

2019 ANNUAL PROGRESS REPORT



CHANGING MARYLAND'S
ENVIRONMENT FOR THE BETTER



Swallow Falls State Park in Garrett County

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LEADING *the* CHANGE

For four years now, our state has been leading the change when it comes to real, bipartisan, common sense solutions, and we are proud to be setting an example for the nation and the world with strong environmental leadership. Our administration remains fully committed to meaningful and innovative policies and programs that protect and enhance our environment in ways that also promote job growth and economic opportunity.

Through our administration's funding priorities, we continue to demonstrate unprecedented support for initiatives that protect our air, lands, and waters, and prepare our state for a successful environmental future.

This year's budget includes \$117.1 million in Bay Restoration Funding (BRF) that supports grants to upgrade major municipal sewage treatment plants, cover crops, and for other nutrient reduction programs such as sewer hookups for failing septic systems - all in support of a cleaner Chesapeake Bay. Included in that funding is \$10 million for the Bay Restoration Fund - a \$4 million addition over FY19's \$6 million appropriation - authorized by the Clean Water Commerce Act to purchase cost-effective nitrogen, phosphorus, or sediment load reductions.

In addition, the Chesapeake and Atlantic Coastal Bays Trust Fund received \$53.6 million - the fourth year in a row that the Hogan administration has fully funded bay restoration efforts. Our budget doubled the tax credit for zero-emissions vehicles, which will assist in reducing greenhouse gas emissions that contribute to climate change and nitrogen pollution in the Bay.

Our administration also continues to emphasize climate resiliency and preparedness, such as Coast Smart and Climate Resiliency programs and new funding for the Flood Hazard Mitigation Fund, which will fund capital projects that assist with comprehensive flood management techniques in the aftermath of Maryland's wettest year on record in 2018.

While we have made incredible strides over the past four years, there is still more work to do to ensure Maryland is the very best place to live, work, and play. At the Maryland Environmental Service (MES), this means a commitment to finding innovative solutions to our region's most complex environmental challenges that preserve our natural resources and promote stewardship. I encourage you to learn more about how MES is keeping this promise in their annual report.

Together, we will continue Changing Maryland for the Better.

Larry Hogan
Governor



STRONGER *than* EVER

2019 has been yet another year filled with remarkable growth and extraordinary achievements for the not-for-profit Maryland Environmental Service (MES), including the highest sales in our organization's history. Guided by the leadership of Governor Larry Hogan, and with the partnership of his Administration and the Maryland General Assembly, MES has maintained its focus on our mission of providing operational and technical services to protect and enhance the environment for the benefit of the people of Maryland.

We are proud to be leading a dynamic organization that is stronger than ever. For the fourth year in a row, MES closed out the fiscal year with exceptional operating results. In FY19, our revenue - \$161 million - approached the largest in our history. Today, MES is also the largest organization we have ever been - over 850 teammates strong - and still growing, both in terms of the services we provide and the opportunities for professional growth that we offer to our teammates.

Through good financial management, building on work with existing partners, and actively developing new ones, MES continues growing and performing exceptionally well. When the books closed on FY19, MES' operating revenue rose by \$5.8 million (3%) and we forecast to break that record yet again in FY20. The excellent customer service and care provided by MES' team again allowed our organization to meet all of our BEST (Building Excellence and Success Together) goals.

Across the State this year, MES has continued or initiated projects that reflect our residents' commitment to environmental enhancement and innovation. Projects like the highly-successful restoration of Poplar Island, operating the largest food waste composting facility on the East Coast, providing critical water and wastewater services, offering state-of-the-art GIS mapping, drone, and GPR services that can support infrastructure needs and flood plain mapping, and recycling services that preserve natural resources and extend the operating lifetime of landfills. The depth and breadth of the projects MES undertakes would not be possible without the outstanding dedication of our teammates to delivering the best services and products possible for our business partners.

Our organization is particularly proud of the elevated outreach we've done throughout the year, raising awareness of MES as a leading environmental services resource. This included the sold-out *Environmental Business Leadership Conference (EBLC)* we again hosted, attracting nearly 300 attendees, some from across the country and globe, and over 50 industry expert speakers and panelists from the public and private sectors.

