Dear Citizen,

Thank you for reading the 2016 Riverwatch Water Quality Report! With water in news headlines nationwide our attention should now, more than ever, be focused on Western New York’s most vital natural resource - fresh water. This report contains insightful information about the water quality in our region and our hope is that you can use it as an educational tool.

With 2016 being our first year overseeing the Riverwatch Volunteer Water Quality Monitoring Program, we cannot thank our volunteers enough! Over 50 people participated and their commitment was outstanding. These volunteers are trained and form teams which monitor numerous sites on the Niagara River and its major tributaries once a month from April through November. Volunteers collect general water quality parameters including dissolved oxygen, pH, conductivity, and turbidity. This report displays the results of their efforts by comparing data to state water quality standards, giving each site a letter grade, and comparing with data collected from previous seasons.

This report also displays the findings from our Young Environmental Leaders Program summer mentorship. Riverkeeper staff worked with five Buffalo Public High School students and their teachers to complete a multi-faceted project involving water quality sampling and cleaning up shoreline trash.

Community engagement programs, including Riverwatch, have been the cornerstone of Buffalo Niagara Riverkeeper since its foundation. We have been credited for propelling a community-wide attitude shift towards water protection, and in 2016 we were awarded the Thiess International River Prize as recognition for our collaborative method of revitalizing the Niagara River Watershed! This is a prestigious award, presented by the International River Foundation to organizations demonstrating outstanding results in sustainable river basin management, restoration, and protection. Our work in the Niagara River Watershed would not be possible without the support of the community and our volunteers!

Sincerely,

Wendy Paterson
Community Liaison

Elizabeth Robbe
Water Quality Specialist

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“Funding provided by the NYS Pollution Prevention Institute through a grant from the Environmental Protection Fund as administered by the New York State Department of Environmental Conservation”

“Any opinions, findings, conclusions or recommendations expressed are those of the author(s) and do not necessarily reflect the views of New York State Pollution Prevention Institute or the Department of Environmental Conservation”
This report summarizes our testing results in two different ways:

1. **Water Quality Standards**
   
   Comparison to State Water Quality Standards created by the New York State Department of Environmental Conservation (NYSDEC) under the Clean Water Act (CWA). The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters.

   Our State Environmental Agency, the NYSDEC, establishes water quality standards, authorized by the CWA with the United States Environmental Protection Agencies oversight. These standards may be narrative or numeric. Guidance values are created when no present standard exists.

   Here are the standards for the parameters we test:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissolved Oxygen</td>
<td>No less than 6.0 mg/L for Niagara River</td>
</tr>
<tr>
<td></td>
<td>No less than 4.0 mg/L for all other streams</td>
</tr>
<tr>
<td>Conductivity</td>
<td>Between 150 and 500 us/cm</td>
</tr>
<tr>
<td>pH</td>
<td>Between 6.5 and 8.5</td>
</tr>
<tr>
<td>Turbidity</td>
<td>No more than 5.0 NTU</td>
</tr>
</tbody>
</table>

   New York State waterways are assigned a letter classification that denotes their Best Uses by the NYSDEC. Evaluations occur on a five year cycle to determine whether waterbodies are meeting their best uses. These evaluations include water quality sampling and comparing results to set standards.

   **Stream Classes and Their Best Uses**

   - **A** Special. A source of water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation; and fishing. These waters shall be suitable for fish, shellfish, and wildlife propagation and survival.
   - **B** Primary and secondary contact recreation and fishing. These waters shall be suitable for swimming and other contact recreation as well as fish, shellfish, and wildlife propagation and survival.
   - **C** Fishing. These waters shall be suitable for fish, shellfish, and wildlife propagation and survival as well as primary and secondary contact recreation, although other factors may limit the use for these purposes.
   - **D** Fishing. These waters, which reflect the lowest classification standard, shall be suitable for fish, shellfish, and wildlife survival. The water shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.

2. **Water Quality Index**

   Giving each point a numerical and letter grade using a Water Quality Index (WQI)

   A Water Quality Index provides a single number that expresses overall water quality at a certain location and time period based on multiple water quality parameters. The objective of an index is to turn complex water quality data into information that is understandable and useable by the public. Riverkeeper developed a WQI based on the National Sanitation Foundation's WQI.

