Severn River Report Card

2019

Severn River Association

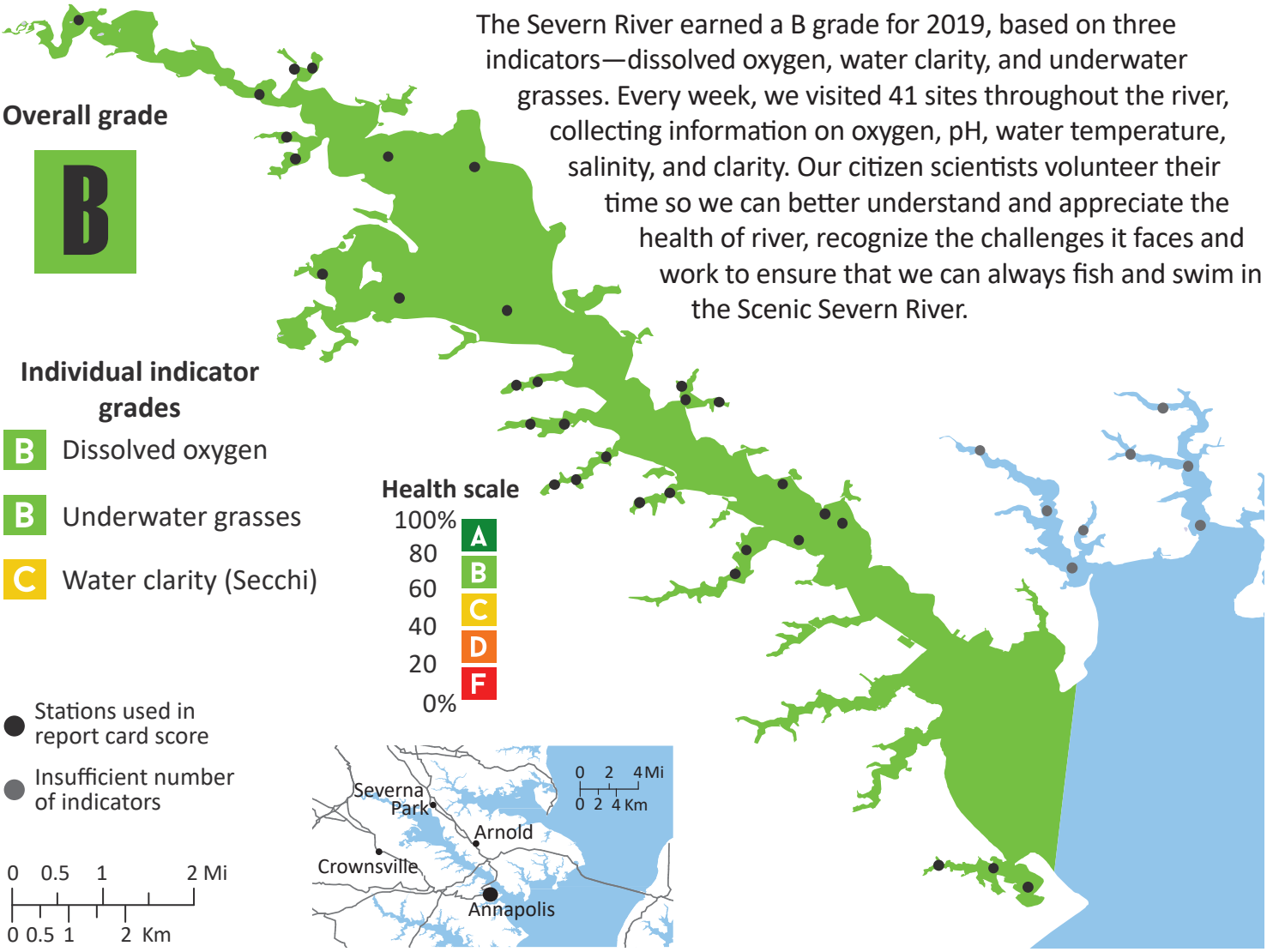
The Severn River earned a B grade for 2019, based on three indicators—dissolved oxygen, water clarity, and underwater grasses. Every week, we visited 41 sites throughout the river, collecting information on oxygen, pH, water temperature, salinity, and clarity. Our citizen scientists volunteer their time so we can better understand and appreciate the health of river, recognize the challenges it faces and work to ensure that we can always fish and swim in the Scenic Severn River.