As we embark on the 50th anniversary of MES in 2020, opportunities abound for our organization - and our teammates - to continue to grow in serving our partners. As that growth occurs, MES' reputation, too, grows throughout the Mid-Atlantic region as a premier provider and operator of environmental services.

Roy McGrath
CEO & Chairman

BOARD of DIRECTORS



Roy McGrath, IOM, CAE
CEO & Chairman



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Deputy Director



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Board Member



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Board Member



Students at an MES educational outreach program



MES AT A GLANCE WHO ARE WE?

Established in 1970, MES operates approximately 1,000 environmental projects and services across the Mid-Atlantic Region, and employs over 800 teammates.

- Not-for-profit public corporation and independent state agency
- \$161 million in FY19 revenue
- Highest labor sales in 50-year history
- 25th largest business in the Baltimore Metro Area by revenue
- Record-setting growth over the past three years; net assets up over 116%
- Operations in eight Mid-Atlantic area states
- Headquartered in Millersville, Maryland

Our Mission

Our Mission is to provide operational and technical services to protect and enhance the environment for the benefit of the people of Maryland.

Our Vision

MES is an innovative and leading-edge solver of environmental problems; a responsible and successful manager of environmental operations; and a great place to work.

STRONG PARTNERSHIPS

MES continues its strong partnership with the MDOT Maryland Port Administration (MPA) providing operations and maintenance, environmental, and engineering services at Masonville, Cox Creek, and Hart-Miller Island Dredged Material Containment Facilities and the Paul S. Sarbanes Ecosystem Restoration Project at Poplar Island, and hazardous materials and environmental management services at the Hawkins Point Hazardous Waste Facility and Dundalk Marine Terminal. MES continues to support MDOT MPA with important expansion projects at Masonville, Cox Creek and Poplar Island. During FY19, MES also executed a \$3.165 million agreement with MDOT MPA for the Mid-Bay Island Ecosystem Restoration Project design.

ENVIRONMENTAL DREDGING & RESTORATION

MES' commitment to finding innovative reuses of dredged material allows for the material to be used in new and beneficial ways and helps our partner, MDOT MPA, promote the long-term viability of the Port of Baltimore by recycling at least 500,000 cubic yards of material annually. As of January 2019, MES assisted MDOT MPA in successfully reclaiming 10,500 CY of dredged material from the Cox Creek DMCF and moving the material off-site for use in small volume demonstration projects at Hawkins Point, where 4,500 CY is being used as engineered fill, and at Quarantine Road Sanitary Landfill, where 6,000 CY is being used as alternative daily cover in partnership with the City of Baltimore. MES is also assisting MDOT MPA with implementation of the Design with Dredge pilot project at the Hart-Miller Island North Cell. This project will create 23 acres of habitat, engage and educate the public, and minimize costs to MDOT MPA through the construction process.

MASONVILLE

MES is currently raising the dikes at the Masonville DMCF to expand the dredged material storage capacity of the facility for MDOT MPA. MES and subcontractors are working to increase the height of the dikes by 8 feet from their previous elevation. The design and permitting process for the next phase of the dike raising is also underway to stay ahead of MDOT MPA inflow and capacity requirements.

COX CREEK

MES continued to successfully manage the ongoing group of projects making up the expansion of the Cox Creek Dredged Material Containment Facility (DMCF). These projects include the construction of a new Operations and Maintenance building, demolition of the existing Kennecott Copper Refinery campus, construction of widened dikes for future dike raising (partially using material excavated from onsite to further increase capacity of the facility), design of a new security camera system for the expanded facility, and design and permitting for the next phase of dike raising. The expansion of the facility will help to provide the storage capacity needed for MDOT MPA to meet the needs of their 20-year capacity plan.

