

U00A
Department of the Environment

Executive Summary

The Maryland Department of the Environment (MDE) was created in 1987 to protect and restore the quality of the State's land, air, and water resources and safeguard citizens from health risks associated with pollution. It is responsible for planning, monitoring, controlling, and regulating air, solid, and hazardous wastes; radiation, sewage sludge, sediment, and stormwater; toxicities, sewage treatment and water supply facilities; and environmental disease control programs.

Operating Budget Data

(\$ in Thousands)

	<u>FY 18</u> <u>Actual</u>	<u>FY 19</u> <u>Working</u>	<u>FY 20</u> <u>Allowance</u>	<u>FY 19-20</u> <u>Change</u>	<u>% Change</u> <u>Prior Year</u>
General Fund	\$28,369	\$30,434	\$33,656	\$3,222	10.6%
Adjustments	0	128	686	558	
Adjusted General Fund	\$28,369	\$30,562	\$34,342	\$3,780	12.4%
Special Fund	90,393	100,802	104,792	3,990	4.0%
Adjustments	0	562	1,057	495	
Adjusted Special Fund	\$90,393	\$101,364	\$105,849	\$4,486	4.4%
Federal Fund	28,249	32,527	31,266	-1,261	-3.9%
Adjustments	0	151	622	472	
Adjusted Federal Fund	\$28,249	\$32,678	\$31,889	-\$789	-2.4%
Reimbursable Fund	4,553	3,990	3,979	-11	-0.3%
Adjustments	0	0	0	0	
Adjusted Reimbursable Fund	\$4,553	\$3,990	\$3,979	-\$11	-0.3%
Adjusted Grand Total	\$151,564	\$168,593	\$176,059	\$7,466	4.4%

Note: The fiscal 2019 appropriation includes deficiencies, a one-time \$500 bonus, and general salary increases. The fiscal 2020 allowance includes general salary increases.

Note: Numbers may not sum to total due to rounding.

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- The MDE budget includes a fiscal 2019 deficiency, which would increase MDE's overall appropriation by \$290,000 in special funds for salaries and contractual services supporting greenhouse gas emissions modeling and economic modeling as part of the Greenhouse Gas Reduction Act plan. The funding comes from the Strategic Energy Investment Fund – Regional Greenhouse Gas Initiative revenues that were not encumbered in fiscal 2018.
- The overall adjusted change in the MDE fiscal 2020 budget is an increase of \$7.5 million, or 4.4%. The single largest change in the budget is a \$4.0 million increase in special funds for implementing Chapters 366 and 367 of 2017 (Clean Water Commerce Act), which expanded the authorized uses of the Bay Restoration Fund to include the purchase of cost-effective nitrogen, phosphorus, or sediment load reductions in support of the State's efforts to restore the health of the Chesapeake Bay. The total funding for this purpose is \$10.0 million in fiscal 2020.

Personnel Data

	<u>FY 18</u> <u>Actual</u>	<u>FY 19</u> <u>Working</u>	<u>FY 20</u> <u>Allowance</u>	<u>FY 19-20</u> <u>Change</u>
Regular Positions	893.00	893.00	893.00	0.00
Contractual FTEs	<u>36.58</u>	<u>48.50</u>	<u>72.00</u>	<u>23.50</u>
Total Personnel	929.58	941.50	965.00	23.50

Vacancy Data: Regular Positions

Turnover and Necessary Vacancies, Excluding New Positions	57.52	6.54%
Positions and Percentage Vacant as of 12/31/18	96.00	10.75%

- MDE's position count does not change between the fiscal 2019 working appropriation and the fiscal 2020 allowance. However, a number of positions have been reclassified and/or reassigned within MDE's programs.
- As of December 31, 2018, MDE has 96 vacant positions, of which 33 positions have been vacant for more than a year. MDE notes the following status for these positions that have been vacant for more than a year: 8 positions are now filled; 2 positions have selected candidates; 6 positions are being interviewed for; 11 are in recruitment; 5 positions are to be filled; and 1 position was incorrectly included in the vacancy data.
- MDE contractual full-time equivalents (FTE) increase by 23.5 in the fiscal 2020 allowance, primarily due to the shift from grant funds used for the College of Southern Maryland's Maryland Center for Environmental, Health, and Safety Training's work to contractual FTEs paid directly by MDE.

- The MDE turnover rate increased from 6.50% in the fiscal 2019 working appropriation, to 6.54% in the fiscal 2020 allowance. Therefore, MDE must hold open about 58 positions throughout fiscal 2020. MDE had 96 positions vacant, or 10.75%, as of December 31, 2018.

Key Observations

- ***Criteria Pollutants Continue to Fall, but Temperature May Be Better Predictor of Compliance With Eight-hour Ozone Standard:*** There has been a steady decline in the amount of criteria air pollutants (in thousands of tons per year) emitted from power plants. However, this has not been necessarily correlated with the reduction in the number of exceedances of the eight-hour ozone standard. There does appear to be a correlation with the average monthly highest maximum temperature.
- ***Child Blood Lead Levels Continue to Decline Despite More Testing:*** The number of children tested for elevated blood lead continues to rise, while the reported exceedances of the elevated blood lead standard of greater than or equal five micrograms per deciliter, the most stringent standard for child blood lead levels, continues to fall.
- ***No Water Bodies Have Been Fully Cleaned Up:*** Maryland continues to complete Total Maximum Daily Load (TMDL) analyses for water bodies that need them. However, MDE has not fully delisted any water bodies between 2010 and 2018. So while MDE continues to move water bodies out of the category in which a water body is impaired and a TMDL is needed, these water bodies are moving to other categories of impairment.
- ***Clean Water Commerce Act Efficiency Unclear:*** The 2018 *Joint Chairmen's Report* (JCR) included a request for a report detailing a spending plan for the Clean Water Commerce Act for the fiscal 2018 actual, the fiscal 2019 working appropriation, and the fiscal 2020 allowance. The report notes that regulations have been published and multiple solicitations are underway, but no information on particular projects is forthcoming. **The Department of Legislative Services (DLS) recommends that MDE comment on the dollars per pound of nitrogen reduced for the two proposals in the first solicitation round, whether the selected project or projects truly represent cost-effective load reductions, and whether the Clean Water Commerce Act Program is meeting the overall objectives set out in statute.**
- ***Maryland Scrap Tire Annual Reports Submitted Late:*** The *Maryland Scrap Tire Annual Report* has not been submitted consistently. Environment Article Section 9-275(c) specifies that an annual status report is due on or before November 1 of each year. The report is often dated fairly close to the end of the fiscal year to which it corresponds but the actual submission is many months later, well beyond the November 1 deadline. **DLS recommends that MDE comment on why the Maryland Scrap Tire Annual Report is not consistently submitted by the November 1 deadline and on the status of the report that was due November 1, 2018.**

In addition, DLS recommends that budget bill language be added to restrict \$200,000 in general funds pending submission of the report by November 1, 2019.

- ***Enforcement and Inspection Position Strength Assessment and Efforts to Fill Vacant Positions:*** The fiscal 2019 Budget Bill restricted \$200,000 in general fund appropriations in each of the Maryland Department of Agriculture and MDE budgets for filling vacant compliance and enforcement positions and further restricted the funding until the submission of quarterly reports on July 1, 2018; October 1, 2018; January 1, 2019; and April 1, 2019. The July 1, 2018, October 1, 2018, and January 1, 2019 reports were all submitted on February 11, 2019, and indicate continuing support of enforcement and compliance activities.
- ***MDE's Enforcement Activity Is Down but Perhaps Next Generation Compliance Can Help:*** MDE's enforcement activity appears to have declined in recent years. This is particularly true for the Water and Science Administration, which is of particular concern because of the tremendous resources and efforts being taken to restore the health of the Chesapeake Bay. In recent years, next generation compliance has been discussed as a way to adapt regulatory regimes in order to achieve more widespread environmental compliance. **DLS recommends that MDE comment on its enforcement philosophy and discuss what it is doing in terms of next generation compliance.**

Operating Budget Recommended Actions

1. Add budget bill language expressing intent that regular positions should be budgeted for the work of the College of Southern Maryland's Maryland Center for Environmental, Health, and Safety Training employees.
2. Add budget bill language restricting \$200,000 in general funds pending the submission of the Maryland Scrap Tire Annual Report by November 1, 2019.

Updates

- ***Preliminary Evaluations of Two MDE Boards Recommend Fee Increases and Statutory Changes:*** DLS conducted preliminary evaluations of the Board of Waterworks and Waste Systems Operators and the Board of Well Drillers during the 2018 interim. The recommendations for the two boards included the following: waive from full evaluation; extend the termination date by 10 years to July 1, 2031; require a preliminary evaluation by December 15, 2028; and amend statute to require the boards to set fees such that revenues cover expenditures. Legislation has been introduced in the 2019 legislative session to require the State Board of Well Drillers (SB 671 and HB 1114) and the State Board of Waterworks and Waste Systems Operators (SB 585 and HB 1100) to amend the statute to require the boards to

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set fees such that revenues cover expenditures as recommended in the evaluations. However, the increased revenue is still credited to the State's General Fund.

- ***Volkswagen Settlement Spending Plan Submitted:*** The 2018 JCR requested MDE, in collaboration with the Department of Budget and Management, to provide a report with the fiscal 2020 budget submission detailing the description, timing, and funding associated with each of the Volkswagen settlements and a spending plan for the revenues for the fiscal 2018 actual, the fiscal 2019 working appropriation, and the fiscal 2020 allowance. The submitted report notes that there are two main Volkswagen settlements: U.S. Environmental Protection/California Air Resource Board settlement; and a separate Maryland settlement. In addition, Maryland has recently reached a settlement with Fiat Chrysler and parts manufacturer Bosch.

