

**U00A**  
**Department of the Environment**

***Operating Budget Data***

(\$ in Thousands)

	<u>FY 06</u> <u>Actual</u>	<u>FY 07</u> <u>Working</u>	<u>FY 08</u> <u>Allowance</u>	<u>FY 07-08</u> <u>Change</u>	<u>% Change</u> <u>Prior Year</u>
General Fund	\$34,472	\$36,218	\$37,150	\$932	2.6%
Special Fund	30,629	41,663	41,515	-148	-0.4%
Federal Fund	27,402	28,983	29,976	993	3.4%
Reimbursable Fund	<u>4,133</u>	<u>4,341</u>	<u>3,988</u>	<u>-352</u>	<u>-8.1%</u>
<b>Total Funds</b>	<b>\$96,637</b>	<b>\$111,204</b>	<b>\$112,629</b>	<b>\$1,425</b>	<b>1.3%</b>

- The Maryland Department of the Environment's (MDE) fiscal 2008 allowance totals \$112.6 million. This is \$1.4 million, or 1.3%, more than the fiscal 2007 working appropriation. However, when you adjust for one-time health insurance cost savings, the allowance is \$5.0 million, or 4.7%, more than the fiscal 2007 working appropriation.
- The general fund allowance is \$37.2 million, or 2.6%, more than the fiscal 2007 working appropriation. The general fund allowance reflects the following increases: \$900,000 to fill in for Clean Air Fund dollars to support the Air and Radiation Administration; \$600,000 for developing Total Maximum Daily Loads; and \$225,000 for water quality monitoring network stream gauges.
- The special fund allowance is \$41.5 million, or 0.4%, less than the fiscal 2007 working appropriation. The special fund allowance increase of \$5.0 million for debt service payments from the Bay Restoration Fund is offset by reductions in tire scrap pile cleanups and projects (\$1.8 million); anticipated completion of the homeland security project for development of early warning systems along the Potomac and Patuxent Rivers (\$840,000) and the Coastal Plains aquifer study (\$300,000); and reductions in contractual services and other operating costs in the Hazardous Waste Program (\$630,000), the Air Management Administration (\$605,000), and the Solid Waste Program (\$600,000).
- MDE's federal fund allowance increases by 3.4%, or \$993,000, due to the increase for the Federal Emergency Management Agency floodplain map modernization project (\$1.7 million). This increase was partially offset by reductions in funds for mining contracts (\$398,000) and childhood lead poisoning funds (\$320,000).

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

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***Personnel Data***

	<b><u>FY 06</u></b> <b><u>Actual</u></b>	<b><u>FY 07</u></b> <b><u>Working</u></b>	<b><u>FY 08</u></b> <b><u>Allowance</u></b>	<b><u>FY 07-08</u></b> <b><u>Change</u></b>
Regular Positions	949.00	951.00	955.00	4.00
Contractual FTEs	<u>26.00</u>	<u>37.50</u>	<u>44.50</u>	<u>7.00</u>
<b>Total Personnel</b>	<b>975.00</b>	<b>988.50</b>	<b>999.50</b>	<b>11.00</b>

***Vacancy Data: Regular Positions***

Turnover, Excluding New Positions	61.98	6.49%
Positions Vacant as of 12/31/06	73.00	7.68%

- The fiscal 2008 allowance creates six new positions which are offset by two abolished positions for a net of four additional positions. All of the new positions are in the Water Management Administration.

<b><u>Position</u></b>	<b><u>Work</u></b>	<b><u>Funding</u></b>
Water Resources Engineer IV	Wastewater treatment plants upgrade project management	Bay Restoration Fund
Water Resources Engineer IV	Wastewater treatment plants upgrade project management	Bay Restoration Fund
Sanitarian IV	On-site sewage disposal systems fieldwork	Bay Restoration Fund
Sanitarian IV	On-site sewage disposal systems fieldwork	Bay Restoration Fund
Public Health Engineer	Monitor State reduction in water use	Federal funds
Environmental Specialist IV	Monitor State reduction in water use	Federal funds

- MDE’s budgeted fiscal 2008 turnover rate of 6.49% is approximately 1.2% less, or 11.02 fewer positions, than the current fiscal 2007 vacancy rate.

## *Analysis in Brief*

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### Issues

***Talk of Enterprise Environmental Management System Efficiencies Shifts from Cost Savings to Cost Avoidance:*** Fiscal 2007 budget bill language required MDE to submit a status report on implementation of the Enterprise Environmental Management System (EEMS). The status report met the first requirement (the project is three months behind schedule but within budget) but did not include sufficient information to meet the independent verification and validation (IV&V) results and operating savings requirements. **As a result of the considerations above, the Department of Legislative Services (DLS) recommends that MDE and the Department of Budget and Management submit the following two documents to enable the committees to evaluate the project's progress and potential lost savings:**

- **either the IV&V itself or a more detailed summary of the IV&V results; and**
- **a list of what has been implemented so far, what resources (by money/position and type of work) have been freed up as a result of this level of implementation, and how these freed up resources are being used now (by money/position and type of work).**

**After reviewing and evaluating the documents, the budget committees will be in a better position to consider the release of funds (\$1.2 million) for the final phase of work.**

***Enforcement/Compliance Capacity Low:*** The allowance for the Office of the Attorney General includes four new positions for environmental crimes. This suggests that enforcement of environmental laws will be a priority for new Attorney General Douglas F. Gansler. However, it is unclear whether MDE has the enforcement capacity to provide the new Attorney General with information about law-breakers. **DLS recommends that MDE discuss what inspection coverage rate is appropriate for each enforcement and compliance program, how many additional inspectors and funds MDE estimates that this would require, and what the potential environmental and public health hazards might be if the status quo is maintained.**

***Cause of Potomac River Intersex Fish Unknown:*** Intersex fish are fish that have both male and female characteristics in the same fish. A new category of pollutant called organic wastewater contaminants appears to be one possible cause of the intersexed fish. Included in this category of organic wastewater contaminants are pharmaceuticals (antibiotics, cardiovascular drugs) and hormones (endocrine disrupters). **DLS recommends that MDE brief the committees on the findings of the Environmental Protection Agency Office of Research and Development's initial findings on the causes of intersex fish characteristics in the Potomac watershed, on the considerations of these findings relative to the State's capital campaign to upgrade wastewater treatment plants, and on MDE's plan for addressing this issue.**

*U00A – Department of the Environment*

**Recommended Actions**

	<b><u>Funds</u></b>	<b><u>Positions</u></b>
1. Increase turnover for new positions from 6.51 to 25.00%.	\$ 53,216	
2. Delete funding for an environmental specialist IV position (074043) that has been vacant longer than a year.	47,336	1.0
<b>Total Reductions</b>	<b>\$ 100,552</b>	<b>1.0</b>

**U00A**  
**Department of the Environment**

***Operating Budget Analysis***

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**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 seven major administrative units.

