Agenda Item Executive Summary

Title: R-14-2014 - Approving and Adopting the Stormwater Master Plan (Adopt)

Presenter: Steven M. Saunders, Village Engineer

Agenda Date: 04/17/2014

Consent: ☐ YES ☑ NO

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

Item History:

June 12, 2012	Award of professional services contract to Baxter & Woodman Consulting Engineers (B&W) to develop a stormwater master plan
July 9, 2013	Council review of preliminary draft of plan: Study Session, Agenda pp. 2 - 46
December 10, 2013	Council review of pre-final draft of plan: Study Session, Agenda pp. 2 - 80

Executive Summary:

In recent years, a series of rain storms caused overland and basement flooding throughout the Village. In response, the Village undertook several studies, including Flood Risk Assessments, a Sanitary Sewer Flow Monitoring Study, Sanitary Sewer Evaluation Surveys and the Stormwater Utility Feasibility Study, developed plans for extensive improvements to the stormwater management system, and began implementation of some of the plans.

The Village Council has determined that a long-term Stormwater Master Plan is necessary to provide a comprehensive statement of the Village's current stormwater management policies and activities, in order to facilitate the implementation of planned improvements, and to provide a guide for policy and decision-making over the next five to 10 years on matters related to managing the volume and quality of stormwater runoff and sanitary sewer discharges in an environmentally sensitive and sustainable way.

Working with Village staff, B&W has drafted a Stormwater Master Plan that builds on the previous studies and plans. After the Council considered and provided comment and policy direction on earlier drafts, B&W prepared a final draft, which has been made available for public review and comment since February. The Village has also provided additional information of the Village's stormwater management program in a series of special stormwater management newsletters.

Resolution R-14-2014 adopts the final draft of the Stormwater Master Plan prepared by B&W.

Recommendation / Suggested Action:

Consider amending the draft Stormwater Master Plan to incorporate public comments.

Consider adopting Resolution R-14-2014, titled "A Resolution Approving and Adopting the Village of Winnetka, Illinois, Stormwater Master Plan."

Attachments:

Agenda Report

1) July 9, 2013 Village Council minutes
2) November 14, 2013 Village Council Minutes
3) December 10, 2013 Village Council minutes
4) Public comments
5) Draft Stormwater Master Plan
6) Resolution R-14-2014 - "A Resolution Approving and Adopting the Village of Winnetka, Illinois, Stormwater Master Plan"

Agenda Report

Subject: **Resolution R-14-2014: Stormwater Master Plan Adoption**

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

Date: April 9, 2014

On June 12, 2012, the Village Council awarded a contract to Baxter & Woodman (B&W) for professional services to develop a Stormwater Master Plan for the Village of Winnetka. The Village Council determined that a Stormwater Master Plan process would facilitate concurrent stormwater management activities being undertaken or proposed, to unify all of these activities in a single framework. The overall objective of this project is to develop a clear, comprehensive, and forward-looking framework that encompasses the Village's existing stormwater management program, presents a detailed investigation into key components of stormwater as it is related to the Village, establishes stormwater management goals for the future, presents tools to meet or exceed established goals and provides a foundation for future policy decisions. The final product is a document which helps the Village guide the stormwater program for the next five to 10 years and beyond.

The Stormwater Master Plan builds on the previously completed Flood Risk Reduction Assessments, Sanitary Sewer Flow Monitoring Study (and subsequent Sanitary Sewer Evaluation Surveys) and the Stormwater Utility Feasibility Study. Each Section of the Plan focuses on a different aspect of the Village's stormwater management program and sets forth the following goals:

- Reduce the risk of flooding throughout the Village with improvements to stormwater infrastructure;
- Reduce basement back-ups and sanitary sewer overflows by reducing the amount of inflow and infiltration into the sanitary sewer system;
- Maintain participation and good standing in the National Flood Insurance Program and improve floodplain management practices to minimize flood damages and reduce flood insurance premiums for property owners;
- Protect the quality of water in Lake Michigan and the Skokie River;
- Encourage the use of stormwater best management practices throughout the Village to reduce runoff volumes and improve the quality of stormwater runoff;
- Establish development regulations for the Village which are state of the art with regard to stormwater management;

- Effectively maintain the storm and sanitary sewer systems to promote optimum performance; and

- Fund stormwater management initiatives through a sustainable and equitable source of revenue.

July 9, 2013 Study Session
The Village Council first reviewed a preliminary draft of the Stormwater Master Plan at the July 9, 2013 Study Session. Two sections were not fully developed, due to the required feedback from other government agencies. First, the chapter on flood plain management was awaiting comments on the Village's application for the Federal Emergency Management Agency's (FEMA) Community Rating System. Second, the section on stormwater management regulations was awaiting passage of the Metropolitan Water Reclamation District's (MWRD) countywide Watershed Management Ordinance (WMO). The Council provided policy direction on a number of outstanding issues. Minutes of this meeting are attached as **Attachment #1**.

November 14, 2013 Study Session
The Village Council met to review the Village's stormwater management regulations in light of the MWRD's October, 2013 adoption of the countywide WMO (see preceding paragraph). The WMO sets for minimum, consistent countywide stormwater management regulations, but these standards are generally applicable for larger-scale development projects, whereas the Village's standards are focused on a much smaller-scale development such as single-family homes. B&W first reviewed the development regulations where the Village has regulations in place that are more restrictive than the new WMO, recommending that in these cases Village maintain its regulations rather than adopt those of the WMO. B&W next reviewed regulations in the WMO that are more restrictive than current Village regulations, recommending that in these instances, the Village change its regulations to match the WMO. The Council noted its consensus on the following recommendations from Staff and B&W: 1) The Village should petition to become an authorized municipality under the MWRD's WMO and 2) The Village should review and re-write necessary stormwater management regulations to fit together with the WMO. Minutes of this meeting are attached as **Attachment #2**.

December 10, 2014 Study Session
The Village Council reviewed a final draft of the Stormwater Master Plan prior to publishing for public comment. B&W and the Council reviewed the draft Stormwater Master Plan section by section, making comments and suggestions. Several members of the public commented on sections of the plan as well. Minutes of this meeting are attached as **Attachment #3**.

Public comments received
After the December 10 Study Session, the Council's recommended changes were incorporated and the draft Stormwater Master Plan was posted for public comment at the Village's stormwater management program website (www.winnetkastormwaterplan.com) for a month-long public comment period. Notification to the community about this

posting was provided via several standard Village communication channels, including: the Village website, the weekly E-Winnetka electronic newsletter, Winnetka government cable channel, and in summaries of Council actions. One set of written comments was received, and is shown as **Attachment #4.** The comments focus on four areas:

1. *Further clarification of the scope of the project.* The comment refers to clarifying the Village's definition of "structural flooding" on page 17 of the Master Plan. Staff believes that the definitions of structural and overland flooding are clear.
2. *Elimination of cross connections (Inflow/Infiltration control).* The comments suggest that Village should be more aggressive in identifying sources of inflow and infiltration, particularly downspouts, than is currently anticipated in the Master Plan. MWRD is currently developing regulations that would govern how local sewer systems address the issue of inflow and infiltration. The current text of this plan is left somewhat open-ended in anticipation that MWRD's requirements will inform activities and schedules. Staff anticipates that the MWRD's regulations will be adopted in mid-2014, and that this section of the Master Plan should be amended to reflect those requirements when they are adopted.
3. *Immediate steps on water quality/best management practices.* The comments provide a recommendation that the Village move expeditiously to implement a number of bans including pesticides, certain fertilizers, plastic bags, etc. The Village Council has recently delegated research on the issue of addressing coal tar sealers to the Environmental & Forestry Commission. The Council could consider modifying the text to encourage these measures, with the idea of asking the Environmental & Forestry Commission to evaluate these issues as well.
4. *Implementation of sustainable infrastructure and adoption of a "Green Area Ratio".* The newly adopted WMO is structured so that BMP's are permitted as means of providing required stormwater management, and the Village's Engineering Design Guidelines will follow suit. The Master Plan also includes an action item that the Village develop a process to implement Best Management Practices (BMP's) into public improvements. If the Council is inclined to strengthen this action item, the Council could direct staff to identify potential projects and costs, and include them in the proposed FY 2015 budget when it is presented to the Council.

The Village Council should consider whether to incorporate these comments into the Stormwater Master Plan. If the Council does not wish to amend the Plan to address comments, the Stormwater Master Plan shown as **Attachment #5** is a final draft for Village Council review and possible adoption. Resolution R-14-2014 (**Attachment #6**) adopts the Stormwater Master Plan. If the Plan is adopted, the Village Council should consider scheduling an annual review and update of the plan at a study session early each year.

Recommendation:

1. Consider revising the draft plan to address public comments.
2. Consider adopting Resolution R-14-2014.

Attachments:

1. July 9, 2013 Council Minutes
2. November 14, 2013 Council Minutes
3. December 10, 2013 Council Minutes
4. Public comments
5. Stormwater Master Plan
6. Resolution R-14-2014

ATTACHMENT #1
July 9, 2013 Council Minutes

MINUTES
WINNETKA VILLAGE COUNCIL STUDY SESSION

July 9, 2013

(Approved: August 6, 2013)

A record of a legally convened meeting of the Council of the Village of Winnetka, which was held in the Village Hall Council Chambers on Tuesday, July 9, 2013 at 7:00 p.m.

1. Call to Order. President Greable called the meeting to order at 7:03 p.m. Present: Trustees Joe Adams, Arthur Braun, Jack Buck, Patrick Corrigan, Richard Kates and Stuart McCrary. Absent: None. Also in attendance: Village Manager Robert Bahan, Assistant to the Village Manager Megan Pierce, Village Attorney Katherine Janega, Public Works Director Steven Saunders, Finance Director Ed McKee, and approximately 11 persons in the audience.

2. Draft Stormwater Master Plan. Public Works Director and Village Engineer Steve Saunders explained that the Stormwater Master Plan is a framework to guide the Village moving forward, not only with the proposed capital improvement projects, but for other aspects that go into making a full stormwater program; for example, water quality, building regulations, inflow and infiltration (I/I) and green infrastructure. The end goal is a comprehensive plan that relates to stormwater control, similar to the way that the *Winnetka 2020* Comprehensive Plan relates to land use.

   Mr. Saunders said the draft Stormwater Master Plan still has a number of policy questions to be answered, and that Council input is needed to flesh out the document before public engagement begins. Two sections were not fully developed, due to the required feedback from other government agencies. First, the chapter on flood plain management will be completed once the Village's in-process application for the Federal Emergency Management Agency's (FEMA) Community Rating System is finished. Second, the section on stormwater management regulations is subject to change once the Metropolitan Water Reclamation District (MWRD) passes its stormwater management ordinance, which has been published in draft form and is subject public comment before adoption.

   Mr. Saunders introduced Mark Phipps, of Baxter & Woodman, to present the draft Master Plan and review policy questions with the Council.

   Mr. Phipps explained that the look of the Master Plan document will be very different once it has been completed and graphics and photographs are inserted; and that the focus of tonight's discussion was technical content such as goals, objectives and recommendations. He said the Master Plan is a multi-faceted, comprehensive guide that is intended to function as a roadmap for the Council to use when making stormwater-related decisions.

   Mr. Phipps said seven major goals were identified for the Village's Stormwater Master Plan:

   1. **Reduce the risk of flooding.**
      Focus: Stormwater infrastructure improvements such as the proposed projects currently under consideration by the Council.

   2. **Reduce basement backups and sanitary sewer overflows.**
      Focus: Reduce I/I into the storm sewer system, including door-to-door visits with residents to check for cross-connections.

3. **Participate in and remain in good standing with the National Flood Insurance Program.**
   Focus: Improve floodplain management practices and set strict development standards; continue with application for FEMA's Community Ratings Program.

