2024 Annual Report

Nottawasaga Valley Conservation Authority

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Message from the CAO

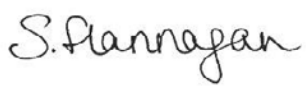
2024 marked the 70th anniversary of Hurricane Hazel. In this devastating storm, 81 people lost their lives. Across the Nottawasaga Watershed, 18 bridges and dams were damaged or destroyed. This anniversary date is a stark reminder of why conservation authorities like NVCA exist.

Every day, NVCA staff worked tirelessly to protect and improve the health of our watershed so that our communities, economies, and wildlife could thrive. They worked with our municipalities, partners, funders, landowners, and volunteers to manage the watershed so that it is resilient to climate change and urban growth.

In 2024, they navigated through changes to the *Conservation Authorities Act* and created strategies and ideas that would lead the organization forward. They embraced these changes and became more, innovative, efficient, and impactful.

Together, the NVCA team protects and preserves the rivers, streams, forests and wetlands deeply connected to the economic and social well-being of the communities we serve. Whether by safeguarding agricultural land, mitigating flooding or maintaining the natural beauty that attracts residents and visitors, their work has a positive impact across the entire watershed.

The coming years will be a transformational period for Nottawasaga Valley Conservation Authority (NVCA) as we welcome a new CAO. Together, we will find solutions, improve customer service and explore new ways to exceed expectations.



Sheryl Flannagan

Interim CAO

Adapting to the Changing *Conservation Authorities Act*

Developing Strategies

Through the changes to the *Conservation Authorities Act*, all conservation authorities in Ontario were directed to produce five strategies: Watershed-Based Resource Management Strategy, Conservation Areas Strategy and Land Inventory, Ice Management Plan, Natural Hazard Infrastructure Asset Management Plan and Natural Hazard Infrastructure Operational Management Plan.

Over the last few years, NVCA has appointed individuals and established working groups to complete these strategies. All of them were complete by December 31, 2024.

The Watershed-Based Resource Management Strategy identifies the risks, issues and challenges in the watershed along with mitigation strategies to address these concerns through an integrated watershed management approach. NVCA will use the information from this strategy to identify current priorities and future direction.

The Conservation Areas Strategy is intended to inform the decision-making related to the lands NVCA owns and controls, including decisions related to the acquisition and disposition of these lands. The Land Inventory captures specific information for each parcel of land owned or controlled by NVCA. It is directly linked to the Conservation Areas Strategy as the land use categories established in the strategy will be applied to each parcel of land in the Inventory.

The Ice Management Plan includes how ice within NVCA's jurisdiction may increase the risk of natural hazards and the necessary steps to mitigate risk. This includes identifying the equipment and resources needed to carry out these steps.

The Natural Hazard Infrastructure Asset Management Plan supports mandatory programs and services related to flood control, low flow augmentation, and erosion control infrastructure. This plan provides details of the flood infrastructures that NVCA manages, as well as an assessment of the structures, processes, and systems.

The Natural Hazard Infrastructure Operational Management Plan summarizes the operation, maintenance, repair, and decommissioning of any water control infrastructure.

More Changes to the *Conservation Authorities Act*

In February 2024, NVCA received notification from the Ministry of Natural Resources that the final changes to the *Conservation Authorities Act* were to be enacted on April 1, 2024.

These changes included:

- Removal of pollution and conservation of land tests in permit application reviews
- Regulation buffer around wetlands reduced from 120 metres to 30 metres
- Annual update of regulations mapping
- Additional exceptions to the types of developments that are regulated
- Reviewing applications within 21 days for completeness and give notice of decision within 90 days for all applications
- Permits may be issued for up to 60 months, including any extensionsUpdates to hearing procedures
- Implementation of stop orders

As soon as NVCA staff received notification of these changes, a transition plan was implemented to ensure legislative requirements were met.

Public Consultations

There were many components of the changes to the *Conservation Authorities Act* that required public consultation. These included 30-day public consultations for the Watershed-Based Resource Management Strategy, the Conservation Areas Strategy and updates to NVCA's planning and regulations fee policy and regulation procedures.

Environmental Education

2024 was a year of growth for NVCA's Education department. From family-oriented programming to lessons geared towards youth from Junior Kindergarten to grade 12, their programs continued to inspire curiosity and a connection with nature. NVCA remained a trusted educational community partner, working with organizations like the Simcoe County District School Board (SCDSB), and Georgian Bay Forever (GBF) and the Rotary Club of Barrie.

In 2024, the Education team engaged with over 12,500 students from 16 municipalities in our watershed—and beyond! Summer Camp Tiffin saw enrolment grow to 80 youth per week, an increase of 20 from last year. Our commitment to bilingual education also expanded, with three French-language educators now on staff, increased French-language training, translated materials, and new course offerings in French. Now, students can enjoy some of our most beloved activities, like our Maple Syrup tours, in both official languages and word is spreading as we grew 44 percent from the previous year.

As we look ahead, the Environmental Education team is eager to build on this momentum. With growing interest in our programs, new partnerships on the horizon, and exciting opportunities to expand our offerings, we're excited for what's to come in 2025.

Tiffin Nature School: A New Chapter

This year, the Tiffin Nature Program took a big step forward, officially becoming the Tiffin Nature School! With our submission of a 'Notice of Intention to Operate an Uninspected Private School' to the Ministry of Education, we've expanded to serve more age groups, offering full-day programming on both Tuesdays and Thursdays.

And it's not just students who are learning—our team also hosted educational events for community organizations, sharing the wonders of nature with even more people.

Georgian Bay Forever: Hands-on Learning for a Healthier Watershed

Thanks to funding from Georgian Bay Forever (GBF), NVCA expanded our hands-on education programs focused on water quality and pollution prevention. The Environmental Education team helped students learn about our local waterways and their impact on them through three key initiatives.

Yellow Fish Road

While participating in Yellow Fish Road, students painted yellow fish near storm drains to remind their communities that only rain should go down the drain. Educators inform students of the importance and limitations of our wastewater systems, and the stencils become a mark of proactivity the students can see as an impact beyond just their time with NVCA.

Microplastics

With more and more news coming out about the impact of microplastics, students had the opportunity to investigate microplastics firsthand. Through this program, students collected water and soil samples, then analyzed them under microscopes to see for themselves the pervasiveness of microplastics in our aquatic ecosystems.

Enviroscape

Enviroscape is a 3D model that helps students get hands-on experience with how our watershed functions. This model helps students visualize how water flows through the landscape and how pollution spreads. Participation in the Enviroscapes program increased by 84% in 2024.

Community Support & Recognition

The Rotary Club of Barrie also partnered with GBF and NVCA, offering a pizza lunch to the first school to sign up for one or more programs—congratulations to Ardagh Bluffs Public School for winning this tasty prize!

Furthermore, Georgian Bay Forever helped expand access to environmental education by offering free programming to all municipalities in our watershed.

Salmon Run in Collingwood

Once again, NVCA joined the See the Salmon Run in the Town of the Blue Mountains, hosted by the Blue Mountain Watershed Trust. Students had the opportunity to witness the incredible salmon migration and gain a deeper appreciation for local fish populations, their habitats, and the importance of conservation efforts.

Adding French-Language Programming

A bilingual expansion saw NVCA's Environmental Education staff receive French-language training, thanks to the support of a retired French principal. This led to the introduction of new fully French programs, and the translation of materials—including the beloved Tiffin Scavenger Hunt—ensuring even more students can engage with nature in their preferred language.

Far-Reaching Education: Inspiring Students Across the Watershed and Beyond

NVCA's Education Team connected with students from 16 municipalities in our watershed—with plans in place for the outstanding two in 2025. Highlights from the year included Grey Highlands students taking part in an overnight environmental education camp at Tiffin, where they explored nature firsthand.