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Department of the Environment

Operating Budget Analysis

Program Description

The Maryland Department of the Environment (MDE) was created in 1987 to protect and restore the quality of the State's land, air, and water resources and safeguard citizens from health risks associated with pollution. It is responsible for planning, monitoring, controlling, and regulating air, solid, and hazardous wastes; radiation, sewage sludge, sediment, and stormwater; toxicities, sewage treatment and water supply facilities; and environmental disease control programs. The department is structured into six major administrative units.

- ***Office of the Secretary:*** This office provides direction and establishes State environmental policies to be implemented by the operating units.
- ***Operational Services Administration:*** This administration provides general administrative and fiscal services to the department.
- ***Water and Science Administration:*** This administration administers the State's water pollution control and drinking water protection activities, implements Total Maximum Daily Loads (TMDL) for pollutants in impaired waterways, regulates industrial/municipal wastewater and stormwater discharge, develops and promulgates water quality standards, provides technical support and analysis for TMDLs, monitors shellfish, develops environmental and public health risk assessments, implements nonpoint source pollution programs, and develops and issues fish advisories.
- ***Land and Materials Administration:*** This administration ensures that all types of hazardous and nonhazardous solid wastes are managed in a manner that protects public health and the environment. It regulates solid waste management facilities, scrap tire recycling facilities, above-ground and below-ground petroleum storage facilities, petroleum distribution, hazardous waste transportation, mining, and both concentrated animal feeding operations and Maryland animal feeding operations. In addition, this administration coordinates lead poisoning prevention efforts.
- ***Air and Radiation Administration:*** This administration ensures that air quality and radiation levels in Maryland sustain public health, safety, and the environment. It operates an air-monitoring network, licenses asbestos removal contractors, provides oversight of the Vehicle Emissions Inspection Program, and monitors radiation use. Climate change initiatives are a relatively new component of its operations.
- ***Coordinating Offices:*** This office manages budget matters, the Water Quality and Drinking Water Revolving Loan funds and other water pollution control program capital projects, and

Board of Public Works (BPW) activities; coordinates public information and outreach; provides hazardous chemical and oil spill emergency response services; provides legal advice; and information technology (IT) services.

MDE's mission is to protect and restore the environment for the health and well-being of all Marylanders. MDE's vision is for healthy, vibrant, and sustainable communities and ecosystems in Maryland. MDE has five goals that are consistent with efforts to protect and preserve Maryland's natural resources. The goals are as follows.

- **Goal 1:** Provide excellent customer service and community outreach.
- **Goal 2:** Manage air quality and emissions for maximum protection of human health and the environment.
- **Goal 3:** Reduce Maryland citizens' exposure to hazards.
- **Goal 4:** Protect water resources and ensure safe and adequate supplies of drinking water.
- **Goal 5:** Support and track sustainable materials management and waste reduction.

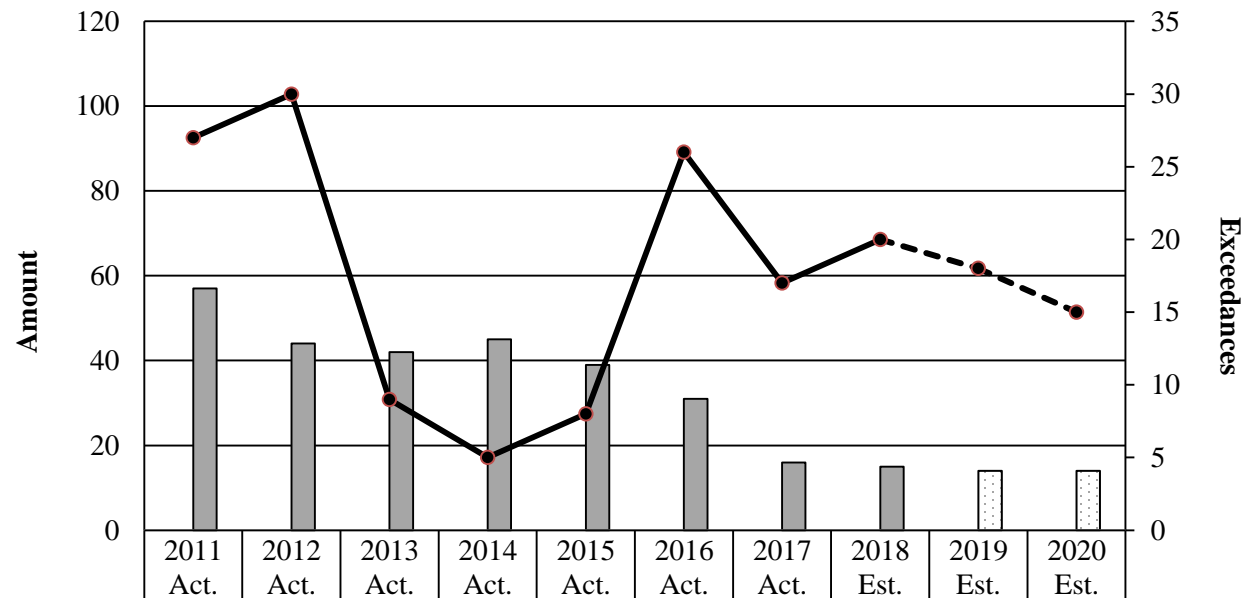
Performance Analysis: Managing for Results

The MDE Managing for Results measures show (1) criteria pollutants continue to fall, but temperature may be a better predictor of compliance with the eight-hour ozone standard; (2) child blood lead levels continue to decline despite more testing; and (3) no water bodies have been fully cleaned up.

1. Criteria Pollutants Continue to Fall, but Temperature May Be Better Predictor of Compliance with Eight-hour Ozone Standard

MDE's second goal is to manage air quality and emissions for maximum protection of human health and the environment. Under this goal, MDE has the objective of reducing emissions of criteria pollutants from power plants. These criteria pollutants are ground-level ozone, particular matter, carbon monoxide, lead, sulfur dioxide, and nitrogen dioxide. As can be seen in **Exhibit 1**, there has been a steady decline in the amount of criteria air pollutants (in thousands of tons per year) emitted from power plants. However, this has not necessarily correlated with the reduction in the number of exceedances of the eight-hour ozone standard. There does appear to be a correlation with the average monthly highest maximum temperature. Maryland sought a judicial review of the U.S. Environmental Protection Agency's (EPA) decision to deny Maryland's petition for relief under Section 126 of the Clean Air Act on October 15, 2018. The petition asked EPA to impose additional controls on upwind emissions of nitrogen oxides that are a precursor to the ozone that cause Maryland to exceed the eight-hour ozone standard when the weather is warm. MDE notes that the lawsuit remains in active litigation with briefs due to the court in spring 2019.

Exhibit 1
Air Quality Measures
Calendar 2011-2020 Est.

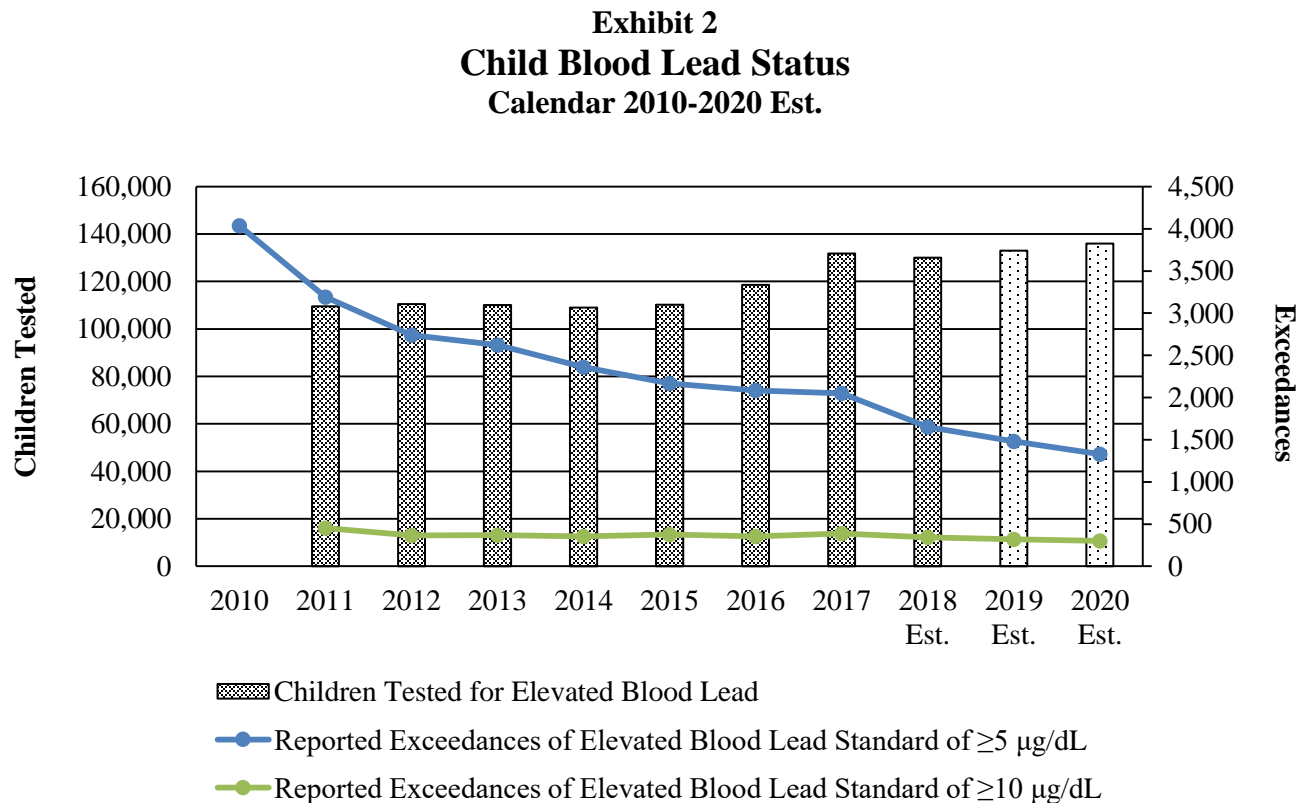


Average Monthly Highest Maximum Temperature for Baltimore, Maryland	106	104	97	96	97	100	98	99		
Amount of Criteria Pollutants (in Thousands of Tons Per Year) Emitted from Power Plants	57	44	42	45	39	31	16	15	14	14
Number of Exceedances of the Eight-hour Ozone Standard	27	30	9	5	8	26	17	20	18	15

Source: Governor's Fiscal 2020 Budget Books

2. Child Blood Lead Levels Continue to Decline Despite More Testing

MDE’s third goal is to reduce Maryland citizens’ exposure to hazards. Under this goal is the objective to reduce the number of elevated blood lead levels found. **Exhibit 2** shows the number of children tested for elevated blood lead continues to rise, while the reported exceedances of the elevated blood lead standard of greater than or equal 5 micrograms per deciliter – the most stringent standard for child blood lead levels – continues to fall.



