City of CHAMPAIGN

STORMWATER UTILITY FEE
ADVISORY COMMITTEE
City of Champaign, Illinois

TO: Stormwater Utility Fee Advisory and Technical Committee Members

FROM: Vic McIntosh, Chair

DATE: April 6, 2011

SUBJECT: NOTICE OF MEETING

The Stormwater Utility Fee Advisory Committee will meet on Monday, April 11, 2011, at 4 p.m. in the City of Champaign Council Chambers, 102 North Neil Street, 61820.

AGENDA

1. Minutes (March 14, 2011)
2. Member Inquiries / Staff Follow-up
3. Stormwater Management User Fee Credits and Incentives
4. Surveys
5. Public Participation
6. Next Meeting (May 9, 2011)
7. Adjourn

The City of Champaign strives to ensure that its programs, services and activities are accessible to individuals with disabilities. If you are planning on attending this meeting and would like to request special accommodations, please contact the Public Works Department at 217/403-4700 at least 72 hours prior to the start of the meeting with your specific request.

Stormwater Utility Fee Advisory / Technical Committee Meeting

April 11, 2011
4 – 5:30 p.m.

April 11, 2011 Meeting Agenda

1. Minutes (March 14, 2011)
2. Member Inquiries / Staff Follow-up
3. Stormwater Program Credits and Incentives
4. Surveys
5. Public Participation
6. Next Meeting (May 9, 2011)
7. Adjourn

City of CHAMPAIGN

City of Champaign, Illinois
Minutes of Meeting

Stormwater Utility Fee Advisory & Technical Committees Meeting

March 14, 2011

Advisory Committee Members Present: Charles Allen, Donald Agin, Eliana Brown, Clif Carey, Steve Cochran, James Creighton, Karen Foster, Jim Jesso, Vic McIntosh, Anna Maria Watkin

Advisory Committee Members Absent: Jim Bustard, Chris Hamelburg, Jim Spencer, David Tomlinson

Technical Committee Members Present: Shawn Luesse, Leslie Lundy, Lorrie Pearson, Mark Toalson

Technical Committee Members Absent: Andrew Proctor

City Staff Present: Dennis Schmidt, Jamie Vermillion

Consultants Present: Greg Kacvinsky – Foth Infrastructure & Environmental, Douglas Noel – AMEC Earth & Environmental, Keith Readling– AMEC Earth & Environmental

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Call to Order
The meeting was called to order at 4:00 p.m.

Minutes
The minutes from February 14, 2011 were approved.

Member Inquiries/Staff Follow-up
Schmidt indicated some Committee members have made inquiries about rate structures of other communities who have already adopted a stormwater utility fee. Staff is currently conducting a survey of these communities. Results of the survey will be provided at the April 11, 2011 meeting.

Stormwater Management Revenue Plan – Base Structure
Noel made a presentation describing different types of rate bases used in stormwater management. The rate bases covered include Impervious Area, Impervious Plus Gross Area and Impervious Plus Pervious Area (Effective Hydraulic Area).

Luesse mentioned that when land is developed, the amount of runoff allowed to flow to the discharge point can be no more than the runoff from the previous condition of the land, i.e. farmland. This would indicate that the runoff coefficient could be no more than

the runoff of the land in its current condition. Luesse asked if the proposed rate base takes that into account or does it only look at impervious area. Noel explained that a rate base has not been selected yet, but most utilities use the Impervious Only method.

Foster asked if the GAU (Impervious Plus Gross Area) slide was skipped. Noel indicated this slide was not suppose to be included in presentation. He explained that the GAU method is similar to the Impervious Only method, except IAUs represent Impervious Area Units and GAUs represent Gross Area Units. Each single family property is assigned one (1) IAU and one-quarter (0.25) GAU resulting in a flat rate. Non-single family residential properties are then assigned coefficients for IAUs and GAUs in one of two ways. The first method assigns a different coefficient for IAUs and GAUs. For example, 80% of the program costs could be assigned to the impervious area unit (IAU) because they are infrastructure related and the remaining 20% assigned to gross area units (GAU) because they are not infrastructure related. The second method utilizes a composite number of units. In this case the program costs are in the numerator of the equation and the impervious area is added to the gross area developing a composite number that you are going to divide the program costs by.

Foster asked if the Impervious Plus Gross Area rate would be higher than Impervious Only rate for single family residential properties. Noel explained that the Impervious Only method only looks at the amount of impervious area on a single family lot to develop a rate, whereas with the Impervious Plus Gross Area method looks at both the impervious area and the gross area in rate development. By utilizing the Impervious Plus Gross Area method, more cost would go to single family residential homeowners because they will have more green space than commercial properties, i.e. large box stores.

Cochran asked if undeveloped properties could be charged a stormwater utility fee. Noel indicated that some communities do bill undeveloped properties because there are services provided by the City that all property owners benefit from, i.e. the NPDES Phase II permit.

Agin asked if the Impervious Only method considers every single family residential lot to be the same size. Noel explained that is an option, but there are alternatives. All single family residential parcels could be measured and an ERU could be determined and properties could be charged based upon ERUs. Another alternative would be utilizing a tiered structure where single family properties would fit into a category and their rate would be based upon a range of ERUs. Another alternative would be one flat rate for all single family residential properties.

Agin asked if the City had access to each property's lot size. Noel indicated lot size is readily available.

Creighton commented that the Impervious Only method seemed easiest to setup based upon database building and implementation. He asked if this method was equitable for homeowners and business owners. Noel explained that in his opinion he thinks there is equity. He further explained the Impervious Only takes a statistically significant sample

of single family residential properties to develop the number of square feet in an ERU. If single family properties account for 25% of total imperviousness estimated within the community, then the 25% is locked in and the rest of the community pays the remaining 75%. Those properties representing the remaining 75% are individually measured to ensure accuracy. If a tiered structure were developed, the 25% is still distributed among the tiers so cost is not pushed out to other land uses. The most equitable way to implement the Impervious Only method is to measure each property and charge the property based upon its impervious area. This technique is more complex and therefore more expensive.

