



Stormwater Management Program

August 30, 2013

SPECIAL REPORT

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Stormwater Town Hall Meetings

Where: Winnetka Community House
Matz Hall
620 Lincoln Avenue

When: Thursday, September 19
6:30 PM

Wednesday, September 25
6:30 PM

If you are unable to attend one of the Town Hall Meetings, you may email your questions and comments to:
Stormwatercomments@winnetka.org

For more information visit:
www.villageofwinnetka.org
www.winnetkastormwaterplan.com

Welcome

Dear Winnetka Neighbors:

Since 2008, on three separate occasions, pervasive flooding has inflicted destruction and substantial financial loss on our entire community. Simply put, "100-year floods" have happened more frequently. The quality of life and economic effects of flooding impact every Winnetkan and have saddled the entire community with a reputation which has depressed our home values. No single flood-impacted neighborhood or individual homeowner can provide relief from this recurring problem—making the implementation of improvements to eliminate or significantly reduce the risk of structural flooding throughout Winnetka the #1 community priority. We have made real progress in developing a comprehensive flood control program, as well as a reasonable and equitable model for financing the essential improvements. Now the time has come to move expeditiously from planning to implementation.

This is a special report to inform every Winnetkan of the Stormwater Management Program and financing mechanisms approved by the Village Council, relying upon expert advisors who have studied the flooding problem and the most reasonable and fair way to pay for its permanent solution. And make no mistake – this is intended to be both a comprehensive and a permanent solution. While total protection of all streets and homes from any flooding whatsoever cannot be guaranteed, the Program adopted by the Council is intended to provide the maximum possible protection for the foreseeable future from even the worst storms.

With this special report in hand, every resident has an opportunity to come forward at one or both of the Town Hall Meetings scheduled by the Council. You can be heard by asking questions, voicing an opinion and expressing your support for or objection to the Council's proposed flood solution. The proposed Program will be the largest endeavor in terms of construction and financing in the Village since the 1930s, when the railroad tracks were built below ground level. Consequently, I urge every Winnetkan to read this special report thoroughly and attend at least one of the two meetings scheduled for September 19 and 25 at the Winnetka Community House.

Sincerely,

E. Gene Greable
President, Village of Winnetka

Rising Floodwaters and Rising Anxieties Call for Community-Wide Solution

Seemingly more and more, when it rains in Winnetka, it pours. And, more and more, when it pours, Winnetka floods. Stormwater runoff spills over every property, every home and institution in Winnetka and often finds its way into residents' window wells, basements, and homes, as well as local businesses and institutions.

Unfortunately, flooding has also found a way into the collective psyche.

The threat of heavy rains puts homeowners on edge. The Village has heard from many residents who have developed detailed "pre-storm" routines to protect their homes against floodwaters.

It has become clear that pervasive flooding in Winnetka requires bold, aggressive action. A community-wide problem requires a community-wide response.

They move their belongings to high ground and sandbag any vulnerable points of entry to their homes. They often alter their plans so clean-up can begin as soon as possible. The Village follows similar routines—cleaning storm drains, setting-up pumps, and diverting staff to critical areas once the rain begins. The clean-up is often a significant drain on core services, as public works and public safety staff are "all-hands on deck" during and after the storm. And during storms, the community anxiously waits, prepared for the worst but hoping for the best.

In addition to the obvious impacts structural flooding has on

homeowners, its effects ripple throughout the entire community. Flooding impacts insurance rates, home values, public safety, quality of life and, increasingly, Winnetka's reputation as an ideal place to live and raise a family.

The July 2011 flooding impacted more than 1,000 Winnetka homes causing an estimated \$7.6 million in uninsured damages alone, likely many times more in total damages. For example, New Trier High School reported over \$631,000 in total damage at the East Campus; however, insurance covered almost all of the loss. Some residents have commented to the Village that their homeowners' insurance policies have been dropped due to repeated flood damage claims.

It has become clear that pervasive flooding in Winnetka requires bold, aggressive action. A community-wide problem requires a community-wide response. The Village of Winnetka has been working with engineers, financial experts, and consultants to develop a comprehensive Stormwater Master Plan that will help modernize aging infrastructure and develop a strong flood protection policy to better manage and pay for stormwater improvements well into the future.

Much of the work on the Stormwater Management Program is underway, but the major construction work, which will deliver the greatest impact to the largest number of homeowners, still lies ahead.

The goal is simple: the Village wants to make improvements to eliminate or significantly reduce the risk of structural flooding in Winnetka by the year 2017. But, the challenge is achieving this goal in a way that is financially responsible, sensitive to the environment and sustainable for decades to come.



Flooding damage clean-up following July, 2011 storms.



Street and overland flooding in Winnetka, April, 2013.

Delivering Flood Relief Through Smart Planning

Winnetkans have endured several major rain events in recent years. Even moderate storms flood parts of Winnetka. But major storms like the July, 2011 event can cause flooding for more than 25 percent of Winnetka homeowners throughout the Village.

