## Definition

As Rankin County continues to grow, the need for clean water grows and the challenge of maintaining clean water also grows. As development occurs, natural vegetated areas are converted into paved and roofed (impervious) areas. With the increase in impervious surfaces there is an increase in stormwater runoff volume and pollution. At the same time, there is a decrease in trees, grass, and plants, which serve as natural filters; therefore, more pollutants are present and fewer are being filtered. Sources of stormwater pollution (often called non-point source pollution) are driveways, streets, parking lots, construction sites, agricultural fields, lawns, pet wastes, failing sewer systems, leaking septic tanks, and illicit discharges such as dumping waste motor oil. Pollutants of concern include but are not limited to oils, grease, sediment, fertilizers, pesticides, herbicides, bacteria, debris and litter, etc. Stormwater runoff can wash these pollutants through the stormdrain system and into local streams such as Campbell Creek, Fannegusha Creek, Pelahatchie Creek, Dabbs Creek, Steen Creek, and Richland Creek. **Stormwater runoff does not flow to a treatment plant**; it flows directly into our streams and lakes. Stormwater runoff from Rankin County ultimately reaches the Pearl River and Ross-Barnett Reservoir**.**

## Stormwater Management Program

Rankin County was one of thirty-one designated cities and counties in Mississippi required by the United States Environmental Protection Agency (EPA) to develop a stormwater runoff management program. In order to better address water quality and reduce non-point source pollution to local waters Rankin County developed a stormwater runoff management program that is comprised of the following six measures: (1) public education and outreach, (2) public involvement/participation, (3) illicit discharge detection and elimination, (4) construction site runoff control, (5) post-construction runoff control, and (6) pollution prevention and good housekeeping for City facilities.

## Tips

The following is a list of tips that the general public may utilize to minimize stormwater pollution:

- Don’t dump anything down storm drains.
- Dispose of litter properly.
- Recycle
- Choose non-toxic products.
- Conserve water.
- Keep storm drains clear of debris, trash, sediment, and other litter.
- Make sure septic system is operating properly.
- Minimize the use of fertilizers and pesticides.
- Practice clean and responsible boating.
- Wash vehicles at a car wash or where water flows into the grass.

## Links

The following links provide sources of additional information related to water quality and stormwater management for preventing stormwater pollution:

- **HOMEOWNERS**

www.epa.gov/owow/nps/whatis Contains fact sheets, articles, and resources for general public and homeowners explaining what NPS pollution is and what individuals can do to prevent and reduce it. Topics include household chemicals, septic systems, and impervious surfaces.

http://msucares.com/pubs/infosheets/is1419.htm **Correct Use of Your Septic Tank:**
Contains an explanation of how a septic system works, tips for proper operation and maintenance, and the risks associated with a failing system.

http://msucares.com/pubs/infosheets/is566.htm **Control of Garden Bugs:**
Provides guidance and tips on controlling a wide variety of common garden insect pests. Lists the appropriate type of control for each insect including type and rate of application for chemical controls, as well as safety precautions and conversion rates for common measurements.

http://msucares.com/pubs/infosheets/is1580.htm **Non-Chemical Weed Control:**
Contains information on managing and eliminating undesirable plants from landscaping that do not require chemicals. Addresses many of the reasons that weeds occur in the first place, and identifies methods of addressing the source of the problem in order to avoid repeated, unnecessary use of chemicals.

http://msucares.com/pubs/infosheets/is1436.htm **Household Cleaning Products:**
Contains guidance on choosing the appropriate cleaner for a particular job. Provides explanation of the chemicals contained in common household cleaners and the dangers associated with each. Encourages use of less harmful cleaning chemicals with tips on making and using less harmful alternatives.

http://msucares.com/pubs/infosheets/is1484.htm **Lawn Mulching for Homeowners:**
Debunks several common myths concerning lawn clippings and provides common sense applications for the beneficial use of lawn clippings. Encourages the use of lawn clippings over disposal.

http://www.deq.state.ms.us/MDEQ.nsf/page/NPS_Education_Public_Outreach
**Non Point Source Education Page:**
Contains links to a variety of public education, outreach, and involvement programs that are available through MDEQ including programs for teachers, students, volunteer groups, homeowners, volunteer groups, and stormwater management officials.

- **EDUCATORS**

www.epa.gov/owow/nps/kids **Non Point Source Kids Page:**
Contains games, puzzles, interactive activities, educators' materials, and links to additional information.

www.epa.gov/owow/nps/eduinfo
Contains links to educational materials including classroom lesson plans, classroom activities, publications, and a variety of additional information for educators, including links to other websites.

http://www.deq.state.ms.us/MDEQ.nsf/page/NPS_Education_Public_Outreach
**Non Point Source Education Page:**
Contains links to a information related to a variety of public education, outreach, and involvement programs that are available through MDEQ including programs for teachers, students, volunteer groups, homeowners, volunteer groups, and stormwater management officials.

http://www.dmr.state.ms.us
The Department of Marine Resources website has a wealth of information for the general public, children, teachers, boaters, and marinas, etc. Information includes pollution prevention and marinas, non-point source pollution, stormwater runoff management and best management practices provided via the Mississippi Gulf Coast Stormwater Management Toolbox, stormwater management tools for schools, Coastal Cleanups, and workshop information for teachers.