Schmidt commented that rate bases get more complex as you go from Impervious Only, to Impervious Plus Gross Area to Impervious Plus Pervious Area to Intensity of Development. Administratively, the Impervious Only method would be the simplest to manage. There would be higher administrative costs as you progress through the aforementioned methods.

Schmidt commented that typically stormwater utility fee bills would go out to property owners only after a property has been developed.

Carey asked if staff is aiming to charge between $60-$80 per year per single family residential property. Schmidt indicated that is still the target range. Once a revenue plan begins to develop those charges will be detailed in order to see how much revenue that target is capable of generating.

Foster asked if the Impervious Only method is chosen, does a property go to a flat rate after it is developed, regardless of how that property is developed. Schmidt indicated that decision has not yet been made and whether we want to charge residential as a flat rate will be discussed later.

Noel commented that billing systems are static, generally staying the same unless there is reason to change it, i.e. the physical characteristics of a property change. So, it is "flat" in a way, because property owners will be able to budget based upon the charge on the first bill.

Carey asked how the administrative costs Schmidt shared with the Committee previously fit into the list of methods provided. Schmidt indicated those costs were probably mid-range, not the simplest and definitely not the most complex.

Stormwater Management Revenue Plan – Residential Rate Simplifiers

Readling made a presentation on rate structure residential rate simplifiers. Bundling imperviousness was discussed as well as the advantages and disadvantages of adding details to the rate structure.

Cochran asked if 10,000 square feet is the largest single family residential lot in Champaign. Readling explained that they looked at a macro view of the City and reviewed different styles of houses in the neighborhoods to make a representative sample.

Creighton asked if all 18,050 single family properties are measured or are neighborhoods sampled if a tiered system were utilized. Readling explained that in a lot of communities a prediction algorithm can be developed that predicts which tier a property falls into without detailed measurement. However, that would not apply to Champaign and the consultant would need to look at each of the 18,050 single family residential lots.

Carey asked why the algorithm technique could not be used in Champaign. Readling explained that the detailed information used to make that sort of predication is not available digitally for the City of Champaign. He further explained that they utilize tax assessment data which includes information about the house and combines that with information about the lot to complete a regression analysis which gives a very accurate prediction model for residential impervious area. However, that detailed information about homes in Champaign County is not digital and it would cost more to make it digital than it would to measure the properties.

Schmidt commented that the detailed housing information Readling is describing includes information such as whether or not a property has a detached garage. This data could be used in determining which tier a property falls into.

Brown asked if the City adopted an Impervious Only method, is the City estimating the University would be charged approximately $107,000. Noel indicated that figure does not take into account any credits that could be applied to University properties. Schmidt further clarified that he believes a closer calculation would be required.

Brown asked how the City of Champaign is looking at charging roads. Schmidt said that Council will make that decision, but most likely sidewalks and roadways would be exempt from the fee.

Cochran asked what the distribution in fees generated is between residential and non-residential properties. Readling explained that based upon estimates, there are 18,050 single family homes and 56,201 ERUs. That would suggest that single family homes would generate approximately 32% (18,050/56,201).

Cochran asked if we are looking at a residential rate of approximately $7 or $8. Schmidt indicated there is an established range of $6 to $8 Council wants the rate to fall into.

Watkin asked for an explanation as to why the sample did not have many houses with less than 2,000 square feet. Readling said that the chart represented impervious area on the lot, not square footage of the home. The impervious area includes not only the footprint of the house, but also any patio, porch, driveway, etc. Schmidt added that when the figure 2,000 square feet of impervious area is used, it is not accurate to think of it as a 2,000 square foot home. Most properties have twice as much impervious area as the footprint of the home.

Watkin asked how gravel driveways would be taken into consideration as opposed to concrete. Schmidt said that answer will eventually be available, but at this time it has not been determined how gravel driveways will be classified. The biggest problem with gravel driveways is that it cannot be differentiated from concrete when utilizing aerial photography.

McIntosh asked why duplexes, multiple family and condo properties are separate from single family. Readling indicated that it has not been finalized that these properties would be treated differently than a single family home. Once a rate structure is determined, those property uses will be analyzed. If it is established that they are similar enough to a single family home to be handled through the same rate methodology, they will be grouped with single family homes.

Schmidt announced that survey forms pertaining to the materials covered regarding the Revenue Plan will be distributed before the next Advisory Committee Meeting. Topics covered will include flat rate, ERUs, etc.

Creighton asked if there would be more revenue if we adopted a tier system over flat rate for single family properties. Readling said the two systems should be revenue neutral. He further explained that the rationale of the three tiers is that the middle tier includes the mean and the median, so they are going to be equal to one (1) ERU. The lower tier will be a certain amount less than one ERU which is calculable. Then the higher tier is a certain amount more than one (1) ERU which is calculable. The sum product should add up to exactly the same number of ERUs as if they were flat rated. There is no revenue difference.

Agin asked if all methods are revenue neutral. Readling stated that they are.

McIntosh noted that Bloomington and Normal both have a stormwater utility fee. Bloomington's is tiered and Normal's is not. He asked if we could compare the two programs per dollar to see how much is spent on administrative costs and how much is used on stormwater activities. Schmidt said that staff will report back with that information.

Foster thanked staff for supplying the supplemental reading materials in the Meeting Materials Packet.

Carey asked if the stormwater utility fees in Bloomington and Normal were established at the same time. Noel stated they were established about a year apart from each other.

Jesso asked if one community has experienced more problems than the other. Kacvinsky indicated that Bloomington passed their stormwater utility fee on a consent item with a lot of other items, so it went through their Council under the radar. This caused Bloomington to have problems collecting with non-residential customers because they had no idea the stormwater utility fee was coming. Normal involved the community

(similarly to Champaign) by establishing an advisory committee and coordinating with ratepayers making implementation a lot smoother than Bloomington.

Creighton asked if the consultant felt a flat rate was better or worse than a tiered rate. Noel believes that flat rates have a lot of appeal because it is simpler to implement the program. By initially keeping it simple, it is easier to make modifications at a later date. Schmidt added that simple is always best. He feels it would be easier to explain a flat structure than a tiered structure to residential property owners.

Public Participation

There were no questions or comments made by the public.