   1. Each parameter was given a weight based on how influential they are on determining water quality.

   2. The average seasonal value for each parameter was calculated for each site and plugged into equations created by the NSF which yielded a number known as a Q value.

   3. Q values for each parameter were multiplied by the weighting factor and added together to get the WQI number grade out of 100 for each site.

   **Example: Reservoir Park**

   \[
   (97 *0.24) + (64*0.20) + (84*0.20) + (78*0.18) + (88*0.18) = 83
   \]

   DO Cond. Turb. pH ΔT Total

   **Reservoir Park Total = 83**

   Reservoir Park would get a B grade

   Dissolved Oxygen, Conductivity, Temperature, and pH is sampled using a YSI Pro Plus equipped with a quatro cable.

   Turbidity is sampled using a HACH 2100 Q Turbidimeter.

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1 33 U.S.C. §1251 et seq. (1972)
2 Part 703: Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations (Statutory authority: Environmental Conservation Law, §§ 3-0301[2][m], 15-0313, 17-0301, 17-0809)
3 Part 701: Classifications-Surface Waters and Groundwaters (Statutory authority: Environmental Conservation Law, §§ 1-0101, 3-0301[2][m],15-0313, 17-0101, 17-0301, 17-0303, 17-0809)
4 U.S. Environmental Protection Agency’s Water: Monitoring and Assessment 5.9 Conductivity
5 ΔT refers to the change in temperature of one sample location to the average temperature of other sample locations in the same waterbody. Example: location 1 lacks shading from riparian vegetation and records a higher water temperature than location 2, which has abundant vegetation and shading. There would be a large ΔT between these two locations.
1. Water Quality Standards

For each waterbody sampled, a bar graph was created presenting the total percentage of samples which fell inside the standard range for that parameter.

Sample Chart

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Inside standard range (ideal)</th>
<th>Outside standard range (not ideal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductivity (µs/cm)</td>
<td>9%</td>
<td>91%</td>
</tr>
<tr>
<td>Dissolved Oxygen (mg/L)</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>pH</td>
<td>94%</td>
<td>6%</td>
</tr>
<tr>
<td>Turbidity (NTU)</td>
<td>36%</td>
<td>64%</td>
</tr>
</tbody>
</table>

Note: Percentage shown indicates percentage inside range

Water Quality Issues are referenced from NYSDEC’s Waterbody Inventory/Priority Waterbodies List (WI/PWL) which can be viewed here: http://www.dec.ny.gov/chemical/36738.html

Ransom Creek
Stream Class: C
Stream Length: 93.7 miles (includes Got Creek)
Water Quality Issues: Aquatic life and recreation are impaired by residential sewage discharges from on-site septic systems resulting in low dissolved oxygen and excess pathogens.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Inside standard range (ideal)</th>
<th>Outside standard range (not ideal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductivity</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>pH</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Turbidity</td>
<td>4%</td>
<td>96%</td>
</tr>
</tbody>
</table>

Buffalo River
Stream Class: C
Stream Length: 8.6 miles (from mouth to Cayuga Creek)
Water Quality Issues: The main stem of the river is designated as a Great Lakes Area of Concern (AOC). Fish consumption is precluded while aquatic life and recreation remain stressed. Combined sewer overflows, stormwater runoff, sediment contamination, inactive hazardous waste sites, and hydrologic modification also impact the river.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Inside standard range (ideal)</th>
<th>Outside standard range (not ideal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductivity</td>
<td>58%</td>
<td>42%</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>pH</td>
<td>92%</td>
<td>8%</td>
</tr>
<tr>
<td>Turbidity</td>
<td>62%</td>
<td>38%</td>
</tr>
</tbody>
</table>

Tonawanda Creek (Middle Main Stem)
Stream Class: C
Stream Length: 11.7 miles (from East Pembroke to Batavia)
Water Quality Issues: Aquatic life and recreation are impaired by elevated nutrient levels, the result of sanitary discharges, stormwater runoff, and streambank erosion.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Inside standard range (ideal)</th>
<th>Outside standard range (not ideal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductivity</td>
<td>37%</td>
<td>63%</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>pH</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Turbidity</td>
<td>17%</td>
<td>83%</td>
</tr>
</tbody>
</table>

