

City of O'Fallon, Illinois
Stormwater Management Program
Rate Study (Draft)



Prepared By

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December 22, 2006

Revised: November 10, 2007
By City of O'Fallon



City of O'Fallon, Illinois

Stormwater Utility Rate Study

The City of O'Fallon has developed a five year plan for stormwater management. This plan addresses the traditional engineering, operations and maintenance, and capital improvement needs related to stormwater management as well as the water quality regulatory initiatives for the National Pollutant Discharge Elimination System (NPDES) Phase II stormwater permit program. The purpose of this rate study is to evaluate and recommend a stormwater utility service charge rate that meets the funding needs of the stormwater management program in O'Fallon.

1. BACKGROUND

The City of O'Fallon has had a stormwater management program for many years. Like many communities around the country, aging infrastructure, operational needs, and regulatory compliance programs have created a need for a more comprehensive stormwater management program. With this enhanced stormwater program has come the need for an adequate, equitable, stable, and dedicated source of funding. A stormwater service charge was the funding method that was determined to best suit local needs.

This Rate Study is the culmination of analysis and discussions on the program structure and needs over the next five years. While the City has addressed some of its flooding problems, solutions to other local stormwater issues and problems have eluded the City with localized erosion problems, rapid growth, and water quality needs exceeding the resources available to the community through both general and sewer utility funds. The March 2003 filing of a Notice of Intent for coverage under the State of Illinois' NPDES Phase II general stormwater permit has placed an additional demand upon the City of O'Fallon to address the requirements of this program. The rate recommendation is based on and reflective of local problems and needs, a proposed program strategy, policy decisions, and a cost of service analysis. The key points made in the rate study include the following.

- Local stormwater problems and needs, as defined and quantified by staff, citizens, and the consultants, drive the recommended program strategy. The most visible problems are the need to address localized flooding, the need for erosion and sedimentation control, the need for enhanced maintenance, and the need to comply with the Phase II stormwater regulations.
- The program strategy provides a foundation for the cost of service analysis, which identifies a full range of operating and capital expenses.
- Policy recommendations were developed by the Stormwater Advisory Committee (SWAC), consisting of Board-appointed stakeholders from the community and City staff. The consultant team served as the facilitators of this group while the SWAC provided the

vision of the community in making the policy recommendations. One of the policies addresses the service fee rate methodology. The recommended approach bases service fees on impervious area. This factor influences the peak rate, total volume, and quality of stormwater runoff generated by developed properties in O'Fallon. The selection of impervious area to represent the demands placed on the drainage system by developed properties is a widely accepted concept and therefore is properly associated to the costs of providing stormwater management services to those properties.

- The rate base available to support the program through service fees has been estimated using existing data files, property data, and aerial photography. The average impervious surface area on groups of single-family residences has been determined from analysis of available and newly developed impervious data. The impervious coverage on non-residential properties has been estimated as well. Actual parcel-by-parcel measurements are being performed now, and the final determination of the rate base cannot be completed until then.
- A detailed Cost of Service Analysis has been prepared based on the analysis of needs and the program strategy.
- A “rate model” has been used to determine the amount of the service fee necessary to meet the overall funding and year-to-year cash flow requirements for the first five years of the program.
- The utility funding approach will enable the City to correct existing service deficiencies and build the foundation to prevent new ones from developing. Enhanced maintenance in the drainage system is an immediate priority. The City will also be able to conduct its stormwater quality program in compliance with the State of Illinois’ NPDES stormwater discharge permit.

Cities and counties throughout the United States have established several hundred stormwater utilities during the past twenty-five years. The term “utility” may have a variety of meanings. In this case it represents a focused, comprehensive program that will address existing service deficiencies and will address community water quality initiatives and future needs.

The funding strategy and service fee rates are directly associated with the cost of providing stormwater services and facilities.