Students from Toronto Christian High School combined adventure with learning when they took NVCA's "Amazing Race" challenge, blending outdoor education, teamwork, and problem-solving.

Camp Tiffin

Camp Tiffin had its most successful year ever, growing from 60 to 80 campers per week! This success was made possible by a dedicated team of staff and counsellors, who led engaging outdoor adventures and encouraged campers to connect with nature in creative ways—like making gifts for the fairies of the forest!

Indigenous Learning

Our relationships with Indigenous partners deepened this year as we began working alongside Indigenous educators who came to the Tiffin Centre, to assist us with programming to more than 900 Grade 5 students from Simcoe County District School Board. Introducing a traditional way of life for the Indigenous peoples who have called Simcoe County their home, predominately Anishinaabe Nations, students learned about opening ceremony and were invited to participate in a smudging with sage to help them move forward in a good way for the day. They also learned about the importance of living respectfully with the land, the importance of sacred plants, Indigenous practical skills like shelter building and fire starting with natural materials, and using flint and steel and bow drills.

Challenges & Looking Ahead

Despite many successes, 2024 also brought challenges for NVCA's Environmental Education team. High staff turnover due to low wages created a knowledge gap, requiring increased training and mentorship for new staff.

To sustain and expand programming, the Environmental Education team diversified and created new revenue streams, offering more specialized, versatile programs. Despite these hurdles, our team remains committed to adapting, innovating, and inspiring the next generation of environmental stewards. With the continued support of our partners and communities, the team looks forward to an exciting future for outdoor education in the Nottawasaga Watershed!

Conservation Lands & Operations

NVCA's Conservation Lands Department is vital in maintaining and improving our Conservation Areas, ensuring they remain safe, accessible, and welcoming for visitors. In 2024, NVCA's Conservation Areas saw an estimated 45,000 visitors. To keep our Conservation Areas safe and inviting, the Lands team worked tirelessly to keep trails maintained, facilities in top shape, and natural spaces thriving.

They also conducted Conservation Area inspections and enforcement to ensure a safe and enjoyable experience for all. From everyday upkeep to major restoration projects, the team worked year-round to protect the natural beauty of our watershed. Additionally, they oversaw a robust schedule of facility rentals which catered to both community organizations and private events, including weddings, while they organized special events like the Spring Tonic Maple Syrup Festival and Festival at Fort Willow.

Managing Edenvale Conservation Area

In 2024, NVCA's Conservation Lands Department took over maintenance of the Edenvale Conservation Area, one of our most popular sites. As part of a long-term improvement plan, the team upgraded the parking area and introduced paid parking. They also removed an aging pavilion that had reached the end of its lifespan. Once known primarily as a paddling launch, Edenvale has now been transformed into a welcoming picnic area for families, offering a more enjoyable and scenic spot to relax and connect with nature.

Developing New Visitor Experiences at the Fort Willow Conservation Area

Fort Willow Conservation Area is a National Historic Site with a rich past dating back to before European settlement of the area. Located on the Nine Mile Portage, the site was once a vital location used in the transportation of goods and people between Lake Ontario and Georgian Bay. Today, visitors can explore scenic trails, and educational displays that bring history to life.

In 2024, the Conservation Lands team began developing interactive signs to help visitors visualize what the Conservation Area looked like during its operation as a supply depot in the early 1800s. With support from Tourism Simcoe County, the team designed the first five signs. This project will continue into 2025, with five more signs planned to enhance the visitor experience further.

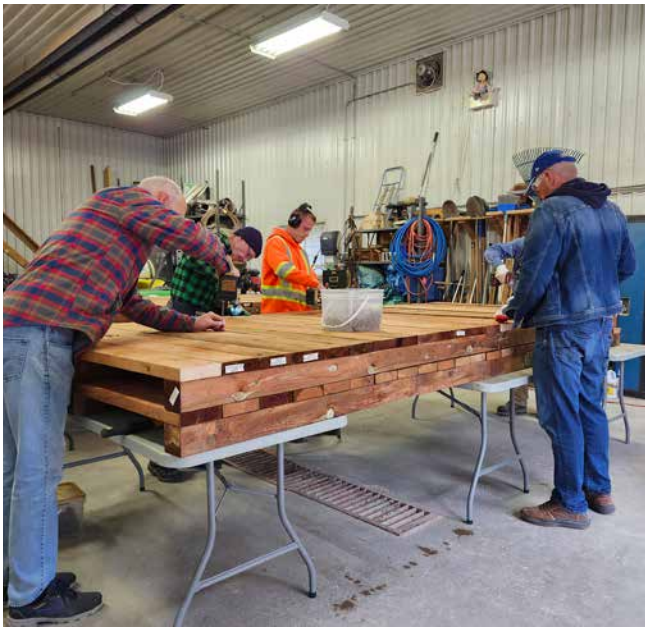
Refreshing Buildings in Petun Conservation Area

At Petun Conservation Area, the Conservation Lands team supported the Georgian Triangle Anglers' Association to improve the building on the property. Upgrades included refreshed decking, repaired siding, and regraded driveway, ensuring the space remains functional and well-maintained for years to come. NVCA helped fund some materials, but most of the project was paid for through fundraising efforts and volunteer labour.

Restoration Work for Utopia Grist Mill Continues

At Utopia Conservation Area, NVCA's Conservation Lands team continued to partner with the Friends of the Utopia Grist Mill to support ongoing restoration efforts at the historic gristmill. Thanks to the dedication of Friends of the Utopia Grist Mill Chair Susan Antler and volunteers, exterior tiles were sourced from Quebec to maintain the mill's original character. With funding from the Rural Economic Development Program through the Ontario Ministry of Agriculture, Food and Rural Affairs the mill's exterior was successfully restored, preserving this local landmark for future generations.

New Boardwalk Coming to Minesing Wetlands



In 2024, NVCA launched a multi-year project in partnership with the Rotary Club of Barrie to install a low-impact boardwalk at the Harold Parker Memorial Trail in the Minesing Wetlands Conservation Area. With the help of Rotary volunteers, NVCA's Conservation Lands team began the assembly of the first 10 sections of the boardwalk.

This boardwalk will extend from the parking area on George Johnston Road on an existing hiking trail. This boardwalk will make the wetlands more accessible, while keeping visitors' feet dry. Over the coming years, NVCA plans to raise additional funds to extend the boardwalk to the end of the trail and install an elevated platform.

Spring Tonic and Festival at Fort Willow

Spring Tonic Maple Syrup Festival and the Festival at Fort Willow returned in 2024 and continued to offer meaningful opportunities for NVCA to connect with the community. Spring Tonic welcomed families to the Tiffin Centre, where they enjoyed maple syrup tastings, pancake breakfasts, and hands-on activities celebrating this sweet Canadian tradition.

Meanwhile, the Festival at Fort Willow transported visitors back to the 1800s, bringing history to life through interactive displays and reenactments. Together, these events fostered a deeper appreciation for Ontario's natural and cultural heritage while strengthening public engagement with NVCA's mission.

Providing Space to Gather in Nature

In 2024, NVCA's Conservation Areas served as vibrant community hubs, hosting a diverse range of events that brought people together, supported important causes, and showcased the versatility of our natural spaces. From educational gatherings like Girl Guides Canada's World Think Day to outdoor adventures with the Barrie Canoe and Kayak Club and Disc Golf Tournaments, NVCA's spaces welcomed visitors of all ages and interests.

The Conservation Lands team was proud to host fundraisers and awareness events, including Ducks Unlimited Canada's 'Duck and Run' fundraiser for conservation, Down Syndrome awareness walks, and Barrie SPCA's inaugural "Petoberfest," which drew 300 attendees and 30 vendors.

Cultural and recreational experiences flourished, with ongoing live-action role-playing events, dinner theatre performances, and a Hallmark movie filming on-site. Conservation-minded groups, including the Ganaraska Hiking Trail Association and Bruce Trail Conservancy, also held meetings and special hikes in our protected areas.

