



What is Stream Waders?

- **Benthic macroinvertebrates**
- **Part of DNR's Maryland Biological Stream Survey (MBSS)**
- **A way to interact with others interested in streams**
- **A place to meet your future spouse!**



Maryland Stream Waders – 11 Years of Success!



Goals

- **More sampling sites**
- **Provide good data**
- **Educate**
- **Encourage local action**

Maryland Stream Waders – 11 Years of Success!



Benthic Index of Biotic Integrity



POOR – 1.0-2.9

FAIR – 3.0-3.9

GOOD – 4.0-5.0

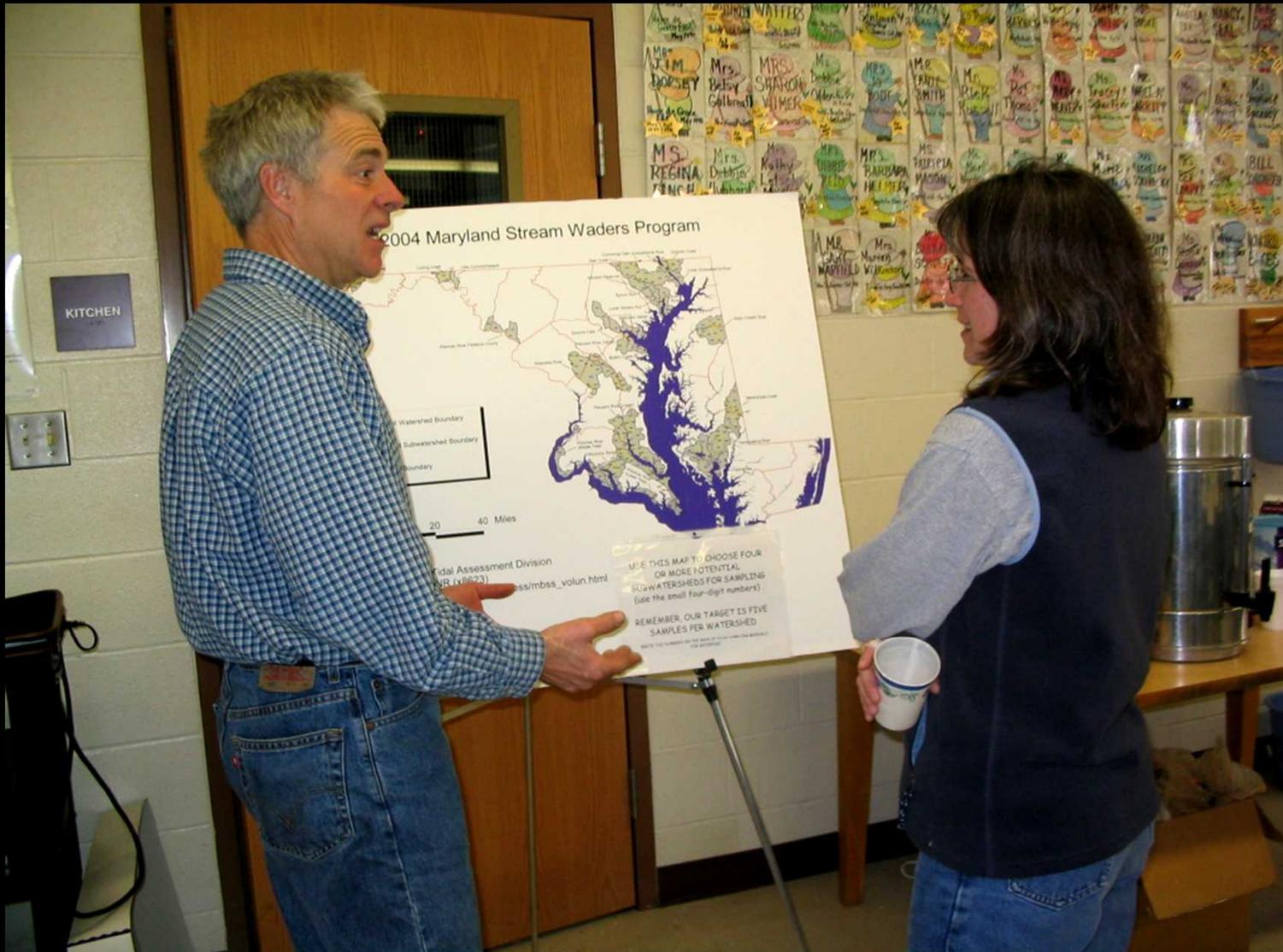
Maryland Stream Waders – 11 Years of Success!



Maryland Stream Waders – 11 Years of Success!



Maryland Stream Waders – 11 Years of Success!



