

 **DRAFT**

CITY OF SULTAN
Stormwater Utility Rate Study

SHOCKEY
BRENT, INC. 

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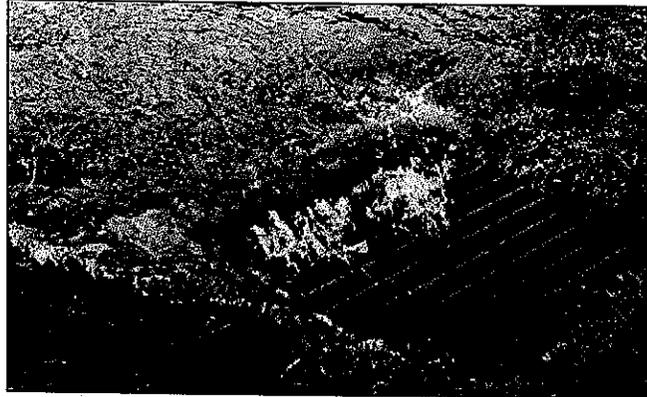
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1. INTRODUCTION

Under normal circumstances stormwater flow impounds in wetlands, depressions, ponds and puddles, and soaks into the water table slowly. This process allows toxins and pollutants in the water to filter out in the soil, lessening the impact of the stormwater on aquatic resources and private well systems.

Increased development and impervious (paved) surfaces in populated areas causes stormwater to flow rapidly from the impervious surfaces directly into streams, lakes and marine waterways carrying pollutants and causing long-term damage to water quality, salmon and other aquatic life.



A stormwater utility is essentially a special assessment district set up to generate funding specifically for stormwater management. Users within the district pay a stormwater fee and the revenue thus generated directly supports maintenance and upgrade of existing storm drain systems; development of drainage plans, flood control measures, and water-quality programs; administrative costs; and sometimes construction of major Capital Improvements. Unlike a stormwater program that draws on the general tax fund or uses property taxes for revenue, the people who benefit are the only ones who pay.

The City of Sultan wishes to establish a stormwater utility. The separation of stormwater management functions and funding from other municipal utilities will enhance the City's ability to provide for Operations and Maintenance, and Capital Improvements associated with stormwater quality.

The Surface Water Quality Management Plan¹ for the City of Sultan has concluded that cities with populations from 5,000 to 25,000 that implemented drainage utilities did a better job of maintaining drainage facilities and communicating with their constituents than did those cities that relied upon Sewer and Street Fund revenues. The assumption is that an assured source of revenue in the form of drainage fees can provide surface water managers the ability to plan and execute the longer term programs that are desirable to address maintenance needs and the planning and placement of infrastructure to reduce flooding.

In this report the term "rate" refers to the overall total amount of money the stormwater utility will need to collect from all users in order to meet its financial needs. The term "fee" refers to the amount of money the utility must collect from each individual user of the stormwater system, regardless of whether that user is public, private or commercial.

¹ Surface Water Quality Management Plan, City of Sultan, 2002, Berryman Henigar

In order to provide the City of Sultan with decision-making tools to establish a stormwater rate and implement the collection of the stormwater fee, this report analyzes survey results, topic literature and uses basic accounting principles. The goal of this report is to provide a general idea of what rate is sufficient to support stormwater activities and goals, and what individual fee would be revenue-sufficient, fair, equitable, legally defensible and publicly-acceptable to fulfill the stormwater rate requirements of the City.



2. EXECUTIVE SUMMARY

The City of Sultan wishes to establish a Stormwater Utility for the improved management of surface water run-off. Infrastructural needs, operation and maintenance costs were identified in the Surface Water Quality Management Plan produced by Berryman and Henigar in 2002. The City has indicated a desire to propose a new updated budget and implement funding options for the stormwater utility in 2007. Elements of the budget, which have been carried forward to the Stormwater section of the Comprehensive Plan and the Capital Facilities Plan for the City of Sultan, are used in this report.

Analysis of other jurisdictions, via phone survey, revealed four approaches to determining a stormwater utility rate. The results of the phone survey are recorded in *Appendix A*.

The four approaches to a stormwater utility rate were:

- ERU calculation
- Water Consumption
- Flat Rate to Meet Costs
- No Rate

General principles are commonly used to establish stormwater rates in other jurisdictions. After comparing our rate alternatives to the general principles for establishing stormwater rates, only the Equivalent Residential Unit (ERU) method fulfilled all of the principles. Individual property owner fee determination uses the ERU method in this report. The general principles used to establish a stormwater rate for Sultan are:

- Rates should be cost-based and set at a level such that they meet the full revenue requirements of the utility.
- Rates should be easy to understand and administer.
- Fees and the process of allocating costs should conform to “generally accepted” fee setting techniques.
- Rates should be stable, in their ability to provide adequate revenues to meet the utility’s financial, operational and regulatory requirements.
- Rate levels should be stable from year to year from the customer’s perception.
- Rates should be fair and equitable to the customer.
- Rates should be legally defensible.

The rate was determined by averaging the Capital Improvement Expenses over the budget period (2007-2013) then adding annual Operations and Maintenance Expenses to determine total costs for one year.

The rate is further broken down into a stormwater fee by dividing the annual expenses by the number of ERUs available for billing within the city limits. Four options for stormwater fee implementation are presented in the report:

- **Fee Phasing Strategy-** The numbers that change in this option are the number of ERUs (new houses, new businesses, etc.) due to development in the City and annexed Urban Growth Areas (UGAs). An estimated annual growth rate of 5% was assumed. Also, the monthly ERU fee was assumed to increase by 7% annually from its low introductory rate of \$8.50 per ERU per month. In 2013, using this assumption the rate would be \$12.76 per ERU per month.
Prior to 2010, costs will have to be supplemented by the Streets and Sewer Fund to compensate for the discrepancy caused by the low introductory rate. The total amount of supplemented funds will be \$229,960.24. After 2010, the rate will exceed costs and the utility will be able to pay back the Streets and Sewer Fund for a surplus of \$7,082.09 for anticipated Capital Improvements in the following year's budget. Attempts should be made to remain "revenue neutral" in subsequent years.
- **Fee Phasing Strategy #2 -** If the City were planning to implement a reducing fee for the entire billing period (until 2013) it would start at \$12.51 per ERU per month for the first year. This amount would cover all budgeted Operations and Maintenance costs and Capital Improvements scheduled for the year. With ERU increases every year due to development and annexations, this fee could actually decrease as ERUs are added, if expenses stay the same. The fee in this example decreases from \$12.51 per ERU per month to \$9.21 per ERU per month in the year 2013.
- **Flat Fee -** Approximately \$95,700.66 would have to be borrowed from the Streets and Sewer Fund if the fee is \$10.62 per ERU per month. The utility would break even in 2010 and be able to repay the Streets and Sewer Fund by 2013 with \$1,224.60 left-over.
- **No Fee -** No implementation plan is necessary for this option. The Stormwater Utility fee would come out of the Streets and Sewer Fund with no increase to the stormwater level of service in the City.

The ERU reports attached as appendixes to this report provide analysis of the appropriate size and available number of ERUs.

There are still policy issues that should be reviewed and decided upon prior to implementing the billing system. Issues of concern include:

- Billing of Schools
- Senior Citizen/Low Income Discounts
- Incentive for "Green Building" Discount
- Review of the City's Exempt Classifications
- Discounts for businesses with existing and maintained stormwater control.

