



CITY OF URBANA, ILLINOIS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

MEMORANDUM

TO: Mayor Laurel L. Prussing and Members of the City Council
FROM: William R. Gray, Public Works Director
Gale L. Jamison, Assistant City Engineer
Bradley M. Bennett, Civil Engineer
DATE: September 15, 2011
RE: Storm Water Utility Fee Feasibility Study

Introduction

Attached please find a copy for your review of the executive summary from the Stormwater Utility Fee Feasibility Study prepared by AMEC Earth and Environmental (AMEC). The complete report is available for viewing online at www.city.urbana.il.us and paper copies are available for review at the Public Works Department or at the Urbana Free Library reference desk.

The Stormwater Utility Fee Feasibility Study was prepared at the request of the City Council to review stormwater program goals and priorities, review stormwater program needs and resources, review funding sources, generate a proposed utility fee structure and establish a stakeholder input group for the proposed utility fee.

Public Works Department Staff and Mr. Doug Noel from AMEC will be presenting the stormwater utility fee feasibility study at the Committee of the Whole meeting on Monday, September 26th at 7:00 p.m.

Any questions, comments, or inquiries may be directed to Mr. Gale Jamison or Mr. Brad Bennett at the Public Works Department at 217/384-2385.

Recommended Action

The Public Works Department seeks acceptance by motion of the stormwater utility feasibility study report and its recommendations.

The Public Works Department also seeks by motion, approval to proceed with retaining AMEC to prepare the draft stormwater utility fee rate and enterprise fund ordinances for Council to review and vote on approval in early 2012. The Public Works Department also seeks by motion, approval to proceed with retaining AMEC to prepare a credit/incentive program for the proposed stormwater utility fee.

The estimated final engineering fees for the draft ordinances and additional credit/incentive program work is \$10,000. Sufficient funds are available in the Stormwater Utility Fee Implementation Phase Budget Line Item.

EXECUTIVE SUMMARY

The City of Urbana, Illinois is a small Midwestern city. At just over 175 years old the city has begun to show its age as some of the old infrastructure has reached or exceeded its designed useful life. Being a city of over 40,000 residents, the county seat, and the home of a major university the expectations for a functional, efficient drainage system are understandably high.

The City currently provides stormwater management services in seven broad categories; storm sewer operations and maintenance, engineering services, Boneyard Creek and regional pond maintenance, capital improvements, a sump pump reimbursement program, GIS-based mapping, and stream flow and rainfall gauging (in conjunction with USGS).

The two key issues driving the stormwater program funding levels are the deteriorating condition of the storm sewer infrastructure (pipes, manholes, and inlets) and the State mandated requirements that the City reduce the amount of pollution in its stormwater discharges.

Due to the funding levels of the stormwater program the Public Works Department has had to adopt a reactive infrastructure management policy rather than the preferred proactive management approach. A reactive approach address problems as they manifest themselves as sinkholes forming in streets or localized flooding from deteriorating pipes, manholes, and inlets. A proactive infrastructure management approach involves identifying infrastructure problems in an early stage, prioritizing the time frame for the repair, and then fixing the problem before it manifests itself in a failure evident as a sinkhole or localized flooding problems. Generally proactive infrastructure repairs result in less expense and less impact on adjacent properties than reactive repairs since the problem is addressed before the surrounding infrastructure (street, sidewalk, driveway, etc.) is damaged.

Any storm sewer repairs for the 2011-2012 Fiscal Year are anticipated to be reactive repairs. The Public Works Department prioritizes the reactive repairs on a worst-first basis with an increasing number of repairs and rehabilitation being deferred to the future. Storm sewer repairs are a significant portion of the costs incurred on street construction and resurfacing projects. Program funds for those repairs from the stormwater utility fee would make more of the limited motor fuel tax funds available for necessary street maintenance.

The Illinois Environmental Protection Agency (IEPA) has required the City operate under a National Pollution Discharge Elimination System (NPDES) permit for the discharge of City stormwater to the local creeks and streams. The City's NPDES permit requires that the City implement six minimum measures to reduce the amount of pollution in the City's stormwater. The six minimum measures result in 40 Best Management Practices (BMPs) that the City must complete annually which include public education pollution prevention activities, street sweeping, storm sewer cleaning, administration of an erosion control permit program, illegal discharge elimination program, and in-house pollution prevention practices. The cost of complying with the six minimum measures mandated by IEPA has been borne by the stormwater management program budget without any offsetting funding allocations.

In June 2010 the City Council authorized the Public Works Division to investigate the feasibility of implementing a stormwater utility fee method of funding the stormwater management program in the City of Urbana. Stormwater utility fees are based on many of the same principles as utility fees for other

infrastructure programs, such as water and wastewater. An important characteristic of these programs is that the fees are dedicated to the program and cannot be used for unrelated purposes. Another is that the fee is program driven, covering the cost of providing a predetermined level of service. They are also equitable because they are based on the runoff-producing potential of all the properties in the community, rather than being based on assessed value or income.

