



ANNUAL REPORT 2015



## **BOARD OF DIRECTORS**

**James M. Harkins, Director**

**John J. O'Neill, Jr., Deputy Director**

**Richard P. Strett, Jr., V.M.D., Secretary**

**Janet R. Irvin, Treasurer and Chief Financial Officer**

**Leslie Jackson Jenkins, Esq., CPM**

**William B. C. Addison, Jr.**

**Joseph F. Snee, Jr., Esq.**

**Talmadge E. Simons**

**Edward C. Adams, Jr., P.E.**



## **CONTENTS**

**LETTER FROM THE DEPUTY DIRECTOR 5**

**MISSION AND VISION 6**

**ORGANIZATION CHART 8**

**OUR PROJECTS 9**

**FINANCIAL STATEMENTS 42**

Bald Eagle on Poplar Island Dike



## LETTER FROM THE DEPUTY DIRECTOR

The Service had a very busy year serving its many customers in 2015. We primarily operate under contracts and agreements with state, county, and local governments and do a small amount of work for the private sector. Our largest governmental customers are large state agencies such as the Maryland Port Administration, Department of Public Safety and Correctional Services and the State Highway Administration. MES's nimble procurement system provides expedited solutions to environmental problems facing these and all of our customers.

For example, the Maryland Port Administration suffered a major emergency at its Cox Creek facility last Spring. A large area of abandoned mulch caught fire and challenged the efforts of both the Anne Arundel County Fire Department and the MPA by repeatedly self-igniting due to moisture and wind conditions. MES marshalled its forces from around the State to provide for heavy equipment and operators to separate the piles, contracted with haulers to haul it off site and assisted with the clean-up of the large area. The MPA was very grateful for the outstanding response of MES and its employees.

Another example of MES's service occurred at the Eastern Correctional Institution's power plant which is operated under contract by MES. A major failure occurred to one of two turbines that provide electricity at the plant. Using its expedited procurement authority and expertise, MES immediately sent the turbine out for repair and concurrently continued a major replacement of electrical switchgear at the facility, saving both time and money while providing a consistent source of electricity and steam to the large prison complex.

These activities of course didn't detract from the numerous day-to-day operations throughout the state for our many customers, each of whom relies on us to provide worry-free operations of their critical infrastructure that allows them to focus on their core mission functions. I am certainly proud of our employees and their many accomplishments. I hope you enjoy reading about our many projects in this Annual Report.



John J. O'Neill, Jr.  
Deputy Director

## WHO WE ARE

In 1970, Maryland's Governor and legislators created Maryland Environmental Service to protect the State's air, land and water resources. Today, our independent State agency continues to fulfill this vital directive.

We have no regulatory authority and we receive no direct appropriations. Our agency is a self-supporting, not-for-profit public corporation, combining the public sector's commitment to environmental protection with the private sector's flexibility and responsiveness.

MES provides services at competitive rates to government and a few private sector clients and works on projects including water and wastewater treatment, solid waste management, composting, recycling, dredged material management, hazardous materials cleanup, storm water services and renewable energy. We provide expert engineering, monitoring and inspection services.

With 886 diverse projects located in three states, ranging in cost from \$100 to \$7.9 million, we couple operational expertise with a commitment to strict environmental compliance and safe work practices.

Today, Maryland Environmental Service remains focused on finding innovative solutions to our region's most complex environmental challenges and preserving our region's natural resources for generations to come.

### MISSION

*To provide operational and technical services to protect and enhance the environment for the people of Maryland.*

### VISION

*Maryland Environmental Service: an innovative and leading edge solver of environmental problems; a responsible and successful manager of environmental operations; and a great place to work.*

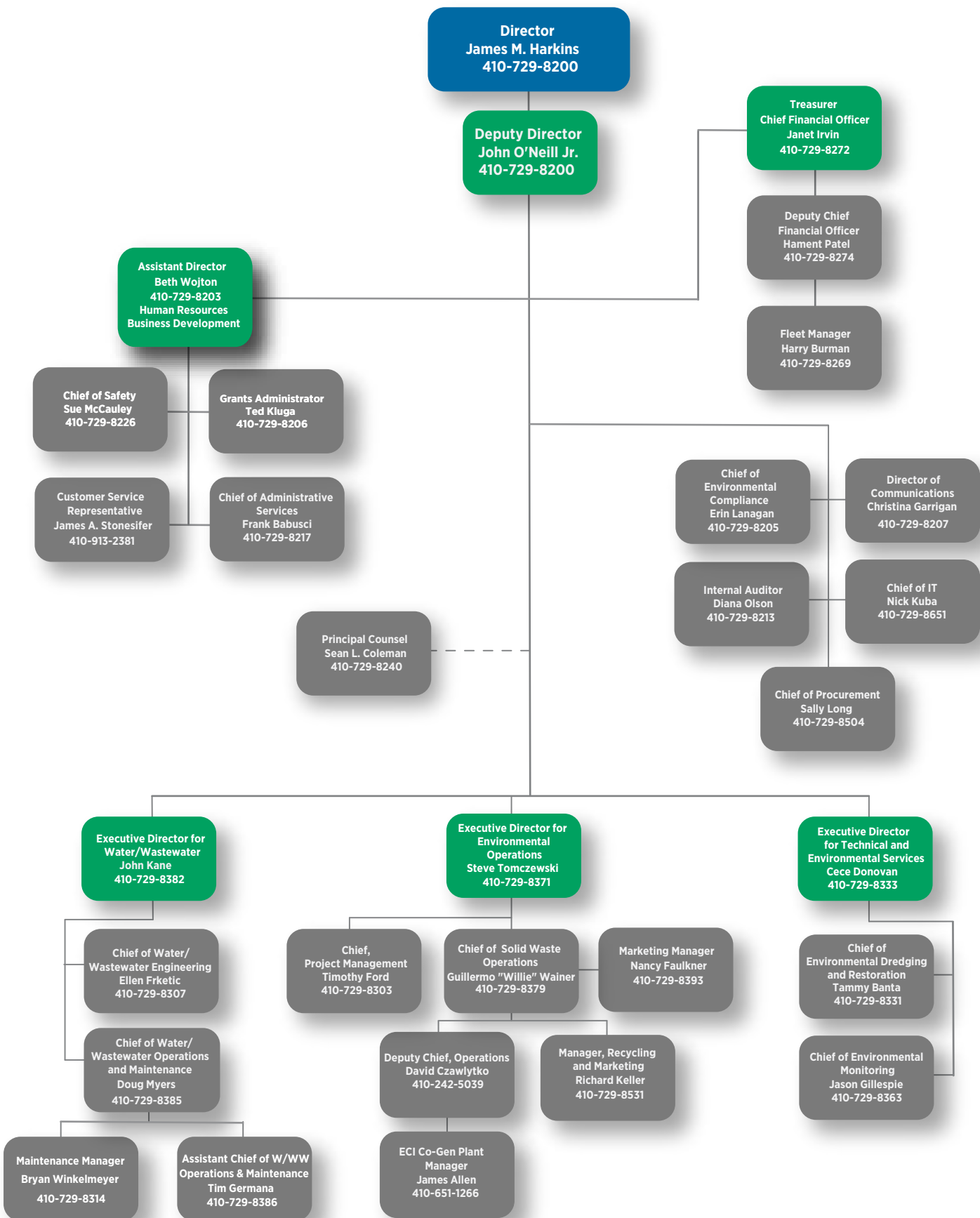


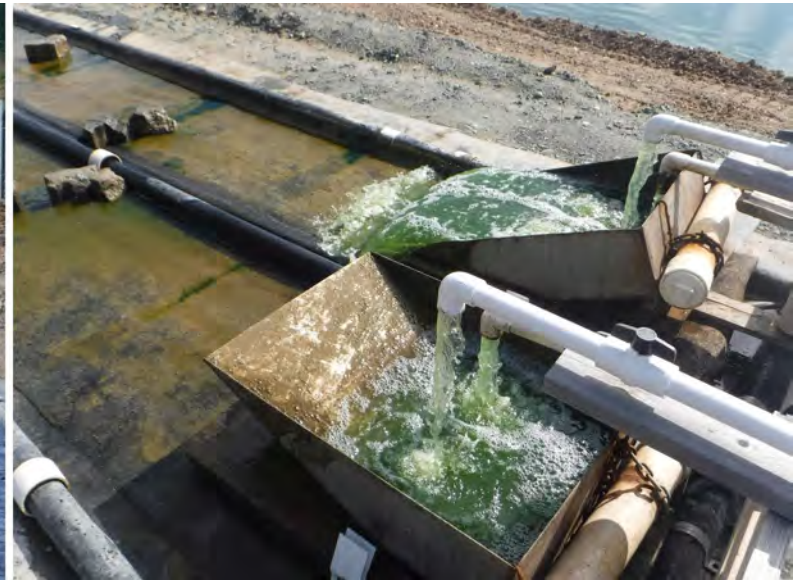
As part of our commitment to the environment, MES chose the LEED (Leadership in Energy and Environmental Design) criteria as the guideline for construction of our headquarters. The building was designed to fully integrate the structure and site. This integration of built and natural environments was accomplished using bioswales, rooftop rainwater for landscape irrigation and xeriscape landscape practices. Our headquarters boasts a wide range of sustainable features that include commercially available materials and technologies to maximize energy and water conservation.

MES has partnered with Constellation Energy to build two solar installations that together are capable of generating 741,000 kilowatt hours of power per year, nearly all of the Service's electricity need. The first of the two systems, a 300 kilowatt ground and roof-mounted system completed in 2008, is comprised of two different types of solar technologies—lightweight and flexible thin film panels applied directly to the building rooftop, and crystalline silicon panels deployed on the grounds. A 288 kilowatt system of solar carports was completed in 2015 and includes electric vehicle charging stations.



In 2011, the U.S. Green Building Council designated the MES Headquarters Building as LEED Gold certified, making us Maryland's first State government building with operations and maintenance practices certified to LEED standards. The building was recertified Gold in 2013.





*Algae Turf Scrubber at Cox Creek*

## TECHNICAL AND ENVIRONMENTAL SERVICES

*The Technical and Environmental Services Group continued to support State, County, Local Government and a few private clients with services related to environmental monitoring and environmental dredging and restoration. Several new clients were added over the year as they determined that our combination of cost effective services and technical proficiency made economic sense for their projects.*

*The efficiency of MES procurement practices allowed \$33.57M in project funding to flow to the private sector using MES competitive procurement policies in FY15. This allows economic growth to benefit the State and keeps our clients' projects moving forward. Firms who benefited from these project procurements included contractors, consultants, utility suppliers, equipment vendors, material and supply firms, and permit expeditors and reviewers.*

### ENVIRONMENTAL DREDGING AND RESTORATION

The Maryland Port Administration (MPA) is responsible for ensuring placement capacity for the material dredged from the shipping channels running through the Maryland portion of the Chesapeake Bay, including the Patapsco River and Baltimore Harbor. Regular dredging is required to provide safe and clear passage for vessels.

The MES Environmental Dredging & Restoration Division (EDRD) supports the Port's mission by providing dredged material management services including planning, permitting, monitoring, reporting, operating and maintaining dredged material containment facilities (DMCF), with an emphasis on environmental restoration and the innovative reuse of dredged material. MES also provides public outreach services related to these projects.



*Cox Creek Dredged Material Containment Facility*

The Port of Baltimore is an economic engine for the State of Maryland. The majority of the services provided by the EDRD during FY15 were for the Maryland Port Administration. EDRD strives to provide fiscally responsible services to our clients by providing low cost, quality support from MES staff and competitively solicited services from qualified private sector contractors.

### **COX CREEK DMCF**

After the closing of Hart–Miller Island on December 31, 2009, the Cox Creek and Masonville Dredged Material Containment Facilities became the remaining two options for placement of Harbor dredged material. MES operates the 133–acre Cox Creek site for MPA. To date, Cox Creek has received 2.1 million cubic yards of material.

Management of Total Maximum Daily Loads regulations (TMDLs) required the MPA to have a management strategy for TMDLs which include a loading cap for nutrients and sediment discharged to the Bay from point and non–point source

discharges. DMCFs are considered a point source discharge. In 2014, MES completed a discharge management document for the MPA identifying best management practices (BMPs) to enable the MPA to continue to cost effectively discharge water while maintaining compliance.

One of the BMPs identified to reduce nutrients being released from the DMCFs to the Bay is an Algal Turf Scrubber (ATS). Cox Creek was able to use the pilot scale ATS that was in operation at the Dundalk Marine Terminal. The ATS successfully began operating at Cox Creek July 24, 2015. The ATS is harvested once a week to remove, test, and weigh the algae in an effort to determine the nutrient removal rates and if this is a feasible BMP for long term implementation at the MPA DMCFs.

MES also manages the Swan Creek wetlands adjacent to Cox Creek along with the adjacent Forest Conservation Area. The wetland is an 11.13–acre habitat restoration project that includes vegetated wetlands, shallow water and a special cobble riffle for fish passage. The Forest



*Terrapin Release at Poplar Island*



Conservation Area includes 115 acres of forested habitat with adjacent non-tidal wetlands. This restored area has become an urban habitat for wildlife, including ibis, heron, eagles and waterfowl. Submerged aquatic vegetation has colonized the area and increased fish diversity has also been found in the area where MES installed 325 reef balls, an artificial marine habitat built from concrete. At the request of MPA, MES has been working with USFWS in implementing a Wildlife Management Plan for Swan Creek and the Forest Conservation area.

As placement facilities reach capacity, innovative reuse of dredged material gains importance. Cox Creek is a potential future home for innovative reuse activities for MPA.

### **COX CREEK EXPANDED**

To continue future Port operations, MPA needs additional dredged material placement capacity.

On MPA's behalf, MES and consultants are drafting the feasibility study for the horizontal expansion of the Cox Creek DMCF onto the MPA-owned 93-acre parcel of upland area adjacent to the existing DMCF, and the vertical expansion of the existing Cox Creek DMCF.

This expansion onto the MPA owned upland property (excluding wetlands) is considered Stage I of the project. Stage II will focus on developing a feasibility study to expand the DMCF onto the 130 acres of north adjacent property currently owned by Cristal USA, Inc. Total cost of the feasibility study including both stages is currently \$4 million.

During FY15, an MOU between MES and MPA was approved by the Maryland Board of Public Works to begin the design and construction phase of the Cox Creek Expanded DMCF project. The MOU will provide funding to allow demolition of existing structures on the upland area, final study and engineering site design, dike construction



*Poplar Island expansion plan*

to elevation +60 feet Mean Lower Low Water, environmental remediation and mitigation, and technical services for Cox Creek Expanded. As the Cox Creek Expanded DMCF project progresses in FY16, structure demolition will begin, and final dike design and regulatory coordination and permitting will be underway.

## **POPLAR ISLAND**

MES operates the Paul S. Sarbanes Ecosystem Restoration Project at Poplar Island for MPA and their Federal partner, the U.S. Army Corps of Engineers (USACE). Poplar Island was once a 1,000-plus acre island with a thriving community. Over the years the island slowly eroded away, leaving only three small remnant islands.

Today, clean dredged material is used to rebuild the island and its upland and wetland habitats. To date, more than 28 million cubic yards of dredged material has been deposited in the island. Poplar Island is now recognized as a valuable

*The Poplar Island Environmental Restoration Project was awarded the **2015 Innovation in Sustainable Engineering Award** from the American Society of Civil Engineers. The award honors engineering projects that implement and demonstrate creative applications of sustainability.*

*“The American Society of Civil Engineers has been a steadfast advocate of sustainable practices in engineering,” said Robert D. Stevens, president of the American Society of Civil Engineers, in the news release. “The Poplar Island restoration project is a stellar example of what can be accomplished when vision, collaboration and creativity come together to improve economic, social and environmental sustainability.”*





*Hart-Miller Island*

nesting and nursery area for many species of wildlife, including osprey, egret, and diamondback terrapins, while providing millions of cubic yards of dredged material placement capacity. Just over 3.41 million cubic yards of dredged material was placed during the 2014/2015 dredging season including material from the Baltimore Harbor approach channels and southern approach channels to the Chesapeake & Delaware Canal.

Wetland cell development continues onsite with Cell 3A and 3C channels and grading completed. Cell 3A was opened to tidal flow on October 6, 2014 and planted between April and June 2015. Cell 3C was opened to tidal flow on September 16, 2015 and is scheduled for planting in spring 2016. To date over 230 acres of wetlands have been developed onsite.