CONOWINGO RFP

On February 25, 2019 Maryland Environmental Service issued a notice of intent to award a contract for a demonstration project in the Conowingo reservoir. The notice of intent was issued as a result of the Conowingo Sediment Characterization and Innovative Reuse and Beneficial Use Pilot Project Request for Proposals (RFP) that was issued in July of 2018 by MES at the direction of Governor Hogan and on behalf of the Chesapeake Bay Cabinet. The project includes a sediment characterization study, a pilot removal/dredging project of up to 1,000 cubic yards of sediment from the Susquehanna River upstream of the Conowingo Dam with innovative reuse/beneficial use of the material, or a combination of both. The project will allow the State to assess potential solutions for reducing the nitrogen, phosphorus, and sediment inputs to the Chesapeake Bay from the accumulated sediments within the Maryland portion of the Susquehanna River upstream of the Conowingo Dam.



TERP PROGRAM

The Terrapin Education and Research on Poplar Program (TERP) celebrated its 10th year. MES created the TERP Program in a partnership with the MDOT MPA and Arlington Echo, which is the Anne Arundel County Public School's Outdoor Education Center. To date, 2,650 terrapins have been "head started" by Maryland students, and more than 700 classes from schools around the state have released head-start turtles.

This year, a four-year-old head start terrapin was found nesting on Lowe's Wharf (near Poplar Island) by the Ohio University research team. This is particularly notable since terrapins generally do not reach maturity or lay eggs until they are 6-8 years old. A head-start terrapin raised at MES during the 2016-17 school year was recaptured on Poplar Island this year.



EDUCATION & OUTREACH

MES' Outreach Team provides community engagement support to clients through participation in community festivals and events, meetings, project site tours, and onsite and in-classroom environmental education. On behalf of MDOT MPA, the EDR Education/Outreach staff reached over 10,000 people throughout the state providing education on the Port of Baltimore, tours of dredged material containment facilities, visiting school classrooms, providing exhibits and presentations, and offering tours of Poplar Island.

POPLAR ISLAND

Expansion of the Paul S. Sarbanes Ecosystem Restoration Project at Poplar Island continued in 2019. MES staff provided support to MDOT MPA and the U.S. Army Corps of Engineers to ensure construction continued effectively throughout the year. MES coordinated with MDE to modify the expansion's Tidal Wetlands License, incorporating a dike alignment and several large rock reefs, which will provide vital fisheries habitat. MES worked to ensure construction continued throughout the year in accordance with the site's many time of year restrictions relating to protecting wildlife, oyster bars, and submerged aquatic vegetation beds. Of particular concern is the site's protected nesting bird species, including the state-endangered common tern and state-threatened least tern, who prefer sandy nesting substrates like that found within the site's stockpiles of construction sand.



ARLINGTON ECHO

MES completed a living shoreline restoration project located at the Arlington Echo Outdoor Education Center. The project was the result of a partnership between MES, Anne Arundel County Public Schools, and MDOT MPA. A cost-sharing agreement was established between the clients in exchange for mitigation credits for MDOT MPA, and MES staff successfully constructed the new 360-foot long shoreline to enhance the existing waterway.

Dredging can keep shipping channels and lakes open for their intended purposes.

LAKE LINGANORE DREDGING

On behalf of Frederick County in conjunction with the City of Frederick and the Lake Linganore Association, MES successfully completed the planning and permitting of the Lake Linganore Dredging Project. MES procured a dredging contractor for the removal of 100,000 cubic yards of dredged material from Lake Linganore and reuse of that material as landfill cover.



“MDOT MPA and MES continue a long-standing relationship of working together on dredged material management solutions, engineering designs, environmental restoration projects, as well as educational tours and lesson plans. MES consistently provides excellent customer service, strong technical expertise and a positive and proactive approach toward accomplishing any task, large or small. The MES team is truly an extension of the MPA Harbor Development family and much of our success is rooted in the hard work and day-in and day-out dedication of MES staff.”

