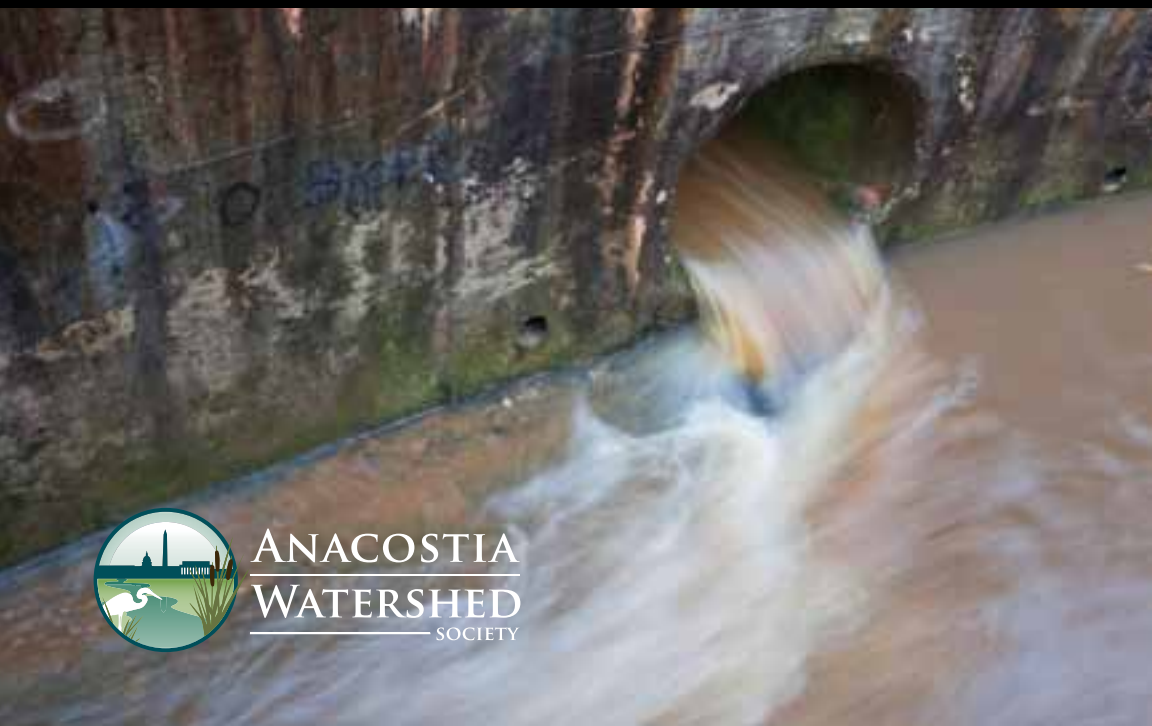
2011 STATE OF THE ANACOSTIA RIVER



ANACOSTIA WATERSHED SOCIETY

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www.anacostiaws.org

WELCOME

TO OUR SECOND ANNUAL STATE OF THE RIVER REPORT FOR THE ANACOSTIA RIVER!

This report card is your guide to how well our communities, environmental groups, and governments are meeting the goal of a fishable and swimmable Anacostia River, per the terms of the Clean Water Act. Our objective is to provide a benchmark of progress and create accountability for decision makers entrusted with the health of the river. We have analyzed scientific data gathered for core river health parameters and provided a summary so that citizens and public officials can better understand the progress (or lack thereof) toward a healthy Anacostia River.

Sadly today people who know the Anacostia are primarily familiar with it as the "forgotten river," subject to decades of pollution and neglect. Few people know the proud history of the Anacostia River, when it was a major shipping destination. In colonial times Bladensburg was a bigger port than Baltimore and the river was 40 feet deep to the banks. Freedmen could earn an honest living working the river's wharves. Fish were so bountiful they could be scooped up from boats, and the marshes of the river were famous for their waterfowl hunting.

The river can again be a thriving community asset. Visit its banks yourself to see the surprising beauty and abundance of wildlife. Make your voice heard in efforts to restore this once proud river to its proper place in the life of our communities.

