What Is Stormwater Management?

Stormwater management involves management of both water quantity and water quality for runoff in urban and suburban areas. Your community is probably already doing a number of things to manage stormwater. If nothing else, it has most likely designed plans and constructed systems to attempt to manage the problems caused by too much runoff or flooding. It may also already have in place education or ordinances for control of some stormwater pollutants such as sediment from construction sites or dumping of oil and other wastes down storm drains.

Why Is Stormwater Management Receiving So Much Attention These Days?

From a national perspective, after runoff from agriculture, the impacts of stormwater runoff are the most common reason for impairment of water quality in our streams, rivers, lakes and estuaries. The writers of the Clean Water Act and the U.S. EPA recognized the significant problems posed by storm water runoff some time ago. Metropolitan areas with a population over 100,000 (Phase I cities) have been required to have stormwater permits and management programs since 1990.

From an Alabama perspective, county by county assessments of water related environmental problems conducted by local citizens identified increased flooding downstream of urban and suburban areas as one of, if not the most frequent and serious environmental concern.

As a result of the seriousness and magnitude of stormwater impacts, regulations are scheduled to go into effect in 2003 to address stormwater management in metropolitan areas with a population of 50,000 or more, or in other areas where stormwater impacts exist or are likely to exist. This brochure is prepared to assist these communities (Phase II stormwater communities). It also may serve as a tool for communities that recognize that proactive stormwater management can help to avoid problems and expenses related to stormwater and thus should be considered even if they are not required to obtain a permit.

Front panel photo shows poor housekeeping (storage of materials in riparian zone too near stream) and disturbances in riparian zone on opposite bank of stream.

How Can I Determine If My Community Will Have To Obtain A Permit And Develop A Stormwater Management Program?

Some Phase II stormwater communities were listed in the legislation that created the stormwater program. Some were designated because the communities were in an urbanized area as identified by the 1990 census. Other communities may be listed for a variety of reasons including projected future growth, existing water quality impairments, or because they have special water quality concerns or problems (for example ongoing problems such as NPDES violations at a municipal wastewater treatment facility).

Phase II Communities Based Upon the 1990 Census

Anniston Florence
Auburn—Opelika Gadsden
Birmingham Huntsville
Columbus, GA—AL Mobile
Decatur Montgomery
Dothan Tuscaloosa

Note: Five of these cities/areas, Birmingham, Montgomery, Huntsville, Mobile and Shelby County are covered by a Phase I stormwater permit.

Potentially Designated Cities

Jacksonville and Selma

Population increases from the 2000 census could cause additional areas to be designated.

What Else Might Cause My Community To Be Designated A Phase II Community?

The Alabama Department of Environmental Management is required to develop criteria for determining which additional areas with stormwater systems and populations of 10,000 or more or population densities of 1000 or more per square mile will be required to obtain permits. The U.S. EPA has suggested criteria that will likely be included in

consideration of whether these smaller communities will be required to obtain a Phase II Stormwater permit. In cases where the community -

- Has a sensitive waters discharge
- Is a high growth area
- Is near an urban area
- Has discharges exceeding WQ standard
- Is a significant polluter
- Has poor WQ control programs

it is likely that a Phase II Stormwater permit will be required. The more of these conditions that are true, the more likely a community is to be listed.

A community that may be a candidate for requiring a permit could conceivably avoid being listed if only one or two of the above conditions exist <u>and</u> the community has in place programs or ordinances which are capable of successfully addressing the concerns. Also, by being proactive on stormwater management, communities might avoid being designated as a result of citizen requests for a community to be designated.

Phase II Communities Designated By Being Listed in the Legislation

Flint City Anniston Attalla Florence Gadsden Auburn **Autauga County** Glencoe Blue Mountain Grimes Calhoun County Hartselle Colbert County **Hobson City** Dale County Hokes Bluff Decatur **Houston County** Dothan Kinsey **Etowah County** Lauderdale Co. Lee County Prattville **Madison County** Priceville Midland City **Rainbow City** Montgomery County **Russell County** Morgan County Sheffield Muscle Shoals Southside Napier Field **Sylvan Springs** Northport Talladega County Opelika Tuscaloosa Oxford Tuscaloosa Co. Tuscumbia Phenix City Weaver

When Does A Designated Phase II City Have To Act and What Will It Have To Do To Meet Permit Requirements?

Automatically designated communities have to submit a permit application by March 10th, 2003. Other designated communities have to submit a permit application within 180 days after notification. (There may be some slack in this schedule but these dates and time frames are what your community could be held to as things stand at the present time). If the state issues a general permit and your community wishes to fall under the general permit an NOI or "Notice Of Intent" must be filed. If there is no general permit or if your community does not want to fall under the general permit it will have to submit an application for an individual permit.

The basic requirements of the Phase II permit should be considered to be the "minimum" requirements. Your community may wish to do more to prevent stormwater impacts than the permit requires. It may also decide to do more than the permit requires to monitor water quality improvements due to the stormwater program.

