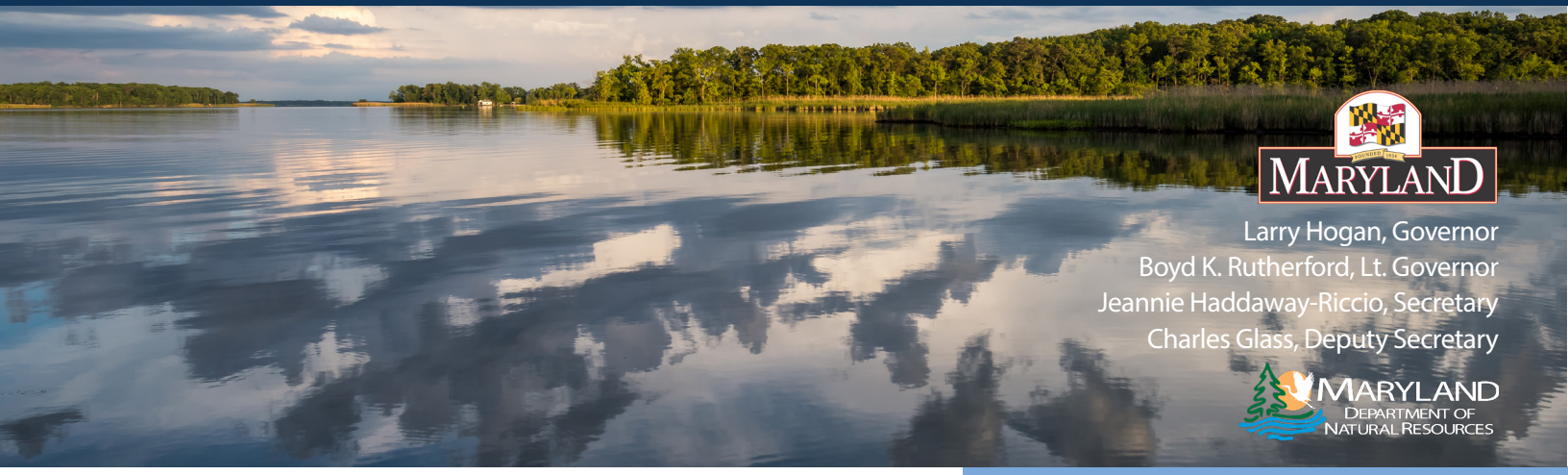
CHESAPEAKE AND ATLANTIC COASTAL BAYS TRUST FUND

FY20 ANNUAL REPORT



MARYLAND

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor
Jeannie Haddaway-Riccio, Secretary
Charles Glass, Deputy Secretary

MARYLAND DEPARTMENT OF NATURAL RESOURCES

The Chesapeake and Atlantic Coastal Bays Trust Fund (Trust Fund) was created to provide the financial assistance necessary to advance Chesapeake Bay restoration by focusing available financial resources on the most effective non-point pollution control projects. Essential to its success is an annual allocation process that:

- Targets funds to the most cost effective locations and practices;
- Leverages funds to the greatest extent achievable;
- Engages the community while holding everyone accountable; and
- Provides the flexibility necessary to take advantage of constantly changing conditions, opportunities and scientific developments.

"We are very thankful for Governor Hogan's strong leadership on the environment and particularly the Chesapeake Bay. Thanks to the governor's unprecedented support, our department and our partners can continue working together to protect our natural resources and the bay, which is rebounding and becoming more resilient."

- Jeannie Haddaway-Riccio, Secretary
Maryland Department of Natural Resources

Budgeted Through FY20

$506,530,000 in state funds

$225,199,000 in leveraged funds

$731,729,000 total

By the Numbers

Nutrient and Sediment Reductions*
(cumulative FY09 - FY19)
(annual practices FY19)