$\mu\text{g/dL}$: micrograms of lead per deciliter of blood

Source: Governor’s Fiscal 2020 Budget Books

3. No Water Bodies Have Been Fully Cleaned Up

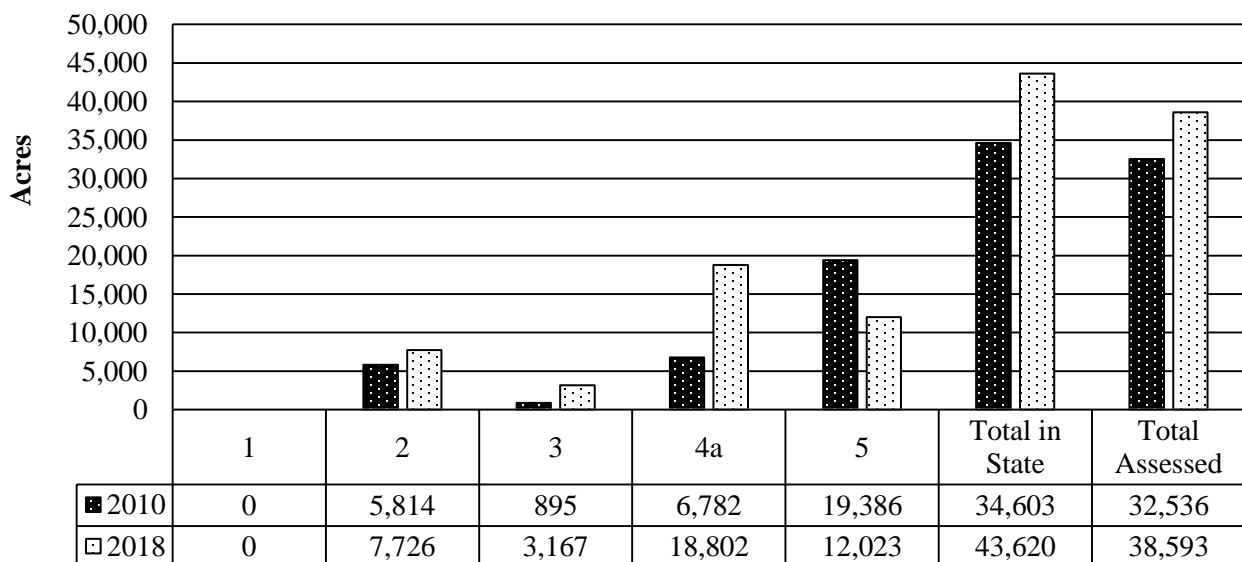
MDE’s fourth goal is to protect water resources and ensure safe and adequate supplies of drinking water. Under this goal is the objective to complete all federally required TMDL analyses to address Clean Water Act Section 303d impaired waters listings. Data on TMDL development status

may be found in *Maryland's Draft 2018 Integrated Report of Surface Water Quality*. The major classifications of impaired water bodies are as follows:

- **Category 1:** a water body is meeting all standards;
- **Category 2:** a water body is meeting some but not all standards;
- **Category 3:** there is insufficient data to determine whether standards are being met;
- **Category 4a:** water quality standards are not being met, but a TMDL is not needed (because it has already been completed); and
- **Category 5:** a water body is impaired and a TMDL is needed.

The draft report notes that Maryland continues to complete TMDL analyses for water bodies that need them. However, MDE has not fully delisted any water bodies between fiscal 2010 and 2018 as shown by the zero acres for Category 1 in **Exhibit 3**. So while MDE continues to move water bodies out of Category 5 (a water body that is impaired and a TMDL is needed), these water bodies are moving to other categories of impairment.

Exhibit 3
Integrated Surface Water Report Changes
Fiscal 2010-2018



Source: Maryland Department of the Environment

Fiscal 2019 Actions

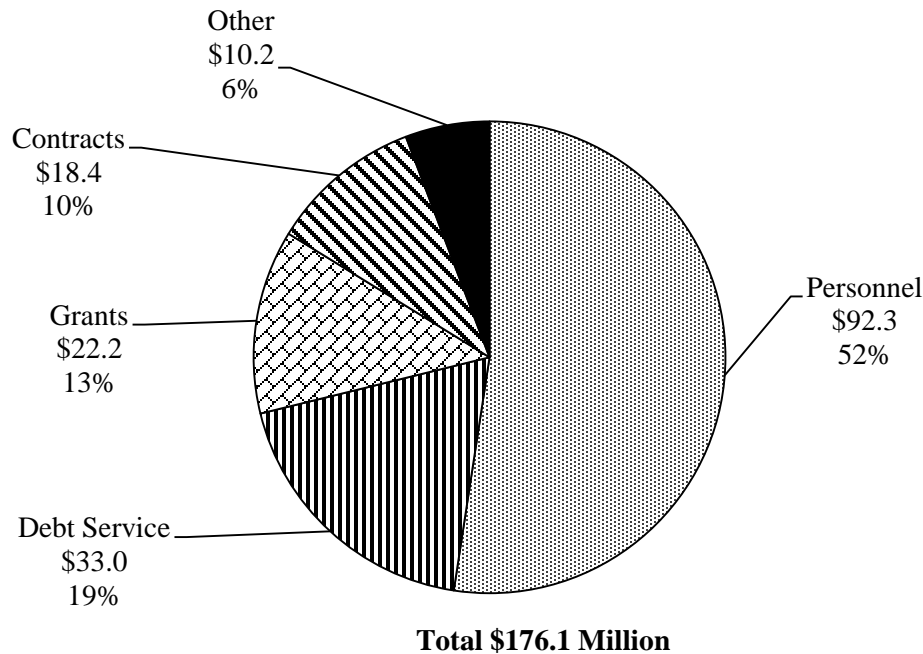
The Governor has submitted a deficiency appropriation for the fiscal 2019 operating budget that would increase the Air and Radiation Administration's special fund appropriation by \$290,000 in special funds. The funding would be used for salaries and contractual services supporting greenhouse gas emissions modeling and economic modeling as part of the Greenhouse Gas Reduction Act plan. The funding comes from the Strategic Energy Investment Fund – Regional Greenhouse Gas Initiative revenues that were not encumbered in fiscal 2018.

Fiscal 2020 Allowance

Overview of Agency Spending

MDE's main expenditure categories are personnel, debt service, grants, contracts, and other administrative funding. **Exhibit 4** reflects this breakdown. The personnel category includes MDE's 893.0 regular positions and 72.00 contractual full-time equivalents (FTE) and accounts for \$92.3 million, or 52%, of MDE's fiscal 2020 allowance, including the general salary increase. Debt service on Bay Restoration Fund revenue bonds accounts for \$33.0 million, or 19%. The next largest category is grants, which accounts for \$22.2 million, or 13%, and includes \$10.0 million for Clean Water Commerce Act grants and \$7.0 million for grants to local jurisdictions to operate and maintain wastewater treatment plants upgraded to enhanced nutrient removal technology. Contracts account for \$18.4 million, or 10%. This category includes contracts for \$2.4 million for Department of Information Technology (DoIT) fee-for-service (FFS) work, \$1.6 million for scrap tire cleanup projects performed by the Maryland Environmental Service, and \$1.5 million for administrative grants to local jurisdictions for administering septic system upgrade grants and regulations as authorized by Chapter 379 of 2014 (Bay Restoration Fund – Authorized Uses – Local Entities). The remaining 6% of expenditures are for other spending.

Exhibit 4
MDE Main Expenditure Categories
Fiscal 2020
(\$ in Millions)



MDE: Maryland Department of the Environment

Source: Department of Budget and Management; Department of Legislative Services

Proposed Budget Change

The MDE fiscal 2020 adjusted allowance increases by \$7.5 million, or 4.4%, relative to the fiscal 2019 adjusted working appropriation, as shown in **Exhibit 5**. The changes by fund reflect an increase of \$3.8 million in general funds, an increase of \$4.5 million in special funds, a decrease of \$0.8 million in federal funds, and a decrease of \$11,000 in reimbursable funds. The largest change is a \$4.0 million increase in special funds for implementing Chapters 366 and 367 of 2017 (Clean Water Commerce Act), which expanded the authorized uses of the Bay Restoration Fund to include the purchase of cost-effective nitrogen, phosphorus, or sediment load reductions in support of the State's efforts to restore the health of the Chesapeake Bay. Changes in personnel funding are discussed first and then other administrative changes.

