Agenda Item Executive Summary

Title: Stormwater Utility Feasibility Study - Workshop #3

Presenter: Steven M. Saunders, Director of Public Works/Village Engineer

Agenda Date: 03/12/2013

Consent: ☐ YES ☑ NO

☐ Ordinance
☐ Resolution
☐ Bid Authorization/Award
☑ Policy Direction
☐ Informational Only

Item History: *(reference past Council reviews, approvals, or authorizations)*

Stormwater Funding Mechanisms Primer: November 13, 2012
Stormwater Utility Workshop #1: January 8, 2013
Stormwater Utility Workshop #2: February 12, 2013

Executive Summary:

As part of determining how to implement necessary flood risk reduction improvements, the Village has engaged the services of Municipal & Financial Services Group (MFSG) to evaluate financing options and methods for the improvements, including evaluating the feasibility of funding improvements via a Stormwater Utility. MFSG's scope of work includes four workshops with the Village Council and public to evaluate and discuss various aspects of stormwater financing, including the proposed topics: 1) Stormwater Funding Mechanisms, 2) Level of Service, 3) Rate/Fee Analysis, and 4) Implementation Considerations.

At the January 8, 2013 Study Session, MFSG presented Workshop #1, focused on levels of service associated with a stormwater program (the elements to be considered as part of the Village's program) and the source of program funding (property taxes, a utility fee, or a combination thereof). At the February 12, 2013 Study Session, MFSG presented Workshop #2, which examined the component elements of a stormwater fee, which drive the means and proportions by which that revenue is collected.

MFSG's "Workshop #3 Report" (attached) provides a very detailed analysis of the effect of these selected funding scenarios on individual parcels, for both 20-year and 30-year bond repayment periods. MFSG also addresses a number of implementation issues associated with a stormwater utility, including an evaluation of credits and incentives for on-site stormwater management activities, billing methods, and appeals.

Recommendation / Suggested Action: *(briefly explain)*

Provide policy direction and guidance to staff and MFSG for use in preparing a final report and recommendations on funding the proposed stormwater improvements.

Attachments: *(please list individually)*

Agenda Report
Stormwater Utility Feasibility Study: Workshop #3 Report

Agenda Report

Subject: **Stormwater Utility Feasibility Study – Workshop #3**

Prepared By: Steven M. Saunders, Director of Public Works/Village Engineer

Date: March 6, 2013

As part of determining how to implement necessary flood risk reduction improvements, the Village has engaged the services of Municipal & Financial Services Group (MFSG) to evaluate financing options and methods for the improvements, including evaluating the feasibility of funding improvements via a Stormwater Utility. MFSG's scope of work includes four workshops with the Village Council and public to evaluate and discuss various aspects of stormwater financing, including the proposed topics: 1) Stormwater Funding Mechanisms, 2) Level of Service, 3) Rate/Fee Analysis, and 4) Implementation Considerations.

At the January 8, 2013 Study Session, MFSG presented Workshop #1, focused on levels of service associated with a stormwater program (the elements to be considered as part of the Village's program) and the source of program funding (property taxes, a utility fee, or a combination thereof). At the February 12, 2013 Study Session, MFSG presented Workshop #2, which examined the component elements of a stormwater fee, which drive the *means and proportions* by which that revenue is collected.

Workshops #1 and #2 evaluated a number of policy issues associated with stormwater funding, and the Council has provided policy direction as follows:

1. Level of Service. The gross magnitude of the required stormwater revenue is driven by the level of service. Factors including the number and cost of projects to be funded, whether to replenish reserves, and whether to fund O&M costs, all determine the overall magnitude of the program expenditures. After extensive discussion, the Council has indicated that the level of service should be limited to currently planned capital projects, consisting of the Willow Road Tunnel Project, the Winnetka Avenue Pump Station, the Lloyd Park Outlet, the Tower/Foxdale Improvements, and the Northwest Winnetka/Forest Glen Improvements. The Council has indicated that the ongoing operation and maintenance expenses (O&M) should continue to be funded from the General Fund. The Council also directed that future revenue projections should not include provisions to replenish General Fund reserves committed to the stormwater projects.
2. Funding Source. In Workshops #1 and #2, MFSG presented options on what funding source should be used for the proposed stormwater projects, such as property taxes, a stormwater fee, or a combination of the two. The Council provided direction that primary consideration be given to establishing a stormwater fee to fund all or most of the improvements, primarily because of the interest expressed in funding the improvements in the most equitable manner possible. The Council indicated that

funding stormwater improvements entirely from property taxes should not be given further consideration.

3. Rate Base (i.e. billing unit). For a stormwater fee to function, a decision must be made about the billing unit to be used. For the electric utility, the service is billed at a dollar rate per kilowatt-hour of electricity used. A stormwater fee is no different in structure, consisting of a dollar rate per billing unit. MFSG discussed three possible approaches to the billing unit – a single rate per parcel, a proxy such as zoning or lot size, or a measure of impermeable surface on a parcel, called an Equivalent Runoff Unit (ERU). The Council desired to evaluate other methods. MFSG will review Intensity of Development (ID) and Equivalent Hydraulic Area (EHA) approaches at Workshop #3, however MFSG continues to recommend the ERU approach because the underlying data is available through the Village's GIS, and because the ERU most equitably corresponds with the amount of runoff attributable to each parcel and therefore impact on the stormwater system.
4. Fee Structure (i.e. rate per billing unit). Once a billing unit is determined, then the rate per billing unit must be considered. Typically, stormwater utilities bill at a uniform rate per billing unit throughout a municipality. This method is relatively easy to communicate and to administer. However, the Council desired to consider differential billing rates proportional to stormwater contributions and project benefits. MFSG explored this in detail in Workshop #2. After much discussion and public input, the Council directed MFSG and staff to focus on a uniform fee per ERU, and to set aside the location-based fee.

MFSG's "Workshop #3 Report" (attached) provides a very detailed analysis of the effect of these selected funding scenarios on individual parcels, for both 20-year and 30-year bond repayment periods. MFSG has developed their financial models based on the following capital improvement and borrowing schedules:

Project	2013(1)	2014(2)	2015(2)	2016(2)	Total
Winnetka Avenue Pump Station	$750,000				**$750,000**
Tower Road / Foxdale	$1,050,000				**$1,050,000**
Lloyd Park / Spruce Street	$364,000				**$364,000**
Northwest Winnetka Greenwood / Forest Glen	$4,040,000				**$4,040,000**
Willow Road Tunnel	$800,000	$800,000	$16,900,000	$16,000,000	**$34,500,000**
Stormwater Master Plan	$70,000				**$70,000**
Elm St. Storm Sewer Outfall Replacement	$250,000				**$250,000**
Total	$7,324,000	$800,000	$16,900,000	$16,000,000	**$41,024,000**

(1) Funded with General Fund reserves

(2) Funded with debt

Projected Debt Service Payments	2014	2015	2016	2017	2018
20 year Bonds (Principal & Interest)	$314,396	$1,588,872	$2,459,040	$2,459,040	$2,459,040
30 year Bonds (Principal & Interest)	$314,396	$1,301,608	$1,915,969	$1,915,969	$1,915,969

Staff has evaluated existing funding in the General Fund and has identified approximately $700,000 that could be allocated towards annual debt service for stormwater, to reduce the unfunded stormwater revenue requirements. This $700,000 consists of approximately $500,000 in current debt service for the public safety building improvements that will be retired in late 2014, as well as contributing $200,000 annually in Motor Fuel Tax Funding to the annual street rehabilitation program currently being funded with General Fund revenue.

