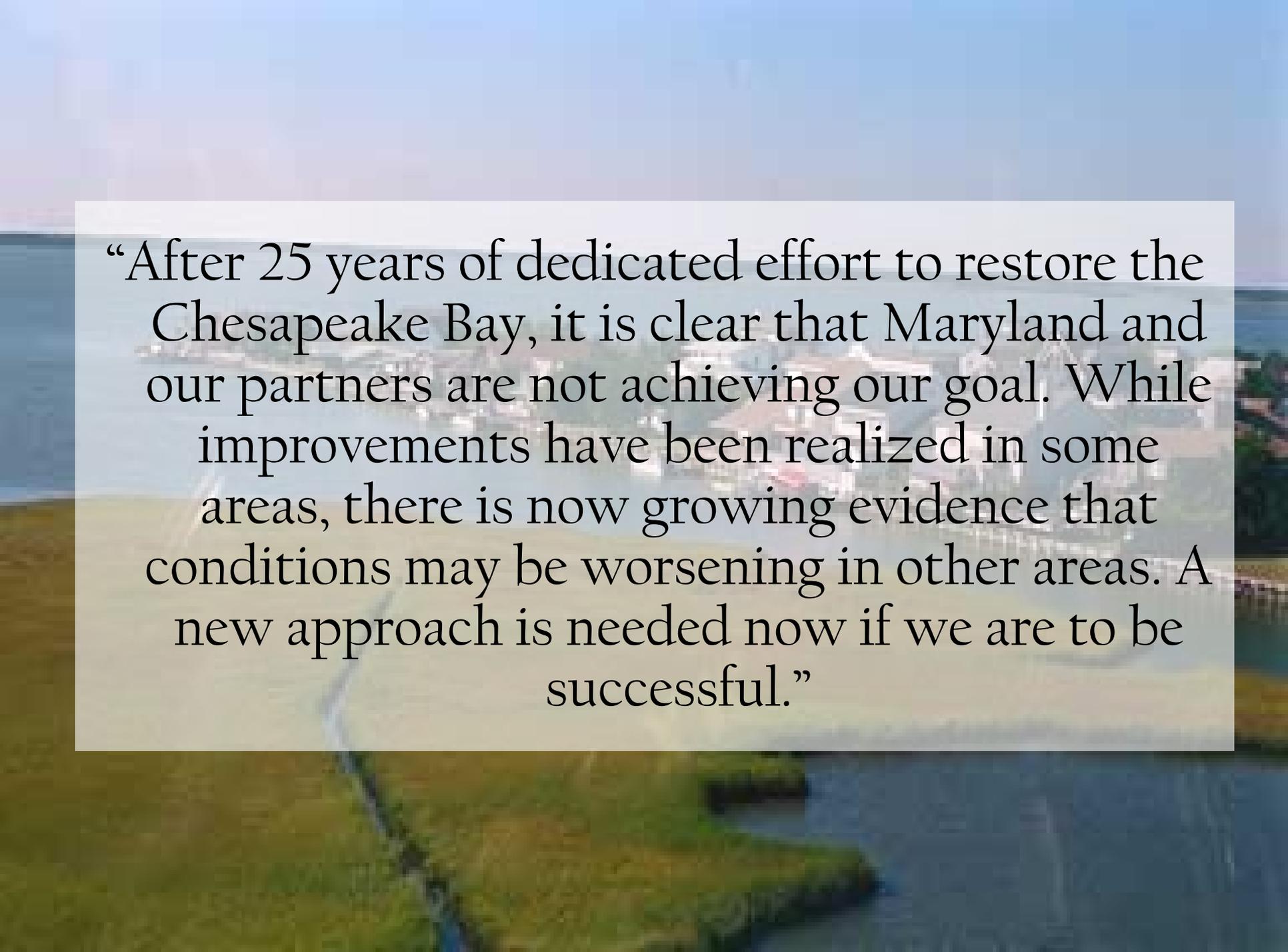# Restoration and Protection Targeting Tools: Business Not As Usual

Maryland Chesapeake & Coastal Program

Chris Cortina & Catherine McCall

"After 25 years of dedicated effort to restore the Chesapeake Bay, it is clear that Maryland and our partners are not achieving our goal. While improvements have been realized in some areas, there is now growing evidence that conditions may be worsening in other areas. A new approach is needed now if we are to be successful."

