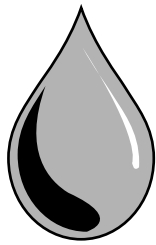




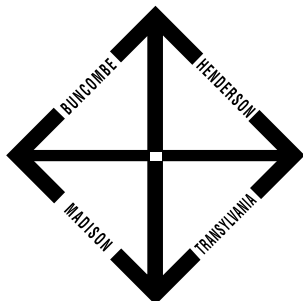
Local Stormwater Program Elements & Funding Alternatives



Stormwater Fact Sheet No. 4

This fact sheet is No. 4 of a four-part series for local government officials on stormwater runoff problems and control strategies. The series covers:

- 1) Stormwater Problems and Impacts
- 2) Control Principles and Practices
- 3) Roles and Regulations
- 4) Local Program Elements and Funding Alternatives



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Overview

The first three fact sheets addressed stormwater problems, impacts, control practices, and roles and regulations. This fact sheet describes the elements of a comprehensive local stormwater management program, including funding options.

Elements Of A Comprehensive Local Program

The required elements of a comprehensive local stormwater management program may vary considerably from one community to another. Political, social, environmental, and economic conditions vary between communities. In addition, state and federal requirements potentially impact the elements of the local program. Cities and counties may have different problems and approaches and needs which require different program elements. Typical elements of a comprehensive stormwater program are discussed below.



Figure Courtesy City of Orlando

□ Stormwater Goals and Objectives

A set of well defined goals and objectives is perhaps the most important element. Unfortunately, communities often undertake expensive construction projects or adopt stormwater control ordinances without fully understanding the problem, why action is needed, or how much control or management is required.

Goals and objectives state a community's philosophy and need and give direction to the entire stormwater program. They also serve as a benchmark that can be used to gauge the effectiveness of the program.

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- **System Inventory** – Identifies and maps the location, size, capacity and condition of the stormwater drainage system. Helps identify pollution sources such as illicit connections.

- **Hydrologic/Water Quality Studies** – Hydrologic studies examine the location, frequency and severity of flooding. Water quality monitoring helps identify specific pollutants and their sources and helps develop an effective stormwater pollution prevention and control program.



Stormwater Monitoring Can Identify Water Quality Problems

Photo Courtesy of HDR Engineering

- **Stormwater Master Plan** – Evaluates various control options and lays out a plan of action for addressing stormwater problems, issues and needs in each drainage basin. Today's master plans should address both stormwater quantity and quality impacts.

□ Policies, Regulations & Design Manuals

Numerous policy decisions have to be made when developing and implementing a local stormwater management program. These policies address the fundamental questions of “who, what, when, where and how” (e.g., who pays for the program and how?).

Stormwater regulations and ordinances are another important part of the comprehensive stormwater program. They are typically used to control runoff quantity and/or quality from new development/redevelopment. They strive to reduce the volume and peak rate of runoff and prevent and control pollutant loadings from the

site.

Design and operation and maintenance manuals provide detailed specifications for preparing stormwater management plans and designing, constructing and maintaining structural practices/facilities including pipes, culverts, channels, inlets/outlets, detention/retention basins, infiltration and vegetative practices, and other Best Management Practices. Nonstructural practices, such as pollution source reduction measures, should also be addressed by these manuals.

□ Program Administration & Funding

Adequate staff, equipment and funding are needed to administer a comprehensive local program. Many local programs are administered by staff within the public works, planning, engineering, inspections and/or other departments. Some larger communities establish separate stormwater departments, divisions or branches to carry out the program. Multi-jurisdictional arrangements or agencies can also be used.

Depending on the elements of the program, staff are needed to carry out various functions including administration, planning, capital improvements, operation and maintenance, and public education/involvement. This may require only one person in a small town or rural county, or several people in a large city that has a comprehensive program including significant infrastructure.

Equipment used in a comprehensive municipal program may include street sweepers, catch basin vacuum trucks, backhoes and other equipment to remove sediment and debris from basins and watercourses, computer hardware/software, water quality monitoring equipment, and construction equipment. A county without a storm sewer system may need very little equipment since its program may consist primarily of enforcing regulations and implementing stormwater education programs.