The "Workshop #3 Report" also addresses a number of implementation issues associated with a stormwater utility, including an evaluation of credits and incentives for on-site stormwater management activities, billing methods, and appeals.

A working draft of MFSG's PowerPoint presentation is included in the Village Council's packet, to help prepare for the discussion. As this is a draft, there may be some minor edits to the PowerPoint before the meeting. The information contained in this report is the result of an extremely detailed analysis including the assessed valuation, land use, and impermeable surface coverage of each parcel in the Village. MFSG's study has created a detailed, flexible, and scalable financial model that allows for evaluation of a wide range of construction and maintenance levels, bonding scenarios, and fee and tax rates. It is important to note that though Staff has worked closely with MFSG to provide budget numbers and improvement costs for utility modeling, the dollar figures presented are still estimates. MFSG has also made assumptions in the models that can be revised moving forward to understand potential cost implications of various policy decisions.

Recommendation:
Provide policy direction and guidance to staff and MFSG for use in preparing a final report and recommendations on funding the proposed stormwater improvements.

Village of Winnetka

Stormwater Utility Feasibility Study
Workshop #3 Reporting

Prepared by

Municipal & Financial Services Group

March 5, 2013

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The following report presents the documentation for the third stormwater utility feasibility study workshop to be held with the Village of Winnetka Council on March 12th, 2013. The document incorporates questions, comments and guidance provided by the Council and public at the second stormwater workshop. The input provided at the workshop is incorporated in the analysis and the recommendations provided in this report. The report also outlines the key considerations related to the implementation of a stormwater utility including the opportunity for the Village to provide stormwater credits and/or rebates and other key administrative requirements.

A. KEY POLICY CONSIDERATIONS

On February 12th, MFSG participated in the second stormwater utility feasibility workshop with the Village Council. The second workshop focused primarily on the structure of a potential stormwater fee, but also provided a summary of the key policy considerations for the Council in relation to the funding of stormwater expenditures within the Village. The key policy issues are summarized below along with the guidance provided by the Village Council at the second workshop.

Policy Issue #1 - What level of stormwater service should the Village provide?

The level of stormwater service provided by the Village defines the expenditures that will be made by Village as it maintains and improves the stormwater system. As part of the feasibility study, the full range of stormwater expenditures that the Village may fund, at some point in the future, were identified. Based on the discussion at the second workshop, the Council provided guidance that the Village should fund the ongoing operations and maintenance of the stormwater system and the current planned capital projects. Additionally, the Council suggested that all operating and maintenance expenses remain within the General Fund and that General Fund reserves used to fund stormwater capital projects not be refunded at this point in time. The remaining unfunded stormwater expenditures define those costs that may be recovered from stormwater fees, property taxes or some combination.

Policy Issue #2 - How should the level of service be funded?

The Village has the option to fund stormwater expenditures completely from property taxes, completely from stormwater fees or any combination of the two (50% / 50% was provided in the second workshop to demonstrate the combination funding). The Council provided guidance that they would like to continue to consider funding stormwater expenditures completely from stormwater fees and using a 50% / 50% split, but that the use of only property taxes be excluded from future analysis at this time.

Policy Issue #3 - What rate base should be used to measure stormwater contribution?

MFSG outlined the use of impervious area and the resulting equivalent runoff unit (ERU) approach as an appropriate rate base for the stormwater fee along with highlighting other

approaches used by other communities which impose stormwater fees. The Council agreed with this approach but questioned the impact of pervious area and mentioned alternative methods, which account for pervious area, not discussed in the MFSG analysis. These alternative methods are discussed in Section C of this document. The Council also suggested that the calculation of the ERU not be rounded to the whole ERU but rather that ERU's be calculated to the fraction of an ERU.

Policy Issue #4 - How should the stormwater fee be structured?

MFSG presented two stormwater fee structures that could be implemented by the Village, including a uniform fee structure and a location based fee structure. The uniform fee structure would charge all parcels the same fee per ERU regardless of location within the Village. The location based fee structure would charge parcels a stormwater fee per ERU based on the specific location of the parcel within the Village. Several members from the public expressed their concerns regarding the location based approach, mentioning that it divides up the Village and provides a false sense of equity. The Council agreed and suggested that the location based approach be excluded from consideration at this time.

The guidance provided by the Village Council helps to further refine how the Village may fund the cost of operating, maintaining and expanding the stormwater system. The remainder of this document incorporates the guidance provided by the Council to arrive at a recommended stormwater funding proposal for Council consideration.

B. LEVEL OF SERVICE

Based on the guidance provided by the Village Council, the level of service revenue requirements for the stormwater system were refined. The Village will continue to fund the operating and maintenance of the stormwater system from the General Fund, remaining consistent with current practice. A summary of the annual operating and maintenance expenses are provided in Table 1.

Table 1 - Stormwater Operating and Maintenance Expenses

	2014	2015	2016	2017	2018
Public Works Administration	$106,000	$109,000	$112,000	$116,000	$119,000
Training	$2,000	$2,000	$2,000	$2,000	$2,000
Engineering	$36,000	$37,000	$39,000	$40,000	$41,000
Drainage Operations	$278,000	$287,000	$295,000	$304,000	$313,000
Total	**$422,000**	**$435,000**	**$448,000**	**$462,000**	**$476,000**

It should be noted that the increases in the operating and maintenance costs are due to inflation and not due to the potential formation of a stormwater utility.

The capital costs included in the level of service are presented in Table 2. It should be noted that this excludes possible future capital projects such as the additional drainage areas. This does not mean that the Village will not complete these projects. Rather, the Village will have the opportunity to continue to evaluate these projects and may, at some point in the future, decide to fund them.

Table 2 - Current Planned Capital

	2013	2014	2015	2016	Total
Winnetka Avenue Pump Station	$750,000				**$750,000**
Tower Road / Foxdale	$1,050,000				**$1,050,000**
Lloyd Park / Spruce Street	$364,000				**$364,000**
Northwest Winnetka Greenwood / Forest Glen	$4,040,000				**$4,040,000**
Willow Road Tunnel	$800,000	$800,000	$16,900,000	$16,000,000	**$34,500,000**
Stormwater Master Plan	$70,000				**$70,000**
Elm St. Storm Sewer Outfall Replacement	$250,000				**$250,000**
Total	**$7,324,000**	**$800,000**	**$16,900,000**	**$16,000,000**	**$41,024,000**

The capital projects shown in Table 2 will be funded with a combination of General Fund reserves and the issuance of debt. The capital projects in 2013 will be funded from General Fund reserves and the projects in 2014 through 2016 will be funded with debt. The specific assumptions regarding the debt issuance are shown in Table 3.

