



Dear Friends,
 Friends of the Bohemia, Inc. is a new watershed organization just formed in the past year. We are devoted to monitoring and improving the health of the Bohemia River, and bringing together everyone who lives, works, or plays in the interlinked watersheds between Chesapeake City and Cecilton. No one alone can solve the problems our waterways face, but if all of us, including you, do what we can it can have a huge impact. Although our organization is young we already have a robust water quality testing program at 5 sites in the Bohemia River with a 6th to be added. This pamphlet summarizes our water quality findings for the 2015 sampling year. We have also been active cleaning trash at the Hack's Point boat launch and the Bohemia Mill pond, and installing a rain garden at Chesapeake City Elementary School. We have a lot more planned, including a public meeting, so fill out the back of this flap to sign up for our mailing list and "like" us on Facebook to be the first to know.

How can you help?

The Bohemia doesn't have just one source of pollution. Everyone who lives in or travels through our watershed has an impact, and the opportunity to influence the health of the river. These are just a few ways your small actions can have a positive effect and make our watershed a better place.

1. Don't litter
2. Pick up any trash you see
3. Reduce fertilizer, herbicide, and pesticide use
4. Plant bird and insect friendly native plants
5. Leave wild areas on your property
6. Don't mow to the water's edge: leave a vegetated buffer
7. Maintain and update septic systems
8. Lower boat and jet ski wake near the shore
9. Don't bring breakable glass bottles or easily blown trash boating, fishing, or picnicking
10. If you know of a stream or shoreline area with problems, help out or let us know

Spotlight on Littering

Picking up litter (both your own and other people's) can really help. Litter doesn't just appear, and it doesn't go away. All litter has to be dropped by someone and it can remain in our watershed for years or decades. The Bohemia doesn't have the waves necessary to create pretty sea glass, so the bottle you leave behind today will be sharp shards in the river decades from now. Cleaning up doesn't even take much time. In our cleanup this spring just 25 of us cleared 940 pounds of trash in only a few hours. Join the challenge, grab a few friends, and see how much you can pick up in your own neighborhood. Just make sure you stay safe!



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Bohemia River Water Quality Report Card 2016



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Water Quality Results

Friends of the Bohemia tested the water quality of the Bohemia River by boat once a month between June and October of 2015. This is a summary of the results. The map shows the stream health letter grades (think school report card) at each of our 5 sampling sites. We measured dissolved oxygen, nutrients, chlorophyll, water clarity, and submerged aquatic vegetation. Overall we scored a B, with a B grade in every sampling site except for the Little Bohemia Creek. While this is good, breaking down the grades to each of the parameters sampled shows we still have work to do.

Dissolved Oxygen A

Underwater animals need to breathe dissolved oxygen to live. Many areas of the Chesapeake Bay suffer from low oxygen over the summer; some have less oxygen than the surface of the moon, resulting in death for many animals. The Bohemia is relatively shallow and well mixed, so low oxygen does not seem to be a problem. We only saw dissolved oxygen dip below the recommended 5 mg/L briefly in August, and even then it was not below the 2 mg/L associated with hypoxia and mass animal death.

Nutrients A + B

Nitrogen and phosphorus come from many sources; fertilizer is likely a major source. In the past phosphorus caused problems for some water bodies leading to algal blooms and harming river life, but phosphate detergent bans cut household phosphate output, a real success story of small changes that can make a big impact. Our scores for nutrients were good with a score of A for nitrogen and B for phosphorus. However, our sampling may have missed runoff that would briefly raise nutrient levels.

Chlorophyll C

Chlorophyll is used by plants to get energy from sunlight. In the water it indicates the presence of algae, and high chlorophyll usually means algal blooms. Although most algal blooms don't harm humans they increase water cloudiness and shade underwater plants.

