

## WHAT IS THE NPCA CURRENTLY DOING?



### Land & Water Management, Outreach & Education, and more.

The NPCA is entrusted with the management and operation of 41 properties. These properties total more than 7,194 acres, and are protected and maintained for both their natural heritage features, and for recreational value including camping and public access to various watercourses.

NPCA programs focus on keeping people and their property safe from flooding and erosion. Our programs also monitor the quality of our surface and ground water, and strive to ensure our drinking water remains safe.

Our curriculum-based education programs available at different Conservation Areas also allow teachers and educators to bring the classroom outdoors for fun and innovative experiences.

For more information, please visit [www.npca.ca](http://www.npca.ca), Get Involved!

### Biggest, Boldest, & Most Robust Initiatives in NPCA history.

The NPCA announced eight key initiatives on October 25, 2017. These bold objectives set aggressive targets for improving water quality, ecology, and the overall health of the watershed.

Environmental health is everyone's responsibility and these goals can't be achieved without the help of the people of the watershed.

Please see [www.npca.ca/initiatives](http://www.npca.ca/initiatives) for more information, or [www.npca.ca/npca-volunteer-sign](http://www.npca.ca/npca-volunteer-sign) to volunteer!

## HOW CAN WE ENHANCE THE WATERSHED?

### What Can You Do?

- Plant native trees, wildflowers, shrubs, and/or rainwater gardens.
- Reduce the amount of mown grass on your property.
- Reduce the amount of pesticides, herbicides and fertilizers you use.
- Conserve water by using low flow showers and toilets, high efficiency clothes washers and dishwashers.
- Install rain barrels to collect water for use around your yard.



### What Can Your Community Do?

- Sponsor community clean ups to keep waste and garbage out of natural areas.
- Look for ways to expand the existing urban tree canopy.
- Reduce the amount of pesticides, herbicides and fertilizers used.

### What Can Your Business Do?

- Establish a corporate volunteering program to support local initiatives such as tree plantings.
- Invest in 'greener' alternatives to current practices.
- Encourage recycling and composting in the workplace.
- Donate towards water quality and habitat improvement programs.
- Evaluate the effectiveness of environmental programs.

Do you have questions not answered by this summary document? Visit [npca.ca](http://npca.ca) for more information.



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The Watershed Report Card is available online and in other formats upon request.

## Niagara Peninsula WATERSHED Report Card 2018



Niagara Peninsula Conservation Authority has prepared this report card as a summary of the state of Niagara Peninsula's forests, wetlands, and water resources.



## WHERE ARE WE?



### What is a Watershed?

A watershed is an area of land drained by a creek or stream into a river which then drains into a body of water such as a lake or pond. Everything in a watershed is connected. Our actions upstream can affect conditions downstream.

### Why Measure?

Measuring helps us better understand our watershed. We can target our work where it is needed and track progress. We measured:



Groundwater  
Quality



Surface Water  
Quality



Forest  
Conditions



Wetland  
Cover

### GRADING

A	Excellent
B	Good
C	Fair
D	Poor
F	Very Poor
	Insufficient Data

### What is a watershed report card?

Ontario's Conservation Authorities report on watershed conditions every five years. The watershed report cards use Conservation Ontario guidelines and standards developed by Conservation Authorities and their partners.





