



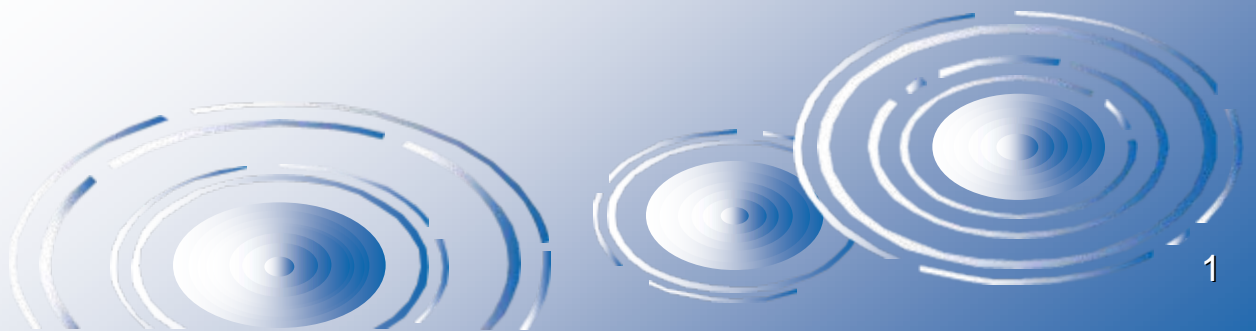
IAFSM

*Illinois Association for
Floodplain and Stormwater Management*

Stormwater Utility Credit Programs

March 11, 2009

amec  Doug Noel



Stormwater user fee credit programs

- What are credits / incentives?
- How do credits / incentives work?
- Who qualifies for credits / incentives?
- How are credits / incentive programs administered?
- Example
- Will property owners retrofit?
- Examples of programs
- Survey results

What is a stormwater utility?

- A stormwater utility is a funding concept under which a property pays a fee that is based on its use of infrastructure or programs
- Use is measured by demand for services, which is a function of runoff potential
- Rate is determined as the quotient of the cost of services and the rate base
- Cost of service is based on providing a target level of service to customers

What are stormwater user fee credits?

- Rate modifier / equity builder
- 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 and/or activities
- A stormwater user fee credit is an acknowledgement that on-site stormwater management may:
 - ❖ reduce operational costs
 - ❖ reduce compliance costs
 - ❖ reduce capital costs

What are stormwater incentives?

- A stormwater management incentive can be a method of reducing a property's user fees by reducing the amount of imperviousness on the property,
or
- A stormwater management incentive can be a method of compensating a property owner for providing on-site stormwater management, such as:
 - ❖ Grant programs
 - ❖ Cost share programs

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 cannot exceed the periodic fees that would be paid by the property
- Must be applied for;
 - ❖ Qualifying criteria set by policy
 - ❖ Maintenance of stormwater controls required

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
- Participation may be capped
- Must be applied for;
 - ❖ Qualifying criteria set by policy
 - ❖ There may be criteria to keep on-going incentives or the application process may be repetitive

Who can receive credits or incentives?

- Credit programs
 - ❖ Most programs focus on non-residential customers only, though 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

Who can receive credits or incentives?

- What activities typically 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
 - ✓ have a current NPDES stormwater permit
 - ❖ Must one meet or exceed local standards?



Who can receive credits or incentives?

- What activities are typically incentivized?
 - ❖ Minimizing imperviousness 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 repetitive
 - ✓ Compensation is typically through grants, cost sharing

Green stormwater management



Green stormwater management



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 internally and externally

How are credit programs administered?

- 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?

How are credit programs administered?

- Should the credit program structure 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)

How are credit programs administered?

Menu based credit structure 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

