

# Operations and Maintenance Summary

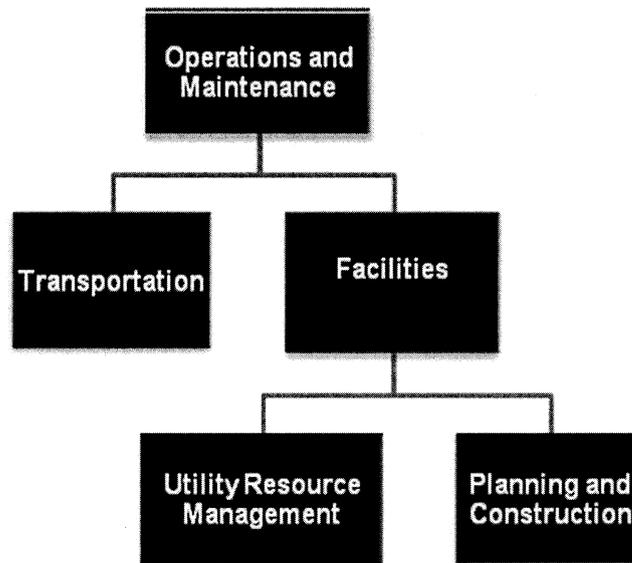
## Program Overview

The Operations and Maintenance program is comprised of various non-instructional areas of the school system that enable teaching and learning. Operations and Maintenance includes departments that are responsible for efficiently and effectively delivering Facilities Management, Planning and Construction, Student Transportation, and Community Services. Departments deliver services to schools and HCPS stakeholders in support of the Harford County Board of Education Strategic Plan Goal #4 to provide safe, secure, and healthy learning environments that are conducive to effective teaching and learning.

The primary purposes of Operations and Maintenance are to:

- Provide the technical skills and expertise to establish and deliver a comprehensive maintenance program for all school facilities.
- Manage a capital improvement program to plan, design, construct, and modernize educational facilities for the students and staff.
- Provide energy management resources through the coordination of administration and policy between the central office management team and the individual facility managers.
- Provide transportation to eligible students enrolled in our schools.
- Administer the program for the use of public school facilities by the community by providing funds for custodial overtime, materials and supplies, and fees associated with the community use of our facilities.

## PROGRAM COMPONENT ORGANIZATION



	FY12 Actual	FY13 Actual	FY14 Actual	FY14 Budget	Change FY14- FY15	FY15 Budget
<b>OPERATIONS AND MAINTENANCE</b>	\$ 67,667,330	\$ 66,984,483	\$ 68,041,156	\$ 68,793,551	\$ (580,387)	\$ 68,213,164
Facilities Management	\$ 21,774,525	\$ 21,478,610	\$ 21,285,372	\$ 21,817,012	\$ (23,120)	\$ 21,793,892
Planning and Construction	\$ 813,109	\$ 818,624	\$ 786,683	\$ 857,195	\$ 4,817	\$ 862,012
Transportation	\$ 31,031,105	\$ 31,218,016	\$ 30,411,148	\$ 30,843,916	\$ 16,626	\$ 30,860,542
Utility Resource Management	\$ 14,048,591	\$ 13,469,233	\$ 15,557,953	\$ 15,275,428	\$ (578,710)	\$ 14,696,718

## Summary Report

### Operations and Maintenance

By Object Code	FY12 Actual	FY13 Actual	FY14 Actual	FY14 Budget	14-15 Change	FY15 Budget
Salaries	\$22,794,243	\$22,840,688	\$22,732,703	\$23,416,852	(\$34,969)	\$23,381,883
Contracted Services	\$27,142,136	\$26,153,089	\$25,344,733	\$25,933,923	(\$142,740)	\$25,791,183
Supplies	\$4,309,498	\$4,363,981	\$4,420,127	\$4,212,808	(\$3,500)	\$4,209,308
Other Charges	\$12,980,557	\$13,350,323	\$15,458,139	\$15,114,132	(\$579,178)	\$14,534,954
Equipment	\$440,896	\$276,402	\$85,455	\$115,836	\$180,000	\$295,836
<b>Total:</b>	<b>\$67,667,329</b>	<b>\$66,984,483</b>	<b>\$68,041,157</b>	<b>\$68,793,551</b>	<b>(\$580,387)</b>	<b>\$68,213,164</b>

### Budgeted Full Time Equivalent Positions

	FY12	FY13	FY14	14-15	FY15
Assistant Supervisor	9.0	9.0	9.0	0.0	9.0
Bus Attendant	88.0	91.0	91.0	0.0	91.0
Bus Driver	100.4	103.4	103.4	0.0	103.4
Bus Instructor/Trainer	4.0	4.0	4.0	0.0	4.0
Clerical 12 Month	11.0	11.0	11.0	0.0	11.0
Custodian	336.9	337.9	337.9	0.0	337.9
Director	2.0	2.0	2.0	0.0	2.0
Facilities Maint Technician	87.0	87.0	87.0	0.0	87.0
Plan/Construction	2.0	2.0	2.0	0.0	2.0
Specialist 12 Month	2.0	2.0	2.0	0.0	2.0
Supervisor	4.0	4.0	4.0	0.0	4.0
Vehicle Mechanic/Helper	12.0	12.0	12.0	0.0	12.0
	<b>658.3</b>	<b>665.3</b>	<b>665.3</b>	<b>0.0</b>	<b>665.3</b>

By State Category	FY12 Actual	FY13 Actual	FY14 Actual	FY14 Budget	14-15 Change	FY15 Budget	FY15 FTE
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#### STUDENT TRANSPORTATION

Contracted Services	\$22,832,267	\$22,829,776	\$21,979,026	\$22,415,650	\$(145,320)	\$22,270,330	
Equipment	\$3,717	\$38,779	\$1,280	\$4,441	\$180,000	\$184,441	
Other Charges	\$33,272	\$36,089	\$28,613	\$29,452	\$0	\$29,452	
Salaries	\$6,271,532	\$6,306,792	\$6,311,665	\$6,449,797	\$(18,054)	\$6,431,743	
Supplies	\$1,311,630	\$1,457,084	\$1,539,904	\$1,350,000	\$0	\$1,350,000	
<b>TOTAL:</b>	<b>\$30,452,419</b>	<b>\$30,668,519</b>	<b>\$29,860,488</b>	<b>\$30,249,340</b>	<b>\$16,626</b>	<b>\$30,265,966</b>	<b>217.4</b>