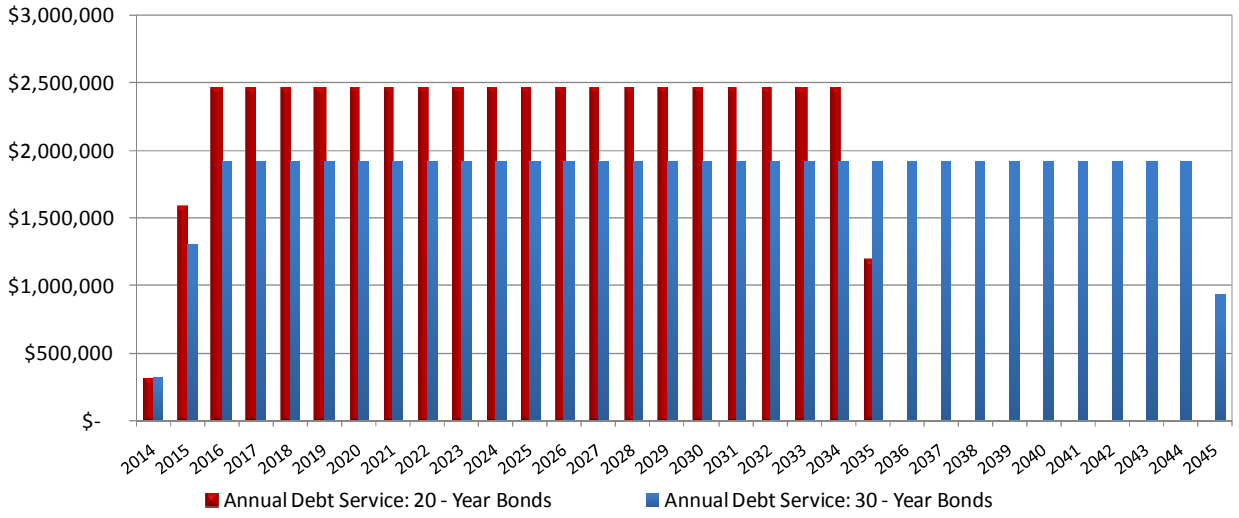
Table 3 - Stormwater Bond Assumptions

Bond Issue	Bond Issuance Amount	Year of Issue	Interest Rate
2014 Bonds	$17,965,500	2014	3.5%
2015 Bonds	$16,240,000	2015	4.0%
Total	$34,205,500		

Table 3 shows that we have conservatively assumed a slightly higher interest rate on the 2015 bond issue under the assumption that interest rates will be increasing over the next few years. The Village requested that the annual debt service associated with the stormwater bonds be calculated using bonds with 20-year maturities and 30-year maturities.

The annual debt service using the different maturities is shown in Figure 1.

Figure 1 - Annual Debt Service Comparison



The use of 20-year and 30-year bonds is continued throughout the remainder of this report to demonstrate the impact on the stormwater revenue requirements, stormwater fee and parcel owner stormwater bills. The combination of operating and capital expenses defines the full level of service that will be provided by the Village. Tables 4 and 5 present the total expenditures using 20-year and 30-year bonds. The tables also present the available revenues for stormwater operations and debt service. These revenues include funds from the General Fund to support the operating and maintenance costs. The revenues also include additional funds from the General Fund consisting of:

- $200,000 in reduced General Fund contributions to the street rehabilitation program which will be offset by directing Motor Fuel Tax funds to street repairs. These funds will be available in FY 2014.

- $500,000 in existing debt service payments within the General Fund that will be retired in FY 2014. These funds will be available for stormwater expenditures in FY 2015.

The comparison of the expenditures and revenues results in the unfunded stormwater revenue requirements.

Table 4 - Level of Services Funding - 20-Year Bonds

	2014	2015	2016	2017	2018
Expenditures					
Operating and Maintenance	422,572	435,249	448,307	461,756	475,609
Project Debt - 20-Year Bonds	314,396	1,588,872	2,459,040	2,459,040	2,459,040
Revenues					
Current General Fund Revenues[(1)]	422,572	435,249	448,307	461,756	475,609
Additional Funds Available within General Fund[(2)]	200,000	700,000	700,000	700,000	700,000
Unfunded Stormwater Revenue Requirements	**$114,396**	**$888,872**	**$1,759,040**	**$1,759,040**	**$1,759,040**

(1) Revenues from General Fund to fund operating and maintenance expenses.
(2) Revenues from General Fund available due to debt payoff and reallocation of funds.

Table 5 - Level of Services Funding - 30-Year Bonds

	2014	2015	2016	2017	2018
Expenditures					
Operating and Maintenance	422,572	435,249	448,307	461,756	475,609
Project Debt - 30-Year Bonds	314,396	1,301,608	1,915,969	1,915,969	1,915,969
Revenues					
Current General Fund Revenues[(1)]	422,572	435,249	448,307	461,756	475,609
Additional Funds Available within General Fund[(2)]	200,000	700,000	700,000	700,000	700,000
Unfunded Stormwater Revenue Requirements	**$114,396**	**$601,608**	**$1,215,969**	**$1,215,969**	**$1,215,969**

(1) Revenues from General Fund to fund operating and maintenance expenses.
(2) Revenues from General Fund available due to debt payoff and reallocation of funds.

The unfunded stormwater revenue requirements shown in Tables 4 and 5 represent the expenditures (varying based on maturity of debt) that must be funded from stormwater fees or by a combination of stormwater fees and property taxes. It should be noted that the unfunded stormwater revenue requirements only include capital costs associated with the debt issuance, all operating and maintenance costs will be funded from the General Fund. As mentioned above, two specific funding scenarios are to be considered in the analysis which include full funding from stormwater fees and a 50% stormwater fee / 50% property tax funding scenario. Table 6 presents the two scenarios.

