

02-23-AAC

Nottawasaga Valley Conservation Authority

Jun 29, 2023 at 10:00 AM EDT to Jun 29, 2023 at 12:00 PM EDT

Agenda

1. Call to Order

2. Motion to Adopt the Agenda

Recommendation:

RESOLVED THAT: the agenda for the Agricultural Advisory Committee 02-23-AAC dated June 29, 2023 be approved.

3. Declaration of Pecuniary and Conflict of Interest

4. Adoption of Minutes

The minutes of the Agricultural Advisory Committee meeting 01-23-AAC dated on March 30, 2023 was approved by the Board of Directors during the 04-23-BOD dated on April 28, 2023.

5. Presentations

5.1. Watershed Health Checks - The State of our Natural Resources

Ian Ockenden, Acting, Watershed Science Supervisor will conduct a presentation regarding Watershed Health Checks - The State of our Natural Resources.

Recommendation:

RESOLVED THAT: the Agricultural Advisory Committee receive the presentation regarding Watershed Health Checks - The State of our Natural Resources.

6. Update on Bill 23 and 97

Chris Hibberd, Director, Watershed Management Services will speak about the updates regarding Bill 23 and 97.

7. Other Business

8. Adjourn



01-23-AAC Minutes
Nottawasaga Valley Conservation Authority
March 30, 2023 at 10:00 AM EST

Attendance

Members Present:

Dave Ritchie, Simcoe County Federation of Agricultural

Ted Woods, Christian Farmers Assoc.

Dave Spring, Simcoe County Federation of Agricultural

Chair, Donna Jebb, Simcoe County Federation of Agricultural

Jody Mott, Holland Marsh Muck Farmers

Deputy Mayor Paul Van Staveren, NVCA Member

Vice-Chair, Cllr. Kevin Eisses, NVCA Member

Cllr. Pieter Kiezebrink, NVCA Member

Members Absent:

Hugh Simpson, Grey County FA

Colin Elliot, North Simcoe Soil and Crop Assoc.

Andy Vanniekerk, North Simcoe Soil and Crop Association

NVCA Staff:

Doug Hevenor, Chief Administrative Officer

Chris Hibberd, Director, Watershed Management Services

Byron Wesson, Director, Conservation Services

Meagan Kieferle, Senior Regulations Officer

Sarah Campbell, Aquatic Biologist

Kerry Jenkins, Administrative Assistant/Recorder

1. Call to Order

Doug Hevenor, Chief Administrative Officer called the meeting to order at 10:16am. He asked that everyone present introduce themselves.

Dave Ritchie put forth a motion to vote Donna Jebb in the committee.

Recommendation:

RES: 01-23

RESOLVED THAT: Previous member, Donna Jebb (Simcoe County Federation of Agricultural) be voted in as a member of the 2023 Agricultural Advisory Committee.

Moved by: Deputy Mayor Paul Van Staveren

Seconded by: Dave Ritchie

Carried;

2. Motion to Adopt the Agenda

Recommendation:

RES: 02-23

Moved by: Cllr. Pieter Kiezebrink

Seconded by: Ted Woods

RESOLVED THAT: the agenda for the Agricultural Advisory Committee 01-23-AAC dated March 30, 2023 be approved.

Carried;

3. Declaration of Pecuniary and Conflict of Interest

None declared.

4. Approved Minutes

Approved by Consent

(Board of directors approved the minutes during the 11-22-BOD meeting)

5. Elections

Chair

Dave Ritchie nominated Donna Jebb for the position of Chair.

Donna Jebb accepted.

Donna Jebb nominated Cllr. Kevin Eisses for the position of Chair.

Cllr. Kevin Eisses accepted.

Donna Jebb was declared as Chair

Vice-Chair

Donna Jebb nominated Cllr. Kevin Eisses for the position of Vice-Chair.

Cllr. Kevin Eisses accepted.

Cllr. Kevin Eisses was declared as Vice-Chair

Recommendation:

RES: 03-23

RESOLVED THAT: Donna Jebb be declared as Chair and Cllr. Kevin Eisses be declared as Vice-Chair.

Moved by: Dave Ritchie

Seconded by: Jody Mott

Carried;

6. Administration

Chair Donna Jebb briefly went over the AAC Terms of Reference. It was noted that there is a vacant spot for Dufferin County Federal Agricultural.

7. Presentations

7.1 Permitting Process including Agricultural Drain Cleanout

Megan Kieferle, Senior Regulations Officer conducted a presentation regarding NVCA's Permitting Process including Agricultural Drain Cleanout.

Discussion:

NVCA staff informed members that permits are valid for 2 years. If a permit holder is requiring a renewal or amendment, kindly let staff know prior to the 30 day mark. The fee is ½ the original price of the permit and will be valid for another 2 years. If the permit is expired, the permit holder will need to re-apply and pay the full fees again.

It was noted from NVCA staff, that if farmers would like to put in their own drainage system and clean it every year, they would require a permit from the NVCA if it's regulated, even for the clean outs.

Questions were asked regarding the initial 21 days after permit applications get submitted. NVCA staff informed the members that permit applications do not go to a Regulations Technician/Officer right away. The Development Review Coordinator reviews all permits applications that get sent in to ensure the permit applications have all the necessary documents that the NVCA requires. If not, the Development Review Coordinator will reach out to the Applicant. Once the application is deemed complete, the Development Review Coordinator will then send the application to the appropriate Regulations Technician/Officer.