Jim Foster
President, Anacostia Watershed Society

Anacostia Watershed Society has a mission to protect and restore the Anacostia River and its watershed communities by cleaning the water, recovering the shores, and honoring the heritage. We believe that by working together with businesses, governments, faith-based organizations, and youth we can create sustainable solutions that improve our communities, empower our residents, and create economic prosperity that will result in a clean river. We want to change the way people think about the Anacostia and make the river a destination through our new campaign to "Rediscover Your Anacostia"!

DISCLAIMERS

- *Data set: All available, professionally collected data was used. The data sets include those collected by DC government, Maryland Department of Natural Resources, and the Anacostia Watershed Society.*
- *The data was compared with thresholds developed by Mid-Atlantic Tributary Assessment Coalition (MTAC).*
- *For the 2011 State of the Anacostia River Report, 2010 data set was used because it was the most recent available data.*
- *For trend analysis, data sets from 1984 to 2010 were used depending on the parameter and the section of the river.*

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THE 2011 STATE OF THE ANACOSTIA RIVER

A B C D F
PASS — FAIL

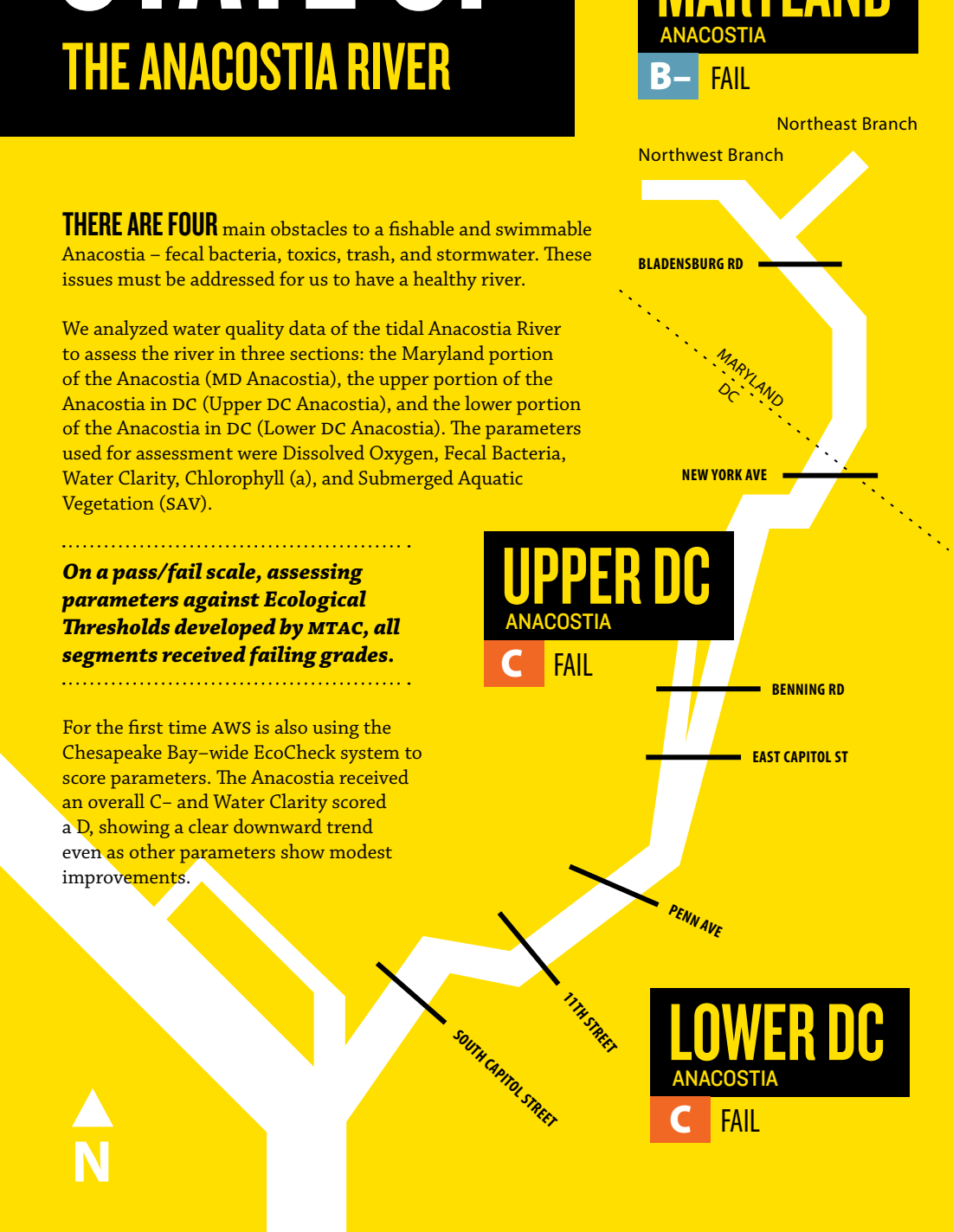
MARYLAND
ANACOSTIA
B– FAIL

THERE ARE FOUR main obstacles to a fishable and swimmable Anacostia – fecal bacteria, toxics, trash, and stormwater. These issues must be addressed for us to have a healthy river.

We analyzed water quality data of the tidal Anacostia River to assess the river in three sections: the Maryland portion of the Anacostia (MD Anacostia), the upper portion of the Anacostia in DC (Upper DC Anacostia), and the lower portion of the Anacostia in DC (Lower DC Anacostia). The parameters used for assessment were Dissolved Oxygen, Fecal Bacteria, Water Clarity, Chlorophyll (a), and Submerged Aquatic Vegetation (SAV).

