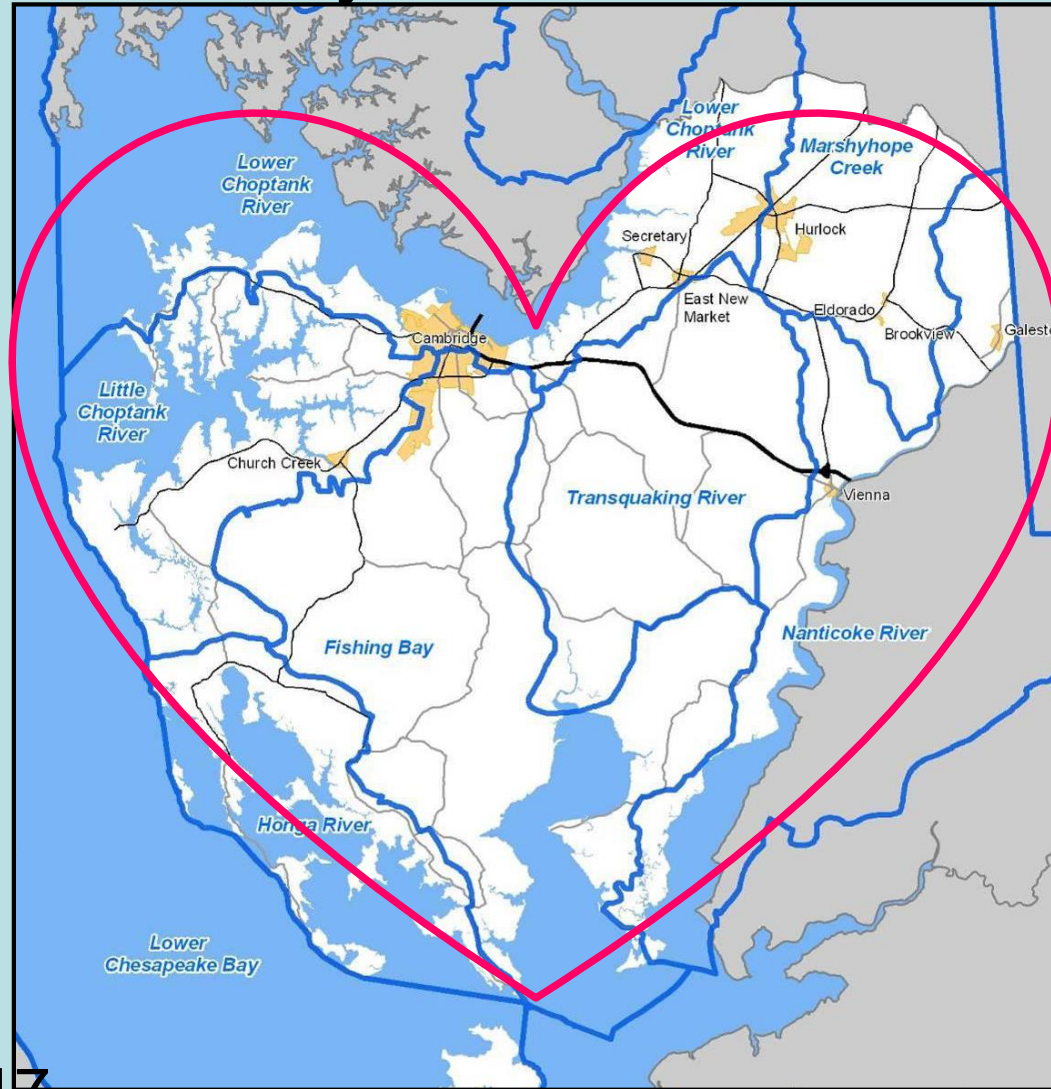


Dorchester County's Creekwatcher Program



Roman Jesien
January 29, 2017
Annual Meeting

*"We ARE the heart of the
Chesapeake"*

*Dorchester
Citizens
For
Planned
Growth*



Dorchester is nestled between the
Choptank River and Nanticoke

Many hands involved in monitoring



2015 Chesapeake Bay Health

- Overall Health – steady improvement from 2011 (D+C)
- Choptank Health - C+ no change
 - N, P Fluctuated showing some improvement
- Lower Shore Health C upward trend
 - N Improved from 2010
 - P Steady but slight decline



