FINAL REPORT | July 15, 2020

Stormwater Utility Feasibility and Rate Study

Village of Libertyville, Illinois

PREPARED IN ASSOCIATION WITH:

NewGen Strategies & Solutions

DONOHUE

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July 15, 2020

Nicholas A. Mostardo
Finance Director
Village of Libertyville
118 West Cook Avenue
Libertyville, IL 60048

Subject: Stormwater Feasibility and Rate Study – Phase I

Dear Mr. Mostardo,

NewGen Strategies and Solutions, LLC, in association with Donohue and Associates, Inc, is pleased to submit to the Village our report summarizing our completed Phase I of the Village's Stormwater Feasibility and Rate Study. This document details the results of our analysis of the forecasted costs of implementing the Village's Master Stormwater Management Plan. Our report provides a number of recommendations that will enable the Village to fully fund the costs related to providing this valuable service to its customers. Our recommendations are based on the most recently available data and industry standard cost allocation methodologies.

It has been a distinct pleasure to work with you and the Village of Libertyville. The dedication and assistance provided by yourself, as well as Deputy Village Administrator Engelmann, Public Works Director Kendzior, and Village Engineer Cooper were essential to the completion of this study and should be acknowledged. Thank you for the opportunity to work with the Village on this important project.

Sincerely,

DocuSigned by:
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Eric Callocchia
Executive Consultant
NewGen Strategies and Solutions, LLC

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Definitions

Directly Connected Impervious Area (DCIA) – The portion of IA with a direct hydraulic connection to the permittee's MS4 or a waterbody via continuous paved surfaces, gutters, drainpipes, or other conventional conveyance and detention structures that do not reduce runoff volume.

Equivalent Hydraulic Area (EHA) – The total runoff area of a parcel that considers both pervious and impervious area.

Equivalent Residential Unit (ERU) – The average IA per residential parcel, equal to the total IA of residential parcels divided by the number of residential parcels. The Village's ERU is equal to 3,800 square feet.

Impervious Area (IA) – Any surface within a parcel that prevents or significantly impedes the infiltration of stormwater into the soil. Impervious areas include, but are not limited to, buildings, roofed structures, paved areas, walkways, driveways, parking lots, patios, swimming pools, and similar non-porous areas.

Intensity of Development Factor (IDF) – The area within a parcel that is impervious vs. the total area of a parcel, expressed as a percentage. For instance, a 10,000 square foot parcel with 5,000 square feet of impervious area would be assigned an IDF of 50%.

Level of Protection (LOP) – The Level-of-Protection is the frequency with which a storm resulting in structural damage may occur.

National Pollutant Discharge Elimination System (NPDES) Permit – A permit given by Illinois EPA that defines limits on pollutant discharge levels, monitoring and reporting requirements, and other provisions for each permittee.

Non-Residential Parcel – Any parcel that has been developed for use as anything other than Single-Family or Multi-Family

Parcel – An area of land within the corporate limits of the Village that has been established by a plat or other legal means and has been assigned a Property Index Number (PIN).

Pervious Area – A surface that allows the percolation of stormwater into the underlying soil.

Residential Parcel – A parcel which has been identified as being developed as a Single-Family or Multi-Family residence

Stormwater Best Management Practice (BMP) – Structural, vegetative, or managerial practices used to treat, prevent, or reduce water pollution.

EXECUTIVE SUMMARY

The Village of Libertyville adopted Village-wide Master Stormwater Management Plan (MSWMP) in February 2019 that detailed $45.5 million in capital improvement projects that would be necessary to provide a 100-year level of flood protection for the Village's citizens. The MSWMP includes a proposed flood reduction project for various locations and prioritizes each proposed project by the estimated total costs and benefits. To finance the implementation of the MSWMP, The Village engaged NewGen Strategies and Solutions, LLC in association with Donohue and Associates, Inc. to develop a Stormwater Utility Feasibility and Rate Study. The purpose of the study was to project the total costs of the MSWMP's implementation and recommend an equitable and defensible funding mechanism for a dedicated Village-wide Stormwater Utility.

Operating Costs

The operating costs of the Stormwater utility are projected to be $737,318 in the first year of the utility's operation, increasing about 2.1% per year thereafter. The operating costs of the system include personnel costs, the cleaning and maintenance of various stormwater BMPs, as well as regulatory and legal costs.

Capital Costs

The Village plans on issuing debt to fund most of the capital improvements recommended by the MSWMP. In addition to the new improvements, the Village must repair, rehabilitate, and replace its existing stormwater assets. Over the fifteen-year capital improvement plan adopted by the Village, over $47.8 million in new debt will be issued, resulting in annual debt service of about $3.2 million. The debt service will be phased in over the next fifteen years, allowing for incremental increases in stormwater fees.

Minimum Fund Balance Policy

The Village's policy is to maintain two reserve balances for each of its dedicated utilities. The first is an operating and maintenance reserve, which shall be at least 90 days of operating expenses of the system. The second is a debt service reserve, which shall be at least one annual debt service payment. These two reserves combined total about $3.5 million when the projects in the MSWPM are completed. The fund balance policy is phased-in over the fifteen-year project timeline as new debt service is added to the Village's system.

Net Revenue Requirement and Recommended Stormwater Fees

To fully finance the operating, capital, and reserve requirements of the Village's Stormwater Utility, NewGen is recommending that the Village implement a stormwater fee based on both the impervious area (IA) of each parcel as well as the Intensity of Development Factor (IDF) of each parcel. The net revenue requirement is the amount of revenue that must be raised to fund the system net of any late fees, penalties, and interest income.

The Equivalent Residential Unit of impervious area within the Village is 3,800 square feet. We recommend assigning Intensity of Development Factors to each parcel based on the percent of each parcel that is developed, i.e. covered in impervious area, based on the following table:

IDF Classification	% Impervious	IDF Factor
Vacant	0%	0.20
Light Development	1% - 20%	0.50
Moderate Development	21% - 40%	1.00
Heavy Development	41% - 70%	1.50
Very Heavy Development	>70%	2.00

Based on the recommended cost allocation methodology, the stormwater fees to support the Village's MSWMP are as follows:

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Net Revenue Requirement	**$2,155,132**	**$1,838,543**	**$2,275,891**	**$2,783,762**	**$2,774,525**
System ERUs	17,343	17,343	17,343	17,343	17,343
System IDFs	10,361	10,361	10,361	10,361	10,361
Total System ERUs + IDFs	**27,703**	**27,703**	**27,703**	**27,703**	**27,703**
Fee per Parcel ERU + IDF	**$13.00**	**$13.00**	**$14.00**	**$17.00**	**$17.00**

The recommended fee would be applied to each parcel's ERU and IDF. For example, if a parcel has an impervious area of 5,000 square feet and a total parcel area of 15,000 square feet, the fee would be calculated as follows:

Parcel ERU = Parcel IA / System ERU

Parcel ERU = 5,000/3,800 = 1.3 (rounded)

Parcel IDF = Parcel IA / Parcel Total Area

Parcel IDF = 5,000 / 15,000 = 33% (rounded) = 1.0

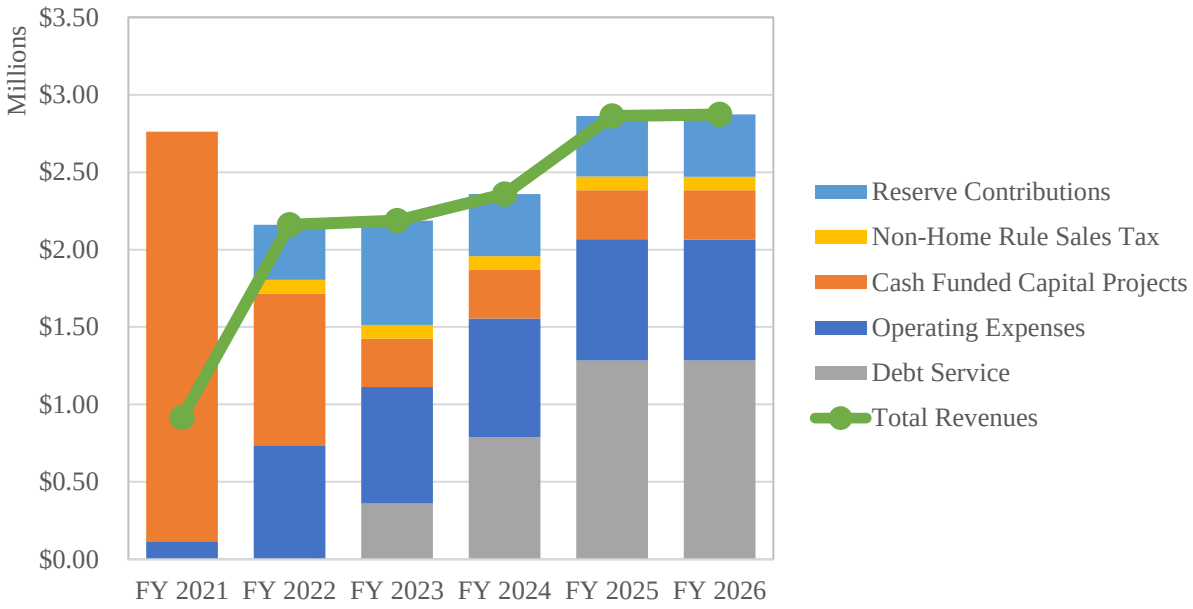
FY 2022 Parcel Bi-Monthly Fee = (ERU x $13.00) + (IDF x $13.00)

FY 2022 Parcel Bi-Monthly Fee = (1.3 x $13.00) + (1.0 x $13.00)

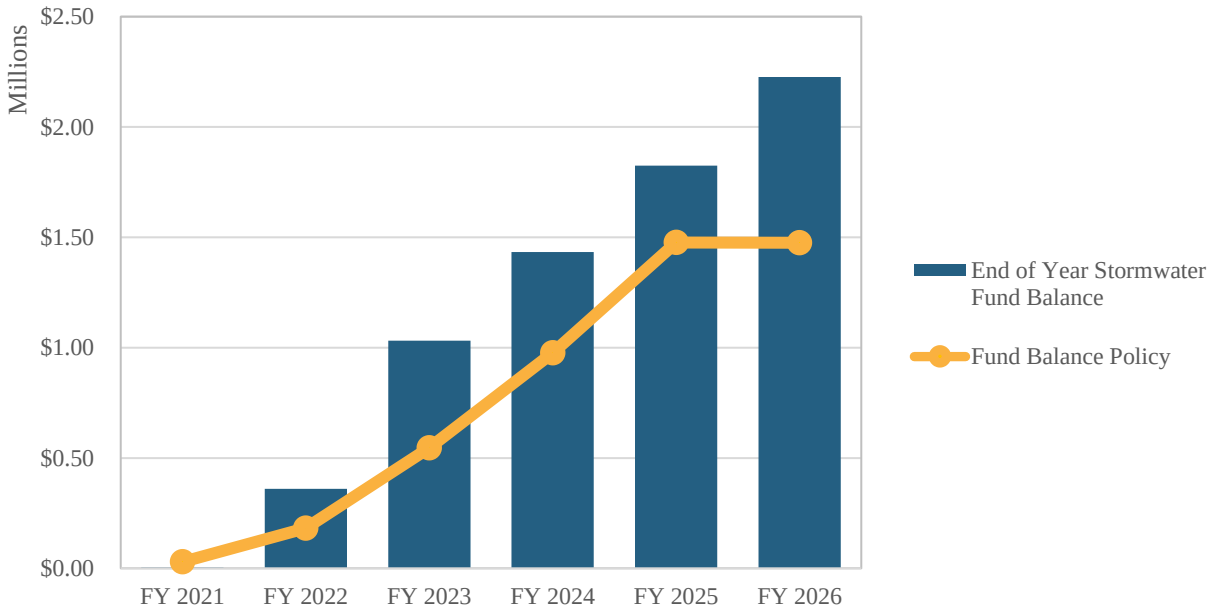
FY 2022 Parcel Bi-Monthly Fee = $29.90

The IDF methodology can be more equitable than fees based solely on ERU because the IDF considers both impervious and pervious area of each parcel.

The projected cash flow of the Village's system is as follows:



The system's cash balance is projected to be as follows:



We recommend that the Village re-calculate the stormwater fee in each of the next three fiscal years to ensure that the system's costs are aligned with the projected fees.

Recommended Credit and Appeal Processes

We recommend that the Village offer two types of credits that a customer may qualify for to reduce their stormwater fee:

Discharge Credit – A parcel qualifies for this credit if the parcel owner can show that 100% of stormwater runoff from property drains outside the Village's Stormwater System. This qualifies the parcel for a 50% discount in fees.

Sampling Credit - A parcel qualifies for this credit if the parcel owner can show that 100% of stormwater runoff from property drains outside the Village's Receiving waters. This qualifies the parcel for a 50% discount in fees. The credits are not mutually exclusive, so a parcel may qualify for both. Parcel owners would need to apply for each credit, which would include the following:

- A site topographical survey prepared by either a Licensed State of Illinois Professional Land Surveyor or Civil Engineer with 1-foot contour elevations (completed within 2 years of the date of credit application), including property lines
- Identification of all impervious areas on property
- Site Drainage & Utility Plan prepared by a Licensed State of Illinois Professional Civil Engineer, showing that 100% of property drainage areas discharge either:
    - Outside the Village's Stormwater System (Discharge Credit)
    - Into receiving waters outside the Village of Libertyville and discharge points (Sampling Credit)

The Village must also adopt a formal appeals process for parcels who pay stormwater fees. From time to time, there may be errors related to the fee's calculation or application to a certain parcel. We have developed an appeals process that includes both billing errors and impervious area errors:

- Billing Errors
    - Bill has been sent to wrong address
    - Impervious Area is correct, but fee has been calculated incorrectly
- Impervious Area Errors
    - Existence: Bill includes IA that does not exist
    - Location: Bill includes IA in an incorrect location
    - Amount: IA on parcel has different area than calculated.

