Patuxent

RIVERKEEPER®

IS THE WATER BETTER OR WORSE ?

A citizen’s guide to water quality reporting

Dedicated to empowered citizens everywhere, who care about their water as though it were life itself (as indeed it is)…..

The Point of Citizen Science is to:

Empower grassroots citizens to act constructively
To provide authentic data that can be used to make change
To raise understanding of sources and causes of local water degradation
To ground truth and refute misleading reports
To hold governmental and other feet to the fire
Provide forensic support to local watershed protection efforts

The difference between citizen science and governmental of sponsored science:

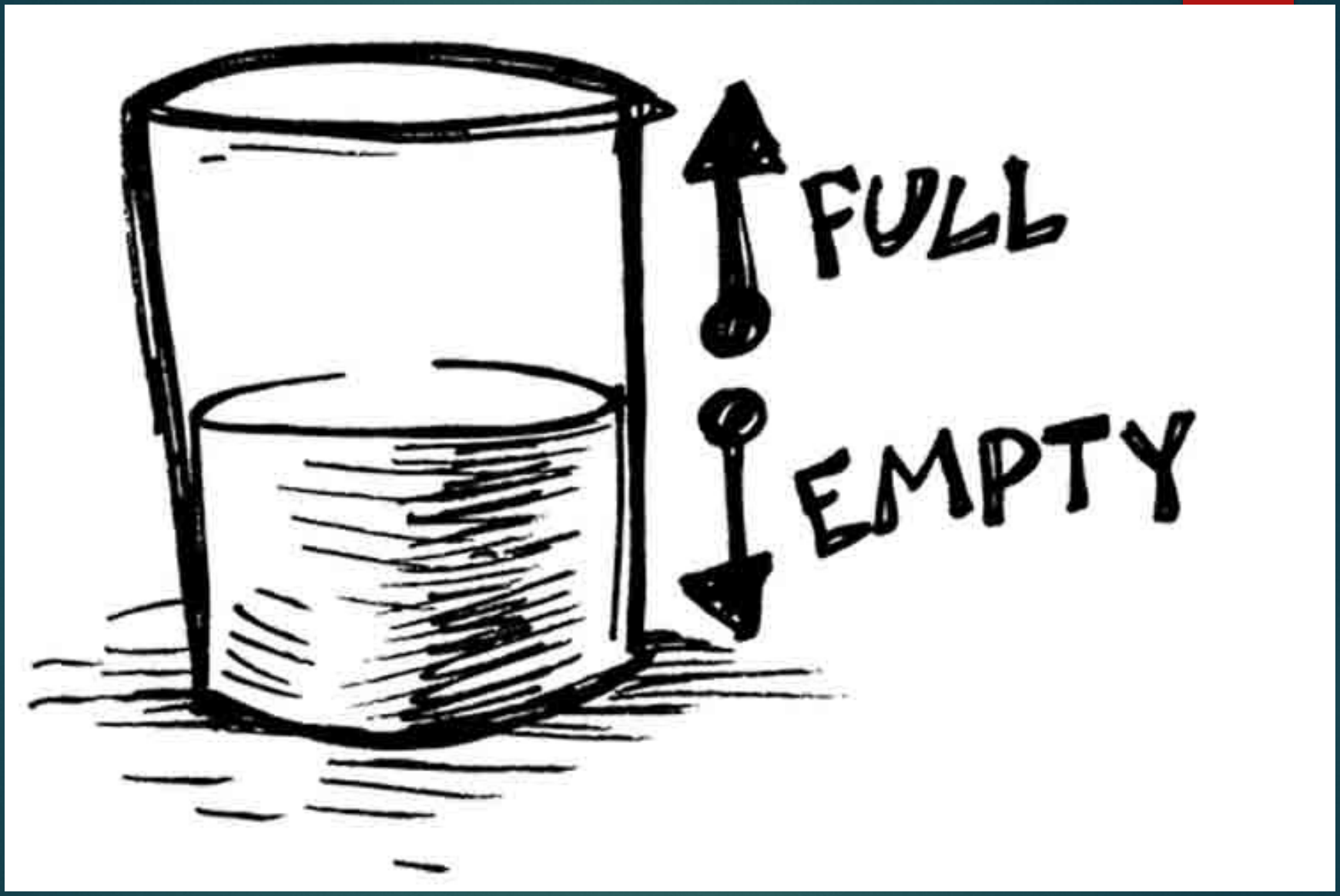
Citizen science:

- Immune to coercion and political pressure
- Usually cannot get defunded
- Focused on community problems instead of success stories or on science as an end-game

Problems with sponsored/subsidized science:

- No finger pointing
- Hazy qualitative or relative claims
- No trend data
- No systemic lens
- Low or no public health context
- (i.e. can you fish, swim or drink it?)

…conveys the impression publicly that the basic science is more important than the impacts and implications


FULL
EMPTY

Contaminants found in rivers

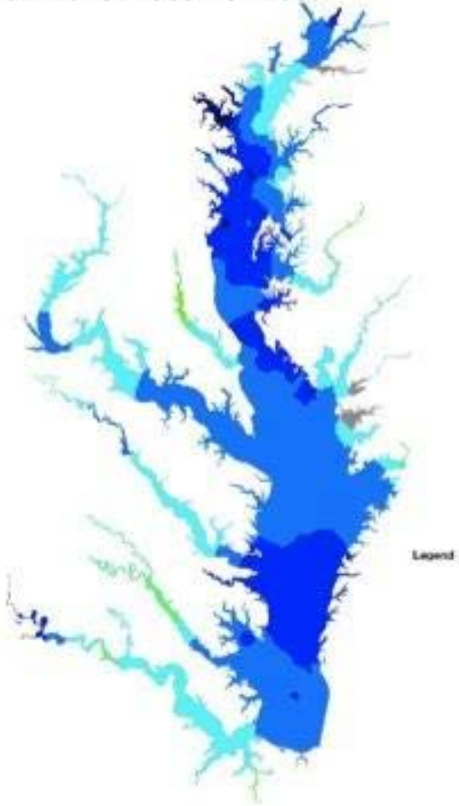
Estrogen
Anti seizure medication
Anti-depressants
Acetaminophen
Mercury
PCBS
Pathogens (intestinal parasites)