The design for the Poplar Island expansion has been completed and MES submitted the Tidal Wetlands Application to MDE in 2015. The expansion is planned to be 575 acres of upland and

wetland habitat. With the expansion included, the Poplar Island restoration project in Talbot County would be approximately 1,715 acres in size, with 776 acres of wetland, 829 acres of upland and 110 acres of open-water embayment habitat. MES operations, maintenance, monitoring and development at Poplar are anticipated to continue through 2040.

### **HART-MILLER ISLAND DMCF**

MES has operated and maintained Hart-Miller Island (HMI), a 1,140-acre DMCF, since 1984. HMI, a project that began in controversy, has become a model of successful collaboration between government and citizens. HMI now serves as a valuable habitat for shore and water birds and an outstanding recreational site for boaters.

Over 25 years, more than 100 million cubic yards of dredged material was placed at HMI; the last placement occurred in 2009. MES will continue to provide operations, maintenance and



*Controlling invasive species on Hart -Miller Island*

environmental monitoring support to the project. MES continues to work with MPA, DNR and the design team to develop cost effective approaches to transform HMI's North Cell into viable wildlife habitat.

In 2015 an Inter-Agency Agreement was signed between MPA, MES, and DNR to open the South Cell for public access. Bird watching, hiking and biking opportunities will be offered. MES will be assisting DNR in the maintenance of the South Cell trails and will continue to provide scheduled tours of the North Cell during the habitat development phase.

### **MASONVILLE DMCF**

MES continued management of the \$153 million Masonville DMCF construction, mitigation and enhancement project for MPA. Masonville is a 141-acre facility partially bordered by fringe wetlands with 130 acres of open water contained by sand dikes, interior leachate barrier, exterior armor stone and a cofferdam cell bulkhead. In 2015,

Masonville received approximately 950,000 cubic yards of material from the Seagirt-Dundalk Access Channel Dredging inflow project. Masonville is currently receiving a second inflow project from the Sparrows Point Terminal that is expected to add 70,000 cubic yards before the end of the year. To date, the facility has received over 1.4 million cubic yards of Harbor material.

As part of the DMCF construction project permitting, MES is designing and constructing the mitigation elements of the project, including enhancement of the 52-acre Masonville Cove area adjacent to the DMCF facility with wetlands, living shorelines, a community environmental education center and walking trails.

Enhancement of the central portion of the Cove uplands was completed in 2012 and opened to the public in October of that year. Local residents now have access to the Patapsco River at Masonville Cove via two new piers constructed in 2011 including a fixed boat pier and a floating pier for kayaks and canoes. Uplands enhancement



## *Masonville*

continued in 2013 in the second zone of the Cove; the third zone of the uplands enhancement began in 2014. The overall uplands enhancement is expected to be complete by the end of 2016. The first phase of Cove substrate improvement was completed in 2010 and 635 reef balls produced by MES were placed in the completed areas in 2012. The second phase of substrate improvement was completed in early 2015 adding 158,000 tons of clean sand and an additional 1,375 reef balls.

In 2013, MES applied on behalf of MPA for the Maryland Department of Natural Resources Natural Filters Grant. In the spring of 2015, 9.8 acres of Masonville Cove was planted with native tree species funded by the award of this grant. In the fall of 2015, the remaining 4.6 acres were planted. MPA will be able to account for these trees under credits needed for TMDL offsets.

The Masonville Cove Adaptive Management Plan (AMP) was completed December 31, 2014 and implementation began in the spring of 2015. The AMP details the monitoring that is to be

conducted to ensure all mitigation components are successfully completed. Monitoring within Masonville Cove was conducted May through September 2015 on the two completed non-tidal wetlands, the living shoreline, and the fringe wetland. As mitigation is completed, management of invasive species is crucial for the native plants to establish themselves.

In an effort to reduce the use of herbicides, MES investigated, initiated, and completed a one acre pilot project that included the use of goats to control for invasive (non-native) species on site in the upland mitigation areas. This pilot project showed that the goats consumed the targeted invasive species while adding nutrients to the nutrient poor soil used for capping. MES will re-evaluate the use of goats in the spring 2016.

The Masonville Cove Environmental Education Center hosts a variety of programs to enrich the community. The Center is a near-zero net energy building with a ground source HVAC system and solar energy power. The center, constructed



*Access channel dredging allows larger ships to return to the Port of Baltimore*

by MES and its subcontractor, Baltimore Green Construction, was built green, incorporating features such as fresh air energy recovery, recyclable materials and efficient building standards with minimal energy input. The Living Classrooms Foundation and the National Aquarium conduct education programs at the center. These activities expanded into the Masonville Cove campus area in fall 2012, following the grand opening to the public, and continued through 2015.

### **SEAGIRT-DUNDALK ACCESS CHANNEL DREDGING**

On MPA's behalf, MES managed dredging activities on the widening of the Seagirt-Dundalk Access Channel, specifically the Dundalk West Access Channel and the Seagirt-Dundalk Connecting Channel. Due to the expansion of the Panama Canal, this berthing channel needed to be widened to accommodate the larger size ships able to navigate the Canal when calling on the Port of Baltimore.

Approximately 900,000 cubic yards of estimated dredging quantities were removed for this operation. An additional approximate 50,000 cubic yards were removed in an area within the Dundalk Marine Terminal Berth one access channel to maintain vessel access. All material dredged under this contract was transported and unloaded into MPA's Masonville Dredged Material Containment Facility. From this dredged material, an estimated 110,000 cubic yards of good quality sand was reclaimed and stockpiled at the Masonville DMCF to be used for future Masonville projects.

The completion of this project coincided with MPA's announcement that Maersk was returning service to the Port of Baltimore for the first time in nearly 20 years, bringing an estimated 31,000 new containers per year through the Port of Baltimore.

### **FAIRFIELD MARINE TERMINAL – WET BASIN**

To assist MPA with the development of up to 7.5 acres of additional terminal space for cargo



*Pearce Creek Lake*

storage at the Fairfield Marine Terminal (FMT), MES is providing oversight and management to relocate an existing storm drain and fill and stabilize the existing Wet Basin. These projects are part of a federal transportation (TIGER) grant and Port of Baltimore Export Expansion program. MES will manage the contractor providing the in-water filling, and upland filling will be performed by MES using MPA-owned equipment. Sand material reclaimed from the Seagirt-Dundalk Access Channel dredging, will be used saving MPA funds and dredged material capacity.

### **PEARCE CREEK**

MES has provided technical support to MPA for the reactivation of the Pearce Creek Disposal site in Cecil County. Pearce Creek received a water quality certification (WQC) from MDE in December 2014 and is scheduled to receive dredged material inflow at the end of 2017, after a liner has been installed at the site.

A water system design and installation is being

funded by MPA to provide drinking water to the surrounding residents located in the groundwater impact area of Pearce Creek. MES technical services on behalf of MPA have included: permitting investigations, public outreach support, sediment and residential groundwater well data review, and governmental and regulatory agency coordination.

MES also manages a contract with the Town of Cecilton on behalf of MPA to implement the preliminary design, planning, and engineering for the water system through their subcontractor, AECOM. Final water system designs are anticipated by the end of 2015, with construction start in beginning of 2016.

### **OUTREACH & DATA TRACKING**

MES continues working to create a web accessible database for tracking public outreach program data including the program schedules, topics, and information about the audience served. This



*Lake Linganore*

database will be easily updated by the various public outreach contractors and accessed by MES and MPA staff for reporting on the success of MPA's outreach efforts.

### **LAKE LINGANORE DREDGING**

MES is assisting Frederick County with the planning and permitting associated with the dredging of the portion of Lake Linganore to the east of Boyers Mill Road, in Frederick County, MD. Frederick County is working in partnership with the City of Frederick (City) and the Lake Linganore Association (LLA) on this project. The Lake serves as a drinking water source for the City, and a backup drinking water source for Frederick County; therefore, it is vital to restore capacity to this reservoir, which has been lost due to sedimentation since the Lake's construction in 1972. MES and the project team are evaluating dredged material placement locations and preparing an alternatives analysis in order to determine the most cost effective method to dredge up to 300,000 cubic yards of material from

the Lake within the project team's \$7M budget.

### **HAWKINS POINT HAZARDOUS WASTE LANDFILL**

MES operates and manages the Hawkins Point Hazardous Waste Landfill, a long-standing project with MPA and Honeywell. This landfill no longer accepts waste material. Services include: routine post-closure care, leachate management and leachate disposal in accordance with the EPA RCRA Corrective Action Permit and MDE Controlled Hazardous Substance (CHS) permits. MES also provides routine groundwater monitoring as directed by the CHS permit, report writing and regulatory coordination with EPA and MDE.

In 2014, MES contracted the 14.5 acre planting project at the closed Hawkins Point DMCF North Cell. A total of 3,161 native trees were planted to obtain Critical Area credit for the MPA. MES continues to monitor the survivability of the trees for the MPA.



*Wetland and forest services at the Boehm scrap tire clean-up site*

## **DUNDALK MARINE TERMINAL**

MES operates and maintains the groundwater treatment plant at Dundalk Marine Terminal (DMT) for MPA. The Service manages hazardous and non-hazardous waste associated with the chromium contamination at DMT, provides sampling and report writing services for the NPDES permit, and cleans and repairs storm drains.

## **ENVIRONMENTAL MANAGEMENT SYSTEM SERVICES**

MES has assisted the MPA Safety, Environment and Risk Management Department with their Environmental Management Plan (EMS), including ISO 14001 certification, since 2007 by providing on-site staff to implement and maintain the MPA EMS and assist with regulatory compliance. Our services include asbestos management, industrial hygiene support, assistance with MPA air quality initiatives, stormwater pollution prevention inspections and reporting, TMDL planning

and implementation assistance and EPA grant assistance to reduce diesel emissions at the Port of Baltimore.

## **WETLAND AND FOREST STAND SERVICES**

MES has provided wetland and forest services for the MES Environmental Operations Group and MPA. The services include wetland delineation, wetland mitigation monitoring, wetland mitigation planning, forest stand delineation, forest conservation planning, and forest mitigation monitoring and habitat assessments. MES provided an Advisors Report to the Maryland Board of Public Works to assist them with a Tidal Wetlands application for the Dominion Cove Point LNG Plant in Calvert County.

## **ENVIRONMENTAL MONITORING**

Expert environmental monitoring protects our air, land and water. It also ensures our clients comply with complicated regulations and avoid costly violations. The Environmental Monitoring Division



*Water monitoring*

provides comprehensive water quality laboratory, sampling and reporting services; environmental compliance program management; facility and systems operations and maintenance; and geospatial and hydrologic/hydraulic engineering services to preserve these resources for the residents of Maryland.

### **WATER QUALITY SERVICES**

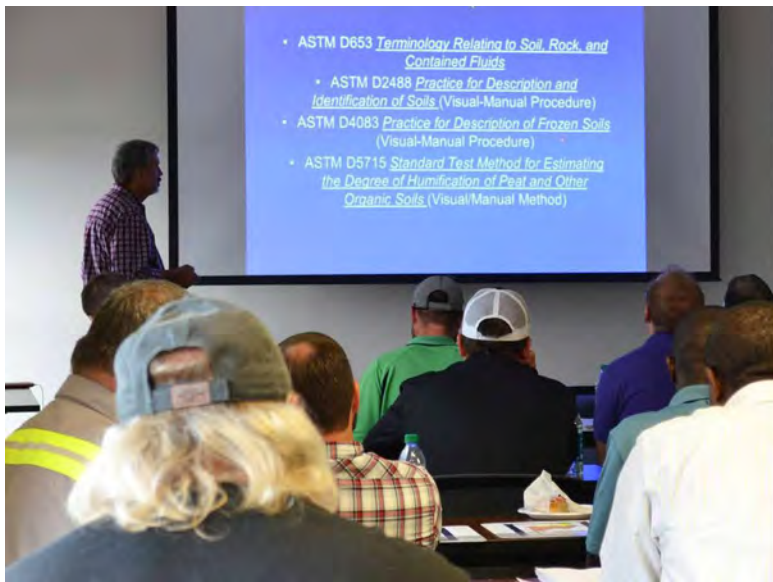
Across Maryland, MES provides field sample collection, laboratory analysis and regulatory reporting services in accordance with all Federal and State environmental requirements. MES currently documents NPDES and SDWA compliance for numerous wastewater treatment plants, industrial discharges and permitted drinking water facilities and reports compliance data for hundreds of thousands of individual parameters annually on behalf of our clients.

A key tool in managing the thousands of compliance data points for reporting is MES's use of Hach's Water Information Management Solution

(WIMS) Program. Field collected and laboratory generated data is imported through Excel files into WIMS and organized by project through easy to use dashboards. Through the dashboard project managers can review critical data and generate compliance reports. Facility information can also be viewed in graphs or exported into Excel for review. Currently NPDES reporting requirements are being met electronically with the use of NetDMR, a web-based reporting utility housed by the EPA. The WIMS system allows for customization of Discharge Monitoring Reports (DMR) and easy export into the NetDMR system.

### **ENVIRONMENTAL MANAGEMENT SERVICES**

MES provides comprehensive program management, technical and scientific consulting services to a small number of private clients, counties and all Maryland Department of Transportation (MDOT) Modals. Services include environmental spill/leak investigations, sampling, compliance assistance, remediation, NPDES and TMDL assistance, maintenance, underground



*Subsurface Investigation Training at MES Annex*

storage tank removal and inspections, above-ground storage tank installations, fueling facility upgrades, asbestos and lead paint monitoring, large stormwater programs, invasive species control, oil/water separator inspection and maintenance and environmental management system development.

As part of these efforts MES staff routinely provide training to clients on new permit requirements and environmental industry standards. During the previous year, Environmental Monitoring Division staff provided training to approximately 100 Baltimore County staff on new 12-SW stormwater permit compliance requirements and collaborated with the National Drilling Association (NDA) Mid-Atlantic Chapter to develop an 8-hour Refresher Training for the National Highway Institute (NHI) Subsurface Investigation (SSI) Qualification Certification. Over 38 attendees representing State Agencies, geotechnical contractors and engineering consultants were able to complete the new one-day course to maintain their certification. Before the development of

this course, recertification required re-taking the initial 3-day full training course at an average cost of \$825 per attendee. The new 1-Day refresher was only \$125 per attendee.

Services provided by MES extend throughout the State to advance projects into construction in a timely manner while in accordance with environmental regulations such as the Chesapeake Bay TMDL. As an example, MES employees currently serve as Department of Natural Resources (DNR) representatives for the Integrated Policy and Review Unit for State Highway Administration (SHA) and other related transportation projects in accordance with Maryland's Streamlined Environmental and Regulatory Process for State Transportation Project Review. Additionally, for the SHA's Route 404 dualization project, funded as part of the Governor's \$1.97 billion package to improve highways and bridges, the MES team has been inspecting the work of the geotechnical contractor, performing Quality Control of soil samples and boring logs, coordinating traffic control and performing outreach to the local property owners.



*Work for the Maryland Aviation Administration at BWI Airport*

## **RENEWABLE ENERGY**

MES helps clients with a full range of energy services including energy audits, feasibility studies, energy use footprint analyses, technology assessments and the design, installation and operation of wind energy, solar, geothermal and biomass processes.

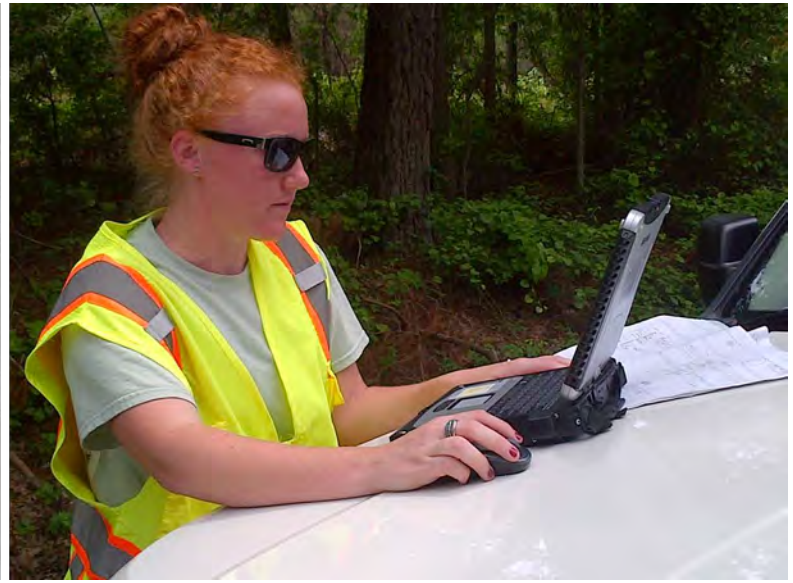
MES has been supporting documentation and tracking of Department of Housing and Community Development's (DHCD) Customer Investment Fund Targeted & Enhanced Weatherization Program (CIF). This program helps low income Marylanders in the Baltimore Gas and Electric (BG&E) utility service region (except Baltimore City), address and correct health and safety hazards within the home and allow energy efficient upgrades to be installed. This program is scheduled to expand during FY16 with MES providing post weatherization and energy education support services via LEED (Leadership in Energy and Environmental Design) specialists.

