

## STORMWATER RESOURCES FOR PHASE II MS4 PROGRAMS

Operators of regulated Phase II MS4s must develop a stormwater management program (SWMP) that includes best management practices (BMPs), with measurable goals, to effectively implement the required six minimum control measures. To assist in this process, the following resources are highlighted:

EPA's NPDES Stormwater Web Site (<http://cfpub.epa.gov/npdes/stormwater/munic.cfm>) includes a wide variety of helpful materials for local stormwater programs.

- **Public Education and Outreach:** Perform educational outreach regarding the harmful impacts of polluted stormwater runoff.
  - The University of Central Florida Stormwater Management Academy serves as the state's clearinghouse for stormwater education. Web site: [http://stormwater.ucf.edu/public\\_education.asp](http://stormwater.ucf.edu/public_education.asp)
  - **Stormwater Education Tool Kit (SET)** - The Stormwater Education Toolkit (SET) contains thousands of educational products organized by target audience into three volumes – 1. General Public; 2. Business/Industry and Government; 3 – Youth. Each toolkit volume contains digitized educational materials in Adobe .pdf format that can be opened with Adobe Acrobat Reader. Available at: <http://stormwater.ucf.edu/toolkit/index.htm>
  - Flash videos on Pet Waste and Erosion and Sediment Controls that can be run on local cable access channels are available at [http://stormwater.ucf.edu/research/H2O4U\\_p3\\_puppy\\_videos.htm](http://stormwater.ucf.edu/research/H2O4U_p3_puppy_videos.htm)
  - **The TAPP - Think About Personal Pollution** Campaign helps educate individuals on ways that small personal changes in home and yard practices can help keep local lakes, sinks and streams cleaner. Includes award winning television and radio PSAs that can be customized for a specific MS4 program: <http://www.tappwater.org/>
  - DEP's Stormwater/NPS Management Program has developed numerous public education materials which are available at <http://www.dep.state.fl.us/water/nonpoint/pubs.htm>
- **Public Participation/Involvement:** Comply with State and local public notice requirements and encourage other avenues for citizen involvement.
  - Stormwater utility creation: One of the most important components of a good local stormwater program is a dedicated funding source since stormwater does not compete well against police protection, fire protection, social services, and other community needs during the budget process. A dedicated funding source such as a stormwater utility is the solution and is authorized by Section 403.0893, Florida Statutes. The Florida Stormwater Association, in cooperation with DEP, developed a manual on creating stormwater utilities which is available at <http://www.florida-stormwater.org/manual.html>. Information on stormwater utilities is also available at <http://stormwaterfinance.urbancenter.iupui.edu/>
  - Children's Water Festivals are an excellent way of teaching students and their parents about how they can reduce the impacts of daily activities on stormwater pollution. For information on conducting one, go to: <http://stormwater.ucf.edu/toolkit/vol3/Contents/pdfs/Water%20Festival%20Manual/CWF.pdf>

- Some of our local programs have established “Green Business” programs to target stormwater pollution reduction from specific businesses such as restaurants, pressure washing, lawn care, etc. For more information on Cocoa Beach’s program see <http://www.cityofcocoabeach.com/greenbusiness.htm>
- EPA’s web site includes a variety of materials on increasing public involvement in local stormwater programs: [http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min\\_measure&min\\_measure\\_id=2](http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=2)
- To reduce the impacts of stormwater discharges from industrial operations into local waters or the MS4 system, the local program should create an inventory of industries within the community that may need a NPDES Stormwater Associated With Industrial Activity permit that they share with DEP stormwater staff. Sadly, many industries have not obtained these permits and DEP can assist the local stormwater program in reducing impacts of these discharges if DEP knows who they are. For more information about stormwater requirements for industrial activities please see <http://www.dep.state.fl.us/water/stormwater/npdes/industrial1.htm>.
- **Illicit Discharge Detection and Elimination:** Implement a plan to detect and eliminate any non-stormwater discharges to the MS4 and create a system map showing outfall locations.
  - Storm sewer stencil programs are a good way to remind citizens that only stormwater should go into stormwater systems. For more information about setting up such a program go to <http://www.siue.edu/OSME/river/stenciling/howto.html><http://www.siue.edu/OSME/river/stenciling/howto.html>
  - Students can initiate such programs as seen at <http://www.greatswamp.org/Education/TeachersGuide/A-6.htm>
  - EPA’s web site has a variety of information on Illicit Discharge programs which is available at [http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min\\_measure&min\\_measure\\_id=3](http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=3)
- **Construction Site Runoff Control:** Implement and enforce an erosion and sediment control program for construction activities.
  - Florida’s Environmental Resource Permitting program, implemented cooperatively by DEP and the WMDs, provides local stormwater programs with an effective program to reduce impacts from construction site runoff. A local permitting program is not required. However, the local stormwater program needs to conduct inspections to assure that all of the BMPs in a construction site Stormwater Pollution Prevention Plan are being properly implemented and maintained. The local program can either take enforcement action if stormwater problems exist at the construction site or can call the appropriate WMD to have them conduct an inspection and take enforcement actions
  - Florida’s local programs need to assure that their local ordinances assure that a Florida ERP is obtained before any construction begins or before any local building or grading authorizations are provided. Furthermore, they should consider implementing enforcement tools such as Administrative Fines and Stop Work Orders in local ordinances since these very effective compliance tools are not available to DEP and the WMDs.

