



**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.

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Architecture/Engineering/Planning/Surveying Firm

Management and Leadership



Environmental Policy Statement

Sustainability, which includes social, economic, and environmental aspects, is a core value of FWA, thereby increasing the health and productivity of our employees while providing better service to our clients.



Environmental Team

In December 2008, Frederick Ward Associates began an internal Sustainability Initiative. Every department (survey, planning, architecture, engineering, and administration) participates and incorporates sustainable design practices into each and every project.

The FWA Sustainability Initiative Committee meets once per month and sends out regular e-mail updates and posts to the company intranet. The committee is composed of seven members and each department at the company is represented.



Annual Environmental Goals

Internal Goals:

1. *Reduce, Reuse, Recycle (Economic, Environmental, Social)*
 - a. *Reduce the amount of paper used by 10%*
 - b. *Reduce use of non-reusable dining products to none*

- c. *Reduce vehicle emissions*
- d. *Create a viable Recycling Program*
- 2. *Improve Office Environment (Economic, Environmental, Social)*
 - a. *Improve air quality*
 - b. *Improve interior visual aesthetics*
 - c. *Improve office cleanliness*
 - d. *Improve office thermal comfort*
 - e. *Create Facilities Operations Manual*
- 3. *Educate employees about sustainability (Environmental, Social)*
 - a. *Provide 8 hours of volunteering to sustainable practices within the community*
 - b. *Provide 8 hours of instruction/discussion to all employees about sustainability*
 - c.

External Goals:

1. *Adopt the 2030 Challenge for 25% of new projects (Economical, Environmental, Social)*
2. *Implement Sustainable design strategies into 100% of all projects.*
3. *Educate clients, consultants, and Government jurisdictions about sustainable design and practices.*
 - a. *Become affiliated with Sustainable groups and Alliances.*
 - b. *Facilitate / Sponsor 10 hours of discussion / instruction about sustainable practices.*
 - c. *Become known in our industry as a leadership, technical-level resource for sustainable design.*



Environmentally Preferable Products and Services

FWA provides Stormwater management services to our clients. Our SWM designs exceed all local and state regulations. Using innovative methods including environmental site design and innovative site design, our SWM designs reduce pollution from rainfall event runoff by reducing Total Suspended Solids, Total phosphorus, and runoff volumes. The methods used to meet these goals include reducing impervious area on a site, Natural filtering methods (Bio-retention, Sand Filter), Infiltration Practices, Green Roofs, and SWM Water Quality Ponds.



Environmental Restoration or Community Environmental Projects

FWA is very involved with efforts to educate community groups, government agencies, non-profits and School districts about green practices. FWA has completed presentations on Sustainable Design to Harford County Public Schools and is involved with the USGBC Maryland Chapter's High-

Performance Green Schools Committee to help green our local and state K-12 schools. FWA has also presented to chambers of commerce, school boards, Rotary groups, and community colleges in an effort to educate others about green building and sustainability.

FWA did a volunteer stream cleanup of a local waterway, Plumtree Run, on May 22, 2010. Fifteen volunteers consisting of FWA employees, spouses, and children collected trash that had blown into the stream from adjacent developments and documented (via digital photography) the current state of the stream. In total we collected 30 large bags of trash, 15 bags of recyclables, and various large objects. Our long range plan is to "adopt" a large portion of the stream, much like civic groups adopt segments of highways. Harford County has also just initiated a program to monitor Plumtree Run and FWA will partner with the County to assist with their efforts.

In 2009, Harford Habitat for Humanity, an organization that FWA has done volunteer work with in the past, came to FWA for assistance in designing & building their Second LEED modular home with Harford Technical High School. FWA is acting as their LEED consultant and is doing volunteer work with the School and Harford Habitat to see that they take their Award-winning program (USGBC Maryland Young Professionals Award in 2009) to the next level.

Some of the features FWA has pushed for regarding the latest modular LEED home are: Solar shading devices on the South façade, a 1.05 kw Photovoltaic array on the roof, reuse of trees on the site, pervious pavers for walkways, and a switch to a more durable and sustainable exterior siding (hardi-siding as opposed to vinyl). The preliminary HERS rating suggests that the LEED Rating will be Gold or perhaps Platinum, which will be an outstanding achievement for the students, teachers, and all involved with the project.

Waste

Solid Waste Reduction and Reuse

After installing a new Energy Star label dishwasher, FWA purchased flatware, recycled-content mugs, and plates/bowls for employee use. We have thus been able to eliminate disposable paper, plastic, and Styrofoam products from our office such as: cups, paper plates, & disposable cutlery as well as their associated packaging.

Cardboard boxes are reused for shipping or storage containers/filing. Hardboard tubes are reused for dead-filing of drawing rolls. Education and innovation is an ongoing effort in our office. E-mails are sent to the entire office

to remind employees of our waste reduction methods. We have signs placed around the office regarding the receptacles and what can go in each bin. We have changed each of our duplex-capable printers to default to double sided printing, and have encouraged and created easy settings for printing half-scale drawings, when possible. Digital archiving is the method of choice for all employees, versus hard-copy archiving of documents.