It was highly noted from NVCA staff to request a pre-consultation. Pre-Consultations can help prevent any bumps on the road as well as a potential faster application process.

7.2 NVCA's Role in Invasive Species

Sarah Campbell, Aquatic Biologist, conducted a presentation regarding NVCA's Role in Invasive Species.

Discussion:

Questions were asked regarding if people should burn infested wood. NVCA staff are asking to help generalize the infested wood by leaving it where it is.

Members mentioned which invasive species affecting their farms:

Gypys Months (Lymantria Dispar Dispar)

Spotted lanternfly (Lycorma delicatula)

Canada Flea (Spiny Waterflea)

8. Tentative 2023 Meeting Dates

Recommendation:

Approved by Consent

RESOLVED THAT: the meeting dates for 2023 will be as follows:

2nd Quarter Date: Thursday June 29, 2023

3rd Quarter Date: Thursday September 28, 2023

4th Quarter Date: Thursday December 7, 2023

subject to change - majority vote is required

9. Other Business

There was no other business.

10. Adjourn

Recommendation:

RES:04-23

Moved by: Jody Mott

Seconded by: Dave Ritchie

RESOLVED THAT: this meeting adjourn at 12:12pm, to meet again on June 29, 2023 or at the call of the Chair.

Carried;

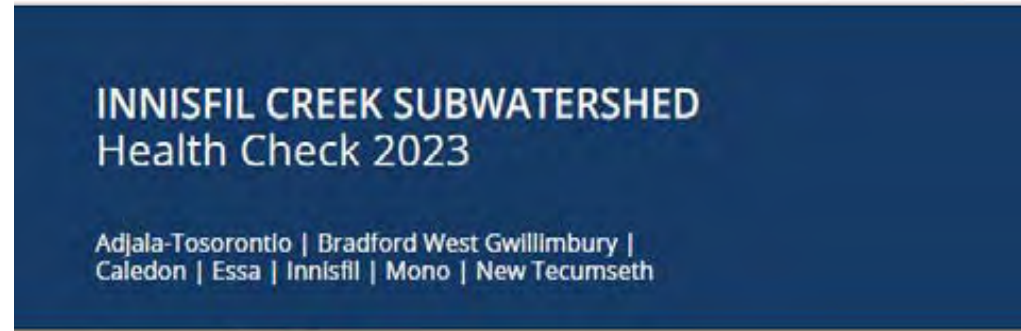


Watershed Health Checks – The State of our Natural Resources

Ian Ockenden | Acting Watershed Science Supervisor | June 2023

Watershed Health Checks

- » Natural resource evaluation
- » Subwatershed basis
- » Watershed Science communication



INNISFIL CREEK SUBWATERSHED Health Check 2023

Adjala-Tosorontio | Bradford West Gwillimbury |
Caledon | Essa | Innisfil | Mono | New Tecumseth



Nottawasaga Valley
Conservation Authority

The Nottawasaga Valley Conservation Authority is your public agency dedicated to the preservation of a healthy environment. As your partner, the NVCA provides the expertise to help protect our water, our land, our future.



WHAT IS A SUBWATERSHED HEALTH CHECK?

NVCA's subwatershed health checks provide an overview of forest, wetlands, stream and groundwater health within the larger NVCA watershed. They also identify stewardship priorities, future challenges and opportunities to improve environmental health.

Watershed health checks were completed for all nine of NVCA's subwatersheds in 2023, and are produced every five years. Our science monitoring staff collects samples from forests, wetlands, streams and groundwater for data analysis. Our stewardship staff uses this information to determine the success of past restoration projects and areas in need of improvement.

NVCA began producing Subwatershed Report Cards in 2007. In 2013, they were renamed to Watershed Health Checks in an effort to differentiate these reports from Conservation Ontario's province-wide Watershed Report Cards.

What is a subwatershed?

A subwatershed is a smaller watershed within a larger basin. The water from the subwatershed contributes to a stream connected to the main river. In the NVCA watershed, this river is the Nottawasaga River. Everything in a subwatershed is connected, meaning our actions upstream can affect conditions downstream.

Nottawasaga Valley Watershed's nine subwatersheds

- Blue Mountains Subwatershed
- Boyne River Subwatershed
- Innisfil Creek Subwatershed
- Lower Nottawasaga River Subwatershed
- Mad River Subwatershed
- Middle Nottawasaga River Subwatershed
- Pine River Subwatershed
- Upper Nottawasaga River Subwatershed
- Willow Creek Subwatershed



WHAT WE MEASURED

We measured the status and health of the forests, wetlands, streams and groundwater in each subwatershed. We also reported the number of stewardship projects that were completed from 2002 to 2021.



OUR GRADING SYSTEM

VERY GOOD	An environment that is at or close to natural conditions
GOOD	An environment close to natural conditions with minor disturbance
FAIR	A disturbed environment
POOR	A highly disturbed environment
VERY POOR	An environment that lacks natural features
NO DATA	Not enough data to make a conclusion

Why Measure?

Measuring helps us better understand our watershed. With this information, we can better target where planning and restoration is needed and track progress of watershed conditions.

Subwatersheds

- » One watershed health check
- » 9 subwatershed health checks

WHERE ARE WE?



Info Page

- » Physiographic map
- » Natural & human history
- » Lay of the land



ABOUT THE INNISFIL CREEK SUBWATERSHED

The Innisfil Creek subwatershed consists of four main creek systems – Innisfil Creek, Bailey Creek, Beeton Creek and Penville Creek – that drain the southeast portion of the Nottawasaga River watershed.