Following the September 2008 rains, which dumped eight inches of stormwater on Winnetka in less than 72 hours, the Village Council and staff members began to develop a plan to implement improvements in areas that experience the most serious flooding – flooding that damages residences, businesses, schools, and buildings throughout the Village. The Village hired Christopher B. Burke Engineering, Ltd. (CBBEL), a leading stormwater engineering firm, to identify improvements to reduce the risk of flooding.

The Village began by developing improvements that would protect against moderate rain events – those that can be statistically expected once every ten years (although they can occur more frequently). The first study, focusing on the hardest hit areas of southern and western Winnetka, identified two potential improvements, including a new storm sewer along Birch Street and Hill Road, as well as new storm sewers, detention, and pumping facilities in the Duke Childs Field/Hibbard Road area. The total cost of the proposed improvements was \$8 million.

After reviewing and discussing these proposed improvements, the Village Council expanded the study to other vulnerable areas that were identified based on resident survey results and staff input. In 2010, CBBEL began to study six additional areas in northwest, northeast, and southeast Winnetka. The additional identified improvements raised the total cost of the proposed improvements to \$14 million, but still were only modeled to protect against moderate rain events.

July 2011 Deluge a Gamechanger

Then, the deluge in July 2011 that dumped about 6.5 inches of rain in 2.5 hours caused extreme and extensive flooding damage and changed the Village's approach entirely. By the Village's count, over 1,100 homes experienced some type of flooding. CBBEL evaluated whether the stormwater improvements under consideration at the time would have prevented or mitigated extensive flooding. The experts concluded that improvements then under discussion would have provided little benefit for the

Providing the maximum level of flood protection so Winnetkans can weather 100-year rain events.

magnitude of storm experienced. If the Village had spent \$14 million, residents would still have experienced extensive flood damage in 2011.

The Council immediately expanded CBBEL's project

scope to develop improvements that would protect against 25, 50, or 100-year storms. In late 2011, the Council determined that the preferred program would use a 100-year event as the desired protection level, based on the additional benefit of higher protection levels for the associated cost. Since then, staff and CBBEL have completed feasibility analyses and have been advancing detailed engineering plans for these 100-year flood risk reduction improvements. The comprehensive Stormwater Management Program currently being designed, financed, and implemented is the result of that study.

Modernizing Winnetka's Storm Water Infrastructure: If We Don't Move Forward, We Fall Behind

Fair or not, persistent, frequent structural flooding stigmatizes communities, threatens home values and drives up insurance costs.

Neighboring communities like Wilmette, Northfield, Glencoe, Northbrook, and Lake Forest are investing millions of dollars to modernize their storm water management infrastructure. Residents may have heard that the Village of Kenilworth has approved \$9.75

million in debt to finance sewer system improvements. Other municipalities are upgrading and/or expanding their sewer systems, often to address flood prone areas like those in Winnetka. The Village needs to do the same.

Investing today delivers flood relief to homeowners tomorrow and is a key component in the Village's daily work to ensure that Winnetka continues to be a desirable place to live and raise a family.



Village crews responding to storm and flooding damage, July, 2011.

Improvements Already in the Pipeline

Projects that will help the Village minimize the risk homeowners face in a 100-year flood event are already proceeding, with the addition of new infrastructure in some areas of the village and improvement of existing infrastructure in others. Projects will affect eight identified drainage/watershed areas – both inside and outside of floodplain areas – that are most vulnerable to prolonged and severe flooding.

Northeast Winnetka

This is a large drainage area east of the railroad grade separation bounded on the north by Tower Road, and on the south by approximately Spruce Street. This drainage area experiences significant flooding along Sheridan Road from Maple Street south, along Spruce Street east to the lake, and along Tower Road east of Old Green Bay Road. Engineering work for northeast Winnetka projects is complete. The Village Council is now soliciting construction bids in order to begin the project as soon as possible.

Planned Improvements:

- New outlet from Sheridan Road at Lloyd Park
- Relief sewer along Old Green Bay Road and Tower Road

Anticipated Outcome: Alleviate structural and surface flooding along Sheridan Road south of Maple Street and along Tower Road east of Old Green Bay Road for up to 100-year events.

Cost: \$1.56 million

Schedule: Construction tentatively scheduled for fall 2013.

Northwest Winnetka

The improvements in northwest Winnetka focus on a large watershed area, where significant elevation changes cause flooding during moderate and heavy rains.

Planned Improvements:

- Additional trunk sewer along Tower Road
- Multiple lateral sewers to drain Forest Glen, Vernon, Edgewood, Greenwood, and Grove areas

- Larger outlet pipe to pond on south side of Tower Road

Anticipated Outcome: Alleviate structure and surface flooding along Forest Glen, Tower, Greenwood, Edgewood, and Grove streets for up to 100-year events.

Cost: \$4.27 million

Schedule: Engineering work is 90 percent complete. Construction will likely begin in spring 2014 and be completed by the end of that summer.