NVCA hosted wedding rentals and ceremony-only bookings year-round, continuing to provide couples with a stunning natural backdrop for their special day. This year, we introduced enhanced wedding packages, ensuring an even more memorable experience. A standout addition was our fire-tending service for outdoor campfires, which quickly became a favourite among couples. To further elevate the ambiance, we also installed string lights in the courtyard outside the Jose Building, adding a warm and inviting glow to evening celebrations.

Seasonal celebrations rounded out the year, with Haunted Halloween, Christmas Markets, and Music Hikes adding a festive touch. Whether for corporate meetings, training sessions, or milestone celebrations, NVCA's Conservation Areas continue to be sought-after destinations for connection, learning, and outdoor experiences.

Grace Thompson Photography

Stewardship

The Stewardship team plays a crucial role in restoring and enhancing the health of our watershed. Through tree planting, stream rehabilitation, and strong community partnerships, they work to protect and improve our natural spaces for future generations. In 2024, the Stewardship team's efforts led to 101 projects that resulted in 16,594 trees planted and 7.6 km of streams and rivers rehabilitated, helping to reduce erosion, improve flood abatement opportunities, restore forests, improve wildlife habitat, improve water quality and aquatic ecosystems, and increase climate resilience across our watershed.

A Legend Retires

After three decades of dedicated service, Fred Dobbs, Manager of Stewardship Services, retired from NVCA at the end of 2024. Throughout his career, Fred played a pivotal role in shaping the health of our watershed. He coordinated the natural channel design for the Black Ash Creek Floodway in Collingwood, restored floodplains along Beeton Creek, and led multiple dam removal projects to improve aquatic habitat. His most ambitious initiative, the Nottawasaga River Restoration Program, set out to restore 10 km of the river, a project that has grown into one of the largest river habitat enhancement efforts in southern Ontario. Fred's impact on conservation will be felt for generations to come, and we wish him all the best in his well-earned retirement!

Tiffin Corridor Grasslands Project

At Tiffin Conservation Area, NVCA's Stewardship team has partnered with Hydro One to transform the hydro corridor into a thriving ecological space while balancing the electrical infrastructure maintenance requirements of the corridor. While Hydro One's priority is maintaining a stable energy system, its infrastructure spans hundreds of acres that hold untapped potential for conservation.

This pilot project explores how grassland restoration can be integrated into Hydro One's standard operating procedures, potentially shaping future land management practices. To measure its impact, NVCA's Stewardship team is monitoring Bear Creek and tracking bird populations, terrestrial species, and water infiltration, gathering critical data on how the site responds to restoration efforts.

Report on the Nottawasaga River Restoration Project

In 2024, the Stewardship team stabilized a total of 387metres of the river banks through the Nottawasaga River Restoration Program! This was made possible with the help of Nottawasaga Futures/South Simcoe Streams Committee, Friends of the Mad River other partners, volunteers and funders. Additionally NVCA completed 200m of bank stabilization and floodplain enhancement on Willow Creek.

In the six years the Nottawasaga River Restoration Project has been running, the team has restored and stabilized a total of 3.2km of banks.

Saving Sheldon Creek – a Triple Bypass Project!

Rivers and streams are like the critical circulatory systems of our watersheds, transporting not only water but also nutrients and sediments across the landscape. The following describes a "Triple Bypass" project designed to improve the health of Sheldon Creek.

Rivers and streams naturally form meanders which are important features for the health of these watercourses. One important function of meanders is to help reduce the energy and speed of water travelling through rivers. When a river is too straight, water moves too quickly and carries too much energy.

Meanders help reduce the speed and energy of the water travelling through a river and decrease the potential for bank erosion and hazardous conditions further downstream. Meanders are also important for habitat diversity with the outside of meander bends supporting deep pools for fish and invertebrates, while the inside of meanders form shallow slow-flowing sand bars which provide nursery habitat for smaller fish.

Along parts of Sheldon Creek, stream banks were historically overgrazed by livestock, which stripped away vegetation and the roots that stabilized the bank and prevented erosion. The resulting rapid erosion of the creek banks in multiple directions created very exaggerated meander curves resulting in the development of a very long, flat stream channel. The flat portions of the creek do not move quickly enough to scour away eroded sediment which builds up on the stream bed and buries the gravelly and rocky portions of the stream bed which provide spawning habitat for fish and crevice habitat for aquatic insects. The lack of shade due to vegetation removal by livestock and the slow-moving water currents in the long flat sections also contributed to increases in summer water temperatures. Parts of Sheldon Creek became too warm to provide good cool-water fish habitat!

To restore this section of Sheldon Creek, NVCA's Stewardship team completed a two-year project to move the creek to its natural, gently meandering form. The team also worked with volunteers to stabilize the creek banks to reduce erosion. This work involved reducing the length of the creek by bypassing three exaggerated meanders and creating new bypass channels with a gently meandering form. The old meanders were converted into oxbow wetlands designed to provide habitat for amphibians, reptiles and birds. Volunteers and NVCA staff helped stabilize creek banks by anchoring cut Christmas trees at the bottom of the slopes, flattening the bank profile with a 20-ton excavator machine, re-applying natural on-site sod mats and planting trees.

Taming the Mad River Continues

In 2023, NVCA's Stewardship team partnered with the Friends of the Mad River to start stabilizing an 85-meter-long eroding bank to protect the adjacent access road and parking lot at the Carruthers Park in Clearview Township. The bank stabilization project was accomplished through the installation of a 40-meter long boulder wall which incorporated topsoil and live vegetation to also improve habitat conditions. In 2024, the pilot project sought improve mid-channel habitat for fish and aquatic insects by installing large granite boulders in the middle of the river. The boulders provided feeding habitats for trout by creating slow moving pockets where these fish can easily hold position while hunting for food. The boulders also provided overhead and lateral cover that protects fish from predators.

The site was identified as a priority location for restoration based on a study completed in 2022. This study documented warm stream temperatures and low trout abundance at this location that would benefit from a targeted restoration project. A fish community survey will be completed in future years to better quantify changes in trout abundance.

Restoring Mono Centre Creek

Mono Centre Creek is a stream in the Niagara Escarpment in the rural Town of Mono that supports native brook trout and other cold-water fish species. At the Bruce Trail Conservancy's Whitetail Refuge property, a man-made pond constructed several decades ago provides a large stagnant water surface area that warms the water flowing out of the pond into Mono Centre Creek. Thanks to funding from the Mono Headwater Streams Committee, NVCA's Stewardship team in partnership with the Bruce Trail Conservancy and GSS Engineering, is developing a restoration plan for the pond that will reduce temperatures in Mono Centre Creek while retaining wildlife habitat provided by the pond. The restoration plan will be based on topographical survey information and an analysis of stream flows and temperature data collected in 2024, thanks to support from the Mono Headwaters Streams Committee.

New Partnership Restores Water Quality and Habitat in Willow Creek

NVCA's Stewardship team partnered with Napoleon and Midhurst Landowners Group to complete phase 1 of the largest stream restoration project that NVCA has ever completed in the Township of Oro-Medonte.

The coordination of this project took several years. Napoleon gave permission to NVCA to restore Willow Creek on their property, while Midhurst Landowners Group contributed funding to stabilize eroding stream banks and control phosphorus. The Government of Ontario also provided funding for the project for the construction of floodplain wetlands adjacent to the creek.

Volunteers secured Christmas trees to the bottom of the eroding banks to create habitat for small fish and stabilize the base of the eroding slopes. An excavator reduced the height of the eroding bank to create a shelf where large cut tree roots with 3-meter long logs attached were installed to further stabilize the creek bank and provide in-water habitat for aquatic species. Live sod mats, shrubs and larger caliper trees were added to the stream bank to create 'instant' habitat. The excavator also created floodplain wetlands along Willow Creek to improve habitat for amphibians, reptiles, mammals, and birds, as well as storing excess water and reducing local flooding.

