The Arundel Rivers Federation uses science, restoration, and community action to make the South, West and Rhode Rivers and the waterways of Southern Anne Arundel County cleaner and healthier.

Silver Linings

Last year was the wettest year on record for this region, according to the National Weather Service. Due to the volume of stormwater gushing sediment, nutrients, and other pollutants into our waterways, our 2018 grades are worse than last year. Still, the news isn't entirely despairing. While overall water clarity was understandably worse than 2017, dissolved oxygen was actually slightly better in both rivers. Other parameters, including the presence of nitrogen and phosphorus, did not increase as much as you might expect.

We also discovered a small patch of underwater grass growing inside the mouth of the Rhode River. The most hopeful sign was the appearance in July of a large pod of bottlenose dolphins. If these magnificent creatures consider the river fishable and swimmable, we'll take that as an endorsement.

That doesn't mean we can relax. If current patterns persist, the weather is bound to be more severe, and there will be more and more rain. We need to double up on our efforts to mitigate stormwater runoff before it pollutes our rivers, as we did with the project we just completed at the Holly Hill Harbor community waterfront park in Edgewater. Fortunately, our new partnership with the South River Federation to form the Arundel Rivers Federation will give us the resources to do just that— with your help. We can't do all we do without you!

Help Us Detect Pollution

We have a talented corps of citizen-scientists who volunteer to help us collect data weekly no matter the weather, but there are still costs that are not covered.

Maintenance and upkeep of the two boats used to sample is itself a financial hurdle, not to mention the cost of fuel for the boats to cover all 28 sites every week. Additional costs include the lab fees for bacteria analysis at the 14 community beaches we test, as well as the surprisingly expensive solutions used to calibrate the monitoring equipment. Your support is vital in covering some of these expenses. Please help keep our local waterways fishable and swimmable and make a generous donation today.

Treating Stormwater Before It Pollutes

Here, 6th graders plant native trees on the wettest day of the wettest year to complete a project that treats polluted stormwater before it reaches the Rhode River. In 2018, the West & Rhode Riverkeeper® helped construct this project in the park at the Holly Hill Harbor community in Edgewater. Built as a series of step pools and bioswales, the project is designed to catch and filter stormwater before reaching Bear Neck Creek.

Native plants absorb excess nutrients while their roots keep the soil from eroding. This successful collaboration with South River Federation was one of the factors that led to the two organizations’ unification as the Arundel Rivers Federation in January 2019.

Methodology

Data was collected by West & Rhode Riverkeeper’s citizen scientists from 28 tidal sites on both rivers. We also used data from the Maryland Dept. of Natural Resources, the Smithsonian Environmental Research Center and the Virginia Institute of Marine Sciences. Data was compared against thresholds established by the Mid-Atlantic Tributary Assessment Coalition. Scores are reported as the percentage of data meeting attainment goals.

The West & Rhode Riverkeeper office of the Arundel Rivers Federation is located on the campus of the Smithsonian Environmental Research Center 647 Contees Wharf Road, Edgewater, MD 21037 443-758-7797 www.arundelrivers.org
West & Rhode Rivers 2018 Grades

<table>
<thead>
<tr>
<th>Water Quality Indicators</th>
<th>West River</th>
<th>Rhode River</th>
<th>Overall Grade</th>
<th>Change From 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Clarity</td>
<td>28%</td>
<td>28%</td>
<td>D</td>
<td>-9%</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>71%</td>
<td>75%</td>
<td>B</td>
<td>+13%</td>
</tr>
<tr>
<td>Nutrients</td>
<td>46%</td>
<td>39%</td>
<td>C</td>
<td>Same</td>
</tr>
<tr>
<td>Underwater Grasses</td>
<td>0%</td>
<td>1%</td>
<td>F</td>
<td>Same</td>
</tr>
<tr>
<td>Average Scores</td>
<td>36%</td>
<td>36%</td>
<td>D</td>
<td>Same</td>
</tr>
<tr>
<td>Bacteria</td>
<td>92%</td>
<td>81%</td>
<td>A</td>
<td>-9%</td>
</tr>
</tbody>
</table>

Accomplishments this past year to protect our rivers:

1) Saved the 140-acre Turtle Run site in Churchton from illegal development in Critical Areas.
2) Completed stormwater treatment project at Holly Hill Harbor in Edgewater.
3) Moved base of operations to the campus of the Smithsonian Environmental Research Center.
4) Cleaned up tons of Conowingo Dam storm debris at Beverly Beach with Clean Creeks Football Club.
5) Cleaned up the Galesville waterfront park with students from St. Anne’s School in Annapolis.
6) Pumpout boat served more than 700 recreational boats and safely disposed of more than 17,000 gallons of raw sewage.
7) Secured a grant from the Maryland Dept. of Natural Resources to design a 2,500-foot living shoreline to protect Franklin Point State Park.
8) Combined forces with the South River Federation to form the Arundel Rivers Federation.