- ***Office of the Secretary:*** This office provides direction and establishes State environmental policies to be implemented by the operating units.
- ***Administrative and Employee Services Administration:*** This administration provides general administrative and employee services to the department.
- ***Water Management Administration:*** This administration incorporates all aspects of the State's water pollution control program, including capital project management; implementation of Total Maximum Daily Loads (TMDLs) for pollutants in impaired waterways; and industrial/municipal wastewater and storm water discharge regulatory functions.
- ***Technical and Regulatory Services Administration:*** This administration provides hazardous chemical and oil spill emergency response services; develops and promulgates water quality standards; provides technical support and analysis for TMDLs; monitors shellfish; develops environmental and public health risk assessments; implements non-point source pollution programs; and develops and issues fish advisories.
- ***Waste Management 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.
- ***Air and Radiation Management Administration:*** This administration ensures that air quality and radiation levels in Maryland sustain public health, safety, and the environment.
- ***Coordinating Offices:*** These offices manage budget matters, the Water Quality Revolving Loan Fund, and Board of Public Works' activities; coordinate public information and outreach; and provide legal advice.

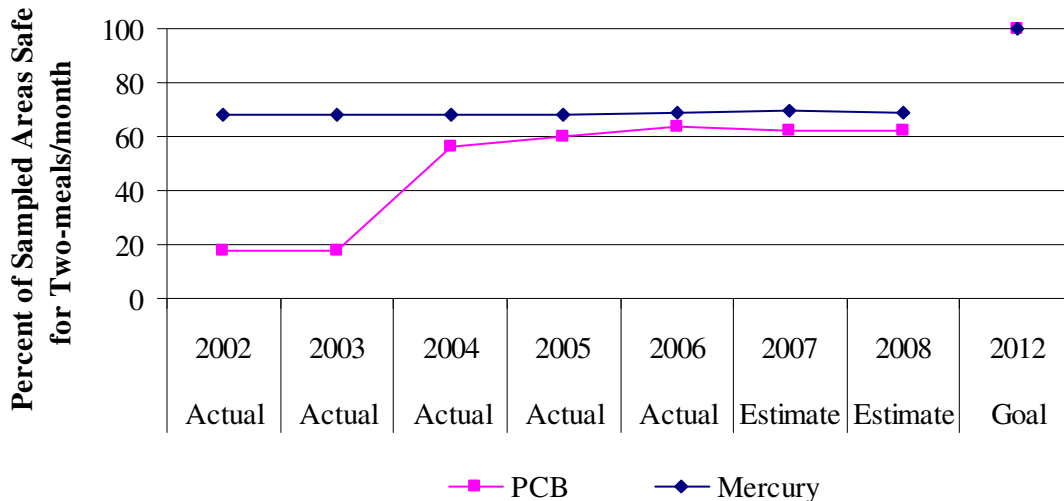
MDE has identified six goals that illustrate its core efforts to protect and preserve Maryland's natural resources. They are:

- promoting land redevelopment and community revitalization;
- ensuring safe and adequate drinking water;
- reducing Maryland citizens’ exposure to hazards;
- improving and protecting Maryland’s water quality;
- ensuring the air is safe to breathe; and
- providing excellent customer service and community outreach.

### Performance Analysis: Managing for Results

**Exhibit 1** provides data on MDE’s third goal: reducing Maryland citizens’ exposure to hazards. MDE has the following 2012 goal: 100% of freshwater sampled areas safe for two-meals/month of fish. Mercury and PCB are the two contaminants for which MDE samples, and it appears that the measures have plateaued below 70% with only five years before the 2012 goal is to be met.

**Exhibit 1  
Fresh Water Fish Tissue Concentrations  
Safe for Two-meals/Month  
Fiscal 2002-2008**

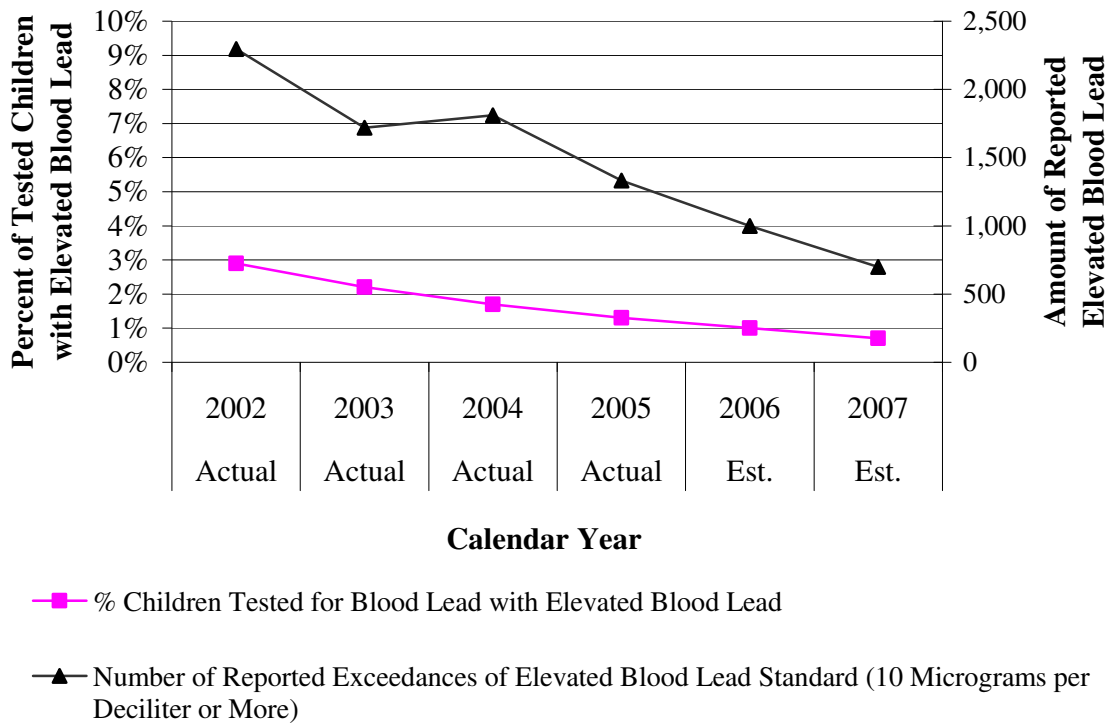


Source: Governor’s Budget Books, Fiscal 2005-2007

MDE should comment on whether the goal of 100% of freshwater sampled areas safe for two-meals/month of fish is still achievable and if so how it will be achieved.

