

A RECOMMENDED FUNDING APPROACH FOR A MUNICIPAL STORMWATER PROGRAM

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Abstract. To comply with its NPDES MS4 Permit (the first NPDES MS4 Permit issued by US EPA Region IV) and a variety of other local requirements, the City of Venice must nearly double its existing stormwater budget. Accordingly, Venice is in the process of setting up an integrated stormwater funding program that utilizes the general fund, a stormwater utility, private system permit fees, stormwater charges, special assessments, and outside grants to meet its financial needs. The integrated funding approach is equitable, respects local political issues, provides flexibility, and maximizes outside grants and loans.

INTRODUCTION

The City of Venice is a small (5,000 acres), coastal municipality located in Sarasota County in Southwest Florida. Venice is situated on the Gulf of Mexico approximately 90 miles south of Tampa and 50 miles north of Fort Myers. The City has a population of 16,922 permanent residents (1990 census data) which expands to over 30,000 during a typical winter season.

Because the City is located in Sarasota County (pop. > 100,000), it was a co-applicant on the County's National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit Application. The final permit for Sarasota County became effective on January 1, 1995. Furthermore, to comply with the requirements of the City's Comprehensive, a city-wide Stormwater Management Plan was developed in early 1994.

Due to the requirements set forth in the City's NPDES MS4 Permit and Stormwater Management Plan, the City's stormwater expenditures have more than doubled. Accordingly, Venice is in the process of setting up an integrated stormwater funding program that utilizes the general fund, a stormwater utility, private system permit fees, stormwater charges, special assessments, and outside grants.

Many Georgia municipalities may be facing similar funding dilemmas in the near future. This paper presents the background and justification for the proposed funding mechanism as well as recommendations for Georgia municipalities when implementing stormwater management

programs. The Venice funding program is presented in this paper as a case study. Any Georgia municipality looking to set up a utility can use the concepts presented as guidelines. However, each municipality is different; therefore, a unique funding and utility approach should be evaluated for individual communities.

BACKGROUND

Stormwater in Georgia. Due to point source treatment advantages, non-point source pollution is rapidly coming to the forefront as the primary contributor to surface water pollution. The water quality of the Chattahoochee, Flint, and Savannah Rivers is of major concern as non-point source pollution has contributed significantly to quality degradation. Furthermore, coastal non-point pollution and its impacts on coastal waters and estuaries is becoming increasingly noticeable. Coastal estuaries are one of the most productive natural systems on earth, and without proper protection, their vitality can be easily impacted.

Urbanization in Georgia adversely impacts both stormwater quantity and quality. As Georgia has grown, streets, sidewalks parking lots and buildings now cover the soil. In addition, the growth has removed much natural vegetation and compacted the soil. As a result, Georgia's historical land surface has become more impervious, thereby increasing the quantity of runoff.

This quantity problem often results in drainage systems that maximize local convenience and protection, without considering other important factors such as off-site damage from accelerated flow, water pollution, or even the loss of a water resource. Other quantity-associated problems include sediment deposition, increased channel erosion and more frequent flooding.

In addition to the quantity aspects, growth within Georgia has also impacted water quality. In undeveloped areas, many physical, chemical and biological processes interact to recycle most of the materials found in stormwater. However, as urbanization increases, these processes are more intensely disrupted. Leaves, litter, animal wastes, oil, greases, fertilizers and pesticides are washed off by rainfall and

carried by stormwater to Georgia's lakes, rivers, and bays. These materials can create high pollutant loadings of sediment, oxygen demanding substrates, nutrients, heavy metals, petroleum hydrocarbons, coliform bacteria, and excessive fresh water.

Improved stormwater management will reduce the impacts of these pollutants in new developments and in older developments have systems that were designed primarily for drainage control.

Venice History and Local Stormwater Issues. The City of Venice has a very old stormwater conveyance system. The system was constructed in 1926 for the primary purpose of flood control and has performed satisfactory in that respect.

As with most of South Florida, the Venice topography is relatively flat with elevations ranging from sea level to 20 feet. Venice receives an average of 50 inches of rain per annum with more than two-thirds of it occurring during the summer. Also, by being located in a tropical climate, hurricanes and tropical storms continually pose the threat of heavy rainfall.

Venice also has some unique water quality issues. Since Venice relies heavily on tourism and seasonal visitors for revenue, maintaining a pristine environment and coastline is important for continued tourism dollars. For example, Venice recently completed the first phase of an \$18 million beach nourishment project. As a result, reducing stormwater impacts in Venice waterways and the Gulf of Mexico coastal waters is one of the major reasons for placing a heavy emphasis on stormwater management. As a result, comprehensive, local stormwater management is directly related to the economic livelihood of the City.