The utility approach offers several advantages over other methods of funding. One of the most important is improved equity in the allocation of costs. Establishing a clear relationship between the cost of the services and facilities and the associated funding for those services and facilities will create a high level of financial equity and accountability. Costs will be allocated through the service fee, reflecting the demands placed on the stormwater systems and programs rather than property value or direct and special benefits. The service fee will be applicable to tax-exempt properties as well as those that are taxable. Such properties place a demand on the stormwater systems, but do not pay property taxes. Service fees and other revenues allocated to the utility will be dedicated strictly to stormwater management, and fund balances will be retained in the

enterprise fund from one year to the next or appropriated as annual stormwater expenditures fluctuate.

2. COST OF SERVICE ANALYSIS

A preliminary Cost of Service Analysis was performed in conjunction with a funding feasibility study¹ for stormwater management. It identifies the cost of labor, supplies, support services, capital equipment, investment in systems, and other components of the proposed program in detail. The preliminary cost of service was updated in the summer of 2006. Non-operating costs that influence revenue requirements, such as allowances for bad debt, are accounted for in this Rate Study. Other costs were set in terms of 2005 dollars for fixed asset acquisition to recognize that they are targets for investment.

2.1. Existing Program Costs

Currently the City of O’Fallon has what would be considered a reactive stormwater management program in comparison to other communities across the nation. Only emergency or minimal maintenance and system upgrades are performed. The current annual expenditures are approximately \$510,000. This total expenditure includes \$250,000 in capital planning and construction using Proposition S (Prop S) funds. Table 1 depicts the City’s budget for its stormwater program. The paragraphs following the table provide a description of each program area.

Table 1. Current Stormwater Management Program Budget

Administration and Overhead			
General Administrative	Supervision, Administrative	0.05	\$5,000
Engineering and Planning			
Engineering and Design Support	Engineering administration of system	0.1	\$10,000
Contracted Services	Support of planning	n/a	\$50,000
Operations and Maintenance			
Codes Enforcement	Administration of codes & inspections	0.1	\$5,000
Complaint Response	Engineering analysis of complaints	0.1	\$10,000
Cleaning and Minor Repairs	System maintenance	1.5	\$80,000
Materials	Materials for system maintenance	n/a	\$40,000
Capital Improvements			
Annual Stormwater Capital Projects	Remedial and major capital	n/a	\$250,000
Regulation and Enforcement			
Plan Review	Stormwater-related aspects of plan review	0.5	\$25,000
Site Inspection	Stormwater-related aspects of inspection	0.5	\$25,000
Water Quality			
MS4 Permit	Implementation of new ordinance & policies	0	\$10,000
Total Stormwater Program		2.85	\$510,000

¹ Stormwater Advisory Committee Recommendations, AMEC, January 26, 2006

2.1.1. Administration and Finance

Administrative costs include portions of the Director of Public Works (City Engineer) and the Public Works Operations and Engineering Managers' time to manage the program as well as more minor involvement of Code Enforcement administration of the FEMA floodplain program. Time for the City Engineer and his staff to respond to citizen complaints or issues that cannot be satisfied by the Public Works Department are included elsewhere. It is estimated that it takes about 5% of a full-time equivalent to handle these pure administrative activities presently.

2.1.2. Special Programs

There are only minor current special programs at this time in the City of O'Fallon. The city is working on updating its GIS capabilities, work order scheduling, system understanding, and tracking through City Works software. Inventorying of stormwater assets or the system has just begun.

2.1.3. Stormwater Quality Management

Currently, the City has no activities specifically directed at maintenance or enhancement of stormwater or stream water quality. The City is, however, required to maintain a National Pollutant Discharge Elimination System (NPDES) permit that is managed by the Illinois Environmental Protection Agency (IEPA). It is currently minimally fulfilling its mandated requirements through its updated Subdivision and Development Control ordinance and inspections of new developments.