Discussion Outline

2010 Trust Fund & Local Implementation Grant
What is the 2010 Trust Fund and the LIG?
Why was LIG created?
How was targeting conducted?
What was the response?
What are the next steps?

Targeting Protection and Restoration
'Same old' challenges
Targeting and modeling for protection and restoration
Where will it be implemented and what will change?

2010 Trust Fund & LIG

Chesapeake & Atlantic Coastal Bays 2010 Trust Fund

- During a special legislative session, the Fund was established to provide $50 million to implement in-the-ground nutrient and sediment reduction strategies.

- It was made into law in July 2008 and is funded out of rental car tax, motor fuel tax and state budget allocations.

- Passage of the 2010 Trust Fund has laid the foundation for an ambitious strategy for restoring and protecting the bays and their tributaries.

- Allows Maryland to accelerate Bay restoration by focusing limited financial resources on the most effective non-point source pollution control projects.

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MDE

MARYLAND
Department of Agriculture

Local Implementation Grant (LIG)

- The LIG was a portion of the Trust Fund set aside to provide a "one-stop-funding-shop" to implement existing watershed plans.
- Represents a targeted approach for watershed restoration employed in response to ineffective piecemeal project implementation - **business as usual.**
- Proposals solicited from local governments and non-governmental organizations to implement innovative, coordinated, multi-partner, multi practice non-point source pollution projects.
- Funds will be allocated through a process that is:
  - based on the best available scientific information regarding water quality
  - cost-effectiveness of nutrient and sediment control measures,
  - results in the greatest possible benefits via reductions in non-point source nutrient and sediment loadings.

- LIG was modeled after a pilot targeting project already underway called the Corsica River Targeted Watershed Project

- Goals of Corsica project:
  - develop the best business practices
  - implement the processes, partnerships, assessment, and tools needed to meet the threshold for restoring a single sub-watershed of the Bay


Corsica River Subwatersheds - potential restoration sites
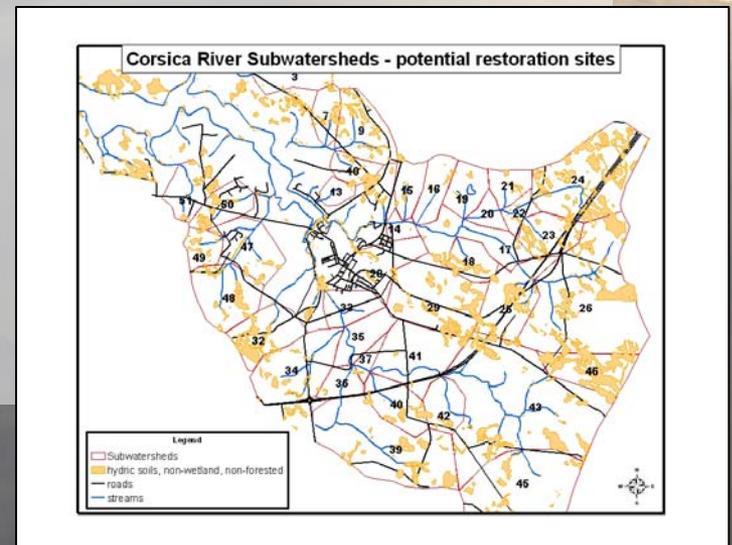
2010 Trust Fund & LIG

- Targeting began by identifying "priority areas"

- Achieved by overlaying data from:
    - Chesapeake Bay Report Card: provides an assessment of the previous year's Bay health
        - Helped narrow 10 major tributary basins down to 5 of highest concern
        - Identified Trib. basins with **greatest need** of non-point source pollution reduction

    - USGS SPARROW model
        - (SPAtially Referenced Regressions On Watershed attributes) a statistical modeling approach that relates upstream nutrient sources to downstream nutrient loads.
        - Identified Trib. basins with **highest nutrient load potentials**

