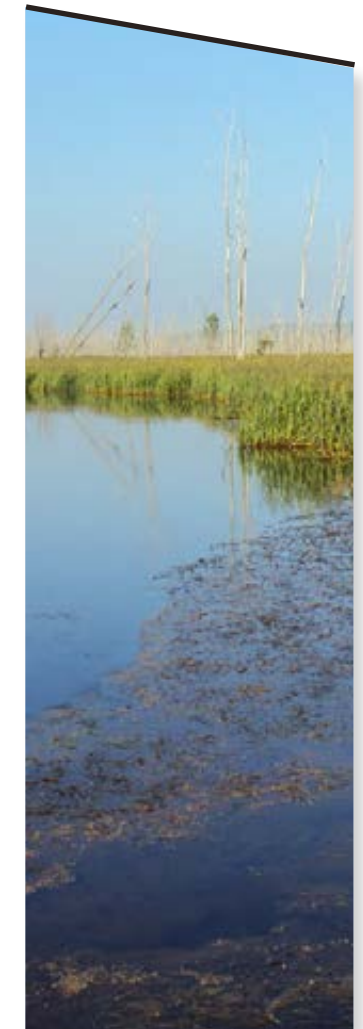
The Nottawasaga Watershed contains 38 areas of Natural and Scientific interest, and 20 Areas of Earth Science interest. These provincially designated areas include Niagara Escarpment and Oak Ridges Moraine. A lesser known but significant corridor connects the Niagara Escarpment to the Canadian Shield. It passes through the Nottawasaga Watershed and is made up of a system of watercourses, wetlands and forests extending from the Niagara Escarpment northeast through Minesing Wetlands to the Canadian Shield in Severn Township.

Wetlands

NVCA's jurisdiction contains more than 4,000 individual wetlands that are greater than 0.1 hectares. Whether they are large or small, wetlands directly and indirectly provide invaluable natural services for landowners, businesses, and numerous other stakeholders. This includes maintaining healthy drinking water, providing recreational opportunities, and ensuring that native plants and wildlife have the necessary space to thrive.

Wetlands are also very important for flood control, water filtering, groundwater recharge and discharge and wildlife habitat. When there is a lot of rain or snowmelt, wetlands absorb and slow floodwaters, which helps to alleviate property damage and can even save lives. In the face of climate change, these wetlands are ever more important as we experience more extreme storm events.

NVCA is mandated to regulate all wetlands and has developed internal policies that provide guidance for how these wetlands should be protected or conserved.



Assessing Our Wetlands to Protect Our Wetlands

As the Nottawasaga Watershed becomes more developed, it becomes more important to understand our wetlands. In 2021, NVCA's Watershed Science team completed the NVCA Watershed Wetland Evaluation and Prioritization Report.

The report identified a total of 3,333 Provincial Significant Wetlands (PSW), 34 evaluated non-PSWs and 80 unevaluated wetland complexes. With this information, future wetland evaluation efforts can be prioritized accordingly.

Under the *CA Act*, development must be located at least 30 m away from wetlands to ensure the long-term protection and enhancement of these features.

Ecological Net Gains

NVCA is responsible for conserving, restoring, developing, and managing the watershed's natural resources. Population growth, and resulting urbanization, presents a challenge for the protection and enhancement of wetlands throughout the watershed.

In 2021, NVCA's Planning Services team developed the *Achieving Net Gains Through Ecological Offsetting Guidelines* to address ongoing loss of wetlands and other ecological features in the watershed.

These guidelines aim to ensure that further losses of regulated natural heritage features within the Nottawasaga Watershed are highly limited, and where appropriate, met with equal or greater gains in area, value, and function.

It's important to note that by instituting a formal offsetting policy, NVCA is not promoting or supporting an increase in removal of wetlands and associated natural features throughout the watershed, but rather to overcome challenges to ensure high quality water resources are available for generations to come.





Native Grasslands

In Southern Ontario, native grasslands once covered more than 400,000 hectares of land. Today, less than 3% remain.

This puts species that depend on them, like the Bobolink and Eastern Meadowlark, at risk.

In 2021, NVCA started eight projects covering over 82.9 hectares with farmers, rural landowners, volunteers and the Nature Conservancy of Canada to help restore some of these grasslands and enhance hay and pasture management.

This work was made possible thanks to funding from Forests Ontario's Grassland Initiative, World Wildlife Canada, Environment Canada and Nature Conservancy Canada.