2015 NANTICOKE RIVER REPORT CARD

River Final Grade

B-

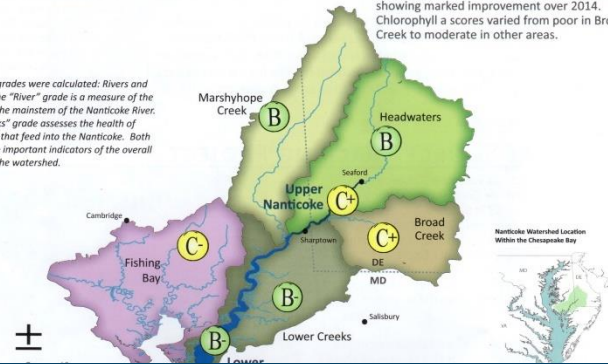
Water clarity and phosphorus scores slightly improved; however, water clarity continued to be moderately poor in both regions. Phosphorus scores were moderately good, while nitrogen scores were poor. Chlorophyll a scores were moderate.

Creeks Final Grade

B

Water clarity scores were good for all regions, except for the Lower Creeks in Maryland and Broad Creek in Delaware. Nitrogen scores were poor in all creek regions; the Lower Creeks' nitrogen scores declined greatly from 2014 to 2015. Phosphorus scores were moderate or good in all creek regions, with the Lower Creeks showing marked improvement over 2014. Chlorophyll a scores varied from poor in Broad Creek to moderate in other areas.

Two final grades were calculated: Rivers and Creeks. The "River" grade is a measure of the health of the mainstem of the Nanticoke River. The "Creeks" grade assesses the health of the creeks that feed into the Nanticoke. Both grades are important indicators of the overall health of the watershed.



2014 NANTICOKE RIVER REPORT CARD

River Final Grade

B-

- Scores were very similar to those in 2013.
- Water clarity scores continued to be poor for the Upper and Lower Nanticoke.
- Phosphorus scores were moderately good, while nitrogen scores were poor. Chlorophyll a scores were moderate.

Creeks Final Grade

B

- Water clarity scores were good for all regions, except for the Lower Creeks in Maryland.
- Nitrogen scores were poor in all creek regions, except for the Lower Creeks. Phosphorus scores were moderate in the Lower Creeks while good in the other creek regions. Chlorophyll a scores varied from good to moderate.

Two final grades were calculated: Rivers and Creeks. The "River" grade is a measure of the health of the mainstem of the Nanticoke River. The "Creeks" grade assesses the health of the creeks that feed into the Nanticoke. Both grades are important indicators of the overall health of the watershed.

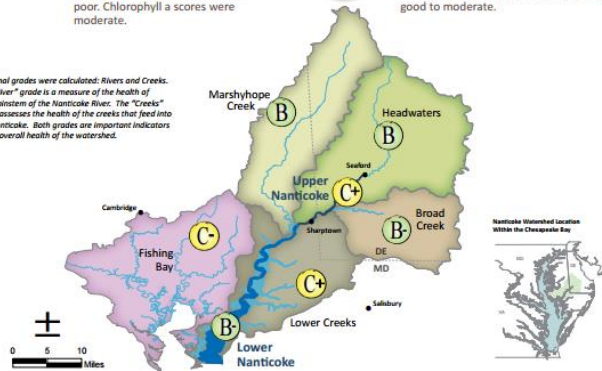
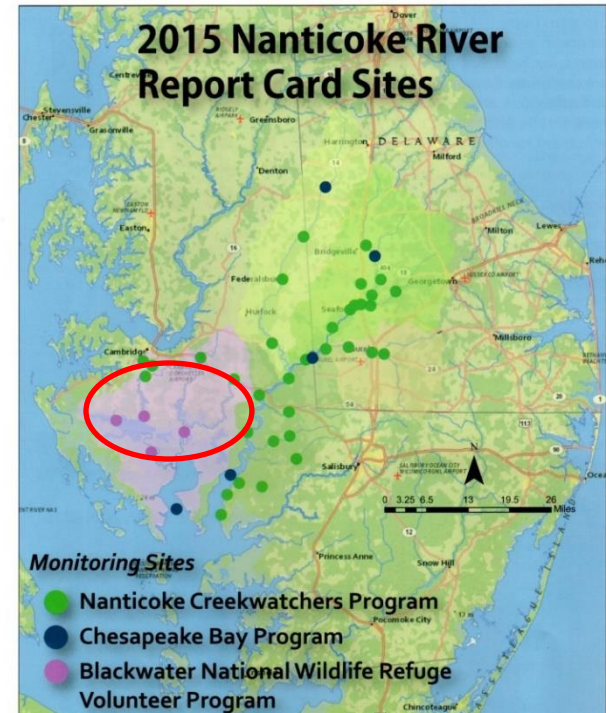