On a pass/fail scale, assessing parameters against Ecological Thresholds developed by MTAC, all segments received failing grades.

For the first time AWS is also using the Chesapeake Bay–wide EcoCheck system to score parameters. The Anacostia received an overall C– and Water Clarity scored a D, showing a clear downward trend even as other parameters show modest improvements.



UPPER DC
ANACOSTIA
C FAIL

LOWER DC
ANACOSTIA
C FAIL

WATER QUALITY REPORT CARD

Parameters	O_2				*	Section grade
MARYLAND ANACOSTIA						
% Score	92	54	31	75		
Grade for each parameter	A	C	D	B+		63
Trend	Improving	Improving	Degrading in recent years	Improving	**ENTIRE ANACOSTIA:**	B-
Estimated years to meet criterion	8	87	n/a	43		
UPPER DC ANACOSTIA					**% Score** 0	
% Score	61	33	26	60		
Grade for each parameter	B-	D	D	B-	**Grade** F	45
Trend	Improving	Improving	Degrading in recent years	Seems improving		C
Estimated years to meet criterion	28	39	n/a	Insufficient data	**Trend** Degraded	
LOWER DC ANACOSTIA						
% Score	**56**	**55**	**39**	**59**	**Estimated years to meet criterion** n/a	
Grade for each parameter	C+	C+	D+	C+		**52**
Trend	**Improving**	**Improving**	**Degrading in recent years**	**Improving**		**C**
Estimated years to meet criterion	**54**	**25**	**n/a**	**59**		

Overall Grade: C-

This assessment is based on 2010 water quality data.
The higher % score indicates better water quality.
**Assessment of SAV is available only for the entire Anacostia River.*

O_2 DISSOLVED OXYGEN (DO)

- Measure of dissolved oxygen in the water
- Critical to the survival of aquatic life

FECAL BACTERIA

- In DC, Combined Sewer Overflows dump raw sewage directly into the Anacostia River any time rain exceeds the drains' capacity
- MD has two problems: leaking sewer pipes and animal waste

WATER CLARITY (SECCHI DISK DEPTH)

- Measure of how much light penetrates the water column
- Affects the health of aquatic grasses