    - Subwatersheds were prioritized as high, medium or low priority areas
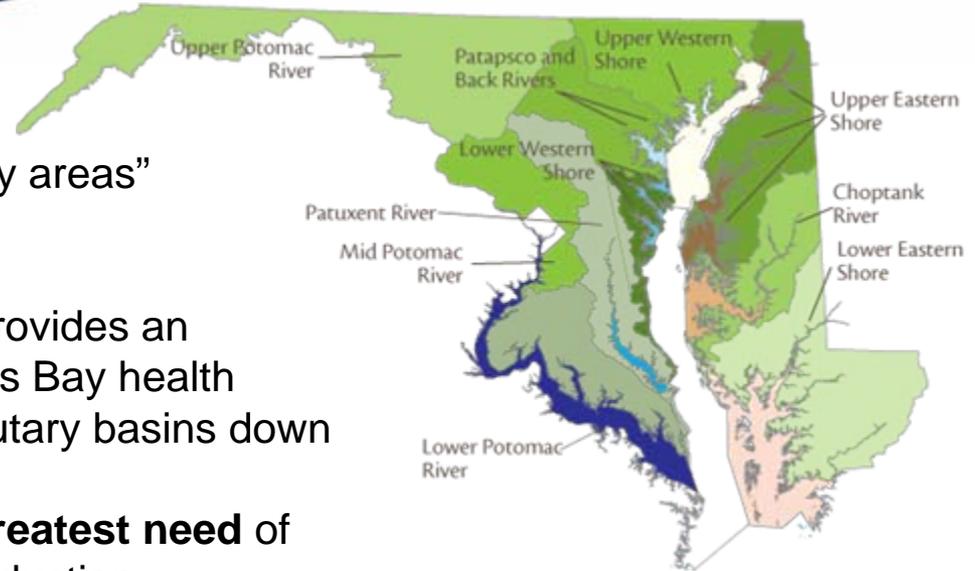
Priority subwatersheds that have the greatest potential to realize water quality benefits to the Chesapeake Bay, Coastal Bays, and their tributaries via reductions in non-point source nutrient and sediment loadings were selected based on current monitoring and modeling data.
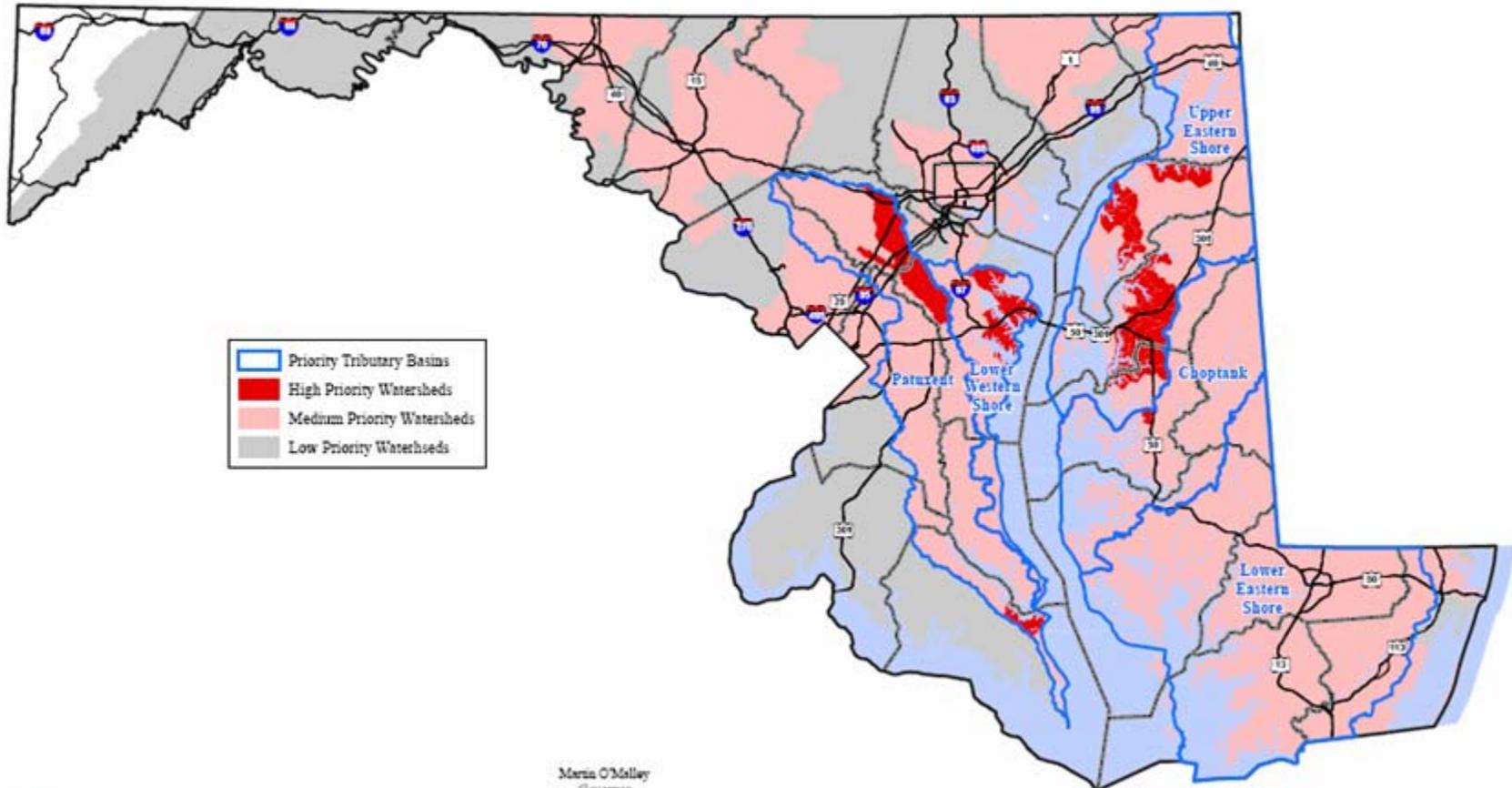
2010 Trust Fund & LIG