4. **Protect and enhance the quality of water in Lake Michigan and the Skokie River.**
   Focus: Educate residents, reduce illegal sanitary sewer connections, and implement control measures on construction sites. Consider water quality sampling at five suggested locations where Baxter & Woodman's water sampling revealed elevated levels of fecal coliform, nitrogen and phosphorus.

5. **Encourage the use of stormwater Best Management Practices (BMPs) to reduce runoff volumes and improve the quality of runoff.**
   Focus: Green infrastructure such as permeable pavements and rain barrels, to reduce runoff and improve stormwater quality. Consider incentive or recognition program for green infrastructure projects, develop ordinance requirements for new development – public and private.

6. **Establish development regulations which are cutting-edge in the area of stormwater management.**

7. **Effectively maintain the storm and sanitary sewer systems for optimum performance.**
   Focus: Clean and maintain 1/7 of the sanitary and storm sewers annually.

Mr. Phipps reviewed the proposed next steps in the Stormwater Master Plan process, which include: (i) refine the goals, objectives and recommendations; (ii) hold open houses for residents to learn about floodplain management, water quality issues and I/I; and (iii) discuss development regulations to reduce stormwater runoff and improve water quality. He requested Council direction on the questions of: (i) moving forward with house-to-house canvassing to uncover illegal storm sewer connections; (ii) whether the Village should pursue plans for a cost-sharing program to disconnect sump pumps and foundation drains from the sanitary sewer; and (iii) scheduling public open houses.

Answering a question from President Greable about a financing component to the Master Plan, Mr. Phipps explained that although the financing has been thoroughly discussed in conjunction with the Municipal Financial Services Group Stormwater Utility Study, a financing chapter could be added to the Master Plan.

There was a lengthy discussion about aspects of the Master Plan, including: public open houses, BMPs, illegal connections to the sanitary sewer, house-to-house canvassing, and water sampling.

Mr. Saunders, responding to questions from Trustees Buck and Corrigan, explained that a Master Plan is needed because it will look ahead five to ten years and provide a vision to guide future Councils, in the same way the Comprehensive Plan guides the Village on land use issues.

Terry Lowinger, 950 Hill Road: Ms. Lowinger said BMPs could be used in other areas besides water quality and runoff, and she suggested adopting green infrastructure practices as soon as possible.

Ted Wynnychenko, 1086 Oak Street: Mr. Wynnychenko made the following points: (i) the Council should seriously consider the question of credits when implementing the stormwater utility fee; (ii) it is important to re-evaluate the code with respect to drainage; (iii) the Village's Engineering Guidelines are not Best Practices; and (iv) the tunnel boring machines vibrate and may crack the foundations and walls of surrounding homes.

Chuck Dowding, 968 Elm Street: Mr. Dowding said a Master Plan is extremely important, the community needs to know that the Council thought deeply about the direction it wants to go in, and the regulatory agencies require it as part of their permit processes.

The Council provided the following direction on the outstanding issues: (i) implement a recognition program for projects that utilize BMPs, similar to the Historic Preservation Awards; (ii) participate in the MWRD's rain barrel distribution program; (iii) do not implement a stormwater fee credit program, unless there is a legal reason to do so; (iv) do not implement a cost-sharing program to help residents remediate illegal connections to the sanitary sewer; (v) proceed with a long-term water quality monitoring program, but provide more specifics to the Council; (vi) reduce the number of recommended public open houses; and (vii) schedule a special Study Session to discuss development regulation.

3. Willow Road Stormwater Tunnel – Engineering Procurement and Construction Contracting Methods. Mr. Saunders explained that a two-phase process, starting with a Request for Qualifications (RFQ) and then proceeding to a Request for Proposals (RFP), is recommended because the complexity of the project will require a significant cost for bidders to provide a detailed proposal. Staff would like to narrow down the pool of respondents to a reasonable number of firms that are qualified and suited for this type of project. He also reviewed two types of construction contracting methods:

   - General Contracting Bidding. A traditional approach which is most successful for linear projects such as roadway, sewer, stormwater and water main improvements. This method provides the lowest cost for a given set of documents; however, any changes in the scope of work or ambiguities in the construction documents are open to interpretation/negotiation and subject to change orders for time, dollars, or both. This method can lead to an adversarial relationship between the Village, Design Engineer and Contractor.

   - Construction Management. This technique brings the contractor to the design team, where s/he assists the Village in making schedule and scope decisions early in the process. This approach provides more frequent and accurate cost estimates, which are used throughout the design process, and affords early identification of cost and scheduling issues. In addition, the risk of cost overruns (not associated with the project scope) is transferred to the Construction Manager.

   After reviewing the proposed contract structure, Mr. Saunders recommended a Construction Manager at-risk for the first phase of the Tunnel Project, with the remainder of the proposed projects being awarded in a traditional General Contractor bidding arrangement. He said the goal is to get the RFQ published later in July; review responses by early September; issue an RFP in October and possibly award a contract in December.

   After a brief discussion, the Council agreed with Mr. Saunders' recommendations for the contracting methods for the Tunnel Project.

4. Legislative Update – HB 183 "Concealed Carry." Attorney Janega reported that the State legislature overrode the Governor's veto and passed a concealed carry law that pre-empts home rule, but does provide a 10-day window for municipalities to pass legislation banning assault weapons. She explained that for all practical purposes, the Council can assume there is no restriction on carrying firearms other than what is in place in the new Act.

   Trustees Adams, Kates, McCrary and Braun said they would like Attorney Janega to draft an assault ban ordinance for discussion and public comment at the July 16 Council Meeting.

5. Public Comment. None.

6. Adjournment. Trustee Braun, seconded by Trustee Adams, moved to adjourn the meeting. By voice vote, the motion carried. The meeting adjourned at 10:13 p.m.

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Recording Secretary

ATTACHMENT #2
November 14, 2013 Council Minutes

MINUTES
WINNETKA VILLAGE COUNCIL RESCHEDULED STUDY SESSION

November 14, 2013

(Approved: December 3, 2013)

A record of a legally convened meeting of the Council of the Village of Winnetka, which was held in the Village Hall Council Chambers on Thursday, November 14, 2013 at 7:00 p.m.

1) Call to Order. President Greable called the meeting to order at 7:02 p.m. Present: Trustees Joe Adams, Jack Buck, Patrick Corrigan, Richard Kates and Stuart McCrary. Absent: Trustee Arthur Braun. Also in attendance: Village Manager Robert Bahan, Assistant to the Village Manager Megan Pierce, Village Attorney Katherine Janega, Director of Public Works/Village Engineer Steve Saunders, Finance Director Edward McKee, and approximately four persons in the audience.

2) Stormwater Master Plan: Review of Development Regulations. Director of Public Works and Village Engineer Steve Saunders explained the ongoing development of the Village's Stormwater Master Plan and the need for strategies to update the Village's stormwater management regulations. The Metropolitan Water Reclamation District of Greater Chicago (MWRD), the County-wide stormwater authority, adopted a Watershed Management Ordinance (WMO) in October that will become effective May 1, 2014. Since the WMO allows authorized municipalities to issue local Watershed Management Permits, Mr. Saunders said Staff recommends becoming an authorized municipality to maintain a simplified review process for its permit applicants. The Stormwater Master Plan development also brought about a review of Winnetka's Engineering Guidelines so that the Village can decide which best practices to include from its existing ordinance and which to include from the MWRD. Lastly, Mr. Saunders said Winnetka's Zoning Ordinance was reviewed to identify sections that have significant stormwater management implications.

   Mark Phipps, the Village's Master Plan consultant from Baxter & Woodman (B&W), described the difference in focus between the Village's existing regulations and those contained in the countywide WMO. Generally, the Village's standards are focused on a much smaller, neighborhood-scale development. Mr. Phipps first reviewed the development regulations where the Village has regulations in place that are more restrictive than the new WMO. In these cases, it was recommended the Village maintain its regulations rather than adopt those of the WMO. Trustee McCrary asked if these rules impose any requirements on existing developments. Mr. Phipps said adoption of the new standards would not impact prior development. It was noted that developments already in the works would also be regulated under existing standards.

   Mr. Phipps next reviewed regulations in the WMO that are more restrictive than current Village regulations. In these instances, B&W recommended the Village change its regulations to match the WMO.

   Trustee McCrary and President Greable asked for clarification about the ability of new developments to construct basements within the floodplain. Mr. Saunders explained there is a process by which residents can apply through FEMA to have the floodplain revised and allow for basement construction. President Greable asked how many new homes have been

constructed in the floodplain; Mr. Saunders estimated it is on average about two to three per year.

Mr. Phipps then presented standards where it was recommended the Village match the new WMO for regulated projects and then determine whether the same requirements be extended to other projects. Mr. Saunders said Staff is seeking policy direction from the Council so that the Village can create a hybrid of development regulations that best suit Winnetka, given what has been put forth in the WMO. Trustee Adams asked about the Village's authority to grant variations for projects regulated by the WMO. It was noted that the MWRD has maintained its authority to issue variances for projects regulated under the WMO, but that this is not likely to apply where the Village adopts a more restrictive standard.

A final area of standards reviewed by Mr. Phipps included regulations where the Village should match the WMO for required projects, but not extend those regulations to others. Mr. Saunders noted these additional requirements would just become part of the existing review process, except for things that must be submitted to the MWRD. He said it is not a choice of whether or not to follow the WMO. Certain development will be regulated by it, but the Village can take direction on additional best practices to manage stormwater.

Mr. Saunders summarized the four areas from the current Village Zoning Ordinance that were identified as having stormwater implications and said Staff can further evaluate whether change is desirable in these areas to integrate zoning and stormwater management. The areas identified and reviewed included: encouragement of detached garages in the rear quarter of a lot; maximum impermeable surface coverage; treatment of semi-permeable surfaces; and construction of deep basements.

Staff recommended that the Village become an authorized municipality to allow administration and enforcement of the countywide WMO. Trustee Corrigan said the Village should absolutely be authorized to simplify the permit process and make it less time consuming. Trustee McCrary clarified that the Village would be authorized to issue the permit itself rather than requiring both a permit from the Village and the MWRD.

Staff also recommended that the Village adopt the countywide WMO and then update the Village's current regulations to match. Mr. Saunders said Staff would bring back a new subsection of the Village Code containing the necessary changes and additional regulations sometime in 2014. Trustee Adams expressed support for adopting the countywide WMO, so as not to start from scratch with an existing extensive document.

The Council and Mr. Saunders then discussed the recommendation to further evaluate the four areas of zoning requirements with stormwater runoff implications. Trustee Kates asked for more specificity about how the zoning requirements might be changed. Mr. Saunders said they each need to be further investigated and then brought back to the Council for direction. Mr. Kates also expressed concern about encouraging semi-permeable surfaces and the true positive impact of the materials on properties. Trustee Kates inquired about the monitoring and regulation of sump pumps and what is done to ensure one property is not just pumping water onto a neighbor.

Trustee Adams said the Council often hears resident concerns about new development and was supportive of studying these areas further. Trustee Kates also supported studying these

four areas as well as any other areas identified along the way. President Greable estimated that there might be more than four areas that could be addressed at the same time.

Ann Wilder, 1096 Spruce Street. Ms. Wilder said she understands the goal of the discussion to be to control stormwater runoff to reduce or control flooding. Even though a letter of map revision can be obtained, Ms. Wilder said FEMA does not recommend constructing a basement on floodplain land. She thinks the Village should disallow the building of basements on lots that have obtained a letter of map revision for fill. She stated federal flood insurance has very limited coverage for basements, so if they exist, they are a risk. If these basements flood, it will likely add to uninsured losses. In cases of new construction, the Village should be stricter than FEMA and at least not allow construction of deep basements.

The Council then noted its consensus on the following recommendations from Staff and B&W: 1) The Village should petition to become an authorized municipality under the MWRD's WMO and 2) The Village should review and re-write necessary stormwater management regulations to fit together with the WMO.