Table 6 - Funding Scenarios

Revenue Requirements	2014	2015	2016	2017	2018
Scenario 1: 100% Stormwater Fees					
20-Year Bonds	$114,396	$888,872	$1,759,040	$1,759,040	$1,759,040
30-Year Bonds	$114,396	$601,608	$1,215,969	$1,215,969	$1,215,969
Scenario 2: 50% / 50%					
50% Stormwater Fees					
20-Year Bonds	$57,198	$444,436	$879,520	$879,520	$879,520
30-Year Bonds	$57,198	$300,804	$607,985	$607,985	$607,985
50% Property Taxes					
20-Year Bonds	$57,198	$444,436	$879,520	$879,520	$879,520
30-Year Bonds	$57,198	$300,804	$607,985	$607,985	$607,985

C. STORMWATER UNIT OF MEASURE (RATE BASE)

During the second workshop, MFSG recommended the use of impervious area as the appropriate measure of stormwater impact with the impervious area on each parcel converted to equivalent runoff units (ERUs). Based on our analysis we have recommended that an ERU of impervious area be established at 3,400 square feet. This approach was used to calculate the ERU's for all land uses in the Village based on actual impervious area. However, we rounded to the nearest whole ERU to calculate the ERU per parcel. As mentioned previously, the public and Council requested that the ERU's not be rounded to the whole ERU but rather to a fraction of an ERU to provide greater equity based on the actual impervious area on the property. Table 7 presents the calculated number of ERU's by land use allowing for fractions of ERUs.

Table 7 - ERUs by Land Use

Land Use	Equivalent Runoff Units (ERUs)	Percentage of Total
Single Family Residential	5,270.2	79.6%
Multi-Family Residential	233.2	3.5%
Commercial	204.3	3.1%
Industrial	11.6	0.2%
Tax Exempt	919.6	13.7%
Total	**6,638.9**	**100.0%**

By not rounding the ERU calculation to the whole ERU, the calculated ERU's in the Village total 6,638.9. This is slightly lower than what was calculated when rounding the ERU's to the whole ERU, which resulted in 6,769 ERU's.

As previously mentioned in the key policy issues discussed at the second workshop, the Council questioned the impact of pervious area on the stormwater system and if it should be factored into the calculation of the stormwater fee. The use of impervious area and ERU is by far the most common approach used by communities that implement stormwater fees, with approximately 85% of the utilities across the United States using this approach.[1] However, there are methods that have been used that account for pervious area on properties, in addition to impervious area. The two most common approaches that use pervious area are the Intensity of Development (ID) approach and the Equivalent Hydraulic Area (EHA) approach. Each approach is described below.

Intensity of Development - This approach is based on the percentage of impervious area relative to the entire parcel's size. All parcels, including vacant/undeveloped parcels, are charged a fee. For parcels with development, the fees are based on their intensity of development, which is defined as the percentage of impervious area on the parcel. Vacant or undeveloped parcels do contribute some runoff and are charged a lower fee. The fees are typically assessed based on the development of a sliding rate scale, with higher rates charged per square foot of property to those parcels with a greater percentage of impervious to pervious area. For example, the rate per square foot of property for a parcel that is 90% impervious may be $4.00, where as a parcel with 40% impervious may be charged a rate of $2.00 per square foot of property. While this approach addresses the intensity of development on a property by including the ratio of impervious area to pervious area, there are a number of reasons why it is not as common as the ERU approach. The primary disadvantages to using the ID approach include:

- This approach does not charge parcel owners in direct proportion to their relative stormwater discharge. For example, a parcel could have a significant amount of impervious area (which contributes a significant amount of stormwater) but because the parcel also has a lot of pervious area the ratio would be in the lower range resulting in a lower rate per square footage of property.

- This approach required the calculation of a sliding scale which is often difficult to justify. Rather than establishing a stormwater fee based on actual impervious area (as under the ERU approach with each square foot of impervious area paying the same rate), a rate must be determined within a range of ratios of impervious to pervious area and assigned to this ratio. The assumptions that are required to establish sliding scale and resulting rates are somewhat arbitrary, which opens up this method to challenge.

- Under this approach, the benefits of reducing or limiting impervious area are often not experienced by the parcel owner because of the fact that their rate is based on the ratio of impervious to pervious which, unless it changes significantly, will not result in a reduced stormwater bill.

[1] Western Kentucky University Stormwater Utility Survey 2012

- The ability of the public to understand this approach.

We are not aware of any communities in the State of Illinois that have implemented the ID approach.

Equivalent Hydraulic Area - Under this approach parcels are billed on the basis of the stormwater runoff generated by their impervious and pervious areas. This approach is similar to the ERU approach except that pervious area is included in the calculation of the rate base. This is accomplished by taking the impervious area of the parcel times a runoff coefficient representative of impervious area (typically between 0.85 to 0.95) plus the pervious area of the parcel times a runoff coefficient representative of pervious area (0.10 to 0.15) resulting in an equivalent hydraulic area (EHA) of the parcel. The EHA is then multiplied by the stormwater fee, resulting in the bill for the parcel. The EHA approach is more common than the ID approach because it does not require the development of the sliding rate scale and because the runoff coefficients for impervious and pervious area are based on engineering design standard for runoff. However, the ERU approach is selected for the vast majority of stormwater utilities. The primary disadvantages to using the EHA approach include:

- The additional data analysis and management required to administer this approach (impervious and pervious area must be managed).

- This approach can have a significant impact on parcels with limited impervious area (shifting costs to parcels with pervious area) which may not be equitable because impervious area has been demonstrated to be the single most important factor influencing stormwater runoff contribution (including carrying of pollutant loads and velocity of runoff leading to flooding).

- This approach limits the incentive for parcel owners to reduce impervious area since the parcel is billed based on both pervious and impervious area.

- The ability of the public to understand the approach.

The City of Moline has used the EHA approach for a number of years. However, to limit the administrative burden on the City, the City uses tiers for residential parcels rather than calculating actual EHA's for every parcel residential parcel.

Based on the issues discussed above, we continue to recommend that the Village utilize the ERU approach. The disadvantages associated with the ID approach are significant enough that we believe it would not be an appropriate approach for the Village. While the disadvantages to using the EHA approach are less significant, we are concerned with the shift of costs that would occur to parcels with significant amounts of pervious area.

D. STORMWATER FEE STRUCTURE

The Council provided guidance at workshop #2 that a uniform stormwater fee (rather than a location based fee) was the preferred approach to structuring the stormwater fee. The stormwater fees are calculated in this section of the report based on the uniform approach using the unfunded revenue requirements presented in Tables 4 and 5 and the number of ERU's presented in Table 7.

Table 8 presents the stormwater fee assuming that stormwater fees fully fund the unfunded stormwater revenue requirements, using 20-year bonds, presented in Table 4.

Table 8 - 100% Stormwater Fee Funding - Annual Stormwater Fee per ERU (20-year bonds)

	FY14	FY15	FY16	FY17	FY18
Collected via Stormwater Fees	$114,396	$888,872	$1,759,040	$1,759,040	$1,759,040
Annual Stormwater Fee per ERU	**$17.23**	**$133.89**	**$264.96**	**$264.96**	**$264.96**

Table 8 shows that the stormwater fee would quickly ramp up to around $274 per ERU per by FY16, at which time it levels off due to the leveling revenue requirements. Table 9 presents the stormwater fee assuming that stormwater fees fully fund the unfunded revenue requirements, using 30-year bonds, presented in Table 5.