Stormwater Management Plans. In recent years, many municipalities have developed stormwater management plans that define the responsibilities necessary to limit many of the adverse stormwater impacts previously discussed. These plans take various forms; however, at the minimum, they usually quantify the existing system and provide recommendations for future improvements.

The City of Venice developed a stormwater master plan in early 1994 (ATM, 1994). The plan quantified the existing system, identified areas needing improvements, and recommended additional Best Management Practices (BMP's) to reduce pollutant loads into Venice waterways. The increased costs associated with implementing the plan were also presented. Since the plan was developed per the State requirements, it has legal authority and must be implemented.

Sarasota County NPDES MS4 Permit. As briefly discussed previously, the City of Venice, along with the County, three other municipalities, and the Florida Department of Transportation (FDOT), was a co-applicant on the Sarasota County NPDES MS4 permit application. Currently, the State of Florida does not have an authorized NPDES program; therefore, the permit application was submitted to US EPA Region IV. The Sarasota County NPDES MS4 permit became effective on January 1, 1995 and was the first permit issued by Region IV.

The permit requirements for the co-applicants are extensive. The major required components of the permit include:

- O&M requirements for structural controls, stormwater collection system, and public streets;
- Controlling discharges from areas of new development and significant redevelopment;
- Managing flood control projects and monitoring water quality of stormwater discharges;
- Monitoring discharges from facilities not covered by NPDES industrial stormwater permits;
- Developing management programs to control discharges associated with pesticides, herbicides, and insecticides;
- Developing programs to control and/or eliminate illicit discharges and improper disposal;
- Monitoring industrial and high risk runoff;
- Managing construction site runoff; and
- Preparation of annual reports for submittal to EPA.

Additionally, the permit mandates that municipalities have the funds to comply with all the requirements of the permit, thus forcing municipalities to develop dedicated funds for stormwater management.

FUNDING PLAN

Financial Needs. Improvements mandated by the City's Stormwater Management Plan and the NPDES MS4 permit have nearly doubled the City's stormwater budget. Currently the City spends \$490,000 per year on operation and maintenance and \$30,000 on capital improvements for a total annual budget of \$520,000. The proposed funding plan includes an annual budget of \$655,000 for operation and maintenance and \$345,000 on capital projects for a total annual stormwater budget of \$1,000,000.

The increase in the operation and maintenance budget results primarily from the NPDES Permit requirements. While the NPDES MS4 permit is a federally mandated program, EPA does not provide any funding mechanism for assisting County and municipal governments with

implementing its program. Therefore, municipal governments are responsible for providing funds for their program. Capital budgeting increases are needed for improvements in three specific areas: (1) retrofiting pipes which have exceeded their service life, (2) rerouting coastal outfalls (a requirement of the beach nourishment permit), and (3) improving the stormwater conveyance system in the City's industrial area.

Previous Funding Mechanism. Like most municipalities, historically, City stormwater funds were provided from the City's General Fund, which covered the operation and maintenance of the stormwater program (approx. \$490,000). Additional monies were also generated from a portion of the gas and sales taxes (approx. \$30,000), which typically covered stormwater improvements associated with road repair.

To maximize the small amount of monies available for capital improvements, only minor drainage improvements have been completed to date. As a result, areas now remaining to be improved require significant stormwater improvements. Accordingly, the existing level of funding for capital improvements is no longer adequate and a new funding source must be developed.

Proposed Funding Program. Because of its lack of sufficient funds for future stormwater management, the City realized the need to develop a new, comprehensive funding program. To do so, the City needed to devise a funding program that would limit the amount of expense to residents, be equitable to everyone, optimize available grants and low-interest loans, and respect local political issues. Based on a thorough evaluation of various funding alternatives, the City developed an integrated program consisting of six major elements.

1. *Stormwater Utility* - A stormwater utility was proposed for funding the majority (\$435,000 per year) of O&M expenditures. By using the utility to only fund most of the O&M expenditures, a dedicated fund would be available for NPDES permit compliance, yet the utility fee would be set as low as possible.
2. *General Fund* - The General Fund and gas and sales tax monies are proposed to remain intact (\$520,000 per year). These monies will fund primarily capital improvements. Capital improvements may be discretionary and by using the General Fund, local government will have more control over these funds. Therefore, if other, non-stormwater expenditures are needed, these funds may be utilized without significantly impacting NPDES compliance.

3. *Inspection and Permit Fees* - To help defray the cost for private system inspection (NPDES permit requirement), the City will assess inspection and permit review fees (\$5,000 per year) to the owners of these systems.
4. *County and Private Charges* - To help defray the cost of canal and coastal outfall maintenance, the City will charge (\$30,000 per year) Sarasota County and private residents who reside near the coast or the drainage canals.
5. *Special Assessments* - Special assessments will be utilized to fund localized stormwater improvements when a distinct group of beneficiaries can be assigned. The stormwater fund will not rely heavily on these assessments, but will be used when a group of residents specifically request improvements.
6. *Other Sources* - In recognizing the financial impact the updated stormwater management program will have on its residents, the City plans on actively pursuing outside funding sources (estimated \$10,000 per year). These sources will primarily consist of grants or low-interest loans where available.

