



**Maryland**  
Department of  
the Environment

# Collaboration to Improve TMDL Implementation

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**Initiative:** collaborate on restoration of TMDL watersheds with Use Class \_\_\_-P designations

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**MDE Watershed Restoration Division seeks to partner with the Potomac River Basin Drinking Water Source Protection Partnership (DWSPP) to increase the efficiency and the effectiveness of pollution reductions being driven by TMDLs and mandated in Phase I stormwater permits.**



# Partnerships

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- The Integrated Water Planning Program (IWPP) is part of the Water and Science Administration (WSA)
  - TMDL Development
  - Watershed Restoration Division
  - Water and Sewer Plan Review
- IWPP's Watershed Restoration Division
  - Partnerships increasing with other agencies driven by Chesapeake Bay WIP development
  - DNR
    - Fisheries
    - Forest Service
  - Maryland Department of Planning
  - Maryland Department of Health and Mental Hygiene
  - Maryland Department Agriculture



# Information in the presentation

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- **1) highlight information being generated by stormwater permits in order to identify opportunities to collaborate with the DWSPP membership, and**
- **2) to foster collaboration between DWSPP and Maryland jurisdictions in order to prioritize the improvement of water quality in Maryland's Use Class -P (water supply designated use) waters.**



$$\text{TMDL} = \Sigma \text{WLA} + \Sigma \text{LA} + \text{MOS}$$

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Clean Water Act mandates development of TMDLs for all the waters identified on their Section 303(d) list of impaired waters.

- $\Sigma \text{WLA}$  = sum of wasteload allocations (point sources)
  - Stormwater (SW)
- $\Sigma \text{LA}$  = the sum of load allocations (nonpoint sources and background)
- MOS = margin of safety



# Use Class-P Designated Uses

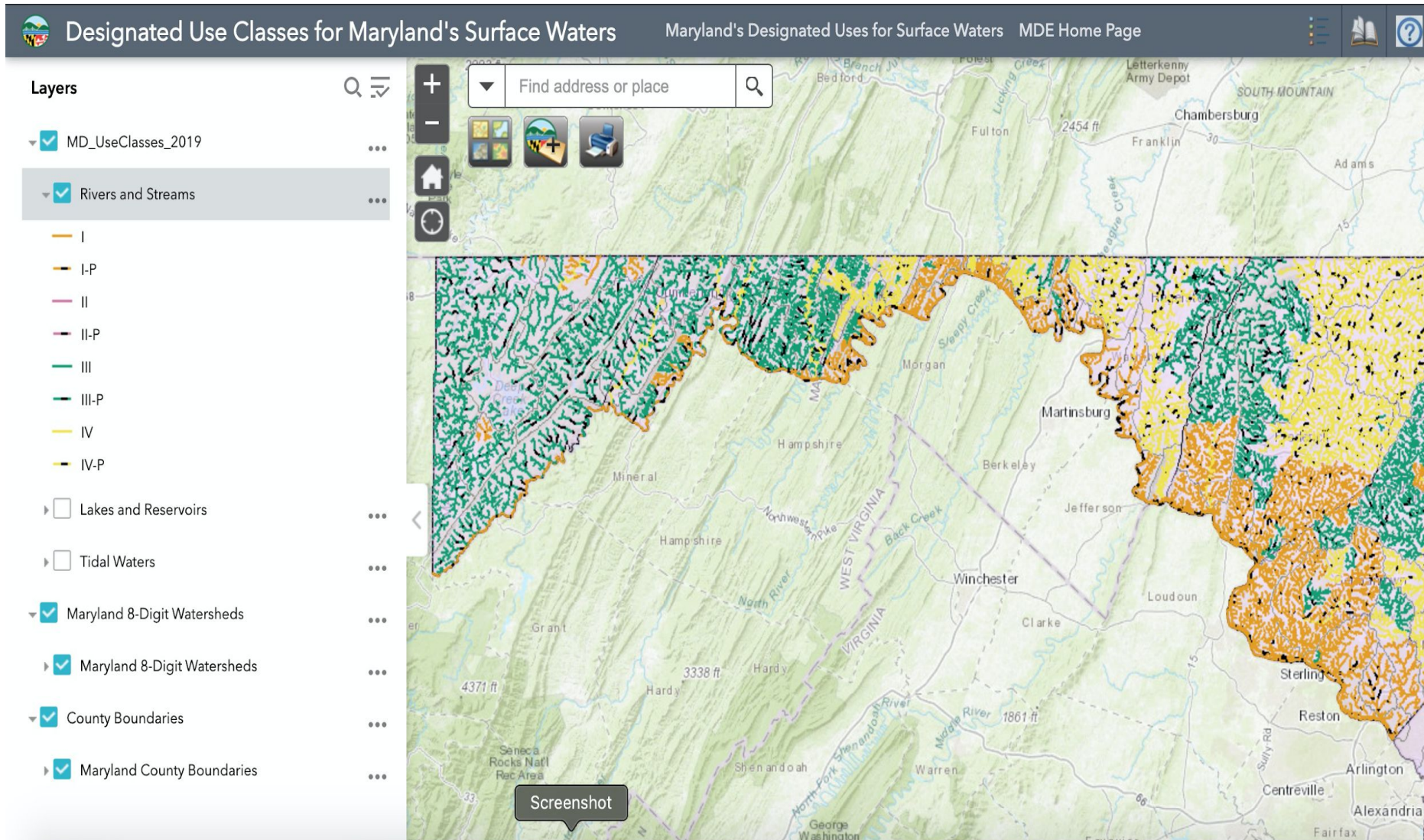
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- Use Class I: Water Contact Recreation, and Protection of Nontidal Warmwater Aquatic Life
- **Use Class I-P: Water Contact Recreation, Protection of Aquatic Life, and Public Water Supply**
- Use Class II: Support of Estuarine and Marine Aquatic Life and Shellfish Harvesting
- **Use Class II-P: Tidal Fresh Water Estuary – includes applicable Use II and Public Water Supply**
- Use Class III: Nontidal Cold Water
- **Use Class III-P: Nontidal Cold Water and Public Water Supply**
- Use Class IV: Recreational Trout Waters
- **Use Class IV-P: Recreational Trout Waters and Public Water Supply**