2.1.4. Public Works and Planning & Zoning

The Public Works and Planning & Zoning Departments are responsible for many direct stormwater and stormwater related activities, including:

- Land disturbance/building permit application review;
- Review of rezoning requests and variance requests;
- Engineering design of medium sized road and drainage projects;
- Creating and implementing drainage regulations;
- Feasibility and drainage studies;
- Capital Improvement Project (CIP) planning and development;
- Street construction and maintenance planning;
- Drainage system planning;
- ROW and easement acquisition;
- Erosion & Sedimentation Control

The Public Works Department is responsible for implementing the stormwater program, and shares with Planning & Zoning in the administration of the City's Erosion and Sedimentation Control Program under the new Subdivision and Development Control Ordinance. Public Works is also responsible for the planning and direction for streets, sewer lines, construction and maintenance, drainage systems, right-of-way and easement acquisition.

2.1.5. Operations and Maintenance

A portion of the Department of Public Works is the Operations Group, lead by the Operations Manager. The Operations Group has two divisions that work part-time on stormwater related responsibilities that include:

- Some minor construction of drainage system headwalls and storm drains
- Clearing of rights-of-ways and drainage obstructions
- Public complaint response and coordination

Although exact estimates are difficult to obtain, it is estimated that \$100,000 is spent annually on stormwater-related activities using current personnel – about ½ a crew non-dedicated to stormwater. There are no dedicated resources to stormwater, so stormwater work is done either because it becomes serious enough to attract attention or through street improvements that include street drainage.

2.1.6. Capital Improvements

City Capital Improvement projects include enhancements to the existing drainage system by increasing the systems ability to manage the quantity and/or quality of stormwater discharged through the system. This typically results in larger, more efficient structural system components than what might currently exist or even new system components where none exist today (e.g. culvert, storm sewer and/or catch basin replacements, placing rip-rap along eroding stream banks, drainage improvements) on City property or within drainage easements, and creek cleanouts when necessary. Capital Improvement Program (CIP) projects are currently funded in O’Fallon by Proposition S – a ½ cent sales tax assessment on general merchandise. This tax is active indefinitely. Stormwater cannot compete for adequate funding for its needs against street paving and improvements and other pressing needs. Currently about \$250,000 is spent annually on stormwater capital projects, which includes minor remedial maintenance and repairs.

2.2. Five Year Future Program

The SWAC members participated in a series of exercises that defined the problems, needs, and goals of stormwater management in O’Fallon for the next five years and made recommendations on how the City should fund the future program. As part of the process of identifying problems, needs and goals the SWAC members identified the priorities of the future stormwater management program and made recommendations as to the level of funding that should be provided to the program elements based on those priorities. From those exercises and the SWAC recommendations² the City and its consultants have defined the stormwater management program and its estimated \$1.2 million annual cost for a five year period. Table 2 shows the proposed five-year funding plan for the stormwater program, followed by descriptions of the recommended program upgrades.

² Stormwater Advisory Committee Recommendations, AMEC, January 26, 2006

Table 2. Recommended Stormwater Program

City of O'Fallon Cost of Service

Existing Program	Line Item	Program Element	Year				
			1	2	3	4	5
\$5,000	1	Administration and Overhead					
	2	General Administrative	\$15,000	\$15,450	\$15,914	\$16,391	\$16,883
	3	Utility Billing	\$50,000	\$51,500	\$53,045	\$54,636	\$56,275
	4						
\$10,000	5	Engineering and Planning					
	6	Engineering and Design Support	\$10,000	\$10,300	\$10,609	\$10,927	\$11,255
	7	Contracted Services	\$50,000	\$51,500	\$53,045	\$54,636	\$56,275
	8	Master Planning	\$100,000	\$103,000	\$10,000	\$10,300	\$10,609
	9						
\$5,000	10	Operations and Maintenance					
	11	Codes Enforcement	\$10,000	\$10,300	\$10,609	\$10,927	\$11,255
	12	Complaint Response	\$10,000	\$10,300	\$10,609	\$10,927	\$11,255
	13	Materials	\$100,000	\$103,000	\$106,090	\$109,273	\$112,551
	14	Cleaning and minor repairs	\$200,000	\$206,000	\$212,180	\$218,545	\$225,102
	15						
\$250,000	16	Capital Improvements					
	17	Annual Stormwater Capital Projects	\$500,000	\$550,000	\$600,000	\$600,000	\$600,000
	18						
\$25,000	19	Regulation and Enforcement					
	20	Plan Review	\$40,000	\$41,200	\$42,436	\$43,709	\$45,020
	21	Site Inspection	\$100,000	\$103,000	\$106,090	\$109,273	\$112,551
	22						
\$10,000	23	Water Quality					
	24	MS4 Permit	\$20,000	\$20,600	\$21,218	\$21,855	\$22,510
	25						
\$510,000	26	Total Stormwater Program	\$1,205,000	\$1,276,150	\$1,251,845	\$1,271,400	\$1,291,542
	27	Other Funding Support	\$510,000	\$510,000	\$510,000	\$510,000	\$510,000
	28	Proposed Program Needs	\$695,000	\$766,150	\$741,845	\$761,400	\$781,542