Planting Trees to Make Up for Losses

In recent years, trees in the Nottawasaga Watershed have become increasingly threatened by invasive species such as emerald ash borer (*Agrilus planipennis* Farmaire) and *Lymantria dispar dispar* (LDD), formerly known as European Gypsy Moth.

LDD Moths

LDD is a non-native, invasive species from Asia that was introduced to Massachusetts in the 1860s. These moths spread to Ontario in 1969. LDD caterpillars feed on deciduous trees, including oaks, poplars and birches, but will also consume conifers if there are no alternatives available.

LDD populations are cyclical, peaking after 7-10 years then crashing from parasites or fungus. Although they are not harmful to people, high concentrations of the caterpillars will defoliate trees. A healthy tree will likely survive, however young, newly planted or trees that were already stressed by other factors may not bounce back as easily from the defoliation.

In 2021, LDD impacted NVCA's planting sites by stressing and sometimes killing the trees that were planted. The population of LDD was predicted to peak in 2021. If true, their population will slowly decrease over the next few years, until there is a natural crash in their population. When populations of LDD are very high, the only way to manage trees is to patiently wait for the population to crash.

Emerald Ash Borers

In recent years, the emerald ash borer has killed thousands of ash trees across the watershed.

Travelling all the way from Asia, the emerald ash borer was first observed in an Ontario ash tree in 2002. Over a very short amount of time, this small forest pest had managed to cause great economic and environmental destruction.

Infestations of emerald ash borer can occur in both stressed and healthy ash trees. Once this system is disturbed by emerald ash borer larvae, the affected ash tree will die.

The spreading of the emerald ash borer is of high concern because it affects all forests and residential areas in the watershed, including the ash-dominated wetlands in Collingwood and Wasaga Beach and the internationally significant Minesing Wetlands.

To compensate for this NVCA's forestry and stewardship programs planted over 100,000 trees in 2021 to help compensate for the loss of tree canopy from the emerald ash borer.



Science

By monitoring surface water quality, groundwater and natural heritage, NVCA's Watershed Science team can identify stressors and their impacts on the local environment. This information can shape land use planning and policy decisions, and can measure the effectiveness of environmental restoration projects or the impacts of new development.

To fully understand the health of the watershed, NVCA monitors for specific attributes that can tell a strong story about the impacts on the local environment.



Water chemistry sampling provides a snapshot of the quality of rivers at the time the sample was taken. It allows for the direct comparison of results to Provincial Water Quality Objectives. However, water chemistry alone does not provide enough information about the state of the river, or how to repair degraded sections. That's where monitoring other attributes - benthic macroinvertebrates (small aquatic animals that can be seen with the naked eye and have no backbone), stream temperature and flow, as well as fish come in.

Natural heritage monitoring includes formal breeding bird surveys in forest and marsh wetland settings as well as informal monitoring of other plants and animals.

Combined, this information helps NVCA understand the human impacts on our streams and rivers. For example, impacts of development, agriculture and industry, as well as the benefits of environmental restoration.

In 2021, the Watershed Science team undertook a critical review of the watershed monitoring program to ensure all aspects of the program continue to be cost-effective and focused on directly supporting the goals of NVCA and its municipal partners.

Partnerships

NVCA manages our watershed sustainably so that it is resilient to climate change, urban growth and other stressors. But we cannot do this alone.

We must work together with our municipalities, communities, funders and stakeholders to deliver innovative, integrated watershed management that is responsive to the environmental, economic and social sustainability of the Nottawasaga Watershed.

Working With Our Partner Municipalities

Permits and Regulation

Property owners looking to develop in areas with natural hazards associated with rivers, streams and wetlands, and shorelines must apply for a permit from NVCA. Similar to municipal permits such as a building permit or a site alteration permit, this permit is one of the applicable law approvals needed prior to issuance of a building permit.

NVCA's Regulation team works closely with municipal partners to ensure proper permits are in place prior to development to avoid the loss of life and damage to property due to flooding and erosion, and conserve and enhance natural resources.

In the case of non-compliances, NVCA works with municipalities to investigate the case, which may result a request for include site restoration and potential court action.

Planning

As experts in natural hazards and plant and animal communities in the Nottawasaga Watershed, NVCA's Planning Services team works closely with municipalities, developers and consultants to find a balance between development and preserving natural environment while protecting lives and property from natural hazards.