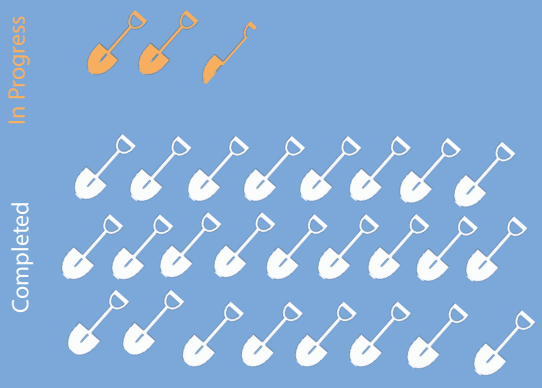
3,531,111
lbs Nitrogen

193,764
lbs Phosphorus

188,004
tons Total Suspended Solids

**Fluctuations in reported reductions are a result of changing accounting methodology and annual practice implementation,*

Status of Funded Projects:



Over **2,780** projects through Maryland's Chesapeake and Atlantic Coastal Bay watersheds

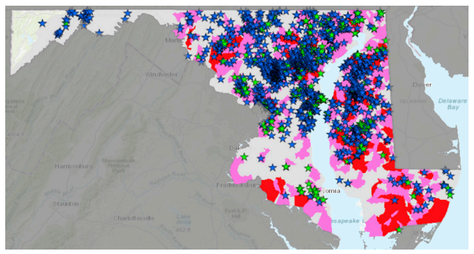
= 100 sites

CHESAPEAKE AND ATLANTIC COASTAL BAYS TRUST FUND FY20 ANNUAL REPORT

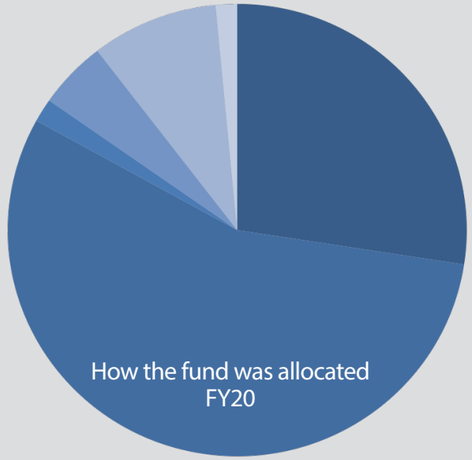
A Targeted Investment

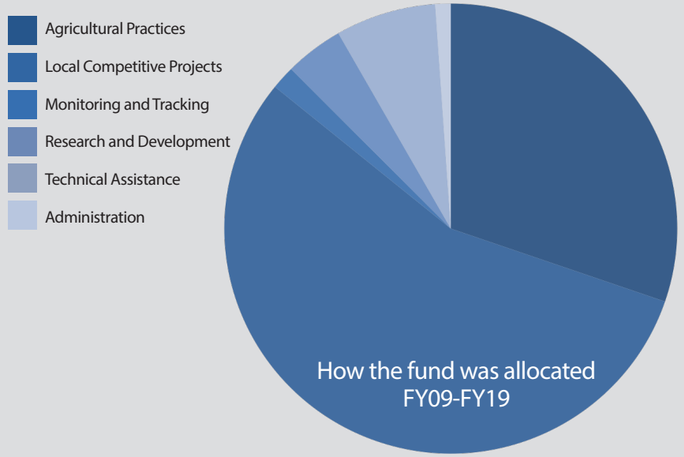
The Trust Fund targets investments geographically to reduce the greatest amount of nonpoint source pollution from entering the mainstem of the Bay. Working with the Scientific Advisory Panel and the United States Geological Survey (USGS), the Trust Fund uses the SPARROW (SPAtially Referenced Regression On Watershed attributes) model to identify locations that are contributing the most nonpoint source pollution to the Bay.

SPARROW estimates the amount of pollution transported from inland watersheds to larger water bodies by linking monitoring data with information on watershed characteristics and contaminant sources. Considering multiple source sectors, the SPARROW model has supported the Trust Fund's efforts to direct funding to those areas of the state that are having the greatest impact on the Bay. Along with overall cost-efficiency and readiness to proceed, the Trust Fund makes investment decisions based on reducing delivered loads in these targeted locations.