Winnetka Avenue Pump Station

The Winnetka Avenue Pump Station is an existing, key piece of infrastructure constructed in 1995. The station provides stormwater drainage for a large area on Winnetka's west side. The pump station is located at a point where a ditch on the Cook County Forest Preserve District's property enters the Skokie River. This ditch is the main point of discharge for western Winnetka's storm sewers, and in times of heavy rain, the level of the River rises above the ditch and water must be evacuated through pumping.

Planned Improvements:

Replace four existing pumps at the station to increase capacity from 40,000 gallons/minute to 60,000 gallons/minute.

Anticipated Outcome: Improve flow in upstream storm sewers in south and west Winnetka and increase the discharge capacity of the Forest Preserve ditch.

Cost: \$1 million

Schedule: Construction could begin in December and be completed by April 2014 if a bid is awarded in September, as planned.

The projects described below are independent of the larger Willow Road Tunnel project and can be implemented right away. These projects preceding the Tunnel are estimated to cost about \$6.83 million and will be funded by the first planned bond issuance of \$18.5 million.

Transparency in the Process

Back in 2008, the Village initiated a conversation with residents about how to best address flooding in Winnetka. It has been a productive and at times spirited conversation that continues to this day.

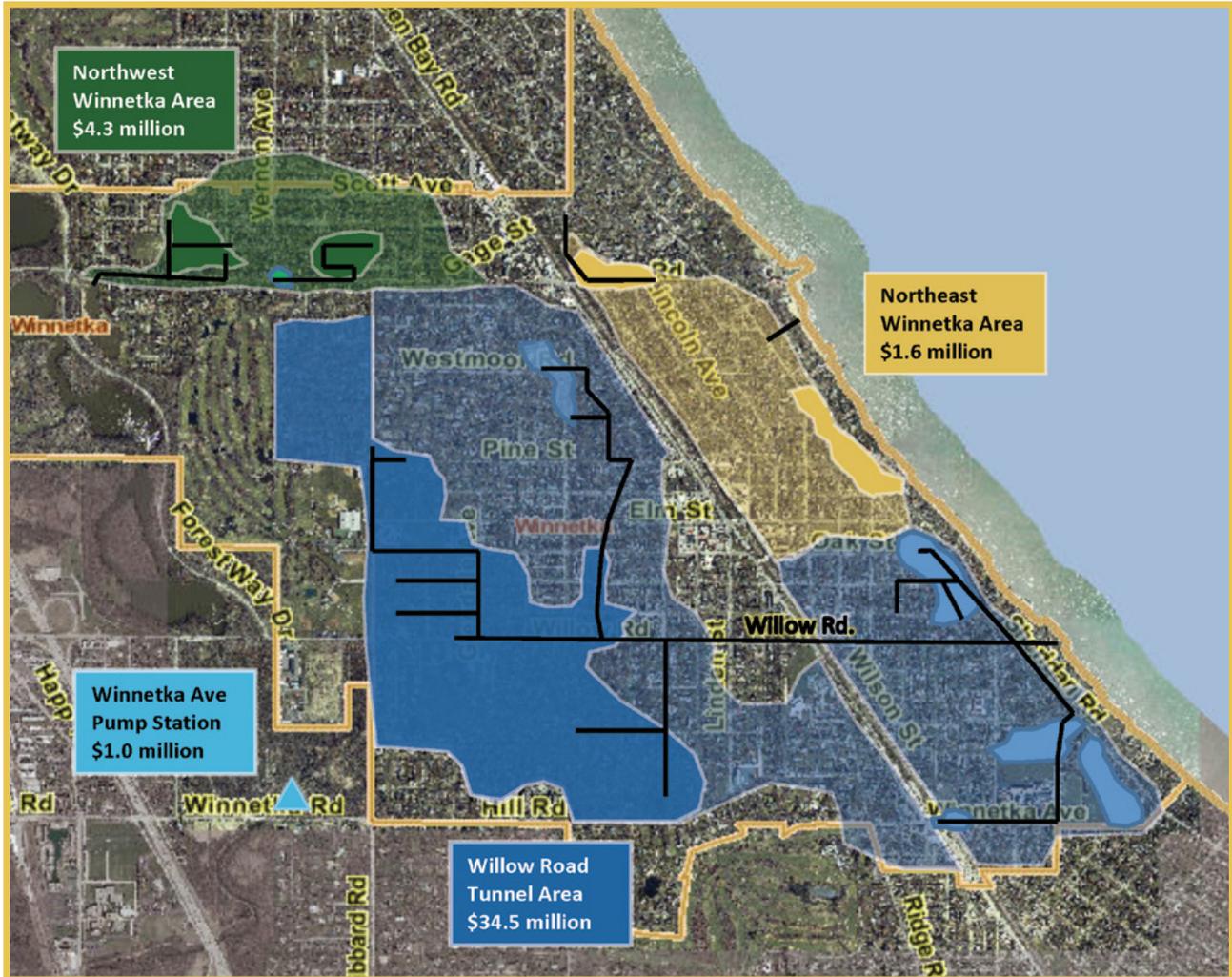
It has always been the Village's goal to share more information about this issue rather than less. And the aim has always been to gather more input from homeowners rather than less. To that end, the Village has taken several steps and continues to keep the conversation going, to ensure transparency. Notably, the Village:

- launched a dedicated website (www.winnetkastormwaterplan.com) in September 2012 that serves as a clearinghouse for information about the planning, financing and implementation of its Stormwater Management Program. At that website, residents are invited to ask questions and provide information and input about the Program.
- has discussed stormwater infrastructure improvements in an open forum at dozens of Village Council meetings over the years. And, the Village hosted four public workshops earlier this year during regular Village Council meetings to gather feedback about a potential storm water utility fee.
- conducted two residential mitigation workshops to help residents understand flood mitigation opportunities.