Erie Basin & Black Rock Canal
Stream Class: C
Stream Length: 6.6 miles
Water Quality Issues: Fish consumption is impaired due to PCBs from contaminated sediments and inactive hazardous waste sites. Combined sewer overflows along the canal are also a concern.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Inside standard range (ideal)</th>
<th>Outside standard range (not ideal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductivity</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>pH</td>
<td>90%</td>
<td>10%</td>
</tr>
<tr>
<td>Turbidity</td>
<td>73%</td>
<td>27%</td>
</tr>
</tbody>
</table>
Cayuga Creek (Erie County)
Stream Class: Lower Stretch - C (from mouth to Lancaster)
Middle Stretch - B (from Lancaster to Folsomdale)
Stream Length: Lower Stretch - 13.5 miles; Middle Stretch - 116.6 miles
Water Quality Issues: Aquatic life and recreation are stressed by known pathogen pollution and suspected nutrient, silt, and sediment pollution. Sources include sanitary sewer overflows and suspected urban stormwater runoff and streambank erosion.

Niagara River
Stream Class: A (Special - Drinking Water)
Stretch Monitored: Upper and Lower Main Stem (Lake Erie to Lake Ontario)
Water Quality Issues: The Niagara is a source of drinking water for much of the region. The NYSDEC considers this use to be threatened by known contamination from toxic sediment and suspected contamination from combined sewer overflows and urban stormwater runoff.

Scajaguada Creek
Stream Class: Lower Stretch - B (from mouth to Main St, Buffalo)
Middle Stretch - C (from Main St to Cheektowaga)
Stream Length: Lower Stretch - 0.3 miles; Middle Stretch - 8.3 miles
Water Quality Issues: Aquatic life and public bathing is precluded and recreation is impaired by low dissolved oxygen, excess nutrients, pathogens, and odors. Known sources include combined sewer overflows and urban stormwater runoff.

Grand Island
Stream Class: All are class B
Stream Length: 53.7 miles
Water Quality Issues: Habitat and aquatic life in the tributaries of Grand Island are thought to be threatened by elevated stream temperatures, silt, sediment, and nutrients linked to development in surrounding areas.

Cayuga Creek (Erie County)
Stream Class: Lower Stretch - C (from mouth to Lancaster)
Middle Stretch - B (from Lancaster to Folsomdale)
Stream Length: Lower Stretch - 13.5 miles; Middle Stretch - 116.6 miles
Water Quality Issues: Aquatic life and recreation are stressed by known pathogen pollution and suspected nutrient, silt, and sediment pollution. Sources include sanitary sewer overflows and suspected urban stormwater runoff and streambank erosion.

Ellicott Creek
Stream Class: B
Stream Length: 112 miles
Water Quality Issues: Aquatic life and recreation is impaired due to excess nutrients, pathogens, silt, sediment, from urban stormwater runoff and sanitary sewer overflows.

Gill Creek
Stream Class: C
Stream Length: 12.3 miles
Water Quality Issues: Aquatic life and recreation are impaired by stormwater runoff and suspected toxic contaminated sediment.
2. Water Quality Index

**Parameter Descriptions**

**Dissolved Oxygen (DO)** is simply the amount of oxygen dissolved in the water, and is essential for the survival of nearly all aquatic life. DO can be decreased by sewage discharges, storm water runoff, and failing septic systems.

**Turbidity** is a measure of the amount of suspended material in water which can include soil particles, algae, plankton, microbes, and other substances. Higher turbidity increases water temperatures, decreases DO, provides refuge for harmful microbes, and can clog gills of fish and crustaceans.

**Conductivity** is a measure of the ability of water to pass an electrical current and is indicative of the presence of inorganic dissolved solids such as salts, chlorine, nitrate, sulfate, and phosphate ions. Elevated levels may be from the presence of sewage or storm water discharges.

**pH** is a term used to indicate the alkalinity or acidity of a substance as ranked on a scale from 1.0 to 14.0. The majority of aquatic animals prefer a range of 6.5-8.0. pH outside this range reduces the diversity in the stream because it stresses the systems of most organisms and can reduce reproduction.