This work begins early in the development planning process. NVCA's engineers, ecologists and groundwater specialists review the proposed development plan to identify potential risks and environmental features that may be impacted by the development. This information is communicated to developers and municipalities, and may include requests for supplementary information such as environmental impact studies, natural hazard studies and stormwater management studies.

NVCA establishes annual partnership agreements with municipalities to identify key roles and services in the development plan review process. Examples include expertise in flooding, erosion, stormwater management, natural heritage and groundwater. The partnership agreements help ensure that development application reviews are coordinated and streamlined.

Stormwater

Soil in natural areas or farmland absorbs rainfall and snowmelt and slowly releases it into rivers and streams, helping to create a constant, permanent flow of water. As the Nottawasaga Watershed becomes more urbanized, more hard surfaces (such as pavements) are created.

It becomes harder for water to infiltrate into soil, causing large volumes of stormwater to flow into streams and rivers at a fast pace. Often, this creates erosion and flooding. The permanent flow of water entering rivers and streams from underground springs will also decrease. Going unchecked, stormwater runoff can result in contaminants (oil, pesticides, metal) going into streams and rivers.

As all streams and rivers in a watershed are connected, Ontario's legislation promotes the management of stormwater using a watershed-wide approach.

Municipalities are responsible for the management of stormwater, such as planning, design, building and the maintenance of stormwater facilities. These facilities include stormwater management ponds and various Low Impact Development techniques.

NVCA collaborates with municipalities during the development process to help ensure that stormwater meets provincial standards that ensure the protection and enhancement of our wetlands, watercourses, Georgian Bay shoreline and wildlife habitat.



Pretty River Dyke

In 2021, NVCA and the Town of Collingwood started the Pretty River Dyke Maintenance Project.

The Town of Collingwood was built on a shallow floodplain, making it prone to flooding. The Pretty River Dyke was built in the 1970s to reduce the risk of flooding in the urban areas of Collingwood. While considering the ecological functions of the corridor, vegetation growing along the sides of the dyke must be removed from time to time to ensure its full functionality.

NVCA and the Town of Collingwood produced a public education campaign to inform residents about the project and why removing vegetation was necessary. It included a mailout of letters and brochures to all town residents as well as two virtual public question and answer sessions.

Working With Education Partners

Developed through years of passion and experience, NVCA's education program has proven to be a valuable asset to educate youth about our natural environment. In 2021, six new programs were created with external organizations to offer even better learning opportunities to the future generations in our watershed. Two of these programs are the Great Lakes Virtual Field Trip and a microplastics program in Collingwood.



Great Lakes Virtual Field Trip

The Ministry of the Environment, Conservation, and Parks approached NVCA and four other environmental organizations across Ontario to create a virtual field trip about the Great Lake closest to each organization. As rivers and streams in the Nottawasaga Watershed flow into Lake Huron and Georgian Bay, it was the focal point for the Education team.

This collaboration was enriched with the help of experts such as indigenous peoples, museum curators, scientists, and NVCA staff to speak to students about how lucky we are in Ontario to have this precious resource, and the work that is being done to care and protect our Great Lakes.

Microplastics in Our Great Lakes

All over the world, including in the Nottawasaga Watershed, hundreds of thousands of microfibrils go down the drain after a cycle in the washing machine. Many are too small to be captured by wastewater treatment plants and end up in our streams, lakes and finally into Georgian Bay.

With generous funding from Georgian Bay Forever, NVCA delivered a free microplastics program for students in the Town of Collingwood. The program aims to take 400 students per year to the Georgian Bay lakeshore or other areas where water collects in their community to understand how water moves through the water cycle and across the land. Students will then take sand soil samples from a beach in Collingwood and a beach in Wasaga Beach, and peer through microscopes lens to find microplastics in the samples.

Working With Our Stewardship Funders and Supporters

Petun Dam

The Petun Dam Removal Project is complete! In 2020, the Petun Dam was removed to help return Black Ash Creek to its original condition. This year, staff and volunteers applied finishing touches, such as planting trees, installing live dogwood stakes and constructing in-stream habitat.

Historically, water trapped behind the dam created a 100-metre long stagnant pond, causing summer stream downstream temperatures to increase by 7°C. Not only was the dam a flood risk to communities downstream but it also degraded fish and wildlife habitat.

