

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

Baltimore County DEPRM has designated *environmental education (EE), outreach, action, and stewardship through community partnerships*, 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 citizen watershed organizations offer opportunities for effective community partnerships involving a broad constituency of individual 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 new [Green@Work](#) initiative for employees provide the coordination and focus for efforts to reach, inform, engage, 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.

Baltimore County DEPRM stressed adoption of best practices and cost-effective *prevention* In addition to *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 2009, 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. DEPRM maintained its statewide leadership in this initiative and expanded its effort to target schools in the 2009-2010 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 52 recognized *Maryland Green Schools* and *Green Centers* provided valuable models for community stewardship. Underscoring its commitment to promote meaningful environmental education, DEPRM maintained a Board of Trustees position in The Maryland Association for Environmental and Outdoor Education (MAEOE) and county staff provided leadership at the state level by serving as MD Green School program chair of the *MD Green School* committee.

Long term partnerships with local environmental organizations and agencies brought expertise, technical support, 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 DEPRM, 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 14th, 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. Offices of Sustainability in both Baltimore County and Baltimore City are identifying and assessing environmental education needs and developing initiatives, such as Baltimore County's new [Green@Work](#) program for county employees.

In 2009, coordination of DEPRM's environmental education activities was accomplished by one part-time staff person working approximately 33 hours/week. Other DEPRM employees, staff from other county agencies, student interns, citizen volunteers, and program partners provided additional material and staffing support.

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, has been provided in previous NPDES Annual Reports 1995-2009. This section reports program components developed or expanded in 2009 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, DEPRM 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 and committed.

- 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

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 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 in school settings and at conferences and workshops.

- Promotion and support for stewardship projects:

Large acreage schoolyards, traditionally landscaped in large expanses of turf, provide opportunities to adopt conservation landscaping management techniques and plant trees. Recognized *MD Green Schools* and those working towards the honor seek stewardship

projects every year. DEPRM assisted schools and identified programs and potential tree planting and reforestation sites.

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

DEPRM 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.

- Leadership in MAEOE: DEPRM provided state level leadership for the *MD Green School Program* in a year that saw the largest number of new schools ever recognized. MAEOE, with its broad-based membership, is the preeminent environmental education organization in the state. It provides a forum for the exchange of information, sponsors the *MD Green School Awards Program*, the *Schoolyard Habitat Partnership*, and maintains an informational website. MAEOE hosted an annual 3-day environmental education conference that was the largest state-level environmental education conference in the nation. DEPRM staff serves on the Board of Trustees and as the statewide MD Green School Program Chair. Baltimore County hosts MD Green School sessions and workshops annually at the MAEOE conference.

- 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 2010 report includes education and outreach activities undertaken by multiple county agencies and offices including DEPRM, the Department of Public Works Recycling Division, the Baltimore County Public School System's Office of Science, and through DEPRM's affiliation with MAEOE. Additionally, beginning with the 2011 report, DEPRM plans to incorporate initiatives accomplished by the Baltimore County Department of Recreation and Parks and other agencies.

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 2009, DEPRM sponsored a wide 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 DEPRM's website or in hard copy, by request. Presentations highlighted water quality, stormwater topics, best practices, conservation landscaping and stewardship opportunities. DEPRM 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 DEPRM provide numbers on their websites for citizens to report sources of pollution.

- [Green@Work:](#)

In 2009, Baltimore County initiated a new 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. 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 model best practices in the community, new and expanded initiatives included promotion of citizen actions such as the planting of large native trees on private property, increased site visits for school campus assessment, 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 preparations to roll out a new expanded “Single Stream” recycling program involved a major public awareness and outreach campaign 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 Community Reforestation Program, citizens have access to tree programs to fit the requirements of any project on public or private property. In 2009, 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 2009, environmental information was provided in the DEPRM lobby, on the county’s website, on county cable channel, in print form when requested, and through citizen presentations. 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. Program information was updated.

- Managing Household Hazardous Waste:

In 2009, the County began accepting medicines at county drop-off sites and promoted the opportunity to drop-off fluorescent bulbs.

- Community and agency partnerships were expanded:

In 2009, new and expanded relationships with watershed groups, 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 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, 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.

- Urban Nutrient Management Workgroup:

The County is working with this group to develop standardized protocols for measurement and reporting the results of citizen stewardship actions.

- Communication Media and County Webpage:

The County made use of commercial media, DEPRM'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 DEPRM and the Department of Public works Recycling Division. Beginning with the 2011 report, DEPRM 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 by means of 10,125 environmental presentations, outreach events and a variety of media outlets. DEPRM's programs serve as models for other communities and jurisdictions. The selection of events in 2009 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 2009.

In 2009, approximately 1,880 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. DEPRM 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

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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 2009 as described in Table 4-1.

Table 4-1: NPDES Public Environmental Education Topics Addressed through County Initiatives, by Basin, 2009*

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	✓	✓	- “Wells and Water Quality in Baltimore County” - “From My Backyard to Our Bay” - Raingarden/rainbarrel information - MD Green School Program - Baltimore Downspout Disconnect Program - Watershed associations’ programs
SWM Facility Maintenance	✓	✓	- Adopt-a-Pond Program
Erosion and Sediment Control	✓	✓	- Green Card Training (NPDES Sec 2) - MD Green School Program -MDA Publication: Erosion Control - Watershed associations’ programs
Household Hazardous Waste	✓	✓	- Waste Management Program - HHW Collection Events
Lawn Care Landscape Mgt (conservation landscaping)	✓	✓	- Lawn Care Publications - BayScaping Publications - Native Plant guidebooks - Grasscycling publications - MD Green School Program - MDA Publications: Fertilizer, IPM, Ice removal - UMD Cooperative Ext Publications - MDA publications: Lawn Service guidelines - Mower trade-in program - Watershed associations’ programs - Baltimore Downspout Disconnect Program
Litter control, Recycling, Composting	✓	✓	- Bureau of Solid Waste Programs - MD Green School Program - Baltimore Watershed Agreement - Recycling publications - Watershed associations’ programs
Car Care, Mass Transit, Alternative Transportation	✓	✓	- Ozone Action Days - Red Alert Policy - MD Green School Program - Employee Carpooling - Green@Work
Pet Waste Management	✓	✓	- Recreation and Parks: Pet Waste Bag Program - University of MD Extension Publication - Watershed associations’ programs

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NPDES Regulated Community Permits	✓	✓	DEPRM Watershed Management and Monitoring Section
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*Table 4-1 describes the geographic coverage of NPDES permit topics as a result of outreach and education activities undertaken throughout the county in 2009.

The number of events accomplished in 2009 for specific watershed audiences is shown in Table 4-2. A majority of the audiences (78%) were located in the county's 7 urban watersheds: Back River, Bird River, Baltimore Harbor, Patapsco, Loch Raven, Gwynns Falls, and Jones Falls. In 2009, 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, 2009

Watershed	# Events	Watershed	# Events	Watershed	# Events
Back River	188	Jones Falls	96	Patapsco	67
Baltimore Harbor	60	Liberty	10	Prettyboy	11
Bird River	128	Little Gunpowder	15	Countywide	1,063
Deer Creek	15	Loch Raven	109	Regional	74
Gunpowder River	3	Lower Gunpowder	120		
Gwynns Falls	58	Middle River	17		

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*, 2009

Type of Group/Audience	# Events for each audience
Citizens, Community Groups or Associations	425
Public Schools	189
Private Schools	60
Special Needs Education	11
Environmental Career Education	12
College/University	7
Government Agency, Facility, Group	80
DEPRM Lobby, Duty Room	8,700
Public Library	19
Festival/Show	14
Conference, Workshop, Training sessions	44
Business	55
Commercial TV/Radio	18
County Comcast Cable Channel	72
Countywide	1,063
Regional	74

*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 DEPRM office duty room staff is estimated to be 25 people/day for 50 weeks. Some presentations and events addressed audiences that included several of the groups listed above and thus were entered in more than one category. Contact with individual citizens (as opposed to groups) by phone or site visit often provides valuable and significant opportunity for environmental education and outreach; these conversations are not currently tracked.