Overall grade

B

Individual indicator grades

- B Dissolved oxygen
- B Underwater grasses
- C Water clarity (Secchi)



What do the grades mean?

- **A** All water quality and biological health indicators meet desired levels, which is very good for fish and shellfish.
- **B** Most water quality and biological health indicators meet desired levels, which is good for fish and shellfish.
- **C** There is a mix of good and poor water quality and biological health indicators, which is fair for fish and shellfish.
- **D** Some or few water quality and biological health indicators meet desired levels, which are poor conditions for fish and shellfish.
- **F** Very few or no water quality and biological health indicators meet desired levels, which are very poor conditions for fish and shellfish.

Dissolved oxygen is a key indicator of health

In 2019, SRA tracked an extensive dead zone (dissolved oxygen (DO) <2.0 mg/L) throughout the river. How can w have a dead zone and still receive a good B grade? This is due to the nature of the dead zone, where low DO water settles on the bottom half of the water column. Conversely, there is plenty of oxygen in the top half of the water column, where fish are forced to congregate. This report card assessed the entire water column, not just the bottom water.

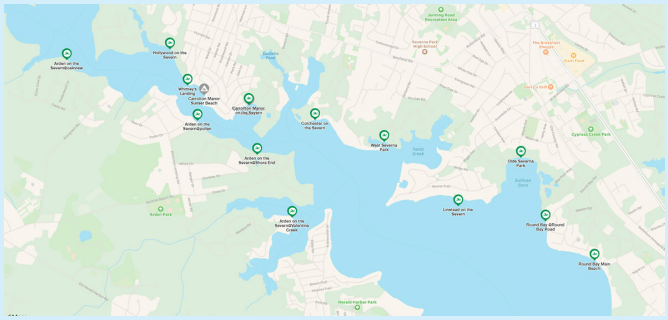
A banner year for underwater grasses!

The final tally for underwater grasses was over 400 acres—more than double the amount of grass the year before. This is more submerged aquatic vegetation (SAV) than we've had in generations.

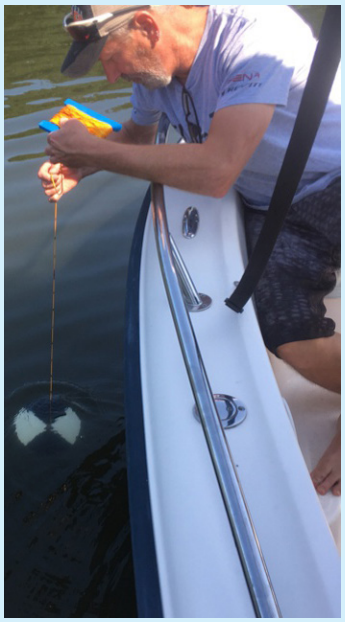
SAV is crucial because it filters and cleans the river, adds oxygen, and provides habitat for fish and crabs.

Was it safe to swim?

Yes! It was safe to swim most of the time in 2019. The river beaches routinely pass EPA's swimming test for fecal bacteria based on weekly testing by our partner, Operation Clearwater. The Anne Arundel County Health Department still advises against swimming within 48 hours of a major rain event.



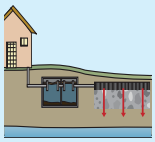
Citizen science team work key to success



Our river-wide Water Quality Monitoring Program succeeds because specially trained citizen scientists donate their time to help us better understand our river. Thanks to their enthusiasm, we can visit 41 stations a week. Special thanks to our famous Water Quality Crew!

What you can do to help our Scenic River!

To ensure that the Severn River remains swimmable and fishable, we all must focus on reducing stormwater runoff, which carries nitrogen and phosphorus pollution and bacteria into the river.



- Plant trees,
- Install rain barrels and rain gardens,
- Pick up pet wastes,
- Maintain your septic system to reduce bacteria pollution, and
- Remove invasive plants and plant native plants that soak up rain.

Acknowledgements

Special thanks to Delaplaine Foundation for their support of our water quality monitoring program. Thanks also to our team of volunteer citizen scientists who staff our weekly tours! They are supported by our volunteer boat captains who host our water quality crew on the river. We'd also like to thank Operation Clearwater, the Eastport Civic Association, and the Port of Annapolis Marina for their support. The Severn River Association is happy to partner with the Chesapeake Monitoring Cooperative for technical guidance, quality assurance, data upload to the Chesapeake Data Explorer, and report card production through the University of Maryland's Center For Environmental Science.

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