

## 4.0 Permit Requirements

### E.7. Public Education

A public education and outreach program shall be implemented to reduce stormwater pollutants. As part of this program, Baltimore County shall develop material and make it available for distribution to the public by watershed associations and at community events. These efforts are to be documented and summarized in the County's annual reports. At a minimum, Baltimore County shall:

- a. Establish and publicize a compliance hotline for the public reporting of suspected illicit discharges, illegal dumping, and spills.
- b. Provide information regarding the following water quality issues to the general public:
  - i. Water conservation;
  - ii. Stormwater management facility maintenance;
  - iii. Erosion and sediment control;
  - iv. Household hazardous waste;
  - v. Lawn care and landscape management (e.g., the proper use of herbicides, pesticides, and fertilizers, ice and snow removal, cash for clippers," etc.);
  - vi. Litter control, recycling, and composting;
  - vii. Car care, mass transit, and alternative transportation;
  - viii. Pet waste management.
- c. Provide information regarding the following water quality issues to the regulated community:
  - i. NPDES permitting requirements;
  - ii. Pollution prevention plan development;
  - iii. Proper housekeeping; and
  - iv. Spill prevention and response.

### 4.1 Introduction

In 2010, the Baltimore County Department of Environmental Protection and Resource Management (DEPRM) became the Department of Environmental Protection and Sustainability (EPS). The department continues to view *environmental education (EE)*, *outreach*, *action*, and *stewardship through community partnership* as high priorities in its suite of services to citizens. The County's integrated watershed approach to resource management and its intention to work with and support local citizens and watershed organizations offer opportunities for effective community partnerships. These involve a broad constituency of citizens, families, schools, organizations, faith communities, and businesses. Baltimore County's *Let's Be Partners* program for citizens and communities, its *Getting Greener Schools* environmental education and outreach program to schools, and the [Green@Work](#) initiative for employees provide the coordination and focus for efforts to reach, inform, engage, energize, and work with many segments of the Baltimore County community.

Program components targeting schools and communities carried the pollution prevention message and special attention was given to the direct connection between the management of household and commercial toxic materials, pesticides, herbicides, fertilizers, landscape maintenance, cleaning procedures, pet waste, and the impacts on water quality in ground water, local streams, drinking water reservoirs, and the Chesapeake Bay.

In 2010, Baltimore County EPS stressed adoption of best practices and cost-effective *prevention* measures as well as *pollution regulation*, *structural controls*, and *cleanup*. Recognizing the benefits of conservation landscaping techniques and design components (erosion control, cleaner healthier water, increased biological diversity, energy saving, education and stewardship opportunities, scenic values, habitat restoration, recreation, etc), the County encouraged actions such as the restoration of tree cover and natural native vegetation on public and private lands. In 2010, new and enhanced partnerships with schools, communities, organizations, and agencies were created to coordinate efforts, expand outreach to new audiences, and report program results.

As part of its successful *Maryland Green School* program initiative *Getting Greener Schools*, Baltimore County continued to use *The Maryland Green School Awards Program* to provide a framework for integrating environmental learning and community involvement in local schools. EPS maintained its statewide leadership in this initiative and expanded its effort to target schools in the 2010-2011 school year and beyond. The Department's workshops and site-based support for teachers provided local and regional resources to enhance staff development opportunities and increase the environmental awareness and interest of local school principals, teachers, and facilities managers. Baltimore County's 60 recognized *Maryland Green Schools* and *Green Centers* provided valuable models for community stewardship. Baltimore County is committed to promoting meaningful site-based environmental education and supports public and private schools in their efforts to enhance student environmental literacy and adopt sustainable operations.

Long-term partnerships with local environmental organizations and agencies provided expertise, technical support, and volunteers to assist schools and citizens as they explored water quality issues and identified stewardship opportunities. *Small Watershed Action Plans* (SWAP) involved citizens and stakeholders in identification of activities and projects that improve local water quality. The Baltimore County EPS, Watershed Management and Monitoring Section worked with county agencies covered under the NPDES stormwater permit discussing permitting regulations and developing pollution prevention plans for proper housekeeping, and spill prevention and response.

As a result of the *Baltimore Watershed Agreement* first signed by Baltimore County and Baltimore City in October 2002, re-negotiated and signed on December 14<sup>th</sup>, 2006, an increasing number of Baltimore County's environmental education initiatives have extended across political boundaries into watersheds shared with Baltimore City. Goals and objectives addressing five topic areas were set in 2007 and a Phase 1 Action Plan was completed in March 2009. Cooperative initiatives involving Baltimore County and Baltimore City are underway to identify and assess environmental education needs and develop long term plans for implementation in shared watersheds.

As part of Baltimore County's departmental reorganization, a survey of existing environmental education/outreach activities and a needs assessment has been undertaken in order to re-establish program priorities, develop a workplan, and establish a timeline for implementation.

**4.2 Education and Outreach Program Description** - New or expanded components:

A full description of DEPRM's *Let's Be Partners/Getting Greener Schools* education program, as well as other ongoing outreach efforts initiated by DEPRM/EPS, has been provided in previous NPDES Annual Reports 1995-2010. This section reports program components developed or expanded in 2010 to increase effectiveness in reaching citizens, and local school and community audiences on water quality topics.

*4.2.1 School Initiatives*

*Increased support for all schools:* In order to provide professional development for teachers, encourage school-community/business partnerships, promote best practices, and enhance opportunities for high quality, effective, authentic environmental education and community stewardship for all public and private school students Pre K-12 in Baltimore County, EPS undertook the following:

- Expanded MD Green School initiatives for promotion and support:

Baltimore County's *MD Green Schools* investigate and address water quality topics, model best practices, and engage in stewardship projects in local watersheds. New efforts included targeting potential MD Green Schools and Green Centers in certain watersheds, cooperating with agencies and school offices for increased promotion, and conducting more school site visits and faculty trainings. Special emphasis was placed on maintaining contact with the county's previously recognized *MD Green Schools* to increase the likelihood that they will stay involved, committed, and active.

- Outreach to independent schools, faith-based schools and school systems, and school organizations:

Presenting at conferences and workshops serving these organizations provided an efficient way to reach many more schools with fewer individual presentations.

- Outreach to schools and organizations serving students with special needs

Working with teachers from individual schools and presenting at conferences and workshops that serve these organizations provided an opportunity to target the message to this audience. Strategies for integrating the environment as a context for learning were identified so that all students may have access to the benefits of environmental education.

- Professional development for formal and non-formal environmental educators:

In most cases, a school's level of involvement in environmental education depends on the readiness of the adult teaching staff. Teachers with experience in making the important curricular connections across grade levels and disciplines are more likely to sustain their efforts year after year. Baltimore County agencies provided increased professional development opportunities at schools and at local and regional conferences and workshops. These sessions provided a valuable chance to reach a sizeable new adult audience, and audience that is in a position to institute environmental learning in their classrooms and impact many thousands of students and families in Baltimore County.

- Promotion and support for stewardship projects:

Large acreage schoolyards, traditionally landscaped in large expanses of turf, provide opportunities to adopt conservation landscaping management techniques, conduct site-based cleanups, and plant trees. Recognized *MD Green Schools* and those working towards the honor seek stewardship projects every year. EPS, in cooperation with BCPS support staff, helped identify programs, potential tree planting and reforestation sites, and places to undertake litter control projects.

- Environmental Career Exploration and Internships for High School and College Students:

EPS provided new opportunities for students to gain experience in fieldwork, agricultural preservation programs, GIS, reporting, tree programs and public outreach. Staff attended local school career fairs to speak with students about environmental career opportunities.

- Expanded reporting of education and outreach initiatives undertaken by other Baltimore County agencies and offices:

For a more comprehensive reporting of environmental education activities in Baltimore County, the 2011 report includes education and outreach activities undertaken by multiple county agencies and offices including EPS, the Department of Public Works Recycling Division, the Department of Recreation and Parks, the Baltimore County Public School System's Office of Science, and through EPS's affiliation with MAEOE.

Results of these new and expanded initiatives are presented in sections 4.3.

#### *4.2.2 Outreach to Homeowners, Citizen Groups, Businesses, Landscape Managers, and County Employees:*

In 2010, Baltimore County sponsored a variety of community outreach events including informational displays, business events, neighborhood and stakeholder meetings, and interactive events for citizens and families. Support materials were available on the EPS and other county agency websites or in hard copy, by request. Presentations highlighted water quality, stormwater topics, best practices, conservation landscaping, pet waste management, litter control, and stewardship opportunities. EPS sought voluntary commitments to best practices and alternative landscape design and maintenance protocols. The County maintains a "Quick Guide", available on the website to assist citizens in reaching the appropriate county agency for purposes of reporting illicit discharges, dumping, and spills. Local watershed organizations supported by EPS provide numbers on their websites for citizens to report sources of pollution.

- Greening Baltimore County Operations:

In 2010, Baltimore County continued a program to "improve the environmental sensitivity and sustainability" of Baltimore County government operations. Through this program, the county endeavors to lead by example by implementing new technology and practices and engaging its employees in energy conservation practices. Some of these efforts are supported/funded by a grant from the U.S. Department of Energy. Although primarily an energy focus at this time, additional actions promoted through this program include solid waste reduction, recycling, use of low impact cleaning agents, and carpooling.

- Conservation Landscaping:

As part of the county's efforts to provide information and model best practices in the community, new and expanded initiatives included promotion of citizen actions such as purchasing native vegetation and the planting of large native trees on private property. The County increased site visits for school campus assessment, and assisted school staff in identification of areas for erosion control, buffer enhancement, and tree planting by the County.

- Water Conservation, Recycling, Re-using, and Composting:

Programs to encourage buying and installing rainbarrels and composting bins, and the trading in of old lawn mowers were promoted. Baltimore County's new expanded "Single Stream" recycling program involved a major public awareness and outreach campaign to schools and communities throughout the county.

- Trees for Communities: Through the county's tree programs, the Growing Home Campaign (GHC), the Tree-Mendous MD Program in Baltimore County, and the annual big Tree Sale, citizens have access to tree programs to fit the requirements of any project on public or private property. Staff routinely field questions from citizens regarding tree-related questions and planting advice. In 2010, through partnerships with neighboring jurisdictions, the GHC was expanded so that citizens and nursery businesses outside Baltimore County could also participate.

- Community Presentations, Printed Materials, and Lobby Displays:

In 2010, environmental information was provided in the EPS lobby, on the county's website, on county cable channel, in print form when requested, and through citizen presentations and workshops. Topics addressed included conservation landscaping, benefits of planting trees, energy conservation, recycling and solid waste reduction, agricultural preservation, water quality awareness, stormwater issues, citizen and community stewardship.

- Managing Household Hazardous Waste:

In 2009, the County began accepting medicines at county drop-off sites. Because medicines dropped off often include narcotics and controlled substances, by direction of the US Justice Department, in 2010 the practice was limited to one-day events where police at the events handle the narcotics. Work release inmates are present on site to staff these events.

- Community and agency partnerships were expanded:

In 2010, new and expanded relationships with watershed groups – including the new watershed coalition group *Blue Water Baltimore*, other community based organizations, and county agencies were developed in order to coordinate efforts and facilitate reporting. The County's three MD Green Centers modeled best environmental practices, worked with local schools, and provided environmental programs for the community at large. Watershed organizations funded by the county sponsored programs and events for communities and schools such as Adopt-a-Stream, Stream Watch, Project Clean Stream, Baltimore Downspout Disconnection Program, native plant sales and invasive plant removal. Through their outreach networks, their festivals, events, sales, workshops, and websites, they addressed watershed restoration and preservation, trash and litter issues, conservation landscaping techniques, and the importance of reporting sewage events, spills, and other evidence of

waterway pollution. Increasingly, county agencies cooperate to expand awareness of programs and services to citizens.

- Urban Nutrient Management Workgroup:

Baltimore County works with this group to encourage development of standardized protocols for measurement and reporting the results of citizen stewardship actions.

- Communication Media and County Webpage:

The County made use of commercial media, EPS's electronic newsletter, press releases, cable TV, and radio outlets for the purpose of advertising its new programs and initiatives.

- Expanded reporting of community outreach initiatives undertaken by other Baltimore County agencies, offices, and local organizations:

For a more comprehensive reporting of environmental education activities in Baltimore County, the 2010 report includes education and outreach activities undertaken by multiple county agencies and offices including EPS and the Department of Public works Recycling Division. Beginning with the 2011 report, EPS will incorporate initiatives accomplished by additional agencies such as the Department of Recreation and Parks.

Results of these new and expanded initiatives are presented in sections 4.3.

#### **4.3 Environmental Education and Outreach Program Activity and Accomplishments:**

Baltimore County's environmental education programs remains popular and in demand by citizens, schools, community groups, and businesses. Since 1994, Baltimore County has carried its messages in over 15,220 environmental presentations, outreach events and a variety of media outlets. Many of Baltimore County's programs serve as models for other communities and jurisdictions. The selection of events in 2010 was based upon the size and type of audience, the subject matter requested, and the likely degree of effectiveness in reaching desired pollution prevention environmental education outcomes. Appendix 4-1 provides a listing of presentations, distributions, events and outreach accomplished in 2010.

In 2010, approximately 5,100 presentations, distributions, and events carried components of the county's environmental education message. Over half of the events were scheduled as a result of referrals or requests for return visits. EPS expanded plans for its office lobby display to take advantage of the audience passing through the office each day. Regarding outreach to public and private schools, less emphasis was placed on direct individual classroom involvement with students and greater emphasis was placed on venues for site assessment, teacher training, facilities management, and school administration (public and private schools) where changes in system-wide protocols can be addressed. Watersheds where comprehensive plans are being implemented were targeted for program presentations as part of the county's integrated, comprehensive approach to watershed management. Small watershed Action Plan (SWAP) meetings address citizen actions as part of an overall watershed restoration strategy.

Public reporting of suspected illicit discharges, illegal dumping, and spills is handled by several Baltimore County agencies. A "Quick Guide", developed to assist citizens in finding the assistance they need is provided in Exhibit 4-1. A web version can be accessed at: [http://www.baltimorecountymd.gov/Contact\\_Us/telephone/helpful\\_numbers.html](http://www.baltimorecountymd.gov/Contact_Us/telephone/helpful_numbers.html)

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Information about the following water quality issues has been provided to the public and the regulated community countywide and in specific watersheds in 2010 as described in Table 4-1.