4.3.1 Schools: Activities and Accomplishments:

In 2009, 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 MAEOE with coordination and promotion of the statewide *MD Green School Program*, annual application review and awards ceremony. School presentations accomplished in 2009 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. DEPRM has had notable success in its outreach to schools. Baltimore County continues to lead the State in developing and recognizing model schools. Statewide, and also in Baltimore County, 2009 resulted in the largest number of schools being recognized in any one year.



Table 4-4 provides a summary of MD Green Schools honored in all Maryland jurisdictions 1999-2009. Currently, 18% of *MD Green Schools* are located in Baltimore County. Through its leadership in MAEOE, Baltimore County serves 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 1999-2009

Maryland Jurisdiction	# Green Schools Awarded
Garrett	8
Allegany	2
Washington	3
Frederick	8
Baltimore City	15
Carroll	20
Howard	20
Harford	23
Anne Arundel	25
Baltimore County	48
Montgomery	24
Prince Georges	14
St. Mary’s	7
Charles	8
Calvert	23
Queen Anne’s	5
Worcester	4
Kent	2
Dorchester	1
Cecil	4
Wicomico	2
Total:	266

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Note: There are 4 *MD Green Centers* serving schools and the community in Baltimore County and 19 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, and other water quality benefits.

In 2009, Baltimore County's *Getting Greener Schools* program efforts resulted in 10 new schools recognized (8 public and 2 private). Additionally, 2 schools re-certified to maintain their *MD Green School* status. As of April 2009, Baltimore County had an 89% success rate for re-application by eligible schools. Seventeen of the nineteen schools eligible for re-application by 2009 have 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*. DEPRM, in cooperation with the BCPS Office of Science 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 1999-2009 is provided in Exhibit 4-2.

Table 4-5 reports the 2009 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 Projects Implemented
in County Watershed Basins by the New and Recertifying MD Green Schools (public and private)
in Baltimore County, 2009

Environmental Learning Topic/Project	Upper Western Shore Basin: Westowne ES Pinewood ES Seventh District ES Pot Spring ES Timonium ES Hereford HS Cromwell Valley ES	Patapsco Back Basin: Eastwood ES Stoneleigh ES Sussex ES Windsor Mill MS Glyndon ES Krieger Schechter Day The Park School
Agricultural Projects	✓	
Bio-retention Planting	✓ # projects reported: 3	✓ # projects reported: 4 - captured roof and sidewalk runoff - provided model for communit - addressed parking lot runoff to Jones Falls
Butterfly Garden	✓	✓

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Environmental Learning Topic/Project	Upper Western Shore Basin: Westowne ES Pinewood ES Seventh District ES Pot Spring ES Timonium ES Hereford HS Cromwell Valley ES	Patapsco Back Basin: Eastwood ES Stoneleigh ES Sussex ES Windsor Mill MS Glyndon ES Krieger Schechter Day The Park School
	# gardens reported: 7	
Environmental Issue Investigation	✓	✓
Habitat Restoration	✓ - 5 bluebird projects 40+ boxes - planted a pollination garden	✓ - enhanced and protected Duck Creek wetlands - planted schoolyard meadow
Invasive Plant Control		✓
IPM	✓	✓
Native Plants	✓ # planted: over 132 - over 600 sq ft	✓ - over 900 sq ft
Learning Structures/signs	✓ - signs for water conservation, no-mow, no-idle - sink signs “the Bay Starts Here”	✓ - used outdoor moveable classrooms - switch plate covers - no-mow
Litter Control	✓	✓ - “Project Clean Stream” - Bear Creek
Maintenance Plan for Schoolyard Landscape	✓ - work with facilities staff	✓ - weed control, tree trimming, mulching
Mentoring	✓ - student to student, - school to school - teacher to teacher	✓ - middle school to elementary school - private school to public school - high school to elementary school
No-Mow Zones	✓	✓ - riparian
Protect Existing Trees	✓ - in schoolyard	✓ - in schoolyard
Riparian Planting or Protection	✓ - Minebank Run	✓ - Gwynns Falls, Moore’s Branch - 15 yr commitment to buffer enhancement: Duck Creek
Site Analysis	✓	✓

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Environmental Learning Topic/Project	Upper Western Shore Basin: Westowne ES Pinewood ES Seventh District ES Pot Spring ES Timonium ES Hereford HS Cromwell Valley ES	Patapsco Back Basin: Eastwood ES Stoneleigh ES Sussex ES Windsor Mill MS Glyndon ES Krieger Schechter Day The Park School
Solid Waste Reduction/Recycling	✓ -electronic newsletters - no waste lunches - submitted MD Green School application electronically	✓ - refurbished 150 computers in 4 yrs - made cloth napkins - instituted electronic newsletters - submitted MD Green School application electronically -established “free” stores on campus for reusable items - used fabric from old jackets for art canvasses -held a boot swap and textbook exchange
Stormwater Management/ Erosion control	✓	✓ - addressed drainage/erosion problem - addressed parking lot surface runoff to Jones Falls tributary
Storm Drain Painting/Re-painting		✓ - on school property
Stream Restoration Supplemental Planting Project	✓ Minebank Run	Buffer planting
Stream Studies	✓ Gunpowder River, Minebank Run	
Submerged Aquatic Vegetation	✓ - Chesapeake Bay - used “aqua-ecosystem” to raise bass and SAV	✓ - campus pond
School Projects Affect Countywide BCPS School System or Private School Management Protocols	✓ - students advocated for elimination of school bus idling systemwide - non-toxic chemicals for cleaning - re-usable cafeteria trays - need cafeteria recycling bins - developed student action plans to reduce waste	✓ - reduced temperature settings in winter - raised temperature settings in summer - installed solar heaters
School Projects Repeated at Home	✓ - 300 families saved 50,000 sheets of	✓

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Environmental Learning Topic/Project	Upper Western Shore Basin: Westowne ES Pinewood ES Seventh District ES Pot Spring ES Timonium ES Hereford HS Cromwell Valley ES	Patapsco Back Basin: Eastwood ES Stoneleigh ES Sussex ES Windsor Mill MS Glyndon ES Krieger Schechter Day The Park School
	paper/yr - conducted neighborhood outreach - seedlings planted at home	
Transportation Issues	✓ - distributed no-idle hangtags for carpool and school busses - re-organized drop-off zones - set up no-idle for delivery trucks	✓ - established no-idle zones - “Walking Wednesdays”
Tree and/or Shrub Planting	✓ # planted: over 192	✓ # planted: over 330
Turf Reduction	✓	✓
Water Quality Monitoring	✓ - water fountains, - Minebank Run, Gunpowder River	
Water Conservation/Water Pollution Prevention	✓	✓

*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 2009. 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 2009 MD Green Schools removed the following from the waste stream:

- | | | |
|----------------------------------|---------------------------|-----------------------------|
| Paper and cardboard | Cellphones | CDs and DVDs |
| Plastic and glass bottles | Plastic and paper bags | Re-usable clothes and shoes |
| Drink pouches | Aluminum | Re-usable art supplies |
| Electronics, computer components | Plastic laminating film | Bottle caps |
| Glue sticks | Ink cartridges | Batteries |
| Packaging materials | Paper napkins, drink cups | Plastic food wrap |