Table 9 - 100% Stormwater Fee Funding - Annual Stormwater Fee per ERU (30-year bonds)

	FY14	FY15	FY16	FY17	FY18
Collected via Stormwater Fees	$114,396	$601,608	$1,215,969	$1,215,969	$1,215,969
Annual Stormwater Fee per ERU	**$17.23**	**$90.62**	**$183.16**	**$183.16**	**$183.16**

The same approach was used to calculate the stormwater fee under a combined funding approach (50% property taxes and 50% stormwater fees) as presented in Table 6. The resulting stormwater fees and incremental property tax bills are shown in Tables 10 and 11. It is important to note that the annual stormwater fee per ERU represents the stormwater bill for a parcel with 1 ERU of impervious area. Parcels with greater impervious area would pay multiples of an ERU based on the size of their impervious area. Additionally the tax bill shown in Tables 10 and 11 are based on a home with an equalized assessed value (EAV) of $400,000. Lastly, Tables 10 and 11 calculate the property tax deduction taken as a result of the increased tax bill. This assumes that the parcel owner has the ability to deduct property taxes and is not subject to the alternative minimum tax (AMT). Table 10 presents the combined funding approach assuming the use of 20-year bonds.

Table 10 - Combined Funding - Annual Stormwater Fee per ERU and Incremental Annual Tax Bill (20-year bonds)

	FY14	FY15	FY16	FY17	FY18
Collected via Stormwater Fees (50%)	$57,198	$444,436	$879,520	$879,520	$879,520
Collected via Property Taxes (50%)	$57,198	$444,436	$879,520	$879,520	$879,520
Annual Stormwater Fee per ERU	**$8.62**	**$66.94**	**$132.48**	**$132.48**	**$132.48**
Incremental Property Tax Bill[1]	**$14.25**	**$110.74**	**$219.15**	**$219.15**	**$219.15**
Tax Deduction[2]	($5.42)	($42.08)	($83.28)	($83.28)	($83.28)
Resulting Total Tax Bill After Deduction	**$8.84**	**$68.66**	**$135.88**	**$135.88**	**$135.88**

[1]*Assumes a single family home with annual tax bill of $27,000.*
[2]*Assumes an individual filing with income of $275,000, Federal tax bracket of 33% plus IL State income tax of 5%.*

Table 10 demonstrates a lower stormwater fee due to the additional funding from property taxes which would fund 50% of the unfunded stormwater revenue requirements.

Table 11 presents the combined funding approach assuming the use of 30-year bonds.

Table 11 - Combined Funding - Annual Stormwater Fee per ERU and Incremental Annual Tax Bill (30-year bonds)

	FY14	FY15	FY16	FY17	FY18
Collected via Stormwater Fees (50%)	$57,198	$300,804	$607,985	$607,985	$607,985
Collected via Property Taxes (50%)	$57,198	$300,804	$607,985	$607,985	$607,985
Annual Stormwater Fee per ERU	**$8.62**	**$45.31**	**$91.58**	**$91.58**	**$91.58**
Incremental Property Tax Bill[1]	**$14.25**	**$74.95**	**$151.49**	**$151.49**	**$151.49**
Tax Deduction[2]	($5.42)	($28.48)	($57.57)	($57.57)	($57.57)
Resulting Total Tax Bill After Deduction	**$8.84**	**$46.47**	**$93.93**	**$93.93**	**$93.93**

[1]*Assumes a single family home with annual tax bill of $27,000.*
[2]*Assumes an individual filing with income of $275,000, Federal tax bracket of 33% plus IL State income tax of 5%.*

E. PARCEL OWNER IMPACTS

This section of the report demonstrates the impact on actual parcels within the Village under each of the various approaches to funding stormwater expenditures. The following tables present the impact on three single family residential parcels, two commercial parcels and two

tax-exempt parcels. It is important to note that the tables show comparisons of total stormwater bills based on each approach.

Table 12 - Single Family Residential Parcel #1

Impervious Area	EAV			ERUs	
3,000 sq ft	$325,000			0.9	
Bill Comparison	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**
100% SW Fee Bill (20-year bonds)	**$16**	**$121**	**$238**	**$238**	**$238**
100% SW Fee Bill (30-year bonds)	**$16**	**$82**	**$165**	**$165**	**$165**
20-Year Bonds					
50% SW Fee Bill (A)	$8	$60	$119	$119	$119
50% Property Taxes (Tax Bill)	$12	$90	$178	$178	$178
Tax Deduction	($4)	($34)	($68)	($68)	($68)
Tax Bill After Deduction (B)	$7	$56	$110	$110	$110
Total SW Bill (50% / 50%) (A+B)	**$15**	**$116**	**$229**	**$229**	**$229**
30-Year Bonds					
50% SW Fee Bill (A)	$8	$41	$82	$82	$82
50% Property Taxes (Tax Bill)	$12	$61	$123	$123	$123
Tax Deduction	($4)	($23)	($47)	($47)	($47)
Tax Bill After Deduction (B)	$7	$38	$76	$76	$76
Total SW Bill (50% / 50%) (A+B)	**$15**	**$78**	**$159**	**$159**	**$159**

Table 13 - Single Family Residential Parcel #2

Impervious Area	EAV			ERUs	
5,330 sq ft	$464,000			1.6	
Bill Comparison	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**
100% SW Fee Bill (20-year bonds)	**$28**	**$214**	**$424**	**$424**	**$424**
100% SW Fee Bill (30-year bonds)	**$28**	**$145**	**$293**	**$293**	**$293**
20-Year Bonds					
50% SW Fee Bill (A)	$14	$107	$212	$212	$212
50% Property Taxes (Tax Bill)	$17	$128	$254	$254	$254
Tax Deduction	($6)	($49)	($97)	($97)	($97)
Tax Bill After Deduction (B)	$10	$80	$157	$157	$157
Total SW Bill (50% / 50%) (A+B)	**$24**	**$187**	**$369**	**$369**	**$369**
30-Year Bonds					
50% SW Fee Bill (A)	$14	$72	$147	$147	$147
50% Property Taxes (Tax Bill)	$17	$87	$176	$176	$176
Tax Deduction	($6)	($33)	($67)	($67)	($67)
Tax Bill After Deduction (B)	$10	$54	$109	$109	$109
Total SW Bill (50% / 50%) (A+B)	**$24**	**$126**	**$255**	**$255**	**$255**

