

GRIFFIN, GEORGIA'S STORMWATER UTILITY "A NON-STRUCTURAL BEST MANAGEMENT PRACTICE (BMP)"

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Abstract. The U.S. Congress passed the Clean Water Act in 1972 with a stated objective to restore and maintain the chemical; physical and biological integrity of the nation's waters through point source and non-point source controls. The method to achieve this restoration process is through the implementation of "Best Management Practices" (BMP's). An effective tool to achieve compliance with the Proposed Stormwater National Pollution Discharge Elimination System (NPDES) Phase I and Phase II Regulations is implementation of a Stormwater Utility. The NPDES program was created to ensure that permitted discharges meet applicable water quality requirements. The Phase I and Phase II permitting process involves primarily urban communities of a specific size and population. Phase I of the process required cities (100,000 population or greater) to secure a NPDES permit. The Phase II process will require smaller municipalities and other urbanized areas to secure a NPDES permit. The City of Griffin will undergo the Phase II permitting process based on its size and population. We took a proactive approach to watershed management by addressing both Stormwater quantity and quality issues. The City of Griffin felt that creation of a Stormwater Utility (the Utility) was one of the most important steps to take in order to ensure that the overall Stormwater Management Program could be successfully implemented. The Utility is an example of a non-structural Best Management Practice (BMP) that has been implemented for the sole purpose of generating revenues for stormwater related improvements. This paper summarizes the important aspects associated with Griffin's successful effort to create and implement the first Stormwater Utility in Georgia.

INTRODUCTION

The City of Griffin has established a Utility as part of their overall Stormwater Management Program to manage its watersheds and to create a model for other cities to consider when evaluating possible funding sources to achieve compliance with the upcoming Phase II permitting process.

The action plan created as part of the Utility consists of policy making; institutional planning; environmental review and planning; financial strategies; and public education and involvement.

The Utility provides the City of Griffin a financial mechanism from which to address both water quality and water quantity control issues that will be required as part of the Phase II permitting process. It will allow the City of Griffin to develop BMP's to address non-point source pollution and flood control management (via infrastructure repairs) that, when implemented together, will ensure protection of the regions' water resources. Finally, the utility will secure the funding to address the proposed regulations by employing Environmental Technicians to monitor and enforce erosion and sedimentation regulations and conduct water quality monitoring. It will fund public information and education programs. It will also insure in-house compliance and master plan the stormwater drainage system.

The Stormwater Utility, like a sewer or water supply utility, is user oriented with costs being allocated based on services received (Debo, Reese, 1995). Another way of saying this is, "you only pay for the demand you put on the system". Traditional structural BMP's typically consist of detention ponds, grassed swales, sand filters/filter strips, infiltration basins, porous pavements, etc. Traditional non-structural BMP's include special zoning requirements, ordinances (such as erosion and sediment control ordinances), maintenance activities (such as storm drain cleaning and street sweeping), and education/outreach activities (R.W. Beck, Inc. 1998). The City of Griffin considers the Utility to be a viable non-structural BMP that will enable the City to generate revenues for stormwater related improvements.

Stormwater Utilities have been in existence since the 1970's with more than 300 utilities currently in operation across the nation. What makes Griffin's Utility special? Griffin's Utility is the first in the nation to address the upcoming requirements associated in the Phase II permitting process by generating Revenues necessary to accomplish the mandated requirements. Currently, it is estimated that over

3,500 communities across the nation will have to comply with the Phase II permitting regulation. The City of Griffin made the decision to implement the Utility now in order to ease the financial burden put onto the City as a result of the upcoming Phase II permitting requirements.

BACKGROUND

The experiences of hundreds of communities over the past twenty years suggests that a fairly consistent process involving at least five phases, occurs from initial investigations and conceptual discussions through implementation of a stormwater utility, its service (user) charge, and achievement of an effective Stormwater Management Program (Cyre, 1997).

Phase I – Preparatory

This phase represents the basic idea that a change is needed in the way Stormwater is managed and funded. The City of Griffin did not need a lot of investigative research to figure out what the needs of a 150 year old city are: flood control, failed infrastructure, erosion and sediment control and water quality issues with no program or funding source. A series of policy papers were assembled: 1) program mission and priorities, 2) extent, scope and level of service, 3) funding philosophy, 4) program/funding coordination, 5) funding methods, and 6) service charge rate structure.

Phase II – Concept Development

This phase includes the assembling of information needed to evaluate the basic feasibility of various options followed by the selection of the most appropriate concepts. The City of Griffin, its staff and elected body accepted the fact that stormwater problems were real and solving them was a priority.

Phase III – Detailed Analysis

In this phase the activities focused on policy and financial analysis required to establish a Stormwater Utility. Griffin's elected officials were committed from the onset, allowing development of a conceptual rate structure as well as a secondary funding method. We were able to develop a detailed cost of service, rate base, and revenue/expenditure analysis for incorporation into the final rate ordinance.

Phase IV – Data and Systems Implementation

Griffin finalized the master account file, the capability to bill service charges, receive and process payments and properly account for the utility service.

Phase V – Public Information & Education

This phase is essential in successfully implementing a Stormwater Utility. Successful implementation of the Utility was the result of educating the public as to the benefits of the overall program. Some of the tools that were used and continue to be used are brochures, films, television presentations, public meetings, public presentations, etc.