Next Meeting

McIntosh announced the next meeting will be held April 11, 2011 at 4 p.m. in Council Chambers of the City Building. Staff will be presenting information to Council regarding the Stormwater Utility Fee at the March 29, 2011 Council Meeting. All Advisory and Technical Committee Members are invited to attend.

Adjourn

The meeting was adjourned at 5:30 p.m.

Member Inquiries / Staff Follow-up

Can Greg or you follow-up on Vic McIntosh's question from the March 14 committee meeting?

Vic's question was....Per AMEC's presentation...Bloomington has a tiered system for single family...Normal has a single rate for single family....is Bloomington experiencing higher administrative expenses in maintaining and administering their stormwater utility fee versus Normal that has a single rate system?

ANSWER:

Dennis et al: Greg checked with the folks in Bloomington and found that there is minimal effort expended for on-going maintenance of the single family residential billing database. It sounds like their tiers are based solely on lot size, therefore the properties are relatively simple to assign to a tier based on parcel data in the GIS and the tier won't change unless a parcel is split or combined.

To implement that process correctly some analysis would need to be performed up front to associate the impervious area to lot size and then to define the breakpoints between tiers. The accuracy of the predictions based solely on the correlation of lot size to imperviousness won't be ideal and might result in a lot of initial customer service work if the ratepayers are concerned enough to question their tier assignments.

Stormwater Utility Fee Advisory Technical Committee Meeting

April 11, 2011

Agenda Item 3

Revenue Plan

Credits and Incentives

City of CHAMPAIGN

Stormwater user fee credit programs

- What are credits and incentives?
- How do they work?
- Who qualifies for credits / incentives?
- How are credit and incentive programs administered
- Example calculations
- Examples of programs
- Examples of limits
- Why not?

4

What are stormwater user fee credits?

- A stormwater user fee credit is a reduction in stormwater fees charged to a qualifying property in return for implementing qualifying on-site stormwater management controls or activities
- A stormwater user fee credit is an acknowledgement that on-site stormwater management may reduce the City's ongoing:
  - Operational costs
  - Compliance costs
  - Capital costs

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What are stormwater incentives?

- Stormwater management incentives are methods of encouraging property owners to undertake activities that further the stormwater program goals either by
  - reducing a property's user fees

  or
  - compensating a property owner in other ways such as:
    - Grant programs
    - Cost share programs
    - Rebates

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How do credits work?

- Direct reduction of user fees
- Applied after user fees are calculated
- Can be a one time credit (offset) or on-going
- Typically, credits cannot exceed the periodic fees that would be paid by the property
- Must be applied for:
  - Qualifying criteria set by the City
  - Maintenance of stormwater controls required

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How do incentives work?

- No reduction of computed user fees
- Can be a one time or on-going
- May or may not be related to fees calculated
- May be competitive or participation may be capped
- Must be applied for:
  - Qualifying criteria set by the City
  - There may be criteria to keep on-going incentives or the incentives may expire and require new application

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Who can receive credits or incentives?

- Credit programs
  - Most programs focus on non-residential customers only
  - Some programs allow credits for all properties
  - Credit application and maintenance requirements are typically cost prohibitive for residential and small non-residential customers
- Incentives
  - Many focus on residential and non-profit
  - Any group or individual may qualify depending on locally-developed criteria

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What activities qualify for credits?

- Peak control
  - one level
  - multiple levels
- Volume control
  - detention time w/ one design storm
  - detention time w/ multiple design storms
- Water quality control
  - meet a standard, or
  - have a current NPDES stormwater permit, or
  - Assist City in meeting its NPDES requirements (e.g. schools)
- Must one meet or exceed local standards?

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What activities are incentivized?

- Minimizing impervious areas
  - Build up, not out
  - Use green methods
  - Reduce imperviousness →→ fewer ERUs →→ lower fees
- Best practices
  - Beneficial practices not required by local standards
  - Practices contracted by local government
  - All properties can be eligible
  - One-time or on-going
  - Compensation is typically through grants, cost sharing

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Green stormwater management

Rain Garden

Permeable Pavement

Rainwater Harvesting

Green Roof

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How are credit programs administered?

- Steps in setting up a credit program:
  - Determine the structure of program (what & how)
  - Identify the application process
  - Define the requirements for maintaining the credit
  - Define the appeals process
  - Develop examples of credit applications
  - Develop a credit policy and credit manual
  - Provide training, both internal and external

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Program Structure

- Should the credit program structure include both credits and incentives? If so, which types of practices fall into each?
- What should be the maximum level of credit?
- How much credit can be achieved for various practices?
- How much funding should be made available to incentives?
- Do properties that meet standards get credits, or only properties that exceed standards?

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Should the credit program be prescribed or menu-based?

- Prescribed
  - X% for one level of control
  - Y% for a second level
  - Z% for a third level
  - Absolute cap (50%, 60%, etc)
- Menu-based
  - Define credit available for a menu of controls
  - Allow property owner to apply as he/she sees fit
  - Absolute cap (maximum credit available)

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Menu-based example

- Total credit maximum = 50%
- Peak control credit (PC)
  - PC1 – meet standards — PC1max = 20%
  - PC2 – exceed standards — PC2max = 20%
- Quality control credit (QC)
  - QC1 – parking lot control — QC1max = 10%
  - QC2 – nutrient control — QC2max = 10%
  - QC3 – NPDES permit — QC3max = 10%
- Ways to get to 50%
  - PC1 + PC2 + (QC1 or QC2 or QC3)
  - PC1 + QC1 + QC2 + QC3

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Application Process

- How much detail should be required?
- Map area served by each stormwater practice
- Owner maintenance of facilities required
- Will there be an application fee?
- Certification by qualified professional?
- Is an inspection required?
- Should a photograph accompany the application?
- Who will review and approve?

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Annual Maintenance Requirements

- Verification / certification that practices are operating as approved
- Annual certification by owner (self certification)?
- Annual inspection?
- Annual photograph?
- Receipts for maintenance services?
- Are approvals indefinite or will periodic applications be required? Will reapplication fees be required?