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 9,000 new teachers and students directly involved in 2009. Table 4-6 reports the number of students and adult staff involved in each watershed basin in 2009. 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, 2009

Schools	Upper Western Shore Basin:	Patapsco Back Basin:	Total
	Westowne ES Pinewood ES Seventh District ES Pot Spring ES Timonium ES Hereford HS	Eastwood ES Stoneleigh ES Sussex ES Windsor Mill MS Glyndon ES Krieger Schechter Day Park School	
	# Students/Staff	# Students/Staff	
New Baltimore County <i>MD Green Schools,</i> 2009	2,525 students 330 staff	3,160 students 500 staff	5,685 830
Re-certifying <i>MD Green Schools,</i> 2009	1,840 students 150 staff	470 students 60 staff	2,310 210
Total Participating	4,845	4,190	9,035

A new DEPRM initiative to engage additional audiences and provide opportunities for schools sustaining their efforts was announced in 2009. It offered an environmental art contest for all public and private school students PreK-12 in Baltimore County. This program, highlighting art-environment connections, was titled “*Environmental Best Practices: Using Art to Persuade*”. It 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. Fifteen schools, public and private, participated by submitting 470 entries in Fall 2009. Winners will be announced in Spring 2010. Five of the participating schools are currently recognized as MD Green Schools. They plan to use their program participation as part of their documented activities when their school is due for re-certification. The ten other schools are working towards their first MD Green School application. This is an example of how DEPRM works to promote the use of the environment as a context for learning across disciplines and sustain program participation.

A selection of the artworks was framed and will be 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*. DEPRM, in cooperation with BCPS will assist the 14 schools and centers eligible for re-application in 2010 and the 7 eligible in 2011. By 2010, 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 or Baltimore County DEPRM’s webpage at www.baltimorecountymd.gov/go/deprm. Baltimore County’s educational initiatives benefit from statewide funding support for the MD Green School Awards Program provided by MAEOE, MD DNR, Constellation Energy Group, Recreation Equipment, Inc. (REI), and NOAA-BWET. Grants to local schools are provided by the Chesapeake Bay Trust.

Support for schools and centers: DEPRM 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 fact sheets and brochures were made available upon request.

Baltimore County Public Schools/DEPRM MD Green School Committee: BCPS, working with DEPRM staff has adopted system-wide, the policy of working to facilitate *MD Green School* operations at all public schools PreK-12. To date, 36 of the 165 public schools in the county have been recognized. This represents 22% of Baltimore County public schools. Through the efforts of DEPRM and the BCPS Office of Science, over 50 additional schools have begun the process. This is largely due to 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. 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, 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 was honored in 2009. Ascension

Catholic School, sustaining its MD Green School operations since 1999, will become eligible for recognition as Maryland's first "Model Green School" in 2010. DEPRM works with staff at this school to support these efforts.

- 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. In fall 2009, DEPRM worked with the horticulture teacher at the Forbush School (Sheppard Pratt) to present the *MD Green School* model at the biennial conference of the Maryland Association of Nonpublic Special Education Facilities (MANSEF).

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) in Baltimore City, 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 seven 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 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 and those working to support them leads to increased interest in environmental education. Invitations for DEPRM staff to present at seminars and training workshops hosted or sponsored by other environmental organizations have increased both locally and regionally. In 2009, DEPRM initiated green school-type activities at professional workshops and faculty trainings for many public and private schools and organizations around the county. Overall, 44 professional development presentations were conducted.

In recent years (2006-8) the rate of new schools certifying has held steady at a high rate of 6-7 schools/year. With increased program awareness and supporting professional development opportunities, the application rate jumped to 12 in 2009. With the MD Green School

application process taking 2 years, it is likely that approximately 20-25 local schools and centers will be ready to apply or re-apply in April 2010 and 2011.

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 2009, the new initiative “*MD Green School Best Practices: Using Art to Persuade*” was introduced to all public school art teachers. The art contest, highlighting art-environment curricular connections, ran through fall 2009. Fifteen art teachers from public and private schools participated. With the popularity and success of this initiative, BCPS has requested that DEPRM repeat the program and present it to its teachers during BCPS in-service training in late August, 2010.

- 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 and other SWM, sediment control and other environmental benefits. Since 1999, the 48 Baltimore County *MD Green Schools* and 4 *MD Green Centers* serving Baltimore County have accomplished over 800 projects on school properties or in local communities. Refer to Table 4-4 for examples of the activities accomplished by the schools awarded in 2009.

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 450 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 MAEOE, CBF, and the Irvine Nature Center provided valuable how-to technical support for these activities. In 2009, a series of summer and fall workshops included *MD Green School* program models and were specially targeted to Baltimore County teachers. They were well attended by both public and private school teachers. One event involved “train-the-trainer” schoolyard habitat workshops.

In 2009, tree-related topics were highlighted to county and regional audiences (school and community) on over 980 occasions. The services provided included: 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 52 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. DEPRM 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 2009. The BCPS Office of Science in cooperation with the Baltimore County Forestry Board and the Chesapeake Bay Trust, assisted over 1,300 students from 30 public high schools in the planting of over 670 native trees. 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. Future reports will attempt to quantify the stormwater benefit from school planting projects.

Table 4-7: Tree Plantings on Baltimore County School Property, Fall 2009

Basin	# Schools	# Students	# Trees
Patapsco Back (Patapsco, Gwynns Falls, Jones Falls, Back River Baltimore Harbor)	24	676	480
Upper Western Shore (Loch Raven, Bird River, Lower Gunpowder, Middle River)	6	339	192
Total	30	1,310	672

School sites are being assessed for potential future reforestation projects planned and implemented by Baltimore County DEPRM. To date, 6 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. DEPRM 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 DEPRM 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 2009, several paid and unpaid internships were available for local high school and college students, and adults. The internship opportunities at DEPRM 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 2009, DEPRM staff, serving on the Board of Trustees and as statewide MD Green School Program Chair, served in a leadership capacity to help MAEOE accomplish its mission of providing professional development for classroom teachers and non-traditional outdoor

educators. In 2009, 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 19th, 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: DEPRM, BCPS, Towson University, the Forbush School, Irvine Nature Center.

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

Beginning with the 2009 report, school presentations accomplished by the Baltimore County Department of Public Works Recycling Division are included. In addition, fall tree planting events at public high schools led by the BCPS Office of Science are being tracked by location, date, and number of trees planted. In 2010, school programs conducted by MAEOE's MD Green Centers and the watershed organizations in the county will be included.

4.3.2 Community Outreach: Activities and Accomplishments

- Green@Work:

The Baltimore County Office of Sustainability was established in 2008 to develop a Sustainability Network comprised of agency, community, and business representatives. This network will make recommendations to the County Executive leading to a carbon emissions reduction goal of 10% by 2012 for government operations and the community at large. With this new program, rolled out 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://bcnet.co.ba.md.us/agencies/sustainability/greenatworkchallenge/index.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. Through programs such as Forest Sustainability, Land Preservation, Single Stream Recycling, Smart Growth and Priority Places, Trail Development, MD Green School program, Urban Greening and 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:

DEPRM continued its literature distributions at educational events, festivals, the County's public libraries, schools, Department of Permits and Development Management, and DEPRM's lobby. *BayScapes* brochures were distributed by DEPRM's 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. Towson Gardens Day in April was 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. Watershed organizations, funded by the county, highlighted the adoption of functional landscaping techniques by homeowners.

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

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

- Managing Household Hazardous Waste:

In 2009, 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, dramatically increased in 2009.

Household Hazardous Waste Collection Events were held in spring and fall 2009.