3) Fiscal Year 2014 Budget Follow-up Items. Finance Director Ed McKee noted that during the budget process, issues were raised that required additional information. The budget follow-up items were reviewed, noting timelines and action steps, including: Westlaw/legal reference resources; independent civil engineering review; building, business, and liquor license fee comparison; street program; floral program; revised stormwater fund cash-flow; evaluation of refuse funding; and updated pension information. Trustee Kates asked if the road program would be brought back to the Council since the road condition assessment will not be completed before the budget is adopted. Mr. McKee confirmed that the Council will authorize the items individually even if they are included in the budget. Trustee Kates clarified that this also applied to items previously discussed, such as the recycling containers recommended by the EFC.

   Trustee Kates inquired if anything additional was being contributed for the pension funding this year. Mr. McKee explained that the current year budget includes an additional amount to make-up for the short, nine-month fiscal year. The Village is making supplemental transactions in the current fiscal year.

   The Council concurred with the recommendations outlined in the budget follow-up schedule.

4) Public Safety Pension Funding. Mr. McKee presented draft actuarial reports for the Village's Firefighter and Police Pension Funds. Because the Village's actuary made a change in the mortality table employed, the life expectancy of the people in the fund has been increased, and thus an additional $94,364 would be required in the Village's tax levy. He said the changes in computations for both Fire and Police will be reflected in the proposed tax levy and would put additional funds in both pensions next year.

   Trustee Kates asked if Mr. McKee thought is the allocations are sufficient, given the Village's rating in the most recent bond issuance. Mr. McKee said the Village's assumptions are very conservative, but that the Council could make a policy decision to allocate more to pension contributions. He advised once the surplus for the current year is known it may make more sense to consider an additional, supplemental contribution. Trustee Corrigan noted that the only negative on our bond rating was a slight underfunding of the pension

funds. He said the Village should be using reserves rather than raising taxes and that the problem is not going away.

The Council discussed whether there would be any adverse impacts of using reserves to allocate additional funds for pensions. Mr. McKee noted there is not a direct negative impact on the reserves, but it does reduce the Village's flexibility to use those reserves for other items that may arise. President Greable asked what the actuary is recommending. Mr. McKee said based on the assumptions and the 20-yearamortization, the numbers from the draft report are what the actuary would recommend. President Greable advocated sufficiently funding the pensions but felt a five-year plan would be helpful to determine the best approach. Trustee McCrary described the changes in legislation that changed the calculation that determines pension funding levels.

Responding to a question from Manager Bahan, Mr. McKee said the Village would have an initial impression of the closing fiscal year 2013 numbers in March, 2014. He said there would be more information at that time to understand what is available for additional contributions to pensions. Trustee Buck said he believes it is more than evaluating pension funding—also looking at the elimination of other taxes and fees that would also affect the levy and the reserves. He advocated getting rid of the natural gas tax, the vehicle stickers, and the animal registration.

The Council agreed to accept the recommendation to increase the portion of the levy related Public Safety Pension Funds $96,000 to reflect the change in the actuary's mortality table, with a corresponding reduction in the Village's General Fund Corporate Levy.

Ann Wilder, 1096 Spruce Street: Ms. Wilder asked if the mortality tables from the actuary were broad or based only on the people in Village's pension funds. Mr. McKee responded that the actuary uses national tables that are not specific to the Village.

5) Public Comment.

Ann Wilder, 1096 Spruce Street: Ms. Wilder asked about the status of a report requested by Trustee Braun related to stormwater impact on the Lake. She inquired as to if and when a report would be done. Manager Bahan responded that the environmental impact on the Lake would come from the design engineering for the Willow Road Tunnel project and that a report will not be possible until the engineering has progressed.

6) Executive Session: None

7) Adjournment. Trustee Adams, seconded by Trustee Buck, moved to adjourn the meeting. By voice vote, the motion carried. The meeting adjourned at 8:45 p.m.

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Recording Secretary

ATTACHMENT #3
December 10, 2013 Council Minutes

MINUTES
WINNETKA VILLAGE COUNCIL STUDY SESSION

December 10, 2013

(Approved: January 7, 2014)

A record of a legally convened meeting of the Council of the Village of Winnetka, which was held in the Village Hall Council Chambers on Tuesday, December 10, 2013 at 7:00 p.m.

1) Call to Order. President Pro Tem Kates called the meeting to order at 7:00 p.m. Present: Trustees Arthur Braun, Jack Buck, Patrick Corrigan, Richard Kates and Stuart McCrary. Absent: President E. Gene Greable and Trustee Joe Adams. Also in attendance: Village Manager Robert Bahan, Assistant to the Village Manager Megan Pierce, Village Attorney Katherine Janega, Public Works Director Steve Saunders, and approximately 13 persons in the audience.

2) Stormwater Master Plan Final Draft. Village Engineer/Public Works Director Steve Saunders explained that the purpose of the Stormwater Master Plan (the Plan) is to combine goals and objectives into a single, comprehensive document which incorporates other consultant studies, a financial plan, and action items, etc. for the purpose of providing a planning resource to achieve the Village's stormwater goals. He said all of the action items have previously been approved by the Council, with the exception of Section 5 (Floodplain Management).

   Mr. Saunders explained that Staff is looking for final Council guidance on the Plan prior to publishing it for the public. Final adoption of the Plan will take place in early 2014, after public comment has been received. The document consists of the Stormwater Master Plan, followed by a series of appendices; the final form of the Plan will be split into two documents: the Plan and the appendices, for ease of use.

   President Pro Tem Kates suggested some changes to the wording in Section 2 – Our Vision. After a brief discussion, there was Council agreement to take out the last sentence on page 11 and modify the wording of the fourth bullet point on page 12.

   Debbie Ross, 921 Tower Road. Ms. Ross disagreed with removing the last sentence on page 11, as it is important to note that studies show runoff contains carcinogens, fecal matter, synthetic chemicals and detergents, which cannot be filtered. She posited that the Tunnel project will negatively affect property values in the region.

   Stacy Meyers, Policy Coordinator for Open Lands. Ms. Meyers said the language on page 11 should remain in the Plan, as it is timely and there is a movement to press for runoff protection. She presented the Council with a letter from Chicago Wilderness, an alliance of environmental groups.

   Laurie Morse, 271 Hawthorne Street, Glencoe. Ms. Morse said the language on page 11 refers to water quality data that was collected by the Village, and the effort to improve and enhance water quality should at least bring the Village's samples to a better level.

   Mr. Saunders said he would devise language to replace "enhance and protect" on page 12 of the Plan.

Mark Phipps, Baxter & Woodman (W&E), reviewed Sections Three – Stormwater Capital Improvements and Four – Infiltration & Inflow, which the Council had previously commented on. The Council suggested that a reference be inserted that the Stormwater Improvement Plan is designed for a 100-year flood, and also requested that the word "recommendation" be changed to "action items" throughout the Plan.

Ms. Morse commented that she did not see any green infrastructure included in the Capital Improvements, and Mr. Phipps said Section 7 specifically incorporates green infrastructure.

Trustee Buck requested that public comment be deferred until the Council has reviewed the entire Plan, to which the Council agreed. Trustee McCrary noted that citizens can also contact Council members or staff to discuss their issues further.

Mr. Phipps turned to Section Five – Floodplain Management, which the Council had not previously reviewed. He said the goal of floodplain management is to maintain good standing in the National Flood Insurance Program (NFIP), which is run by the Federal Emergency Management Agency (FEMA) in cooperation with local government units. Local governments agree to regulate development in the floodplain in exchange for FEMA underwriting flood insurance policies in the community.

Three critical aspects of the NFIP are: i) floodplain mapping which designates areas of significant flood hazard and specifies the level of hazard; ii) flood insurance availability; and iii) enactment of local building permit regulations in the floodplain that keep structures reasonably safe from flooding. Winnetka has been in the NFIP since 1973 and recently applied to become a member of the Community Rating System (CRS), a voluntary program which reduces flood insurance premiums for residents in communities that exceed the NFIP minimum requirements to reduce flood damages. Mr. Phipps reviewed several ways the Village could increase its score in the CRS, including examining repetitive loss areas to determine if steps can be taken to reduce flood loss in these areas.

Mr. Phipps mentioned that Cook County has just begun developing its Hazard Mitigation Plan, a multi-jurisdictional plan to ensure local governments are prepared for disaster. Winnetka could benefit from participation, and Mr. Saunders said the Village is enrolled to participate in the planning.

Mr. Phipps next reviewed Section 6 – Water Quality. He said these action items are requirements under the Village's National Pollutant Discharge Elimination System (NPDES) permit, which is granted to municipalities with separate storm and sanitary sewers. He said the Illinois Environmental Protection Agency (IEPA) has established a Total Maximum Daily Load (TMDL) for E. coli in Lake Michigan and is developing limits for the Skokie River watershed.

Mr. Saunders explained that the TMDL for E. coli will be a concern for the permitting agencies of the Tunnel Project, and that the Village should begin sampling for E. coli at Winnetka beaches. He noted that water quality is important in its own right, not just for permitting purposes; and Section 6 contains a number of water quality initiatives not tied to the Tunnel Project, which are the right practices for the Village. Water quality testing also ensures that stormwater projects are having the intended effect. For example, Elder beach had many fewer beach closings in 2012 and 2013 after the Village worked to correct cross connections that were affecting water quality at that beach.

Responding to a question about prohibiting the use of coal tar, Mr. Phipps said there are several towns in the Chicago area, as well as some states, that have banned the coal tar, which studies show is a carcinogen. He added that some towns ban phosphorus, which is found in lawn fertilizer, but that fertilizer is hard to ban because enforcement is difficult.

Mr. Phipps moved to Section 7 – Stormwater Best Management Practices (BMPs). There are two ways to encourage BMPs: i) urge individual property owners to take steps; and ii) implement BMPs in capital projects on public property, where it is cost effective and feasible to do so.

After Mr. Phipps reviewed the remaining sections in the draft Plan, President Pro Tem Kates called for public comment.

Ann Wilder, 1096 Spruce Street. Ms. Wilder, reading from her written comments, proposed alternate solutions with grey and green components and requested that the Tunnel Project be delayed until such solutions are investigated.

Debbie Ross, 921 Tower Road. Ms. Ross said she thinks the Village's lack of commitment to BMPs is appalling and suggested permeable pavers, utilization of the Villages IKE grant, changes in the Zoning Ordinance to reduce lot coverage and allow deep basements, and the use of Crow Island Park for stormwater detention.

Mr. Saunders explained that permeable pavers do not provide the volumes of stormwater detention for a 100-year storm, but that they are useful for filtering pollutants from stormwater runoff. Regarding the grant, he noted it was originally a group effort with Glenview, Niles, Winnetka and several Chicago neighborhoods. Chicago has dropped out of the process, and an initial Request for Proposals (RFP) came back with an expanded scope beyond what the grant initially offered. The grant is for planning purposes and not construction of stormwater projects. The Village has been working on a second RFP better suited to the vision and focusing on retrofitting neighborhoods and including green infrastructure. He noted that the grant funding is still available and the State has been very cooperative so that the municipalities can establish repeatable planning processes that benefit other localities.

Dan Wade, Alliance of Great Lakes. Mr. Wade expressed concerns about additional stormwater discharges to the Lake, and he asked if there are proposals to treat contaminated water at the existing outfalls, specifically, proposals in green infrastructure on private and public property.

Trustee Corrigan asked if a significant component of the pollution at Elder Beach is from the dog beach.

Mr. Saunders said testing to identify whether bacterial components are from human or non-human sources has not been done; however, there are many contributors of bacteria at beaches, and it would be unfair to say the dog beach is the main culprit. He noted that eliminating some sources of sanitary sewer infiltration into the storm sewer did improve the situation at Elder Beach, but he cautioned that finding cross-connections is difficult and repairing them is expensive.