# Use Class -P Waters of the non-tidal Potomac River Basin-Hatched Segments





# Local TMDL Implementation

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- Most implementation driven by:
  - NPDES Surface Water discharge permits
  - NPDES MS4 permits
- **Phase I stormwater permits in Maryland require the development of TMDL stormwater wasteload allocation (SW-WLA) implementation plans for all applicable pollutants.**





# What is in these plans?

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Legal requirements for SW-WLA WIPs include five basic elements:

1. Schedule of projects and programs leading to attainment, and with end date.
2. Accounting of cost estimates for projects and programs.
3. Detailed monitoring and modeling plan that has a solid scientific foundation for actions taken.
4. Specific adaptive management process
5. Set up a system of accountability, which includes meaningful and technologically relevant forms of public engagement



# Pollutants Covered in these Plans

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- Bacteria
- PCBs
- Sediment
- Nutrients
- Trash
- Temperature?



## Prioritize the resource-base and/or the designated use to drive planning

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- Reservoir/Use-P
- Fisheries and aquaculture
- Beaches
- Agricultural Water Supply (FDA Regulations)
- 319 non-point source plans (for working landscapes)
- Scenic and Wild Rivers Program (for tourism)



# Jurisdictions Creating SW-WLA (Watershed) Implementation Plans

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- Maryland DOT State Highway Administration
- Anne Arundel
- Baltimore City
- Baltimore County
- Carroll County
- Charles County
- Frederick County
- Harford County
- Howard County
- Montgomery County
- Prince George's County



# Interjurisdictional cooperative framework to encourage coordinated implementation

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**Gold Standard: interjurisdictional WIPs, but this requires a process**

- **Ultimately, IWPP hopes to leverage this cooperative process to encourage interjurisdictional TMDL implementation and planning efforts. IWPP has also initiated similar processes with the Baltimore City Reservoir Technical Group (RTG) and the Patuxent Reservoirs Technical Advisory Committee (TAC).**
- Develop clearinghouse of data and information among involved jurisdictions for addressing TMDLs
- Pooled monitoring data can help monitor liability
  - Co-authoring implementation plans, to expedite reductions called for by TMDLs
  - Implement monitoring called for by technical workgroups
- Leverage
  - Funding from other agencies and sectors
  - Existing data resources
  - BMP implementation
  - Planning resources
- Improve
  - Modeling and BMP sizing
  - Processes for the prioritization of BMP implementation
- Avoid
  - Planning based on political boundaries
  - Wasting resources
  - Missing opportunities



