



REPORT TO CITY COUNCIL

FROM: Steven C. Carter, City Manager

DATE: October 19, 2012

SUBJECT: STORMWATER UTILITY FEE – CREDIT AND INCENTIVE MANUAL - SS 2012-054

A. Introduction: The purpose of this report is to review the Credit and Incentive Manual for the City’s stormwater utility fee and to obtain Council’s input on the Manual.

B. Recommended Action: Incorporate Council’s input into the Credit and Incentive Manual and finalize the Manual.

C. Prior Council Action:

- On October 27, 2009, Council discussed a report on financial options to address flooding in three neighborhoods, which the Finance Department had prepared at Council’s request. Council directed staff to provide additional information on stormwater utility fees.
- March 23, 2010, Council Study Session, SS 2010-022, Council directed staff to develop an Expenditure, Revenue, and Billing Plan for a stormwater utility fee.
- June 15, 2010, CB 2010-127, Council established a Stormwater Utility Fee Advisory Committee.
- June 15, 2010, CB 2010-128, Council appointed individuals to the Stormwater Utility Fee Advisory Committee.
- August 3, 2010, CB 2010-168, Council authorized the City Manager to execute a professional services agreement with AMEC Earth and Environmental, Inc., Indianapolis, Indiana, to assist staff with the development of a stormwater utility fee Expenditure, Revenue, and Billing Plan.
- March 29, 2011, Council Study Session, SS 2011-019, Council directed staff to proceed with the completion of the Stormwater Utility Fee Expenditure, Revenue, and Billing Plan.
- August 23, 2011, Council Study Session, SS 2011-054, Council took the following actions on the stormwater utility fee:
 1. Provided input on the Revenue Plan, Credit and Incentive Plan, Billing Plan, and Public Outreach Plan.
 2. Directed staff to incorporate a \$3.2 Expenditure Plan into the Stormwater Utility Fee Expenditure, Revenue, and Billing Plan.
 3. Directed staff to proceed with the Public Outreach Plan.
 4. Directed staff to develop a “draft” Stormwater Utility Fee Rate Ordinance.

- February 28, 2012, Council Study Session, SS 2012-012, Council directed staff to finalize the rate ordinance and UCSD billing agreement and schedule these items for Council action at the April 17 meeting. Staff also indicated they would finalize the AMEC professional services agreement and have that document also ready for Council action at the April 17 meeting.
- April 17, 2012, Council adopted an ordinance that amended the City Code to establish the stormwater utility fee, authorized the City Manager to execute an intergovernmental agreement for stormwater utility fee billing services with the Urbana & Champaign Sanitary District (UCSD) and authorized the City Manager to execute a professional services agreement with AMEC Earth and Environmental, Inc., Indianapolis, Indiana in an amount not to exceed \$231,522.

D. Summary:

- Currently, there is no funding available in the Stormwater Fund for additional capital projects. The City committed all previously uncommitted resources in the fund to the Boneyard Creek Second Street Reach, Washington Street East, and John Street Drainage Improvement Projects.
- Council established development of a plan to fund stormwater drainage improvements as a 2009-2011 City Council goal. A key project for the 2011-2013 City Council goals was “Adopt a dedicated funding source for stormwater improvements.”
- March 2010, Council directed staff to prepare an Expenditure, Revenue, and Billing Plan for a stormwater utility fee.
- June 2010, Council established the Stormwater Utility Fee Advisory and Technical Committees. The purpose of the committees was to assist staff with the preparation of the stormwater utility fee Expenditure, Revenue, and Billing Plan.
- April 17, 2012, Council adopted an ordinance amending the City Code establishing the stormwater utility fee.
- One of the implementation steps for the stormwater utility fee is the development of a Credit and Incentive Manual.
- Staff, with review and input from the Stormwater Utility Fee Advisory Committee, developed a draft Credit and Incentive Manual.
- The purpose of the Credit and Incentive Manual is to encourage property owners to incorporate sustainable stormwater management practices on their property thereby reducing the financial impact of the utility fee.
- The draft manual is very similar to the types and values of credits and incentives that have been discussed over the last two years.
- Two changes that have been made to the draft manual are: 1) provide an incentive payment (\$25) for every rain barrel purchased by the property owner, and 2) K-12 school properties, like all other properties in the City, would be limited to the 50 percent credit limit on their stormwater utility fee.
- First bills for the stormwater utility fee are scheduled for May 2013.
- New projections estimate the annual revenue from the stormwater utility fee at \$3 M.

E. Background:

1. **Stormwater Funds Totally Committed.** Due to the 2008 and 2009 record rainfalls and

the neighborhood flooding those rainfalls caused, Council expressed an interest in completing more capital drainage improvement projects. The improvement projects would address neighborhood flooding problems. Currently, there is no funding available in the Stormwater Fund for additional capital projects. In 2010, the City committed all previously-uncommitted resources in the fund to the Boneyard Creek Second Street Reach Project, Washington Street East, and John Street Drainage Improvement Projects. The following information summarizes the Stormwater Management Fund’s revenues and programs for a typical year:

Revenues		Expenditures	
¼ Cent Sales Tax	\$2.9M	Operating Budget	\$1.0M
Property Tax	\$1.3M	Recurring Projects	\$1.8M
General Fund Transfer	\$0.7M	Debt Service	\$2.7M
Build America Bond Payments	\$0.4M		
Other	\$0.2M		
Total Revenues	\$5.5M	Total Expenditures	\$5.5M

Current recurring revenue in this fund is about \$5.5 million per year from several sources, but primarily a one-quarter percent sales tax that the City levies under its Home-rule authority. The “Build America Bonds Payments” in the chart above refers to payments from the Federal Government, authorized in the 2009 economic stimulus program, which pays 35% of the interest expense on certain state and local government bonds issued in 2009 and 2010. The City’s 2010 bonds were issued as Build America Bonds and the payments reduce the effective rate of interest paid by the City. The payments contributed to the City’s ability to expand the debt issuance to include projects beyond the Boneyard Second Street Basin.

Stormwater Management Fund expenditures fund the following activities, which use all available funds:

- Operations, which includes activities such as water quality management (pursuant to Federal requirements) and response to flooding - \$1 million annually.
- Recurring projects include maintenance of storm sewers and channels and rehabilitation of storm sewers and related facilities such as catch basins - \$1.8 million annually.
- Debt Service: The City typically finances large projects through bond issues with debt service payments for up to about 20 years. Currently the City pays debt service on two bond series issued in the late 1990’s Boneyard Creek improvements (the Healey Street Detention Basin and Campustown Channel Improvements) and a bond series issued in 2010 to finance the Second Street Basin, East Washington, and John Street drainage improvement projects. That bond issue exhausted all uncommitted resources in the Stormwater Management Fund for the next 20 years – about \$2.7 million annually, of which about \$400,000 is reimbursed by Federal Build America Bond payments.

2. Council Goals.

- a. 2009-2011 City Council Goals – Key stormwater projects identified were:
 - Fund the John Street and Washington Street East flood abatement projects.
 - Develop flood abatement plans for Washington Street West.
 - Develop a plan to fund stormwater drainage improvements.

- b. 2011-2013 City Council Goals – Key stormwater projects identified were:
- Finish John Street stormwater project.
 - Finish Phase 2 of Washington Street West stormwater project.
 - Initiate Phase 3 of Boneyard stormwater improvements.
 - Adopt a dedicated funding source for stormwater improvements.

3. Stormwater Utility Fee. A stormwater utility fee is one method of providing the funding that would be needed to accomplish the key stormwater projects listed under the Council goals.

Stormwater runoff can be managed as a utility and billed as a fee. The fee is based on the concept that every property contributes runoff and should support the operation, maintenance, and rehabilitation of the stormwater transport system. The amount of support is based on the amount of runoff the property contributes to the stormwater drainage system.

The runoff from a property is directly proportional to the amount of impervious area that has been constructed on a property. Impervious areas include roofs, sidewalks, driveways, parking lots, and any other surfaces that will not allow rainfall to soak into the ground.

4. City Stormwater Utility Fee Efforts. City of Champaign stormwater utility fee efforts began March, 23, 2010, when Council directed staff to prepare an Expenditure, Revenue, and Billing Plan for a stormwater utility fee. A technical and advisory committee was formed to assist staff in these efforts. The technical committee consisted of City staff from the Planning, Finance, IT, Legal, and Public Works Departments, plus representatives from the development community and the Chamber of Commerce staff. The advisory committee consisted of representatives from the watershed steering committees (Washington East, Washington West, and John Street), Champaign School District, Parkland College, Champaign Park District, University of Illinois, local businesses (both manufacturing and commercial), City Council, and neighborhoods.

From March 23, 2010, to February 28, 2012, there were four Council Study Sessions on the stormwater utility fee. The study sessions provided opportunities for input on the Expenditure, Revenue, and Billing Plan for the stormwater utility fee plus the Credit and Incentive Plan, Public Outreach Plan, and Stormwater Utility Fee Rate Ordinance.

Council adopted the Stormwater Utility Fee Rate Ordinance on April 17, 2012. The adopted ordinance established the fee for single family and duplex properties at \$4.94 per month for zero to 6,000 ft² of impervious area, \$10.55 per month for 6,001 ft² to 8,000 ft², and \$13.64 per month for over 8,000 ft² of impervious area. The fee for all non-single family and duplex properties would be \$5.24 per month for 3,478 ft² of impervious area. It's estimated the fee would generate \$3.2M annually.

The stormwater utility fee would be included as a separate line on the UCSD bill. UCSD would collect the fee and send the fee recipients to the City monthly. The first stormwater utility fee bills are scheduled to be mailed May 2013.

Prior to adoption of the Stormwater Utility Fee Rate Ordinance, staff completed an extensive Public Outreach Plan on the fee. The plan consisted of holding four public meetings, 19 individual meetings, and 13 group meetings with stakeholders on the stormwater utility fee.

Nationwide, over 1,000 communities have adopted a stormwater utility fee. In Illinois, there are 15 communities that staff is aware of that have a stormwater utility fee. Three of these 15 have adopted them in 2012 (Champaign, Urbana, and Downers Grove).

5. Stormwater Utility Fee Advisory Committee. The advisory committee was established and appointed by Council on June 15, 2010. The purpose of the committee was to provide input on the Expenditure, Revenue, and Billing Plan for the City’s stormwater utility fee. The committee met monthly 11 times over a 12-month period. Upon completion of the Expenditure, Revenue, and Billing Plan, the committee stopped meeting. The committee’s last meeting was July 11, 2011.

The advisory committee was reactivated May 8, 2012. City staff thought the committee could be a valuable resource in helping complete the Stormwater Utility Fee Credit and Incentive Manual. The goal was to review the draft manual with the committee and then incorporate their input into the document.

Membership on the reactivated advisory committee was very similar to the original committee. Due to retirements, job changes, or relocations, representation changed a little. The table below lists the original committee membership versus the reactivate membership.

Stormwater Utility Fee Advisory Committee		
	Original Committee Member	Reactivated Committee Member
Committee Chair	Vic McIntosh	Vic McIntosh
Champaign City Council	Karen Foster	Karen Foster
John Street Steering Committee	Steve Cochran	Steve Cochran
Washington St East Steering Committee	Charles Allen	Carol Jo Morgan
Washington St West Steering Committee	James Creighton	James Creighton
Property Owner (City Resident)	Anna Maria Watkin	Anna Maria Watkin
Central Illinois Apartment Association	Chris Hamelberg	Andrew Timms
Commercial Business	Clif Carey	Clif Carey
Commercial Business	James Jesso	James Jesso
Industrial Business	Donald Agin	-
Unit 4 School District	David Tomlinson	Judy Wiegand
Champaign Park District	Jim Spencer	J.R. Pope
Parkland College	Jim Bustard	Seamus Reilly
University of Illinois	Eliana Brown	Eliana Brown

The reactivated committee met three times (June 18, July 16, and August 13) to discuss the Stormwater Utility Fee Credit and Incentive Manual. Minutes for each committee meeting have been included in Exhibit A.

The committee recommended the City provide an incentive payment for every rain barrel purchased by the property owner rather than one barrel per property as suggested by City staff. This modification was unanimously supported by the committee, and staff has incorporated this recommendation into the Credit and Incentive Manual.

The committee also polled several suggestions about limiting or expanding credits. Those polls are listed below. The committee made no recommendations on these polls. At the time, staff did not incorporate any of the poll results into the Credit and Incentive Manual. The education credit limit was later changed as a result of comments from the City's Legal Department, as discussed in the next section.