Bill Krucks, 920 Sunset Lane. Mr. Krucks asked if anything can be done to provide relief for Area L and the "tree streets" until the Tunnel Project is completed.

Mr. Saunders explained that the Winnetka Avenue pump station improvement will help Area L, and the Ash Street pump station modernization will also help the "tree streets."

Rick McQuet, 528 Maple Street. Mr. McQuet asked for information that would quantify the effect of permeable pavers, and he asked how water coming through the Tunnel would be treated.

President Pro Tem Kates explained that the "first flush" of each rainstorm would be diverted to the river. Since the first flush picks up most of the pollutants, contaminants going through the Tunnel would be highly diluted, and engineering will be done to ensure the water is filtered before going into the Lake.

Mr. McQuet asked how much of the pollutant load would be carried away in the first flush, and Mr. Saunders responded that there are studies that estimate 70-80% or more of pollutants are contained in that first amount of runoff.

Jen McQuet, 528 Maple Street. Ms. McQuet said even if the first flush removes a majority of pollutants, there will still be more contaminants going into Lake Michigan as a result of the Tunnel Project, and she asked how the report could state that the Village will endeavor to improve the water quality of the Lake.

Mr. Saunders and Trustee McCrary explained that the wording had been discussed earlier in the meeting and was still being worked on, and the Council feels it is important to set a goal of cleaning the water for the future.

Laurie Morse, 271 Hawthorne Street, Glencoe. Ms. Morse said the beaches are essential to the property values of lakefront communities and suggested a combination of green infrastructure and other things might remove the need for a tunnel. The existing problem of pollution at Winnetka's beaches makes the Tunnel Project a worrisome prospect for many in the community.

Ted Wynnychenco, 1086 Oak Street. Mr. Wynnychenco said he was disappointed that the stormwater utility will not have credits or incentives for residents who take real steps to reduce their stormwater runoff and that a legal challenge to the utility could ensue.

Trustee Braun said the Council will examine the credits and incentives in more detail when the time comes to approve the stormwater utility fee, adding that the Stormwater Master Plan is not yet adopted and will be published for public comment.

Bob Zabors, 321 Willow Road. Mr. Zabors said the first concern of the Stormwater Master Plan is alleviating flooding, and he cautioned that pollutants added to the Lake through the Tunnel outfall will remain there for a long time. He suggested that money could be better spent on immediate projects, and he added that residents have heard a lot of details on funding of the Stormwater Improvement Plan, but not much about other options.

3) Public Comment. None.

4) Adjournment. Trustee Braun, seconded by Trustee Buck, moved to adjourn the meeting. By voice vote, the motion carried. The meeting adjourned at 9:19 p.m.

_____

Recording Secretary

ATTACHMENT #4
Public comments

Steve Saunders

From: Steve Saunders
Sent: Tuesday, March 11, 2014 8:57 PM
To: Christopher Blum (blumcd@gmail.com)
Cc: Stormwatercomments; Robert Bahan; Megan Pierce; Steve Saunders
Subject: RE: Comments on Stormwater Master Plan

Dear Mr. Blum,

Thank you for your comments on the Stormwater Master Plan. These will be forwarded to Baxter & Woodman, the Village's consultant for this project, and to the Village Council, for consideration before the plan is adopted. Adoption is tentatively scheduled for April. I would encourage you to continue to stay informed of the Village's stormwater plans via the Village's stormwater website at www.winnetkastormwaterplan.com

Sincerely,

Steven M. Saunders
Director of Public Works/Village Engineer Village of Winnetka
1390 Willow Road
Winnetka, IL 60093
(847) 716-3534
(847) 716-3599 (facsimile)
ssaunders@winnetka.org

-----Original Message-----
From: Stormwatercomments
Sent: Tuesday, March 11, 2014 9:17 AM
To: Robert Bahan; Megan Pierce; Steve Saunders
Subject: FW: Comments on Stormwater Master Plan

-----Original Message-----
From: Chris Blum [mailto:blumcd@gmail.com]
Sent: Friday, March 07, 2014 4:20 PM
To: Stormwatercomments
Subject: Comments on Stormwater Master Plan

From: Chris Blum <blumcd@gmail.com>
Subject: Comments on Stormwater Master Plan

Message Body:
Please consider the following comments to the Draft Stormwater Master Plan (SMP) for the Village of Winnetka.

- Further Clarification Regarding Scope of Project re: Structural vs. Overland Flooding

It is good to see that the SMP acknowledges that the current proposed projects are geared at structural flooding in limited areas of the Village. (SMP at 17) This has been less than clear in the past. However, its is disappointed to see the overland flooding that impacts larger sections of the village described as merely "nuisance flooding." (SMP at 17) Additionally, it would be helpful for the residents of the Village to understand how the Village has defined structural

flooding as opposed to overland flooding. I understand the Village's flooding problems to be related to rainfall and low lying areas, not to water bodies (i.e., the Skokie Lagoons / Chicago River) rising above the banks. Therefore, all of the "structural flooding" appears to be flooding by rain water traveling over land. If the village is limiting its definition of structural flooding to waters entering structures (regardless of the cause) then the SMP should make that clear, so residents can make an informed evaluation of the SMP and the proposed improvements.

- Elimination of Cross Connections

The Village should take a more aggressive approach to cross connections into the sanitary sewer. The SMP suggest that the Village "commit" to doing so, but limits the proposed canvassing to areas adjacent to the improvement projects, rather than the entire Village. As made clear in the Village's rationale for the Village-wide Utility Fee, everyone contributes to flooding. One relatively quick method of dealing with the cross connection survey would be as follows: (1) survey (foot or vehicle) homes along each street in the Village for downspouts that go into the ground and do not discharge at grade. (2) If the downspouts go into the ground, then the Village could note the property address and search its records for a permit or other document showing that the gutters are connected the storm sewer. (3) If there is no documentation, then the Village should inspect that property.

- Immediate Steps On Water Quality / BMP

The Village should pass regulations and adopt policies improve water quality and follow through on its commitment to water quality. Implementation of such regulations and policies, would likely go a long way to showing the permitting agencies that the Village has the ability and the willpower to honor its commitment to water quality. Importantly, the following can be accomplished without waiting for approval for permits and should be done immediately.

- The Village should ban the use of pesticides (to the extent not preempted by the Illinois Pesticide Act)
- The Village should ban the use of phosphorus containing lawn treatments, including fertilizers and pesticide containing weed and feed products. (Similar bans have been implemented in other Illinois communities and the regulation for Dane County, Wisconsin was upheld by the US Court of Appeals).
- The Village should announce that it is abandoning the use pesticides / fertilizers on Village property or projects.
- The Village should ban the use of plastic bags at stores / restaurants.
- The Village should explore abandoning its use of road salt in favor of other alternatives such as sand and CMA.
- The Village should begin to convert public right of ways (i.e. parkways) into rain gardens, tree box filters, or other modern and sustainable infrastructure. This could be done in areas of the Village that will not be directly impacted by the planned projects without fear of having to redo these projects should the tunnel program be approved or that they will not be effective if the tunnel is not approved.

In addition, the Village should explore policies and programs being implemented across the country. Cities on both coasts are adopting Green Area Ratio, minimum impervious area, or increased maximum impervious surface area regulations and the Village should consider adopting the same so that its regulations can truly be "state of the art." (SMP 12)

--
This mail is sent via contact form on Winnetka Stormwater Master Plan http://winnetkastormwaterplan.com

ATTACHMENT #5
Stormwater Master Plan

VILLAGE OF WINNETKA

STORMWATER MASTER PLAN

Prepared by

BAXTER & WOODMAN Consulting Engineers

VILLAGE OF WINNETKA, ILLINOIS
STORMWATER MASTER PLAN

ACKNOWLEDGMENTS

Special acknowledgements go to all those who contributed much time and effort towards the development of the Stormwater Master Plan.

Village Council 2012-2013

Arthur Braun, Trustee

Jack Buck, Trustee

Patrick Corrigan, Trustee

Richard Kates, Trustee

Stuart McCrary, Trustee

Jennifer Spinney, Trustee

Jessica Tucker, President

Village Council 2013-2014

Joe Adams, Trustee

Arthur Braun, Trustee

Jack Buck, Trustee

Patrick Corrigan, Trustee

Gene Greable, President

Richard Kates, Trustee

Stuart McCrary, Trustee

Stormwater Work Group

Robert Bahan, Village Manager

Jim Johnson, Stormwater Program Manager

Megan Pierce, Assistant to the Village Manager

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

Consultants

Baxter & Woodman, Inc.

Christopher B. Burke Engineering, Ltd.

MGP, Inc.

Municipal & Financial Services Group

Strand Associates, Inc.

Thanks to the many property owners and other interested parties who offered input at public meetings as this Stormwater Master Plan was being developed.

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SECTION 1

INTRODUCTION

"...a village in a natural setting committed to its tradition
of residential neighborhoods, citizen involvement, local shops and educational excellence..."

A 2020 Vision for Winnetka

1. INTRODUCTION

Figure 1. Village Hall

The Village has an ambitious goal to develop a comprehensive, multi-faceted plan to manage stormwater runoff quantity and quality, and sanitary sewer discharges, in a manner that protects and enhances property values and promotes a thriving and sustainable community. This Master Plan is central to achieving that goal.

The Stormwater Master Plan establishes a vision for the Village's stormwater program with actionable goals and objectives that serve as a roadmap to realizing that vision. It incorporates multiple goals and objectives into a single comprehensive plan for stormwater management, which will guide investment and policy decisions in order to improve the quality of life in Winnetka.

This document is the result of planning efforts and research undertaken by the Village Council, Village staff and residents, along with a team of consultants. These efforts began in earnest after a devastating flood in September 2008 and continued steadily through the fall of 2013. The building blocks include several Flood Risk Reduction Assessments, a Sanitary Sewer Flow Monitoring Study with subsequent Sanitary Sewer Evaluation Surveys, and a Stormwater Utility Feasibility Study. Property owners and other interested parties offered input at numerous public meetings providing direction at each step.

The Stormwater Master Plan is intended to serve as a guide to Village policy and decision making over the next five to ten years. The Plan should be updated periodically as objectives are accomplished and goals are met.

Figure 2. Winnetka Public Works

SECTION 2

OUR VISION

"An effective plan helps Village leaders make informed decisions by providing an inventory of values shared by residents as well as an inventory of the community's physical attributes."

A 2020 Vision for Winnetka

2. OUR VISION

Figure 3. Downtown Winnetka

Winnetka is a unique, established Village located on the shore of Lake Michigan, just 16 miles north of the City of Chicago. Residents enjoy a wealth of recreational and environmental benefits by living so close to Lake Michigan and Skokie River. But, the Village was mostly developed before the advent of floodplain maps and modern stormwater management techniques and several recent extreme storm events have resulted in extensive flood damages.

The Village intends to improve its stormwater management system and the quality of its stormwater runoff. To make sure that it remains a very desirable place to live for generations to come, the Village of Winnetka will…

- Reduce the risk of flooding throughout the Village with improvements to stormwater infrastructure.
- Reduce basement back-ups and sanitary sewer overflows by reducing the amount of inflow and infiltration into the sanitary sewer system.
- Maintain participation and good standing in the National Flood Insurance Program and improve floodplain management practices to minimize flood damages and reduce flood insurance premiums for property owners.
- Protect ~~and enhance~~ the quality of water in Lake Michigan and the Skokie River through management of stormwater runoff quality at the local level.
- Encourage the use of stormwater best management practices throughout the Village to reduce runoff volumes and improve the quality of stormwater runoff.
- Establish development regulations for the Village which are state of the art with regard to stormwater management.
- Effectively maintain the storm and sanitary sewer systems to promote optimum performance.
- Fund stormwater management initiatives through a sustainable and equitable source of revenue.