**Temperature** affects the oxygen content of the water (as temperature increases, DO decreases); the rate of photosynthesis by aquatic plants; the metabolic rates of aquatic organisms; and the sensitivity of organisms to toxic wastes, parasites, and diseases.

### Data for select sites are available starting in 2011. Please view past Water Quality Reports on our website or contact Water Quality Specialist if interested.
Map 1: Sample sites are numbered in correlation to Table 1 and are color coordinated to coincide with their WQI Score.
Environmental Justice (EJ) is the concept that all people regardless of race, ethnicity, or income level have the right to live in a healthy environment. Historically, many communities in our area have been disproportionately burdened with environmental problems.

Riverkeeper, in partnership with Buffalo Public Schools and funding from NYSDEC and First Niagara Bank, launched a pilot environmental education program for students residing in these communities in 2014. In 2016, with new support from the Cameron and Jane Baird Foundation, the program continued with anticipated expansion in 2017. The Young Environmental Leaders Program (YELP) provides a unique opportunity for students to learn about local environmental issues that affect their neighborhoods. Students were recruited by partner teachers Adam Hovey of South Park High School (SP), and John Bihr of Riverside Institute of Technology (RIT).

The program consists of two components. First, students attend a series of hands-on experiential learning opportunities where they explore current environmental issues within a local context. Upon successful completion, the students gain three college credit hours. Second, a mentorship opportunity is presented for select students to participate in a research project alongside their teachers and Riverkeeper staff. The students receive a stipend and valuable experience in environmental science.

The students selected for the 2016 mentorship included Amanda Boorum, Destiny Barrett, and Shwe Phew Moo of SP and Mehdi Muzaffari and Tila Khanal of RIT.

Students were trained to use high-tech water quality testing equipment and tested the following locations within the city of Buffalo during the summer: Cazenovia Park, Red Jacket Riverfront Park, Canalside, Broderick Park, and Black Rock Canal Park. The presence of combined sewer overflows at or near these sites provided the opportunity to educate the students about the workings of a combined sewer system and the threats they pose to the natural environment. Students collected samples for E. coli, as it is used as an indicator of sewage pollution.

Results from the E. coli sampling were used to update Swim Guide, a website and app that presents free water quality information for over 7,000 possible swimming locations in multiple countries. Created and managed by Lake Ontario Waterkeeper, Swim Guide utilizes data collected from government agencies or local affiliates. Information is posted online to help visitors determine if beaches are safe for swimming. While the YELP sampling locations are not regulated swimming beaches, citizens are commonly observed recreating and contacting the water.

Swim Guide utilizes a ‘Beach Finder’ map, as seen below, allowing for easy navigation. Colors of water quality icons refer to the status of the location and whether or not most recent tests have met water quality standards.
Swim Guide updates were made by comparing test results to the Environmental Protection Agencies Beach Action Value (BAV) of 235cfu/100mL. This value is often used for making beach notification decisions. As seen in the chart to the right, high levels of *E. coli* were recorded in Buffalo throughout the summer.

Another element of the YELP mentorship involved litter pickup at the five sampling locations. Students spent five minutes collecting trash and recording what they found and how much they found. Over 1200 cigarette butts, 18 pieces of fishing line/lures, and 279 pieces of broken glass were found. Students then researched how these types of litter impact local wildlife. An educational display, which can be viewed below, was created using select findings. This display piece, in addition to the water quality and *E. coli* findings, was presented by the students at the NYPA Wildlife Festival. This event provided an opportunity for the students to present their findings while engaging with the local community.

![Escherichia coli Monitoring Results 2016](image)

**Figure 1**: *Escherichia coli* results from YELP sampling locations in comparison to the EPA Beach Action Value.

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### A Growing Concern - Microplastics Pollution

Microplastics are small plastic particles smaller than 5mm in length. They originate from a wide variety of sources, including the degradation of larger plastic debris, microbeads from personal care products, and fibers from clothing. These tiny particles are finding their way into our water resources and pose many potential threats to aquatic life. Studies have found microplastic in the digestive tracts of many species of birds and fish, which can cause starvation and dehydration.