Table 14 - Single Family Residential Parcel #3

Impervious Area	EAV			ERU	
8,600 sq ft	$656,000			2.5	
Bill Comparison	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**
100% SW Fee Bill (20-year bonds)	**$43**	**$335**	**$662**	**$662**	**$662**
100% SW Fee Bill (30-year bonds)	**$43**	**$227**	**$458**	**$458**	**$458**
20-Year Bonds					
50% SW Fee Bill (A)	$22	$167	$331	$331	$331
50% Property Taxes (Tax Bill)	$23	$182	$360	$360	$360
Tax Deduction	($9)	($69)	($137)	($137)	($137)
Tax Bill After Deduction (B)	$14	$113	$223	$223	$223
Total SW Bill (50% / 50%) (A+B)	**$36**	**$280**	**$554**	**$554**	**$554**
30-Year Bonds					
50% SW Fee Bill (A)	$22	$113	$229	$229	$229
50% Property Taxes (Tax Bill)	$23	$123	$249	$249	$249
Tax Deduction	($9)	($47)	($94)	($94)	($94)
Tax Bill After Deduction (B)	$14	$76	$154	$154	$154
Total SW Bill (50% / 50%) (A+B)	**$36**	**$190**	**$383**	**$383**	**$383**

Table 15 - Commercial Parcel #1

Impervious Area	EAV			ERU	
6,800 sq ft	$823,000			2.0	
Bill Comparison	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**
100% SW Fee Bill (20-year bonds)	**$34**	**$268**	**$530**	**$530**	**$530**
100% SW Fee Bill (30-year bonds)	**$34**	**$181**	**$366**	**$366**	**$366**
20-Year Bonds					
50% SW Fee Bill	$17	$134	$265	$265	$265
50% Property Taxes (Tax Bill)	$29	$228	$451	$451	$451
Total SW Bill (50% / 50%)	**$47**	**$362**	**$716**	**$716**	**$716**
30-Year Bonds					
50% SW Fee Bill	$17	$91	$183	$183	$183
50% Property Taxes (Tax Bill)	$29	$154	$312	$312	$312
Total SW Bill (50% / 50%)	**$47**	**$245**	**$495**	**$495**	**$495**

Table 16 - Commercial Parcel #2

Impervious Area	EAV			ERU	
2,900 sq ft	$218,000			0.9	
Bill Comparison	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**
100% SW Fee Bill (20-year bonds)	**$16**	**$121**	**$238**	**$238**	**$238**
100% SW Fee Bill (30-year bonds)	**$16**	**$82**	**$165**	**$165**	**$165**
20-Year Bonds					
50% SW Fee Bill	$8	$60	$119	$119	$119
50% Property Taxes (Tax Bill)	$8	$60	$120	$120	$120
Total SW Bill (50% / 50%)	**$16**	**$121**	**$239**	**$239**	**$239**
30-Year Bonds					
50% SW Fee Bill	$8	$41	$82	$82	$82
50% Property Taxes (Tax Bill)	$8	$41	$83	$83	$83
Total SW Bill (50% / 50%)	**$16**	**$82**	**$165**	**$165**	**$165**

Table 17 - Tax-Exempt Parcel #1

Impervious Area	EAV			ERU	
200,000 sq ft	$-			58.8	
Bill Comparison	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**
100% SW Fee Bill (20-year bonds)	**$1,013**	**$7,873**	**$15,580**	**$15,580**	**$15,580**
100% SW Fee Bill (30-year bonds)	**$1,013**	**$5,328**	**$10,770**	**$10,770**	**$10,770**
20-Year Bonds					
50% SW Fee Bill	$507	$3,936	$7,790	$7,790	$7,790
50% Property Taxes (Tax Bill)	-	-	-	-	-
Total SW Bill (50% / 50%)	**$507**	**$3,936**	**$7,790**	**$7,790**	**$7,790**
30-Year Bonds					
50% SW Fee Bill	$507	$2,664	$5,385	$5,385	$5,385
50% Property Taxes (Tax Bill)	-	-	-	-	-
Total SW Bill (50% / 50%)	**$507**	**$2,664**	**$5,385**	**$5,385**	**$5,385**

Table 18 - Tax-Exempt Parcel #2

Impervious Area	EVA			ERU	
40,600 sq ft	$-			11.9	
Bill Comparison	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**
100% SW Fee Bill (20-year bonds)	**$205**	**$1,593**	**$3,153**	**$3,153**	**$3,153**
100% SW Fee Bill (30-year bonds)	**$205**	**$1,078**	**$2,180**	**$2,180**	**$2,180**
20-Year Bonds					
50% SW Fee Bill	$103	$797	$1,577	$1,577	$1,577
50% Property Taxes (Tax Bill)	-	-	-	-	-
Total SW Bill (50% / 50%)	**$103**	**$797**	**$1,577**	**$1,577**	**$1,577**
30-Year Bonds					
Based 50% SW Fee Bill	$103	$539	$1,090	$1,090	$1,090
50% Property Taxes (Tax Bill)	-	-	-	-	-
Total SW Bill (50% / 50%)	**$103**	**$539**	**$1,090**	**$1,090**	**$1,090**

The tables show that impacts to actual parcels within the Village will vary significantly depending on the amount of impervious area and assessed value. As would be expected, parcels with a significant amount of impervious area will experience the most significant impact under the stormwater fee approach and conversely parcels with high assessed values will experience the most significant impact under the combined funding approach, which includes increased property taxes.

F. CREDITS AND INCENTIVES/REBATES

The establishment of a stormwater fee recognizes that the stormwater runoff from individual properties results in a cost to the Village to manage the stormwater system. To the extent that the property owner mitigates the stormwater runoff on their property the cost of operating, maintaining and expanding the stormwater system may be reduced. Therefore it is common for a stormwater utility to offer credits in the form of a reduction in stormwater fees. A credit is an on-going reduction in the stormwater fee applicable to a given property in recognition of qualifying onsite or off-site systems, facilities, measures, or other actions taken by property owners to reduce or mitigate the impact of their property(s) stormwater contribution. Credits are typically offered to those properties that demonstrate the continuing performance of the stormwater management control(s).

In addition to credits, some utilities offer incentives. Incentives are one-time rebates / reimbursements that are offered to assist in offsetting the cost of materials, construction and installation of qualifying stormwater facilities. The incentives are intended to incentivize property owners to install stormwater control facilities.

This section of the report provides an overview of the key considerations related to offering a credit and/or incentive program. It is important to note that the level of complexity associated with a credit and/or incentive program will directly correlate to the resources required to manage the program.

Credits

Stormwater fee credit programs implemented by stormwater utilities vary significantly across the country. Some utilities maintain very simple programs to limit the administrative burden in managing a credit program and others maintain extremely complex programs that provide very specific credits. However in any credit program several key considerations must be addressed, including:

- Who is eligible to receive a stormwater fee credit, all property owners or just non-residential parcels?
- What stormwater management control facilities / activities qualify for credits?
- Do properties that meet local stormwater standards get credits, or only properties that exceed standards?
- How much of a fee reduction is offered with each control activity?
- Is there a maximum credit that is offered?

The way in which each of these considerations are addressed is largely dependent on the policies of the locality. As there is no one-size fits all credit program, each program is going to reflect the unique nature of each locality. The components of a typical credit program are provided to solicit input from the Village.

