

## **An Internet Guide to Financing Stormwater Management**

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The Center for Urban Policy and the Environment (CUPE) is collaborating with the Watershed Management Institute (WMI) and the United States Environmental Protection Agency (EPA) to develop a web-based resource center for communities interested in finding ways to finance stormwater management programs. The resource center will include an annotated bibliography of existing stormwater finance materials, an online archive of selected stormwater finance publications, a guidebook that describes different stormwater management finance options, a group of case studies that outline successful finance approaches, and a page of links to other useful stormwater management web sites. The web-based resource center is being designed to guide communities through the development and implementation of stable, dedicated funding sources that will pay for the components of a comprehensive stormwater management program.

### **Background and Need**

It is well known that urban stormwater runoff is a major source of water pollution. In 1990, through the 1987 amendments to the Clean Water Act, the EPA began to regulate pollution in urban runoff and modified the NPDES permit system to require large municipalities and industries to obtain permits for discharges from their stormwater systems. In late 1999, Phase 2 of the regulatory program established a schedule that requires smaller municipalities to implement programs to control pollutants in urban runoff. These programs will be expensive.

Stormwater programs historically have been underfunded, and investments in the construction and maintenance of storm sewer systems often have been made only when money is left unspent in the public works budget at year's end. This lack of investment in many communities has led to the deterioration and failure of existing storm sewer systems and the degradation of the natural environment due to pollution from runoff. The EPA's new pollution control requirements come at a time when most communities' stormwater budgets are already strained by reductions in federal funding for local infrastructure, competition for funding with other local government agencies, and crusades against raising taxes to cover increased government spending. Local officials need information about how to develop stable sources of funding for the stormwater programs that will be required under the new regulations.

Since the 1970's when stormwater managers first began to develop runoff-based charges for financing stormwater management, experts in public works and local government finance have worked to train others in innovative approaches to program finance and management. Much of their work, however, has been published in the so-called gray literature that includes conference proceedings, technical reports, and professional journals that are not archived. As a result, much of this information never has been collected or codified and managers in many communities often spend time searching for materials that can help them in their particular situations. This project is designed to provide web site access to information from a wide variety of sources and save managers time by eliminating the need to search for and obtain other relevant materials themselves. The project will be completed early in 2001, submitted to the WaterWeb

Consortium for inclusion in the WaterWeb ring, and publicized through articles in several professional journals.

## **Annotated Bibliography**

The annotated bibliography and the archive will be divided into ten sections:

- stormwater and urban runoff manuals
- government finance manuals
- general articles about stormwater utilities
- surveys of stormwater utilities
- stormwater utility manuals
- other topics concerning stormwater utilities
- impact fees
- permit and inspection fees
- other possible stormwater management funding options
- case studies.

Materials in the stormwater and urban runoff manuals section are usually technical manuals about the setup, operation, and maintenance of stormwater control systems that only contain brief discussions of stormwater management finance methods. Resources listed under the heading government finance manuals are materials produced by government organizations that usually review several different options that communities can use to finance projects without any discussion of stormwater management specifically. The general stormwater utility articles section contains papers and presentations that provide the reader with an overview of the stormwater utility concept. The materials in the stormwater utility surveys section provide raw data and statistical information concerning existing stormwater utilities around the country while the utility manuals guide the reader through a series of suggested steps toward the implementation of a utility. The components of the stormwater utility surveys and manuals are summarized in two tables within the body of the bibliography in order to provide planners with an overview of each resource. Resources in the sixth category, other topics, pertain to sub-topics of the utility creation process like how to structure the billing system or determine the base unit charge. Materials in the impact fees section discuss the types of impact fees that can be used to fund stormwater programs, the legal issues surrounding impact fee programs, and how to determine the appropriate impact fee amount. Papers on permit and inspection fees discuss how to assess each type of fee, how much to charge, and what types of fees are the most common. Finally, the case studies discuss the specifics of individual communities' stormwater management projects. The ten resource divisions will allow readers to quickly and easily find the type of resources that they need and eliminate those resources that do not relate to the topic that they are researching. Because some of the publications fit more than one category, the publications were placed in the most appropriate category and then cross-referenced so that they can be found in all of the relevant categories. To date, the bibliography includes approximately 75 references (see Appendix A).

## **Online Archive**

The online archive will contain previously published materials concerning stormwater management financing. The materials included in the archive will be reprinted by permission of the original authors, publishers, or copyright holders as appropriate. The materials are in the process of being scanned and converted into PDF files using Adobe software in order to make the materials available to the greatest number of users and allow for easy downloading. The archived materials will be categorized in the same way as the resources in the annotated bibliography and users of the web site will be able to download archived materials using a hyperlink in the annotated bibliography listing for the particular resource or by accessing the online archive directly. To date, the permission has been received to post on-line about half of the materials included in the bibliography.

## **Guidebook**

The guidebook, *Funding Urban Runoff Programs: A Guide to Available Funding Mechanisms*, will have seven sections:

- Introduction
- Program Components and Costs
- Principles of Public Finance
- General Appropriations
- Program Fees
- Dedicated Funding Sources
- Case Studies.

The guidebook will begin by introducing readers to the importance of stormwater management programs and explaining why such programs need stable, dedicated funding sources to be most effective. The second section of the guidebook will outline the essential components of a stormwater management program and provide cost estimates for each of the major program elements. The section entitled Principles of Public Finance will discuss the funding options available to communities and discuss the equity, political acceptability, and administrative requirements of each funding mechanism. The sections on general appropriations, program fees, and dedicated funding sources will review each funding mechanism in more detail and discuss the strengths and weaknesses of programs funded using each method. The guidebook will conclude with a discussion of the strengths and weaknesses of different approaches to funding. The case studies section will summarize the programs of several communities and provide readers with a summary table that includes the basic information about each community's program for easy comparison.

## **Case Studies**

The case studies portion of the website project will provide a more detailed analysis of the stormwater management funding mechanisms used in a set of communities. The communities were chosen based on the types of funding mechanisms used, the length of time funding mechanisms have been in place, the region of the United States in which the community is

located, and the population served by the stormwater management program. Emphasis is placed on smaller communities and regional programs with dedicated funding sources in order to provide information that is most applicable to the communities that are included in Phase II of the NPDES permit system.

### **Links to Other Stormwater Management Web Sites**

The links developed for this project will allow users to find additional information about stormwater management, the NPDES Phase II permit requirements, and public finance mechanisms. Users will be able to view the web pages of other communities' stormwater management programs, order additional materials concerning stormwater management and funding, and contact professional organizations that specialize in topics related to stormwater management.

*An Internet Guide to Financing Stormwater Management* will give community leaders the information they need to create a stable, dedicated funding source for stormwater management and allow for the development of a comprehensive watershed management plan by giving planners the opportunity to look beyond the current fiscal year. Community leaders have often been frustrated by the uncertainty associated with obtaining funding from the general appropriations budget. The development of a dedicated funding source for stormwater management will eliminate the need for stormwater management supporters to spend time and energy each year campaigning for money from the general fund and give managers additional time to develop comprehensive stormwater management plans that look five, ten, or twenty years into the future and ensure the development of the necessary stormwater management facilities. Users of this website will learn the differences between various funding mechanisms, understand the implications of different funding choices on various groups of rate-payers, and learn how to structure a stormwater management program that is legally defensible and meets the unique needs of their communities.

## **Appendix A: Materials Included in the Annotated Bibliography**

### **General Manuals About Stormwater and Urban Runoff**

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