Exhibit 2 provides data on blood lead levels – another component of MDE’s goal to reduce Maryland citizens’ exposure to hazards. The percentage of children testing for and adults reporting elevated blood lead levels has decreased by 10% per year. Baltimore City is a focus of this effort.

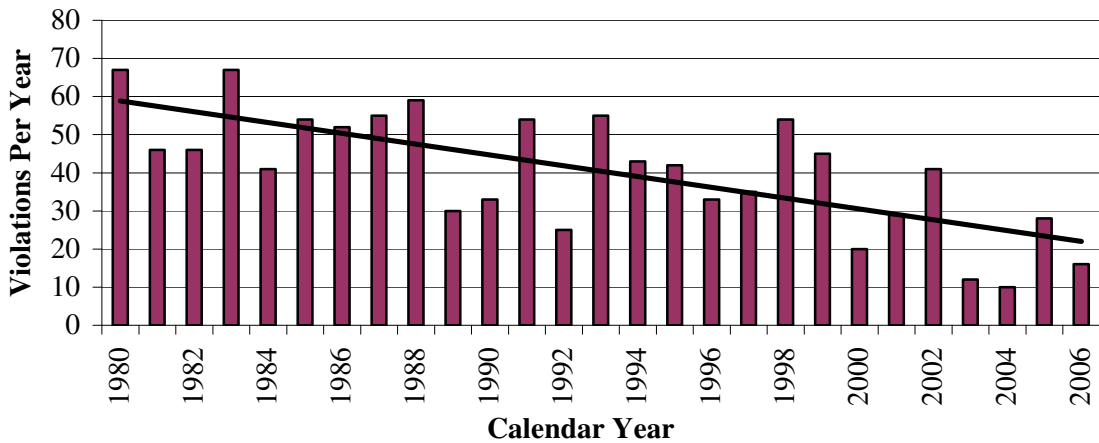
**Exhibit 2  
Elevated Blood Lead Levels**



Source: Governor’s Budget Books, Fiscal 2005-2007

Exhibit 3 provides data on MDE’s fifth goal: ensuring the air is safe to breath. As can be seen, Maryland’s number of 8-hour ozone standard exceedances has declined since 1980. However, this decline must be put into perspective.

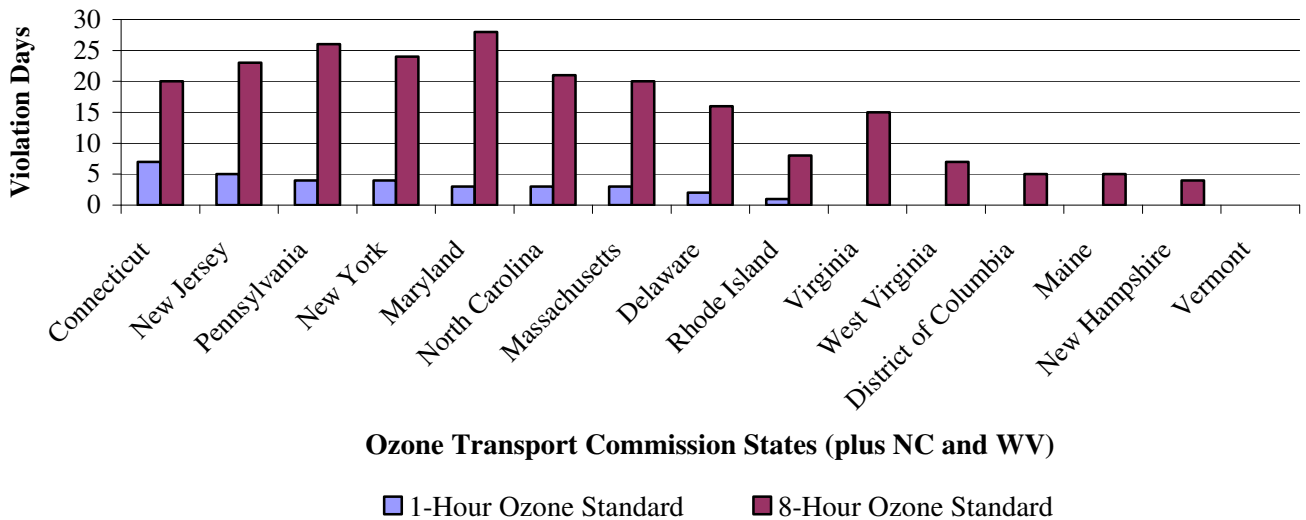
**Exhibit 3  
Maryland 8-Hour Ozone Exceedance Days Per Year**



Source: Maryland Department of the Environment

**Exhibit 4** provides data on how Maryland compares to other Ozone Transport Commission states with the addition of North Carolina and West Virginia. While tied for fourth with North Carolina and Massachusetts in terms of 1-hour ozone standard violation days, Maryland had the highest number of 8-hour ozone standard violation days of the states shown.

**Exhibit 4  
1- and 8-Hour Ozone Standard Violation Days  
Calendar 2005**



Source: Maryland Department of the Environment

**MDE should comment on what still needs to be done to reduce the number of 8-hour ozone standard violation days.**

## **Governor's Proposed Budget**

**Exhibit 5** indicates that MDE's fiscal 2008 allowance is \$112.6 million, which is 1.3% more than the fiscal 2007 working appropriation. This overall increase in funding reflects increases of \$932,000 in general funds and \$993,000 in federal funds.

### **Personnel Expenses**

Personnel expenses decrease by \$2.0 million. The two largest decreases are for one-time savings in health insurance costs (\$3.3 million) and for funds that were brought in by budget amendment that have not yet been distributed among subobjects (\$2.0 million). MDE also abolished two positions – an administrative specialist III and a public health engineer II – which accounts for \$93,000 of the decrease. In addition to increases for increments and other compensation (\$1.9 million), employee retirement contributions, Social Security and unemployment insurance (\$1.2 million), MDE has six new positions in its allowance, which account for \$322,000 of the personnel expenses and are listed in the Personnel Data section.

### **Other Changes**

MDE's goals of water quality improvement, hazard reduction, and healthy air promotion are reflected in the 2008 allowance. Bay Restoration Fund debt service payments of \$5.0 million and an additional \$190,000 for Total Maximum Daily Load development address water quality improvement.

Hazard reduction is budgeted for a \$1.7 million increase for a floodplain map modernization project. However, this increase is offset by less funding for tire cleanup projects (\$1.7 million), no tire recycling facility grant to the Maryland Environmental Service (\$1.4 million) in fiscal 2008, and funding one-time fiscal 2007 projects such as the monitoring of drinking water sources for homeland security purposes and the Coastal Plains aquifer study (\$977,000).

Funding associated with the healthy air promotion goal increases for replacement of aging air monitoring equipment and computers needed for Enterprise Environmental Management System usage (\$184,000). Additional contractual positions are in the allowance for air quality permit review, monitoring, and for radiation machine inspection (\$111,000). These increases are offset by a \$298,000 reduction in air quality monitoring studies due to decreased special and federal fund availability.