Innisfil Creek arises on the gently rolling sand-silt plains of the Simcoe Uplands south of Barrie. Emerging from headwater forests and wetlands, it flows south into intensively farmed lowlands that extend through Cookstown downstream to the Nottawasaga River.

Bailey Creek emerges on the Oak Ridges Moraine near the hamlet of Connor. It winds southeastward through rolling forests and farm fields. Bailey Creek descends into the Schomberg Clay Plains north of Colgan, passing through a mix of agricultural lands and swamp/lowland forest. Downstream, the creek enters an intensive agricultural area within the Simcoe Lowlands as it flows eastward toward Beeton Creek.

Beeton Creek arises on the Oak Ridges Moraine south of Tottenham. Flowing north, the creek enters a reservoir at the Tottenham Conservation Area and then continues downstream. An east branch, originating east of Tottenham, flows westward through agricultural lands and enters Beeton Creek north of Tottenham. Beeton Creek continues to flow northward through an agricultural landscape, skirting the west side of Beeton before joining Bailey Creek and then entering Innisfil Creek.

Penville Creek emerges within a mix of hills (drumlins) and clay plains near Bond Head, flowing northward through agricultural lands before entering Innisfil Creek north of Newton Robinson.



FOREST CONDITIONS

Status: Good
Trend: Neutral

Around 10,000 years ago, parts of the Blue Mountain subwatershed were occupied by the ancient Lake Algonquin. Around 4,000 years ago, today's nearshore areas were submerged under the Nipissing Transgression (when Georgian Bay was higher in elevation). As these lakes disappeared, they left behind the landscape we see now: bluffs along the Algonquin shoreline and troughs and ridges along the previous Nipissing shoreline. The Blue Mountain subwatershed supports moderate forest cover. Large forests provide significant habitat for wildlife species that require forest interior habitat (deep, undisturbed forests) to thrive.

Fragmented forests are present along the ancient Algonquin bluff and the ancient Nipissing shoreline. East of the Escarpment, forest cover is fragmented with land use generally dominated by agriculture while the Collingwood/Wasaga Beach urban areas dominate the Georgian Bay shoreline.

Wetlands form a large portion of forest cover in this watershed. Coastal wetland systems along Georgian Bay are globally and provincially rare, and consist of rich coastal fens along the shoreline. Away from the

shoreline, wetland features become more thicket-like before changing over to swamp forests.

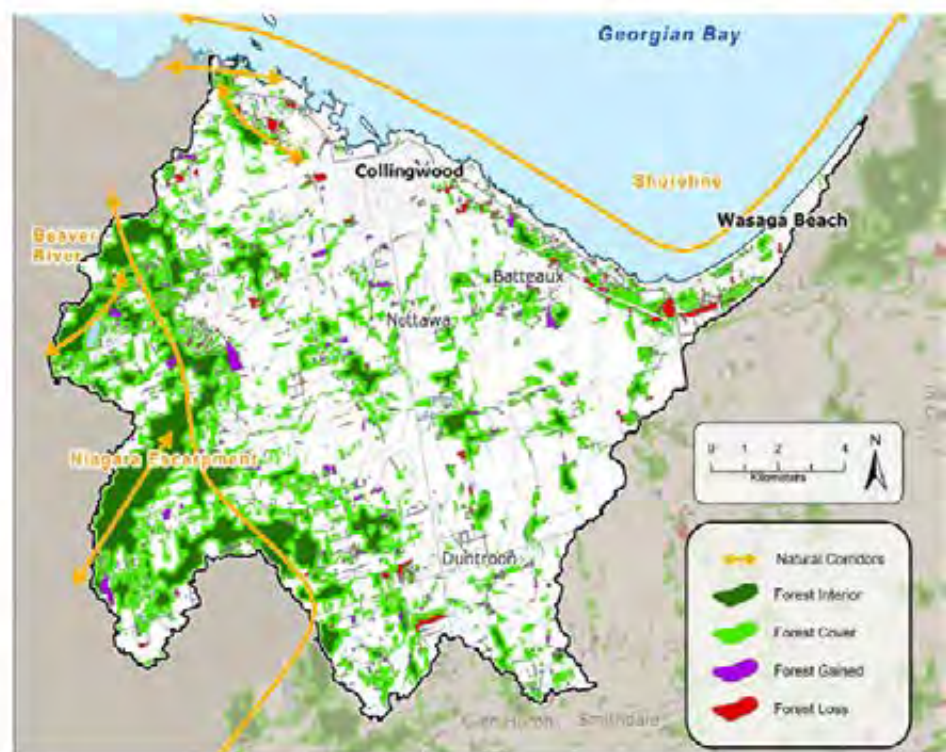
Large forests are common within the Niagara Escarpment headwaters (river source areas). These rich forests are provincially significant and support a number of rare plant and animal species including Hart's-tongue Fern and Louisiana Waterthrush. Coniferous and mixed forests in the Pretty River headwaters provide important winter habitat for deer.

The headwater forest cover in the Blue Mountain subwatershed forms an integral part of the Niagara Escarpment's natural corridor. It is also connected to nearby forests and wetlands within the Beaver River valley to the west as well as the Mad River subwatershed to the south. Lowland forests provide an important corridor for migrating waterfowl and shorebirds along the Collingwood and Town of Wasaga Beach shorelines.