Figure 1: Report card grades for the Nanticoke River, its creeks, and Fishing Bay in 2014. The water quality grades are based on data collected by Nanticoke Creekwatchers, volunteer citizen scientists for the Nanticoke Watershed Alliance. Additional Nanticoke River watershed data comes from the Chesapeake Bay Program, including sites monitored by the Delaware Department of Natural Resources and Environmental Control and the Maryland Department of Natural Resources. Blackwater National Wildlife Refuge provided data from their volunteer program for the Fishing Bay watershed.

2015 Nanticoke River Report Card Sites



Monitoring Sites

- Nanticoke Creekwatchers Program
- Chesapeake Bay Program
- Blackwater National Wildlife Refuge Volunteer Program



2013 NANTICOKE RIVER REPORT CARD

River Final Grade

C+

- Oxygen scores were generally good.
- Water clarity scores were poor for the Upper and Lower Nanticoke
- Nitrogen scores were poor, particularly in the Upper Nanticoke.

Creeks Final Grade

B

- Oxygen scores were very good in all creek regions.
- Water clarity scores were good for all regions except for the Lower Creeks in Maryland.
- Nitrogen scores were poor in all creek regions, especially in Broad Creek, the Delaware Headwaters, and Marshyhope Creek.

Two final grades were calculated: Rivers and Creeks. The "River" grade is a measure of the health of the mainstem of the Nanticoke River. The "Creeks" grade assesses the health of the creeks that feed into the Nanticoke. Both grades are important indicators of the overall health of the watershed.



DCPG Creek Watchers

7 Stations every 2 weeks – 2008 - Present



Field

Dissolved Oxygen
Temperature
Salinity
Water Clarity

Laboratory

Nutrients
Nitrogen
Phosphorus
Bacteria



Chicamocomico @ Rt 50



Nanticoke Watershed Association

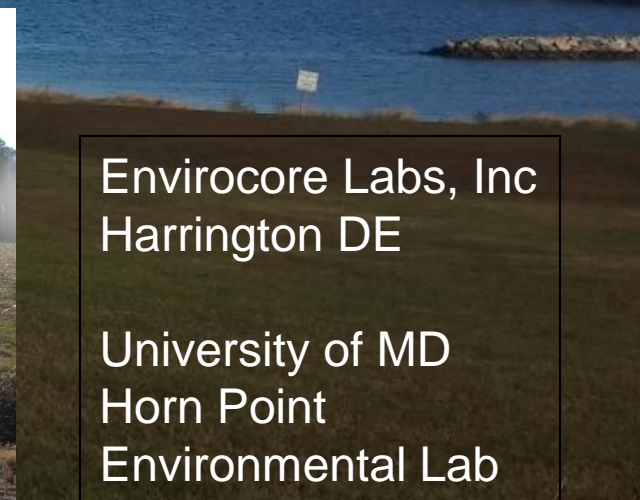
Made Possible through the
Efforts of Dedicated Volunteers