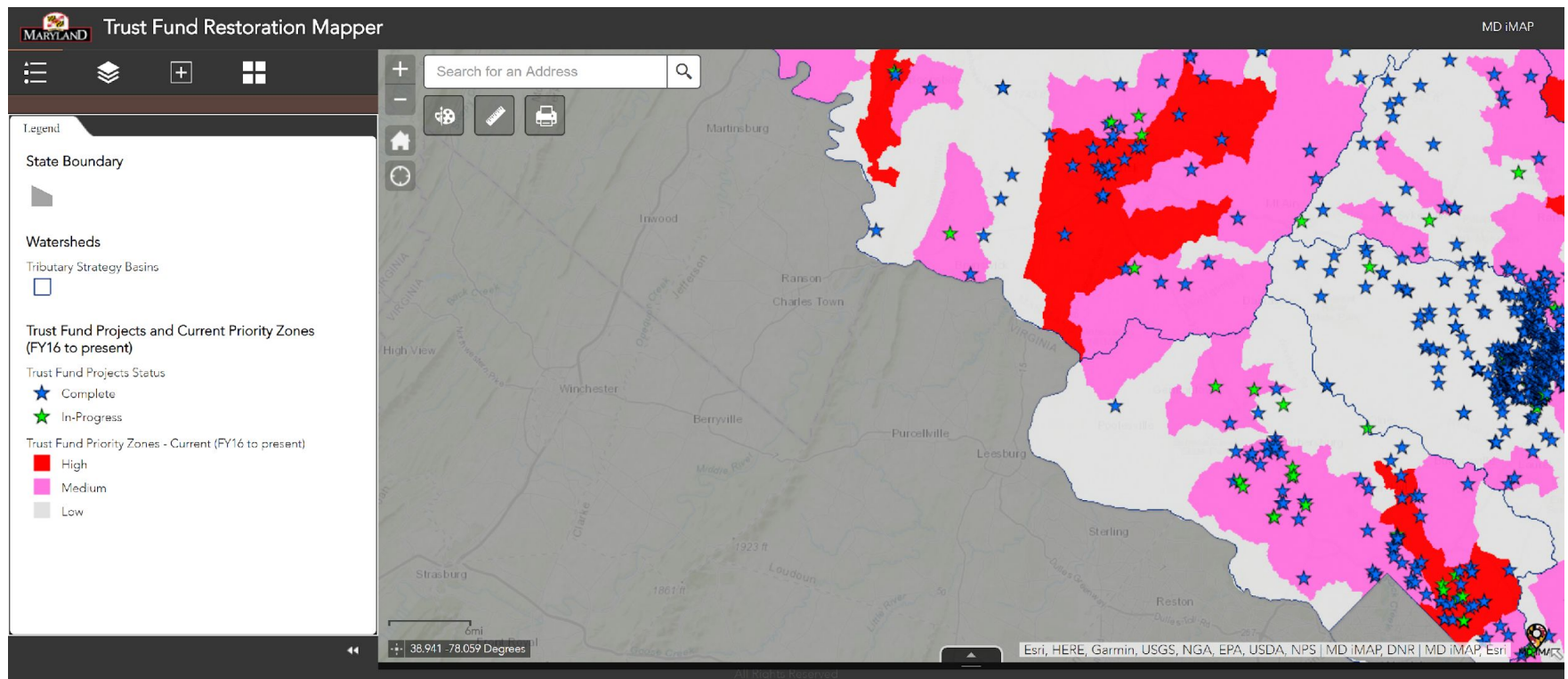
# Trust Fund priority watersheds in the Potomac River Basin

Trust Fund Restoration Mapper:

<https://geodata.md.gov/imapwab/?appid=bcf8a3f28efe40d498402025a88d482f>

Grants Gateway Application:

