



Maryland Green Registry MEMBER

The Maryland Green Registry promotes and recognizes sustainable practices at organizations of all types and sizes. Members agree to share at least five environmental practices and one measurable result while striving to continually improve their environmental performance.

Baltimore County Government



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Local Government

Members since September 2014

Management and Leadership



Environmental Policy Statement

The mission of the Baltimore County Department of Environmental Protection and Sustainability (EPS) is to conserve, enhance, and perpetuate the natural resources of Baltimore County and to protect the environmental health of its citizens. This is accomplished through programs that manage and enhance natural and man-made resources and that provide environmental guidelines to our citizens.

- *Natural resources are protected through strong regulatory programs supplemented by long-term resource management efforts with emphasis on land preservation, watershed planning, and capital restoration projects to improve water quality and habitat.*
- *Public environmental health is addressed through regulatory and educational programs for groundwater protection and waste management.*
- *Public/private partnerships provide educational, monetary, and manpower resources to citizen organizations for environmental enhancement.*

The mission of the Baltimore County Bureau of Solid Waste Management is to provide a safe, environmentally sound, integrated solid waste management program to promote waste prevention, increase recycling and resource recovery, and decrease the quantity of solid waste requiring landfilling in accordance with the Ten Year Solid Waste Management Plan.

Environmental Team

Green at Work Campaign and Committee:

The Green at Work committee is a group of employees dedicated to making the workplace greener. The committee has promoted energy and resource conservation and awareness among County employees since the launch of the Green at Work campaign in 2009. The campaign is designed to educate employees, save energy and reduce electricity costs for the County. An Energy Conservation Guidelines packet is distributed to new employees during their orientation at Human Resources to promote green practices in the workplace. The Green at Work committee meets quarterly to discuss new ideas.

Annual Environmental Goals

Baltimore County has a goal to achieve and maintain a 50 percent tree canopy Countywide and within the three drinking water reservoirs by the year 2025. Additionally, the County strives to achieve and maintain 40 percent tree coverage within more populated areas inside the Urban Rural Demarcation Line and for each of its Census Designated Places. Tree canopy maps and data on land cover are available by request for 30 Census Designated Places online here:

www.baltimorecountymd.gov/Agencies/environment/forestsandtrees/treecanopy.html

The County's implementation of the Chesapeake Bay Phase II Watershed Implementation Plan (WIP) includes tree planting that also support the tree canopy goals.

In 2010, the U.S. Environmental Protection Agency (EPA) set limits on the amount of nutrients and sediments that can enter the Chesapeake Bay and required jurisdictions within the Chesapeake Bay Watershed to develop Watershed Implementation Plans (WIPs). The WIP allocates nutrient loads among separate sources and identifies County-wide strategies for reducing pollutant inputs to local streams and coastal waters.

With the development of the Phase II Baltimore County Watershed Implementation Plan in July 2012, Baltimore County set specific nutrient reduction goals. By 2025, the County plans to reduce nitrogen loads to the Bay from 4,454,000 lbs (2010 levels) to 2,604,000 lbs, or 41.5%. Phosphorus loads will be reduced by 20.1%, from 203,000 lbs to 162,142 lbs. The 2017 interim reduction targets for nitrogen and phosphorus are 34.5% and 13.8%, respectively.

Baltimore County has developed TMDL Implementation Plans for local TMDLs that address water quality impairments for local waters. These impairments include phosphorus impairing the drinking water reservoirs, nutrients (nitrogen and phosphorus) impairing local tidal waters, sediment impairing stream biotic communities and infilling

of the reservoirs, bacteria in streams impairing recreational use, PCBs, chlordane, and mercury above safe consumption levels in fish tissue, and trash impairing recreational water use. The TMDL Implementation Plans detail the actions to be taken to address the impairment, interim target milestones, and monitoring to determine progress and target actions.

Broadly, the County's strategy for achieving these goals involves nutrient load reductions from non-point sources (urban and septic), and point sources (Waste Water Treatment Plants (WWTPs) and industrial discharges). Specifically, actions include WWTP upgrades, stream restoration, shoreline erosion control, street sweeping, upland/riparian reforestation, sanitary sewer overflow elimination, and redevelopment.