Although forest conditions remain good, forest cover declined by 1.2% (83.3 ha) between 2008 and 2018. Forest interior increased by 3.5% (60.46 ha) over this time period. Remaining forest cover has likely been bolstered by adjacent forest regeneration, increasing forest interior.

Indicators	Blue Mountains Subwatershed	NVCA Watershed	Indicator Description	Trend (2008-2018)
Forest Cover	30.9% (6,871 ha)	32.2%	Forest cover is the percentage of the watershed that is forested. Environment Canada suggests that 30% forest cover is the minimum needed to support healthy wildlife habitat; more coverage is beneficial.	-83.3 ha (-1.2%)
Forest Interior	8.1% (1,792 ha)	10.2%	Forest interior is the area of forest that lies more than 100 m from a forest edge - away from the windy, dry conditions and predators that are associated with the edge. Sensitive forest birds, mammals, reptiles and amphibians require deep forest habitat for survival. Environment Canada suggests that 10% forest interior cover is the minimum needed to support a range of species.	+60.5 ha (+3.5%)
Riparian Cover	68.2% (1,658 ha)	68%	Streamside vegetation (riparian cover) filters pollutants and provides important fish and wildlife habitat. Environment Canada suggests that at least 30 m on each side of the stream (over 75% of its length) should be in natural cover to support healthy streams.	Insufficient Data

Rating Scale:



WETLAND CONDITIONS

Status: Good
Trend: Improving

Wetlands play an important role in the ecological health of a subwatershed. They improve water quality by filtering runoff from agricultural and urban areas. Wetlands control flooding, reduce erosion and help maintain stream flows during dry periods by holding back water on the landscape. The wetland swamps, marshes and fens (an open wetland dominated by low shrubs, ferns, sedges and grasses) in the Willow Creek subwatershed provide habitat for a rich variety of plants and animals.

Wetland conditions within the Willow Creek subwatershed meet Environment Canada's wetland habitat guidelines, however, historical wetland loss has occurred. Ducks Unlimited Canada data indicate historical wetland loss in the subwatershed (1800-2002) is 17%. From 2002 to 2016, an additional net wetland loss of 0.2% (13.7 ha) occurred.

In the Willow Creek subwatershed, based on satellite photo interpretation, between 2016 and 2018 there was a net wetland gain of 5.4 hectares (ha). This represents a 0.1% increase in wetland cover since 2016. Natural wetland

regeneration (53.8 ha) in low-lying areas accounted for all wetland gains. Wetland loss (48.4 ha) was dominated by agricultural conversion.

At over 6,000 hectares, the Minesing Wetlands is recognized as internationally significant because of its important ecological, economic and cultural values. Extensive marshes along Willow Creek in Minesing support a rich variety of marsh bird species including the threatened Least Bittern. The Minesing Wetlands provide critical flood control functions for Wasaga Beach, holding back upstream floodwaters for several days before releasing flows back into the Nottawasaga River. The Minesing Wetlands is also a great place to go puddling.

Five groups of wetlands within the Willow Creek subwatershed have been evaluated as provincially significant by the Ontario Ministry of Natural Resources and Forestry: Minesing Wetlands, Little Lake Wetland, Dalston Wetland, Hawkestone Wetland Complex and the Copeland-Craighurst-Guthrie Wetland Complex. Provincial and municipal planning policies help protect these wetlands from development and site alteration.

Indicators	Willow Creek Subwatershed	NVCA Watershed	Indicator Description	Trend (2016-2018)
Wetland Cover	23.7% (7,763 ha)	14.5%	10% wetland cover has been identified as a minimum guideline for healthy watersheds (Environment Canada).	+5.4 ha (+0.1%)
Wetland Buffer (100m buffer area)	54.8% (2,627 ha)	49.6%	A buffer is a vegetated area next to a wetland or stream. Many wetland wildlife species require nearby upland areas for foraging, nesting and other activities. Only forest cover was available for buffer assessment through the 2018 Watershed Health Check.	Insufficient Data

Rating Scale:





STREAM HEALTH

Status: Fair

Trend: No Change

Stream health is determined by testing water chemistry and evaluating the health of benthic macroinvertebrates (water bugs). They are categorized as Unimpaired (very healthy), Below Potential (moderate health) and Impaired (very poor health). Final grades are determined by merging these two factors.

Stream health in the Mad River subwatershed ranges from Unimpaired to Impaired. The Mad and Noisy Rivers and their tributaries support healthy resident and migratory trout populations.

The Mad and Noisy Rivers alternate Below Potential and Unimpaired grading as they flow through wetland and rural areas west of the Niagara Escarpment. Stream sections that are graded Below Potential often coincide with stream channel alterations, agricultural drainage and the extensive clearing of trees and other natural cover. Stream health improves as these rivers enter the Escarpment area. Extensive forest cover and groundwater discharge (springs) through this zone support excellent trout habitat. Large online ponds on the Mad River in Singhampton and Glen Huron contribute to Impaired conditions by warming temperatures and promoting algae growth.