TONY

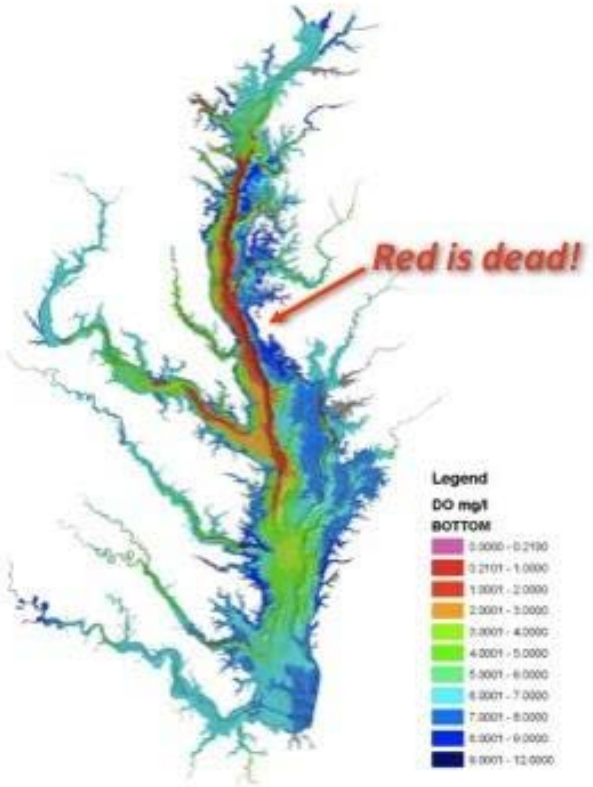
Rising temperatures in the Bay: "Dead zones"

Warm waters exacerbate hypoxic dead zones

Mean Summer Surface DO - 2006



Mean Summer Bottom DO - 2006



WATER CONTACT ADVISORY

Vibrio Skin Infections have been reported to the Calvert County Health Department during the summer of 2010

Vibrio bacteria are natural inhabitants of salty water. A combination of warm water and increased salinity favors their growth. Since Vibrio species are normally found in the Chesapeake Bay and its rivers, do not to enter these water if you have an open wound of the skin. Consult a health care provider if signs and symptoms of skin infection, such as redness, soreness, swelling or drainage occur following water contact.

Avoid gastrointestinal illness caused by Vibrio by making sure that shellfish are thoroughly cooked.