The 2012 2-year interim targets for nitrogen and phosphorus reduction in Baltimore County are 35,318 lbs and 3,873 lbs, respectively. Baltimore County exceeded the phosphorus reduction goal, reducing loads by 7,275 lbs. Nitrogen loads were reduced by 20,301 lbs. Progress will continue to be assessed biannually, and strategies will continue to be refined in order to meet the aforementioned 2025 nutrient reduction targets.

Per the Baltimore County Bureau of Solid Waste Management's 2009-2018 Ten Year Plan, the County aims to continue meeting or exceeding the minimum recycling rate required by Maryland law (35%). In addition, the County aims to meet or exceed a Baltimore County-set voluntary goal of 45% recycling beginning the year 2015, and aims to meet or exceed Maryland's voluntary statewide recycling goal of 55% by 2020 and voluntary statewide waste diversion goal of 60% by 2020. These goals include both residential and commercial sources.

On its website www.bcrecycles.com, Baltimore County sets a residential recycling rate goal of approximately 50% (the County's residential recycling rate in 2015 was 16%).



Environmentally Preferable Purchasing

The County has contracts for environmental preferable purchasing including contracts to purchase Energy Star computer equipment and recycled toner cartridges, to recycle electronics, and purchase green cleaning supplies, including non-toxic, biodegradable, and made from renewable resources. These include green products such as vacuum cleaners with High-Efficiency Particulate Air (HEPA) filters, floor machines with dust return systems, recycled paper products, and micro-fiber cloths and mops.

Additionally, the following County Code sections (with provisions) address the purchase of recycled and recyclable products by the Purchasing Agency.

10-2-312. PURCHASE OF RECYCLED AND RECYCLABLE PRODUCTS

- (a) *“Recycled paper” defined. In this section, “recycled paper” means a paper product meeting the Environmental Protection Agency recommended content standards as defined in 40 C.F.R. Part 247.*
 - (b) *Requirements in general. Whenever practicable, the Purchasing Agent shall use the following guidelines in the procurement of paper and other commodities:*
 - (1) *In procuring paper or paper products, the Purchasing Agent shall purchase or approve for purchase commodities that are recyclable and produced from recycled paper containing post-consumer waste at least 10% in excess of that required by the applicable standard;*
 - (2) *Of the total volume of paper that the Purchasing Agent buys, at least 40% shall be recycled paper;*
 - (3) *The Purchasing Agent shall avoid purchasing non-recyclable polystyrene products or products packaged in non-recyclable polystyrene;*
 - (4) *Contracts shall specify that materials shall be packaged in recycled and recyclable materials;*
 - (5) *In the purchase of non-paper commodities, the Purchasing Agent shall review product specifications, and shall revise specifications, where appropriate, to include recycled content in the following product areas: re-refined oil, plastic products, auto parts, compost material, aggregate, insulation, solvents, and rubber products; and*
 - (6) *County publications may not use inks containing toxic components.*
 - (c) *Photocopying requirements. Except for legal documents filed in court or subject to the rules of the State Court of Appeals, when photocopied, all documents over six pages in length shall be copied on both sides of the page.*
 - (d) *Purchasing Agent to advise contractors. The Purchasing Agent shall advise contractors doing business with the county of the county's policies regarding recycled and recyclable materials.*
 - (e) *Requirements for consultant's reports. A consultant producing reports for the county shall use recycled paper and recyclable paper printed on both sides.*
- (1988 Code, § 15-91) (Bill No. 65-98, § 1, 7-10-1998; Bill No. 83-00, § 2, 7-1-2004)*



Environmental Restoration or Community Environmental Projects

Three departmental sections at Baltimore County's Department of Environmental Protection and Sustainability plan and implement environmental restoration projects.

The Watershed Management and Monitoring section evaluates the County's streams and assesses watershed conditions and determine pollution reduction strategies. These strategies involve both municipal and citizen-based actions and prescribe such projects as stream restoration, street sweeping, reforestation, and bayscaping. Citizen stakeholders, including neighborhood residents, community leaders, watershed associations, and local businesses are involved in the development and implementation of the action strategy. Additional annual grants are awarded to citizen watershed organizations to implement environmental projects.

The Forestry Management section designs and executes rural and urban reforestation projects as mitigation for development in accordance with Maryland's Forest Conservation Act. The EPS Community Reforestation Program plants a target of 10-15 acres of trees each year and maintains nearly 25 separate sites that total >170 acres.