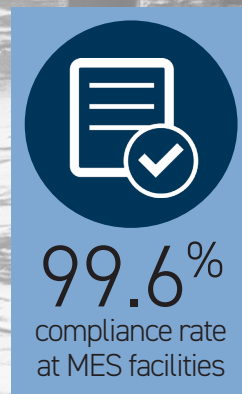
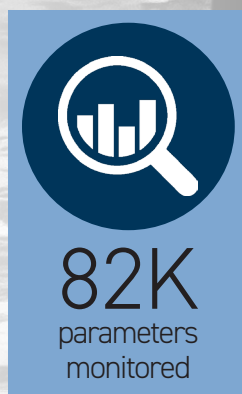
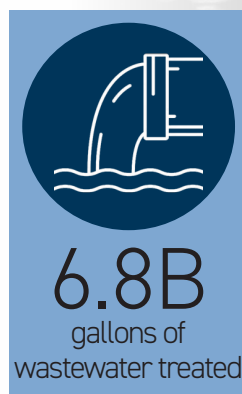
- Kristen Fidler, Director, Harbor Development MDOT MPA

ENVIRONMENTAL SERVICES

The MES Environmental Services group supports our partners by providing technical and operational services for water and wastewater, environmental monitoring, and dredging and restoration programs. Our project teams are involved in the full project life cycle from planning, to permitting, inspection and monitoring, reporting, through to operating and maintaining.

NATIONAL IMPACT

MES' Watershed Resources Registry (WRR) continues to gain traction in other states throughout the region and beyond. It began as a national pilot project in Maryland to integrate land-use planning, regulatory, and non-regulatory decision making using the watershed approach. The strategy that the Environmental Protection Agency (EPA) and MES have developed is now being rolled out to states in the Chesapeake Bay watershed and beyond, most notably, New Jersey, New York, and South Carolina. EPA Region III has also requested additional funding from the Chesapeake Bay Program to develop Stream Restoration and Stream Preservation models in all EPA Region III states, rounding out the suite of WRR models to 10 per state. This is in addition to the ongoing work for Maryland, Pennsylvania, Delaware, West Virginia, and Virginia.



BWI AIRCRAFT DEICING FLUID RECYCLING PROGRAM

MES collected over 2.8 million gallons of waste deicing fluid at BWI Marshall Airport during the 2018 and 2019 deicing season, keeping the fluid from reaching the environment. In addition, 115,000 gallons of high concentration fluid was collected and recycled.

GARRETT COUNTY

In FY 2019, MES reached a historic agreement with officials in Garrett County to operate all 27 of the county's water and wastewater treatment facilities.

This first-of-its-kind partnership will provide reduced costs, enhance compliance efficiency, and increase performance. The agreement reflects MES' extensive experience and operations knowledge with similar facilities and systems throughout the state.

\$100,000
Garrett County projected
first-year savings



Testing water quality

WATER/WASTEWATER ENGINEERING

MES also awarded two significant construction projects during FY 2019, the Eastern Pre-Release Unit (EPRU) WWTP Upgrade and the Eastern Correctional Institution (ECI) WWTP Upgrade. The EPRU project will upgrade a facility that was originally constructed in 1964 to using the new Membrane Bioreactor treatment. The ECI project is being delivered through an innovative Construction Manager-at-Risk delivery method and will also result in a significant upgrade to the existing treatment technology.

WORKING TOGETHER WITH THE MARYLAND DEPARTMENT OF TRANSPORTATION

MES is supporting MDOT's efforts to retrofit privately-owned, existing, stormwater management facilities with Continuous Monitoring and Adaptive Control (CMAC) technology. Through a new agreement with TNC/Opti Development Partners, a joint venture between the Nature Conservancy and Opti/RTC, Inc., will allow MDOT to purchase 100 certified impervious area treatment (IAT) credits at a maximum rate of \$37,500 per acre of IAT. A significant portion of the IAT credits will come from projects conducted on Walmart facilities throughout the State of Maryland. The rate is inclusive of long-term operations and maintenance of certified credits (and associated technology) for a period of 20 years from the date of purchase. In addition, MES will provide completion certification for all CMAC retrofitted ponds. MES will also coordinate in a direct capacity to explore the possibility of establishing a connection between data collected from CMAC systems with the Watershed Resources Registry, an on-line interactive mapping tool that highlights areas for preservation and restoration, to illustrate real-time performance of CMAC technology.