These six revenue sources will be used concurrently to form an integrated stormwater funding mechanism. The utility will be developed so that ad valorem taxes will not be increased, and the General Fund will continue to be used so that the utility fee is not overwhelming.

The stormwater utility user fee is based on four factors including impervious area, total lot size, land use, and treatment credits. A weighted algorithm between the four factors was developed so that each individual property will have its own utility fee. Each individual fee reflects how much a property differs from the average of each of the four factors. This method for developing a utility fee differs from the most common approach where every single family home pays the same fee and all other properties are based on pervious area.

DISCUSSION

Previous Utility Set-ups. Many stormwater utilities have been set up throughout the United States. Florida is currently undergoing some growing pains regarding their stormwater utilities. The conventional approach had been to charge all single family residences a flat rate, called an ERU, SFU or EFU, and charge other properties a fee relative to the single family rate. This method did not incorporate differences between single family properties. This concept has been successfully challenged in the Courts in Sarasota County, forcing the County to change its fee structure. As a result, although the single ERU is still common, many

municipalities are shying away from it to limit the potential for future litigation.

User Fees vs. Tax/Assessment. When setting up a utility, a municipality must ensure that the "user fee" is not a tax in disguise. It doesn't matter what you call it, but a tax is a tax. If a municipality sets up a utility where all single family residences pay exactly the same fee, regardless of lot size, housing type, or total impervious area, then the utility fee is actually a tax. If the municipality does not go through the legal process of setting up this tax, then the utility fee system could be found illegal, thereby forcing a municipality to return all user fees collected.

Public Education. Probably the most important factor in implementing the integrated stormwater management funding mechanism is public education. Educating the public about the reasons for an enhanced program, how they can minimize costs, and overall awareness of stormwater issues is extremely important with this type of program. Most people are not aware of stormwater issues (except after major rainfall events), and as a result, they usually are not initially favorable to paying fees for services they do not realize they need. Therefore, proper public education is essential to raising stormwater fees.

Integrated Funding Program Advantages. There are many advantages to the integrated funding approach. First, the approach is equitable. With the utility concept, property owners pay the majority of their stormwater fee based on their contribution to stormwater quantity and quality. Second, this approach respects political issues. The integrated approach does not require any "tax" increases which are normally unpopular with residents. In addition, a property owner in a poor section of town with a small home will pay less than property owner in a more affluent section with a larger property. This type of system will recognize the difference between home sizes and assess a user fee accordingly.

Third, the integrated funding mechanism provides flexibility that is not present in a single revenue source fund. For example, if the City is in a financial crisis and revenue is required from discretionary areas of the General Fund, the utility will still provide incoming monies for stormwater management. Also, if the annual budget for the utility underestimates the actual expenditures required, the General Fund monies are available as a last resort. Finally, the integrated approach maximizes available grants and low-interest loans. Venice recognizes the availability of monies to fund a variety of municipal projects, some of which can

include stormwater management. Therefore, to limit the financial burden on residents, these other sources will be explored each year for potential revenue.

RECOMMENDATIONS

What can Georgia municipalities learn from the stormwater activities undertaken in Venice, Florida? First, a system-wide stormwater management plan helps a municipality quantify its existing system, recognize problem areas, and plan for future improvements and expenditures. Second, the municipality must understand its residents and existing political climate. A recommended funding mechanism should reflect the needs of local residents and respect local political issues. Additionally, if a utility fee is utilized, then it must be a true "user fee" and not a tax, regardless of what the fee is called.

Third, inform the public why a new funding mechanism is necessary. Educating the public and having them involved relatively early can make the process of implementing a funding program much less painful. Most likely, there will be opposition to a new funding program. However, if a group of residents understands and supports the funding mechanism already, they may be more successful than outside consultants in convincing the remainder of the community of a program's importance or benefit.

Fourth, attempt to utilize some type of multi-faceted stormwater funding program if at all possible. This will provide optimum flexibility to help meet the needs of the residents. Finally, municipalities should always be pursuing outside sources to complement the revenue generated from municipality residents and property owners. This will help minimize the burden on local residents and maximize the number of local stormwater improvements.

LITERATURE CITED

- Livingston, E.H. and E. McCarron, 1994. Stormwater Management: A Guide for Floridians. Florida Department of Environmental Regulation.
- US Environmental Protection Agency, 1994. Sarasota County NPDES Municipal Separate Storm Sewer System Permit.
- City of Venice, 1989. Venice Comprehensive Plan. 1,534 pages.
- Applied Technology and Management, Inc., 1994. City of Venice Stormwater Management Plan. 187 pages.