Trust Fund By the Numbers

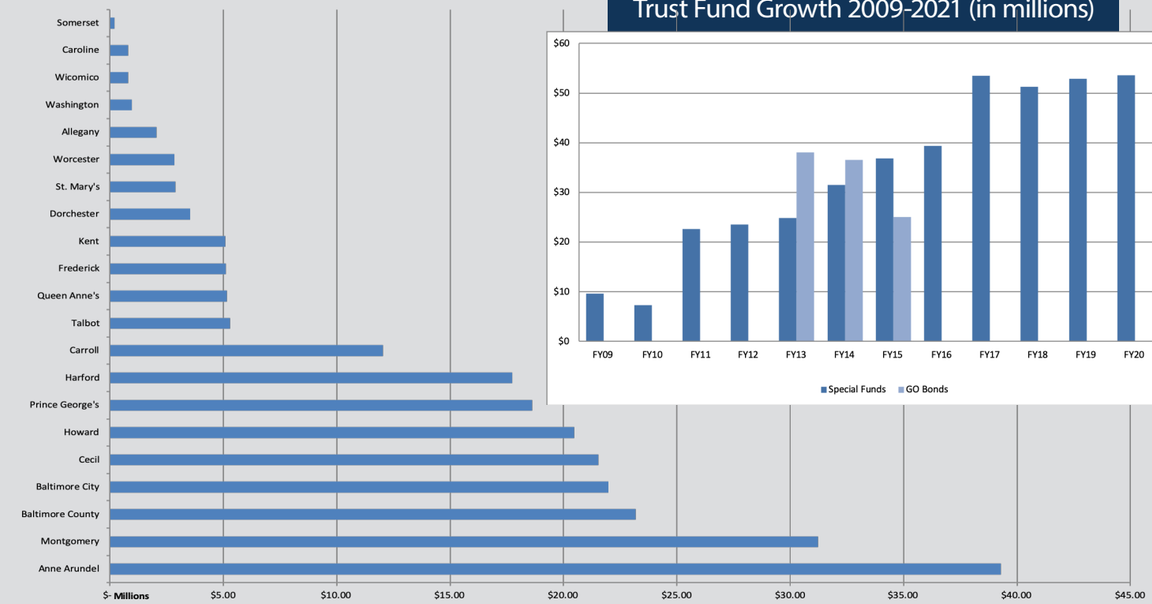




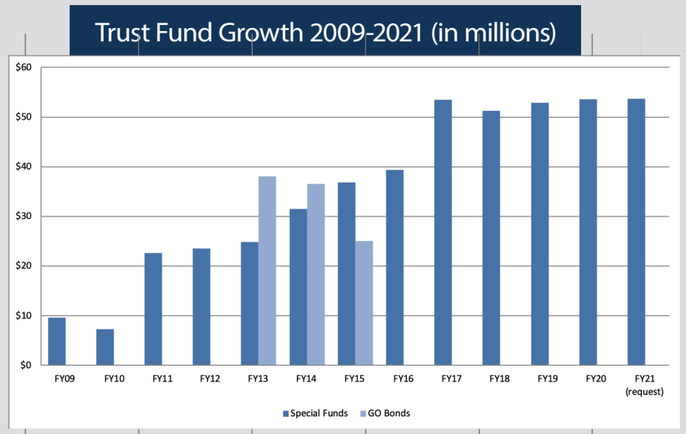
$506 million to date

for non-point source pollution projects across Maryland

Funding by County 2009-2019



Trust Fund Growth 2009-2021 (in millions)