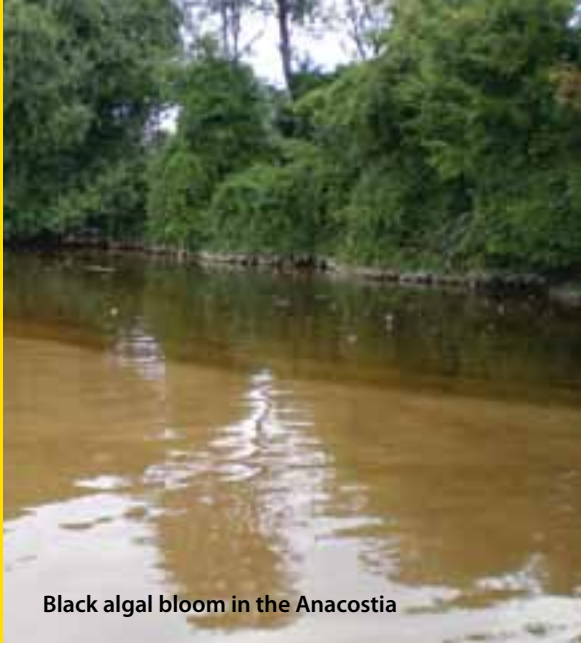
CHLOROPHYLL (a)

- Measure of microalgae biomass
- Can impact water clarity and dissolved oxygen levels

SUBMERGED AQUATIC VEGETATION (SAV)

- Habitat for many aquatic organisms.
- Take up nutrients, increase water clarity, etc.
- The amount of light reaching the bottom directly determines if SAV can survive.

While the river is improving gradually overall, it is still in critical condition.



Black algal bloom in the Anacostia

IS THE MD ANACOSTIA REALLY CLEANER?

The two large free-flowing tributaries (the Northwest and the Northeast Branches) upstream of the MD Anacostia section provide DO-rich water as they bubble down to Bladensburg. Further, although this water also contains excess nutrients, factors such as better tree canopy in tributaries, and lower water temperature do not allow algae to grow excessively as compared to the tidal portion of the river. This trend is also reflected in the better Chlorophyll (a) score compared to downstream sections.

This year Fecal Bacteria in the MD Anacostia was better than usual. In past years it has been the worst of all sections and it is unknown at this point if this change is a result of WSSC's ongoing efforts or of variation in the weather pattern.

The table shown here explains that the most upstream section had been on average the most polluted with fecal bacteria. In general all sections seem to be improving and the MD Anacostia may be improving the most quickly. WSSC is certainly working hard to fix broken pipes and other sewage discharges.

Water Clarity is declining in all sections in recent years, primarily due to uncontrolled stormwater runoff. As a result SAV has entirely disappeared from the Anacostia River since 2003. Cloudy water does not allow sunlight to reach the river bottom so that SAV can grow. The volume and velocity of stormwater runoff from roads, parking lots, and roofs scours and erodes our streambeds and banks, freeing and transporting excessive amounts of sediment that cloud the water and fill in downstream channels.

While the river is improving gradually overall, it is still in a critical condition. In summer 2011, AWS and governments alike were mystified by what turned out to be a black-colored algal bloom on the river, caused by a type of algae known as a dinoflagellate. Another dinoflagellate called Pfiesteria has at times ravaged the Maryland coast with fish kills – this time we were lucky because the algae was not toxic.

Averages of % Score over 5-year periods for fecal bacteria

	5-year avg. 2001–2005	5-year avg. 2006–2010
MD Anacostia	D 29.9	C 50.5
Upper DC Anacostia	C- 40.9	C 50.7
Lower DC Anacostia	C 52.8	B 67.4

POLITICAL REPORT CARD

	Stormwater	Toxics	Trash	Overall Plan
DC	 *New MS4*	 *Some progress but work remains*	 *Bag bill, trash traps*	 *Comprehensive plan*
MC	 *Piloting neighbor-hood-scale retrofits*	 *Unknown*	 *Bag bill, but little else*	 *Good restoration work*
PGC	 *New SW regs, MS4 permit delay*	 *Unknown*	 *No movement on Trash TMDL*	 *No overall plan*
MD	 *weak model MS4*	 *Toxic sources not well documented*	 *Trash diet pending*	 *Will WIP be adequate?*
FED	 *SW not adequately addressed by Bay TMDL*	 *Some progress but work remains*	 *Trash diet results pending*	 *Urban Waters pilot program + new restoration fund*

DC Washington, DC
MC Montgomery County, MD
PGC Prince George's County, MD
MD State of Maryland
FED Federal Government