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Appeals Process

- Process will be defined in the policy and the manual
- Define turn-around time from appeal to hearing
- Determine who will hear appeals: individual or panel?
- *May follow appeals process for other programs*
- Provide example calculations that follow guidance in technical manual
- Train staff that will review credit applications as well as local design, engineering, and development community

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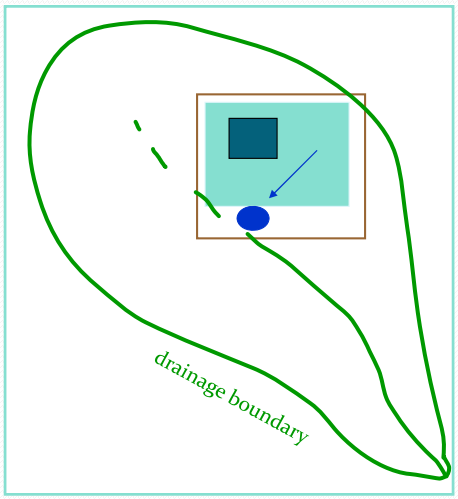
Stormwater Credit Program Examples



Simple Credit Calculation *(assume commercial zoning)*

- All impervious drains to one point
- Design meets qualifying criteria
- PC = Peak Discharge Credit
- PCmax = 20%
- PC = % impervious area runoff controlled times PCmax
- **PC = 100% x 20% = 20%**

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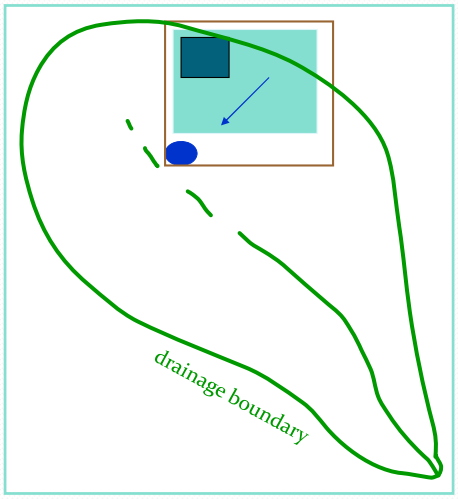
Stormwater Credit Program Examples



Partial Credit Calculation

- Part of the impervious area drains to a detention pond
- Design meets qualifying criteria
- 80% drains to pond
- PC = Peak Discharge Credit
- PCmax = 20%
- PC = % impervious area runoff controlled times PCmax
- **PC = 80% x 20% = 16%**

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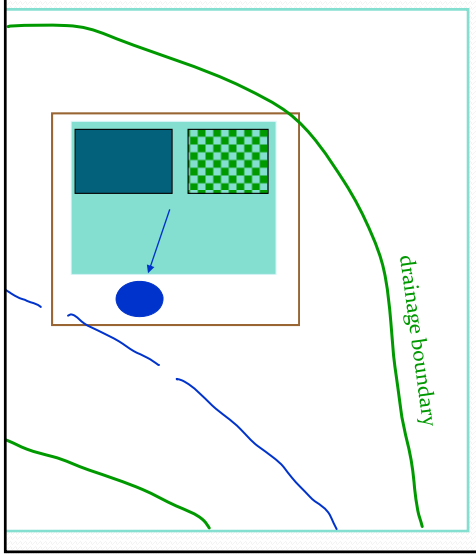
Stormwater Credit Program Examples



Compound Credit Calculation

- All impervious areas drain to pond
- Parking BMP (50% of site drains to pervious pavement parking lot)
- PC = 100% x 20% = 20%
- QC = Water Quality Credit
- QCmax = 20%
- QC = % impervious area treated by BMP times QCmax
- QC = 50% x 20% = 10%
- TC = Total (cumulative) Credit
- **TC = 20% + 10% = 30%**

QUANTITY QUALITY

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Examples of Credit Programs

Louisville	Non-residential	Detention	
SD No 1	Non-residential	Detention	Water Quality
Charlotte	Non-residential	Detention	Water Quality
Columbus	Non-residential	Detention	
Durham	Non-residential		Water Quality
Indianapolis	Non-residential	Detention	
Lake County	Non-residential		Water Quality
Minneapolis	Non-residential	Detention	
	Residential		Water Quality
Raleigh	Non-residential	Detention	Water Quality
St Paul	Non-residential	Discharge	

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Stormwater credit program limits

Columbus, OH	80%	Charlotte, NC	100%
Griffin, GA	50%	Raleigh, NC	50%
Bloomington, IL	50%	Tulsa, OK	60%
Morton, IL	50%	Portland, OR	35%
Minneapolis, MN	50%	Sandy, OR	33%
Kansas City, KS	50%	Maryville, TN	50%
Louisville, Ky	82%	Franklin, TN	75%
SD #1, KY	80%	Austin, TX	50%
Indianapolis, IN	67%	Chesapeake, VA	40%

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How are incentive programs administered?

- Steps in setting up an incentive program
  - Determine the structure of program (what & how)
  - Determine the funding level for each type of incentive
  - Identify the application process
    - Determine content
    - Determine how to prioritize
    - Develop examples
  - Develop technical guidance where appropriate
  - Determine if any incentives can be repetitive

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Examples of Incentive Programs

• Louisville	Residential	Rain Barrels
• Rock Island, IL	Residential	Rain Gardens
• Sandy, OR	All	Impervious Disconnect
• Philadelphia	All	Green Roofs (tax)
• Knox County, TN	All	Vegetative filter
		Impervious Disconnect
• Portland, OR	All	Green Roof Fund
• Chicago	Commercial	Green Roof Fund

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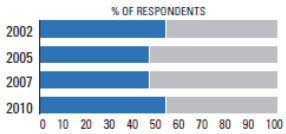
Stormwater User Fee Survey Results

Are credits provided for private detention/retention facilities?

53% Yes
47% No



Are quantity-based user-fee credits provided to encourage customers to control or reduce stormwater pollution?

78% No
22% Yes

Are quantity-based incentives other than user-fee credits provided to customers to control or reduce stormwater pollution?

83% No
17% Yes

Source: Black & Veatch 2010

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Why not participate?