In 2012, sampling verifying the presence of microplastics was conducted within the Great Lakes Basin. Research efforts pertaining microplastics continues to increase worldwide. Developments are still being made in regards to standardizing sampling and analytical methods to detect the presence of microplastics.

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Sources of Ongoing Pollution

There are two forms of pollution in the watershed: legacy pollution, which was discharged to the water during our industrial past, and ongoing pollution which continues to be discharged into our waterways. The Riverwatch Program monitors for water quality parameters affected by ongoing sources of pollution.

Combined Sewer Overflows (CSOs)

During rain events, water from streets, roofs, and lawns run off into storm drains and combines with sewage in one system. When there is more than a half inch of rain, the volume of water overwelms the system and overflows into local waterways by design. These overflows contain not only stormwater, but untreated human waste, toxins, and debris.

Stormwater Runoff

In rural areas or areas with separated sewer systems, rainwater runs directly off of buildings, roads, lawns, and farm fields into waterways, often with no type of filtration. This stormwater runoff carries nutrients and pesticides from lawns and fields, toxins and salts from roads, along with silt and sediment from erosion.

Land Use

Waterways in their natural state have areas of forest, shrub land or wetlands along shorelines. This vegetation is natural infrastructure that helps filter stormwater and control erosion. Development of the land in our watershed has removed much of this natural resiliency resulting in increased erosion and pollution from stormwater.

Solutions to Ongoing Pollution

You can help reduce stormwater and sewage pollution! Below are three different green infrastructure solutions you can apply at your own home to reduce the amount of stormwater from your property.

Downspout Disconnection

Downspouts on many homes are connected directly to the combined sewer system, contributing to combined sewer overflows. Disconnecting downspouts from the sewer system allow roof water to drain to lawns and gardens. It is a more natural way to manage roof runoff as it allows water to soak into the ground as plants and soils filter pollutants.

Rain Barrels

Rains barrels are containers that collect and store rain water for future uses, such as watering landscaping, while decreasing the amount of storm water runoff that leaves your property. A rain barrel is placed under the downspout to channel rainwater into the barrel for later use. Rain barrels are available for purchase at Riverkeeper. View http://bnriverkeeper.org/rainbarrels/ for more information.

Rain Gardens

A rain garden is a planted depression that allows rainwater runoff from impervious urban areas like roofs, driveways, walkways, and compacted lawn areas to be absorbed. This reduces rain runoff by allowing storm water to soak into the ground. Rain gardens can reduce the amount of pollution reaching creeks and streams by up to 30%.
## Related Riverkeeper Projects

For additional information on these programs and more, please visit [http://bnriverkeeper.org](http://bnriverkeeper.org)

<table>
<thead>
<tr>
<th>Water Academy</th>
<th>Shoreline Sweeps</th>
<th>River Tours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water Academy</strong> is a field-based college credit environmental science class also open to the public. Classes are instructed by staff and local experts in Western New York.</td>
<td><strong>Shoreline Sweeps</strong> engage 2,000 volunteers and removes 20 tons of trash from 45 shoreline sites throughout the Niagara River Watershed annually.</td>
<td><strong>River Tours</strong> provide citizens a direct connection to the water through paddling, hiking and biking tours led by expert guides in and along waterways. Snowshoe tours will be offered in 2017.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Restore Corps at Gill Creek</th>
<th>Native Plant Guide</th>
<th>Healthy Niagara</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Restore Corps</strong> engages community volunteers to remove invasive vegetation and plant native trees and shrubs to help prevent stormwater runoff. In 2016, work kicked off to begin 3 years of plantings along Gill Creek in Niagara Falls.</td>
<td><strong>The Native Plant Guide</strong> is an educational tool to instruct local homeowners, nurseries, and organizations about proper use of native plants in landscaping. Guides are available at the Riverkeeper office.</td>
<td>Under phase two of the Healthy Niagara initiative, Riverkeeper conducted two years of extensive water sampling and stream assessments to utilize in the creation of implementation plans for 5 priority sub-watersheds in the Niagara River Watershed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scajaquada Creek Initiative</th>
<th>Living Shorelines Program</th>
<th>Buffalo River Habitat Restoration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Our Scajaquada Creek Initiative</strong> is dedicated to restoring the water quality of Scajaquada Creek and to transform this waterway into a vibrant, healthy, accessible ecosystem for the entire community.</td>
<td><strong>The Living Shorelines Program</strong> aims to restore both hardened and degraded shoreline areas to their natural, resilient, and self-repairing form which will better support a sustainable, higher-functioning ecosystem.</td>
<td>For the last 13 years, Riverkeeper has coordinated the <strong>Buffalo River Remedial Action Plan</strong>. In-water and upland restoration at specific sites are nearing completion. Construction for other sites will kick-off in 2017.</td>
</tr>
</tbody>
</table>
The Riverwatch Team