- Further targeting was achieved through the proposal review process
  - Internal review
  - Interagency review
  - Scientific Advisory Panel review

- Evaluation criteria:
  - Located in High, Medium, or Low **Priority Watershed**?
  - **Scientific Feasibility** - watershed's capacity to demonstrate the effect of the project on water quality;
  - **Implementation Readiness** - readiness of the jurisdiction to implement the restoration plan;
  - **Implementation Ability** - jurisdictions ability to execute the implementation plan.

- Special consideration given to new and innovative approaches that:
  - leverage the funds to the greatest extent possible,
  - targets the priority areas and practices within those areas that generate the greatest possible nutrient reductions per 2010 Trust Fund dollar
  - engage the community at large,
  - and hold everyone accountable.

FY09 & FY10 Local Implementation Grant Proposals

Trust Fund Watershed Priority
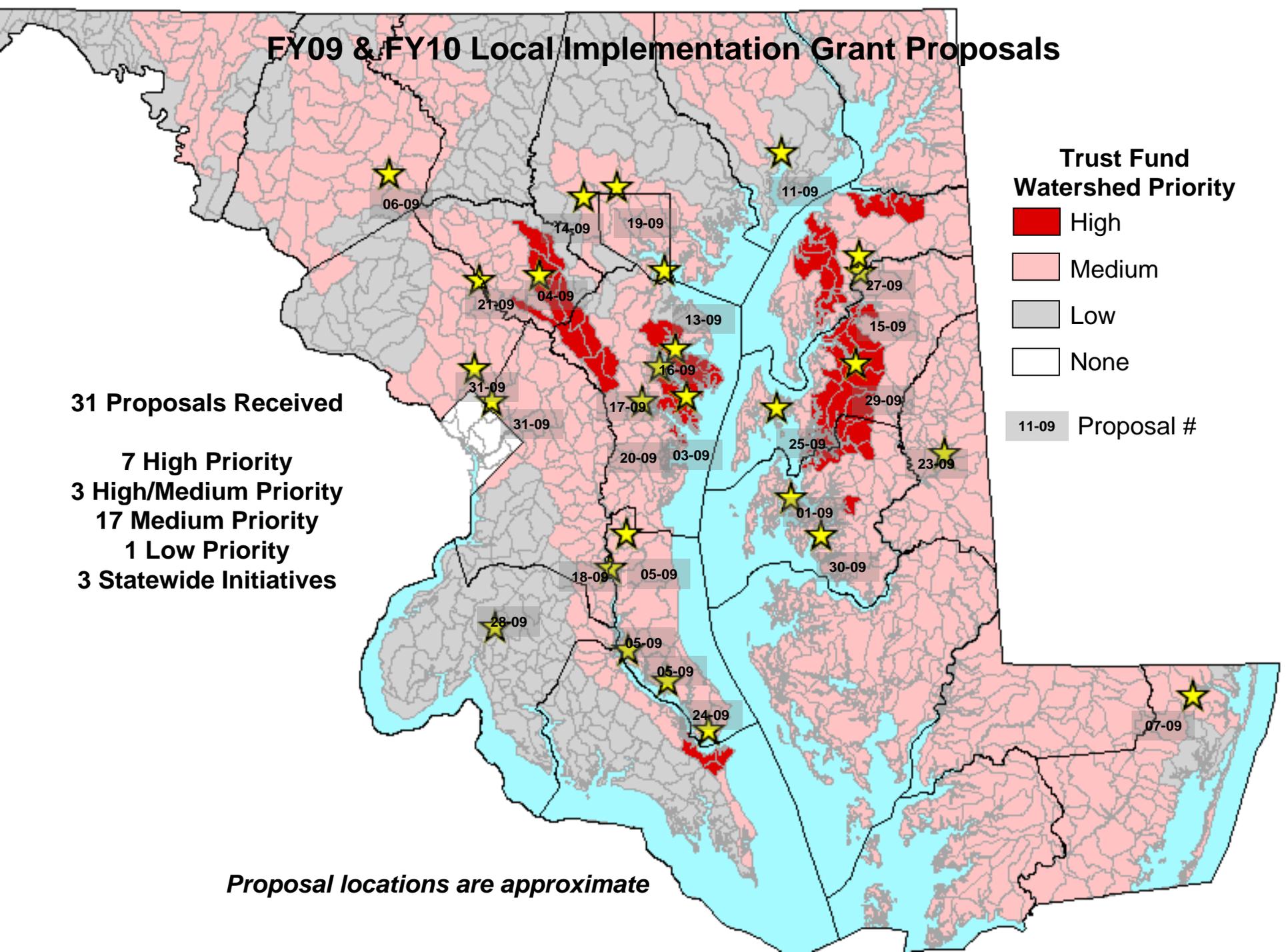
- High
- Medium
- Low
- None
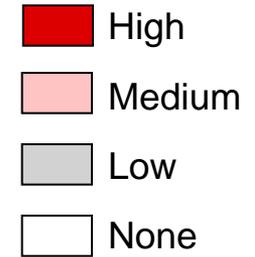
11-09 Proposal #

31 Proposals Received

7 High Priority
3 High/Medium Priority
17 Medium Priority
1 Low Priority
3 Statewide Initiatives

Proposal locations are approximate

Watershed Assistance Collaborative

√ **The Training:** Hands on trainings for communities interested in watershed targeting, planning, and the financing of long-term restoration efforts…

√ **The Resources:** Planning and design grants and technical assistance to meet the needs of local governments & communities preparing to undertake a comprehensive restoration effort…

√ **The Support:** Regional Watershed Specialists to provide implementation assistance focused on helping local and county governments.

2010 Trust Fund & LIG

Without 2010 Trust Fund & Local Implementation Grant	**With** 2010 Trust Fund & Local Implementation Grant

▪ Local governments prepare applications for and seek funding from multiple sources to begin. implementation of watershed plans.
 	
    - Staff time and resources spread thin trying to secure funding.
 	
 ▪ Implement individual projects in single locations over a large geographic area.
 	
    - Little reductions observed.
 	
 ▪ Limited project support and assistance
	▪ Single funding source to implement NPS watershed plan strategies.
	
	 ▪ Greater number of projects clustered in a single area/watershed.
	
