



Maryland
Department of
the Environment

Understanding and Utilizing MD Clean Water Commerce Act for Conservation Outcomes

2022 Maryland Land Conservation Conference

June 2, 2022

MWIFA Funding Programs

- Water Quality Revolving Loan Fund
- Drinking Water Revolving Loan Fund
- Bay Restoration Fund – Wastewater Program and Septic System Upgrade Program
- **Clean Water Commerce Program**
- Water Supply Grant Program
- Comprehensive Flood Management Grant Program
- Sewer Overflow Grant Program (OSG)



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Maryland Clean Water Commerce Program – Pilot Years

- Initial pilot program was authorized by CH366/367 of 2017
- Pilot funded through FY21
- Authorized the purchase of cost-effective Nitrogen, Phosphorous, and Sediment load reductions
 - \$4M in FY18
 - \$6M in FY19
 - \$10M in FY20
 - \$10M in FY21
- Load reductions couldn't be from the agricultural sector
- April 2018 MDE adopted the required regulations with the input of a stakeholder group
- FY18 funding was not utilized due to timing of legislation passage and need to develop regulations



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FY19 Applications Received / Projects Selected

FY19 Proposals Received:

Applicant	Nitrogen (\$/Lb/yr)	Phosphorus (\$/Lb/yr)	Sediment (\$/Ton/yr)	Evaluation Results
HGS, LLC (a RES company)	\$105.12	\$144.34	\$552.80	Selected
OptiRTC, Inc.	\$265.00	\$1,535.00	\$1,995.00	Not Selected

- 2 proposals received; both non-point source
- Selected the HGS, LLC project.
- Up to \$4,409,300 in grant funding for HGS, LLC to restore 6,236 linear feet of degraded stream channel.
- HGS is providing 20 years of monitoring and maintenance activities and all restoration areas are projected in perpetuity by deed restrictions
- MDE provides annual payments for the purchase of verified annual reductions of nitrogen, phosphorous, and sediment based on the agreed upon unit prices.

Reduction Type	Estimated Units/Year		Delivery Factor	Unit/Year Delivered	Price per Unit/Year	Total Price/Year
Nitrogen	1,626.00	Lbs/yr	0.43	699.18	\$105.12	\$73,497.80
Phosphorus	749.00	Lbs/yr	0.68	509.32	\$144.34	\$73,515.25
Sediment	129.00	Tons/yr	1.03	132.87	\$552.80	\$73,450.54

Total Annual Price	\$220,463.59
Practice Useful Life (years)	20
Total Over 20 Years	\$4,409,271.73



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FY20 Applications Received / Projects Selected

Applicant	Nitrogen (\$/Lb/yr)	Phosphorus (\$/Lb/yr)	Sediment (\$/Ton/yr)	Evaluation Results
Broadneck WRF	\$75.00	\$100.00	\$300.00	Selected
Annapolis WRF	\$75.00	\$100.00	\$300.00	Selected
Little Patuxent WRF	\$79.00	\$99.00		Selected
HGS, LLC (a RES company)	\$105.12	\$144.34	\$552.80	Not Selected
Blue Oyster Environmental	\$750.00	\$8,000		Not Selected

- 5 proposals received; 3 WWTPs and 2 non-point source
- Selected Broadneck, Annapolis, and Little Patuxent WRFs
- *Little Patuxent WRF* -- up to \$1,818,450 in grant funding for Howard County to implement advanced online instrumentation coupled with automated control and active management, along with expanded treatment regime to achieve treatment level and performance exceeding Enhanced Nutrient Removal (ENR) to provide additional nitrogen and phosphorus reductions.
- MDE provides annual payments for the purchase of verified annual reductions of nitrogen and phosphorus beyond ENR based on the agreed upon unit prices

Reduction Type	Estimated Units/Year		Delivery Factor	Unit/Year Delivered	Price per Unit/Year	Total Price/Year
Nitrogen	589	Lbs/yr	0.80	471	\$75.00	\$35,325.00
Phosphorus	2,000	Lbs/yr	0.74	1,480	\$99.00	\$146,520.00

Total Annual Price \$181,845.00
 Practice Useful Life (years) 10
 Total Over 20 Years \$1,818,450.00



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FY20 Applications Received / Projects Selected

(continued)

- *Broadneck and Annapolis Little Patuxent WRF* -- up to \$8,181,550 in grants for Anne Arundel County Department to develop and implement an advanced online instrumentation coupled with automated control and active management, along with expanded treatment regime to achieve treatment level and performance exceeding the ENR in order to provide additional nitrogen, phosphorus and sediment reductions.
- MDE provides annual payments for the purchase of verified annual reductions of nitrogen, phosphorus and sediment beyond ENR based on the agreed upon unit prices.