Completed to Date

240,859 linear feet of stream restored

676 stormwater retrofits installed

24 acres of impervious surface removed

22,321 urban trees planted

362,976 acres of fall certified Cover Crops in FY19

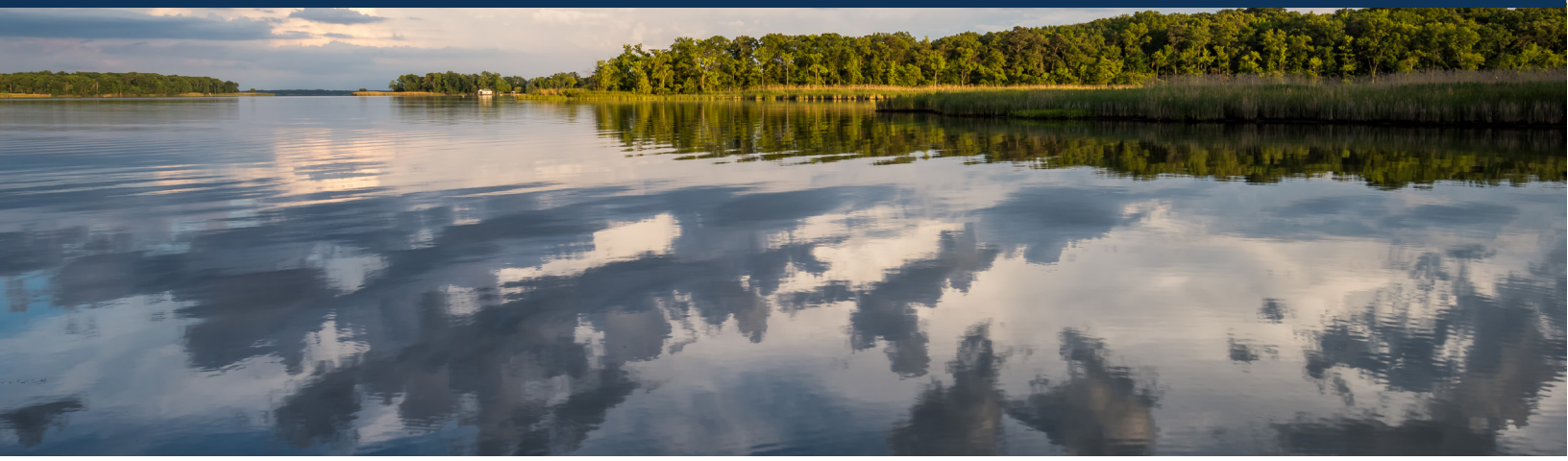
1,216 acres of riparian forest established

37,319 volunteers engaged

3,294 direct and indirect jobs supported

CHESAPEAKE AND ATLANTIC COASTAL BAYS TRUST FUND

FY21 BUDGET AT A GLANCE



Annual Expenditure Plan (FY19 - FY21)

Targeted Activity	Project Partner	FY19 Actual	FY20 Current	FY21 Request	+/- FY20 to FY21
Accountability, Verification and Management					
1. Strategic Monitoring & Assessment	Natural Resources	$400,000	$400,000	$400,000	$0
2. Restoration Research Grant Program	Competitive grants	$300,000	$300,000	$300,000	$0
3. Implementation Tracking	Information Technology	$200,000	$200,000	$200,000	$0
4. Administration & Management (1.5%)	Natural Resources	$793,970	$804,380	$858,344	$53,964
Accelerating Restoration through Research & Development					
5. Innovative Technology Fund	Natural Resources/ University of Maryland	$1,000,000	$1,000,000	$1,000,000	$0
6. Manure Management through Proven Technology	Agriculture	$1,600,000	$1,600,000	$0*	($1,600,000)
Implementation Technical Assistance					
7. Agricultural Technical Assistance	Agriculture	$3,290,000	$3,290,000	$4,890,000	$1,600,000
8. Water Management Permit Expediters	Environment	$750,000	$750,000	$750,000	$0
9. Field Restoration Specialists	Natural Resources	$750,000	$750,000	$750,000	$0
	Sub TOTAL	$9,083,970	$9,094,380	$9,148,344	$53,964
Non-point Source Pollution Control Projects					
10. Cover Crop Program	Agriculture	$11,250,000	$11,250,000	$11,250,000	$0
11. Conservation Reserve Enhancement Program Bonus Payments	Agriculture	$500,000	$500,000	$500,000	$0
12. Grants to Farmers	Agriculture	$2,000,000	$2,000,000	$3,010,000	$1,010,000
13. Manure Transport Program	Agriculture	$750,000	$750,000	$1,750,000	$1,000,000
14. Development of the Phosphorus Management Tool	Agriculture	$210,000	$210,000	$0*	($210,000)
15. Competitive Grant Program	Competitive grants	$23,137,363	$23,820,948	$25,502,587	$1,681,639
16. Natural Filters on Public Lands	Competitive grants	$6,000,000	$6,000,000	$6,000,000	$0
	Sub TOTAL	$43,847,363	$44,530,948	$48,012,587	$3,481,639
	GRAND TOTAL	**$52,931,333**	**$53,625,328**	**$57,160,931**	**$3,535,603**

*Please refer to project descriptions on the back of this budget. Manure Management through Proven Technology and the Development of the Phosphorus Management Tool will be maintained through Grants to Farmers and other non-point source pollution control line items to allow for greater integration with overall nutrient and sediment reduction efforts. These programs continue to be a state priority for meeting water quality goals.