#### OPERATION OF PLANT

Contracted Services	\$1,713,333	\$695,299	\$939,126	\$1,080,135	\$4,080	\$1,084,215	
Equipment	\$248,360	\$121,678	\$8,099	\$26,768	\$0	\$26,768	
Other Charges	\$12,927,359	\$13,286,058	\$15,407,646	\$15,054,509	\$(579,178)	\$14,475,331	
Salaries	\$10,841,406	\$10,783,921	\$10,686,544	\$11,006,174	\$(4,608)	\$11,001,566	
Supplies	\$1,092,526	\$1,014,792	\$998,734	\$1,021,146	\$0	\$1,021,146	
<b>TOTAL:</b>	<b>\$26,822,985</b>	<b>\$25,901,748</b>	<b>\$28,040,150</b>	<b>\$28,188,732</b>	<b>\$(579,706)</b>	<b>\$27,609,026</b>	<b>343.3</b>

#### MAINTENANCE OF PLANT

Contracted Services	\$2,555,256	\$2,603,247	\$2,426,581	\$2,388,138	\$(1,500)	\$2,386,638	
Equipment	\$188,639	\$97,845	\$65,189	\$84,627	\$0	\$84,627	
Other Charges	\$19,925	\$28,176	\$21,879	\$30,171	\$0	\$30,171	
Salaries	\$5,425,348	\$5,424,901	\$5,389,127	\$5,570,331	\$(11,872)	\$5,558,459	
Supplies	\$1,788,210	\$1,772,610	\$1,762,553	\$1,701,662	\$(3,500)	\$1,698,162	

<b>By State Category</b>	<b>FY12 Actual</b>	<b>FY13 Actual</b>	<b>FY14 Actual</b>	<b>FY14 Budget</b>	<b>14-15 Change</b>	<b>FY15 Budget</b>	<b>FY15 FTE</b>
<b>TOTAL:</b>	<b>\$9,977,378</b>	<b>\$9,926,780</b>	<b>\$9,665,330</b>	<b>\$9,774,929</b>	<b>\$(16,872)</b>	<b>\$9,758,057</b>	<b>103.0</b>
<b>COMMUNITY SERVICES</b>							
Salaries	\$255,956	\$320,934	\$337,367	\$390,550	\$(437)	\$390,113	
Supplies	\$117,132	\$119,494	\$118,935	\$140,000	\$0	\$140,000	
<b>TOTAL:</b>	<b>\$373,088</b>	<b>\$440,428</b>	<b>\$456,302</b>	<b>\$530,550</b>	<b>\$(437)</b>	<b>\$530,113</b>	<b>1.6</b>
<b>CAPITAL OUTLAY</b>							
Contracted Services	\$41,280	\$24,767	\$0	\$50,000	\$0	\$50,000	
Equipment	\$180	\$18,100	\$10,887	\$0	\$0	\$0	
Salaries	\$0	\$4,140	\$8,000	\$0	\$0	\$0	
<b>TOTAL:</b>	<b>\$41,460</b>	<b>\$47,007</b>	<b>\$18,887</b>	<b>\$50,000</b>	<b>\$0</b>	<b>\$50,000</b>	<b>0.0</b>
<b>Grand Total:</b>	<b>\$67,667,329</b>	<b>\$66,984,483</b>	<b>\$68,041,157</b>	<b>\$68,793,551</b>	<b>\$(580,387)</b>	<b>\$68,213,164</b>	<b>665.3</b>



# Facilities Management

## Program Overview

The mission of the Facilities Management Department is to provide the best learning environment for students of Harford County Public Schools. This is in addition to our vision to provide clean and optimally maintained buildings. We strive to accomplish our mission and vision by providing the technical skills and expertise to establish and deliver a comprehensive maintenance program for all school facilities, as well as, develop and provide a Preventive Maintenance Program to ensure the efficient operation of building systems and to extend the useful life of these systems. The Facilities Management Department develops and administers a long range Capital Improvements program to ensure that equipment such as boilers, rooftop units, environmental issues, parking lots and roadways, grounds improvement, and all aspects of school facilities building systems are replaced or repaired in a timely manner.

Included in the operations of our department are the custodians, who are needed to maintain the schools and central office in a clean and healthy environment. Over 6,000,000 square feet of floors must be cleaned, most of which is done on a daily basis. Custodians also change lighting tubes, provide lawn maintenance, clear snow and ice from sidewalks, move furniture within the building for assemblies and special programs, remove trash, clean the cafeteria between lunch periods, and operate the heating and air conditioning system.

Additionally, school buildings are an extension of the community. Schools are used for over 2,500 activities by outside groups each year. Activities such as Parks and Recreation, Boys and Girls Scouts, community association meetings, cultural events, before school and after school daycare, general and primary elections, church services, and other civic events are held in the public school facilities.

## Accomplishments – FY 2013

- Removal of underground storage tanks at Roye-Williams ES and C. Milton Wright HS. (Board Goal 4)
- Bleacher replacement at Center for Educational Opportunity. (Board Goal 4)
- Constructed a computer lab at Edgewood MS. (Board Goal 4)
- Fire alarm replacements at Emmorton and William Paca/Old Post Road ES. (Board Goal 4)
- Carpet replacement in the Havre de Grace MS media center. (Board Goal 4)
- Resurfacing at Wakefield and Roye-Williams ES. (Board Goal 4)
- Replaced wastewater treatment plant at Harford Tech, John Archer and Prospect Mill ES. (Board Goal 4)
- Extensive repairs throughout the system to the storm water management facilities. (Board Goal 4)
- Replacement of synthetic gym floor at Emmorton ES. (Board Goal 4)
- Replacement of gym partition at Joppatowne HS. (Board Goal 4)
- Replacement of exterior doors and hardware at Southampton MS. (Board Goal 4)