Reduction Type	Estimated Units/Year		Delivery Factor	Unit/Year Delivered	Price per Unit/Year	Total Price/Year
Nitrogen	20,626	Lbs/yr	1.00	20,626	\$75	\$1,546,950
Phosphorus	3,840	Lbs/yr	1.00	3,840	\$99	\$380,160
Sediment	285	Tons/yr	1.00	285	\$300	\$85,500

Total Annual Price \$2,012,610
 Practice Useful Life (years) 5
 Total Over 20 Years \$10,063,050
 (Only \$8,181,550 are available)



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FY21 Applications / Projects

Applicant	Nitrogen (\$/Lb/yr)	Phosphorus (\$/Lb/yr)	Sediment (\$/Ton/yr)	Evaluation Results
Patuxent	\$ 50.00	\$ 75.00	\$ 250.00	Selected
Cox Creek	\$ 50.00	\$ 75.00	\$ 250.00	Selected
Damascus	\$ 72.50	\$ 95.00	\$ -	Not Selected
Western Branch	\$ 75.00	\$ 99.00	\$ -	Not Selected
Seneca	\$ 72.50	\$ 95.00	\$ -	Not Selected
Parkway	\$ 72.50	\$ 95.00	\$ -	Not Selected
Piscataway	\$ 75.00	\$ 99.00	\$ -	Not Selected
North East River	\$ 72.00	\$ 94.00	\$ 250.00	Not Selected
Rockville Rest	\$ 63.50	\$ 84.10	\$ 254.70	Not Selected
Pea Hill Branch	\$ 69.00	\$ 89.00	\$ 289.00	Not Selected
Irvine Old Pond	\$ 95.95	\$ 590.77	\$ 4,022.83	Not Selected
Oyster Aquaculture	\$ 150.00	\$ 1,500.00	\$ -	Not Selected
Cheston Point	\$ 285.86	\$ 765.73	\$ 761.90	Not Selected
Winters Run	\$ 55.20	\$ -	\$ 40.00	Selected

- Received 14 proposals; 8 from WWTPs and 6 from non-point
- Selected Patuxent and Cox Creek WRFs, and Winters Run Stream Restoration



FY21 Applications / Projects (continued)

- Patuxent and Cox Creek WRFs - Anne Arundel County will develop and implement advanced automated control and active management mechanisms. The two facilities will also have expanded treatment regime to achieve treatment level and performance exceeding the ENR and provide additional nitrogen and phosphorus reductions
- MDE provides annual payments for the purchase of verified annual reductions of nitrogen and phosphorus beyond ENR based on the agreed upon unit prices.

Reduction Type	Estimated Units/Year		Delivery Factor	Unit/Year Delivered	Price per Unit/Year	Total Price/Year
Nitrogen	27,500	Lbs/yr	0.80-1.00	26,000	\$50	\$1,300,000
Phosphorus	850	Lbs/yr	0.75-1.00	759	\$75	\$56,925

Total Annual Price \$1,356,925

Practice Useful Life (years) 7

Total Over 20 Years \$9,498,475

HGS, LLC (Winters Run Stream Restoration) funding of an additional \$501,525 to purchase additional nitrogen and sediment reductions, thereby increasing the state grant funds from \$4,409,300 to \$4,910,825.

Reduction Type	Estimated Units/Year		Delivery Factor	Unit/Year Delivered	Price per Unit/Year	Total Price/Year
Nitrogen	1,407.00	Lbs/yr	0.43	605.0	\$50.00	\$30,250.00
Sediment	873.80	Tons/yr	1.03	900.0	\$40.00	\$36,000.00

Total Annual Price \$66,250

Practice Useful Life (years) 20

Total Available Grants \$501,525



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Clean Water Commerce Act 2.0

- CH694/695 of 2021 (Clean Water Commerce Act of 2021) reauthorized and modified through June 30, 2030.
- Provides \$20M a year in grant funding for the program (source of funds is Bay Restoration Fund wastewater funding)
- Funds must be used to purchase “environmental outcomes” (nitrogen reductions) to help the State achieve the Chesapeake Bay TMDL
- The bill establishes requirements for the provision and verification of environmental outcomes
- Environmental Outcome - *Minimum of 10 year; Maximum of 20 year*
- Carve outs – “at least”
 - 35% (\$7M) for agricultural practices, with priority for fixed natural filters and ditch management
 - 20% (\$4M) for projects in Environmental Justice Communities, including stormwater management and green infrastructure projects
 - *10% (\$2M) for nonagricultural landscape restoration projects*



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Carve-Out for Nonagricultural Landscape Restoration Projects

- At least 10% (\$2M) of the funding annually must be used to procure environmental outcomes from nonagricultural landscape restoration projects that take into consideration the project’s ecological suitability, including the hydrological conditions and other physical characteristics of the location at which the project will be implemented.
- “Nonagricultural landscape restoration project” means a project that:
 - Is installed on nonagricultural lands;
 - Has an intended lifespan of at least 10 years; and
 - Provides environmental outcomes.
- “Nonagricultural landscape restoration project” includes a project that returns land to native or natural land cover, such as afforestation or reforestation projects.



CWCA 2.0 Process / Status

- MDE is required to:
 - (1) Use a competitive process to invite funding proposals
 - (2) Develop and use a scoring system to evaluate a submitted funding proposal;
 - (3) Provide each person that submits a funding proposal with a copy of the scoring system; and
 - (4) At least once a year, publicly announce an RFP
- When evaluating funding proposals, MDE is required to prioritize the following factors in the following order:
 - The dollar cost per unit of environmental outcome;
 - The provision of expected co-benefits related to:
 - Enhancing the mitigation of and resiliency to the anticipated adverse effects of climate changes;
 - Alleviating the environmental harms and risks borne by communities disproportionately burdened by environmental harms and risks;
 - Contributing toward the attainment of water quality standards in a locally impaired watershed; or
 - Reductions in phosphorous or sediment loads that are directly measured or modeled by the Chesapeake Bay Program models and can be counted toward the MD's pollution load reductions required under the Chesapeake Bay TMDL.
- We are currently finalizing the program design, application, and scoring system and plan to release the RFP documents later this month for the first round of funding.



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