Little Blackwater at Rt 16



Trib at Stone Boundary



Envirocore Labs, Inc
Harrington DE

University of MD
Horn Point
Environmental Lab

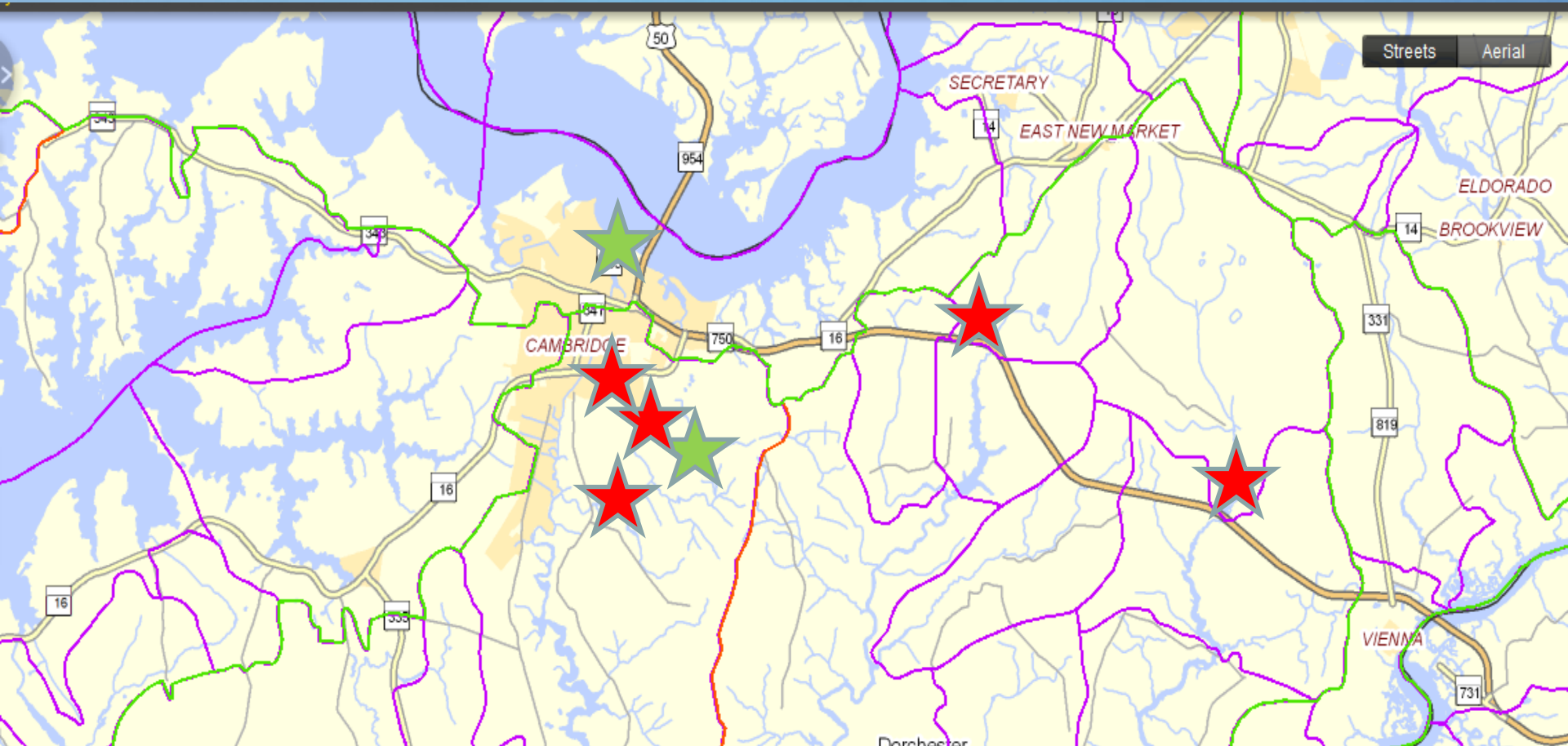
Creek Watchers

Richard Ball
Robert Sellers
John Lindinger



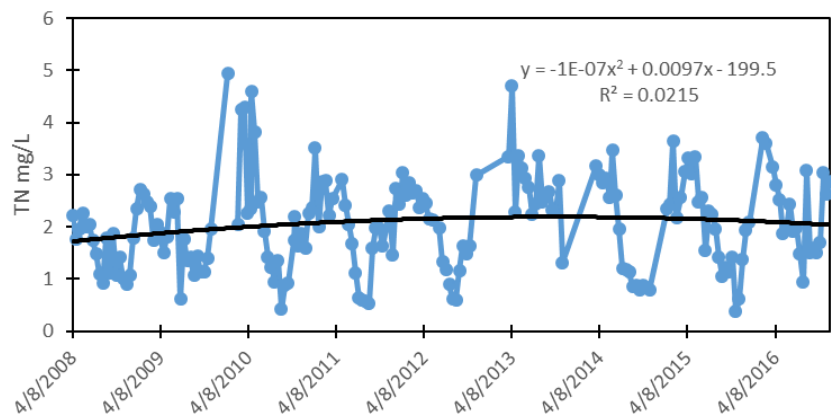
Sampling stations

5 Long term, NWA 2 DCPG funded



Some Examples of Trends Over the Past 9 years?