As with all utilities, the actual process of billing must be decided. A variety of methods are employed by nearby jurisdictions that range from:

- Billing for stormwater with other utility billings.
- Billing annually or bi-annually with the County Tax Assessor bill.
- Billing separately using a variety of commercially available electronic billing systems.



3. CITY COUNCIL ACTIVITIES

Generally a municipality enacts two ordinances to create a stormwater utility, one to establish the various components of the utility and the other to determine the rate and fee structure. Forming the utility through two separate ordinances allows the flexibility to alter the rate structure at a later date without having to revise the ordinance governing the basic structure of the utility².

The second City Council decision should incorporate policy decisions regarding the following issues:

Billing of Surface Water Customers – The City currently bills the City’s customers for surface water services through the Streets and Sewer Fund. There are a number of administrative, cost and policy issues associated with establishing a stormwater billing system. These issues need to be researched and explored in more detail to ensure that the City has the capability to perform this billing function.

Billing of Schools – The City will need to review its policy regarding billing schools and other essential public services. Schools were not added into the stormwater fee calculation for this report.

Senior Citizen/Low Income Discounts – The City has the discretion to provide fee discounts to the elderly and economically disadvantaged per RCW 35.67.020 (5).

Incentive for “Green Building” Discount – The City is required to offer a 10% discount to new and remodeled commercial properties that utilize a permissive rainwater harvesting system. Rainwater harvesting systems shall be properly sized to utilize the available roof surface of the building. The City shall consider rate reductions in excess of 10% dependent upon the amount of rainwater harvested per RCW 35.67.020 (3).

Review of the City’s Exempt Classifications – If the City has “exempt” customer classifications such as common areas, open space, vacant mobile home sites, governmental services and City roads, they should be reviewed to determine the financial implications of either maintaining their exempt status or beginning to charge for stormwater services at some level.

This report will address the Capital Improvements identified by the City of Sultan and presented to the Citizen’s Advisory Board in March 2007, the recommended stormwater utility rate based on financial information provided by the City, and recommendations for implementing the fee and/or phasing strategy based on other jurisdictions in the area. The Council will then follow Sultan Municipal Code procedures for the adoption of this stormwater utility rate and individual fee.

² Natural Resource Defense Council, 2006



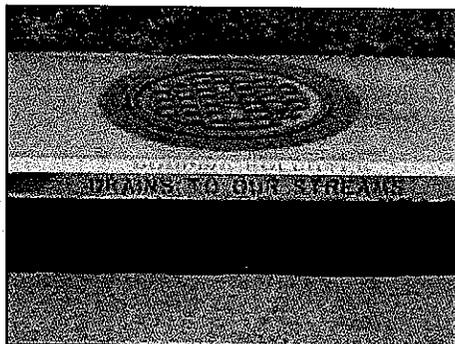
4. PUBLIC OUTREACH

Informing the public and gaining their involvement in stormwater management is the first and most crucial step to establishing a stormwater utility. If this is done well, customers will understand the importance of the rate imposed on them. Most importantly, they will understand that stormwater functions towards dual purposes. The first is the reduction of on-site flooding, the benefits of which customers will see immediately. The second is maintaining clean water through pollution discharge control, the benefits of which the “human” population will see for generations.



Some methods employed by other jurisdictions to inform and educate the public include, but are not limited to flier distribution through other utility bill mailings; discussions with community, civic and school organizations; local cable station “infomercials”; public “town hall” meetings; and recruiting volunteer groups to act as stormwater stewards to install signage, stencil or mark storm-drains and inform communities about the importance of reducing lawn fertilizer use and the hazards associated with dumping illicit substances down the storm-drain.

Information given to the public has ranged from what stormwater management is, what methods and systems are used to control stormwater, how the stormwater rate is calculated and what the short- and long-term benefits of stormwater management are.



The King County Stormwater Management Program has set an excellent example for public involvement. During 1984, King County began an aggressive program to inform and involve communities in the development of the proposed service program activities. A speaker's bureau was established to make presentations to civic organizations throughout King County. Presentations to the public raised community awareness of the natural drainage system and the serious public and private damages occurring from increased runoff. Speakers explained why the county did

not have the tools and funding to undertake a much needed countywide program. Those meetings outlined how a county Stormwater Management (SWM) program, which levied a service charge based on the runoff contribution of each land parcel, could benefit residents and solve the problem. A SWM Utility Citizens Advisory Committee was established and charged with examining the proposed Capital Improvements. A total of 260 Capital Improvements costing about \$65 million were ultimately identified. Thirty-four projects were targeted for construction over a three year period at a cost of \$8 million.

To obtain further public opinion, two telephone surveys were conducted in the proposed service charge area. The first sampled 500 residential property owners and 500 non-residential property owners. The second survey consisted of 215 questionnaires completed by citizens at public meetings. Once residents understood the severity of the growing surface water problems and the limitations of current funding sources and other financial options, questionnaire and survey responses showed many willing to pay up to \$40 per year for an expanded SWM program, which

they felt was not only desirable, but necessary. King County received a national Association of County's Achievement Award for this public involvement, priority process (Ferrari, 1987).

Many conclusions can be drawn from King County's public involvement program. The most applicable to the City of Sultan are: Public involvement is crucial to stormwater utility success and there is no such thing as "too much information" when informing the public.

On the other end of the spectrum, a smaller local jurisdiction generated unfavorable publicity in this past year due to insufficient public notice. The jurisdiction took over billing practices for their stormwater utility from Snohomish County in 2007. Although the fee per ERU had not changed, the number of square feet per ERU, the base unit for which the city charges its fees, had changed resulting in fee increases for some commercial and residential property owners. To educate the public on the changing fee and the importance of stormwater utility functions, the jurisdiction held one public Council Meeting for which they posted notice in the local newspaper. The City ascertained that the greatest change in total charges would occur at the commercial property owner level so they mailed a letter to all commercial property owners explaining the ERU and fee calculation strategy. A small note was included in single-family property owners' utility bills. Not adequately getting the message out to customers resulted in city dollars and time spent dealing with increased complaints to the Utility, unfavorable press and poor public opinion. Although there are currently no pending lawsuits, the lesson that can be found in the experiences of this jurisdiction is that insufficient public notice and failure to gain public "buy in" for stormwater rates can be harmful and costly to a city³.

³ Marysville Globe, 2007

5. COSTS

The costs to operating a stormwater utility can be broken down into two categories:

1. On-going costs or costs of conducting Operations and Maintenance, and for associated administrative support for the stormwater system; and
2. One-time costs or Capital Improvements.

Operation and Maintenance

The City currently maintains three detention ponds, 15 infiltration trenches, 592 inlets and five outlets. The Public Works Director and City Administrator provided information for estimated operation and maintenance costs for a future Stormwater Utility. The estimate includes proposed surface water management costs including estimated hours required to complete administrative and maintenance activities.

Staff

The following staff is included in the estimated budget for the proposed Stormwater Utility:

- Director of Public Works
- Administrative Assistant
- Stormwater Engineer
- Utility Maintenance Technicians
- Inspector

The estimated hours and their associated costs for all operation and maintenance activities for each staff member are depicted in *Table 1*.