Projected Benefits from Stormwater Management Program Components

Stormwater currently spills over the vast majority of Winnetka streets and neighborhoods and causes flooding in as many as a quarter of homes and properties. Infrastructure improvements will remove stormwater from the surface more quickly, thus delivering relief from structural flooding to many Winnetka property owners.

This map shows both the Village's drainage areas and the areas that will benefit from the Management Program projects, including the Willow Road Tunnel. The transparently shaded areas indicate water that drains to the various infrastructure modernization projects. The solid shaded areas show areas that will generally benefit from improvements.



Stormwater Improvement Program Timeline					
	2013	2014	2015	2016	2017
Northeast Winnetka	Bidding, Award, & Construction				
Northwest Winnetka	Permitting, Final Engineering, & Authorize Bids	Bid Awards & Construction			
Winnetka Ave. Pump Station	Bidding & Award	Construction			
Willow Road Tunnel	RFQ, RFP & Engineering Firm Selection	Design, Engineering, & Permitting Requirements	Tunnel Construction		

The diagram above presents a broad timeline for the overall Stormwater Management Program. Infrastructure projects that are not connected to the Willow Road Tunnel will be designed and constructed first, while more complex engineering and permitting work on the Tunnel progresses. Under the Village's current plans, all projects would be completed by 2017.

The Willow Road Tunnel

The most significant component of Winnetka’s Stormwater Management Program is an 8-foot diameter, 7,900-foot-long storm sewer beneath Willow Road that would convey water from a roughly 900-acre drainage area on the west side of the village, plus roughly 300 acres from the east side of the village, eastward towards Lake Michigan. The Willow Road Tunnel project will collect water from roughly 2,500 property parcels from five drainage areas into a single infrastructure project, via a storm sewer—running from approximately Glendale Avenue to an outfall structure at Lake Michigan.

Why take stormwater runoff from the west side of the village to Lake Michigan?

Because the Skokie River, where the water from the west side of Winnetka drains, can only take so much water without causing downstream flooding, as regulated by numerous Illinois agencies.

The Village initially explored options to direct stormwater westward, but found it impractical and costly because it relied on land acquisition from several governmental entities and on the temporary “storage” of significant amounts of runoff stormwater in highly valued open spaces like Duke Childs Field and the Skokie Playfields. Based on the Village’s studies, the \$34.5 million Willow Road Tunnel Project is 20 percent less costly than draining water to the west, does not require expensive land acquisition, water detention or pumps, and it conveys the water

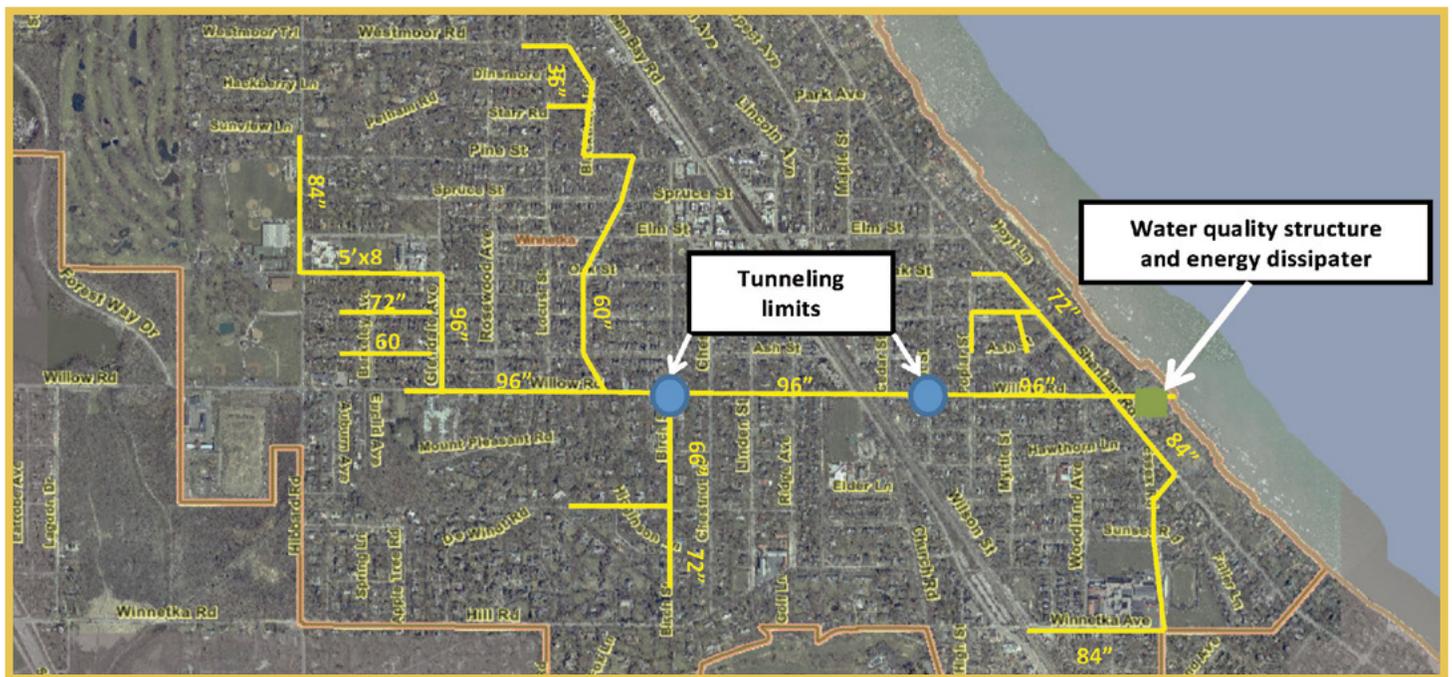
away from problem areas. When complete, the Tunnel will serve as the backbone of the Village’s efforts to eliminate structural flooding by the year 2017. The Tunnel will prevent widespread flooding and significantly reduce the risk of structural flooding throughout much of the village, including North Willow Road, South Willow Road, Provident Avenue, Cherry Street Outlet and