This project was generously funded and supported by Bruce Power, Greenbelt Foundation, Environment and Climate Change Canada, Blue Mountain Watershed Trust, Georgian Triangle Angler's Association, Nottawasaga Steelheaders, Lake Huron-Georgian Bay Watershed Community Action Initiative, Enbridge, the Town of the Blue Mountains, Rumball Excavation, the Province of Ontario and the H. John McDonald Foundation.





Nottawasaga River Restoration Program

Sports fisheries provide important economic benefits for many municipalities in the Nottawasaga Watershed. For example, summer Chinook salmon fishing is extremely popular in the Town of Collingwood and Town of Wasaga Beach. In the fall, many anglers fish for Chinook salmon and rainbow trout in the Township of Essa.

The Nottawasaga River is also home to native species such as brook trout and river burbot, as well as two species at risk: lake sturgeon and northern brook lamprey. All of these fish rely on healthy waterways to thrive.

The Nottawasaga River Restoration Program (NRRP) is a stream restoration initiative coordinated by NVCA and Nottawasaga Futures – South Simcoe Streams Network. The program aims to improving the water quality in the Nottawasaga River in order to enhance the world class trout and salmon sport fishery, as well as restore native fish habitat.

Restoration efforts begin in the Upper Nottawasaga River, downstream from the Village of Hockley where excellent water quality from the Niagara Escarpment deteriorates quickly. This is caused by soil and nutrients released from eroding river banks and surrounding lands. Summer stream temperatures also rise quickly as there are no forests providing shade to the stream.

Together, all of these factors degrade the habitat for sports fisheries in the Nottawasaga River.

Thanks to funding and support from many partners, NVCA's Stewardship team and volunteers planted native trees and shrubs along the river, stabilized eroding streambanks, constructed woody instream cover habitats, re-created floodplain habitats, enhanced wetlands and worked with local landowners to install livestock exclusion fencing.

These achievements were made possible through support from local landowners, volunteers, Nottawasaga Steelheaders, Mono Headwaters Streams Committee, Headwaters Flyfishers, Township of Adjala Tosorontio and the Town of Mono.

The NRRP is funded by Fisheries and Oceans Canada, the Ontario Trillium Foundation, Patagonia-Tides Foundation, Bass Pro Shops – Cabelas Outdoor Fund, H. John McDonald Foundation, Takla Foundation, Somerville Nurseries and Rumball Excavation.

Thanks to the H. John McDonald Foundation, NVCA began to collect information about the Pine River to determine if the methods used for the Upper Nottawasaga River could be applied to restore sections of the Pine River in Township of Mulmur.

Phragmites Control

Phragmites australis (European Common Reed) is an invasive perennial grass that is spreading rapidly throughout Ontario causing severe impacts in our communities and ecosystems.

It forms thick stands that choke out native vegetation. It limits shoreline access, impeding recreational activities like swimming and boating, and degrading shoreline ecosystems. This tall grass spreads rapidly and can take over wetlands harming turtle, bird and native plant habitat. It is most easily managed when stands are small or still establishing.

Since 2014, NVCA has been working with the Town of Collingwood, Blue Mountain Watershed Trust, Georgian Bay Forever and community groups in the Silver Creek Wetland Complex to remove *Phragmites* in an effort to control the spread of this invasive plant. After pausing in 2020 due to COVID-19, NVCA staff and community volunteer groups got together again in 2021 and removed over 1,190 kg of *Phragmites* from the Collingwood shoreline and nearby watercourses and wetlands.



Working With Volunteers

In 2021, stewardship staff worked with funders and partners to purchase and plant over 9,900 native trees and shrubs along streams, wetlands and in parks.

Typically, over 2,000 volunteers and landowners help with habitat and water quality projects. COVID-19 lockdowns prevented them from helping during the intense spring planting season which presented some challenges. Thanks to some charitable donations and funders, NVCA hired hand planters to ensure the trees were not wasted. Individual landowners also stepped up and planted them beside streams with their families.

Finally, with restrictions lifted in the fall, over 250 volunteers were able to participate in our fall tree planting events.

Funding for these projects was generously donated by Environment and Climate Change Canada, Forest Ontario, Nature Conservancy Canada, TD Friends of the Environment, World Wildlife Fund, Trillium Foundation, Somerville Tree Nursery, and many more.