**STORMWATER UTILITY
PROPOSED 6-YEAR BUDGET**

Surfacewater Fund	2008	2009	2010	2011	2012	2013	
# of employees	3	3	3	3	3	3	
Salaries and Wages	\$ 209,300	\$ 216,626	\$ 224,207	\$ 232,055	\$ 240,177	\$ 248,583	
Benefits	\$ 52,325	\$ 54,156	\$ 56,052	\$ 58,014	\$ 60,044	\$ 62,146	
Operating Supplies	\$ 12,000	\$ 12,240	\$ 12,485	\$ 12,734	\$ 12,989	\$ 13,444	
Other Services/charges	\$ 115,000	\$ 40,750	\$ 16,538	\$ 17,364	\$ 18,233	\$ 19,144	
Intergovernment Services	\$ -	\$ -	\$ -	\$ -		\$ -	
Capital Outlay	\$ 62,000	\$ 21,000	\$ 21,000	\$ 21,000	\$ 21,000	\$ 23,000	
Debt Service Payment w/ Interest	\$ 29,631	\$ 29,631	\$ 29,631	\$ 29,631	\$ 29,631	\$ 29,631	
Operating Transfer Out to Capital Improvement	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	
Total Surface Water Fund	\$ 530,256	\$ 424,403	\$ 409,913	\$ 420,798	\$ 432,073	\$ 445,947	
Utility Fee/Month	\$ 19.72	\$ 15.78	\$ 15.24	\$ 15.65	\$ 16.07	\$ 16.58	\$ 16.51
 budget Increase ERU's ADDED	 \$(105,853) (661.58)	 \$(14,490) (90.56)	 \$ 10,886 68.04	 \$ 11,275 70.47	 \$ 13,874 86.71		
Employees							
Public Works Director	0.33	0.33	0.33	0.33	0.33	0.33	
Administrative Assistant	0.17	0.17	0.17	0.17	0.17	0.17	
Stormwater Engineer	1	1	1	1	1	1	
Inspector	0.5	0.5	0.5	0.5	0.5	0.5	
Utility Worker	1	1	1	1	1	1	
Total	3	3	3	3	3	3	
Other Services/Charges							
Surface Water Comp Plan	100000	25000	0	0	0	0	
Professional Services	15000	15750	16538	17364	18233	19144	
Total Other Svc/Charges	115000	40750	16538	17364	18233	19144	
Capital Outlay							
Truck	40000	5000	5000	5000	5000	5000	
Computer	2000	0	0	0	0	2000	
Inspection Equipment	5000	1000	1000	1000	1000	1000	
Minor Repairs (<\$5k)	15000	15000	15000	15000	15000	15000	
Total	62000	21000	21000	21000	21000	23000	
Debt Service Payments							
Vactor	14000	14000	14000	14000	14000	14000	
Sweeper	7000	7000	7000	7000	7000	7000	
2002 Water Quality Report	8631	8631	8631	8631	8631	8631	
Total	29631	29631	29631	29631	29631	29631	

Capital Improvements

The City of Sultan Capital Facilities Plan identifies necessary stormwater expenditures for Capital Improvements. No Capital Improvements have been conducted since 2002. In order to pay for all of the necessary Capital Improvements by 2013, the total costs have been averaged out over a period of seven years, starting in 2007 and ending in 2013. These funds will need to be placed in an interest bearing account until the payment for the necessary Capital Improvements becomes due. The following is a list of all identified Capital Improvements, their estimated costs and the average annual cost.

Eastern Basin

<u>Sultan Basin Road north of Bryant Road, flooding of rural property</u>	\$15,000.00
<u>Sultan Basin Road 600' south of Bryant Road, flooding of rural property</u>	\$10,000.00

Central Business District

<u>3rd Street and Birch</u>	\$75,000.00
<u>3rd Street and Date, standing water in intersection</u>	\$75,000.00

Northern Basin

<u>Trout Farm Road 300' north of Gohr Road, deteriorating culvert</u>	\$25,000.00
<u>134th Street 150' east of Gohr Road, flooding of property and road</u>	\$20,000.00

Total Capital Improvement Costs	\$220,000.00
Average Annual Cost per Year from 2007-2013	+ 36,667.00
Total Annual O&M Costs	\$295,344.00
Total Annual Costs for Budget Period	\$332,011.00

For the Comprehensive Plan period from 2007-2013, the annual fixed costs for both Capital Improvements and Operation and Maintenance will be \$332,011.00 assuming the State loan previously obtained by the City for stormwater improvements has already been spent and the loan payment is entered into the annual expenses. The proposed stormwater fee will be calculated to sufficiently cover these costs.

6. REVENUE

General Principles

Revenue for a utility must be set at a level where a utility's operating and capital expenses are met with the revenues received from customers. This is an important point, as failure to achieve this objective may lead to insufficient funds to maintain system effectiveness.

A comprehensive rate study consists of two interrelated analyses: a cost of service analyses is already described in the preceding section of this report; and this section - the fee design analysis, will describe four alternatives for calculating fees for individual customers.

As a practical matter, there should be a general set of principles to choose the method in which the rate will be set. These types of principles may be referred to as general principles since they are commonly utilized by all utilities in the development of their rates. The following is a brief listing of the general principles around which the City should consider when setting their utility rates:

- Rates should be cost-based and set at a level such that they meet the full revenue requirements of the utility.
- Rates should be easy to understand and administer.
- Fees and the process of allocating costs should conform to "generally accepted" fee setting techniques.
- Rates should be stable, in their ability to provide adequate revenues to meet the utility's financial, operational and regulatory requirements.
- Rate levels should be stable from year to year from the customer's perception.
- Rates should be fair and equitable to the customer.
- Rates should be legally defensible.

These guiding principles will be utilized within this section to help develop surface water rates that are cost-based and equitable.

Utility Rate Alternatives

ERUs

By far the most prevalent method of calculating a stormwater rate is by establishing the Equivalent Residential Unit (ERU). Establishment of the ERU is done for the purpose of calculating the stormwater user's rate. It represents the average square footage of impervious surface of a detached single-family residential property and is applied to commercial properties.

Let us assume the intensity of development of most single-family residential parcels of real property in the City is similar and that it would be excessively and unnecessarily expensive to

determine precisely the square footage of the improvements (such as buildings, structures and driveways) on each such parcel.

Let us also ascertain by reviewing a representative sample of recorded data, maps, surveys or field measurements that the average impervious area for a single-family lot is approximately the same average number of square feet. This would become the definition of one equivalent residential unit of impervious area. Non-residential properties would be converted into ERUs based on the amount of impervious area on the property:

Each Single-Family Residential Customer = 1 ERU

Each Non-residential Customer = n ERUs

Where n = the property's impervious area divided by the average single-family parcel impervious area (x square feet)

EXAMPLE:

Average Single-family Lot = 4,519 square feet of impervious area

Shopping Center with 10,000 square feet of impervious area

= 10,000 / 4,519 = 2.21 ERUs

Table 2 presents a list of local cities ERU rates in the year 2000 compared to ERU rates in 2006. This list demonstrates the range of ERU rates that can be expected in the region and demonstrates that rates reflect the costs of each individual utility and cannot be applied from one jurisdiction to another. As such, rates from one jurisdiction cannot be used to establish rates in another jurisdiction. The method for establishing the rate can be used if it fulfills the general principals.