For more information visit: www.calverthealth.org

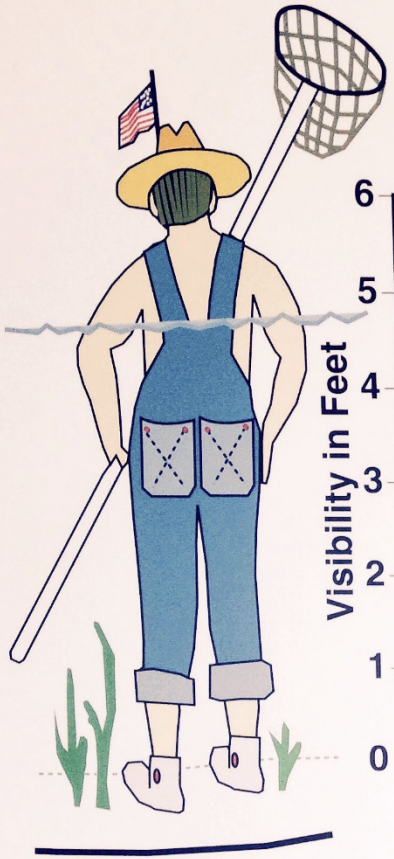
Posted by the authority of the

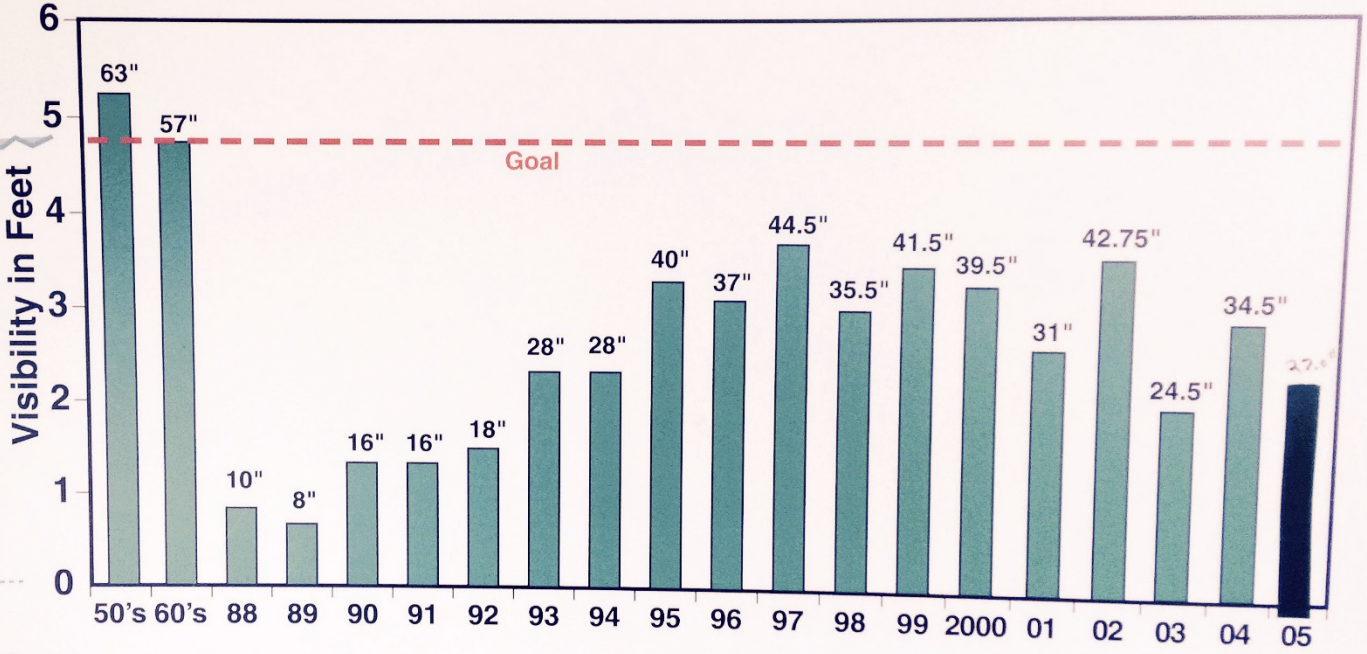
CALVERT COUNTY HEALTH OFFICER

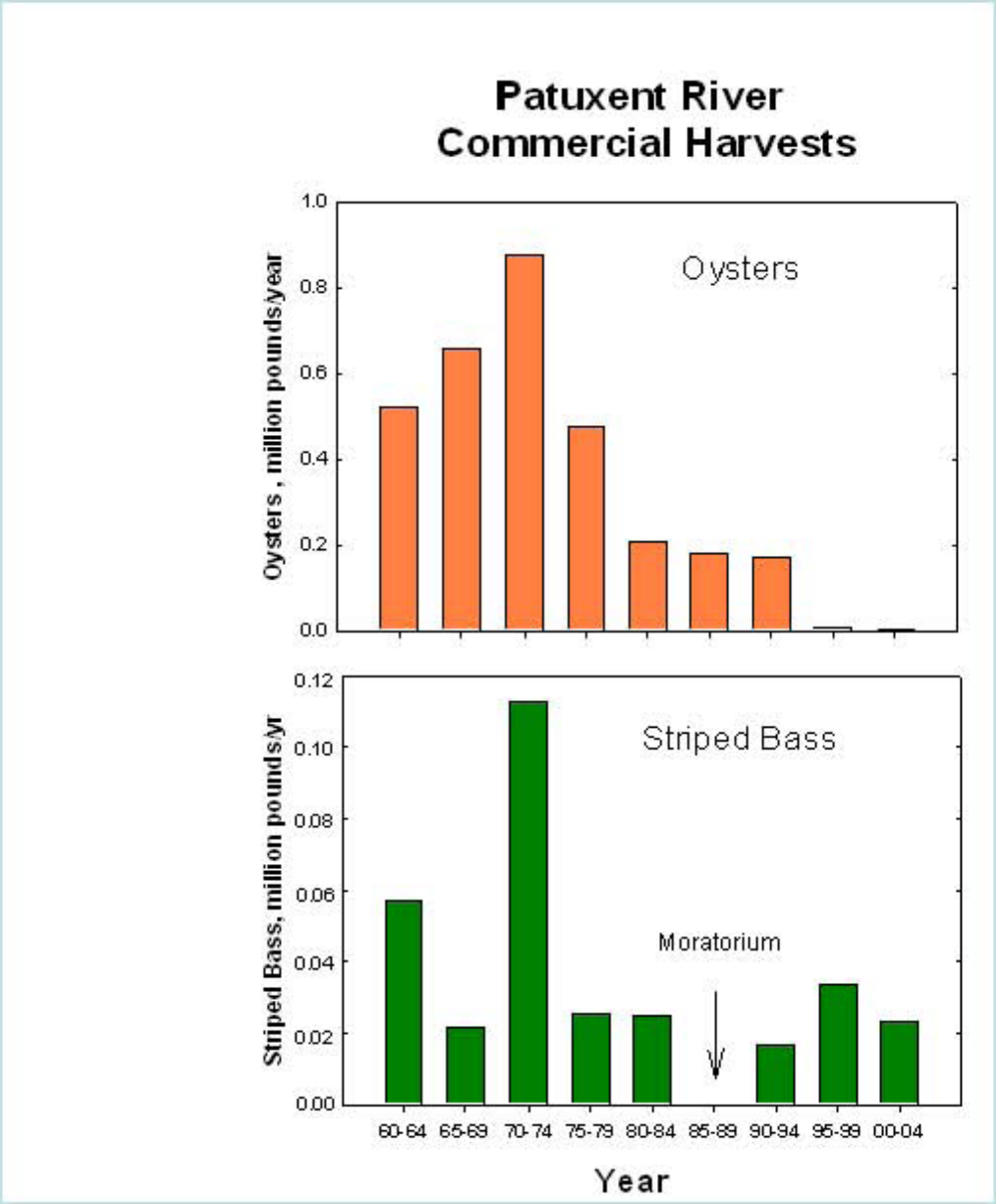

Senator
Jim

Bernie Fowler's "Sneaker Index"

Chesapeake Bay Program
A Watershed Partnership





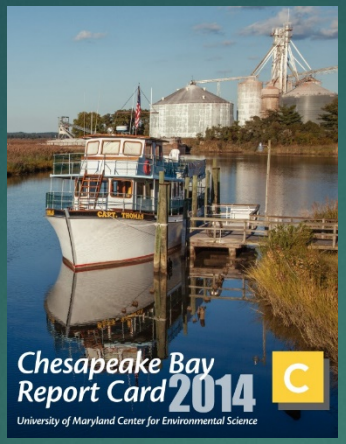

Patuxent River
Commercial Harvests
Oysters
Oysters , million pounds/year
1.0
0.8
0.6
0.4
0.2
0.0
Striped Bass
Striped Bass, million pounds/yr
0.12
0.10
0.08
0.06
0.04
0.02
0.00
Moratorium
60-64
65-69
70-74
75-79
80-84
85-89
90-94
95-99
00-04
Year

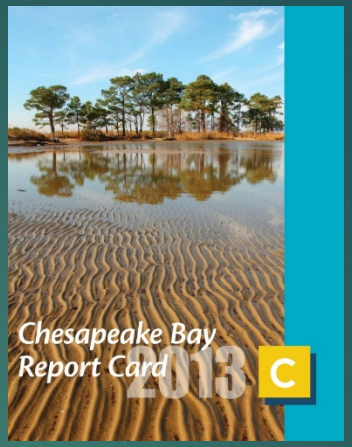
2015 Chesapeake Bay Report Card

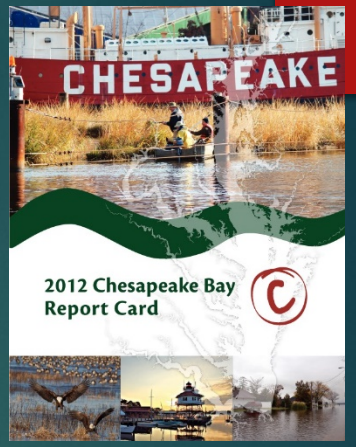
This report card provides a transparent, timely, and geographically detailed assessment of Chesapeake Bay. In 2015, the report card includes five water quality indicators and two biotic indicators. In 2015, the overall grade for Chesapeake Bay is a 53%, a C. This means the Bay is in moderate health. Long term trends of each reporting region health and a fisheries index are also presented.