The Forestry Management section also reviews and approves planting plans developed by local environmental organizations intended for County land (parks, public schools, community recreation centers, etc.). In October 2012, Baltimore County developed the Policy and Guidelines for Community Tree Planting Projects to assist groups with the process of designing and implementing successful tree planting projects. The publication guides the selection, arrangement, and installation of tree species. More information is available online here:
www.baltimorecountymd.gov/Agencies/environment/forestsandtrees/plantingguide.html

Lastly, EPS's Watershed Restoration section works to restore, protect and enhance surface water and improve water quality through a variety of projects and services such as stream restoration, shoreline stabilization, water quality retrofitting, public stormwater management facility maintenance, dredging, submerged aquatic vegetation monitoring, waterway cleanup, and abandoned boat removal.

In addition to EPS's efforts, the Department of Recreation and Parks focuses on educating citizens about the natural environment through its interpretive facilities and programs. The latest of the County's environmental interpretation centers, the Lake Roland Nature Center, opened in 2016. This facility provides expanded indoor space for nature and other programs at the ~ 450-acre Lake Roland Park, which features a diverse wildlife habitat.

The Baltimore County Center for Maryland Agriculture and Farm Park provides a place for citizens and the farming community to learn about agriculture-related best management practices. The park feature extensive demonstration farm fields, a "master gardeners" area where citizens can learn how to implement environment-friendly practices in their own yards and gardens, livestock paddocks and areas, wooded uplands, and an agriculture resource center where a number of farming-related entities are housed. The central theme of the agricultural resource center and farm park is conservation agriculture.

These two sites and their facilities expand upon the County's widespread interpretive network, which includes Oregon Ridge Nature Center and Park, Marshy Point Nature Center and Park, Cromwell Valley Park and its Willow Grove Nature Education Center, and the Benjamin Banneker Historical Park and Museum (the latter of which hosts nature programs in addition to its primary historical focus). More environmental interpretation facilities are available at Holt Park and Center for the Arts,

and interpretive signs that teach about nature and environmental initiatives are situated at many parks throughout the County.

Waste

Solid Waste Reduction and Reuse

Within the Baltimore County Department of Public Works, the Recycling Division is responsible for promoting recycling and waste prevention. The Division promotes the reuse of a wide variety of materials through a Reuse Directory, which is available both online and in print. Baltimore County also maintains a partnership with the Loading Dock Incorporated, a nonprofit building materials re-use center. The Loading Dock accepts reusable building materials at the Eastern Sanitary Landfill in White Marsh and the Central Acceptance Facility in Cockeysville.

Recycling

Baltimore County's single stream recycling collection program services all single-family homes, as well as most apartments, condominiums, and County facilities. Materials accepted for recycling in the program include paper, cardboard, plastic, metals, and glass. In calendar year 2015 alone, 54,310 tons of material were collected from County residents for single stream recycling, which was an all-time record.

Baltimore County has a single stream materials recovery facility (MRF) in Cockeysville, which enables the County to retain the value of collected recyclables and maximize the financial benefits of its recycling program. From November 2013 into November 2016, 156,000 tons of recyclables were sold from the MRF, generating gross revenues of \$20.1 million and avoiding \$9.9 million in trash disposal costs.

Baltimore County also accepts additional items for recycling at its three drop-off facilities, which are located in White Marsh, Cockeysville, and Halethorpe. Metallic items including appliances, doors, hangers, pipes, propane tanks, and more can be dropped off as scrap metal. The County also accepts electronics for recycling, including computers, computer peripherals, cables, GPS devices, tablets, and cell phones. In calendar year 2016, 689,760 pounds of electronics were collected at County drop-off centers for recycling.

Baltimore County also operates a household hazardous waste (HHW) recycling program, which allows County residents to drop off HHW for recycling or proper disposal at the Eastern Sanitary Landfill. Materials accepted at this site include automotive fluids, cleaners, paints, pesticides, and many other household chemicals. Certain types of HHW are also accepted at the Central Acceptance Facility and the Western Acceptance

Facility. The table below provides a listing of HHW collected and processed in fiscal year 2016.