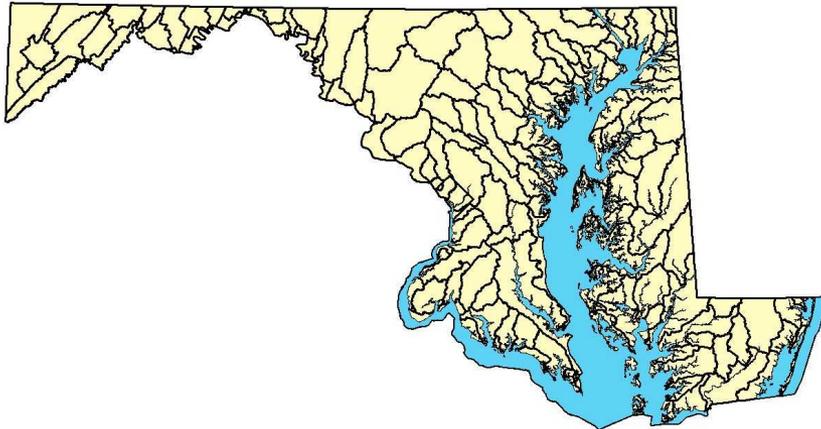
Maryland Stream Waders – 11 Years of Success!



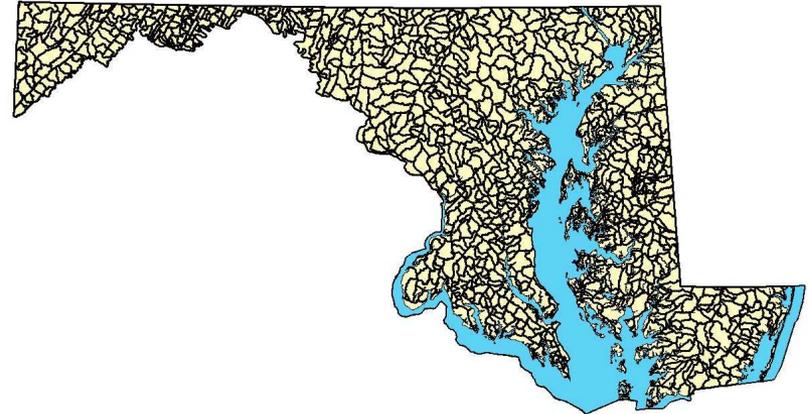
2000 – 2010

- **1,237 trainees (150/year avg.)**
- **40 teams/year**
- **79% of all subwatersheds sampled**
- **5,950 sites (541/year avg.)**
- **673,513 invertebrates identified**