- Four committee members voted to allow the school district to receive education credits for all 12 grade levels.
- Six committee members voted to limit education credit eligibility to less than 12 grades.
- None of the committee members supported allowing schools to zero out their stormwater utility fee bill by utilizing credits.
- Nine committee members recommended the 50 percent limit on credits apply to schools.
- Ten committee members voted against expanding education credits beyond schools.

August 14, 2012, staff received a letter from the Champaign Park District requesting the City add to the Stormwater Utility Fee Credit and Incentive Manual education credits for Champaign Park District programs. A copy of the Park District letter has been included in Exhibit B. Staff polled the advisory committee members on the Park District's request and the results were: one member was in favor (Champaign Park District); two members were in favor, but total credits must be limited to 50 percent of their stormwater utility fee bill; eight members were not in favor of expanding education credits to Park District programs; the University of Illinois indicated they would respond by the end of September; and one committee member did not respond. Staff has incorporated no changes into the Credit and Incentive Manual concerning Park District education credits as a result of this poll.

On the reactivated Stormwater Utility Fee Advisory Committee, staff tried to add a minister from one of the small faith-based churches. Evangelist Eloris Nash expressed an interest in serving, but unfortunately her schedule did not allow her to attend any of the committee meetings. Melinda Carr became President of the Ministerial Alliance and was interested in serving. Unfortunately, staff did not learn of this interest until after the last meeting of the advisory committee. City staff and the chair of the advisory committee offered to meet with the Ministerial Alliance President to brief her on the stormwater utility fee and the Credit and Incentive Manual. To date, there has been no response to the offer.

6. Credit and Incentive Manual. A copy of the draft Credit and Incentive Manual for the City's stormwater utility fee has been included in Exhibit C. The draft manual was reviewed with the Stormwater Utility Fee Advisory Committee, and their input was incorporated into the manual.

In developing the Credit and Incentive Manual, staff used the following goals:

- The manual should encourage property owners to incorporate sustainable stormwater management practices on their property.
- The manual should be easy for the property owner to use and should not overly complicate the stormwater utility fee billing system.
- The manual should enhance the equity of the stormwater utility fee’s rate structure.

These are the same goals staff has consistently used in all discussions and formulations of credits and incentives for the City’s stormwater utility fee.

The table below provides a good summary of the credit and incentive values that are in the manual.

Credit and Incentive Plan	Single Family & Duplex Properties	“Other Properties”
1. Rain Barrel	\$25 – Incentive	\$25 – Incentive
2. Rain Garden	\$250 – Incentive	\$250 – Incentive
3. Rate Reduction	\$250 – Incentive	15% – Credit
4. Volume Reduction	\$250 – Incentive	15% – Credit
5. Water Quality	\$250 – Incentive	10% – Credit
6. NPDES	N/A	5% – Credit
7. Private Detention Maintenance	15% – Credit	15% – Credit
8. Direct Discharge	N/A	50% – Credit
9. Education	N/A	\$5 per Student

The above table has been included numerous times in presentations and Reports to Council concerning the City’s stormwater utility fee. There were no changes to the type of credits and incentives nor their values from previous versions of this table.

The manual contains seven example calculations for credits and incentives. Each example illustrates how the credit and incentive would be calculated for the installation of a hypothetical stormwater management practice on a property. The manual contains the forms that would be used to apply for credits and incentives, plus all the procedures that would be used to administer the credits and incentives for the City’s stormwater utility fee.

Two changes were made to the original draft Credit and Incentive Manual.

1. The Stormwater Utility Fee Advisory Committee recommended the City provide an incentive payment (\$25) for every rain barrel purchased by the property owner i.e. no limit. The original draft manual specified one barrel per property. This change was unanimously supported by the committee; staff incorporated this recommendation into the Credit and Incentive Manual.
2. The City’s Legal Department recommended changing the education credit. The manual provides that “the City will provide a credit to educational institutions on an annual basis at a rate of \$5 per student for providing instruction in accordance with an approved curriculum” for “water quality based education programs.” Additionally, credits are limited to a maximum of 50 percent of a property’s total stormwater utility fees.

However, in the original version of the draft manual, the education credit was not subject to the 50 percent limit.

It is recommended this education credit exemption to the 50 percent limit be eliminated. In other words, all property owners in the City would be subject to the 50 percent limit including the school district. The logic was that applying the 50 percent limit to all would enhance the City's chances to successfully defend against a legal challenge to the stormwater utility fee/credit/incentive, whether that challenge is based on the requirement that a user fee's impact should be direct and proportional to the benefit conferred, or the requirement, under Equal Protection analysis, that there be some rational basis for how we discriminate between property owners regarding the impact of available credits against the stormwater utility fee.

7. Stormwater Utility Fee Implementation Steps - Update. The first bills for the stormwater utility fee are scheduled to be sent May 2013. To accomplish this goal, a number implementation steps need to be completed. Below is a listing of the steps and their status. Overall, the implementation steps are on schedule for the May 2013 billing.

- a. **Credit and Incentive Manual.** Work on the manual is nearly complete. Council's input needs to be incorporated into the manual and then the manual can be finalized and placed on the City's web site.

Staff tentatively plans to start accepting applications for the stormwater utility fee credits and incentives in January 2013. The goal is to review and approve as many credits/incentives as possible before the first bill.

- b. **Credit and Incentive Program Training.** This step would develop the materials needed to conduct training sessions for local developers, site designers, property owners, etc. on the use of the Credit and Incentive Manual. This includes creating a web-based version for posting on the City's web site and also includes City staff conducting on-site training sessions on a quarterly basis.

No major progress has been accomplished on this implementation step. Once the Credit and Incentive Manual is finalized, then work would start in earnest on this task.

- c. **Private Detention Basin Maintenance Standards.** One of the proposed credits for the stormwater utility fee is a 15 percent credit for those private detention basins that meet City maintenance standards. The purpose of this implementation step was to develop the City maintenance standards for private detention basins.

Work on the City's maintenance standards has been completed. The existing standards in the City's Manual of Practice were reviewed and determined to be adequate.

- d. **University of Illinois Service Agreement.** The University requires service agreements with the municipalities for the payment of fees. The Urbana and Champaign Sanitary District (UCSD) has a service agreement with the University for their fee; and both

Champaign and Urbana have a similar agreement with the University for the sanitary sewer fee. The University requested a service agreement for the stormwater utility fee.

Champaign, Urbana, and the University are working together in the development of the service agreement. The cities have completed the calculations to estimate the University's stormwater utility fee. A meeting is being scheduled with the University to review these calculations. Additional meetings will be needed. The goal is to complete the University's service agreement prior to the May 2013 billing date for the first stormwater utility fee bill.

- e. **Billing.** The UCSD would be the billing agent for Urbana and Champaign's stormwater utility fee. To date, based on impervious area, all single family and duplex properties have been assigned to one of the three Champaign billing tiers. Additionally, the impervious area calculations for all non-single family / duplex properties have been completed. A master account file is being developed with this information. UCSD will use the master account file to calculate the stormwater utility fee for each parcel and this calculated value will be placed on their bill. UCSD is working with their billing software vendor and Beta testing for the stormwater utility fee bills is scheduled for January 2013.
- f. **Customer Service Assistance.** This step would develop a service plan, flowchart, and FAQs for customer service staff at UCSD, Public Works, and the Finance Department for the stormwater utility fee.

No major progress has been made on this implementation step. Staff's focus has been to complete tasks associated with creating the bill first. Once the billing issue has been completed, customer service requirements would be addressed.

- g. **Public Education and Outreach.** This step is a continuation of work that has already been completed educating our customers on the need and impact of the City's stormwater utility fee. Crisp Media has been contacted and a scope of work has been developed to create a web site for the City's stormwater utility fee. The web site is where the public will be directed for information and answers to questions on the fee. Work is just starting with the City's public information staff to determine what information needs to be developed and disseminated to the public. Discussions are just starting with UCSD to send out informational materials, brochures, and/or a sample stormwater utility fee bill to property owners.

8. Revenue Update. It was estimated the City's stormwater utility fee could generate annually \$3.2M. The original estimate was based on generalizations from other communities and "rules of thumb." There were tools available that could have been used to provide more accurate revenue estimates. The cost for the higher accuracy would have been an additional \$150,000 to \$200,000 in professional services fees. Staff judged the City did not want to incur this additional expense when there was no certainty a stormwater utility fee would be adopted.

Upon adoption of the fee at the April 17, 2012, Council meeting, City staff and the City's consultant proceeded with the additional efforts to determine the imperious areas for all

properties in the City. In turn, these efforts provided a more accurate revenue projection for the fee.

Specifically, all single family and duplex properties were assigned to one of the three City billing tiers. Additionally, the impervious area calculation for all non-single family/duplex properties was calculated. These calculations indicated the City's stormwater utility fee is projected to generate approximately \$3M in revenue. This is a decrease in the estimate of \$200,000 or a 6.75 percent decrease.

The primary reason for the decrease was vacant (non-built) residential and commercial lots in the City. The original estimate allowed for limited vacancies, but the actual number resulted in a drop of billing units in this category from 40,402 to 34,397, or approximately 15 percent. The Expenditure, Revenue, and Billing Plan for the stormwater utility fee was adjusted to reflect the new revenue projections.

F. Alternatives:

1. Direct staff to incorporate Council's input into the Credit and Incentive Manual and finalize the Manual.
2. Do not direct staff to finalize the Manual and provide further direction to staff.

G. Discussion of Alternatives:

Alternative 1 would direct staff to incorporate Council's input into the Credit and Incentive Manual and finalize the document.

a. Advantages

- Continues progress toward the implementation of a stormwater utility fee, which was a key project in the 2011-2013 City Council Goals – "Adopt a dedicated funding source for stormwater improvements."
- Finalizing the Credit and Incentive Manual provides definitive measures that property owners can take to reduce their stormwater utility fee.
- Encourages property owners to construct and maintain improvements to their properties to reduce and treat stormwater on their property.

b. Disadvantages

- There appears to be no disadvantages to this alternative. If the City is going to implement a stormwater utility fee, then there should be a means through credits and incentives whereby property owners should be able to reduce those fees.

Alternative 2 would not finalize the Stormwater Utility Fee Credit and Incentive Manual and provides an opportunity for Council to provide direction to staff on how to proceed.

a. Advantages

- Provides an opportunity for Council input.
- Depending on Council action, there could be other advantages.

b. Disadvantages

- Difficult to identify disadvantages without knowing what Council direction could be.

H. Community Input: There have been several study sessions addressing drainage issues. Citizens at several of these meetings have voiced support for enacting a stormwater utility fee to help pay for needed drainage projects.

Additionally, there have been numerous neighborhood and steering committee meetings to discuss local flooding and drainage problems. Questions about a stormwater utility fee have been asked at several of the meetings. Public Works staff has discussed and provided steering committee members with stormwater utility fee information.

The John Street, Washington Street East and West Steering Committees were provided with a copy of this report. The public will have an opportunity to provide input on the Council Bills at the Council meeting.

Council established a Stormwater Utility Fee Advisory and Technical Committee. The committees met monthly from September 2010 through July 2011. The advisory committee was reactivated to assist staff with the completion of the Credit and Incentive Manual for the stormwater utility fee. The reactivated committee met monthly in June, July, and August 2012.

The packets for each committee meeting and minutes from each meeting are available at the City's website at: <http://ci.champaign.il.us/departments/public-works/residents/stormwater-management/stormwater-utility-fee/stormwater-utility-fee-advisory-committee/resource-page/>. Committee meetings were televised on CGTV. Committee meetings were recorded and are available for viewing at: www.ci.champaign.il.us/cgtv (search keyword is "storm"). The advisory committee was provided with a copy of this report.

Staff developed a Public Outreach Plan for the stormwater utility fee, and the plan has been completed. The completed outreach activities and written public input were attached as Exhibits D and E to Council Study Session, February 28, 2012, Report to Council:
<http://archive.ci.champaign.il.us/archive/dsweb/Get/Document-10734/SS%202012-012.pdf>.

I. Budget Impact: To implement a stormwater utility fee, staff estimated the total cost at \$500,000. Staff feels this estimated cost is still a valid representation of what it could cost the City to implement a stormwater utility fee.

To date, the City has contracted for \$398,746 for professional services (AMEC Earth and Environmental, Inc., Indianapolis, Indiana) to assist staff with the implementation of the City's stormwater utility fee. This \$398,746 is part of the \$500,000 estimate.

Sufficient resources have been budgeted in the Stormwater Fund to implement the stormwater utility fee at the estimated cost of \$500,000. The stormwater utility fee rates would be established at a level to pay back the Stormwater Fund for all costs associated with developing and implementing the stormwater utility fee.