MINIMUM CONTROLS

- 1. Public Education and Outreach
- 2. Public Involvement/ Participation
- 3. Illicit Discharge Elimination
- 4. Construction Site Runoff Control
- 5. Post-Construction Runoff Mgt.
- 6. Pollution Prevention/Good Housekeeping for Municipal Operations

Note: In addition to these minimum control measures there may also be other requirements as established in the NPDES general or individual permit developed consistent with the provisions of §§ 122.41 through 122.49, as appropriate.

Also, your community does not have to and should not wait until the application deadline to begin stormwater management activities. Delays may only add to future problems that might have been avoided had stormwater management activities started earlier. Starting now may allow some activities to be conducted in a more organized and cost efficient manner.

What Will Be Required and What Are Some Ways to Satisfy the Requirements?

Public Education and Outreach:

- Distribute educational materials
- Inform citizens of steps they can take
- Target groups of stakeholders (schools, churches, civic clubs, environmental groups and other appropriate local groups) that your community can partner with

Public Involvement:

- Note and follow public notice requirements
- Involve citizen conservation or environmental groups
- Target key groups with education and encouragement to obtain diverse stakeholder involvement
- Establish an advisory group representing a crosssection of stakeholders and groups and individuals who bring special talents to the process

Illicit Discharges:

- Prepare stormwater system map showing all outfalls and known "hotspots"
- Enact an appropriate ordinance with enforcement provisions
- Implement a detection and elimination plan
- Implement an anti-dumping program
- Include illicit discharges and anti-dumping information in education campaign

Construction Sites:

- Develop program for controlling runoff from construction sites larger than one acre
- Implement construction site portion of the stormwater ordinance
- Conduct reviews of construction plans and inspect construction sites
- Institute a permitting program with BMPs (this might be requirements added to building permits via the stormwater ordinance)

- Implement program to receive and address complaints about building sites
- Revise subdivision regulations as needed to address flow control and erosion and sediment control

Post-Construction BMPs:

- Implement maintenance/inspection program
- Require post-construction BMP plan from the developer
- Require maintenance of BMPs
- Make preference for non-structural BMPs known to developers and if possible create incentives for non-structural BMPs
- Post-development conditions (flow, water temperature and so forth) should be as close to predevelopment conditions as possible (this should be an element of the stormwater ordinance).

Municipal Operations:

- Implement plans for eliminating preventable pollution from municipal operations
- Provide employee training needed to accomplish the pollution reduction
- Implement maintenance program
- Implement program to reduce street and highway pollution
- Implement waste disposal program
- Implement flood management program

OTHER IMPORTANT STORMWATER MANAGEMENT CONSIDERATIONS

- Prevention measures or techniques, such as using urban design to prevent stormwater impacts, are typically much more effective and less costly than applying BMPs
- Although monitoring is not specifically listed as a requirement for Phase II permit holders, some type of monitoring or accounting for water quality and water quality trends will undoubtedly be needed
- Non-structural best management practices (BMPs) are generally preferred due to lower cost and lower maintenance requirements
- Many smaller communities adjoining larger towns and cities are going to have a very hard time carrying out the requirements of a stormwater permit

and need to seek a partnership with the larger community in the form of a regional stormwater management authority

RESOURCES

Alabama NEMO Project: This project provides education and technical assistance to communities on planning, design and other measures for reducing the stormwater impacts related to urban development while addressing related quality of life issues. To arrange an introductory presentation on the NEMO concepts contact Gavin Adams at 334-394-4353 or call the ADEM Ombudsman Office at 1-800-533-ADEM.

Center for Watershed Protection: The Center for Watershed Protection has excellent technical publications on urban watershed management. Some examples of such publications include:

- Rapid Watershed Planning Handbook
- National Pollutant Removal Performance Database—2000, 2nd Edition
- Better Site Design
- Eight Tools of Watershed Protection
- Watershed Protection Techniques (Volume 1 # 2 is available on the EPA Website)

For information visit the CWP website at cwp.org

U.S. EPA Stormwater Toolbox Website: http://www.epa.gov/owmitnet/sw/toolbox/chouse/htm

Preliminary Data Summary of Urban Stormwater Best Management Practices, EPA –821-R-99-012. http://www.epa.gov/OST/stormwater/

Alabama Water Watch: The Alabama Water Watch Program is uniquely qualified to form partnerships with local communities and stormwater management authorities to promote education and public involvement in water quality monitoring. Contact the AWW program office at 1-888-844-4785 or visit the AWW webpage for information.

ADEM Stormwater Contact: Dennis Harrison, phone 334-271-7801 or e-mail ddh@adem.state.al.us

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STORMWATER MANAGEMENT AND YOUR COMMUNITY



IT'S ABOUT MORE
THAN WATER
QUALITY: IT'S
ABOUT QUALITY
OF LIFE