Material Type	Quantity in FY2016
Liquids (in gallons)	
Antifreeze	7,000
Gasoline	8,580
Oil	74,577
Paint/Latex	13,905
Solvents/Oil-Based Paint	11,580
Total Liquids	115,642
Solids (in pounds)	
Asbestos Waste	80,080
Batteries (Automotive)	75,100
Corrosive Liquids (Acid)	3,800
Corrosive Liquids (Base)	5,225
Electronics	697,720
Medicines	364
Oxidizers	611
Pesticides (Solid)	5,650
Pesticides (Liquid)	14,200
Total Solids	882,750*
Solids (in number of items)	
Fluorescent Light Bulbs	64,696
Total Solids	64,696*

Used toner cartridge recycling is promoted for County employees through the Green @ Work campaign. Employees are asked to return the used cartridges to their original source so they can be refilled and reused.

Composting

The Baltimore County Bureau of Solid Waste Management/Recycling Division promotes the reduction of yard materials generation through “grasscycling” (leaving grass trimmings on the lawn) and home composting. In addition to providing composting information to residents via handouts, videos, and the County website, Baltimore County hosts an annual compost bin sale for residents.

- *Spring 2015 compost bin sale: 750+ bins sold*

- *Spring 2016 compost bin sale: 450+ bins sold*

Energy

Energy Efficiency

Baltimore County's Property Management division is responsible for implementing energy efficiency, renewable energy and sustainability programs and policies in government operations and Countywide. Baltimore County has both long term and short term goals to reduce utility costs and minimize our impact on the environment.

In 2016, Baltimore County Executive Kamenetz announced an energy efficiency policy goal, established by an Executive Order, to reduce per-square-foot electricity consumption by 15 percent within five years in County government buildings, pumping stations and streetlights, using fiscal year 2015 as a baseline. Under this Energy Efficiency Policy, the County has developed an Energy Reduction Plan.

In 2016, the County was awarded a grant from the Maryland Energy Administration to participate in the Maryland Smart Energy Communities program. Grant funding will fund projects energy efficiency projects to help achieve the energy efficiency policy goal.

In 2009-2012, the County utilized \$7.4 million in funding from the Department of Energy's American Recovery and Reinvestment Act to improve the energy efficiency of its buildings through comprehensive energy audits, upgrades to antiquated systems, and lighting retrofits.

The ARRA grant also funded a 'Cool Trees' planting project, designed to reduce long-term heating and cooling costs for County owned facilities. EPS planted 957 native canopy trees to cast shade onto 75 County facilities. Sites included public schools, fire stations, police precincts, community centers, senior centers, and libraries. The 957 trees are estimated to collectively conserve over 4.5 million kWhs of energy and 150,000 therms over 30 years. In this time, the trees will also intercept 140 million gallons of stormwater and sequester over 15 million tons of carbon dioxide. Altogether, these benefits amount to a 30-year cumulative cost savings of approximately \$2.2 million (>300% return on investment).

The Green At Work Committee also helps promote energy conservation in the workplace by encouraging employees to turn off lights when not needed, shut their computers at night, and to turn off any other unnecessary equipment when not being used.

Renewable Energy

In 2016, Baltimore County Executive Kamenetz announced a renewable energy policy goal, established by an Executive Order, to utilize renewable energy sources to generate or displace at least 20 percent of the County's electric demand by 2022. As part of this Renewable Energy Policy, the County developed a Renewable Energy Action Plan.

In 2016, the County contracted with Solar City to install an estimated 20 megawatts of ground-mounted solar power systems at four County-owned properties. Through a power purchase agreement, Solar City will finance, install and maintain the solar power systems at no upfront cost to the County. In exchange, the County has agreed to purchase the electricity produced at lower rates than current utility costs, resulting in savings from avoided electricity costs. All sites are expected to be operational by the spring of 2018.

In the first year of operation, it is estimated that the solar power systems will generate more than 28 million kWh of electricity, exceeding the 20 percent goal outlined in the Renewable Energy Policy. Over the lifetime of the 25 year PPA, the County estimates it will save more than \$20 million, assuming a modest increase in utility electricity prices over that same period.

In addition to supporting green jobs, the solar power systems are expected to avoid the emissions of more than 482,000 metric tons of carbon dioxide over the 25 year project lifespan.