J. Staffing Impact: Staff has been working on the stormwater utility fee for almost three years. On the average, staff has spent approximately 1,000 hours each year on the fee.

It took 80 staff hours to prepare this Report to Council.

The Expenditure, Revenue, and Billing Plan recommended the following additional staffing for the stormwater utility fee:

- One temporary Project Specialist for ten hours per week to assist the Public Works Director with the planning and implementation for the stormwater utility fee. This temporary staffing would no longer be needed once the billing for the fee has been started.
- Two temporary customer service staff (one Public Works and one Finance Department) to assist with questions on stormwater utility fee billing. It is estimated the temporary customer service staff would be needed for approximately six months. After six months, it is assumed the volume of customer service requests for the stormwater utility fee will decrease to a level that existing permanent staff can handle.
- One full-time permanent Engineering Tech II to assist with the review and approval of credit applications and incentive requests. This technician would also help with project management of new drainage capital improvement projects that the City would undertake as a result of the revenue from the stormwater utility fee.
- An upgrade of an existing Civil Engineer II to a Civil Engineer III. The upgraded engineer would supervise the City's stormwater staff and manage the Stormwater Fund.

The staffing levels and resources for the stormwater utility fee staff have been included in the FY13 budget.

Prepared by:

Dennis Schmidt, PE
Public Works Director

Attachments: Exhibit A – Stormwater Utility Fee Advisory Committee June 18, July 16, and August 13, 2012 Meeting Minutes
Exhibit B – Champaign Park District Letter
Exhibit C – Draft - City of Champaign Stormwater Utility Fee Credit and Incentive Manual

City of Champaign, Illinois
Minutes of Meeting

Stormwater Utility Fee Advisory Committee Meeting

June 18, 2012

Advisory Committee Members Present: Clif Carey, Steve Cochran, James Creighton, Karen Foster, Jim Jesso, Vic McIntosh, Carol Jo Morgan, John Pope, Anna Maria Watkin, Judy Wiegand

Advisory Committee Members Absent: Eliana Brown, Seamus Reilly, Andrew Timms

City Staff Present: Joe Hooker, Alex Nagy, Dennis Schmidt, Jamie Vermillion

Consultants Present: None

Call to Order

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

Introductions

Committee members and City staff members were introduced.

Stormwater Utility Fee Advisory Committee - Purpose

Schmidt explained the purpose of the Stormwater Utility Fee Advisory Committee is to help complete the Credit and Incentive Manual for the Stormwater Utility Fee with the assistance of City Staff and the City's consultant, AMEC Earth & Environmental over the course of four meetings.

Stormwater Utility Fee - Review

Schmidt summarized what a stormwater utility fee is and why the City adopted a stormwater utility fee.

Watkin asked if the estimated \$86.2 million of stormwater capital funding needs includes areas in the City which have not been studied in depth. Schmidt clarified that the \$86.2 million estimate only includes dollars identified as needs by drainage studies or Master Plans.

Creighton asked when impervious area measurements of commercial properties will begin and how long they will take to complete. Schmidt indicated the consultant, AMEC, started measuring commercial properties at the end of April 2012. Nagy added that the billing database should be complete by the end of November 2012, so measurements should be finished by that time.

Stormwater Utility Fee - Rate Ordinance

Schmidt reviewed the Stormwater Utility Fee Rate Ordinance emphasizing sections applicable to credits and incentives and explained how the stormwater utility fee will function in the City of Champaign. The full Rate Ordinance is included as Attachment I in the Stormwater Utility Fee Advisory Committee Meeting Packet.

Creighton asked if incentives will be applied as credits to the property owner's stormwater utility fee account. Schmidt indicated that the City will disburse a check following approval of the completed incentive. Nagy added that the only reduction for single family and duplex properties where the credit will be applied as a bill reduction is the Private Detention Maintenance credit.

Pope asked why a rain barrel install is considered an incentive rather than a credit since the barrel will continue to reduce stormwater year after year. McIntosh explained that an incentive is only paid to a property owner one time. In effect, staff will only have to visit the property one time. Schmidt further explained that incentives for single family and duplex properties were developed in a way to make them more appealing to property owners. For example, if a 15% credit was given to a single family/duplex property owner to build a rain garden, this would equate to a savings of less than \$1 a month. An incentive of \$250 is much more desirable to property owners.

Watkin asked if credits and incentives will be retrospective, i.e. will property owners who have already taken actions to reduce their stormwater runoff (rain garden, rain barrel, etc.) be eligible for these credits and incentives? Schmidt said property owners will be eligible to receive credits and incentives for actions previously taken to reduce runoff.

Jesso asked if Champaign is treating large commercial properties similarly to other larger communities with stormwater utility fees. Schmidt explained that Champaign is treating commercial properties exactly the same as other communities. No properties will be exempt from the stormwater utility fee.

Public Participation

There were no questions or comments made by members of the audience.

Next Meeting

The next meeting will be July 16 from 4-5:30 in Council Chambers. Meetings may be viewed on CGTV or "On Demand" through the City's website, should a Committee member miss a meeting. Staff is also available to meet with Committee members privately if one is absent.

Adjourn

The meeting was adjourned at 4:54 p.m.

City of Champaign, Illinois
Minutes of Meeting

Stormwater Utility Fee Advisory Committee Meeting

July 16, 2012

Advisory Committee Members Present: Steve Cochran, James Creighton, Karen Foster, Vic McIntosh, Carol Jo Morgan, John Pope, Andrew Timms, Anna Maria Watkin, Judy Wiegand

Advisory Committee Members Absent: Eliana Brown, Clif Carey, Jim Jesso, Seamus Reilly

City Staff Present: Alex Nagy, Dennis Schmidt, Jamie Vermillion

Consultants Present: None

Call to Order

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

Introductions

Committee members were introduced.

Stormwater Utility Fee Advisory Committee – Purpose

Schmidt explained that a memorandum was included in the meeting packet for any committee members who did not attend the June meeting. The memo outlines meeting dates and agenda topics for each future meeting.

June 18, 2012 Stormwater Utility Fee Advisory Committee Minutes

The minutes from the June 18, 2012 Stormwater Utility Fee Advisory Committee Meeting were reviewed and accepted.

Stormwater Utility Fee Credit and Incentive Manual

Nagy described the components of the “draft” Credit and Incentive Manual, which describes improvements a property owner could make to reduce their stormwater utility fee bill. Credits are a recurring reduction in a property owner’s stormwater utility fee bill while incentives are a one-time payout. Credits and incentives are available to all properties.

Creighton asked if items reducing stormwater runoff which are not specifically identified in the Credit and Incentive Manual would be eligible for a credit or incentive, i.e. French drain. Nagy explained that staff will be flexible and review proposals from citizens for credits and/or incentives that are not listed in the “draft” credit and incentive manual. Staff will review these proposals and make decisions on a case by case basis.

Watkin asked if it is accurate that a property owner would only be eligible for one rain barrel incentive per property. Nagy indicated the “draft” Credit and Incentive Manual proposes one rain barrel incentive per parcel. Watkin suggested giving incentives for more than one barrel on a property. Schmidt pointed out to the Committee that the purpose of this meeting was to review the proposed Credit and Incentive Manual. The August meeting will focus entirely on changes the Committee recommends to the proposed Manual. Schmidt asked the group to keep a list of items they wish to modify for discussion during the August meeting.

Cochran asked if a rain garden over 100 square feet would be eligible for three incentives. Nagy indicated they would be eligible for the rate reduction incentive, the volume reduction incentive and the water quality incentive.

Cochran asked if detention basins are currently required to undergo regular maintenance. Nagy indicated the City’s 231 detention basins are supposed to be maintained, however, many are not. This incentive is intended to encourage residents to come together to maintain detention basins where regular upkeep has been overlooked in order to receive an incentive.

Cochran asked what the City’s detention basin requirement is for detention basin volume. Nagy indicated detention basins are currently required to be sized to hold a 100-year rainfall event.

Schmidt commented that for the Educational Credit, he would recommend visiting the Water Environment Federation website (www.wef.org) for model curriculums.

Watkin asked if lesson plans would be required from every single teacher in order for a school to be eligible for the Educational Credit. Schmidt explained that the “draft” Credit and Incentive Manual only requires approval of the class curriculum.

Creighton asked if staff had an estimate of what Unit 4’s stormwater utility fee would be without any credit or incentives. Schmidt estimated that Unit 4’s twenty-two properties have approximately 2.5 million square feet of impervious area equating to an annual fee of approximately \$43,000. Creighton then asked how many students are in Unit 4. Wiegand indicated there are 9,300 students enrolled in the Unit 4 school district.

Pope asked if an estimate for the Champaign Park District has been calculated. Schmidt indicated the Park District has just under 1 million square feet of impervious area which equates to an annual fee of approximately \$18,000 dollars.

McIntosh asked if the City will be taking over maintenance responsibilities for inlet and outlet structures for private stormwater detention basins as a result of the stormwater utility fee. Schmidt explained that after a discussion with City Council it was decided the City would not maintain inlet and outlet structures at this time.

Public Participation

Eric Green provided a calculation showing costs incurred for construction of a 172 square foot rain garden installed by his students and volunteers in the John Street Watershed. Green would like to use the stormwater utility fee to help motivate property owners to install rain gardens on their properties. Green suggests allowing a property owner to recoup their rain garden installation costs up to \$750.

Furthermore, he proposed a rain garden installation to be considered a credit rather than an incentive. Green reasoned that rain gardens do not stop functioning unless they are not properly taken care of.

Pattsi Petrie shared five comments on the proposed Credit and Incentive Manual as follows:

- Petrie thinks that giving an incentive for one rain barrel per household does not encourage residents to have rain barrels at each corner of their home. A significant amount of runoff could be diverted if each property had rain barrels capable of capturing 220 gallons of water.
- Petrie is unclear as to why the three categories - rate reduction, volume reduction and water quality are not grouped together into one category with a maximum of \$750 since each of these categories are exactly the same with the exception of the addition of a cistern in the volume reduction category.
- Petrie believes in discouraging the use of detention ponds and encouraging more sustainable maintenance and handling of stormwater management such as pervious surfaces, cisterns, green roofs, etc.
- Petrie would like for the Champaign Park District to be eligible for an educational credit for educational programs involving students (i.e. rain garden construction).
- Petrie feels the proposed incentives and credits do not move properties to attain zero runoff, which should ultimately be the goal.

Creighton suggested that educating residents on the benefits of reducing stormwater runoff will help people change their behaviors more than monetary incentives.

Watkin commented that education needs to go beyond the schools. She would like to see the City develop a more in-depth sustainability plan.

McIntosh suggested broadcasting a program on CGTV educating residents on the benefits of stormwater management.

Next Meeting

The next meeting will be August 13 from 4-5:30 in Council Chambers. Meetings may be viewed on CGTV or "On Demand" through the City's website, should a Committee member miss a meeting. Staff is also available to meet with Committee members if one is absent.

Adjourn

The meeting was adjourned at 5:14 p.m.

City of Champaign, Illinois
Minutes of Meeting

Stormwater Utility Fee Advisory Committee Meeting

August 13, 2012

Advisory Committee Members Present: Clif Carey, Steve Cochran, James Creighton, Karen Foster, Jim Jesso, Vic McIntosh, Carol Jo Morgan, Barbara Ramsay, Seamus Reilly, Andrew Timms, Anna Maria Watkin

Advisory Committee Members Absent: Eliana Brown, John Pope

City Staff Present: Alex Nagy, Dennis Schmidt, Jamie Vermillion

Consultants Present: None

Call to Order

The meeting was called to order at 4 p.m.

Introductions

Committee members were introduced.

July 16, 2012 Stormwater Utility Fee Advisory Committee Minutes

The minutes from the July 16, 2012 Stormwater Utility Fee Advisory Committee Meeting were reviewed and accepted.

Draft Stormwater Utility Fee Credit and Incentive Manual

Schmidt indicated the July meeting focused on the components of the Draft Stormwater Utility Fee Credit and Incentive Manual. He asked the Committee if there were any questions. There were none.

Public Participation

Sarah Tufte, FedEx Ground and Home Delivery, indicated the FedEx site has approximately 1.2 million square feet of impervious area equating to an annual stormwater utility fee bill of approximately \$26,000. Their staff have explored methods to decrease the fee and looked into collecting rainwater from the roof, funneling it into storage tanks and then using the water for toilet flushing. Tufte said this plan was presented to the City and representatives from FedEx were told the site would be eligible for a 5% rate reduction incentive. The improvements proposed would cost FedEx \$200,000, meaning they would not reach a return on their investment for forty-five years. If they could get an incentive of 15% they would see a return on their investment in six years.