When complete, the Tunnel will serve as the backbone of the Village’s efforts to eliminate structural flooding by the year 2017.

the Winnetka Avenue Underpass areas, for large magnitude storms like the rains of September, 2008; July, 2011; and April, 2013.

To date, a completed study has found that building the Tunnel is feasible from a technical and regulatory

perspective. The study also helped to outline a detailed cost estimate for the tunneling work and the outlet structure. Engineering work on the Tunnel is expected to proceed in 2014, as the Village is currently seeking qualified engineering firms. Due to the project’s complexity and number of permits the Village is required to obtain, construction would likely begin sometime in 2015 and be completed in 2017.



The Willow Road Tunnel will be constructed underneath the road, beginning at Glendale Avenue and traveling east to an outfall structure at Lake Michigan. This graphic shows the main tunnel pipe under Willow, as well as the interconnecting sewers (and their associated pipe diameter) that will remove water from the five drainage areas benefitted by the Tunnel.

Protecting Homes While Also Protecting the Environment

Lake Michigan is Winnetka's most treasured natural asset and a distinguishing attraction for residents and visitors alike. In addition, the Skokie Lagoons and Skokie River and their associated wetlands provide diverse wildlife habitat and recreational opportunities for Winnetka residents.

Stewardship of the Village's natural water resources is a core value. Meanwhile, providing residents with real relief from pervasive flooding is the Village's number one priority. The Village's developing Stormwater Master Plan seeks to articulate how both goals can coexist. The Plan, anticipated to be completed by the end of 2013, contemplates how Winnetka can address flooding in a way that is sensitive to the environment by working toward two goals:

1. Protect and enhance the quality of water in Lake Michigan and the Skokie River.
2. Encourage the use of stormwater Best Management Practices (BMPs) throughout the Village to reduce runoff volumes and improve the quality of stormwater runoff.

The draft Stormwater Master Plan proposes achieving this goal by meeting several objectives, including:

- Continue to eliminate illicit discharges to the storm sewer system;
- Continue preventing stormwater pollution from active construction sites;
- Require new development and re-development projects to minimize stormwater runoff volume and provide water quality treatment for stormwater runoff after construction;
- Continue preventing stormwater pollution resulting from municipal operations;
- Monitor the quality of water discharging from the storm sewer system.

In order to construct the Willow Road Tunnel, the Village will undergo a rigorous permitting process overseen by several

regulatory agencies, all of which have a stake in protecting Lake Michigan from pollutants. These agencies include the Illinois Environmental Protection Agency, the US Army Corps of Engineers, the Illinois Department of Natural Resources, the North Cook County Soil and Water Conservation District, and the Metropolitan Water Reclamation District of Greater Chicago.

Protecting homes from flooding while protecting the environment is possible through planning, partnerships and stewardship.

The Village has already started to work with these permitting agencies to understand how the project will need to be designed and constructed to assure that water quality in Lake Michigan is maintained. The early cooperation with regulators

helps the Village ensure its plans outline the right process, so that unwanted stormwater runoff materials do not reach Lake Michigan. While the details remain to be engineered, the Tunnel design will provide for a sediment control structure at the outlet that also controls the velocity of stormwater leaving the Tunnel, and will incorporate a variety of stormwater "best management practices," i.e. green infrastructure, to address runoff and water quality throughout the system.