MES also continued to expand TMDL support services to the Maryland Department of Transportation-State Highway Administration. A new memorandum of understanding was signed with District 3. The focus of the work effort was inlet inspections and cleanings. MES inspected over 1000 inlets and cleaned more than 460 culverts which will be used for TMDL credits.

The Maryland Transportation Authority (MDTA) recently provided MES a notice to proceed on outfall rehabilitation services, including inspection, survey, geotechnical investigation, design, permitting, and bid assistance for outfalls along I-95 and I-895. MES anticipates that 30 outfalls will be inspected and over a dozen will be selected to proceed to final design and permitting. In addition, MES is working on three new projects for pipe inspections, major stormwater repairs along I-895, and drainage repairs at 5 different sites along I-895.



MES operates Material Recycling facilities in
Montgomery and Prince George's counties

ENVIRONMENTAL OPERATIONS

The MES Environmental Operations Group serves counties, large municipalities, and rural communities who need creative solutions for solid waste challenges and recycling services. Whether a landfill on the Eastern Shore that provides essential services to thousands of Maryland citizens, an electric generation facility that supplies steam and electricity to a State prison, recycling services in various regions of the state, or operation of the largest food waste composting facility on the East Coast, we strive to satisfy our partners with cost-effective and environmentally-responsible solutions.

GOING THE EXTRA MILE

MES operates the Montgomery County Material Recovery Facility (MRF), and works closely with our local partners to help the county reduce its overall carbon footprint. Measures taken by MES include routine cleaning of the facility's stormwater inlets and stormwater outfalls to ensure there is not a negative impact on the environment and associated watershed areas adjacent to the facility. This year there were 26,060 tons of recyclables that were returned to the marketplace from the Montgomery County MRF operation. Also in Montgomery County, the team at the Montgomery County Yard Trim Facility purchased an electric powered trammel screen to replace a trammel with two diesel engines, which will reduce emissions created by the trammel.

STATE-OF-THE-ART COMPOSTING

Prince George's County's 12-bunker Gore Cover System was brought online in Mid-September of 2018 and is being used to produce Leafgro Gold®. As of December 31, 2018, the team had processed just over 57,154 tons of material including 15,800 in brush and grass and 10,881 tons of food scraps. In addition to upgrading to a state-of-the-art cover system the team at the Prince George's County Organics Composting Facility also upgraded two balers, replaced three forklifts, and purchased a new John Deere wheel loader - all to ensure the facility runs as effectively and efficiently as possible.

POWERING ECONOMIC DEVELOPMENT

In partnership with the Maryland Energy Administration, MES conducted a competitive procurement process that will result in bringing critical natural gas energy infrastructure to the Eastern Correctional Institution and the University of Maryland Eastern Shore in Somerset County. Once complete, the project will provide the two institutions with a reliable, affordable source of energy, advance a critical economic development initiative for the region, and significantly reduce greenhouse gas emissions.



“The county continues to be impressed by the customer service efforts of MES. No request is too big or too small, and attention is given both quickly and efficiently. Leadership of the Environmental Operations component of MES is at all times supportive when called upon for a variety of matters. ”

- Andrew Hollis, Talbot County Manager

PARTNERSHIPS

The MES Strategic Partnerships and Industry Relations (SPIR) group was further enhanced this year to expand our ability to work with key partner organizations throughout the State. Since its creation in 2017, the SPIR team has emphasized and continued building greater awareness of MES' services and products through the public and private sectors. Among the groups that have been a part of this awareness engagement are the Maryland Association of Counties (MACo), Maryland Municipal League (MML), Maryland Economic Development Association (MEDA), Greater Washington Board of Trade (GWBOT), BWI Partnership, World Trade Center Institute (WTIC), Regional Manufacturing Institute (RMI), Economic Alliance of Greater Baltimore (EAGB), Bisnow, and others. As a fee-for-service, not-for-profit public corporation, MES is committed to growing its network of strategic partnerships and cultivating new opportunities to provide affordable, accessible services that enhance and preserve the environment throughout Maryland and the region.