<https://dnr.maryland.gov/ccs/Pages/funding/grantsgateway.aspx>





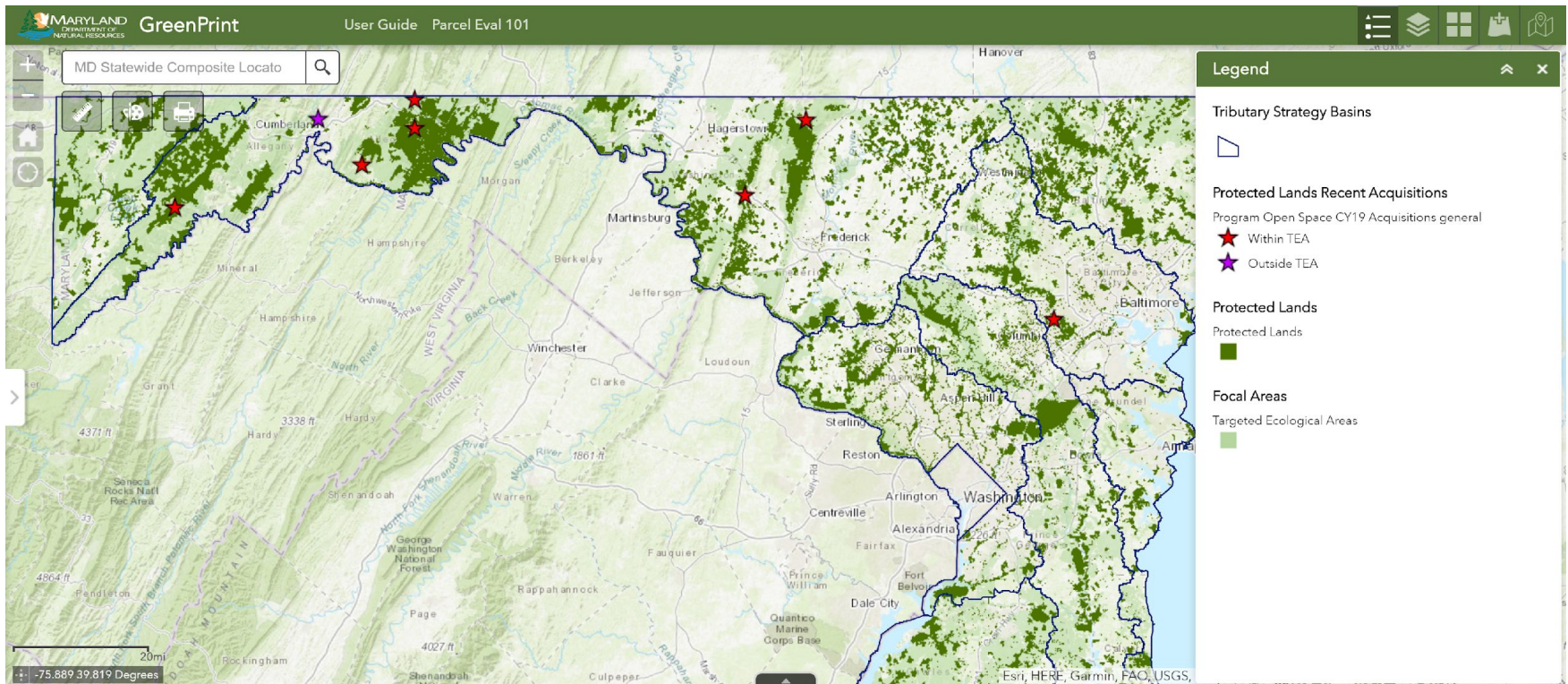


# GreenPrint: Targeted Ecological Areas for Stateside Program Open Space

GreenPrint Interactive Mapper: <https://geodata.md.gov/greenprint/>

Stateside Program Open Space:

<https://dnr.maryland.gov/land/Pages/ProgramOpenSpace/Program-Open-Space-Stateside-Targeting.aspx>