Scale

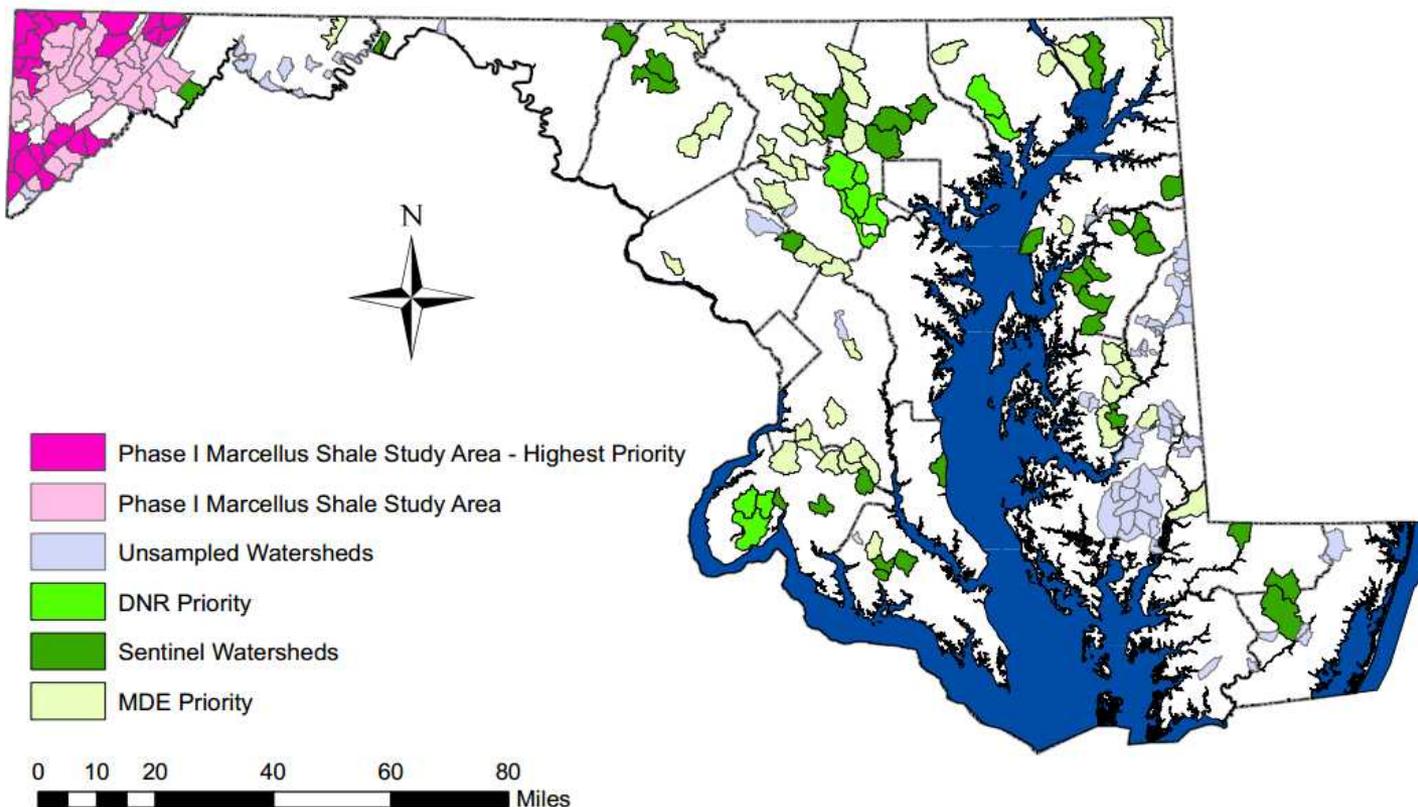


**MBSS -
Watersheds**



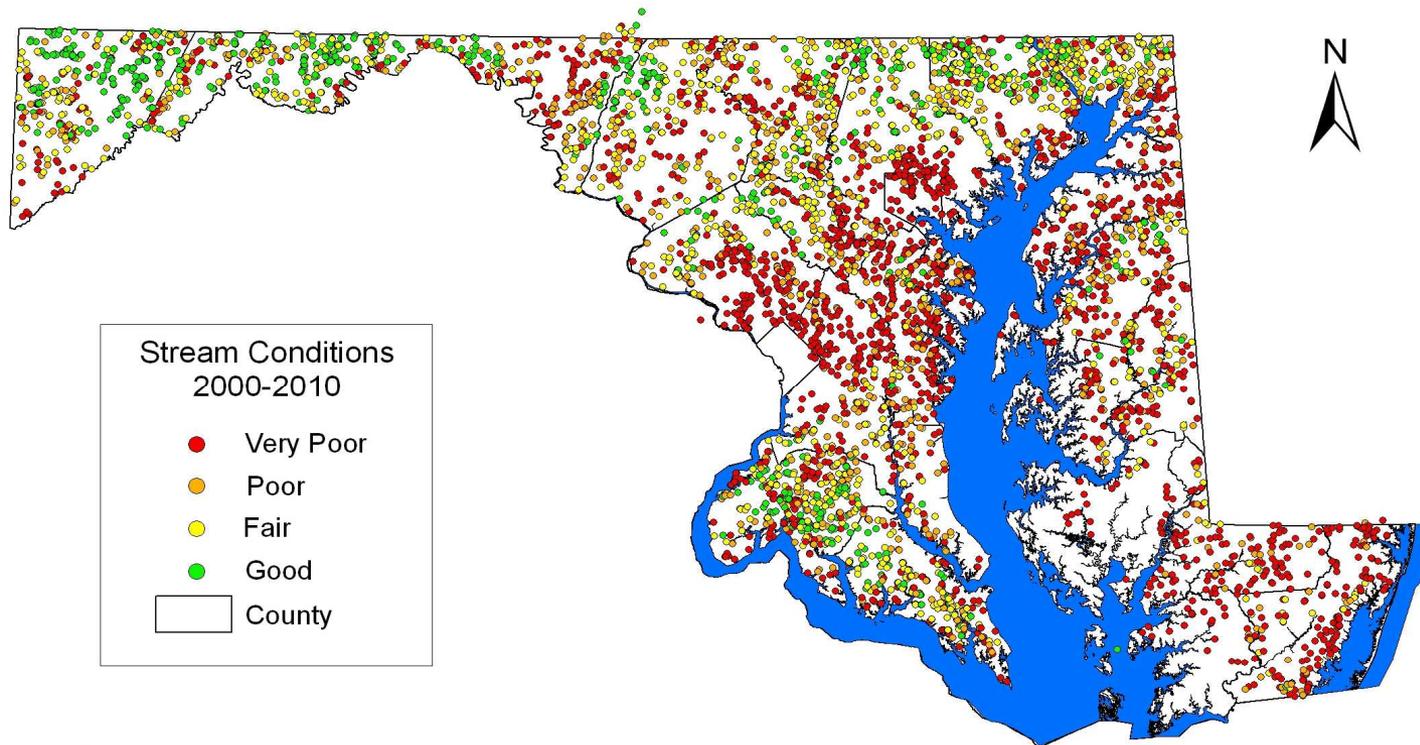
**Stream Waders -
Subwatersheds**

2012 Maryland Stream Waders Watersheds



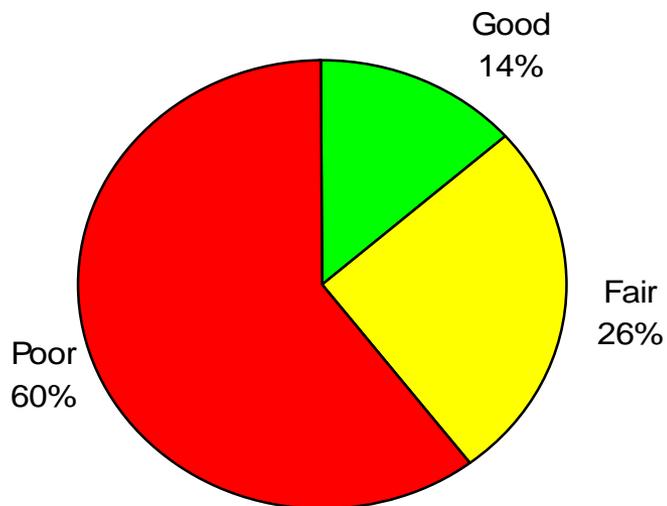
Maryland Stream Waders – 11 Years of Success!

