



## Urban Forestry Turns over a New Leaf

*Justin Freedman, Staff Scientist*

Before the everyday citizen started going green by bringing their own canvas bags to the grocery store and installing rain barrels at their homes, the landscaping and urban forestry industries were referred to as the Green Industry. Unfortunately, this label was based purely on spectral merits (green leaves), as many standard industry practices were anything but ecologically friendly. Excessive irrigation, fertilizer and pesticides often used by Green Industry workers keep residential, commercial and golf course landscapes lush and beautiful, while the health of wetlands, estuaries and reefs suffer.

However, some efforts are now being made by forward-thinking city foresters, arborists and landscape professionals, as well as state and federal agencies, to reverse this trend and help the green industry “go green.” Local green efforts include adopting fertilizer standards and promoting xeriscaping.

### Fertilizer standards

Improper or excessive fertilization of landscapes often results in nitrogen and phosphorus being washed into waterways. These excess nutrients have detrimental effects on wetlands and Florida’s coastal waters. Many counties have imposed strict limits on the use of fertilizer, including bans on using fertilizer during rainy season, limits on the percentage of phosphorus allowed in fertilizer and the mandatory use of slow-release fertilizer. Many urban foresters, public works departments and landscape professionals have undergone training and certifications programs from groups like the University of Florida Institute of Food and Agricultural Sciences. These programs promote proper use of fertilizers and pesticides in order to improve the health of Florida’s water resources.

Participation in groups like the Broward Everglades Working Group, with which E Sciences has been actively involved, have been at the forefront of developing industry and public support for these initiatives and to act as advocates to nursery owners and landscape professionals to incorporate best management practices in their businesses.

### Xeriscaping

Xeriscape principles were once thought of as desert landscapes with scattered cacti amidst a sea of pebbles and sand. Here in Florida, a xeriscape yard can be as lush and green as a water-hungry yard when certain native plants are used. More and more state, county and city programs are promoting environmentally friendly landscapes using drought-tolerant plants as a water saving solution, especially as water allocations for new projects become harder and harder to obtain.

Many South and Central Florida communities are taking a lead in incorporating principles of xeriscape into their landscape code. Broward County promotes xeriscape in its County Code of Ordinances. E Sciences recently secured a grant to update the City of Dania Beach’s Landscape Code to include new provisions that further promote xeriscaping by offering reduced landscape irrigation requirements and other incentives.

*For more information regarding E Sciences’ Urban Forestry services, contact **Michael McCoy** ([mmcroy@esciencesinc.com](mailto:mmcroy@esciencesinc.com)) or **Justin Freedman** ([jfreedman@esciencesinc.com](mailto:jfreedman@esciencesinc.com)).*



## Additional Economic Opportunities for Brownfield Sites

**Nadia Locke, P.E.**, based in E Sciences' Fort Lauderdale office, recently presented at the 11<sup>th</sup> Annual Florida Brownfields Conference and Exhibition in St. Petersburg Beach. Her presentation, *Additional Economic Opportunities for Brownfield Sites*, provided a look at complementing traditional Brownfields incentives with incentives from other environmental programs administered at the federal, state, and local levels. By demonstrating that a redevelopment project meets the intent of the broad objectives of other parallel programs (such as Florida's Urban Stormwater and Coastal Management Programs, and the goals of energy efficiency), additional incentives can be leveraged. Today's funding challenges call for diverse and creative approaches to "connecting new dots" which will exponentially enhance economic and environmental urban revitalization opportunities.



### *Did You Know? E Sciences Works in a Brownfield Every Day!*

*In 2008, E Sciences moved their flagship office from a distressed federal hubzone area of Orlando, to make way for the new Orlando Events Center. The company was committed to staying within the Orlando Brownfield Area (DEEDS BF 480401000) and renovated the historic Knox-Bacon Building (established 1888) for their new corporate headquarters, located at 34 E. Pine Street in the heart of Orlando's vibrant downtown historic area.*

*Photo: E Sciences Headquarters at 34 East Pine Street in Downtown Orlando, Florida (Inset: historical photo of property circa 1911.)*

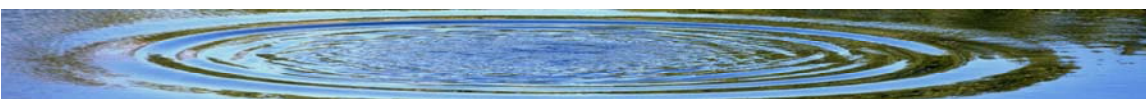
## New Stormwater Treatment Rule

Through a collaborative effort with the public and private sector, the Florida Department of Environmental Protection (FDEP) has been developing a new Statewide Stormwater Treatment Rule. Over the past decades, Florida has been a pioneer in stormwater treatment, perhaps out of necessity. Florida receives over 50 inches of rainfall each year, nearly 50% higher than the national average. Nutrient enrichment from urban runoff has caused many Florida water bodies to be below water quality standards. The new Statewide Stormwater Treatment Rule is designed to increase the required level of stormwater treatment before pollution can further impair our lakes, rivers, and oceans.

In 1999, the Florida Watershed Restoration Act was enacted leading to the implementation of Florida's water body restoration program and the establishment of Total Maximum Daily Loads (TMDLs). A TMDL is the maximum amount of a specific pollutant that can be discharged to a water body while maintaining water quality standards. A TMDL must be established and implemented for all impaired waters – water bodies or water body segments that are not currently meeting their applicable water quality standards. Since the program began, over 2000 impairments have been verified in Florida's surface waters with nutrients identified as the major cause of impairments. Additionally, nutrient enrichment of ground waters and springs has been recognized as a major concern in Florida.

To address the growing problem of nutrient enrichment of Florida's surface and ground waters, a number of initiatives have been undertaken by DEP, the WMDs, and the Florida Department of Agriculture and Consumer Services. One such initiative is the Statewide Stormwater Treatment Rule which will increase the level of nutrient removal required of stormwater treatment systems serving new development. This rule will be based upon a performance standard that the post-development nutrient load will not exceed the nutrient load from natural, undeveloped areas.

E Sciences has helped our clients to meet their PLRG obligations and reduce their pollutant contributions. If you need assistance in understanding your TMDLs, or need to improve your stormwater treatment system to meet the new statewide rule requirements, E Sciences can help with all your stormwater needs. Please contact **Robert Potts** at ([rpotts@esciencesinc.com](mailto:rpotts@esciencesinc.com)) for additional information.



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