Table 4-1: NPDES Public Environmental Education Topics Addressed through County Initiatives, by Basin, 2010\*

NPDES Topic	Upper Western Shore Basin:	Patapsco Back Basin:	Baltimore County Initiatives
	Deer Creek Prettyboy Loch Raven Lower Gunpowder Little Gunpowder Bird River Gunpowder River Middle River	Liberty Patapsco Gwynns Falls Jones Falls Back River Baltimore Harbor	
Water Conservation	✓	✓	<ul style="list-style-type: none"> <li>- “Wells and Water Quality in Baltimore County”</li> <li>- “From My Backyard to Our Bay”</li> <li>- Raingarden/rainbarrel information</li> <li>- MD Green School Program</li> <li>- Baltimore Downspout Disconnect Program</li> <li>- Watershed associations’ programs</li> </ul>
SWM Facility Maintenance	✓	✓	<ul style="list-style-type: none"> <li>- Adopt-a-Pond Program</li> </ul>
Erosion and Sediment Control	✓	✓	<ul style="list-style-type: none"> <li>- Green Card Training (NPDES Sec 2)</li> <li>- MD Green School Program</li> <li>- MDA Publication: Erosion Control</li> <li>- Watershed associations’ programs</li> <li>- Stream Watch Program</li> </ul>
Household Hazardous Waste	✓	✓	<ul style="list-style-type: none"> <li>- Waste Management Program</li> <li>- HHW Collection Events</li> </ul>
Lawn Care Landscape Mgt (conservation landscaping)	✓	✓	<ul style="list-style-type: none"> <li>- Lawn Care Publications</li> <li>- BayScaping Publications</li> <li>- Native Plant guidebooks</li> <li>- Grasscycling publications</li> <li>- MD Green School Program</li> <li>- MDA Publications: Fertilizer, IPM, Ice removal</li> <li>- UMD Cooperative Ext Publications</li> <li>- MDA publications: Lawn Service guidelines</li> <li>- Managing Yard Materials publication</li> <li>- Watershed associations’ programs</li> <li>- Baltimore Downspout Disconnect Program</li> </ul>
Litter control, Recycling, Composting	✓	✓	<ul style="list-style-type: none"> <li>- Bureau of Solid Waste Programs: single stream recycling</li> <li>- MD Green School Program</li> <li>- “Cleaner-Greener Back River” anti-litter campaign</li> <li>- Baltimore Watershed Agreement</li> <li>- Recycling publications</li> <li>- Watershed associations’ programs</li> </ul>
Car Care, Mass Transit, Alternative Transportation	✓	✓	<ul style="list-style-type: none"> <li>- Ozone Action Days</li> <li>- Red Alert Policy</li> <li>- MD Green School Program</li> <li>- Employee Carpooling</li> <li>- Green@Work</li> </ul>

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Pet Waste Management	✓	✓	- EPS Dog Bone Giveaway - Recreation and Parks: Pet Waste Bag Program - MD Green School Program - University of MD Extension Publication - Watershed associations' programs
NPDES Regulated Community Permits	✓	✓	EPS Watershed Management and Monitoring Section

\*Table 4-1 describes the geographic coverage of NPDES permit topics as a result of outreach and education activities undertaken throughout the county in 2010.

The number of events accomplished in 2010 for specific watershed audiences is shown in Table 4-2. A majority of the audiences (75%) were located in the county's 7 urban watersheds: Back River, Baltimore Harbor, Bird River, Patapsco, Loch Raven, Gwynns Falls, and Jones Falls. In 2010, an effort was made to conduct environmental outreach and education activities to reach citizens in all of the county's watersheds.

Table 4-2: Education Outreach Conducted for Residents of the County and Region by Watershed Audience, 2010

Watershed	# Events	Watershed	# Events	Watershed	# Events
Back River	87	Jones Falls	48	Patapsco	49
Baltimore Harbor	33	Liberty	25	Prettyboy	11
Bird River	37	Little Gunpowder	18	Countywide	81
Deer Creek	8	Loch Raven	83	Regional	27
Gunpowder River	8	Lower Gunpowder	42		
Gwynns Falls	<b>65</b>	Middle River	22		

Presentations were made to a wide variety of groups. Table 4-3 reports presentation events by type of audience.

Table 4-3: Education Presentations, Distributions and Events by Type of Audience\*, 2010

Type of Group/Audience	# Events for each audience
Citizens, Community Groups or Associations	2,350
Public Schools	250
Private Schools	36
Special Needs Education	8
Environmental Career Education	25
College/University	10
Government Agency, Facility, Group	50
DEPRM Lobby, Duty Room	8,750
Public Library	19
Festival/Show	23
Conference, Workshop, Training sessions, field trips	56
Business	57
Media/Commercial and Cable TV/Radio/Billboards	2,241
Countywide	81
Regional	27

\*Notes: Individual schools represented at conference and training events are tracked as a single entry for a public or private school audience. Career education includes school career fairs and internship opportunities. Access to lobby displays is estimated to be approximately 100 people/day; the number of conferences with EPS office duty room staff is estimated to be 25 people/day for 50 weeks (250 days). Some presentations and events addressed audiences that included several of the groups listed above and thus were entered in more than one category. Every day,

contact with individual citizens (as opposed to groups) by phone or site visit provides valuable and significant opportunities for environmental education and outreach; these conversations are not currently tracked.

*4.3.1 Schools: Activities and Accomplishments:*

In 2010, education efforts targeting school audiences included promotion of the MD Green School model, professional development for teachers, materials and resource contacts, site assessments, planning for stewardship projects, environmental career exploration, and assistance with MD Green School and Green Center applications. Recognizing an opportunity to increase awareness and adoption of best practices in schools, Baltimore County assisted the Maryland Association for Environmental and Outdoor Education (MAEOE) with promotion of the statewide *MD Green School Program*, annual application review and awards ceremony. School presentations accomplished in 2010 are listed in Appendix 4-1 and 4-2. Results of school related activities include:

- MD Green School initiatives for promotion and support:

Baltimore County’s leadership and support for the *Maryland Green School Awards Program* has been described in previous annual reports. EPS has had notable success in its outreach to schools. Baltimore County continues to lead the State in developing and recognizing model schools.

Table 4-4 provides a summary of recognized MD Green Schools in all Maryland jurisdictions 1999-2010. Currently, 17% of *MD Green Schools* are located in Baltimore County. Baltimore County serves MAEOE in an advisory capacity for other jurisdictions on how to garner local support and develop partnerships that will result in the adoption of more sustainable operations at local schools and more recognized *MD Green Schools*.



Table 4-4: *Maryland Green Schools* by Jurisdiction 1999-2010

Maryland Jurisdiction	# MD Green Schools Awarded
Garrett	9
Allegany	2
Washington	4
Frederick	9
Baltimore City	15
Carroll	23
Howard	36
Harford	23
Anne Arundel	38
<b>Baltimore County</b>	<b>56</b>
Montgomery	35
Prince Georges	17
St. Mary’s	9
Charles	12
Calvert	26
Queen Anne’s	5
Worcester	4
Kent	2

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Dorchester	1
Cecil	5
Wicomico	2
Caroline	0
Talbot	0
Total:	338

Notes: For regional comparisons, counties are listed according to region (Western MD, Central MD, Washington DC suburban counties, Southern MD, and Eastern Shore. There are 4 *MD Green Centers* serving schools and the community in Baltimore County and 23 additional centers around the state providing programmatic and technical support.

Because of the prominent location of schools in all neighborhoods, *MD Green Schools* are highly visible models for other schools and set an example for adoption of best practices in the community. They plan, implement, and maintain schoolyard and community projects that provide stormwater management, water conservation, sediment control, integrated pest management, litter control, and other water quality benefits.

In 2010, Baltimore County's *Getting Greener Schools* program efforts resulted in 8 new schools recognized (5 public and 3 private). Additionally, 8 schools re-certified for the first, second or third time to maintain their *MD Green School* status. As of April 2010, Baltimore County had a 92% success rate for re-application by eligible schools. Twenty-three of the twenty-five schools eligible for re-application by 2010 sustained their operation as a *Maryland Green School* and completed one or more successful re-certifications. The two public schools that were eligible but have not re-applied have experienced major changes in staff during the months or years following their initial recognition as a *MD Green School*. EPS, in cooperation with the BCPS Office of Science and MAEOE, is working with these schools to support their efforts.

Along with the steady rate of new schools certifying, the county's high re-certification rate is an even more important tool to measure program success. It indicates to what extent schools have integrated program initiatives and sustained the effort over time. The County's rate exceeds the overall statewide rate, and is one of the most important and effective indicators of success. A map of *MD Green School* locations in Baltimore County 1999-2010 is provided in Exhibit 4-2.

Table 4-5 reports the 2010 accomplishments of Baltimore County's newly recognized and re-certifying MD Green Schools by watershed basin. Increasingly, schools are reporting the quantitative details of their projects. The data currently available is reported below.

Table 4-5: School and Community Environmental Education and Stewardship Projects  
in County Watershed Basins as Reported by the New and Recertifying MD Green Schools (public and private)  
in Baltimore County, 2010

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<b>Environmental Learning Topic/Project</b>	<b>Upper Western Shore Basin:</b> Joppa View ES Oldfields School Hereford MS Pine Grove MS	<b>Patapsco Back Basin:</b> Immaculate Conception School Immaculate Heart of Mary School Logan ES McCormick ES Parkville MS Westchester ES Ascension Catholic School Loch Raven Academy MS Dundalk HS Dundalk MS Berkshire ES Hillcrest ES
Agricultural Projects	✓ # projects reported: 4 - students grew native plants - developed plans for conservation landscaping installations - grew vegetables and flowers	✓ # projects reported: 2 - students grew sedum for green roof installation
Bio-retention Planting and/or maintenance	✓ # projects reported: 3 - installed “No-mow” zones	✓ # projects reported: 10 - rainbarrels - captured roof and sidewalk runoff - raingardens - stream buffer plantings - provided model for community
Butterfly Habitat	✓ # gardens reported: 2 - plantings to support	✓ # projects reported: 6 - raised and released painted lady - plantings to support
Energy Conservation	✓ # projects reported: 20	✓ # projects reported: 50
Environmental Issue Investigation	✓ all schools report this - local environmental issues - habitat preservation vs. human needs/wants	✓ all schools report this - increase in library resources for research
Faculty and/or Parent PTA actions	✓ - carpooling to work and events - act to reduce paper usage	✓ - selection of cleaning products - parent and student garden club - volunteer courtyard maintenance - litter control - home contracts for action - task lighting at teachers’ desks

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<b>Environmental Learning Topic/Project</b>	<b>Upper Western Shore Basin:</b> Joppa View ES Oldfields School Hereford MS Pine Grove MS	<b>Patapsco Back Basin:</b> Immaculate Conception School Immaculate Heart of Mary School Logan ES McCormick ES Parkville MS Westchester ES Ascension Catholic School Loch Raven Academy MS Dundalk HS Dundalk MS Berkshire ES Hillcrest ES
Habitat Restoration	✓ # projects reported: 15 - planted pollination gardens - installed BayScapes - built oyster reef balls - planted SAV - grew native plants	✓ # projects reported: 65 - built oyster reef balls - raised and released insects, horeshoe crabs, fish, butterflies - 4 year long-term habitat restoration - bluebird and bat boxes - 9,300 sq ft habitat restoration - awarded a Nat'l Wildlife Habitat designation by the Nat'l wildlife Federation - SAV planting at Hammerman Area - created aquatic habitat on schoolyard - planted a pollinator garden
Invasive Plant Control		✓ # projects reported: 2
IPM	✓ # projects reported: 2 - used organic gardening procedures - developed conservation landscaping plans	✓ # projects reported: 5 - developed bat habitat to control insects - raised and released ladybugs
Native Plants	✓ # projects reported: 4 - planted trees and shrubs at school - over 200 sq ft planted - planted trees awarded in County art contest - planted in community	✓ # projects reported: 7 - planted trees and shrubs at school - planted in community - planted trees awarded in County art contest - BCPS Buffer Reforestation: 85 trees
Learning Structures/signs	✓ - poster signs for water conservation, no-mow, no-idle, other BMPs - birdfeeders	✓ - used outdoor moveable classrooms - switch plate covers - no-mow info signs - retro-fitted greenhouse

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		- built solar house - bird and bat boxes - trails and pathways - tree ID tags
Litter Control	✓ - stream clean-up	✓ - Loch Raven area community clean-up - “Project Clean Stream” - hiking club controls “trail trash” - schoolgrounds clean-up
Maintenance Plan for Schoolyard Landscape	✓ - work with facilities staff on schoolyard	✓ - maintenance on schoolyard - maintenance at local park - weed control, tree trimming, mulching
Mentoring	✓ - student to student, - school to school - teacher to teacher - “Using Art to Persuade” on BMPs	✓ - middle school to elementary school - private school to public school - high school to elementary school - “Using Art to Persuade” on BMPs
No-Mow Zones	✓ - schoolyard	✓ - riparian
Protect Existing Trees	✓ - mulching on schoolyard	✓ - tree ID
Riparian Planting or Protection	✓ - planting along trib to Loch Raven reservoir - set aside no-mow zones - pond ecosystem restoration	✓ - BCPS forest Buffer Restoration - adopted Minebank Run