Table 2 – Rates Over The Years

Jurisdiction	2000	2006	Rate of Increase
Tumwater	\$4.95	\$5.10	3%
Renton	\$4.93	\$5.72	16%
Chehalis	\$4.30	\$5.95	38%
Edmonds	\$3.70	\$7.78	110%
Kitsap County	\$3.75	\$4.77	27%
Everett	\$2.85	\$10.50	268%
Mountlake Terrace	\$5.00	\$5.83	16%
Orting	\$3.00	\$3.00	0%

Rate Based on Water/Auxiliary Meter

Stormwater fees may be based on sanitary sewer usage as measured by the water meter and/or auxiliary meters. The fee typically involves a flat amount per 1,000 cubic feet of water consumption added to flat fee for a customer service charge that is typically used to compensate meter readers. This revenue source does not take into account commercial operations that may use more or less water regardless of their amount impervious surface or development intensity.

The average single-family consumer uses 1,000 cubic feet of water per month⁴. The City of Monroe is the only city found in a local jurisdiction survey to use this method.

Flat Rate

This stormwater fee is determined either as a flat fee for all property owners that will satisfy the financial needs of the Utility Rates – this revenue source typically provides a predictable stream of revenue that is available for on-going maintenance and operations, capital projects and debt repayment. This revenue source does not take into account development densities, usage or development type. It assumes that all developed property produces the same amount of stormwater runoff and places the same financial burden on the system.

No Rate

The “do nothing” alternative implies a continuance of the practice of deriving maintenance and operations costs for stormwater activities from the Sewer and Street Fund and imposes no additional rate for stormwater management on the constituents of the City of Sultan. The benefit of this course of action is that no additional rate and accounting system would be developed saving the City time and effort. The disadvantage to the “no action” alternative is that no funds other than those already set aside in the Sewer and Street Fund would be available for stormwater improvements and costs over and above operations and maintenance costs such as emergency flood control.

Table 3 applies each rate alternative to the general principles in order to select the most fair and equitable method of rate determination.

Table 3 – Comparison of Fee Alternatives

Alternative	Meet Revenue Requirements	Easy to Understand & Administer	Conform to Accepted Techniques	Provide Adequate Revenue	Stable from Year to Year	Fair and Equitable	Legally Defensible
ERU	✓	✓	✓	✓	✓	✓	✓
Water Usage	✓			✓	✓		✓
Flat Rate	✓	✓	✓	✓	✓		✓
No Rate		✓			✓		✓

In *Table 3*, the only rate alternative that satisfies all of the general principles is the ERU strategy. It can be calculated to meet revenue requirements of the utility, it is easy to understand and administer, and most jurisdictions use the ERU rate strategy in some form so it conforms to accepted techniques. It is stable from year to year and since population and development increase, growth can be anticipated. It is fair and equitable because it charges everyone based on the amount of impervious surface generated by their development.

Role of City Engineer, Hired Consultant or Staff

For rate alternatives that require impervious surface analysis, the City Engineer, hired consultant or staff shall have the discretion to determine the impervious surface area of non-residential developed property and determine an appropriate square footage for residential ERUs. This can

⁴ Brown, 2002

be done by examining property tax assessor's rolls, site examination, mapping information, aerial photographs, as-built plans and other reliable information. The City Engineer, hired consultant or staff shall have the discretion to determine the source of the data from which the ERU is established, taking into consideration the general acceptance and use of such source on the part of other stormwater systems, and the reliability and general accuracy of the source.

Establishing an ERU

In this report Shockey/Brent, Inc. used aerial photographs provided by Snohomish County in 1"=50' scale and a CAD program to measure the impervious surfaces visible on residential and commercial properties. A residential ERU was determined in this way and the amount of impervious surfaces on every commercial property was determined by using the same method. The method used to determine the ERU for Sultan is outlined in *Appendix B – Equivalent Residential Unit*. Also, the impervious surface and the corresponding ERUs for commercial properties can be seen in *Appendix C – Commercial Property ERU Calculations*. The Citizen's Advisory Board determined that multifamily residential properties would be charged for 1.75 ERUs regardless of size due to the complexity of determining actual ERUs. This method is used in other jurisdictions and is an accepted method. The results of the ERU calculations are discussed in later sections of this report.

7. IMPLEMENTATION STRATEGY

Now that a strategy for calculating the required stormwater rate has been decided upon, a method for determining and implementing the stormwater utility fee must be chosen. There are several options for implementing a stormwater fee.

Internal Implementation Activities

The near-term, internal implementation activities are designed to begin the transition of separating the recording of costs of stormwater-related activities from other Public Utilities Department activities. This will create a more accurate record of surface water-related activities, their level of effort, and their costs for use in the utility formation and post-formation management process. It will also create a work pattern within the present Public Utilities Department structure of having employees cognizant of their stormwater-related work efforts and the need to account for their time for these activities separately from other Public Works functions.

Specific accounting codes should be established within a "Stormwater Management" account that will track activities along the areas identified in *Table 1 –Operations and Maintenance Costs*. As a matter of priority, the following categories should be established as soon as practicable:

- Maintenance of City-owned drainage facilities;
- Street sweeping costs;
- Review and comment on proposed private drainage facilities;
- Inspection of private drainage facilities and guidance on maintenance;
- General guidance and management (administrative) activities;
- Capital improvement projects prioritization, funding, design and construction management; and
- Equipment and supply purchases, and maintenance costs.

Establishing a Stormwater Rate

As shown previously, the ERU method of fee determination is the preferable method because it fulfills all of the general principles for fair and equitable fee establishment. Establishing a stormwater fee using the ERU method consists of simply calculating the total number of ERUs in the City, the total projected costs of running the Stormwater Utility for a year and doing the math. Previously in this report, it was determined the annual costs for operations and maintenance and Capital Improvements would be \$336,631.00.

The ERU for Sultan is calculated in *Appendix B: Equivalent Residential Unit (2007)*. The ERU for Sultan was determined to be 4,519 square feet. Of 14 other jurisdictions examined in the phone survey for this report, Sultan's ERU is the second highest (see *Table 4 – ERUs' in Western Washington Jurisdictions*). This is largely due to the rural nature of residential



properties and the number of barns and out-buildings that had to be measured in the random selection of residential properties used to determine the ERU.

Table 4 – ERUs in Western Washington Jurisdictions

Jurisdiction	ERU square ft.
Bellevue	2,000
Chehalis	3,000
Edmonds	3,000
Everett	1,000
Kitsap County	4,200
Marysville	3,200
Mill Creek	3,500
Monroe	2,500
Mountlake Terrace	2,282
Renton	2,800
Snohomish	2,500
Tacoma	7,000
Thurston County	1,000
Tumwater	3,250
Average ERU	2,945

In addition to determining the size of an ERU, it is necessary to determine the quantity of ERUs within the City limits. The number of ERUs in Sultan was calculated from data provided by the Snohomish County Assessor's Office.

There are 1,246 residential structures on real property. There are 45 2- to 4-plex structures that were calculated at a rate of 1.75 ERU per structure (City decision). Non-residential and multi-family 5-99 unit (commercial) ERUs were established by measuring the total square footage of impervious surface on a commercial property, then dividing the number by 4,519 to establish the number of ERUs on the property. This method is explained in previous sections of this report and the data sheet with measurements for each commercial property is attached in **Appendix C: Commercial Property ERU Calculations**. There are 920 commercial ERUs, 75 1- to 4-plex multi-family ERUs for a total of 2,241 ERUs in the City of Sultan.