2.2.1. Routine Maintenance

One new crew is added with an expectation that this level of service will be able to provide an adequate response to complaints and will occasionally get ahead of complaints. Raising the routine maintenance program to this level of service raises the cost of this program element from \$135,000 to \$320,000 annually.

2.2.2. Major Capital Construction

The ability of stormwater to compete with other needs (e.g. roads) for Prop S money is problematic and as a result the City is falling behind on stormwater projects. The SWAC members agreed the capital program should be set at a minimum level at \$500k per year and wanted an escalation of amounts when available. This means that when funds are not spent for maintenance, master planning, compliance or enforcement they should be spent on capital construction. Currently the capital construction program is funded at about \$250,000 annually. The proposed program upgrade would have the funding for stormwater projects start at \$500,000 annually and escalate to \$600,000 during the five year planning period.

2.2.3. Master Planning

Due to development pressures and the need to plan for its impacts, the citizen group recommended master planning the remaining undeveloped areas as early in the 5 year period as possible. The proposed approach will allow the City to get ahead of the development curve and provide regulatory options for managing new development. The level is set to do about 8-10 square miles per year at a cost of \$100,000 per year. Once the growth areas are completed, maintaining a nominal amount in the budget (\$10,000 per year) will allow the City to maintain the master plans and update as needed.

2.2.4. Regulatory Compliance

A dedicated funding level for compliance with the NPDES stormwater permit was recommended. The level is set at about \$20,000 per year with reference to the known needs projected for implementation of the mandatory ordinances for floodplain management, erosion control, illicit connections control, and post construction controls.

2.2.5. Regulation and Enforcement

The funding level for this element was increased significantly – from \$50,000 per year to \$150,000 per year - over the five years to meet the needs as the city grows and new demands are placed on staff. As areas continue to develop, staff will need to continue ongoing inspection services on a larger scale. Staff felt that appropriate inspection staff and funding at the moderate level was most cost effective.

3. RATE ANALYSIS

The experiences of other communities suggest that an initial stormwater utility service fee rate methodology should be easy to understand (to gain public acceptance) and implement (to minimize costs). To satisfy technical standards, however, it must also be a fair and reasonable approach that results in service fees that bear a substantial relationship to the cost of providing stormwater services and facilities. The impervious area methodology satisfies all of these requirements.

Impervious area is widely cited in the engineering literature as the single most important factor influencing the peak rate of runoff, the total runoff volume, and key pollutant loadings typically found in stormwater. It is also the most commonly used stormwater service fee rate parameter for stormwater utilities nationwide. In the proposed rate structure, impervious area is therefore the indicator of the demand for service exerted by each developed property in the City. A recent survey found that fifty-four (54) percent of all stormwater utility rate methodologies are based solely on impervious area.³

This rate study provides three essential pieces of information that the City Council needs for setting stormwater rates; a projection of costs, an estimate of the available rate base, and a profile of cash flow over the analysis period. In order to set rates, the number of billing “units” that are

³ *Stormwater Utility Survey; 2005.* Black & Veatch Management Consulting

available to bear the cost of service must be determined to an acceptable level of accuracy. In this case, the basic billing units represent the impervious area of parcels and are referred to as “equivalent residential units” (ERUs). They are structured to reflect the conditions typical of a detached, single-family residential (SFR) property.