East of the Escarpment, Mad River stream health improves to Unimpaired through Creemore before declining to Below Potential as it enters an agricultural landscape with relatively sparse forest cover. The River remains in Below Potential

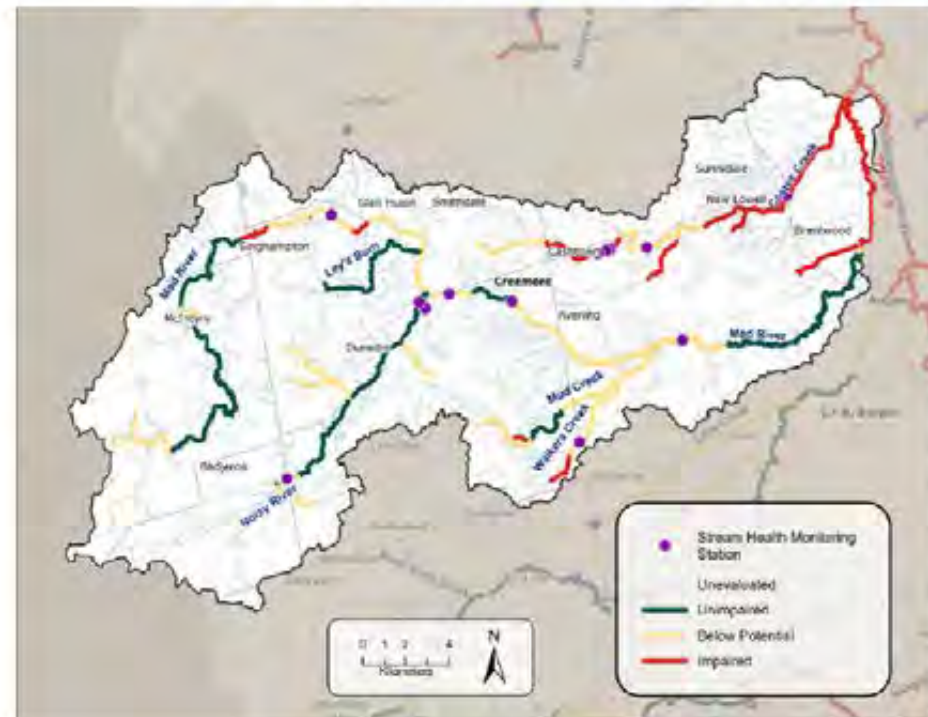
conditions further east through Glencairn, before improving to Unimpaired as the river flows through dense forest stands in Base Borden. Stream health rapidly declines to Impaired as the Mad River flows through Angus towards the agricultural fields to the north, before entering the Minessing Wetlands.

Coates Creek flows through an agricultural landscape and its health ranges from Below Potential to Impaired. This is due to sparse riparian (streambank) cover next to farm fields, extensive channel alteration, gravel pits and urban areas. A small forested valley system west of New Lowell provides enough groundwater inputs to raise the stream health in Coates Creek to Below Potential for a brief period. The dam at New Lowell Conservation Area and its head pond impacts stream health significantly lowering the grade to Impaired, a condition which persists downstream to the Minessing Wetlands.

Walkers Creek and Mud Creek are in good health through the Escarpment, except where online ponds cause impairment. Sparse riparian cover and livestock impacts degrade stream conditions downstream of the Escarpment.

Nutrient concentrations (total phosphorus) are generally low at the Glencairn water quality sampling station, however algae growth remains high, reflecting the Below Potential stream health grades in section of the river.

Overall, stream health has not changed in the Mad River since the 2013 Health Check. The 2018 Watershed Health Check assessed 21% of the river length in the Mad River subwatershed, down from 22% in 2013.



Indicators	Mad River Subwatershed	Indicator Description	Indicator Trend (2012-2021)
Benthic Grade	2.12	Insects and other "bugs" that inhabit the streambed are excellent indicators of stream health. Healthy streams receive a score of "3" while unhealthy streams receive a score of "1".	No Change
Total Phosphorus (low flow; mg/L)	0.018	Total phosphorus indicates nutrient levels within a stream. Our healthiest streams have levels less than 0.01 mg/L during low flow conditions. Mad River range in all conditions: 0.005-0.099 mg/L. Provincial Water Quality Guidelines suggest that levels greater than 0.03 mg/L result in unhealthy stream conditions.	No Change

Rating Scale:



GROUNDWATER QUALITY

Data availability:
13 of 14 years
(2008-2021)
Status: Very Good

Groundwater is water that is stored underground in soils and bedrock fractures. When it rains or when snow melts, water absorbs into the ground, eventually feeding local streams and wetlands or filter down into aquifers. Aquifers may be separated into different layers. Sediments that are relatively impermeable, such as clay and silt, offer protection by limiting the amount of water to flow into the aquifer. This layer is called an aquitard. Aquifers located below aquitards are preferred drinking water sources.

It is important to keep contaminants out of groundwater because it supports a variety of uses including municipal and private water supplies, agricultural irrigation, and is a source for rivers and streams. Contaminants can come from both urban and rural areas. Chloride and nitrate are used as indicators for groundwater quality. In urban areas, groundwater is susceptible to chloride due to excessive application of winter salt on roads and parking lots. In rural areas, nitrate in groundwater can be due to excessive and improper use of crop fertilizers.

Staff from the NVCA and the Province of Ontario have been working with municipalities, communities, and individual residents to reduce the potential for groundwater contamination. For opportunities to reduce these contaminants, please refer to the Watershed Stewardship section.

In the Lower Nottawasaga River subwatershed there are 21 municipal wells providing drinking water to residents. Through the Provincial Groundwater Monitoring Network (PGMN) partnership with the Ministry of the Environment, Conservation, and Parks, the NVCA monitors water levels and water quality at two PGMN wells in this subwatershed. Groundwater monitoring began in 2003 and sampling has been conducted annually since 2008, allowing the NVCA to track changes in groundwater levels and quality over time.