In each appeal case, the parcel owner must show the correct bill calculation for their parcel. In no cases will the Village consider appeals based on the types of surfaces considered impervious. The Village's Credit Manual, Credit Application, and Appeal Application forms are included as appendices to this report.

Next Steps

If the Village desires to implement the recommendations in our report, there are several next steps that are necessary.

First, the Village must conduct a robust public education program to inform citizens and businesses of the Stormwater Fee, including its calculation methodology, implementation timeline, and other policies the Village intends to adopt for the Stormwater Utility.

Second, we recommend that the Village include the Stormwater Fee on customer's existing utility bills. This will require the alignment of the Village's parcel database, which was used to develop the fee recommendations in our report, with the Village's utility billing database. This process may impact the fees calculated in this report.

Third, the Village must adopt a Stormwater Utility Ordinance in compliance with Illinois law. We have developed a draft Stormwater Ordinance for the Village and recommend that the Village engage qualified legal counsel to ensure the sufficiency of the draft Ordinance. Our fee projections assume that the Village complete these tasks and adopt the Stormwater Fee recommended in this report effective March 1, 2021.

Section 1
PROJECT BACKGROUND AND SCOPE

Village Background

The Village of Libertyville is in south central Lake County, approximately 37 miles from Chicago and seven miles west of Lake Michigan. The Village is an established residential community and has traditionally served as a major market and service center for Central Lake County. The population of the Village, approximately 20,315 (2010 Census), has more than doubled since 1960, as the Village has shared in the economic growth of the Chicago metropolitan area. An ongoing effort to restore and preserve historic Libertyville contributes to the traditional hometown atmosphere in the Village.

Libertyville has six Village Trustees and a Mayor, all elected at large, who serve staggered four-year terms. The Mayor and members of the Village Board appoint a professional Village Administrator to manage the day-to-day operations of the Village.

The mission of the Village of Libertyville municipal organization is to provide quality services, programs and facilities in the most cost effective and efficient manner to all citizens of the community, to preserve Village history and tradition, to preserve resources for future generations, and to facilitate a partnership with all members of the community to make Libertyville a better place to live and work.

Stormwater Issues in the Village

Due to localized surface flooding in numerous locations during moderate to heavy rainfall events, the Village initiated the development of a Village-wide Master Stormwater Management Plan (MSWMP) to identify and develop proposed flood reduction projects to the drainage problems throughout the Village. The study was completed by Christopher B. Burke Engineering, Ltd. (CBBEL) in February 2019. The methodology for analyzing the storm sewer system for the MSWMP included a comprehensive survey of the storm sewer system, resident meetings, hydrologic and hydraulic modeling of the existing drainage system, identification of system limitations, and development of proposed drainage improvements.

It was recommended that the proposed drainage improvements in the MSWMP be incorporated into the Village's current infrastructure projects, green infrastructure, and long-term capital improvement projects. During the commencement of the study for the MSWMP, the Village experienced a large storm event in July 2017 which recorded over 7 inches of precipitation in 12 hours resulting in widespread flooding.

Exhibit 1-1: Heavy flooding in Libertyville, July 2017

CBBEL identified 10 Flood Study Areas (FSAs) and conducted a detailed analysis for each FSA. CBBEL developed and calibrated hydrologic and hydraulic models for each FSA using the detailed accounts and pictures from residents. The modeling was verified based on the high water marks observed during the July 2017 storm event. The existing drainage systems in some of the FSAs have less than 10-year Level of Protection (LOP) before structures are at risk for flooding. CBBEL proposed drainage improvements to provide a LOP up to the 100-year design storm event.

Long-term capital improvement projects include increasing storm sewer sizes, adding relief storm sewers, and incorporating stormwater detention storage. An engineer's estimate of probable cost for each of the proposed drainage improvement alternatives was prepared. The capital improvements recommended by the MSWMP are shown in Table 1-2.

Table 1-2
Projects Identified in Libertyville's 2019 Master Stormwater Management Plan

Flood Study Area	Engineer's Estimate of Cost (2018 Dollars)	Proposed Level of Flood Protection
Burdick and Ames*	$7,600,000	50-Year+
Rockland Road	$7,300,000	100-Year
Winchester/Interlaken/Stonegate	$12,100,000	100-Year
Copeland Manor	$6,500,000	100-Year
Ellis Avenue	$5,200,000	100-Year
Appley Avenue	$800,000	100-Year
Liberty Bell Lane and 4th Avenue	$4,400,000	100-Year
Harding and Willow	$15,000	100-Year
Carriage Hill	$915,000	100-Year
Lange and Cook	$706,000	100-Year
Total Estimated Cost (2018 Dollars)	**$45,500,000**	

* It is recommended during final engineering design that this project be optimized to provide the most cost effective level of protection between the 50-year and 100-year frequency events that benefits the greatest number of structures.

The Village – a non-home rule community – desired to evaluate a stable and sustainable revenue stream for funding the recommended stormwater infrastructure improvements and maintenance. The Village engaged NewGen Strategies and Solutions, LLC along with Donohue & Associates, Inc. to complete a Stormwater Utility Feasibility and Rate Study to identify dedicated funding mechanisms to fund the ongoing operation, maintenance, and construction related to implementing the MSWMP.

Study Scope of Work

The Village's Stormwater Utility Feasibility and Rate Study's scope of work was comprised of two Phases:

- Phase I - Stormwater Fee Feasibility Analysis
  - Task 1 – Project Management
  - Task 2 – Assessment of Existing and Future Stormwater Costs
  - Task 3 – Development of Stormwater Rate Policy and Revenue Analysis
  - Task 4 – Development of Implementation Requirements
  - Task 5 – Final Report and Recommendations
- Phase II - Stormwater Fee Implementation
  - Task 1 – Public Education
  - Task 2 – Final Development of the Customer Database
  - Task 3 – Final Rate Setting and Adoption

This report is the final deliverable of Phase I of the Feasibility and Rate Study. The recommendations made in this report are based on a review of the Village's MSWMP and industry standard cost allocations to the Village's stormwater customers. Phase II of the study will focus on the refinement of the parcel database and the alignment of the Village's parcel data with its utility billing database. This alignment will facilitate the administration of the recommended Stormwater Utility Fee. The fees recommended in this report are preliminary in nature and may change based on the Phase II task of aligning the Village's parcel database with its utility billing database.

Key Guiding Principles of the Study

The following principles were used to guide the rate study and were developed with the assistance of Village staff:

- The Stormwater Utility must be legally defensible
- The Stormwater Utility must be financially self-supporting, meaning:
  - Stormwater Fees must fully fund the costs of the system, including operating, asset maintenance, and debt service costs
  - The Stormwater Fund must maintain appropriate reserves
- Stormwater Fees must be allocated among the Village's customers in reasonable proportion to the services provided

The following sections of this report discuss in detail the methodologies used to develop a Stormwater Utility and Stormwater Fee that satisfy each of the above criteria.

Section 2
KEY POLICY CONSIDERATIONS

Stormwater as a Utility

Currently within the Village, stormwater Best Management Practices (BMPs), including storm sewers, culverts, and a host of other stormwater infrastructure components are allocated operations & maintenance funding, but funding for capital improvements is scarce. Establishing a stormwater utility is a viable strategy for local governments to respond to these challenges. Setting up a stormwater utility allows a community to establish a user fee based on the demands property owners place on the drainage system. It subsequently provides a dedicated revenue stream for stormwater programs.

Legal Issues[1]

When stormwater utilities have been challenged in court, litigants have sometimes argued that the fee is actually a real estate tax and that the tax is improperly levied — for instance, levied on a church or other institution that is exempt from property taxes. However, stormwater fees have withstood this type of legal challenge in Illinois and multiple other states. Case law supports the proposition that a stormwater charge meeting a basic legal test is not a tax. The most recently decided case in Illinois regarding the legality of a stormwater fee is *Green v. Village of Winnetka, 2019 IL App (1st) 182153*, in which a Winnetka citizen alleged both that the Fee was really a tax and that the Fee is not proportional to use of the stormwater system because it does not vary according to the amount of stormwater actually discharged by property in the Village, as the Village does not measure each parcel's stormwater discharge into the system in order to assess the Fee. The First District Appellate Court, Sixth Division, ruled that the Village was lawful in charging the Fee for stormwater service (which was not a tax) and that their basis for assessing the Fee – impervious area - was reasonable.

A second question is whether local governments have the legal authority to institute the fee. Home rule units of local government, with their relatively broad powers to institute fees and taxes, should have no legal difficulty in establishing stormwater fees. Most municipalities in Illinois that have established stormwater fees have done so under their home rule powers. While non-home rule units are more restricted in the fees they may establish, all municipalities have the power to own and operate utilities under the Illinois Municipal Code. The non-home rule Village of Morton, City of East Moline, and Village of Richton Park, and Village of Villa Park have established stormwater fees.

Our study uses industry standard cost allocations to ensure that the fees we recommend to the Village are reasonable.

Benefits of a Stormwater Utility

There are several benefits to a local government of a dedicated stormwater utility fee.

[1] Nothing in this report is intended to be or should be interpreted as legal advice or opinion. The Village should retain proper legal counsel to address any legal issues regarding the implementation of a Stormwater Utility Fee.

- Revenue – A dedicated stormwater fee generates a stable source of revenue to fund stormwater BMPs.
- Structure – A distinct Stormwater Utility creates and organized entity to solve the problems regarding stormwater management including aging infrastructure, development, and legal challenges.
- Environment – Increased focus on stormwater issues such as erosion, flooding, preservation of source water and water quality can encourage environmental initiatives.
- Regulation – A dedicated Stormwater Utility can focus on meeting the requirements of NPDES permits and other regulatory mandates.

Most importantly, a stormwater utility provides the means of collecting the revenue required to construct and maintain large stormwater capital improvements needed to protect Village businesses and residents from the effects of flooding. Existing taxing and revenue generating mechanisms are incapable of meeting this essential need.

Key Policy Issues

There are several policy issues that impact the cost needed to sustain a stormwater management program, and therefore the fees that are charged to support the utility. The Village must first define the Level of Protection it will provide with its stormwater investments, the funding mechanism by which it will generate revenue to cover the costs related to the LOP, and the administrative process by which stormwater fees may be appealed or reduced for particular customers.

Level of Protection

The recommended improvements in the MSWMP are intended to provide up to a100-year Level of Protection (LOP). The Level of Protection is the likelihood of a storm occurring that might result in structural damage. However, weather is unpredictable, and it is somewhat misleading to characterize a storm as a "10-year" or "100-year" event, since it is statistically possible that multiple 100-year storms could occur during a 100-year period. It is more precise to say the LOP has a 1% probability of being exceeded in any given year.

Funding Mechanisms

There are several funding mechanisms that are used to generate revenue for the operation of a stormwater utility. Examples are ad valorem taxes, rates based on water consumption, and fees based on impervious area. Each funding mechanism has benefits and disadvantages. When deciding the funding mechanism of a stormwater utility a balance must be made between the administrative simplicity and understandability of the fee and the detail and equity by which it allocates costs to customers. In all cases, assumptions and allocations must be made due to the impracticality of measuring the actual runoff contribution of each customer parcel within a stormwater system. In general, impervious area is considered the most equitable funding mechanism for a stormwater utility because it most accurately reflects the stormwater contribution of each customer's parcel to the system.

Rate Base – Measure of Stormwater Contribution

This report details several ways in which stormwater contribution can be measured for parcels within the Village limits. Each methodology utilizes impervious area as a proxy for the measurement of stormwater contribution of each parcel. Section 4 of this report details each methodology and its benefits and disadvantages as well as the impact on the Village's customers.

Credits / Incentives

A local government may choose to make certain credit programs available to its stormwater customers. In general, credits may be offered to parcels that either do not contribute runoff to the system, parcels that build and maintain BMPs separate from the system, or parcels whose owners try to reduce impervious area. Credits and incentives increase the cost of stormwater management to those who do not qualify since the cost of operating a stormwater management system is largely fixed. A key policy consideration when developing a stormwater utility is the credits offered and the process by which they may be granted. Also, the duration of any credits and the process by which they are reviewed and renewed is a key consideration.

We discuss each of these key policy issues in the following sections of this report. Our recommendations are consistent with industry standards and the policy guidelines provided to us by the Village.

Section 3
PROJECTED SYSTEM REVENUE REQUIREMENTS

The first step of any Stormwater Feasibility Study is to compile the costs of owning and operating the stormwater system. The LOP provided by the Village is defined by both the historical spending on stormwater management and the future capital investments recommended by the MSWMP. The increased capital investment will also result in the need to increase operating and maintenance costs above and beyond the historical spending of the Village. This section details the costs needed to upgrade and operate the Village's stormwater system as recommended in the MSWMP.