## Goals – FY 2015

- Active participation in EPA's Tools for Schools across HCPS. (Board Goal 4)
- Inspection of all school buildings. (Board Goal 4)
- Inspection and preventative maintenance of all storm water management facilities. (Board Goal 4)
- Work collaboratively with schools and departmental to support their needs. (Board Goal 4)
- Evaluation of site/building conditions to include for program adequacy. (Board Goal 4)

## Objectives – FY 2015

- Provide an environment where every child feels comfortable going to school. (Board Goal 4)
- Obtain and optimize use of adequate resources. (Board Goal 4)
- Improve operational efficiency and effectiveness. (Board Goal 4)
- Recruit and retain a high quality diverse work force. (Board Goal 3)
- Provide a diverse, highly trained, skilled work force to apply modern technologies to building systems, contributing to the quality of instruction and student achievement. (Board Goal 3)
- Provide advice, resources, and consultation to all the stakeholders of the school system. (Board Goal 2)
- Develop a maintenance program that evaluates and prioritizes the needs of each facility to include structural, mechanical integrity, energy efficiency, operational and maintenance efficiencies to meet health and safety requirements. (Board Goal 4)
- Provide modern aesthetically pleasing facilities. (Board Goal 4)
- Minimize operating/utility costs via an efficient work force and providing modern efficient building systems (all aspects of physical plant). (Board Goal 4)
- Maintain a program that addresses emergencies, both planned and unplanned. (Board Goal 4)

# Facilities Management

## FACILITIES COST REDUCTION STRATEGIES

- Performance contracting phase 3 is currently underway at 27 schools and includes upgrades such as lighting, kitchen equipment, LCD projectors, building controls, transformers, and plumbing fixtures, as well as installation of sensors and high speed hand dryers. This initiative is budget neutral using energy savings to pay for the project.
  - Phase 1 cost avoidance: annual average \$438,275, total savings \$6,574,121
  - Phase 2 cost avoidance: annual average \$420,684, total savings \$6,310,265
- Soap dispensers are provided at no charge to HCPS by the vendor supplying our soap.
- Conversion to hand dryers can result in \$10,000 less spent on paper products, less oversight by custodial staff and reduced emergency response from Facilities.
- Recycle parts and equipment where possible, such as: breakers, fire alarm panel components, transformers, split systems, plumbing fixtures, doors, door hardware, bleachers, furniture, chalk/white boards.
  - Breaker from EHS resulted in a \$25,000 credit with our contracted vendor.
  - Transformer reused avoiding a \$6,000 purchase.
  - Reused several split AC systems at a savings of \$20,000 each.
  - Copper wiring recycled from flood in EMS boiler room for \$5,000.
  - Scrap metal and used tires recycled from various locations for \$5,000, plus a towing credit.
- Work collaboratively with Harford County Government in the following areas:
  - Artificial turf upkeep
  - Recycling for ball fields/buildings
  - Playground permitting and installation
  - Rain gardens/ storm water management facilities
  - Emergency communication
  - Emergency repairs – parts & labor
  - Vehicle wash
  - Salt from shops throughout county during weather events
- Electronic recycling and destruction of confidential materials at no charge.
- Closed the loop on composting – food scraps to compost to athletic fields.

## FY 2015 Funding Adjustments

The changes for fiscal 2015 include:

### **Wage and Benefit Adjustments of (\$22,200):**

- Align salary accounts based on actual expenditures, (\$22,200).

### **Base Budget Adjustment net changes of (\$5,000):**

- Funds transferred from Vocational Education and Industrial Education – Care and Upkeep (\$5,000). Funds were transferred to Career and Technology – Other Equipment.

### **Cost of Doing Business of \$4,080:**

- Annual increase in Facility Rental Contracts for the Bel Air Armory and Forest Hill Commerce Road, \$4,080.

**The net decrease in expenditures from the fiscal 2014 budget for Facilities Management is (\$23,120).**

## Facilities Management

By Object Code	FY12 Actual	FY13 Actual	FY14 Actual	FY14 Budget	14-15 Change	FY15 Budget
Salaries	\$15,565,825	\$15,588,592	\$15,528,896	\$16,045,208	(\$22,200)	\$16,023,008
Contracted Services	\$2,869,136	\$2,790,402	\$2,762,727	\$2,747,294	\$2,580	\$2,749,874
Supplies	\$2,520,199	\$2,457,133	\$2,407,301	\$2,392,808	(\$3,500)	\$2,389,308
Other Charges	\$384,240	\$425,248	\$520,623	\$522,662	\$0	\$522,662
Equipment	\$435,124	\$217,235	\$65,825	\$109,040	\$0	\$109,040
<b>Total:</b>	<b>\$21,774,525</b>	<b>\$21,478,610</b>	<b>\$21,285,372</b>	<b>\$21,817,012</b>	<b>(\$23,120)</b>	<b>\$21,793,892</b>

### Budgeted Full Time Equivalent Positions

	FY12	FY13	FY14	14-15	FY15
Assistant Supervisor	4.0	4.0	4.0	0.0	4.0
Clerical 12 Month	5.0	5.0	5.0	0.0	5.0
Custodian	336.9	337.9	337.9	0.0	337.9
Director	1.0	1.0	1.0	0.0	1.0
Facilities Maint Technician	86.0	87.0	87.0	0.0	87.0
	<b>432.9</b>	<b>434.9</b>	<b>434.9</b>	<b>0.0</b>	<b>434.9</b>

By State Category	FY12 Actual	FY13 Actual	FY14 Actual	FY14 Budget	14-15 Change	FY15 Budget	FY15 FTE
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OPERATION OF PLANT							
Contracted Services	\$905,354	\$689,576	\$923,024	\$940,135	\$4,080	\$944,215	
Equipment	\$248,312	\$121,632	\$3,405	\$26,268	\$0	\$26,268	
Other Charges	\$381,081	\$419,181	\$514,671	\$516,244	\$0	\$516,244	
Salaries	\$10,699,036	\$10,656,543	\$10,593,760	\$10,913,858	\$(5,076)	\$10,908,782	
Supplies	\$1,002,112	\$936,835	\$883,603	\$928,646	\$0	\$928,646	
<b>TOTAL:</b>	<b>\$13,235,896</b>	<b>\$12,823,767</b>	<b>\$12,918,462</b>	<b>\$13,325,151</b>	<b>\$(996)</b>	<b>\$13,324,155</b>	<b>342.3</b>