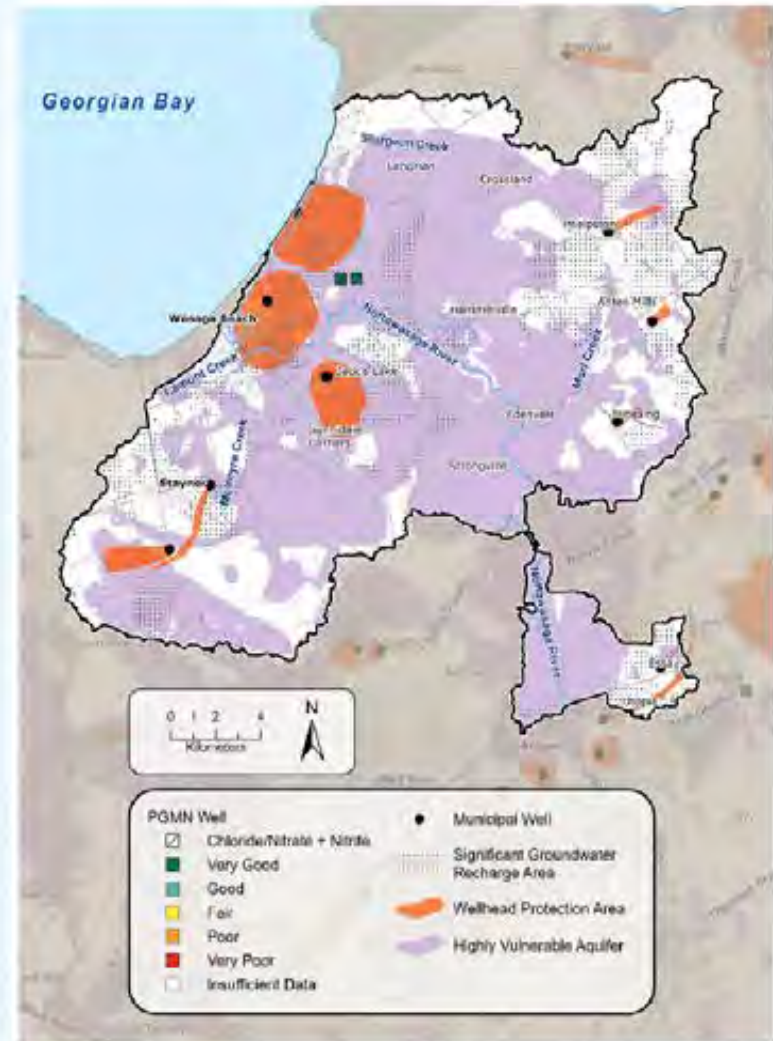
Results indicate that the PGMN monitoring wells meet Ontario Drinking Water Quality Standards. The NVCA requires additional data to interpret trends in groundwater quality at the sampled wells. Since some wells are deeper than others and water chemistry differs between aquifers, individual samples do not necessarily reflect the broader groundwater quality in the area.

Indicators	Shallow Wells (0-20m)	Intermediate Wells (21-60 m)	Deep Wells (>60m)	Indicator Description
Number of PGMN wells	1	1	0	
Chloride (mg/L)	1.2	6.6	No Data	The Ontario guideline for chlorides in drinking water is 250 mg/L and is based on aesthetic objectives. Drinking water should not exceed this level.
Nitrite & Nitrate (mg/L)	0.1	0.1	No Data	The Ontario standard for nitrite and nitrate is 10 mg/L and is based on the maximum allowable concentration. Drinking water should not exceed this level.

Results reflect health at the well and should not replace testing at private wells.

Rating Scale:

VERY GOOD GOOD FAIR POOR VERY POOR NO DATA



Ontario's Drinking Water Source Protection Program

Focuses on protecting municipal drinking water sources, including:

Wellhead Protection Areas

areas that contribute water to municipal wells;

Highly Vulnerable Aquifers areas where groundwater is close to ground surface;

Significant Groundwater Recharge Areas areas which feed the aquifers.

WATERSHED STEWARDSHIP



What is Watershed Stewardship?

Watershed Stewardship and Restoration is the responsible and sustainable care of our natural resources and wildlife within a watershed.

Protecting what we have, and enhancing and restoring where possible helps the environment, and protects human uses as well. As caretakers of our environment, we all need to implement stewardship practices that protect and restore natural resources.

We all depend on good stewardship of private and public lands to achieve healthy waters and sustainable ecosystems. With almost 96% of land in our watersheds privately owned, residents can play a critical role.



Forestry Program

The NVCA's Forestry Program provides trees, planting services and forest management advice for landowners throughout the watershed. Between 2002 and 2021, more than 2.3 million trees have been planted on 669 properties, reforesting 1,384 hectares of land in the NVCA watershed. These future forests will help to moderate the effects of both drought and flooding; reduce soil erosion, provide habitat for wildlife, improve water quality and groundwater recharge, and mitigate climate change.

Healthy Waters Program

The NVCA's Healthy Waters Program provides landowners with free site visits, technical and financial support for eligible projects, such as tree planting, well decommissioning, stream bank stabilization, exclusion of livestock from streams and wetlands, prevention of manure runoff and nutrient management. From 2002 to 2021, landowners in the Upper Nottawasaga River subwatershed have undertaken 97 stewardship projects on their properties through the support of this program. These projects have improved water quality, enhanced fish and wildlife habitat, protected species at risk, and prevented toxic algae blooms & fish kills.