Major Assumptions

There are several major assumptions that must be made to project the future costs of the Village's stormwater system. NewGen worked closely with Village staff to develop conservative assumptions regarding the future financial and operational requirements of the Village's system. Although our study projected the costs and revenues of the Village's Stormwater Utility for twenty-five years, our report's tables and charts only show the first six years of the Utility's projections (FY 2021 – FY 2026). We recommend that the Village update the cost and revenue projections of its Stormwater Utility each year for the first three years of its operation, and then every three to five years thereafter. This report serves as a foundation of the Stormwater Utility's beginning years and is subject to future impacts that may be material to the costs incurred and the fees charged by the Village.

Implementation Timing

The Village operates on a Fiscal year of May 1 through April 30. The Village originally planned to adopt and implement a Stormwater Utility Fee beginning May 1, 2020, the beginning of its Fiscal Year 2021. However, the unprecedented global impact of COVID-19 in early 2020 required the Village to reprioritize its efforts and focus on the more immediate needs of its citizens. Therefore, this report assumes that the Village's fee is adopted and implemented beginning March 1, 2021. The initial fee will remain in effect through FY 2022. The Village's stormwater system will be funded via inter-fund transfers and loans during FY 2021 so that the Village may continue its already adopted stormwater capital program and operating budget.

Minimum Required Fund Balance

As a part of the study, NewGen worked with Village staff to develop a formal policy regarding the minimum fund balance reserves that are appropriate for the Village's future Stormwater Fund. There are two components to the minimum recommended fund balance:

- Operating Reserve – The minimum operating reserve balance shall be sufficient for 90 days of Operating and Maintenance (O&M) expenses; and
- Debt Service Reserve – The minimum debt service reserve balance shall equal the system's annual debt service.

The recommended minimum reserve projection is shown below in Table 3-1.

Table 3-1
Minimum Stormwater Fund Minimum Recommended Balance Projection

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Operating Reserve	$181,804	$185,563	$189,412	$193,354	$192,884
Debt Service Reserve	$ -	$360,104	$787,002	$1,282,988	$1,282,988
Total Minimum Reserve	**$181,804**	**$545,667**	**$976,414**	**$1,476,342**	**$1,475,871**

The minimum reserve drives the financial plan detailed in this report. Stormwater fees are set to cover the operating and capital needs of the system (including debt service) as well as to maintain the minimum reserve balance shown above. If at any time the projected rates in a given year would not sustain the minimum balance in the next fiscal year, it is assumed that rates would be adjusted to maintain the minimum required balance.

Study Escalation Factors

NewGen's cost projections are based on the latest available actual data. To project future costs, escalation and inflation factors must be assumed. NewGen's financial model includes the operating and maintenance budget line items each of which are assigned one of the inflation factors outlined in Table 3-2.

Table 3-2
Study Escalation Factors

	Annual Escalation
Labor	2.5%
Benefits	4.0%
Maintenance	1.5%
Capital Cost Escalation	0.5%
Customer Base Growth	0.0%

A conservative assumption made during our study is that the Village will not experience any growth in its stormwater customer base, that is, developed impervious area. This is a conservative assumption because the Village has plans for several residential and commercial expansion projects within its current Village limits that will likely add to the Village's stormwater customer base. The additional impervious area from these parcels is not included in this study for several reasons. First, the level of effort to incorporate the additional sub-divisions of parcels into the database used to calculate fees during the study would add substantial cost to the study. Second, the additional impervious area will not add significant costs to the projected operating and capital expenses of the Villages system. Third, the additional impervious area will have a downward impact on the fees calculated without their inclusion, so our report presents the most conservative estimates of rates by not including any additional impervious area.

Operating Expenses

The Village's FY 2021 expenses stormwater operations and maintenance is estimated to be $117,027. The level of protection defined by the MSWMP would require additional operating expenses beginning in FY 2022. Table 3-3 shows the projected operating costs of the system for FY 2021 through FY 2026.

Table 3-3
Projected Stormwater Operating Costs[2]

	Estimated FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026
Catch Basins/Manholes		$8,242	$8,365	$8,491	$8,618	$8,748
NPDES Fees		$1,000	$1,000	$1,000	$1,000	$1,000
Other NPDES		$300	$300	$300	$300	$300
SW Basin Maintenance		$7,727	$7,843	$7,960	$8,080	$8,201
Catch Basin Cleaning		$103,023	$104,568	$106,136	$107,728	$109,344
Televising and Cleaning		$103,023	$104,568	$106,136	$107,728	$109,344
Point Repairs		$101,500	$103,023	$104,568	$106,136	$107,728
Landscaping		$25,375	$25,756	$26,142	$26,534	$26,932
Legal Expenses		$25,625	$26,266	$26,922	$27,595	$10,000
Misc. O&M Expenses		$25,375	$25,756	$26,142	$26,534	$26,932
Street Sweeping		$76,125	$77,267	$78,426	$79,602	$80,796
Personnel Costs		$170,253	$174,509	$178,872	$183,343	$187,927
Benefits		$89,752	$93,342	$97,076	$100,959	$104,997
Total Stormwater O&M	**$117,027**	**$737,318**	**$752,561**	**$768,171**	**$784,159**	**$782,250**
% Change		*530.0%*	*2.1%*	*2.1%*	*2.1%*	*(-0.2%)*

The decrease in FY 2026 assumes that any legal expenses related to the stormwater system will be reduced in that year. The rates and fees developed in this study are sufficient to cover the increasing operating and maintenance costs of the Stormwater Utility.

Capital Improvement Plan

There are two components to the recommended Capital Improvement Plan for the Village's stormwater system. The first component is the ongoing asset maintenance that is needed to rehabilitate and replace the Village's existing and future stormwater assets. The second is the major capital construction projects recommended by the MSWMP. The Village developed and adopted a fifteen-year CIP for the implementation of the MSWMP. The stormwater utility fee developed during this study fully funds the construction and maintenance of the Village's current and future stormwater assets.

Stormwater Asset Maintenance Plan

The Village's current stormwater system currently contains about 92 miles of buried storm sewers, some of which date back to pre-1968. Built into the future costs of the system is the assumption that the Village continue to maintain and replace its existing buried assets. NewGen assumed that the Village would fund a 75-year replacement cycle for its buried stormwater assets. Based on the book value of its existing assets and a 75-year replacement cycle, the Village must invest $311,123 in FY 2022 in the rehabilitation or replacement of its existing storm sewers. This value is increased in future years to account for inflation.

[2] FY 2021 Operating costs are a total estimate. Detailed projections begin in the first full year of implementation, FY 2022.

Major Capital Investment Projects

The Stormwater Capital Improvement Plan was developed by Village staff based on the recommendations in the MSWMP. The projected cost of each project is based on the original estimate in 2018 dollars and an inflation rate of 0.5% per year.

Table 3-4
Planned Capital Improvement Projects

	Project Cost	Funding Year
Miscellaneous Capital	$390,000	FY 2021
Rockland Road - Engineering	$147,500	FY 2021
Rockland Road - Upsizing	$1,068,371	FY 2021
Burdick & Ames - Engineering (1B) A	$235,000	FY 2021
C. Brown Reservoir	$804,049	FY 2021
Burdick & Ames - Engineering (1B) B	$668,325	FY 2022
Rockland Road - Construction	$5,278,260	FY 2022
Burdick & Ames - Construction (1B) A	$6,257,306	FY 2023
Burdick & Ames - Construction (1B) B	$6,288,592	FY 2024
Copeland Manor - Engineering	$981,374	FY 2024
Copeland Manor - Construction	$5,678,230	FY 2026
Winchester/Interlaken/Stonegate - Engineering	$1,857,448	FY 2026
Winchester/Interlaken/Stonegate - Construction	$7,111,373	FY 2027
Winchester/Interlaken/Stonegate - Construction	$3,582,376	FY 2029
Ellis Avenue - Engineering	$802,361	FY 2029
Ellis Avenue - Construction	$4,642,462	FY 2031
Liberty Bell and 4th - Engineering	$684,549	FY 2031
Liberty Bell and 4th - Construction	$3,941,093	FY 2032
Appley Avenue - Engineering	$125,332	FY 2033
Appley Avenue - Construction	$719,761	FY 2034
Harding and Willow - Engineering	$5,335	FY 2034
Harding and Willow - Construction	$10,819	FY 2034
Carriage Hill - Engineering	$146,091	FY 2035
Carriage Hill - Construction	$834,808	FY 2035
Lange and Cook - Engineering	$113,252	FY 2036
Lange and Cook - Construction	$647,157	FY 2036
Total 15-Year Stormwater CIP	**$53,021,224**	

Based on inflationary factors on the $45.5 million of recommended projects in the MSWMP, we estimate that the Village will invest over $53.0 million in stormwater BMPs over the next fifteen years.

Projected Debt Service

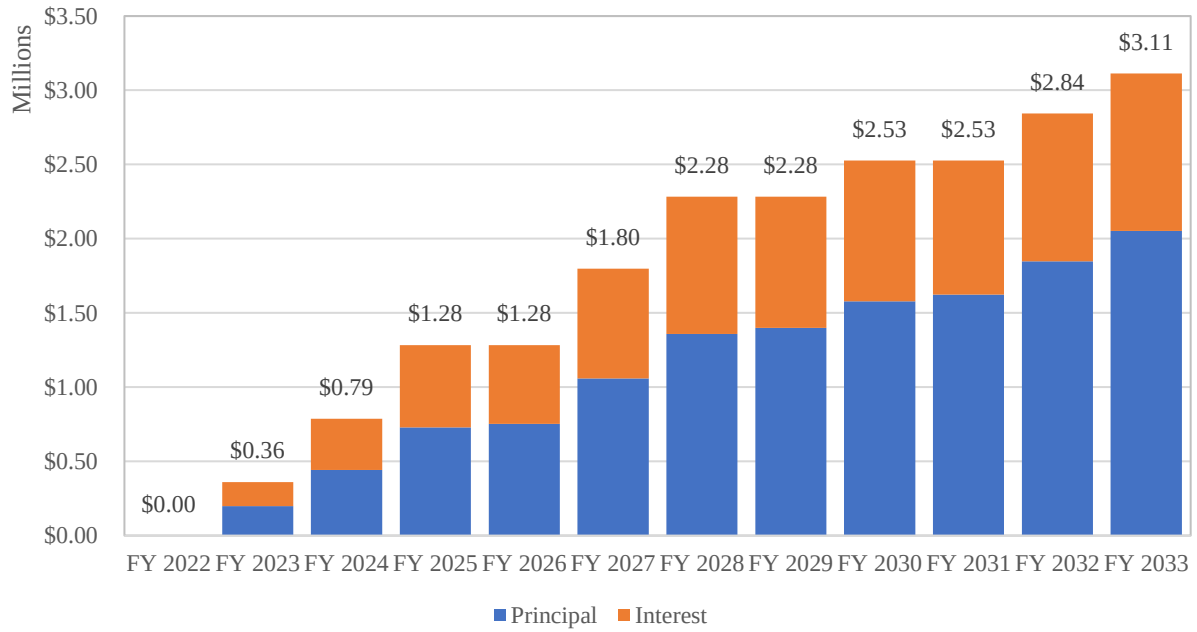
There are several reasons to fund the stormwater CIP with debt service. First, the Village's stormwater assets are long lived, and the cost of those assets should be borne by the system's users and beneficiaries over time. This concept is called intergenerational equity and it allows the Village to allocate the cost of its system over the period in which it is useful to its customers. Second, the financial burden of PAYGO (cash) funding of the stormwater CIP would require the immediate implementation of a large stormwater fee. By utilizing debt service to fund the stormwater CIP the Village can phase-in a stormwater fee and allow its customers to adjust to the impact over a ten to fifteen-year timeframe. NewGen developed an estimated financing plan that groups projects based on the timing in the CIP shown above. The loan amounts and timing are shown in Table 3-5.

Table 3-5
Projected Capital Financing Plan

Bond #	Bond Amount	Issue Year
Bond 1	$5,357,434	FY 2022
Bond 2	$6,351,165	FY 2023
Bond 3	$7,379,016	FY 2024
Bond 4	$7,648,713	FY 2026
Bond 5	$7,218,043	FY 2027
Bond 6	$4,450,508	FY 2029
Bond 7	$5,406,916	FY 2031
Bond 8	$4,000,210	FY 2032
Total Bond Funded CIP	**$47,812,005**	

In projected years beyond FY 2032, the Village will be able to PAYGO fund the estimated projects. Each loan is assumed to be paid over a 20-year amortization at 3.0% interest with level payments. The projected debt service in each of the next twelve years is shown in Exhibit 3-6. The system's debt service remains constant in FY 2034 through FY 2042, when it begins to decrease as debt issues reach maturity.

Exhibit 3-6 Stormwater Debt Service Projection



Reserve Contributions

NewGen's approach to any utility financial plan includes the assumption that the system will maintain appropriate reserves. Based on discussions with the Village, we have calculated two reserves for the stormwater utility's financial plan:

- Operating Reserve – The minimum operating reserve balance shall be sufficient for 90 days of Operating and Maintenance (O&M) expenses; and
- Debt Service Reserve – The minimum debt service reserve balance shall equal the system's annual debt service.

To meet these reserve requirements, the following contributions must be made annually.

Table 3-7
Annual Reserve Contributions

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Reserve Contribution	$ -	$350,000	$350,000	$350,000	$350,000	$350,000

An annual reserve contribution of $350,000 will allow the Village to meet or exceed the policy of maintaining an operating and debt service reserve. The use of reserves will also enhance the credit rating of the stormwater debt issued by the Village.