CHIC TN

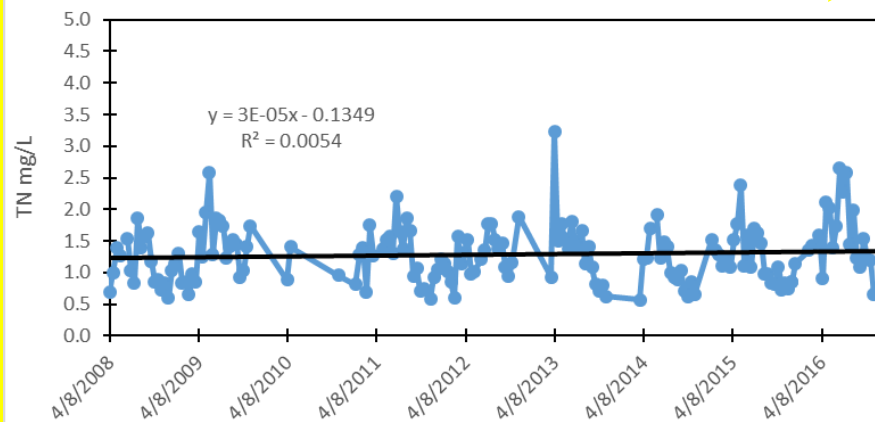


Upward (increasing nutrient) Trend

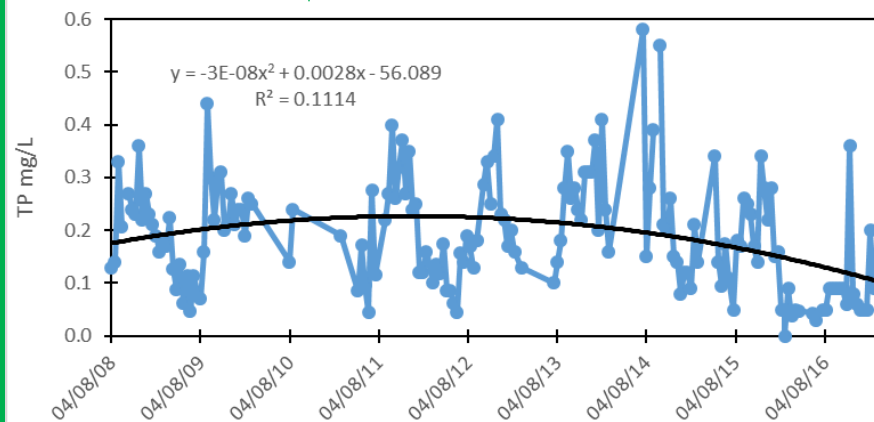
No Trend

Decreasing (lower nutrients) Trend

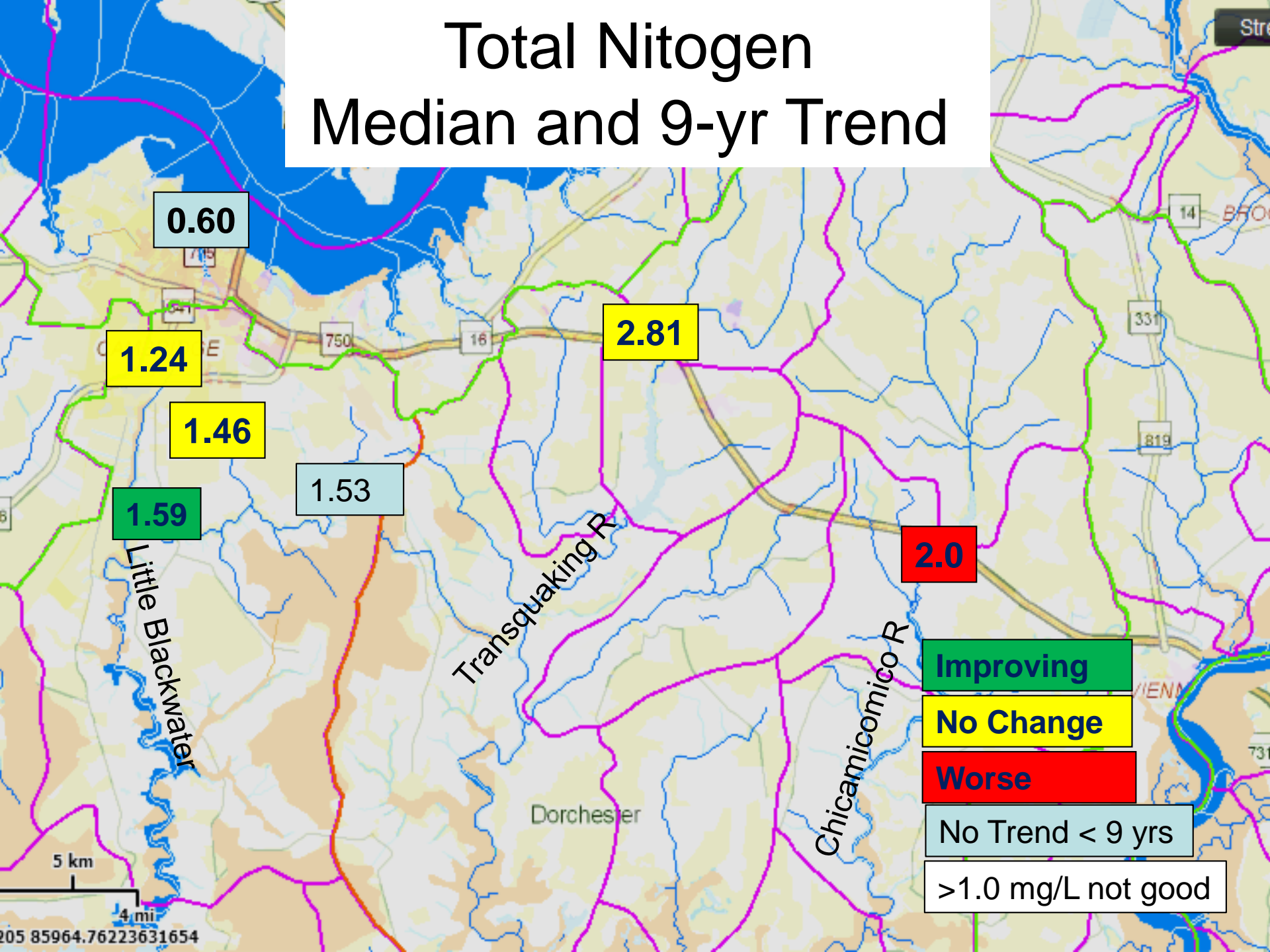
LIBL1 TN



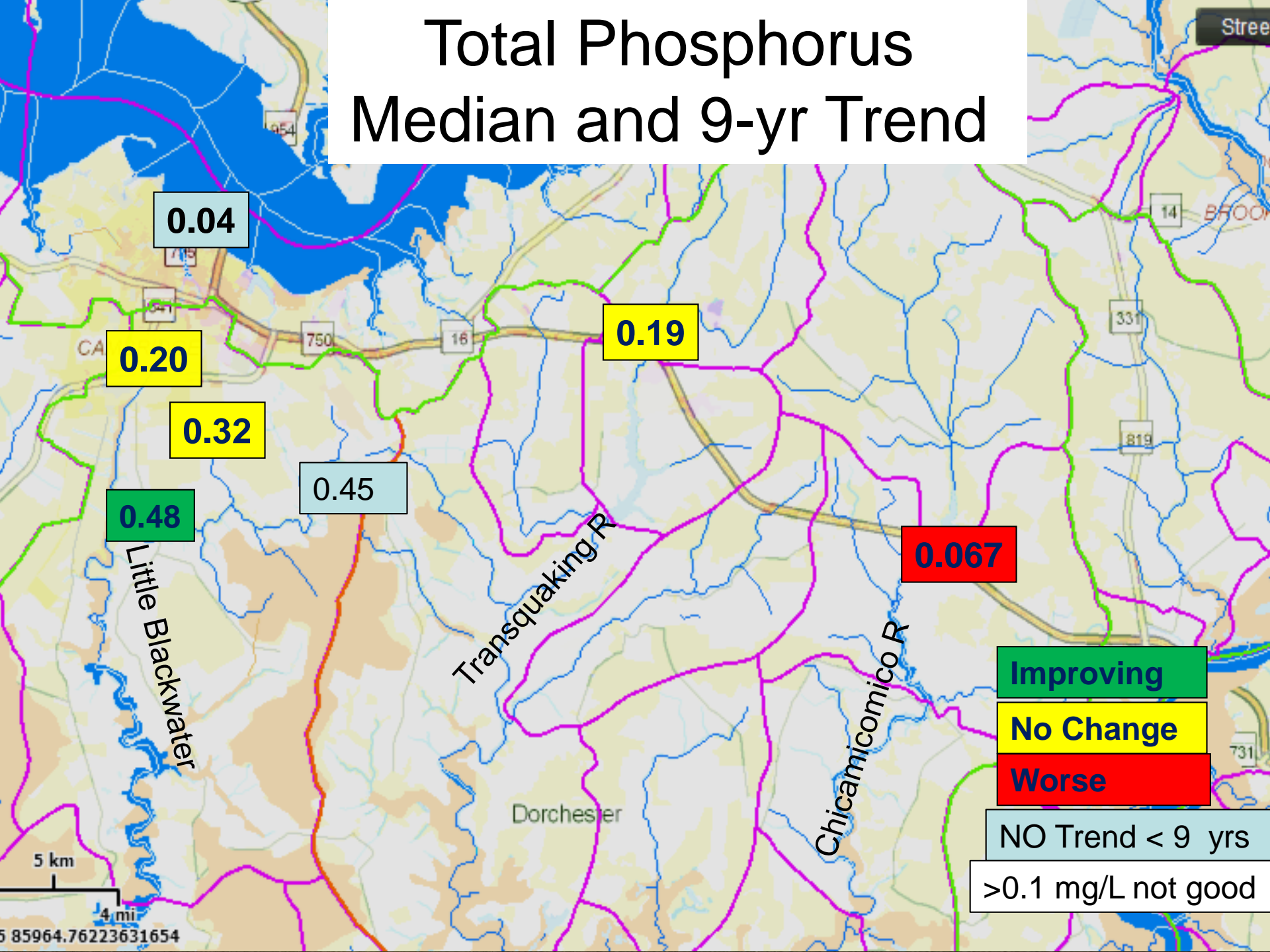
LIBL1 TP



Total Nitrogen Median and 9-yr Trend