Forestry

NVCA's Forestry department works with funders, municipalities and landowners to plant forests on private land across the Nottawasaga Watershed. Planting trees helps provide wildlife habitat, shade rivers and streams, and produces oxygen, among many other benefits. Well managed forests also contribute to the economy by providing lumber for construction and wood fiber for products such as paper.

In 2024, 74,840 trees were planted on 24 properties.

Depending on the location and scale of the project, NVCA may be able to cover 25% – 88% of tree plantings for private landowners. In 2024 Tree planting was supported by grants from Forests Canada, Tree Canada, The County of Simcoe, The Town of New Tecumseth, World Wildlife Fund, EcoAction, and a donation from a watershed resident.

Planting Trees is Very Popular, but can be a Tough Sell

In the early 1900s, as settlers established communities in the Nottawasaga Watershed, they started to clear land for farming. Topsoil quickly eroded and the sand underneath was exposed, creating inhospitable conditions for farming and residents. Between the 1960s and early 1990s, the Province of Ontario planted millions of trees to restore lost forests. Fast forward to today, NVCA is the only organization in the watershed that offers large scale tree planting services.

Planting trees helps provide wildlife habitat, shade rivers and streams, and produces oxygen, among many other benefits. Well managed forests also contribute to the economy by providing lumber for construction and wood fiber for products such as paper.

To qualify for NVCA's tree planting program, properties must have at least 2 acres of planting space and be in the Nottawasaga Watershed. The vast majority of planting sites are privately owned, so the plantings must meet the needs and long-term property management goals of the landowner. Participation is not only voluntary, but landowners are required to assist financially. Grants can be used to encourage landowners to host plantings that meet NVCA priorities like wetland and riparian buffers. If financial resources allowed providing a 100% grant would greatly increase targeted plantings.

Planting sites are arranged 1 year in advance of planting. In 2024, 1/3 of the properties that NVCA's Forester visited were suitable for NVCA's Forestry Program. The rest of the sites were too wet, stoney, or the proposed planting was unaffordable to the landowner.

In the coming year, the Forestry department is exploring new opportunities to plant wetland buffers to enhance the watershed through flood water retention, improve water quality and habitat diversity.

Watershed Science

NVCA's Watershed Science team monitors the rivers, streams, groundwater, wetlands, and forests in the Nottawasaga Watershed to identify stressors impacting the local environment. The information this team collects can measure the effectiveness of environmental restoration projects, the impacts of new development or other changes impacting the landscape.

Their work can help shape land use planning and policy decisions and determine if these policies are working.

NVCA's Watershed Science team provides cost-effective monitoring for municipalities, gathering local data and watershed-wide insights into human impacts. Collecting information on a watershed scale reduces redundancy and informs effective management.

Development of the Watershed Monitoring Strategy

In 2023, the Watershed Science team began developing a Watershed Monitoring Strategy to improve efficiency while aligning with NVCA's Strategic Plan. The first section completed was the surface water discipline.

In 2024, the Watershed Science team began using the surface water discipline in their work. They determined the long-term monitoring sites and began implementing effective collection methods.

The team also incorporated a climate change lens to the monitoring strategy. Although this is a new discipline, the team incorporated many parameters that they already measure. These include stream health and groundwater monitoring. Currently, the team analyzes the data to extract information about temperature change, water quality and impacts on fish. Additional analysis will be completed to measure the impacts of climate change, including change in air temperature and the flow of water in streams and rivers.

The Watershed Science team will complete the groundwater and natural heritage components of the Watershed Monitoring Strategy in the following years.

What lives in Petun Conservation Area?

Since 1960, NVCA has secured over 5,300 hectares of mostly environmentally sensitive areas within the watershed. While NVCA operates 11 active conservation areas, the majority of these lands are closed to the public to protect environmentally significant and natural hazard features.

To support ongoing and future management planning for these properties, staff ecologists are conducting biological surveys to determine the significance and sensitivity of each property. These surveys will contribute to the development of management plans that will guide future use and development of the properties.

In 2024, NVCA's watershed ecologist visited Petun Conservation Area to conduct a review and inventory of various features, including rivers, escarpment slopes, vegetation communities, and plant and wildlife diversity.

A secondary benefit of these biological inventories is their use as local indicators of climate change. The Watershed Science team will be starting a pilot project in 2025 to monitor the impacts of climate change on vegetation communities of select NVCA properties.

Auditing the Wetland Offsetting Program

In 2021, NVCA introduced the *Achieving Net Gains through Ecological Offsetting* guidelines. These guidelines aim to ensure that further losses of regulated natural heritage features within the Nottawasaga Watershed are limited and, where appropriate, are offset with equal or greater gains in area, value, and function.

Starting in 2024, NVCA's Stewardship team used the funds collected through these guidelines to establish new wetlands to help improve flood water retention, resiliency to drought, water quality and habitat diversity. To ensure these new features develop as wetlands with all their watershed benefits, the Watershed Science team initiated a 10-year monitoring project. If the wetlands are not performing as expected, the data gathered will provide NVCA staff with information to improve the habitats and functionality of these wetlands.

The Watershed Science team also worked to refine the *Net Gains* policy to ensure the process will use the ecological offsetting funds for the greatest watershed benefit.

Report on NVCA's Climate Change Action Plan

In 2022, NVCA's Board of Directors approved the 2022 – 2025 NVCA Climate Action Plan. The plan is a part of NVCA's continued response to climate change and our commitment to face the challenges it poses to our communities and ecosystems.

Encompassing all NVCA departments, this plan outlines seven goals and 34 actions that capture the corporate strategic directions and program objectives.

An internal Climate Change Action Plan working group was formed in 2023 to aid and report on the implementation of climate change work items. As part of this initiative, the working group produced the Climate Change Action Plan Report: Measuring Our Progress to summarize NVCA's work to date.

Overall, NVCA has completed 11 of 41 tasks, with five marked as ongoing.