**Exhibit 5**  
**Governor’s Proposed Budget**  
**Department of the Environment**  
**(\$ in Thousands)**

<b>How Much It Grows:</b>	<b><u>General</u> <u>Fund</u></b>	<b><u>Special</u> <u>Fund</u></b>	<b><u>Federal</u> <u>Fund</u></b>	<b><u>Reimb.</u> <u>Fund</u></b>	<b><u>Total</u></b>
2007 Working Appropriation	\$36,218	\$41,663	\$28,983	\$4,341	\$111,204
2008 Governor’s Allowance	<u>37,150</u>	<u>41,515</u>	<u>29,976</u>	<u>3,988</u>	<u>112,629</u>
Amount Change	\$932	-\$148	\$993	-\$352	\$1,425
Percent Change	2.6%	-0.4%	3.4%	-8.1%	1.3%

**Where It Goes:**

**Personnel Expenses**

Increments and other compensation.....	\$1,913
Employee retirement, Social Security, unemployment insurance contribution.....	1,228
Six new positions.....	322
Other fringe benefit adjustments.....	158
Health insurance costs decline due to one-time savings.....	-3,273
Fiscal 2007 personnel funds brought in via budget amendment and not yet distributed among subobjects.....	-1,977
Turnover adjustments.....	-270
Two abolished positions.....	-93

**Other Changes**

*Improving and Protecting Maryland’s Water Quality*

Debt service reserve funds for BRF/ENR program.....	5,000
Increase in Total Maximum Daily Load funding.....	190

*Reducing Maryland Citizens’ Exposure to Hazards*

Federal Emergency Management Agency floodplain map modernization project.....	1,686
Reduction in tire cleanups due to slow movement in current projects.....	-1,703
No Maryland Environmental Service tire recycling facility grant in fiscal 2008.....	-1,384
Reduction of homeland security funding, end of the Coastal Plains aquifer study.....	-977

*Ensuring the Air Is Safe to Breathe*

Replace air monitoring equipment and computers needed for EEMS usage.....	184
Additional contractuals for air quality permit review, monitoring, and radiation machine inspection.....	111
Reduction in air quality monitoring studies due to decreased special and federal funds....	-298

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**Where It Goes:**

*Other*

Ten replacement vehicles and associated expenses in Waste Management .....	231
Replace equipment stolen from Emergency Response building.....	157
Increase in utilities .....	156
Six replacement vehicles and associated expenses in Technical and Regulatory Services.....	97
Other adjustments .....	-34

**Total** **\$1,425**

BRF: Bay Restoration Fund

EEMS: Enterprise Environmental Management System

ENR: Enhanced Nutrient Removal

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

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Other increases are more broadly related to MDE operating expenses. The Waste Management Administration and Technical and Regulatory Services Administration have allowances for 10 replacement vehicles (\$231,000) and 6 replacements vehicles (\$97,000), respectively. The existing vehicles have mileages of over 125,000 miles in many cases. Increases for replacing equipment stolen from the Emergency Response building (\$157,000) and utilities (\$156,000) account for the majority of the remaining fiscal 2008 allowance changes.

## ***Issues***

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### **1. Talk of Enterprise Environmental Management System Efficiencies Shifts from Cost Savings to Cost Avoidance**

To address data and system inefficiency issues, MDE initiated implementation of an Enterprise Environmental Management System (EEMS) that will provide on-line permit application, data submission for compliance reporting, permit and process status tracking information, and a single point of reference for environmental information. Fiscal 2007 budget bill language required MDE to submit a status report on implementation of EEMS in order to secure release of funds for phase three, task order four (the final phase and task order). The report submission deadline was after completion of the third task order or December 1, 2006, whichever occurred first. The status report was to include the following:

- latest EEMS implementation budget estimate and schedule;
- results of an independent verification and validation report (IV&V) on EEMS; and
- updated estimates of specific MDE annual operating cost savings resulting from EEMS implementation including the identification of specific personnel savings by position identification number.

The status report met the first requirement (the project is three months behind schedule but within budget) but did not include sufficient information to meet the IV&V results and operating savings requirements.

#### **IV&V Results**

The IV&V results requirement was addressed in the status report as follows: “The IV&V highlighted opportunities for improvement in the overall management of the EEMS project. MDE has taken the recommended action to address or minimize the potential risk identified in the IV&V.” When asked to either clarify this statement or to submit the IV&V, MDE and the Department of Budget and Management’s (DBM) Office of Information Technology (IT) responded that the IV&V provides opinions and advice on specific projects at a point in time and that the opinions and advice are considered confidential.

#### **Operating Savings**

Operating savings were not addressed in the status report. MDE has stated on numerous occasions that there were initial IT position reductions but that there will be no additional position reductions related to EEMS implementation. Instead, according to MDE, there will be programmatic efficiencies such as the return of employees who are currently maintaining databases to their full-time programmatic functions (sanitarians, engineers, and others). Implicitly, this means that MDE was

understaffed before the EEMS implementation process began and that MDE is using EEMS programmatic efficiencies to mitigate the staffing shortage. As a result, even under the best scenario, no position reductions would occur until EEMS has compensated for MDE's original staffing shortage.

Information provided by MDE in January 2006 about costs and project delays indicates that the sanitarians, engineers, and others will be required to maintain the existing databases longer than originally projected, which will increase the EEMS system cost \$1.2 million and thus eliminate the \$1.2 million in personnel cost savings projected in August 2004. As a result, potential programmatic efficiencies and position reductions will be pushed even further into the future. MDE states that it cannot update the cost benefit analysis because it is in the process of implementing the second task order release and validating the enhancements requested by the programs in the third task order release.