Figure 4. Playing Fields at Country Day School

SECTION 3

STORMWATER CAPITAL IMPROVEMENTS

"...maintain and upgrade the Village's infrastructure
in keeping with Village character and high community standards."

A 2020 Vision for Winnetka

3. STORMWATER CAPITAL IMPROVEMENTS

GOAL

Reduce the risk of flooding throughout the Village with improvements to stormwater infrastructure.

OBJECTIVE

Design and construct stormwater infrastructure improvements recommended by the Village's Flood Risk Reduction Assessments. Plan the improvements to be implemented first in areas with the most severe and repetitive flooding. Infrastructure improvements that address structural flooding will be prioritized.

FLOOD RISK REDUCTION ASSESSMENTS

In response to the flood damage resulting from severe storm events in September 2008 and July 2011, the Village initiated Flood Risk Reduction Assessments prepared by Christopher B. Burke Engineering, Ltd., dated September 2009, June 2011, and October 2011(see Appendix 1) to determine what improvements could be made to mitigate flood damage from future storm events in the areas that have proven to be the most susceptible to flooding. Then, as a first step in the development of this Stormwater Master Plan, the Village conducted a Flood Risk Reduction Assessment of the areas within the Village that had not yet been assessed, known as the "Additional Study Areas" prepared by Baxter & Woodman, dated December 2012 (see Appendix 2). Exhibit 1 shows the boundaries of each study area in the Flood Risk Reduction Assessments.

PROGRAMMED IMPROVEMENTS

Final engineering began in 2012 for several of the improvements recommended in the Flood Risk Reduction Assessment: 25-, 50-, and 100-year Protection prepared by Christopher B. Burke Engineering, Ltd., October 2011 (see Appendix 1). These projects include: the Winnetka Avenue Pump Station Improvements, Spruce Street Outlet Area Improvements, and Northwest Winnetka Improvements. Final engineering for the Willow Road Tunnel is scheduled to begin in early 2014. These five projects are the highest priority projects because they would alleviate flooding in areas of the Village susceptible to widespread structural flooding caused by overland flow. The proposed improvements would provide protection from the 100-year storm for the drainage areas they serve. Table 1 shows the estimated cost of the programmed Improvements. The projects are briefly described below.

Figure 5. Winnetka Avenue Pump Station

Winnetka Avenue Pump Station Improvements

Area J and Area L

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.

The planned improvements include the replacement of four existing pumps at the station to increase capacity from 40,000 gallons/minute to 60,000 gallons/minute. These improvements are expected to improve flow in upstream storm sewers in south and west Winnetka and increase the discharge capacity of the Forest Preserve ditch.

Spruce Street Outlet Area Improvements

Area D and Area I

This is a large drainage area east of the railroad grade separation bounded on the north side 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 planned improvements include a new outlet from Sheridan Road at Lloyd Park, and a relief sewer along Old Green Bay Road and Tower Road. These improvements are expected to 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.

Northwest Winnetka Improvements

Area B

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

The planned improvements include an additional trunk sewer along Tower Road; multiple lateral sewers to drain Forest Glen, Vernon, Edgewood, Greenwood, and Grove areas; and a larger outlet pipe to the pond on the south side of Tower Road.

These improvements are expected to alleviate structure and surface flooding along Forest Glen, Tower, Greenwood, Edgewood, and Grove streets for up to 100-year events.

Willow Road Tunnel

Areas F, H, J, K, L and M

The recommended alternative consists of a large storm sewer under Willow Road (the "Tunnel Project") extending from Glendale Avenue to Lake Michigan, with multiple storm sewers extending into each of the benefitted study areas (South of Willow Road Study Area, Cherry Street Outlet Study Area, and the Underpass Study Area).

Project	Estimate of Project Cost
Winnetka Avenue Pump Station Improvements	$ 1,188,562
Spruce Street Outlet Area Improvements	
Lloyd Park Outlet	$ 398,786
Tower Road/Foxdale Area	$ 1,162,853
Northwest Winnetka Improvements	
Tower Road/Greenwood Area	$ 3,581,924
Forest Glen Extension	$ 685,000
Willow Road Tunnel	
North Willow, South Willow, & Provident	$ 27,969,048
Cherry Street Outlet Area	$ 2,000,000
Winnetka Underpass Area	$ 4,400,000
Area F (west of Hibbard Road)*	$ 100,000
Total =	$ 41,486,173

* Cost estimate not yet finalized, but expected to be less than $100,000

Table 1. Stormwater Capital Improvements Plan

NON-PROGRAMMED IMPROVEMENTS

Flooding in the Additional Study Areas primarily consists of standing water and overland flow in streets and yards. This nuisance flooding most commonly results in sewer back-ups, basement seepage, and sump pump failures. A few cases of overland flow into structures have also been reported, but the projects recommended in the Flood Risk Reduction Assessment for the Additional Study Areas are still being considered for future funding. Design and construction of these improvements may be programmed at a later date.

ACTION ITEMS

1. Complete design and construction of the Winnetka Avenue Pump Station Improvements, Spruce Street Outlet Area Improvements, Northwest Winnetka Improvements, and the Willow Road Tunnel.

2. Since an adverse tailwater condition limits the effectiveness of the modeled storm sewer improvements in Area N, a detailed topographic survey of Area N should be performed to determine how residences can be protected against overland flooding by making improvements to the overland flow paths.

3. Evaluate the feasibility of constructing the improvements that are currently not programmed once the planned capital projects have been constructed.

SECTION 4

INFILTRATION & INFLOW

"The capacity of municipal utilities is a critical element in land use planning for the community."

A 2020 Vision for Winnetka

4. INFLOW & INFILTRATION

GOAL

Reduce basement back-ups and sanitary sewer overflows by reducing the amount of inflow and infiltration (I/I) into the sanitary sewer system.

OBJECTIVE

Investigate and eliminate sources of I/I on public and private property.

BACKGROUND

I/I is an important problem in the community. Excessive I/I causes basement backups and sanitary sewer overflows to occur. Both incidents are health hazards that must be taken seriously.

Public sanitary sewers and private sanitary services both contribute to the problem. On the public side, leaky sewers and manholes take in groundwater infiltration. In some cases, illicit connections between the public storm sewer system and sanitary sewer systems cause clear-water inflow.

On the private side, downspout connections and leaky service pipes play a role, but the largest sources of I/I are typically sump pump and foundation drain connections to the sanitary service.

In early 2014, the Metropolitan Water Reclamation District of Greater Chicago (MWRD) is expected to impose new requirements related to I/I. These requirements will apply to the Village since the Village's sanitary sewers connect to sewers owned by the MWRD. In order to meet these requirements, the Village will likely have to assess and rehabilitate 50% of its sanitary sewer system within 5 years, develop a long-term operation and maintenance program for its sanitary sewers, and investigate sources of I/I from private property as part of its long-term operation and maintenance program.

Figure 6. Sanitary Sewer Manhole

ELIMINATING SOURCES OF I/I ON PUBLIC PROPERTY

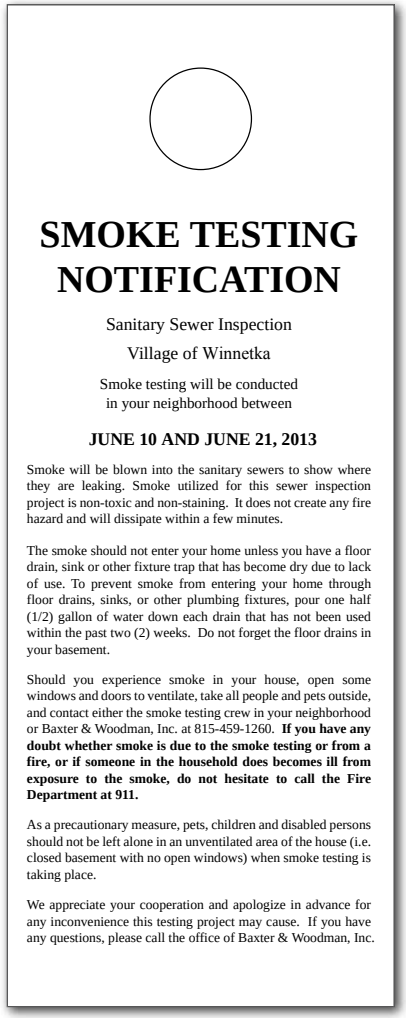
The Village completed a study prepared by Strand Associates, Inc., dated August 2012 (see Appendix 3) in which sanitary sewer flows were monitored over a period of time to identify areas of the sanitary sewer system most affected by I/I. The flow monitoring results were used to prioritize areas of the Village for a thorough investigation of the sources of I/I. Common sources include: defects in manholes and pipe joints that allow groundwater infiltration; and direct connection of sump pumps, foundation drains, and downspouts to the sanitary sewer system. These sources can be detected using methods ranging from manhole inspections to smoke testing, televising, and dye testing the sewer system.

The first phase of the Sanitary Sewer Field Investigation and Pilot Rehabilitation Project was completed in 2013. This phase included investigation of nine priority areas, development of a rehabilitation program for identified sources of I/I, and construction of improvements to eliminate I/I. Exhibit 3 shows the nine priority areas investigated in this project. The results of the Pilot Rehabilitation Project will be used to estimate the cost of improvements in the second and third phases of the Sanitary Sewer Evaluation Survey, which are expected to be completed in 2014 and 2015, respectively.

ELIMINATING SOURCES OF I/I ON PRIVATE PROPERTY

The largest sources of I/I from private property are sump pump and foundation drain connections to the sanitary sewer system. These sources are not typically found while investigating sources of I/I on public property using the aforementioned methods. Finding sump pump and foundation drain connections usually requires building-to-building canvassing.

Canvassing consists of entering private property to identify the discharge points for all building downspouts outside the home and the discharge location of any sump pumps inside the house. This is a labor intensive process and usually includes scheduling appointments on evenings and weekends if contact with 100% of the businesses and residents in the project area is required. A strong policy is required to eliminate illegally connected sump pumps since this type of program is often viewed as intrusive.



SMOKE TESTING NOTIFICATION

Sanitary Sewer Inspection

Village of Winnetka

Smoke testing will be conducted in your neighborhood between

JUNE 10 AND JUNE 21, 2013

Smoke will be blown into the sanitary sewers to show where they are leaking. Smoke utilized for this sewer inspection project is non-toxic and non-staining. It does not create any fire hazard and will dissipate within a few minutes.

The smoke should not enter your home unless you have a floor drain, sink or other fixture trap that has become dry due to lack of use. To prevent smoke from entering your home through floor drains, sinks, or other plumbing fixtures, pour one half (1/2) gallon of water down each drain that has not been used within the past two (2) weeks. Do not forget the floor drains in your basement.

Should you experience smoke in your house, open some windows and doors to ventilate, take all people and pets outside, and contact either the smoke testing crew in your neighborhood or Baxter & Woodman, Inc. at 815-459-1260. **If you have any doubt whether smoke is due to the smoke testing or from a fire, or if someone in the household does becomes ill from exposure to the smoke, do not hesitate to call the Fire Department at 911.**

As a precautionary measure, pets, children and disabled persons should not be left alone in an unventilated area of the house (i.e. closed basement with no open windows) when smoke testing is taking place.

We appreciate your cooperation and apologize in advance for any inconvenience this testing project may cause. If you have any questions, please call the office of Baxter & Woodman, Inc.

Figure 7. Smoke Testing Door Hanger

The investment of resources in canvassing and removal of sump pump and foundation drain connections does have its rewards, though. These illegal connections to the sanitary sewer can increase the domestic flow rate by 30 times during storm events. That means that a typical 8-inch sanitary sewer, which can serve over 300 residences without overflows or basement back-ups if only sewage is connected to the pipe, can serve only 10 residences without overflows or basement back-ups if sewage is combined with 10 sump pumps or foundation drains.

