



A Franklin County Rain Garden Initiative

On October 17th a meeting was held to discuss initiating a regional educational and technical movement for rain gardens within Franklin County. Representatives from Franklin Soil and Water, City of Columbus (Dept. of Rec. & Parks, Dept. of Public Utilities, and Columbus Green Team), City of Westerville, OSU Extension, NRCS, RC&D Council, and FLOW met to discuss options and most effective ways to start a regional approach to educating and promoting rain gardens.

A rain garden is a low landscaped area in a yard or community area that collects storm water from rooftops, driveways, sidewalks, or streets which would normally flow into storm drains that empty directly to our streams. It is planted with native, deep-rooted perennials that allow rain water to seep naturally into the ground. Benefits of this conservation practice include: reducing storm water runoff, increasing infiltration, providing a source of food and cover for wildlife, improving water quality of streams, and preventing pollutants entering streams.

Clean water, beautification, and community engagement are three goals of this approach. "An installation component will be very

important in the near future, with the goal of implementing rain gardens on public properties to help show landowners, local governments, residents, and organizations what rain gardens look like and how they can be beneficial," said Stephanie Suter of Franklin Soil and Water. The group plans to provide education, technical assistance, and planting and soils information to interested persons. Cost-sharing is a potential component, too, with research being done to find out how to best fund this option. Planning is in the beginning stages. The group will meet again next month to further develop ideas and tasks to be completed.



Rain garden at Homestead Park in Washington Township

Engineering Short Courses

Two short courses will be presented on December 11th and 12th by Phil De Groot, Ph.D., P.E. and Michael Menoes, Ph.D., P.E. of Hydrosphere Engineering. The Day 1 course is Calculation of Storm Water Hydrographs. The objective is to calculate storm water hydrographs which provide realistic estimates of runoff for various average return periods. Day 2 covers Hydraulic Design of Storm Water Detention Basins. The objective of this course is to design a detention basin which will provide treatment of storm water

runoff, prevent increased downstream erosion and flooding, and be easy to maintain. Each course will provide 6 Professional Development Hours for engineers. These two short courses are designed for Professional Engineers, engineering interns, and other professionals who want to learn or improve their knowledge of the techniques and calculations related to the management of storm water quantity and quality. Both courses will be held at the Division of Wildlife office on Dublin Road in Grandview Heights and will cost \$160 each. For more information about these courses, presenters, and to register go to www.hydrosphere-engineering.com and click on "Continuing Education". Or call Michael Menoes at 330-721-2722 or mike@hydrosphere-engineering.com.

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Stream Resource Geo-database

We are particularly proud of our nationally-recognized drainage mapping project, although it may be the most difficult to explain. Geographic Information Systems (GIS) have allowed the integration of vast amounts of data with finely detailed mapping. Over the last five years Franklin Soil and Water staff members have created a GIS geodatabase by mapping most of the tributaries, rivers, streams, and ditches in Franklin County including field verification of the exact locations of storm drain outlets, septic outlets, drainage tiles, bridges, and culverts. With support from our partners, we can finish the year's worth of remaining work incorporating this field data into the geodatabase to be accessed and used in community and watershed projects

Mapping of stormwater systems, including receiving streams, is required by the National Pollutant Discharge Elimination System (NPDES) for most municipalities. But mapping is just the starting point. Information is vertically integrated so that different data can be shown accurately on one aerial photograph, allowing municipal and county employees to see how storm drain systems, sanitary sewer systems, road drainage, retention ponds, and agricultural drainage intersect, interact and ultimately affect the natural hydrology. Because all flowing water is given directionality, spills and other pollution discharges can be mapped and tracked to possible sources. Whether it is responding to a citizen complaint or delineating pollution "hot spots" for better management, seeing the route water takes will save countless staff hours. Drinking water source protection may become another beneficiary of this ability to model water flow.