Approximately 2,300 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 2009, 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, the Baltimore Jewish Environmental Network (BJENS), community organization coalitions, the Baltimore County Public School System, non-profit environmental organizations, the Archdiocese of Baltimore, Comcast Cable, and other County and State agencies and offices.

- Urban Nutrient Management Workgroup:

As part of DEPRM’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.

Opportunities for continued dialogue with representatives of the lawn care industry provided through participation on the Urban Nutrient Management Workgroup have 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*, 48 local nurseries 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 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 2009 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, 2009

Baltimore County Public or Private School	Examples of Participating Businesses and Community Organizations
Eastwood ES	MD DNR, DEPRM, MD Port Admin., Marshy Point, Snyder Foundation, Home Depot, Master Gardeners, UMD Coop Ext., Parent's Gardening Committee, Lowe's
Pinewood ES	Balto Co Forestry Board, Home Depot, Herring Run Watershed Assoc, Primary Talent Grant
Cromwell Valley ES	Girl Scouts of Central MD, EPA Tools for Schools
The Park School	National Aquarium, DEPRM, CBF, Center for Watershed Protection, Jones Fall Watershed Assoc, City of Baltimore, Marshy Point, BRESCO, Oregon Ridge, Master Gardeners, BP Solar, Irvine Nature Center
Stoneleigh ES	Herring Run Watershed Assoc., A local landscape architect, DEPRM, MAEOE, Parents for Climate Action, Biohabitats,
Sussex ES	MD DNR, Balto Co Forestry Board, Chesapeake Bay Trust, American Native Plants, Microsoft Refurbishers Program, Carver Center, Balto Co DPW, Johns Hopkins, Terracycle, Home Depot
Seventh District ES	Kingsdene Nursery, Sparks ES, DEPRM, Towson University, Chesapeake Bay Trust, Marshy Point, Harford Glen, Boy Scouts of America
Hereford HS	Gunpowder Valley Conservancy, Gunpowder State Park
Krieger Schechter Day School	Synagogue Administration, School Alumni, Home Depot, Abitibi, Betten Landscape Design, Irvine Nature Center, Jewish National Tree Fund, AIMS, MAEOE, National Aquarium, KAYAM Organic Farm
Timonium ES	Signature Horticulture Landscape Design, Bakersfield Lawn and Garden, Cigarette

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	Restitution Fund, Target, Giant Food, MD Dept of the Environment, Chambers of Commerce, UMBC
Windsor Mill MS	North Bay, UMBC, Natural Way Design, Lowe's, Advanced Auto Parts, St Paul's School for Girls, DEPRM, Abitibi,

- 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 2009. Comcast Cable reports 240,000 local County subscribers. The County's E-News Stream, Baltimore County's BCPS Principal's Bulletin, and MAEOE's newsletter offered additional opportunities to reach other audiences. Nine issues of DEPRM's E-News Stream, reached approximately 900 county citizens and organizations in 2009. 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/go/deprm.

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

In 2009, shifts in program emphases, demand, audience availability, method of delivery, and reporting program components have resulted in the changes noted in Table 4-9 below.

Table 4-9: Presentations, Participants and/or Audience, and Materials, 1994-2009

Year	# Presentations, Distributions, Events and other Media Outreach	# Estimated Audience (the same audience member may receive different messages)	# 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*

* With this report and 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). Often the same audience member receives different messages. Literature distribution to schools by DPW is included from 2008 forward. The decline in literature reflects the fact that most handouts and informational literature are now available online. Citizens and organizations are routinely invited to obtain the materials by accessing the county's website. A continuation of this trend in reduction of printed literature is expected.

4.4 Other Environmental Education and Outreach Initiatives

Currently, all sections in DEPRM are involved in public outreach at some level. In addition to the activities described above, DEPRM staff takes advantage of potential opportunities for informal environmental education through daily contact and interaction with citizens to share environmental information and make recommendations. In addition, over 100 telephone calls and 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 DEPRM 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 is intended to develop citizen stewardship through participation of citizen volunteers in the program who actively assume the role of caring for segments of the stream network by observing changes in the system, by providing stream clean-ups, and participating in planting activities. The Stream Watch Program also includes identification of potential restoration projects for possible inclusion in the Waterway Capital Improvement Program and provides a valuable addition to our Illicit Connection Program through reports by Stream Watch participants.

The Stream Watch Program is being implemented throughout the County with the *Watershed Association Restoration Planning and Implementation Grant* program (Section 4.2.2, below). One of the provisions of the grant is to administer the Stream Watch Program in the organizations activities. The County provides support to the watershed associations for implementation of the Stream Watch Program. This includes 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 the grant is to provide funding for staff time to participate in County restoration planning, support for the Stream Watch

program, identification of restoration projects, implementation of restoration projects, educational activities, and the ability to leverage additional funding. Annual funding is limited up to \$30,000 with a minimum of 1000 hours of staff time to be expended on projects. 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 renewed their commitment to work together to protect and restore shared watersheds. The *Baltimore Watershed Agreement* was signed October 2002 and re-affirmed in 2006. The new agreement calls for workgroups in five topic areas: trash, public health, stormwater, greening, and redevelopment. Baltimore County and Baltimore City completed the development of goals for each of the five topics in 2007. In 2009, a Phase 1 Action Plan was developed and accepted by the Committee of Principals on March 13, 2009. This Action Plan can be reviewed on line at <http://www.baltimorecountymd.gov/Agencies/environment/watershedagreement/index.html>, or on the accompanying CD.

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. DEPRM aggressively promotes the program in Baltimore County through twice-yearly, traditional and electronic mailings to over 800 individual citizens, schools, greening committees, and other interested groups. Each spring and fall, DEPRM 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 DEPRM and the DNR staff is maintained to ensure a smooth delivery process.

In 2009, DEPRM provided technical assistance and received requests for free delivery of 13 orders, totaling 256 trees. An additional 519 trees were sold to Baltimore County organizations, for which free delivery by DEPRM was not requested. 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 2009, three schools in Baltimore County benefited from participation in the *MD Green School* program by receiving 70 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 DEPRM 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 DEPRM, 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/ 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 2009 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;
- Working with the Baltimore County Department of Education, the Natural Resources conservation Service (NRCS), and DEPRM in the Annual Envirothon Science Competition. Annual topics include forestry, soils, wildlife, aquatic and a fifth rotating topic on current pertinent issues, some of which have included wetlands, agricultural lands preservation, cultural landscapes, exotic, invasive species, natural resource management in urban environments, and in 2008, Recreational Impacts Upon Natural Resources. Since 2000, DEPRM staff has served as teaching experts in training sessions for Envirothon participating students in the aquatics and fifth rotating issue topics. In 2009, DEPRM provided teaching materials for the Envirothon Program;
- Serving on the steering committee for DEPRM's forest sustainability initiative using the Montreal Process criteria and ecological indicators; producing a Forest Sustainability Strategy for Baltimore County, and conducting a series of informational conferences on forest conservation and management topics for the public.

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. With the GHC coupon, homeowners can obtain trees for planting on their property from participating local nurseries and at a reasonable cost.

Program coordination is provided by Baltimore County DEPRM. 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 great 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.

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 2009, the *Campaign* also leveraged about \$17 of total private sector investment per dollar of County cost share funds. Coordination of the program and printing costs were funded in 2009 through a Chesapeake Bay Small Watershed Grant administered by the National Fish and Wildlife Foundation.

4.5 Summary

Baltimore County implements its public awareness and education programs to 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 school administration and staff, facility managers, students, homeowners, community groups, 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 Office of Sustainability recommendations and new [Green@Work](#) initiatives are part of the county's growing efforts to model best practices through changes to county operating protocols and also engage its employees in the workplace. 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, DEPRM 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 distributed at many venues. Volunteer citizen participation in pollution prevention and 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 new communication technologies, such as the worldwide web and cable television, 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.