Planting in Conservation Areas and Other Public Places

With so many people enjoying getting outside into local parks and trails, NVCA completed stewardship projects to give back to the natural areas we enjoy.

This year, staff completed a wide variety of habitat restoration projects including establishing forest, wetland, stream, grassland and pollinator patches. This was possible thanks to the many volunteers and funding partners that made this possible!

The Township of Essa's Healthy Communities Committee teamed up with NVCA's Stewardship team to create a pollinator patch to enhance the park and support native pollinators at LeClair Park in Angus.

Other projects were completed in the Utopia Conservation Area, Petun Conservation Area, Edenvale Conservation Area, Stayner EcoPark, Minesing Wetlands Conservation Area, Tottenham Conservation Area and Dunsmore Park in Barrie.

Mapping

Thanks to partnerships with our municipalities, NVCA's Information Services & Technology team obtained higher resolution topographic data and refined flood hazard limits for select areas. Updates also incorporated flood studies, natural features inventory, and assembling a land use layer for modeling. With these updates, NVCA was able to provide technical recommendation to our municipal partners such as the Town of Collingwood for the Pretty River Dyke maintenance project.

Improving Flood Resiliency, Naturally

In addition to reducing flood risks through planning and regulations, another important tool is enhancing our forests, wetlands and grasslands.

These natural areas allow water to soak directly into the ground to replenish groundwater, instead of flowing directly into streams and rivers. Restoring stream and riverbanks reduces erosion as the roots of the vegetation stabilizes the soil.

Forests also help provide drought resilience. As the snow melts in the spring, the snow under the trees will take longer to melt, reducing the storm peak.

NVCA's Healthy Waters Program also helps farmers increase flood resiliency through providing technical advice and grant incentives.



Servicing Our Watershed Communities

Educating Our Youth

Each year, NVCA educates our youth about the wonders of nature and the environment in our watershed. These topics are often discussed among family members at home, inspiring families and communities to make change.

In 2021, some the topics that were introduced to youth include the 7 R's (refuse, reduce, reuse, repair, recycle, rot, rethink), road salts and the importance of water quality.

Teaching Hope in Climate Change

Targeted towards youth in Grades 4-8, NVCA's Education team developed a new climate change program. Through using games and technology, students will learn about what climate change is and how they and their families can make better choices to create change. As eco-anxiety is as prevalent as ever, program content will focus on the positive work that humans have done and will continue to do to make change.

This program is built on the current green energy education program. With tablets generously donated by Enbridge, students scan QR codes to launch videos about how green energy can help reduce climate change. Staff made new videos to highlight other features at the Tiffin Centre for Education, such as wetlands, and talk about the roles of those areas in climate change.





Our Conservation Areas

Outdoor spaces provide many benefits for humans, including the ability to reduce symptoms of stress, anxiety, depression, and attention deficit/hyperactivity disorder. Regular use of natural areas for physical activity can reduce the risk of mental health problems by 50%.

The benefits of walking or running in a natural setting compared to indoors include greater sense of revitalization and positive engagement, decreased tension, confusion, anger, and depression, increased energy, and a greater intent to repeat the activity.

Providing Nature Spaces for Our Communities

Visitors to NVCA's conservation areas have been increasing every year, but visitor numbers exploded in 2020 when many other activities were not available to the public due to the pandemic. Usage continued to grow in 2021, however, it was the sale of annual parking passes that saw the most significant increase, doubling annually since 2019. This is an indication that visitors value and enjoy the experiences provided by NVCA's conservation areas and recognize the value these greenspaces provide.

New Infrastructure at Utopia Conservation Area

With funding support from the Ontario Trillium Foundation and extensive community fundraising by the Friends of the Utopia Gristmill and Park, accessible, compostable washrooms were installed to compliment the newly resurfaced accessible hiking trails. Interpretive signs were installed along the trail system to highlight the natural features and history of the property.

A new parking lot is available for visitors for passive recreation, like hiking, bird watching or cross-country skiing.

Fundraising efforts are ongoing to continue with the implementation of the 2020 Utopia Master Plan.



New Parking Lot for Petun Conservation Area

The Petun Conservation Area may be located in the far, western reaches of the Nottawasaga Watershed, but that doesn't mean the property is any less important than NVCA's more central properties.

The Petun Conservation Area is one of the highest points along the Niagara Escarpment and part of the Bruce Trail transects its hills and forests. The property also supports an externally managed, seismic monitoring station that measures ground motion which can determine location and magnitude of earthquakes.