Repayment of Non-Home Rule Sales Tax Loan

When establishing a new enterprise fund, it is sometimes necessary to use non-fee revenue to establish the fund for cash flow purposes. That is, when the fund is established, expenses will immediately need to be paid from the enterprise fund, whereas revenues will not be generated for a period. The Village sends utility bills on a bi-monthly basis. Therefore, the Village will experience some delay in collecting revenue from its entire system. Also, due to the delay in establishing the fee due to COVID-19, the Village needs a revenue source to fund the stormwater utility in FY 2021. A portion of this funding will be a General Fund transfer of $500,000. The remainder will be a loan from the Village's Non-Home Rule Sales Tax revenue.

NewGen assumed that the Village would transfer $416,685 million to the stormwater fund in FY 2021. This would be considered a loan, and the stormwater fund would pay the General Fund back the $416,685 amortized over five years at 2.0% simple interest. The repayment schedule is shown in Table 3-8.

Table 3-8
NHR Sales Tax Loan Repayment Projection

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Principal	$ -	$80,070	$81,671	$83,304	$84,970	$86,670
Interest	$ -	$8,334	$6,732	$5,099	$3,433	$1,733
Total Repayment	**$ -**	**$88,403**	**$88,403**	**$88,403**	**$88,403**	**$88,403**

This repayment ensures that the stormwater system is indeed financially self-sustaining, a key policy assumption maintained throughout the study.

Miscellaneous Non-Rate Revenues

NewGen developed estimates for two non-rate revenue sources for the stormwater fund. The first is late fees/penalties that would be added to customer bills that are not paid by the due date. NewGen investigated the level of late fee/penalty revenue in the Village's other utility funds and found that late fees and penalties total 1.0% of annual rate revenues for both the water and wastewater systems. Therefore, NewGen included a 1.0% estimated annual revenue source of late fees and penalties for the stormwater fund.

The other non-rate revenue allocated to the stormwater fund is interest on reserves. NewGen assumed that the stormwater reserves will generate 1.0% interest annually. The total non-rate revenues included in the financial projections are shown in Table 3-9.

Table 3-9
Estimated Non-Rate Revenue

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Transfer from GF	$500,000	$ -	$ -	$ -	$ -	$ -
NHR Sales Tax Loan	$416,685	$ -	$ -	$ -	$ -	$ -
Late Fees/Penalties	$ -	$ -	$21,609	$21,609	$23,271	$28,258
Interest Income	$ -	$37	$3,595	$10,318	$14,330	$18,250
Total Non-Fee Revenues	**$916,685**	**$37**	**$25,203**	**$31,927**	**$37,601**	**$46,507**

The small amount of interest income in FY 2022 is based on an estimated end of FY 2021 stormwater utility fund balance of $3,720.

Net Revenue Requirements Projection

The combination of the operating, asset maintenance, debt service, NHR Sales Tax loan repayment, and reserve contributions is the total cost of owning and operating the Village's stormwater system. From this total the non-rate revenues are subtracted, leaving the net revenue requirement that must be generated from fees each year to support the stormwater system.

Table 3-10
Stormwater System Revenue Requirements

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Operating Expenses	$117,027	$737,318	$752,561	$768,171	$784,159	$782,250
Asset Maintenance	$2,644,920	$979,448	$312,678	$314,242	$315,813	$317,392
Debt Service	$ -	$ -	$360,104	$787,002	$1,282,988	$1,282,988
NHR Sales Tax Repayment	$ -	$88,403	$88,403	$88,403	$88,403	$88,403
Reserve Contributions	$ -	$350,000	$350,000	$350,000	$350,000	$350,000
Total Expenses	**$2,761,947**	**$2,155,169**	**$1,863,746**	**$2,307,818**	**$2,821,363**	**$2,821,033**
Less: Non-Rate Revenues	**($916,685)**	**($37)**	**($25,203)**	**($31,927)**	**($37,601)**	**($46,507)**
Net Revenue Requirement	**$1,845,262**	**$2,155,132**	**$1,838,543**	**$2,275,891**	**$2,783,762**	**$2,774,525**

The total revenue needed in each year must be collected from the Village's customers, except in FY 2021 when the Village will support the stormwater system with existing reserves. Beginning on April 1, 2021, the Village plans to begin collecting stormwater utility fee revenue from its customers.

The methodology by which fees are allocated and assessed has varying impacts on customers. The next section of this report will detail several fee methodologies developed by NewGen and Donohue and the impact that each has on Village customers.

Section 4
RATE BASE AND FEE ALTERNATIVES

A major task when determining a Stormwater Utility Fee is to calculate the customer base over which the costs of the system can be allocated and the appropriate fee to charge each customer to financially support the system. As a part of the study, NewGen calculated several fee alternatives to allow the Village the opportunity to evaluate the customer impact of several industry standard cost allocation methodologies.

Total System Rate Base

The customer base of the Village is the sum of all parcels within the Village's corporate limits. Parcel records were acquired from the Lake County Assessor's office. Each parcel in the database was assigned one of thirteen categories. These are mapped in Exhibit 4-1. Total and impervious areas by category are summarized in Table 4-2.

Exhibit 4-1 Map of Village Parcels

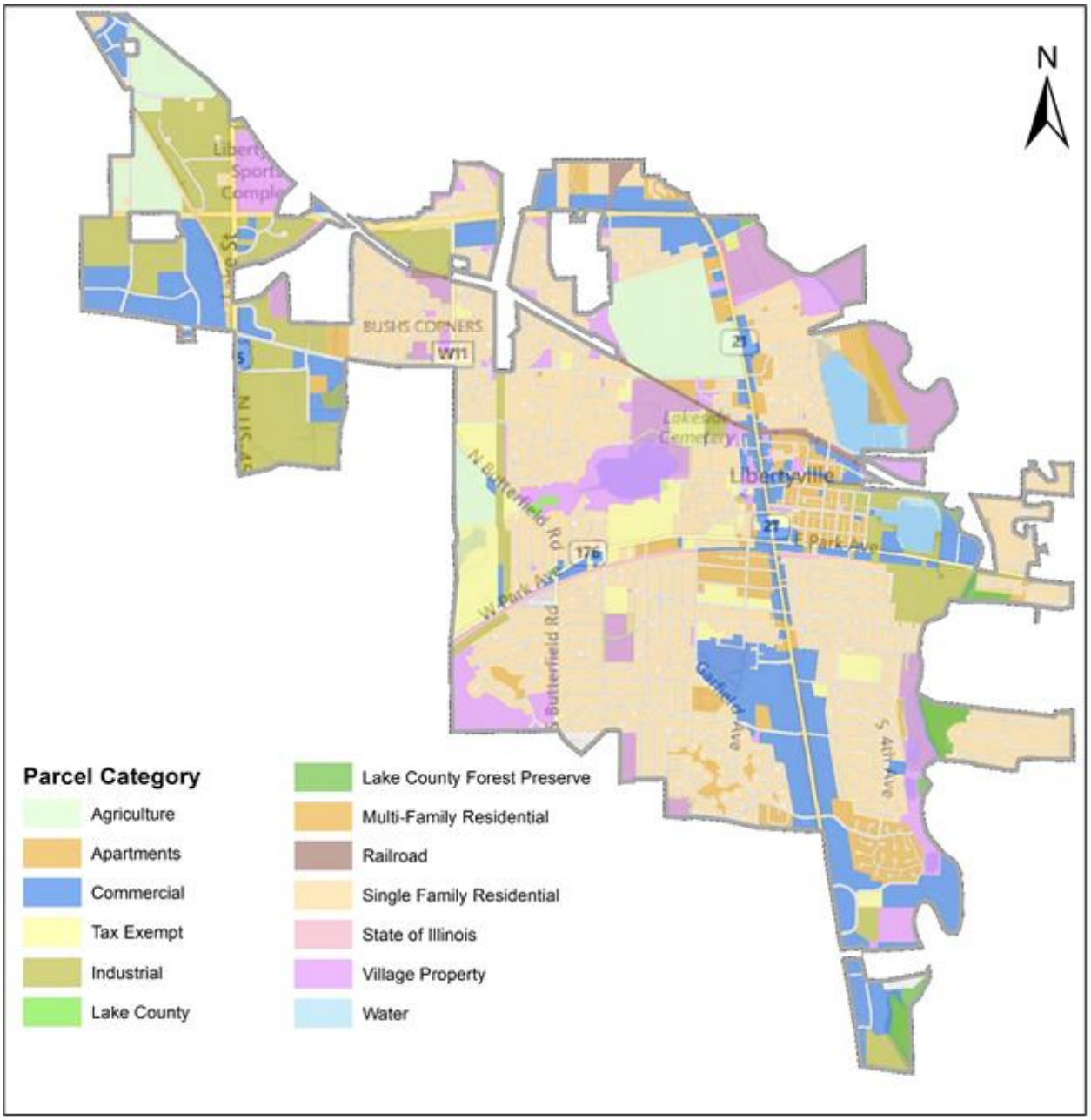


Table 4-2
Summary of Village Stormwater Customer Base by Land Use

Classification	Parcels	Total Area (ft^2)	Pervious Area (ft^2)	Impervious Area (ft^2)	Avg. Impervious Area (ft^2)	Avg. % Impervious
Single-Family Residential	5,433	84,542,850	61,434,842	23,108,008	4,253	27.3%
Multi-Family Residential	1,859	12,648,476	8,343,938	4,304,539	2,316	34.0%
Commercial	782	32,788,750	14,883,498	17,905,252	22,897	54.6%
Industrial	177	26,788,737	13,484,550	13,304,188	75,165	49.7%
Village Property	173	31,476,869	28,982,343	2,494,526	14,419	7.9%
Tax Exempt	100	10,303,879	7,782,767	2,521,112	25,211	24.5%
Apartments	31	775,000	311,081	463,919	14,965	59.9%
Lake County Forest Preserve	18	3,822,428	3,802,868	19,560	1,087	0.5%
Lake County	9	565,657	545,882	19,775	2,197	3.5%
State of Illinois	9	597,744	519,759	77,985	8,665	13.0%
Water	9	4,529,230	4,465,890	63,340	7,038	1.4%
Railroad	8	1,208,566	1,117,474	91,092	11,387	7.5%
Agriculture	7	8,949,738	7,417,056	1,532,682	218,955	17.1%
Totals	**8,615**	**218,997,924**	**153,091,947**	**65,905,977**	**System Avg. IA %**	**30.1%**

The parcel classifications are based on Lake County data and may require re-classification during Phase II when the Village aligns the County's parcel database with its utility billing database.

Fee Alternative 1 – Actual ERU

The Village's Equivalent Residential Unit (ERU) is equal to the total impervious area of Residential parcels divided by the number of Residential parcels. For the purposes of this calculation, "Residential" parcels are Single-Family and Multi-Family. The calculation of the Village's ERU is shown in Table 4-3.

Table 4-3
Calculation of Village ERU

	Parcels	Impervious Area (ft^2)
Single-Family Residential	5,433	23,108,008
Multi-Family Residential	1,859	4,304,539
Totals	**(A) 7,292**	**(B) 27,412,546**
System ERU = (B) / (A)	3,800	**square feet**

Fee Alternative 1 allocates the stormwater fee based solely on the ratio of impervious area of each parcel to the average residential one. The ratio of each parcel is assigned by dividing the actual impervious area by 3,800 ft^2 and rounded to the nearest tenth. For example, a parcel with 15,300 ft^2 of impervious area would be assigned a fee multiplier of (15,300 / 3,800) = 4.02 rounded to 4.0.

Table 4-4
Alternative 1 Fee Projection

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Net Revenue Requirement	**$2,155,132**	**$1,838,543**	**$2,275,891**	**$2,783,762**	**$2,774,525**
System ERUs	17,343	17,343	17,343	17,343	17,343
Bi-Monthly Fee per ERU	$21.00	$21.00	$22.00	$27.00	$27.00

Advantages

The amount of impervious area on each parcel is easy to identify. The relationship between impervious area and stormwater impact is easy to explain. This approach treats all parcels in the Village equally.

Disadvantages

The relative proportion of impervious area of each parcel is not considered. For example, a parcel with 5,000 ft^2 of impervious area on a total area of 6,000 ft^2 would be charged the same fee as a parcel with 5,000 ft^2 of impervious area on a total area of 20,000 ft^2 even though an argument can be made that the smaller parcel's impervious area contributes more stormwater runoff to the system due to there being less pervious area surrounding it into which rainwater can percolate.

Fee Alternative 2 – Modified ERU

Fee Alternative 2 uses the same ERU calculation as Fee Alternative 1, however the fee is applied differently. Fee Alternative 2 assigns all residential parcels an ERU value of 1.0. The calculation for non-residential parcels is still based on the ratio of impervious area to the average (3,800 ft^2), rounded to the nearest tenth.

Table 4-5
Alternative 2 Fee Projection

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Net Revenue Requirement	**$2,155,132**	**$1,838,543**	**$2,275,891**	**$2,783,762**	**$2,774,525**

System ERUs	17,421	17,421	17,421	17,421	17,421
Bi-Monthly Fee per ERU	**$21.00**	**$21.00**	**$22.00**	**$27.00**	**$27.00**

The difference in total ERUs between Alternative 1 and Alternative 2 is due to rounding and the impact of assigning all Residential parcels 1.0 ERU.