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<b>Environmental Learning Topic/Project</b>	<b>Upper Western Shore Basin:</b> Joppa View ES Oldfields School Hereford MS Pine Grove MS	<b>Patapsco Back Basin:</b> Immaculate Conception School Immaculate Heart of Mary School Logan ES McCormick ES Parkville MS Westchester ES Ascension Catholic School Loch Raven Academy MS Dundalk HS Dundalk MS Berkshire ES Hillcrest ES
Site Analysis	✓	✓
Solid Waste Reduction/Recycling	✓ - purchased recycled carpeting - re-vamped the campus-wide recycling process - replaced all cardboard storage with re-usable durable plastic containers - sold cloth napkins - installed single stream bins throughout school - promoted single stream awareness - collected discarded clothing for re-use - electronic newsletters - no waste lunches - submitted MD Green School application electronically - 2,700 drink pouches recycled	✓ - red worm composting -held an Electronics Recycling Day - collected used linens for wildlife refuge - held a holiday sale of used items - instituted electronic newsletters - submitted MD Green School application electronically - recycled 300 ink cartridges, 13 cellphones, 200 bottles - instituted printing duplex and reusing second side as standard procedures - established “free” stores on campus for reusable items - book swap - school store sell recycled items - re-used articles for art projects - “Trash to Treasure” program -“Reverse Magazine drive” : 30,000 magazines collected (8 tons) in a 3 week campaign - 6,580 lb of paper recycled in 6 mo period - set goal of “zero waste”
Stormwater Management/ Erosion control	✓ - turf reduction: hillside/slope planting and annual maintenance	✓ - installed rainbarrels on campus
Storm Drain Painting/Re-painting		✓
Stream Studies and Water Quality	✓	✓

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Testing/Monitoring	<ul style="list-style-type: none"> <li>- annual BayDays events:   Gunpowder Falls</li> <li>- macroinvertebrates</li> <li>- school drinking water for pH</li> </ul>	<ul style="list-style-type: none"> <li>- salinity, DO, turbidity, temperature</li> <li>- trib to Loch Raven</li> <li>- Minebank Run</li> <li>- Bullneck Creek</li> </ul>
Submerged Aquatic Vegetation	<ul style="list-style-type: none"> <li>✓</li> <li>- grew wild celery in the classroom   for planting in the Chesapeake Bay</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> </ul>
School Projects Affect Countywide BCPS School System or Private School Management Protocols	<ul style="list-style-type: none"> <li>✓</li> <li>- developed student action plans to   reduce waste systemwide at their   school</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> </ul>
School Projects Repeated at Home	<ul style="list-style-type: none"> <li>✓</li> <li>- school families participate in   recycling drives</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>- parents cooperate to achieve 33%   of students arriving and leaving by   carpool</li> <li>- students propagate native plants to   sell to parents and the community for   planting in the watershed.</li> <li>- “take shorter showers” at home   promotion</li> </ul>
Transportation Issues	<ul style="list-style-type: none"> <li>✓</li> <li>- established no-idle zones</li> <li>- promote “ride the bus” to   accomplish fewer or no private car   drop-offs</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>- established no-idle zones</li> <li>- “Walking Wednesdays”</li> <li>- 33% of students carpool</li> </ul>
Tree and/or Shrub Planting and Maintenance	<ul style="list-style-type: none"> <li>✓</li> <li>- promoted the multiple benefits of   trees through participation in “Using   Art to Persuade”, theme: <i>My Tree   and Me</i></li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>- held a “Plant-Off” competition   between high schools</li> <li>- native plants propagated</li> <li>- red oaks planted to increase canopy</li> </ul>

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<b>Environmental Learning Topic/Project</b>	<b>Upper Western Shore Basin:</b> Joppa View ES Oldfields School Hereford MS Pine Grove MS	<b>Patapsco Back Basin:</b> Immaculate Conception School Immaculate Heart of Mary School Logan ES McCormick ES Parkville MS Westchester ES Ascension Catholic School Loch Raven Academy MS Dundalk HS Dundalk MS Berkshire ES Hillcrest ES
		- BCPS Forest restoration Program - native prayer garden - community plantings: Dundalk, Merritt Park, Fleming Park - students assess previous plantings and keep records on viability
Turf Reduction	✓ - previously mowed hillside was planted	✓ - increased the forest/stream buffer
Water Conservation/Water Pollution Prevention	✓ - nutrient reduction: septic system upgraded - low-water toilets - use “green” cleaners	✓ - installed rainbarrels - labeled stormdrains - removed 7,000 sq ft of impervious paving - automatic faucet installation - “take shorter showers” at home promotion

\*The numbers reported and individual projects cited above as examples, are taken from a school’s voluntary reporting, are not comprehensive, and do not reflect the total number of accomplishments by schools in a given watershed basin in 2010. A school’s MD Green School application documents actions accomplished over a 2-year period.

Solid waste reduction project results are too numerous to cite in the table above. Baltimore County’s 2010 MD Green Schools raised awareness about single stream recycling and removed the following from the waste stream:

- |                            |                                  |                         |
|----------------------------|----------------------------------|-------------------------|
| Aluminum                   | Drink pouches                    | Plastic food wrap       |
| Art supplies               | Electronics, computer components | Plastic laminating film |
| Bags, plastic and paper    | Eyeglasses                       | Scrap wood              |
| Bags, canvas               | Glue sticks                      | School supplies         |
| Batteries                  | Hearing aids                     | Shoes                   |
| Bottle caps                | Ink cartridges                   | Textbooks               |
| Bottles, plastic and glass | Newsprint                        | Tin                     |
| Cell phones                | Packaging materials              | Tires for mulch         |
| Clothes                    | Paper and cardboard              | Toner cartridges        |
| CDs and DVDs               | Paper napkins, drink cups        |                         |

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The combined environmental benefit from these and other projects in schools, on schoolyards, and in the community includes stormwater, sediment, and erosion control, riparian protection, habitat and air quality enhancement, energy savings, and other values.

Originally intended as a way to recognize, celebrate, and honor schools that engage in meaningful environmental education and stewardship, the *MD Green School Awards Program* in Baltimore County now serves as a model for how schools and centers can extend learning into the community and watershed. The program has become an important mechanism for raising awareness and initiating new stewardship projects at county public and private schools and centers. Becoming recognized as a *MD Green School* changes the overall “culture” at the school and since 1999, tens of thousands of local teachers, students, and support staff have been involved. There were over 11,100 teachers and students directly involved in 2010. Table 4-6 reports the number of students and adult staff involved in each watershed basin. The number of volunteers, parent families, and community partners active at individual schools is not reported at this time, but known to be substantial.

Table 4-6: Number of Participants in MD Green School Program in Baltimore County, 2010

<b>Schools</b>	<b>Upper Western Shore Basin:</b>	<b>Patapsco Back Basin:</b>	<b>Total</b>
	Joppa View ES Oldfields School Hereford MS Pine Grove MS  <b># Students/Staff</b>	Immaculate Conception School Immaculate Heart of Mary School Logan ES McCormick ES Parkville MS Westchester ES Ascension Catholic School Loch Raven Tech MS Dundalk HS Dundalk MS Berkshire ES Hillcrest ES <b># Students/Staff</b>	
New Baltimore County <i>MD Green Schools,</i> 2010	800 students  160 staff	3,555 students  425 staff	4,355  585
Re-certifying <i>MD Green Schools,</i> 2010	1,880 students  200 staff	3,570 students  515 staff	5,450  715
<b>Total Participating</b>	<b>3,040</b>	<b>8,065</b>	<b>11,105</b>

Due to favorable response in 2009, the pilot year, a new EPS initiative to engage schools was offered again in 2010. The program targets all schools, especially those wishing to be recognized as MD Green Schools or sustain their Green School operations. It involved an environmental art contest highlighting art-environment connections, was titled “*Environmental Best Practices: Using Art to Persuade*”. The opportunity was open to all public and private

school students PreK-12 in Baltimore County. Contest themes underscored the importance of spreading the word about opportunities to adopt the best practices that *MD Green Schools* must model and document. An alternate theme, optional for PreK-Grade 2, was “My Tree and Me” to showcase the multiple benefits of trees. Twenty-four schools, public and private, participated by submitting over 800 entries in Fall 2010, thus doubling participation rates in the pilot year. Winners will be announced in Spring 2011. In 2010, thirteen of the participating schools are currently recognized as MD Green Schools. These schools plan to use their program participation as part of their documented activities when their school is due for re-certification. Others are working towards their first MD Green School application. This is one example of how EPS works to promote the use of the environment as a context for learning across disciplines, sustain program participation, and support the advancement of environmental literacy in schools.

A selection of the artwork was framed and displayed as part of a permanent exhibit in county offices and a traveling exhibit to assist in the promotion of the *MD Green School* program.

With programs like “Using Art to Persuade”, the County works to sustain an ongoing relationship with all Baltimore County’s *Green Schools* and *Green Centers*. EPS, in cooperation with BCPS will assist the 10 schools and centers eligible for re-application in 2011 and the 18 eligible in 2012. By 2011, several will have re-applied for the second time, sustaining their operations 10 or more years, and will be eligible for “Emeritus” or “Model MD Green School” status. Recognitions received by these schools and centers have been described in previous reports. DEPRM works with potential *MD Green Schools* to provide training, develop program, find community partners, and assist with projects.

The *MD Green Schools/Green Centers Award Program*, as implemented in Baltimore County, continues to raise environmental awareness among school administrators, facilities managers, teachers, students, parents, school neighbors, and nature centers. It promotes and rewards the implementation of conservation best practices and environmental stewardship. Further information about the *MD Green School/Green Center* program is available on the MAEOE website: [www.maeoe.org](http://www.maeoe.org) or Baltimore County DEPRM’s webpage at [www.baltimorecountymd.gov/eps](http://www.baltimorecountymd.gov/eps). Baltimore County’s educational initiatives benefit from individual grants to local schools provided by the Chesapeake Bay Trust and other local businesses and organizations.

Support for schools and centers: EPS provided over 100 enhanced aerial photographs for the dual purpose of local stream awareness and site analysis of school properties and surrounding neighborhood. These site maps, along with copies of the MD DNR’s *Check-up for Schools* and field assessments of schoolyards provide tools and techniques teachers and students need for planning stewardship projects. Over 200 copies of the USFW publication *Native Plants for Wildlife and Conservation Landscaping* were made available to schools and organizations as a reference guide for planning school and community habitat restoration projects. Other topical fact sheets and brochures were provided upon request.

*Baltimore County Public Schools/EPS MD Green School Committee*: BCPS, working with EPS staff has adopted system-wide, the policy of working to facilitate *MD Green School* operations at all public schools PreK-12. To date, 41 of the 165 public schools in the county have been recognized. This represents 25% of Baltimore County public schools. Through the efforts of EPS and the BCPS Office of Science, over 50 additional schools have begun the process. This is

largely due to strong BCPS administrative support, an increase in presentations directly to school faculty, and the establishment of a formal committee to promote and support the *MD Green School* model.

- Outreach to new school populations: independent schools, faith-based schools and school systems, and school organizations:

An evaluation of the geographic distribution of *MD Green Schools* and the number of independent schools participating, led to an initiative to reach out to additional independent non-public schools and faith-based schools Pre K-12. In recent years, a series of presentations at the Association of Independent Maryland Schools (AIMS) Conferences, the Baltimore Jewish Environmental Network (BJENS), the biennial Catholic School Teacher's Conference, the annual MAEOE environmental education conference, and to individual school faculties was intended to reach these audiences. Currently, several Jewish schools and approximately 15-20 Catholic schools are in the process of adopting the MD Green School model. The first MD Green School in the Jewish community, honored in 2009, now serves as a mentor to other schools in the system. Ascension Catholic School, sustaining its MD Green School operations since 1999, was successfully recognized as one of Maryland's first "Model Green Schools" in 2010. Currently, of the 56 recognized MD Green Schools in Baltimore County, 15 (27%) are independent, non-public schools.

- Outreach to schools and organizations serving students with special needs

Environmental education opportunities should be accessible to all students. In recognition of the fact that there are special circumstances that often limit the children with special needs from taking advantage of the more common opportunities to experience the environment, the county explored ways to reach more teachers at schools providing special services.

Anecdotal reports from the teachers involved indicate that their *MD Green School* program experience provides alternative educational settings, increases learning outcomes, and provides other tangible benefits for students. A teacher from the Regional Institute for Children and Adolescents (RICA) located in Baltimore City and serving Baltimore County students, reports that their *MD Green School* activities have resulted in major changes in student interest, appropriate behavior, and student achievement. Other schools with under-served populations are also participating. Public displays and visual materials were designed to be accessible to diverse audiences and show that everyone participate and benefit from environmental education and outdoor activities.

The County continues to explore ways to bring environmental opportunities to more students countywide. Currently 7 local schools primarily serving special needs populations have met the requirements and have been recognized as *MD Green Schools*. These include:

- The Forbush School at Sheppard Pratt Hospital System in Glyndon, sustaining its MD Green School operations since 1999
- The Rosedale Center High School, BCPS, newly recognized in 2008
- The RICA School, located in Baltimore City but serving Baltimore County students
- The Odyssey School, Owings Mills, newly recognized in 2008
- Jemicy School, Owings Mills campus, sustaining operations since 2004
- The Harbour School, Owings Mills campus, sustaining operations since 2004

- Eastwood ES, in Essex, recognized in 2009.

- Professional development for formal and non-formal environmental educators:

Professional development for teachers leads to increased interest in environmental education. Invitations for EPS staff to present at seminars, training workshops, and meetings hosted or sponsored by other environmental organizations have increased both locally and regionally. In 2010, EPS initiated green school-type activities at professional workshops and faculty trainings for many public and private schools and organizations around the county. Overall, 50 professional development presentations were conducted.

In cooperation with BCPS Office of Science, site-based assistance and teacher training was provided in use of technical equipment, enhancement of field skills, identifying and strengthening curriculum connections, and developing lesson plans and timelines. At these local and statewide workshops and conferences, emphasis was placed on using the environment as a context for learning across all grade levels and disciplines.

As part of BCPS in-service training and staff development workshops in advance of the opening of school in September 2010, the new initiative “*MD Green School Best Practices: Using Art to Persuade*” was again introduced to all public school art teachers. The art contest, highlighting art-environment curricular connections, will run through fall 2010. Over 30 art teachers from public and private schools participated in the second year of the program. With the popularity and success of this initiative, BCPS requested that EPS repeat the program and present it to its teachers during BCPS in-service training in late August, 2011.