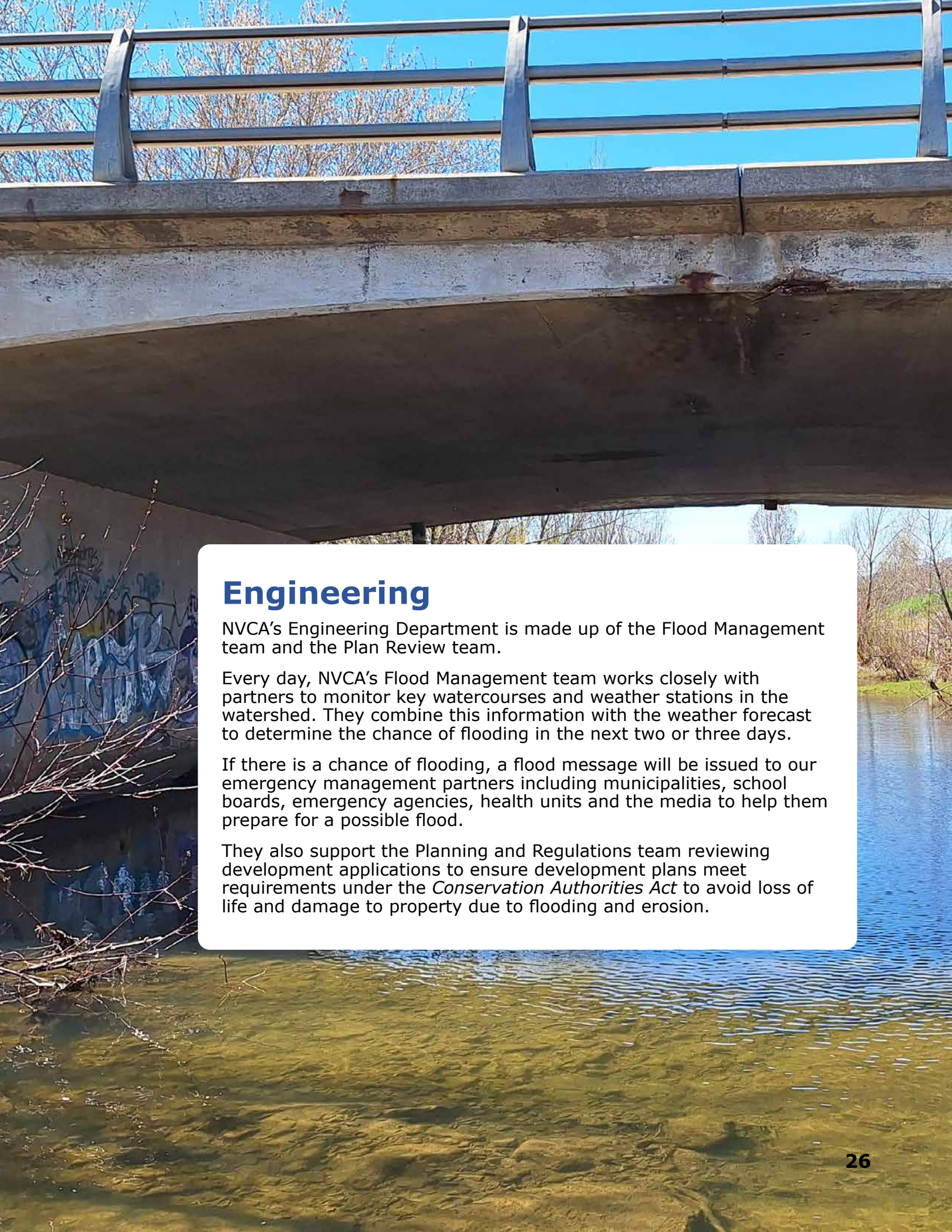
Source Water Protection

Source Water Protection refers to the protection of lakes, rivers and aquifers that provide municipal drinking water from overuse or contamination.

NVCA, along with the Lake Simcoe Region Conservation Authority and Severn Sound Environmental Association, make up the South Georgian Bay Lake Simcoe Source Protection Region. This region spans over 10,000 km^2, from the Oak Ridges Moraine in the south to the Canadian Shield in the north. It contains 52 municipalities, three First Nations communities, 291 municipal supply wells, and 16 municipal surface water intakes.

In 2024, NVCA reviewed source water protection plans for a new well in the Town of Shelburne and initial planning for wells or well upgrades in Clearview, New Tecumseth and Oro-Medonte. This work is funded under a newly renewed agreement with the province of Ontario.

NVCA continues to perform its delegated responsibilities as the Risk Management Official and Inspector for 10 of our member municipalities for implementing the regulations of Source Water Protection under the *Clean Water Act*.



Engineering

NVCA's Engineering Department is made up of the Flood Management team and the Plan Review team.

Every day, NVCA's Flood Management team works closely with partners to monitor key watercourses and weather stations in the watershed. They combine this information with the weather forecast to determine the chance of flooding in the next two or three days.

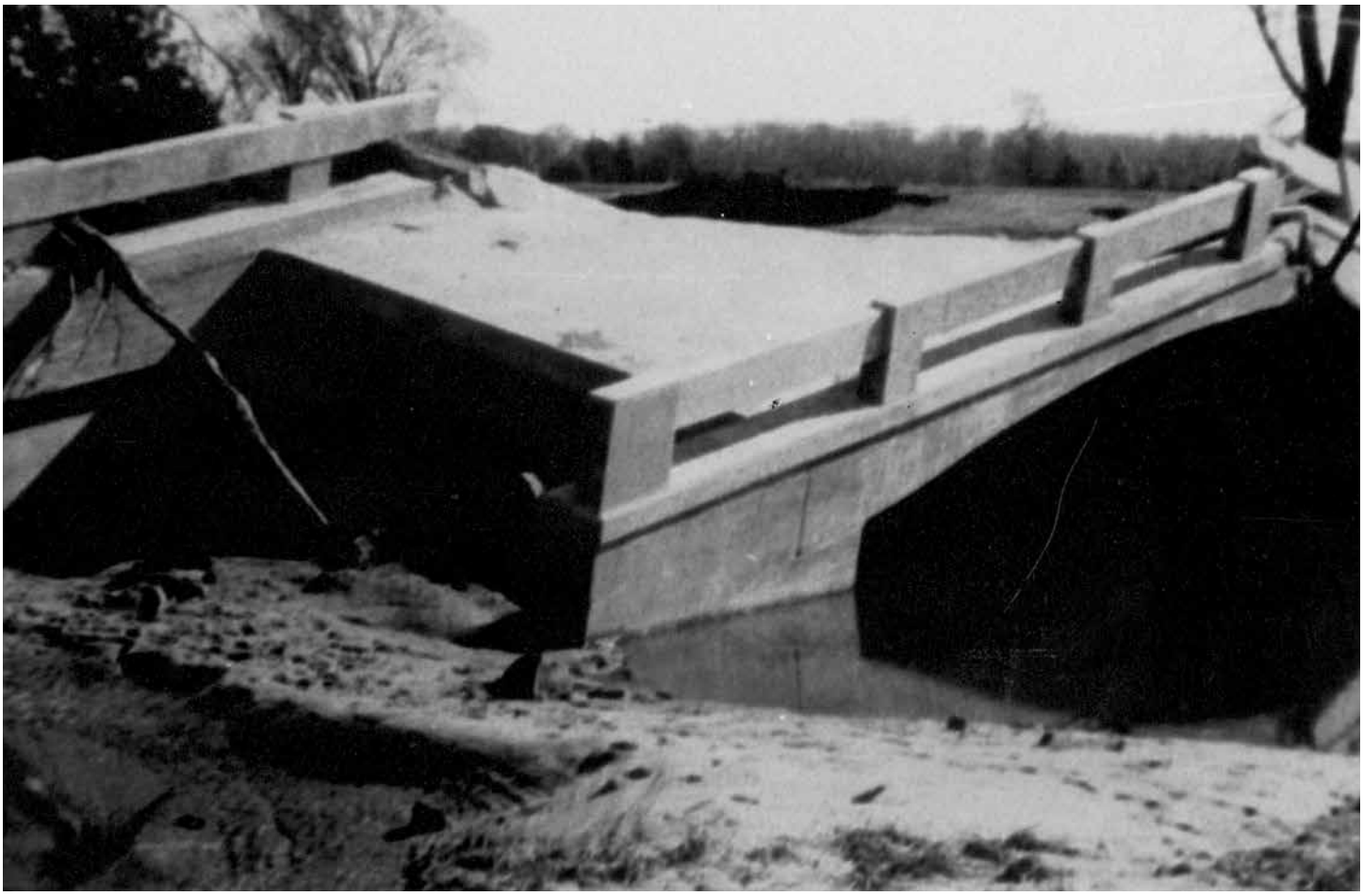
If there is a chance of flooding, a flood message will be issued to our emergency management partners including municipalities, school boards, emergency agencies, health units and the media to help them prepare for a possible flood.

They also support the Planning and Regulations team reviewing development applications to ensure development plans meet requirements under the *Conservation Authorities Act* to avoid loss of life and damage to property due to flooding and erosion.

Hurricane Hazel

In 2024, the Flood Management team marked the 70th anniversary of Hurricane Hazel, an event that continues to serve as a pivotal reminder of the risks associated with urban flooding. It is a time for reflection on the evolving nature of stormwater management in our watershed, particularly the need to evaluate stormwater both pre- and post-development.

Prior to *Conservation Authority Act* changes, NVCA was responsible for both stormwater quantity and quality management. Today, municipalities focus on the quality of stormwater, while NVCA's role centers around its quantity. As development continues across the watershed, it is crucial that stormwater management in both urban and rural areas are thoroughly reviewed and carefully managed.