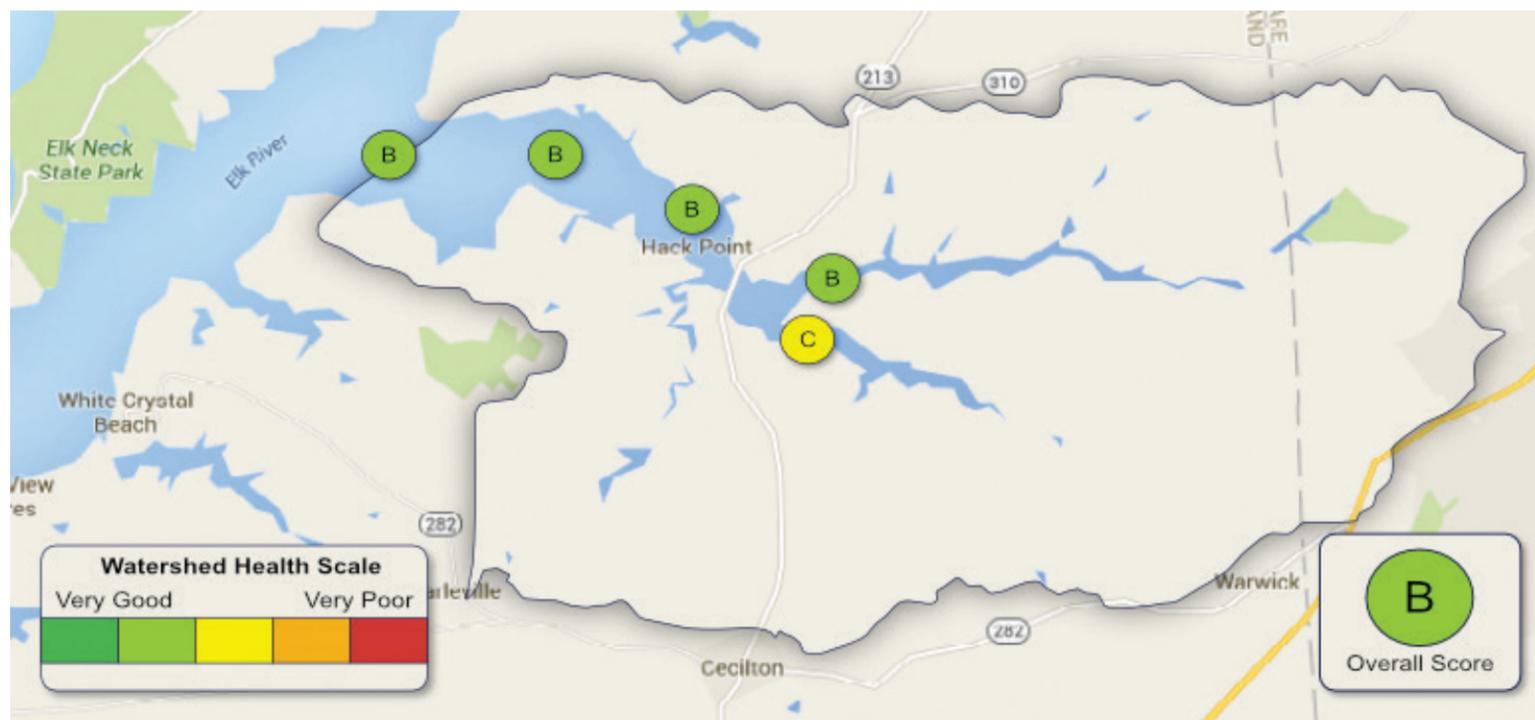
During blooms, dying algae can cause bacterial growth and lower oxygen. We measured chlorophyll in August and September to coincide with summer blooms. Our overall grade was a C.

Water Clarity D

Water clarity is measured by lowering a black and white Secchi disk and recording the depth at which it can no longer be seen. Water clarity receives our lowest score for any water quality indicator. At no point in our testing was the visible depth over 3 feet and many times it was less than 1 foot. The scores were lower near our tributaries than at the mouth, indicating that our rivers and not the bay are the source of the cloudiness. Cloudy water can originate from runoff washing soil into the river, waves or boats stirring mud from the river bottom, and algae living in the water. Cloudy water doesn't just look bad, it harms the ecosystem. It shades plants growing on the bottom and aquatic animals like fish can't navigate or breathe as easily. Although shallow estuaries like the Bohemia will never be crystal clear, humans can cause excess turbidity, and humans can also improve water clarity. We can stabilize eroding banks, use cover plantings on bare ground, boat slower near shore or in shallow waters, and follow best management practices on farms.

Submerged Aquatic Vegetation (SAV) D

SAV includes all plants that grow completely under the water. They benefit the ecosystem by increasing water clarity, providing habitat for fish and crabs, and producing oxygen. SAV are critical to a healthy river. In 2015, the Bohemia had 131.97 ha of SAV, up from only 25.6 ha in 2014. Even though the SAV is increasing, they are still only at 36% of 2005 goal levels. Despite the poor score, in some places the SAV is doing very well. Friends of the Bohemia hosted a workshop in Veazey Cove last year and found a large bed containing 10 different SAV species growing lush and healthy. Having similar beds expand to elsewhere in the river would create a positive feedback loop, since these plants increase water clarity and clearer water allows more light for more plant growth.



Join the Friends of the Bohemia!

Friends of the Bohemia has made great strides in the past year, but we need your help to keep up the pace. We would love to add you to our list of members and count you among our friends. If you can, a small donation would make a huge difference. Even if you can only give time or expertise we need your ideas. Just fill out the information below, detach this flap and mail it to us. You can also donate on our website at: www.friendsofthebohemia.org.

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We would like to thank all of our donors as well as Cecil County, the Sassafras River Association, Chesapeake Bay Trust, Watershed Stewards Academy and the University of Maryland Extension, VWR International, and members of the local business community for your contributions and support.

[Friends of the Bohemia, Inc. is tax-exempt per IRS Section 501(c)3 and contributions are deductible to the full extent permissible. A copy of our current financial statement is available upon request by contacting us at 40 Two Rivers Lane, Chesapeake City, MD 21915, Phone: (443) 566-3513. Documents and information submitted to the Maryland Secretary of State by Friends of the Bohemia, Inc. under the Maryland Solicitations Act may be obtained from the Secretary of State for the cost of copies and postage. Federal Tax ID No. 47-3599804]