The increase of visitors noted at all of NVCA's conservation areas, was particularly pronounced at the Petun Conservation Area. In partnership with the Bruce Trail, Georgian Triangle Anglers Association and the Town of the Blue Mountains, NVCA developed year-round parking to accommodate passive recreational visitors. This project will improve the safety of visitors to the site, allowing them to park within the property boundaries and off the road.





Festivals Canada Funding

Every year, the Festival at Fort Willow welcomes Grade 7 students from across the watershed to learn how the Historic Fort Willow Conservation Area was used before, during and after the war of 1812. For the second year in a row, this annual festival was cancelled.

With support from Local Festivals, a grant through the Federal government, NVCA's Lands and Communications teams recreated the festival and bringing it to students through a virtual field trip. Reenactors, local experts, indigenous representatives and an archeologist provided curriculum-based information that would otherwise have been provided at the festival.

The interactive video will be provided to the Simcoe County District School Board, the Simcoe Muskoka Catholic School Board and Bluewater District School Board.

Excellent Customer Service

Although most staff continued to work remotely in the second year of the COVID-19 pandemic, NVCA continued to provide excellent customer service to our watershed residents.

The Information Management team was able to meet the needs of staff allowing access to centralized information to carry out CA business. The databases and application built over the years provided easy transition to remote working. NVCA's new phone system, with collaborative tools, staff was able to maintain good communication with our partners, the public, and co-workers.

Budget Review

In anticipation of the changes to the *CA Act*, regulations and the move towards categorizing the work of conservation authorities, the Finance team completed a preliminary review of the budget to determine how NVCA may be impacted.

This involved going through many spreadsheets line by line, as well as creating a new potential platform for future budgets as new regulations are approved.

Switch to Hybrid Working

Prior to the COVID-19 pandemic, NVCA was facing increasing pressure to construct a new building to accommodate the growing number of staff. As remote working proved to be a good alternative, staff will be transitioning to a hybrid working model, working from the office and remotely.

NVCA's Management team reorganized the John Hix Administration Building to accommodate shared offices and hoteling stations, preventing the construction of a new building.



Retrained Staff Accessibility

NVCA continues to be committed to identify, prevent and remove barriers that may limit access to our services, facilities and information. We are dedicated to creating a sustainable culture that continues to facilitate inclusive environments for continued success.

All NVCA staff received mandatory accessibility training for documents that are posted to websites to ensure that they are accessible for people using assistive technologies such as screen readers.

IT Security

Protecting interest of the public and our staff, the Information Management team incorporated additional security practices to NVCA's data and back-up data centre. NVCA implemented industry standards for cyber threats, additional securities on network access, and were able to migrate our data to a new back-up data server.

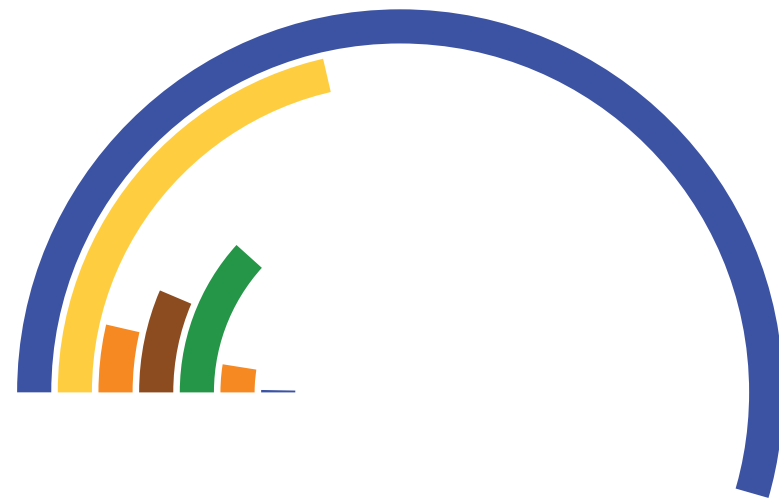
Revenues and Expenses

NVCA's total 2021 operational budget was \$4,949,422. Revenue came from diverse sources, including member municipalities, provincial and federal governments, local non-governmental partners, and user fees for programs and services and the NVCA ended the year with revenue at 5,104,491. Operational expenses for the year came in at \$5,055,642.