If your community would like assistance with accessing or utilizing updated information, please contact Jeff Pierce at

Conservation Easements as Stormwater BMPs

Does a portion of your property contain floodplains, wetlands, or have significant habitat for wildlife? If so, you should consider placing it into permanent protection by establishing a Conservation Easement with Franklin Soil and Water. Often used as a non-structural post-construction BMP, conservation easements are a great way to provide open space and reduce the impacts that runoff may have on local rivers and streams.

A Conservation Easement is....A restriction placed on the deed of a piece of property to protect its natural resources in perpetuity while still allowing the landowner to own the land. A conservation easement constitutes a legally binding agreement that prohibits certain land uses and types of



development from taking place and can be tailored to meet the needs of individual landowners. They are publicly recorded and give the holder, in this case Franklin Soil and Water, the responsibility to monitor and enforce those restrictions imposed by the easement. Landowners also retain their right to privacy and are not required to allow public access.

A Conservation Easement is not....An area to be used for active recreation such as soccer or baseball fields, and typically cannot be used to house storm water structures such as retention and detention basins.

For more information on Conservation Easements visit our website at www.franklinswcd.org or contact Kyle Wilson at 614-486-9613 ext. 128.

Now Available from the Center for Watershed Protection

Manual 3: Urban Stormwater Retrofit Practices

This manual outlines the basics of retrofits, describes the 13 unique locations where they are found, and presents rapid methods to find, design and deliver retrofits to meet a wide range of sub watershed objectives.

It also contains updated costs for retrofit practices, new pollutant removal data for storm water treatment options, a design point method to estimate individual retrofit removal rates, and practical tips to support the design, permitting and construction of retrofit projects.

In short, the manual provides all the resources needed to develop an effective local retrofit program. It is available as a free download. A hard copy will be available soon. To download your copy visit the Center for Watershed Protection at www.cwp.org.

Using Native Plants

“Use native plants” is a widespread environmental catchphrase today, but often misunderstood. Sometimes our good intentions can lead to unexpected results. When using “native” species, physical and biological parameters are important considerations. A good starting point is to identify your local eco-region. Locate your eco-region at: http://www.epa.gov/wed/pages/ecoregions/ohin_eco.htm.

Eco-regions are large units of land or water that contain geographically distinct assemblages of species, natural communities, and environmental conditions.

These regions are useful in conservation planning and integrated ecosystem management, an ultimate goal of most federal and state resource management agencies.

Using biological criteria as a planning tool makes more sense than using political jurisdiction lines such as county, state, or national boundaries.

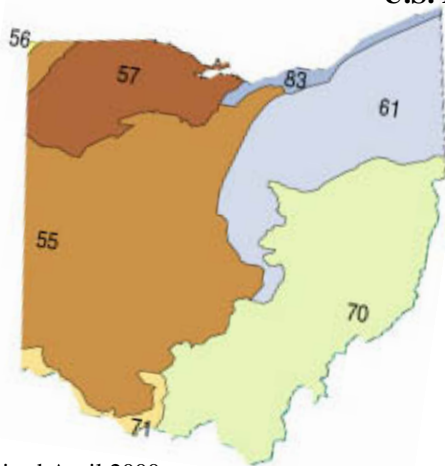
There are four major subdivisions identified in Ohio, the Eastern Corn Belt Plains, Huron/Erie Lake Plains, the Erie Drift Plain, and the Western Allegheny Plateau. Minor components occur along the Ohio River and northern Ohio. Franklin County is located in loamy, high lime, glacial till of the “Eastern Corn Belt Plains” eco-region.

Knowing your eco-region is imperative to determine which species is best for your site. An Ohio native may be native only to a specific eco-region within the state. Recognized reference materials and lists of herbarium records have aided in the compilation of local species lists for geographic locations. A species list for wetland restoration with eco-region reference is located at the website: http://www.epa.state.oh.us/dsw/wetlands/Characteristic_Plant_Species.pdf

Site specific use of a species must also be considered. The selected species should have the appropriate water budget and physical parameters such as sunlight or shade, and be used in the proper species assemblage if a natural balanced community is desired.