CHESAPEAKE AND ATLANTIC COASTAL BAYS TRUST FUND

FY21 BUDGET DETAILS

Accountability, Verification and Management : $1,758,344

1. Strategic Monitoring & Assessment: Will provide $400,000 to develop and implement monitoring strategies, collect and analyze data for trends, provide biological monitoring in Trust Fund watersheds and comparison watersheds, and communicate the results of the restoration efforts.

2. Restoration Research Grant Program: Will provide $300,000 to competitively fund monitoring projects that will answer regulatory and restorative questions about best management practices for non-point source pollution in a robust, rigorous and representative manner.

3. Implementation Tracking: Will provide $200,000 to provide hosting, application, maintenance, and data support services for the Trust Fund dashboard, mapper and Maryland's integrated map services.

4. Administration & Management: Will provide 1.5% of the total operating allowance to provide fiscal oversight; manage grant programs including solicitation development, project review, contract and project development and management; coordinate with bay agencies, the Scientific Advisory Panel, Department of Budget and Management, Department of Legislative Services; and report to the Maryland General Assembly.

Accelerating Restoration through Research and Development: $1,000,000

5. Innovative Technology Fund: Will provide $1 million to the fund, established with the goal of accelerating Chesapeake Bay restoration through the development of new innovative technologies. It is made possible through funding from the Trust Fund, Environmental Protection Agency's Chesapeake Bay Implementation Grant, and in partnership with the University of Maryland's Industrial Partnership and Mtech Ventures Program.

6. Manure Management through Proven Technology: To be consistent with the intent of the Trust Fund, the manure management through proven technology budget will be included as part of the competitive grant program as projects are identified.

Implementation Technical Assistance: $6,390,000

7. Agricultural Technical Assistance: Will provide $4.89 million to support agricultural technical assistance positions in Soil Conservation Districts. In total, the Trust Fund now supports 78 (53 state and 25 local) Soil Conservation District positions needed to assist farmers in the implementation of agricultural best management practices as identified in the Watershed Implementation Plan.

8. Water Management Permit Expediters: Will provide $750,000 to expedite state review of qualifying stormwater and wetland restoration projects and to protect the quality of the ground and surface waters.

9. Field Restoration Specialists: Will provide $750,000 to increase the level of field specialists to assist state and local partners identify, engineer, design, and provide construction and construction oversight assistance of priority Chesapeake Bay restoration projects.

Non-point Source Pollution Control Projects: $48,012,587

10. Cover Crop Program: Will provide $11.25 million to Maryland's Cover Crop Program to supplement funds provided through Maryland's Chesapeake Bay Restoration Fund. Cover crops are critical to achieving the reduction of nutrients necessary to meeting the the Watershed Implementation Plan.

11. Conservation Reserve Enhancement Incentive: Will provide $500,000 to support the Conservation Reserve Enhancement Program. Trust Funds are used to provide the state $100 per acre signing incentive for new and re-enrolled acres on eligible best management practices including grass and forest stream-side buffers, wetlands and permanent stabilization of highly erodible land.

12. Grants to Farmers (Nutrient Management Regulations): Will provide $3.01 million to help farmers offset the cost of installing best management practices on their farms: to protect natural resources and comply with federal, state and local environmental requirements; address challenges in managing manure under Maryland's nutrient management requirements (Phosphorus Management Tool); and the establishment of drainage and buffer pilot projects.

13. Manure Transport Program: Will provide $1.75 million to transport manure away from farms with high soil phosphorus levels to other farms or locations that can use the manure agronomically. Dollars will leverage funds already provided by poultry integrators and state general funds traditionally used to support manure transport.

14. Development of the Phosphorus Management Tool: This effort has moved into the implementation phase and will be included as part of the grants to farmers and manure transport program.