# GROUNDWATER QUALITY

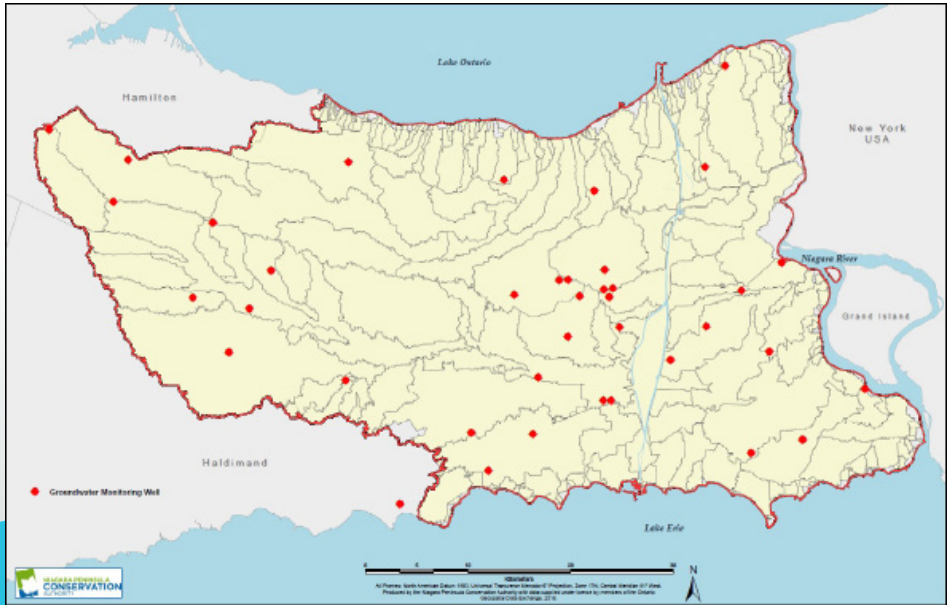
## B

The NPCA monitors groundwater quality and water levels at 50 sites in locally significant hydrogeologic areas within its watershed.

Although most of the NPCA watershed is serviced by drinking water from municipal water treatment plants, there are areas in the watershed where residents obtain their drinking water through private wells.

### What Did we Find?

- The water quality at most NPCA monitoring wells is good, with some wells exceeding Ontario Drinking Water Standards.
- Most groundwater well impacts were attributed to natural conditions, with some impacts attributed to adjacent land uses.
- Groundwater levels at most wells vary seasonally, with their highest water levels being observed during the late winter and early spring. These drop to their lowest level during the fall months.
- Private well owners are responsible for making sure their well is up to standards and having their well-water tested regularly.
- To have your private well tested, contact your local municipality.



# SURFACE WATER QUALITY

## D

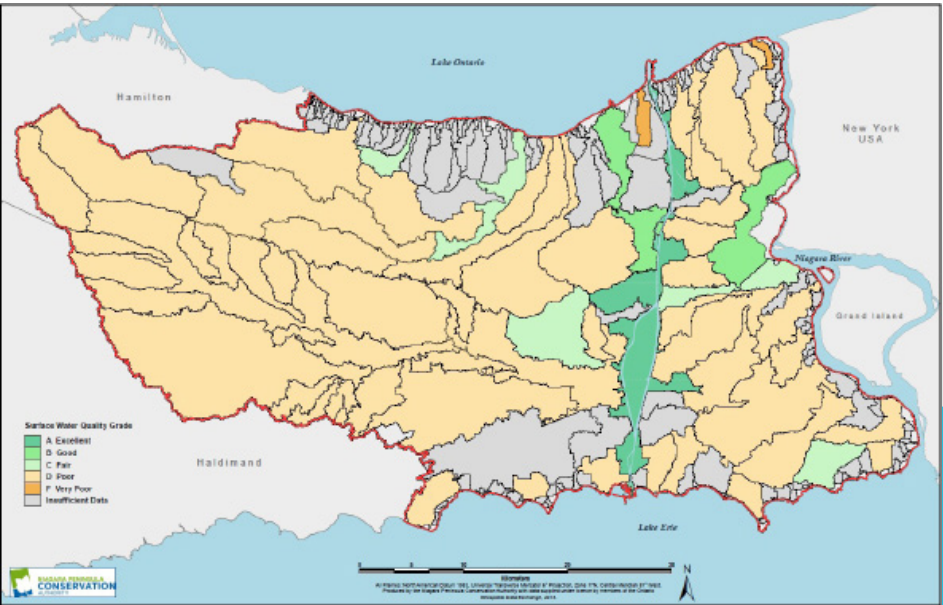
The NPCA monitors water quality at 80 sites throughout its watershed.

Surface water quality is graded using three indicators:

- Phosphorus (contributions from excessive fertilizer use and wastewater discharge)
- E. coli bacteria (found in the intestines of humans and other animals)
- Benthic macroinvertebrates community (small animals without a backbone that live at the bottom of streams). These animals have a range of tolerances to water pollution. Their quantity and variety can provide an indication of the level of water pollution.