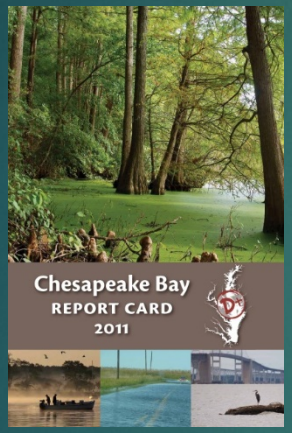
PDF

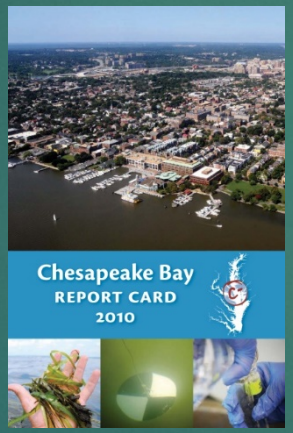

Chesapeake Bay
Report Card 2015
C
University of Maryland Center for Environmental Science

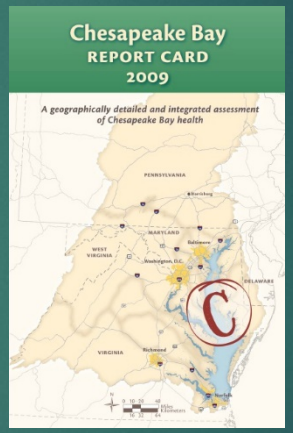

Chesapeake Bay
Report Card 2014
C
University of Maryland Center for Environmental Science

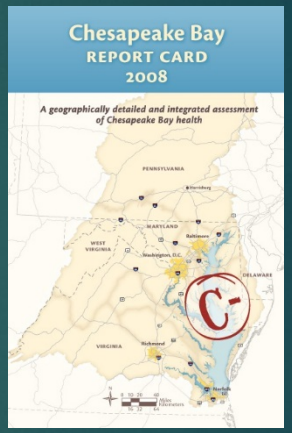

Chesapeake Bay
Report Card 2013
C


CHESAPEAKE
2012 Chesapeake Bay
Report Card
C


Chesapeake Bay
REPORT CARD
2011
D


Chesapeake Bay
REPORT CARD
2010
C-


Chesapeake Bay
REPORT CARD
2009
A geographically detailed and integrated assessment of Chesapeake Bay health
C


Chesapeake Bay
REPORT CARD
2008
A geographically detailed and integrated assessment of Chesapeake Bay health
C-

BIANNUAL PATUXENT RIVER REPORT CARD

Patuxent RIVERKEEPER®

This newsletter is the third edition of the Patuxent River ecosystem health report card. It provides grades for the three regions of the Patuxent River estuary (i.e., the tidal portion of the river). The grades are based on the frequency the river is able to meet six ecological targets during 2009 and 2010. The report card shows that the health of the Patuxent River is remaining consistent. Additionally, a narrative description of the non-tidal portion of the river based on the Patuxent Riverkeeper's citizen water quality monitoring program is provided.

D-

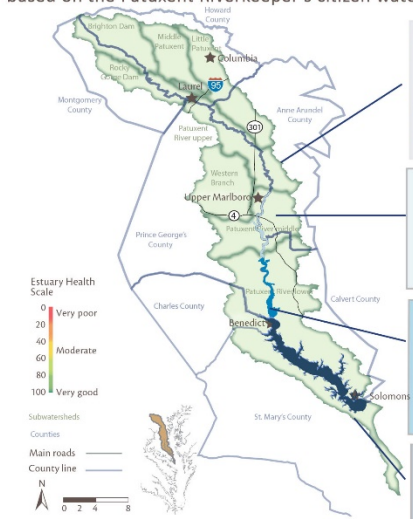


Figure 1: 2009/2010 report card grades for the three estuarine regions of the Patuxent River.

Volunteer sampling of the creeks (non-tidal) and embayments (tidal) indicated that nitrate concentrations at two northern non-tidal stations (Reddy Branch and Little Patuxent) tended to be consistently higher than those at other tidal and non-tidal stations. In contrast, the range of surface water temperatures was higher in the southern portion than in the northern, and turbidity tended to be higher in the southern non-tidal and northern tidal stations than elsewhere.

C- The upper estuary grade decreased slightly in 2009 due to the poor water clarity and benthic and phytoplankton communities. Increases in Chlorophyll a and aquatic grasses helped to balance the losses in the other areas. In 2010 declines in Chlorophyll a and aquatic grasses were mitigated by no score for benethic community health.

C / D+ The middle estuary grade improved in 2009 largely due to the increased benthic community score. The phytoplankton community health degraded as well as the aquatic grasses. In 2010 the grade declined significantly due to the loss of aquatic grasses and decreases in the health of the benthic and phytoplankton communities.The other indicators remained fairly stable.

D- The lower estuary saw a small improvement in 2009 due to the improved dissolved oxygen and water clarity grades. The drop in Chlorophyll a and benthic community scores largely balanced the improvements made in the other parameters. In 2010, improved benthic and phytoplankton community health mitigated the lower dissolved oxygen, clarity and Chlorophyll a scores.

A All water quality and biological health indicators meet desired levels. Quality of water in these locations tends to be very good, most often leading to very good habitat conditions for fish and shellfish.

B Most water quality and biological health indicators meet desired levels. Quality of water in these locations tends to be good, often leading to good habitat conditions for fish and shellfish.

C There is a mix of healthy and unhealthy water quality and biological health indicators. Quality of water in these locations tends to be fair, leading to fair habitat conditions for fish and shellfish.

D Some or few water quality and biological health indicators meet desired levels. Quality of water in these locations tends to be poor, often leading to poor habitat conditions for fish and shellfish.

F Very few or no water quality and biological health indicators meet desired levels. Quality of water in these locations tends to be very poor, most often leading to very poor habitat conditions for fish and shellfish.

Sponsor Spotlight - Chesapeake Bay Trust - Mozilla Firefox

File Edit View History Bookmarks Tools Help

(no subject) - ftutman@gmail.com - Gmail | » | Chesapeake Bay Action Plan | Sponsor Spotlight - Chesapeake Bay Trust | Caught Between a Watershed and a Mar...

www.cbtrust.org/site/c.miJPKXPCJnH/b.8100191/k.BB41/Sponsor_Spotlight/apps/nl/newsletter2.asp

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more...

Maryland Seafood Festival

The Chesapeake Bay Trust is proud to partner with the 46th Annual Maryland Seafood Festival to be held on September 7 and 8 at Sandy Point State Park. The Trust will be a charitable recipient of the event, which features everything from beach volleyball tournaments and live music, to crab cake eating contests and more! Check out what the Seafood Festival has to offer and learn how you can buy your tickets.

more...

Constellation Energy

Constellation
An Exelon Company

The Chesapeake Bay Trust is a proud to partner with Constellation Energy to help support environmental education and restoration projects in the Chesapeake Bay watershed. Constellation is a supporter of the Trust's Chesapeake Conservation Corps program, which provides young adults with paid environmental volunteer opportunities.

more...

Bowie Baysox

For the third year in a row the Chesapeake Bay Trust is proud to partner with the Bowie Baysox! Every Friday night home game this season will be a bay themed game, with prizes to win and our bay mascot Rocko! Join us for fun season starting kick-off events in March and April, and mark your calendars for Bay Night at the Bowie BaySox stadium on August 23!

more...