Patti Petrie of the John Street Watershed addressed the Committee. She raised concern about imposing a regressive tax on the citizens of Champaign. She suggested making it a progressive tax by charging residents based upon their income. If a progressive tax is not possible, she suggested charging residents in tiers based upon site square footage. She recommended contacting Council members and

encouraging them to curtail sprawl in order to mitigate the need for fees. She also noted that the City needs a comprehensive stormwater management plan that integrates several sustainable approaches to stretch the use of fee money generated. Petrie also would like to have an ordinance that states that when residents change a permeable surface to an impermeable surface, mitigation needs to occur on the site to eliminate additional runoff. Additionally, Petrie would like a provision allowing staff to revisit the stormwater utility fee ordinance after 18 months.

Eric Green, 308 N. State Street, Champaign, would like the Advisory Committee to consider increasing monetary incentives. Educating residents on the benefits of decreasing runoff combined with a higher monetary incentive would encourage residents to make changes which affect runoff from their properties.

McIntosh thanked the audience for their participation. He noted the Credit and Incentive Manual is a living document. He suggests that Council review the Manual after one year to see if any changes need to be made to the manual.

Stormwater Utility Fee Credit and Incentive Manual – Proposed Changes

Schmidt asked the Committee for suggested changes to the Stormwater Utility Fee Credit and Incentive Manual.

Creighton made the following suggestions:

1. Give an incentive for every rain barrel purchased rather than one barrel per household
2. Grant FedEx a higher percentage credit for utilizing rainwater for toilet flushing as a rate reduction
3. Give school districts three credits – 6th, 9th, and 12th grades for the curriculums taught rather than allowing them to zero out their balance by receiving a credit for each student enrolled in Unit 4

The Committee discussed the number of rain barrels on a property which would be eligible for an incentive. Alternatives of four rain barrels, eight rain barrels and an unlimited number of barrels were discussed. It was noted that any properties with rain barrels already installed would be eligible for the incentive as long as they have not already received one. Timms made a motion that a resident be eligible for an incentive for an unlimited number of rain barrels. Carey seconded the motion. All members approved unanimously.

The Committee discussed Creighton's proposal that schools be limited to a credit to students in 6th, 9th and 12th grades. Schmidt suggested an option of making the 50% credit for all other properties apply to schools as well. Four members of the Committee voted to allow school districts to receive the credit for all twelve grade levels. Six members voted to limit credit eligibility to less than twelve grades. Zero members voted to allow schools to be allowed to zero out their bill.

The Committee discussed expanding an education credit to beyond schools to businesses, the university, etc. Watkin pointed out that there was a suggestion at the July 16 meeting to extend the credit to the Champaign Park District. Schmidt indicated that Normal, Illinois is the only other community in Illinois

which offers credits to schools, and no other communities with stormwater utility fees offer credits beyond schools. Timms suggested that by extending the credit to businesses, the City would not be singling out a specific group (schools) and any commercial enterprise would be eligible to receive the education credit. Morgan expressed concern over how manageable it would be for staff to approve a curriculum for every business in the City. Cochran asked if schools in Normal were permitted to zero out their stormwater utility bill with the education credit. Schmidt does not recall the ordinance specifically addressing that issue, and will research. Ten members voted against expanding the credit to anything other than k-12. Nine members recommended a 50% maximum reduction in a school's fee regardless of the number of children studying stormwater management.

Carey asked which method of stormwater reduction is most effective. Nagy explained that a detention basin can impact water quality, volume and rate reduction. Schmidt added that the credits associated with large properties with a lot of impervious area probably are the most beneficial in reducing stormwater runoff.

Creighton commented that he believes commercial properties should be incentivized at a higher percentage.

Foster said the City will be willing to look at special instances of unique improvements and these can be addressed on a case by case basis. The manual has been developed in an effort to be fair and reasonable to citizens and if there is something that has not been addressed, changes can be made. Schmidt elaborated by adding the Credit and Incentive Manual was not included as part of the stormwater utility fee rate ordinance in order to allow the Public Works Director to revise the Manual with no limitations. The Director will notify Council of any changes and the revisions will be effective 15 days after Council notification.

Timms expressed concern that the credits and incentives are not lucrative enough to influence residents' behavior.

Next Meeting (September 10, 2012)

The Committee decided not to meet in September. Staff will distribute minutes of this meeting to all Committee members via email.

McIntosh thanked the panel for their participation as members of the Stormwater Utility Fee Advisory Committee.

Adjourn

The meeting was adjourned at 5:20 p.m.



Discover the fun!

August 14, 2012

Mr. Dennis Schmidt
Public Works Director
City of Champaign
702 Edgebrook Drive
Champaign, Illinois 61820

Re: Stormwater Utility Fee Advisory Committee Recommendations

Dear Dennis:

On behalf of the Champaign Park District Board of Commissioners and as a follow up to the June 2012 Stormwater Utility Fee Advisory Committee meeting, and discussion about "education credit" and how the Champaign Park District could take advantage of it. I spoke with Judy Wiegand and am aware of how Champaign Public Schools will receive a \$5 credit for each of its 9,300 students by having teachers provide lesson plans for the upcoming school year. They plan to educate their students about the importance of lessening or stopping the amount of stormwater runoff from homes and businesses and how this will benefit the City of Champaign. This will become a part of the student's weekly curriculum.

Teaching our children, during these formative years, about stormwater runoff and the importance of lessening it and the methods available to capture as much of it as possible are critical for our future. I believe that what the Champaign Park District can bring to the table are the steps prior to and beyond where the Champaign Public Schools will stop.

Champaign Public Schools deal with a specific population, primarily K-12 or 5 up to 18 year olds. The Champaign Park District (CPD) provides recreation activities and programs for this same age group through its summer day camps and year-round seasonal offerings. CPD also programs for all ages from preschool to senior adults. Through CPD's annual marketing and promotional offerings throughout the year the District reaches out to the entire population. The audience that will be most affected by the proposed stormwater utility fee, the homeowner, the commercial business owner.....the tax payer.

During the past year the Champaign Park District web site's homepage was visited over 100K times. This past July alone there more than 9000+ "hits". The CPD Facebook page has 1,548 "Likes" and there are 1571 "Twitter" followers, and 3 times each year CPD prints and mails out to over 38,000 households its "Funformation" program guide. These mailings alone reach more than 114,000 homes which equates to well over 300K contacts.

Champaign Park District
706 Kenwood Road
Champaign, Illinois 61821-4112
217.398.2550 Phone
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Park Commissioners
Newton H. Dodds
Alvin S. Griggs
Barbara J. Kuhl
Joseph A. Petry
Jane L. Solon

Officers
Guy C. Hall, *Attorney*
Gary Wackerlin, *Treasurer*
Bobbie H. Herakovich, *Executive Director*
We provide quality parks and recreation for our community.

Mr. Dennis Schmidt
August 14, 2012
Page 2

CPD proposes to incorporate on its website homepage, Facebook and Twitter pages and in the *Funformation* program guide an on-going and rotating educational feature about stormwater runoff and the importance of controlling it both from an environmental as well as an economic standpoint. CPD employs staff whose expertise can be tapped to provide articles/information on rainbarrels; how to design, construct and manage a rain garden; the important role proper landscaping is to controlling runoff and why to consider using impervious materials when installing sidewalks and driveways. These are only a sampling of the educational materials we would disseminate to the entire Champaign community. These educational materials will follow curriculum as sourced for the School District and/or the Trust for Public Lands, and/or the National Park and Recreation Association.

Dennis, I believe that what I have outlined above is a logical progression to follow that which the Champaign Public Schools will initiate. The School District will deal with the youth of Champaign while the CPD will then pick up where they leave off through afterschool, summer camps and print material that CPD initiates. We will continue to educate individuals before and after the school district targeting the preschool to adult population about the important role they all play in controlling/managing stormwater runoff in our city.

Please consider these ideas as an addendum to the definition of educational credit as noted in the proposed Stormwater Utility Fee Credit and Incentive Manual.

Sincerely,



J. R. Pope
Superintendent of Planning and Operations

c: Bobbie Herakovich
Guy Hall

DRAFT FINAL

DRAFT FINAL

DRAFT FINAL

**CITY OF CHAMPAIGN
STORMWATER UTILITY FEE
CREDIT AND INCENTIVE MANUAL**

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CITY OF CHAMPAIGN STORMWATER UTILITY FEE CREDIT AND INCENTIVE MANUAL

1 BACKGROUND

For the purposes of the stormwater utility a developed property is defined as having a minimum of 500 or more square feet of impervious area. In determining the fee, properties are assigned to one of two categories, 1) single family residential or duplex properties, or 2) other properties that are not single family residential and duplex. The amount of a ratepayer's stormwater utility fee is based on the amount of impervious surface that exists on the property and the category assigned to the property.

Ratepayers have an opportunity to reduce their stormwater utility fee amount by applying for the incentives and credits that are outlined in this manual. Incentives and credits are available to ratepayers who reduce the impact of the runoff from their properties by such methods as installing sustainable stormwater practices that allow stormwater to infiltrate into the ground. These practices offset the impact of some of the impervious surface on the property by reducing the rate and volume of runoff, and by improving water quality.

This manual provides details on the basis of the fee and for the incentives and credits.

2 DEFINITIONS

The following definitions will assist the applicant understand the references in this manual.

Applicant - The owner (or his agent or his legal representative) of land requesting a stormwater user fee credit or incentive.

Best Management Practice (BMP) - A stormwater control which, when properly installed and maintained, reduces the concentration of typical stormwater pollutants discharged from a particular property.

City - The City of Champaign, Illinois.

Credit - A conditional, recurring reduction in the amount of a stormwater user fee to an individual property based on approved on-site stormwater runoff controls, a NPDES industrial stormwater discharge permit, or proof of direct discharge outside of the corporate limits.

Detention Basin (Dry Bottom) - Privately-owned and maintained stormwater detention basin, constructed for the purpose of mitigating stormwater runoff from a developed site to control the peak discharge rates that is normally a dry basin between storms. Maintained by the property owner.

Detention Basin (Wet Bottom) - Privately-owned and maintained stormwater detention basin, constructed for the purpose of mitigating stormwater runoff from a developed site to control the peak discharge rates that normally has a permanent pool of water between storms. Maintained by the property owner.

Ditch - An open drainage channel with either natural (grassed) or paved (concrete) banks which may have continuous flow of stormwater. Open ditches are outlets for surface and subsurface storm sewer drainage systems.

Drainage Easement - The land required for the installation and maintenance of storm drainage facilities.

Drainage Facilities - All ditches, channels, conduits, retention-detention systems, tiles, swales, sewers, and other natural or artificial means of draining stormwater from land.

Drainage System - Any combination of surface and/or subsurface drainage components that collect, convey, store or treat stormwater runoff. This may include parking lots, streets, driveways and yards that convey storm runoff to a drainage swale, open ditch, or a storm sewer.

ERU - Equivalent Residential Unit, used as the basis for determining the stormwater service charge to a parcel. Three thousand seven hundred and forty-eight (3,748) square feet of impervious area shall be one ERU. The number of ERU's attributed to a parcel is determined by dividing the total impervious area (square feet) of the parcel by three thousand seven hundred and forty-eight (3,748) and rounding the result up to the nearest integer. Rounding is down for fractional ERUs 0.5 or less, up for fractions greater than 0.5.

Impervious Area - Areas that prevent or impede the infiltration of stormwater into the soil. Common impervious areas include, but are not limited to; rooftops, sidewalks, walkways, patio areas, driveways, parking lots, storage areas, and awnings.

Incentive - Stormwater management program incentives are one time disbursements that compensate a property owner for "partnering" with the city to achieve a stormwater management objective, such as the installation of a rain garden or rain barrel.

Maintenance - Cleaning, spraying, removal of obstructions or debris or sediment from, and making minor repairs in a drainage facility or BMP so that it will perform the function for which it was designed and constructed.

Municipal Separate Storm Sewer System (MS4) – The City owned and/or operated storm sewer system, including all drainage system components and that eventually discharge to local creeks and tributary streams.

NPDES - National Pollutant Discharge Elimination System, a United States Environmental Protection Agency program (delegated to the Illinois Environmental Protection Agency) initiated to reduce and eliminate pollutants reaching water bodies of all types.

Owner - The owner of land subject to the stormwater user fee or his agent.

Property – Any delineated parcel within the City of Champaign.