**As a result of the considerations above, DLS recommends that MDE and DBM submit the following two documents to enable the committees to evaluate the project's progress and potential cost savings:**

- **either the IV&V itself or a more detailed summary of the IV&V results; and**
- **a list of what has been implemented so far, what resources (by money/position and type of work) have been freed up as a result of this level of implementation, and how these freed up resources are being used now (by money/position and type of work).**

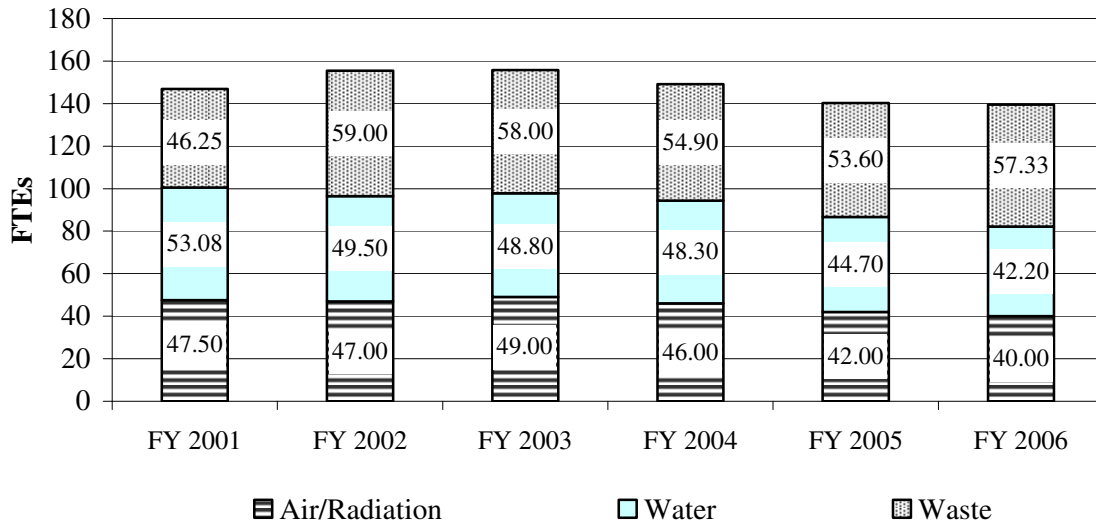
**After reviewing and evaluating the documents, the budget committees will be in a better position to consider the release of funds (\$1.2 million) for the final phase of work.**

## **2. Enforcement/Compliance Capacity Low**

The allowance for the Office of the Attorney General includes four new positions for environmental crimes. This suggests that enforcement of environmental laws will be a priority for new Attorney General Douglas F. Gansler. However, it is unclear whether MDE has the enforcement capacity to provide the new Attorney General with information about law-breakers.

In **Exhibit 6**, one can see that from fiscal 2001 to 2006, there has been an increase in the number of inspectors for the Waste Management Administration, but a decline in the number of inspectors for the Air and Radiation Administration and the Water Management Administration. Overall, MDE has lost a net of seven inspectors since fiscal 2001.

**Exhibit 6  
Number of Inspectors by Administration**

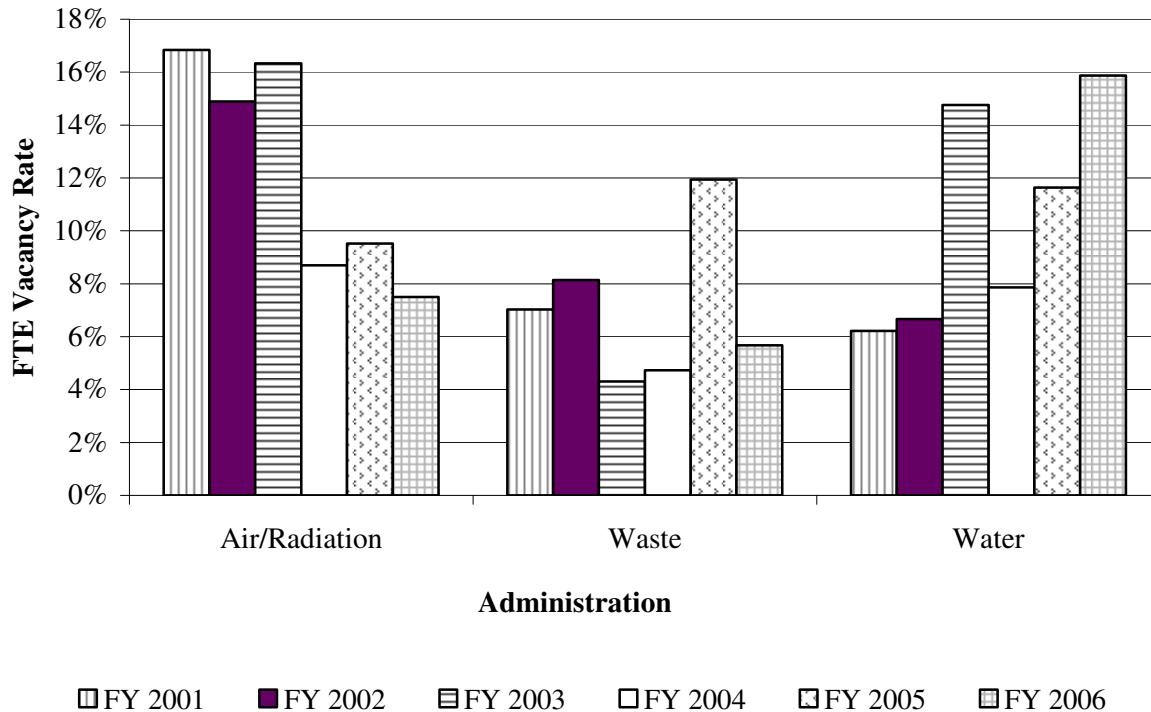


Source: Maryland Department of the Environment (*Annual Enforcement and Compliance Report* (fiscal 2006))

## Vacancies

While the overall inspector vacancy rate has stayed steady, the inspector vacancy rate in the Water Management Administration increased from 6 to 16% between fiscal 2001 and 2007, as shown in **Exhibit 7**. MDE explains that this is because in general the Water Management Administration has older employees, and thus it is beginning to experience attrition. In addition, MDE indicates that it has had difficulties attracting qualified inspectors at State pay levels and retaining inspectors because higher paying federal positions are opening up in the Environmental Protection Agency (due to retirements) to which Water Management Administration personnel are transferring. The number of Waste Management Administration inspectors increased, according to MDE, because there is a more stable revenue stream (general funds) than for the Air and Radiation and Water Management Administrations inspectors (primarily special funds).

**Exhibit 7  
Inspector FTE Vacancy Rate by Administration**



Source: Maryland Department of the Environment

**Inspection Coverage Rate and Significant Violations**

The inspection coverage rate (number of sites inspected/total number of sites) could be significantly higher for many enforcement and compliance programs. **Exhibit 8** shows that when significant compliance (percent of sites inspected with significant compliance) is multiplied by the inspection coverage rate, a number that can be interpreted as the confidence in significant compliance is derived. Exhibit 8 is sorted by the confidence in significant compliance. Inspection coverage rate and confidence in significant compliance measures are shaded for measures that are 20% or below and are listed as follows: stormwater management and erosion and sediment control for construction activity, radiation machines, scrap tires, oil aboveground facilities, ambient air quality control low impact facilities, wetlands – tidal, oil underground storage tank systems, and hazardous waste.

The percent of sites inspected that have no significant violations involving an environmental/public health impact are also depicted in Exhibit 9. The mining – coal enforcement and compliance program has a low percent of sites inspected with no significant violations.