The rate base was initially estimated from land use information. Subsequently, the estimate was refined using more accurate impervious area data assembled by the consultant from digital impervious and parcel boundary layers created for O’Fallon. A “Rate Model” has been developed that provides cash flow (also termed revenue/expenditure) analysis that compares the projected revenue stream and the estimated costs and other expenses over time. This is a key consideration in assessing the financial viability of the service fee approach.

Rate modifying factors are used to enhance equity and reduce the expense of implementing and maintaining a service fee master account file. A range of modifying factors was considered. Two modifications to the basic rate methodology are recommended at the outset of the program. First, a simplified (flat-rate) charge for SFR properties was recommended by the SWAC to reduce the cost of implementing the utility. In addition, service fee credits were recommended for those properties that provide significant mitigative systems and activities.

3.1. Equivalent Residential Unit

The recommended single family residential service fee would take the form of a single, flat rate. The concept of multiple groups, or tiers, within the residential properties was considered by the City. After discussion of a multi-tiered residential rate and how it might enhance the equity to the rate structure as compared to a single flat rate, the City determined that the additional cost that would be incurred to create the multi-tiered system could not be justified in light of the marginal reduction in rate for the properties with lower imperviousness.

The ERU size recommended in O’Fallon for the typical detached single-family residential parcel is 3650 square feet of impervious cover. This value was determined from analysis of single-family residential properties within O’Fallon’s geographic information system (GIS). For the sampled properties all of the impervious areas on each property were measured and the statistical mean for the lot type was computed. Impervious areas are defined as any surface that is no longer in a vegetated state. Therefore constructed surfaces, such as a rooftops, driveways, parking lots, sidewalks, etc, are considered to be impervious surfaces, as are gravel driveways and parking lots.

The ERU concept for impervious areas is based on SFR properties. For other properties the equivalent unit concept is applied as follows. All properties will be billed at least the service charge of one half of an ERU. The “di minimis” area for definition as a developed property is one half an ERU, or 1825 square feet of impervious area. For developed properties, the impervious area, as measured from aerial photography, is divided by the ERU value of 3650 square feet to determine the number of equivalent impervious (or residential) units to be billed to each property. Few of these properties will have precisely an even number of ERUs. The service charge for each property will be based on the number of ERUs rounded **up** to the nearest whole ERU. In the case of a property having 20,000 square feet of impervious area (about one-

half acre), the number of ERUs is calculated as 20,000 square feet divided by 3650 square feet, or 5.48 ERUs. Rounded up, the service charge for this property would be 6 ERUs.

3.2. Service Fee Credits

Service fee credits recognize the importance of on-site stormwater management systems and activities that significantly mitigate the impacts of development on peak flow, total volume, and pollutant loads in stormwater runoff above and beyond ordinance requirements. It was recommended by the SWAC that the City adopt a credit program that recognizes stormwater management activities of private property owners who reduce the cost of services provided by the City.⁴

3.3. Other Issues

The service fee analysis addresses other issues as well. Several objectives must be balanced in developing a rate recommendation, and they are not always consistent. The basic objective must be to meet the cash flow requirements each year.

The Proposition S funding of \$250,000 per year is assumed to be increased to \$300,000 per year for the five year planning period.

Other sources of revenue could support portions of the stormwater program in the future. Plan review, inspection, and other special fees could be incorporated directly into the stormwater rate methodology and rate ordinance, including special inspection fees for properties that have on-site stormwater control facilities. These should be considered when the utility rate structure and fee is reviewed for adjustments during the fifth year.

Over the life of the initial five-year planning period there are no major (multi-million dollar) capital improvement projects planned therefore bond debt service was not programmed into the initial cost of service analysis and rate study.