- Promotion and support for stewardship projects:

Schoolyard assessments involving students and teachers and leading to projects and community landscape design and maintenance projects have resulted in an increase in general environmental awareness as well as turf reduction, tree and forest cover enhancement on school properties, bio-diversity, wildlife habitat, bio-retention, SWM, sediment control and other environmental benefits. Since 1999, the 56 Baltimore County *MD Green Schools* and 4 *MD Green Centers* serving Baltimore County have accomplished over 1,000 projects on school properties or in local communities. Refer to Table 4-5 for examples of the activities accomplished by the schools awarded in 2010.

Each year, more schools show interest in adopting conservation landscaping principles, removing unused turf areas on their schoolyard campuses and replacing it with no-mow zones, planting trees, restoring habitat and addressing stormwater management issues. The *MD Green Centers* in Baltimore County provide training and model projects and best practices that can be implemented on school property. In recent years, over 520 local schools have sent staff to grounds workshops or expressed interest in habitat restoration. To increase the sustainability of projects, most schools routinely coordinate actions with their facility/grounds manager. The workshops sponsored by BCPS in-service, MAEOE, CBF, and the Irvine Nature Center provided valuable how-to technical support for these activities.

In 2010, tree-related topics were highlighted to county and regional audiences (school and community) on almost 1000 occasions. In Baltimore County high schools, forestry is one of the 5 competition topics in the annual Envirothon event. Taking place on several dates in spring and

fall, the event involves training for teachers and volunteers and extensive preparation by students.

Other events varied according to particular needs including: site assessments, assisting with planting projects and removal of invasive competing plants, conducting environmental education programs about the benefits of trees, teacher training, leading planting demonstrations, providing technical assistance with species and site selection, and funding opportunities. In addition, no-cost delivery of Tree-Mendous MD tree orders and a \$10 citizen discount coupons through the county's *Growing Home Campaign* were made available when appropriate. Baltimore County's 60 MD Green Schools and Centers were all eligible to receive a 1:1 match on all DNR Tree-Mendous Maryland tree orders in recognition of their MD Green School operations. EPS assisted in planning and advertising local stewardship projects such as Project Clean Stream hosted by the Alliance for the Chesapeake Bay.

The BCPS fall tree-planting project engaged students in planting hundreds of trees on county public high school sites in fall 2010. The BCPS Office of Science in cooperation with the Baltimore County Forestry Board and the Chesapeake Bay Trust, assisted over 1,000 students from 30 public high schools in planting 680 native trees for habitat enhancement, energy savings, and forest restoration. Several high schools served as tree-planting mentors by inviting nearby middle schools and elementary schools to join in the projects. These plantings occurred on school properties in the watersheds shown in Table 4-7.

**Table 4-7: Student Participation in BCPS Tree Plantings by Baltimore County Schools, Fall 2010**

<b>Basin</b>	<b># Schools</b>	<b># Students</b>	<b># Trees</b>
Patapsco Back (Patapsco, Gwynns Falls, Jones Falls, Back River Baltimore Harbor)	25	836	521*
Upper Western Shore (Loch Raven, Bird River, Lower Gunpowder, Middle River)	6	249	159*
<b>Total</b>	<b>30</b>	<b>1,085</b>	<b>680</b>

\*Note: Of these totals, thirty-two trees planted by students attending schools in the Patapsco-Back Basin (row 1) were at planting sites in the Upper Western Shore Basin. Fifty-five trees planted by students attending schools in the Upper Western shore basin (row 2) were planted in the Patapsco-Back basin. The majority of the plantings, 80%, were riparian buffer plantings; the other 20% were on upland sites.

School sites are being assessed for potential future reforestation projects planned and implemented by Baltimore County EPS. To date, 10 schools with large acreage schoolyards have expressed interest. Follow-up discussions and site visits are planned.

- Environmental Career Exploration and Internships for High School and College Students:

Exploring and promoting environmental careers continues to be part of the county's outreach to students and the public. EPS staff participated in elementary, middle and high school level career fairs providing environmental career information and "practice" interviews. To support these efforts, staff used two fliers on the topics: *Internship Opportunities*, and *An Introduction to*

*Environmental Careers, Job Titles, and Suggested Coursework*, and a GIS site analysis map of school grounds. The flyers were also available to schools, in the EPS lobby, and on the website. “Take Your Child to Work Day” was celebrated in late April as an opportunity to increase awareness and introduce young people to environmental careers.

In 2010, several paid and unpaid internships were available for local high school and college students, and adults. The internship opportunities at EPS offered students the opportunity to work with resource professionals and gain valuable experience in watershed planning and monitoring, GIS, education and outreach, environmental health, ground water and stormwater management, and agricultural preservation.

- Leadership through MAEOE:

In 2010, EPS staff served in a capacity to help MAEOE accomplish its mission of providing professional development for classroom teachers and non-traditional outdoor educators. In 2010, MAEOE piloted new initiatives to work with teachers to provide higher quality, more accessible environmental education for all students in Maryland. These include 1) the certification of non-formal environmental education teachers, and 2) partnering with other stakeholders to support local and national environmental education initiatives including the Governor’s Partnership for Children in Nature, signed April 22, 2008 and the national No Child Left Inside Act which passed in the House of Representatives September 19<sup>th</sup>, 2008. MAEOE works with MSDE and others to develop a state level environmental literacy initiative. Baltimore County as a jurisdiction is well-represented on the MAEOE Board with 7 members serving as individual citizens or as representatives of these organizations: EPS, BCPS, Towson University, the Forbush School, Irvine Nature Center.

- Expanded reporting of education and outreach initiatives undertaken by other Baltimore County agencies and offices:

School presentations accomplished by the Baltimore County Department of Public Works Recycling Division and the Department of Recreation and Parks are included in the 2010 reporting. In addition, spring stream studies and fall tree planting events at public high schools led by the BCPS Office of Science are now being tracked and reported.

#### *4.3.2 Community Outreach: Activities and Accomplishments*

- Green@Work: A sustainability network comprised of agency and community representatives.

In late 2010, the Baltimore County Office of Sustainability became part of the County’s Department of Environmental Protection and Sustainability (EPS). Recommendations leading to a carbon emissions reduction goal of 10% by 2012 for government operations and the community at large were developed for the County Executive. With this program, begun in 2009, the County will implement new technology and practices and engage its employees in actions such as energy saving, solid waste reduction, recycling, and carpooling. Additional components include GPS routing for county vehicles to prescribe more efficient schedules and minimization of travel time. For more information on this new program, go to:

<http://www.baltimorecountymd.gov/Agencies/environment/sustainability/countyactions.html>

- Providing a model for the community: Innovations in county operations and programs:

The County has instituted a Green Building Policy and Program, Green Building Property Tax Credit, updated its lighting systems, and instituted the use of low impact cleaning agents as well as other actions. In late 2010, the County initiated an energy audit of County buildings to assess usage and identify inefficiencies. The audit will be completed in 2011. The County website for sustainability was updated to highlight sustainable actions the county is taking and provide action opportunities and ideas for communities and citizens. The website includes an easy to use do-it-yourself home energy audit for homeowners. Go to:

<http://www.baltimorecountymd.gov/Agencies/environment/sustainability/residents.html>

Through programs such as Forest Sustainability, Land Preservation, Single Stream Recycling, Smart Growth and Priority Places, Trail Development, MD Green School program, Urban Greening, the Growing Home Campaign, and other programs, the County seeks to provide a balanced offering of education and stewardship opportunities for all citizens.

- Conservation Landscaping:

EPS continued its literature distributions at educational events, festivals, the County's public libraries, schools, Department of Permits and Development Management, and the EPS public lobby. *BayScapes* brochures were distributed by the EPS Environmental Impact Review section. This brochure was provided in cooperation with The Alliance for the Chesapeake Bay (ACB).

Trees are an important component in conservation landscape planning, providing multiple water quality protection benefits, especially in heavily urbanized areas where stormwater retrofits are difficult, costly or impossible. The County used local community events to highlight the importance of trees in neighborhoods and provided access to tree programs and information. In spring 2010, Towson Gardens Day was again designated "Arbor Day in Baltimore County" by the reading of an official County Executive Proclamation extolling trees and those who plant and care for them. In behalf of the citizens of Baltimore County, the County Executive accepted the national Tree City USA recognition. In addition, watershed organizations funded by the county, highlighted the adoption of functional landscaping techniques by homeowners.

In September, the county hosted a Big Tree Sale to make large size native trees available to homeowners at a reasonable price for planting on their property. The offerings, many not usually available from commercial nurseries, included varieties of oaks, maples, river birch, pawpaw, green ash, tuliptree, redbud, and others. County staff assisted citizens in tree selection according to the planting site and underscored the benefits gained including enhanced property value, potential energy savings, stormwater management benefits, and habitat enhancement. Each tree was posted and labeled with optimal planting requirements; tree planting and watering recommendations were provided to increase survival rate. Due to the success of this project, plans are being made to repeat the sale in spring and possibly fall of 2011.

- Water Conservation, Recycling, Re-using, and Composting:

Baltimore County's recycling and waste prevention programs, serving a population of 800,000, moved to single stream recycling in 2010. The comprehensive program includes grasscycling promotions, compost bin sales, and *Reuse Directory* distributions. Outreach and media events are listed in Appendix 4-1.

- Managing Household Hazardous Waste:

In 2010, the County began accepting medicines at county drop-off sites. Citizen participation in the county’s program for drop-off fluorescent light bulbs, first initiated in 2008, continued to increase in 2010.

Household Hazardous Waste Collection Events were held in spring and fall 2010. Over 2,000 drop-offs of a variety of hazardous materials were made. In addition, citizens were encouraged to drop off hazardous waste items at the County’s Eastern Sanitary Landfill from April through October (see Section 3.5 for a summary of material collected). At each of these events, 1,000-1,200 education outreach materials were given out to citizens at each drop-off site. Events are promoted in print media, lobby displays, cable TV, and website.

- Community Partnerships:

In 2010, local and regional cooperative and partnerships brought increased opportunities to bring environmental education to a wider audience. A partial listing includes MAEOE, the County’s watershed associations, the Baltimore County Forestry Board, community organization coalitions, the Baltimore County Public School System, non-profit environmental organizations, Comcast Cable, and other County and State agencies and offices.

- Urban Nutrient Management Workgroup:

As part of EPS’s contribution to the Urban Nutrient Management Workgroup (UNMWG), staff participated in the planning and promotion of nutrient management workshops targeting professional landscape managers and turf technicians on public and private landscapes. The workgroup will be addressing the development of protocols for standardizing the reporting of benefits received through citizen actions.

The workgroup affords opportunities for continued dialogue with representatives of the lawn care industry. Over the years, this has raised industry awareness concerning the connection between lawn care, pesticide applications, stormwater management, and water quality. Best practices for nutrient applications and lawn care are stressed.

- Business Outreach:

Through the *Growing Home Campaign*, over 30 local nurseries in 50 locations joined in partnership with the county to provide incentives to buy and plant trees on private home landscapes, effectively increasing the urban tree canopy. A listing of these nurseries is available on the county’s webpage. The Green Building Council, in an effort to reach out to local schools teamed up with MAEOE’s *MD Green School* program to support installation of green building components in both new buildings and retrofits and encourage teachers to use these changes on school properties as learning opportunities. Partnerships between businesses and hundreds of local schools both public and private provide ongoing opportunities to reach the business sector. Business and community partnerships with the 2010 MD Green Schools are reported in Table 4-8.

Table 4-8: Community and Business Partnerships Supporting Baltimore County’s Public Schools recognized as MD Green Schools, 2010

<b>Baltimore County Public or Private School</b>	<b>Examples of Participating Businesses and Community Organizations</b>
Westchester ES	EPS, Benjamin Banneker Park, PTA, Master Gardeners, Jared Lyles - Naturalist

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Immaculate Heart of Mary School	EPS, Abitibi Recycling, Cromwell Valley Park, Parent Volunteers, CBF, MAEOE, B-WET, Baltimore Aquarium
Immaculate Conception, Towson	Abitibi, BYKOTA, Boy Scout Webelos, Girl Scouts of Central MD, LCF, EPS
Logan ES	SLURRP, EPS, CBF, Ground Services, Lowes Toolbox for Education, Parent Donations, Honeywell, Living Classrooms
Oldfields School	CBF, EPS, One Straw Farm, Big Bean Café, PTA.
Joppa View ES	Lowes Toolbox for Education, EPS, Weis Market, WalMart, Home Depot, Marshy Point Nature Center
Parkville MS	Wicklein's Water Gardens, Fleming Park, Days Cove Environmental Education Center, Patapsco State Park, BCPS Buffer Restoration Program,
McCormick ES	EPS, TerraCycle, Abitibi, Eastern Tech High School, the Rosedale Center, Greenewit, BC Bureau of Solid Waste Management, Natural History Society of MD, Lowes, Home Depot, CBT, Constellation Energy
Berkshire ES (re-certification)	Marshy Point Natur3e Center, EPS, Baltimore Aquarium, Jennifer Kurtis Keats – author, Exploring the Environment Grant, Baltimore County office of Service learning, local farmers, Dundalk Renaissance Corp, Walmart
Hereford MS (re-certification)	CBT, CBF, EPS, Living Classrooms, Science Foundation, Gunpowder Valley Conservancy, Hereford High School, Gunpowder State Park
Loch Raven Academy (re-certification)	BCPS Office of Science, Forestry Board, Pleasant Plains ES, Kiwanis, Steve Lafferty
Dundalk MS (re-certification)	North Bay, Sollers Pt HS, Giant, BC Recreation and Parks, CBF, Dundalk Tenant and Landlord Community, Dundalk Renaissance Corporation, E-Club 26, Empties-4-Cash
Dundalk HS (re-certification)	Patapsco HS, CBT, CBF, Emory Knolls Farm, Greening of Dundalk, Provident Bank, BCPS Office of Science, Dundalk Renaissance Corporation
Hillcrest ES (re-certification)	BGE, Master Gardeners, ABC Rentals, Vangel Paper, Catonsville Plant Exchange, Karen Mullin, DNR, CBT, CDM E-Cycling, Jeff Plusen: landscape architect
Ascension Catholic School (re-certification)	Catholic HS, CBF, National wildlife Federation, Girl Scouts of Central MD, CBT, EA Engineering, EPS, Cornell Lab of Ornithology, Northrop Grumman
Pine Grove MS (re-certification)	MD Bluebird Society, EPS, BCPS Office of Science

- Communication media and county webpage:

To reach a broader audience, environmental videos, “Hello Baltimore County” program reports, and news items were broadcast in cooperation with the County Office of Communication and Comcast Cable aired on the county’s cable channel 4-5 times each week both regularly and seasonally during 2010. Comcast Cable reports 240,000 local County subscribers. The County’s E-News Stream offered additional opportunities to reach other audiences. Six issues of EPS’s E-NewsStream, reached approximately 1,200 county citizens and organizations in 2010. Tree program and *MD Green School* information and applications, pollution prevention messages, environmental careers, and additional program services were incorporated and updated on the department’s website: [www.baltimorecountymd.gov/eps](http://www.baltimorecountymd.gov/eps).