- Developer is not property owner and won't realize financial benefits
- Retrofitting for credit is rarely cost effective
- Application process
  - Can be burdensome
  - Can be too costly
  - Can require professional assistance
- Most credit programs require (proof of) owner maintenance of stormwater control
- Credit application and maintenance requirements are typically cost prohibitive for residential and small non-residential customers

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Retrofit analysis - dry detention

Dry Detention				
Site area (ac)			5	
Impervious acres @100%			5	
10 Yr Storm Depth			4.37	
Storage volume (cuft)			79,316	
Pond Cost - Construction			$65,605	
Land (4%)			$60,000	
Design, Permits, Contingencies			$20,993	
Pond Cost - Total			**$146,598**	
Pond Cost - Annual	(50 yr, 3%)			**$5,698**
Routine Maintenance - Annual				**$656**
Total Annual Cost				**$6,354**
Stormwater Fees				
ERUs	@ 2500 sq ft	gross	87.1	
		billable	87	
SW Charge	@ $4.16/ERU		$4,343	
Stormwater Fee Credits				
Credits cap	@ 20%		$869	($5,485)
Credits cap	@ 30%		$1,303	($5,051)
Credits cap	@ 40%		$1,737	($4,616)

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Questions?

City of CHAMPAIGN

Stormwater Utility Fee Advisory Technical Committee Meeting

April 11, 2011

Agenda Item 4
Surveys

City of CHAMPAIGN

STORMWATER UTILITY FEE SURVEY RESULTS

Aurora

Fee Structure: The stormwater utility fee for all properties in Aurora is a flat fee of $3.45 per parcel per month.

Exemptions: Tax exempt/non-profits, parks and schools are all required to pay the stormwater utility fee.

Activities Funded through SWUF: The stormwater utility fee is used to fund Rehabilitation, Capital Improvements, Stormwater Quality Programs, EPA Phase II Stormwater Permit Requirements and Activities Dictated through the MS4 Permit.

Annual Revenue: Annually, the stormwater utility fee generates $4,009,000 in revenue.

Population: The population of Aurora based upon 2010 census figures is 197,899.

Effect of SWUF on Traditional Funding: Once the stormwater utility fee was established, "traditional" funding was added to revenues acquired by the fee. The fee has helped to fund a number of large capital projects.

Bloomington

Fee Structure: The stormwater utility fee for single family properties in Bloomington is based upon the property's gross area. Single-family properties are divided into tiers as follows:

- Small parcel (gross area less than or equal to 7,000 sq. ft.) = $2.90 per month
- Medium parcel (gross area greater than 7,000 sq. ft. and less than or equal to 12,000 sq. ft.) = $4.35 per month
- Large Parcel (gross area over 12,000 sq. ft.) = $7.25 per month

Non-single family properties are charged based upon an Impervious Area Unit (IAU). One IAU is equal to 1,000 square feet of impervious area. The charge per IAU is $1.45 per month. Parcels less than or equal to 4,000 square feet are be charged a flat rate equal to four IAUs or $5.80 per month. Parcels greater than 4,000 square feet are charged for the actual number of IAUs within the parcel, OR four IAUs, whichever is greater.

Exemptions: Tax exempt/non-profits, parks and schools are all required to pay the stormwater utility fee.

Activities Funded through SWUF: The stormwater utility fee is used to fund Operation & Maintenance, Rehabilitation, Capital Improvements and Stormwater Quality Programs.

Annual Revenue: Annually, the stormwater utility fee generates $2,762,000 in revenue.

Population: The population of Bloomington based upon 2010 census figures is 76,610.

Effect of SWUF on Traditional Funding: Once the stormwater utility fee was established, "traditional" funding was diverted to other projects, i.e. sanitary sewer projects.

East Moline

Fee Structure: The stormwater utility fee for single family properties in East Moline is based upon an Equivalent Residential Unit (ERU). One ERU is equal to 2,200 square feet of impervious surface. Single-family properties are divided into tiers as follows:

- Small parcel (under ¼ acre) = 1 ERU = $2.54 per month
- Medium parcel (¼ – ½ acre) = 1.75 ERUs = $4.45 per month
- Large Parcel (½ - 2 acres) = 2.5 ERUs = $6.35 per month
- Larger than 2 acres = $2.54 x # of ERUs

Non-single family properties are charged $2.54 per ERU.

Exemptions: Tax exempt/non-profits, parks and schools are all required to pay the stormwater utility fee.

Activities Funded through SWUF: The stormwater utility fee is used to fund Operation & Maintenance, Rehabilitation, Capital Improvements, Stormwater Quality Programs and Street Cleaning.

Annual Revenue: Annually, the stormwater utility fee generates $350,000 in revenue.

Population: The population of East Moline based upon 2010 census figures is 21,302.

Effect of SWUF on Traditional Funding: Once the stormwater utility fee was established, "traditional" funding was diverted to other projects, i.e. sanitary sewer projects.

Freeport

Fee Structure: The stormwater utility fee for single family properties in Freeport is a flat fee of $4.00 per parcel per month.

Non-single family properties classified as commercial or public pay $20.00 per month and those categorized as industrial pay $40.00 per month.

Exemptions: Tax exempt/non-profits, parks and schools are all required to pay the stormwater utility fee.

Activities Funded through SWUF: The stormwater utility fee is used to fund Operation and Maintenance, Rehabilitation, Capital Improvements and Debt Service.

Annual Revenue: Annually, the stormwater utility fee generates $600,000 in revenue.

Population: The population of Freeport based upon 2010 census figures is 25,638.

Effect of SWUF on Traditional Funding: Once the stormwater utility fee was established, "traditional" funding was diverted to other projects.

Highland Park

No response to information request.

Moline

Fee Structure: The stormwater utility fee for single family properties containing less than 2 acres in Moline is based upon the property's gross area. Single-family properties are divided into tiers as follows:

- Small parcel (gross area less than ¼ acre) = $1.46 per month
- Medium parcel (gross area of ¼ acre to under ½ acre) = $2.81 per month
- Large Parcel (gross area of ½ acre to 2 acres) = $5.77 per month

The stormwater utility fee for single family properties containing more than 2 acres and all other non-single family properties is based upon the Equivalent Hydraulic Acreage (EHA). The formula for calculating each property's EHA is:

(Impervious Acreage x 0.95) + (Pervious Acreage x 0.15)
The fee charged is equal to the EHA x $21.96 (monthly) or EHA x $87.83 (quarterly).