**Exhibit 8**  
**Enforcement and Compliance Data**  
**(Sorted by Confidence in Significant Compliance)**  
**Fiscal 2006**

<u>Administration</u>	<u>Enforcement and Compliance Programs</u>	<u>Significant Compliance (%)</u>	<u>Inspection Coverage Rate (%)</u>	<u>Confidence in Significant Compliance (%)</u>	<u>Inspected Sites with No Significant Violations Involving Environmental/Health Impact (%)</u>	
Air/Radiation	Ambient Air Quality Control High Impact Facilities	96	67	64	98	
	Air Quality Complaints	90	68	61	85	
	Radioactive Materials	81	43	35	100	
	Asbestos	99	29	29	98	
	Radiation Machines	51	36	18	100	
Waste	Ambient Air Quality Control Low Impact Facilities	99	8	8	99	
	Refuse Disposal	95	100	95	99	
	Natural Wood Waste Recycling	93	100	93	100	
	Sewage Sludge Utilization	98	31	30	99	
	Oil Pollution Remediation Activities	99	24	24	99	
	Lead Poisoning Prevention	74	31	23	92	
	Scrap Tires	99	16	16	100	
	Oil Aboveground Facilities	93	15	14	98	
	Oil Underground Storage Tank Systems	87	7	6	87	
	Hazardous Waste	77	2	1	79	
	Water	Discharges – Pretreatment (Industrial)	100	n/a	n/a	100
		Oil and Gas Exploration And Production	n/a	0	n/a	n/a
		Discharge – Groundwater (Municipal And Industrial)	98	100	98	99
Discharges – Surface Water (Municipal and Industrial)		99	85	84	99	
State and NPDES Permits						
Water Supply Program – Community and Non-transient Non-community Water Systems		82	100	82	93	
Water Supply Program – Transient Non-community Water Systems		88	78	69	91	
Water Supply and Sewerage Construction		100	53	53	100	
Waterway Construction – Dam Safety		96	54	52	100	
Wetlands and Waterways Non-tidal and Floodplain		99	40	40	99	
Mining – Coal		38	97	37	0	
Mining – Non-Coal		100	32	32	100	
Stormwater Management and Erosion and Sediment Control for Construction Activity		99	20	20	100	
Wetlands – Tidal	92	8	7	92		

**Exhibit 8 (cont.)**  
**Enforcement and Compliance Data**  
**(Sorted by Confidence in Significant Compliance)**  
**Fiscal 2006**

Note: Confidence in Significant Compliance (DLS) = Significant Compliance x Inspection Coverage Rate.

Note: Inspected sites with No Significant Violations Involving Environmental/Health Impact (DLS) = Number of Inspected Sites with No Significant Environmental/Health Violations / Number of Inspected Sites.

Note: Shaded numbers indicate a measurement of 20% or less.

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

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## Number of Inspectors

**Exhibit 9** shows number of sites to be inspected, inspection coverage rate, and current number of inspectors for each administration. Local inspection sites account for 112,707 of the 138,375 sites in the Waste Management Administration.

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### Exhibit 9 Inspection Data by Administration Fiscal 2006

<u>Administration</u>	<u>Number of Sites to Be Inspected</u>	<u>Inspection Coverage Rate (%)</u>	<u>Current Number of Inspectors</u>
Air/Radiation	21,238	22%	40
Waste	138,375	14%	57.33
Water	38,303	33%	42

Note: Private sector accredited lead abatement services providers account for the majority of the 35,052 lead inspections in the Waste Administration.

Source: Maryland Department of the Environment

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**DLS recommends that MDE discuss what inspection coverage rate is appropriate for each enforcement and compliance program, how many additional inspectors and funding MDE estimates that this would require, and what potential environmental and public health hazards might exist if the status quo is maintained.**

### 3. Cause of Potomac River Intersex Fish Unknown

Intersex fish are fish that have both male and female characteristics in the same fish. Surveys conducted in fall 2005 suggest that intersex characteristics in fish can be found throughout the Potomac and Shenandoah Rivers.

A new category of pollutant called organic wastewater contaminants appears to be one possible cause of the intersexed fish. Included in this category of organic wastewater contaminants are pharmaceuticals (antibiotics, cardiovascular drugs) and hormones (endocrine disrupters). Endocrine disrupters (and chemicals such as personal care products and pharmaceuticals that may not have been previously identified as endocrine disrupters) have received the most attention because they are capable of creating the hormonal changes leading to developmental and reproductive abnormalities in fish. However, other factors must be considered too including changes in water

temperature and habitat characteristics and contamination by previously banned chemicals such as DDT, chlordane, and others.

At this point, EPA is addressing whether existing water quality criteria cover the reproductive and developmental impacts of endocrine disrupters. In addition, EPA is conducting a pilot study of the occurrence and concentration of pharmaceuticals and personal care products in fish tissue with a final report expected by the end of 2007.

Efforts to remove the endocrine disrupters or other causes of fish developmental and reproductive abnormalities depend on the possible sources of the contaminants. EPA's focus is on wastewater treatment plants, concentrated animal feeding operations, drinking water plants, and biosolids application sites. According to MDE, control efforts used elsewhere include pharmaceutical recycling/buyback programs (to keep people from putting pharmaceuticals in the wastewater stream) and the theoretical removal by wastewater treatment. Since data is limited and since neither wastewater nor most drinking water treatment technologies are designed to effectively remove the contaminants, MDE is working cooperatively with other EPA Region III states to track the new issue. Initial findings from EPA Office of Research and Development's study of the causes of intersex fish characteristics in the Potomac watershed will be available in January 2007.

**DLS recommends that MDE brief the committees on the findings of EPA Office of Research and Development's initial findings on the causes of intersex fish characteristics in the Potomac watershed, on the considerations of these findings relative to the State's capital campaign to upgrade wastewater treatment plants, and on MDE's plan for addressing this issue.**

***Recommended Actions***

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	<b><u>Amount Reduction</u></b>		<b><u>Position Reduction</u></b>
1. Increase turnover for new positions from 6.51 to 25.00% to reflect Department of Budget and Management instructions for new positions.	\$ 35,162	SF	
	\$ 18,054	FF	
2. Delete funding for an environmental specialist IV position (074043) that has been vacant longer than a year. This reduction still leaves the Maryland Department of the Environment with six new positions.	47,336	GF	1.0
<b>Total Reductions</b>	<b>\$ 100,552</b>		<b>1.0</b>
<b>Total General Fund Reductions</b>	<b>\$ 47,336</b>		
<b>Total Special Fund Reductions</b>	<b>\$ 35,162</b>		
<b>Total Federal Fund Reductions</b>	<b>\$ 18,054</b>		

## ***Current and Prior Year Budgets***

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### **Current and Prior Year Budgets Department of the Environment (\$ in Thousands)**