	    - Goal is to monitor nutrient/sediment reduction in a more focused area with many projects in the ground.
	
	 ▪ Implementation support is provided by Watershed Assistance Collaborative projects.

2010 Trust Fund & LIG

<u>Lessons Learned:</u>

- Overwhelming response that "this is exactly what local governments have been waiting for"

- Establishes the opportunity to line up future partnerships to build capacity at the local level

- Enhances the ability of governments to implement existing plans and work at a watershed level to reduce sediment and nutrient loading

- Identification of priority areas may need to be retooled to reflect capacity and existing watershed plans in addition to nutrient and sediment loading information
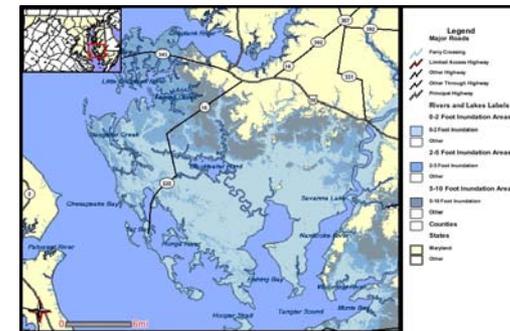
Targeting


MET

'Same Old' Threats:

- Hardening of the shoreline
- Limited resources for land protection through easements or acquisition
- Development pressure leading to degraded ecosystems and diminished ecosystem services
- Impact of climate change and sea level rise – loss of land and critical habitats
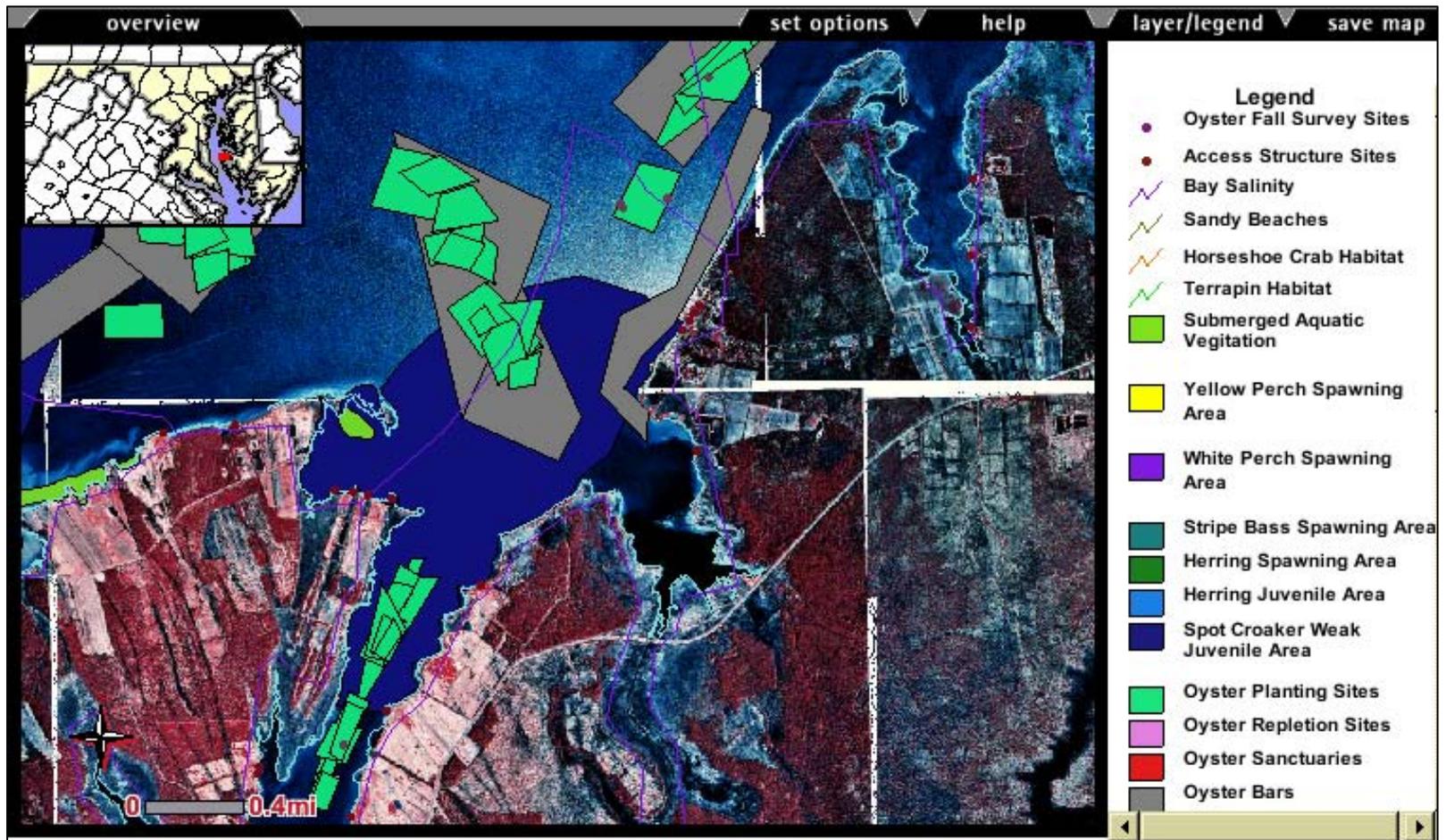
Blue Infrastructure