Exemptions: Tax exempt/non-profits, parks and schools are all required to pay the stormwater utility fee.

Activities Funded through SWUF: The stormwater utility fee is used to fund Operation & Maintenance, Rehabilitation, Capital Improvements, Stormwater Quality Programs, EPA Phase II Stormwater Permit Requirements and Activities Dictated through the MS4 Permit.

Annual Revenue: Annually, the stormwater utility fee generates $1,800,000 in revenue.

Population: The population of Moline based upon 2010 census figures is 43,483.

Effect of SWUF on Traditional Funding: Once the stormwater utility fee was established, "traditional" funding was diverted to other projects.

Morton

Fee Structure: The stormwater utility fee for single family properties in Morton is a flat fee charged on a per parcel basis. The fee per parcel is currently $4.74. On May 1, 2011 the fee will increase to $4.88.

Non-single family properties are charged based upon an Equivalent Residential Unit (ERU). One ERU is equal to 3,300 square feet of impervious area. The charge per ERU is currently $4.74 per month. On May 1, 2011, the charge per ERU will increase to $4.88 per month.

Exemptions: Tax exempt/non-profits, parks and schools are all required to pay the stormwater utility fee.

Activities Funded through SWUF: The stormwater utility fee is used to fund Operation & Maintenance, Rehabilitation, Capital Improvements, Stormwater Quality Programs and Compliance Efforts with NPDES.

Annual Revenue: Annually, the stormwater utility fee generates $900,000 in revenue.

Population: The population of Morton based upon 2010 census figures is 16,600.

Effect of SWUF on Traditional Funding: Once the stormwater utility fee was established, "traditional" funding was diverted to other projects. Prior to the adoption of the fee, there was no dedicated source of funding for stormwater. Funding was obtained from the General Fund.

Normal

Fee Structure: The stormwater utility fee for single family properties in Normal is a flat fee charged on a per parcel basis. The fee per parcel is currently $4.60.

Non-single family properties are charged based upon an Equivalent Residential Unit (ERU). One ERU is equal to 3,200 square feet of impervious area. The charge per ERU is currently $4.60 per month.

Exemptions: Tax exempt/non-profits, parks and schools are all required to pay the stormwater utility fee.

Activities Funded through SWUF: The stormwater utility fee is used to fund Operation & Maintenance, Rehabilitation, Capital Improvements and Stormwater Quality Programs.

Annual Revenue: Annually, the stormwater utility fee generates $1,713,000 in revenue.

Population: The population of Normal based upon 2010 census figures is 52,497.

Effect of SWUF on Traditional Funding: Once the stormwater utility fee was established, "traditional" funding was diverted to other projects.

Richton Park

Fee Structure: The stormwater utility fee for single family properties in Richton Park is a flat fee charged on a per parcel basis. The fee per parcel is currently $5.85 per month.

The stormwater utility fee for commercial properties is double that of single family properties, which equates to $11.70 per month. Multiple family properties are charged on a per unit basis of $5.85 per month per unit, i.e. an apartment building with fifty (50) units pays $5.85 multiplied by fifty (50) or $292.50 per month.

Exemptions: Tax exempt/non-profits, parks and schools are all required to pay the stormwater utility fee.

Activities Funded through SWUF: The stormwater utility fee is used to fund Operation & Maintenance, Rehabilitation and Capital Improvements.

Annual Revenue: Annually, the stormwater utility fee generates $500,000 in revenue.

Population: The population of Richton Park based upon 2010 census figures is 13,646.

Effect of SWUF on Traditional Funding: Once the stormwater utility fee was established, "traditional" funding was diverted to other projects. Prior to the adoption of the fee, there was no dedicated source of funding for stormwater. Funding was obtained from the General Fund.

Rock Island

Fee Structure: The stormwater utility fee for single family properties in Rock Island is based upon the property's gross area. Single-family properties are divided into tiers as follows:

- Gross Area less than or equal to 6,000 sq. ft. = $2.89 per month
- Gross area greater than 6,000 sq. ft. and less than or equal to 18,000 sq. ft. = $3.83 per month
- Gross area greater than 18,000 sq. ft. and less than 87,120 sq. ft. = $4.80 per month
- Gross area greater than 87,120 charged as a commercial property.

Non-single family properties are charged based upon an Impervious Area Unit (IAU). One IAU is equal to 2,800 square feet of impervious area. The charge per IAU is $3.83 per month.

Exemptions: Tax exempt/non-profits, parks and schools are all required to pay the stormwater utility fee.

Activities Funded through SWUF: The stormwater utility fee is used to fund Operation & Maintenance, Rehabilitation, Capital Improvements, Stormwater Quality Programs, Compliance Efforts through NPDES and the City's Levy System.

Annual Revenue: Annually, the stormwater utility fee generates $1,600,000 in revenue.

Population: The population of Rock Island based upon 2010 census figures is 39,018.

Effect of SWUF on Traditional Funding: Once the stormwater utility fee was established, "traditional" funding supplemented revenues obtained through the fee.

Rolling Meadows

Fee Structure: The stormwater utility fee for single family properties in Rolling Meadows is a flat fee charged on a per parcel basis. The fee per parcel is currently $3.05 per month.

Non-single family properties are charged based upon an Equivalent Residential Unit (ERU). One ERU is equal to 3,604 square feet of impervious area. The charge per ERU is currently $1.65 per month.

Exemptions: Tax exempt/non-profits, parks and schools are all required to pay the stormwater utility fee.

Activities Funded through SWUF: The stormwater utility fee is used to fund Operation & Maintenance, Rehabilitation, Capital Improvements, Stormwater Quality Programs, Streambank Stabilization, Matching Grants and Stormwater Engineering Services.

Annual Revenue: Annually, the stormwater utility fee generates $560,000 in revenue.

Population: The population of Rolling Meadows based upon 2010 census figures is 23,300.

Effect of SWUF on Traditional Funding: Once the stormwater utility fee was established, "traditional" funding supplemented revenues obtained through the fee.

