

Rain Leads to Poor Scores

We have long known that heavy rain washes pollution from the land into our rivers. Rainfall in 2018 was the highest ever recorded for the Baltimore metro area. The U.S. Naval Academy showed a 65% increase in rainfall since 2017, and the River suffered accordingly. The South River's overall score dropped from a 56% to a 51%, and we saw declining scores in every major parameter measured.



David Sites

We also witnessed significant algae blooms in spring, especially in Little Aberdeen and Warehouse creeks. We suspect that the downturn in water quality is to blame for our second year in a row without any summer time underwater grass beds in the River.

On the bright side, community swimming beaches were still safe to swim 86% of the time. Anne Arundel County dramatically increased its enforcement efforts with 30% more compliance cases opened and 9% more enforcement actions taken for environmental violations than in 2017. We also noticed natural recruitment of spat on our oyster sanctuary

reef, which indicates that the reef may be able to sustain itself.

We can't control Mother Nature, but thanks to our supporters, we can continue building transformative stormwater restoration projects, advocating for proper enforcement of environmental law, and carefully monitoring the River's health.

Help Us Detect Pollution

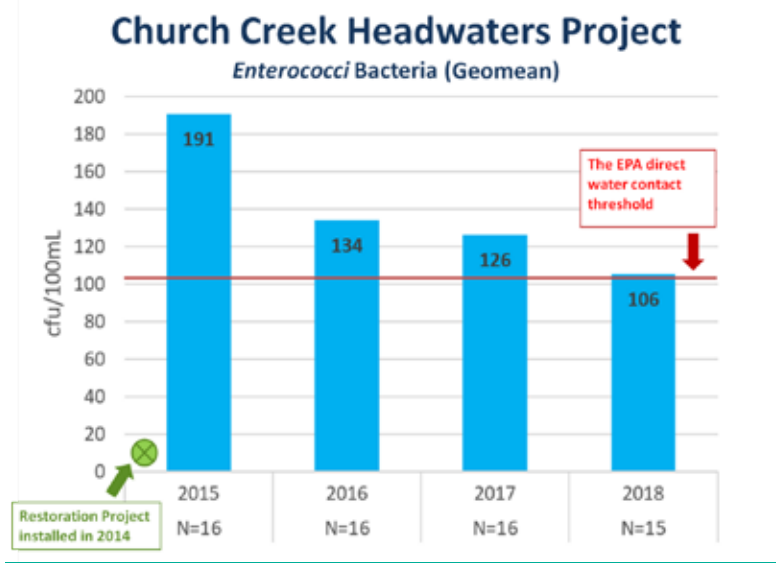
While Arundel Rivers Federation, formerly South River Federation, is known for our robust monitoring program, we are still a small non-profit operating on a tight budget. The Hydrolab, our \$15,000 water quality measuring device, is 11 years old and is on its last legs.

Additionally, nutrient testing costs almost \$30 per sample in lab fees, forcing us to take nutrient samples sparingly. This is unfortunate in a year like 2018, where we witnessed many algae blooms. Without increased support for our monitoring program, harmful pollution will go undetected.



Bacteria Drops at Church Creek

Bacteria levels at the tidal headwaters of Church Creek have steadily dropped since our restoration project in 2014. Since then, we have constructed two more stream restoration projects further upstream.



Methods

The report card scores are calculated with data from 21 tidal sites. Seven parameters are measured weekly (Apr.-Oct.) with a Hydrolab instrument and a Secchi disk. Bacteria samples, collected from residential beaches, are analyzed by the local community college. Our scoring system uses the approach of the Mid-Atlantic Tributary Assessment Coalition.



The Jim and Patty Rouse Charitable Foundation



We are grateful for:

Dr. Tammy Domanski, Anne Arundel Community College as well as our Quality Assurance Officers: Dr. Jennifer Gundersen and Dr. Wayne Martin and all our generous supporters.

Cover Photo: Ryan McClellan (left) and Sarah Giordano (right)