- Local programs need to be sure that their inspection staff is properly trained, whether they are stormwater inspectors or building inspectors with stormwater BMP inspection responsibilities. DEP offers the Stormwater, Erosion, and Inspector Training Program to train inspectors and local Training Teams to conduct the training program. For more information please see <http://www.dep.state.fl.us/water/nonpoint/erosion.htm>
  - EPA's web site includes a variety of information on managing construction site runoff but remember very few states have stormwater treatment regulatory programs similar to Florida. As such, local programs in many other states must establish a comprehensive program at the local level. For more information, see [http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min\\_measure&min\\_measure\\_id=4](http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=4)
- **Post-construction Runoff Control:** Implement and enforce a program to address discharges of post-construction stormwater runoff from new development and redevelopment areas.
    - Florida's Environmental Resource Permitting program, implemented cooperatively by DEP and the WMDs, provides local stormwater programs with an effective program to reduce stormwater impacts from all new development and redevelopment activities. A local permitting program is not required. However, the local program needs to help assure that all BMPs serving private and public developments are operated and maintained properly. Again, having trained local inspectors and a good local ordinance are key components of an effective local stormwater program.
    - Two publications that provided good guidance for local stormwater programs are available on the UCF Stormwater Academy Website. These are "*Institutional Aspects of Urban Runoff Management: A Guide for Program Development and Implementation*" and "Operation, Maintenance and Management of Stormwater Management Systems ." These publications can be downloaded at: [http://stormwater.ucf.edu/research\\_publications.asp](http://stormwater.ucf.edu/research_publications.asp)
    - Since stormwater problems begin with land use and site plan decisions, both of which are determined by local government comprehensive plans and land development regulations, Florida's local governments need to make sure that new development projects incorporate sustainable principles otherwise called "low impact design"(LID) or "green design". Accordingly, local government land development regulations need to specifically allow and promote LID practices such as minimize clearing of vegetation, minimize imperviousness, minimize directly connected impervious areas, pervious pavement, greenroof/cistern systems, and Florida-friendly landscaping and fertilizers. The Department of Community Affairs, in cooperation with DEP, has developed a LID model code that local governments can use to revise their land development regulations which is available at <http://www.dca.state.fl.us/fdcp/dcp/springs/index.cfm>. In addition, DEP, in cooperation with local governments and watershed stakeholders, has developed a model Florida-friendly landscaping ordinance that assures that all new landscaping is based on FFL principles, all irrigation systems are built to code, all landscape workers are properly trained on the Green Industries BMPs, and that only Florida-friendly fertilizers (as required by DACS Urban Turf Labeling Rule) are used. These materials are available at: <http://www.dep.state.fl.us/water/nonpoint/pubs.htm#URBAN%20POLLUTION%20PREVENTION>

- **Pollution Prevention/Good Housekeeping:** Implement a program to reduce pollutant runoff from municipal operations and properly and perform staff pollution prevention training.
  - To assure that local staff is trained properly on the operation and maintenance of stormwater systems, the Florida Stormwater Association, in cooperation with DEP, has established a Stormwater Operator Training Program. For more information please visit <http://www.florida-stormwater.org/trainings.htm>
  - What do you do with the materials that accumulate in stormwater BMPs? Please see the guidance on this topic and associated reports (Pubs #9, 10, 11) at <http://www.dep.state.fl.us/water/nonpoint/pubs.htm#Urban%20Stormwater%20Management>
  - EPA's web site has several materials that may be of interest and use to local stormwater programs including:
    1. [Municipal Pollution Prevention/Good Housekeeping Practices Manual \(PDF\)](#): This manual focuses on control and reduction of stormwater pollution and addresses local subwatershed restoration goals and objectives.(Manual 9)
    2. [Street Sweeping/Storm Drain Cleanout Study Manual \(PDF\)](#): This manual provides information to support pollutant removal efficiencies for street sweeping and storm drain cleanout practices for Phase I and II communities in the Chesapeake Bay watershed.