- Expanded reporting of community outreach initiatives undertaken by other Baltimore County agencies and offices

In 2010, shifts in program emphases, demand, audience availability, method of delivery, and changes in the reporting of program components have resulted in the changes noted in Table 4-9 below.

Table 4-9: Presentations, Participants and/or Audience, and Materials, 1994-2010

Year	# Presentations, Distributions, Events and other Media Outreach	# Estimated Audience	# Literature Distributed
1994	4	100	387
1995	16	414	1,036
1996	22	1,009	2,576
1997	89	4,889	13,519
1998	107	12,415	18,128
1999	79	15,141	18,243
2000	112	21,191	21,178
2001	147	29,193	36,378
2002	165	224,800	32,000
2003	172	425,642	34,301
2004	174	309,030	35,320
2005	155	290,000	20,000
2006	166	317,170	20,100
2007	246	373,950	23,422
2008	683	352,419	52,197
2009	1,880*	8,938,060*	49,200*
2010	5,100	10,415,609	857,336

\* Beginning with the 2009 report and continuing in subsequent reports, the total number of presentations and participants include additional presentations and outreach conducted in cooperation with BCPS Office of Science and by Baltimore County Department of Public Works Recycling Division (DPW), and other agencies and offices. Literature distribution to schools by DPW is included from 2008 forward. There is a decline in literature distribution overall, reflecting the fact that most handouts and informational literature are now available online and are not frequently offered as hard copy. Citizens and organizations are always invited to obtain the materials by accessing the county’s website. A continuation of this trend in reduction of printed literature is expected. The increase in literature distribution in 2010 is thought to be temporary and largely the result of informational materials, procedures, and schedules distributed to citizens as part of the county’s move to single-stream recycling.

#### 4.4 Other Environmental Education and Outreach Initiatives

Currently, all sections in EPS as well as several other county agencies and offices are involved in public environmental education and outreach at some level. In addition to the activities described above, County staff takes advantage of potential opportunities for informal environmental education through daily contact and interaction with citizens to share environmental information and make recommendations. Over 100 telephone calls and many more email messages per week resulted in opportunities to answer questions and provide environmental education. Responses by phone, fax, email, and traditional mail were followed by information packets available on the webpage, faxed, or sent through the mail.

Brochures, maps, and specific information promoting citizen education on the topic of stormwater pollutants were also distributed by staff in the following EPS sections: Waste Management, Environmental Health, Watershed Management and Monitoring, Field Operations, Capital Improvement, Environmental Impact Review, Stormwater Engineering, and Groundwater Management.

Substantial support was provided by the County to local watershed associations in the form of grant funding, organizational guidance, identification of stakeholders, training, educational presentations, brochures, data, GIS maps, and participation at their local festival events.

The following updates are provided for other programs that provide environmental value:

#### *4.4.1 The Stream Watch Program*

The Stream Watch Program uses volunteers to assist the county on identifying pollution impacts to local streams. Citizens walk their stream on a quarterly basis and report back on any unusual conditions such as discoloration, smells, sediment or trash. The volunteers can further their stewardship by actively organizing stream clean-ups and participating in planting activities. The County's Waterway Improvement Program and the Illicit Connection Program use the information provided by the volunteers to identify potential restoration projects or initiate an investigation as part of the Illicit Connection Program.

The Stream Watch Program is implemented throughout the county with the *Watershed Association Restoration Planning and Implementation Grant* program (Section 4.2.2, below). One of the provisions of this monetary grant is to administer the Stream Watch Program in the organizations' activities. The County provides additional support with field training and use of the GIS system for stream reach segmentation.

#### *4.4.2 Watershed Association Restoration Planning and Implementation Grant Program*

At the end of 2004 the County developed a new grant program entitled, *Watershed Association Restoration Planning and Implementation Grant* Program. This grant program was developed to address staffing needs of local watershed associations. The intent of this monetary grant is to provide funding for staff time to participate in the development of Small Watershed Action Plans (SWAPs), support for the Stream Watch program, identification and implementation of restoration projects, educational activities, and provide an ability to leverage additional funding. Measurable successes of this program are listed in Chapter 7.

Eligible organizations must meet the following qualifications:

- The organization must be a locally based Watershed Association with membership in Baltimore County.
- The organization must have 501(c)(3) private, non-profit status.

- The organization must have a demonstrated history of identifying and conducting citizen based restoration projects.

#### 4.4.3 *The Baltimore Watershed Agreement*

Baltimore County and Baltimore City have continued implementation of the Phase 1 Action Plan as part of the Baltimore Watershed Agreement. The Baltimore Watershed Agreement was originally signed in October 2002 and re-affirmed in 2006. The Agreement sunsets in 2012 and discussion is taking place about a schedule for renewal. A workgroup meets regularly to update the status of the Action Plan and discuss next steps. Currently a planning committee for another State of Our Watersheds conference is being organized. The conference will be scheduled in the winter of 2012. Updates and a copy of the Action Plan can be reviewed on line at <http://www.baltimorecountymd.gov/Agencies/environment/watershedagreement/index.html>,

#### 4.4.4 *Tree-Mendous Maryland Program in Baltimore County*

Baltimore County continues to partner with the MD DNR to actively promote the Tree-Mendous Maryland Program. This state administered tree planting program is designed to provide citizens, schools, and community groups with an inexpensive way to obtain mostly native tree and shrub species for planting on public street tree easements, other public lands, and within community open spaces. EPS aggressively promotes the program in Baltimore County through twice-yearly electronic mailings to over 800 individual citizens, schools, greening committees, and other interested groups. Each spring and fall, EPS provides assistance to groups and individuals planning tree-planting projects in the County. This may include technical advice, information about required permits, project coordination, and free tree delivery. Telephone and e-mail contact with citizens and "greening" committees is made to underscore the need for careful planting, watering, and maintenance, while frequent contact between EPS and the DNR staff is maintained to ensure a smooth delivery process.

In 2010, EPS provided technical assistance and received requests for free delivery of 14 orders, totaling 208 trees. A major benefit of the Tree-Mendous Maryland Program, as expanded and enhanced in Baltimore County, continues to be citizen education. Contact with citizens, schools, and greening committees provides opportunities to increase environmental awareness, especially concerning the value of trees and forests for managing water movement in watersheds. The Maryland DNR honors community tree planting efforts with annual *Maryland PLANT* (People Loving and Nurturing Trees) *Community Awards*.

In addition, Baltimore County's *Green Schools* Program in partnership with the Tree-Mendous Maryland Program, provides participating schools with free trees at a 1:1 match for every Tree-Mendous tree purchased for planting on the school properties or on community open space. In 2010, four schools in Baltimore County benefited from participation in the *MD Green School* program by receiving 86 free trees, enhancing the ecological and aesthetic value of school properties. Data on the number of trees/year can be found in Section 7.

#### 4.4.5 *The Baltimore County Forest Conservancy District Board*

Urban, suburban, and rural forests play an important role in the protection and enhancement of the county's water resources. For over 50 years, volunteers serving on the Forestry Boards in Maryland have been working to sustain valuable forest resources. Forestry Boards have always realized the value of forests in providing forest products. In recent years, Baltimore County's

Forestry Board has also recognized a growing awareness of the ecological values and benefits of trees and forests for retarding soil erosion, recycling nutrients, improving water quality, providing essential habitats for the region's forest-dependent wildlife, and for adding beauty to the landscapes of the region.

This Board has provided leadership for environmental improvement throughout the County through its tree planting and maintenance events and through its educational programs and opportunities highlighting watershed protection and the benefits of trees and forests. In recognition of the value of these programs, Baltimore County EPS has provided support through annual financial grants to the Board. Certain programs, developed and implemented in cooperation with the Maryland DNR and with the support of EPS, offer excellent opportunities for environmental education. A brief summary of Forestry board activities includes the following:

- Promotion of and support for community "greening," and for the state-sponsored Tree-Mendous Maryland Program;
- Participation in the Department of Recreation and Parks forest buffer restoration activities, Senior Expo, BCPS Advanced Placement and MD State Fair events;
- Maintenance of the Board's website [www.bcfb.sailorsite.net/](http://www.bcfb.sailorsite.net/) providing a range of information on tree and forests topics;
- Contribution of funds to the Maryland Smokey the Bear fire prevention campaign;
- Donation of scholarships annually for three high school students interested in environmental science careers to attend the annual Natural Resources Career Conference at Camp Hickory in Garrett County, Maryland;
- Distribution of seedlings in cooperation with DNR;
- Processing of the 2010 Tree City USA award for Baltimore County's commitment to a community forestry program, a forest and tree conservation ordinance and set of regulations, support of the County's Forest Conservancy District Board's environmental education programs, and an annual Arbor Day celebration;
- Facilitating the annual *Maryland PLANT Community* award: a DNR recognition program, recognizing the greening committees, schools, and groups that meet established criteria. This award is automatically presented to recipients of the Tree City award;
- Providing technical assistance and tree donations to school groups for planting projects at County parks;
- Providing technical assistance and donations of soils and fertilizers to schools for planting projects on school properties;
- Providing funds for teaching materials for the annual Envirothon Science Competition;
- Serving on the steering committee for the EPS forest sustainability initiative using the Montreal Process criteria and ecological indicators.

#### *4.4.6 The Baltimore County Growing Home Campaign*

The *Growing Home Campaign*, Baltimore County's urban tree planting and education project, was introduced to the public in spring 2006 and expanded regionally in 2007 and 2008 to include Baltimore City, as part of the Baltimore Watershed Agreement, and Harford County. The *Growing Home Campaign* is an innovative approach to expanding urban tree canopy on residential properties in the Baltimore region. The planting of trees is an alternate stormwater

BMP and a strategic approach in denser urban areas where traditional stormwater retrofits are not possible due to lack of land, infrastructure conflicts, and costs.

Program coordination is provided by Baltimore County EPS. As a successful public-private partnership between Baltimore County, Baltimore City, Harford County, local retail nurseries and garden centers, and homeowners, the *Campaign's* goal since inception in Spring 2006 is to motivate homeowners to plant 10,000 new trees on residential property. *Growing Home* addresses behavior change at the homeowner level through (1) targeted homeowner education about planting native and other selected urban-tolerant trees in private yards, and (2) a financial incentive in the form of a \$10 discount coupon redeemable toward the cost of a qualifying tree with a retail cost of at least \$25 purchased from a local participating nursery or garden center. The coupons also serve as a mechanism to track the success of the *Campaign* to add trees to targeted tree deficient areas by geo-coding information and mapping the results using GIS software. Data on the number of trees planted by watershed can be found in Section 7.

The overall goal of the *Growing Home Campaign* for Baltimore County is to increase much needed tree cover, especially in the urban areas of the County. Older Baltimore County communities within the Urban Rural Demarcation Line (URDL) are in need of additional trees. Baltimore County has identified target areas within the County's URDL where there is an existing tree deficit. Residential land comprises approximately 72% of the total land cover within the County's Urban Rural Demarcation Line (URDL). Recent studies show that the best opportunities for increases in Urban Tree Canopy in the County are available on private land therefore planting on residential property is crucial to successfully increasing the County's Urban Tree Canopy.

Homeowner outreach for the *Growing Home Campaign* includes comprehensive education about the value of adding trees within existing neighborhoods, guidance about site considerations and species selection, and tree planting and maintenance instructions. Also included is information on the multiple environmental benefits of planting trees including: (1) slowing stormwater runoff and reducing the cost of controlling stormwater, especially in urban areas, (2) reducing erosion, (3) filtering air and water by absorbing air pollutants and fertilizer and pesticide runoff. The educational information is distributed as a printed brochure that is widely distributed throughout the County and on the *Growing Home Campaign* website [www.growinghome.info](http://www.growinghome.info).

Homeowners play an important role in the *Campaign* by (1) purchasing trees to plant in their yards, and 2) transporting, watering and maintaining the trees. Local nurseries play an important role in the *Campaign* by (1) contributing a cost share of \$5 for each reimbursed coupon, (2) promoting tree planting, (3) stocking a diverse selection of trees that are appropriately sized and priced for the average homeowner to transport and plant, and (4) offering customers knowledgeable horticultural advice about their tree selections. The *Growing Home Campaign* supports local retail nursery businesses and provides education about trees and tree purchase discounts for homeowners. During 2010, the *Campaign* also leveraged about \$17 of total private sector investment per dollar of County cost share funds. Coordination of the program was funded in 2010 through an Urban Greening Grant administered by the Chesapeake Bay Trust and a grant from the Honeywell Corporation.

#### **4.5 Summary**

Baltimore County implements its public awareness and education programs to raise public awareness and reduce stormwater pollutants. The initiatives and programs are multi-faceted and developed for flexibility so that the message may be easily adapted to a variety of educational settings involving homeowners, community groups, school administration and staff, facility managers, students, watershed coalitions, faith communities, and businesses in various geographic settings around the County and region.

A number of important new components and materials have been developed or enhanced in order to better reach certain target audiences. The County's sustainability initiatives provide recommendations and [Green@Work](#) initiatives in the increasing effort to model best practices. Through changes to county operating protocols, employees are engaged in the workplace, and measurable progress is expected. Through local initiatives by individual watershed organizations, the *MD Green Schools/Green Centers* initiatives, and special professional development projects for school staff, new emphasis has been placed on institutional landscape design, maintenance, and conservation landscaping concepts such as the benefits of native plants, integrated pest management (IPM), and removal of impervious surfaces. Pet waste, grass clippings, improper application of fertilizer, and other sources of nutrients in urban and suburban neighborhoods were highlighted at community and school events.