Even though these disconnections would be made on private property, a strong case can be made for investing public funds to remove sump pump and foundation drain connections to the sanitary sewer system. This is because the Village can dramatically increase its available sewer capacity with a relatively small investment. Consider that the removal of 30 private sump pumps (approximately $150,000) could have the same system-wide benefit as rehabilitating 40,000 feet of sanitary sewer (approximately $2,000,000).

ACTION ITEMS

1. Continue with the three phases of the Sanitary Sewer Evaluation Survey in order to find and eliminate sources of I/I on public property.

2. Commit to eliminating illegal connections to the sanitary sewer system. Include building-to-building canvassing of all businesses and residences adjacent to future storm sewer capital improvement projects. Any sump pumps or foundation drains that are connected to the sanitary sewer system can be disconnected and connected to the new storm sewer.

3. Smoke test sanitary sewers along all streets that have future storm sewer, water main, or roadway capital improvement projects planned.

SECTION 5

FLOODPLAIN MANAGEMENT

"Geography and landscape affect the appropriateness or intensity of specific land uses."

A 2020 Vision for Winnetka

5. FLOODPLAIN MANAGEMENT

GOALS

Maintain participation and good standing in the National Flood Insurance Program (NFIP) and improve floodplain management practices to minimize flood damages and reduce flood insurance premiums for property owners.

OBJECTIVES

- Advise property owners about flood hazards, flood insurance, and flood protection measures.
- Adopt and enforce regulations that exceed the NFIP's minimum standards for new development and re-development.
- Reduce future flood damage to existing buildings by helping property owners retrofit or relocate existing flood prone buildings.
- Improve flood warning systems and flood response procedures.

NATIONAL FLOOD INSURANCE PROGRAM

The National Flood Insurance Program (NFIP) is based on a cooperative agreement between the Federal Emergency Management Agency (FEMA) and local units of government. FEMA agrees to underwrite flood insurance policies within a community and the community agrees to regulate development in the floodplain. Participation in the NFIP is voluntary, but communities have incentive to join because Federally-backed flood insurance is only available in participating communities and a non-participating community will not receive Federal aid for damage to insurable buildings in the floodplain.

The three basic components of the NFIP are floodplain mapping, flood insurance, and floodplain management regulations. Floodplain mapping is provided by FEMA on a series of maps called Flood Insurance Rate Maps, which designate areas of a community according to various levels of flood risk. Regardless of its risk level, any building in an NFIP participating community can be covered by a flood insurance policy, even buildings not located in a mapped floodplain. A flood insurance policy is only mandated for Federally-backed mortgages on buildings in the floodplain. Any new buildings constructed within the floodplain, and any improvements or repair of existing buildings is subject to the Flood Hazard Protection Regulations (Chapter 15.68) of the Village Code.

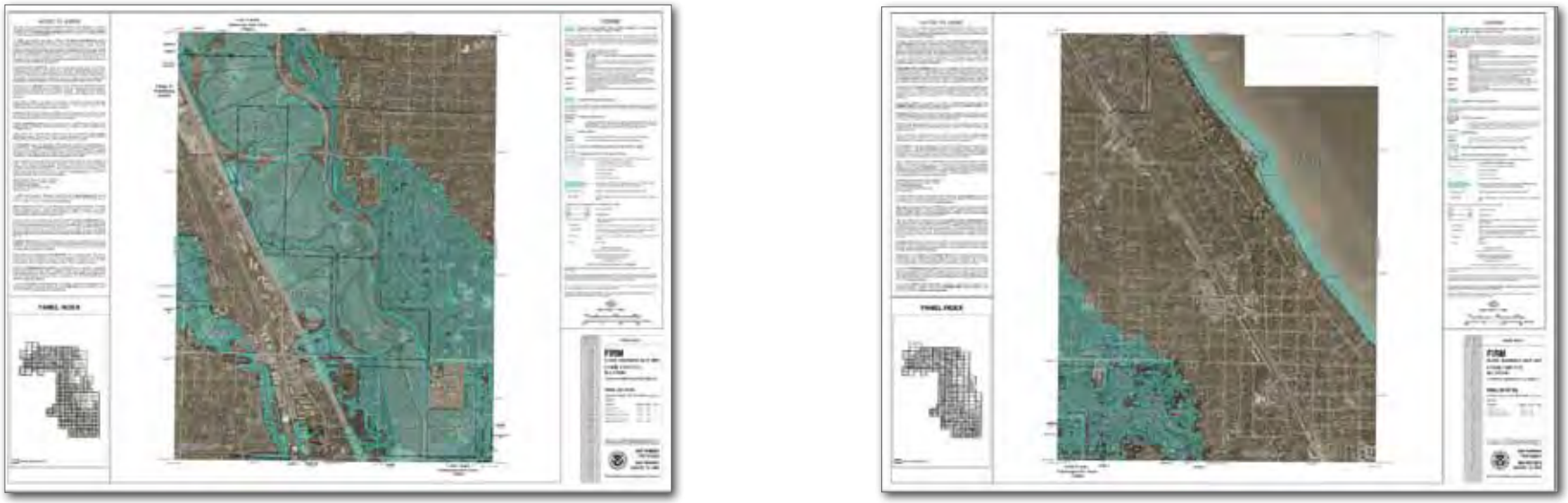


Figure 8. Flood Insurance Rate Maps of Winnetka

The Village of Winnetka joined the NFIP on November 9, 1973 and has remained in good standing with the program ever since.

COMMUNITY RATING SYSTEM

The Community Rating System (CRS) is a voluntary program designed to reward a community for doing more than meeting the NFIP minimum requirements to reduce flood damages. Communities can be rewarded for activities such as: reducing flood damage to existing buildings, managing development in in areas not shown in the floodplain on the Flood Insurance Rate Maps, protecting new buildings from floods greater than the 100-year flood, helping insurance agents obtain flood data, and helping people obtain flood insurance. The reward for these activities comes in the form of reduced premiums for flood insurance policy holders.

Before a community can apply for the CRS, the community must first be audited by FEMA and the Illinois Department of Natural Resources (IDNR) and be found in full compliance with the NFIP. An application to the CRS must then be submitted within one year of the audit.

Once a community has been accepted into the CRS, the community's floodplain management activities are rated according to the scoring system described in the CRS Coordinator's Manual. CRS communities are rated on a scale of 1-10. A Class 10 community receives no reduction in flood insurance premiums, but every class above 10 receives an additional 5% premium reduction. Class 1 requires the most credit points and provides a 45% premium reduction.

How much discount property owners in your community can get

Rate Class	Discount SFHA*	Discount Non-SFHA**	Credit Points Required
1	45%	10%	4,500 +
2	40%	10%	4,000 - 4,499
3	35%	10%	3,500 - 3,999
4	30%	10%	3,000 - 3,499
5	25%	10%	2,500 - 2,999
6	20%	10%	2,000 - 2,499
7	15%	5%	1,500 - 1,999
8	10%	5%	1,000 - 1,499
9	5%	5%	500 - 999
10	0%	0%	0 - 499

Figure 9. From FEMA's publication, *National Flood Insurance Program Community Rating System – A Local Official's Guide to Saving Lives, Preventing Property Damage, and Reducing the Cost of Flood Insurance*

In 2013, there are 54 Illinois communities in the CRS program, all of which are rated between 8 and 5.

Figure 10. CRS Rating of Illinois Communities in 2013

The Village of Winnetka was audited by FEMA and IDNR on May 8, 2013 and was accepted into the CRS program on July 9, 2013. On October 2, 2013, the Village received a preliminary indication that it would be rated either at either 8 or 7. The final determination is subject to the Village submitting documentation regarding its floodplain management activities by April 30, 2014. The effective date of the Village's entry into the CRS program is expected to be October 1, 2014.

REPETITIVE LOSS AREA ANALYSIS

The NFIP considers a property a Repetitive Loss Property if two or more flood insurance claims of more than $1,000 have been paid within any 10-year period since 1978. According to FEMA's records, there are 18 Repetitive Loss Properties within the Village. Many more properties in Winnetka may have reached the damage threshold for Repetitive Loss Properties, but not all properties are

covered by flood insurance and flood insurance claims are not submitted for all flood damage sustained.

FEMA maintains a list of Repetitive Loss properties that includes the property address, dates of claims, the current insured's name, and/or the previous owner's name. Communities in the CRS program are required to update the list periodically by reviewing the list for current information and noting whether the insured buildings have been removed, retrofitted, or otherwise protected from the cause of the repetitive flooding.

The CRS program has two special conditions for communities with 10 or more Repetitive Loss Properties. One condition requires the Village to implement an annual outreach project to the properties in the Repetitive Loss Areas that have insurable buildings. The outreach project must advise the recipient that:

- the property is in or near an area subject to flooding;
- certain property protection measures are appropriate for the flood situation;
- sources of financial assistance may be available for property protection measures; and
- flood insurance is available.

The other condition requires the Village to adopt either a Floodplain Management Plan or a Repetitive Loss Area Analysis prior to its entry into the CRS program.

Adopting a Floodplain Management Plan requires adherence to a rigorous 10-step planning process that involves public participation, an assessment of the flood hazard, goal setting, and formal adoption by the Village Council. These plans are typically developed at a Countywide scale and Cook County is currently developing an All Hazards Mitigation Plan. That Plan would meet the CRS requirement for a Floodplain Management Plan, but the Plan is not expected to be ready for the Village Council to adopt until after April 30, 2014, when the Village is required to submit documentation of its floodplain management activities for entry into the CRS program.

Figure 11. Cook County is in the process of developing an All Hazards Mitigation Plan. Information about the Plan is available at: http://www.cookcountyhomelandsecurity.org/hazard-mitigation-plan/

As an alternative to adopting a Floodplain Management Plan, the Village could adopt a Repetitive Loss Area Analysis by adhering to these five steps.

- Step 1 – Advise all the properties in each repetitive loss area that an analysis of the area will be conducted and request their input on the hazard and recommended actions.
- Step 2 – Contact agencies or organizations that may have plans or studies that could affect the cause or impacts of the flooding.
- Step 3 – Visit each building in the repetitive loss areas and collect basic data. Building entry is not necessary for this step since adequate information can be collected by observing the building from the street.
- Step 4 – Review alternative approaches and determine whether any property protection measures or drainage improvements are feasible. The review must consider the full range of property protection measures for the types of buildings affected, including: preventative activities, property protection activities, natural resource protection activities, emergency services measures, structural projects, and public information activities.
- Step 5 – Document the findings in a report. The report should include: a summary of the process that was followed and how property owners were involved in the process; a problem statement with a map of the affected area; a list or table showing basic information for each building in the affected area; the alternative approaches that were reviewed; and a list of action items identifying the responsible party, when the action should be completed, and how it will be funded.

Unless the repetitive loss areas have similar building and flooding characteristics and similar mitigation measures are appropriate, a separate report should be prepared for each of the Village's four repetitive loss areas.

RELOCATION AND RETROFITTING OF EXISTING BUILDINGS

Removing buildings from the floodplain and other flood prone areas is the most effective way to reduce flood damages because it is a permanent form of mitigation. These activities can be partly funded through FEMA's Pre-Disaster Mitigation (PDM) and Hazard Mitigation Grant Programs (HMGP) when the Cost Benefit Ratio exceeds 1.0. The Village will become eligible to apply for PDM and HMGP funding once Cook County completes development of the All Hazards Mitigation Plan and the Village Council adopts the Plan.

When it is not feasible to remove a flood prone building, one or more of the retrofitting projects listed below can be an effective way to protect buildings, particularly when the flood waters are shallow or slow-moving:

- Elevating buildings above predicted flood levels.
- Dry floodproofing buildings (implementing measures designed to keep water from entering a building).
- Wet floodproofing buildings (implementing measures designed to minimize damage to a structure and its contents from water that is allowed into a building.