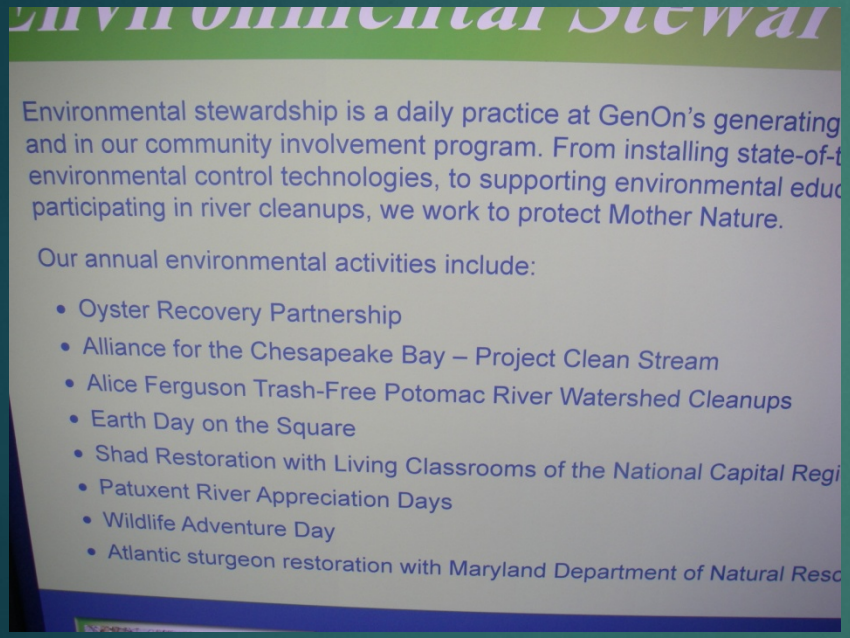
Reliable Churchill

RELIABLE CHURCHILL

Reliable Churchill, on behalf of Beaulieu Vineyard® (BV), a historic Napa Valley winery, announced their partnership renewal with the

www.cbtrust.org/site/lookup.asp?c=miJPKXPCJnH&b=5612063

Conflict of interest ?



Genon's Greenwashing partners

Chesapeake Watershed forums

2012 Sponsors

Dominion

Dominion Resources, a platinum sponsor.

PERDUE Celebrating 90 years

Arthur W. Perdue Foundation, a gold sponsor.

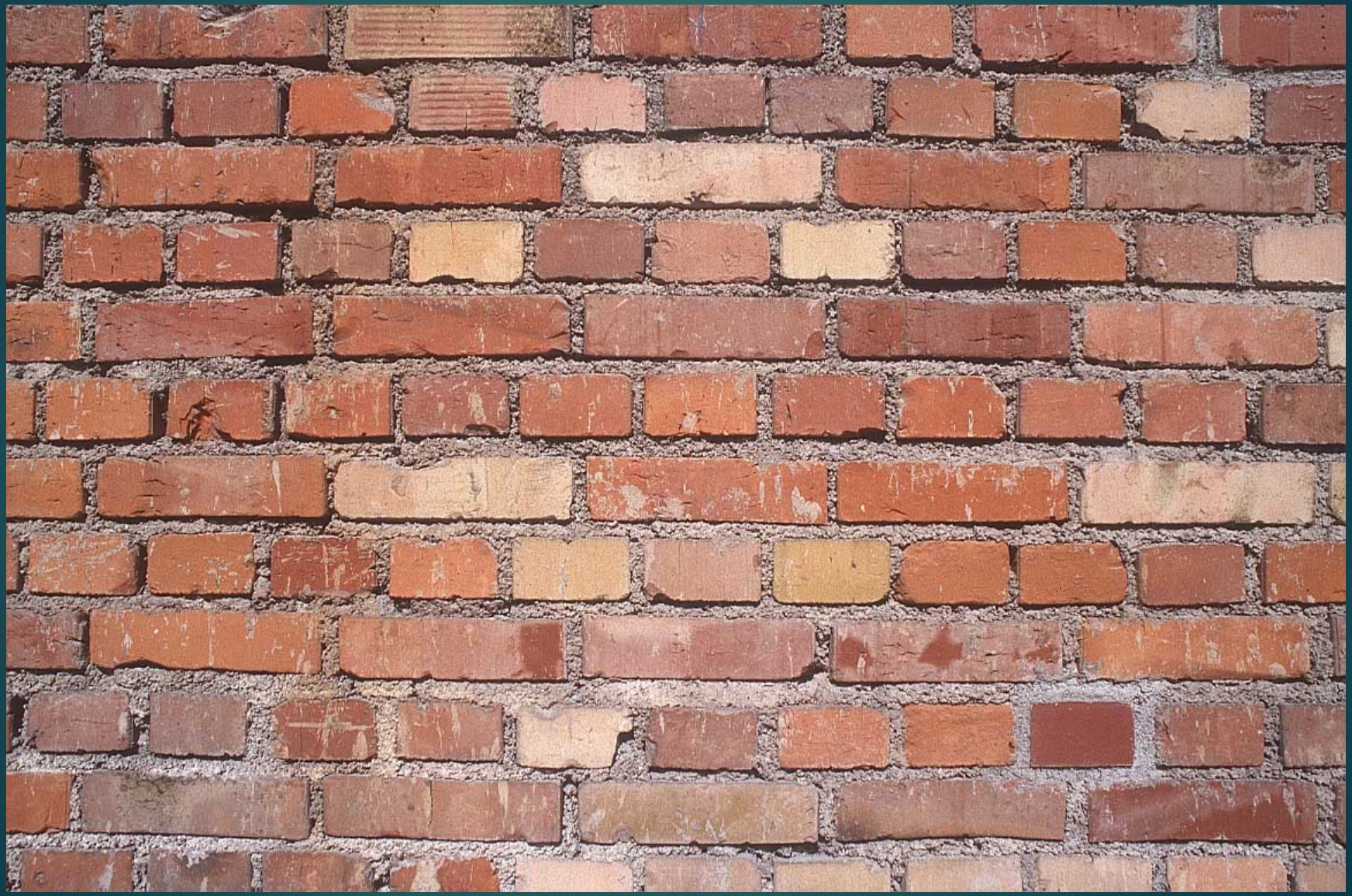
Smithfield

Smithfield Foods, a gold sponsor.

Constellation Energy

Constellation Energy, a gold sponsor.