## **FIELD OPERATIONS AND MAINTENANCE SERVICES**

MES provides the Maryland Aviation Administration (MAA) with around the clock emergency response services at BWI Thurgood Marshall Airport and Martin State Airport. Our employees help keep both airports open for business on a daily basis, including during weather and other emergencies.

Through collection and processing of the de-icing fluids during the winter months, MES has assisted BWI Marshall airport in significantly reducing the amount of de-icing material reaching streams near BWI. During FY15, continuous NPDES outfall monitoring and sampling indicated that more than 95% of the deicing fluid was collected, protecting the nearby streams.

FY15 also saw expansion of these services to other clients in addition to the MAA. Dedicated teams of laborers, mechanics and equipment operators



*Geospatial and Engineering staff*

provided stormwater maintenance support services to the Baltimore County Department of Environmental Protection and Sustainability and the Maryland Transportation Authority.

### **GEOSPATIAL AND ENGINEERING SERVICES**

With expanding capabilities and technological improvements, including enhanced data collection and data sharing services (particularly between agencies), interactive mapping and customized reporting, MES is a leading resource in Maryland to help State government efficiently organize, plan and implement multi-agency environmental efforts.

Currently, the Maryland Emergency Management Agency (MEMA) is working closely with MES and our team of partners to integrate data used to create Maryland's Digital Flood Insurance Rate Maps (DFIRMs) into the State's updated Hazard Mitigation Plan (HMP), which is set for completion

in 2016. The MES team was already working with the Maryland Department of the Environment (MDE) to systematically transition to DFIRMs and to update a GIS-based Flood Risk Application with the support of the Department of Information Technology (DoIT).

The level of collaboration and coordination that has occurred between MEMA, MDE, the MES team, DoIT, and the Federal Emergency Management Administration (FEMA) has enabled the State to leverage Federal dollars in a way that minimizes duplicative efforts and maximizes the quality and extent of analysis that is possible from a Floodplain Management / Hazard Mitigation perspective. Cost savings associated with this collaborative approach have allowed the State to focus additional resources on outreach to the citizens and local jurisdictions of Maryland and minimize potential impacts to homeowners and businesses alike.

MES services help the State government efficiently



*MES staff inspect stormwater structures*

organize, plan and implement multi-agency environmental efforts.

With continually improving capabilities and technological improvements, including enhanced data collection and data sharing services (particularly between agencies), interactive mapping and customized reporting, MES is a leading resource in Maryland for environmental application development.

MES is currently working with the Maryland Department of the Environment to improve NPDES reporting and data submission processes. This effort will help MDE assess MS4 permit compliance, better model TMDLs and monitor Chesapeake Bay Program progress and stormwater Wasteload Allocations (WLAs).

As a part of this project, MES is helping MDE

develop a new GIS-based submittal process that includes: new geodatabase design, tools to assist permit holders with data submission and review, as well as tools to assist MDE with reporting and data management. This project will enable MDE to seamlessly integrate the NPDES Annual Report and associated information into a single, comprehensive data format.



*Freedom District Wastewater Plant, Sykesville*

## **WATER AND WASTEWATER SERVICES**

*At parks, hospitals, prisons and other institutions, MES serves as the water and wastewater operator for the State of Maryland. We operate and maintain 138 private, municipal and county plants; several shared-use facilities, as well as 88 state-owned plants at correctional facilities, health facilities, rest areas and State parks. Throughout the State, we provide service 24/7 to correct treatment plant problems.*

*In several parts of Maryland located outside of incorporated areas served by public water and sewer, MES provides high quality drinking water and wastewater treatment to protect the public health and the environment. We use our resources to work with local health departments, school systems, developers and homeowner associations to insure that small-scale treatment systems meet the most current treatment and regulatory requirements and that they are staffed by qualified licensed operators.*

*With years of experience in the operation of all types of facilities, we understand the administrative and technical requirements necessary to provide a safe water supply and keep wastewater discharge meeting Federal and State requirements.*

### **WATER TREATMENT AT SCHOOLS**

Among our water and wastewater clients are public and private schools and colleges across the State. As schools face more stringent environmental regulations during a time of shrinking budgets, more facilities are turning to MES for reliable service at a reasonable cost.

The Anne Arundel County Public School system had only one Certified Operator to check thirteen separate facilities. Their operator was challenged to visit all the facilities along with his other plumbing and maintenance work. The School System was concerned that their water treatment



*Dorsey Run Wastewater Treatment Plant*

needed more attention.

MES put together a proposal for limited inspections. MES employees would visit the facilities once per week on varying days and check the chlorine residuals, iron levels, pH and the chemical feed vats and pumps and report any deficiencies to the AACPS Supervisor of Operations. With all identified issues immediately addressed by the AACPS, the program successfully stops potential problems before they become water quality issues.

### **SOLVING PROBLEMS, SAVING DOLLARS**

Our broad experience at facilities throughout the State helps MES save our clients money.

For example, MES operates the Groundwater Remediation Plant for the Maryland Port Administration at the Dundalk Marine Terminal (DMT). We also operate water and wastewater plants for the Town of LaPlata in Charles County.

At the LaPlata wastewater plant, wastewater first passes through a Parkson bar screen, designed to catch paper and plastic debris and send it to a dumpster. The plant had been having trouble with debris coming off the screen during windy conditions. MDE had noted the problem on an inspection report. The Town was looking for an affordable solution to the problem.

An MES employee had previously worked at DMT and knew that DMT had removed two screw conveyors and four dumpsters from the outfalls and were going to scrap them. The screw conveyors were in good condition, but were not the right application for DMT. He suggested the Town look to purchase these conveyors and dumpsters as they would be a good fit for the headworks at LaPlata.

Recognizing that this could solve the problem, LaPlata approved the purchase of the conveyors and dumpsters. MES helped our two clients work out the purchase. DMT recouped dollars



### *Cambridge Wastewater Treatment Plant*

for equipment it planned to scrap. The Town of LaPlata paid a total of \$6,000 for two conveyors and four dumpsters. If new, the package would have cost over \$150,000. Environmental problem solved, and taxpayer dollars saved.

### **ENHANCED NUTRIENT REMOVAL UPGRADES**

MES Engineering staff manages upgrades to several major WWTPs to attain an Enhanced Nutrient Removal level of treatment and reduce nitrogen and phosphorus loadings to the Chesapeake Bay. Current projects include:

- Freedom District WWTP in Carroll County
- Maryland Correctional Institution WWTP in Hagerstown
- Eastern Correctional Institution WWTP in Somerset County

### **NEW STORMWATER PERMIT REQUIREMENTS**

MDE has reissued General Permit No. 12-SW for Stormwater Discharges from Industrial Facilities, which became effective January 1, 2014. There are many changes from the previous permit. W/WW

Engineering staff have been assisting our clients meet the new permit requirements by:

- Preparing Stormwater Pollution Prevention Plans (SWPPP) using the new guidelines;
- Discussing the changes from the previous permit and SWPPP with the clients to help them understand their options;
- Updating the stormwater facility map to meet current MDE standards utilizing MES CADD services;
- Submitting plans along with the required Notice of Intent (NOI) electronically to MDE.

Clients included: Piney Orchard; Town of Perryville; Town of LaPlata; Burris Logistics (Federalsburg, MD); Maryland-Virginia Milk Cooperative (Landover, MD); and the Maryland Department of Public Safety and Correctional Services.

### **ST. MARY'S COUNTY STORMWATER SERVICES**

MES W/WW Engineers have been providing stormwater inspection services to St. Mary's County for many years. We maintain a



*Rocky Gap Water Treatment Plant*

Stormwater System database which includes information such as the location, property owner, and pertinent design information. Annual field inspections are performed on an estimated 20 new and 200 existing facilities. MES records the results of the inspections in the database and sends out notification letters to the owners informing them of the inspection results and any maintenance needed. MES staff follows up with owners as requested to clarify inspection findings and/or maintenance requirements and perform limited re-inspections.

### **BIOSOLIDS MANAGEMENT**

MES Water/Wastewater staff provides technical assistance and expertise in the area of biosolids management for a number of municipalities in the State and the DC Water Blue Plains Wastewater Treatment Plant. These services include planning, development of nutrient management plans, inspections, regulatory permitting and reporting functions on a customized basis for individual wastewater facilities.

### **ROCKY GAP STATE PARK**

MES is responsible for the water and wastewater systems that serve Rocky Gap State Park and the Casino. The W/WW Engineering staff has been managing capital improvement projects at both the water and wastewater treatment plants at the Park.

With an obsolete water treatment plant at the Park and increased water demand since the opening of the Casino, new facility and raw water intake were needed to ensure reliability. W/WW Engineering staff recommended that the new plant be built on the other side of the lake, allowing construction of a new water intake structure in deeper water, where the water quality is more consistent year-round.

Construction of the upgraded water treatment facility was completed in 2015.



*VideoRay equipment allows remote water tank inspections*

## **STATEWIDE WATER/WASTEWATER MAINTENANCE**

MES Maintenance employees are strategically located throughout Maryland, ready to quickly respond to emergencies. In addition to providing repair and maintenance services for water and wastewater equipment, MES also has a generator repair and service program, as well as an expert water tank team who can provide complete tank services, including:

- Performing tank inspections and evaluations and submitting a report that describes the condition of the tank and the needed repairs and rehabilitation,
- Performing metal thickness testing,
- Underwater dive and robotic inspections with VideoRay, a remote operated vehicle,
- Paint failure analysis,
- Lead paint and hazardous material testing,
- Disinfection and chlorination,
- Testing for levels of volatile organic compounds (VOCs) and other bacteria and water quality testing,
- Inspection and quality assurance of repair, cleaning and painting operations and
- New tank design, bidding and construction management.
- Preparing tank repair and reconditioning specifications,



*Montgomery County Recycling Facility/Yard Waste Composting*

## ENVIRONMENTAL OPERATIONS

*From our cost-effective regional landfill on the Eastern Shore to a state-of-the-art recycling center in Montgomery County, MES project managers and operators work to meet the solid waste disposal needs of Maryland communities.*

### RECYCLING

#### MONTGOMERY COUNTY

Under contract for Montgomery County, MES operates a national award-winning recycling facility that processed 30,786 tons of commingled recyclables in FY15. MES also provides recycling tours and educational programs for school children and citizens.

#### BALTIMORE COUNTY

In November 2013, MES completed the installation of a new state-of-the-art, single-stream recycling process designed by Bollergraff

Technologies under contract for Baltimore County Central Acceptance Facility. MES purchased the equipment and provided the construction management for this \$16 million project. The facility has the capacity to process 42 tons per hour and handles all of Baltimore County and Harford County's single-stream recycling material. In FY15 the system processed 77,227 tons and since start-up the single stream system processed over 120,500 tons of recyclables. Baltimore County also host tours of the transfer station and the single stream recycling system.

A unique feature of this facility is its reliance on pre-release inmates from the County detention center, to provide the majority of the sorting personnel. MES provides the marketing for all of the recycled commodities generated by this operation.

#### EASTERN SANITARY LANDFILL

MES was selected by Baltimore County to manage



### *Midshore Recycling Program*

the design and construction of a new transfer station at the Baltimore County Eastern Sanitary Landfill located near White Marsh, Maryland. As part of an agreement between Harford County and Baltimore County, this facility will be funded by Harford County and will serve as the primary outlet for solid waste for Harford County once the Harford Waste-to-Energy Facility closes in Spring 2016. The new facility will be able to transfer over 1,000 tons per day of solid waste.

### **MIDSHORE RECYCLING**

MES manages the Midshore Recycling Program for Caroline, Kent, Queen Anne’s and Talbot Counties. Since assuming this responsibility MES has done the following: built commodity consolidation bunkers at Midshore II Landfill; optimized collection routes for maximum efficiency; instituted improved safety procedures; and competitively bid the recyclable commodities collected.

In FY14, MES purchased 50 additional new eight-yard recycling containers, for a total of 150 eight-yard containers to replace the aging collection “igloos” and two new front-end, collection vehicles to collect cardboard, paper, plastics and cans from the 43 Midshore recycling sites.

During FY15 MES collected and sold 2,969 tons of recyclable material. Also a food waste composting pilot test was successfully performed during a three-month period, collecting food waste from a tomato greenhouse, a food processing plant and a high school cafeteria. In addition, MES launched an initiative at its Midshore I and Midshore II landfills to collect oyster shells from residential and commercial sources to be used to repopulate oyster beds in the Chesapeake Bay.

### **RECYCLING PROGRAM MARKETING, EVALUATION AND TRAINING**

For agencies and organizations seeking to improve recycling rates, MES provides program



*Single-stream Recycling at Baltimore County's Central Acceptance Facility*

evaluation and training. MES recycling experts have worked with customers including: Maryland Aviation Administration at BWI Thurgood Marshall and Martin State Airports, Maryland Port Administration, Maryland Department of General Services and the Maryland Stadium Authority.

MES also competitively markets all of the recyclable commodities for Montgomery, Baltimore, and Harford Counties and the Midshore Partnership.

## **SOLID WASTE TRANSFER STATIONS**

### **BALTIMORE COUNTY CENTRAL ACCEPTANCE FACILITY**

MES has operated the Central Acceptance Facility (CAF), formerly known as Baltimore County Resource Recovery Facility (BCRRF), in Cockeysville since 1990 under contract to Baltimore County. The facility serves the needs of Baltimore County residents in the areas of

solid waste transfer and single-stream recycling processing and provides a convenient homeowner drop-off center for general solid waste and recyclable materials.

At the end of FY13, MES opened a new \$8 million open-top transfer trailer system at the CAF. During FY15 Baltimore County transferred 116,100 tons of solid waste and Waste Management transferred 104,853 tons, for a total of 251,560 tons of solid waste transferred through the CAF.

### **BALTIMORE COUNTY WESTERN ACCEPTANCE FACILITY**

MES continues to operate the Western Acceptance Facility (WAF) for Baltimore County using the single tunnel Open Top Transfer Trailer loading system which was installed in 2005. The WAF handles the Baltimore County residential waste collected in the southwest area of the County as well as commercial waste collected by Republic Services. MES provides all waste loading



*Food composting pilot project at Western Branch Composting Facility*

operations and transfers the Baltimore County residential waste to the Wheelabrator Baltimore (BRESCO) facility. All Republic Services deliveries are loaded on 3rd party transfer trailers and transferred to Republic Services' Virginia landfills. Baltimore County waste transferred was 82,537 tons in FY15. Republic Waste tons transferred was 189,922 tons in FY15, for a total of 272,459 tons of solid waste transferred through the WAF.

## COMPOSTING

MES is one of the largest composters in the State of Maryland. The agency operates yard waste composting facilities for both Prince George's and Montgomery County.

### MONTGOMERY COUNTY DICKERSON FACILITY

MES began operating the Montgomery County Yard Trim Waste Facility in 1983. This national award winning facility processes approximately

77,000 tons of grass, leaves and small branches annually. The material is composted and sold in bulk and bags as Leafgro®. In FY15, 518,550 bags of Leafgro®, and 55,748 cubic yards of bulk Leafgro® were sold from this facility.

### PRINCE GEORGE'S COUNTY COMPOSTING FACILITY AT WESTERN BRANCH

In Prince George's County, the Western Branch Composting Facility located near Upper Marlboro processes yard waste including grass, leaves, brush and Christmas trees, from approximately 158,000 households. At the site, the yard waste is placed in windrows and processed into compost. The compost is sold to wholesalers in bulk and is available to residents from various retailers. In FY15, MES processed 36,487 tons of yard waste through this facility, resulting in the sale of 32,513 yards of Leafgro®, a soil conditioner product.