The annual costs for operation, maintenance and Capital Improvements divided by the number of ERUs yields the total annual amount that must be charged per ERU to satisfy the needs of the utility. If that amount is divided by 12, it yields a monthly charge per ERU. The required monthly fee per ERU is calculated in **Table 5**. As shown on the last line, the required rate per ERU per month would have to be 12.35. Simply calculating the rate is not sufficient to determine a fee. Fee determination must take into account an increase in ERUs that happens every year due to development and annexations. This will be discussed in further detail in the next section.

Table 5 Stormwater Fee per ERU per Month

	Number of Developed Properties	Number of ERUs
Residential ERUs	1246	1246
2-4 plex properties	45	75
Commercial ERUs	158	920
Total ERUs		2241
Total Fees To Collect		\$ 332,010.91
Total Annual Charge Per ERU		\$ 148.15
Total Monthly Charge Per ERU		\$ 12.35

1.75 ERUs each

Establishing and Implementing a Fee

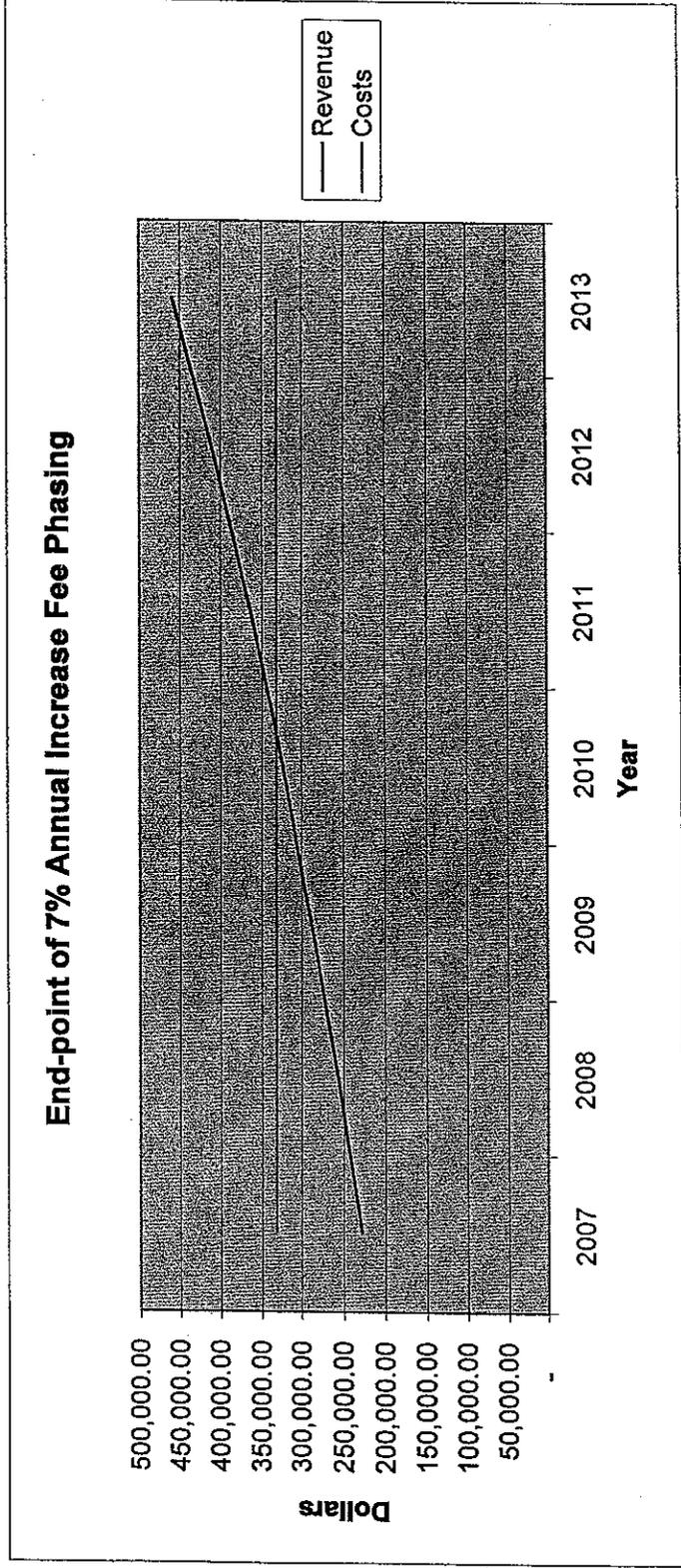
Fee Phasing Strategy

Since Capital Improvement costs are the same every year until 2013, and Operations and Maintenance costs are fixed annually for the same period, this number stays the same until the new budget is developed in 2013. The numbers that change in this example are the number of ERUs (5% annually) due to development and annexed UGAs and the monthly ERU fee charged, which will increase 7% annually from its low introductory rate of \$8.50 per ERU per month to \$12.76 per ERU per month in 2013. Prior to 2010, costs will have to be supplemented by the Streets and Sewer Fund to compensate for the discrepancy caused by the low introductory rate. The total amount of supplemented funds will be \$229,960.24. After 2010, the rate will exceed costs and the utility will be able to repay the Streets and Sewer Fund and make a profit of \$7,082.09 for anticipated Capital Improvements in the next budget. After the 2013 phased implementation a new budget will be calculated with a flat fee that satisfies all costs associated with the stormwater utility. A visual representation of the fee phasing can be seen in the table and graph on *Figure 1 - Fee Phasing Strategy*.

Figure 1 depicts a table that represents each year in this budget cycle. The number of ERUs increases 5% annually. The monthly charge per ERU increases 7% annually and the total revenue is shown both in the annual figure and the monthly figure. The table shows the profit and/or loss of the year and the dollar amount that will be supplemented by the Streets and Sewer fund and the amount of surplus that can repay the Streets and Sewer Fund. The linear graph of costs-versus-revenue shows that if the ERU fee is phased in from \$8.50 per ERU per month and increased 7% annually, the revenue will meet cost demands by half way through the year 2010.

Figure 1 – Fee Phasing Strategy

	2007	2008	2009	2010	2011	2012	2013
ERU's assume annual 5% increase							
Monthly Change per ERU (annual 7% increase)	2,241	2,353	2,471	2,594	2,724	2,860	3,003
Total Annual (12 months) Fee Revenue	28,582.00	26,811.88	28,528.14	324,161.37	364,195.30	409,173.42	459,706.34
Total Revenue from Other Sources							
Total Annual Revenue	28,582.00	26,811.88	28,528.14	324,161.37	364,195.30	409,173.42	459,706.34
Total Annual Cost (no increase during this period)	(332,010.91)	(332,010.91)	(332,010.91)	(332,010.91)	(332,010.91)	(332,010.91)	(332,010.91)
Profit/Loss	(103,428.91)	(75,199.03)	(43,482.76)	(7,849.54)	32,184.39	77,162.51	127,695.43
Necessary General Fund Supplement	103,428.91	75,199.03	43,482.76	7,849.54	(32,184.39)	(77,162.51)	(127,695.43)



Fee Phasing Strategy #2

If a fee were developed without phasing, a simple rate per ERU would be established and billed to property owners. The rate could be recalculated every year to compensate for the increase in ERUs and unanticipated changes in expenses. This is a good method for a new utility that has not established an accounting history yet. The downside of this method is that provisions would have to be made in the code to allow for quick fee changes every year in order to evaluate expenses and implement the new fee by January 1st with little or no public involvement. This fee strategy earns no funds in excess of the projected expenses of the utility at any time. Revenue would be calculated to meet budget requirements every year.