Credit Eligibility

The majority of credit programs around the Country focus on non-residential land uses only. The primary reason for this focus is because the economic benefits (reduction in fees) are outweighed by the requirements associated with applying for and qualifying for the credits. In general the credit application and maintenance requirements are typically cost prohibitive for residential parcels in relation to their stormwater fee. The other primary reason why residential parcels are typically not offered credits is to limit the administrative burden placed on the utility including costs of managing the credit program. There are utilities however, that offer credits to residential parcels to ensure that all parcels are treated the same. In these cases most often the credits available to residential parcel owners are limited to match the limited control activities available to these parcels. For utilities that do not offer credits to residential parcels, a number have implemented incentive programs to provide funds to

residential parcel owners to incentivize the installation of stormwater management activities. Incentives are discussed later in this section.

Stormwater Management Control Facilities / Activities

The key factors that influence the cost of management of stormwater systems include the quantity of runoff (both total volume and peak rate) and the quality of the runoff (what the stormwater runoff is carrying to local waterways). Therefore on-site stormwater management control facilities and activities that qualify for a credit must address one or both of these factors. A credit program can offer credits generally grouped into four categories as shown in Table 19.

Table 19 - Stormwater Management Control Facilities and Activities

Control Activity	Examples
Peak Rate Reduction	Private Detention Basins
Volume Reduction	Retention Basins, Rain Harvesting, Green Roofs, Permeable Pavement, Rain Gardens
Water Quality Control	Rain Gardens, Permeable Pavement, Best Management Practices
Direct Discharge	Property or portion of property directly discharges outside the Village stormwater system

Once the stormwater management control facilities and activities are identified, a community has to decide if credits are available to all parcels with stormwater management controls or only those with controls that exceed the local standards. This is a very important distinction, which has a significant impact on the scope of the credit program and those that would be eligible for credits. In most communities with credit programs, only parcels that exceed the local standards are eligible for credits.

To qualify for the credit, under each of the categories listed in Table 19, the parcel owners are typically required to demonstrate that the stormwater control activity is installed and operating as specified by the Village. The parcel owner is also responsible for the ongoing maintenance of the facility to remain eligible. Most utilities require some form of periodic reporting from the property demonstrating maintenance and often require a reapplication after a 3 to 5 year period.

In addition to the control activities listed in Table 19, it is fairly common for communities to offer credits to K-12 institutions that develop lesson plans and instruct their students about stormwater management issues. Lastly, some communities offer credits to entities that form partnerships with the utility to manage stormwater. This credit could be offered under the unique circumstance that an entity provides land necessary for stormwater control activities or makes some other significant financial contribution to the Village to assist in the ongoing management of stormwater.

Level of Credits

Once the control activities are defined it is necessary to determine the appropriate level of the fee reduction or credit for each activity. It is important to set the level of the credit to be consistent with the actual ability of the control activity to reduce the runoff and or improve the quality of the runoff. Table 20 presents a typical range of credits, based on our experience, offered by control activity type. It should be noted that the credits are provided purely as examples.

Table 20 - Stormwater Fee Credits

Control Activity	Stormwater Fee Credit (Examples)
Peak Rate Reduction	Up to 10%
Volume Reduction	Up to 10%
Water Quality Control	Up to 5%
Direct Discharge	Up to 25%
Education	$3 per student 3rd grade student taught annually
Partnership	Up to 100%

The approach that is typically used to assess the credits for the control activities including peak rate, volume, reduction, water quality and direct discharge would include an evaluation of the portion of the impervious area on the property that drains to the control facility. An example is provided for clarification. If 100% of impervious area drains to onsite detention basin(s) then the credit is 10% (the stormwater bill would be reduced by 10%). Alternatively, if 50% of impervious area drains to onsite detention then 50% times 10% resulting in 5% credit (the stormwater bill would be reduced by 5%).

Based on the stormwater fee credits shown in Table 20 a couple of administrative considerations are provided. First, it is important to determine the maximum credit that will be offered. In most instances we would recommend that this be set at 25% which is the typical maximum credit for stormwater utilities with credit programs. It would be possible for a property owner to have facilities that provide peak reduction, volume reduction and water quality control thereby reaching a cumulative 25% credit. Setting a maximum credit recognizes the fact that all parcels owners benefit from proper stormwater management in the Village and therefore all parcel owners should contribute to funding the stormwater system.

The only exceptions to the 25% maximum would be K-12 institutions that have management controls and offer educational programs and those entities that qualify for the partnership credit. In the case of partnerships, depending on the level of contribution to the Village, these parcels could be credited up to 100% of the stormwater fee. Lastly, it also is important to note

that any reduction in revenues via a stormwater fee credit will result in less revenue generated for the utility and/or an increase in the necessary stormwater fee.

Incentives

In addition to stormwater fee credits it is becoming very common for communities to offer incentives in the form of rebates / reimbursements to encourage property owners to implement new stormwater management controls. The incentives are typically offered to all property owners on a first come, first serve basis with an annual budget provided from the stormwater utility. Property owners who receive stormwater fee credits are typically excluded from the incentive program. Stormwater controls that are required to meet local standards are also typically not eligible for reimbursements. Incentives, unlike credits, are not offered on an annual basis but as a one-time rebate against the cost of purchase and installation of stormwater management controls.

Eligibility

All property owners within the Village could be eligible to receive a stormwater incentive for the purchase, construction and installation of qualifying stormwater facilities. Property owners would be required to submit a stormwater incentive application with proof of purchase and demonstrate installation of the stormwater facility. The Village would reserve the right to inspect the installed facility prior to approving the application.

Stormwater Facility Incentives

Similar to the stormwater management facilities and activities discussed with the stormwater fee credit, the incentive program would offer rebates / reimbursements for activities that control the various aspects of stormwater (quantity, peak rate and quality). The two most common stormwater control activities available to residential property owners include rain barrels and rain gardens. Other activities that are often incentivized would include the use of green methods such as installing pervious pavement or green roofs and the installation of best management practices that improve water quality.

Some sample stormwater incentives are presented in Table 21.

Table 21 – Sample Stormwater Incentives

Control Activity	Incentive Amount	Requirements	Maximum Incentive
Rain Barrels	$1 per gallon of capacity	Minimum of 50 gallons	$50
Rain Gardens	$5 per square feet of garden	Minimum of 100 square foot of garden	$1,000
Other Facilities (green roofs, permeable pavement, cistern)	30% of cost of materials, construction and installation		$1,200

The incentives detailed in Table 21 outline the most common stormwater management control activities but other incentives may be offered by the Village as available stormwater control activities change over time. The maximum incentives are based on the overall magnitude of the cost of each type of activity and not intended to fully fund the cost of control activity. These reimbursements should only be offered to property owners who can demonstrate proof of purchase and actual cost of installation and construction.