- Protecting basements from sewer back-ups.
- Constructing barriers, including levees, berms, and floodwalls.

FLOOD WARNING AND RESPONSE PLAN

Advance identification of an impending storm is only the first part of an effective Flood Warning and Response Plan. To truly realize the benefit of an early flood warning system, the warning must be then be disseminated quickly to floodplain occupants and critical facilities. Finally, appropriate response activities must be implemented, such as: directing evacuation, sandbagging, and moving building contents above flood levels.

The development of a Flood Warning and Response Plan requires an assessment of the nature of the flood hazard and the expected impacts of flooding, the preparation of flood inundation maps, as well as a description of the warning devices used and the specific flood response actions taken at different flood levels. Fortunately, Cook County is currently developing an All Hazards Mitigation Plan, which should address flood warning and response at a Countywide scale. Participation in the development of the Plan will raise the Village's awareness of resources that can be used to improve: threat recognition, warning notification, critical facilities protection, and recovery and mitigation.

ACTION ITEMS

1. Conduct an annual Repetitive Loss Outreach project to each of the Village Repetitive Loss Areas to educate property owners about flood hazards, flood insurance, and flood protection measures (see Appendix 4).

2. Develop and adopt a Repetitive Loss Area Analysis to help property owners retrofit or relocate existing flood prone buildings.

3. Participate in the development of the Cook County All Hazards Mitigation Plan and adopt the Plan. This will make the Village eligible for grants from FEMA and help the Village make improvements to its flood warning systems and flood response procedures.

4. Adopt floodplain management regulations from the Cook County Watershed Management Ordinance that exceed the Village's current regulations (see Section 8).

SECTION 6

WATER QUALITY

"...a mature, built-out community needs a plan that identifies community assets worthy of protection and areas in need of improvement."

A 2020 Vision for Winnetka

6. WATER QUALITY

GOALS

Protect ~~and enhance~~ the quality of water in Lake Michigan and the Skokie River through managing stormwater runoff quality at the local level. In doing so, maintain compliance with the conditions of the Village's National Pollutant Discharge Elimination System (NPDES) Phase II permit.

OBJECTIVES

- Conduct public education and outreach on stormwater quality.
- Involve the public in Village efforts to protect and enhance stormwater quality.
- Eliminate illicit discharges to the storm sewer system.
- Prevent 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.
- Prevent stormwater pollution resulting from municipal operations.
- Monitor the quality of water discharging from the storm sewer system.

EXISTING NPDES PHASE II PROGRAM

The Village has a General NPDES Permit from the Illinois Environmental Protection Agency (IEPA) for discharges from its municipal separate storm sewer system (General Permit). The General Permit requires the Village to develop, implement, and enforce a stormwater management program designed to reduce the discharge of pollutants from the municipal separate storm sewer system to the maximum extent practicable. The program

Figure 12. Spruce Street Outfall

must include the following six Minimum Control Measures and must include at least annual water quality monitoring to evaluate the effectiveness of the program.

- Public education and outreach on stormwater impacts
- Public involvement/participation
- Illicit discharge detection and elimination
- Construction site stormwater runoff control
- Post-construction stormwater management in new development and re-development
- Pollution prevention/good housekeeping for municipal operations

The Village submitted a Notice of Intent (NOI) to the IEPA describing the practices which would be implemented in order to comply with the conditions of the permit. These practices include:

- Publishing educational articles for the general public on topics related to stormwater pollution prevention in Village and Park District newsletters.
- Providing residents obtaining a pet license with information on proper pet waste management.
- Providing residents purchasing yard waste bags and tags with information on responsible lawn and garden care.
- Providing all residents with information on swimming pool cleaning and maintenance, residential stormwater management, and safe disposal procedures for prescription drugs and sharps.
- Posting signage at storm sewer outfall locations notifying residents to report suspected non-stormwater discharges.
- Inspecting storm sewer outfalls for illicit discharge indicators.
- Enforcing the Engineering Design Guidelines for new development and redevelopment, including review of site plans prior to construction, as well as site inspections during and at the conclusion of construction.
- Cleaning the storm sewer system regularly.
- Maintaining the Public Works fleet inside the Public Works facility where wash water and vehicle fluids drain to the sanitary sewer system.

The Village submits a report to the IEPA annually on the status of its NPDES Phase II Program. The IEPA has audited the Village's NPDES Phase II program on one occasion and did not suggest any substantive changes to the program, but the Village should begin a long-term water quality monitoring program since IEPA inspectors are increasingly enforcing the water quality monitoring requirement.

Figure 13. Pollution Reporting Sign

EXISTING WATER QUALITY DATA

Between September 2012 and March 2013, the Village collected end-of-pipe samples at four outfalls to monitor a wide range of water quality parameters during both wet- and dry-weather conditions. Samples were collected on five different days – three wet-weather days and two dry-weather days. Three of the four monitored outfalls discharge to Lake Michigan (at Spruce Street, Cherry Street, and Elder Lane) and the fourth outfall discharges to a tributary of Skokie River (at Hibbard Road south of Willow Road). Exhibit 4 shows the locations where water quality samples were collected. Samples were tested for: temperature, dissolved oxygen, pH, total dissolved solids, total suspended solids, total phosphorus, nitrate, nitrite, ammonia, total Kjeldahl nitrogen, oils/fats/grease, fecal coliform, conductivity, chloride, total metals, and dissolved metals. All tests were performed at an independent laboratory, with the exception of fecal coliform, which was tested at the Village's water plant.

The results of the water quality testing summarized in Exhibit 5 indicate levels of fecal coliform in storm sewer discharges that are elevated. Levels of nitrogen, phosphorus, total dissolved solids, and total suspended solids appear to be elevated, as well (full Laboratory Reports are included in Appendix 5). These findings are typical for urban runoff, but they suggest that the Village will have to take action to protect and enhance the quality of water in Lake Michigan and the Skokie River. Logical action steps would include investigation for illicit connections to the storm sewer system, public education about sources of nutrients in runoff, increased street sweeping, and increased erosion control at construction sites in the Village.

- Fecal coliform is used as an indicator of fecal contamination. Sources of fecal contamination in urban settings can include wildlife (e.g., geese), pets, leaking sanitary sewers, dumpster leaks, grease trap leaks, pavement wash water and catch basin debris.

- Nutrients, such as phosphorus and nitrogen, are a common concern in runoff from urban watersheds. There are a variety of sources of nutrients, including fertilizer, yard waste, eroded soils and sediments, organic loadings (e.g. manure), and detergents.

- Dissolved solids refer to any minerals, salts, metals, cations or anions dissolved in water. They are not typically associated with health effects, but total dissolved solids is used as an aggregate indicator of the presence of a broad array of chemical constituents.

- Suspended solids generally represent sediment in stormwater runoff. The greater the amount of total suspended solids in water, the murkier it appears.

Exhibit 6 demonstrates how the water quality varies by sampling location and over time. For reference, recent ambient water quality data for Lake Michigan and Skokie River is included, where the data was available.

ACTION ITEMS

1. Continue to implement existing practices related to the Village's NPDES Phase II Program.

2. Incorporate development of a stormwater pollution prevention webpage into the ongoing redesign of the Village's website. An outline for this webpage is included as Appendix 6. This webpage should include links to pertinent information, including public education materials (see Appendix 7), the Village's Notice of Intent to comply with the NPDES Phase II permit, and the Village's most recent NPDES Phase II Annual Report.

3. Develop a Stormwater Pollution Prevention Plan for the Public Works Facility and the Village's parks.

4. Incorporate periodic stormwater pollution prevention training into the training program for Public Works employees. A training video is included as Appendix 6.

5. Implement a long-term water quality monitoring program to monitor the effectiveness of Village initiatives on the quality of water discharging from the storm sewer system (see Table 2). For example, the Village can track fecal coliform readings over time as illicit connections to the drainage system are found and removed. Or, if elevated nutrient levels persist, the Village may initiate a public education campaign about the use of phosphorus-free fertilizer. A long-term water quality monitoring program may also be a condition of the permit the Village plans to obtain for a new storm sewer outfall to Lake Michigan.

Water Quality Parameters for Annual Sampling at Location 2	Cost of Lab Test
Flow	N/A*
Temperature	N/A*
Dissolved Oxygen	N/A*
pH	N/A*
Total Dissolved Solids	$ 10.00
Total Suspended Solids	$ 10.00
Nitrite	$ 10.00
Nitrate	$ 10.00
Ammonia	$ 22.50
Total Kjeldahl Nitrogen	$ 22.50
Total Phosphorus	$ 22.50
Chloride	$ 11.25
Fecal Coliform	N/A**
Total Annual Cost =	$ 118.75

* Field measurement
** Test performed at Village water plant

Table 2. Long-Term Water Quality Monitoring Plan

6. A study was completed by the IEPA in July 2013 that established a Total Maximum Daily Load (TMDL) limit for *E. coli* at Lake Michigan beaches, and another study is underway by the IEPA to establish TMDL limits for pollutants of concern in the Skokie River watershed. Once

completed, these studies will include recommended actions to reduce pollutant loadings which are likely to affect Winnetka. Therefore, the Village should participate in the ongoing TMDL process and update the Village's NPDES Phase II program to implement the recommendations of the TMDL studies.

7. Implement a strategy to incorporate stormwater Best Management Practices (BMPs) into public and private improvements (see Section 7).

8. Update the stormwater quality standards in the Village Code and the Engineering Standards Manual (see Section 8).

9. Evaluate where the Village Code can be updated to prohibit activities that can negatively impact runoff water quality. For example, prohibiting the use of phosphorus-containing fertilizer and coal tar-based driveway sealers.

SECTION 7

STORMWATER BEST MANAGEMENT PRACTICES

"...maintaining the natural features of the Village
for the enjoyment of future generations remains a high priority."

A 2020 Vision for Winnetka

7. STORMWATER BEST MANAGEMENT PRACTICES

GOAL

Encourage the use of stormwater Best Management Practices (BMPs) throughout the Village to reduce runoff volumes and improve the quality of stormwater runoff.

OBJECTIVE

Encourage the use of stormwater BMPs in private and public improvements.

Stormwater BMPs

Simply put, a stormwater BMP is a practice used to manage the impacts of stormwater runoff. Some stormwater BMPs occur naturally, such as wetlands, woods and other natural vegetation. Other stormwater BMPs are man-made structures, such as detention ponds, swales, rain gardens, or permeable pavement.

Source - American Society of Landscape Architects

Figure 14. Parkway Rain Garden

When land is developed, impervious surfaces such as rooftops, roads, parking lots, and driveways are created. These impervious surfaces generate stormwater runoff because they do not allow rain to soak into the ground. Impervious surfaces also accumulate pollutants deposited from the atmosphere, leaked from a vehicle, or wind-blown in from adjacent areas. During storm events, pollutants quickly wash off impervious surfaces and are rapidly delivered to downstream waters. Some common pollutants found in urban stormwater runoff include sediment, nutrients (nitrogen and phosphorus), heavy metals, oil and grease. Stormwater BMPs are inserted into the landscape to improve water quality and reduce the flooding associated with increased impervious cover and surface runoff.

Stormwater BMPs in Private Improvements

Potential strategies to encourage the use of stormwater BMPs in private improvements can be classified into five different categories: financial incentive programs, awards and recognition programs, distribution programs, stormwater utility fee discounts, and ordinance requirements. Local examples of each category are provided below. Note that the following examples are presented for reference only and not all are recommended; however, creating some incentive for private property owners to install BMPs may be a condition of the permit the Village plans to obtain for a new storm sewer outfall to Lake Michigan.