Public Works Department - The Public Works Department of the City of Champaign, the department that manages the stormwater utility.

Qualified Professional – a licensed professional authorized to submit drainage plans to the City of Champaign, such as an Illinois-registered Professional Engineer.

Ratepayer - The owner of land subject to the stormwater user fee or his agent.

Stormwater Utility Fee - Fee charged to owners of all developed residential and non-residential properties within the City, based on impervious area, to fund the management of the stormwater program.

Swale - A natural or constructed waterway, usually broad and shallow, covered with erosion-resistant grasses, used to conduct surface water from a lawn, field, diversion, or other site feature to a stream, lake, detention basin or other conveyance.

Underdrain - A drainage system below or near the bottom of a stormwater infiltration unit whose purpose is to dewater the device by providing access to the local drainage system.

3 STORMWATER UTILITY FEE

A stormwater utility is different than other utilities in that there is no direct way to measure the “utility use” for each property, such as with a water or electric meter. Under a stormwater utility, the amount of utility use for each property is estimated based on the demand for service of the property. Due to the widely-documented relationship between intensity of development and stormwater runoff, the amount of impervious surfaces that exist on a property are used to estimate runoff potential of the developed property. The rationale behind this is that impervious surfaces don’t allow stormwater to penetrate into the ground and thereby generate more stormwater runoff that drains into the City’s stormwater infrastructure. The larger the impervious area on a property the more stormwater runoff may be generated by the property, which in turn increases demand on the City’s stormwater infrastructure. Examples of impervious surfaces include roof tops, driveways, pavements, walkways or any other hard surface that prevents the infiltration of stormwater into the ground.

It has been determined that the average single family residential property in Champaign has 3,478 square feet of impervious surface on it. This amount is known as an Equivalent Residential Unit (ERU), which becomes the base unit for calculating stormwater utility fees for all properties.

In determining how the fee amount is calculated, the stormwater utility rate structure classifies properties into two general categories. The first category is “single family residential and duplex properties”. The second category includes all “other properties” that are not single family and duplex. Details for each category are provided below.

3.1 Single Family Residential and Duplex Properties

For single family residential and duplex properties, the stormwater utility fee structure is based on a three-tiered flat fee system, as shown in Table 1. The tiered flat rate structure was chosen based on the distribution of sampled properties and the small degree of variation when computing ERUs. The tiers reflect the increased impervious area on the small percent of properties in this category that actually would have more than one billing unit (ERU).

Table 1 Stormwater Utility Fee for Single Family Residential and Duplex Properties

Tier	Amount
Tier 1 (0-6,000 square feet of impervious area)	\$4.94 per month
Tier 2 (6,001-8,000 square feet of impervious area)	\$10.55 per month
Tier 3 (over 8,000 square feet of impervious area)	\$13.64 per month

3.2 Other Properties

For all properties in the City that are not single family residential or duplex properties, the amount of the stormwater utility fee is \$5.24 per month per ERU. For example, a property with 10,000 square feet of impervious area would have the following fee.

3.3 Example Fee Calculation

A corner convenience store is determined to have 10,000 square feet of impervious area on its lot. The number of billable ERUs on the property is calculated as follows:

$$\text{No. of ERUs} = 10,000 \text{ square feet} \div 3,478 \text{ square feet} = 2.9 \text{ ERUs} \Rightarrow 3.0 \text{ ERUs}$$

The stormwater utility fee is computed as follows:

$$\text{Fee Amount} = 3.0 \text{ ERU} \times \$5.24/\text{ERU}/\text{month} = \$15.72/\text{month}$$

4 CREDIT AND INCENTIVE POLICIES

Each property in the City of Champaign places a demand on the City's stormwater infrastructure. Depending on the amount of development and the stormwater features in place, some properties place heavy demands on the City infrastructure while others actually lessen the demands. Properties that lower the demand on City systems help to lower the City's cost of providing stormwater services, while properties with unmitigated heavy demands drive up the City's costs. To acknowledge the impact that these activities or facilities have on the City's stormwater management program costs, the City has developed a system of credits and incentives through which a ratepayer can reduce their stormwater utility fee or whereby an incentive, is available to help defray costs associated with the construction of on-site stormwater management practices. Qualifying stormwater management activities that are eligible for either credits or incentives must provide either a reduction in peak discharge, a reduction in stormwater runoff volume, a water quality benefit, or some combination of the three.

The following goals were established for the development of the City's Credit and Incentive Policy:

- The policy should encourage property owners to incorporate sustainable stormwater management practices on their property.
- The policy should be easy for the property owner to use and should not overly complicate the stormwater utility fee billing system.
- The policy should enhance the equity of the stormwater utility fee's rate structure.

The following sections provide policies regarding incentives, credits, and the general administration of the City of Champaign's stormwater utility fee credit and incentive program.

4.1 Incentives

Incentives are available for any property in the City of Champaign that installs specific types of sustainable stormwater management features. It should be noted that both the credits and incentives programs are mutually exclusive and that credits and incentives will not be awarded to the same property, with the exception of the Private Detention Basin Maintenance Credit,

which can be earned in conjunction with either credits or incentives. Those properties that are eligible for credits will have to choose between the two programs. Table 2 summarizes the types of stormwater management features that qualify for incentives and the maximum incentive amounts available.

Table 2 Maximum Available Stormwater Management Incentives

Incentive Type	Maximum Amount
Rain Garden	\$250
Runoff Rate Reduction	\$250
Runoff Volume Reduction	\$250
Runoff Water Quality	\$250
Total Incentive Available	\$1,000
Rain Barrel	\$25 per barrel (no maximum limit)

The maximum lifetime incentive amount available per property for the combination of rain gardens, rate reduction, volume reduction and water quality items is \$1,000. Once a property reaches \$1,000 in incentive payments for these items, no more incentives will be issued to the property regardless of the ownership. Rain barrels are not subject to any maximum lifetime incentive amount.

4.2 Credits

The City of Champaign has adopted a credit program policy that has identified a total of 6 categories of credits. These categories include: 1) private detention maintenance credits; 2) rate reduction credits; 3) volume reduction credits; 4) water quality/BMP credits; 5) direct discharge credits, and 6) education credits. Table 3 summarizes the credits and the applicable credit limit for each category. It should be noted that single family residential and duplex properties are eligible for only the private detention maintenance credit category.

Table 3 Stormwater Utility Fee Credits

Credit Type	Credit Amount	
	Single Family / Duplex	Other Properties
Private Detention Basin Maintenance	15% max.	15% max.
Runoff Rate Reduction	NA	15% max.
Runoff Volume Reduction	NA	15% max.
Runoff Water Quality/NPDES Permit	NA	15% max.
Direct Discharge	NA	50% max.
Education	NA	\$5/student

4.3 General Administrative Policies

4.3.1 Eligibility for Credits and Incentives

The following policies apply to eligibility for participation in the City of Champaign Credit and incentive programs:

- a) The incentive program is available for participation by any property in the City of Champaign that is not participating in the rate reduction, volume reduction, water quality, or direct discharge credit programs.
- b) Any property whose stormwater runoff discharges to a privately maintained detention basin may be eligible to receive a private detention basin maintenance credit. To qualify the property must participate in the maintenance of the facility and proof must be provided that maintenance is indeed being performed as required by Chapter 23 of the City of Champaign Manual of Practice. For single family residential developments, application must be made by either a homeowner or lake owner association on behalf of its members. Individual homeowners may not apply. Upstream properties do not qualify unless capacity in the detention basin is specifically designed to accommodate their runoff and the upstream property is responsible for its share of the detention basin's maintenance.
- c) Owners of properties other than single family residential or duplex are eligible to apply for rate reduction, volume reduction, or water quality credits for qualifying activities.
- d) Credits will not be granted for any stormwater management control built or maintained using funds provided by the City of Champaign.

4.3.2 Credit / Incentive Determination

It is the intent of the City to process applications within thirty (30) working days of submittal of a complete and correct application package. Billing adjustments required to implement credits shall be applied retroactively to the date of receipt of the customer's complete application. A pending application for credit shall not constitute a valid reason for non-payment of the currently assessed stormwater utility fee by the customer. If an application is denied, a letter explaining reason(s) for the denial will be provided to the applicant. The applicant has the right to appeal this decision in accord with the procedures outlined in Article VI of Chapter 29.5 of the City Code.

4.3.3 Maintenance Required

All stormwater management facilities require maintenance in order to perform as designed. Stormwater detention facilities are required to be maintained as prescribed in Chapter 23 of the City of Champaign Manual of Practice. Proof of maintenance is required annually in the form of an annual report. Failure to maintain stormwater management facilities will result in the loss of stormwater utility fee credits.

4.3.4 Term of Credit

All stormwater utility fee credits must be reapplied for every 5 years. In the case of stormwater detention maintenance credits the owner should consider reapplication coincident with the 5 year cycle of reporting required by Chapter 23 of the City of Champaign Manual of Practice.

4.3.5 Indemnification

In consideration for permission to construct, install, or modify a stormwater management facility or BMP, and by nature of applying for a stormwater utility fee credit, the applicant is hereby legally acknowledging and agreeing to the following:

- a) After completion of the construction, modification, or installation by the Owners and approval by the City, the stormwater management facility or BMP shall remain a privately owned and maintained stormwater management facility /BMP, shall not be accepted by the City, and shall not become a part of the maintenance program of the City. All maintenance responsibility and liability shall be and remain with the Owners, their personal representatives, heirs, grantees, successors and assigns.
- b) Owners, their personal representatives, heirs, grantees, successors and assigns shall indemnify and hold harmless the City, its officers agents and employees from any and all claims, actions, causes of action, judgments, damages, losses, costs, and expenses (including attorney's fees) arising out of or resulting from the construction, modification, installation, maintenance, or operation of the stormwater management facility / BMP.
- c) Owners, their personal representatives, heirs, grantees, successors and assigns acknowledge that credits are not perpetual and that both maintenance of stormwater management facilities and annual reporting of maintenance activities may be required in order to maintain all approved credits, and that credits must be re-applied for every 5 years.
- d) This Agreement provides the City and its representatives Right of Entry to inspect and/or monitor the performance of stormwater management facilities.
- e) This Agreement shall run with the real estate upon which the stormwater management facility / BMP has been constructed and shall be binding upon the Owners, their personal representatives, heirs, grantees, successors and assigns so long as the stormwater management facility and/or improvement or any part of it shall be used by them. This Agreement shall be disclosed upon transfer of real estate. At such time as the stormwater management facility / BMP shall cease to be so used, this Agreement shall immediately terminate.

4.3.6 Suspended / Terminated Credits

If the terms of the credit are not met, particularly in regard to annual reporting and maintenance when required, the property owner will be notified and will have 30 days to come into compliance before the credit will be terminated. Once a credit is terminated a complete application must be submitted in order to restore the credit.

4.3.7 Credit Limit

Credits are limited to a maximum of 50 percent of a property's total stormwater utility fees.

4.3.8 Rainfall Proration

For volume reduction credits where rainfall prorations will be applicable, the following table shall be used:

Table 4 Rainfall Proration

Rainfall Depth (inches)	Credit Proration Factor
0.50 to 0.74	50%
0.75 to 0.99	75%
1.00 or more	100%

5 INCENTIVE CRITERIA

Incentives are available for any property in the City of Champaign that installs specific types of sustainable stormwater management features. It should be noted that credits and incentives programs are mutually exclusive and that credits and incentives will not be awarded to the same property. Those properties that are eligible for credits will have to choose between the two programs. The only exception to this is single family and duplex properties are eligible for a 15 percent Detention Basin Maintenance credit.

The following sections describe the requirements for participation in the City of Champaign's stormwater management incentive program.

5.1 Incentive Application Process

The following process should be followed to submit an application for a stormwater management incentive.

- a) Download current Incentive Application Form from the City website or obtain the form from the City of Champaign Public Works Department (702 Edgebrook Drive).
- b) Prepare Incentive Application Form
- c) Submit form and attachments (if required) to the address on the Incentive Application Form
- d) City will check to insure submittal is complete and notify applicant
- e) City will review application within 30 working days and notify applicant of incentive determination, including identification of deficiencies if the application is not approved
- f) If the incentive is denied applicant may address identified deficiencies and resubmit a revised application
- g) If an incentive is denied applicant may appeal the determination following guidelines in Article VI of Chapter 29.5 of the City Code

5.2 Rain Gardens

Rain gardens are shallow depressions planted with native perennial plants that are either located near a downspout or that are in an area that sheds noticeable amounts of rainwater. Rain gardens reduce runoff, absorb pollutants, and sustain some wildlife.