G. IMPLEMENATION AND ADMINISTRATION

In order to implement a stormwater utility the Village will need to address several administrative considerations. While this section of the report does not provide an exhaustive discussion of the potential administrative considerations, it addresses those that are most common and provides a framework that will allow for a smooth implementation of a stormwater utility. Some of the considerations will require direction from the Village Staff and/or the Village Council prior to implementation. Each key consideration is discussed below.

Billing Methodology

To implement a stormwater fee the Village will need to decide how to bill the property owners. The primary options available to the Village would be to impose the fee on an existing utility "water" bill, to place the fee on the property tax bill or to generate a separate stormwater bill. There are pros and cons to using each of these methods of billing the stormwater fee and all of these approaches are used by utilities around the United States. A fairly recent stormwater utility survey[2] revealed that 75% of agencies with stormwater utilities place the stormwater fee on an existing water bill, 21% include it on the property tax bill, with the remaining agencies generating a separate bill (4%).

Collecting the stormwater fee on an existing water bill is the most common approach for a number of reasons. The fee is generating revenues for the operation of a utility and therefore it makes sense that it would be collected with other utility related fees. Conversely, placing the fee on the property tax bill implies that the fee is some form of a tax which is in direct contrast to the goal of the fee. Additionally, placing the fee on the water bill provides greater transparency since property owners will actually see the fee as compared to the property tax bill which is often included in an escrow account funded in monthly mortgage payments.

This does not mean that there are not challenges associated with billing the fee on the water bill. One of key challenges relates to the development of the billing database for the fee. The development of the rate base and ERUs is based on a per parcel analysis for each individual parcel in the Village. The current water bill does not correlate one to one with each property in the Village. As a result there are parcels that currently don't receive water service and no water bill and there are parcels that may receive two water bills or multiple parcels that receive one

[2] Stormwater Utility Survey 2010 – Black & Veatch

water bill. While the vast majority of parcels will match one to one with water bills, manual review will be required for those that don't match one to one.

There would be little reason for the Village to generate a separate stormwater bill based on the availability of placing the bill on the water bill. A separate stormwater bill would result in increased costs for bill generation and collection resulting in higher administrative costs. Utilities that generate separate stormwater bills typical do so as a last resort because of the lack of availability of a water bill or property tax bill to piggyback on.

Development and Maintenance of Billing Database

To allow for accurate billing of a stormwater fee, the Village will need to develop and manage a stormwater billing database. As part of this Stormwater Utility Feasibility study, the initial components of the stormwater billing database have been developed. The amount of impervious area for each parcel in the Village has been determined. However, it will be necessary to further review the impervious area determinations to ensure a high level of accuracy. There are instances where impervious area on one parcel crosses over onto another parcel and as a result is captured in both parcels. This does not mean the impervious area is double counted, but in essence should not be billed to the both parcels. Exceptions in the data like this will need to be cleaned up prior to full implementation and billing.

The billing database for the stormwater fee will be a fairly static set of data. Since the Village is close to build-out, the amount of impervious area on a year to year basis will not change significantly, which Winnetka's case would correlate with the number of demolitions. However, the Village should implement a process that captures changes made at individual properties to ensure that the appropriate stormwater fee is imposed. The most effective approach would be to ensure that the GIS database and billing data are updated consistently with each new building permit to ensure that the billing database reflects any changes to the imperviousness of each property. The Village currently completes a community wide review and update of impervious area every five years which would help to ensure the integrity of the billing database.

Appeals

The implementation of a stormwater utility and stormwater fee will require the Village to be prepared to handle appeals from property owners. As a result the Village will need to establish an appeals process. The process does not need to be complicated but should provide a process to handle challenges in a logical and timely manner. The appeals process should conform to the current standard processes used by the Village when providing other utility services, such as water service. In general the appeals process must answer the following questions:

- Who is allowed to appeal the stormwater fee?
- What is the process to initiate the appeal?
- Who is responsible for investigating the appeal?

- What corrective actions are to be taken if the investigation reveals that the property owner has been billed incorrectly? Either too little or too much?

H. RECOMMENDATIONS

The incorporation of the guidance provided by the Village Council regarding the key policy issues has helped to further refine how the Village may fund the cost of operating, maintaining and expanding the stormwater system. Based our analysis, the use of a stormwater utility as a means of funding at least a portion of the costs of the Village Stormwater system is a feasible option and one in which we recommend that the Village implement. Our specific recommendations for the Village Council's consideration regarding the structure of a stormwater utility are provided below within the frame work of the key policy issues.

In regards to the level of service, we recommend that the Village:

- Provide a level of service that includes funding of the ongoing operations and maintenance of the stormwater system and the current planned capital projects.

- Utilize available General Fund revenues to assist in funding a portion of the level of service including the ongoing operating and maintenance expenses, the short-term capital needs and a portion of future debt service (as presented in Tables 4 and 5).

- Issue debt to fund the majority of the planned capital projects including the Tunnel project (as shown in Table 3). The magnitude of the capital projects requires the issuance of debt. The Village should consider the use of 30-year bonds given that the life of the capital projects funded with the bonds will exceed 30 years and the longer maturity will reduce the annual debt service payments, lowering the annual stormwater funding needs.

In regards to how the level of service should be funded, we recommend that the Village:

- Fund the unfunded stormwater revenue requirements with stormwater fees. The use of stormwater fees will provide an equitable allocation of costs and a dependable revenue stream for the funding of the debt service.

In regards to the rate base that should be used to measure stormwater contribution, we recommend that the Village:

- Use measured impervious area as the rate base for the fee. The impervious area for each parcel in the Village is readily available and has been determined to be the single most important factor influencing the rate of peak runoff and the total runoff quantity.

- Use the ERU approach with one ERU being equivalent to 3,400 square feet of measured impervious area on a parcel.

In regards to the structure of the stormwater fee, we recommend that the Village:

- Use a uniform stormwater fee approach which charges all parcel owners the same stormwater fee per ERU regardless of location within the Village.

Should the Village Council decide to proceed with the implementation of a stormwater utility a number of implementation considerations mentioned in this report will need to be addressed including the potential development of a credit and/or incentive program, a methodology for billing parcel owners and an appeals process. These implementation considerations will be further developed and addressed in our final report based on the input provided by the Village Council at the third stormwater utility feasibility study workshop.

Based on our recommendations, the general magnitude of the fees that the Village should consider adopting are presented below on an annual and bi-monthly basis (consistent with current utility billing). The fees are subject to change based on the actual costs of capital projects and the addition of a credit and/or incentive program.

Table 22 - 100% Stormwater Fee Funding - Stormwater Fee per ERU (30-year bonds)

	FY14	FY15	FY16	FY17	FY18
Annual Stormwater Fee per ERU	**$17.23**	**$90.62**	**$183.16**	**$183.16**	**$183.16**
Bi-Monthly Stormwater Fee per ERU	**$2.87**	**$15.10**	**$30.53**	**$30.53**	**$30.53**