Exhibit 5
Proposed Budget
Department of the Environment
(\$ in Thousands)

How Much It Grows:	General Fund	Special Fund	Federal Fund	Reimb. Fund	Total
Fiscal 2018 Actual	\$28,369	\$90,393	\$28,249	\$4,553	\$151,564
Fiscal 2019 Working Appropriation	30,562	101,364	32,678	3,990	168,593
Fiscal 2020 Allowance	<u>34,342</u>	<u>105,849</u>	<u>31,889</u>	<u>3,979</u>	<u>176,059</u>
Fiscal 2019-2020 Amount Change	\$3,780	\$4,486	-\$789	-\$11	\$7,466
Fiscal 2019-2020 Percent Change	12.4%	4.4%	-2.4%	-0.3%	4.4%

Where It Goes:**Personnel Expenses**

General salary increase and one-time \$500 bonus	\$1,815
Employee and retiree health insurance	894
Retirement contribution	664
Increments and other compensation	361
Workers' compensation	-53
One-time deficiency for Greenhouse Gas Reductions Act work (salaries)	-170
Other fringe benefit adjustments	-1

Other Changes**Grants**

Clean Water Commerce Act funding increase	4,000
Net contractual FTEs increase by 23.5 but are offset by a reduction in grant funding	287
Chesapeake Bay grant shifted to the Maryland Department of Agriculture	-1,429

Information Technology

Department of Information Technology fee-for-service business model	2,306
Wetland permit system database information technology project completed	-225
Water source protection database information technology project completed	-250
Lead in schools database information technology project completed	-500
Lead rental certificate and accreditation information technology project completed	-841

Routine Operations

Annual rent as negotiated by the Department of General Services	186
Mining Program doser supplies increase related to mining capital program	155
Five new vehicles in Oil Control Program for routine replacement	150
One-time deficiency for Greenhouse Gas Reductions Act work (contracts)	-120
Other	237

Total**\$7,466**

FTE: full-time equivalent

Note: Numbers may not sum to total due to rounding.

Personnel

The MDE overall personnel expenditures increase by \$3,509,463 in the fiscal 2020 adjusted allowance. The major change is an increase of \$2,274,754 for the general salary increase in fiscal 2020, which is reduced by \$460,209 for the one-time \$500 employee bonus in fiscal 2019. Another large change is an increase of \$893,951 in employee and retiree health insurance. Also, the retirement contribution increases by \$663,842 in fiscal 2020 and increments increase by \$361,803. Of note, there is an increase of \$1,763,978 in general funds in the Water and Science Administration and a corresponding decrease of \$1,290,064 in special funds. This reflects the intent to provide some special fund relief and turnover support so that MDE can fill positions in a more timely fashion and is related to the general salary increase. The special fund relief appears to be necessary because the Maryland Clean Water Fund had \$2,175,120 in expenditures in fiscal 2018 but only ended fiscal 2018 with a fund balance of \$246,000.

Other Changes

Overall, the nonpersonnel portion of the MDE fiscal 2020 adjusted allowance increases by \$3,956,141. The areas of change may be broadly categorized as grants, IT, and routine operations.

Grants

There are several large changes in funding related to grants in fiscal 2020. There is an increase of \$4.0 million in special funds for implementing Chapters 366 and 367, which expanded the authorized uses of the Bay Restoration Fund to include the purchase of cost-effective nitrogen, phosphorus, or sediment load reductions in support of the State's efforts to restore the health of the Chesapeake Bay. The total funding for this purpose is \$10.0 million in fiscal 2020.

There is also a smaller net increase of \$286,708 for the additional 23.5 contractual FTEs. The increase in FTEs accounts for a \$1,309,213 increase in the budget, but this mostly reflects the shift of \$1,022,505 in grant funding that supported the work done by the College of Southern Maryland's Maryland Center for Environmental, Health, and Safety Training. MDE hired a number of the Center employees as contractual FTEs, and now the same work is being done in-house. This shift in funding reflects the resolution to the May 2018 audit finding that MDE used interagency agreements with a college to augment its staff, allowing it to avoid using competitive procurement processes or budgeted positions.

The \$1,429,000 reduction in grant funding reflects the shift in a portion of the federal Chesapeake Bay Regulatory and Accountability grant to the Maryland Department of Agriculture (MDA). The shift in funding allows MDA to receive the funding directly instead of receiving it from MDE.

IT

MDE's fiscal 2020 funding for IT increases by a net of \$2,305,535 for DoIT service charges. DoIT is moving to a FFS funding model, which results in declining DoIT general fund appropriations and increasing reimbursable fund appropriations. This increase is offset partially by decreases for the following IT projects that have been completed or prior year funding is available for use: wetland permit system database (\$225,000); water source protection database (\$250,000); lead in schools database (\$500,000); and the lead rental certificate and accreditation major IT development project (\$841,448). No funding is provided for either the lead rental certificate and accreditation or environmental permit tracking system modernization projects in fiscal 2020, although funding is programmed for the latter project in fiscal 2021. MDE notes that the lead rental certification and accreditation project received 11 responses to the task order Request for Proposals and that vendor selection is anticipated by April or May 2019. For the environmental permit tracking system modernization project, MDE notes that it has completed 8 of the 27 time periods that the project has broken down and that the next phase will be to develop a new user interface.

Routine Operations

Routine operations account for the remainder of the change in MDE's fiscal 2020 budget. Annual rent costs negotiated by the Department of General Services increase by \$185,583, comprised of \$165,458 in special funds, \$16,816 in general funds, and \$3,309 in reimbursable funds – the funding received from the Maryland Energy Administration for its portion of the rent. Mining program doser supplies increase by \$154,815 in special funds for work related to buffering acid mine drainage in MDE's pay-as-you-go Mining Remediation program. In addition, there is \$149,872 in special funds for five new vehicles in the Oil Control Program for routine replacement. Finally, there is a reduction of \$120,000 in special funds for the one-time fiscal 2019 deficiency for Greenhouse Gas Reductions Act work.

Issues

1. Clean Water Commerce Act Efficiency Unclear

The 2018 *Joint Chairmen's Report* (JCR) included a request for a report detailing a spending plan for the Clean Water Commerce Act for the fiscal 2018 actual, the fiscal 2019 working appropriation, and the fiscal 2020 allowance. Chapter 366 and 367 expanded the authorized uses of the Bay Restoration Fund's Wastewater Account to include the purchase of cost-effective nitrogen, phosphorus, or sediment load reductions in support of the State's efforts to restore the health of the Chesapeake Bay; the bill authorizes up to \$4 million in fiscal 2018, \$6 million in fiscal 2019, and \$10 million per year in fiscal 2020 and 2021 from the Bay Restoration Fund for that purpose. The nitrogen, phosphorus, and sediment load reductions cannot be generated by the agricultural sector and must be created on or after July 1, 2017.

The report notes that an advisory group comprised of stakeholders met in 2017 to work on regulations guiding the process of purchasing cost-effective nitrogen, phosphorus, or sediment load reductions. The regulations were published in the *Maryland Register* in March 2018 and became effective April 2018. The first tranche of \$4.0 million could not be used due to the regulations being published at the end of fiscal 2018. MDE sent out a funding solicitation for the second tranche, the fiscal 2019 funding of \$6.0 million, on June 1, 2018, with bids due by August 3, 2018. MDE received two bids: OptiRTC, Inc. proposed the retrofitting of several ponds at various locations within Central Maryland; and HGS, LLC proposed a stream restoration project in Harford County.

MDE issued a second round of solicitations on December 27, 2018. This round reflected the remaining fiscal 2019 funding – the first solicitation is not expected to use the full \$6.0 million – and the \$10 million in fiscal 2020 funds. Based on updated information provided by MDE subsequent to the drafting of the report, bids are due to MDE by February 22, 2019, for the remaining fiscal 2019 funding. The expectation is that the chosen projects will be taken to BPW by the end of June 2019. **The Department of Legislative Services (DLS) recommends that MDE comment on the dollars per pound of nitrogen reduced for the two proposals in the first solicitation round, whether the selected project or projects truly represent cost-effective load reductions, and whether the Clean Water Commerce Act Program is meeting the overall objectives set out in statute.**

2. Maryland Scrap Tire Annual Reports Submitted Late

The *Maryland Scrap Tire Annual Report* has not been submitted consistently. Environment Article Section 9-275(c) specifies that an annual status report is due on or before November 1 of each year. As shown in **Exhibit 6**, the report is often dated fairly close to the end of the fiscal year to which it corresponds, but the actual submission is many months later, well beyond the November 1 deadline. **DLS recommends that MDE comment on why the *Maryland Scrap Tire Annual Report* is not consistently submitted by the November 1 deadline and on the status of the report that was due November 1, 2018. In addition, DLS recommends that budget bill language be added to restrict \$200,000 in general funds pending submission of the report by November 1, 2019.**

Exhibit 6
Maryland Scrap Tire Annual Report Date Data
Fiscal 2013-2018

<u>Fiscal Year Ending June 30</u>	<u>Report Dated</u>	<u>Submittal Letter</u>
2013	November 2013	June 24, 2014
2014	April 2015	May 12, 2015
2015	October 2016	February 16, 2018
2016	November 2016	February 16, 2018
2017	September 2018	September 25, 2018
2018	n/a	n/a

Source: Maryland Department of the Environment

3. Enforcement and Inspection Position Strength Assessment and Efforts to Fill Vacant Positions

The fiscal 2019 Budget Bill restricted \$200,000 in general fund appropriations in each of the MDA and MDE budgets for filling vacant compliance and enforcement positions and further restricted the funding until the submission of quarterly reports on July 1, 2018; October 1, 2018; January 1, 2019; and April 1, 2019. The reports were requested to include the following:

- an evaluation of the adequacy of Maryland’s current authorized compliance and enforcement positions; a comparison of the size, roles, and responsibilities of the departments’ compliance and enforcement positions to neighboring or similar states;
- a list of all inspection activities in certain programs; staffing and funding levels for fiscal 2019 and 2020; and
- position identification numbers and titles for all positions filled with restricted funding and how the positions are being used.