The City will reimburse property owners \$250 for a rain garden that has a minimum surface area of 100 square feet and has at least 500 square feet of impervious area draining into it. Smaller rain gardens shall be prorated based on the square footage of the rain garden. The minimum rain garden eligible for an incentive shall be 50 square feet.

The rain garden should be designed with a ponding area to capture and infiltrate the runoff from one inch of rainfall on the contributory impervious area within 24 hours.

The property owner is required to submit their rain garden plan to the City for review and approval. The City will pay the incentive to the property owner after construction has been completed and the construction has been inspected and approved by the City.

There would be only one reimbursement rain garden per property. Rain gardens in excess of 100 square feet are eligible to qualify for volume, rate reduction and water quality incentives as outlined in Section 5.4. Rain gardens that receive incentives under Section 5.4 are not eligible to receive the incentives under this section.

5.3 Rain Barrels

Rain barrels are structures designed to intercept and store runoff from rooftops. Typically, a rain barrel is a 55-gallon drum connected to a downspout. The stored water can provide irrigation for a garden or can be released slowly to a lawn.

The City provides an incentive of \$25 to the property owner for the purchase of a rain barrel. The incentive payment is made after the property owner provides proof of rain barrel purchase to the City.

There is no limit to the number of rain barrel incentives a property owner can obtain under this program..

5.4 Other Incentives

All properties in the City are eligible for incentives for installing and/or implementing activities that provide either a reduction in peak discharge, a reduction in stormwater runoff volume, a water quality benefit, or some combination of the three. The property owner is required to submit a plan to the City for review and approval prior to construction or installation of the stormwater management practice or facility. The amount of the incentive would be 25% of the construction cost for the activity up to a maximum incentive of \$250 for each category. The City would pay the incentive to the property owner after construction has been completed and the installation has been inspected and approved by the City. All costs for the construction of the stormwater management feature(s) must be documented and submitted to the City before payment of the incentive. Table 5 lists some typical stormwater features that would qualify for incentive payments under this section.

These incentives could be earned individually, i.e. one \$250 maximum incentive for installing a water quality management activity or one \$250 maximum incentive for installing a volume reduction management activity. It would also be possible to combine activities, i.e. installing one management activity that accomplishes a combination of rate reduction, volume reduction and/or water quality improvement. In the case of combination, it would be possible to achieve \$750 in maximum incentive payment for installing one single stormwater management activity valued at \$3,000, if it achieves all three categories. \$750 is the maximum incentive amount that a property owner is eligible for under this section.

Table 5 Other Stormwater Features That Qualify for Incentives

Incentive Type	Category
Permeable Pavement	Peak Discharge/Volume Reduction/Water Quality
Cistern	Volume Reduction
Green Roof	Peak Discharge/Volume Reduction/Water Quality
Bioswale	Peak Discharge/Volume Reduction/Water Quality
Rain Garden	Peak Discharge/Volume Reduction/Water Quality
Detention Basins	Peak Discharge/Volume Reduction/Water Quality
Vegetated Swales	Peak Discharge/Volume Reduction/Water Quality
Manufactured BMPs	Peak Discharge/Volume Reduction/Water Quality

These incentives are subject to three rules: 1) the stormwater management feature must capture, store and/or treat a 1-inch rainfall from a minimum of 500 square feet of impervious area; 2) the amount of the incentive is 25% of the construction cost, up to a maximum incentive of \$250 per incentive category, and; 3) each property is eligible to receive no more than one incentive disbursement for each of the three categories (Runoff Rate Reduction, Runoff Volume Reduction, and Water Quality Control) in a lifetime.

Eligible construction costs for calculation of the incentive payment must be directly related to the costs associated with the stormwater management feature. Stormwater features constructed for new homes would be eligible for the incentives.

6 CREDIT CRITERIA

The City of Champaign has adopted a credit program policy that has identified a total of 6 categories of credits. These categories include: 1) private detention maintenance credits; 2) rate reduction credits; 3) volume reduction credits; 4) water quality/BMP credits; 5) direct discharge credits, and 6) education credits. It should be noted that single family residential and duplex properties are eligible for only the private detention maintenance credit category. In the following sections the credits available to properties in Champaign are discussed, including the specifics of how to apply for the credits.

6.1 Credit Application Process

The following process should be followed to submit an application for a stormwater utility fee credit.

- a) Download current credit application forms from City website or obtain the form from the City of Champaign Public Works Department (702 Edgebrook Drive).
- b) Prepare General Credit Application Form

- c) Prepare credit-specific application form(s)
- d) Prepare or locate required site drainage plan showing topography, drainage patterns, and contributing area to each stormwater management structure
- e) Prepare technical calculations required to determine applicability of credit(s)
- f) Obtain appropriate signatures on forms
- g) Submit forms and required attachments to the address on the General Application Form
- h) City will check to insure submittal is complete and notify the applicant
- i) City will review application within 30 working days and notify the applicant of credit determination, including identification of deficiencies if the application is not approved
- j) If credit is denied applicant may address identified deficiencies and resubmit the revised application
- k) If credit is denied applicant may appeal the determination following guidelines in Article VI of Chapter 29.5 of the City Code

The process may vary depending on the type of credit being applied for. Specific criteria are provided in the following sections.

6.2 Private Detention Basin Maintenance Credit (Maximum 15%)

Property owners that discharge a portion or all of their impervious area runoff to a private detention basin that was: 1) required by the City's stormwater management regulations; 2) built to those standards; and 3) are complying with Chapter 23 of the City's Manual of Practice for Detention Basins Standards for Maintenance and Repair Responsibilities, are eligible for up to a 15 percent credit. The credit will be renewed each year upon receipt of the detention basin annual condition report and its review and approval by the City. The credit will be renewed on the fifth year upon receipt of the professional engineer's condition report and its review and approval by the City. The 5-year submittal of the professional engineer's condition report is a requirement of Chapter 23 of the City's Manual of Practice.

Properties that are in the tributary area of qualifying detention basins and who contribute to the maintenance of the basins are eligible to apply for this credit. For detention basins that accept the direct runoff from subdivision developments that include individual single family residential or duplex properties, the credit must be applied for by a homeowner or lakeowner association on behalf of its members. Individual single family residential or duplex properties may not apply. Upstream properties may not receive credit unless the detention basin was designed specifically to provide detention for their runoff and unless they participate in the maintenance expense.

Partial credit is not available for incomplete maintenance.

To receive this credit the applicant must provide the following information:

- a) A completed General Credit Application Form
- b) A completed Private Detention Basin Maintenance Credit Application Form
- c) A copy of the most recent maintenance report as required in Chapter 23 of the City's Manual of Practice
- d) A copy of the site drainage plan with lots and addresses, showing drainage areas tributary to the detention basin
- e) A copy of any calculations that help support and/or determine credit eligibility of the impervious area of the site and of the contributing drainage area

6.3 Rate Reduction Credit (Maximum 15%)

A rate reduction credit is available to properties that install and maintain stormwater rate reduction devices that control stormwater flow rates from sites to a level that is lower than what is required by the City stormwater management regulations. This type of credit is typically applied to properties that oversize detention basins to account for offsite upstream stormwater flows that enter the site. The property owner would be required to submit their plan for the rate reduction stormwater management device to the City for review and approval. The property owner's plan must be prepared and certified by a professional qualified to submit stormwater management plans. A professional engineer registered in the State of Illinois would satisfy this requirement. The rate reduction achieved by the stormwater management device must meet or exceed the requirements of the City's stormwater management regulations. The rate reduction device can earn up to a maximum credit of 15 percent depending on the reduction of flow rate and the amount of detention storage in excess of that required by the City stormwater management regulations.

The City will apply the credit after the City approved rate reduction plan has been constructed and inspected by the City. Every five years, the City will consider renewal of the credit upon receipt of a report from the property owner prepared by a certified professional indicating the rate reduction stormwater management practice is functioning as designed and is being maintained.

The Rate Reduction Credit is available to all developed properties that install and maintain a stormwater rate reduction device that results in oversizing a detention basin by at least 20 percent over that which is required by the City stormwater management regulations. This credit is not available for single family residential and duplex properties.

To qualify to receive the maximum 15 percent Rate Reduction Credit, the detention basin must have at least 20 percent more volume than is required by the City stormwater management regulations for a 100-year rainfall event. The property owner's designer must show that the detention basin is properly designed to detain the runoff for the 100-year rainfall event for the entire contributing drainage area, including any offsite areas. To confirm that this criteria was met for an existing detention basin, calculations, based on the criteria in Chapter 23 of the City's Manual of Practice, must be provided that show that the as-built storage volume of the detention basin is at least 20 percent larger than what was required for the property owner's property alone. Built out conditions must be assumed for the entire contributing areas.

Prorated credit will be considered for design storms less than the 100-year rainfall event. However, the excess storage volume of the detention basin must be at least 20 percent larger for any design storm to qualify for any credit. Example; a detention basin that has 20 percent more capacity than what is required by the City stormwater management regulations for a 50-year rainfall event would qualify for a 7.5 percent credit.

6.3.1 Rate Reduction Credit Application Process

To receive this credit the applicant must provide the following information:

- a) A completed General Credit Application Form
- b) A completed Rate Reduction Credit Application Form
- c) A copy of the site drainage plan, showing drainage areas tributary to the detention basin

- d) Copies of technical calculations showing the computation of the design capacity of the detention basin
- e) Copies of detention basin modeling output for the appropriate runoff volumes and retention times

6.4 Volume Reduction Credit (Maximum 15%)

Volume reduction credits are available for those activities that reduce the total volume of runoff from a property. A volume reduction credit requires the implementation of a stormwater infiltration or reuse practice. Many of these practices are also referred to as rainfall or stormwater harvesting practices, as rather than allowing the rainfall to simply runoff into a drainage system or receiving water body, the rainfall or runoff is intercepted and stored for a beneficial use, such as irrigation of lawns or plantings, or for non-potable uses such as toilet flushing.

Volume reduction practices can earn up to a 15 percent credit, depending on the fraction of the total impervious area served and the equivalent depth of rainwater or runoff that is either infiltrated or reused. The full 15 percent credit will be issued to all volume reduction practices that capture and store a 1-inch rainfall from the entire impervious area present on a property. For volume reduction practices that capture and store less than a 1-inch of rainfall from the entire impervious area on a property, credit will be prorated based on the fraction of rainfall, as shown on Table 4, and the fraction of the total impervious area on the property that drains into the volume reduction device.

Volume reduction practices also provide a water quality benefit. A practice designed to capture 1.0 inch of rainfall in Champaign, Illinois will capture almost all of the runoff for 90% of the annual rainfall events, meaning 100% capture of suspended and many dissolved stormwater pollutants for most events, and a significant capture and removal for events exceeding 1.0 inches of rainfall. Therefore, a Volume Reduction Credit in all likelihood will also qualify for at least a partial Water Quality Credit.

Stormwater controls that are constructed with underdrains do not qualify for this credit.

Stormwater controls must be drained within 72 hours to qualify for a Volume Reduction Credit.

The following sections define a variety of rainfall harvesting and reuse techniques that would qualify for a Volume Reduction Credit. The City is willing to consider other techniques not listed here for Volume Reduction Credits.

6.4.1 Cisterns

A cistern is a watertight receptacle for holding rainwater. Cisterns range in capacity from a few hundred gallons to thousands of gallons, effectively forming covered reservoirs. The water in cisterns can be used for irrigation or other types of reuse and infiltration practices. Cisterns are typically gravity fed and capture runoff from surfaces at the same level or higher than the storage, typically from rooftops. The Volume Reduction Credit for a cistern requires that the cistern capture and store 1 inch of rainfall from the impervious area contributing runoff. The credit may be prorated based on the fraction of the total impervious area of the property that provides water to the cistern and the fraction of rainfall depth that can be stored. The volume reduction plan must explain how the captured rainwater will be used so as to empty the stored water within 72 hours.

6.4.2 Green Roofs

A green roof is a roof of a building that is partially or completely covered with vegetation and a growing medium, planted over a waterproof membrane.

Green roofs serve several purposes for a building, such as absorbing rainwater, providing insulation, creating a habitat for wildlife, and helping to lower urban air temperatures and combat the heat island effect. There are two types of green roofs: intensive roofs, which are thicker and can support a wider variety of plants but are heavier and require more maintenance, and extensive roofs, which are covered in a light layer of vegetation and are lighter than an intensive green roof.

The Volume Reduction Credit for a green roof requires the roof to capture and infiltrate 1 inch of rainfall. The credit may be prorated based on the fraction of 1 inch of rainfall that is retained and on the fraction of the total impervious area of the property that the green roof represents.