*Leafgro® Gold*

## **FOOD WASTE COMPOSTING AT WESTERN BRANCH**

MES contracted with Sustainable Generation to provide a Gore™ Cover System at Western Branch. This allowed for the introduction of food waste into the yard waste composting process. The system accelerates the process and shortens the time needed to generate compost, and eliminates odors which may result from the addition of food waste. In FY15, 4,400 tons of pre-consumer food wastes were successfully composted (mixed with yard waste) at the Western Branch facility using the Gore™ Cover System, resulting in the sale of 5,800 cubic yards of Leafgro Gold. Prince George's County approved an additional heap that was installed in June of 2015 giving us a total of 4 heaps. We have started the process to get approval for a total of an 8 heap system.

## **POULTRY LITTER COMPOSTING DEMONSTRATION PROJECT**

MES concluded the poultry litter compost pilot

demonstration at Twin Maples Farm in Caroline County in FY15. The in-vessel rotary drum composter on loan from BW Organics of Sulfur Springs Texas was returned upon completion of the project.

The project provided valuable information for successful composting of poultry litter. The in-vessel rotary drum composter significantly reduced the retention time needed to produce pathogen-free compost. The information gathered will be useful for future applications of composting poultry litter for larger commercial scale operations. It will also allow MES to better assess the feasibility of composting poultry litter as a method to mitigate excess poultry litter and improve the water quality of the Chesapeake Bay.

## **2015 MARYLAND AGRICULTURAL PHOSPHORUS INITIATIVE**

MES is cooperating with Maryland Department of Agriculture and other State Agencies to



*Midshore II Landfill won the 2013 Solid Waste Association of North America's GOLD Award, their highest honor.*

implement Maryland's Phosphorus Management Tool (PMT) regulations. MES is indentifying technologies to provide cost effective, long-term alternatives to land-applying excess poultry litter. The objective is to find sustainable and environmentally safe uses of poultry litter to reduce the level of soil phosphorus and risk to the environment.

## **MIDSHORE REGIONAL LANDFILL**

As part of an 80-year solution to solid waste management, the four Midshore Counties – Caroline, Kent, Queen Anne's and Talbot – formed a unique partnership where each county hosts a solid waste facility, operated by MES for 20 years. The first project constructed in 1991 was the Midshore I Regional Solid Waste Facility located in Talbot County.

In addition to the disposal of solid waste, Midshore I also provided disposal of household hazardous waste, pesticides, motor oil, antifreeze,

wood waste processing and refrigerant recovery. After 20 years of operation, the Midshore I Landfill was closed on December 31, 2010, completing Talbot County's commitment to provide a host disposal site for the Midshore Counties. All of the cost to operate the Landfills and the MRRPs are covered by MES via the tipping fees charged at both landfills. None of the Midshore Counties have needed to provide any financial support for this operation during the past 25 years.

## **MIDSHORE II REGIONAL LANDFILL**

Construction of the next regional landfill in Caroline County, Midshore II, began in June 2009 and the facility opened in 2010. MES also operates an adjacent homeowner drop-off site. In FY 2015, Midshore II accepted 107,703 tons of solid waste for disposal. Midshore II received the Solid Waste Association of North America GOLD Excellence Award for Landfill Operations during FY 2013. SWANA is North America's largest solid waste association.



*Cell #2 at Midshore II Landfill, Ridgely*

A major design project was initiated in FY 2013 involving the construction of the next landfill cell, Cell #2, at the site. This project design was completed in mid FY14 and construction started in April 2014. Cell #2 was completed in Spring 2015.

### **MIDSHORE I REGIONAL LANDFILL**

Under a separate new agreement with Talbot County, MES began operation of a transfer station and homeowner drop-off at the Midshore I Landfill site in Easton. All solid waste delivered to Midshore I is transferred to the new Midshore II Facility for disposal, thus reducing truck traffic into Midshore II and saving fuel costs for Talbot County haulers. In FY15, a total of 31,053 tons of solid waste was transferred from Midshore I to Midshore II.

In addition, design work was finalized in FY14 for the final capping of Midshore I Landfill utilizing an innovative exposed geomembrane capping system. This design significantly reduced the cost to cap the landfill as a result of eliminating the

need to place thousands of yards of cover dirt onto the landfill. Construction of the cap began at the end of FY15 and is scheduled to be completed in FY16.

### **ADDITIONAL ACTIVITY ON THE EASTERN SHORE**

MES activity has expanded at other Eastern Shore landfill sites. Work on the permanent closure of the existing Old Beulah Landfill near Preston, Maryland in Dorchester was initiated in July 2015. The state-of-the-art design included a geomembrane liner, geocomposite drainage layer, 18” drainage cap and 6” vegetative cover.

MES also completed the installation of a new active landfill gas collection and flare at the Hobbs Road Landfill located near Denton in Caroline County.

MES also continues to make progress on the construction of 16 acres of wetlands on the



*Farm Tire Collection Days 2014*

Ackerman Farm located adjacent to the Midshore II landfill. This activity is a requirement of the wetlands mitigation permit associated with the Midshore II project.

## SCRAP TIRES

Since the Scrap Tire Program began in 1994, MES, in coordination with Maryland Department of the Environment, has managed 27 large scale Scrap Tire Cleanups, numerous Demonstration Projects on the use of recycled scrap tires and crumb rubber products and various other scrap tire related activities funded through the State's Scrap Tire Fund.

### SCRAP TIRE COLLECTIONS

No new collection events were scheduled during 2015, though initial planning and coordination were begun for a second Agricultural Scrap Tire Collection Event scheduled in early 2016. This event, as with the initial agricultural tire event,

will be a coordinated effort of MDE, MES and the Maryland Farm Bureau.

### SCRAP TIRE DUMP CLEANUPS

Since the MDE/MES Scrap Tire Program began in 1994, MES has managed the cleanup of 27 sites – removing and properly disposing of approximately 3.5 million abandoned tires.

In 2015, MES continued to monitor the stabilization and reforestation of the recently completed Garner/Brandywine Scrap Tire Clean-Up. This monitoring requirement will continue thru 2016 in accordance with the original project approval and permitting.

MES began the design and permitting of the Boehm/Crownsville Cleanup (Phase I) of the next Large Scale Scrap Tire Dump Cleanup. The Boehm/Crownsville dump located on a closed landfill is expected to yield over 215,000 abandoned tires when restoration activities are



*Harford Waste Disposal Center, Scarborough*

completed in FY 2016–2017.

MES is also working closely with MDE in the development of a project to clean up a site known as the Tyler/Clarksville Scrap Tire Clean up on the site of a former junkyard in Howard County. MES has actively supported MDE as their attorneys pursued court action to gain access and a consent decree which would allow design and permitting activities to begin. It appears that work will now begin in early CY 2016.

## **INTEGRATED SOLID WASTE MANAGEMENT**

### **HARFORD COUNTY**

In 2015, MES began assuming the responsibility for the operations of the Harford County Solid Waste Program based at the Harford Waste Disposal Center in Scarborough. These operations include landfill, composting operations and the Home Owners Drop-Off. Additionally, MES crews will be maintaining Used Oil Program collection sites around the

County and the Litter Patrol on Harford County roads.

## **INNOVATIVE SOLID WASTE PROGRAMS**

### **USED OIL PROGRAM**

This program, administered by MES on behalf of the Maryland Department of the Environment, remains a popular recycling initiative for automotive and boating enthusiasts. MES provides contractual collection, hauling, maintenance and administrative services to support do-it-yourself used oil collection centers. There are 135 collection locations statewide. MES also conducts audits of the existing collection locations to determine site viability and pollution prevention improvements recommended for each site. MES has also continued with its routine inspections and cleaning of all 135 sites across the state. In FY15, MES contractors collected 484,216 gallons of used oil and 24,479 gallons of antifreeze. Oil that is collected is sold to fund the program. Despite the collapse of the oil market worldwide MES will



*ECI co-generation facility, Landfill gas flare at Midshore I*

continue to provide this service at no cost to the communities that host this important recycling initiative.

### **BENEFICIAL USE OF LANDFILL GAS**

MES purchased the remaining interest in a central flare station from C2i–Methane (formerly Blue Source), located at the Midshore I Landfill in FY14. In the interim, MES has continued the sale of carbon credits from the destruction of landfill gas. MES is currently in negotiation with Easton Utilities to sell landfill gas for the generation of electricity from a portion of the Midshore landfill gas. It is anticipated that this project will be completed by the end of FY16.

### **ENVIRONMENTAL MONITORING**

MES currently performs environmental investigation, monitoring, and reporting tasks for 25 active and closed landfills throughout the State of Maryland. Sites are located as far west as Garrett County, as far east as Somerset

County, as far north as Harford County, and as far south as St. Mary’s County. Monitoring efforts include groundwater, surface water, landfill gas/ greenhouse gas, and stormwater.

### **ENVIRONMENTAL REMEDIATION**

MES currently operates groundwater and gas remediation systems at 7 facilities throughout the State of Maryland. The systems include 6 (soon to be 7) landfill gas collection and control systems, as well as 2 groundwater treatment systems. MES is currently employing innovative and “alternative” remediation strategies at several facilities, including monitored natural attenuation and groundwater remediation through the control of soil vapors.

### **EASTERN CORRECTIONAL INSTITUTION**

MES operates and maintains a wood fired co-generation facility at the Eastern Correctional Institution in Westover, MD generating steam, high temperature hot water and electricity for use



*Maryland Correctional Institution Steam Plant, Hagerstown*

by the Institution which houses approximately 3,400 inmates. The facility combusts approximately 55,000 tons per year of de-barked wood chips. MES provides approximately 85 percent of the electrical and 100 percent of the thermal needs for this facility from the co-generation facility. In FY14, MES began planning for an upgrade to the electric power system controls at ECI and expect that those upgrades will be completed in FY16. MES contracted with General Electric to upgrade the power system controls.

### **MARYLAND CORRECTIONAL INSTITUTION-HAGERSTOWN STEAM PLANT MANAGEMENT**

MES signed an intergovernmental agreement with the Maryland Department of Public Safety and Correctional Services to operate and maintain the MCI Power Plant. On July 1, 2014 MES took over the operation of the power house which consists of three (3) oil fired water tube boilers that produce and supply steam to the Correctional Facility for heating, kitchen and laundry use. July 1, 2015,

MES also took over the maintenance of the Steam Plant.

### **COMBINED HEAT AND POWER SYSTEM**

In 2015, MES solicited proposals from Maryland's Energy Performance Contract suppliers to develop and implement a Comprehensive Combined Heat and Power System, (CHP) and provide a guaranteed cost reduction program for the Maryland Department of Public Safety and Correctional Services (DPSCS), Hagerstown Correctional Facility (MCI-H). The purpose of this RFP was to select a provider to guarantee the energy performance and then finance, design and build a CHP for MCI-H that will supply all the heat loads and at a minimum, approximately 50% of the electricity loads for the Hagerstown campus. After reviewing proposals from a number of offerors, MES chose Johnson Controls for this project. The design of the facility will be completed in FY16 and construction will begin sometime in FY17.

*Masonville Cove*





# Maryland Environmental Service

259 Najoles Road  
Millersville, MD 21108

*(A Component Unit of the State of Maryland)*

Financial Statements

Fiscal Year Ended June 30, 2015

(With Independent Public Accountants' Report Thereon)

## FINANCIAL SECTION

**REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS 44**

**MANAGEMENT'S DISCUSSION AND ANALYSIS 46**

**STATEMENT OF NET POSITION 56**

**STATEMENT OF REVENUE, EXPENSES AND CHANGE IN NET POSITION 57**

**STATEMENT OF CASH FLOWS 58**

**MIDSHORE REGIONAL LANDFILL PRIVATE PURPOSE TRUST FUND STATEMENT OF NET POSITION 59**

**MIDSHORE REGIONAL LANDFILL PRIVATE PURPOSE TRUST FUND STATEMENT OF REVENUE,  
EXPENSES AND CHANGE IN NET POSITION 60**

**OTHER POST EMPLOYMENT BENEFIT PLAN STATEMENT OF PLAN NET POSITION 61**

**OTHER POST EMPLOYMENT BENEFIT PLAN STATEMENT OF CHANGE IN PLAN NET POSITION 62**

**NOTES TO FINANCIAL STATEMENTS 63**

**REQUIRED SUPPLEMENTAL INFORMATION FOR OTHER POSTEMPLOYMENT BENEFIT PLAN 83**

**REQUIRED SCHEDULE OF PROPORTIONATE SHARE OF NET PENSION LIABILITY 84**

**REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON  
COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL  
STATEMENTS PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS 85**



## Report of Independent Public Accountants

To the Board of Directors  
Maryland Environmental Service

### **Report on the Financial Statements**

We have audited the accompanying financial statements of the business type activities and fiduciary funds of the Maryland Environmental Service (the Service), a component unit of the State of Maryland, as of and for the year ended June 30, 2015, and the related notes to the financial statements, which collectively comprise the Service's basic financial statements as listed in the table of contents.

### **Management's Responsibility for the Financial Statements**

The Service's management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### **Auditor's Responsibility**

Our responsibility is to express opinions on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement. An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

200 International Circle • Suite 5500 • Hunt Valley • Maryland 21030 • P 410-584-0060 • F 410-584-0061



## **Opinions**

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Service as of June 30, 2015, and the changes in its financial position and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

## **Other Matters**

### **Adoption of New Accounting Standards**

As discussed in Note 1 to the financial statements, in 2015, the Service adopted the new accounting guidance from GASB statements No. 68, "Accounting and Financial Reporting for Pensions" and No.71, "Pension Transition for Contributions Made Subsequent to the Measurement Date". Our opinion will not be modified with respect to this matter.

### **Required Supplementary Information**

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis and Required Supplementary Information for Other Postemployment Benefit Plan on pages 3-11 and 40-41 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

### **Other Reporting Required by Government Auditing Standards**

In accordance with Government Auditing Standards, we have also issued our report dated September 28, 2015, on our consideration of the Service's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the Service's internal control over financial reporting and compliance.

Hunt Valley, Maryland  
September 28, 2015

200 International Circle • Suite 5500 • Hunt Valley • Maryland 21030 • P 410-584-0060 • F 410-584-0061

**Maryland Environmental Service  
Management's Discussion and Analysis  
June 30, 2015  
(In thousands except where noted)**

**Overview of Financial Statements**

Maryland Environmental Service (the Service) is an independent agency of the State of Maryland that provides environmental services to both the public and private sectors on a fee for service basis. Substantially all the Service's revenue is derived from the delivery of technical and operational environmental services. The Service is organized into four basic groups: Environmental Operations, Water/Wastewater Operations, Technical and Environmental Services and Administration. The financial statements present a report and use accounting methods similar to those employed by private sector companies.

The purpose of the discussion and analysis that follows is to provide an understanding of the financial performance and activities of the Service as of and for the fiscal year ended June 30, 2015 with 2014 for comparative purposes. As required supplementary information, the accompanying analysis of financial information should be used in conjunction with the financial statements and related notes thereto included elsewhere to assess the overall financial condition and reported operating results of the Service.

The following table presents condensed financial information about the Service's net position as of June 30, 2015 and 2014:

<b>Net Position</b> <i>(Expressed in Thousands)</i>		
	<b>2015</b>	<b>2014 as restated *</b>
Current and other assets	\$ 85,872	\$ 78,021
Capital assets	18,539	14,479
Total assets	104,411	92,500
Deferred outflows related to pensions	331	276
Current and long-term debt and capital leases	5,278	5,868
Other liabilities	77,217	66,341
Total liabilities	82,495	72,209
Deferred inflows related to pensions	230	-
Net position:		
Net investment in capital assets	13,261	8,611
Restricted	12	11
Unrestricted	8,744	11,945
Total net position	\$ 22,017	\$ 20,567

\* The June 30, 2014, balances have been restated to reflect the adoption of GASB No. 68, Accounting for Pensions.