Maryland Department of Natural Resources 2000-2010 Stream Waders Program Stream Health Ratings

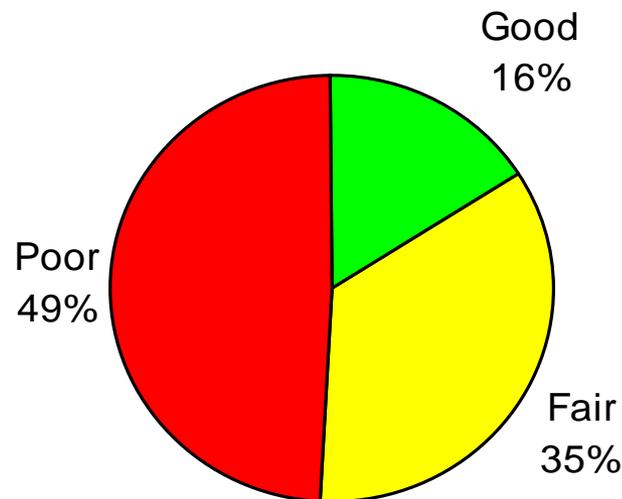


Statewide Results

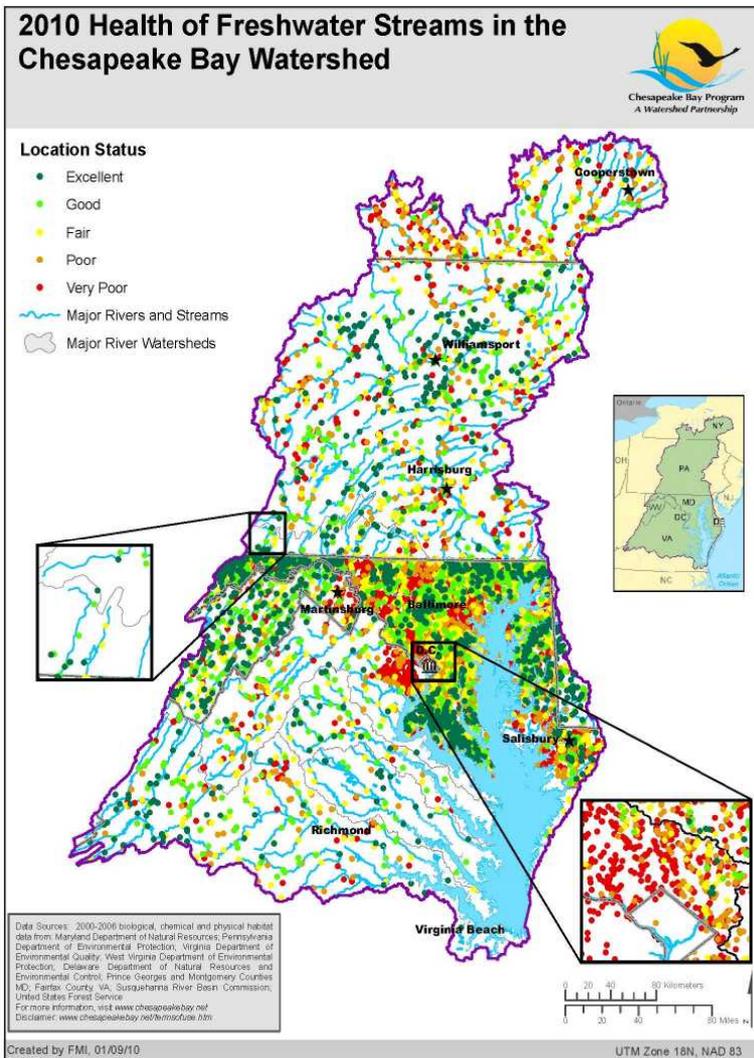