Creemore Flood Study

In 2024, the Engineering and Information Management teams completed the Phase 1 of the Creemore Flood Study, which involved running simulations to assess how a severe storm could impact the Town of Creemore.

The study focused on evaluating the effectiveness of the Mad River in removing water from the town during heavy rainfall, as well as examining how development and increasing hard surfaces have affected water flow and drainage. The findings from this study will help guide future flood management strategies and improve Creemore's resilience to extreme weather events.

Pretty River Dike

The Pretty River Dike cleanup and maintenance project has been an ongoing effort for the Flood team since 2021. The Flood team has been focused on removing vegetation and smaller trees from the dike to ensure its integrity and improve its effectiveness in managing flood risks. This work has been supported by Water and Erosion Control Infrastructure (WECI) funding.

In 2023, vegetation and smaller trees were removed on the east side of 'Section 4', from Hume St and Pretty River Parkway. In 2024, the remaining portions of Section 4 were completed, marking the end of Stage 1 of the project. Larger trees were left intact to avoid compromising the dike's structure, as their roots could potentially undermine its stability.

Stage 2 of the project will begin in 2025, with a focus on geo-technical inspections to assess the dike's clay core and determine if it continues to function as designed. This will be the first investigation of the dike's core since its construction in the 1970s, and the findings will guide future maintenance and necessary repairs to ensure the dike remains effective in protecting the community from flooding.

Flood Structures

NVCA is responsible for managing four dams in the Nottawasaga Watershed. To ensure they are functioning properly and do not pose a public safety risk, the Engineering team recently completed Dam Safety Reviews for Tottenham Dam and New Lowell Dam. In 2024, the Engineering team applied for funding through the WECI Program to address the high priority recommendations.

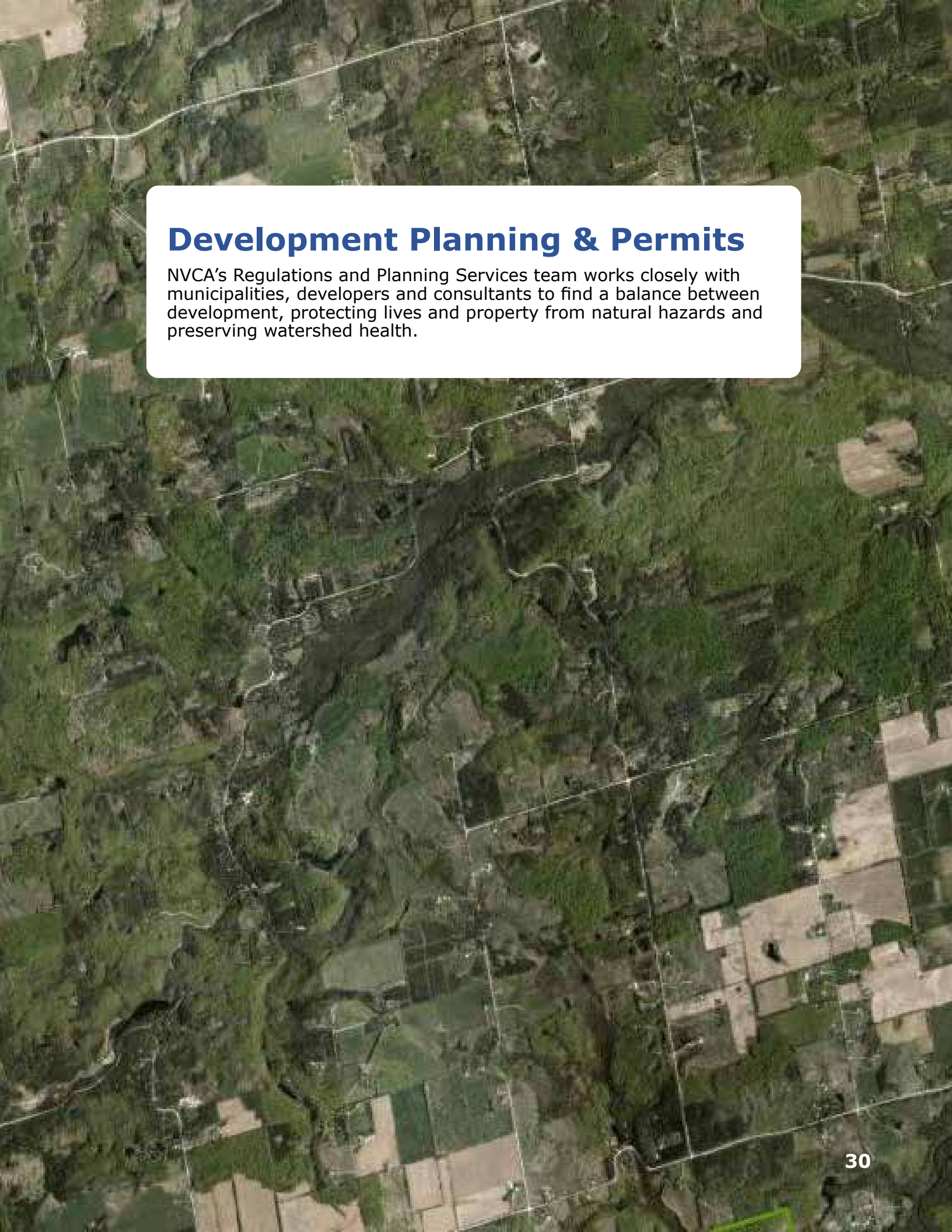
Over the next few years, the Engineering team plans to review the lifecycle costs of maintaining dams and weigh those against the costs of decommissioning these structures.

Reviewing the Engineering Review Process

Between 2022 and 2024, the Engineering team received over 5,500 permit application review requests and inquires.

In August 2024, the Manager of Engineering Services brought forward a staff report to the Board of Directors summarizing her observation and assessment of why the engineering team has been having a bottleneck and suggested a plan to incrementally improve the broader review process.

The Board of Directors provided incredible support and provided $200,000 in the 2025 budget to add two staff members to the Engineering team. As this was an urgent matter, the Board also approved staff to begin the hiring process in October 2024.



Development Planning & Permits

NVCA's Regulations and Planning Services team works closely with municipalities, developers and consultants to find a balance between development, protecting lives and property from natural hazards and preserving watershed health.

Updating the Permit Review Process

In February 2024, NVCA's Planning and Regulations team was notified that new changes to the permit review process would be enacted on April 1, 2024. Staff worked diligently to implement changes to meet the requirements of the new legislation.

In March, the Regulations and Planning Services team informed municipal partners of the changes and established a temporary policy to support the transition.

Over the next month, the Regulations and Planning Services team implemented a series of changes for the transition. They attended over 30 Conservation Ontario webinars to learn and prepare for the changes.

In 2024, the Regulations and Planning Services team updated planning procedures and guidelines to reflect new regulations, including creating an internal committee to ensure that permit applications will be reviewed for completeness within 21 days.

One of the largest changes in the legislation update is reducing the buffer around wetlands from 120 metres to 30 metres. As a result, the amount of land regulated in the Nottawasaga Watershed decreased 18.6%.

Through this process, the Information Management team updated NVCA's regulation mapping, while Communications staff updated NVCA's website to inform and guide property owners of the upcoming changes.

Changes to *Conservation Authorities Act* provided the opportunity for program review

Navigating the changes to the *Conservation Authorities Act* was also a good opportunity for the Regulations and Planning team to adjust operations to become more efficient and more solutions oriented.

In 2023, the Regulations and Planning teams were merged. This transition continued in 2024 as senior planner and development review assistant positions were added to the team.

The team also established a prescreening process and adopted templates developed by Conservation Ontario to update relevant documents and procedures. The team also developed multiple standard operation procedures to process permits. Staff also started a process to call or email applicants to let them know when a file is in review and added a start and stop clock in internal software to improve timeline tracking.