MAINTENANCE OF PLANT							
Contracted Services	\$1,963,782	\$2,100,826	\$1,839,703	\$1,807,159	\$(1,500)	\$1,805,659	
Equipment	\$186,812	\$95,603	\$62,419	\$82,772	\$0	\$82,772	
Other Charges	\$3,160	\$6,067	\$5,953	\$6,418	\$0	\$6,418	
Salaries	\$4,610,833	\$4,611,114	\$4,597,769	\$4,740,800	\$(16,688)	\$4,724,112	
Supplies	\$1,400,955	\$1,400,803	\$1,404,763	\$1,324,162	\$(3,500)	\$1,320,662	
<b>TOTAL:</b>	<b>\$8,165,541</b>	<b>\$8,214,414</b>	<b>\$7,910,607</b>	<b>\$7,961,311</b>	<b>\$(21,688)</b>	<b>\$7,939,623</b>	<b>91.0</b>

COMMUNITY SERVICES							
Salaries	\$255,956	\$320,934	\$337,367	\$390,550	\$(437)	\$390,113	
Supplies	\$117,132	\$119,494	\$118,935	\$140,000	\$0	\$140,000	
<b>TOTAL:</b>	<b>\$373,088</b>	<b>\$440,428</b>	<b>\$456,302</b>	<b>\$530,550</b>	<b>\$(437)</b>	<b>\$530,113</b>	<b>1.6</b>

<b>Grand Total:</b>	<b>\$21,774,525</b>	<b>\$21,478,610</b>	<b>\$21,285,372</b>	<b>\$21,817,012</b>	<b>\$(23,120)</b>	<b>\$21,793,892</b>	<b>434.9</b>
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# Planning and Construction

## Program Overview

The purpose of the Planning and Construction Department is to plan, construct, modernize, and improve educational facilities for the students and staff of the Harford County Public Schools. The department utilizes demographic data and other pertinent information to plan new facilities or expansions to accommodate a growing student population. In addition, this department plans for and constructs improvements, modernizations, and additions to existing facilities that are old and obsolete, and that do not meet current educational program requirements.

Through the development of the annual Capital Improvement Program, the Planning and Construction Department analyzes population trends, birth numbers, student enrollment patterns, and residential growth in Harford County and assists in the planning of new school facilities to accommodate student enrollment.

The development of a sound educational program, coupled with a modern physical environment is translated into a community school building at either the elementary, middle, or secondary level.

## Accomplishments – FY 2013

- Completed design and installation of air conditioning at Youth's Benefit ES primary building. (Board Goal 4)
- Completed design and installation of air conditioning at William Paca ES. (Board Goal 4)
- Completed design and Phase II of Havre de Grace HS HVAC systemic renovation. (Board Goal 4)
- Completed design and construction at Jarrettsville ES comprehensive HVAC systemic replacement project. (Board Goal 4)
- Completed design and construction of Stadium Upgrades at Havre de Grace HS. (Board Goal 4)
- Completed design and installation of HVAC retrofit at Hall's Cross Roads ES. (Board Goal 4)
- Completed design and installation of replacement of Ice Storage Chiller at Emmorton ES. (Board Goal 4)
- Completed design and installation of central cooling plant up-grade to include chiller replacement and boiler room controls update and retrofit at Havre de Grace ES. (Board Goal 4)
- Completed design and installation of central cooling plant up-grade to include chiller replacement at Church Creek ES. (Board Goal 4)
- Completed design and construction of the waste water treatment plant off-site sewer hook-up at Red Pump ES. (Board Goal 4)

## Goals – FY 2015

- Complete design and start construction at Fallston HS HVAC systemic renovation. (Board Goal 4)
- Complete design and start construction for Youth's Benefit ES replacement project. (Board Goal 4)
- Receive state local planning approval and start design for Joppatowne HS limited renovation. (Board Goal 4)
- Receive State Local Planning Approval and start design for Havre de Grace Middle/High School replacement. (Board Goal 4)
- Complete design and start installation of air conditioning at the Center for Educational Opportunity. (Board Goal 4)
- Complete design and start construction at Dublin ES HVAC systemic renovation. (Board Goal 4)
- Complete design and start construction at Darlington ES HVAC systemic renovation. (Board Goal 4)
- Complete design and installation of central cooling plant up-grades to include chiller replacement, cooling tower replacement, and control replacement at Ring Factory ES. (Board Goal 4)
- Complete design and start construction on Open Space Renovation Projects. (Board Goal 4)
- Complete design and start construction on North Harford Middle School Domestic Water Improvements. (Board Goal 4)

## Objectives – FY 2015

- The development of a sound educational program, coupled with a modern physical environment is translated into a community school building at either the elementary, middle, or secondary level. (Board Goal 4)
- Facilities are designed and constructed to provide a safe, secure, and healthy teaching and learning environment. (Board Goal 4)
- Facilities are designed and constructed that are attractive, affordable, and flexible in their design to accommodate differentiated teaching and learning styles as required. (Board Goal 4)
- Facilities are designed and constructed to allow students, teachers, and staff the opportunity to access the most current advances in technology. (Board Goal 4)
- Design and construction quality school facilities within budget and on schedule. (Board Goal 4)

# Planning and Construction

## SUSTAINABLE DESIGN STRATEGIES

HCPS uses Sustainable Design Strategies in the design and construction of our school buildings. The following list highlights some of the sustainable design strategies used in major capital projects that are either modernization, replacement, or new facilities.

### **SITE**

- On modernization and replacement projects, an attempt to use the existing site is always developed, negating the need for additional land procurement and development.
- Specimen trees saved are where possible. Use of native plants reduces irrigation requirements.
- Storm Water Management for both quality and quantity through the use of bio-retention facilities, micro pools with forebays.
- Design as to not disturb sensitive areas such as the Chesapeake Bay Critical Area.
- The use of high reflective concrete at pedestrian paths and plaza help reduce heat islands.
- Develop projects in cooperative partnership with Parks and Recreation eliminating unnecessary "dual development".
- The installation of bike racks on site to encourage "green transportation."