DEPRM does not have any method to quantify the pollution reduction results from this program. Questions remain about the type of audience that receives specific messages, if the media outlet was successful in reaching the audience, and how many in the audience act on the message. Answering these questions and then converting the results into a nutrient reduction amount 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

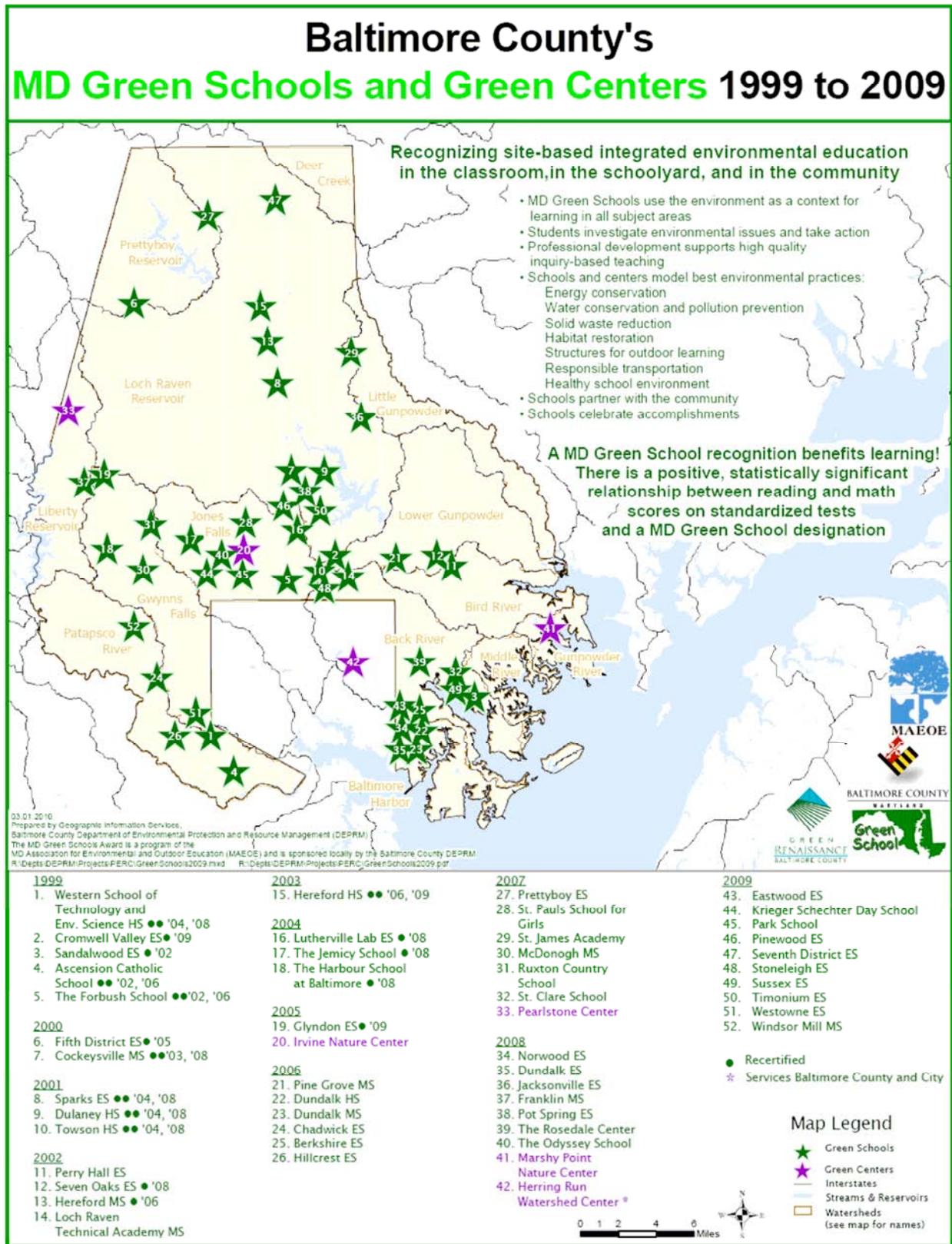
**Quick Guide to
Baltimore County Resources for Business**
www.baltimorecountymd.gov

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 410-887-3900
Plumbing Board	410-887-3620	Food, Gaming, Gathering, Public Exhibition License 410-887-3616
Business & Amusement License	410-887-3373	
Code Inspection	410-887-3953	

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	
Additional Business Resources	
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
Useful Business Web Sites	
Baltimore County Government	www.baltimorecountymd.gov
For detailed agency information, see "agencies" list	
Baltimore County Conference & Visitors Bureau	www.visitbacomd.com
Meeting, event and conference planner and visitor guide	
Maryland Business Licensing Information System	www.blis.state.md.us
State permits and licenses, online applications	
Maryland Department of Business & Economic Development	www.choosemaryland.org
State data and resources for business development	
 BALTIMORE COUNTY MARYLAND	
Baltimore County Department of Economic Development 400 Washington Avenue Towson, Maryland 21204-4665 Phone 410-887-8000 e-mail businesshelp@baltimorecountymd.gov	
Baltimore County Executive Jim Smith and the Baltimore County Council	
1-07	

Exhibit 4-2: Baltimore County's *Maryland Green Schools and Green Centers, 1999-2009*



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Appendix 4-1: Presentations, Distributions, and Events, by Watershed, 2009

DATE	ORGANIZATION	LOCATION	WATERSHED (Audience)	# PEOPLE
Jan-Nov	Lobby Display (6 topics) Ongoing throughout 2009	Towson	Countywide, Regional Jones Falls	2,450
Jan-Dec	DEPRM Duty Room	Towson	Countywide	6,250
Jan-Dec	Comcast video: "Our Land Our Legacy"	Countywide	Countywide, Regional	Est 130,000
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 BC Park and Rec Facilities: GHC	19 facilities	Countywide	1,600
Jan-Dec	Baltimore Co MD Green Schools and Green Centers: GHC	54 schools and centers	Countywide	1,300
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

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Jan-Dec	DEPRM Lobby: GHC	Towson	Countywide	1,200
Jan-Dec	DEPRM Website visits: GHC	Website	Countywide	6,775
Jan-Dec	DEPRM Website downloads: GHC (brochures, coupons, nurseries, tree lists)	Website	Countywide	4,403
Jan-Dec	Community Colleges of Balto Co: 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
01/14/09	Howard County Conservancy	Howard County	Regional	125
01/16/09	Project Learning Tree/GS planning	Statewide	Regional	6
01/28/09	Our Lady of Grace School	Parkton	Deer Creek, Loch Raven, Prettyboy	45
02/03/09	Oldfields School	Glencoe	Regional, Loch Raven	30
02/09/09	Pot Spring ES	Timonium	Loch Raven	30
02/09/09	Riderwood ES	Riderwood	Loch Raven	85
02/10/09	DEPRM E-News Stream Newsletter	Countywide	Countywide	900
02/16/09	DPW Recycling: 30-day Billboard Display (Daily Effective Circulation: 13,800 people over 18)	Cockeysville	Loch Raven	414,000
02/17/09	Loyola Blakefield	Towson	Jones Falls, Countywide	20
02/19/09	Project Learning Tree	Marshy Point	Countywide	20
02/26/09	Marshy Point Nature Center	Marshy Point	Loch Raven, Jones F, Back R, Bird R, Lower Gunpowder,	200
02/27/09	MDGS ½ day Workshop: 20 schools	Ocean City	Countywide, Regional Loch Raven, Lower Gunpowder	65
02/27/09	MAEOE MD GS Display	Ocean City	Countywide, Regional	550
02/28/09	MAEOE GS Intro Sessions (23 schools) Timonium ES	Ocean City	Countywide, Regional Loch Raven,	50