**Staff**
- Chirs Murawski - Director of Citizen Engagement
- Liz Robbe – Water Quality Specialist
- Wendy Paterson – Community Liaison

**Interns**
- Chloe Wasteneys – SUNY Buffalo
- Olivia Patick – SUNY Buffalo
- Kate McGowan – SUNY ESF
- Ron Zietz – ECC
- Darius Huggins – ECC

**Volunteers**
- **Buffalo Creek:** Ron Zietz, Krista Wagoner, John Sadewater, Jared Zajac, Louis Rodriguez, Tim Englert, Pat & Bill Townsend
- **Buffalo River:** Intefada Wardia, David Solowski, Judy Hendee, Elizabeth Mattson
- **Cayuga Creek (Erie County):** Richard Zacher, Ryan Marchant, Mike Conway
- **Cayuga Creek (Niagara County):** Brian Barre, Edward Nickson, Brian McGowan, Thomas Heyer
- **Cazenovia Creek:** Jack Schweigel, Lex MacCubbin
- **Elicott Creek:** Mark Casper, Brian Foley, Steve Hassett
- **Erie Basin & Black Rock Canal:** Frank Balics, Victoria Anderson, Sherrill Quinn
- **Niagara River:** Jim Galbo, Michelle Johnson, Beverly Seyler, Coleen Cook-Wagner, Robin Wagner, Andrew Lui, Youidex Ngui
- **Grand Island:** Greg Madejski, Diane Evans, Ron & Denise Rezabek
- **Scajaquada Creek:** Elizabeth Oldfield, Glyn Holden, Holly Graham, Timm Otterson
- **Tonawanda Creek:** Jude Hammer, Val Macer, Mary McNeil, John Svec, Kandy Krampitz Svec, Kate Svec, Taylor Schweigal
- **Ransom Creek:** Joyce Ciski, Paul Jones, Nicole Peradotto
- **Gill Creek:** Alan Cobb, Jim & Dawn Cody, Griffin Gansworth

Volunteer Spotlight

**Ryan Marchant**
*Cayuga Creek (Erie County)*

Ryan spends most of his free time outdoors with his dog Baileigh hiking, camping, and kayaking. He joined Riverwatch in 2016, adding to his Riverkeeper volunteer resume. In the past he has worked to clean up shorelines, plant trees and shrubs along Gill Creek in Niagara Falls, and to promote the Rain Barrel initiative through the City of Buffalo. Ryan is also a graduate of BNR’s River Academy program. “I find that volunteering with Riverkeeper is a great way to give back to the waterways that I derive so much enjoyment from,” expressed Ryan.

**Kandy Krampitz Svec & Family**
*Middle Tonawanda Creek*

Inspired by their love of the outdoors, the Svec family began volunteering at the Riverkeeper Shoreline Sweep. They have more recently become involved with Riverwatch, Gill Creek Restoration Plantings, and kayak tours. They consider themselves ‘stewards of the earth’ and enjoy actively volunteering to make a difference. They bring their children to events to encourage participation in environmental community service. “Our family admires the great work BNR has done for the community and Western New York,” Kandy stated.

Buffalo Niagara RIVERKEEPER® is a community-based organization dedicated to protecting the quality and quantity of water, while connecting people to water. We do this by cleaning up pollution from our waterways, restoring fish and wildlife habitat, and enhancing public access through greenways that expand parks and open space.

Buffalo Niagara RIVERKEEPER® is a member of the global WATERKEEPER® ALLIANCE.

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