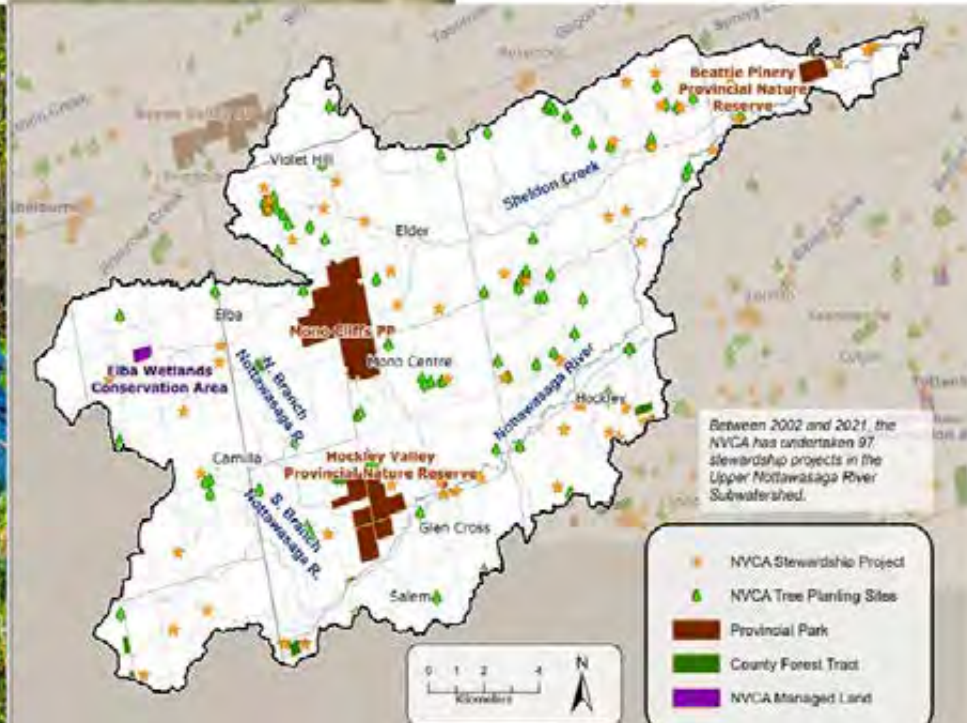
Landowner Grant Assistance

To assist landowners with protecting the environment, NVCA's Stewardship and Forestry Programs provide technical assistance and a range of grant incentives to help offset the cost of projects on private property.

Grant rates range from 25% to 100% of eligible project costs.

To discuss your land management and stewardship goals

Call us at
705-424-1479



WATERSHED STEWARDSHIP

RESTORATION PRIORITIES

Each subwatershed in the Nottawasaga Valley encompasses unique landforms and land uses. As a result, restoration priorities differ across subwatersheds to their local needs. Healthy waters depend on a healthy watershed; the lands that drain into them.

Engaging landowners, farmers and volunteers in voluntary, hands-on stewardship projects to restore and protect natural infrastructure creates climate resilient landscapes and communities. Habitat

restoration of wetlands, rivers, forests, native grasslands and certain farming practices help create carbon-rich, 'spongy' soils. Healthy soils increase flood attenuation, drought resilience, and reduce pollution-runoff. Other benefits include including reduced water pollution and maintaining cool river temperatures.

The implementation of the restoration priorities would not be possible without support from our partners including local municipalities, environmental groups, landowners, and funders.

Restoration Priorities for the Boyne River Subwatershed

1. Complete river restoration projects including stream-side tree and shrub planting, bank stabilization using natural woody materials, livestock exclusion fencing and best management practices for dams/head ponds on the upper Boyne River and headwater tributary streams west of the Melancthon-Mulmur Townline. The goal of this work is to optimize water quality and coldwater trout habitat in the headwaters of the Boyne River.
2. Improve bank stability and water quality in the headwaters by creating natural stream buffers, planting stream-side with native trees, shrubs and meadows, and wetlands in the townships of Shelburne, Melancthon, Amaranth, Mulmur and Mono.
3. Reduce flooding by increasing soil infiltration rates across the watershed by increasing natural vegetation cover, protecting and restoring wetlands, encouraging farm soil health practices, and adopting low impact development techniques in urban areas.
4. Reduce soil erosion and runoff of nutrients (e.g. phosphorus) and fecal bacteria, to protect streams, lakes and groundwater through agricultural stewardship practices, streambank stabilization and good septic care.
5. Improve water quality and fish habitat by retrofitting dam structures to bottom discharge and removing dams in headwater reaches and tributary streams.

Before (2018)

After (2018)



An example of streambank restoration in the Boyne River subwatershed: Livestock exclusion fencing to protect the Boyne River, wetland and pond.