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	Cromwell Valley ES Fresh Start Farm at Bragg Eastwood ES Our Lady of Grace School Mars Estates ES Deep Creek ES		Loch Raven Lower Gunpowder Patapsco Back R, Balto Harbor Loch Raven, Deer Cr, Prettyboy Back R, Middle River Back R, Middle River	
02/28/09	MAEOE MD GS Display	Ocean City	Countywide, Regional	550
02/28/09	MAEOE GS Pre-review: (30 schools)	Ocean City	Countywide, Regional	100
03/02/09	Perry Hall HS Faculty	Perry Hall	Lwer Gunpwder, Bird R	100
03/02/09	DPW Recycling: 30-day Billboard Display (Daily Effective Circulation: 8,500 people over 18)	Halethorpe	Patapsco	255,000
03/02/09	DPW Recycling: 30-day Billboard Display (Daily Effective Circulation: 15,900 people over 18)	Parkville	Lower Gunpowder, Back River	477,000
03/06/09	Maryland Home and Garden GHC	Timonium	Countywide, Regional	1000
03/07/09	Maryland Home and Garden GHC	Timonium	Countywide, Regional	1000
03/08/09	Maryland Home and Garden GHC	Timonium	Countywide, Regional	1000
03/13/09	Maryland Home and Garden GHC	Timonium	Countywide, Regional	1000
03/14/09	Maryland Home and Garden GHC	Timonium	Countywide, Regional	1000
03/15/09	Maryland Home and Garden GHC	Timonium	Countywide, Regional	1000
03/18/09	Envirothon School teams: Sparrows Pt HS Chesapeake HS Eastern Vo-Tech HS Owings Mills HS New Town HS Hereford HS Franklin HS	Camp Pu'tuk	Balto Harbor, Back R Middle R, Back R Middle R, Back R Gwynns Falls Patapsco, Gwynns Falls Loch Raven, Deer Cr, Little Gunpowder Gwynns Falls Liberty, Loch Raven	70
03/19/09	Envirothon School teams: Landsdowne HS Western Tech HS Catonsville HS Perry Hall HS Dulaney HS Towson HS Carver HS	Camp Pu'tuk	Patapsco Patapsco, Countywide Patapsco Bird R, Low Gunpwder Loch Raven, Little Gunpwder Loch Raven, Jones Falls, Lower Gunpowder, Loch Raven, Jones Falls Countywide	70
03/20/09	Eastern Tech HS Careers Event	Essex	Middle River, Back R	25

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03/23/09	Diana Gutierrez: LEED & Sustainability	Baltimore	Countywide, Regional	1
03/24/09	Hereford MS	Hereford	Loch Raven, Prettyboy, Deer Creek, Little Gunpowder	30
03/26/09	Western Tech HS Careers Event	Catonsville	Patapsco, Gwynns Falls	25
03/29/09	MD Presbyterian Church: Water Quality event	Providence	Lower Gunpowder, Loch Raven	15
Apr-Nov	HHW Drop-off event	Eastern	Countywide	1000
April	Comcast production "Hello Baltimore County" GHC	Countywide airing	Countywide	3,000 est
April	CNN Newsmakers GHC	Regional airing	Countywide, Regional	3,000 est
April	DPW Recycling TV Commercial WBFF Fox 45 and affiliates, 2 weeks	Regional airing	Countywide, Regional	1,700,000 (households)
04/01/09	Assoc of Mid-Atlantic Aquatic Biologists (AMAAB)		Regional	200
04/02/09	DPW Recycling: 30-day Billboard Display (Daily Effective Circulation: 8,500 people over 18)	Halethorpe	Patapsco	255,000
04/02/09	DPW Recycling: 30-day Billboard Display (Daily Effective Circulation: 15,900 people over 18)	Parkville	Lower Gunpowder, Back River	477,000
04/04/09	Project Clean Stream GHC	Countywide	Countywide	1000
04/05/09	Household Hazardous Waste Day	Cockeysville	Loch Raven, Countywide	1200
04/08/09	Watershed Plans Mtg	Back River	Back River	160
04/10/09	DEPRM E-News Stream Newsletter	Countywide	Countywide	900
04/18/09	DPW Compost Bin Promotion and Sale	White Marsh	Lower Gunpowder, Back R, Middle R, Gunpowder R, Bird R Baltimore Harbor	1,245
04/18/09	Herring Run WS Assoc Plant Sale	Baltimore	Back River	50
04/19/09	DPW Compost Bin Promotion and Sale	Reisterstown	Loch Raven, Patapsco Gwynns Falls, Liberty, Jones Falls	839
04/19/09	Herring Run WS Assoc Plant Sale	Baltimore	Back River	50
04/19/09	Earth Day at MPC	Providence	Lower Gunpowder, Loch Raven	151
04/20/09	DPW Recycling: 30-day Billboard Display (Daily Effective Circulation: 28,700 people over 18)	White Marsh	Bird River	861,000
04/20/09	DPW Recycling: 30-day Billboard Display (Daily Effective Circulation: 11,700 people over 18)	Dundalk	Back River Baltimore Harbor	351,000
04/20/09	MD GS Application Review	Annapolis	Countywide, Regional	40
04/21/09	MD GS Application Review	Annapolis	Countywide, Regional	40
04/21/09	Storm Drain Marker Event: Grange ES	Dundalk	Baltimore Harbor	80

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04/22/09	Perry Hall HS event	Perry Hall	Bird, Low. Gunpowder	200
04/22/09	Seven Oaks ES event	Perry Hall	Lower Gunpowder	250
04/22/09	Sparks ES event	Sparks	Loch Raven	300
04/22/09	Eastwood ES event	Essex	Back R, Balto Harbor	225
04/22/09	2008-9 Envirothon Competition (14 schools, 19 teams) Landsdowne HS Eastern Vo-Tech HS (2) New Town HS Owings Mills HS Western HS (2) Hereford HS (2) Dulaney HS Towson HS Perry Hall HS Sparrows Point HS Chesapeake HS Franklin HS (2) Catonsville HS (2) Carver HS	Camp Pu'Tuk	Patapsco 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	150
04/23/09	Arbor Day Proclamation in Baltimore County	Towson	Jones Falls, Countywide Regional	1000
04/23/09	Take Your Child to Work Day	Towson	Jones Falls, Countywide	5
04/23/09	WYPR Taping for GHC	Towson	Countywide, Regional	5,000 est
04/25/09	Herring Run WS Assoc Plant Sale	Baltimore	Back R, Countywide	50
04/25/09	Dundalk Community College	Dundalk	Baltimore Harb, Back R	100
04/27/09	Carroll County Outdoor School	Carroll County	Regional	50
04/27/09	Eco-Fest	Druid Hill Park	Regional	1,000
04/28/09	Timonium ES Science Career Event	Timonium	Loch Raven	400
05/01/09	Master Gardeners Springdale	Timonium	Loch Raven	30
05/08/09	Cockeysville MS Eco-Event	Cockeysville	Loch Raven	1,000
05/09/09	DPW Recycling: 30-day Billboard Display (Daily Effective Circulation: 26,100 people over 18)	Halethorpe	Patapsco	783,000
05/10/09	DEPRM E-News Stream Newsletter	Countywide	Countywide	900
05/15/09	Seventh District ES event	North County	Loch Raven, Deer Creek	350
05/18/09	Perry Hall ES Faculty w/BCPS	Perry Hall	Bird River Lower Gunpowder	80
05/20/09	DPW Recycling: 30-day Billboard	Dundalk	Back River	351,000