### What Did we Find?

- Most of the watersheds scored a D grade and have poor water quality.
- The highest surface water quality grades were found in watersheds where cleaner water is redirected from Lake Erie and the Niagara River to support hydroelectric generation and shipping in the Welland Canal.
- Nutrient and bacteria contamination from non-point sources (agricultural/livestock runoff and faulty septic systems) and point sources (combined sewer overflow and urban stormwater) continue to be the major causes of water quality impairment in the NPCA watershed.



# FOREST CONDITIONS

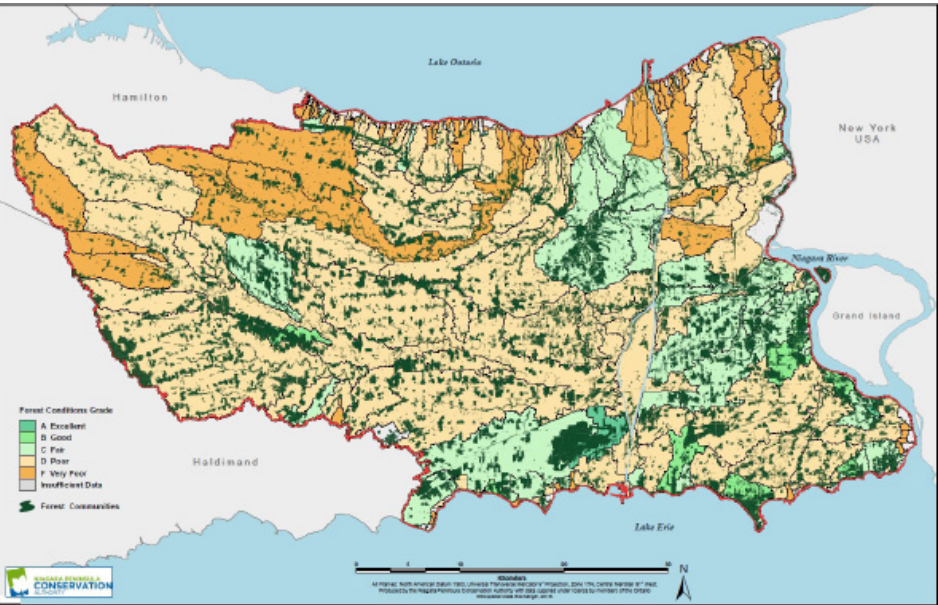
## D

Forests are ecosystems that are composed of a diverse group of plants, animals and other organisms. Forests provide many social and ecological benefits such as habitat of flora and fauna, carbon sequestration, building materials, and opportunities for recreation.

The percentages of forest cover, forest interior, and stream side cover were used to evaluate the forest conditions of the watershed.

### What Did we Find?

- The majority of NPCA's watershed scored a D grade as most of the woodlands are small, narrow, fragmented, and do not contain interior forest habitat.
- The highest forest condition grades were found in the southern portions of the watershed.
- The lowest forest condition grades were found in watersheds along the Lake Ontario shoreline, portions of Hamilton, and the urban centres such as St. Catharines and Niagara Falls.



# WETLAND COVER

## B

Wetlands are areas of land covered by water for all or part of the year, and are characterized by plants adapted to saturated soil conditions. Wetlands include marshes, wooded swamps, bogs, seasonally flooded forest, sloughs, and any land area that can keep water long enough to let wetland plants and soils develop.

Wetlands are critical for a healthy environment. They play a key role in filtering and purifying water, recharging groundwater, reducing flooding by storing water, providing habitat to many wildlife species, and creating opportunities for recreation.

### What Did we Find?

- 11% of the NPCA watershed is covered by wetlands.
- Environment Canada recommends that a healthy watershed should contain at least 10% wetland cover.
- The most wetland cover is found in the southern portions of the NPCA watershed, in Fort Erie, south Niagara Falls, Wainfleet, and Haldimand.
- The least wetland cover is found in watersheds along the Lake Ontario shoreline and the urban centres such as St. Catharines and Niagara Falls.