In its broad-based school initiatives, EPS has shifted emphasis from hosting individual classroom events to increased teacher training, outreach to supervisors and facility staff to influence system-wide protocol review and revision. The County works with community coalition groups and businesses to foster new partnerships, provide a wider range of services, and reach new audiences.

Partnerships with other Baltimore County offices and agencies enhanced the level of communication, avoided duplication of services, and increased overall effectiveness and efficiency. Supporting materials developed by the department and by outside organizations were made available online. Volunteer citizen participation in pollution prevention and environmental stewardship was promoted in all components of the program.

Baltimore County continues to:

- Make a significant commitment to education, outreach, sustainability and stewardship.
- Provide the information and assistance that citizens and employees need to act at home, at school, at work, and in their local watersheds.
- Use communication technologies, such as the worldwide web, cable television, and electronic newsletters to provide information for citizens, businesses, and schools.
- Promote and facilitate meaningful outdoor interactive and investigative environmental experiences for young people.
- Work in partnerships to provide valuable assistance to public and private schools.
- Provide programmatic models for the state and region.
- Work towards "government by example" by preparing pollution prevention plans for maintenance operations, and instituting sustainable landscaping techniques on publicly owned and managed properties. These will serve as models for the community.

Measurement tools are inadequate in the task of quantifying direct pollution reduction resulting from initiatives in this public education and outreach program. Questions remain about the benefits of targeting certain audiences for specific messages, whether a media outlet was

successful in reaching its audience, and how many in the audience act on the message. Answering these questions and accurately converting the results into a reliable nutrient reduction is needed to accurately reflect the accomplishments of the County's NPDES program.

Exhibit 4-1: Baltimore County's "Quick Guide" for Citizens, Organizations, and Businesses, Page 1



**BALTIMORE COUNTY**  
**MARYLAND**

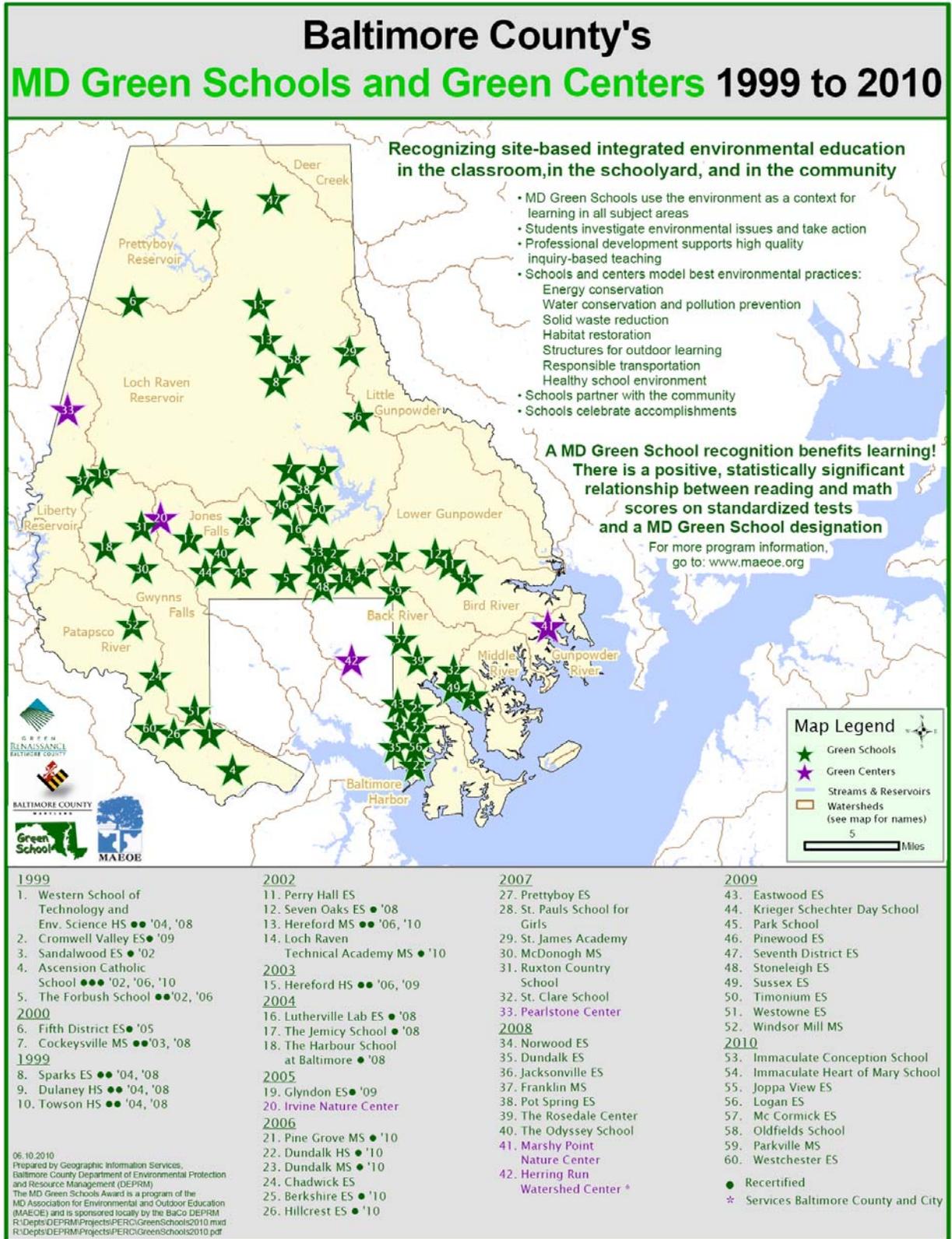
**Quick Guide to  
Baltimore County Resources for Business**  
[www.baltimorecountymd.gov](http://www.baltimorecountymd.gov)

Baltimore County Executive		410-887-2450
Baltimore County Council		410-887-3196
Clerk of the Circuit Court		410-887-2601
Land Records (Deeds)	410-887-2650	
Community Conservation		410-887-3317
Housing, neighborhood renaissance, Commission on Disabilities		
Environmental Protection & Resource Management		410-887-3733
Environmental health, food facility and environmental regulations		
Stormwater Engineering	410-887-3768	Food Plans Review 410-887-4068
Inspection and Enforcement	410-887-3226	Food Protection and Health 410-887-4065
Critical Area and Wetlands	410-887-3980	Waste Management 410-887-3745
Environmental Impact Review	410-887-3980	Community Hygiene 410-887-4066
Groundwater Management	410-887-2762	Agricultural Preservation 410-887-3776
Economic Development		410-887-8000
Real estate, financing, workforce development, business growth assistance		
Fair Practices and Community Affairs		410-887-5557
Liaison to minority/ethnic communities, minority-, women- and disabled-owned businesses		
Fire Department		EMERGENCY dial 911
Fire protection, emergency medical aid and rescue		
General Information	410-887-4500	
Liquor License Commissioners		410-887-3191
Permits & Development Management		410-887-3353
Building permits, enforcement of development, building, electrical, plumbing, livability, and zoning codes		
Bureau of Land Acquisition	410-887-3280	Lead Abatement 410-887-3373
Building Plans Review	410-887-3987	Development Plans Review 410-887-3751
Fire Plans Review	410-887-3985	Zoning Review 410-887-3391
Electrical Board	410-887-3636	Building, Electrical, Plumbing Permit Processing
Plumbing Board	410-887-3620	410-887-3900
Business & Amusement License	410-887-3373	Food, Gaming, Gathering, Public Exhibition License
Code Inspection	410-887-3953	410-887-3616

Exhibit 4-1: (Continued) Baltimore County's "Quick Guide" for Citizens, Organizations, and Businesses, Page 2

Planning Office	410-887-3211
Master Plan, comprehensive zoning, historic preservation, public facilities and land use needs assessment	
Police	EMERGENCY dial 911
Enforces state and county laws and ordinances, safeguards life and property, prevents crime	
Non-emergencies 410-887-2222 General information 410-887-2214	
Public Works	410-887-3300
Highways, solid waste management, traffic engineering and transportation planning, utilities engineering and construction	
Emergency Sewer Service (24 hrs.)	410-887-7415
Water Service (managed by Baltimore City)	410-396-5352
Engineering & Construction	410-887-3788
Traffic Engineering & Transportation Planning	410-887-3554
Solid Waste Management Refuse & Recycling	410-887-2000
Purchasing	410-887-3880
County procurement and contracting	
Workforce Development	410-887-2008
Workforce recruitment, training, employee placement	
<b>Additional Business Resources</b>	
Baltimore County Small Business Resource Center	410-825-6200
Start-up assistance, business and marketing plans, financing resources	
Baltimore County Revenue Authority	410-887-3127
Publicly owned golf courses, parking garages, meters and lots	
Maryland State Department of Assessments	410-512-4900
Commercial, industrial and residential property assessments	Baltimore County office
<b>Useful Business Web Sites</b>	
Baltimore County Government	<a href="http://www.baltimorecountymd.gov">www.baltimorecountymd.gov</a>
For detailed agency information, see "agencies" list	
Baltimore County Conference & Visitors Bureau	<a href="http://www.visitbacomd.com">www.visitbacomd.com</a>
Meeting, event and conference planner and visitor guide	
Maryland Business Licensing Information System	<a href="http://www.blis.state.md.us">www.blis.state.md.us</a>
State permits and licenses, online applications	
Maryland Department of Business & Economic Development	<a href="http://www.choosemaryland.org">www.choosemaryland.org</a>
State data and resources for business development	
 <b>BALTIMORE COUNTY</b> MARYLAND	
Baltimore County Department of Economic Development 400 Washington Avenue Towson, Maryland 21204-4665 Phone 410-887-8000 e-mail <a href="mailto:businesshelp@baltimorecountymd.gov">businesshelp@baltimorecountymd.gov</a>	
Baltimore County Executive Jim Smith and the Baltimore County Council	

Exhibit 4-2: Baltimore County's *Maryland Green Schools and Green Centers, 1999-2010*



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**Appendix 4-1: Presentations, Distributions, and Events, by Watershed, 2010**

<b>DATE</b>	<b>ORGANIZATION</b>	<b>LOCATION</b>	<b>WATERSHED (Audience)</b>	<b># PEOPLE</b>
Jan-Nov	EPS Lobby Display (6 topics) Ongoing throughout 2010	Towson	Countywide, Regional Jones Falls	2,450
Jan-Dec	DEPRM Duty Room	Towson	Countywide	6,250
Jan-Dec	BC Public Libraries (19): GHC	19 branches	Countywide	6,000
Jan-Dec	All Baltimore Co Senior Centers: GHC	17 locations	Countywide	1,600
Jan-Dec	All BCo Park and Rec Facilities: GHC	19 facilities	Countywide	1,600
Jan-Dec	Baltimore Co MD Green Schools and Green Centers: GHC	60 schools and centers	Countywide	1,400
Jan-Dec	MD AG Extension: GHC	Cockeysville	Countywide	200
Jan-Dec	Outreach to Watershed Associations (6): GHC	multiple	Back River Jones Falls Patapsco Gunpowder R, Loch Raven, Little Gunpowder Lower Gunpowder Prettyboy Bird R	500 200 300 900   500 30
Jan-Dec	Community and Agency Outreach: GHC Towson University Valley Planning Greenbrier Garden Club  Fran Flanigan National Aquarium MD Science Center Irvine Nature Center MD Horticultural Society Gunpowder State Park	Towson  Towson  Baltimore City Baltimore City Owings Mills	Jones Falls Jones Falls Lower Gunpowder, Back R  Regional Regional Gwynns Falls Gunpowder R, Regional	100 25 25  50 200 200 150 300 50
Jan-Dec	Community Associations: GHC Ruxton-Riderwood Woodholme Charlesbrooke Pot Springs Greater Towson Community Council Dundalk Rodgers Forge Bird River Mt Washington Kenilworth	Ruxton Woodholme Towson area Timonium Towson Dundalk Towson White Marsh Baltimore City Towson area	Jones Falls Jones Falls Jones Falls Loch Raven Jones F, Back R Baltimore Harbor Jones F, Back R Bird R Regional Jones Falls	50 100 150 175 160 50 50 30 50 300
Jan-Dec	EPS Lobby: GHC	Towson	Countywide	1,200
Jan-Dec	EPS Website visits: GHC	Website	Countywide	13,491
Jan-Dec	EPS Website downloads: GHC	Website	Countywide	3,689

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	(brochures, coupons, nurseries, tree lists)			
Jan-Dec	Community Colleges of Balto Co: GHC 6 campuses	Essex Catonsville Dundalk Owings Mills Hunt Valley White Marsh	Countywide Bird River Patapsco, Gwynns Falls Balto Harbor, Back R Gwynns Falls Loch Raven Bird River	300
Jan-Dec	Business Nursery Retailers (48): GHC	Countywide	Countywide, Regional	4,300
Jan-Dec	Outreach to Faith-based Groups: GHC Beth-EL Central Presbyterian St. Vincent de Paul Caring for Creation-Episcopal BJENS: Ricky Gratz	Pikesville Towson Baltimore City  Pikesville	Jones F Jones F, Back R Regional Jones Falls Jones Falls	75 50 50 50 50
Jan-Dec	Baltimore County Council: GHC	All districts (7)	Countywide	500
Jan-Dec	All Baltimore County Agencies: GHC		Countywide	2,600
Jan-Dec	Baltimore Co Office buildings: GHC displays	Towson	Jones F, Countywide	200
January	DPW Recycling: 3 mail campaign events to 235,000 single family and townhome residences		Countywide	705,000
January	EPS E-News Stream Newsletter		Countywide	1,200
01/12/10	Lutherville Community Association: Recycling	Lutherville	Loch Raven	20
01/14/10	Norwood ES Green Event	Dundalk	Baltimore Harbor	600
01/20/10	Comcast taping for monthly Hello Baltimore County (Feb 2010 airing)		Countywide	Est. 130,000
01/24/10	Erosion and Sediment Control Green Card Certification		Countywide	16
01/27/10	SWAP Mtg		Back River	100
February	EPS E-News Stream Newsletter		Countywide	1,200
February	DPW Recycling ads posted on 25 MTA busses (ads ran 28 days; *estimated 300 people /day/bus)		Countywide	210,000
February	DPW Recycling commercials on 55 Comcast Cable channels (4,295 spots ran over 28 days)		Countywide	Viewership numbers not available
February	DPW Recycling: Five 28-day Billboard Displays: daily effective circulation (DEC)	Timonium Towson/Overlea  Owings Mills Dundalk Arbutus	Loch Raven, Jones F Bird River, Back River Lower Gunpowder, Gwynns Falls, Baltimore Harbor, Patapsco	842,800 730,800  730,800 327,600 238,000
February	DPW Recycling: local broadcast media (78 spots at various viewing times over 28 days on local channels: WBFF, WJZ,		Countywide Regional	4,581,700