**Maryland Environmental Service  
Management's Discussion and Analysis  
June 30, 2015  
(In thousands except where noted)**

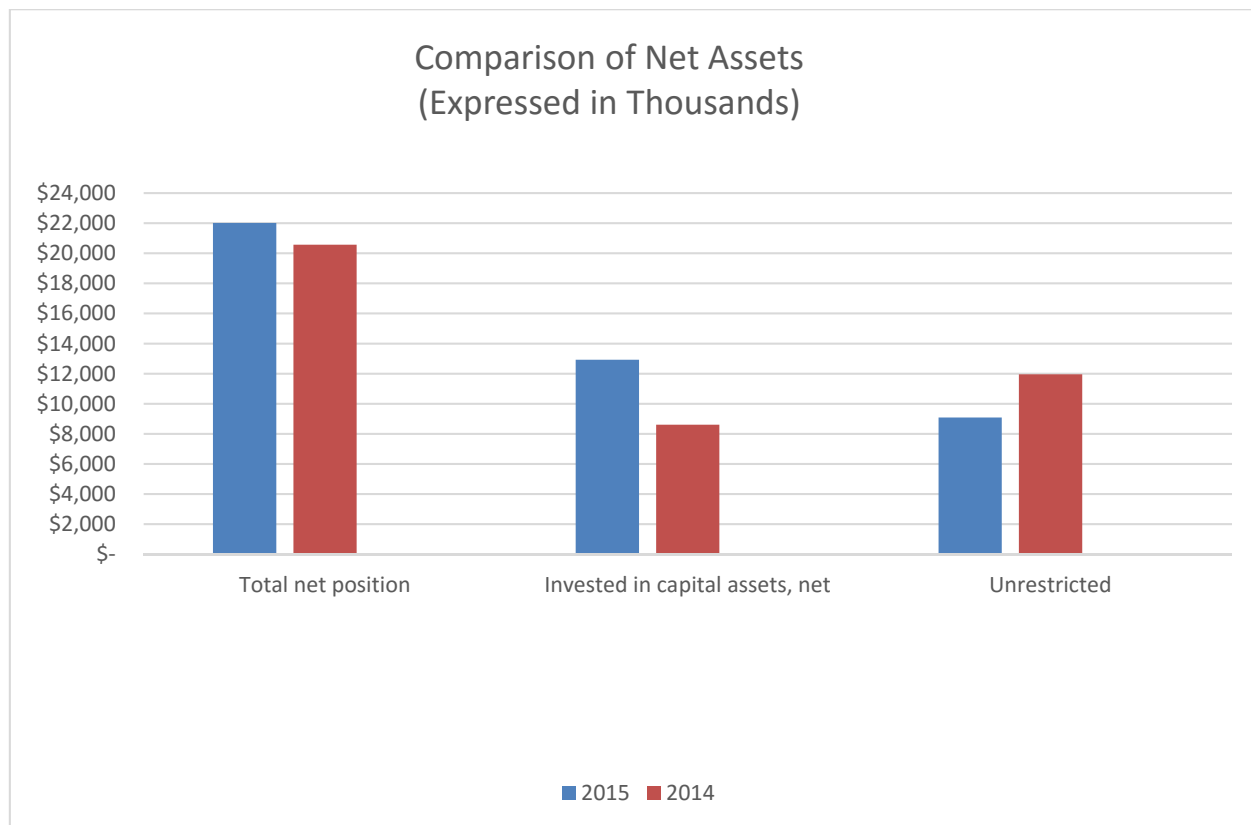
**Fiscal Year 2015**

Net position represents the difference between total assets and deferred outflows and total liabilities and deferred inflows.

The Service implemented GASB No. 68, Accounting for pensions. This had a zero impact on the net position as the Service recorded a due from project participants as the pension costs will be recovered from the participants.

Total net position increased \$1,450 thousand in 2015 which is related to the excess of revenue over expenses. Net investment in capital assets increased \$4,315 thousand from the addition to land and equipment, and payment of debt. The remaining components, restricted and unrestricted net position of \$9,091 thousand, represent funds available for future expenditures. Over time, increases and decreases in net position provide an indicator of improving or deteriorating financial position.

A comparison of years ended June 30, 2015 and 2014 are presented graphically below:



**Maryland Environmental Service  
Management's Discussion and Analysis  
June 30, 2015  
(In thousands except where noted)**

The following table presents condensed financial information about the Service's revenue, expenses and changes in net position for the years ended June 30, 2015 and 2014:

<b>Change in Net Position</b> <i>(Expressed in Thousands)</i>		
	<b>2015</b>	<b>2014</b>
Total operating revenue	\$ 141,173	\$ 110,317
Operating expenses		
Salaries and benefits	44,340	42,421
Other	81,249	53,859
General and administrative	13,746	12,676
Total operating expenses	139,335	108,956
Operating income	1,838	1,361
Nonoperating expense, net	(388)	(394)
Change in net position	1,450	967
Net position, beginning of year	20,567	19,600
Net position, end of year	\$ 22,017	\$ 20,567

The following table presents revenue by business type activity for the years ended June 30, 2015 and 2014:

<b>Revenue by Business Type Activity</b> <i>(Expressed in Thousands)</i>		
	<b>2015</b>	<b>2014</b>
Environmental Dredging & Restoration	\$ 53,325	\$ 31,222
Water/Wastewater Operations	24,196	22,753
Recycling	14,295	12,599
Solid Waste Management	16,289	15,831
Energy Co-Generation	7,891	6,264
Environmental Engineering	1,908	2,048
Environmental Monitoring	14,596	12,879
Hazardous Waste Treatment	5,500	5,175
Federal Grants	2,663	1,050
Other	510	496
Total Revenue	\$ 141,173	\$ 110,317

**Maryland Environmental Service  
Management's Discussion and Analysis  
June 30, 2015  
(In thousands except where noted)**

**Revenue by Business Type Activity Fiscal Year 2015**

The total increase in operating revenue for the year ended June 30, 2015 was \$30,856 thousand over June 30, 2014. The change represents an increase of 28% in operating revenue. There were increases in Environmental Monitoring of \$1,717 thousand, Environmental Dredging and Restoration of \$22,102 thousand, Water/Wastewater plant construction of \$1,443 thousand, and Recycling of \$1,696 thousand.

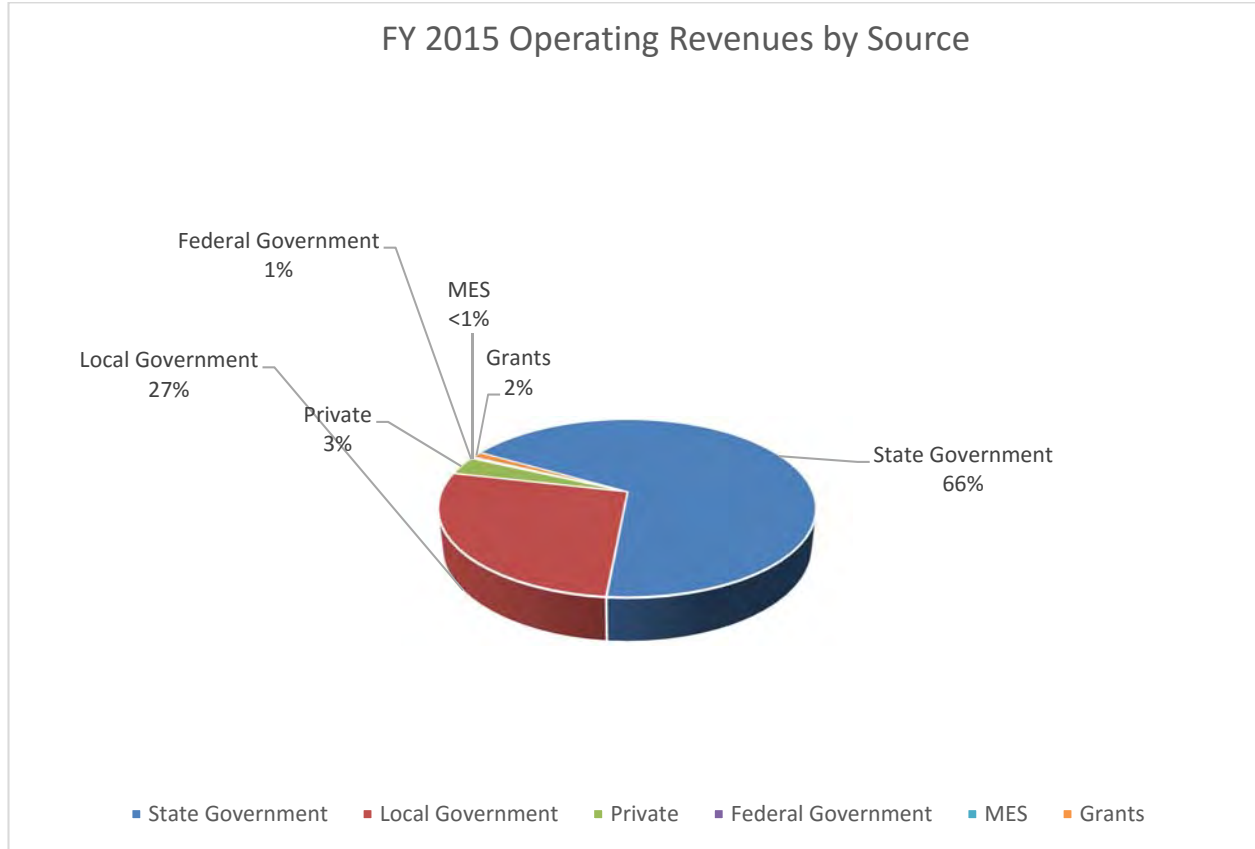
The largest increase for Environmental Monitoring and other projects continued to be the Oyster Restoration Project undertaken for Maryland Department of Natural Resources. Other projects included an E-reporting project also for the Department of Natural Resources and Hawkins Point. Increases to Environmental Dredging and Restoration revenue continued to be from the Masonville Dredged Material Containment Facility construction project. The Solid Waste Management revenue growth was due to an increase for Montgomery County Yard Waste and an upgrade to the ECI Cogeneration Plant. The Water/Wastewater construction project revenue changes included the continuation of upgrades to the Freedom District plant and other smaller plants throughout the state.

The following table presents revenue by source for the years ended June 30, 2015 and 2014:

<b>Revenue by Source</b> <i>(Expressed in Thousands)</i>		
	<b>2015</b>	<b>2014</b>
State government	\$ 95,014	\$ 67,471
Local government	38,389	37,124
Private	4,636	4,243
Federal government	129	160
MES product revenues	342	269
Federal Grants	2,663	1,050
Total Revenue	\$ 141,173	\$ 110,317

**Maryland Environmental Service  
Management's Discussion and Analysis  
June 30, 2015  
(In thousands except where noted)**

The following graph presents revenue by source for the year ended June 30, 2015:



**Maryland Environmental Service  
Management's Discussion and Analysis  
June 30, 2015  
(In thousands except where noted)**

**Fiscal Year 2015**

State government revenues increased by \$27,543 thousand in 2015, while local government revenue increased by \$1,265 thousand. All other sources of revenue increased by \$2,048 thousand.

The Oyster Restoration Project and the Masonville Dredged Material Containment Facility construction project continued to be the two large projects that contributed to the State revenue increases. The local government revenue increase was related to the Montgomery County Yard Waste project and the operation of the Baltimore County Single Stream Recycling facility.

**Fiscal Year 2014**

State government revenues increased by \$12,154 thousand in 2014, while local government revenue increased by \$4,125 thousand. All other sources of revenue increased by \$115 thousand.

The Oyster Restoration Project and the Masonville Dredged Material Containment Facility construction project were the two large projects that contributed to the State revenue increases. The local government revenue increase was related to the Baltimore County Single Stream Recycling Facility completion and limited solid waste management operations in Prince George's County.

**Operating Expenses**

Operating expenses are predominantly related to those classified as cost of goods and services, general and administrative, and depreciation on capital assets. Operating expenses were 99% of revenue in 2015 and 2014.

**Operating Income Fiscal Year 2015**

Operating income reported in 2015 was \$1,838 thousand compared to \$1,361 thousand in 2014, an increase of \$477 thousand. The reasons for the increase in operating income from the previous fiscal year were an increase in indirect cost recovery as a result of the growth in labor revenue and an increase in the project variances, particularly the GIS services and Tub Grinding services.

**Fiscal Year 2014**

Operating income reported in 2014 was \$1,361 thousand compared to \$1,207 thousand in 2013, an increase of \$154 thousand. The principal reason for the increase in operating income from the previous fiscal year was an increase in the project variances, particularly the GIS services and the Used Oil Recovery program.

**Maryland Environmental Service  
Management's Discussion and Analysis  
June 30, 2015  
*(In thousands except where noted)***

**Non-operating Revenue (Expense), Net Fiscal Year 2015**

Non-operating expenses, (net) decreased \$6 thousand to \$388 thousand in 2015. Non-operating items primarily include interest income and interest expense. For 2015, interest income increased by \$15 thousand and interest expense decreased by \$41 thousand, and a net loss on sale of equipment of \$50.

**Fiscal Year 2014**

Non-operating expenses, (net) increased \$58 thousand to \$394 thousand in 2014. Non-operating items primarily include interest income and interest expense. For 2014, interest income decreased by \$6 thousand and interest expense increased by \$68 thousand.

**Grants**

**Fiscal Year 2015**

Operating grants in 2015 totaled \$2,663 thousand compared to \$1,050 thousand in 2014. The increase was from a mapping grant from the Federal Emergency Management Agency.

**Fiscal Year 2014**

Operating grants in 2014 totaled \$1,050 thousand compared to \$1,215 thousand in 2013. A few small grants from the Environmental Protection Agency pertaining to Chesapeake Bay efforts and Garner/Brandywine and Federal Emergency Management funding remain.

**Maryland Environmental Service  
Management's Discussion and Analysis  
June 30, 2015  
(In thousands except where noted)**

**Investment in Capital Assets**

The following tables present capital assets, net of depreciation as of June 30, 2015 and 2014, and capital expenditures for the years ended June 30, 2015 and 2014:

**Capital Assets, Net of Depreciation  
(Expressed in Thousands)**

	2015	2,014
Land and improvements	\$ 4,262	\$ 1,040
Buildings and improvements	7,055	7,483
Infrastructure	372	240
Machinery and equipment	6,850	5,716
Total	\$ 18,539	\$ 14,479

**Capital Expenditures  
(Expressed in Thousands)**

	2015	2014
Autos and trucks	\$ 1,187	\$ 413
Land	3,222	-
Construction and production equipment	1,190	177
Computer hardware/software	176	294
Tools/machinery/equipment		65
Leasehold improvements	201	-
Total	\$ 5,976	\$ 949

**Fiscal Year 2015**

As of June 30, 2015, the carrying value of capital assets, net of depreciation was \$18,539 thousand, an increase of \$4,060 thousand from 2014. The increase is comprised of capital additions of \$5,976 thousand, net disposals of \$50 thousand, and depreciation of \$1,866 thousand. The capital additions for the year were fleet vehicle replacements, JD Edwards ERP system, construction equipment, and the acquisition of land.

**Fiscal Year 2014**

As of June 30, 2014, the carrying value of capital assets, net of depreciation was \$14,479 thousand, a decrease of \$987 thousand from 2013. The decrease is comprised of capital additions of \$949 thousand, net disposals of \$65 thousand, and depreciation of \$1,871 thousand. The capital additions for the year were fleet vehicle replacements, JD Edwards ERP system, and construction equipment.

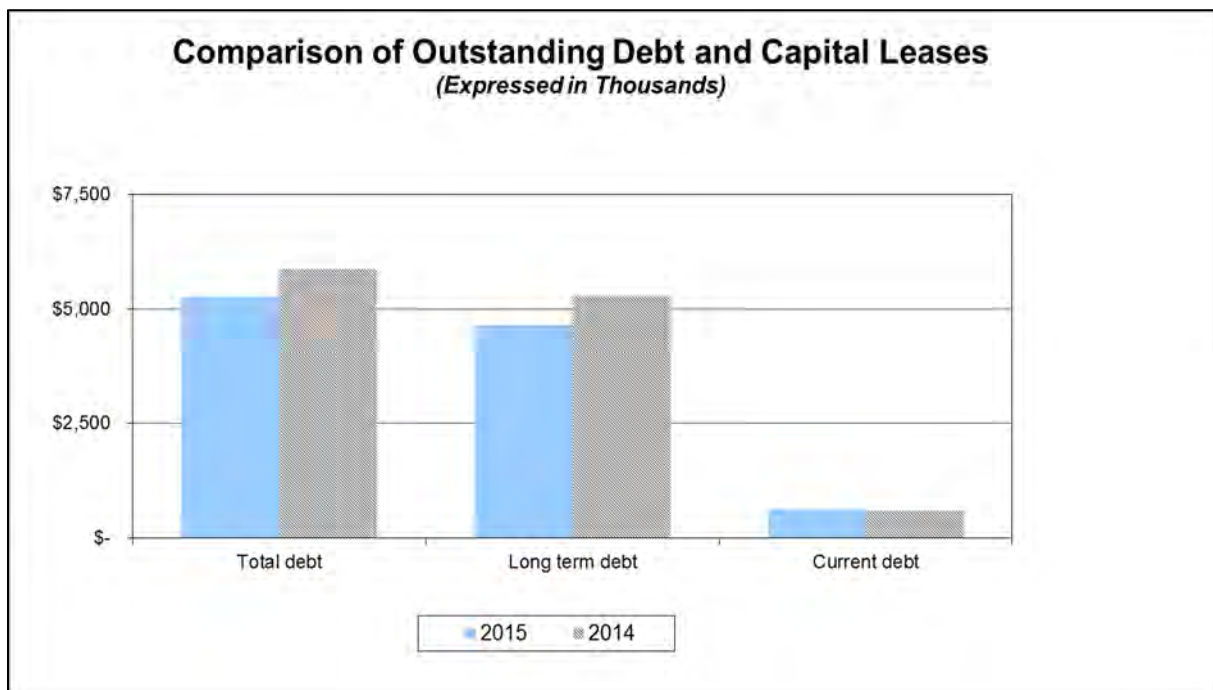
**Maryland Environmental Service  
Management's Discussion and Analysis  
June 30, 2015  
(In thousands except where noted)**

**Outstanding Debt**

The following table and graph present outstanding debt as of June 30, 2015 and 2014:

**Outstanding Debt and Capital Leases  
(Expressed in Thousands)**

	2015	2014
Capital leases	\$ 4,964	\$ 5,514
General obligation bond / note	314	354
<b>Total</b>	<b>\$ 5,278</b>	<b>\$ 5,868</b>



**Fiscal Year 2015**

As of June 30, 2015, outstanding debt was \$5,278 thousand, representing a net decrease in borrowing of \$590 from 2014. The net decrease consists of principal payments.