### **BUILDING**

- Multi-story construction is implemented on most buildings, which creates a compact footprint, minimizing site disturbance. The compact footprint also reduces storm water management requirements.
- Building design to include the use of natural light and day lighting techniques to develop a high performance school, maximize energy savings and enhance student performance.
- Glazing: All glazing is tinted double-pane, low E, thermally broken.
- Interior building finishes with high indoor air quality benefits such as, low V.O.C. paints and carpet products and the use of mold resistant gypsum board.
- Careful selection of roofing materials, whether a low sloped roof covered with a highly reflective white chip aggregate or a sloped metal roof of high SRI color or even a Polyvinyl-Chloride (PVC) Roofing Membrane system.

### **RECYCLING**

- During construction/demolition - Recycling of demolished rubble for use on site as fill. Use of construction material with recycled content such as flooring, drywall, metals, wood.
- Post occupancy – Recycling dumpster utilized, single stream recycling has reduced landfill waste in half.
- Additional space designed to allow multiple dumpsters on site.

### **LIGHTING AND POWER**

- The use of multi-level switching of lamps is used in fixtures for classrooms, conference rooms and office applications.
- Installation of high performance T8 and T5 lamps, ballasting of fixtures for dimming capabilities in concert with day lighting strategies.
- Installation of LED lighting systems on building exteriors and interiors, site lighting and parking lots.
- The design and installation of full automatic shutoff of lighting systems using a combination of interior occupancy sensors and the Energy Management System auto-off of site lighting and interior public spaces.
- The installation of daylight sensors are used with fixtures adjacent to windows and clerestory glazing.

### **WATER CONSERVATION**

- Native and drought resistant plants that reduce the need for an irrigation system or extensive watering planted in appropriate area around the building perimeter.
- Dual flush toilets closets reduces water consumption.
- Low flow water fixtures.

# Planning and Construction

## ENERGY EFFICIENCY/ INDOOR AIR QUALITY

- Total energy heat recovery wheels to capture and reuse waste heat to precondition outside air for the aerobics room, weight room, locker rooms, gymnasium and auditorium and other areas with high exhaust requirements.
- Use of dedicated outside air systems utilizing total energy recovery wheels to pre-condition/dehumidify outside air to meet ventilation requirements in classrooms.
- Use of a flat plate and frame heat exchanger capturing waste heat from the condenser water system to provide free summer reheat when needed for dehumidification.
- Use of multiple high efficiency water cooled chillers using magnetic bearing, variable speed compressors.
- Use of variable speed pumping on condenser water loop, secondary chilled water and heating water loop based on the building demand.
- Variable supply air flow using CO<sub>2</sub> sensors for assembly spaces to match space loads as determined by the number of occupants (dining, auditorium, gym).
- Air flow measurement of outdoor air, supply air and return air for all systems.
- HVAC systems selection based on life cycle cost analysis factoring operational and maintenance costs rather than first cost basis (i.e. geothermal systems).
- Lighting control through the EMS for site lights, corridor lights, stairwell lights and dining area lights.
- Use of multiple high efficiency condensing boilers and domestic hot water heaters that are 90%+ efficient.
- Use of Variable Refrigerant Flow HVAC Systems for increased flexibility, and high efficiency.
- Heating water supply temperature reset based on outdoor air temperature.
- Complete automation of building systems performance while minimizing energy consumption.
- Metering of cooling systems, heating systems, electrical consumption in KW and makeup water for all HVAC systems for better energy management.
- Commissioning of Building Energy Systems.
- Use of low (no) emitting material for flooring, paint and glass.
- Construction IAQ Management Plan for the construction phase and prior to occupancy.

## FY 2015 Funding Adjustments

The changes for fiscal 2015 include:

### **Wage and Benefit Adjustments of \$4,817:**

- Align salary accounts based on actual expenditures, \$4,817.

**The net increase in expenditures from the FY 2014 budget for Planning and Construction is \$4,817.**

## Planning and Construction

By Object Code	FY12 Actual	FY13 Actual	FY14 Actual	FY14 Budget	14-15 Change	FY15 Budget
Salaries	\$677,993	\$677,850	\$666,538	\$689,455	\$4,817	\$694,272
Contracted Services	\$108,845	\$91,764	\$86,009	\$134,132	\$0	\$134,132
Supplies	\$7,498	\$6,559	\$4,554	\$8,000	\$0	\$8,000
Other Charges	\$16,766	\$22,109	\$15,927	\$23,753	\$0	\$23,753
Equipment	\$2,007	\$20,342	\$13,657	\$1,855	\$0	\$1,855
<b>Total:</b>	<b>\$813,109</b>	<b>\$818,624</b>	<b>\$786,683</b>	<b>\$857,195</b>	<b>\$4,817</b>	<b>\$862,012</b>

## Budgeted Full Time Equivalent Positions

	FY12	FY13	FY14	14-15	FY15
Assistant Supervisor	4.0	4.0	4.0	0.0	4.0
Clerical 12 Month	2.0	2.0	2.0	0.0	2.0
Director	0.0	0.0	0.0	0.0	0.0
Plan/Construction	2.0	2.0	2.0	0.0	2.0
Supervisor	1.0	1.0	1.0	0.0	1.0
	9.0	9.0	9.0	0.0	9.0

By State Category	FY12 Actual	FY13 Actual	FY14 Actual	FY14 Budget	14-15 Change	FY15 Budget	FY15 FTE
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MAINTENANCE OF PLANT							
Contracted Services	\$67,565	\$66,997	\$86,009	\$84,132	\$0	\$84,132	
Equipment	\$1,827	\$2,242	\$2,770	\$1,855	\$0	\$1,855	
Other Charges	\$16,766	\$22,109	\$15,927	\$23,753	\$0	\$23,753	
Salaries	\$677,993	\$673,711	\$658,538	\$689,455	\$4,817	\$694,272	
Supplies	\$7,498	\$6,559	\$4,554	\$8,000	\$0	\$8,000	
<b>TOTAL:</b>	<b>\$771,649</b>	<b>\$771,617</b>	<b>\$767,797</b>	<b>\$807,195</b>	<b>\$4,817</b>	<b>\$812,012</b>	<b>9.0</b>