Tinley Park

Fee Structure: The stormwater utility fee for all properties in Tinley Park is based upon water consumption. Properties are charged $1.62 plus $0.27 for every 1,000 gallons of usage over 6,000 gallons on a monthly basis.

Exemptions: Tax exempt/non-profits, parks and schools are all required to pay the stormwater utility fee.

Activities Funded through SWUF: The stormwater utility fee is used to fund Operation & Maintenance, Rehabilitation, Capital Improvements and Stormwater Quality Programs.

Annual Revenue: Annually, the stormwater utility fee generates $475,000 in revenue.

Population: The population of Tinley Park based upon 2010 census figures is 56,703.

Effect of SWUF on Traditional Funding: Once the stormwater utility fee was established, "traditional" funding was added to revenues obtained through the fee.

SUMMARY OF SWUF CREDIT PROGRAMS IN ILLINOIS								
City	**SF Rate Base Type**	**SF Rate Amount (Monthly)**	**Non-SF Property Rate Amount (Monthly)**	**Properties Exempt**	**Activities Funded thru SWUF***	**Annual Revenue from SWUF**	**Population (2010)**	**Effect on Traditional Funding**
Aurora	*Per Parcel (Flat)*	*$3.45*	*$3.45*	*None*	*R, CI, SQP*	*$4,009,000*	*197,899*	*Supplement SWUF Revenues*
Bloomington	*Gross Area (Tiered)*	*$2.90 - ≤ 7,000 SF* *$4.35 - 7,000 – 12,000 SF* *$7.25 - ≥ 12,000 SF*	*$5.80 ≤ 4,000 SF* *($1.45) x (# of IAU) OR* *$5.80 whichever is greater ≥ 4,000 SF*	*None*	*O & M, R, CI, SQP*	*$2,762,000*	*76,610*	*Diverted*
East Moline	*Impervious Area (Tiered)*	*$2.54 - 1 ERU* *$4.45 – 1-1.75 ERUs* *$6.35 – 1.75 – 2.5 ERUs*	*($2.54) x (# of ERUs)*	*None*	*O & M, R, CI, SQP, Oth*	*$350,000*	*21,302*	*Diverted*
Freeport	*Per Parcel (Flat)*	*$4.00*	*Commercial/ Public: $20* *Industrial: $40*	*None*	*O & M, R, CI, Oth*	*$600,000*	*25,638*	*Diverted*
Highland Park	*Unavailable*	*Unavailable*	*Unavailable*	*Unavailable*	*Unavailable*	*Unavailable*	*29,763*	*Unavailable*
Moline	*Gross Area (Tiered)*	*$1.46 – < ¼ Ac* *$2.81 – ¼ to < ½ Ac* *$5.77 – ½ to 2 Ac* *EHA x $87.33 – 2 Ac+*	*($87.83) x (#EHAs)*	*None*	*O & M, R, CI, SQP, Oth*	*$1,800,000*	*43,483*	*Diverted*
Morton	*Per Parcel (Flat)*	*$4.74 (gross) or $4.50 (net)*	*($4.74) x (# of ERUs)*	*None*	*O & M, R, CI, SQP, Oth*	*$900,000*	*16,600*	*Diverted*
Normal	*Per Parcel (Flat)*	*$4.60*	*($4.60) x (# of ERUs)*	*None*	*O & M, R, CI, SQP*	*$1,713,000*	*52,497*	*Diverted*
Richton Park	*Per Parcel (Flat)*	*$5.85*	*Commercial: $11.70/mo. Multiple Family: $5.85/unit*	*None*	*O & M, R, CI*	*$500,000*	*13,646*	*Diverted*
Rock Island	*Gross Area (Tiered)*	*$2.89 – ≤ 6,000 SF* *$3.83 – 6,000 – 18,000 SF* *$4.80 – 18,000 - 87,120 SF*	*($3.83) x(# of IAUs)*	*None*	*O & M, R, CI, SQP, Oth*	*$1,600,000*	*39,018*	*Supplement SWUF Revenues*

*O & M: Operation & Maintenance, R: Rehabilitation, CI: Capital Improvements, SQP: Stormwater Quality Programs, Oth: Other (these items are detailed in the attached Stormwater Utility Fee Survey Results

SUMMARY OF SWUF CREDIT PROGRAMS IN ILLINOIS								
City	**SF Rate Base Type**	**SF Rate Amount (Monthly)**	**Non-SF Property Rate Amount (Monthly)**	**Properties Exempt**	**Activities Funded thru SWUF***	**Annual Revenue from SWUF**	**Population (2010)**	**Effect on Traditional Funding**
Rolling Meadows	*Per Parcel (Flat)*	*$3.05*	*($1.65) x (# of ERUs)*	*None*	*O & M, R, CI, SQP, Other*	*$560,000*	*23,300*	*Supplement SWUF Revenues*
Tinley Park	*Water Consumption*	*$1.62 + $0.27 per 1,000 gallons consumed over 6,000 gallons*	*$1.62 + $0.27 per 1,000 gallons consumed over 6,000 gallons*	*None*	*O & M, R, CI, SQP*	*$475,000*	*56,703*	*Supplement SWUF Revenues*

*O & M: Operation & Maintenance, R: Rehabilitation, CI: Capital Improvements, SQP: Stormwater Quality Programs, Oth: Other (these items are detailed in the attached Stormwater Utility Fee Survey Results

City of Champaign

Stormwater Utility Fee Advisory Committee

March 25, 2011

Rate Structure Recommendations

The recommendations below have been created to solicit the input of the Stormwater Utility Fee Advisory Committee on the material presented and discussed during the March 14th meeting. Please review the following issues, make your recommendations, and return to Dennis Schmidt.

Rate Structure Recommendations: Rate Base

The City of Champaign is considering the implementation of a stormwater utility fee to fund its stormwater management program. A key component of stormwater utility fee's Revenue Plan is the determination of the method for equitable distribution of the program costs among the properties that demand services from the city's stormwater infrastructure and management programs. Virtually all rate methods include an impervious area-based component which insures that there will be a reasonable relationship between the charges to each property and the demand for service. As was discussed during our meeting, the documentation of the relationship between development, as measured by imperviousness, and peak runoff rates, runoff volume and water quality is extensive. As will be discussed in the May meeting, a credit program can be developed that would reduce the fees for ratepayers who can demonstrate that their "effective impervious areas" are reduced through the use of well-functioning best management practices.