If the City were planning to implement a flat fee it would start at \$12.51 per ERU per month for the first year. This amount would cover all budgeted Operations and Maintenance costs and Capital Improvements scheduled for the year. With ERU increases every year due to development and annexations, this fee could actually decrease as new impervious surfaces are added, if expenses stay the same. In the model depicted in *Figure 2 – Fee Phasing Strategy #2*, the fee decreases from \$12.51 per ERU per month to \$9.21 per ERU per month.

Figure 2 - Fee Phasing Strategy #2

	2007	2008	2009	2010	2011	2012	2013
ERU's assumed annual 5% increase	2,241.00	2,353.05	2,470.70	2,594.24	2,723.95	2,860.15	3,003.15
Monthly Charge per ERU (recalculated yearly)	12.55	11.76	11.28	10.67	10.16	9.67	9.21
Total Annual (12 months) Fee Revenue	332,010.91	332,010.91	332,010.91	332,010.91	332,010.91	332,010.91	332,010.91
Total Revenue from Other Sources							
Total Annual Revenue	332,010.91	332,010.91	332,010.91	332,010.91	332,010.91	332,010.91	332,010.91
Total Annual Cost (no increase during this period)	332,010.91	332,010.91	332,010.91	332,010.91	332,010.91	332,010.91	332,010.91
Profit/Loss	-	0.00	-	-	0.00	0.00	-
Necessary General Fund Supplement	\$ -	\$ (0.00)	\$ -	\$ -	\$ (0.00)	\$ (0.00)	\$ -

Flat Fee Strategy

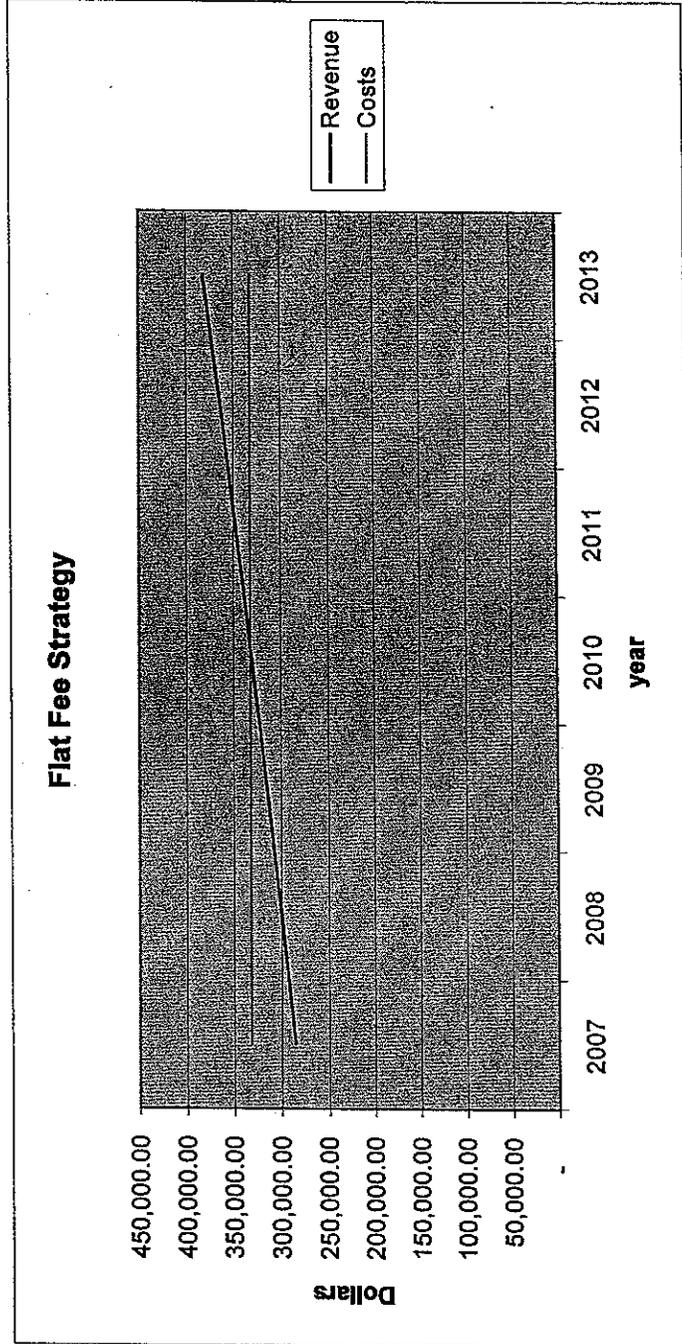
This fee strategy suggests that a flat fee can be introduced per ERU that would cover all anticipated costs for the utility. The rate would only be changed every six years after a new budget is approved in the Capital Facilities Plan. This strategy necessitates a close watch on expenditures in the first three years and the utility would have to be supplemented by the Streets and Sewer Fund until the revenue was able to meet expenses and repay the fund. *Figure 3 – Flat Fee Strategy* depicts the projected annual income assuming a 5% rise in ERUs every year from development and annexations. Approximately \$95,700.66 would have to be borrowed from the Streets and Sewer Fund if the fee were \$10.62 per ERU per month. The utility would break even in 2010 and be able to repay the Streets and Sewer Fund by 2013 with \$1,224.60 left over.

No Rate Strategy

No implementation plan is necessary for this option. The stormwater utility rate would come out of the Streets and Sewer Fund with no increase to the stormwater level of service in the City.

Figure 3 – Flat Fee Strategy

	2007	2008	2009	2010	2011	2012	2013
ERUs assume annual 5% increase	2,241.00	2,353.05	2,470.70	2,594.24	2,723.95	2,860.15	3,003.15
Monthly Charge per ERU	10.62	10.62	10.62	10.62	10.62	10.62	10.62
Total Annual (12 months) Fee Revenue	285,593.04	299,872.69	314,866.33	330,609.64	347,140.13	364,497.13	382,721.99
Total Revenue from Other Sources							
Total Annual Revenue	285,593.04	299,872.69	314,866.33	330,609.64	347,140.13	364,497.13	382,721.99
Total Annual Cost (no increase during this period)	332,010.91	332,010.91	332,010.91	332,010.91	332,010.91	332,010.91	332,010.91
Profit/Loss	(46,417.87)	(32,138.21)	(17,144.58)	(1,401.26)	15,129.22	32,486.22	50,711.08
Necessary General Fund Supplement	46,417.87	32,138.21	17,144.58	1,401.26	(15,129.22)	(32,486.22)	(50,711.08)



consistent w/ transportation plan

Other Sources of Revenue

After the established stormwater fee is implemented and the new stormwater utility has stabilized, additional sources of revenue can be considered to offset the annual increases in costs. Supplementing stormwater fees with additional funds allows for fee stability from year to year while increasing the City's level of service to the customer. Some other sources of revenue could include:

State Low-Interest Loan Programs – There are several low-interest loan programs offered by the State of Washington that would be available for stormwater capital projects. These are typically competitive programs with certain application cycles. These can be a cost-effective method of funding capital projects that would be repaid over a longer term up to 20 years.

Developer Contributions – If the focus of Capital Improvements is more regional in nature, some cities use a Rate-in-Lieu-of-Construction as a developer contribution toward regional projects that are designed to mitigate the impacts of such development. In other situations, developers may be required to construct a facility that may be transferred to the City. To offset the costs of developer-constructed stormwater facilities, some cities have allowed ownership and the corresponding maintenance responsibilities to be transferred to the homeowner's association.