Transportation

Employee Commute

Baltimore County has a Telework Program available for employees. Launched in January 2013, the Telework program allows non-probationary employees to submit a request to participate. Approved employees will be permitted to work remotely for up to five days of each two-week pay period.

Alternative Work Schedule

In some agencies, subject to the approval of the County Administrative Officer, employees may choose a predetermined Alternative Work Schedules (AWS). The agency may approve an AWS for an employee if it will enhance, or at least not hinder, the effectiveness of the employee's work unit.

Fleet Vehicles

Hybrid vehicles are available for use by County employees when necessary. A GPS routing optimizer is also used for County vehicles. The route optimizer prescribes an efficient schedule that should increase productivity, while reducing fuel consumption, by minimizing travel time to various locations throughout the workday. Operations involving vehicles with multiple stops per day and those responding to unscheduled maintenance calls are expected to benefit the most from this program.

In 2012, the Office of Information Technology installed a fleet tracking system on all County owned vehicles. With its extensive tracking and mapping capabilities, this system pinpoints the exact locations of County vehicles, allowing work crews and managers to be more efficient in responding to calls for service and to identify the most expeditious routing of job locations. This improved management of agency operations also cuts fuel costs and emissions, helping to reduce environmental impact.

The system provides a Garmin GPS unit in each vehicle, allowing dispatchers to send service calls and messages directly to drivers. The driver can directly respond to service calls, reporting back when they have accepted and completed assigned jobs. The system's turn-by-turn directions reduce fuel costs by helping drivers take the most direct route and avoid getting lost. The system alerts County managers if a particular vehicle is idling for too long, is speeding or is inactive for an excessive period of time. Monitoring these alerts allows agencies to manage and address any such driver issues and to monitor unauthorized vehicle use.

Water

Water Conservation

Baltimore County complies with the Maryland Water Conservation Plumbing Fixtures Act.

Baltimore County Water Conservation Plan:

The Baltimore County water system is an extension of the City system. Raw water is brought into the City filtration plants from City-owned impoundment reservoirs in the County, treated and returned to County consumers through transmission mains, distribution mains, storage facilities and pumping stations. Therefore, the City and County are physically and legally bound to a common water system.

In recent years, the County has participated in the following City-managed contracts to reduce the amount of unaccountable water:

- *Supervisory Control and Data Acquisition contract to replace or renew all of the telemetry in the system to gain more accurate readings.*
- *Water audit contracts to calibrate all large meters above 4" in size and to search for other unaccountable water causes.*
- *Valve and fire hydrant exercising and repair contract to limit leakage from these appurtenances.*
- *Leak detection contracts to survey large areas of the system to repair water leaks that do not reach the surface.*
- *Replacement of water tank altitude valves to stop unnecessary water overflows.*

In addition, Baltimore City and Baltimore County have worked to find all buried meters in Baltimore County to gain a more accurate overall reading of metered water. At last count, no meters were left to be uncovered in Baltimore County.

County public works officials, police and fire departments have worked to stop illegal usage from the system's fire hydrants. Baltimore County has applied updated State standards for plumbing fixtures in new construction to conform to the State's conservation requirements.

Rain Barrel Sales:

Since 2010, Baltimore County has hosted annual rain barrel sales for residents to promote water conservation and reduce stormwater runoff.

- *Spring 2015 rain barrel sale: 700+ rain barrels sold*
- *Spring 2016 rain barrel sale: 450+ rain barrels sold*

Stormwater Management and Site Design

To lessen the impact of storm water runoff, and thereby improve the quality of the Chesapeake Bay, the Maryland legislature passed the Storm Water Management (SWM) Act of 2007. Baltimore County has revised its Code to incorporate these State-mandated changes. The Stormwater Management Section of EPS reviews grading and stormwater management plans for proposed construction activities and ensures maintenance of publicly and privately owned stormwater management facilities.

The County's Stormwater Remediation Fee is used to address phosphorus, nitrogen and sediment loading into the Bay. The County developed a comprehensive plan to curb pollution, calculated the cost of such a program and then developed an equitable fee structure for County residents and businesses to cover the cost.

[Baltimore County: 200 Miles of Waterfront](#) (PDF) outlines how Baltimore County is allocating funds raised by the Stormwater Remediation Fee. The report summarizes

projects including tree planting and reforestation, storm drain retrofits, stream restoration, street sweeping, stormwater treatment practices and other improvements to impervious surfaces.