Stream Waders Family BIBI



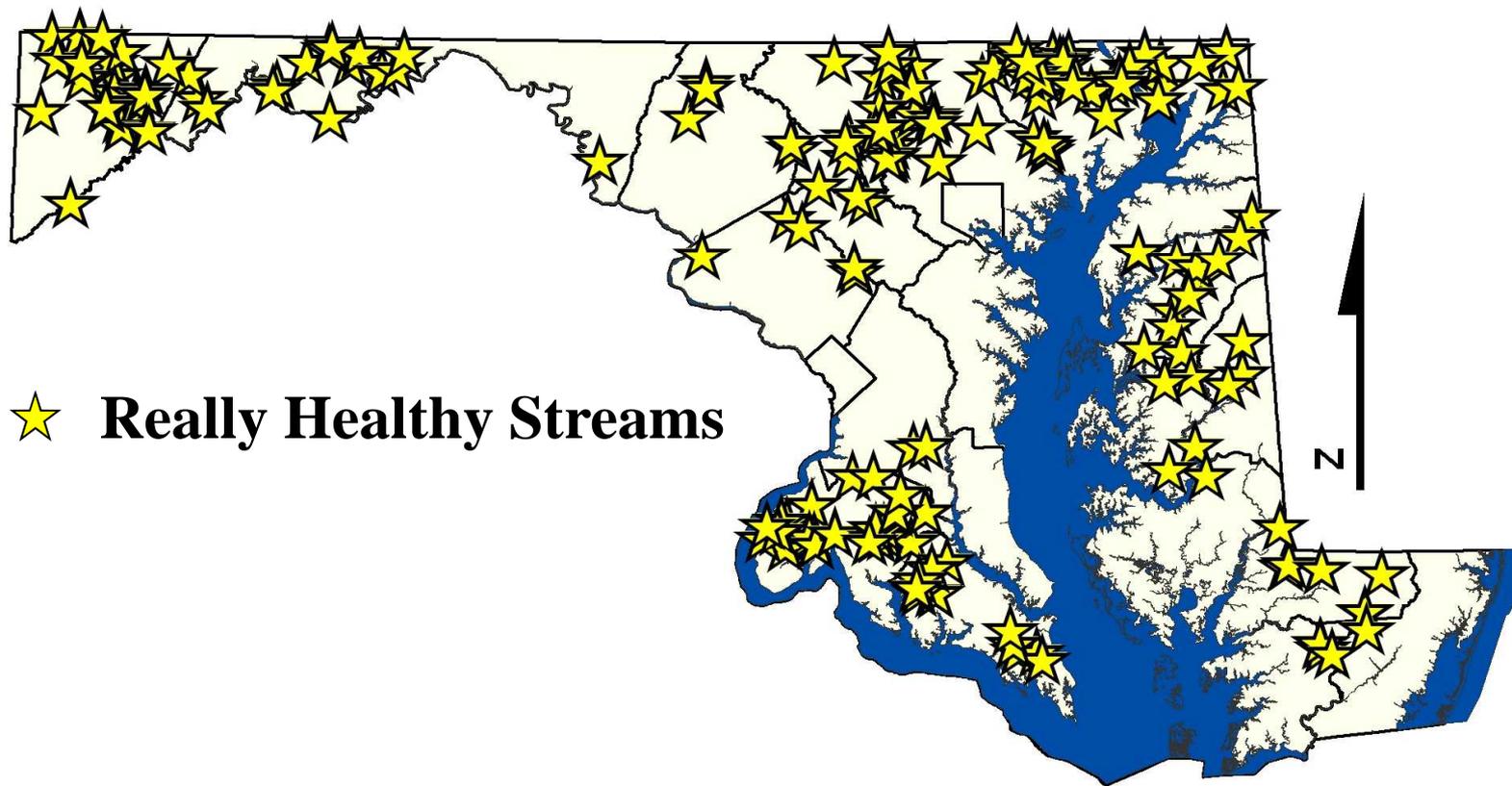
MBSS Genus BIBI



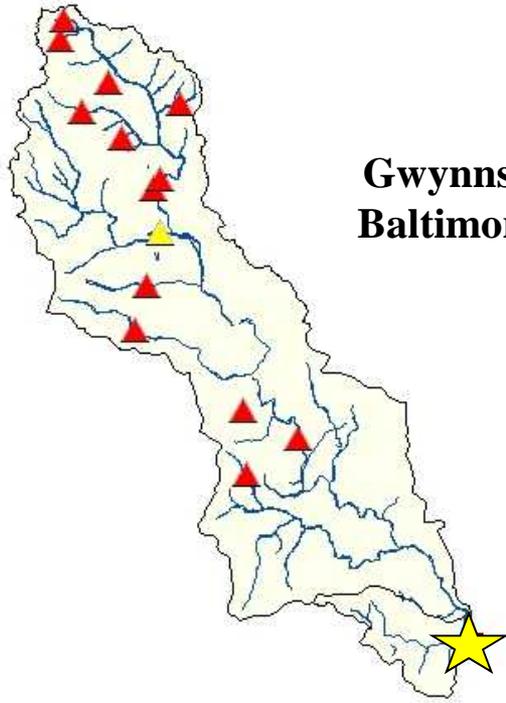
Maryland Stream Waders – 11 Years of Success!