Selling Bonds – There are two main types of bonds, general obligation and revenue bonds. General obligation bonds are backed by the general tax base of the city, whereas revenue bonds are backed by a specified source of revenue, often monthly utility charges. The city is restricted in the maximum amount of general obligation bonds that can be outstanding, although there is a higher limit with voter approval. Revenue bonds are restricted by the monthly rates, or whatever revenue source is promised for repayment. This means that rates can be raised in the future if more bonds need to be sold. With all bonds, the city must meet certain covenants, which can increase the cost or impact of the bonds.

General Government Taxes – the city collects property taxes and other unrestricted taxes to be used as the Council approves in the annual budget process. In the past, many jurisdictions used this source for stormwater programs. However, as demands for police, fire, criminal justice, and parks have increased, fewer funds are available. In addition, there are increasing regulations on stormwater management that cities must meet, thus increasing the cost of managing stormwater beyond what can be accommodated by this alternative.

Street/Road Fund – This is another common source of revenue for stormwater programs or at least used to be very common. Street maintenance is typically focused on maintaining the streets as thoroughfares and managing the pavement aspects. As areas become more urbanized, the effects on water quality have become apparent. Street/Roads funds can be used to build, repair and maintain street-side stormwater drainage systems, taking some of the burden off of the stormwater utility.

Local Improvement Districts – An LID is a financial instrument that provides a long-term payment plan, with relatively low interest rates, which allows property owners to upgrade



various infrastructures in their neighborhood. LIDs work if customers recognize that the benefits of their contribution outweigh the costs of the local improvement.

System Development Charges – This is typically a one-time rate collected from new development as an equitable share of the cost of the system. Each city defines what costs are to be covered by such a rate. There are a variety of rates that are similar and each is specific to a city: capital facilities charge, or connection charge. These rates are set aside for Capital Improvements and not for on-going operations and maintenance.

Permit/Review Fees – These fees are charged for specific service provided in reviewing and approving plans during the permit process. The purpose is to reimburse the city for specific staff time/costs and would be for on-going operations, not for capital projects.

Inspection Fees – These fees are charged for reimbursement of specific services provided by city staff. This would be for on-going operations and not typically for capital projects.

Although the current Capital Facilities Plan for the City of Sultan (CFP 2006) does not list any outside sources of funding for the Stormwater component of its City management, identification and solicitation of additional funding sources is a crucial component to developing a stormwater utility and keeping consumer fees at a reasonable level as costs go up over the years.

Since there are no other sources of revenue for the Stormwater Utility yet, all of the projected Operations and Maintenance costs for 2007 will be funded with the fee. If an initial fee phasing strategy is used during implementation and the phased fee falls short of stormwater expenses for the year, supplemental funds must come from the City's Sewer and Street Fund.

8. CONCLUSIONS

Establishing a Stormwater Utility requires two actions by the City Council. The first is to approve an ordinance establishing a stormwater utility in recognition of the need to manage stormwater runoff to reduce downstream flooding and improve surface water quality. The second is to approve a utility fee, a system to calculate that fee and an implementation strategy. Although these ordinances are sometimes passed simultaneously in other jurisdictions, Sultan recognizes the need to adaptively manage the Stormwater Utility to comply with future water quality requirements of State agencies and to change the fee in the future depending upon the needs of the utility. Passing the fee and strategy for fee calculation and implementation in a separate ordinance would allow for better flexibility in the system.

It is assumed that the Stormwater Utility would comply with all local, State and federal regulations in regards to Stormwater Utility Fees and funds handling. Fee estimates do not include discounted fees pursuant to RCW 35.67.020.

Investigation into the implementation of a stormwater utility fee has yielded a number of conclusions:

- Public disclosure and education are an important component of utility fee implementation, more so than phasing.
- Four alternatives for implementing the calculated stormwater fee are:
 - ◆ **Fee Phasing Strategy**- The numbers that change in this example are the number of ERUs (5% annually) due to development and annexed Urban Growth Areas (UGAs) and the monthly ERU fee charged, which will increase 7% annually from its low introductory rate of \$8.50 per ERU per month to \$12.76 per ERU per month in 2013. Prior to 2010, costs will have to be supplemented by the Streets and Sewer Fund to compensate for the discrepancy caused by the low introductory rate. The total amount of supplemented funds will be \$229,960.24. After 2010, the rate will exceed costs and the utility will be able to repay the Streets and Sewer Fund, and make a profit of \$7,082.09 for anticipated Capital Improvements in the next budget.
 - ◆ **Fee Phasing Strategy #2** - If the City were planning to implement a flat fee it would start at \$12.51 per ERU per month for the first year. This amount would cover all budgeted Operations and Maintenance costs and Capital Improvements scheduled for the year. With ERU increases every year due to development and annexations, this fee could actually decrease as new impervious surfaces are added, if expenses stay the same. In the model depicted in *Figure 2 – Fee Phasing Strategy #2*, the fee decreases from \$12.51 per ERU per month to \$9.21 per ERU per in 2013.
 - ◆ **Flat Fee** - Approximately \$95,700.66 would have to be borrowed from the Streets and Sewer Fund if the fee is \$10.62 per ERU per month. The utility would break even in 2010 and be able to repay the Streets and Sewer Fund by 2013 with \$1,224.60 leftover.

- ◆ **No Fee** - No implementation plan is necessary for this option. The Stormwater Utility fee would come out of the Streets and Sewer Fund with no increase to the stormwater level of service in the City.
- Alternative funding sources are available to supplement rates for stormwater utilities.

The City of Sultan has taken a pro-active approach in managing their stormwater and surface water quality in anticipation of future NPDES permit requirements. Although the City currently does not have to comply with NPDES stormwater requirements, anticipated population growth brings this eventuality closer and closer.

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SMC 16.92.010 (D) adopts Department of Ecology (DOE) Stormwater Management Manual for Western Washington "as it now reads or is hereafter amended." The current manual is amended and adopted by the DOE February 2005 (Publication # 99-11 through 99-15).

APPENDIX A - PHONE SURVEY

Introduction

A stormwater utility survey of other jurisdictions was conducted by Shockey/Brent, Inc. in January 2007. Five counties and 28 cities were contacted to compare information, stormwater utility rates, calculation strategies and implementation, and billing strategies.

Methods

One hundred fifty-five cities and counties were identified in Western Washington using the Municipal Research Service Center. Each City was assigned a number in alphabetical order. A Random Number Generator⁵ was used to select the 33 municipalities contacted for this survey.

Contact was made by a designated call person at the Shockey/Brent office. If phone contact was not possible or feasible at the time of the survey, e-mail communication was used. The designated call person was provided with a list of questions to ask each jurisdiction contacted. If the jurisdiction answered "no" to the first question, the jurisdiction representative was thanked and released from the survey. If the answer was "yes", the designated call person asked to be transferred to a manager of the stormwater utility or a representative of the utility who could answer the rest of the questions. E-mail contact was made by sending a questionnaire to the jurisdiction with instructions for answering the questions and returning the questionnaire electronically.