15. Competitive Grant Program: Will provide $25,502,587 to support targeted, sustainable and cost-effective approaches that dramatically reduce nutrient and sediment pollution to the Chesapeake Bay, Coastal Bays and local waterways.

16. Natural Filters on Public Lands: Will provide $6 million for the implementation of nutrient and sediment reduction projects on public lands. Projects include forested buffers, reforestation, wetland restoration, stream and floodplain restoration, stormwater retrofits and other bioremediation projects.

CHESAPEAKE AND ATLANTIC COASTAL BAYS TRUST FUND

Supporting Local Restoration Efforts and Economies (FY19 Project List)

Anne Arundel County

Watershed Stewards Academy: $205,030 for Berrywood stream restoration, stormwater management and living shoreline (District 33)

Anne Arundel County: $1,721,300 for 3,700 linear feet (LF) of stream and 5.6 acres of wetland restoration at Furnace Creek (District 31A)

Anne Arundel County: $502,300 for 1,100 linear feet (LF) of stream restoration at Cat Branch (District 33)

Arundel Rivers Federation: $1,806,954 for 3,432 linear feet (LF) of stream restoration at Flat Creek/King Branch (District 33)

Baltimore County

Baltimore County DEPS: $586,000 for 1,671 linear feet (LF) of stream restoration at Scott's Level Branch (District 10)

Baltimore Soil Conservation District: $1,408,863 for 4,580 linear feet (LF) of stream restoration and 2.4 acres of wetland at Long Green Creek and Western Run (Districts 7 and 42B)

Baltimore Soil Conservation District: $314,942 for to design and permit an innovative zero order channel stream restoration using a beaver analog technique at Little Gunpowder (District 7)

Park School: $975,206 for 2,700 linear feet (LF) of stream restoration at Moore's Branch (District 11)

Baltimore Tree Trust: $299,737 to plant 850 trees, cut 214 tree wells and remove 3,424 square feet (SF) of impervious surface (Districts 12 and 42A)

Baltimore City

Baltimore Tree Trust: $700,263 to plant 2,960 trees, cut 616 tree wells and remove 9,856 square feet (SF) of impervious surface (Districts 40, 44A, 45 and 46)

Carroll County

Carroll County: $1,900,000 for Willow Pond stormwater management retrofit including 1,700 linear feet (LF) of stream reconnection (District 5)

Carroll Soil Conservation District: $2,566,205 for 5,410 linear feet (LF) of stream and nearly 2 acres of wetland restoration at Sam's Creek and Dickenson Run (District 5)

Cecil County

ShoreRivers: $2,200,000 for 12.1 acres of agricultural wetland and stormwater management at Harborview Cecilton and Jones Farms (District 36)

Cecil County: $405,236 for stormwater management facilities at three public schools (Districts 35A, 35B and 36)

Cecil Land Trust: $1,785,000 for 4,200 linear feet (LF) of stream restoration and 19.6 acres of riparian bufferin the Principio watershed (District 35A)

Frederick County

Catoctin Soil Conseervation District: $48,700 for storm damage repair at Savage stream restoration project (District 4)

Frederick County: $1,109,845 for stormwater management facilities and over 200 acres of tree planting (Districts 3A and 3B)

Harford County

Harford County: $350,000 for 3,600 linear feet (LF) of stream restoration at Annie's Playground (District 7)

Harford Soil Conservation District: $187,232 to restore 22 acres of riparian buffer at Island Branch (District 1)

GreenTrust Alliance: $879,948 to breach a hazard dam at Martin's Pond and restore 2.9 acres of wetland and 1,610 linear feet (LF) of stream (District 7)

Town of Bel Air: $650,000 for 1,935 linear feet (LF) of stream restoraion and wetland creation at Plumtree Run (District 34B)

City of Havre de Grace: $275,000 for a regenerative stomrwater onveyance and dry channel conveyance at Concord Point (District 34A)

Howard County

Howard County: $1,825,000 for 5,576 linear feet (LF) of stream restoration and 12 acres of riparian buffer (District 9A)

Howard County: $2,300,000 for stream restoration and floodplain reconnection at Font Hill and Little Patuxent (District 9A & 9B)

Kent County

Washington College: $155,653 for 45 acres of tree and shrub planting and 2 acres of native grass buffer at Sassafras Natural Resource Management Area (District 36)