Utility Fees Are Typically Based On The Amount Of Impervious Surfaces.

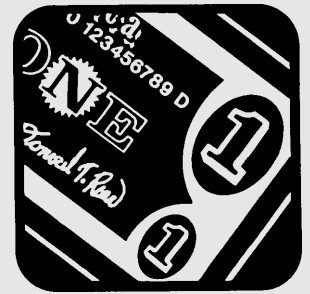
Adequate funding of the program is critical to its success and is often the biggest challenge facing stormwater managers. Past reliance on the general fund to provide needed revenues has often resulted in poorly funded programs. Stormwater utilities which charge user fees are fast becoming a popular method of funding stormwater programs. These and other funding options are listed in the shaded box.

☐ **Public Education & Involvement Program**

Public education and involvement programs are also vital to a successful stormwater program. It is important to keep the public informed about your program's goals, objectives and strategies. Many communities use citizen advisory committees to help develop and target their programs. Education and involvement programs help build support for the stormwater program which is especially needed when adopting regulations and securing adequate funding.

Stormwater managers increasingly realize that government programs with limited resources can not do the job alone. Citizens must take more responsibility for dealing with stormwater problems. Many citizens are eager to help if given the opportunity. Without a doubt, education and involvement programs represent money well spent.

Stormwater Funding Alternatives



Tax Revenues (General Fund) - Property and sales tax revenue can be used for stormwater management activities. However, stormwater programs usually lose in the budget battle for these funds.

Special Service Districts - District tax revenues can be used to provide specific stormwater services not available in other sections of a city or county.

User Fees (Stormwater Utility) - Cities and counties in NC can now charge individual properties monthly user fees based on their contribution of stormwater runoff.

Special Assessments - One-time assessments can be levied against properties in proportion to the benefit each receives from a specific stormwater project.

Powell Bill Funds - Cities can use these gas tax revenues to construct and maintain stormwater drainage systems within city street rights-of-way.

Grants and Loans - Few grant and loan funds are available for stormwater programs. Check with the state or EPA about special demonstration funds or the Rural Development Administration about funds for rural areas and small towns.

Permit and Inspection Fees - Local governments can set fees to cover the cost of permitting and inspection programs.

Impact/Facility Fees - Special local enabling legislation is needed to charge these one-time fees that are related to the impact generated by the new development project.

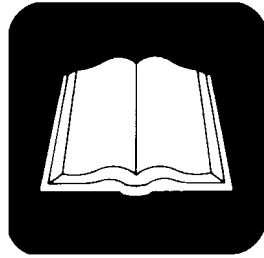
For More Information

☐ Reference Documents

- Stormwater Management in NC: A Guide For Local Officials, 1994, Land-of-Sky Regional Council. Tel. (704) 254-8131.

- Stormwater Management Guidance Manual, 1994, NC Cooperative Extension Service and NC DEHNR. Tel. (919) 515-3723.

- Funding Options for Comprehensive Stormwater Management Programs, 1992, Duke University. Tel. (919) 684-6612.



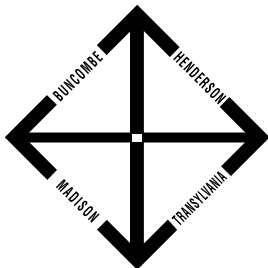
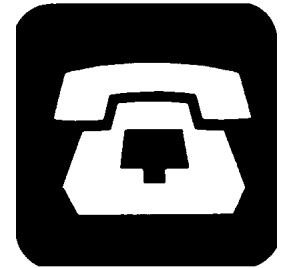
☐ Contacts

- EPA Stormwater Hotline - (703) 821-4823.

- NC DEM Stormwater Management Group - (919) 733-5083.

- Jim Schumacher, City of Charlotte Stormwater Services Manager – (704) 336-3656.

- Institute of Government, UNC-Chapel Hill – (919) 966-5381.



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