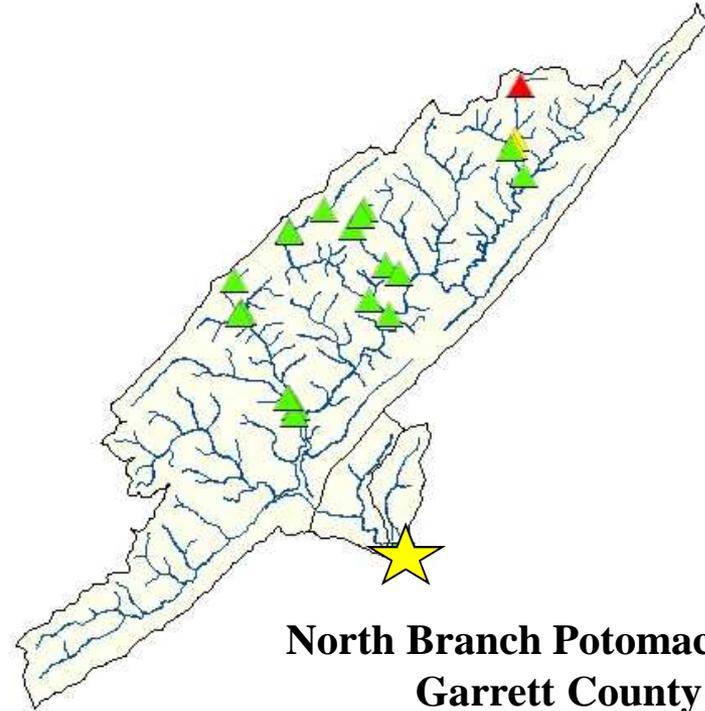
Antidegradation Policy Support



Maryland Stream Waders – 11 Years of Success!



**Gwynns Falls,
Baltimore Area**



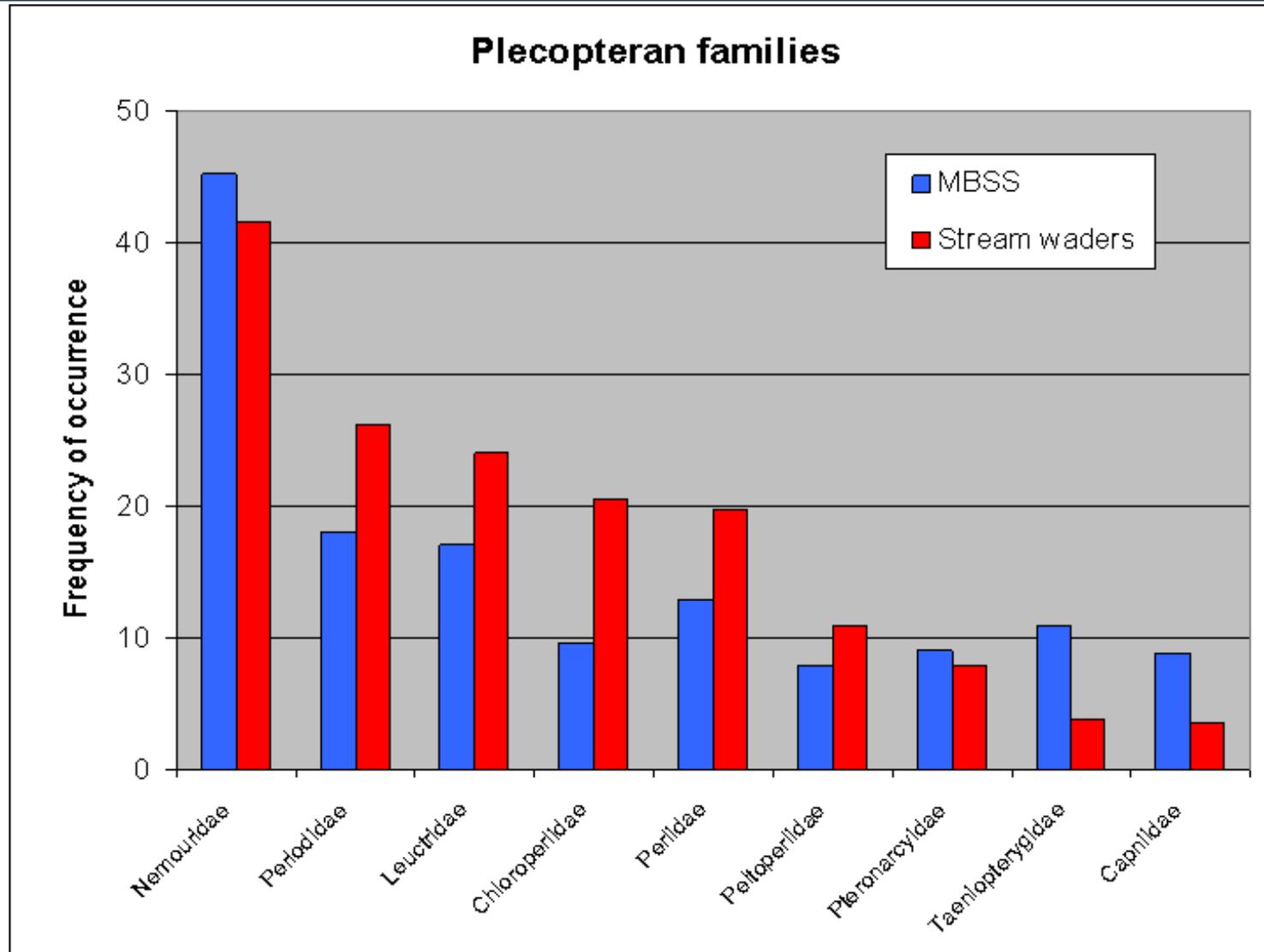
**North Branch Potomac River,
Garrett County**