Advantages

The advantages of Alternative 2 are the same as Alternative 1, with the added advantage of an even simpler administrative effort required to calculate fees.

Disadvantages

Alternative 2 is less equitable than Alternative 1 because all residential properties are assigned 1.0 ERU regardless of their actual impervious area. In addition, the potential effect of stormwater runoff from the previous area of a parcel is not reviewed. Although not as substantial as runoff from impervious surfaces, runoff still occurs on pervious surface, especially traditional lawn grass and especially during major rain events.

Fee Alternative 3 – Tiered Residential ERU

The Residential Tier system is an alternative to the ERU calculation methodology. It uses the same basis as an ERU (3,800 ft^2), however it assigns residential ERUs in tiers that increase according to each parcel's impervious area. Non-Residential parcels continue to be assigned ERUs based on the ratio of impervious are to 3,800 ft^2. Table 4-6 below summarizes the calculated ERUs of the Village's system using this methodology.

Table 4-6
Alternative 3 ERU Calculation

Customer Class	Impervious Area	ERU Value	Parcels	% of Parcels	ERUs	% of ERUs
Small Residential	0 – 2,000 ft^2	0.5	144	1.7%	144	0.8%
Medium Residential	2,001 – 5,000 ft^2	1.0	4,695	54.5%	4,695	26.8%
Large Residential	5,001 – 7,500 ft^2	1.5	1,142	13.3%	1,142	6.5%
Very Large Residential	> 7,500 ft^2	2.0	1,385	16.1%	1,385	7.9%
Non-Residential		Actual	1,250	14.5%	10,129	57.9%
Totals			**8,615**	**100.0%**	**17,494**	**100.0%**

Each residential parcel would be charged a fee according to its assigned ERU value from 0.5 to 2.0. Non-Residential parcels would be charged based on the actual ERU ratio rounded to the nearest tenth. The total ERUs differs from Alternatives 1 and 2 due to the tier structure assigning ERU values to Residential parcels.

Advantages

The tiered residential structure recognizes that the amount of each residential parcel's impervious area has an impact on the stormwater runoff from that parcel while simplifying the ERU calculation.

Disadvantages

Again, Alternative 3 does not consider the relative proportion of impervious are on each parcel nor the amount of runoff from pervious area.

Table 4-7
Alternative 3 Fee Projection

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Net Revenue Requirement	**$1,838,543**	**$2,275,891**	**$2,783,762**	**$2,774,525**	**$2,155,132**
System ERUs	17,494	17,494	17,494	17,494	17,494
Bi-Monthly Fees					
Small Residential	$10.50	$11.00	$13.50	$13.50	$10.50
Medium Residential	$21.00	$22.00	$27.00	$27.00	$21.00
Large Residential	$31.50	$33.00	$40.50	$40.50	$31.50
Very Large Residential	$42.00	$44.00	$54.00	$54.00	$42.00
Non-Residential (per ERU)	$21.00	$22.00	$27.00	$27.00	$21.00

The fee for Medium Residential and Non-Residential parcels is the same under Alternative 1, Alternative 2, and Alternative 3 due to the fact that although each methodology results in slightly different amounts of system ERUs, rounding the fee to the nearest $0.50 results in the fee per ERU being the same for each alternative. The revenue raised by each alternative is nearly identical (due to rounding) and sufficient to fund the revenue requirements of the system.

Fee Alternative 4 – Intensity of Development Factor (IDF)

The Intensity of Development (IDF) calculation method recognizes that the level of development on a parcel will affect the rate of storm runoff. That is, highly developed parcels will have increased runoff as a result of rainfall having less opportunity to infiltrate into the soil. IDF adds an additional component to the stormwater fee calculation that is based on the percentage of each parcel's impervious area relative to its size. Therefore, the total basis for the Village's stormwater fee becomes the sum of the ERUs in the system, calculated using the same methodology in Alternative 1 (actual ERU per parcel) plus the sum of the total IDFs in the system based on the following methodology:

Table 4-8
Village ERU + IDF Fee Basis Calculation

IDF Classification	% Impervious	IDF Factor	Parcels	Total IDFs	% of Total
Vacant	0%	0.20	255	51	0.5%
Light Development	1% - 20%	0.50	634	317	3.1%
Moderate Development	21% - 40%	1.00	3982	3,982	38.4%
Heavy Development	41% - 70%	1.50	2955	4,433	42.8%
Very Heavy Development	>70%	2.00	789	1,578	15.2%
Totals			**8,615**	**10,361**	**100.0%**
		Total System ERUs		**17,343**	
		Total System Fee Basis (ERUs + IDFs)		**27,703**	

All parcels, including vacant/undeveloped parcels, are subject to a fee assessment. To calculate the fee basis for each parcel, the two factors for that parcel are summed according to the following equation:

Stormwater Fee = (ERU x Fee) + (IDF x Fee)

Advantages

The IDF method recognizes that stormwater is generated from the pervious portion of a parcel. In addition, it considers the impact of the proportional level of development of each parcel.

Disadvantages

The IDF method is more complicated to explain to customers than the ERU method. The fees are more sensitive to development within parcels and may require more administrative effort to maintain the customer database. Undeveloped parcels may not receive utility bills, so they may go uncharged until development occurs on such parcels.

Table 4-9
Alternative 4 Fee Projection

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Net Revenue Requirement	**$2,155,132**	**$1,838,543**	**$2,275,891**	**$2,783,762**	**$2,774,525**
System ERUs	17,343	17,343	17,343	17,343	17,343
System IDFs	10,361	10,361	10,361	10,361	10,361
Total System ERUs + IDFs	**27,703**	**27,703**	**27,703**	**27,703**	**27,703**
Fee per Parcel ERU + IDF	**$13.00**	**$13.00**	**$14.00**	**$17.00**	**$17.00**

Note that although the fees shown in the above table are less than those for Alternatives one through three, the Alternative four fees are applied both the ERU and IDF of each parcel. For example, if a parcel has an impervious area of 5,000 square feet and a total parcel area of 15,000 square feet, the fee would be calculated as follows:

Parcel ERU = Parcel IA / System ERU

Parcel ERU = 5,000/3,800 = 1.3 (rounded)

Parcel IDF = Parcel IA / Parcel Total Area

Parcel IDF = 5,000 / 15,000 = 33% (rounded) = 1.0

FY 2022 Parcel Bi-Monthly Fee = (ERU x $13.00) + (IDF x $13.00)

FY 2022 Parcel Bi-Monthly Fee = (1.3 x $13.00) + (1.0 x $13.00)

FY 2022 Parcel Bi-Monthly Fee = $29.90

Parcels with varying ERUs and IDFs will be impacted differently under the Alternative 4 fee structure.

Fee Alternative 5 – Equivalent Hydraulic Area (EHA)

This fee method also accounts for pervious portions of the parcel similar to the IDF method, however under the EHA method, distinct fee structures are applied to the pervious and impervious areas of each parcel. Parcels are billed based on individual measurements of pervious and impervious surfaces rather than on a land use scale. The ERUs under this methodology are calculated by assigning runoff factors to both impervious and pervious surfaces.

Table 4-10
EHA Runoff Factors

Surface Type	EHA Factor
Impervious Area	1.38
Pervious Area	0.22

For each parcel, the impervious area is multiplied by the IA factor and the pervious area is multiplied by the pervious area factor to arrive at the parcel's EHA based ERU. For the Libertyville system, the EHA Based ERU is 7,300. This is a larger value than the IA based ERU because of the inclusion of pervious area on each parcel.

Advantages

The EHA method accounts for flow from the pervious portions of a parcel. Therefore, it might be more equitable than the ERU method. Like the IDF method, it accounts for undeveloped/vacant parcels and allows them to be billed, but it is fairer than the IDF method because parcels are billed based on individual measurements of pervious and impervious areas

Disadvantages

This approach requires more effort to determine the total number of billing units because any impervious or pervious change on a parcel will change that parcel's fee. This results in a high administrative burden. The EHA method is more complicated to explain to customers than the ERU or IDF methods.

Table 4-11
Alternative 5 Fee Projection

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Net Revenue Requirement	**$2,155,132**	**$1,838,543**	**$2,275,891**	**$2,783,762**	**$2,774,525**
System EHA ERUs	17,024	17,024	17,024	17,024	17,024
Fee per EHA ERU	**$21.00**	**$21.00**	**$22.00**	**$27.00**	**$27.00**

The per ERU fee using the EHA method is nearly identical to the ERU method. Therefore, the administrative burden and complicated explanation of how to determine fees does not offer any real advantages over the ERU method.

Fee Alternative 6 – Directly Connected Impervious Area (DCIA)

Some lots may have significant impervious area surrounded by pervious area. The impervious areas often run off onto the pervious areas providing opportunity for rainfall to infiltrate into the soil, thereby mitigating the impervious surface's load on the conveyance system. For example, a downspout that discharges onto the lawn has less impact than one that discharges onto the driveway which then flows to the street and sewer. It is the latter type, Directly Connected Impervious Area (DCIA), that places the greatest load on the conveyance system.

Using the DCIA method, each parcel's total IA is first calculated. It's percent impervious is then calculated by dividing the IA by the total parcel area. Next, the percentage of that IA that is considered DCIA is calculated according to the following formula:

$$DCIA\ (\%) = a\ (IA\%)^{b}$$

The "a" and "b" coefficients in the preceding formula are determined by land use according to the table below:

Table 4-12
DCIA Formula Coefficients

Land Use	a	b
Agriculture	0.1	1.5
Apartments	0.1	1.5
Commercial	0.1	1.5
Exempt	0.1	1.5
Industrial	0.1	1.5
Lake County	0.1	1.5
Landfill	0.1	1.5
LCPF	0.1	1.5
Multi-Family Residential	0.1	1.5
Railroad	0.1	1.5
State of Illinois	0.1	1.5
Low Density Residential (> ½ acre)	0.04	1.7
Medium Density Residential (¼ – ½ acre)	0.1	1.5
High Density Residential (< ¼ acre)	0.4	1.2
Village	0.1	1.5
Water	0.0	1.5
Other	0.1	1.5

Using the coefficients above the DCIA ERU for the Village's system is 2,500 ft^2 DCIA. This value is lower than the typical ERU that only considers IA since there is less DCIA on each parcel than there is IA.

Advantages

The DCIA method may be the most equitable in that each property owner is billed in proportion to their actual load on the conveyance system.

Disadvantages

DCIA is by far the most difficult cost allocation method to understand and the most difficult to implement into a utility billing system.

Table 4-13
Alternative 6 Fee Projection

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Net Revenue Requirement	**$2,155,132**	**$1,838,543**	**$2,275,891**	**$2,783,762**	**$2,774,525**
System DCIA ERUs	19,403	19,403	19,403	19,403	19,403
Fee per DCIA ERU	**$19.00**	**$19.00**	**$20.00**	**$24.00**	**$24.00**

Again, the DCIA fees are not significantly different than those calculated using the traditional ERU method. Therefore, the complex calculation and difficulty of explanation offer no real advantages over the previously discussed methods.

Customer Impacts of Fee Alternatives

The table below compares how the six methods distribute the cost of the Village's stormwater utility across property categories.

Table 4-14
Cost Allocation %

Category	Actual ERU	Modified ERU	Tiered ERU	IDF	EHA	DCIA
Single-Family Residential	35.1%	31.2%	34.1%	43.0%	36.4%	30.8%
Multi-Family Residential	6.5%	10.7%	8.0%	13.9%	6.2%	7.4%
Commercial	27.2%	27.0%	26.9%	21.6%	22.5%	30.8%
Industrial	20.2%	20.1%	20.0%	13.5%	17.1%	22.1%
Village Property	3.8%	3.8%	3.8%	2.9%	7.8%	2.6%
Tax Exempt	3.8%	3.8%	3.8%	2.8%	4.2%	3.6%
Apartments	0.7%	0.7%	0.7%	0.6%	0.6%	0.7%
LCFP	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%
Lake County	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
Water	0.1%	0.1%	0.1%	0.1%	0.9%	0.0%
Agriculture	2.3%	2.3%	2.3%	1.5%	3.0%	1.9%
Railroad	0.1%	0.1%	0.1%	0.1%	0.3%	0.1%
State of Illinois	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

The preceding table is simplified below, which consolidates customer categories into the three major classes of SFR, MFR, and Non-Residential.