The Stormwater Utility Feasibility Study has been an in-depth look at both the City of Urbana's stormwater management program and its funding options. The study utilized a combination of staff, citizen, businesses, and consultant input, and research of other stormwater management funding programs to evaluate the available options. Using these inputs the consultant was able to define limits for the stormwater management program in terms of what, at a minimum, the Public Works Department must be doing to meet both its regulatory requirements, as well as an enhanced level of activities that should provide the level of service expected by the citizens of Urbana.

The enhanced stormwater management program is an upgrade to the existing program in that it increases the frequency of stormwater infrastructure inspections and the resulting maintenance, it adds more resources for compliance with the National Pollutant Discharge System (NPDES) permit for municipal separate storm sewer systems (MS4s), it updates the 30 year old Stormwater Master Plan, and it increases funding levels for infrastructure repairs and capital improvement projects. The estimated expenses of the proposed future stormwater management program are \$1,710,000 for Fiscal Year 2012-2013.

Impervious area is widely cited in engineering literature as the single most important factor influencing the peak rate of runoff, the total volume of stormwater discharged, and key pollutant loads typically found in stormwater runoff from developed urban properties. This is particularly true for storms occurring at or near the design storm frequencies for storm sewer infrastructure. For these reasons impervious area was chosen as the basis for billing in the proposed stormwater utility.

Many of the 1400 communities that have established stormwater utilities have based their rate structure on a flat rate for single family residential properties because those properties make up a large majority of the total number of parcels and have a relatively low amount of impervious area on each property as compared to other land uses. By sampling a statistically significant sample of the single family properties a representative amount of impervious area can be determined. This representative amount of impervious area is referred to as an Equivalent Residential Unit, or ERU, and is used as the billing unit for the stormwater fee in much the same manner as kilowatt hours are the billing unit for electrical service. For commercial and other non-single family properties the actual impervious area is computed and their charges determined based on the number of ERUs on the property. The sampling in Urbana determined that 3100 square feet of impervious area is the local ERU.

In a rate structure that includes flat rates for single family residential properties, there are two choices for billing those properties; there could be a single flat rate for all single family properties, or there could be tiers that establish a second and/or a third flat rate for single family properties. Both approaches were examined in the feasibility study.

A rate model was developed to simulate annual cash flow and to determine the preliminary rate. The model is based on the cost of providing the services defined in the stormwater management business

plan and on a number of policy assumptions that were discussed with City staff. Through the rate modeling process the impact of distributing the cost of service of the proposed program over an impervious area-based rate structure was evaluated. Using this rate structure the preliminary rates are estimated to be \$4.90- \$5.15 per month for single family residential and duplex properties and \$4.90 - \$5.15 per month per 3100 square feet of impervious area for all non-residential properties.

The consultant makes a number of recommendations as a result of the evaluations performed in the feasibility study. Those recommendations include:

- The City should create an enterprise fund dedicated solely to the funding of the stormwater management program.
- The primary source of revenue for the stormwater enterprise fund should be a dedicated utility fee.
- The level of service that is to be provided should be that described as the Stormwater Management Business Plan with an initial estimated annual cost of \$1.71 million.
- Stormwater fees should be based on the runoff potential of each property as indicated by impervious surfaces.
- All properties whose runoff enters or impacts the City's stormwater drainage system infrastructure will be included.
- The public right-of-way will not be charged as it is designed to be part of the stormwater conveyance system.
- Single family and duplex residential properties will be billed a flat monthly rate.
- Billing of all other property types will be based on increments of thirty-one hundred (3100) square feet of impervious surface.
- There should be credit and incentive programs that recognize the potential beneficial impacts of on-site stormwater management controls.

Example utility fee computations are provided for four properties. The fees for the example properties and a single family residential property are summarized in the following table.

Examples of Annual User Fees

Property Type	Impervious Area (ft ²)	Computed Billing Units (ERUs)	Annual Fee Range
Single Family Home	3100	1	\$59 -\$62
Small Business	12,700	4.1	\$235 - \$255

County Courthouse	103,100	33.1	\$1920 - \$2100
Apartment Complex	410,400	132.4	\$7680 - \$8220
Urbana High & Middle School	645,800	208.3	\$12,120 - \$12,900

The recommended funding program would upgrade the stormwater program to a level that meets the needs of the City, the expectations of the residents, and the regulatory requirements of both the United States Environmental Protection Agency (USEPA) and the IEPA.

The City of Champaign is also considering the adoption of a stormwater utility fee for its stormwater management program. The Champaign City Council voted on August 23, 2011 to accept the stormwater feasibility study recommendations prepared by their Public Works Department including a \$3.2 million dollar stormwater management program operating budget that would be funded by a stormwater utility fee. The resulting stormwater utility fee in Champaign would be \$5.24 per ERU per month. The Urbana Public Works Department has been closely coordinating its efforts with the City of Champaign with the goal of being prepared to implement stormwater utility fees in the two cities at about the same time. Both the City of Urbana and the City of Champaign retained the AMEC Earth and Environmental, Inc. from Indianapolis, Indiana to perform the stormwater utility feasibility studies.