CAPITAL OUTLAY							
Contracted Services	\$41,280	\$24,767	\$0	\$50,000	\$0	\$50,000	
Equipment	\$180	\$18,100	\$10,887	\$0	\$0	\$0	
Salaries	\$0	\$4,140	\$8,000	\$0	\$0	\$0	
<b>TOTAL:</b>	<b>\$41,460</b>	<b>\$47,007</b>	<b>\$18,887</b>	<b>\$50,000</b>	<b>\$0</b>	<b>\$50,000</b>	<b>0.0</b>

<b>Grand Total:</b>	<b>\$813,109</b>	<b>\$818,624</b>	<b>\$786,683</b>	<b>\$857,195</b>	<b>\$4,817</b>	<b>\$862,012</b>	<b>9.0</b>
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# Transportation

## Program Overview

The mission of the Transportation Department is to provide transportation to eligible students enrolled in Harford County Public Schools. In planning and carrying out this mission, major consideration is given to the safety of the children transported, to maintaining effective and efficient service that takes children to and from school in an environment that is conducive to learning, and to providing co-curricular and extra-curricular transportation for a multitude of projects.

Approximately 33,000 students are provided direct transportation to and from school in accordance with policies established by the Board of Education. Additionally, thousands of runs for co-curricular, extra-curricular, special programs and field trips are provided through out, what is now, a twelve-month school year.

The McKinney-Vento Homeless Assistance Act requires schools to identify children and youth in homeless situations and provide appropriate services. One such service is providing students with transportation to their school of origin. The McKinney-Vento Act is an unfunded federal mandate. Under this Act, HCPS has transported students that were housed as far as 75 miles away from their school of origin.

## Accomplishments – FY 2013

- Implemented a modification to the delivery model for student transportation, as requested by the Board of Education, reducing the correlated expenditures by \$890,000.
- Reduced the number of preventable accidents in excess of the 10% targeted.
- Reduced the fuel consumption for extra-curricular and athletic field trip buses by combining schools and teams on a common carrier.

## Goals – FY 2015

- Reduce the number of preventable accidents by 10% through continuing skills in-service-training focusing on safety. (Board Goals 3 & 4)
- Create a healthier environment around all schools through the implementation and enforcement of Harford County's idling policy for all buses and other vehicles. (Board Goal 4)
- Eliminate fuel consumption by reducing deadhead miles and creating greater efficiencies on transportation of extra-curricular and athletic field trip buses. (Board Goal 4)
- Conduct in-service classes for all drivers and attendants to focus on student management to reduce the number of bus referrals by 10%. (Board Goals 3 & 4)

## Objectives – FY 2015

- To develop and implement bus routes that deliver students to and from school and extra-curricular activities, in a safe and efficient manner. (Board Goal 4)
- Educate, train and evaluate all drivers. (Board Goal 3)
- Train and supervise bus contractors. (Board Goal 3)
- Successfully resolve and mediate parental, school and public concerns. (Board Goal 4)
- Comply with all Federal, State and local laws. (Board Goal 4)
- Successfully administer and supervise the operation and maintenance of system-owned vehicles. (Board Goal 4)
- Monitor the operation and maintenance of contractor owned vehicles. (Board Goal 4)

### Transportation Facts

	2009	2010	2011	2012	2013
Number of School Buses	481	487	494	505	510
Miles Traveled Annually	7.5 Million	7.6 Million	7.7 Million	8.3 Million	8.3 Million
Number of Bus Accidents	75	60	69	73	47
# of Preventable Accidents	44	35	23	34	21
% of Preventable Accidents to Total	59%	58%	33%	46%	44%

# Transportation

HCPS buses travel an average ...



...46,111 miles per school day!

## FY 2015 Funding Adjustments

The changes for fiscal 2015 include:

### **Wage and Benefit Adjustments of \$31,946:**

- Align salary accounts based on actual expenditures, \$31,946.

### **Base Budget Adjustment net changes of \$600,000:**

- Reversal of year end transfer which moved funds to utilities from transportation, \$600,000.

### **Cost Saving Measures of (\$625,320):**

- Savings realized on bus route changes implemented during the 2013-2014 school year, (\$500,000).
- Eliminate transportation for summer bridge program for middle and high school, (\$125,320).

### **Cost of Doing Business of \$10,000:**

- Transportation routing software, \$180,000.
- Increase cost of physicals for contracted bus drivers/substitutes and employed drivers/substitutes, \$10,000.
- Reduction in contracted bus service, (\$50,000).
- Savings in contracted bus services due to the implementation of cost saving/efficiency modifications related to McKinney Vento, (\$50,000).
- Reduction in bus driver overtime due to the decrease in the number of routes and county field trip assignments over 8 hours, (\$50,000).
- Reduction in contracted bus service for Alternative Education Center due to modifications in the program implemented during the 2013 – 2014 school year, (\$30,000).

The net increase in expenditures from the FY 2014 budget for Transportation is \$16,626.

## Transportation

By Object Code	FY12 Actual	FY13 Actual	FY14 Actual	FY14 Budget	14-15 Change	FY15 Budget
Salaries	\$6,408,055	\$6,446,868	\$6,444,485	\$6,589,873	(\$18,054)	\$6,571,819
Contracted Services	\$22,894,674	\$22,873,949	\$22,043,629	\$22,500,650	(\$145,320)	\$22,355,330
Supplies	\$1,691,386	\$1,822,332	\$1,893,141	\$1,719,500	\$0	\$1,719,500
Other Charges	\$33,272	\$36,089	\$28,613	\$29,452	\$0	\$29,452
Equipment	\$3,717	\$38,779	\$1,280	\$4,441	\$180,000	\$184,441
<b>Total:</b>	<b>\$31,031,105</b>	<b>\$31,218,016</b>	<b>\$30,411,148</b>	<b>\$30,843,916</b>	<b>\$16,626</b>	<b>\$30,860,542</b>