Table 4-15
Cost Allocation % By Major Customer Class

Customer Class	Billing Method					
	Actual ERU	Modified ERU	Tiered Residential	IDF	EHA	DCIA
Non-Residential	58.4%	58.1%	57.9%	43.1%	57.3%	61.8%
Single-Family Residential	35.1%	31.2%	34.1%	43.0%	36.4%	30.8%
Multi-Family Residential	6.5%	10.7%	8.0%	13.9%	6.2%	7.4%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

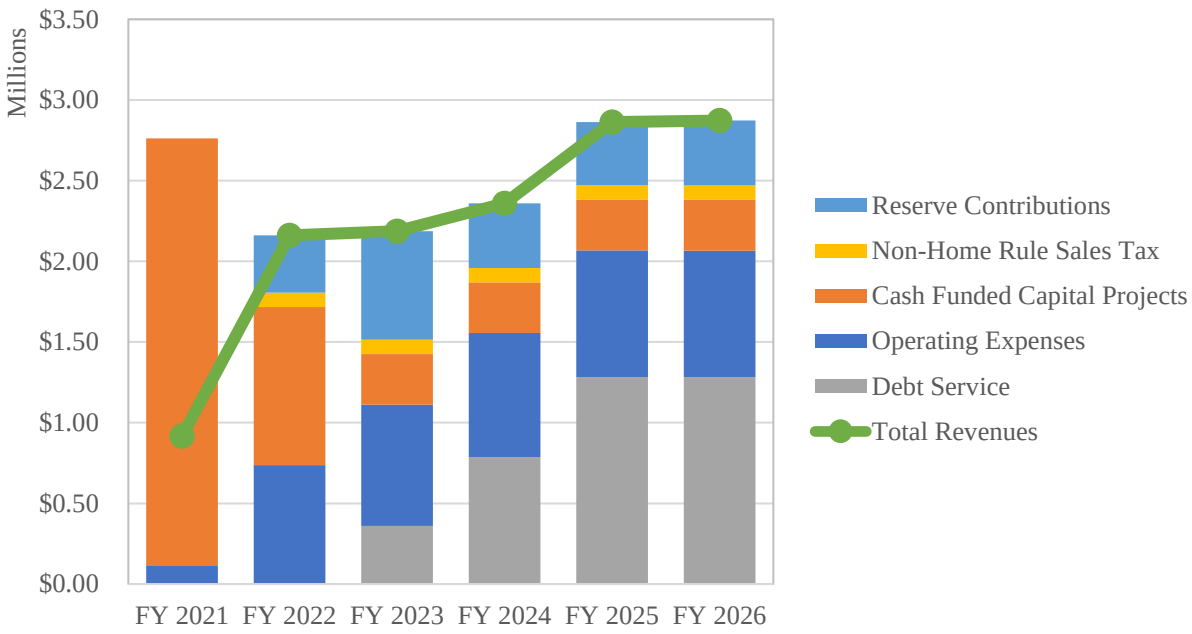
The cost allocations above show that the Actual ERU, Modified ERU, Tiered Residential and EHA methods do not significantly alter the allocation between residential and non-residential parcels. There are slight differences in the allocation between SFR and MFR within those methodologies. However, only IDF and DCIA have a material impact on the allocation between residential and non-residential parcels.

Section 5
SHORT-TERM AND LONG-TERM FINANCIAL PROJECTIONS

Short-Term Cash Flow and Fund Balance Projections Under Recommended Rates

All the billing methodologies detailed above would raise approximately the same revenue each year. The short-term projection of expenses and revenues under any of the billing alternatives is shown in Exhibit 5-1.

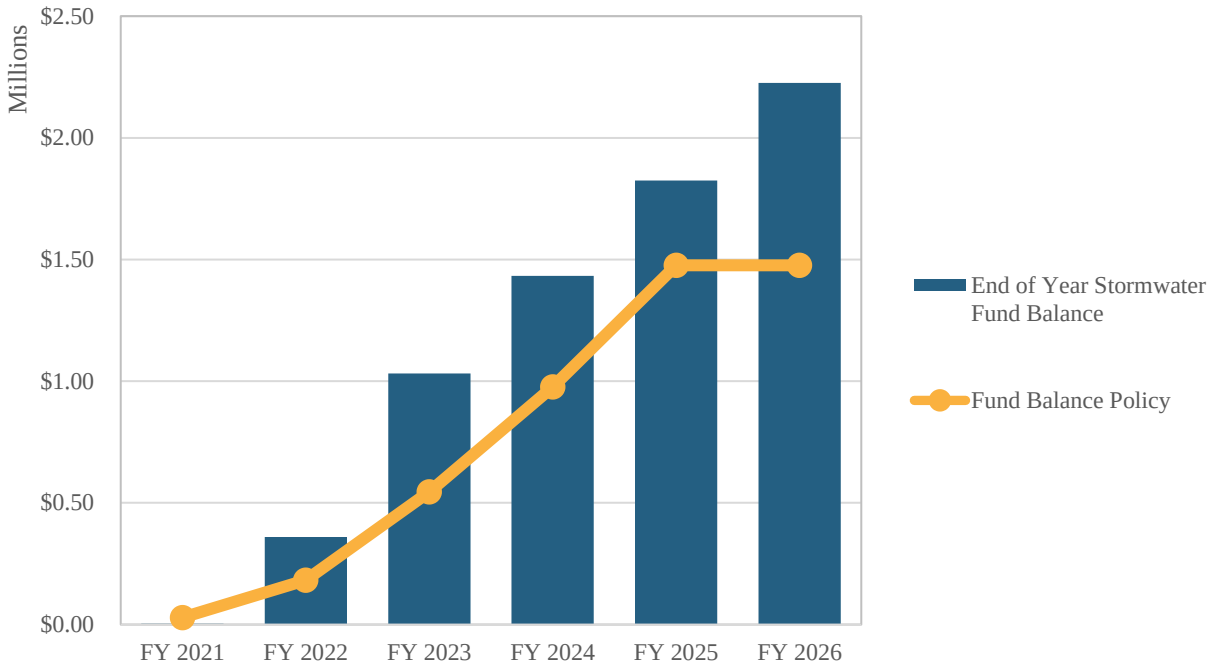
Exhibit 5-1 System Cash Flow Under Recommended Fee



The phasing in of the system's debt service allows the Village to incrementally increase the stormwater fees over a period. The Village should consider re-evaluating actual results year for the first three years of the fee's implementations to re-align revenues and expenses with projections.

The short-term fund balance projection is shown in Exhibit 5-2.

Exhibit 5-2 Stormwater Utility Fund Balance Under Recommended Rates

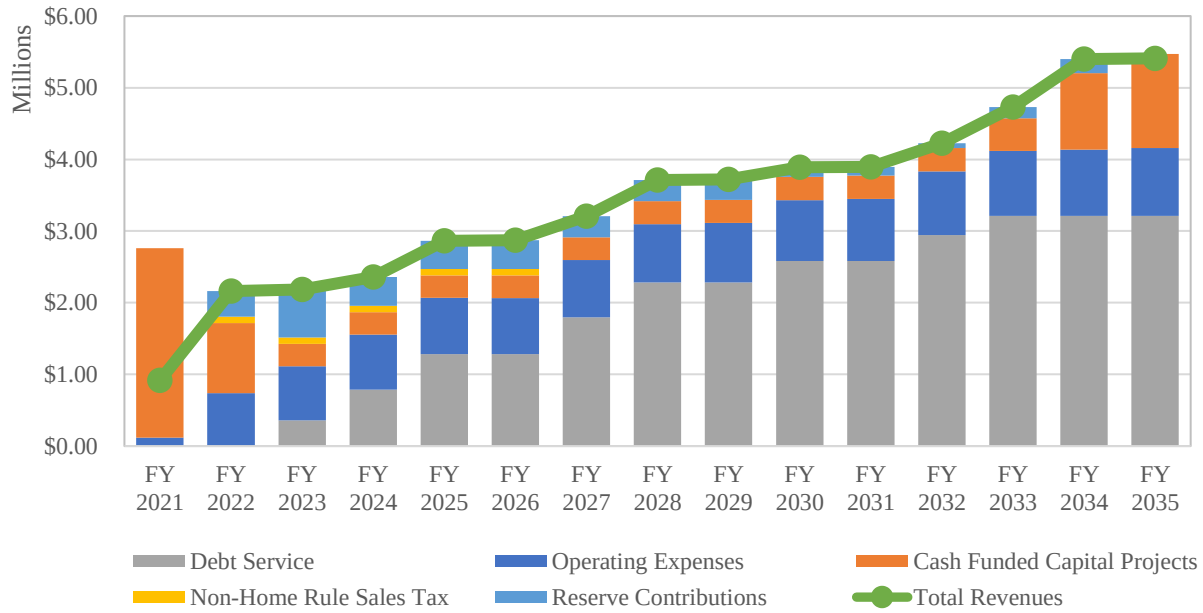


As the stormwater system adds assets (and debt service) the Village's fund balance policy increases. The rates developed in this study maintain the fund balance policy in each of the first five years of the projection period. Again, the Village should re-evaluate fees on an ongoing basis to ensure the financial stability of the stormwater fund.

Long-Term Cash Flow and Fund Balance Projections Under Recommended Rates

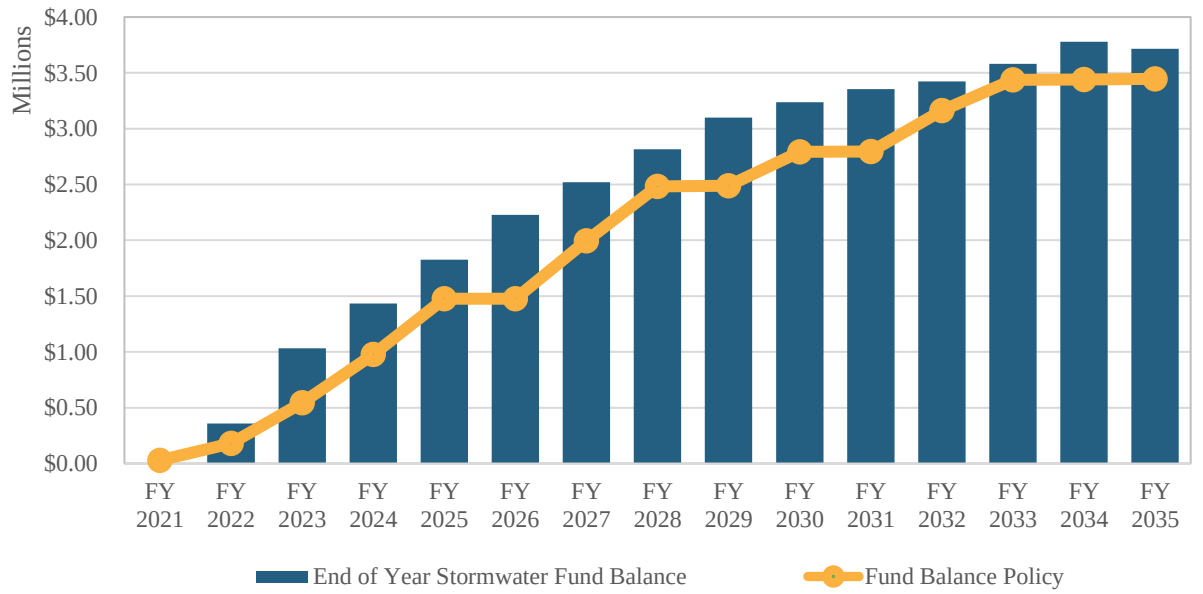
A key issue when developing a stormwater utility is the concept of "build out". That is, what will the fees be when the system is built and the debt service to complete the CIP has been issued and the system shifts from a growth scenario to a maintenance scenario. Based on the Village's CIP, this transition would occur within a fifteen year timeframe. Based on NewGen's long term projections, the stormwater fee would level off in FY 2034 as the system transitions from issuing debt to support the CIP to PAYGO funding asset maintenance of the new system. The long term expense vs. revenue projections are shown in Exhibit 5-3.

Exhibit 5-3 Fifteen-Year System Cash Flow Projection



Based on the long term cost and revenue assumptions, the Stormwater Fund would reach its long-term sustainable level of about $3.75 million in FY 2031, as shown below in Exhibit 5-4.

Exhibit 5-4 Fifteen-Year Stormwater Utility Fund Balance Projection

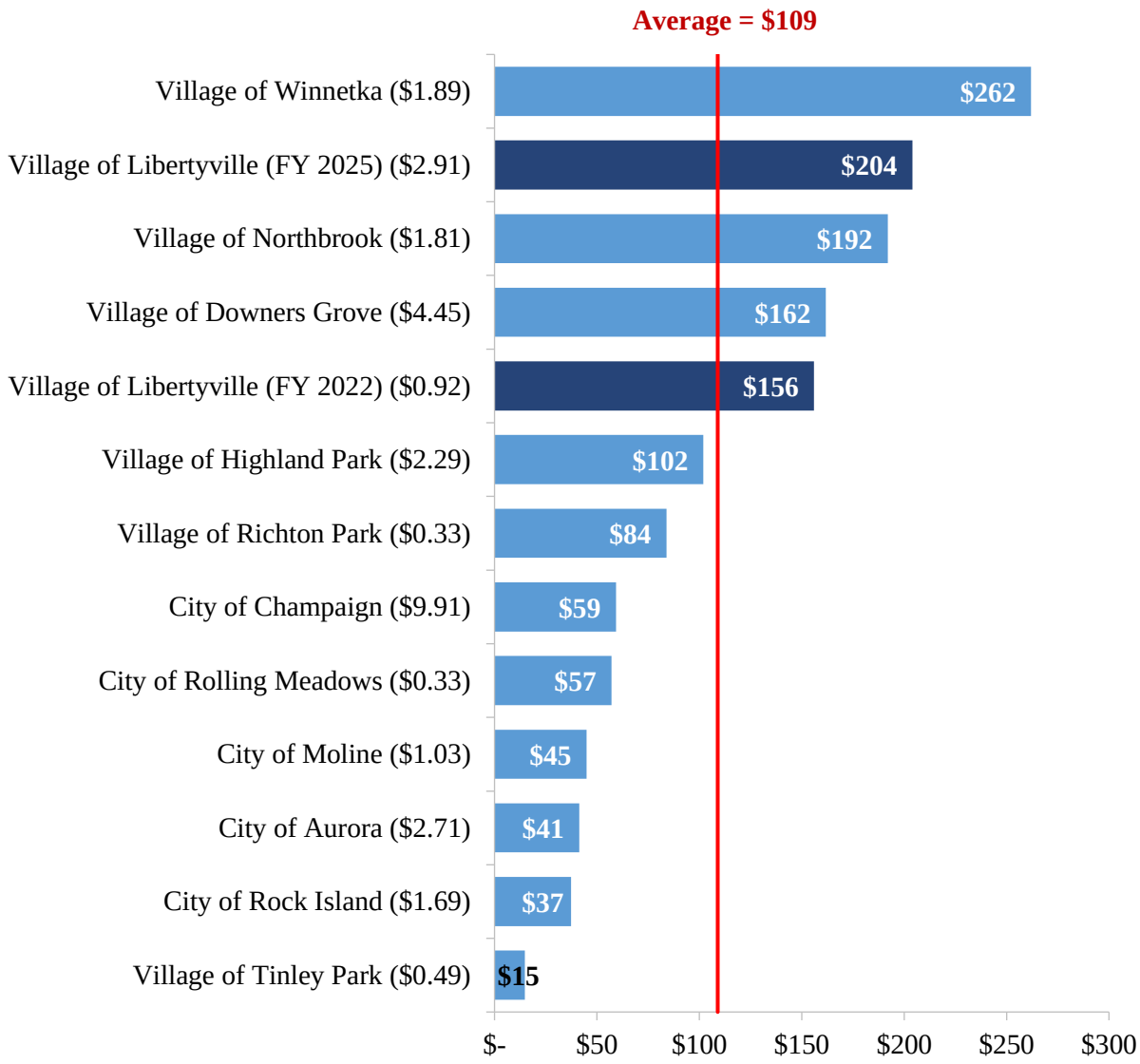


The Village's stormwater system would be built out in FY 2032, at which time the fee would stabilize and only require annual adjustments due to operational changes, as 100% of the debt service due to the MSWMP would be issued. The estimated stabilized FY 2034 bi-monthly IDF fee is $32.00.