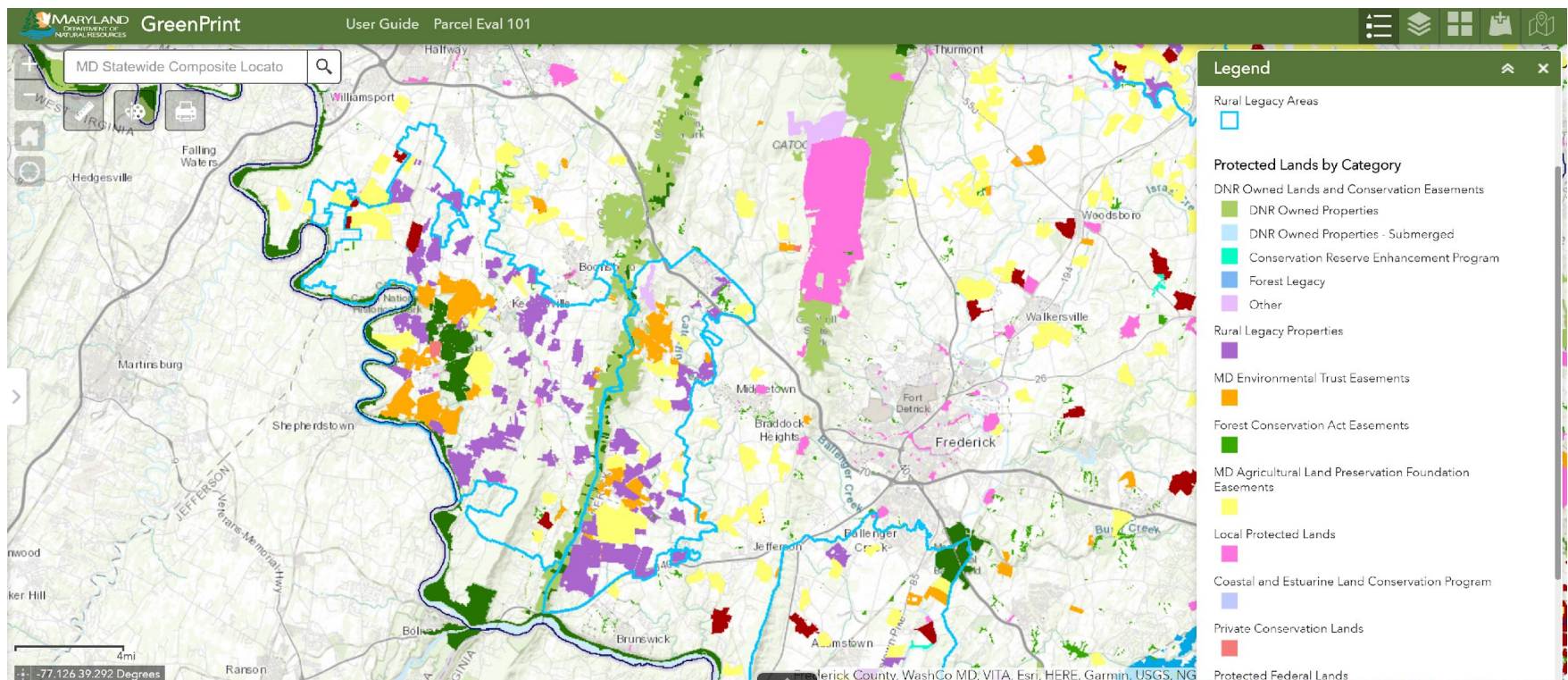


# GreenPrint Implementation Quilt

## Rural Legacy Area Program and other Conservation Partners

### Rural Legacy Program

<https://dnr.maryland.gov/land/Pages/RuralLegacy/home.aspx>





# Stitching Together Funding Opportunities

Funding Program	Agency	Objective	Project Type	Eligibility
<b>Restoration</b>				
Chesapeake and Atlantic Coastal Bays Trust Fund	DNR	Nutrient/Sediment reduction	tree planting, stream restoration, stormwater management, wetland restoration	Priority Trust Fund Watersheds
Chesapeake and Atlantic Coastal Bays Trust Fund	MDA	Nutrient/Sediment reduction	Cover Crops/Farm Management	Agricultural lands
Chesapeake Bay Stewardship Fund	National Fish and Wildlife Federation	Restoration: Nutrients, sediments, farms, wildlife, habitat	Planning and implementation	Baywide - Consistency with Chesapeake Bay goals
<b>Conservation</b>				
Stateside Program Open Space	DNR	Open space for ecological protection, recreation and public access	Acquisition and Easements	Within a GreenPrint Targeted Ecological Area
Rural Legacy Program	DNR and County Sponsors	Conserve rural, working landscapes	Easements	Within a Rural Legacy Area
Maryland Agricultural Land Preservation Program	MDA	Conserve agricultural lands	Easements	Agricultural land - usu 20 acres and in a Priority Preservation Area
Maryland Environmental Trust	MET	Conserve natural and working lands	Donated easements	Agriculture, forest and other natural lands
<b>Resiliency Planning and Implementation</b>				
CoastSmart Communities	DNR	Enhance capacity to understand and effectively plan for and address flood risks associated with a changing climate	vulnerability and risk assessment, planning	Communities facing coastal hazards
Green Infrastructure Resilience	DNR	Enhance capacity to understand and effectively plan for and address flood risks associated with a changing climate	vulnerability and risk assessment, planning	Communities facing stormwater and riparian flooding hazards
Resiliency through Restoration Initiative	DNR	Use of nature and nature based infrastructure to enhance resilience to climate change	Implementation	Clearly addresses CC vulnerability and risk