There are many wide-spread native species that span eco-regions and can be widely used, but it’s important to be aware of local variations. The use of a non-specific genotype of a native species can weaken local gene pools adapted to regional conditions. That adaptation could mean the long term survival of the species. The discovery in central Ohio of a local variety of American elm (*Ulmus americana* “Delaware”) and other local variants tolerant to Dutch elm disease means we may again see these magnificent trees throughout our forests and lining city streets.

Level III Eco-regions of Ohio U.S. Environmental Protection Agency



-  [55. Eastern Corn Belt Plains](#)
-  [56. S. Michigan/N. Indiana Drift Plains](#)
-  [57. Huron/Erie Lake Plains](#)
-  [61. Erie Drift Plain](#)
-  [70. Western Allegheny Plateau](#)
-  [71. Interior Plateau](#)
-  [83. Eastern Great Lakes and Hudson Lowlands](#)

Revised April 2000

Save the Date!

The 6th Annual Stormwater and Erosion Control Expo will be held on March 13th, 2008 at the Longaberger Alumni House adjacent to the Fawcett Center on Olentangy River Road in Columbus. More information on speakers and the agenda will be available soon on our website at Franklinswcd.org. Individuals or organizations interested in exhibiting or sponsoring the event can contact Martha Gilson at Martha-Gilson@franklinswcd.org or download a registration form at www.coe-sceppo.org. We hope to see you there!



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BMP Review: Stormwater planters

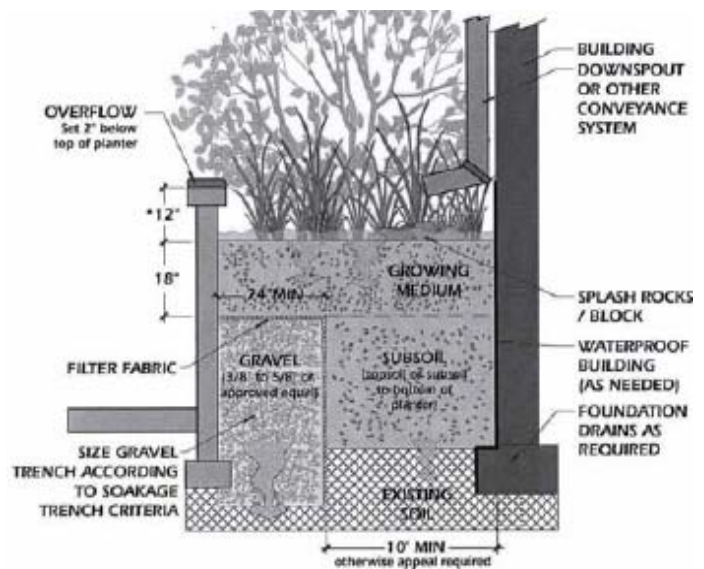


Source: City of Portland, OR

Stormwater or foundation planters are an on-site retrofit practice useful for treating rooftop runoff in highly urban areas, such as a central business district. Designed to treat fairly small drainage areas they can easily be worked into municipal or corporate projects to create an infiltration area within a hardscape such as a plaza, courtyard or streetscape.

They are confined planters that store and/or infiltrate runoff through a soil media to reduce runoff volumes and pollutant loads.

They can be designed either as infiltration planters to allow runoff to first filter through the soil then infiltrate down through existing soils or they can be designed as filter planting boxes where a lining or compacted soil prevents infiltration. In the latter case, water filters through the soil to a perforated under-drain and discharges to a storm drain system. Since this system incorporates an impervious liner it can be installed right next to a building. Both designs temporarily store water above the planter soil allowing a slow release. Stormwater planters should be installed at or above ground level and sized for water to drain out within 4 hours. Plants should be selected that are tolerant to periods of drought and flood.



Urban Subwatershed Restoration Manual 3, Appendix F. Center for Watershed Protection

Connecting People with Natural Resources