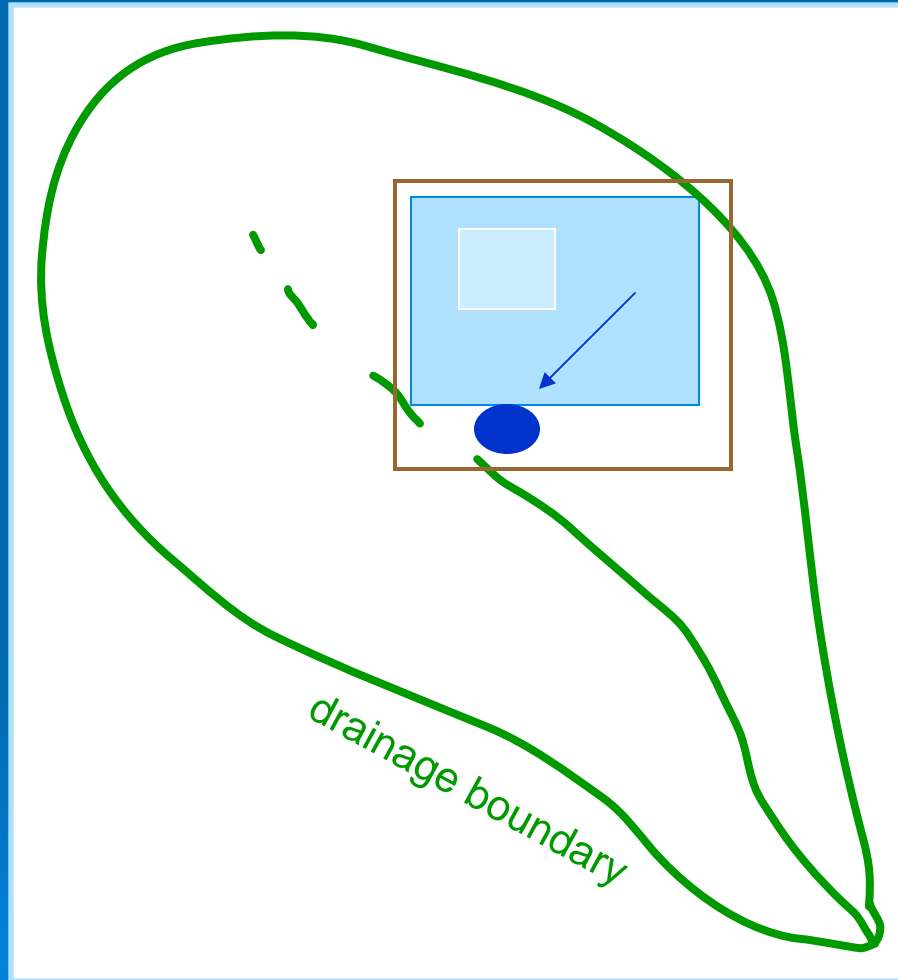
How are credit programs administered?

- 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?

How are credit programs administered?

- Annual credit maintenance
 - ❖ 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?

Stormwater Credit Program Example



Simple Credit Calculation (*assume commercial zoning*)

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

Examples of credit programs

● Charlotte	Non-residential	Detention	Water Quality
● Columbus	Non-residential	Detention	
● Durham	Non-residential		Water Quality
● Indianapolis	Non-residential	Detention	
● Louisville	Non-residential	Detention	
● Minneapolis	Non-residential	Detention	
	Residential		Water Quality
● Normal	Non-residential	Detention	Water Quality
● Raleigh	Non-residential	Detention	Water Quality
● Rock Island	All	Detention	Water Quality
● St Paul	Non-residential	Discharge	

Examples of incentive programs

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

Credit program participation

Community	Population	Rate	Limit	Participation
Morton, IL	15,760	\$4.74	50%	< 2%
Griffin, GA	23,450	\$3.57	50%	< 5% / < 0.5%
Rock Island, IL	38,440	\$3.62	100%	< 5%
Normal, IL	45,390	\$4.60	50%	17% / 2%
Franklin, TN	46,420	\$4.00	75%	< 5%
Raleigh, NC	276,090	\$4.00	50%	< 2%
Charlotte, NC	695,450	\$5.51	100%	< 0.5%
Columbus, OH	711,470	\$3.32	80%	< 1%
Indianapolis, IN	791,930	\$2.25	85%	< 4%

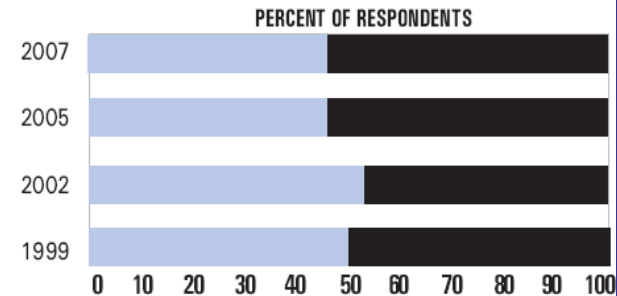
How are incentive programs administered?

- 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

Stormwater user fee survey

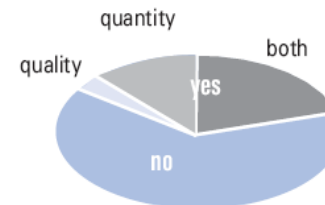
Are credits provided for private detention/retention facilities?

46% Yes
 2005 = 46% • 2002 = 53% • 1999 = 50%
 54% No



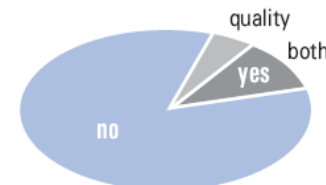
Are user-fee credits provided to encourage customers to control or reduce stormwater pollution?

68% No
 32% Yes
 1% Quality only
 11% Quantity only
 20% Both quality and quantity



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

89% No
 11% Yes
 4% Quality only
 0% Quantity only
 7% Both Quality and quantity



Why is participation low?

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

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	@ \$4.50/ERU	\$392	
SW Charge - Annual			\$4,704

Questions ??

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