RELATED DATA

Demographic Data

Griffin's population is around 24,000 people and its size is approximately 15.5 square miles. The City has approximately 150 miles of roads, six drainage basins and 39 sub-basins equaling a total of 16,403 acres. The City is 156 years old and has an estimated 10,000 drainage structures. The City is responsible for the operation and maintenance of the entire drainage system. The size of this system requires a substantial operating budget. After reviewing all alternatives, Griffin decided to fund its Stormwater Management Program through the creation of a Storm-water Utility.

Utility Data

The user fee is calculated on impervious area only. The ERU or equivalent runoff unit is 2,200 square feet. The charge per month is \$2.95 per residence or per every 2,200 square feet of impervious area on non-residential properties. The user fee will generate \$1.2 million dollars per year. *This ERU break down is as follows: single family residence 6,400, multi-family residence 1386, public/institutional 3074, light industrial/airport 2782, heavy industrial 2772, commercial 8143, undeveloped 396, roads 8732 totaling 33,685 ERU's.*

Results Data

Over a period of five years, Griffin will add two five man work crews and an environmental science team to the staff, and establish a capital construction program. In addition the City has contracted an engineering consultant to inventory the City's stormwater drainage network into a GIS database using state-of-the-art GPS equipment. The consultant will utilize the GIS database for its overall master planning effort. The Master Planning will consist of hydrologic system design, watershed assessment, capital improvement scheduling and design for water quality and quantity issues, flood control and modeling designs.

Keys to Success

Developing and successfully implementing a Stormwater Utility is unique to each community because "each and every

community is different". The City of Griffin's approach is summarized below: 1) Griffin solicited support of important officials early in the process and discussed the City's needs, the overall approach as well as the expected results. 2) We retained a consultant with a proven record of accomplishment in Stormwater utilities and management. 3) The City developed a truthful and direct approach with the general public and key stakeholders. 4) Griffin sold the utility as one key part of overall Stormwater management program, but not the 100% solution to all Stormwater related problems and issues. 5) Griffin developed a viable program and a solid sales strategy then we followed the prescription through the tough times and good. 6) The elected officials put one person in charge of all aspects of the work and became the focal point and major cheerleader for the Utility's development and eventual success (Reese, 1998).

CONCLUSION

The City of Griffin is no different than any other community, or business, by trying to do more with less, down sizing in-house staff, out-sourcing certain tasks while at the same time trying to provide the essential services to the citizens. The City of Griffin feels that the "user charge system" concept is the most dependable and equitable approach available to local governments for financing Stormwater management (APWA, 1991). The term Stormwater management provides a euphonium for a broad range of related topics such as erosion control, flood plain management, wetlands mitigation, detention/retention, and drainage facility design (Pyzoha, 1994).

The City of Griffin's successful implementation of the Utility has proven that a community can take a proactive approach to overall watershed management Implementation of a Stormwater Utility (as a non-structural BMP) can provide a community the financial mechanism to fund the design and construction of structural BMP's to address both water quantity control and water quality issues. Design and implementation of effective BMP's can result in the following: 1) decreased flooding, 2) improved water quality, 3) improved habitat for wildlife, 4) land preservation due to erosion control measure, 5) reduction of pollutant loadings in downstream receiving waters, 6) reduction in water treatment costs, and 7) protection of wetlands and other jurisdictional areas. The actual repairs of the infrastructures can measure the effects and efforts of the utility, reduction of current areas flooding, public information programs offered in water conservation, quality and monitoring results.

The Georgia EPD and USEPA have stressed the importance of individual communities becoming stakeholders

to protect our regions' water resources. As additional communities develop and implement effective BMP's, the entire region will realize the benefits. The City of Griffin feels that successful implementation of a Stormwater utility can be the first step towards better overall management of our regions' watersheds.

RELATED BENEFITS

The City of Griffin used the momentum gained through the successful implementation of the Utility to secure additional funds to address Stormwater related issues. Specifically, the City of Griffin secured: \$750,000.00 Hazard Mitigation Grant from the Georgia Emergency Management Agency (GEMA) to address flooding along a major urban roadway in a commercial and retail area of the City; \$1.0 million from Spalding County's Special Purpose Local Option Sales Tax (SPLOST) Program to construct a regional stormwater detention facility in North Griffin, \$158,000.00 Section 319 (h) Non-point Source Implementation Grant from the Georgia EPD and USEPA; \$2.6 million State Revolving Fund (SRF) Loan from the Georgia Environmental Facilities Authority (GEFA) for non-point source projects and equipment. The loan was the first granted in the State of Georgia specifically to address non-point source issues. The City plans on going to the revenue bond market in 2001, backed by Stormwater Utility revenues.

RECOMMENDATIONS

The City of Griffin considers itself a leader and pioneer in the areas of Stormwater management and water quality enhancement (Feldner 1999). The City hopes that its efforts associated with the successful implementation of the first Stormwater Utility in the State of Georgia will encourage other community leaders to consider this unique BMP in the future. The City recommends that a statewide association be created to assist with the dissemination of stormwater management related information to interested parties. The City would encourage the various regulatory agencies to participate in the stormwater management association meetings. In this manner, they could provide the necessary guidance and advice to community leaders as they attempt to address the challenges of effective watershed management. Finally, it will be imperative that our State and Federal government agencies develop programs to allocate up front "seed money" to assist communities in the development of Stormwater Utilities around the state and region.

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