ENVIRONMENTAL BUSINESS LEADERSHIP CONFERENCE

This year, Maryland Environmental Service hosted the second annual *Environmental Business Leadership Conference* in Baltimore. The conference attracted nearly 300 attendees and over 50 industry leading panelists and speakers. The forum served as an opportunity for those in the environmental business sector to come together to learn and collaborate on cutting-edge solutions to complex environmental challenges. Key speakers at the conference included Governor Larry Hogan and acclaimed journalist Judy Woodruff. In addition to an exceptional lineup of speakers, the conference also featured the *Environmental Business Leadership Awards*, which recognized leadership within the environmental community. Awardees included:

ENVIRONMENTAL BUSINESS LEADER: LifeBridge Health

ENVIRONMENTAL EXCELLENCE-SUSTAINABILITY: University of Maryland Office of Sustainability

ENVIRONMENTAL EXCELLENCE/ENVIRONMENTAL RESTORATION: Anne Arundel County Public Schools

ENVIRONMENTAL EXCELLENCE-SOLID WASTE MANAGEMENT: Baltimore Gas and Electric

MERITORIOUS SERVICE AWARDS (LIFETIME ACHIEVEMENT): George G. Perdikakis, Sr. & Maryland Public Television

RISING STAR: The Compost Crew

HR & PROCUREMENT

MES is creating a culture that fosters opportunities for the personal and professional advancement of our teammates, and recognizes them when their achievements help MES further its mission in service of enhancing and preserving Maryland's environment.

DEVELOPING CAREER SKILLS

The MES Operator in Training (OIT) program develops certified operators who can independently and efficiently monitor and troubleshoot the water/wastewater facilities where they are assigned. The three-year apprenticeship program provides paid educational and on-the-job training; upon successful completion of the program, operators receive a license as a water/wastewater operator for the State of Maryland. MES finished up FY19 with a 44% pass rate for our Operator in Training Program. The overall Statewide average is 30%. Also during this past year, the OIT Program has seen 36 promotions within the program.

MINORITY BUSINESS OPPORTUNITIES

For MES, a key component of making Maryland Open for Business is proactively seeking out and encouraging minority-owned firms to participate in the MES procurement process. Business opportunities with MES exist in the areas of construction, architecture/engineering, commodities, maintenance, and a variety of other services. At a minimum, MES seeks to achieve, and at best exceed, the State of Maryland's established goal for contract dollars awarded to certified minority business enterprises. In FY 19 MES' MBE participation reached 29.44%, which is above the statewide MBE goal of 29%.



Members of the MES Diversity, Equity and Inclusion Committee



\$170K
provided in tuition reimbursement



\$10,000
awarded through the All-Stars program



70
teammates honored for years of service

DIVERSITY, EQUITY & INCLUSION

Maryland Environmental Service is committed to fostering diversity in all aspects of its operations, exemplified by our commitment to our Minority Business Enterprise program and our efforts to foster an inclusive environment by actively promoting such qualities in the workplace.

In 2019, MES finalized its first Diversity, Equity, and Inclusion Plan. The Plan presents our three strategic areas of focus for enhanced diversity – Education, Hiring and Recruiting, and Purchasing. For each area, the Plan lists strategic objectives and action items for implementation.

“MES has been and continues to be outstanding!
MES staff is very responsive to the requests
of the County”

- Marilyn E. Rybak, C.P.M., Acting Associate Director,
Brown Station Road Sanitary Landfill,
Prince George's County

WORKDAY[®] AT WORK *for MES*

This year, MES' IT and Financial divisions oversaw our organization-wide transition to Workday[®]. The new system went live on July 1, and represents a significant technological upgrade that will improve our organization's overall level of service to our clients and the productivity of our teammates.

Prior to and since the launch of Workday[®], teammates have been receiving training on using the program for timekeeping, tracking budgets, paying invoices, onboarding new teammates, and many other features. Maintaining a high level of environmental service to our clients requires that our organization be on the leading edge of using technology to make our teammates more productive, and fully utilizing all the features of Workday[®] will enable MES to continue to raise our overall level of productivity now and in the future.





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