Table 1 – Phone Survey Questionnaire

Designated Call Person	Interviewee	Response by Designated Call Person
Identify Yourself: Our firm is conducting a survey of stormwater management techniques used in the area. This information will be used for future decision making in regional planning.	Continue	Continue
Who do I talk to about Stormwater Management in your jurisdiction?	Myself or (refers another)	Contacts appropriate person
Have you created a stormwater utility?	Answers "no"	Ends Call
	Answers "yes"	Records and Continues
What is the rate per month that you charge a single-family residence or unit?	Indicates rate	Records and Continues
How do you calculate your stormwater rates?	Indicates method(s)	Records and Continues
How did you initially implement your rate? (Phased it in or not)	Indicates method(s)	Records and Continues
What year was the stormwater utility established?	Indicates year	Records and Continues
Do you bill through the Assessor's office or through the utility?	Indicates method(s)	Records and Continues
Any additional comments regarding stormwater billing?	Answers	Records and Ends Call

⁵ Random number generator found at: <http://www.random.org/>

Answers were compiled on a master sheet by the designated call person, then analyzed and disseminated by the report writer.

Results

Of the 33 jurisdictions contacted, 20 (3 counties and 17 cities) had formed stormwater utilities and/or responded to our inquiry. The following jurisdictions were interviewed:

Bellevue	Mountlake Terrace
Chehalis	Orting
Edmonds	Renton
Everett	Snohomish
Federal Way	Tacoma
Kelso	Tumwater
Kent	Woodinville
Marysville	Kitsap County
Mill Creek	King County
Monroe	Thurston County

Rate Development Strategies

Kelso and King County charge a flat rate for single-family residences. Non-residential customers have a sliding scale depending on use intensity.

Orting charges a flat fee of \$3.00 per parcel no matter the size of the development or the intensity of development.

Tumwater charges \$0.90 for every developed property within the city limits and \$5.10 per parcel provided that the impervious square footage of the property does not exceed 50% of the gross property area.

Woodinville charges a flat stormwater rate per parcel.

The other 15 jurisdictions utilize the Equivalent Residential Unit (ERU). Residential properties are charged for one ERU or have a sliding scale based on urban or UGA locations.

Billing and Implementation Strategies

Seven jurisdictions send a bill generated independently of all other utilities and taxes. Five jurisdictions bill either bi-annually or annually through the Assessor's Office. Eight jurisdictions combine their stormwater utility fee with other city utility fees on the same bill.

Federal Way was the only jurisdiction that phased in its fee. During the time that Federal Way charged less for its stormwater rates, it utilized the money and focused research to analyze the utility's current needs and establish Capital Program Objectives prior to implementing the full program.



Ten jurisdictions use their ERUs and the total of impervious surface on the property only to determine commercial property fees. The City of Snohomish assumed all commercial properties has 10,000 pervious square feet and charges them for the corresponding ERU rate.

The City of Edmonds uses the normal ERU system, except for duplex properties, which are charged for 1.76 ERUs no matter the actual size.

The City of Everett sets rates based on the financial needs of the program and bills either as a flat fee or as a function of water consumption.

The City of Federal Way has multiple rates based on the category of the property use, then applies the rate to the ERU.

The City of Kelso charges commercial properties based on the percent of impervious surface used, but does not have an ERU.

King County charges one flat fee for residential and very light commercial with less than 10% impervious surface. Commercial parcels with over 10% impervious surface are billed on a sliding scale per acre per year.

The City of Mountlake Terrace calculates the standard ERU charge, then multiplies the charge by a factor of 0.5 if the site has 1-20% impervious surface, 1.0 for sites that are from 21-40% impervious and 1.5 for sites that are from 41-70% impervious.

The City of Orting charges a flat rate for every utility account within the city limits.

The City of Renton calculates rates based on the size of the property and the intensity of the development.

The City of Tumwater charges a flat rate of \$0.90 for every developed parcel within the city limits plus a charge per square foot of impervious surface divided by 3,250 if the amount of impervious area exceeds 50% of the gross property area.

Residential Monthly Fees per ERU

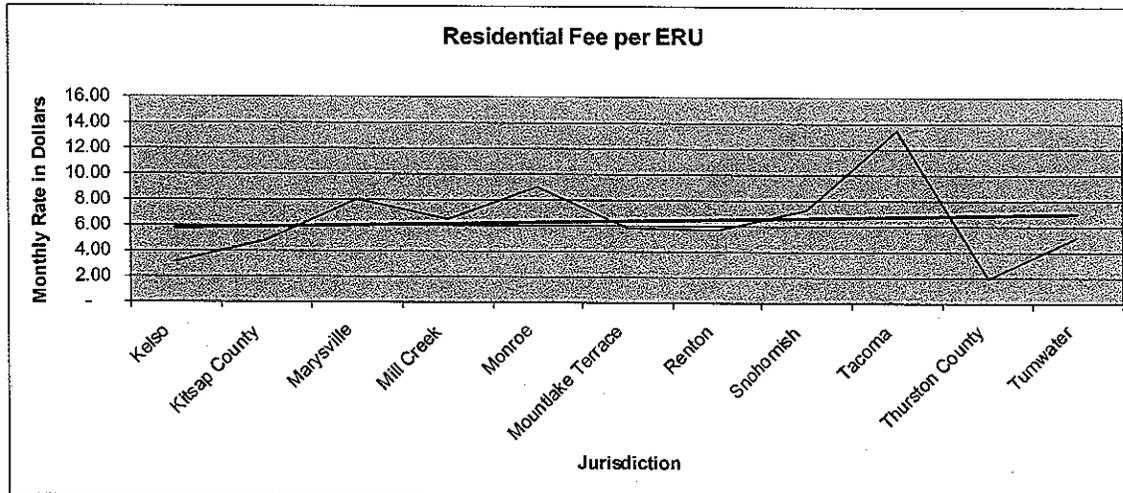
Residential fees per ERU vary from jurisdiction to jurisdiction depending on the financial needs of the corresponding stormwater utility.

Table 2 – Residential Monthly Fee/ERU

Jurisdiction	Monthly Fee/ERU
Bellevue	3.13
Chehalis	5.95
Edmonds	7.78
Everett	10.50
Federal Way	6.58
Kelso	3.10
Kitsap County	4.77
Marysville	8.00
Mill Creek	6.50
Monroe	9.00
MLT	5.83
Renton	5.72
Snohomish	7.25
Tacoma	13.41
Thurston County	1.92
Tumwater	5.10

The calculated mean for the ERU fee is \$6.53. The trend-line in the following figure shows that the average residential fees per ERU range from \$6.00 to \$7.50. Actual fees range from \$2.50 to \$13.50.

Figure 1 – Residential Fees per ERU



Discussion and Conclusion

Stormwater utilities use a variety of methods to establish stormwater fees and billing methods for their customers. The important thing to note is that any one jurisdiction will determine its fees based on its required revenue. Information from other jurisdictions acts as general guidance, a pool of ideas and an indication of what rates are publicly acceptable and defensible. The range of fees shown here reflects the needs of each jurisdiction and the standards to which they must maintain their stormwater infrastructure.

An inquiry of the Department of Ecology (DOE) revealed that most of the jurisdictions polled in this study had obtained their Class II NPDES permits or were part of area-wide Class I NPDES permits. The fees reflected in this study are sufficient to maintain NPDES-compliant stormwater quality in those jurisdictions. The only exception is the City of Orting, which charges a flat fee of \$3.00 for every developed parcel regardless of impervious surface area or use intensity. Orting is currently conducting its own rate study to determine a new rate that will be sufficient to meet its needs.

The predicament of the City of Orting highlights the importance of comprehensive research into the exact costs of operating a stormwater utility and the exact number of chargeable developed properties in a jurisdiction prior to implementing a stormwater utility fee.