The Fifth Wall



PWQI map - Windows Internet Explorer

http://www.pwqi.net/exploring/paxmap.aspx

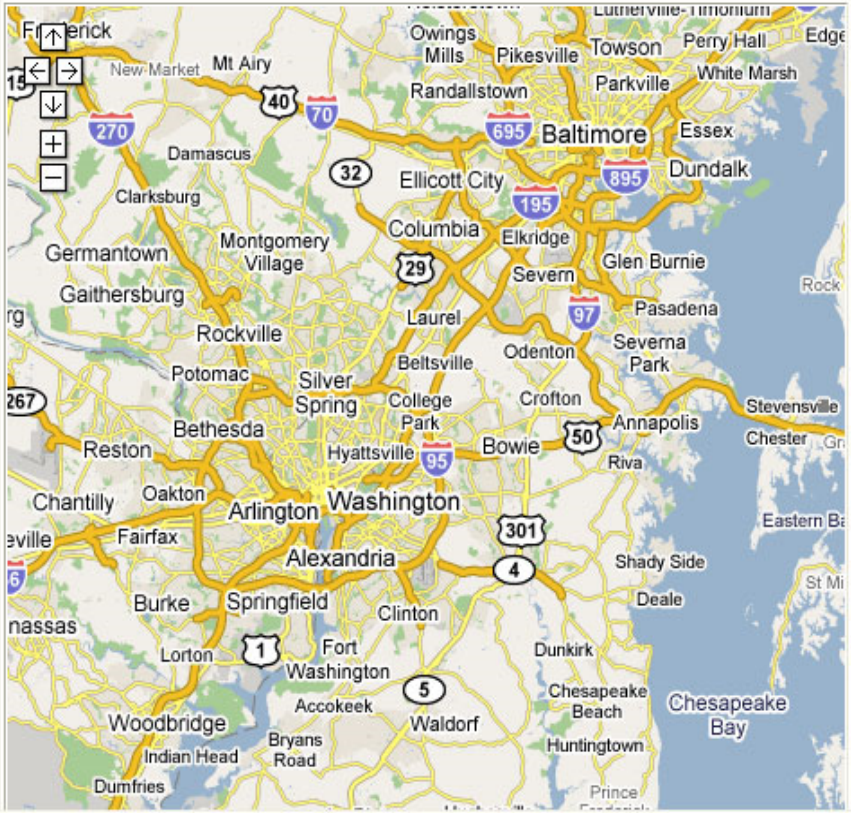
File Edit View Favorites Tools Help

PWQI map

Patuxent River Monitoring Network

Login

- Exploring the river
  - River Slideshow
  - River Cleanup Slideshow
  - Rivershed Map
  - Graphing Test Data
  - Report Card Data
  - Mission
  - Frequently Asked Questions
  - Contact us
  - Stream flow gauges
- User Pages
  - Register
  - Login
  - Forgot Password