3.4. Projected Rate Base

A projection of the available rate base is needed to estimate the service fee level that will recover the cost of service. The estimated rate base is summarized in Table 3. Applying the residential service fee concept described earlier in this report, it is estimated that SFR properties, which account for 88.9% of the parcels by land use, will account for 35.8% of the total ERUs.

⁴ *Stormwater Credit Manual*, City of O'Fallon, October 2006

Table 3. Estimated Rate Base

Land Use Class	Estimated Parcels	Estimated ERUs	% of Total ERUs
Single-family residential (SFR)	6,800	6,800	35.8
Non-single-family residential (NSFR)	851	12,178	64.2
TOTAL	7,651	18,978	100%

3.5. Revenue/Expenditure (Cash-flow) Analysis

The primary purpose of the Rate Study is to identify a way to meet the funding requirements of a given program strategy. The concept is clear and simple. Funding needs to be sufficient to meet operating, non-operating, and capital expenditures throughout the period of time addressed in the study, in this case five years. Basically, income (revenues) must be greater than expenditures, although financing mechanisms like bonding can be used to spread capital expenditures incurred in any single year over several years and thus stabilizing the annual revenue requirements.

A cash-flow analysis is necessary to evaluate the adequacy of the revenue stream and plan for stormwater fee rates and other funding in the context of the projected expenditures. A Rate Model is used to organize the information and perform the calculations. Fees are typically the primary source of funding for a utility. However, the revenue stream generated by other funding sources, both short- and long-term, must be considered. Funding (e.g., loans) from a variety of other sources can be used to bridge periods when the stormwater fee revenue stream is insufficient, such as “seed” money at the onset of stormwater user fee billing to cover operating costs in the first fiscal year before the revenue stream is stable.

The format of the cash-flow analysis spreadsheet module in the Rate Model provides a logical sequence of information leading to a conclusion regarding the needed stormwater service fee rates. Several iterations of the model are typically needed to identify the best fit of service fee rates with costs over the analysis period. The Rate Model is an essential tool for determining whether it is advisable to hold rates constant throughout the five-year planning period, or to program an increase in the rate structure during the period.

The estimated Annual Operating Expense and Annual Capital Expense are derived directly from the **Cost of Service Analysis**, which is summarized in a module of the Rate Model. The total of direct expenses for administration, finance, engineering, operations, capital improvements, and regulation and enforcement each year constitutes the utility's projected annual expenditures.

The estimated annual revenues are the sum of the service charge receipts and other revenue sources. Other revenues include unexpended funds carried forward from previous years, fees and charges for special services, funds available from the sale of bonds, interest income, recovered delinquencies, and other resources such as federal or state grants and loans. These other revenues

are deducted from the total expenses to determine how much revenue must be generated from the monthly stormwater service fees.

Revenue Reduction Allowances are then considered in the Rate Model to determine how much revenue will be needed to actually meet the Stormwater Fee Revenue Requirement. For example, the utility will not receive full payment of all fees it bills. Some payments will be delayed (delinquent) and some may never be paid (bad debt). Credits allowed against the service fee component of the rates will also reduce the actual amount of income generated through fees.

The cash-flow analysis estimates the rate of delinquency, proportion of bad debt, and amount of credits that must be allowed for. Recovery of delinquencies (late payments) is sequenced through the five years covered in the analysis. Non-recoverable delinquencies are shown as bad debt. The total of Revenue Reduction Allowances is added to the Fee Revenue Requirement to calculate the Adjusted Fee Revenue Requirement each year. This figure is the actual annual revenue objective for all stormwater fees, allowing for Other Revenues and Revenue Reduction Allowances.

The Adjusted Fee Revenue Requirement is divided by the estimated total number of ERUs for impervious areas to determine roughly how much must be charged to each ERU. In the initial analysis, this estimated figure varies from year to year as the Adjusted Fee Revenue Requirement and the number of ERUs change. Once an estimate of the rates has been determined, a Recommended Rate Per ERU is entered in the Rate Model, from which the estimated revenue production is then calculated, cash-flow is projected, and the year-end Revenue Surplus (Deficit) is estimated. The Surplus (Deficit) becomes the Funds Carried Forward entry in the calculations in the following year.