The July 1, 2018; October 1, 2018; and January 1, 2019 reports were all submitted on February 11, 2019.

Background

The 2016 JCR included the request for a similar report on compliance and enforcement inspections and positions for Chesapeake Bay restoration. The submitted report was not responsive to the request because the agencies were unable to evaluate the requested information in the context of Chesapeake Bay restoration. Therefore, the fiscal 2018 and 2019 budget bills included language restricting funding until the submission of quarterly reports.

Report Summary

A summary of the three reports submitted for fiscal 2019 is as follows.

MDA

- ***Evaluation of Maryland's Compliance and Enforcement Positions:*** MDA notes that it is authorized to conduct compliance and enforcement inspections through the Office of Resource Conservation's Agricultural Nutrient Management Program and Turfgrass Nutrient Management Program. The Agricultural Nutrient Management Program's aim is to complete a minimum of 15% to 18% of plan inspections per year, but it is not clear whether this goal is being met based on the information in the report. However, the Agricultural Nutrient Management Program's 2018 annual report indicates that the 15% to 18% goal was close to being met as 13.5% of farmer operators were inspected. The Turfgrass Nutrient Management Program was created by Chapters 484 and 485 of 2011 (Fertilizer Use Act) with the fertilizer application compliance inspections beginning after the fertilizer application requirements took effect October 1, 2013. The fiscal note for Chapters 484 and 485 indicates that there were at least 965 businesses that were required to be certified as professional applicators under the bill. The report notes that inspections ramped up in fiscal 2015 due to the phasing-in of inspection requirements in the original bill, which could not be confirmed in the statute. The cycle for investigations appears to have slipped from three years, based on last year's fiscal 2018 estimate of 350 inspections, to a 4.6 year cycle of inspections based on the fiscal 2018 actual of 209 record reviews for compliance out of an estimated 965 businesses that were required to be certified in the original bill. No information about the use of technology was provided for either program.
- ***Comparison to Other States:*** No other Chesapeake Bay watershed state has a mandatory Turfgrass Nutrient Management Program, so there is no comparison to be made. Maryland's Agricultural Nutrient Management Program is similar to nonconcentrated animal feeding operations components of agricultural nutrient management programs in other Chesapeake Bay watershed states; MDE inspects concentrated animal feeding operations (CAFO) and animal feeding operations (AFO) that discharge to a waterway. In general, it appears that CAFOs in other states are required to have nutrient management plans and be inspected, while AFOs, larger farms, and manure management program users may be required or encouraged to have nutrient management plans but are not necessarily inspected. For illustrative purposes, data from calendar 2013 is as follows:

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- Delaware – 3 FTEs performed 85 inspections out of 1,072 regulated AFOs and large farm operations;
 - New York – no information was available on the FTEs and inspections performed on the 562 permitted CAFOs and the nonpermitted AFOs;
 - Pennsylvania – 54 FTEs oversaw 3,300 approved nutrient management plans (data was not available on manure management inspections and FTEs);
 - Virginia – no inspection information was available, but 0.725 FTEs cover 86 CAFOs and 9.56 FTEs cover 1,307 farms comprised of AFOs or Poultry Waste Management permit program users; and
 - West Virginia – 1.3 FTEs implemented the CAFO program, which requires nutrient management plans on permitted and nonpermitted facilities but only requires inspections at two facilities.
- **Inspection Activities:** As noted prior, MDA conducts inspections under the Agricultural Nutrient Management Program and the Turfgrass Nutrient Management Program.
 - **Positions and Funding:** The number of inspectors has been fairly steady between fiscal 2012 and the fiscal 2020 estimate, although the inspectors for the Agricultural Nutrient Management Program decreased from 8 in fiscal 2017 to 6 in fiscal 2018, and there were 3 vacancies in fiscal 2018. MDA notes that in the Nutrient Management Program’s 2018 annual report, these staff vacancies led to a reduction in inspections between fiscal 2017 and 2018. MDA’s fiscal 2019 funding for the Agricultural Nutrient Management Program is comprised of \$774,032 for 9 agricultural inspectors. For the Turfgrass Nutrient Management Program, it has \$158,381 for 2 urban inspectors; 1 urban position in the Turfgrass Nutrient Management Program is contractual and not paid from general funds.
 - **Filled Positions:** No information was provided about the positions and titles for all positions filled with restricted funding and how the positions are being used.

The annual inspection and position data for the Agricultural Nutrient Management Program and the Turfgrass Nutrient Management Program are shown in **Exhibit 7**.

Exhibit 7
Agricultural Nutrient Management Program and Turfgrass Nutrient
Management Program Data
Fiscal 2011-2020 Estimate

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>Est.</u> <u>2019</u>	<u>Est.</u> <u>2020</u>
Agricultural Nutrient Management Program										
On-farm Audits and Inspections	450	647	738	733	890	1,022	1,004	726	1,020	1,100
Workforce Including Contractuals	6	8	7	8	7	9	8	6	9	9
Vacancies	3	1	2	1	2	0	1	3	0	0
Turfgrass Nutrient Management Program										
Record Reviews for Compliance	60	71	22	16	344	197	240	209	160	270
Workforce Including Contractuals	1	1	1	2	2	2	2	2	2	2
Vacancies	1	1	1	0	0	0	0	0	0	0

Source: Maryland Department of Agriculture

MDE

- ***Evaluation of Maryland's Compliance and Enforcement Positions:*** MDE notes that it targets inspection and compliance workloads to the areas of highest risk of public health – areas with multiple permits or particularly sensitive locations – and that it responds to citizen complaints and self-monitoring and reports submission failures. MDE has agreements with Caroline, Cecil, Queen Anne's, and Worcester counties for supplemental inspections and monitoring of sewage sludge utilization. MDE also uses certified third-party inspectors as an initial level of oversight for regulated facilities in the Radiological Health Program, Oil Control Program, and Lead Poisoning Prevention Program. In terms of technology, the Tools for Environmental Management and Protection Organizations (TEMPO) software has improved the ability to track inspections, and the permit modernization project update for TEMPO is anticipated to aid compliance activities. Erosion and sediment control inspection and enforcement authority is delegated as follows:
 - ***Cities:*** Aberdeen, Annapolis, Baltimore, Bel Air, Bowie, Gaithersburg, Greenbelt, Laurel, and Rockville;

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- **Counties:** Anne Arundel, Baltimore, Calvert, Carroll, Charles, Dorchester, Frederick, Harford, Howard, Kent, Montgomery, Prince George's, and Worcester; and
- **Institution:** the Washington Suburban Sanitary Commission.
- **Comparison to Other States:** MDE has noted in the past that it has found environmental compliance activity data for Connecticut and New Jersey but that comparisons are challenging because of differences in program responsibilities, scope, and definitions. For instance, other states do not prepare comprehensive annual enforcement reports as Maryland does. In terms of a comparison of MDE's work in the air, drinking water, hazardous waste, and clean water policy areas to other states and the nation as a whole using data from EPA's Enforcement and Compliance History Online website, MDE notes that the EPA data indicates that it performs as well as or better than the national average on many measures, but MDE did not provide any specific supporting information. MDE noted that wetlands, radiation, and lead poisoning prevention are not part of EPA's enforcement and compliance history online website's reporting.
- **Inspection Activities:** MDE has three media administrations: the Air and Radiation Administration with 6 inspection activities, the Land and Materials Administration with 15 inspection activities, and the Water and Science Administration with 11 inspection activities. The substantive changes in inspections over the fiscal 2011 to 2018 time period are as follows:
 - **Water and Science Administration:** increases for Water Supply Program – Community and Nontransient Noncommunity Water Systems, Discharges – Surface Water, and Water Supply Program – Transient Non-community Water Systems, and decreases for Stormwater Management and Erosion and Sediment Control for Construction Activity, and Wetlands and Waterways – Tidal;
 - **Land and Materials Administration:** increase for Lead Poisoning Prevention and decreases for Oil Control – Pollution Remediation Activities, Scrap Tires, and Oil Control – Underground Storage Tank Systems; and
 - **Air and Radiation Administration:** increases for radiation machines and decrease for asbestos.
- **Positions and Funding:** As shown in **Appendix 3**, the number of inspectors for the three administrations have changed as follows between fiscal 2011 and 2018: no change from 48 positions for the Water and Science Administration; 11 additional positions for the Land and Materials Administration; and 8 fewer positions for the Air and Radiation Administration. The number of vacancies has increased in recent years for the Land and Materials Administration.
- **Filled Positions:** MDE notes that it is continuing recruitment for 2 positions in the Water and Science Administration with the restricted funds. In addition, it has initiated recruitment for 3 positions. Since July 1, 2018, MDE filled 1 position on August 1, 2018.

4. MDE’s Enforcement Activity Is Down but Perhaps Next Generation Compliance Can Help

MDE’s enforcement activity appears to have declined in recent years. This is particularly true for the Water and Science Administration.

Enforcement and Compliance Data

Based on information provided in MDE’s fiscal 2017 *Annual Enforcement and Compliance Report*, the most recent report available, MDE took 8,249 enforcement actions in fiscal 2017, a 44% decrease from the 14,829 enforcement actions that it took in fiscal 2016 but significantly higher than the 10-year average of 4,910. This is largely due to a recent increase in enforcement activity in the Lead Poisoning Prevention Program.

Excluding lead-related actions, the number of enforcement actions taken by MDE in fiscal 2018 was the lowest in a decade. Of particular concern is the low number of enforcement actions taken by the Water and Science Administration in fiscal 2017; while the number of enforcement actions taken by this administration increased from fiscal 2013 to 2016, the number of actions taken in fiscal 2017 decreased by 46% from the prior year and was the lowest since fiscal 2008. This is of particular concern because of the tremendous resources and efforts being taken to restore the health of the Chesapeake Bay.