Recycling

FWA has created a recycling program for its in-house waste reduction. We have based our recycling program around items that are accepted by the Harford Waste Disposal Center in Street, MD. Items include:

*Glass Jars and Bottles
#1 and #2 Plastic bottles and jugs
Aluminum and Tin Metal Cans
Paper products, including cardboard*

Recycling containers are located in areas where most waste is produced. Each printer has an 18 gallon paper recycling bin, while the wide-format print room has a 60 gallon recycling bin. Each workstation has a paper recycling bin of appropriate size. Plastic, glass and metal items are collected together in the kitchen and vending areas of the office. Items are picked up by the Town of Bel Air every week alternating between Paper and Glass, Plastic and metal. We do not measure by weight the amount of recycled material, but gross estimates are as follows:

*90%-95% Paper is recycled
80%-85% Recyclable Glass, Plastic and Metal waste is recycled.*

Energy

Energy Efficiency

Creating a facility manual for the office is one of the Sustainability Initiative's goals for 2010 and it is an ongoing process. Items that have been implemented already to conserve energy are:

- *Changed most of the existing incandescent lamps to CFL's*
- *Encouragement of employees to turn off lights when not in a room*
- *Installed occupancy sensors at switches in many spaces*
- *Dimmers are used where appropriate to set lighting levels*
- *Programmable thermostats are standard, and set points are adhered to*

- Energy conservation measures have been set for all printers and copiers and are encouraged on desktop monitors in the office
- Employees are encouraged to decrease ghost loads and use power strips to manage plug loads
- Installed an energy-efficient new gas water heater in 2009

Measured results: In 2008 FWA's annual energy use was 201,188 kWh. After the changes above were implemented, the company's 2009 annual energy use was 176,400 kWh, a 12.5% decrease. The reduction in energy use and efficiencies gained amounted to a \$9,800 cost savings off the company's annual electric utility bill.

Renewable Energy

Some of our survey crews use 10-watt solar panels to power their Trimble devices while out in the field. This decreases the need to re-charge the batteries at the office as often, and lowers energy costs.

Transportation

Fleet Vehicles

To reduce the likelihood of multiple vehicles making multiple trips per day, a system of communicating has been initiated that eliminates multiple trips to planning agencies and jurisdictions. Everyone tries to be as efficient as possible when making trips, and it lowers fuel costs, wear and tear on the fleet vehicles, and the company's carbon footprint.

Water

Water Conservation

Recently FWA has taken multiple steps to conserve water. FWA has installed a water filter to encourage reusable drink containers instead of bottled water. We installed a water-efficient (Energy Star) dishwasher for washing company and personal dishware instead of washing by hand, which consumes more water. FWA also installed two water conserving (American Standard .8/1.6 gpf) dual-flush toilets. The use of these toilets has conserved a great deal of water compared to the previously installed, outdated toilets that predated the fixture flow rates mandated in the Energy Policy Act of 1992.



Stormwater Management and Site Design

One of FWA's 2011 projects will be to work in conjunction with the Town of Bel Air's Master Plan and re-design our off-site surface parking lot. It will incorporate much-needed pedestrian access, new Environmental Site Design strategies, additional landscaping, and improved storm water management and aesthetics

Other



Leadership in Sustainable Organizations

FWA's Director of Sustainability, Chuck Cooper, LEED AP, is a Project manager in the Architecture studio. In 2008 Chuck began to attend USGBC Maryland Chapter events and got interested in forming a new Branch in the Northern part of Maryland. For his efforts as the founder and Chair of the Northern Chesapeake Branch Steering Committee, Chuck received a special recognition Award from the USGBC Maryland Chapter at their 2009 Annual Awards Ceremony.

Chuck is on two committees as the state level: USGBC Maryland High-Performance Green Schools and USGBC Maryland Advocacy Committee. Mike Grabenstein, another employee of FWA in the Architecture studio, is also involved with the Northern Chesapeake Branch as the Chair of the Communications committee. Additionally Mike participates on the USGBC MD Advocacy Committee, and both he and Chuck testified in support of the passing of Harford County's Wind Legislation, allowing small wind turbines in all zones.

FWA currently has four LEED Accredited Professionals and nine staff members recently took the USGBC's LEED Green Associate "Cram for the Exam" course at Harford Community College. FWA also has two NAHB Certified Green Professionals, Ted Jasinski, AIA and Kevin Small, ASLA. Ted is also on the Associated Builders and Contractors (ABC) Baltimore Chapter's Green Committee. Additionally, Andy Whaley is a member of the Institute of Green Professionals.



Maryland

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

Learn more at green.maryland.gov