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	Display (Daily Effective Circulation: 11,700 people over 18)		Baltimore Harbor	
05/20/09	DPW Recycling: 30-day Billboard Display (Daily Effective Circulation: 28,700 people over 18)	White Marsh	Bird River	861,000
05/26/09	GHC Regional Kick-off	Regional	Regional	40
05/28/09	Regional Special Education Event	Regional	Regional	30
05/29/09	MAEOE MD GS Ceremony #1: TOTAL: 91 schools, 2 MD Green Centers, 11 new, 2 re-ap local Balto County schools Westowne ES Cromwell Valley ES Krieger-Schechter Seventh District ES Sussex ES Park School Windsor Mill MS Eastwood ES Pinewood ES Stoneleigh ES Timonium ES Glyndon ES Hereford HS	Catonsville	Regional Patapsco Loch Raven, Back R Lower Gunpowder, Jones Falls, Countywide Loch Raven, Deer Cr Back River Jones Falls, Countywide Gwynns Falls Back R, Balto Harbor Loch Raven Back River Loch Raven Gwynns Falls Loch Raven, Deer Cr	450
June	DPW Recycling: Newprint Ads: <u>Sunpaper</u> : 3 days <u>Towson Times</u> : 2 days <u>Arbutus Times</u> : 2 days <u>Catonsville Times</u> : 2 days <u>Messenger</u> : 2 days <u>Dundalk Eagle</u> : 1 day <u>Avenue</u> : 1 day <u>Owings Mills Times</u> : 1 day <u>North County News</u> : 1 day <u>Northeast Reporter</u> : 1 day <u>Northeast Booster</u> : 1 day	Regional Towson area Arbutus Catonsville Central county Dundalk Dundalk Owings Mills North County Northeast area Northeast area	Regional, Countywide Jones Falls, Back R, Loch Raven, Lower Gunpowder Patapsco Patapsco, Gwynns Falls Jones Falls, Back R, Lower Gunpowder Balto Harbor, Back R Balto Harbor, Back R Gwynns Falls, Liberty Jones F, Loch Raven Loch Raven, Deer Creek, Liberty, Little Gunpowder Middle R, Bird R, Back R, Lower Gunpowder Middle R, Bird R,	1,638,000 80,000 8,800 16,000 9,200 18,500 65,000 34,000 18,000 16,800 21,500

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			Back R, Lower Gunpowder	
06/01/09	MAEOE MD GS Ceremony #2	Carroll County	Regional	450
06/02/09	MAEOE MD GS Ceremony #3	Calvert County	Regional	450
06/08/09	Springlake Community Assoc mtg	Timonium	Loch Raven	30
06/10/09	DEPRM E-News Stream Newsletter	Countywide	Countywide	900
06/10/09	Herring Run WS Assoc Plant Sale	Back River	Back R, Countywide	50
06/10/09	Stoneleigh ES	Towson	Back R, Jones Falls, Loch Raven, Lower Gunpowder	700
06/11/09	USGBC Inspiring Healthy and Sustainable Schools	Owings Mills	Regional, Countywide	35
06/11/09	BCPS Art Department	Towson	Countywide	4
06/19/09	Bragg Nature Center	Catonsville	Patapsco, Regional	5
06/22- 8/22/09	Camp Milldale/DEPRM Art Project	Reisterstown	Gwynns Falls, Liberty, Loch Raven, Jones falls	100
06/24/09	GHC Celebration: planting 5,000 trees	Dundalk	Back River, Balto Harb	30
06/29/09	Sparks ES MD GS Faculty Support	Sparks	Loch Raven	30
07/08/09	WYPR Dan Rodricks Radio/Interview	Baltimore City	Countywide, Regional	1,500 est
07/08/09	SWAP mtg	Back River	Back River	160
07/10/09	DEPRM E-News Stream Newsletter	Countywide	Countywide	900
07/14/09	Verizon business event	Cockysville	Loch Raven	100
07/29/09	DEPRM Ag Center Groundbreaking	Hunt Valley	Loch Raven, Countywide, Regional	200
08/10/09	DEPRM E-News Stream Newsletter	Countywide	Countywide	900
8/10/09	MD Green Schools Course (MAEOE/CBF) Catonsville MS, Notre Dame Prep	Annapolis and field sites	Loch Raven, Lower Gunpowder, Patapsco, Jones Falls, Regional	20
08/11/09	MD Green Schools Course (MAEOE/CBF) Catonsville MS, Notre Dame Prep	Annapolis and field sites	Loch Raven, Lower Gunpowder, Patapsco, Jones Falls, Regional	20
08/12/09	MD Green Schools Course (MAEOE/CBF) Catonsville MS, Notre Dame Prep	Annapolis and field sites	Loch Raven, Lower Gunpowder, Patapsco, Jones Falls, Regional	20
08/12/09	PBS taping: "Growing Greener Schools"	Prince Geo Co	Countywide, Regional	400
08/13/09	MD Green Schools Course (MAEOE/CBF) Catonsville MS, Notre Dame Prep	Annapolis and field sites	Loch Raven, Lower Gunpowder, Patapsco, Jones Falls, Regional	20
08/14/09	MD Green Schools Course (MAEOE/CBF) Catonsville MS, Notre Dame Prep	Annapolis and field sites	Loch Raven, Lower Gunpowder, Patapsco, Jones Falls, Regional	20
08/19/09	Ag Day in Baltimore County	North County Glen Arm	Lower Gunpowder, Loch Raven, Deer Cr, Little Gunpowder,	100

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			Prettyboy, Countywide	
08/26/09	BCPS Art In-service Teacher Workshops (2 sessions) Kick-off "Using Art to Persuade"	Essex	Countywide	120
08/27/09	Immaculate Conception School Faculty	Towson	Loch Raven, Jones falls	70
08/28/0	Comcast: "Hello Baltimore County" taping for airing through September	White Marsh	Countywide	3,000
09/10/09	DEPRM E-News Stream Newsletter	Countywide	Countywide	900
09/21/09	Parkville MS Faculty	Parkville	Back River, Bird River	90
09/22/09	Kick-off Event for Baltimore County Green@Work Program (county agencies and offices)	Towson	Jones Falls Countywide	100
09/23/09	Eastern Tech HS Tree event	Essex	Middle R, Back R	23
09/24/09	Kingsville ES Faculty	Kingsville	Lower Gunpowder Little Gunpowder	70
09/24/09	Internat'l Erosion Control Assoc Conf (IECA), Mid-Atlantic Chapter	Mid-Atlantic	Countywide, Regional	40
09/26/09	DEPRM Big Tree Sale	Oregon Ridge	Countywide	75
09/30/09	Notre Dame Prep Green School Committee	Towson	Lower Gunpowder, Loch Raven, Countywide	30
09/30/09	Chesapeake HS Tree Event	Essex/Middle R	Middle R, Back R	30
09/30/09	Ft Garrison ES Student Green Team	Pikesville area	Jones Falls	15
10/01/09	Catonsville ES PTA	Catonsville	Patapsco	200
10/01/09	Sparrows Point HS Tree Event	Sparrows Pt	Balto Harbor, Back R	60
10/05/09	Irvine Habitat Stewards Event	Owings Mills	Gwynns F, Countywide	20
10/06/09	Dulaney HS/Pot Spring ES Tree Event	Timonium	Loch Raven, Little Gunpowder	160
10/07/09	Hereford HS Tree Event	Hereford	Loch Raven, Deer Cr Little Gunpowder	28
10/07/09	Baltimore Co Watershed Planning Mtg	Back River	Back River	120
10/08/09	Franklin HS Tree Event	Reisterstown	Gwynns Falls, Liberty, Prettyboy	70
10/08/09	Chesapeake Watershed Forum Display		Regional	200
10/09/09	Chesapeake Watershed Forum Display		Regional	200
10/10/09	Chesapeake Watershed Forum Display		Regional	200
10/10/09	Cromwell Valley Park Fest	Cromwell Valley	Loch Raven, Back R, Lower Gunpowder,	1,800
10/11/09	Chesapeake Watershed Forum Display		Regional	200
10/11/09	Cromwell Valley Park Fest	Cromwell Valley	Loch Raven, Back R, Lower Gunpowder	1,800
10/12/09	Kenwood HS Tree Event	Middle River	Middle R, Back R	12
10/13/09	New Town HS Tree Event	Owings Mills	Patapsco, Gwynns Falls	73
10/14/09	Joppa View ES Faculty	Perry Hall	Bird River	80
10/16/09	MANSEF Conference For Special Needs Education	Baltimore City	Countywide, Regional	80
10/16/09	MANSEF Conference Display	Baltimore City	Countywide, Regional	2,100