Winnetka has taken major steps forward to be sensitive to the environment. Residents should expect that commitment to continue. As engineering and project design progresses, residents will have further opportunity for input into the Stormwater Master Plan and the Village's policies on green infrastructure for both private and public properties and the community can be assured that the Village is protecting homes, as well as the environment.



Stormwater Program Costs and Financing

Historically, Winnetka has funded stormwater maintenance and capital needs through property taxes, using cash or “pay-as-you-go” financing. Although this method is administratively the most simple, the size and scope of the Stormwater Management Program, and its \$41.4 million price tag, is about ten times what the Village has spent on stormwater in total since 1994. So, the Village has been exploring additional financing strategies.

In developing a financial strategy to pay for the improvements, the Village’s Stormwater Utility Feasibility Study first considered the cash approach and secondly, assessed the level of reserve funds that could be dedicated to planned stormwater projects. Reserve funds are built-up over time and are saved for emergency use or significant planned capital expenditures.

The third financing method available to Winnetka is debt issuance, which is commonly used by municipalities constructing large capital projects. Debt is often the preferred financing method when the magnitude of costs is significant, and when the assets being financed will have a long life. Long-term debt matches the

repayment with the life of an asset, and in this case, Winnetka residents, businesses, and other agencies will pay as they accrue the benefits of an improved stormwater management system. Because Winnetka is a home-rule municipality, it has no legal debt limitation. The Village’s Aaa bond rating also makes debt attractive to potential investors.

The Village’s study also evaluated the appropriate bond maturity to use for the planned debt service and a 30-year maturity was recommended. The length of maturity impacts the full program spending, including debt principal and interest, over the life of the debt.

In July, the Village Council, prompted by rising interest rates in the bond market, explored issuing bonds to help finance the improvements. It authorized issuance of \$18.5 million in general obligation bonds in 2013 to lock in current long-term interest rates. To cover the Stormwater Program costs, the Village has allocated approximately \$8.2 million of reserve funds to establish a stormwater utility fund and pay for projected stormwater improvements, which will reduce the

total amount of long-term debt issued. As interest over the life of the bonds is an important component of their long-term cost, the Village cannot delay further in seeking a significant portion of the necessary financing. Given that Winnetka enjoys a Aaa credit rating, the highest possible municipal rating, the Village borrows at the lowest going rate when bonds are issued. In addition, the Village will conduct another bond issuance, for approximately \$16 million, in the next two years. Overall, \$34.5 million of the project costs will be financed by 30-year bonds. Net bond proceeds of \$34.5 million, including principal and interest, are currently projected to cost \$61.3 million over the life of the bonds.

As the next article more fully explains, based on the recommendations from a Stormwater Utility Feasibility Study, the Village Council has determined that the debt issued will be paid for via a stormwater utility fee, paid by every property owner in Winnetka. The chart below presents all the estimated costs associated with the Stormwater Management Program totaling \$41.4 million.

Project Description	Estimate of Probable Cost	Progress To-Date
<i>Spruce Street Outlet Area Improvements</i>		
Tower Road/Foxdale Area	\$1,162,853	Construction tentatively scheduled - fall, 2013
Lloyd Park Outlet	\$398,786	Construction tentatively scheduled - fall, 2013
<i>Northwest Winnetka Improvements</i>		
Tower Road/Greenwood Area	\$3,581,924	Proceeding with final engineering. Council authorization anticipated fall, 2013 and construction in spring, 2014
Forest Glen Extension	\$685,000	
Winnetka Avenue Pump Station	\$1,002,300	Council authorized project bidding - July, 2013
Stormwater Master Plan	\$101,220	Draft Master Plan expected by end of 2013
Utility Feasibility Study	\$72,100	Final report to Council: May 14, 2013
Utility Implementation	\$89,766	MFSG Implementation, Approved June, 2013
<i>Willow Road Stormwater Tunnel</i>		
North/South Willow & Provident	\$27,969,048	Staff has issued an RFQ for engineering services and anticipates that an engineering firm for tunnel design will be hired by the end of 2013
Cherry Street Outlet Area	\$2,000,000	
Winnetka Underpass Area	\$4,400,000	
Area F (west of Hibbard Road)	***	
TOTAL	\$41,462,997	

Developing an Equitable Way to Pay for Stormwater Management

Many basic municipal services like police and fire protection, refuse collection, and snow plowing are funded through property tax revenues. Infrastructure-based utilities, such as electric, water, and sewer service, however, are provided on a user-fee basis. In Chicagoland and around Illinois, stormwater management improvements have been supported by general fund revenues and user fees. There is a growing trend to adopt a user fee approach to finance stormwater improvements, which has typically been established by the creation of a stormwater utility. Unfortunately, rising costs and other capital infrastructure needs often take precedence over stormwater needs—meaning needed improvements do not have a dedicated revenue source to ensure the system is optimally operated and maintained.