	<b><u>General Fund</u></b>	<b><u>Special Fund</u></b>	<b><u>Federal Fund</u></b>	<b><u>Reimb. Fund</u></b>	<b><u>Total</u></b>
<b>Fiscal 2006</b>					
Legislative Appropriation	\$33,677	\$30,049	\$26,047	\$4,246	\$94,019
Deficiency Appropriation	0	0	0	0	0
Budget Amendments	795	4,534	6,003	54	11,386
Reversions and Cancellations	0	-3,954	-4,648	-167	-8,769
<b>Actual Expenditures</b>	<b>\$34,472</b>	<b>\$30,629</b>	<b>\$27,402</b>	<b>\$4,133</b>	<b>\$96,636</b>
<b>Fiscal 2007</b>					
Legislative Appropriation	\$35,811	\$35,379	\$27,658	\$4,252	\$103,100
Budget Amendments	407	6,284	1,325	89	8,105
<b>Working Appropriation</b>	<b>\$36,218</b>	<b>\$41,663</b>	<b>\$28,983</b>	<b>\$4,341</b>	<b>\$111,204</b>

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

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## **Fiscal 2006**

MDE's general fund appropriation increased by \$795,163 due to allocation of the cost-of-living adjustment general fund appropriation (\$333,163) as authorized in the fiscal 2006 budget bill (Budget Amendment 004-06) and to reallocation of the health insurance appropriation (\$462,000) as authorized in the fiscal 2006 budget bill (Budget Amendment 197-06).

Special funds dedicated to operating functions increased by a net of \$580,571. This change was due in part to \$4.5 million in budget amendments, including:

- \$1,357,103 for lower than expected turnover;
- \$500,000 for grants for contracts to model total maximum daily loads of pollutants entering water systems;
- \$500,000 for contractual services related to public information and outreach;
- \$485,000 for salaries and fringe benefit costs of employees in the Water Quality Financing Administration;
- \$372,000 for studies related to the Regional Greenhouse Gas Initiative as required by Chapter 154 of 2006;
- \$300,000 for reclamation of a coal mine site;
- \$268,000 for local government outreach efforts relating to lead poisoning;
- \$250,000 for contractual services associated with the initiation of the new Statewide Computer Recycling Pilot Program (Chapter 384 of 2005);
- \$240,250 for implementation of the Coastal Plain aquifer study in conjunction with the U.S. Geological Survey and the Maryland Geological Survey;
- \$225,000 for contractual services associated with monitoring water and wastewater treatment plant construction projects; and
- \$37,000 for replacement computers in the Air and Radiation Management Administration.

Special fund budget amendments were offset by \$4.0 million in special fund cancellations in the following programs: \$1.5 million in Waste Management Administration; \$991,327 in Water Management Administration; \$637,517 in Technical and Regulatory Services Administration; \$367,107 in Air and Radiation Management Administration; \$340,239 in Coordinating Offices;

*U00A – Department of the Environment*

\$79,000 in Office of the Secretary; and \$29,770 in Administrative and Employee Services Administration.

Federal funds dedicated to operating functions increased by a net \$1.4 million. This change was due in part to \$6.0 million in budget amendments, including:

- \$1,713,036 for grants and administrative costs associated with implementation of the Nonpoint Source Program under the federal Clean Water Act which include such activities as technical assistance, financial assistance, education, training, technology transfer, demonstration projects, and monitoring to assess the success of specific nonpoint source implementation projects;
- \$1,671,227 to support the Nonpoint Source Implementation Grant Program, employee costs related to an interagency agreement with DNR for Mid-Atlantic Highlands Action Program, and information technology projects;
- \$900,000 to capitalize a revolving loan fund in order to make loans and grants for cleanup of brownfield sites;
- \$600,000 for salary and benefit funding in the Water Pollution Control Program;
- \$418,448 to supply and equip air activities and to procure a contract to implement the Regional Greenhouse Gas Initiative required by Chapter 23 of 2006;
- \$250,000 to support contractual information technology services in the Coordinating Offices;
- \$200,000 for contractual services associated with updating a Geographic Information Services – Hydro software package and providing field data collection services for a floodplain mapping program;
- \$150,000 for salaries and benefits in the Administrative and Employees Services Administration; and
- \$100,000 for salaries and benefits in the Office of the Secretary.

These budget amendments were offset by \$4.6 million in federal fund cancellations in the following programs: \$1.6 million in Waste Management Administration; \$1.4 million in Water Management Administration; \$600,096 in Coordinating Offices; \$483,272 in Technical and Regulatory Services Administration; \$287,851 in Air and Radiation Management Administration; \$218,887 in Administrative and Employee Services Administration; and \$40,705 in Office of the Secretary.

## **Fiscal 2007**

The general fund appropriation has increased by a net of \$407,547. Allocation of \$413,890 to MDE for the salary increase general fund appropriation to State agencies as authorized in the fiscal 2007 budget bill (Budget Amendment 001-07) was offset by a \$6,343 reduction for the costs of a comprehensive salary study.

The special fund appropriation has increased by \$6.3 million due to the following budget amendments:

- \$1,500,000 for a contract with the government of the District of Columbia for a project titled “Statewide Early Warning System for MD Public Water Supply” in which MDE would provide technical support for monitoring raw water system stations along the Potomac and Patuxent Rivers;
- \$1,114,421 to provide a grant to the Maryland Environmental Service (MES) to help pay for equipment at the MES Tire Recycling Facility in Baltimore County as part of the multi-year plan to pay for the costs of the \$6.7 million facility;
- \$1,000,000 for detailed investigations, engineering, and implementation of corrective action plans as part of remediation of groundwater contamination for the sixty sites that have no responsible party identified or willing/able party;
- \$837,913 for salaries and fringe benefits for employees working on activities in the Maryland Clean Water Fund in the Water Management Administration;
- \$400,000 for Total Maximum Daily Load contracts;
- \$370,000 for Phase II of the Atlantic Coastal Plain Aquifer Study;
- \$304,664 for allocation of the special fund salary increase appropriation;
- \$300,000 for salary and fringe benefit costs of staff that have been transferred into the Water Quality Financing Administration from the Water Management Administration;
- \$160,000 for services to create an historic emissions inventory database as well as to create a banking and trading database for the State Implementation Plan (air quality plan);
- \$132,000 for replacement vehicles at the Water Management Administration;
- \$62,235 for interagency agreements under the Pennsylvania Chesapeake Bay Partnership to use EPA’s National Environmental Information Exchange Network to exchange Best

*U00A – Department of the Environment*

Management Practice installation or implementation data between the Chesapeake Bay Program jurisdictions and the Chesapeake Bay Program Office;

- \$62,234 for salaries and fringe benefits employees in the Technical and Regulatory Services Administration; and
- \$40,000 for purchase of two replacement vehicles (one totaled in an accident and one auctioned due to high maintenance costs) in the Air and Radiation Management Administration.