Since establishing these processes, staff have already been able to cut down on permit review time as most applications did not require additional studies, allowing them to focus on more complex files.

The team has also launched a new e-permitting platform that will further decrease administrative work and help staff focus on helping property owners and review files more efficiently.

Supporting Large Development Projects

Many municipalities in the Nottawasaga Watershed started to plan new infrastructure projects for their communities. This includes the Honda plant expansion in the Town of New Tecumseth, a new high school in the Town of Wasaga Beach and the Town of Collingwood Grain Terminal revitalization project.

NVCA’s Planning and Regulations team prioritizes files such as these to support these projects. They reviewed proposals to ensure flooding, erosion and other natural hazards were considered. The team also provided the best available scientific information to support these decisions.

Regulations Mapping

Under the changes to the *Conservation Authorities Act,* NVCA must now annually update regulation mapping to show the areas in the Nottawasaga Watershed where development is prohibited.

In 2024, the Regulations and Planning, Engineering, and Information Management teams began updating NVCA's regulation mapping. The updated mapping includes approved flood hazard studies, 2017 shoreline hazard studies, and slope hazard identification. Staff also used modern technologies and collection techniques and visited properties to update the mapping.

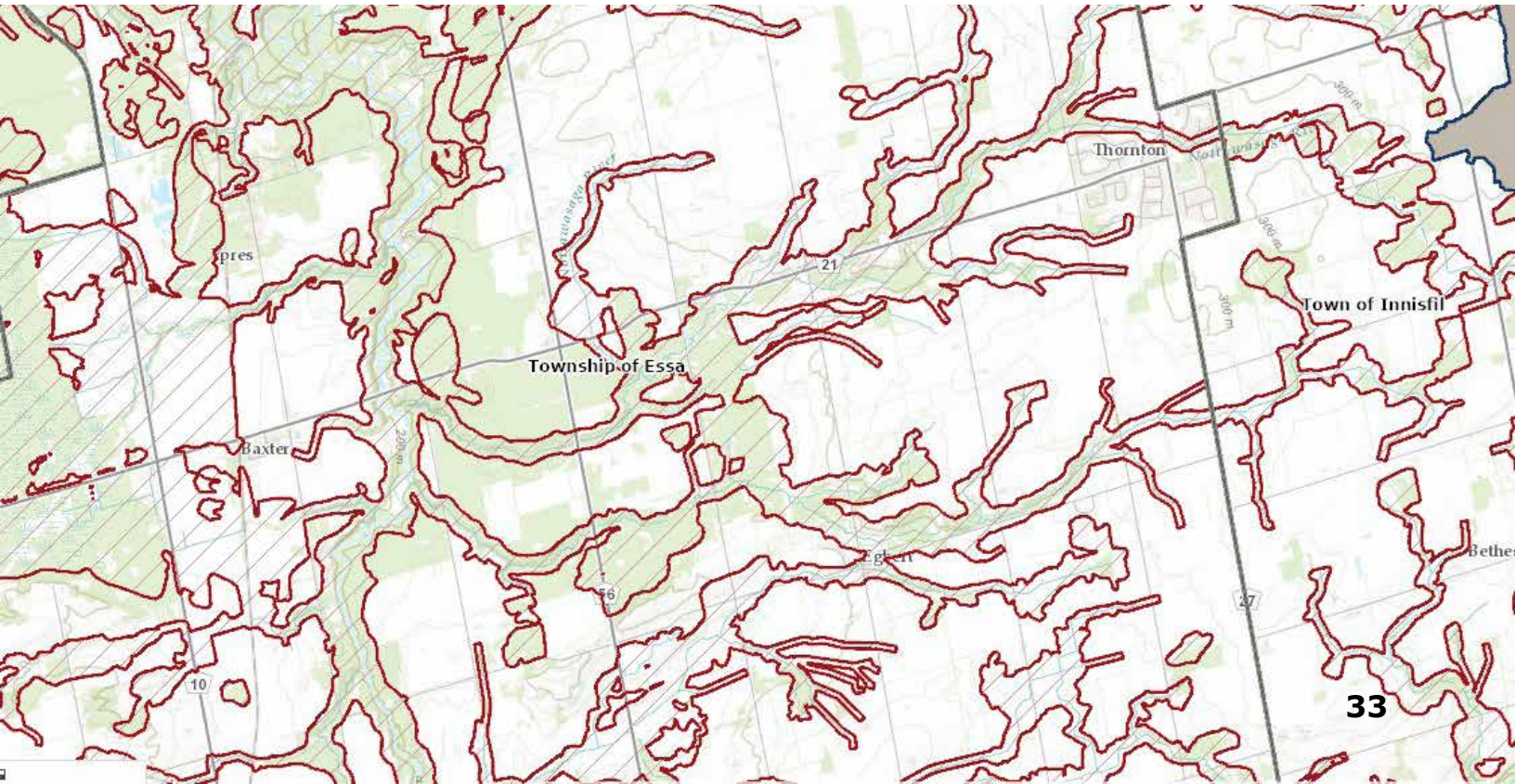
In total, 5,800 wetland boundaries, 580 hectares of slope stability hazard and 42 kilometres of shoreline were updated.

As public consultation is required for major updates to NVCA's regulation mapping, the Regulations and Planning team worked with the Communications team to launch a two-part public consultation process. In 2024, member municipalities were consulted. Once this feedback is incorporated in 2025, NVCA will invite the public to participate in a 30-day public consultation process.

Report on Permit Timelines

Under the changes to the *Conservation Authorities Act*, NVCA must review permit applications within 21 days and notify property owners if their applications are complete or if there is missing information. Regardless of the type of permit, NVCA staff have 90 days to issue a decision on permit applications, once they have been deemed complete.

In 2024, NVCA's Regulations and Planning staff issued 523 permits with an average timeline of 20 days. Major permits were issued within 90 days 95% of the time, and Minor permits were issued within 90 days 100% of the time.



Corporate Services

NVCA's Corporate Services team include Human Resources, Finance, Governance, Communications and Information Management. These teams provide critical support to other departments within NVCA.

Promoting NVCA

To help residents and partners across the watershed take advantage of all the services that NVCA offers, the Communications team works with all departments to promote programs through various communication channels.

In 2024, NVCA's Communications team attended more than 15 community events to connect with residents and communities to share local information about the watershed. Attendees were eager to learn about how their community is connected to the watershed, about invasive species and the environmental health of their local communities.

The Communications team also began working with the Ontario Resource Centre for Climate Adaptation to create a corporate communications strategy to help watershed residents understand the issues facing the Nottawasaga Watershed and engage with NVCA's services. The strategy will be completed in 2025.

Supporting the Changes to the *Conservation Authorities Act*

As NVCA prepared for the changes to the *Conservation Authorities Act*, Corporate Services supported other teams in this transition.

The Communications team prepared simplified resources to inform NVCA's municipal partners and property owners of the upcoming changes.

The Communications team also supported the development of the Watershed-Based Resource Management Strategy, which identifies the risks, issues, and challenges the Nottawasaga Watershed faces, as well as the mitigation strategies to address these concerns. The Information Management team worked with the Engineering and Regulation and Planning teams to update regulation mapping to ensure it follows the requirements of the updated *Conservation Authorities Act.*

The Finance team presented a new budget format that captures the legislated requirements for Categories 1, 2 and 3. Category 1 are mandatory programs and services under the *Conservation Authorities Act*; Category 2 are municipal programs and services provided at the request of a municipality; and Category 3 programs are other programs and services an authority determines are advisable.

Information Management

NVCA's Information Management Department is responsible for making sure NVCA staff have access to accurate information systems. This includes maintaining our internal datasets and storage, working with departments to update their systems, and developing applications that create efficiencies for workflows.