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	WMAR TV)			
02/04/10	Dunloggan Community Association: Recycling	Dundalk	Baltimore Harbor	15
02/17/10	MD Multi-Housing Association/Trade Show: Recycling	Lake-Falls	Jones Falls	10
02/19/10	MAEOE MD GS Art Exhibit Display	Flintstone	Countywide, Regional	550
02/19/10	MAEOE MD GS Session 20 schools participating	Flintstone	Countywide, Regional Loch Raven, Patapsco Lower Gunpowder	30
02/19/10	MAEOE MD GS Pre-review	Flintstone	Countywide, Regional Loch Raven	60
02/20/10	GVC Jennifer Branch		Lower Gunpowder	60
02/28/10	Hope for the Chesapeake Forum	Dundalk	Baltimore Harbor	70
March	DPW Recycling ads posted on 25 MTA busses (ads ran 31 days; *estimated 300 people /day/bus)		Countywide Regional	232,500*
March	DPW Recycling: Five 15-day Billboard Displays: daily effective circulation (DEC)	Timonium Towson/Overlea  Owings Mills Dundalk Arbutus	Loch Raven, Jones F Bird River, Back River Lower Gunpowder Gwynns Falls Baltimore Harbor Patapsco	451,500 238,500  391,500 175,500 127,500
03/08/10	Greening of Dundalk: Recycling	Dundalk	Baltimore Harbor	10
03/08/10	Bridges Montessori School, Head	Providence	Loch Raven, Countywide	5
03/10/10	Woodlawn Police and Community Association: Recycling	Woodlawn	Gwynns Falls	25
03/10/10	Ascension Catholic School	Halethorpe	Patapsco	3
03/10/10	Envirothon School teams: Western Tech HS Catonsville HS Parkville HS Dulaney HS  Towson HS  Carver HS  Perry Hall HS	Camp Puh'tok	Patapsco, Countywide Patapsco Bird R, Back River Loch Raven, Little Gunpwr Loch Raven, Jones Falls, Lower Gunpowder Loch Raven, Jones Falls Countywide Bird R, Lower Gunpowder	80
03/11/10	Envirothon School teams: Sparrows Pt HS Chesapeake HS Eastern Vo-Tech HS Kenwood HS Owings Mills HS	Camp Puh'tok	Balto Harbor, Back R Middle R, Back R Middle R, Back R Middle R, Back R Gwynns Falls	90

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	New Town HS Franklin HS Hereford HS		Patapsco, Gwynns Falls Gwynns Falls Loch Raven, Deer Cr, Little Gunpowder Liberty, Loch Raven	
03/11/10	Hillendale Community Association: Recycling	Hillendale	Back River	15
03/13/10	State of Our Watersheds Conference	Baltimore City	Countywide, Regional	200
03/15/10	Perry Hall HS Faculty	Perry Hall	Bird River	150
03/16/10	Department of Aging: Recycling	Woodlawn	Gwynns Falls	15
03/16/10	Eastwood Residents and Business Association: Recycling	Eastwood	Back River	25
03/22/10	BCPS Stream Studies: Towson HS	Oregon Ridge	Back River	25
03/22/10	BCPS Stream Studies: Towson HS	Oregon Ridge	Back River	25
03/23/10	Jacksonville ES : Recycling	Jacksonville	Loch Raven Little Gunpowder	85
03/23/10	Montreal Process Tree Event	Cromwell	Regional	30
03/23/10	Erosion and Sediment Control Green Card Certification		Countywide	9
03/24/10	Community Event at Ridgely MS: Recycling	Lutherville	Loch Raven	260
03/25/10	BCPS Stream Studies: Hereford HS	Oregon Ridge	Loch Raven, Prettyboy, Deer Creek, Little Gunpowder	27
03/26/10	BCPS Stream Studies: Chesapeake HS	Oregon Ridge	Middle River	12
Apr-Nov	HHW Drop-off	Eastern	Countywide	1000
April	EPS E-News Stream Newsletter		Countywide	1,200
April	Comcast production "Hello Baltimore County" GHC	Countywide airing	Countywide	3,000 est
April	DPW Recycling ads posted on 25 MTA busses (ads ran for 15 days) *estimated viewership 300 people /day/bus)		Countywide	112,500
04/03/10	Household Hazardous Waste Day	Cockeysville	Loch Raven, Countywide	1200
04/07/10	Glyndon ES: Recycling #1	Glyndon	Loch Raven, Liberty, Gwynns Falls	240
04/07/10	Glyndon ES: Recycling #2	Glyndon	Loch Raven, Liberty, Gwynns Falls	240
04/07/10	Equine Seminar	North County	Loch Raven, Prettyboy, Deer Creek, Little Gunpowder	65
04/08/10	North Point Community Council: Recycling	Edgemere	Baltimore Harbor, Back River	30
04/08/10	"Using Art to Persuade" 2010 Art Award Ceremony Event Cromwell Valley ES  Pine Grove MS	Towson	Countywide  Loch Raven, Back R Lower Gunpowder, Lower Gunpowder	60

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	Hereford MS  Deep Creek ES Oldfields School Joppa View ES Immaculate Heart of Mary  Perry Hall HS Logan ES Sussex ES McDonogh MS		Little Gunpowder, Loch Raven, Prettyboy Deer Creek Middle R, Back River Loch Raven, Regional Bird River Bird River Lower Gunpowder, Back R Bird River Baltimore Harbor Back River Gwynns Falls	
04/08/10	BCPS Stream Studies: Perry Hall HS	Oregon Ridge	Bird River	16
04/10/10	Project Clean Stream GHC	Countywide	Countywide	1000
04/10/10	AG Day at Hereford HS	Hereford	Loch Raven	200
04/11/10	Household Hazardous Waste Event	Texas	Loch Raven, Countywide	2,500
04/12/10	BCPS Stream Studies: Lansdowne HS	Oregon Ridge	Patapsco	21
04/13/10	MD GS Application Review	Annapolis	Countywide, Regional	40
04/13/10	BCPS Stream Studies: Eastern Tech HS	Oregon Ridge	Back River	23
04/16/10	Cromwell Valley ES: Recycling	Providence	Lower Gunpowder	439
04/16/10	2009-10 Envirothon Eastern Vo-Tech HS New Town HS Owings Mills HS Western HS Hereford HS  Dulaney HS  Towson HS Perry Hall HS Sparrows Point HS Chesapeake HS Franklin HS  Catonsville HS Carver HS Parkville HS Kenwood HS		Middle R, Back R Patapsco, Gwynns Falls Gwynns Falls Patapsco Loch Raven, Liberty Deer Creek, Little Gunpowder Loch Raven, Back R, Jones Falls Bird R, Low Gunpowder Balto Harbor, Back R Middle R, Back R Gwynns F, Liberty, LR Prettyboy Patapsco Jones Falls, Countywide Bird River, Back River Middle R, Back River	165
04/16/10	Parkville Senior Center: Recycling	Parkville	Back River, Bird River, Lower Gunpowder	15
04/19/10	GHC Green Event at Towson University	Towson	Jones Falls, Countywide Regional	50
04/19/10	Riderwood ES: Recycling	Riderwood	Jones Falls	528

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04/19/10	Business Leadership Baltimore County: Recycling	Towson	Countywide	20
04/19/10	BCPS Stream Studies: Dulaney HS	Oregon Ridge	Loch Raven	27
04/19/10	Holly Neck Conservation Association: Recycling	Holly Neck	Back River, Middle River	20
04/21/10	BCPS Stream Studies: Parkville HS	Oregon Ridge	Back River	14
04/20/10	McCormick ES GS Celebration Event	Overlea	Back River	400
04/20/10	Notre Dame Preparatory School Faculty	Towson area	Loch Raven	300
04/22/10	Eastwood ES Festival: Recycling	Eastwood	Back River	90
04/22/10	CCBC Essex: Recycling	Essex	Bird River, Back River Lower Gunpowder, Gunpowder, Middle R, Baltimore Harbor	325
04/22/10	Western Tech HS Careers Event	Catonsville	Patapsco, Gwynns Falls	30
04/22/10	BCPS Stream Studies: Owings Mills HS	Oregon Ridge	Gwynns Falls	16
04/22/10	BCPS Stream Studies: New Town HS	Oregon Ridge	Gwynns Falls	10
04/22/10	Arbor Day Proclamation in Baltimore County	Towson	Jones Falls, Countywide Regional	3000
04/22/10	Take Your Child to Work Day	Towson	Jones Falls, Countywide	5
04/22/10	Towson Gardens Day	Towson	Countywide, Jones Falls Loch Raven Lower Gunpowder	3000
04/22/10	GBMC Employees: Recycling	Towson	Jones Falls	25
04/22/10	Growing Greener Schools Art Exhibit	College Park	Regional	100
04/22/10	Middleborough ES Career Event	Essex	Back River	30
04/22/10	2009-10 Envirothon Competition Eastern Vo-Tech HS New Town HS Owings Mills HS Western HS Hereford HS  Dulaney HS  Towson HS Perry Hall HS Sparrows Point HS Chesapeake HS Franklin HS  Catonsville HS Carver HS Parkville HS	Camp Pu'Tuk	Middle R, Back R Patapsco, Gwynns Falls Gwynns Falls Patapsco Loch Raven, Liberty Deer Creek, Little Gunpowder Loch Raven, Back R, Jones Falls Bird R, Low Gunpowder Balto Harbor, Back R Middle R, Back R Gwynns F, Liberty, LR Prettyboy Patapsco Jones Falls, Countywide	165

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	Kenwood HS		Bird River, Back River Middle R, Back River	
04/23/10	BCPS Stream Studies: Pikesville HS	Oregon Ridge	Jones Falls	18
04/23/10	Chapel Hill ES: Recycling		Bird River Lower Gunpowder	600
04/24/10	DPW Compost Bin and Rainbarrel Promotion and Sale (>2,000 sales)	White Marsh	Countywide	Est. 1,200
04/26/10	Vincent Farms ES: Recycling	White Marsh area	Bird River, Gunpowder, Lower Gunpowder	120
04/26/10	BCPS Stream Studies: Franklin HS	Oregon Ridge	Gwynns Falls	22
04/27/10	Cub Scout pack #475: Recycling	Perring	Back River	85
04/27/10	BCPS Stream Studies: Western Tech HS	Oregon Ridge	Patapsco	44
04/28/10	Council of Environmental Quality: Recycling	Towson	Countywide	12
04/28/10	Gwynns Falls Stakeholders #1	Owings Mills	Gwynns Falls	16
04/28/10	BCPS Stream Studies: Kenwood HS	Oregon Ridge	Back River	6
04/28/10	Timonium ES Science Career Event	Timonium	Loch Raven	400
04/29/10	Ag event at Boordy Vineyards	Long green	Lower Gunpowder	150
04/29/10	BCPS Stream Studies: Franklin HS	Oregon Ridge	Gwynns Falls	15
04/29/10	Pay Pal Bill Me Later/ Employees Green Fair: Recycling	Timonium	Loch Raven	55
04/29/10	Pay Pal Bill Me Later/ Employees Green Fair: Recycling	Hunt Valley	Loch Raven	155
05/06/10	Dept of Aging: Recycling	Dundalk	Baltimore Harbor	15
05/10/10	Ridgely MS Faculty	Lutherville Timonium	Loch Raven	130
05/12/10	Wellwood International ES: Recycling	Pikesville	Jones Falls	175
05/12/10	Wellwood International ES: Recycling	Pikesville	Jones Falls	200
05/15/10	Faith Outreach in Prettyboy: Charlie Conklin	North County	Prettyboy	40
05/15/10	BCPS Annual STEM Fair	Randallstown	Countywide	400
05/17/10	Catonsville ES Faculty	Catonsville	Patapsco	80
05/23/10	Create Everyday Geniuses Exhibit: Recycling	White Marsh	Countywide, Bird River	5,000
05/24/10	Reisterstown ES Faculty	Reisterstown	Gwynns Falls, Liberty, Loch Raven	70
05/26/10	Oakleigh ES: Recycling and Composting	Parkville	Lower Gunpowder, Bird River, Back River	70
June	EPS E-News Stream Newsletter		Countywide	1,200
06/02/10	Westowne ES: Recycling	Catonsville	Patapsco	80
06/04/10	Seneca ES Green Fair: Recycling	Carroll Island	Gunpowder, Middle R	400
06/04/10	MAEOE MD GS Annual Awards <i>TOTALS:</i> <i>In Maryland, 101 schools, 5 MD Green Centers</i> <i>In Baltimore County: 8 new, 8 re-certified</i> Immaculate Conception School	Annapolis	Regional  Jones Falls, Loch Raven	2000