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	For Special Needs Education			
10/19/09	Owings Mills HS Tree Event	Owings Mills	Gwynns Falls	60
10/20/09	Western Tech HS Tree Event	Catonsville	Patapsco, Countywide	55
10/20/09	Catonsville HS Tree Event	Catonsville	Patapsco	50
10/21/09	Landsdowne HS and MS Tree Event	Landsdowne	Patapsco	50
10/22/09	Loch Raven Academy MS and Pleasant Plains ES HS Tree Event	Towson Area	Lower Gunpowder, Back R	55
10/23/09	Loch Raven HS and Halstead Academy Tree Event	East Towson	Lower Gunpowder, Back R	58
10/26/09	Parkville MS Tree Event	Parkville	Lower Gunpowder, Back R, Bird River	70
10/26/09	Prettyboy ES Re-cert Faculty mtg	Timonium	Loch Raven, Prettyboy	30
10/27/09	Overlea HS Tree Event	Overlea	Back River	28
10/29/09	Parkville HS Tree Event	Parkville	Lower Gunpowder, Back R, Bird River	26
10/29/09	Patapsco HS Tree Event	Dundalk	Balto Harbor, Back R	30
10/30/09	Sudbrook MS Magnet Tree Event	Pikesville	Jones Falls, Gwynns F	80
11/01/09	Household Hazardous Waste event	Catonsville	Patapsco, Countywide	1,000
11/02/09	Sollers Point HS Tree Event	Sollers Point	Baltimore Harbor	25
11/03/09	Randallstown HS Tree Event	Randallstown	Gwynns Falls, Patapsco	50
11/04/09	Towson HS Tree Event	Towson	Back R, Jones Falls, Loch Raven	89
11/05/09	Wellwood ES Tree Planting with Jones Falls Watershed Assoc	Jones Falls	Jones Falls	60
11/05/09	Pine Grove MS Tree Event	Cub Hill	Lower Gunpowder	80
11/09/09	Assoc of Independent MD Schools Conference (AIMS) Including 11 schools serving Baltimore County students: Institute of Notre Dame Oldfields School McDonogh School Maryvale Prep Calvert School Garrison Forest School St James Academy Gilman School St Paul's School Beth Tfiloh School Friends School Waldorf School	Baltimore City	Countywide, Regional Loch Raven Gwynns Falls Jones Falls Jones F, Gwynns Falls Loch Raven, Deer Cr Jones Falls Jones Falls	85
11/16/09	MSDE Annual EE Briefing Presentation	Patuxent 4-H Cntr	Countywide, Regional	200
11/18/09	Perry Hall HS Tree Event	Perry Hall	Bird River, Lower Gunpowder	56
11/19/09	Woodlawn HS Tree Event	Woodlawn	Gwynns Falls	55

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11/24/09	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 Gunpwder Balto Harbor, Back R Middle R, Back R Gwynns F, Liberty, Loch Raven, Prettyboy	83
11/25/09	Envirothon Workshop #2 Western HS (2) Hereford HS (2) Dulaney HS Towson HS (2) Catonsville HS Carver HS (2) Parkville HS	Days Cove	Patapsco, Countywide Loch Raven, Liberty Deer Creek, Loch Raven, Little Gunpowder Back R, Jones Falls Loch Raven Patapsco Jones Falls, Countywide Bird R, Back R, Lower Gunpowder	91
12/07/09	Kingsville ES Faculty workshop	Kingsville	Lower Gunpowder, Little Gunpowder	30
12/10/09	Ag Field Crops Day	White Hall	Lower Gunpowder, Loch Raven, Prettyboy, Little Gunpowder, Deer Creek, Countywide	150
12/10/09	DEPRM E-News Stream Newsletter	Countywide	Countywide	900
12/10/09	Schoolyard Habitat Workshop	Jessup	Countywide, Regional	60
12/18/09	Environmental Art contest Deadline "Using Art to Persuade" McDonogh MS Oldfields School Kingsville ES Joppa View ES Immaculate School Immaculate Heart of Mary Perry Hall HS Pine Grove MS Pot Springs ES Deep Creek ES Logan ES Parkville MS Cromwell Valley ES Sussex ES Hereford MS	Towson	Countywide Gwynns Falls Loch Raven Lower Gunpowder, Little Gunpowder Bird River Loch Raven, Jones Falls Back R, Low Gunpder Bird River Lower Gunpowder Loch Raven Middle R, Back River Baltimore Harbor Bird R, Back R Lower Gunpowder, Loch Raven Back River	470

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			Little Gunpowder, Loch Raven, Prettyboy Deer Creek	
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Appendix 4-2: Education Program for Schools: Recycling Presentations, 2009
Accomplished by
Baltimore County Department of Public Works, Recycling Division

Date	School	City	Grade	Audience Size
01/08/09	Pot Spring Elementary	Lutherville	K-2	225
01/08/09	Pot Spring Elementary	Lutherville	3-5	225
01/21/09	Pinewood Elementary	Timonium	4-5	175
01/21/09	Pinewood Elementary	Timonium	K-3	350
02/10/09	Harford Hills Elementary	Parkville	K-3	220
02/10/09	Harford Hills Elementary	Parkville	4-5	120
03/02/09	Woobrook Early Education Ctr	Govans	PreK	75
03/09/09	Jacksonville Elementary	Phoenix	1	100
03/18/09	Cromwell Valley Elementary	Towson	K	75
03/25/09	Oakleigh Elementary	Parkville	3	75
03/31/09	Park School	Pikesville	PreK-2	180
03/31/09	Park School	Pikesville	3-5	175
04/02/09	Chesapeake Terrace Elem	Baltimore	PreK-3	100
04/02/09	Chesapeake Terrace Elem	Baltimore	4-5	90
04/16/09	Fullerton Elementary	Baltimore	K	80
04/17/09	Chapel Hill Elementary	Perry Hall	K	95
04/21/09	Arbutus Elementary	Baltimore	K	60
04/22/09	Vincent Farms Elementary	White Marsh	1	75
04/28/09	Pleasant Plains Elementary	Loch Raven	PreK-2	250
04/28/09	Pleasant Plains Elementary	Loch Raven	3-5	235
05/22/09	Westowne Elementary	Catonsville	1-2	160
07/08/09	Edgemere Elementary	Sparrows Point	K-5	40
07/09/09	CCBC Performing Arts Camp	Nottingham	3-8	45
07/14/09	Parkville Nazarene Christian	Parkville	K-3	45
				3270