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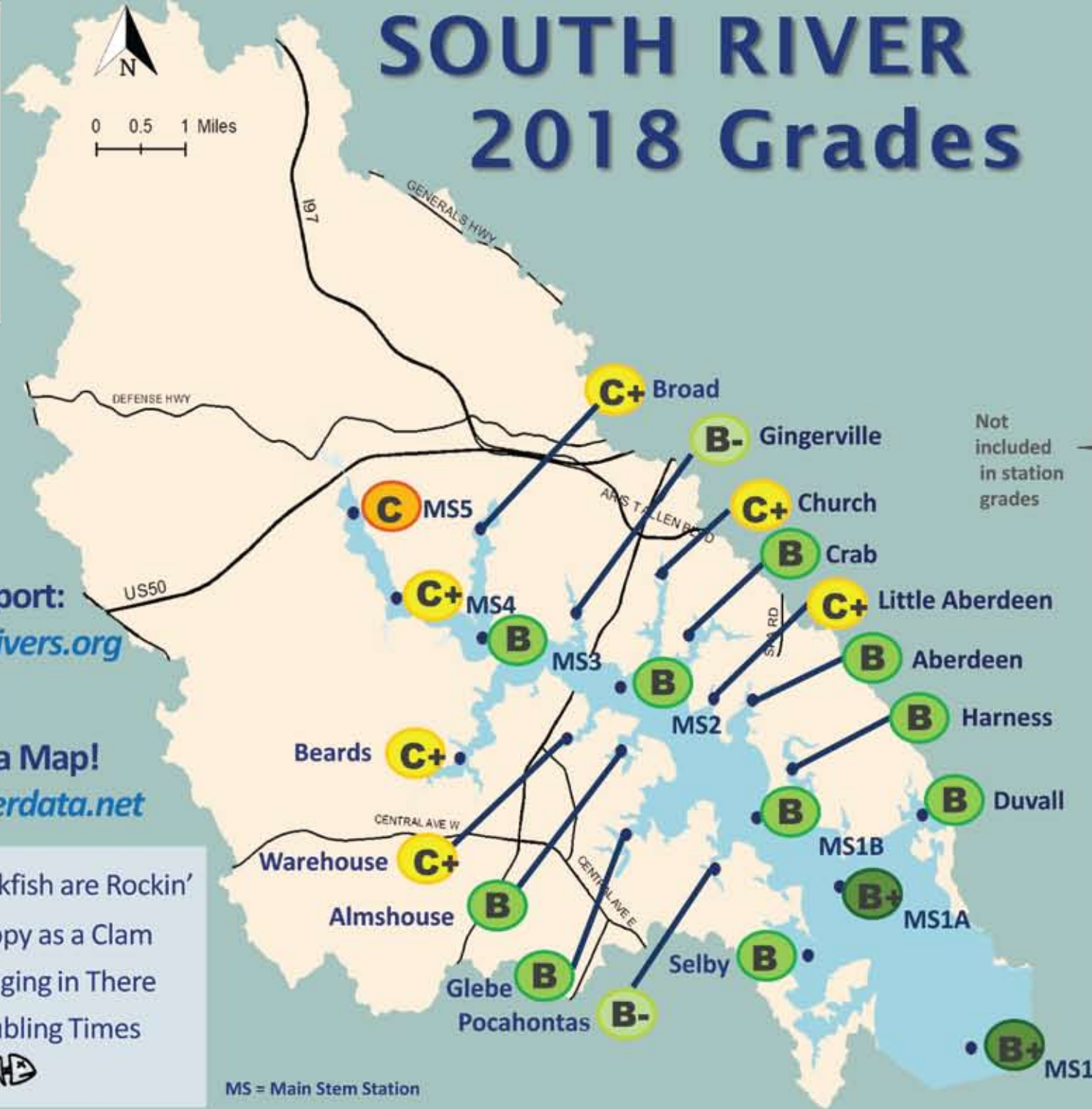
South River Report Card



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



SOUTH RIVER 2018 Grades



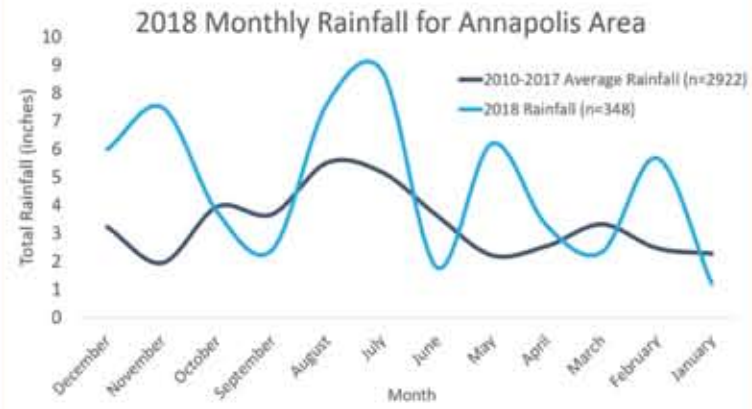
Water Quality Indicators <small>n = # of samples</small>	Number Score	Letter Grade	Change From 2017
Water Clarity n = 407	31%	D	- 5%
Dissolved Oxygen n = 415 profiles	76%	B+	- 3%
pH n = 363	83%	A-	- 12%
Temperature n = 363	42%	C-	- 8%
Bacteria n = 286	86%	A	- 4%
Total Nitrogen n = 56 (MS 2 Station)	32%	D	- 11%
Total Phosphorus n = 56 (MS 2 Station)	39%	D+	- 6%
Underwater Grasses	0%	F	Same
Overall Grade	51%	C	- 5%

Not included in station grades

Not directly comparable to 2017 due to measuring other parameters

17 Inches Extra Rainfall Leads to Poor Score

In 2018 Annapolis recorded 56.7 inches vs. 40.18 inch average



See the Full Report:
www.arundelrivers.org

Check out our
Interactive Data Map!
www.southriverdata.net

- A** (80-100) = Rockfish are Rockin'
- B** (60-79) = Happy as a Clam
- C** (40-59) = Hanging in There
- D** (20-39) = Troubling Times
- F** (<20) =

MS = Main Stem Station