Sites of interest

Get Paddle Path Sites

Get All Test Sites

Get Active Test Sites

Double click on the map to zoom in centered on your cursor

Click here to reset map

Cursor Position
Longitude Latitude

Find a place

Locate

Can't see the map; here are some helpful tips

Done

Internet

100%

Edit View Favorites Tools Help

Search Favorites Media

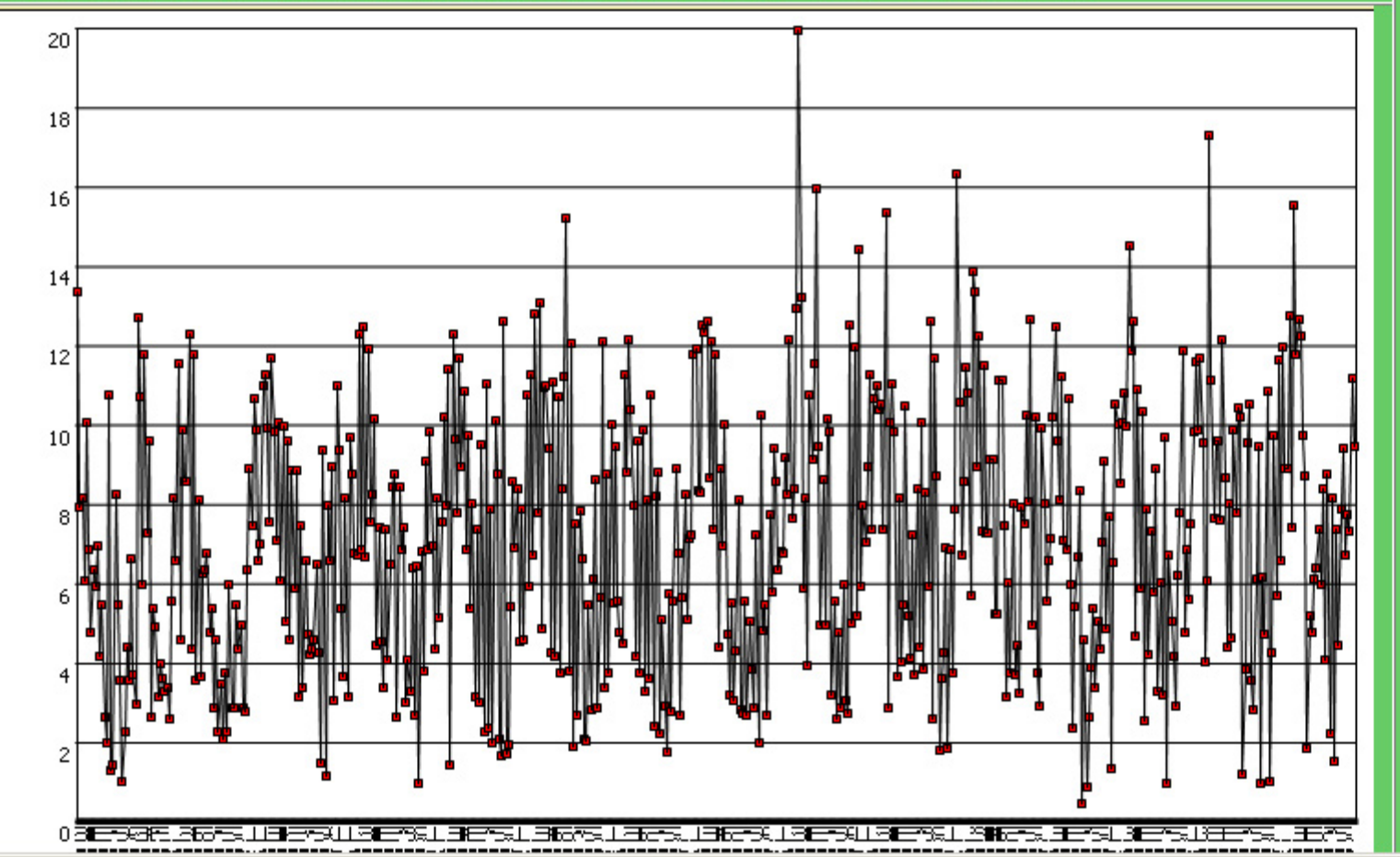
http://www.pwqi.net/DataPlot.aspx

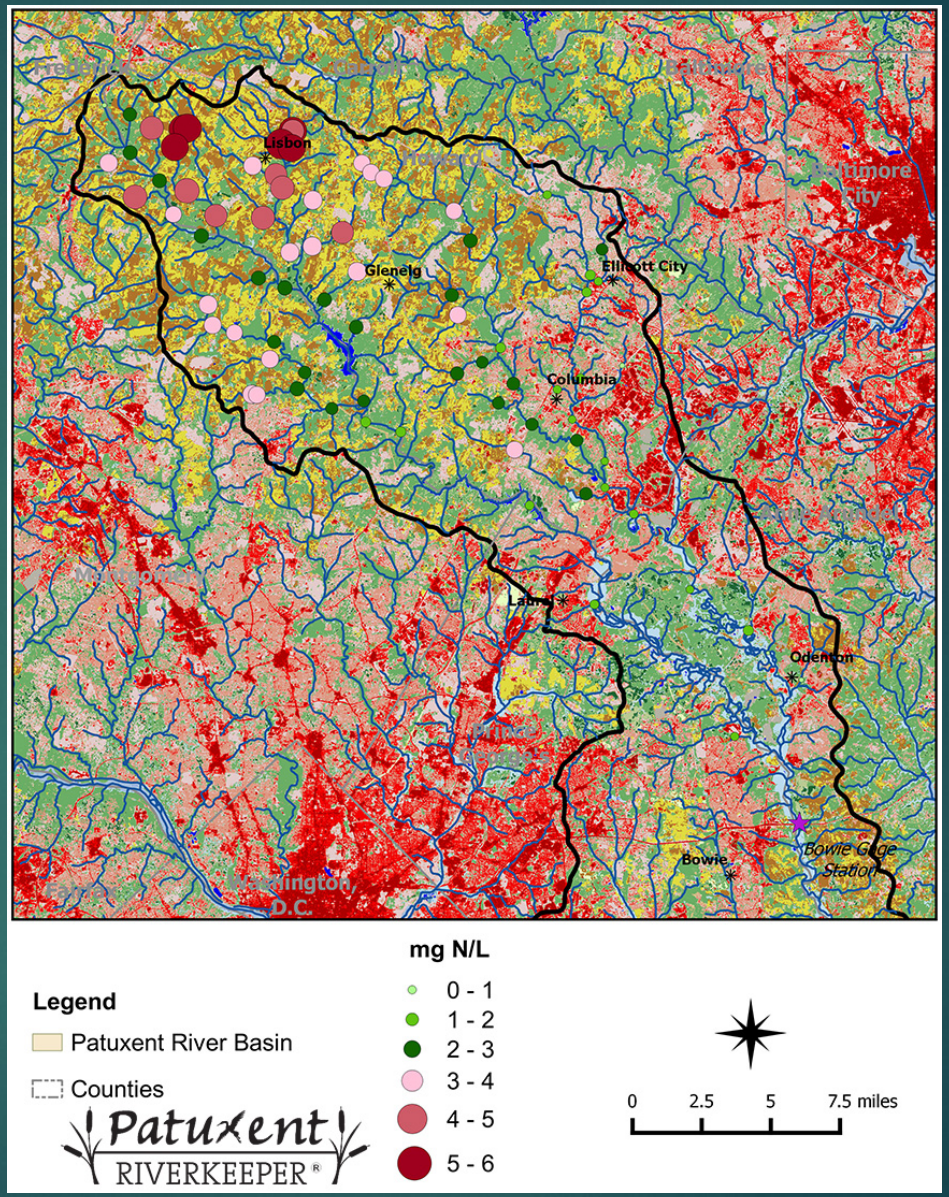
Search Web Mail My Yahoo! Answers Games Music My Web Personals

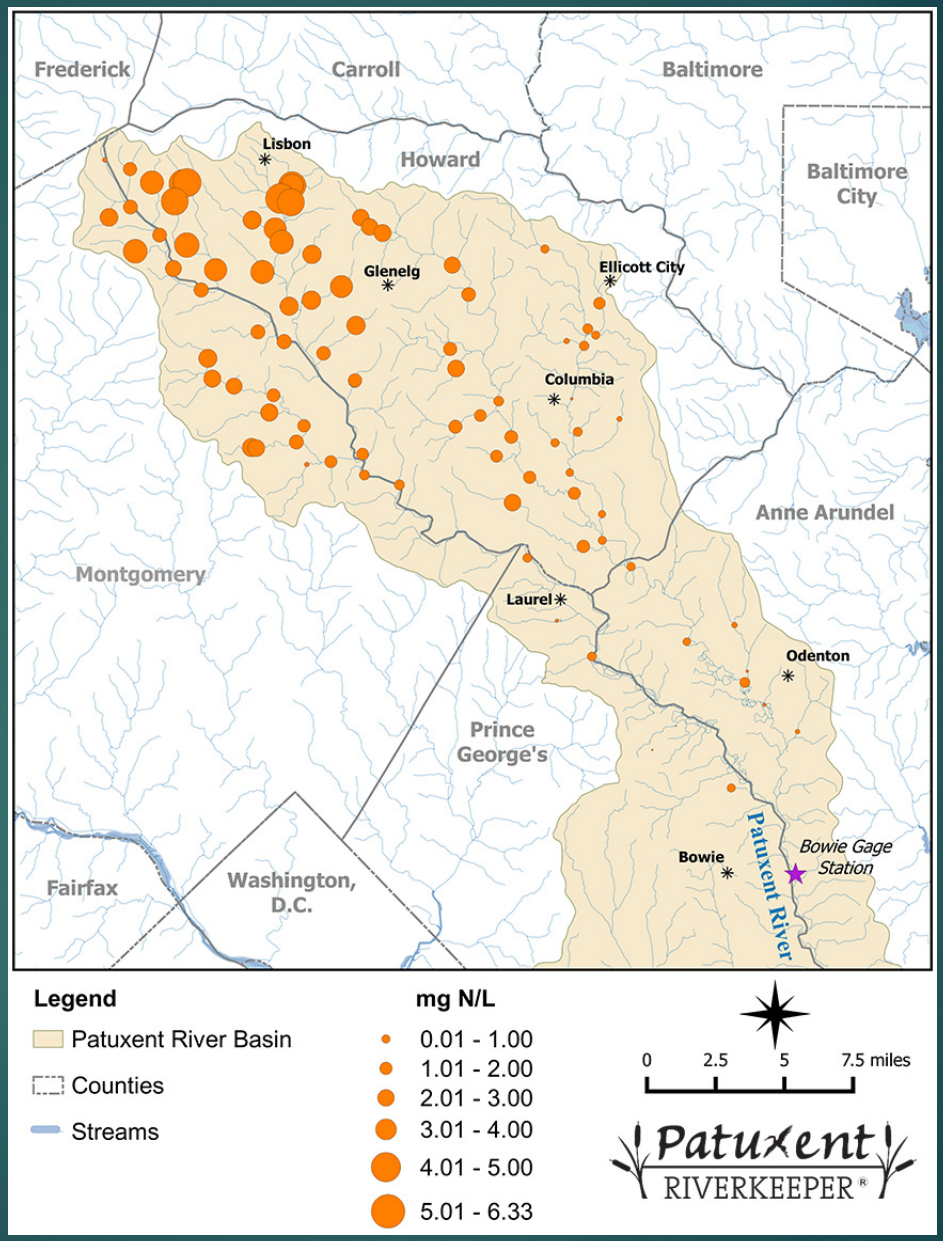
G_BAY_NORTHMARSH | 2/8/1988 | Set Start Date | Plot_All_Details