Montgomery County

Montgomery County: $1,000,000 for a shallow marsh wetland at Kemp Mill and a pond retrofit at Greencastle Lakes (District 19 & 14)

Audubon Naturalist Society: $598,900 for 1,500 linear feet (LF) of stream restoration at Clean DrinkningStream (District 18)

Prince George's County

Low Impact Development Center: $350,000 for Glenn Estates pond retrofit (District 22)

Queen Anne's County

Washinton College: $536,318 for 38 acres of wetland restoration, 125 acres of grass meadow and 37 acres of tree planting at Conquest Beach Preserve (District 36)

Talbot County

ShoreRivers: $2,200,000 for 720 linear feet (LF) of stream restoration and 1200 linear feet (LF) of agricultural ditch enhancement at Sears and Tighman Farms (District 37B)

Chesapeake Wildlife Heritage: $50,619 for 7 acres of shallow emergent wetland restoration (District 37B)

Delmarva Resource Conservation and Development Council: $229,089 for 4.2 acres of emergent wetland and 2.5 acres of buffer (District 37B)

Worcester County

Maryland Coastal Bays Program: $64,342 for assessment of northern Coastal Bays to identify priority best management practices (District 38C)

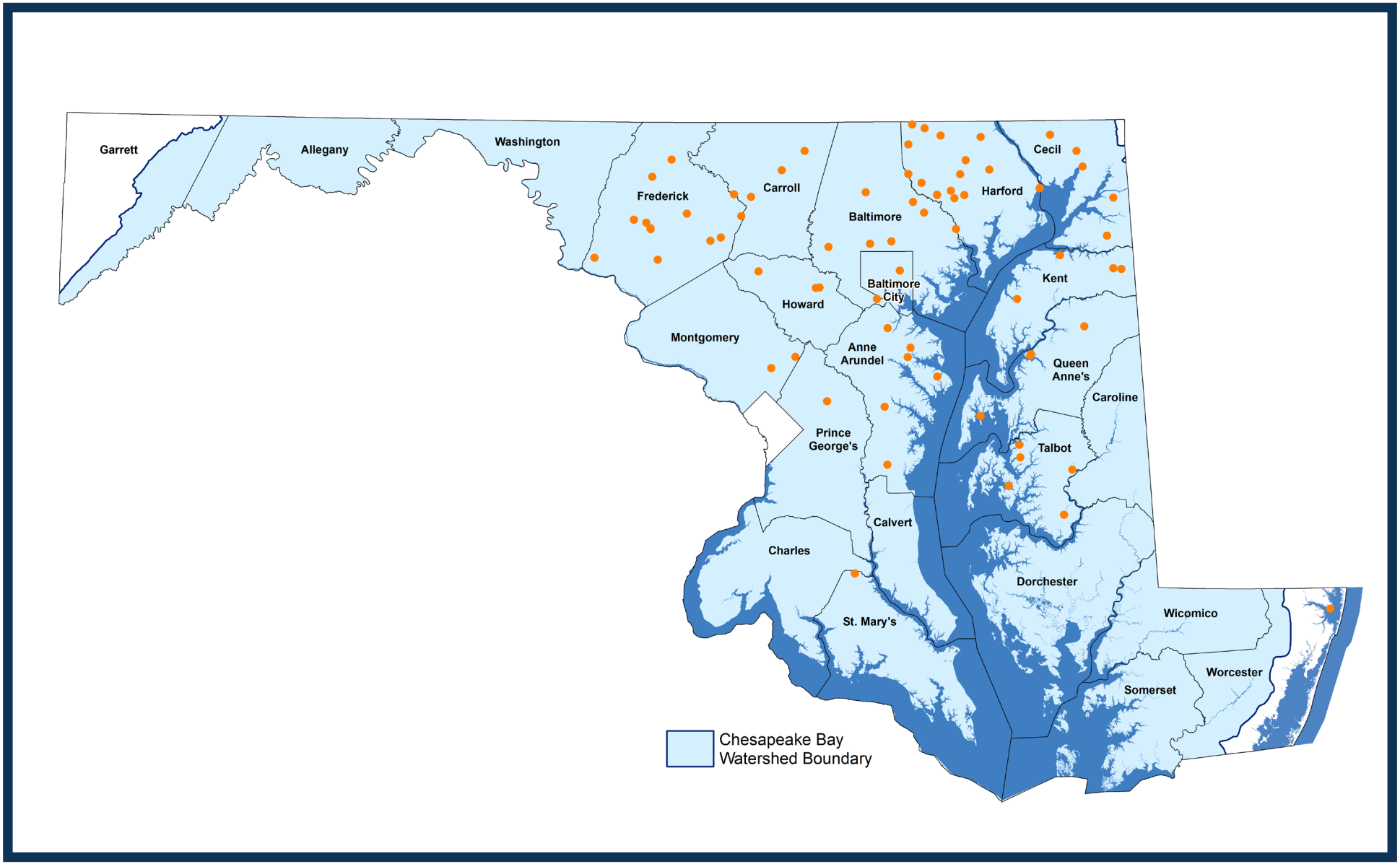
Multiple

Oyster Recovery Partnership: $500,000 for production and planting spat-on-shell for the Maryland Seafood Cooperative leased bottom (multiple districts)

Maryland Forestry Foundation: $524,000 for reforesting 101 acres of private land in eight counties (multiple districts)

CHESAPEAKE AND ATLANTIC COASTAL BAYS TRUST FUND

Supporting Local Restoration Efforts and Economies (FY19 Project Sites)



CHESAPEAKE AND ATLANTIC COASTAL BAYS TRUST FUND

FY20 ANNUAL REPORT

Focused Funding | Measurable Results

In partnership with the Chesapeake Bay Trust, Maryland Department of Transportation, Montgomery County Department of Environmental Protection, and the National Fish and Wildlife Foundation, the Restoration Research Grant Program was created to answer several key restoration questions that are barriers to bay restoration. Research results assist in the regulatory review process and guide future restoration efforts by improving confidence in proposed restoration projects and techniques.