**Fiscal Year 2014**

As of June 30, 2014, outstanding debt was \$5,868 thousand, representing a net decrease in borrowing of \$561 from 2013. The net decrease consists of principal payments.

**MARYLAND ENVIRONMENTAL SERVICE  
FINANCIAL STATEMENT**

<i>Maryland Environmental Service</i>	
<i>Statement of Net Position</i>	
<i>As of June 30, 2015</i>	
<i>(Expressed in Thousands)</i>	
<b>Assets</b>	
Current assets:	
Cash and cash equivalents	\$ 48,326
Investments	10,211
Accounts receivable (net of allowance of \$50)	16,477
Unbilled project costs accrued	5,579
Other	259
Total current assets	80,852
Other assets:	
Restricted cash	194
Due from project participants	4,826
Capital assets, net of accumulated depreciation:	
Land	4,262
Buildings and improvements	7,055
Infrastructure	372
Machinery and equipment	6,850
Total capital assets	18,539
Total other assets	23,559
Total assets	104,411
Deferred outflows related to pensions	331
<b>Liabilities</b>	
Current liabilities:	
Accounts payable and accrued expenses	14,977
Accrued annual leave	2,916
Due to Midshore and other projects	13,806
Advances from project participants	39,535
Current portion of long-term debt and capitalized leases	621
Accrued workers' compensation costs	436
Total current liabilities	72,291
Other liabilities:	
Advances from project participants	1,066
Long-term debt and capitalized leases, net of current portion and bond discount	4,657
Accrued workers' compensation costs	2,379
Net Pension Liability	2,102
Total other liabilities	10,204
Total liabilities	82,495
Deferred inflows related to pensions	230
<b>Net Position</b>	
Net investment in capital assets	13,261
Restricted net position	12
Unrestricted net position	8,744
Total net position	\$ 22,017

The accompanying notes are an integral part of this financial statement.

*Maryland Environmental Service*  
**Statement of Revenue, Expenses and Change in Net Position**  
**For the year ended June 30, 2015**  
*(Expressed in Thousands)*

<b>Operating revenue:</b>	
Charges for services	\$ 138,510
Operating grants	2,663
<b>Total operating revenue</b>	<b>141,173</b>
<b>Operating expenses:</b>	
Salaries and benefits	44,340
Contractual services	29,719
Technical fees	10,342
Utilities	4,622
Repairs and maintenance	4,073
Materials and supplies	12,189
Land, structures and equipment	17,527
Depreciation	1,866
General and administrative	13,746
Other	911
<b>Total operating expenses</b>	<b>139,335</b>
<b>Operating income</b>	<b>1,838</b>
<b>Nonoperating revenue (expenses):</b>	
Investment income	32
Interest expense	(387)
Loss on sale of equipment, net	(33)
<b>Nonoperating expenses, net</b>	<b>(388)</b>
<b>Change in net position</b>	<b>1,450</b>
Net position, beginning of year	20,567
<b>Net position, end of year</b>	<b>\$ 22,017</b>

The accompanying notes are an integral part of this financial statement.

*Maryland Environmental Service*  
**Statement of Cash Flows**  
*For the year ended June 30, 2015*  
*(Expressed in Thousands)*

<b>Cash Flows From Operating Activities</b>	
Receipts from customers	\$ 140,537
Payments to suppliers	(87,729)
Payments to employees	(44,340)
Payments from project participants	6,409
Other payments project Midshore	(820)
Other	99
Net cash from operating activities	14,156
<b>Cash Flows From Capital and Related Financing Activities</b>	
Purchases of capital assets	(5,976)
Principal paid on capital debt	(590)
Interest paid on capital debt	(387)
Increase on lease	-
Other receipts/disbursements	32
Net cash from capital and related financing activities	(6,921)
<b>Cash Flows From Investing Activities</b>	
Purchases of investments	(8,000)
Sales and maturities of investments	5,803
Interest and dividends	34
Net cash from investing activities	(2,163)
Net changes in cash and cash equivalents	5,072
<b>Cash and cash equivalents - beginning of the year</b>	43,254
<b>Cash and cash equivalents - end of the year</b>	\$ 48,326
<b>Reconciliation of operating income to net cash provided by operating activities:</b>	
Operating income	1,838
Adjustments to reconcile operating income to net cash provided by operating activities:	
Depreciation expense	1,866
Loss on disposal	-
Change in assets and liabilities:	
Receivables, net	1,148
Other assets	(1,573)
Accounts and other payables	5,399
Due to project participants	6,394
Net Pension Liability	(215)
Net change due to/from Midshore	(821)
Accrued workers compensation	120
Net cash from operating activities	14,156

The accompanying notes are an integral part of this financial statement.

**Midshore Regional Landfill Private Purpose Trust Fund**  
**Statement of Net Position**  
**As of June 30, 2015**  
**(Expressed in Thousands)**

<b>Assets</b>	
Current assets:	
Cash and cash equivalents	\$ 80
Due from MES	13,806
Accounts receivable	567
Total current assets	14,453
Other assets:	
Restricted investments	2,230
Capital assets not depreciated	1,690
Capital assets being depreciated, net	23,348
Total capital assets	25,038
Total other assets	27,268
Total assets	41,721
<b>Liabilities</b>	
Current liabilities:	
Accounts payable and accrued expenses	631
Advances from project participants	483
Current portion of long-term debt and capitalized leases	1,020
Total current liabilities	2,134
Other liabilities:	
Long-term debt and capital leases, net of current portion and bond discount	21,040
Accrued landfill closure & postclosure care costs	9,372
Total other liabilities	30,412
Total liabilities	32,546
<b>Net Position</b>	
Net investments in capital assets	2,978
Net assets designated-closure/post closure	5,522
Net assets designated-Easton	867
Unrestricted net position	(192)
Total net position	\$ 9,175

The accompanying notes are an integral part of this financial statement.

**Midshore Regional Landfill Private Purpose Trust Fund**  
**Statement of Revenue, Expenses and Change in Net Position**  
**For the year ended June 30, 2015**  
**(Expressed in Thousands)**

<b>Operating revenue:</b>	
Charges for services	\$ 5,803
<b>Operating expenses:</b>	
Salaries and benefits	1,195
Contractual services	310
Technical fees	37
Utilities	40
Operations and maintenance	513
Materials and supplies	121
Land, structures and equipment	207
Depreciation	920
Closure/post closure	138
General and administrative	388
Other, net	27
Total operating expenses	3,896
Operating income	1,907
<b>Nonoperating revenue (expenses):</b>	
Interest income	10
Interest expense	(888)
Nonoperating expenses, net	(878)
<b>Change in net position</b>	<b>1,029</b>
Net position, beginning of year	8,146
<b>Net position, end of year</b>	<b>\$ 9,175</b>

The accompanying notes are an integral part of this financial statement.

*Maryland Environmental Service  
Other Post Employment Benefit Plan  
Statement of Plan Net Position  
As of June 30, 2015  
(Expressed in Thousands)*

<b>Assets</b>		
Cash and short-term investments	\$	151
Investments:		
Equities		1,278
Mutual funds		1,072
Total investments		2,350
Total assets		2,501
<b>Net position held in trust for other postemployment benefits</b>	<b>\$</b>	<b>2,501</b>

The accompanying notes are an integral part of this financial statement.

*Maryland Environmental Service  
Other Post Employment Benefit Plan  
Statement of Changes in Plan Net Position  
For the year ended June 30, 2015  
(Expressed in Thousands)*

<b>Additions</b>	
Employer contributions	319
Investment Income:	
Net decrease in fair value of investments	(61)
Interests and dividends	49
	(12)
Less investment expense	8
Net investment income	(20)
Total additions	299
<b>Deductions</b>	
Benefits paid	64
<b>Net increase</b>	<b>235</b>
<b>Net position held in trust for other postemployment benefits</b>	
Net position, beginning of year	2,266
<b>Net position, end of year</b>	<b>\$ 2,501</b>

The accompanying notes are an integral part of this financial statement.

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(1) Organization and Summary of Significant Accounting Policies**

***(a) Reporting Entity***

The General Assembly created Maryland Environmental Service (the Service) in 1970 as an agency of the Maryland State Department of Natural Resources. Major activities of the Service include the provision of water supply and wastewater treatment, sewage sludge management, recycling assistance, solid waste management, and resource recovery from waste and dredging services. Services are provided to State of Maryland owned facilities, local communities, political subdivisions, Federal facilities, and the private sector.

Pursuant to Chapter 196 of the 1993 Acts of the Maryland General Assembly, effective July 1, 1993, the Service was established as an instrumentality of the State and a public corporation independent of the Department of Natural Resources. Chapter 196 also expanded the Service's Board of Directors from seven to nine members; provided for the appointment of the Deputy Director, Secretary and Treasurer by the Director, with the approval of the Governor; provided for the appointment of the remaining Board members by the Governor, with the advice and consent of the Senate; exempted the Service from most provisions of the State Procurement Law; established the retirement and health benefits available for certain employees of the Service; authorized the Service to create a new personnel system; exempted the Service from most provisions of the State Merit System Law effective January 1, 1995; authorized the Service to create private corporations; authorized the Service to exercise the corporate powers granted Maryland corporations under the Maryland General Corporation Law; and made other changes to the law governing the Service. For financial reporting purposes, the Service is considered a component unit of the State of Maryland.

The Service operates public and private water and wastewater treatment plants throughout the State of Maryland. Licensed and certified personnel operate and maintain the facilities. Projects range in size from basic pumping stations to advanced wastewater treatment facilities. Capabilities include laboratory testing, operations oversight, and management, operations, maintenance and plant supervision.

In the area of solid waste management, the Service operates state-of-the-art waste facilities including municipal solid waste and rubble landfills, incinerators, resource reclamation facilities in Baltimore and Montgomery Counties, and transfer stations in Baltimore County.

The Service has the capabilities to provide site analysis, planning, engineering, design and construction services, and the resources to finance and build water, wastewater and solid waste projects. The Service operates the Hart-Miller Island, Poplar Island, and Cox Creek Dredge Disposal Facilities as well as provides technical support for the Maryland Port Administration.

The Service produces and sells yard waste compost for Montgomery, Baltimore, Anne Arundel, Howard and Prince George's Counties under the registered trademark Leafgro®.

Certain employees of the Service are eligible to participate in the Retiree Medical Reimbursement Plan (OPEB Plan), which is a single employer defined benefit plan administered by the Service. The plan is considered part of the Service's financial reporting entity. A separate report for the OPEB Plan is prepared.

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(1) Organization and Summary of Significant Accounting Policies (continued)**

***(b) Measurement focus, basis of accounting, and financial statement presentation***

The accompanying financial statements, which are all business type activities, present the financial position and results of operations of all of the Service's activities. The Service utilizes the accrual basis of accounting and the economic measurement focus in preparing its financial statements wherein revenues are recognized when earned and expenses are recognized when incurred.

The Service also reports a private purpose trust fund. The purpose of this fund is to account for the operations of the Midshore Regional Landfills. The landfills, located in Talbot County, Maryland and Caroline County, Maryland, are operated for the benefit of the governments of Caroline, Kent, Queen Anne's and Talbot Counties. The counties have the ultimate responsibility for payment of operating expenses and debt of the facility.

***(c) Revenue Recognition***

The Service distinguishes operating revenue and expenses from nonoperating items. Operating revenue and expenses generally result from providing services and producing and delivering goods in connection with ongoing operations. The principal operating revenue of the Service are charges to customers for services. Operating expenses include the cost of services, administrative expenses, and depreciation on capital assets. All revenue and expenses not meeting this definition are reported as nonoperating revenue and expenses. Interest income is recognized as nonoperating revenue as earned. Grants and similar items are recognized as soon as all eligibility requirements imposed by the provider have been met.

***(d) Cash Equivalents***

The Service's cash is considered to be cash on hand and demand deposits. Cash equivalents include overnight investment funds.

***(e) Investments***

Investments are recorded at fair value, which is based on quoted market prices.

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(1) Organization and Summary of Significant Accounting Policies** (continued)

*(f) Capital Assets*

Capital assets are stated at cost and consist primarily of Service-owned assets related to projects operated for participants. Certain contracts contain provisions whereby the participants have the option to purchase certain equipment during the terms of the contracts.

The Service defines capital assets as assets with an initial, individual cost of more than \$5,000 (amount not rounded to thousands) and an estimated useful life in excess of one year. The costs of normal maintenance and repairs that do not add to the value of the assets or materially extend an assets' life are not capitalized.

Major outlays for capital assets and improvements are capitalized as projects are constructed. Interest incurred net of interest earned during the construction phase of capital assets is included as part of the capitalized value of the assets constructed. No interest was capitalized in fiscal year 2015 and 2014.

Depreciation is computed using the straight-line method over the estimated useful lives of the capital assets, which range from 3 to 40 years. For purposes of the statements of revenue, expenses and changes in net position, the depreciation on assets, which are not directly related to projects, are included in general and administrative expenses and product costs.

Certain contracts contain provisions whereby the Service purchases equipment or constructs assets for clients. These expenses are recorded as land, structures and equipment in the statements of revenue, expenses and changes in net position and are not capitalized.

*(g) Compensated absences*

Employees of the Service based on time in service earn vacation benefits. The rights to such benefits are vested and recorded as earned. Sick leave is also earned and accumulated by employees based on time in service. However, such benefits do not vest and are not paid or recorded unless sickness causes employees to be absent.

*(h) Pensions*

Certain employees of the Service are members of the Maryland State Retirement and Pension System. Employees are members of the Employees Retirement System of the State of Maryland (ERS). ERS is part of the State of Maryland Retirement and Pension System which is considered a single multiple employer cost sharing plan.

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of ERS and additions to/deductions from ERS' fiduciary net position have been determined on the same basis as they are reported by ERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(1) Organization and Summary of Significant Accounting Policies (continued)**

**(h) Pensions (continued)**

Deferred Outflows/Inflows of Resources

In addition to assets, the Statement of Net Position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element, deferred outflows of resources, represents a consumption of net position that applies to a future period(s) and so will not be recognized as an outflow of resources (expense/ expenditure) until then.

In addition to liabilities, the Statement of Net Position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element, deferred inflows of resources, represents an acquisition of net position that applies to a future period(s) and so will not be recognized as an inflow of resources (revenue) until that time.

**(i) Other Post-Employment Benefits (OPEB)**

*Plan Description.* The Service provides a self-funded medical reimbursement plan to eligible employees not covered under the State Retiree Medical Plan. To be eligible, employees must retire with 30 years of service with the Agency or retire at age 60 or older and have 16 years of employment with the Service. Retired employees or their spouses ages 60 and over can be reimbursed up to \$3,600 per calendar year for medical expenses. Retirees are not required to contribute to the plan.