Green Building

LEED Certified

- *Liberty Center: LEED Certified for Commercial Interiors*
- *Randallstown Community Center: LEED for New Construction*
- *Jacksonville Recreation and Senior Center: LEED for New Construction*

LEED Silver

- *Dundalk Community Center- LEED for New Construction – Major Renovation*
- *Arbutus Library & Senior Center: LEED for New Construction*
- *Baltimore County Public Library- Perry Hall Branch: LEED for New Construction*
- *Sollers Point Multipurpose Center: LEED for New Construction*

LEED Gold

- *Baltimore County Center for Maryland Agriculture: LEED for New Construction*
- *Arbutus Recreation Center: LEED for New Construction*

Other

Commission on Environmental Quality (CEQ)

The Baltimore County Advisory Commission on Environmental Quality facilitates communication between the County government and its residents on environmental needs, programs, and legislation. The CEQ's actions are twofold. First, the CEQ provides insights to County Officials as environmental questions arise. Second, the CEQ selects environmental issues to evaluate and works with County officials to develop environmentally sound, economically practical, and sustainable results for the consideration by the County Council.

The CEQ, formed by legislation in October 2003, is comprised of fifteen representatives; one from each of the County's seven districts, and five representing groups from the fields of agriculture, science, business, homebuilding, education, as well as three at-large representatives. The CEQ convened for the first time in November 2004. Since that time, the CEQ has met regularly. More information about the group can be found here: www.baltimorecountymd.gov/Agencies/ceq/index.html

Greenhouse Gas Emissions Inventory

Baltimore County had a consultant complete a greenhouse gas inventory based on 2006 emission levels. The report looks at emissions from the residential, commercial, industrial, waste and transportation sectors. The report is available for download here: www.baltimorecountymd.gov/Agencies/environment/sustainability/sustainability.html

Electric Vehicle Charging Stations

The Baltimore County Revenue Authority installed eight electric vehicle plug-in charging stations in Towson public garages.

Energy Conservation Devices Property Tax Credit

Baltimore County offers a Property Tax Credit for solar energy devices or geothermal energy devices for residential or multi-family residential application. Eligible solar devices include that those heat or cool a structure, generate electricity for use in a structure, or provide hot water for use in a structure. Eligible geothermal devices may be used to heat or cool a structure or provide hot water for use in a structure. The amount of the property tax credit is set at the lesser of 50 percent of the cost of the system or \$5,000 for heating devices and \$1,500 for devices which supply hot water. Baltimore County Code limits the total amount that can be awarded for the Energy Conservation Devices Tax Credit to \$250,000 per fiscal year.

High Performance Homes Tax Credit

In April 2012, the Baltimore County Council passed a revised Property Tax Credit for high performance homes that are LEED certified, achieve at least a silver rating according to the International Code Council's 700 National Green Building Standard (NGBS), or have certified energy efficiency improvements made by an approved building modeling system. The tax credit is for new or existing homes in the residential sector which are being renovated.

Land Preservation

Within the Department of Planning, the Land Preservation section provides landowners with assistance on land preservation programs, stewardship of existing easements, applications for easement modifications, and applications for agricultural zoning requests. Baltimore County's nationally acclaimed Land Preservation program provides landowners the opportunity to receive income, estate, or property tax benefits while maintaining ownership and privacy.

Awards

- *Outstanding Government Leadership Award, Maryland Recycling Network (2010 & 2013)*
- *Member of ICLEI- Local Governments for Sustainability*
- *Received Annual Tree City USA Award from the National Arbor Day Foundation since 2003*
- *NACo Achievement Award Recipient under Environmental Protection & Energy category:*
 - *2008 Growing Home Campaign*
 - *2010 Green @ Work Energy Program*
 - *2014 Single Stream Recycling Materials Recovery Facility (MRF)*
 - *2014 Cool Trees: Reducing Long-Term Energy Costs by Planting Trees*
- *County Engineers Association of Maryland (CEAM) Award of Merit – Large Project, for the Baltimore County Central Acceptance Facility (September 2014)*

Profile Updated February 2017



Help build a greener, more sustainable Maryland through voluntary practices that reduce environmental impacts and save money.

Learn more at www.green.maryland.gov/registry