## Budgeted Full Time Equivalent Positions

	FY12	FY13	FY14	14-15	FY15
Bus Attendant	88.0	91.0	91.0	0.0	91.0
Bus Driver	100.4	103.4	103.4	0.0	103.4
Bus Instructor/Trainer	4.0	4.0	4.0	0.0	4.0
Clerical 12 Month	4.0	4.0	4.0	0.0	4.0
Director	1.0	1.0	1.0	0.0	1.0
Specialist 12 Month	2.0	2.0	2.0	0.0	2.0
Supervisor	3.0	3.0	3.0	0.0	3.0
Vehicle Mechanic/Helper	12.0	12.0	12.0	0.0	12.0
	<b>214.4</b>	<b>220.4</b>	<b>220.4</b>	<b>0.0</b>	<b>220.4</b>

By State Category	FY12 Actual	FY13 Actual	FY14 Actual	FY14 Budget	14-15 Change	FY15 Budget	FY15 FTE
<b>STUDENT TRANSPORTATION</b>							
Contracted Services	\$22,832,267	\$22,829,776	\$21,979,026	\$22,415,650	\$(145,320)	\$22,270,330	
Equipment	\$3,717	\$38,779	\$1,280	\$4,441	\$180,000	\$184,441	
Other Charges	\$33,272	\$36,089	\$28,613	\$29,452	\$0	\$29,452	
Salaries	\$6,271,532	\$6,306,792	\$6,311,665	\$6,449,797	\$(18,054)	\$6,431,743	
Supplies	\$1,311,630	\$1,457,084	\$1,539,904	\$1,350,000	\$0	\$1,350,000	
<b>TOTAL:</b>	<b>\$30,452,419</b>	<b>\$30,668,519</b>	<b>\$29,860,488</b>	<b>\$30,249,340</b>	<b>\$16,626</b>	<b>\$30,265,966</b>	<b>217.4</b>
<b>MAINTENANCE OF PLANT</b>							
Contracted Services	\$62,407	\$44,173	\$64,603	\$85,000	\$0	\$85,000	
Salaries	\$136,523	\$140,076	\$132,820	\$140,076	\$0	\$140,076	
Supplies	\$379,756	\$365,248	\$353,236	\$369,500	\$0	\$369,500	
<b>TOTAL:</b>	<b>\$578,686</b>	<b>\$549,497</b>	<b>\$550,660</b>	<b>\$594,576</b>	<b>\$0</b>	<b>\$594,576</b>	<b>3.0</b>
<b>Grand Total:</b>	<b>\$31,031,105</b>	<b>\$31,218,016</b>	<b>\$30,411,148</b>	<b>\$30,843,916</b>	<b>\$16,626</b>	<b>\$30,860,542</b>	<b>220.4</b>



# Utility Resource Management

## **Program Overview**

The Office of Utility Resource Management has developed a multi-faceted approach to managing energy resources. This approach provides for energy resource optimization through the coordination of administration and policy between the central office management team and the individual facility managers; through improvements to the operation and maintenance of the equipment; and through capital improvements.

The overall goal is to optimize energy use without adversely affecting indoor air quality or the comfort and safety of our building occupants. This is currently being accomplished through the collection and analysis of energy consumption data using utility tracking and accounting software. We are also working with administrators, teachers, students and custodial personnel to promote energy conservation awareness, and are controlling. In addition, we are monitoring heating and air conditioning systems via computerized energy management programs.

## **Accomplishments – FY 2013**

- Alternative Energy
  - Installation of a new solar electric panel system at Harford Glen Environmental Center.
  - Upgraded existing wind turbine at Harford Glen to power LED lights in the dining hall.
- Energy Efficiency Upgrades- Johnson Controls Performance Contracting Project
  - Comprehensive lighting retrofits at 27 schools to include interior and exterior lighting as well as occupancy and daylight sensors.
  - High Efficiency Transformers installed in 18 schools to improve energy efficiency.
  - Boiler system upgrades at Abingdon ES, Bel Air MS and C. Milton Wright HS.
  - Natural gas conversions from heating oil at C. Milton Wright HS and Abingdon ES.
  - Building envelope insulation and weather stripping at 27 different schools.
  - Building automation projects at 10 schools to improve response time and climate.
  - Water conservation equipment such as low flow restrictors installed in 27 schools.
- Efficiency upgrades reduced consumption by 2 million dollars annually resulting in cost avoidance of over \$160,000.
- To date received \$653,000 in BGE Smart Energy Rebates for over 50 projects submitted that will lower energy consumption by 4,031,075 kwh/year and yield \$443,400 in energy cost reductions.
- Participated in the Load Response Program for 19 sites resulting in a savings of over \$55,000.
- Over 234 hand dryers have been installed in the school buildings to reduce paper towel usage and operational costs.
- First public school district in the state to develop a comprehensive commercial composting program for 10 schools in the program.
- Training workshops for custodians and other operations staff.
- Conservation and sustainability presentations to students in elementary, middle, and high schools.
- Sustainability presentations given to Anne Arundel, Howard, Queen Anne's County, and ASBO by request.

## **Goals – FY 2015**

- Continue to install energy efficient equipment. (Board Goal 4)
- Continue to participate in utility sponsored credit and rebate programs. (Board Goal 4)
- Continue to upgrade lighting. (Board Goal 4)
- Continue to investigate and implement water conservation technology. (Board Goal 4)
- Establish a yearly training agenda and schedule for school based personnel. (Board Goal 3)

## **Objectives – FY 2015**

- Reduce operational cost without adversely affecting the comfort and safety of our building occupants. (Board Goal 4)
- Partner with other agencies to expand sustainability initiatives. (Board Goal 4)
- Pursue grants and other stimulus funds to upgrade our infrastructure. (Board Goal 4)
- Improve the learning environment. (Board Goal 4)

# Utility Resource Management

## ENERGY COST SAVING INITIATIVES

HCPS is entering the fifth year of their Energy and Resource Conservation Initiative. The goal is to support educational objectives, improve financial management systems by eliminating inefficiencies and recognize savings while improving building operations and maintenance programs. HCPS coordinates all conservation initiatives through various conservation strategies.