MDE has indicated that the recent decline in the number of enforcement actions that it has taken reflects an increased effort to work with violators and prevent minor infractions from becoming more serious. Also, while the number of enforcement actions has declined, the number of inspections, audits, and spot checks that MDE has conducted has increased in certain programs. For example, in the Water and Science Administration, the number of inspections, audits, and spot checks increased by 92%, from fiscal 2016 to 2017; however, the number of sites inspected by that administration in fiscal 2017 was about 36% lower than the number of sites inspected in fiscal 2008.

Next Generation Compliance

In recent years, next generation compliance has been discussed as a way to adapt regulatory regimes in order to achieve more widespread environmental compliance. For instance, a workshop titled *Research on Effective Government: A Workshop on Evaluating Innovative Approaches to Foster Environmental Compliance* was held on January 27, 2017, and was attended by federal and state environmental regulators and academics. Perhaps ideas in the next generation compliance toolkit can inform MDE’s thinking on working with violators.

One of the main ideas behind next generation compliance is to apply rigorous scientific analysis of data in real-time in order to inform the direction of compliance activities. This is also known as evidence-based policymaking and can be implemented through an iterative process of doing experiments, evaluating outcomes, and then changing programs in an adaptive fashion. The design of experiments and use of data can be facilitated by partnerships with the academic community. Some of

the potential regulatory policy issues that are being addressed through next generation compliance include the following.

- ***Compliance Universe:*** It is not always clear whether all of the regulated entities in a sector are actually being regulated. For instance, some small or medium sized entities may be unaware of regulatory requirements or are flying under the radar. A reevaluation of the compliance universe may help to find some of these entities.
- ***Actual Compliance:*** Regulated entities may not be in compliance because they do not understand the applicable regulations or because they are willfully flaunting regulations after doing an informal cost-benefit analysis of the impact of being caught. Understanding the motivations for regulated entities then informs how they should be regulated. For instance, planned inspections may be more helpful for increasing compliance if the regulated entity is ignorant of its responsibilities, while unplanned inspections would be more appropriate for willful violators. Furthermore, closer cooperation between permit writers and an agency's enforcement section can reduce the overall complexity of regulations and perhaps boost compliance.
- ***Inspections:*** Inspections can be conducted through self-audits, the government, or third-party inspectors. It is important to understand the tradeoffs between using these different inspection modes. For instance, self-audits and third-party inspectors both may be less expensive for the State but may lead to more noncompliance in a sector where there are a lot of willful violators. However, self-audits – especially if the regulated entities are trained on their responsibilities – may be helpful for reinforcing those responsibilities.
- ***Predictive Analytics:*** There may be patterns in the data on noncompliance that can be generalized and then used for more efficient and effective regulation. Evaluating noncompliance data using machine learning/artificial intelligence may help the State regulate more strategically to reduce patterns of abuse wherever they may be found in the regulatory process.
- ***Penalties:*** Distinguishing between the effectiveness of penalties versus warnings/alternative compliance is important for focusing limited State resources. Therefore, additional research on this topic can help the State be a more effective regulator.

DLS recommends that MDE comment on its enforcement philosophy and discuss what it is doing in terms of next generation compliance.

Operating Budget Recommended Actions

1. Add the following language:

It is the intent of the General Assembly that regular positions be budgeted instead of contractual full-time equivalents for the ongoing work of the College of Southern Maryland's Maryland Center for Environmental, Health, and Safety Training employees.

Explanation: The fiscal 2020 budget reflects that the Maryland Department of the Environment (MDE) is hiring a number of the College of Southern Maryland's Maryland Center for Environmental, Health, and Safety Training Center employees as contractual full-time equivalents. Therefore, the center's work is now being done in-house instead of being paid through a grant. This shift in funding reflects the resolution to the May 2018 audit finding that MDE used interagency agreements with a college to augment its staff, allowing it to avoid using competitive procurement processes or budgeted positions. Since the work is ongoing, the General Assembly expresses its intent that the Center's employees be budgeted as regular positions.

2. Add the following language to the general fund appropriation:

, provided that \$200,000 of this appropriation made for the purpose of general administrative expenses may not be expended pending the submission of the Maryland Scrap Tire Annual Report. The report shall be submitted by November 1, 2019, and the budget committees shall have 45 days to review and comment. Funds restricted pending the receipt of the report may not be transferred by budget amendment or otherwise to any other purpose and shall revert to the General Fund if the report is not submitted.

Explanation: This action restricts \$200,000 in general funds pending the submission of the Maryland Scrap Tire Annual Report by November 1, 2019. Environment Article Section 9-275(c) specifies that an annual status report is due on or before November 1 of each year. The Maryland Department of the Environment has not consistently met this requirement.

Information Request	Author	Due Date
Maryland Scrap Tire Annual Report	MDE	November 1, 2019

Updates

1. Preliminary Evaluations of Two MDE Boards Recommend Fee Increases and Statutory Changes

DLS conducted preliminary evaluations of the Board of Waterworks and Waste Systems Operators and the Board of Well Drillers during the 2018 interim. The recommendations for the two boards included the following:

- waive from full evaluation;
- extend the termination date by 10 years to July 1, 2031;
- require a preliminary evaluation by December 15, 2028; and
- amend statute to require the boards to set fees such that revenues cover expenditures.

In addition, DLS recommended that the Board of Waterworks and Waste Systems Operators coordinate with MDE's Office of Information Management and Technology on an upgrade of the board's database.

Both of the boards raised fees as a result of recommendations from prior evaluations: a preliminary evaluation of the Board of Well Drillers in 2008; and a full evaluation of the Board of Waterworks and Waste Systems Operators in 2009. These fees were then reduced to pre-2010 levels in 2016 as part of a broader effort by the Administration to reduce administrative fees. **Exhibits 8 and 9** show the recent fiscal history of the two boards and the shortfalls in funding. Of note, 20 out of the 23 nonhealth-related regulatory entities with fee-setting authority are required by law to set fees so as to raise sufficient funds to cover their costs, but the two boards represent 2 out of the 3 entities that are not required to do so. Legislation has been introduced in the 2019 legislative session to require the State Board of Well Drillers (SB 671 and HB 1114) and the State Board of Waterworks and Waste Systems Operators (SB 585 and HB 1100) to amend statute to require the boards to set fees such that revenues cover expenditures as recommended in the evaluations. However, the increased revenue is still credited to the State's General Fund.

Exhibit 8
Fiscal History of the Board of Well Drillers
Fiscal 2013-2018 Est.

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Revenues	\$206,850	\$27,350	\$192,259	\$39,750	\$108,190	\$21,250
Expenditures	106,255	105,992	114,397	35,740	102,737	100,267
Excess/(Gap)	\$100,595	-\$78,642	\$77,862	\$4,010	\$5,453	-\$79,017
Biennial Excess/(Gap)		\$21,953		\$81,872		-\$73,564

Note: Board expenditures typically exceed the legislative appropriation due to underfunding; in such cases, the shortfall is covered at closeout with available funding from the Water and Science Administration (formerly Water Management Administration).

Source: Maryland Department of the Environment; Department of Legislative Services

Exhibit 9
Fiscal History of the Board of Waterworks and Waste Systems Operators
Fiscal 2014-2019 Est.

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019 Est.</u>
Revenues	\$214,271	\$320,999	\$305,946	\$194,522	\$184,240	\$36,492
Expenditures	278,373	210,941	291,941	223,940	266,189	33,934
Excess/(Gap)	-\$64,102	\$110,058	\$14,005	-\$29,418	-\$81,949	\$2,558
Coverage of Expenditures	77.0%	152.2%	104.8%	86.9%	69.2%	107.5%

Note: Fiscal 2019 encompasses the board's revenues and expenditures as of August 31, 2018.

Source: Maryland Department of the Environment; Department of Legislative Services

2. Volkswagen Settlement Spending Plan Submitted

The 2018 JCR requested MDE, in collaboration with the Department of Budget and Management, to provide a report with the fiscal 2020 budget submission detailing the description, timing, and funding associated with each of the Volkswagen settlements and a spending plan for the revenues for the fiscal 2018 actual, the fiscal 2019 working appropriation, and the fiscal 2020 allowance. The submitted report notes that there are two main Volkswagen settlements: an EPA/California Air Resources Board settlement; and a separate Maryland settlement. In addition, Maryland has recently reached a settlement with Fiat Chrysler and parts manufacturer Bosch.

EPA/California Air Resources Board Volkswagen Settlement

EPA and the California Air Resources Board issued a Notice of Violation to Volkswagen AG, Audi AG, and Volkswagen Group of America, Inc. on September 18, 2015, alleging that Volkswagen and Audi diesel cars with 2.0 liter and 3.0 liter engines included software considered “defeat devices” in order to circumvent nitrogen oxide emission standards. A partial consent decree establishing the \$2.925 billion Volkswagen Environmental Mitigation Trust was issued on October 25, 2016. Maryland is eligible to receive a total of \$75.7 million, including \$71.1 million for the 2.0 liter vehicles and \$4.6 million for the 3.0 liter vehicles. Maryland’s final plan for how the \$75.7 million will be used for specifically defined eligible mitigation projects still needs to be approved by the Wilmington Trust – the trustee for the overall settlement. The plan as of February 13 2019, is reflected in **Exhibit 10**.