- **CONSTRUCTION INDUSTRY**

http://www.deq.state.ms.us/MDEQ.nsf/page/epd_epdgeneral?OpenDocument
**MDEQ Stormwater Permits:**
Contains materials including stormwater permit applications, notice of intent forms, and guidance manuals for completing the applications and developing a Storm Water Pollution Prevention Plan.

http://www.deq.state.ms.us/MDEQ.nsf/page/NPS_Urban_Stormwater_Construction
**Urban Stormwater and Construction:**
Contains a narrative description of urban stormwater impacts including construction impacts. Provides links to stormwater permit information and BMP design manuals for construction.

http://www.deq.state.ms.us/MDEQ.nsf/page/NPS_Publications_Literature
**Non Point Source Pollution Literature and Publications:**

Contains links to MDEQ sponsored literature and publications on non-point source pollution targeted to the general public, construction industry, and stormwater manager.

*Better Site Design: A Handbook for Changing Development Rules in Your Community*. The Center for Watershed Protection (August 1998). This handbook was prepared for local planners, engineers, developers, and officials to help them understand development principles that can be used to create environmentally sensitive, economically viable, and locally appropriate development. See: http://www.cwp.org/.

*Low-Impact Development Design Strategies*. Prince Georges County, MD (EPA 841-B-00-003) (January 2000). *Low-Impact Development Hydrologic Analysis.* Prince Georges County, MD (EPA 841-B-00-002) (January 2000). These two documents contain a description of LID principles, programmatic considerations, design strategies and an example of an analytic and computational procedure to use in designing appropriate runoff treatment systems. The strategies document (003) was prepared for local planners, engineers, developers, and officials to describe how to develop and implement LID methods from an integrated design perspective. The hydrologic analysis document (002) is a companion technical document and it contains a methodology that can be used to estimate changes in site hydrology due to new development and also to design appropriate treatment systems to maintain the predevelopment hydrology of the site. For *Low-Impact Development Design Strategies*, see:
http://www.epa.gov/owow/nps/lidnatl.pdf.

http://www.epa.gov/owm/sw/phase2/factshts.htm 14 fact sheets covering the Small MS4 Program, the Six Minimum Measures, Permitting and Reporting, the Construction Program, and the Industrial "No Exposure" Waiver

http://www.tetratech-test.com/bmpmanual/htmfolder/index.htm A draft menu of BMPs that addresses each of the six minimum control measures and two draft model permits for small construction activities and regulated small municipal separate storm sewer systems (MS4s).

**Planning & Design Manual for the Control of Erosion, Sediment & Storm Water:**
Mississippi's manual provides technical guidance for the control of erosion, sediment, and storm water from nonpoint sources (NPDES) and for the preparation of erosion, sediment, and storm water control plans as needed. The manual is a cooperative effort by: Mississippi Department of Environmental Quality, Mississippi Soil & Water Conservation Commission and USDA Soil Conservation Service. The manual can be ordered and is also available (free) electronically at http://abe.msstate.edu/csd/p-dm/.

**Low Impact Development Manuals (Prince George County, Maryland Department of Environmental Resources, Programs and Planning Division, EPA 841-B-00-003 and EPA 841-B-00-002, 1/2000)**
Two technical manuals on Low Impact Development (LID): *Low Impact Development, an Integrated Design Approach* (EPA 841-B-00-003) was prepared by local planners,

engineers, developers, and officials. This document details how to develop and implement LID methods from an integrated design perspective. *Low Impact Development Hydrologic Analysis* (EPA 841-B-00-002) is the companion document to the LID design manual. This document contains methodology that can be used to estimate changes in site hydrology due to new development, and also to design appropriate treatment systems to maintain the pre-development hydrology of the site. Copies available free of charge from the EPA; call (800) 490-9198, or visit the web site at http://www.epa.gov/ncepihom/

- **Regulations**

www.epa.gov/owow/nps **EPA's Non Point Source Pollution Page:**
Provides links to information and resources in a number of categories including publications and information resources, funding opportunities, training and meetings, and applicable regulations.

http://cfpub.epa.gov/npdes/home.cfm
Contains fact sheets and guidance material related to the regulation of stormwater including information concerning Phase II Stormwater regulations.

http://www.epa.gov/owm/sw/phase2/final.htm A copy of the EPA regulation is available at this site