- **Innovative Policies and Procedures:** In June of 2008, HCPS approved a comprehensive energy management plan. The goal of the plan was to reduce resource and energy consumption while creating a more environmentally sustainable organization. Through this plan HCPS adopted new policies and procedures which established specific criteria and requirements relating to energy use, conservation, and sustainability at all levels of the HCPS operations. Through this initiative HCPS established a Resource Conservation Committee to identify short and long-term opportunities, and respond to the needs of the schools. Temporary subcommittees are formed to investigate and address sustainability issues. The Resource Conservation Manager is responsible for implementing the energy conservation program, working closely with the committee and site teams and providing training and education to the students, faculty and staff.
- **Behavior Modification and Training: "Grass Roots" Energy Conservation Initiative:** HCPS is aware that no conservation effort will be successful without Ownership, Pride, Participation and, Cooperation of the building occupants, users and all stakeholders. HCPS also acknowledges the need to have programs that enhance the opportunities for success and savings. Linking energy conservation efforts to teaching and instruction is a priority. Resource conservation activities are designed to include each local school, teacher and student and have a focus on establishing and strengthening partnerships with organizations internal and external to our HCPS for the purpose of educating our staff and students as we continue to improve the efficient use of our resources through the following initiatives:
  - Twenty-two HCPS schools have joined the Maryland Green Schools program. Additional schools are actively engaged in obtaining similar accreditation status.
  - Provide ongoing training workshops for Leadership in Energy and Environmental Design (LEED) for the Facilities.
  - The Resource Conservation Committee works in tandem with the Earth & Environmental Science programs to focus on sustainability issues inside the school buildings and provide real world problem solving opportunities for our students.
- **Water Conservation Efforts:** Conserve water usage through various improvements to school building and grounds (i.e. fixtures, synthetic turf). Include water conservation methods on all capital projects through design standards.
- **Alternative Energy Program:** Solar electric generation sites are active on the roof tops of six schools. These systems to date have resulted in over \$70,000 in utility savings.
- **Energy Procurement Strategies:** Participate in the purchasing consortium with the Baltimore Regional Purchasing Cooperative in which school districts and municipalities jointly procure natural gas and electricity to maximize savings. Currently utilize Harford County Government propane gas contract to reduce per gallon cost of product.
- **Improved Practices:** HCPS developed a centralized data base to track and evaluate all utility bills, a green cleaning program with guidelines and training for our custodial staff, a sustainability review process for our new construction programs to insure that we are critically analyzing our new facilities during the design and construction phase, and implemented a full scale single stream recycling program and centralized data base to track and evaluate all waste disposal bills.

# Utility Resource Management

## **FY 2015 Funding Adjustments**

The changes for fiscal 2015 include:

### **Wage and Benefit Adjustments of \$468:**

- Align salary accounts based on actual expenditures, \$468.

### **Base Budget Adjustment net changes of (\$1,103,800):**

- Reversal of year end transfer which moved funds to utilities from transportation and the fuel reserve fund, (\$1,100,000).
- Funds transferred from Utility Resource Management – Electricity for the 3.8% rate increase in the ESMEC/Enernoc contract, (\$3,800). Funds were transferred to Purchasing, Contracted Services – Other.

### **Cost of Doing Business of \$524,622:**

- Increase in electricity expense due to 3.8% rate increase, \$535,000.
- Reduction in Sun Trust Energy Lease payments (Phase I, II & III), (\$10,378).

**The net decrease in expenditures from the FY 2014 budget for Utility Resources Management is (\$578,710).**

## Utility Resource Management

By Object Code	FY12 Actual	FY13 Actual	FY14 Actual	FY14 Budget	14-15 Change	FY15 Budget
Salaries	\$142,370	\$127,378	\$92,784	\$92,316	\$468	\$92,784
Contracted Services	\$1,269,480	\$396,975	\$452,369	\$551,847	\$0	\$551,847
Supplies	\$90,414	\$77,957	\$115,131	\$92,500	\$0	\$92,500
Other Charges	\$12,546,279	\$12,866,877	\$14,892,976	\$14,538,265	(\$579,178)	\$13,959,087
Equipment	\$47	\$46	\$4,694	\$500	\$0	\$500
<b>Total:</b>	<b>\$14,048,591</b>	<b>\$13,469,233</b>	<b>\$15,557,953</b>	<b>\$15,275,428</b>	<b>(\$578,710)</b>	<b>\$14,696,718</b>

## Budgeted Full Time Equivalent Positions

	FY12	FY13	FY14	14-15	FY15
Assistant Supervisor	1.0	1.0	1.0	0.0	1.0
Facilities Maint Technician	1.0	0.0	0.0	0.0	0.0
	2.0	1.0	1.0	0.0	1.0

By State Category	FY12 Actual	FY13 Actual	FY14 Actual	FY14 Budget	14-15 Change	FY15 Budget	FY15 FTE
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### OPERATION OF PLANT

Contracted Services	\$807,978	\$5,723	\$16,103	\$140,000	\$0	\$140,000	
Equipment	\$47	\$46	\$4,694	\$500	\$0	\$500	
Other Charges	\$12,546,279	\$12,866,877	\$14,892,976	\$14,538,265	(\$579,178)	\$13,959,087	
Salaries	\$142,370	\$127,378	\$92,784	\$92,316	\$468	\$92,784	
Supplies	\$90,414	\$77,957	\$115,131	\$92,500	\$0	\$92,500	
<b>TOTAL:</b>	<b>\$13,587,089</b>	<b>\$13,077,981</b>	<b>\$15,121,687</b>	<b>\$14,863,581</b>	<b>(\$578,710)</b>	<b>\$14,284,871</b>	<b>1.0</b>

### MAINTENANCE OF PLANT

Contracted Services	\$461,502	\$391,252	\$436,266	\$411,847	\$0	\$411,847	
<b>TOTAL:</b>	<b>\$461,502</b>	<b>\$391,252</b>	<b>\$436,266</b>	<b>\$411,847</b>	<b>\$0</b>	<b>\$411,847</b>	<b>0.0</b>

<b>Grand Total:</b>	<b>\$14,048,591</b>	<b>\$13,469,233</b>	<b>\$15,557,953</b>	<b>\$15,275,428</b>	<b>(\$578,710)</b>	<b>\$14,696,718</b>	<b>1.0</b>
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