New Targeting Approaches to Enhance Coastal Resources & Habitat Protection and Restoration

Green Infrastructure   Blue Infrastructure   Complete Ecological Network
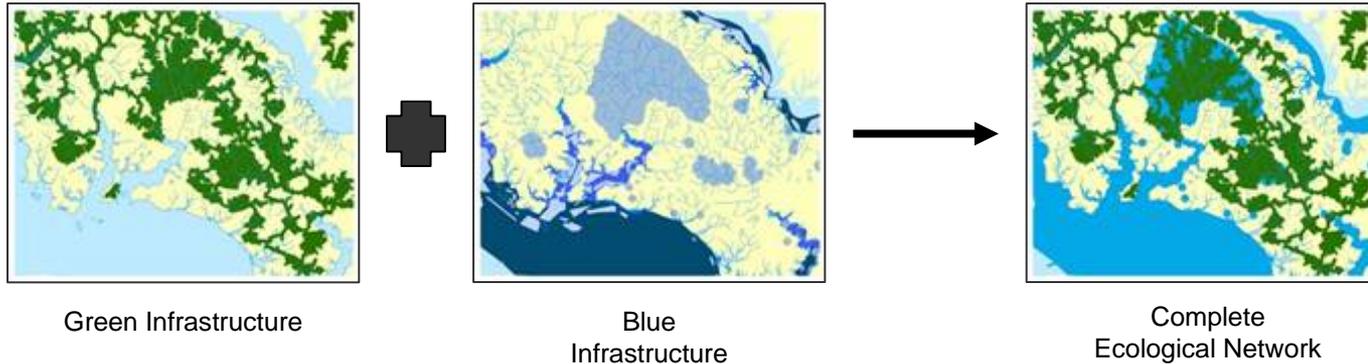
1) Develop a complete aquatic-terrestrial network that represents living resources and coastal habitat. Merging of "Green" and "Blue" Infrastructures

2) The Blue Infrastructure will be developed in three phases: the inventory, followed by the assessment and the implementation and application.

Blue Infrastructure Inventory

Little Choptank River

Blue Infrastructure Assessment

Assessment of Shoreline Reaches

Landward near shore values…
- Buffer habitat/land use type
- Watershed values for habitat, development, and impervious surface

Ecological function values…
- Presence and quality of habitat or resource
- Fisheries areas, shellfish, RTE, SAV, and other related aquatic and terrestrial data

Physical/Anthropogenic disturbance values
- Shoreline stabilization
- Access structures

Maryland's Blue Infrastructure will provide a way to…

- Strengthen the analytical ability of Maryland to assess user- and land-based impacts to natural resources.

- Enhance Program Open Space and Rural Legacy Parcel Evaluations

- Support holistic aquatic resource and fisheries management strategies

- Identify priority aquatic areas and shorelines that may be conserved or restored

Questions?

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