HOW YOU CAN MAKE A DIFFERENCE

Farm Stewardship

- Upgrade manure storages; divert clean water from barnyards with eaves and berms
- Improve stream health by fencing out livestock
- Buffer streams from cropland and pasture (5-30m)
- Reduce soil erosion through conservation tillage, residue management and cover crops
- Reduce nutrient runoff and save money by implementing nutrient management planning
- Use water conservation measures and work with neighbours to coordinate water takings
- Urban Stewardship
- Conserve water in the home - install low flow toilets and showerheads; and in the garden with rain barrels, mulch and rain gardens
- Reduce use of fertilizers
- Don't pour anything down storm drains as these drains flow untreated into rivers and lakes
- Plant neighbourhood trees to moderate the effect of extreme heat and enhance urban spaces
- Support Low Impact Development to increase groundwater recharge and reduce urban flooding

Habitat Restoration

- Protect and create stream and wetland buffers
- Plant natural vegetation between the water and adjacent land use practices
- Stabilize eroding stream banks
- Plant native trees, shrubs, wildflowers and grasses to support birds, pollinators and wildlife
- Learn to identify, safely remove and reduce spread of invasive species

Drinking Water Protection

- Decommission unused wells to prevent surface contaminants from reaching groundwater unfiltered
- Test your well for bacteria at least 3 times per year (your local health unit provides free testing)
- Regularly service your septic system (every 2-5 years) and avoid using cleaning products (like bleach) that kills the beneficial bacteria, on which your sewage treatment depends
- Properly dispose of household hazardous waste and pharmaceuticals
- Clean debris from around your well and ensure the lid is vermin proof
- Reduce micro-plastic contamination by installing a filter on you laundry machine

NVCA'S EDUCATION PROGRAMS

The NVCA's Environmental Education program has been delivering high-quality programming for over 40 years. During 2009-2022, we have collectively interacted with more than 132,000 students whom we have visited us at the Tiffin Centre for Conservation, or we have been invited to visit school yards and green spaces to deliver outdoor programming within their communities.

Our current inventory of over 40 different programs cover topics of Science and Technology, Art, Cultural History, Geography, Survival Skills and Outdoor Recreation which increasingly incorporates Indigenous ways of knowing. Further, the NVCA Education Program has always kept step with provincial curriculum while addressing real time environmental issues, opportunities and solutions.

As such, the most recent program developments have included a climate change program for elementary students, and will soon include one for secondary schools.

We hire professionals from a wide variety of expertise including Ontario College of Teachers educators, and graduates from science, environmental studies, music, art and recreation, creating a team rich in diverse skills, abilities and knowledge. This enables the Nottawasaga Valley Conservation Authority to provide watershed students with the best knowledge and opportunities from the most qualified educator for the subject.

‘Fostering a sense of wonder, appreciation and respect for the natural world through experiential learning and outdoor exploration’



PUBLIC LANDS MANAGEMENT

NVCA's land acquisition program focuses on strategic land securement for the long-term protection of natural features and functions. These properties also provide valuable recreational opportunities to watershed residents. The NVCA manages three properties within the Middle Nottawasaga River subwatershed totaling 168 hectares (ha).

County Forests are managed for a variety of environmental, social and economic purposes. There are six Simcoe County Forest tracts, totaling 427 ha within the Middle Nottawasaga River subwatershed.

Ontario Parks' mandate is "to protect significant natural and cultural resources in a system of parks and protected areas that is sustainable and provides opportunities for inspiration, enjoyment and education: now and for future generations." Ontario Parks manages one park areas (119 ha) within this subwatershed.

Many local municipalities also acquire and manage lands in the public trust.

IMPROVE YOUR ECOHEALTH IN OUR CONSERVATION AREAS

Natural areas clean our air, protect our water and can have a moderating effect on extreme weather. New research indicates that spending time in nature also provides important benefits that support mental health and emotional well-being.

NVCA owns and manages over 5,000 ha of land in the Nottawasaga River watershed, including 11 conservation areas with opportunities to hike, paddle, and fish. Here are some highlights of our conservation areas (in this sub-watershed?).

Tiffin Centre for Conservation (In this subwatershed)

Located between Barrie and Angus, the Tiffin Conservation Area is home to NVCA's John Hix Conservation Administration Centre, and home to our Environmental Education Program. There are approximately 10 km of looped trails that meander through a mixture of wetlands, forests, and open meadows. The NVCA manages a portion of the Tiffin Conservation Area on behalf of its partner, Ontario Heritage Trust.

Minesing Wetlands

Minesing Wetlands acts as an important natural flood control reservoir. During periods of high water levels, the wetland fills up with water and slowly releases it into downstream rivers and into Georgian Bay, protecting downstream communities including Wasaga Beach.

In addition to being a flood control mechanism, Minesing Wetlands is recognized as an internationally significant wetland because of its unique plant communities and diverse wildlife. Visitors can paddle, snowshoe or cross-country ski in this conservation area.

Utopia Conservation Area (in this subwatershed)

Utopia Conservation Area is one of the properties NVCA owns within the Middle Nottawasaga River subwatershed. This property is managed in partnership with the Friends of the Utopia Mill and Park. Over the past few years, the 'Friends' have worked on the restoration of the mill and the development of a trail network on the property.

Through Section 28 of the Conservation Authorities Act, NVCA has the responsibility to regulate activities in natural and hazardous areas in order to prevent the loss of life and property due to flooding and erosion, and to conserve and enhance natural resources. For more information, please visit our website at nvca.on.ca.



Did you know...

Land donations to Conservation Authorities may be eligible for tax benefits?

Contact NVCA about leaving a legacy gift of land.



Nottawasaga Valley
Conservation Authority

Nottawasaga Valley Conservation Authority
8195 8th Line, Utopia ON L0M 1T0
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Member of



Conservation
ONTARIO

Thank you to all of our landowners,
community groups, schools, businesses,
municipalities and other government agencies
who support stewardship activities in our
watershed!