Exhibit 10 Maryland Volkswagen Final Mitigation Plan February 13, 2019

<u>Program/Allocation</u>	<u>Eligible Recipient</u>	<u>Funding Request</u>	<u>% of Total</u>
<i>Electric Vehicle Infrastructure</i>			
Electric Vehicle Infrastructure	MEA	\$11,300,000	
<i>Subtotal</i>		<i>\$11,300,000</i>	<i>14.9%</i>
<i>Private Sector and Federal Government</i>			
Dray Truck Replacement Program	MDOT – MPA	\$2,000,000	
Maryland Idle Reduction Program	MDE/MEA	500,000	
Freedom Fleet Voucher	MEA	5,000,000	
Other Eligible Projects	Federal Government/Private Sector	21,026,391	
<i>Subtotal</i>		<i>\$28,526,391</i>	<i>37.7%</i>

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<u>Program/Allocation</u>	<u>Eligible Recipient</u>	<u>Funding Request</u>	<u>% of Total</u>
<i>Local Governments, Communities, and Environmental Justice</i>			
Transit Bus Replacement	Local Transit Agencies	\$5,525,000	
School Bus Replacement	Counties/School Bus Contractors	4,600,000	
Other Eligible Projects	Local Government/Community Projects	5,525,000	
<i>Subtotal</i>		<i>\$15,650,000</i>	<i>20.7%</i>
<i>State Agency Projects</i>			
Rail Maintenance Equipment Dump Truck and Hi-rail Dump Truck Replacements	MDOT MTA	\$1,034,880	
40-foot Buses	MDOT MTA	2,182,656	
Port Ground Service Equipment	MDOT MPA	3,280,570	
40-foot and 60-foot Transit Buses	MDOT MAA	9,146,000	
Replacement of 21 Dump Trucks	MDOT SHA	3,293,741	
Emergency Response Equipment	MDE	300,000	
<i>Subtotal</i>		<i>\$19,237,847</i>	<i>25.4%</i>
<i>Administrative Costs</i>			
Administrative Costs	State Agencies	\$1,000,000	
<i>Subtotal</i>		<i>\$1,000,000</i>	<i>1.3%</i>
Total		\$75,714,238	

MAA: Maryland Aviation Administration
MDE: Maryland Department of the Environment
MDOT: Maryland Department of Transportation
MEA: Maryland Energy Administration

MPA: Maryland Port Administration
MTA: Maryland Transit Administration
SHA: State Highway Administration

Source: Maryland Department of the Environment

Maryland Volkswagen Settlement

Maryland's Attorney General Brian E. Frosh filed an enforcement action against Volkswagen Aktiengesellschaft, Audi AG, Volkswagen Group of America, Inc., Dr. Ing. H.C.F. Porsche AG, and Porsche Cars North America, Inc. for State environmental law violations. Maryland received \$29 million from the settlement, of which \$22 million was transferred to the State's General Fund in fiscal 2018. MDE spent \$2.9 million of the remaining \$7 million in fiscal 2018 on salaries and operating costs. MDE expects to encumber approximately \$3.1 million during fiscal 2019 and the remainder in fiscal 2020 on air monitoring program improvements by purchasing new laboratory and monitoring equipment and salaries and expects to expend the remainder during fiscal 2020.

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Fiat Chrysler and Bosch Settlement

Maryland's Attorney General reached a separate settlement with Fiat Chrysler and Bosch on January 10, 2019, concerning defeat devices in Fiat Chrysler vehicles manufactured by Bosch. MDE notes that as of February 8, 2019, all funds associated with the Fiat Chrysler (\$1,005,079) and Bosch (\$1,584,990) settlements have been paid to MDE and deposited in the Maryland Clean Air Fund.

Appendix 1
Current and Prior Year Budgets
Department of the Environment
(\$ in Thousands)

	<u>General</u> <u>Fund</u>	<u>Special</u> <u>Fund</u>	<u>Federal</u> <u>Fund</u>	<u>Reimb.</u> <u>Fund</u>	<u>Total</u>
Fiscal 2018					
Legislative Appropriation	\$29,453	\$99,011	\$31,585	\$3,898	\$163,947
Deficiency/Withdrawn Appropriation	-328	-561	-301	0	-1,191
Cost Containment	-757	0	0	0	-757
Budget Amendments	1	0	0	3,130	3,131
Reversions and Cancellations	0	-8,056	-3,035	-2,474	-13,565
Actual					
Expenditures	\$28,369	\$90,393	\$28,249	\$4,553	\$151,564
Fiscal 2019					
Legislative Appropriation	\$30,232	\$100,506	\$32,355	\$3,990	\$167,081
Budget Amendments	202	296	173	0	671
Working					
Appropriation	\$30,434	\$100,802	\$32,527	\$3,990	\$167,752

Note: The fiscal 2019 appropriation does not include deficiencies, a one-time \$500 bonus, or general salary increases. Numbers may not sum to total due to rounding.

Fiscal 2018

The Maryland Department of the Environment (MDE) general fund appropriation decreased by \$1,084,471. The changes are as follows.

- **Deficiency/Withdrawn Appropriation:** A decrease of \$328,246 was due to the withdrawn appropriation for health insurance savings in Section 19 of the fiscal 2019 Budget Bill.
- **Cost Containment:** A decrease of \$757,000 is due to cost containment. The cost containment was allocated through the September 6, 2017 Board of Public Works reductions for funding in the Water and Science Administration based on the use of available special fund balance to backfill the reduction.
- **Budget Amendments:** An increase of \$778 due to a budget amendment, which realigned funds between agencies for telecommunications expenditures as authorized by Section 17 of the fiscal 2018 Budget Bill.

The MDE special fund appropriation decreased by a net of \$8,617,223. The changes are as follows.

- **Deficiency/Withdrawn Appropriation:** A decrease of \$561,129 was due to the withdrawn appropriation for health insurance savings in Section 19 of the fiscal 2019 Budget Bill.
- **Cancellations:** A decrease of \$8,056,094 as a result of cancellations in the Land and Materials Administration due to scrap tire removal projects not being ready, lower than anticipated revenues in several subprograms, and less mining material being needed (\$2,835,955); the Coordinating Offices due to fewer wastewater treatment plants being eligible for enhanced nutrient removal operations and maintenance grants than anticipated (\$2,054,127); the Coordinating Offices – Bay Restoration Fund Debt Service due to debt service payments being less than the appropriation (\$1,243,899); the Water and Science Administration due to delays in tidal and nontidal wetland mitigation projects in coordination with the Chesapeake Bay Trust (\$1,202,647); the Coordinating Offices – Major Information Technology Development Project Fund due to delays in the Lead Rental Certification and Accreditation major information technology (IT) project (\$550,000); and other programs (\$169,466).

The MDE federal fund appropriation decreased by \$3,335,982. The changes are as follows.

- **Deficiency/Withdrawn Appropriation:** A decrease of \$301,183 was due to the withdrawn appropriation for health insurance savings in Section 19 of the fiscal 2019 Budget Bill.

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- **Cancellations:** A decrease of \$3,034,799 as a result of cancellations in the Land and Materials Administration due to appropriations exceeding available revenue primarily for the Mining subprogram (\$1,677,559), the Coordinating Offices due to the appropriation being in excess of available revenue (\$779,249), the Water and Science Administration due to delays in grants projects with the Maryland Environmental Service (\$487,003), and other programs (\$90,988).

The MDE reimbursable fund appropriation increased by \$655,255. The changes are as follows.

- **Budget Amendments:** An increase of \$3,129,726 due to budget amendments that transfer funding from the Department of Information Technology Major Information Technology Development Project Fund (MITDPF) to MDE's MITDPF for implementing the Environmental Permit Tracking System Modernization Project through the use of .Net technologies (\$2,679,726) and for the Lead Rental Certification and Accreditation major IT project that will be integrated with the existing Online Lead Rental Registry and an eCommerce functionality for accepting fee payments online (\$450,000).
- **Cancellations:** A decrease of \$2,474,471 due to cancellations in Coordinating Offices – Major Information Technology Development Projects due to the Environmental Permit Tracking System Modernization Project and the Lead Rental Certification and Accreditation major IT project being delayed (\$2,233,305), the Water and Science Administration due to delays in the Maryland Port Administration reimbursable grant Hart Miller Island project (\$170,368), and other programs (\$70,798).

Fiscal 2019

The MDE general fund appropriation increases by \$201,806 due to a budget amendment that allocates funding for the cost-of-living adjustment (COLA) authorized in the fiscal 2019 Budget Bill.

The MDE special fund appropriation increases by \$295,986 due to a budget amendment that allocates funding for the COLA authorized in the fiscal 2019 Budget Bill.

The MDE federal fund appropriation increases by \$172,809 due to a budget amendment that allocates funding for the COLA authorized in the fiscal 2019 Budget Bill.

The MDE reimbursable fund appropriation has not changed.

Appendix 2 Audit Findings

Audit Period for Last Audit:	July 30, 2013 – December 19, 2016
Issue Date:	May 2018
Number of Findings:	7
Number of Repeat Findings:	2
% of Repeat Findings:	28.6%
Rating: (if applicable)	n/a

- Finding 1:** The Maryland Department of the Environment (MDE) used interagency agreements with a college to augment its staff, allowing it to avoid using competitive procurement processes or budgeted positions. MDE did not ensure that the rates for these services were reasonable.
- Finding 2:** MDE did not establish a sufficient process to ensure that owners of affected lead properties had required inspection certificates. The Office of Legislative Audits identified 10,832 registered rental units without inspection certificates that MDE had not investigated.
- Finding 3:** Inspections of certain constructions sites were not performed as required by State regulations, and MDE lacked a formal plan for inspecting all sites. Only 1,033 of 5,942 sites were inspected during fiscal 2016.
- Finding 4:** MDE did not always retain documentation to support penalties assessed against construction contractors and to evidence supervisory approval.
- Finding 5:** Eleven contractors had unnecessary network-level access to the entire MDE internal network.
- Finding 6:** Malware protection was not sufficient to provide MDE with adequate assurance that its computers were property protected.
- Finding 7:** A critical database and numerous servers were running on outdated software.