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	Immaculate Heart of Mary School Joppa View ES Logan ES Oldfields School Parkville MS Westchester ES McCormick ES Berkshire ES Dundalk HS Dundalk MS Hillcrest ES Loch Raven Tech MS Pine Grove MS Hereford MS  Ascension Catholic School		Back River Bird River Baltimore Harbor Loch Raven, Regional Back River Patapsco Back River Back River Baltimore Harbor Baltimore Harbor Patapsco Back River Lower Gunpowder Loch Raven, Deer Cr Little Gunpowder Patapsco	
06/07/10	BCPS Office of Science Workshop	Pulaski Park	Countywide	20
06/07/10	White Marsh Police Community Council: Recycling	White Marsh	Bird River	30
06/10/10	Winterset Wood HOA: Recycling	Owings Mills	Gwynns Falls	15
06/23/10	Rolling Road Sr Apts (The Greens at Rolling Rd): Recycling	Catonsville	Patapsco	25
06/28/10	Dept of Aging: Recycling	Rosedale	Back River	15
07/14/10	BCPS Visual Arts Office	Towson	Countywide	3
07/15/10	Dept of Aging: Recycling	Lansdowne	Patapsco	3
07/15/10	Reisterstown ES Faculty	Reisterstown	Gwynns Falls, Liberty, Loch Raven	1
07/21/10	Dept of Aging: Recycling	Overlea	Back River	5
07/28/10	ESY Summer Camp: Recycling	Edgemere	Baltimore Harbor Back River	40
08/03/10	Chartley HOA: Recycling	Chartley	Gwynns Falls	125
08/03/10	Community on Patrol: National Nite Out	Chartley	Gwynns Falls	60
08/09/10	Our Lady of Grace School	Parkton	Loch Raven	10
08/09/10	Cromwell Valley Park Council	Cromwell Valley	Lower Gunpowder	15
08/10/10	Dept of Aging: Recycling	Perry Hall	Bird River	3
08/11/10	Pine Grove MS: Jackie Morgan	Carney	Lower Gunpowder	1
08/18/10	The Forbush School at Glyndon	Glyndon	Gwynns Falls, Liberty, Loch Raven, Countywide	15
08/23/10	Our Lady of Grace	Parkton	Loch Raven, Deer Creek, Prettyboy	15
08/25/10	BCPS Art In-service Teacher Workshops (2 sessions) Kick-off "Using Art to Persuade"	Essex	Countywide, Back R Gwynns Falls, Patapsco Loch Raven, Middle R Lower Gunpowder, Baltimore Harbor, Bird River, Liberty,	540

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			Gunpowder, Jones Falls Prettyboy	
08/25/10	BCPS Science In-service Teacher Workshops (2 sessions) “Operating as a MD GS”	East County	Countywide, Bird River Jones Falls, Middle R Back River, Patapsco Gwynns Falls, Liberty Little Gunpowder, Baltimore Harbor	60
September	EPS E-News Stream Newsletter		Countywide	1,200
09/09/10	Franklin Garden Club: Recycling	Reisterstown	Gwynns Falls, Liberty Loch Raven	28
09/09/10	Lutherville Garden Club Exotic Invasive Plants of the Mid-Atlantic	Lutherville	Loch Raven	50
09/11/10	Reisterstown Community Festival: Water Quality/ Pollution Prevention	Reisterstown	Gwynns Falls, Liberty, Loch Raven	100
09/11/10	Reisterstown Community Festival: Recycling	Reisterstown	Gwynns Falls, Liberty, Loch Raven	100
09/12/10	Reisterstown Community Festival: Recycling	Reisterstown	Gwynns Falls, Liberty, Loch Raven	100
09/12/10	Reisterstown Community Festival: Water Quality/ Pollution Prevention	Reisterstown	Gwynns Falls, Liberty, Loch Raven	100
09/21/10	Perry Hall HS Tree Event	Perry Hall	Bird River, Lower Gunpowder	43
09/21/10	Arbutus MS Faculty	Arbutus	Patapsco	25
09/22/10	Baltimore County Ag Center Opening	Hunt Valley	Countywide, Regional	250
09/24/10	Catonsville ES: Recycling #1	Catonsville	Patapsco	250
09/24/10	Catonsville ES: Recycling #2	Catonsville	Patapsco	230
09/24/10	Loch Raven Academy MS and Pleasant Plains ES HS Tree Event	Towson Area	Lower Gunpowder, Back R	60
09/27/10	Hereford HS Tree Event	Hereford	Loch Raven, Deer Cr Little Gunpowder	25
09/28/10	Gwynns Falls Stakeholders Meeting #2	Owings Mills	Gwynns Falls	12
09/29/10	Pinewood ES: Recycling (2 sessions)	Lutherville	Loch Raven, Jones Falls	265
09/29/10	Landsdowne HS and MS Tree Event	Landsdowne	Patapsco	45
09/29/10	Dundalk ES Morning Tree Talks	Dundalk	Baltimore Harbor	56
09/29/10	Dundalk ES Afternoon Tree Talks	Dundalk	Baltimore Harbor	59
October	EPS E-News Stream Newsletter		Countywide	1,200
October	DPW Recycling: multi-lingual program guides distributed to 82,000 multi-family units for distribution to residents		Countywide	82,000
10/01/10	New Town HS Tree Event	Owings Mills	Patapsco, Gwynns Falls	45
10/04/10	Church Lane ES: Recycling	Randallstown	Gwynns Falls	180
10/04/10	Eastern HS Tree Event	Essex	Back River	28
10/04/10	Kenwood HS Tree Event	Middle River	Middle R, Back R	12
10/04/10	Deep Creek ES 5 <sup>th</sup> Gr BMP Talks	Essex	Back River	63
10/05/10	Deep Creek ES 2 <sup>nd</sup> Gr Tree Talks	Essex	Back River	57
10/05/10	Dundalk HS Tree Event	Dundalk	Baltimore Harbor	20

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10/06/10	Sr Expo Department of Aging: Recycling	Timonium	Countywide	1,000
10/06/10	Towson HS Tree Event	Towson	Back R, Jones Falls, Loch Raven	39
10/06/10	BCPS Professional Development Field work (8 schools)	Timonium	Countywide	15
10/06/10	Dulaney HS/Pot Spring ES Tree Event	Timonium	Loch Raven, Little Gunpowder	120
10/07/10	Sr Expo Department of Aging: Recycling	Timonium	Countywide	1,000
10/07/10	Cub Scout Pack #247: Recycling	Perry Hall	Lower Gunpowder	30
10/07/10	Franklin HS Tree Event	Reisterstown	Gwynns Falls, Liberty, Prettyboy	95
10/08/10	McCormick ES GS presentation	Overlea	Back R	200
10/09/10	EPS Big Tree Sale	Hunt Valley	Loch Raven, Countywide	52
10/09/10	Crossroads Center Tree Event	Cox's Pt	Gunpowder	35
10/09/10	Cromwell Valley Park Fest: Water Quality/Pollution Prevention	Cromwell Valley	Loch Raven, Back R, Lower Gunpowder,	1,800
10/09/10	Cromwell Valley Park Fest: Recycling	Cromwell Valley	Loch Raven, Back R, Lower Gunpowder,	1,800
10/10/10	Cromwell Valley Park Fest: Recycling	Cromwell Valley	Loch Raven, Back R, Lower Gunpowder,	1,800
10/11/10	Southwest Academy MS Tree Event	Woodlawn	Gwynns Falls	36
10/12/10	Pine Grove MS BMP presentation #1	Carney	Lower Gunpowder	40
10/12/10	Pine Grove MS BMP presentation #2	Carney	Lower Gunpowder	40
10/12/10	Perry Hall ES: Recycling	Perry Hall	Lower Gunpowder, Bird River	50
10/12/10	Owings Mills HS Tree Event	Owings Mills	Gwynns Falls	80
10/12/10	Pine Grove MS BMP presentation #3	Carney	Lower Gunpowder	40
10/12/10	Ft Garrison ES Faculty	Pikesville area	Jones Falls	80
10/14/10	Western Tech HS Tree Event	Catonsville	Patapsco, Countywide	35
10/15/10	Home and Garden Show: Recycling	Timonium	Loch Raven Countywide	1,000
10/16/10	Home and Garden Show: Recycling	Timonium	Loch Raven Countywide	1,000
10/17/10	Home and Garden Show: Recycling	Timonium	Loch Raven Countywide	1,000
10/18/10	Cash for Clunkers Promotions	Towson	Countywide	50
10/18/10	Jacksonville ES Tree Walk/Talk #1	Jacksonville	Loch Raven, Little Gunpowder	32
10/18/10	Jacksonville ES Tree Walk/Talk #2	Jacksonville	Loch Raven, Little Gunpowder	36
10/19/10	Sparrows Point HS Tree Event	Sparrows Point	Back River	43
10/19/10	Milford Mill HS Tree Event	Randallstown	Gwynns Falls	15
10/20/10	CCBC Essex-Sustainability Event: Recycling	Essex area	Back River, Bird River Baltimore Harbor, Middle River, Gunpowder River	500 est

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10/21/10	GHC/Baltimore Watershed Agreement Tree Planting on City-County line	Overlea	Back River, Regional	25
10/21/10	Chesapeake HS Tree Event	Middle River	Middle River	26
10/22/10	Woodlawn HS Tree Event	Woodlawn	Gwynns Falls	45
10/22/10	Dundalk ES Tree Walk/Talk #1	Dundalk	Baltimore Harbor	30
10/22/10	Dundalk ES Tree Walk/Talk #2	Dundalk	Baltimore Harbor	33
10/25/10	Sudbrook MS Magnet Tree Event	Pikesville	Jones Falls, Gwynns F	70
10/26/10	Dept of Aging Reisterstown: Recycling	Reisterstown	Gwynns Falls, Liberty, Loch Raven	15
10/26/10	Parkville HS Tree Event	Parkville	Lower Gunpowder, Back R, Bird River	15
10/27/10	Westchester ES BMP Presentation	Catonsville area	Patapsco	30
10/27/10	Reisterstown ES: Recycling #1	Reisterstown	Gwynns Falls, Liberty, Loch Raven	185
10/27/10	Reisterstown ES: Recycling #2	Reisterstown	Gwynns Falls, Liberty, Loch Raven	330
10/27/10	Parkville MS Tree Event	Parkville	Lower Gunpowder, Back R, Bird River	12
10/28/10	Patapsco HS Tree Event	Dundalk	Balto Harbor, Back R	24
10/30/10	Tree Workshop with Audubon	Highlandtown	Regional	40
11/01/10	Stoneleigh ES Tree Walk/Talk #1	Towson	Back River	31
11/01/10	Stoneleigh ES Tree Walk/Talk #2	Towson	Back River	34
11/03/10	Essex Civic Council	Essex	Middle River	12
11/03/10	Western Tech HS BMP Presentation	Catonsville	Patapsco	40
11/04/10	CB Small Watershed Awards	Baltimore City	Baltimore Harbor Regional	50
11/04/10	Jacksonville ES Teachers	Jacksonville	Little Gunpowder, Loch Raven	15
11/04/10	Stream Restoration Field Trip	Chartley	Gwynns Falls	5
11/09/10	Catonsville HS Tree Event	Catonsville	Patapsco	36
11/10/10	Randallstown HS Tree Event	Randallstown	Gwynns Falls, Patapsco	31
11/11/10	Loch Raven HS and Halstead Academy Tree Event	East Towson	Lower Gunpowder, Back R	50
11/15/10	BCPS Stream Study: Catonsville HS	Oregon Ridge	Patapsco	23
11/16/10	BCPS Professional Development at Back River Treatment Plant Tour	Essex	Countywide	20
11/21/10	Cub Scout Pack #891: Recycling	Catonsville	Patapsco	90
11/23/10	Envirothon Workshop #1 Eastern Vo-Tech HS Kenwood HS New Town HS Owings Mills HS Perry Hall HS Sparrows Point HS Chesapeake HS Franklin HS	Days Cove	Middle R, Back R Middle R, Back R Patapsco, Gwynns Falls Gwynns Falls Bird R, Low Gunpowder Back R, Balto Harbor Middle R, Back R Gwynns falls, Liberty Loch Raven, Prettyboy	70

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11/24/10	Envirothon Workshop #2 Western HS Hereford HS  Dulaney HS  Towson HS  Catonsville HS Randallstown HS	Days Cove	Countywide, Patapsco Loch Raven, Liberty Deer Creek Loch Raven Little Gunpowder Back R, Jones Falls Loch Raven Patapsco Gwynns Falls	66
11/30/10	Pot Spring ES Tree Walk w/ Faculty	Timonium	Loch Raven, Countywide	3
12/03/10	St Mark's Catholic School Faculty	Catonsville	Patapsco	5
12/03/10	Chadwick ES Faculty (GS Re-ap)	Woodlawn	Gwynns Falls	3
12/10/10	Department of Aging – Liberty: Recycling	Randallstown	Liberty, Gwynns Falls	2
12/10/10	Winfield ES: Recycling #1	Millford Mill	Patapsco, Gwynns Falls	243
12/10/10	Winfield ES: Recycling #2	Millford Mill	Patapsco, Gwynns Falls	243
12/16/10	Environmental Art Contest Deadline “Using Art to Persuade” McDonogh MS Oldfields School Kingsville ES  Imagine Discovery ES Norwood ES Arbutus MS Perry Hall HS Pine Grove MS Dundalk ES Deep Creek ES Reisterstown ES  Parkville MS Cromwell Valley ES  Sussex ES Hereford MS  Western Tech HS Baltimore Highlands ES Westchester ES Franklin ES  Eastwood Magnet ES Our Lady of Grace School  Jacksonville ES  Sudbrook Magnet MS Stoneleigh ES	Towson	Countywide  Gwynns Falls Loch Raven Lower Gunpowder, Little Gunpowder Gwynns Falls Back R, Balto Harbor Patapsco Bird River Lower Gunpowder Baltimore Harbor Middle R, Back River Gwynns Falls, Liberty Loch Raven Bird R, Back R Lower Gunpowder, Loch Raven Back River Little Gunpowder, Loch Raven, Prettyboy Deer Creek Patapsco, Countywide Patapsco Patapsco Gwynns Falls, Liberty Loch Raven Back R, Balto Harbor Loch Raven, Liberty Deer Creek Little Gunpowder Loch Raven Gwynns Falls Back River	>800

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12/21/10	Baltimore County Agriculture Advisory Board for BCPS	Hereford	Countywide Loch Raven	30
12/23/10	Millbrook ES: Recycling #1	Pikesville area	Jones Falls, Gwynns F	150
12/23/10	Millbrook ES: Recycling #2	Pikesville area	Jones Falls, Gwynns F	150