- ▲ Stream Waders site
- ★ Mbss site

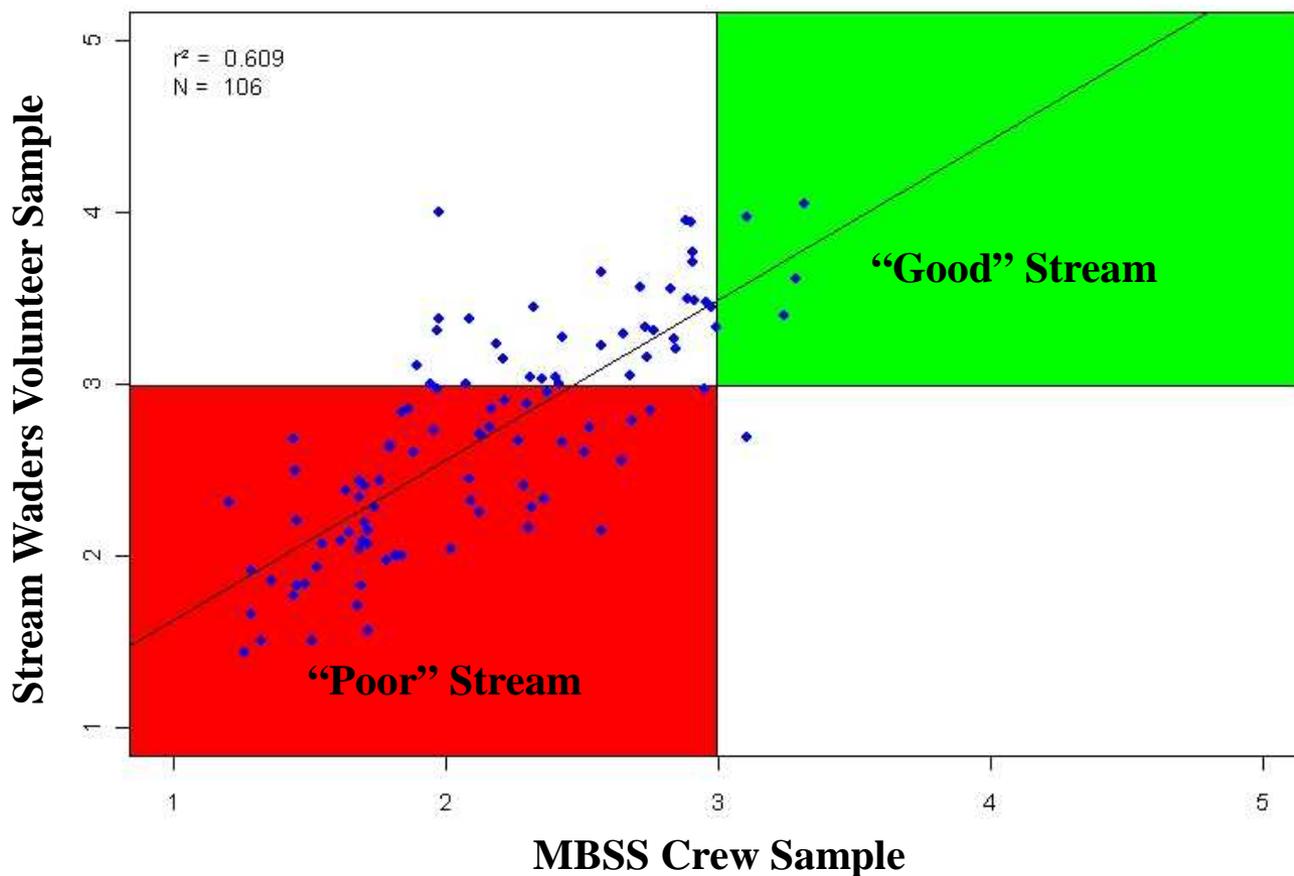
Maryland Stream Waders – 11 Years of Success!



Maryland Stream Waders – 11 Years of Success!



Let's Compare!





[Advanced search](#)
[Language tools](#)

Google Search

I'm Feeling Lucky

[Advertising Programs](#)

[Business Solutions](#)

[About Google](#)

© 2011 - [Privacy](#)

Maryland Stream Waders – 11 Years of Success!