An iterative analysis then continues to arrive at a point where the service fee results in sufficient total revenue to meet cash-flow requirements and create an average Revenue Surplus each year. An average Fund Balance Allowance Test of not less than two (2) percent or more than ten (10) percent of annual operating expenses and capital project fund accumulations in each year is then considered, and the rate is adjusted to satisfy this rule if possible. This allowance provides a minimal cushion against possible errors in the data and adjustments that may be made to specific accounts as the master account file is refined. This ensures that a positive cash balance occurs throughout the year since it is not allowable to operate at a deficit.

3.6. Rate Model Analyses

Several iterations of the Rate Model were evaluated to refine the cost, rate base, and cash flow data and arrive at a service fee rate for the approved cost of service scenario. This report contains the recommended scenario that represents the best fit of the costs and rates given several of the numerous options enumerated above (e.g., rate defined and held constant for five years, adherence to the fund balance test, and not charged).

3.7. The Recommended Service Fee Rate

The Revenue / Expenditure Analysis spreadsheet shown in Table 4 depicts the recommended service fee rate strategy. It is predicated on the assumptions that excessive fund balances are not desirable, a flat residential rate will be charged to all SFR properties, and the growth rate in the number of accounts will be slightly less than one percent per year. The initial rate would be \$41.40/ERU/year or \$0.113/ERU/day.

Table 4. Revenue / Expenditure Analysis

City of O'Fallon Stormwater Utility Rate Model					
	Year 1	Year 2	Year 3	Year 4	Year 5
Expenses					
Administration and Overhead	65,000	66,950	68,959	71,027	73,158
Engineering and Planning	160,000	164,800	73,654	75,864	78,140
Operations and Maintenance	320,000	329,600	339,488	349,673	360,163
Capital Improvements	500,000	550,000	600,000	600,000	600,000
Regulation and Enforcement	140,000	144,200	148,526	152,982	157,571
Water Quality	20,000	20,600	21,218	21,855	22,510
Subtotal: Annual Operating Expense	1,205,000	1,276,150	1,251,845	1,271,400	1,291,542
Bond Expense / Debt Service	-	-	-	-	-
Subtotal: Program plus Debt Service	1,205,000	1,276,150	1,251,845	1,271,400	1,291,542
Seed Money Repay	-	-	-	-	-
Contingency / Emergency Reserves	-	-	-	-	-
Total: Expenses	1,205,000	1,276,150	1,251,845	1,271,400	1,291,542
Other Revenues					
Funds Carried Forward	-	47,705	30,185	43,557	43,761
Other Fees and Charges	-	-	-	-	-
Interest Income	-	-	-	-	-
Recovered Delinquencies	-	-	-	-	-
Prop S	300,000	300,000	300,000	300,000	300,000
Other Resources	220,000	220,000	220,000	220,000	220,000
Total: Other Revenues	520,000	567,705	550,185	563,557	563,761
Service Fee Revenue Requirement	685,000	708,445	701,660	707,842	727,780
Revenue Reduction Allowances					
Delinquencies	-	-	-	-	-
Bad Debt	13,700	14,169	14,033	14,157	14,556
Offsets and Credits	39,284	39,621	39,961	40,303	40,649
Total: Revenue Reduction Allowances	52,984	53,790	53,994	54,460	55,205
Adjusted Total Service Fee Revenue Requirement	737,984	762,235	755,654	762,302	782,985
Estimated Number of Rate-Weighted ERUs	18,978	19,141	19,305	19,470	19,637
Recommended Monthly Service Charge per ERU	3.45	3.45	3.45	3.45	3.45
Recommended Annual Service Charge per ERU	41.40	41.40	41.40	41.40	41.40
Total Estimated Annual Revenue	\$ 785,689	\$ 792,420	\$ 799,211	\$ 806,064	\$ 812,978
Year-end Revenue Surplus (Deficit)	\$ 47,705	\$ 30,185	\$ 43,557	\$ 43,761	\$ 29,993
Fund Balance Allowance Test	6.07%	3.81%	5.45%	5.43%	3.69%