6.4.3 Permeable Pavement

Pervious and permeable pavements are a range of materials and techniques for paving roads, parking lots and pavements that allow the movement of water and air around the paving material. Although some porous paving materials appear nearly indistinguishable from traditional nonporous materials, their environmental effects are qualitatively different. Whether pervious concrete, porous asphalt, paving stones or bricks, all these pervious materials allow precipitation to percolate through areas that would traditionally be impervious.

To qualify for the Volume Reduction Credit the impervious area calculations must include the area of the Permeable Pavement surface in the storage volume computations, and the storage must be based on 1.0 inches of rainfall on the impervious areas.

The credit may be prorated based on the fraction of 1 inch of rainfall that moves through the pavement and on the fraction of the total impervious area of the property.

6.4.4 Volume Reduction Credit Application Process

To qualify for the Volume Reduction Credit, the property owner would need to submit their volume reduction plan to the City for review and approval. The property owner's plan must be prepared and certified by a professional qualified to submit stormwater management plans. A professional engineer registered in the State of Illinois would satisfy this requirement. The City would apply the credit after the approved volume reduction plan has been constructed and inspected by the City. Every five years, the City would consider renewal of the credit upon receipt of a report from the property owner prepared by a certified professional indicating the volume reduction stormwater management practice is functioning as designed and is being maintained properly. Credit renewal would take place after the City has reviewed and approved the report.

To receive this credit the applicant must provide the following information:

- a) A completed General Credit Application Form
- b) A completed Volume Reduction Credit Application Form

- c) A copy of the site drainage plan, showing drainage areas tributary to the volume reduction control(s)
- d) A copy of calculations of the impervious areas of the site and of the contributing drainage area to each volume reduction control
- e) Copies of technical calculations showing the computation of the design capacity of the volume reduction control(s)
- f) Design drawings

6.5 Water Quality and NPDES Permit Credit (Maximum 15%)

Properties that provide measures to improve the quality of stormwater runoff that leaves the property may be eligible to receive a Water Quality Credit. For those properties that are granted either a rate or volume reduction credit, the Water Quality Credit may be added to those credits.

Credit is also available to industrial sites or other municipalities that are required to have a NPDES permit that is issued by the Illinois Environmental Protection Agency.

6.5.1 Water Quality / BMP Credit (Maximum 10%)

A credit may be provided to those applicants' properties that discharge a portion or all of their impervious area runoff to structural or non-structural best management practices (BMPs). The water quality credit will be granted if the applicant can demonstrate that the BMPs are designed to provide a minimum of 75 percent reduction in total suspended solids (TSS) in the stormwater runoff, as measured on an annual basis. Engineering calculations and, if applicable, vendor specifications for manufactured BMPs shall be submitted to demonstrate the minimum 75 percent TSS removal efficiency of the BMPs.

The maximum amount of Water Quality/BMP credit that will be provided is 10 percent. The final credit can be prorated based on the fraction of the total impervious surfaces on site that flows through the BMP.

To qualify for the Water Quality Credit, the property owner is required to submit their water quality plan to the City for review and approval. The property owner's plan must be prepared and certified by a professional qualified to submit stormwater management plans. A professional engineer registered in the State of Illinois satisfies this requirement. The City will apply the credit after the approved water quality plan has been constructed and inspected by the City. Every five years the City will consider renewal of the credit upon receipt of a report from the property owner prepared by a certified professional indicating the water quality stormwater management practice is functioning as designed and is being maintained properly. Credit renewal will take place after the City has reviewed and approved the report.

The following sections define a variety of BMP's that qualify for Water Quality Credits. The City is willing to consider other techniques that are not listed that can demonstrate the ability to achieve 75 percent total suspended solids removal from the runoff.

- a) *Water Quality Detention Basins.* Water quality detention basins are extended wet bottom detention basins that are designed with two control volumes; one control volume is for flood management for the 100-year event as required by City stormwater management regulations and Chapter 23 of the City's Manual of Practice, and the other is the water quality volume that is used to treat stormwater runoff prior to discharge from the detention basin. Water quality detention basins are efficient at sediment removal

and for that reason their design often includes a pretreatment area (forebay) or device that promotes sediment removal in an area of the detention basin that can easily be cleaned. The water quality storage volume is typically computed based on the volume of runoff generated by the “first flush” depth of runoff, assumed to be 1.0 inches in Champaign. The water quality, or first flush volume can be computed by the following equation

$$V_{ff} = 3,630 * C * A$$

Where:

V_{ff} = First flush volume, post-development (in cubic feet)

C = Post-development runoff coefficient

A = Drainage area tributary to detention basin (in acres)

In order to qualify for the maximum 10 percent credit, water quality detention basins must be designed to the V_{ff} volume for the entire property and must demonstrate a 75 percent removal of TSS. Partial credits are available based on the fraction of total impervious area on the property served by the detention basin.

- b) *Vegetated swales*. Vegetated swales, or “bioswales”, are landscape elements designed to remove silt and pollution from surface runoff. They consist of a swaled drainage course with gently sloped sides and filled with vegetation, compost and/or riprap. The water's flow path, along with the wide and shallow ditch, is designed to maximize the time water spends in the swale, which aids the trapping of pollutants and silt. Biological factors also contribute to the breakdown of certain pollutants. A common application of vegetated swales is around parking lots, where substantial automotive pollution is collected by the paving and then flushed by rain. The bioswale, or other type of biofilter, wraps around the parking lot and treats the runoff before releasing it to the storm sewer.

In order to qualify for the maximum 10 percent credit, vegetated swales must be designed to collect and treat a 1-inch rainfall from at least 20 percent of the total impervious area on a property. Partial credits are available based on the fraction of total impervious area on the property served by the vegetated swales.

- c) *Manufactured BMPs*. Manufactured BMPs are a family of BMPs that can be installed as standalone water quality treatments or can be used in conjunction with detention basins to pre-treat the inflow. Some of these devices are considered hydro-dynamic separation units, others use micro-screening techniques, and others provide biofiltration in a closed environment. Manufactured BMPs qualify for the Water Quality Credit if properly sized to remove 75 percent TSS.

In order to qualify for the maximum 10 percent credit, a manufactured BMP must be designed to collect and treat a 1-inch rainfall from at least 20 percent of the total impervious area on a property. Partial credits are available based on the fraction of total impervious area on the property served by the manufactured BMP.

To receive this credit the applicant must provide the following information:

- a) A completed General Credit Application Form
b) A completed Water Quality Application Form

- c) A copy of the site drainage plan, showing drainage areas tributary to the water quality BMP
- d) Copies of technical calculations showing the computation of the water quality storage required
- e) A copy of calculations of the impervious areas of the site and of the contributing drainage area
- f) Copies of detention basin modeling output for the appropriate runoff volumes and retention times for water quality detention basins
- g) Design drawings if retrofit or new construction

6.5.2 NPDES Permit Credit (5%)

This credit will apply only to property owners who are subject to either an industrial or municipal NPDES Stormwater Permit issued by the Illinois Environmental Protection Agency. This credit is conditional upon the proof of permit coverage and continuing compliance. The applicant shall submit her/his most recent annual site compliance inspection/audit update to prove compliance with an industrial NPDES stormwater permit, or the last annual report for a municipal NPDES stormwater permit in order to remain eligible for this credit. Similar information will be submitted annually in order to continue to receive the credit.

This credit will be in the amount of 5 percent for the entire area covered under the NPDES permit inside the City of Champaign corporate limits.

To receive this credit the applicant must provide the following information:

- a) A completed General Credit Application Form
- b) A completed NPDES Credit Form
- c) A copy of the permittee's Notice of Intent
- d) A copy of the permittee's latest annual site compliance report (industrial permit) or annual report (municipal permit)

6.6 Educational Credits

This credit is only applicable to local K-12 education institutions. National studies have shown that programs targeted at these students can be very effective at spreading the messages throughout a household.

The City will provide a credit to educational institutions on an annual basis at a rate of \$5.00 per student for providing instruction in accordance with an approved curriculum. Education credits are based on the number of students actually participating in the education curriculum in a school year. There are numerous water quality-based education programs that may be adopted by local school systems. The curricula for which credit applications are to be submitted must be approved by the City, whether it is a nationally accepted program or a program written by the institution. Examples of qualifying curricula are available at the websites of the United States Environmental Protection Agency (<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/>) under "Public Education" and in the "Classroom Education on Stormwater" subarea, and the Water Environment Federation (www.wef.org) website under "Public Information" and the subarea "Students & Teachers K-12".

To remain eligible for this credit, the applicant shall, on an annual basis, provide a copy of the lesson plan(s), demonstrate that the lesson plan(s) is (are) consistent with the educational

content deemed appropriate by the U.S. EPA for stormwater education, and provide documentation of the number of students taught that year. This credit is limited to the number of children enrolled in the applicant's school and in the target audience grade at the time of the application. This credit is also limited to the 50 percent credit limit indicated in Section 4.3.7.

To receive this credit the applicant must provide the following information:

- a) A completed General Credit Application Form
- b) A completed Education Credit Application Form
- c) A copy of the proposed curriculum and identifying the target audience (i.e.; 5th graders)

6.7 Direct Discharge Credit (up to 50%)

Properties that discharge directly to stormwater facilities or conveyances that are not maintained by the City and that do not eventually re-enter City-maintained drainage systems or streams, exert a lower demand for service on the City's stormwater program than do properties whose runoff must be accommodated by drainage system capacity, planning, and floodplain management. In recognition of that reduction in demand, the City will provide up to a 50 percent credit to those qualifying properties.

Credit amounts are based on the amount of area that does not directly discharge into City stormwater infrastructure. For properties that partially drain into City infrastructure, a prorated credit amount will be determined based the area that does not directly discharge into City stormwater infrastructure.

To receive this credit, the applicant must submit site plans for the property demonstrating which portion(s) of the parcel qualify for this credit and the credit will be prorated accordingly. This credit is not available for single family or duplex properties.

To receive this credit the applicant must provide the following information:

- a) A completed General Credit Application Form
- b) A completed Direct Discharge Credit Application Form
- c) A copy of the site drainage plan, showing delineated drainage areas that discharge to receiving waters outside the City of Campaign and all of the impervious area on the property
- d) A copy of calculations of the impervious areas of the entire property and of the non-contributing drainage area

7 EXAMPLES

The following example applications of the City of Champaign Stormwater Utility Credit and Incentive Manual are intended to provide guidance on the process of determining and applying for credits and incentives. The examples are not intended to cover all possibilities for credit applications. Any questions or uncertainties should be addressed to the Stormwater Coordinator at the City of Champaign Public Works Department for answers. These examples are fictitious and any resemblance to actual situations is merely coincidental. The following credit and incentive scenarios are reviewed:

- Rain Garden Incentive – single family residential property
- Runoff Volume Reduction Incentive – single family residential property
- Private Detention Basin Maintenance Credit - subdivision
- Runoff Rate Reduction – commercial site
- Water Quality / BMP Credit - big box site
- Direct Discharge Credit – mini-storage facility

7.1 Example 1. Rain Garden Incentive

A homeowner decides to build a rain garden as part of a front yard landscaping project. The house has 2,000 square feet of roof evenly distributed between front and back. There is a downspout on each corner of the house. The homeowner can build either a single rain garden to capture the runoff from one downspout, thus having a contributing area of 500 square feet (1/4 of the roof area), or may have a rain garden for each of the front yard downspouts fed by the runoff from 1,000 square feet of roof top, or she may have a single rain garden that captures the runoff from both downspouts. She decides to build a single rain garden that will capture the runoff from the entire front side of the house.

At a minimum, the rain garden must capture and store a 1-inch rainfall from a 500 square foot impervious area. This translates into a 100 square foot rain garden that is approximately 5-inches deep. In the design the homeowner reports that she has evaluated the soils and determined that she will have to amend them to increase the infiltration in the rain garden. The homeowner decides that she will design the rain garden to have a 5-inch ponding depth. She calculates the size of the rain garden to be:

$$\text{Rain Garden Area} = \text{Contributing Area} / \text{Ponding Depth}$$

$$\text{Rain Garden Area} = 1,000 / 5$$

$$= 200$$

Where: Areas are in square feet
Ponding depth is in inches

On a drawing of her front yard she approximates the shape of the garden as 10 feet wide by 20 feet long, running parallel to the house and located slightly further from the foundation of the house than the minimum distance of 10 feet. She develops a planting plan with the assistance of a local nursery utilizing predominantly native plants.