The screenshot shows the Maryland Stream Health website interface. At the top, there is a navigation bar with the Maryland logo and the text "MARYLAND Smart, Green & Growing". Below this is a search bar and a "Stream Health" title. A horizontal menu contains several categories: SG&G, GREENPRINT, AGPRINT, TREES, OYSTERS, STREAMHEALTH (highlighted), and BAYSTAT. The main content area features a "Stream Health" title and a map of Maryland. The map is overlaid with a color-coded stream health index. A "Find Address" button is circled in blue. The map shows various counties and cities, including Garrett, Allegany, Washington, Frederick, Carroll, Baltimore, Harford, Cecil, Kent, Queen Anne's, Caroline, Talbot, Prince George's, Calvert, Charles, St. Mary's, Dorchester, Wicomico, Worcester, and Somerset. Neighboring states are labeled: WEST VIRGINIA, VIRGINIA, NEW JERSEY, and DELAWARE. The bottom of the page has a footer with "Contact the Office | Accessibility | Privacy Notice".

Maryland Stream Waders – 11 Years of Success!



The screenshot shows the Maryland Stream Health website interface. At the top, there is a navigation bar with the Maryland logo and the text "MARYLAND STREAMHEALTH Smart, Green & Growing". Below this, there are several menu items: SG&G, GREENPRINT, AGPRINT, TREES, OYSTERS, STREAMHEALTH, and BAYSTAT. The main content area features a map of Maryland with a search overlay. The search overlay has a "Find an Address" section with input fields for "Street Address" (containing "12500 Pleasant Valley") and "Zip Code" (containing "21530"), and a "Search" button. The map shows various Maryland counties and is surrounded by neighboring states: WEST VIRGINIA, VIRGINIA, NEW JERSEY, and DELAWARE. The interface includes standard map controls like zoom in/out, pan, and a legend.

Maryland Stream Waders – 11 Years of Success!



The screenshot displays the Maryland Stream Health website interface. At the top, there is a navigation bar with the Maryland logo and the text "MARYLAND Stream Health Smart, Green & Growing". To the right of the logo is a search bar and links for "Email Friend" and "Print Page". Below the navigation bar is a horizontal menu with tabs for "SG&G", "GREENPRINT", "AGPRINT", "TREES", "OYSTERS", "STREAMHEALTH", and "BAYSTAT". The "STREAMHEALTH" tab is currently selected. The main content area features a map titled "Stream Health" with a "Find Address" search box. The map shows a network of streams and rivers, with a prominent brown stream winding through the landscape. A blue circle highlights a specific location on the stream. The map includes various icons for navigation, such as zoom in (+), zoom out (-), pan (hand), and a legend. The Maryland logo and "Smart, Green & Growing" tagline are also visible in the top left corner of the map area.

Maryland Stream Waders – 11 Years of Success!



The screenshot displays the Maryland StreamHealth website interface. At the top, there is a search bar and navigation tabs for various environmental categories: SG&G, GREENPRINT, AGPRINT, TREES, OYSTERS, STREAMHEALTH, and BAYSTAT. The main content area features a map titled "Stream Health" with a data popup window. The popup window contains the following information:

- Site ID: 0107-02-2009
- Collection Date: 2009
- Index of Biotic Integrity: 4.428571
- Buttons: [Detailed Data](#) and [Stream Health Coloring](#)

The map shows a network of streams and rivers, with a specific site highlighted in blue. The site is located near a road labeled "144" and a highway labeled "68". The map includes standard navigation controls such as zoom in (+), zoom out (-), pan, and home buttons.

Maryland Stream Waders – 11 Years of Success!

Rocky Gap Creek near Rock Gap Road in Allegany County

Site: 0107-02-2009

Watershed: Evitts Creek

The Family Level Benthic Index of Biotic Integrity (IBI) Rating is: **Good**

What does the IBI score mean?

The IBI score is a quantitative rating of the health of the macroinvertebrate assemblage found at each site. 20.0 different families of benthic macroinvertebrates were collected at this site. Higher diversity of benthic macroinvertebrates is often associated with better stream quality. Of the different kinds of benthic macroinvertebrates, biologists often refer to three groups in particular as "EPT" (Ephemeroptera, Plecoptera, & Trichoptera). 12.0 different kinds of EPT were found at this site. These types of bugs are sensitive to pollution- the presence of 12.0 different kinds is a good sign. 4.0 different families of Dipterans were collected at this site, generally indicating better stream quality. The combination of these factors (in a mathematical index) result in an characterization of the benthic macroinvertebrate community at this site as Good.

Site	Family	Percent of sample
0107-02-2009	Chironomidae, (non-biting midge)	37.6
0107-02-2009	Ephemerellidae, (spiny crawler mayfly)	18.3
0107-02-2009	Peltoperlidae, (roachlike stonefly)	6.4
0107-02-2009	Leuctridae, (rolledwinged stonefly)	5.5
0107-02-2009	Chloroperlidae, (green stonefly)	4.6
0107-02-2009	Uenoidae, (uenoid case maker caddisfly)	3.7
0107-02-2009	Hydropsychidae, (common netspinner caddisfly)	3.7
0107-02-2009	Elmidae, (riffle beetle)	3.7
0107-02-2009	Tipulidae, (crane-fly)	2.8

Maryland Stream Waders – 11 Years of Success!





Google “Maryland Stream Waders” or find us on Facebook