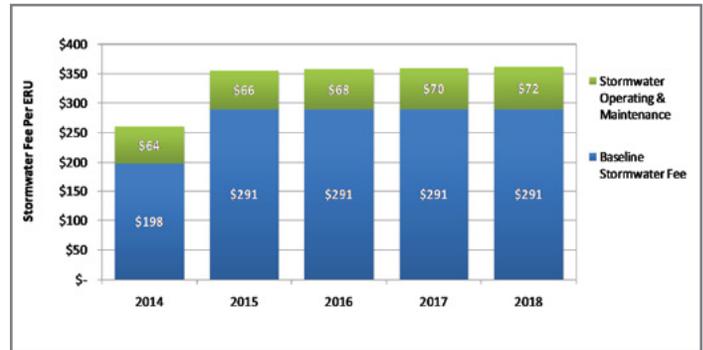
A January, 2013 study from the Chicago Metropolitan Agency for Planning reported that stormwater utilities are a fair and viable option for local governments seeking to address stormwater infrastructure needs. The report stated, “Setting up a stormwater utility allows a community to establish a user fee based on the demands property owners place on the drainage system. It provides a dedicated revenue stream for stormwater programs as well as an incentive for property owners to reduce the amount of runoff they generate.”

Currently there are 19 stormwater utilities in Illinois, including suburban communities such as Aurora, Downers Grove, Highland Park, and Northbrook.

Because the expense of the proposed stormwater improvements is much more than the Village can fund from cash reserves, Winnetka hired Municipal & Financial Services Group (MFSG) in fall, 2012 to analyze financing options and methods, including evaluating the feasibility of funding improvements via a stormwater utility. MFSG evaluated the methods to repay the debt required to finance the substantive improvements for the Village, including property taxes, a stormwater fee, or a combination of taxes and fees.

The ultimate outcome of that study was the development of a Village financing strategy to pay for the approximately \$41.4 million in project costs that combines the responsible use of reserve funds and a \$34.5 million bond issuance that will be repaid through a utility fee paid by residents, business owners, and other institutional property owners. Accordingly, the Council decided last spring to pursue a stormwater utility to fund the Stormwater Management Program.

This policy direction is projected to result in an annual stormwater utility fee of \$362 per ERU (learn more about ERUs on page 10) by fiscal year 2018, after all Management Program-related debt has been issued. It is important to keep in mind that there are a number of variables that will influence the final fee



Village Fiscal Year	2014	2015	2016	2017	2018
Stormwater Fee per ERU	\$262	\$356	\$358	\$360	\$362
Number of ERUs	6,638	6,639	6,639	6,639	6,639

This graph displays the projected stormwater fee per ERU over the next several years, showing the breakdown between operating and maintenance costs and infrastructure components. The table reflects the Village’s total ERU count and the associated annual fee, per ERU, that will be required by property owners.

per ERU, but that this information will be updated throughout the utility implementation process.

Key policy decisions made by the Council on the utility’s structure included:

- Finance 100 percent of improvements with a utility fee;
- Employ impervious surface as fee rate base;
- Implement fee on units with one ERU equal to 3,400 square feet of impervious area;
- Use a uniform fee structure;
- Reserve funds will not be repaid by the utility fee;
- Bill stormwater fee on the Village’s existing Water & Electric bill; and,
- Develop an appeals process.

The Council continues to evaluate the implementation of a credit program for non-residential properties and an incentive program for all property owners.

Over the next year, MFSG will assist the Village by developing a stormwater database billing file; drafting policies and procedures; creating the online stormwater utility bill calculator; as well as finalizing the fee, pro-forma, and utility fund budget. As part of its annual budget process, the Village will be required to draft and adopt an ordinance to begin operating the Stormwater Utility and charging fees.

A Fair Fee: Everyone Contributes, Everyone Pays

Modern, effective stormwater infrastructure is an asset that benefits the entire community. While not every home floods, every property owner benefits from modern, effective stormwater management infrastructure. All Winnetkans benefit from excellent schools in the community, regardless of whether their children currently attend them, for example. Modernized infrastructure that minimizes structural and surface flooding is a benefit to every resident, business, and homeowner in Winnetka.

Under the utility fee structure the Village intends to implement, fees are assessed to all users and property owners, whether or not they pay property taxes. Homeowners, commercial property owners, school districts, churches, and other tax-exempt groups, will all pay their fair share.

If all these entities do not pay based on their property's runoff contribution, residents will bear a larger burden for the cost of stormwater management. MFSG evaluated a property-tax based fee, but did not recommend this method, because a property's market value does not correlate with its stormwater impact. When all users contribute based on impact, tax-exempt properties too pay their fair share.

Why are stormwater utilities a fair and equitable approach to covering the costs of stormwater management services?

While not everyone experiences flooding, it is a fact that every property owner, regardless of their location or their property's use, contributes to the problem by generating stormwater runoff that eventually finds its way not only into the storm sewer system, but also into streets, yards, and other people's homes.

How does everyone pay their fair share?