The Incentive Application Form, including the Rain Garden Incentive section is completed and submitted along with the rain garden plan for consideration by the City of Champaign Public Works Department. Once approval is received from Public Works the homeowner can install the rain garden. When the rain garden is complete the homeowner should notify the Public Works Department and supply her receipts. After the installation is confirmed the incentive disbursement will be approved.

Because the rain garden has enough capacity to capture and store a 1-inch rainfall from 1,000 square feet of impervious area, it exceeds the minimum size requirements. In addition, because this garden is over 100 square feet, it would qualify for the rate reduction, volume reduction and

water quality incentives. The homeowner would qualify for 25 percent of the cost to install the rain garden up to a maximum of \$750 (\$250 for each incentive category).

7.2 Example 2. Runoff Volume Reduction Incentive

The homeowner in Example 1 decides that she wants to capture and reuse rainwater from the roof on the back side of the house to water plants around her patio. To do this she decides to install a cistern. By sizing the cistern to capture the first inch of runoff in a storm she will qualify for an incentive payment of up to \$250.

The homeowner determines, as above, that half of the roof top on the back of the house is an area of 500 square feet. Capturing the runoff from 1 inch of rainfall from that area will require a storage volume of approximately 310 gallons as calculated by the following:

$$\begin{aligned} \text{Volume} &= 7.48 \times \text{Contributing Area} \times \text{Rainfall Depth} / 12 \\ &= 7.48 \times 500 \times 1 / 12 \\ &= 312 \end{aligned}$$

Where: Areas are in square feet
 Rainfall depth is in inches
 7.48 = conversion factor for cubic feet to gallons
 1 / 12 = conversion factor for inches to feet

In order to insure availability of extra water when needed she decides to install a 500 gallon cistern. The volume reduction plan details how she will utilize the captured water volume within a 72 hour period so as to maximize the rainfall harvesting capacity of the cistern. In the Other Incentive Information section of her Incentive Application Form she shows the required size and the proposed actual size of the cistern. She obtains an estimate for her project: the tank will cost \$400; a soaker hose and valves will cost \$80; a stand will cost \$80, and; delivery and setup will cost \$80. The total cost of the cistern, installed, is estimated to be \$640. The estimate is provided to the City of Champaign Public Works Department along with the volume reduction plan and the Incentive Application Form. If the application is approved the incentive payout upon proof of installation of the cistern would be 25% of \$640, or \$160.

7.3 Example 3. Private Detention Basin Maintenance Credit

A small subdivision on the west side of Champaign has 24 lots. The subdivision was built in 2001 and has a wet bottom detention basin that was built to meet the City's current standards. A lakeowners' association was formed and the maintenance and reporting that are required in Chapter 23 of the City's Manual of Practice have been performed on time each year. The association intends to apply for a Private Detention Basin Maintenance Credit on behalf of the members.

To qualify for this credit the lakeowners' association must retain a qualified professional to complete the General Credit Application Form and the Private Detention Basin Maintenance Credit Form. This credit requires that the qualified professional compute the fraction of the total area of the member properties that drains to the detention basin. For this example the entire impervious area is captured and directed to the detention basin, therefore the credit applied for is for 15% for each of the lakeowner association member properties. The address and parcel

identification number for each of the 24 member properties and for the common lot where the pond is located are recorded on the Private Detention Basin Maintenance Credit Form.

When the forms are completed and certified they are submitted to the City of Champaign Public Works Department with a copy of the required maintenance report. Once approved, the credit will be applied to each of the indicated properties.

7.4 Example 4. Runoff Rate Reduction Credit

A local property management firm is the owner / operator of a large commercial development in North Champaign. When the property was first developed a large detention basin was built to comply with local regulations. Because of the amount of impervious area that would be built on the site and the proximity of the site to a portion of the City's stormwater drainage system that is already at or near capacity, the developer designed and built the basin with excess storage that would provide control of events larger than the design rainfall. The property owner believes that he provided more than 20 percent excess storage volume in the detention basin and has decided to retain a qualified professional and apply for the Rate Reduction Credit.

To qualify for this credit the qualified professional must review the detention basin's design and determine the volume of detention storage that is required to meet the City's standards and the amount of detention storage that was actually provided in the basin. If the total storage volume of the basin is at least 20 percent more than what is required for the site then the development would qualify for the Rate Reduction Credit. It is also determined that the detention basin maintenance has been performed regularly as required by the City and therefore qualifies for the Private Detention Basin Maintenance Credit.

When the General Credit Application, Private Detention Basin Maintenance Credit Application, and Rate Reduction Credit Application Forms are completed and certified they will be submitted to the City of Champaign Public Works Department accompanied by a copy of the required maintenance report.

7.5 Example 5. Volume Reduction Credit

A local business decides it likes the idea of using an underground cistern to provide irrigation to some of their site landscaping. The property has a total of 1 acre with approximately 0.33 acres (14,375 ft²) of impervious area. The business owner is currently paying the following stormwater utility bill:

Stormwater ERUs = _____

Stormwater Utility Fee = _____

The business owner has looked at three cistern options that range from capturing all of the 1-inch rainfall from the entire 0.33 acres of impervious areas to capturing a portion of the 1-inch rainfall from part of the 0.33 acres of impervious area. The following options were considered by the business owner:

Cistern #1 (8,961 gallons):

Impervious area captured = 0.33 acres or 14,375 ft²

Rainfall captured = 1-inch or 0.0833 ft.
 Cistern size = $14,375 \text{ ft}^2 \times 0.0833 \text{ ft} = 1,198 \text{ ft}^3$
 Cistern size = $1,198 \text{ ft}^3 \times 7.48 \text{ gal/ft}^3 = 8,961 \text{ gallons}$
 Construction Cost = \$10,000

City Determination. The cistern is sized to capture and hold a 1-inch rainfall from all the 0.33 acres of impervious area on the property. This cistern would qualify for the maximum 15 percent volume reduction credit.

Installation of this cistern would qualify the property owner for a 15 percent credit on their stormwater utility bill as shown below.

Adjusted Stormwater Utility Fee =

Cistern #2 (4,073 gallons):

Impervious area captured = 0.20 acres or 8,712 ft²
 Rainfall captured = 0.75-inch or 0.0625 ft.
 Cistern size =
 Cistern size = —
 Construction Cost = \$5,000

City Determination. The cistern is sized to capture and hold a 0.75-inch rainfall from 0.20 acres of impervious area on the property. The cistern would not qualify for the full 15 percent credit since it doesn't capture and hold a 1-inch rainfall from the entire 0.33 acres of impervious area. However, the cistern does qualify for prorated credit based on the fraction of rainfall less than 1-inch and the fraction of the impervious area less than 0.33 acres. The rainfall proration factor is based on the rainfall depth as shown on Table 4, which, in this case, would be 0.75 for a rainfall of 0.75-inches. The area proration is based on the fractional percentage of impervious area that is captured by the cistern, which, in this case, would be about 60 percent (0.20 acres divided by 0.33 acres). The prorated credit amount would be calculated as follows:

Credit Amount =

Credit Amount = —

Credit Amount =

Installation of a 4,073 gallon cistern would qualify the property owner for a 6.82 percent credit on their stormwater utility bill.

Adjusted Stormwater Utility Fee = /year

Cistern #3 (1,358 gallons):

Impervious area captured = 0.10 acres or 4,356 ft²
 Rainfall captured = 0.50-inch or 0.0417 ft.
 Cistern size =

Cistern size = _____

Construction Cost = \$5,000

City Determination. The cistern is sized to capture and hold a 0.50-inch rainfall from 0.10 acres of impervious area on the property. The cistern would not qualify for the full 15 percent credit since it doesn't capture and hold a 1-inch rainfall from the entire 0.33 acres of impervious area. However, the cistern does qualify for prorated credit based on the fraction of rainfall less than 1-inch and the fraction of the impervious area less than 0.33 acres. The rainfall proration factor is based on the rainfall depth as shown on Table 4, which, in this case, would be 0.50 for a rainfall of 0.50-inches. The area proration is based on the fractional percentage of impervious area that is captured by the cistern, which, in this case, would be about 30 percent (0.10 acres divided by 0.33 acres). The prorated credit amount would be calculated as follows:

Credit Amount = _____

Credit Amount = _____

Credit Amount = _____

Installation of a 1,358 gallon cistern would qualify the property owner for a 2.27 percent credit on their stormwater utility bill.

Adjusted Stormwater Utility Fee = _____

7.6 Example 6. Water Quality Credit

A big box development on North Prospect Avenue has a detention basin that was built to the City's current standards. The basin captures the runoff from 20 acres of building rooftop and pavement. The basin has a surface area of 1 acre and was not designed to provide any storage above that required for permitting. The detention basin currently qualifies for the Private Detention Basin Maintenance Credit. The owner is interested in finding out whether the basin can cost effectively be modified to qualify for additional credits. A qualified professional has been retained to evaluate the feasibility of retrofitting the basin so that it would qualify for the Water Quality / BMP Credit.

After reviewing the information from the design and construction of the existing detention basin the evaluation for the Water Quality Credit is performed. With the entire 20 acres of impervious surface on the site contributing runoff to the detention basin, the water quality storage volume, or first flush storage volume that would need to be added to the detention basin is calculated as:

$$\begin{aligned} V_{ff} &= 3,630 * C * A \\ &= 3,630 * 0.95 * 20 \\ &= 68,970 \text{ cubic feet} \end{aligned}$$

where the runoff coefficient, "C", is assumed as 0.95

In order to accommodate the addition of 69,000 cubic feet of storage the pond would need to be enlarged by:

- a) increasing its footprint,
- b) by increasing the depth – in this case by 1.6 feet, or
- c) some combination of a & b.

In addition, the outlet would need to be modified to insure the proper retention time for the water quality volume and a maintenance plan would need to be developed for periodic removal of accumulated sediment. The qualified professional next prepares a cost/benefit analysis of the retrofit costs and the cost recovery through credits.

An alternative method of total suspended solids control could be provided by installing flow-through manufactured BMPs at the inlet(s) to the basin. As in the example above, the appropriate sized unit must be determined for each detention basin inlet and the total retrofit cost calculated and compared to the cost recovery through credits to determine the feasibility of this option.

If the owner elects to retrofit the detention basin as described in the two options above it would qualify for the entire 10 percent Water Quality / BMP Credit because all of the site's impervious areas discharge to the detention basin.

The submittal for this credit based on the detention basin retrofit includes the completed and certified General Credit Application and Water Quality / BMP Credit Forms, the model results, and the design for the outlet retrofit. If the manufactured BMP alternative is proposed the submittal would require the completed and certified General Credit Application and Water Quality / BMP Credit Forms, the BMP sizing results, and the design for the inlet retrofit(s).

7.7 Example 7. Direct Discharge Credit

XYZ Mini Storage has built a facility in southwest Champaign that discharges directly out of the city and into Copper Slough. The facility has a 20,000 square foot building and approximately 16,000 square feet of paved area and sidewalks.

After examining topographic maps the owners feel that they may be eligible for a Direct Discharge Credit of up to 50% for a portion of their property and decide to hire a qualified professional to prepare a Direct Discharge Credit Application.

The first step for the qualified professional is to confirm that the property qualifies for the credit. The professional reviews maps showing the topography, drainage, and the City's corporate boundaries in the immediate vicinity and downstream of the owners' property. It is determined that the runoff from a portion of the property does indeed discharge outside the city limits without entering any city owned or operated drainage infrastructure.

The qualified professional next delineates the impervious surface areas on the site and determines which portions of those areas directly discharge away from the city's drainage infrastructure. The qualified professional should obtain the impervious surface coverage from the City and update the information to reflect any recent changes. The impervious surfaces should then be overlaid on the topographic map of the site to determine which surfaces drain to / away from the city's storm drainage infrastructure. This information may already exist in a site drainage plan. Upon completion of the map investigations the qualified professional determines that 17,000 square feet of the building and 8,000 square feet of the paved areas discharge directly to Copper Slough. The available credit would be calculated as 25,000 square feet

divided by 36,000 square feet (69.4 percent) times the maximum available credit of 50 percent, or an available credit of 34.7 percent.

The submittal for this credit includes the completed and certified General Credit Application and Direct Discharge Credit Forms, and the delineated impervious areas on topographic maps.

8 FORMS

Application forms for participation in the City of Champaign's Stormwater Utility Fee Credit and Incentive Program are provided on the following pages. If there are any questions related to the content of the forms or process for completion and submittal to the City please call the City of Champaign Public Works Department (217-403-4710) and ask for the Stormwater Coordinator.