*Funding Policy.* The Service has an irrevocable trust, the Maryland Environmental Service OPEB Trust Fund, for the sole purpose of funding post-employment benefits for current and future retirees. Contribution requirements are determined according to actuarial valuations. The Service contributed \$319 thousand in 2015. Total reimbursement of medical expenses was \$64 thousand in 2015.

*Annual OPEB Cost and Net Obligation.* The Service's annual other post-employment benefit (OPEB) cost (expense) is calculated based on the *annual required contribution of the employer (ARC)*, an amount actuarially determined in accordance with the parameters of GASB Statement 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed thirty years. For the fiscal year ended, the Service's annual OPEB cost was \$248 thousand.

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(1) Organization and Summary of Significant Accounting Policies** (continued)

*(i) Other Post-Employment Benefits (OPEB) (continued)*

The following table shows the components of the Service's annual OPEB cost for the year.

OPEB Cost (In Thousands)	<u>2015</u>
Normal cost	\$ 126
Minimum amortization of UAL	105
Interest adjustment to year- end	<u>17</u>
Annual required contribution / OPEB cost	248
Contributions made	<u>(319)</u>
Increase in net OPEB assets	(71)
Actuarial change in methods and adjustments	71
Net OPEB asset - beginning of year	<u>-</u>
Net OPEB asset - end of year	<u>\$ -</u>

*Funding Status and Funding Process.* The funded status of the plan as of July 1, 2013, was as follows (in thousands):

	<u>7/1/2013</u>
Actuarial valuation date	
Actuarial value of assets	\$ 1,702
Actuarial accrued liability	3,483
Unfunded actuarial liability	1,781
Funded ratio	48.9 %
Annualized covered payroll	\$ 34,048
Ratio of unfunded actuarial liability to annual covered payroll	5.20 %
Net OPEB liabilities as of the valuation date	\$ -
Actuarial cost method	Entry age

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(1) Organization and Summary of Significant Accounting Policies** (continued)

*(i) Other Post-Employment Benefits (OPEB) (continued)*

As of the valuation date, the plan was 48.9% percent funded. The actuarial accrued liability for benefits was \$3,483 thousand resulting in an unfunded actuarial accrued liability of \$1,781 thousand.

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the Service are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future.

*Actuarial Methods and Assumptions.* Projections of benefits for reporting purposes are based on the substantive plan (the plan as understood by the Service and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of benefit costs of the Service to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with long-term perspective of the calculations.

In the July 1, 2013, actuarial valuation, the entry age actuarial cost method was used. The actuarial assumptions included a 7.5% estimated long-term investment yield on the investments that are expected to be used to finance the payment of benefits, which are the assets held in the trust.

A minor number of Service employees are enrolled in the State of Maryland's Retirement and Pension plans. These employees are eligible to receive medical coverage under the same conditions as State employees. Costs are billed by the State as a percentage markup of health insurance costs for current employees participating in the State Retirement and Pension plans. Total costs were \$0 in 2015.

*(j) Advances from Project Participants*

Advances from project participants are received by the Service as provided for under contracts and are generally for working capital purposes. Such advances are recorded as a liability and are generally refunded to project participants at the end of the related contracts.

*(k) Bond Discount*

Bond discount is amortized to interest expense using the effective interest method over the contractual term of the bonds.

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(1) Organization and Summary of Significant Accounting Policies (continued)**

**(l) Arbitrage**

The U.S. Treasury has issued regulations on calculating the rebate due to the Federal government on arbitrage profits and determining compliance with the arbitrage rebate provisions of the Tax Reform Act of 1986. Arbitrage profits arise when the Service temporarily invests the proceeds of tax-exempt debt in securities with higher yields. The Service treats the estimated rebate payable as a reduction of any interest income earned. As of June 30, 2015, there were no arbitrage rebate liabilities.

**(m) Use of Estimates**

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingencies at the date the financial statements and the reported amounts of revenues and expenses during the period. Actual results could differ from these estimates.

**(n) Recent Pronouncements**

In 2015, the Service adopted Governmental Accounting Standard Board (GASB) Statement No. 68, entitled Accounting and Financial Reporting for Pensions, an amendment of GASB Statement No. 27, Statement No. 69, entitled Government Combinations and Disposals of Government Operations, and Statement No. 71, entitled Pension Transition for Contributions Made Subsequent to the Measurement Date—an amendment of GASB Statement No. 68.

Due to the implementation of GASB Statement No. 68, the Service recorded a beginning net pension liability and a beginning deferred outflow of resources for contributions subsequent to the measurement date for all the defined benefit pension plans. The net pension liability recorded was offset by an amount due from project participants to reflect the recovery of the pension costs from its participants. Thus, the net impact on the net position as of June 30, 2014, was zero.

**(o) Implementation of Accounting Pronouncement**

As of the year ended June 30, 2015, GASB issued Statement No. 72, entitled *Fair Value Measurement and Application*; Statement No. 73, entitled *Accounting and Financial Reporting for Pensions and Related Assets That are Not within the Scope of GASB Statement 68*, and *Amendments to certain Provisions of GASB Statements 67 and 68*; GASB Statement No. 74 entitled, *Financial Reporting For Postemployment Benefit Plans Other Than Pension Plans*; GASB Statement No. 75 entitled, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*; GASB Statement No. 76 entitled, *The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments*. These statements may have a material effect on the Service's financial statements once implemented. The Service will be analyzing the effects of these pronouncements and plans to adopt them as applicable by their effective date.

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(2) Cash and Cash Equivalents and Investments**

State statutes require that deposits and investments with financial institutions be fully collateralized. The investment policies for all of the Service's funds are the same as those of the State of Maryland Treasurer (Financial Procurement Article 6-222). The Service's cash is considered to be cash on hand and demand deposits. Cash and cash equivalents totaled \$48,326 thousand as of June 30, 2015. Included, as cash equivalents for financial statement presentation, were certain overnight investments of \$48,938 as of June 30, 2015, which are included in the investment discussion below. Investments are valued at fair value, which is based on quoted market prices.

The Finance and Procurement Article 6-222 defines the types of securities authorized as appropriate investments for the Service and the conditions for making investment transactions. Investment transactions may be conducted only through qualified depositories, certified dealers, or directly with issuers of the investment securities. The National Resource Article 3-126 authorizes the investment in obligation as described in the Finance and Procurement Article 6-222.

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The Service policy for managing its exposure to fair value loss arising from increasing interest rates is to comply with the State. The Service intends to hold investments until maturity to reduce adverse effect of changes in interest rates.

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Service's policy for reducing its exposure to credit risk is to comply with the State, which states that investments with financial institutions must be fully collateralized.

As of June 30, 2015, the Service had the following investments and quality ratings:

Investment Type	Ratings by Organization Moody's	Fair Value (In Thousands)	Investment Maturities (in Years)					
			Less than 1	1-5	6-10	11-15	More than 15	
Bank of America FNMA	Aaa	\$ 10,211	\$ 10,211	\$ -	\$ -	\$ -	\$ -	\$ -
Total		\$10,211	\$10,211	\$ -	\$ -	\$ -	\$ -	\$ -

As of June 30, 2015, the Midshore Regional Landfill had the following investments and quality ratings:

Investment Type	Ratings by Organization Moody's	Fair Value (In Thousands)	Investment Maturities (in Years)					
			Less than 1	1-5	6-10	11-15	More than 15	
Money Market Funds	Aaa	\$ 2,230	\$ 2,230	\$ -	\$ -	\$ -	\$ -	\$ -

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(2) Cash and Cash Equivalents and Investments** (continued)

Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer. The Service's policy for reducing this risk of loss is to comply with State regulation.

The issuance of debt is authorized by National Resource Article 3-112. Each Bond issue includes a Tax and Section 148 Certificate, which specifies the investment type and yield requirements.

Restricted cash and investments include deposits and investments that relate to the bond indentures and restricted project funds, which are not available to pay the general operating expenses of the Service.

The restricted cash and investments are comprised of the following funds as of June 30, 2015:

Maryland Environmental Service:

	<b>(In Thousands)</b>
Service held:	
Project restricted	\$ 194

	<b>(In Thousands)</b>
Trustee held:	
Interest	\$ 4
Closure Fund	759
Construction Funds	644
Service held:	
Liability Fund	823
	\$ 2,230

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(2) Cash and Cash Equivalents and Investments (continued)**

OPEB Trust:

All investments are valued at fair value. Fair value for investments is determined using quoted market value of securities. Assets held in trust are held in a custodial account for which the custodian makes no investment decisions. PNC Institutional Investments is the advisor that provides investment management services.

The Service follows the asset allocation policy adopted by the State of Maryland for the Post- Retirement Health Benefits Trust (the Plan).

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The Plan's investment policy does not limit investment maturities as a means of managing its exposure to fair value losses arising from increases interest rates.

For an investment, custodial credit risk is the risk that, in the event of the failure of the counterparty, the Plan would not be able to recover the value of its investments that are in the possession of an outside party. Investment securities are exposed to custodial risk if the securities are uninsured, are not registered in the name of the Plan, and are held by either (a) the counterparty or (b) the counterparty's trust department or agent but not in the Plan's name. Investments of \$2,349,550 are uncollateralized and exposed to credit risk as of June 30, 2015.

Concentration of credit risk is the risk of loss attributed to the magnitude of the Plan's investment in the securities of a single issuer. As of June 30, 2015, the Plan had the following investments, which represented 5% or more of total investments:

Issue	Fair Value	Percentage
iShares MSCI EAFE Index Fund	\$ 589,778	27%
Vanguard Total Stock Market ETF	501,130	23
Dodge & Cox International Stock Fund	501,152	23
Vanguard Total Bond Index Fund	351,944	16
T Rowe Price Real Estate Fund	218,829	10

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(3) Capital Assets (In Thousands)**

The tables below represent the changes in capital assets for the year ended June 30, 2015:

Maryland Environmental Service:

<b>2015</b>	<b>Balance</b>		<b>Transfers</b>		<b>Balance</b>
	<b>06/30/14</b>	<b>Additions</b>	<b>Deletions</b>	<b>In/Out</b>	<b>06/30/15</b>
Capital assets, not depreciated					
Land and improvements	\$ 1,040	\$ 3,222	\$ -	\$ -	\$ 4,262
Capital assets, being depreciated					
Structures and improvements	30,415	201	-		30,616
Equipment	16,114	2,553	(801)	-	17,866
Total capital assets being depreciated	<u>46,529</u>	<u>2,754</u>	<u>(801)</u>	<u>-</u>	<u>48,482</u>
Less: accumulated depreciation for					
Structures and improvements	22,692	497	-		23,189
Equipment	10,398	1,369	(751)	-	11,016
Total accumulated depreciation	<u>33,090</u>	<u>1,866</u>	<u>(751)</u>	<u>-</u>	<u>34,205</u>
Total capital assets, net	<u>\$ 14,479</u>	<u>\$ 4,110</u>	<u>\$ (50)</u>	<u>\$ -</u>	<u>\$ 18,539</u>

Midshore Regional Landfill:

<b>2015</b>	<b>Balance</b>		<b>Transfers</b>		<b>Balance</b>
	<b>06/30/14</b>	<b>Additions</b>	<b>Deletions</b>	<b>In/Out</b>	<b>06/30/15</b>
Capital assets, not depreciated					
Land and improvements	\$1,690	\$ -	\$ -	\$ -	\$ 1,690
Construction in progress	992	5,219	(6,211)	-	-
Total capital assets, not depreciated	<u>2,682</u>	<u>5,219</u>	<u>-</u>	<u>-</u>	<u>1,690</u>
Capital assets, being depreciated					
Structures and improvements	33,402	6,424	-	-	39,826
Equipment	4,976	16	(562)	-	4,430
Total capital assets being depreciated	<u>38,378</u>	<u>6,440</u>	<u>(562)</u>	<u>-</u>	<u>44,256</u>
Less: accumulated depreciation for					
Structures and improvements	15,973	691	-	-	16,664
Equipment	4,573	228	(557)	-	4,244
Total accumulated depreciation	<u>20,546</u>	<u>919</u>	<u>(557)</u>	<u>-</u>	<u>20,908</u>
Total capital assets, net	<u>\$20,514</u>	<u>\$10,740</u>	<u>(\$5)</u>	<u>\$ -</u>	<u>\$25,038</u>

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(4) Construction Commitments**

There were no new construction commitments outstanding as of June 30, 2015.

**(5) Concentrations of Credit**

The Service derived approximately 69% of its revenue in 2015 from providing services to the State of Maryland.

**(6) Leases (In Thousands)**

Operating Leases

The Service leases office, warehouse, and parking space under operating leases, which expire over the next twenty years.

Rent expense for operating leases was \$139 thousand for the year ended June 30, 2015.

Capital Leases

The Service has entered into several leases for financing the building, furniture, fixtures and equipment used in administration and project operations. These lease agreements qualify as capital leases for accounting purposes, therefore, have been recorded at the present value of their future minimum lease payments as of the inception date.

The future minimum lease obligations from capital leases and the net present value of these minimum lease payments as of June 30, 2015, were as follows:

<b>Years ending June 30:</b>		
2016	\$	842
2017		842
2018		842
2019		842
2020		842
2021-2025		1,967
Total minimum lease payments		6,177
Less: amount representing interest		1,213
Present value of minimum lease payments		4,964
Less: current portion		580
Long-term portion of capital leases	\$	4,384

Certain assets acquired using capital leases are held in custody for various customers. Accordingly, such assets are not capitalized by the Service.

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(7) Debt (In Thousands)**

Long-term debt (including current portion) consists of the following as of June 30, 2015:

Maryland Environmental Service:

Bank of America- General Obligation Bond

Interest at 4.05% and principal due in quarterly installments of \$18 through March 31, 2022.	\$ 314
Less: current portion	<u>41</u>
Long-term portion of debt	<u><u>\$ 273</u></u>

Future minimum payments for long-term debt as of June 30, 2015, were due as follows:

<b>(In Thousands)</b>				
<b><u>Years ending June 30:</u></b>	<b><u>Total</u></b>	<b><u>Principal</u></b>	<b><u>Interest</u></b>	
2016	\$ 53	\$ 41	\$ 12	
2017	53	43	10	
2018	53	45	8	
2019	53	47	6	
2020	53	48	5	
2021-2022	<u>94</u>	<u>90</u>	<u>4</u>	
Total	<u><u>\$ 359</u></u>	<u><u>\$ 314</u></u>	<u><u>\$ 45</u></u>	

The Landfill Project Revenue Bonds, 1993 Series, were issued in connection with the acquisition and construction of a sanitary landfill facility in Garrett County and the closure of an existing landfill facility. Garrett County leased the site of the landfill to the Service for a term equal to the term of the bonds and will pay the Service a service fee to cover the costs of financing and operating the landfill, including payment of principal and interest on the bonds. The bonds constitute special obligations of the Service payable solely from revenue from the landfill.

The General Obligation Bond of 2007 was issued to finance the acquisition of property associated with a project in Talbot County. Costs associated with carrying and maintaining the property will be charged to the project, however the debt is payable from Agency resources.

The Master Equipment Lease Purchase Agreements with financing institutions are used to finance the purchase of equipment used to build and operate various project facilities. The Service charges for the use of the construction and operating equipment and the revenues received are used to retire the associated debt and to purchase additional equipment. Substantially, all assets under the agreements serve as collateral under such agreements.

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(7) Debt (In Thousands)** (continued)

The various trust indentures stipulate that the value of the assets in the debt service reserve funds (recorded as restricted cash or investments) meet the related debt service reserve fund requirements. As of June 30, 2015, such debt service reserve requirements were met, and management believes the Service is in compliance with all other significant requirements of the indentures.