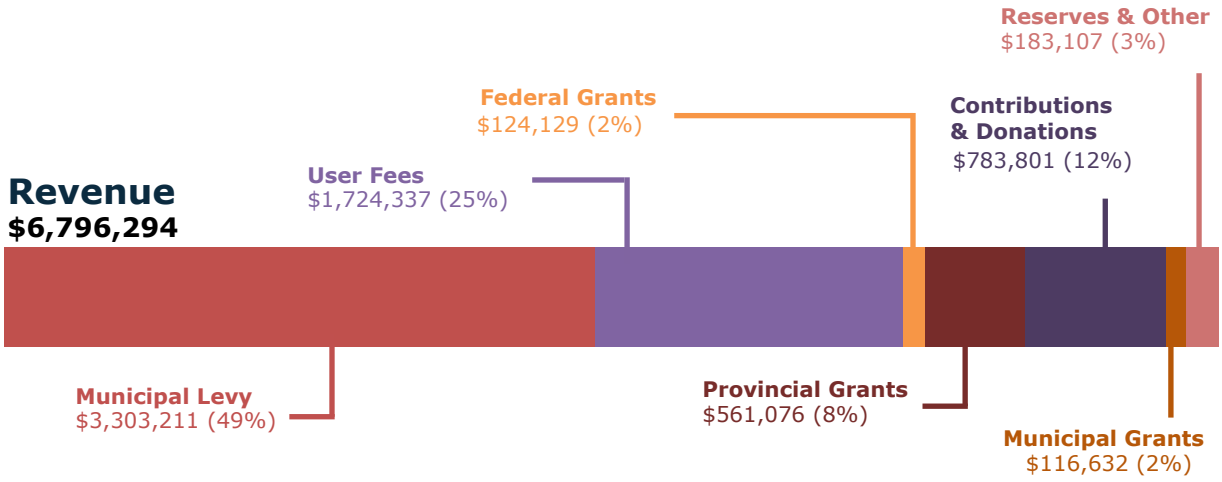
Digital Information Upgrades

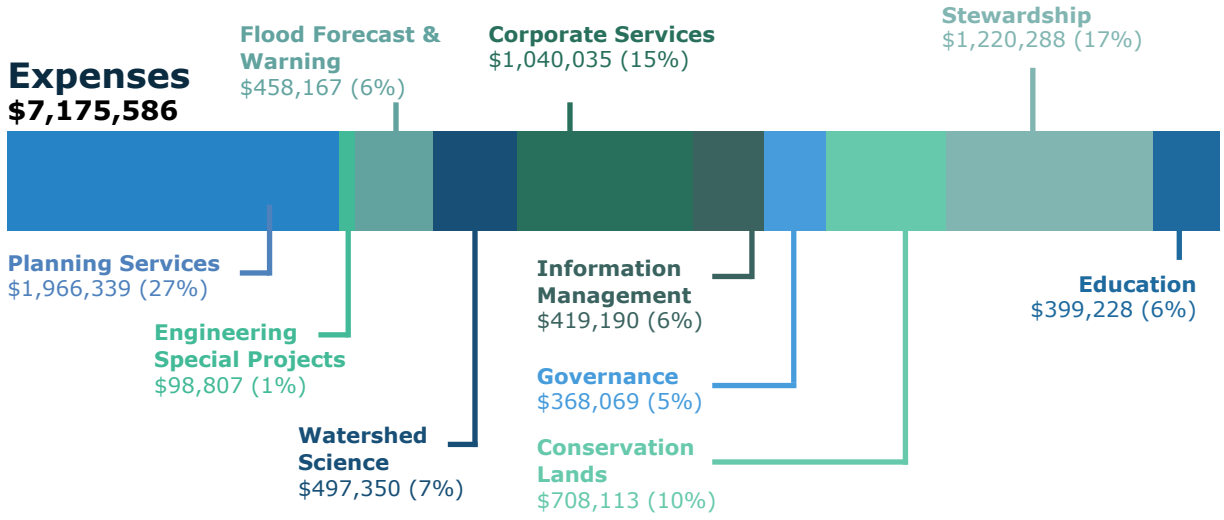
In 2024, NVCA's Information Management team made key upgrades to enhance efficiency, security, and data accessibility. They continued IT infrastructure replacements, installing new servers, backup hardware, and a centralized storage network to improve communication and data management.

A new GIS platform using Open GIS was introduced, supporting NVCA's business units with specialized mapping projects. The team also worked on developing an Open Data platform, ensuring greater transparency and accessibility of information. In line with updates to the *Conservation Authorities Act*, they maintained and updated core datasets to meet new regulations. Additionally, they made progress on NVCA's new e-permitting platform, set to launch in March 2025, streamlining the permitting process for landowners and developers.

Financial Report

NVCA's total 2024 operational budget was $6,444,677. Revenue came from diverse sources, including member municipalities, provincial and federal governments, local non-governmental partners, and user fees for programs and services. NVCA ended the year with revenue at $6,796,294 while operational expenses for the year came in at $7,175,586. In 2024, NVCA purchased $153,310 in capital assets (from an approved capital budget of $467,870), funded through the capital asset levy. This financial information is condensed from year-end, unaudited, statements. The auditor's report for the year ending December 31, 2024, will be posted on the NVCA website at nvca.on.ca once approved by the Board of Directors.





NVCA Staff as of December, 31 2023

INTERIM CHIEF ADMINISTRATIVE OFFICER
Sheryl Flannagan

CORPORATE SERVICES
Sheryl Flannagan, Director
Kerry Jenkins, Administrative Assistant
Christine Knapp, General Accountant
Kimberly Winder, Receptionist/Administrative Assistant
Megan Muxlow, Accounting & Payroll Clerk

Communications
Maria Leung, Senior Communications Specialist
Chris Parker, Communications Assistant

Information Management & Technology
Hendrik Amo, Manager
Robert Bettinelli, Information Management and Technology Specialist
Lyle Wood, GIS Analyst
Darcy Persad, GIS/Database Technician

CONSERVATION SERVICES
Kyra Howes, Director

Lands & Operations
Mike Bacon, Manager, Lands & Operations

Lands & Operations Technicians:
- Clint Collis,
- Spencer Macdonald
- Dylan Allen

Elise Barr-Klouman, Community Engagement Facilitator
Reg Fraser, Custodian

Environmental Education
Naomi Saunders, Manager, Environmental Education

Environmental Education Assistants
- Susan Hall
- Amanda McGibbon

Environmental Education Associates:
- Bob Cole
- Katherine Herington
- Katie Johnson
- RJ Costello
- Nicole Vankooten

Forestry
Rick Grillmayer, Manager

Stewardship
Fred Dobbs, Manager, Stewardship Services
Sarah Campbell, Aquatic Biologist
Shannon Stephens, Healthy Waters Program CoordinatorLaura Wensink, Restoration Biologist

WATERSHED MANAGEMENT SERVICES
Chris Hibberd, Director

Engineering & Flood Program
Dalia Al-Ali, Manager
Sheri Steiginga, Flood Operations Specialist
Will Flavelle, Flood Operations Specialist
Josée Courtemanche, Water Resource Engineer
Megan Durkin, Water Resource Engineer
Michael Saunders, Engineering Technologist
Charles Springall, Engineering Technologist

Watershed Science
Ian Ockenden, Manager
Taryn Arsenault, Watershed Resources Technician
Anna McClymont, Watershed Monitoring Specialist
Sheri Steiginga, Source Water Coordinator

Planning and Permits
Ben Krul, Manager
Greg Marek, Senior Planner
Meagan Kieferle, Senior Regulations Officer
Emma Perry, Planning Ecologist
Mike Francis, Watershed Ecologist

Development Review Assistants:
- Christine Wilcox,
- Mariella Kaczmarczyk

Planners:
- Tyler Boswel
- Davin Metheral
- Tyler Mulhall
- Justin Dodds
- Katelyn Wardlaw

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