Total Phosphorus Median and 9-yr Trend



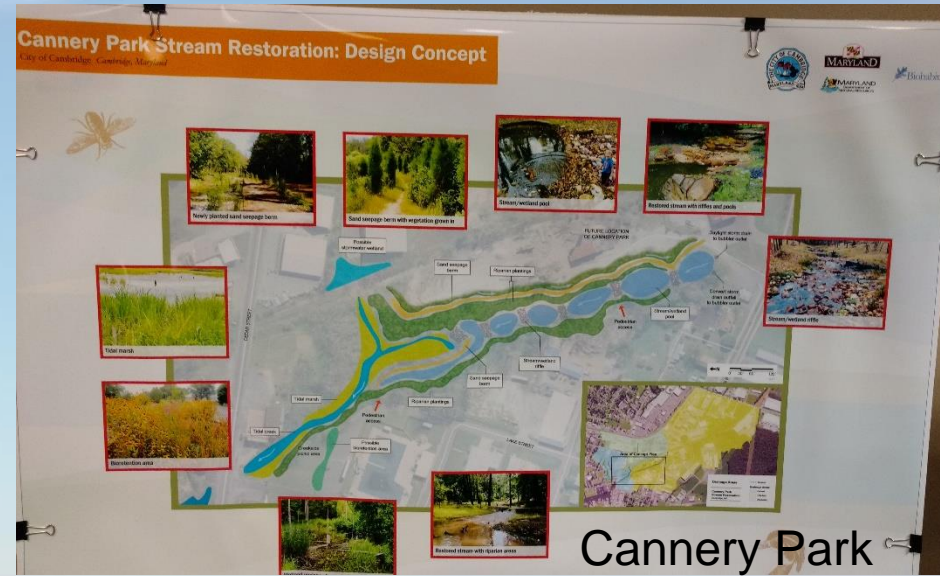
The future looks good – we are headed in the right direction!



Maryland Ave punch outs



Stormwater Ed Station



Cannery Park

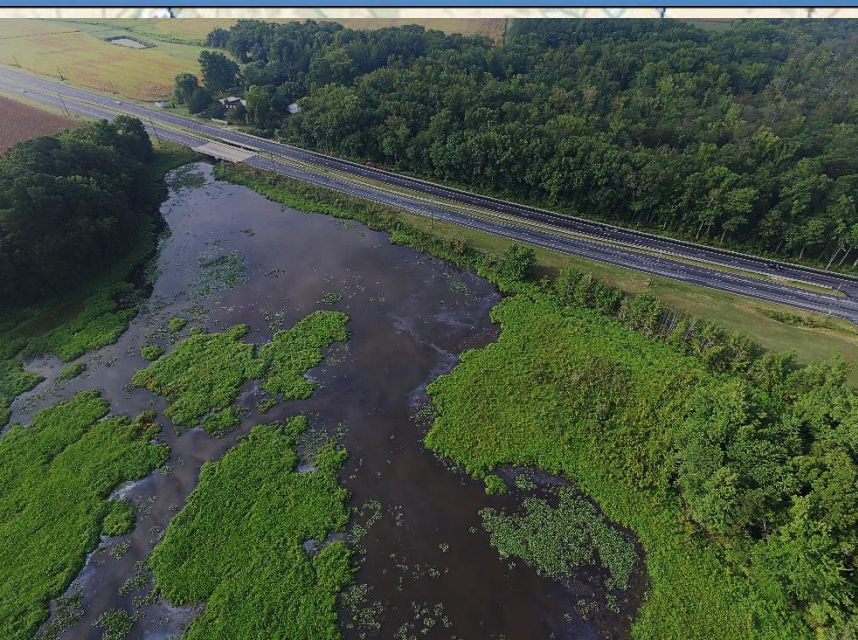


Waugh Church



Long wharf

Stormwater Infiltration



Issues with the Chico Dam

- oxygen depletion
- fish passage
- fish kills

Linkwood State
Wildlife
Management Area

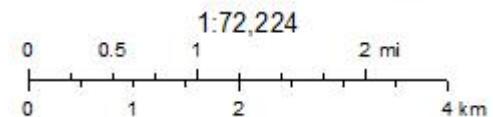
Chicamacomico

Salem

Plans are underway to modify the dam to allow for fish passage. This will provide access to the upper Chic for fish such as shad and river herring, that live in the ocean but spawn in freshwater

January 25, 2015

MD Merlin.net



USGS The National Map: National Boundaries Dataset, National Elevation Dataset, Geographic Names Information System, National Hydrography

Questions?

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rjesien@Comcast.net

*Dorchester
Citizens
For
Planned
Growth*