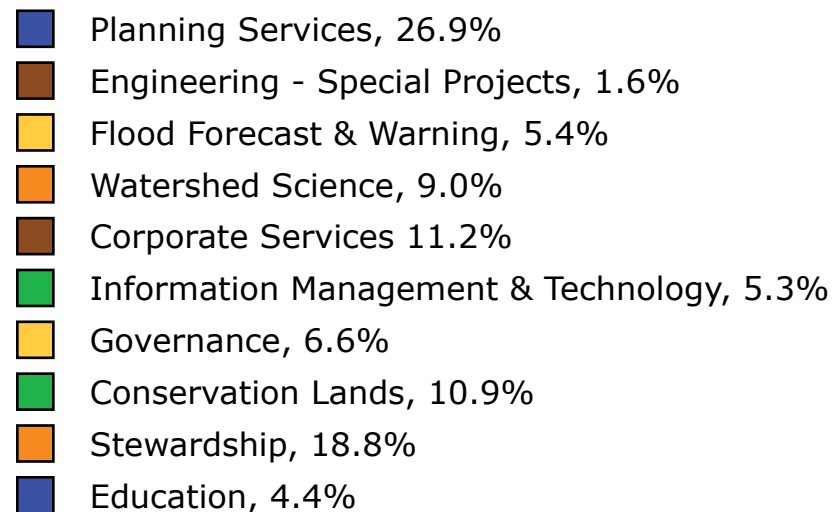
In 2021, NVCA purchased \$65,802 in capital assets (from an approved capital budget of \$293,287), funded through the capital asset levy. The NVCA was able to delay the purchase of some assets due to COVID-19.

This financial information is condensed from year-end, unaudited, statements. The auditor's report for the year ending December 31, 2021, is posted on the NVCA website at nvca.on.ca once approved by the Board of Directors.

Revenues



Expenses



NVCA Staff as of December 2021

CHIEF ADMINISTRATIVE OFFICER

Doug Hevenor

CORPORATE SERVICES

Sheryl Flannagan, Director

Finance & Administration

Haleigh Ferguson, Executive Administrator

Kerry Jenkins, Administrative Assistant

Christine Knapp, General Accountant

Felicia Najudjaja, Accounting Clerk

Kelcey Montag, Accounting Clerk

Kimberly Winder, Receptionist/Administrative Assistant

Communications

Maria Leung, Communications Coordinator

Information Management and Technology

Hendrik Amo, Manager GIS/IT

Robert Bettinelli, Information Management and Technology Specialist

Lyle Wood, GIS Analyst

WATERSHED MANAGEMENT SERVICES

Chris Hibberd, Director

Engineering & Flood Program

Mark Hartely, Senior Engineer

Megan Durkin, Water Resource Engineer

Marianne Maertens, Water Resource Engineer

Michael Saunders, Engineering Technologist

Sheri Steiginga, Flood Operations Field Specialist

Watershed Science

Ryan Post, Manager

David Featherstone, Senior Ecologist

Ian Ockenden, Watershed Monitoring Specialist

Sarah Thompson, Watershed Monitoring Technician

Taryn Arsenault, Watershed Monitoring Technician

Mackenzie Clark, Watershed Monitoring Technician

Planning

Ben Krul, Manager

Emma Perry, Planning Ecologist

Amy Knapp, Supervisor, Planning Services

Regulation & Enforcement

Tyler Mulhall, Regulations Technician

Kate Thomson, Regulations Technician

Meagan Kieferle, Regulations Technician

CONSERVATION SERVICES

Byron Wesson, Director

Lands & Operations

Kyra Howes, Manager

Clint Collis, Lands & Operations Technician

Mike Bacon, Lands & Operations Technician

Spencer Macdonald, Lands & Operations Technician

Environmental Education

Naomi Saunders, Manager

Susan Hall, Education Assistant

Emily Febrey, Environmental Education Associate

Charlotte Driscoll, Environmental Education Associate

Jo-Ann White-McKenna, Environmental Education Associate

Vandita Watts, Environmental Education Associate

Samantha Smith, Environmental Education Associate

Stephanie Zsolnay, Environmental Education Associate

Forestry

Rick Grillmayer, Manager

Stewardship

Fred Dobbs, Manager

Sarah Campbell, Aquatic Biologist

Shannon Stephens, Healthy Waters Program Coordinator

Laura Wensink, Restoration Biologist



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