



Waters Savers

1. Living Roof

A living roof is a roof that is partially or completely covered in vegetation and growing medium, and is installed on a waterproof membrane. Other layers may include a drainage system, root barrier, and insulation.



The HRWC will incorporate a living roof system across the entire rooftop. This system will reduce the rate and quantity of rainwater runoff by at least 25% compared to a conventional roof. The plants will help clean the air, reduce the heat island effect, and provide additional habitat for urban wildlife. The plants will also at least double the lifespan of the roof and significantly increase the roof's insulating capacity.

2. Cistern

A cistern is a receptacle designed to capture and store liquids, typically rainwater. The receptacle can be any size and can be placed above or below ground.

The HRWC will use a 350-gallon above-ground storage tank to capture and store rooftop rainwater. This water will then be sterilized and pumped back into the building for use in the brown water toilets.

3. Brown Water & Composting Toilets

Today's low-flow toilets use approximately 1.6 gallons of clean, potable water per flush. Though this amount of water is far less than was used in older toilets, it is still inefficient. Two alternatives are brown water toilets, which use sterilized on-site rainwater, and composting toilets, which use no water at all.



The HRWC will have both of these technologies on site and available for public use. The brown water toilet will also have a dual flush option, allowing a 0.8 gallon flush for liquids. By incorporating these technologies alone, we expect to reduce our water use by at least 20,000 gallons per year. We will conserve even more water through the use of low flow faucets in our sinks and shower.

Herring Run Watershed Center

A Place for Children and Families to Learn About the Environment

"Growing a Green Building" involves the complete renovation of a 3000 sq. ft. former bakery into a state-of-the-art watershed education center. Following U.S. Green Building Council Guidelines, we will create a technologically "green" and handicapped accessible facility that will serve as a model for businesses and residents of northeast Baltimore City and much of Baltimore County. Along with being one of the first LEED™ Silver projects in Baltimore City, our building will be...

- ❖ An attractive and functional space for staff, visitors, and volunteers in which to carry out the environmental mission of HRWA;
- ❖ A community asset that will be available to neighborhood groups, non-profit organizations, and others;
- ❖ A sustainable building that will be efficient to operate and that will illustrate green building technologies that are adaptable to Baltimore row-house construction and renovation.
- ❖ An environmental education center offering after school programs for children and their families, day camps, and seminars on many topics, including building sustainable communities.



Beyond the Building

1. Native Landscaping

Replacing impervious surfaces such as concrete and asphalt with living plants reduces stormwater runoff and helps alleviate the urban heat island effect.

The concrete sidewalks surrounding the HRWC will be replaced with reclaimed street cobbles to allow rainwater to soak into the ground. In addition, native trees and shrubs will be planted in several locations to capture rainwater, shade our building and sidewalks, and add color and softness to an urban street corner.

2. Green Power

Most of the power that is generated for Baltimore City and County comes from burning coal, a non-sustainable and dirty energy source. To help offset our building's impact on the environment, we plan on purchasing 100% of our building's power from local wind farms.



Energy Savers

1. Low-E Windows

Low-E or low-emittance windows are coated with virtually invisible metal or metallic oxide layers that reduce non-solar heat loss or gain by suppressing radiative heat flow. A typical type of low-E coating is transparent to the solar spectrum (visible light and short-wave infrared radiation) and reflective of long-wave infrared radiation.

The HRWC will use low-E, double glazed (paned) windows and doors throughout the facility, allowing in the maximum amount of visible daylight while minimizing heat gain in the summer and heat loss in the winter. This will result in a savings of approximately 30% in heating and cooling costs (compared to single pane, aluminum frame windows).

2. Natural Daylighting

Maximizing the amount of daylight entering a building gives an indoor space a more open and natural feel and can greatly reduce the need for indoor lighting, which, in turn can reduce energy costs and eyestrain.

All work spaces within the HRWC will have ample daylighting thanks to numerous windows and glass doors as well as 3 skylights, 3 solartubes, and 20 sq. feet of glass floor. Awnings will limit southern and western exposure during the heat of the day.

3. Tankless Hot Water Heater

Conventional hot water heaters are second only to furnaces and air conditioners in energy consumption, accounting for about 19% of total home energy use. A tankless or on-demand hot water heater only heats water at the moment it is needed rather than keeping a large reservoir of water heated at all times.



The HRWC will use a tankless hot water heater for all hot water needs throughout the facility, resulting in up to a 35% savings compared to a conventional water heater.