The federal fund appropriation has increased by \$1.3 million due to the following budget amendments:

- \$700,000 for Resource Conservation and Recovery Act and Toxic Substances Control Act components of the Performance Partnership Grant with U.S. EPA, which includes salary and fringe benefit costs (\$400,000); contracts (\$250,000); and routine supplies (\$50,000);
- \$286,900 for development and implementation of the Environmental Information Exchange Framework Network Grant, which includes contractual services (\$191,900); supplies and materials (\$40,000); salaries, wages and fringe benefits (\$30,000); equipment (\$20,000); and travel (\$5,000);
- \$90,000 for development of a Planet Pollution Video;
- \$80,000 for contracts under the Pollution Prevention Incentive for States grant program;
- \$70,000 for Phase II of a data acquisition system and for a service contract with Agilent for gas chromatograph/mass spectrometer service;
- \$58,023 for liaison work performed with Mid-Atlantic Highlands Action Program and for the Nutrient Criterion for Wadeable Streams program, which includes salaries, wages, fringe benefits (\$23,404); contracts (\$14,991); travel (\$14,020); and supplies and materials (\$5,608); and
- \$40,000 for an ozone monitoring contract with Howard University.

**Object/Fund Difference Report  
Department of the Environment**

<u>Object/Fund</u>	<u>FY06 Actual</u>	<u>FY07 Working Appropriation</u>	<u>FY08 Allowance</u>	<u>FY07-FY08 Amount Change</u>	<u>Percent Change</u>
<b>Positions</b>					
01 Regular	949.00	951.00	955.00	4.00	0.4%
02 Contractual	26.00	37.50	44.50	7.00	18.7%
<b>Total Positions</b>	<b>975.00</b>	<b>988.50</b>	<b>999.50</b>	<b>11.00</b>	<b>1.1%</b>
<b>Objects</b>					
01 Salaries and Wages	\$ 63,211,641	\$ 69,134,441	\$ 67,142,679	-\$ 1,991,762	-2.9%
02 Technical and Spec Fees	821,964	1,159,181	1,463,091	303,910	26.2%
03 Communication	839,576	850,381	772,704	-77,677	-9.1%
04 Travel	438,113	487,217	497,553	10,336	2.1%
06 Fuel and Utilities	425,008	423,725	608,269	184,544	43.6%
07 Motor Vehicles	1,309,115	1,188,321	1,817,359	629,038	52.9%
08 Contractual Services	6,658,119	14,499,921	10,778,575	-3,721,346	-25.7%
09 Supplies & Materials	988,292	1,217,098	1,325,718	108,620	8.9%
10 Equip – Replacement	871,512	672,410	984,514	312,104	46.4%
11 Equip – Additional	697,966	229,019	208,071	-20,948	-9.1%
12 Grants, Subsidies, and Contributions	16,116,586	17,156,858	17,865,948	709,090	4.1%
13 Fixed Charges	4,258,722	4,135,236	4,114,258	-20,978	-0.5%
14 Land and Structures	0	50,000	5,050,000	5,000,000	10000.0%
<b>Total Objects</b>	<b>\$ 96,636,614</b>	<b>\$ 111,203,808</b>	<b>\$ 112,628,739</b>	<b>\$ 1,424,931</b>	<b>1.3%</b>
<b>Funds</b>					
01 General Fund	\$ 34,472,196	\$ 36,218,067	\$ 37,150,000	\$ 931,933	2.6%
03 Special Fund	30,629,204	41,662,641	41,514,726	-147,915	-0.4%
05 Federal Fund	27,401,803	28,982,539	29,975,571	993,032	3.4%
09 Reimbursable Fund	4,133,411	4,340,561	3,988,442	-352,119	-8.1%
<b>Total Funds</b>	<b>\$ 96,636,614</b>	<b>\$ 111,203,808</b>	<b>\$ 112,628,739</b>	<b>\$ 1,424,931</b>	<b>1.3%</b>

Note: The fiscal 2007 appropriation does not include deficiencies, and the fiscal 2008 allowance does not reflect contingent reductions.

**Fiscal Summary  
Department of the Environment**

<u>Program/Unit</u>	<u>FY06 Actual</u>	<u>FY07 Wrk Approp</u>	<u>FY08 Allowance</u>	<u>Change</u>	<u>FY07-FY08 % Change</u>
01 Office of the Secretary	\$ 1,963,904	\$ 2,979,484	\$ 1,873,409	-\$ 1,106,075	-37.1%
02 Administrative and Employee Services	7,361,812	7,398,514	7,520,446	121,932	1.6%
01 Water Pollution Control Program	24,890,434	25,730,855	27,083,874	1,353,019	5.3%
02 Water Supply Program	4,341,387	6,757,284	5,980,809	-776,475	-11.5%
01 Technical and Regulatory Services	14,705,032	14,675,658	15,046,583	370,925	2.5%
01 Waste Management Administration	21,352,831	29,493,029	26,111,293	-3,381,736	-11.5%
05 Hazardous and Oil Control, Compliance and Cleanup	0	0	0	0	0%
07 Lead Poisoning Prevention Program	0	0	0	0	0%
01 Air and Radiation Management Administration	13,643,266	14,255,197	14,268,709	13,512	0.1%
01 Coordinating Offices	8,377,948	8,813,787	13,811,453	4,997,666	56.7%
02 Major IT Development Program	0	1,100,000	932,163	-167,837	-15.3%
<b>Total Expenditures</b>	<b>\$ 96,636,614</b>	<b>\$ 111,203,808</b>	<b>\$ 112,628,739</b>	<b>\$ 1,424,931</b>	<b>1.3%</b>
General Fund	\$ 34,472,196	\$ 36,218,067	\$ 37,150,000	\$ 931,933	2.6%
Special Fund	30,629,204	41,662,641	41,514,726	-147,915	-0.4%
Federal Fund	27,401,803	28,982,539	29,975,571	993,032	3.4%
<b>Total Appropriations</b>	<b>\$ 92,503,203</b>	<b>\$ 106,863,247</b>	<b>\$ 108,640,297</b>	<b>\$ 1,777,050</b>	<b>1.7%</b>
Reimbursable Fund	\$ 4,133,411	\$ 4,340,561	\$ 3,988,442	-\$ 352,119	-8.1%
<b>Total Funds</b>	<b>\$ 96,636,614</b>	<b>\$ 111,203,808</b>	<b>\$ 112,628,739</b>	<b>\$ 1,424,931</b>	<b>1.3%</b>

Note: The fiscal 2007 appropriation does not include deficiencies, and the fiscal 2008 allowance does not reflect contingent reductions.