The three rate base methods under consideration are: 1) impervious area only; 2) impervious area plus the gross area of the property, and; 3) impervious area plus the grassed or otherwise pervious area of the property. Descriptions of each of these methods were provided during the March 14th meeting.

As stated during the meeting, the City's preference is to keep the initial rate structure as simple and understandable as possible. The simplest rate method would be based on impervious area only as it is based on one directly measurable parameter. The common applications of the other two methods introduce uncertainty in the rate base due to the subjective nature of determining how much weight to give impervious area and either the gross or pervious areas in the computation of each property's fees.

Any of three methods is capable of generating the revenue needed for the City's stormwater management program. The selection of a rate method that includes either the gross or pervious (grassed) area of the property can cause a slight shift in the relative amounts of revenue that are contributed by the different land uses, particularly for properties that have large amounts of undeveloped area.

Rate Structure Recommendation Number 1

If the City elects to implement a stormwater utility fee, the method for distributing the stormwater program's costs should be based on the:

A. Impervious area of each property.
B. Impervious area plus the gross area of each property.
C. Impervious area plus the pervious area of each property.

Rate Structure Recommendations: Single Family Residential Rates

Flat Rates

Whichever rate base is selected in Rate Structure Recommendation Number 1, the basis for the fee on all properties in the city will be in some way based on the amount of impervious surfaces on the property. While the amount of imperviousness on a commercial, industrial, or institutional property might range from a couple of thousand square feet to several acres, the amount of impervious area on a single family residential lot typically ranges from a couple of thousand square feet to six or seven thousand square feet, and on rare occasions up to almost 10,000 square feet in Champaign. Because of this significantly lower amount of variability, and because typically 70 percent (78% in Champaign) of the parcels in Midwestern cities are single family residential, most cities send a flat rate single family residential bill to all single family residences in the city rather than measuring the imperviousness on each of the parcels. Applying a flat rate to these parcels reduces the initial cost of setting up the master billing account file and eliminates the need to track changes on these parcels, thus reducing ongoing administrative costs.

Under a flat rate system, the representative amount of imperviousness on the typical single family property is determined by digitizing the aerial photographs for a statistically significant sample of the properties. The mean or median amount of impervious area then becomes the billing unit for properties under all other land use types. All single family properties are charged for a single billing unit. For all other land uses the amount of imperviousness on the parcel is digitized from aerial photography and the equivalent number of billing units is determined. For example, for a rate based on impervious area only, if the single family billing unit is determined to be 3100 square feet, and the digitized impervious area for the corner convenience mart is 9300 square feet, the number of billing units for the convenience mart property is computed as 9300 square feet divided by 3100, or 3 billing units. (Other rate modifiers, such as credit for on-site stormwater management, will be discussed at the April 11th meeting.)

Variability Within the Flat Rate

The range of imperviousness in the single family residential sample that was evaluated was between 1800 and 9800 square feet, with 90 percent of the samples having less than 5000 square feet of impervious area. The mean level of imperviousness in the sample was 3478 square feet and the median was 3102 square feet. A common question in stormwater rate structure development is whether or not there is a need to further refine the charges within the single

family residential property category to reflect the variation in impervious area on those properties, or whether a single rate for the properties would be adequate.

Most stormwater utilities nationally have a single flat rate for single family residential properties; approximately 25% have multiple rates, or "tiers", within the single family residential flat rate. Fewer still use measured impervious areas for single family residential properties to "group" these into rate classes based on units of 500 or 1,000 square feet of impervious surface. In tiered single family rate structures it is common to discount the rate on the low end of the impervious area curve (low tier), and raise the rate on the upper end of the impervious curve (high tier), with most properties being billed the standard flat rate (medium tier). In tiered rate structures the single family residential properties account the same fraction of the total revenue (32% in Champaign) as they would under a single flat rate. In most tiered rate structures the rate is lowered by approximately $12-15 per year per account for the low tier and raised by the same amount for the high tier, with same number of properties in the high and low tiers.

In Illinois, the following cities have / have not included single family residential tiers within their rate structures:

Illinois Cities With / Without Single Family Rate Tiers

With	Without
Bloomington	Aurora
East Moline	Freeport
Moline	Highland Park
Rock Island	Morton
	Normal
	Rolling Meadows

In order to create tiers property data that is available from the assessor's office is used to create predictive regression equations that estimate which tier the single family residential properties should fall into. The property data needed to develop the regression equations is not readily available in digital format from the City of Champaign Township Assessor's Office. To pull each single family residential property data card and create the digital information would result in considerable effort, more effort than would be required to digitize the impervious area on each of those properties. Therefore, if the single family residential fees in Champaign should reflect the variability of imperviousness on those properties it would be necessary to digitize all of the single family residential properties.

Rate Structure Recommendation Number 2

If the City elects to implement a stormwater utility fee, it should:

A. Adopt a flat rate method for billing single family residential property, while measuring the impervious area on every other property.
B. Measure the impervious area on every property, including single family residential, so that tiering or other more detailed residential "grouping" can be supported.

Survey Form
City of Champaign
Stormwater Utility Fee Advisory Committee
Rate Structure Issues

1. **Rate Structure Recommendation Number 1 – Rate Base**

   If the City elects to implement a stormwater utility fee, the method for distributing the stormwater program's costs should be based on the:

   A. Impervious area of each property.
   B. Impervious area plus the gross area of each property.
   C. Impervious area plus the pervious area of each property.

   (Please circle one of the above responses.)

2. **Rate Structure Recommendation Number 2 – Single Family Residential Rates**

   If the City elects to implement a stormwater utility fee, it should:

   A. Adopt a flat rate method for billing single family residential property, while measuring the impervious area on every other property.
   B. Measure the imperious area on every property, including single family residential, so that tiering or other more detailed residential "grouping" can be supported.

   (Please circle one of the above responses.)

Return this survey form to Dennis Schmidt.