3.7.1. Operating and Capital Expense

The estimated Annual Operating Expense of the stormwater utility for Year 1 is \$1,205,000. It increases through the five years. (A compounding annual inflation factor of three (3.0) percent is applied to all variable annual operating expense over the analysis period and is built into the total

Operating Expense from the Cost of Service Report.) The Annual Capital Expense ranges from approximately \$500,000 to \$600,000 over the first five years.

3.7.2. Total Expenses

The Total Expenses of the stormwater program under this scenario, including operating, capital, and non-operating costs, are estimated to be \$1,205,000 in Year 1 and \$1,291,542 in the fifth year.

3.7.3. Other Revenues

Other Revenues such as Funds Carried Forward, Other Fees and Charges, Interest Income, Recovered Delinquencies, and Other Resources diminish the amount that must be funded from stormwater fees in each year. Total Other Revenues are projected to range from approximately \$520,000 to \$563,762 over the five years, including \$300,000 per year in Prop S funding and the continuation of annual General Fund allocations at \$220,000 annually. All other sources other than the funds carried forward were assumed to be insignificant or non-existent.

3.7.4. Revenue Reduction Allowances

The Revenue Reduction Allowances for delinquencies and bad debt are estimated as a percentage of the amount of stormwater service fee revenue billed. It is estimated that the delinquency rate will be negligible and that the rate of bad debt will be relatively low based on the process for utility fee collection and revenue allocation.

Offsets and credits are estimated to increase between the first year when approvals and inspections are processed to five (5) percent of fee revenue annually, as property owners become aware of what is needed to qualify for service fee credits. It is assumed that credits will be available for on-site stormwater detention systems located on private properties and for industries holding NPDES Industrial permits in good standing. In total, all revenue reduction allowances, including delinquency and bad debt allowances, range from \$52,984 to \$55,204.

3.7.5. Daily Rates

The Rate Model calculates the revenue generated by the service fee rate. In this scenario, the initial rate would \$0.113/ERU/day.

4. SUMMARY

The City of O'Fallon has a variety of stormwater management problems and needs that must be addressed. Although stormwater management is recognized as an essential municipal service, it is but one of many City programs that rely on the General Fund as the primary revenue source and is rarely given the funding priority that many of the other services, such as police or fire protection, are given. In order to evaluate methods for addressing the stormwater management funding dilemma, the City enlisted the assistance of a stormwater advisory committee (SWAC), consisting of citizens and City staff, to think through many of the issues. The result of this

process was consensus that in order to provide dedicated, adequate, equitable, and stable funding for stormwater management, a service fee program should be adopted that will charge developed properties based on the demand they place on the City infrastructure and programs.

After a series of meetings with staff and the SWAC, a stormwater management program was defined that meets the needs of the City and the priorities established by the SWAC. Based on this program the consultants prepared a cost of service analysis that detailed the revenue needs over a five year planning period. Using the demand-based funding philosophy endorsed by the SWAC, a rate model was used to illustrate the equitable distribution of the program costs over the community. The basis that was selected for the rate was developed hard surfaces, or “impervious” areas. Imperviousness was selected as the rate base because of the vast amount of research and data analysis that links the rate, volume, and quality of stormwater runoff to the impervious characteristics of a drainage area.

The initial rate for the stormwater service fee will be \$0.113 per day per month for each detached single family residential parcel. For other land uses other than undeveloped the service charge will be \$0.113/ day for every 3650 square feet of impervious surface (one ERU), rounded up to whole ERUs. Undeveloped parcels will be billed one half an ERU, or \$0.057 per day. This rate will be capable of bearing the annual cost of the City of O’Fallon’s stormwater management program.

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