Since runoff from a property is most proportional to the amount of impermeable surface on that property, a stormwater utility generally bills properties based on the square footage of impermeable surface on that property. Impermeable surfaces are any surface area that does not allow for the penetration of water into the ground, such as driveways, roofs, and sidewalks. The more impermeable surface that exists, the more runoff it generates. Conversely, less impermeable surface area generates less runoff.

MFSG calculated the impervious area for each individual parcel in the Village

of Winnetka and developed a billing unit, called an Equivalent Runoff Unit (ERU), of 3,400 square feet of impervious area. The amount of impervious area for Winnetka's ERUs results from the average amount calculated for all Village parcels and will be rounded to the nearest tenth for billing purposes. The number of ERUs on a parcel, multiplied by the stormwater fee, results in the stormwater bill per parcel.

The utility fee is structured in a way that recognizes that every property owner contributes to stormwater runoff, so everyone pays for their impact on the system and the solution. Learn more about impermeable surface calculations in the images below.

The Village is committed to helping residents understand the fee and will help them calculate anticipated fees with an online stormwater utility bill calculator that will be available this fall.

Every property owner, whether public or private, taxable or tax-exempt, commercial or residential, contributes runoff water that causes flooding. Everyone benefits from modernized infrastructure. Thus, everyone is being asked to pay their fair share.



Lot area: **13,830 square feet**
Impermeable area: **2,990 square feet**
E.R.U Calculation: **0.9**



Lot area: **9,310 square feet**
Impermeable area: **4,555 square feet**
E.R.U Calculation: **1.4**

The areas shaded in blue in these examples represent "impermeable areas" that generate stormwater runoff. How much "impermeable area" a property has is a key factor in determining stormwater utility rates for property owners.

Stormwater Master Plan

An effective stormwater management system is a vital aspect of the Village's overall vision to create and maintain a thriving and sustainable community that we are all proud to call home. Our efforts to manage stormwater need to be guided by smart planning and policy making so that solutions are cost-effective and sensitive to the environment. Winnetka's Stormwater Master Plan is the roadmap that will guide policy, strategy and decision-making on all matters related to flood prevention, stormwater runoff and sanitary sewage collection over the coming five to ten years. A draft of the Master Plan was presented to the Village Council in July, incorporating numerous objectives into a single plan document for stormwater management.

To improve the stormwater management system and the quality of stormwater runoff in Winnetka, the Master Plan outlines key components for Winnetka to:

- Reduce basement back-ups and sanitary sewer overflows by reducing the amount of inflow/infiltration in the sanitary sewer system;
- Implement a fair, equitable, and sustainable means of funding stormwater capital improvements and operating expenses;
- Protect and enhance the water quality in Lake Michigan and the Skokie River;
- Maintain good standing in the National Flood Insurance Program and improve floodplain management practices;
- Encourage the use of stormwater best management practices to reduce runoff volumes and quality;
- Establish appropriate development regulations to

facilitate stormwater management.

The Village's consultant, Baxter & Woodman (B&W), is leading the development of the Stormwater Master Plan. B&W will provide an implementation strategy and suggest a timeline and funding sources available to Winnetka in implementing the plan recommendations.

The Master Plan also calls for community engagement during planning and implementation of the Village's strategy. In fact, Winnetka will host stakeholder open houses with B&W this fall that will focus on floodplain management and development policies and regulations. The Village anticipates finalizing the Stormwater Master Plan by year's end. Additional information about the Master Plan process can be found at www.winnetkastormwaterplan.com.



Sanitary Sewer Evaluation Survey

After the July, 2011 flood, and in addition to the ongoing development of stormwater improvements, the Village began evaluating its sanitary sewer system to identify sources of Inflow and Infiltration (I/I). I/I is stormwater or groundwater that enters the Village's separate sanitary sewer system, which is designed and intended to handle solely wastewater that is collected locally and then discharged to a treatment plant through a network of interceptor sewers operated by the Metropolitan Water Reclamation District. Excessive I/I overloads the system and results in basement backups coming from the floor, drains, sinks, and toilets when the sanitary sewers cannot handle the amount of extra water. Responses to a Village household survey after the July, 2011 flood indicated 276 instances of basement backups.

The Village hired Strand Associates in February, 2012 to undertake a sanitary sewer evaluation survey by performing flow monitoring at 30 locations in the sanitary sewer system, and subsequently identifying and prioritizing portions of the

sanitary sewer system in need of further detailed inspection. The flow monitoring study was completed in the summer of 2012, at which time a follow-up investigation program was proposed to thoroughly evaluate specific portions of the Village's sanitary sewer system and locate defects, identify rehabilitation measures and costs, and develop a rehabilitation program in eight areas.

Subsequently, Village staff undertook a process to narrow the scope of the proposed study and then solicited bids from firms to complete the sanitary sewer evaluation work. A contract was awarded to B&W Consulting Engineers for a detailed I/I Field Investigation and Pilot Rehabilitation Program in April, 2013. During summer, 2013, B&W conducted field work such as manhole investigations, sewer smoke testing, and sewer televising. B&W will report findings and recommendations for a rehabilitation program. It is expected this will be presented to the Village Council in October, 2013 for direction to proceed.