ssolved Oxygen | 10/19/2003 | Set End Date | Plot

ta is available for this site and test from 2/8/1988 9:45:00 AM to 10/19/2003 8:20:00 AM

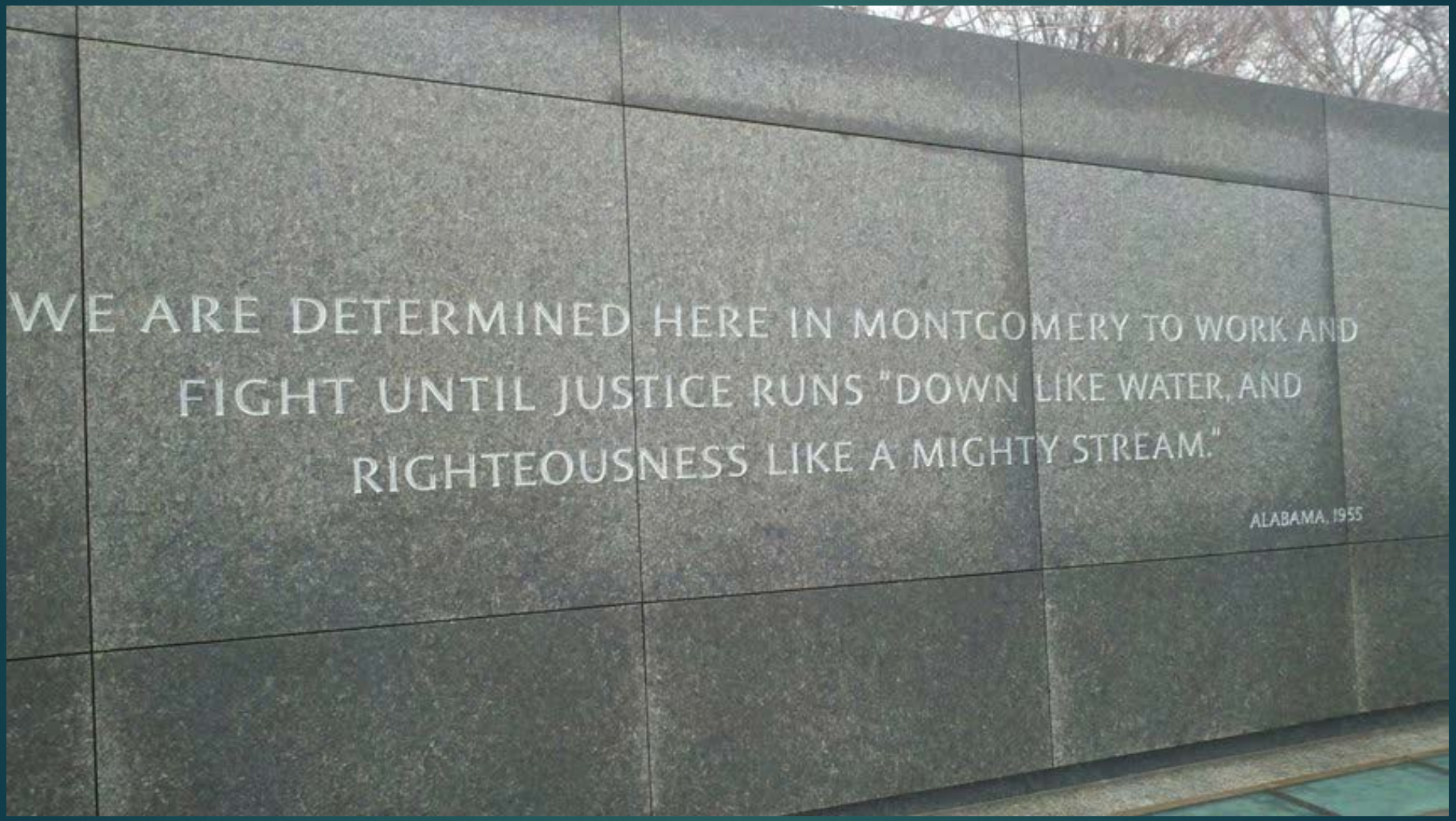



Lisbon
Glenelg
Ellicott City
Columbia
Laurel
Odenton
Bowie
Bowie Gage Station
mg N/L
Legend
Patuxent River Basin
Counties
0 - 1
1 - 2
2 - 3
3 - 4
4 - 5
5 - 6
0
2.5
5
7.5 miles
Patuxent
RIVERKEEPER®


Frederick
Carroll
Baltimore
Howard
Baltimore City
Lisbon
Glenelg
Ellicott City
Columbia
Anne Arundel
Montgomery
Laurel
Odenton
Prince George's
Patuxent River
Bowie
Bowie Gage Station
Fairfax
Washington, D.C.
Legend
Patuxent River Basin
Counties
Streams
mg N/L
0.01 - 1.00
1.01 - 2.00
2.01 - 3.00
3.01 - 4.00
4.01 - 5.00
5.01 - 6.33
0
2.5
5
7.5 miles
Patuxent
RIVERKEEPER®


Howard County
Brighton Dam
Middle Patuxent
Little Patuxent
Columbia
Rocky Gorge Dam
Laurel
95
Montgomery County
Anne Arundel County
301
Patuxent River upper
Western Branch
Upper Marlboro
4
Patuxent River middle
Prince George's County
Patuxent River lower
Calvert County
Charles County
Benedict
Solomons
St. Mary's County
Subwatersheds
Counties
Main roads
County line
N
0 2 4 8

Martin Luther King, Jr.



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Upper Marlboro, MD 20772

Phone: 301-249-8200

www.paxriverkeeper.org