TO CREATE THE POLITICAL REPORT CARD

we assessed each level of government from local (Washington, DC; Montgomery County, MD; Prince George's County, MD) to state (Maryland) to federal (primarily EPA and other agencies' activity) to give an overall sense of how each is doing with respect to certain Anacostia River restoration activities. To make the most effective comparisons, we evaluated clean-up activities for three major pollutants (stormwater, toxics, and trash) as well as the jusridiction's overall plan for restoring the Anacostia River. (Bacteria was not assessed because implementation of our consent decrees with WSSC and DC Water will address the major sources of pollution.)

The District of Columbia has the best overall grade, based on a strong new MS4 permit that will curb stormwater pollution, leading on creation of the bag bill and using the proceeds to fund additional trash reduction measures, and having an overall plan to achieve a swimmable and fishable Anacostia River. DC did however receive a mixed grade for toxics remediation, reflecting an incomplete – they are taking strong steps to move forward at certain sites, but much work remains to be done at those sites and other sites still must be brought into a clean-up framework.

Montgomery County also scores well on stormwater based on their strong MS4 permit, stormwater utility program, and neighborhood-scale retrofit projects. Overall they score well for strategic retrofit and restoration work, as well as research into problems like illicit discharge. However, while we applaud the county for implementing a bag bill and mandating commercial recycling, they are thus far doing little else to remove trash from the tributaries. Finally, we are unaware of any serious work that has been done to assess toxics in county streams.

Prince George's County gets a mixed score on stormwater: their new stormwater regulations are above state minimums but needed to go farther to ensure the health of county streams. The stormwater retrofit portion of the county's WIP is pretty good but the implementation piece needs work. AWS applauds County Executive Rushern Baker for supporting the bag bill, but the county agencies have not moved on trash TMDL implementation.

Pepco's Benning Road facility

A combined sewer outfall

We are concerned about the state of Maryland's activities with regard to the state's model MS4 permit and proposed Chesapeake Bay WIP. Early drafts of both are weak on urban stormwater mitigation, with the MS4 template permit having many technical shortcomings that will hinder effective stormwater retrofits.

The federal government gets high marks for developing the Urban Waters pilot program (including the Anacostia) and a dedicated fund for Anacostia restoration projects. We are also glad for the initiative several federal agencies have shown in securing a cleanup of the Washington Gas toxic site, but we wish they could get more involved at other sites where progress has been slower.

OUR ULTIMATE GOAL is a swimmable and fishable Anacostia River. Through our various programs carried out by our Advocacy, Environmental Education, Recreation, and Stewardship teams, AWS is inching toward the goal. In order to get there, we need to reduce stormwater, fecal bacteria, trash, and toxics. The good news is you can help!

We invite you to Rediscover Your Anacostia by volunteering at a cleanup or tree planting, paddling a canoe down the river, observing wildlife in the Bladensburg Wetlands and Kenilworth Marsh, or participating in one of our other educational, stewardship, and recreation programs held throughout the year.

Here are a few ways to help protect and restore the Anacostia River:

- Use water wisely.
- Prevent stormwater runoff with rain barrels, cisterns, and rain gardens.
- Go native – native plants are made for our climate so they need less watering and fertilizer.
- Use fertilizer wisely and sparingly.
- Don't flush hazardous waste, chemicals, or harsh cleansers down the toilet or the drain.
- Bring your own bags to the store! Plastic bags litter the river.
- Pick up trash you see on the ground before it ends up in the river.
- Become a community leader by participating in the Watershed Stewards Academy.
- Receive Action Alerts from AWS. Stay informed of the latest watershed issues by subscribing to our free email updates & event announcements.
- Support the Anacostia Watershed Society by donating and volunteering!

For additional information on the Anacostia River, visit www.anacostiaws.org.

The Anacostia Watershed Society would like to thank the following organizations for technical assistance and/or funding for this report card:

- *USDA Environmental Microbial and Food Safety Laboratory for the use of a laboratory to allow us to analyze water for fecal bacteria*
- *DDOE for providing AWS with water quality monitoring data*