

Kayak Tour!
Dear Friends,
Friends of the Bohemia, Inc. is devoted to monitoring and improving the health of the Bohemia River, and bringing together everyone who lives, works, or plays in the closely interlinked watersheds. Did you know that the headwaters of the Bohemia lie in Middletown, Delaware? Wherever you are in our watershed, even if you just travel through, you are important to our river's future! Each of us can make the personal choice to be part of the solution to ensure our community is vibrant and beautiful for generations to come. Join the team working to ensure a healthy clean river!

Our volunteers have been busy and we are excited to fill you in on our activities! Whether at learning workshops and kayak tours, water quality monitoring and stream cleanups, or all the work behind the scenes, we have been having fun learning about our river and making it a better place. There's a lot more planned next year, and always more to do, so sign up for our mailing list and "Like" us on Facebook to be the first to know!


SAV Workshop!

Did you know you live in a Watershed?

Everyone lives in a watershed! I'll bet you can see where the water flows from your driveway or yard after a heavy rain storm. That water leads to small gullies and streams, which lead to even larger waterways. If you are in the area outlined on the map in this report card you are in the Bohemia River Watershed, even if you aren't close to the river. The Bohemia itself is in the larger watershed of the Chesapeake Bay, which itself is in the watershed of the Atlantic Ocean.

## What is a Watershed?

A funnel or a filter!
A watershed is an area of land that catches rainfall and moves it, along with all of the sediment, nutrients and trash it can carry, to a river, then to the Bay, and


## Bohemia River Water Quality Report Card 2017



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## Water Quality Results

Friends of the Bohemia measured tidal water quality of the Bohemia River by boat once a month between June and October of 2016. This is a summary of the results. The map shows the results as grades (think school report card!) at each of our six sampling sites. We measured dissolved oxygen, nutrients (nitrogen and phosphorus), chlorophyll, water clarity, and submerged aquatic vegetation.

Overall we scored a B ( $\mathbf{6 7 \%} \mathbf{\%}$ ), while the Bay as a whole scored a C-. Although t is encouraging that our water quality scored higher than the Bay as a whole, we cannot point to other places in the Bay as the source of our problems. Across the board, the water quality parameters we measured were worse at our upstream sites than at the mouth of our river.

Compared to last year our overall score was the same, a B. Our percentage score increased from $61 \%$ to $67 \%$. When broken down into individual parameters we saw a lot of improvement. Our scores for dissolved oxygen, chlorophyll, nitrogen, and water clarity all improved. Phosphorous was the only score that decreased. This trend of increasing scores in most areas and declining scores for phosphates was also seen in the Sassafras River. It did not appear to be specific to any of our sites, and was likely a region-wide trend

When looking at individual parameters our best scores were nitrogen and dissolved oxygen; both scored A's. Our worst scores, like last year, were water clarity and aquatic plant coverage. These are closely tied as cloudy water leads to fewer aquatic plants. Our phosphorous score was also low. Phosphorous mostly enters rivers through fertilizer. In the Bohemia watershed our soils hav excess of phosphorus and lack nitrogen, but many fertilizers contain both Testing soil and using fertilizer designed for your specific soil type and only when necessary on your lawn or farm, can help.

Our scores this year are good compared to other parts of the Chesapeake Bay, but future results depend on all of us and the actions we take today.

## What can you do?

Everyone has an impact on their watershed; here are some easy step you can take to make your impact as positve as can be:

## Homeowners

1. Use herbicide, pesticide, and fertilizer only when absolutely necessary, and follow directions. Check out Delaware's Livable Lawns program at www.delawarelivablelawns.org!
2. Don't mow grass to the water's edge. This leads to erosion and increases runoff. Leave a buffer of trees and shrubs around waterways.
3. Use rain barrels, rain gardens and plantings to slow and reduce runoff.
4. Maintain septic systems properly and use Best Available Technology
(BAT) systems when possible.

## Boaters

1. Lower boat and jet-ski wake near the shore and in shallows.
2. Use pump out stations. NEVER discharge sewage into the river.
3. Take care to avoid oil and gas spills.
4. Don't bring breakable glass bottles or easily blown trash on boats.

## Everyone

1. Don't litter!
2. Reduce, reuse, and recycle! Avoid one-time-use plastics, like grocery bags and water bottles.
3. Only put water down the sink! Oil, paint, and non-biodegradable items can harm septic systems and wastewater treatment plants.
4. Get outside! You live in a beautiful place, explore it and appreciate it.
5. Volunteer! Come to our events or contact us! We need all kinds of
people with all kinds of skills and would love to hear from you! 6. If you see something say something. Whenever you see a pollution source or just have a question, get in touch with us!


|  | 2015 | 2016 |
| :--- | :---: | :---: |
| Dissolved Oxygen | $80 \%$ | $100 \%$ |
| Nitrogen | $90 \%$ | $96 \%$ |
| Phosphorus | $74 \%$ | $59 \%$ |
| Chlorophyll | $52 \%$ | $74 \%$ |
| Water Clarity | $37 \%$ | $42 \%$ |
| Aquatic Grasses | $36 \%$ | $32 \%$ |
| Overall | $61 \%$ | $67 \%$ |


| A | B | C | D |
| :---: | :---: | :---: | :---: |
| $80-100$ | $60-80$ | $40-60$ | $20-40$ |

## Friends of the Bohemia Needs You

We are an all-volunteer organization and can't do anything without your help and support. Whether you want to come sampling with us, participate our events, donate money, or give us your ideas, we want to hear from you. Sign up for our mailing list to be the first to know about upcoming events. You can reach us by phone, email, or mail. "Like" us on Facebook at www.facebook.com/FriendsoftheBohemia!

Fill out the information below, detach this flap and mail it to us at:
Friends of the Bohemia, Inc.
PO Box 506, Chesapeake City, MD 21915
Or donate on our website at: www.friendsofthebohemia.org.
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Donation level:
_ \$1,000 Best Buddies!
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_\$30 Family Membership
_ \$20 Individual Membership
_ \$5 Student Membership
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We would like to thank all of our donors as well as Chesapeake Bay Trust, Delaware Department of Natural Resources and Environmenta Control, VWR International, Sassafras River Association, Cecil County, Watershed Stewards Academy and the University of Maryland Extension, as well as 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 PO Box 506, Chesapeake City, MD 21915, Phone: (443) 5663513. Documents and information submitted to the Maryland Secretary of State by Friends of State for the costof copies and postage. Federal Tax ID No. 47-3599804]