Restoration Research Question: Effectiveness of Stream Restoration

Project Title: Evaluating the Effectiveness and Sustainability of Novel Stream Restoration Designs for Coastal Plain Streams in Maryland

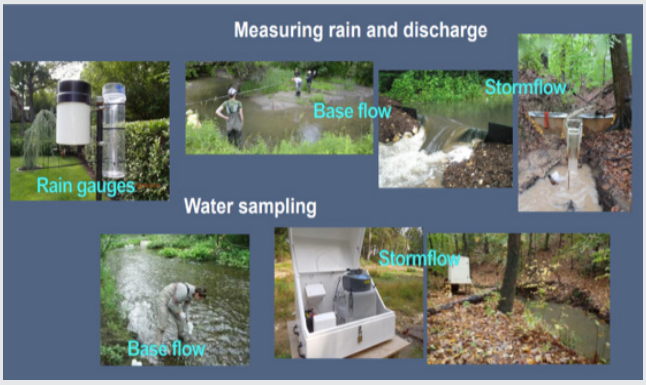
Primary Investigator: Dr. Solange Filoso, University of Maryland Center for Environmental Science.

Research Question: Effectiveness of stream restoration practices accomplishing water quality goals, differences among stream restoration techniques.

Experimental Design: Collect hydrological monitoring data for stream restorations in Maryland and Washington D.C., combined with comparable existing local data to characterize the response of these systems to restorations.

Preliminary Results: Pollutant loads generally decrease following restoration, with some variability in pollutant reduction explained by watershed size, imperviousness, and restoration location within the watershed.

Preliminary Management Implications: Factors including location within the watershed, imperviousness, among others, may effect pollutant reductions.



To learn more about the Trust Fund and to track projects funded in your region, please visit:

dnr.maryland.gov

Gabe Cohee I Maryland's Chesapeake and Coastal Service
Maryland Department of Natural Resources I Tawes State Office Building, E-2
580 Taylor Avenue I Annapolis, Maryland 21401
410-260-8753 I gabe.cohee@maryland.gov

The allocation and implementation of the Trust Fund is a collaborative effort between the following partners: Maryland's Bay Cabinet Agencies, the Scientific Advisory Panel, and the General Assembly. The program is administered by the Maryland Department of Natural Resources.

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