Regional Bill Comparison

The following exhibit shows the annual stormwater bill for a residential customer with 3,800 square feet of impervious area (1.0 ERU) covering 40% of the total parcel area (1.0 IDF). Several of the comparison fees are based on water usage. In that case, the fee is based on the Libertyville residential average usage of 8,000 gallons bi-monthly. The values in parentheses next to each municipality's name is the annual stormwater revenue (in millions) generated by the fees shown in the chart.

Exhibit 5-5 Annual Stormwater Bill Comparison – Typical Residential Customer



It should be noted that both the FY 2022 and estimated FY 2025 fee for Libertyville are shown on the chart above, whereas only the current fees for other jurisdictions are shown. Future increases in fees may more closely align with the projected Libertyville fees.

Section 6
IMPLEMENTATION RECOMMENDATIONS

Phase I Findings and Recommendations

To fully finance the operating, capital, and reserve requirements of the Village's Stormwater Utility, NewGen is recommending that the Village implement a stormwater fee based on both the impervious area of each parcel as well as the Intensity of Development of each parcel. The Equivalent Residential Unit of impervious area within the Village is 3,800 square feet. We recommend assigning Intensity of Development Factors to each parcel based on the percent of each parcel that is developed, i.e. covered in impervious area, based on the following table:

IDF Classification	% Impervious	IDF Factor
Vacant	0%	0.20
Light Development	1% - 20%	0.50
Moderate Development	21% - 40%	1.00
Heavy Development	41% - 70%	1.50
Very Heavy Development	>70%	2.00

Based on the recommended cost allocation methodology, the stormwater fees to support the Village's MSWMP are as follows:

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Net Revenue Requirement	**$2,155,132**	**$1,838,543**	**$2,275,891**	**$2,783,762**	**$2,774,525**
System ERUs	17,343	17,343	17,343	17,343	17,343
System IDFs	10,361	10,361	10,361	10,361	10,361
Total System ERUs + IDFs	**27,703**	**27,703**	**27,703**	**27,703**	**27,703**
Fee per Parcel ERU + IDF	**$13.00**	**$13.00**	**$14.00**	**$17.00**	**$17.00**

The recommended fee would be the sum of each parcel's ERU and IDF. For example, if a parcel has an impervious area of 5,000 square feet and a total parcel area of 15,000 square feet, the fee would be calculated as follows:

Parcel ERU = Parcel IA / System ERU

Parcel ERU = 5,000/3,800 = 1.3 (rounded)

Parcel IDF = Parcel IA / Parcel Total Area

Parcel IDF = 5,000 / 15,000 = 33% (rounded) = 1.0

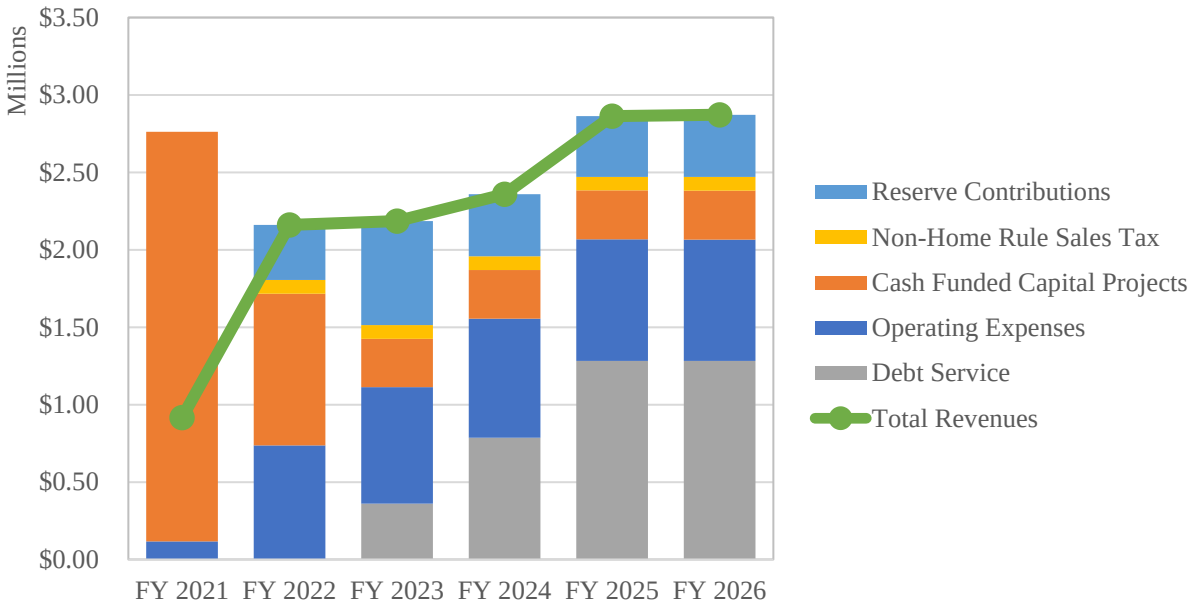
FY 2022 Parcel Bi-Monthly Fee = (ERU x $13.00) + (IDF x $13.00)

FY 2022 Parcel Bi-Monthly Fee = (1.3 x $13.00) + (1.0 x $13.00)

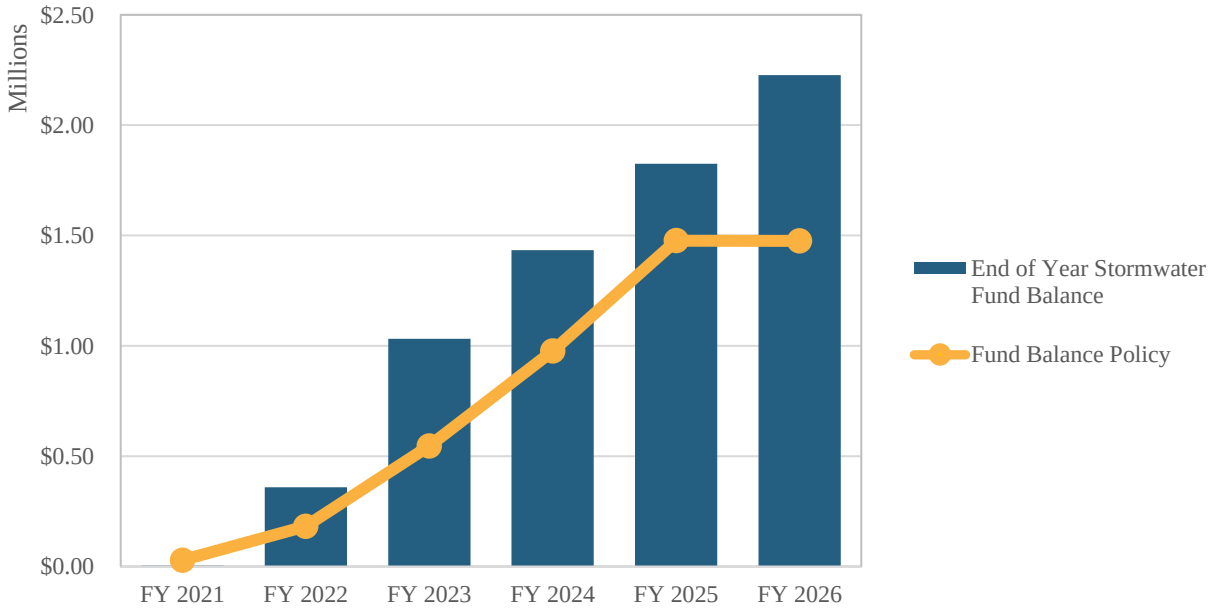
FY 2022 Parcel Bi-Monthly Fee = $29.90

The IDF methodology can be more equitable than fees based solely on ERU because the IDF considers both impervious and pervious area of each parcel.

The projected cash flow of the Village's system is as follows:



The system's cash balance is projected to be as follows:



We recommend that the Village re-calculate the stormwater fee in each of the next three fiscal years to ensure that the system's costs are aligned with the projected fees.

Recommended Credit and Appeal Processes

We recommend that the Village offer two types of credits that a customer may qualify for to reduce their stormwater fee:

Discharge Credit – A parcel qualifies for this credit if the parcel owner can show that 100% of stormwater runoff from property drains outside the Village's Stormwater System. This qualifies the parcel for a 50% discount in fees.

Sampling Credit - A parcel qualifies for this credit if the parcel owner can show that 100% of stormwater runoff from property drains outside the Village's Receiving waters. This qualifies the parcel for a 50% discount in fees. The credits are not mutually exclusive, so a parcel may qualify for both. Parcel owners would need to apply for each credit, which would include the following:

- A site topographical survey prepared by either a Licensed State of Illinois Professional Land Surveyor or Civil Engineer with 1-foot contour elevations (completed within 2 years of the date of credit application), including property lines
- Identification of all impervious areas on property
- Site Drainage & Utility Plan prepared by a Licensed State of Illinois Professional Civil Engineer, showing that 100% of property drainage areas discharge either:
    - Outside the Village's Stormwater System (Discharge Credit)
    - Into receiving waters outside the Village of Libertyville and discharge points (Sampling Credit)

We recommend that the Village also adopt a formal appeals process for parcels who pay stormwater fees. From time to time, there may be errors related to the fee's calculation or application to a certain parcel. We have developed an appeals process that includes both billing errors and impervious area errors:

- Billing Errors
    - Bill has been sent to wrong address
    - Impervious Area is correct, but fee has been calculated incorrectly
- Impervious Area Errors
    - Existence: Bill includes IA that does not exist
    - Location: Bill includes IA in an incorrect location
    - Amount: IA on parcel has different area than calculated.

In each appeal case, the parcel owner must show the correct bill calculation for their parcel. In no cases will the Village consider appeals based on the types of surfaces considered impervious. The Village's Credit Manual, Credit Application, and Appeal Application forms are included as appendices to this report.

Phase II Tasks

There are several issues that must be addressed during the implementation of a Stormwater Utility fee. Each of these issues will be identified and addressed if the Village decides to begin Phase II of the Stormwater Utility Fee and Rate Study.

Alignment of Parcel Data with Utility Database

The preceding analyses were based upon Lake County parcel data. NewGen recommends that the Village include stormwater charges with existing utility bills. This will require the mapping of the County parcel data with the Village's utility database.

The Village's utility billing system currently uses an address-based system. To transfer ERU and/or IDF data from the parcel database to the utility billing system, the two systems will need to be cross-referenced.

At the time of this report Municipal GID Partners, Inc. (MGP) is in the process of cross-referencing addresses and parcels. Once this process is complete, the NewGen and Donohue will be able to cross reference data between the two systems and align stormwater fees with utility billing accounts. This will allow the Village to include the Stormwater Fee on existing customer utility bills.

Adopting the Stormwater Utility Ordinance

NewGen developed a draft Stormwater Utility Ordinance as a part of Phase I. The Village should consult legal counsel regarding the specific language contained within the ordinance prior to its consideration and adoption.

Public Outreach

The Village should undertake an aggressive public outreach campaign to inform citizens of the proposed Stormwater Utility Fee. Public meetings should be held both during daytime and evening hours, spread over several months before the planned adoption of the Stormwater Ordinance. This process will allow the Village's citizens to ask questions and voice any concerns well before the Ordinance is considered and will give the Village time to possibly modify or update the fee projections contained within this report.