*Bold denotes item repeated in full or part from preceding audit report.

Appendix 3
Water and Science Administration
Fiscal 2011-2019 Est.

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>Est.</u> <u>2019.</u>	<u>%</u> <u>2011-2018</u>	<u>2011-2018</u>
Inspectors	48	47	45	44	43	41	47	48	47	0%	0
Vacancies	4	2	3	6	9	14	4	1	n/a	-75%	-3
Water Supply Program – Community and Non-transient Noncommunity Water Systems	26,349	27,024	27,575	25,241	17,554	18,657	53,921	46,686	39,755	77%	20,337
Discharges – Surface Water	1,937	11,968	10,802	9,275	12,948	11,748	12,278	17,055	13,694	780%	15,118
Water Supply Program – Transient Noncommunity Water Systems	11,795	12,030	13,105	12,595	8,084	9,097	15,316	12,547	12,320	6%	752
Stormwater Management and Erosion and Sediment Control for Construction Activity	4,320	3,795	3,456	2,814	2,641	2,591	2,969	3,143	2,901	-27%	-1,177
Wetlands and Waterways – Nontidal and Floodplain	1,858	2,004	1,914	1,806	2,232	1,830	2,273	2,144	2,082	15%	286
Discharges – Groundwater	1,235	1,569	1,206	1,281	1,611	1,618	1,595	1,695	1,636	37%	460
Wetlands and Waterways – Tidal	1,309	1,104	791	713	558	553	533	543	543	-59%	-766
Waterway Construction – Dam Safety	608	216	280	251	162	309	313	181	268	-70%	-427
Water Supply Program – Drinking Water Laboratory Certification	129	130	150	119	144	132	122	115	123	-11%	-14
Discharges – Pretreatment (industrial)	39	37	25	24	26	29	25	25	26	-36%	-14
Water Supply Program – Water Appropriation Permits	292	290	452	40	5	5	72	160	79	-45%	-132

Source: Maryland Department of the Environment

Land and Materials Administration
Fiscal 2011-2019 Est.

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>Est.</u> <u>2019</u>	<u>% Change</u> <u>2011-2018</u>	<u>Change</u> <u>2011-2018</u>
Inspectors	66	69	68	69	73	72	74	77	74	17%	11
Vacancies	2	9	7	11	10	7	5	14	n/a	600%	12
Lead Poisoning Prevention	36,750	29,520	26,087	30,574	92,627	59,280	57,694	56,169	57,714	53%	19,419
Oil Control – Underground											
Storage Tank Systems	5,236	5,645	5,378	5,091	3,928	3,719	4,262	3,628	3,870	-31%	-1,608
Oil Control – Pollution											
Remediation Activities	8,121	7,773	5,059	4,440	4,221	3,428	2,942	2,722	3,031	-66%	-5,399
Scrap Tires	3,781	1,352	2,397	4,222	6,116	2,516	2,058	813	1,796	-78%	-2,968
Mining – Non-coal	857	811	1,927	1,689	2,425	2,639	1,899	1,478	2,005	72%	621
Animal Feeding Operations	916	469	946	793	1,858	2,363	1,067	683	1,371	-25%	-233
Refuse Disposal	1,241	1,210	1,370	1,328	1,493	1,370	1,325	1,289	1,328	4%	48
Sewage Sludge Utilization	1,763	1,973	1,861	1,932	1,768	1,098	1,819	2,002	1,640	14%	239
Mining – Coal	1,099	1,107	1,048	1,092	1,161	1,079	1,026	1,067	1,057	-3%	-32
Oil Control – Aboveground											
Facilities	638	917	826	811	657	586	524	534	548	-16%	-104
Hazardous Waste	426	580	580	564	594	364	211	198	258	-54%	-228
Electronics Recycling											
(Fiscal 2015 Start)	0	0	0	0	360	353	453	607	471	n/a	607
Natural Wood Waste											
Recycling	196	186	144	149	186	201	198	204	201	4%	8
Mercury Switch Recovery											
(Fiscal 2015 Start)	0	0	0	0	220	167	0	0	0	n/a	0
Oil and Gas Exploration											
and Production	11	37	40	20	19	28	32	33	31	200%	22

Source: Maryland Department of the Environment

Air and Radiation Administration
Fiscal 2011-2019 Est.

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>Est.</u> <u>2019</u>	<u>%</u> <u>2011-2018</u>	<u>2011-2018</u>
Inspectors	48	48	48	40	41	39	39	40	39	-17%	-8
Vacancies	3	2	2	1	2	3	2	2	n/a	-33%	-1
Radiation Machines	4,664	3,467	4,683	13,522	13,925	17,621	18,482	20,027	18,710	329%	15,363
High-impact Facilities	2,513	2,394	2,572	2,334	2,347	2,488	2,741	2,737	2,655	9%	224
Low-impact Facilities	2,299	2,740	2,898	2,577	2,511	2,144	2,478	2,450	2,357	7%	151
Complaints	236	264	224	212	208	220	209	163	197	-31%	-73
Asbestos	828	893	481	337	134	190	468	276	311	-67%	-552
Radioactive Materials	173	113	166	184	190	123	155	195	158	13%	22

Source: Maryland Department of the Environment

Appendix 4
Object/Fund Difference Report
Department of the Environment

<u>Object/Fund</u>	<u>FY 18 Actual</u>	<u>FY 19 Working Appropriation</u>	<u>FY 20 Allowance</u>	<u>FY 19 - FY 20 Amount Change</u>	<u>Percent Change</u>
Positions					
01 Regular	893.00	893.00	893.00	0.00	0%
02 Contractual	36.58	48.50	72.00	23.50	48.5%
Total Positions	929.58	941.50	965.00	23.50	2.5%
Objects					
01 Salaries and Wages	\$ 82,730,819	\$ 84,776,216	\$ 86,641,134	\$ 1,864,918	2.2%
02 Technical and Special Fees	1,747,776	1,980,380	3,289,593	1,309,213	66.1%
03 Communication	779,963	808,828	699,348	-109,480	-13.5%
04 Travel	253,055	87,996	86,396	-1,600	-1.8%
06 Fuel and Utilities	382,628	369,303	390,435	21,132	5.7%
07 Motor Vehicles	958,711	1,031,319	1,183,159	151,840	14.7%
08 Contractual Services	15,157,449	19,059,270	18,405,658	-653,612	-3.4%
09 Supplies and Materials	804,112	928,808	1,083,078	154,270	16.6%
10 Equipment – Replacement	777,369	847,789	927,670	79,881	9.4%
11 Equipment – Additional	131,466	65,570	43,020	-22,550	-34.4%
12 Grants, Subsidies, and Contributions	10,733,618	19,252,081	22,199,211	2,947,130	15.3%
13 Fixed Charges	5,351,371	5,544,439	5,744,356	199,917	3.6%
14 Land and Structures	31,756,101	33,000,000	33,000,000	0	0%
Total Objects	\$ 151,564,438	\$ 167,751,999	\$ 173,693,058	\$ 5,941,059	3.5%
Funds					
01 General Fund	\$ 28,368,614	\$ 30,433,501	\$ 33,655,770	\$ 3,222,269	10.6%
03 Special Fund	90,393,447	100,801,589	104,792,082	3,990,493	4.0%
05 Federal Fund	28,249,391	32,527,352	31,266,438	-1,260,914	-3.9%
09 Reimbursable Fund	4,552,986	3,989,557	3,978,768	-10,789	-0.3%
Total Funds	\$ 151,564,438	\$ 167,751,999	\$ 173,693,058	\$ 5,941,059	3.5%

Note: The fiscal 2019 appropriation does not include deficiencies, a one-time \$500 bonus, or general salary increases. The fiscal 2020 allowance does not include general salary increases.

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Appendix 5
Fiscal Summary
Department of the Environment

<u>Program/Unit</u>	<u>FY 18 Actual</u>	<u>FY 19 Wrk Approp</u>	<u>FY 20 Allowance</u>	<u>Change</u>	<u>FY 19 - FY 20 % Change</u>
01 Office of the Secretary	\$ 2,536,551	\$ 2,258,213	\$ 2,226,834	-\$ 31,379	-1.4%
02 Operational Services Administration	9,567,053	9,409,612	9,610,835	201,223	2.1%
04 Water and Science Administration	41,180,474	43,102,419	41,318,105	-1,784,314	-4.1%
06 Land and Materials Administration	26,978,086	31,909,190	32,733,602	824,412	2.6%
07 Air and Radiation Administration	19,614,406	19,478,096	20,277,801	799,705	4.1%
10 Coordinating Offices	51,687,868	61,594,469	67,525,881	5,931,412	9.6%
Total Expenditures	\$ 151,564,438	\$ 167,751,999	\$ 173,693,058	\$ 5,941,059	3.5%
General Fund	\$ 28,368,614	\$ 30,433,501	\$ 33,655,770	\$ 3,222,269	10.6%
Special Fund	90,393,447	100,801,589	104,792,082	3,990,493	4.0%
Federal Fund	28,249,391	32,527,352	31,266,438	-1,260,914	-3.9%
Total Appropriations	\$ 147,011,452	\$ 163,762,442	\$ 169,714,290	\$ 5,951,848	3.6%
Reimbursable Fund	\$ 4,552,986	\$ 3,989,557	\$ 3,978,768	-\$ 10,789	-0.3%
Total Funds	\$ 151,564,438	\$ 167,751,999	\$ 173,693,058	\$ 5,941,059	3.5%

Note: The fiscal 2019 appropriation does not include deficiencies, a one-time \$500 bonus, or general salary increases. The fiscal 2020 allowance does not include general salary increases.

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