Long-term debt (including current portion) consists of the following as of June 30, 2015:

Midshore Regional Landfill:

Midshore II Regional Landfill Project Revenue Bonds, Series 2011; February 2011

\$15,760 (plus bond premium of \$481); interest at 3.0% to 5.1% paid semiannually on May 1 and November 1; due in annual installments beginning 2013 through 2030 in varying amounts from \$600 to \$1,385.	\$ 16,240
---	-----------

Midshore II Regional Landfill Project Revenue Bonds, Series 2014

\$4,253 ; interest at 3.14% paid semiannually on May1 and November 1; due in annual installments beginning 2014 trough 2029 in varying amounts from \$247 to \$369	4,253
--	-------

Hobbs Road Landfill Closure Project Water Quality Bond, Series 2011A; April 2011

\$1,567; interest at 1.1% paid semiannually in February and August; due in annual installments beginning 2013 through 2031 in varying amounts from \$90 to \$111.	1,567
---	-------

Total	22,060
Less: current portion	1,020
	21,040
Long-term portion of debt	\$ 21,040

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(7) Debt (In Thousands)** (continued)

Midshore Regional Landfill:

Future minimum payments for long-term debt as of June 30, 2015, were due as follows:

<b>(In Thousands)</b>				
<b>Years ending June 30:</b>	<b>Total</b>	<b>Principal</b>	<b>Interest</b>	
2016	\$ 1,913	\$ 1,021	\$ 892	
2017	1,913	1,059	854	
2018	1,914	1,098	816	
2019	1,914	1,137	777	
2020	1,913	1,182	731	
2021-2025	9,560	6,720	2,840	
2026-2030	9,182	7,934	1,248	
2031	1,464	1,429	35	
	<u>29,773</u>	<u>21,580</u>	<u>8,193</u>	
Plus: Unamortized bond premium	480	480	-	
<b>Total</b>	<b><u>\$ 30,253</u></b>	<b><u>\$ 22,060</u></b>	<b><u>\$ 8,193</u></b>	

The Regional Landfill Project Revenue Bonds, 2011 Series, were issued in connection with the construction of the Mid-shore II Landfill Facility. The bonds constitute special obligations of the Service and are payable solely from revenues (tipping fees and supplemental fees) from the project pledged by the Service under the bond indentures. Neither the State of Maryland, nor any political subdivision, nor the Service shall be obligated to pay the bonds or the interest thereon, except from such project revenue. In the event of any participating county's failure to pay any amounts required under the related Waste Service Agreement when due, the Service may accept Acceptable Waste generated outside the Mid-shore Counties. In addition, the State Intercept Provision Section 3-108(b) provides that if a Mid-shore fails to pay the Service within 60 days of the due date as established by contract, all State funds, or that portion of them required, relating to the income tax, the tax on racing, the recordation tax, the tax on amusements and the license tax which would otherwise be distributed to such Mid-shore County by the Comptroller of Maryland shall be paid directly to the Service.

The Maryland Environmental Service Water Quality Bond, Series 2011A, was issued in connection with the closure and capping of the Hobbs Road Landfill. The bond constitutes special obligations of the Service and are payable solely from revenues (tipping fees and supplemental fees) from the project pledged by the Service under the bond indentures. Neither the State of Maryland, nor any political subdivision, nor the Service shall be obligated to pay the bonds or the interest thereon, except from such project revenue. In the event of any participating county's failure to pay any amounts required under the related Waste Service Agreement when due, the Service may accept Acceptable Waste generated outside the Mid-shore Counties. In addition, the State Intercept Provision Section 3-108(b) provides that if a Mid-shore fails to pay the Service within 60 days of the due date as established by contract, all State funds, or that portion of them required, relating to the income tax, the tax on racing, the recordation tax, the tax on amusements and the license tax which would otherwise be distributed to such Mid-shore County by the Comptroller of Maryland shall be paid directly to the Service.

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(7) Debt (In Thousands)** (continued)

Midshore Regional Landfill: (continued)

The Regional Landfill Project Revenue Bond, 2014 Series, was issued in connection with the construction of a new landfill cell to increase the capacity of the Mid-shore II Regional Landfill. The bond constitutes a special obligation of the Service and is payable solely from revenues (tipping fees and supplemental fees) from the project pledged by the Service under Indenture of Trust. Neither the State of Maryland, nor any political subdivision, nor the Service shall be obligated to pay the bond or the interest thereon, except from such project revenues. In the event of any participating county's failure to pay any amounts required under the related Waste Disposal Service Agreement when due, the Service may accept Acceptable Waste generated outside the Mid-shore Counties. In addition, the State Intercept Provision, Md. NR Code Ann., Section 3- 108(b), provides that if any local government fails to pay the Service within 60 days of the due date as established by contract, all State funds, or that portion of them required, relating to the income tax, the tax on racing, the recordation tax, the tax on amusements and the license tax which would otherwise be distributed to such local government, including a Mid-shore County, by the Comptroller of Maryland shall be paid directly to the Service.

The following table represents changes in long-term liabilities for the years ended June 30, 2015 (in thousands):

Maryland Environmental Service:

<b>2015</b>	<b>Beginning Balance</b>	<b>Additions</b>	<b>Reductions</b>	<b>Ending Balance</b>	<b>Due Within One Year</b>
Advances from project participants	\$ 34,207	\$ 44,523	\$ (38,129)	\$ 40,601	\$ 34,207
Capitalized leases	5,514	-	(550)	4,964	580
Long-term debt	354	-	(40)	314	41
Workers' compensation	2,695	120	-	2,815	436
Net Pension Liability	2,317	-	(215)	2,102	-
Long-term liabilities	<u>\$ 45,087</u>	<u>\$ 44,643</u>	<u>\$ (38,934)</u>	<u>\$ 50,796</u>	<u>\$ 35,264</u>

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(7) Debt (In Thousands)** (continued)

Midshore Regional Landfill:

<b>2015</b>	<b>Beginning Balance</b>	<b>Additions</b>	<b>Reductions</b>	<b>Ending Balance</b>	<b>Due Within One Year</b>
Long-term debt	\$ 23,079	\$ -	\$ (1,019)	\$ 22,060	\$ 1,021
Landfill closure & post closure care	9,818	362	(808)	9,372	-
Long-term liabilities	<u>\$ 32,897</u>	<u>\$ 362</u>	<u>\$ (1,827)</u>	<u>\$ 31,432</u>	<u>\$ 1,021</u>

**(8) Unrestricted Net Position**

Total unrestricted net position as of June 30, 2015, was as follows:

	<u>Amount</u>
Total unrestricted net position	<u>\$ 8,744</u>

**(a) Business Research and Development/Contingency**

The Service has dedicated funds for the furtherance of its program development activities. These uses may include, but are not limited to: developing, supporting, researching, promoting, securing, providing and procuring goods and services for new and proposed projects, experiments, programs and facilities. Additionally, these funds are available for project contingencies.

**(b) Equipment**

The Service has dedicated funds to facilitate procurement and maintenance of equipment for itself and its clients. The Service charges the appropriate projects for the usage of equipment procured from this reserve and accumulates the costs applicable to that equipment. The operating results of this fund have been restricted for the future use of the fund.

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(9) Accrued Workers' Compensation Costs**

The accrued workers' compensation costs, applicable to the Service's coverage discussed in note 13, are recorded as a short-term and long-term liability. As these costs are recoverable under the Service's contracts, a receivable from project participants has been recorded to reflect the future funding of this liability.

**(10) Pension**

Employees of the Service who were members of the State Employees Retirement or Pension systems on June 30, 1993, continue to participate in the Employees' Retirement and Pension Systems. These systems are part of the Maryland State Retirement and Pension System (the System), and are cost-sharing multiple employer public employee retirement systems. The System, which is administered in accordance with the State Personnel and Pensions Article of the Annotated Code of Maryland, consists of several plans, which are managed by the Board of Trustees for the System. The System provides retirement, death and disability benefits in accordance with State statutes. Vesting begins after completion of five years of service. Members of the Retirement System may retire with full benefits after attaining the age of 60, or completing 30 years of Service Credit, regardless of age. Members of the Pension system may retire with full benefits after attaining the age of 62 or after completing 30 years of Service Credit, regardless of age. The State Employees Retirement and Pension System prepares a separately audited Comprehensive Annual Financial Report, which can be obtained from the State Retirement and Pension System of Maryland, 120 E. Baltimore Street, Baltimore, Maryland 21202.

Members of the Retirement System are required to contribute to the System either 7% or 5% of their regular salaries and wages depending upon the retirement option selected. Members of the Contributory Pension System are required to contribute to the System 7% of their regular salaries and wages. Employer contribution rates are determined by the State annually. The Service's share of the cost of participation was \$304 thousand and \$276 thousand, for the years ended June 30, 2015 and 2014, respectively.

All other employees of the Service participate in a Vanguard 401(k) Savings Plan. The plan requires the Service to contribute to the fund. The Service's share of the cost of participation for the years ended June 30, 2015 and 2014 were \$1,822 thousand and \$2,386 thousand, respectively. Employees are fully vested when eligible for the plan.

**Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions**

As of June 30, 2015, the Service reported a liability of approximately \$2,102 thousand for its proportionate share of the ERS net pension liability. The ERS net pension liability was measured as of June 30, 2014, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. The Service's proportion of the ERS net pension liability was based on a projection of the Service's long-term share of contributions to the pension plan relative to the projected contributions of all participating government units, actuarially determined. As of June 30, 2015, the Service's proportion for ERS was 0.0125 percent, which was substantially the same from its proportion measured as of June 30, 2014.

For the year ended June 30, 2015, the Board recognized pension expense for ERS of approximately \$276 thousand. As of June 30, 2015, the Service reported deferred outflows of resources and deferred inflows of resources related to ERS from the following sources:

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015**  
*(In thousands except where noted)*

**(10) Pension** (continued)

	Deferred Outflows of Resources	Deferred Inflows of Resources
Changes of actuarial assumptions	\$ 30	\$ -
Net Difference between projected and actual earnings on pension plan investments	-	230
Contributions made subsequent to the measurement date	301	-
Total	\$ 331	\$ 230

The \$301 thousand reported as deferred outflows of resources related to ERS resulting from the Service contributions subsequent to the measurement date will be recognized as a reduction of the ERS net pension liability in the year ended June 30, 2016. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to ERS will be recognized in pension expense as follows: Changes in assumptions: Fiscal years 2016-2019, \$7.5 thousand per year; Difference between projected and actual earnings on pension plan investments: Fiscal years 2016-2019, \$57.5 thousand per year.

Actuarial assumptions, long-term expected rate of return on pension plan investments, discount rate, and pension plan fiduciary net position are available at [www.sra.state.md.us/Agency/Downloads/CAFR/](http://www.sra.state.md.us/Agency/Downloads/CAFR/).

*Sensitivity of the Services' proportionate share of the net pension liability to changes in the discount rate.*

The Service's proportionate share of the ERS net pension liability calculated using the discount rate of 7.65 percent is \$2,102 thousand. Additionally, the Service's proportionate share of the ERS net pension liability if it were calculated using a discount rate that is 1-percentage-point lower (6.65 percent) is \$3,203 or 1-percentage-point higher (8.65 percent) is \$1,401.

**(11) Contingent Liabilities**

The Service is involved in litigation arising from the normal course of its operations. In the opinion of management, the amount of liability, if any, resulting from the final resolution of these matters will not be material to the financial position of the Service.

On April 15, 2011, the Maryland Environmental Service issued \$1.5 million of Water Quality Bond, Series 2011B with the Maryland Water Quality Financing Administration (the Administration) in connection with the closure and capping of the Hobbs Road Landfill. Pursuant to the Clean Water Act, the Administration has forgiven the repayment of the principal amount and interest payment of the bond subject to MES continues to perform its other obligations under the agreement. Upon determination by the Administration that any of the other obligations under the agreement have been violated, payment of the principal and interest will be become due and payable on demand.. As of June 30, 2015, management believes it is in compliance with its obligations and has not violated the agreement.

**Maryland Environmental Service**  
**Notes to Financial Statements**  
**June 30, 2015 and 2014**  
*(In thousands except where noted)*

**(12) Landfill Closure and Postclosure Care Costs**

State and Federal laws require the Service to cover and to perform certain maintenance and monitoring functions at Midshore I, Easton Landfill, Midshore II and Hobbs Road Landfill sites for 30 years after closure. Although closure and postclosure care costs will be paid near or after the date the landfills stop accepting waste, the Service reports a portion of these closure and post closure costs as a liability based upon the estimated useful life of the landfills.

Midshore I current cells are approximately 93% filled as of June 30, 2015. The landfill stopped accepting waste on December 31, 2010. Total closure and postclosure care costs for the landfill is currently estimated to be \$9,662 thousand, as determined through engineering studies and \$7,674 has been recognized as a liability by the Service as of June 30, 2015.

Midshore II current cells are approximately 12% filled as of June 30, 2015, with a remaining life of 38 years. Total closure and postclosure care costs for the landfill is currently estimated to be \$17,472 thousand, as determined through engineering studies, and \$1,698 thousand has been recognized as a liability by the Service as of June 30, 2015. Costs may be subject to change due to inflation, deflation, technology, and changes in applicable laws and regulations.

Under Federal regulations, the Service satisfied its financial assurance requirements based upon local government financial ratio tests of the project participants as of June 30, 2014. The Service expects to satisfy these requirements as of June 30, 2015 using the same criteria.

The Service serves as an operator for various landfills throughout the State of Maryland and no liability is recognized in regards to landfill closure and postclosure costs related to these landfills because of the Service's limited role solely as an operator of these facilities.

**(13) Risk Management**

The Service is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. The Service participates in the State of Maryland's self-insurance program (the program). The program covers general liability, property and casualty, workers' compensation (see note 9), and environmental liabilities, and provides certain employee health benefits. The program allocates its cost of providing claims servicing and claims payments by charging a "premium" to the Service based on a percentage of estimated current payroll or based on average loss experience. The Service's premium for the year ended June 30, 2015 was \$4,362.

**Maryland Environmental Service**  
**Schedule of Proportionate Share of Net Pension Liability**  
*(In thousands except where noted)*

**Schedule of Funding Progress (1)**  
**Other Post Employment Benefits**  
**(In Thousands)**

<u>Valuation Date</u>	<u>Value of Assets</u>	<u>Accrued Liability (AAL)</u>	<u>Unfunded AAL (UAAL)</u>	<u>Funded Ratio</u>	<u>Covered Payroll</u>	<u>UAAL as a % of Covered Payroll</u>
July 1, 2013	\$ 1,702	\$ 3,483	1,781	48.9%	34,048	5.0%
July 1, 2011	1,111	2,995	1,884	-	32,615	5.8%
July 1, 2009	-	3,015	3,015	-	34,152	8.8%

(1) The Service has chosen to have actuarial valuations performed bi-annually for purposes of calculating the actuarial accrued liability as allowed by GASB Statement No. 45.

**Schedule of Employer Contributions**  
**(In Thousands)**  
**Other Post Employment Benefits**

<u>Years Ended</u>	<u>Annual Required Contribution</u>	<u>Annual Contribution</u>	<u>Percentage Contributed</u>
2015	\$ 248	\$ 319	129 %
2014	238	308	129
2013	224	288	128
2012	224	271	120
2011	313	316	101

**Maryland Environmental Service**  
**Schedule of Proportionate Share of Net Pension Liability**  
*(In thousands except where noted)*

	<b>2015</b>
The Service's proportion of the ERS net pension liability	0.0125%
The Service's proportionate share of the ERS net liability	\$ 2,102
State's proportionate share of the ERS net pension liability	16,780,977
<b>Total</b>	<b>\$ 16,783,079</b>
The Service's covered-employee payroll	\$ 2,120
The Service's proportionate share of the net pension liability as a percentage of its covered-employee payroll	99%
Plan fiduciary net position as a percentage of the total pension liability	71.87%

This schedule is presented to illustrate the requirement to show information for 10 years. However, information prior to June 30, 2015 is not available.



**SB & COMPANY, LLC**  
KNOWLEDGE • QUALITY • CLIENT SERVICE

**REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS  
ON INTERNAL CONTROL OVER FINANCIAL REPORTING  
AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT  
OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH  
GOVERNMENT AUDITING STANDARDS**

To the Board of Directors  
Maryland Environmental Service

**Report on the Financial Statements**

We have audited in accordance with the auditing standards generally accepted in United States of America and the standards applicable to financial audits contained in Government Auditing Standards issued by the Comptroller General of the United States, the basic financial statements of the Maryland Environmental Service (the Service) as of and for the year ended June 30, 2015, and have issued our report thereon dated September 28, 2015.

**Internal Control over Financial Reporting**

In planning and performing our audit of the financial statements, we considered the Service's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Service internal control. Accordingly, we do not express an opinion on the effectiveness of the Service internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.



**SB & COMPANY, LLC**  
KNOWLEDGE • QUALITY • CLIENT SERVICE

### **Compliance and Other Matters**

As part of obtaining reasonable assurance about whether the Service’s financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

### **Purpose of this Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Service’s internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Service’s internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Hunt Valley, Maryland  
September 28, 2015

A handwritten signature in black ink that reads "SB &amp; Company, LLC".



259 NAJOLE'S ROAD  
MILLERSVILLE, MARYLAND 21108  
410-729-8200 [WWW.MENV.COM](http://WWW.MENV.COM)