APPENDIX A: STORMWATER CREDIT MANUAL

PREPARED IN ASSOCIATION WITH:

NewGen Strategies & Solutions

DONOHUE

ECONOMICS STRATEGY STAKEHOLDERS SUSTAINABILITY

STORMWATER CREDIT MANUAL

Village of Libertyville, Illinois

July 15, 2020

1. Introduction

The intent of this manual is to outline the Village's Stormwater Utility Fee Credit Program and the procedure by which the Program is to be administered. In addition to describing those activities which may be used to qualify for a credit, the manual outlines the administrative and technical basis for determining the extent of the credit and the conditions required to remain eligible for a stormwater fee credit.

2. Definitions

The following definitions are applicable throughout the credit manual and shall have the meanings provided below. If not defined, the terms utilized in this manual shall have the meaning associated with current Village standards for stormwater management and design unless the context clearly indicates otherwise. In all other cases, the terms utilized in the manual shall have the meaning given by common and ordinary use as defined in the latest edition of Webster's Dictionary.

Applicant – An applicant is the person or entity financially responsible for the stormwater utility fee associated with a given account and the stormwater facility or property to be credited.

Credit – A credit shall mean on-going reductions in the stormwater utility fee applicable to a given property in recognition of proof of direct discharge outside the Village's system and/or discharge to waterways which are not sampled by the Village. Credits shall be conditioned on standards adopted by the Village Board upon which the credits are granted and may be revised or rescinded.

Credit Application – A credit application is an application submitted in accordance with the Village's Stormwater Utility Fee Credit Program for a qualifying credit.

Design Storm – A design storm refers to a rainfall event of a certain size or intensity, duration, and return frequency that is used to calculate the peak stormwater discharge. For example, a 100-year storm refers to a rainfall event expected to occur an average of once every 100 years, or an event which has a 1% chance of occurrence within any given year.

Developed Land – Developed land shall mean property altered from a natural state that contains impervious or partially impervious cover, including buildings, pavement, gravel roads, recreation areas (e.g. tennis courts), etc.

Equivalent Residential Unit (ERU) – An ERU shall mean three thousand six hundred (3,600) square feet of impervious surface or any fraction thereof. Three thousand six hundred (3,600) square feet is the average for impervious surface area on a residential property in the Village of Libertyville, and the basis upon which the Village will use to calculate the impervious area for the stormwater utility fee.

Stormwater – Stormwater shall mean the run-off from precipitation that travels over natural or developed lands to the nearest stream, other conduit, or impoundment and appears in lakes, rivers, ponds, or other bodies of water.

Stormwater Utility Fee – The stormwater utility fee for a property is the charge established by the Village to cover the cost of operating, maintaining, and/or improving the Village's Stormwater System. The charge is based on the impervious surface area associated with the property measured in ERUs.

Stormwater System – The Village stormwater system consists of all of the physical components and attributes of the drainage system within the Village that manages and conveys stormwater including but not limited to drains, inlets, culverts, basins, ditches, creeks, public streets, and rights-of-way.

Village – The Village of Libertyville.

Receiving Waters – The waterways that must be sampled by the Village in compliance with EPA reporting requirements.

Village Standards – Village Standards include those standards established by the Village for the design, construction, and maintenance of stormwater facilities. These standards include the Village Code and the Lake County Stormwater Management Commission's Watershed Development Ordinance (WDO), and all other applicable Village policies. These standards are the minimum requirements for Stormwater Control and may be altered or augmented at the discretion of the Village Engineer or Director of Public Works due to unique site conditions and/or preexisting drainage problems within the area.

3. Stormwater Fee Credits

The utility fee credits recognize those applicants that completely discharge outside the Village's stormwater system and/or to applicants that discharge outside the receiving waters sampled by the Village.

While it is the intent of the Village to maintain a program to extend stormwater utility fee credits to applicants subject to the provisions included in this manual, should stormwater regulations change such that the conditions of the Stormwater Credit Program are no longer valid or significantly altered, the Village reserves the right to reduce or eliminate the credits available.

3.1 Eligibility

An applicant is eligible to receive a stormwater utility fee credit if that applicant receives a bill for Stormwater Service provided by the Village. The credit must apply to developed land discharging outside the Village stormwater system and/or receiving waters. Properties that drain to offsite detention facilities are not eligible for credits. Accounts with past-due balances are not eligible to apply for stormwater fee credits.

3.2 Right-of-Entry

As a condition of receiving a stormwater fee credit, an applicant must agree to allow the Village unrestricted access to inspect the property associated with the stormwater utility fee credit. The

intent of the inspections will be to verify that the conditions on the ground are consistent with the documentation provided in credit application.

3.3 Term

Stormwater utility fee credits are provided for a period of five years. In order to continue to receive the credit in future years, the recipient is required to renew the credit application every five years. It is the responsibility of the recipient to submit the credit renewal stormwater application to the Village and to do so in a manner that ensures that the credit remains continuous.

3.4 Stormwater Credit Application

To receive the stormwater utility fee credit, the applicant must submit a Stormwater Credit Application which demonstrates the compliance with the criteria detailed in Sections 3.6 and 3.7 of this manual.

3.5 Application of Credits

For those stormwater credit applications received (and subsequently approved), the credits will be applied to the applicant's account within the billing period in which the application is submitted.

3.6 Qualifying Individual Credits

The options eligible for receipt of an individual stormwater utility fee credit are as follows, and are not mutually exclusive, i.e. a customer may qualify for one or both credits:

3.6.1 Discharge Credit

A credit of 50% will be available to applicants who can demonstrate that their properties discharge all stormwater runoff outside the Village stormwater utility system. Partial discharge of stormwater outside the Village will not be considered.

3.6.2 Sampling Credit

A credit of 50% will be available to applicants who can demonstrate that their properties discharge all stormwater runoff outside the receiving waters sampled by the Village in accordance with IEPA requirements. Partial discharge of stormwater outside the receiving waters will not be considered.

3.7 Application Requirements

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

a) Download current credit application forms from the Village website or obtain the form from Village Hall or Public Works Department.
b) Prepare the credit application form.
c) Prepare or locate required site drainage plan showing topography, drainage patterns and contributing area to drainage outside the Village.
d) Prepare technical calculations required to determine applicability of credit.
e) Obtain appropriate signatures where applicable.
f) Submit form and required attachments to the address on the Application Form.

3.8 Annual Documentation

Annual documentation must be submitted to the Village to continue receiving a credit. The annual documentation must be submitted during the month of April. The required documentation consists of recently dated photographs showing the conditions on the ground of the property have not changed nor impervious area has been added to the parcel that would result in stormwater runoff being contributed to the Village's system or its receiving waters.

3.9 Inspections

The Village reserves the right to inspect parcels receiving a credit at any time. If the field inspection proves that any of the annual documentation submitted for continuation of the credit is not accurate then the credit will be forfeited and the customer must repay the Village in the form of a surcharge the amount of credit received during the period for which the Village determines the parcel was out of compliance. Inspections will be performed at the discretion of the Village.

3.10 Enforcement

Inspections are the primary methods employed to monitor credits. Failure to maintain parcels receiving credit in strict compliance with Village standards will result in the loss of the credit and possible surcharge to recapture improper credits.

APPENDIX B: STORMWATER CREDIT APPLICATION

PREPARED IN ASSOCIATION WITH:

NewGen Strategies & Solutions

DONOHUE

ECONOMICS STRATEGY STAKEHOLDERS SUSTAINABILITY

Village of Libertyville Stormwater Utility

Stormwater Utility Fee Individual Credit Application

Village of Libertyville Stormwater Utility accounts may be eligible for discharging stormwater completely outside the Village stormwater system. This application form shall be submitted to the Village to initiate the Credit review.

SECTION I – GENERAL APPLICATION INFORMATION

Owner/Applicant Name:
_____

Address:
_____

City: _____ State: _____ Zip: _____

Email: _____ Telephone Number: _____

Service Location Information

Account Number: _____Property Address:_____

Parcel Identification Number (PIN) requesting credit: _____

Credit Type (check only one type of credit per application)

- ☐ **Direct Discharge:** 100% of stormwater runoff from property drains outside the Village's Stormwater System
- ☐ **Sampling:** 100% of stormwater runoff from property drains outside the Village's Receiving waters

Credit Review Information

Credit Application Status: ☐ New Application ☐ Credit Renewal

If credit renewal, date of approval of last credit application: _____

Certifications

I certify that all statements made in this application are true, complete, and correct to the best of my knowledge. I further acknowledge that any or all information provided by me is subject to verification and hereby authorize the Village of Libertyville to conduct any investigation or site visit of my property as needed.

_____ _____
Applicant's Signature Date

Mail or deliver forms and support documentation to:

Libertyville Engineering Division
Attn: Stormwater Credit Applications
200 E Cook Ave
Libertyville, IL 60048

Forms and documentation can be scanned and emailed to: waterbill@libertyville.com with the subject line "Stormwater Fee Credit Application".

Credits will be reviewed by Village staff and a response will be mailed to the address indicated in the first section of this form. Please allow 30 days from the delivery date for a reply to any credit application.

SECTION II – DISCHARGE INFORMATION

Applicants shall complete this section in its entirety. The Applicant shall include with this application the following materials (at a minimum):

- A site topographical survey prepared by either a Licensed State of Illinois Professional Land Surveyor or Civil Engineer with 1-foot contour elevations (completed within 2 years of the date of credit application), including property lines
- Identification of all impervious areas on property
- Site Drainage & Utility Plan prepared by a Licensed State of Illinois Professional Civil Engineer, showing that 100% of property drainage areas discharge either:
    - Outside the Village's Stormwater System (Discharge Credit)
    - Into receiving waters outside the Village of Libertyville and discharge points (Sampling Credit)

Credit Determination

(for Village use only)

Has the applicant provided all required documentation? ☐ Yes ☐ No
Does all impervious area drain outside the Village stormwater utility system? ☐ Yes ☐ No
If the answer to the above questions is "Yes", then the discharge credit is set at 50%.
Does all impervious area drain outside the Village's receiving waters? ☐ Yes ☐ No
If the answer to the above question is "Yes", then the sampling credit is set at 50%.

If any of the answers above is "No", then the credit is denied and a letter of determination that identifies the deficiencies will be send to the applicant.

Annual Documentation

(for Village use only)

Year 1 Annual documentation submittal due between April 1-30, 20___, Submitted? ☐ Yes ☐ No
Year 2 Annual documentation submittal due between April 1-30, 20___, Submitted? ☐ Yes ☐ No
Year 3 Annual documentation submittal due between April 1-30, 20___, Submitted? ☐ Yes ☐ No
Year 4 Annual documentation submittal due between April 1-30, 20___, Submitted? ☐ Yes ☐ No
Year 5 Annual documentation submittal due between April 1-30, 20___, Submitted? ☐ Yes ☐ No

Application for credit renewal due: April 30, 20___

APPENDIX C: STORMWATER FEE APPEAL FORM

PREPARED IN ASSOCIATION WITH:

NewGen Strategies & Solutions

DONOHUE

ECONOMICS STRATEGY STAKEHOLDERS SUSTAINABILITY

Village of Libertyville Stormwater Utility Appeal Form

Owner/Applicant Name:
_____

Address: _____

City: _____ State: _____ Zip: _____

Email: _____ Telephone Number: _____

Service Location Information:

Account Number: _____ Property Address:_____

Parcel ID Numbers (P.I.N.):
_____

Reason for Appeal: (Check all that apply and attach documents and descriptions as indicated)

Billing Error or Fee Calculation

☐ **Billing Error: Bill has been sent to wrong address.**
Describe on the attached sheet why you are not responsible for the stormwater fee.

☐ **Fee Calculation: The impervious surface is correct, but the fee has been miscalculated.**
Describe on the attached sheet how the fee has been miscalculated.

Impervious Surface

☐ **Existence: Impervious surfaces have been removed or do not exist.**
Describe on the attached sheet the structure or surface that has been removed, or area where the structure or surface in question does not exist. This includes identification of areas that are wrongly designated as impervious (see note below regarding impervious surfaces).

☐ **Location: Impervious surfaces are not located on this parcel.**
Describe on the attached sheet where the structure or surface is located.

☐ **Amount: Impervious surfaces on parcel have a different area than reported.**
Provide measurements of all impervious surfaces located on the parcel, including an up-to-date plat of survey prepared by a Licensed State of Illinois Professional Land Surveyor as well as sketches and calculations on the attached sheet. These measurements are subject to verification by use of both geographic information systems/aerial photography and by actual ground measurements by Village staff.

Note: Appeals contesting the types of surface areas designated by the Village as impervious will not be considered.

Appeal Description and Documentation: Describe the billing error, fee miscalculation or the structure / local conditions as indicated above. Use only the space provided to describe the appeal. Appeals missing required information will be returned to the applicant without review. Attach any required or additional documentation (plats, surveys, photos, etc.) as needed.

I certify that all statements made in this application are true, complete and correct to the best of my knowledge. I further acknowledge that any or all information provided by me is subject to verification and hereby authorize the Village of Libertyville to conduct any investigation or site visit of my property as needed.

_____ _____

Applicant Signature Date

Mail or deliver form and support documentation to:
Village of Libertyville
Attn: Stormwater Fee Appeals
118 W Cook Ave
Libertyville, IL 60048

Form and documentation can be scanned and emailed to: waterbill@libertyville.com with the subject line "Stormwater Fee Appeal". Appeals will be reviewed by Village staff and a response will be mailed to the applicant address provided. Please allow 30 days from the delivery date for a reply to any appeal.