Source - Lincoln Way Supply

Figure 15. Permeable Paver Driveway

Financial Incentive Programs (Grants, Rebates, Cost-Sharing)

- *Water Quality Improvement Program (DuPage County)* – Grants are awarded annually (up to 20% of project cost) for projects providing a regional water quality benefit.
- *Sustainable Backyard Program (City of Chicago)* – Residents can receive rebates on purchases of trees (up to $100), native plants (up to $60), compost bins (up to $50), and rain barrels (up to $40). Workshops provide basic information on the installation and maintenance of rain barrels, compost bins, native plants, and trees.
- *Rain Garden Cost-Share (Village of Glenview)* – Residents can apply for a grant of 50% of the project costs (up to $1,000) for a rain garden installed according to the Village's rain garden guidelines and which provides a drainage benefit.

Source - The Conservation Foundation

Figure 16. Rainwater Harvesting Concept

- *Local Drainage Inspection Program (Village of Glenview)* – Residents voluntarily participate in a cost-sharing program with the Village in which individual lots are reviewed for drainage problems and recommendations are provided to solve the drainage problems on private property. A green

infrastructure alternative is often considered among the potential solutions. Residents receive a site visit by a registered professional engineer with stormwater expertise, a written report with recommended improvements, cost estimates for the potential improvements, a list of recommended local contractors, and a voucher to cover permitting fees (up to $200). The cost of the program ($800 per property) is split evenly between the Village and the property owner.

Distribution Programs

- *Rain Barrel Program (Metropolitan Water Reclamation District of Greater Chicago)* – Rain barrels are sold to residents ($58 plus tax) within the MWRD service area. An installation kit and delivery are included. Rain barrels may be purchased directly from the MWRD or from participating municipalities.
- *Rain Garden Program (City of Woodstock)* – The City installed demonstration rain gardens in highly visible areas and developed installation guidelines for residents to install their own rain gardens. The guidelines are available on the City's website and at brochure racks at City facilities.

Awards and Recognition Programs

- *Conservation at Home (The Conservation Foundation)* – Residents receive a free site visit for site specific advice on the use of native landscaping, rain barrels, organic fertilizers, and the removal of invasive plants. Reference materials are provided for purchasing plants. Participants that follow-through can have their landscape certified. Donations are suggested ($25 for current members or $50 for non-members) for yard signs signifying participation in the program.

Source - The Conservation Foundation

Figure 17. Conservation Award Sign

Stormwater Utility Fee Discounts

- *Incentives and Credits (Village of Downers Grove)* – An incentive is a one-time reduction in the stormwater utility fee applied to the resident's account balance. It is offered to assist property owners with the cost of materials, construction and installation of rain barrels ($25), rain gardens ($250), permeable pavers ($300), and other qualifying practices (30% up to $300 per property). A credit is an ongoing reduction in the amount of stormwater fees assessed to a parcel (up to 100%) in recognition of site practices that reduce the impact of stormwater runoff.

Ordinance Requirements

- *BMP Ordinance (Village of Lakewood*) - This ordinance requires the installation of BMPs for any development in the R-2 Zoning District that exceeds 500 square feet of new impervious area or that adds impervious area past the side or rear yard building setback lines. Appropriate BMPs are selected by the resident according to the Village's BMP hierarchy. The Village provides an applicant with a FAQ sheet, BMP profile sheets, and standard maintenance agreements to streamline the permitting and design processes.

- *Watershed Development Ordinance - Water Quality Treatment Requirements (Lake County)* – All development resulting in at least 0.5 acre of new impervious area is required to retain 0.01 inch of runoff for every 1% of impervious surface. Hydrocarbon (e.g. oil and grease) removal technology with a minimum 70% removal rate is required for 0.5 inch of runoff from new impervious surfaces resulting from the following types of development: vehicle fueling and service facilities; and parking lots with more than 25 new stalls.

Figure 18. Rain Garden at Baxter & Woodman's Corporate Headquarters

Stormwater BMPs in Public Improvements

In order to encourage the use of stormwater BMPs in public improvements, the Village can begin evaluating the feasibility of incorporating stormwater BMPs into each capital improvement and facility improvement project. Stormwater BMPs that could potentially be incorporated into capital improvements include: permeable pavement, planter boxes, and hydrodynamic separators. Installing catch basins, where inlets would otherwise be installed, is another possible BMP. Stormwater BMPs that could potentially

be incorporated into facility improvement projects include: rain gardens, rain barrels, permeable pavements, bio-swales, infiltration strips, and green roofs. Incorporating BMPs into public projects may be another condition of the permit the Village plans to obtain for a new storm sewer outfall to Lake Michigan.

Source - Filterra

Figure 19. Tree Box Filter

ACTION ITEMS

1. Implement an Award or Recognition Program for BMPs installed on private property. This program should be similar to The Conservation Foundation's Conservation at Home Program (see Appendix 9). Although the Village is outside of The Conservation Foundation's typical service area, the Foundation would be willing to mentor Village staff or a local conservation group, such as Openlands, to administer the program.

2. Participate with the MWRD to distribute rain barrels to interested residents (see Appendix 9). Village participation may simply be advertising that rain barrels are available from the MWRD, or the Village could maintain a supply of rain barrels from the MWRD and distribute them.

3. The Village should implement a formal process to incorporate stormwater BMPs in public improvements. The required scope of services within Requests for Proposals issued by the Village should specifically include an evaluation of the feasibility of incorporating green infrastructure elements into the project. Preference should be given to BMPs that require less maintenance and to designs that maximize the durability of the BMP. For example, turning movements by heavy vehicles can be damaging to permeable pavements, but a new public parking area could be designed with conventional pavement driving aisles and permeable pavement parking stalls.

SECTION 8

DEVELOPMENT POLICIES & REGULATIONS

"The physical character of a community is determined by the interrelationship of factors that affect how land is used."

A 2020 Vision for Winnetka

8. DEVELOPMENT POLICIES & REGULATIONS

GOAL

Establish development regulations for the Village which are state of the art with regard to stormwater management.

OBJECTIVE

Update the Village's development regulations in light of current and pending regional, state, and Federal regulations, as well as current practices in stormwater management.

EXISTING DEVELOPMENT REGULATIONS

The Village regulates residential and commercial development primarily through Titles 12, 15, and 16 of the Village Code, along with the Public Works and Engineering Design Guidelines. Depending on the size and scope of the project, a development project within the Village may also fall under the jurisdiction of the Metropolitan Water Reclamation District of Greater Chicago (MWRD), the Cook County Department of Transportation and Highways, the Illinois Environmental Protection Agency (IEPA), Illinois Department of Natural Resources, the Illinois Department of Transportation, and/or the U.S. Army Corps of Engineers. Regional, state, and Federal regulations are updated from time to time and the Village's regulations should also be updated to maintain compatibility with overlapping jurisdictions.

The MWRD has been granted the authority to adopt a stormwater management ordinance with Countywide authority. As a first step toward establishing the MWRD's stormwater management program, the District adopted the Cook County Stormwater Management Plan on February 15, 2007. After a first draft of the ordinance, an economic impact study, and then a second draft of the ordinance, the MWRD finally adopted the Cook County Watershed Management Ordinance (WMO) on October 3, 2013 with an effective date of May 1, 2014.

Figure 20. Redevelopment Project

COMPARISON OF STORMWATER MANAGEMENT REQUIREMENTS

Exhibit 7 is a side-by-side comparison of the Village's current stormwater regulations, the Countywide WMO and other area stormwater regulations. Each set of regulations represented in the comparison includes the following common elements:

- Runoff requirements;
- Floodplain requirements;
- Natural area requirements; and
- Construction site requirements.

Generally speaking, runoff requirements and construction site requirements apply to development sites without regard to location. Examples include prohibiting the obstruction of runoff from an adjacent site and requiring a contractor to control erosion during construction. Sometimes these requirements depend on the size of the development. For instance, stormwater detention is typically only required when a certain amount of new impervious area is created. Floodplain requirements and natural area requirements, on the other hand, apply only to development in certain areas.

Local governments have complete authority over runoff requirements and they each attempt to set reasonable standards for protecting adjacent or downstream properties, although the actual requirements vary widely. Floodplain requirements, natural area requirements and construction site requirements all must meet minimum federal and/or state standards.

Countywide ordinances tend to regulate stormwater management from a "big picture" perspective. They typically regulate development that might impact a neighborhood or larger region and do not regulate development at a smaller scale. Meanwhile, municipal ordinances tend to regulate stormwater management down to the discharge point of a downspout.

AUTHORIZATION TO ENFORCE THE WATERSHED MANAGEMENT ORDINANCE

The WMO allows authorized municipalities to issue Watershed Management Permits within their corporate boundaries, so the Village has the opportunity to petition the MWRD for this authorization. The benefits of being an authorized municipality include control over the timing of permit issuance and offering applicants a permit process that involves coordination with fewer government agencies.

To become an authorized municipality, the Village would have to adopt the Countywide WMO. This can be done in one of the following ways.

- The Village could adopt the Countywide WMO without modifying the Village's current regulations and enforce whichever regulation is more stringent. This is the simplest option, but with two sets of standards it will be difficult for permit applicants to know what the requirements are for a given project and what they need to submit to get a permit.
- The Village could adopt the Countywide WMO and repeal the Village's current regulations. This is not recommended because certain provisions of the WMO are much more permissive than the Village's current regulations.

- The Village could adopt the Countywide WMO and update the Village's current regulations so the two documents fit together seamlessly. This is the best option.

REVIEW OF VILLAGE ZONING PROVISIONS WITH STORMWATER RUNOFF IMPLICATIONS

The Village's Zoning Ordinance includes provisions related to stormwater management from new development. Examples of these provisions include:

- *Encouragement of detached garages in the rear quarter of a lot.* Section 17.30.040.E.1 of the Village Code exempts the first 400 square feet of floor area associated with a one-story detached garage (provided it is located in the rear quarter of the lot) from inclusion in the building size (i.e. FAR) calculation. This provision was enacted to discourage the construction of front-facing garages, both as a means to reduce the appearance of bulk created by such garages, and to counteract the aesthetic of front-facing garage doors. However, constructing garages in the rear quarter of the lot leads to increases in the amount of impermeable surface on a lot, due to the need to construct a lengthy driveway to access the garage.
- *Maximum impermeable surface coverage.* Section 17.30.030.B of the Village Code sets the maximum percentage of a lot that can be covered by impermeable surfaces at 50% of the area of the lot, for residential properties. This limit has an impact on stormwater runoff, because the single factor most proportional to the amount of stormwater generated by a property is the amount of impermeable surface on the lot.
- *Treatment of semi-permeable surfaces (e.g. gravel, pavers).* Section 17.04.030.I.1 of the Village Code defines "Impermeable Surfaces and provides that only 80% of an area covered with brick, stone, or concrete pavers shall be considered to be an impermeable surface.
- *Construction of deep basements.* The construction of basements significantly deeper than eight feet is becoming more common in new construction, but it is not addressed in the Village's Zoning Ordinance. These deep basements may have an impact on stormwater management when constructed in low-permeability soils. Modern basement construction relies on footing drainage and sump pumps to limit hydrostatic pressure on basement walls. Deep basements with multiple sump pumps would reduce the groundwater table immediately adjacent to the building and convert the groundwater to surface water or discharge it directly to the storm sewer system. Stormwater management facilities are sized based on surface runoff calculations, and, for standard basements, sump pumps are a negligible contribution. However the contribution of multiple sump pumps at an increasing number of homes may need to be accounted for in stormwater calculations.

ACTION ITEMS

1. The Village should petition the MWRD to become an authorized municipality.

Figure 21. New residence elevated above base flood.

2. The Village should adopt the Countywide WMO by reference and update the Village's current regulations so the two documents fit together seamlessly. In particular, the Village should:

   - Maintain existing Village regulations where the existing regulations are more restrictive than the new WMO, such as:
     - ◊ Size of regulated development
     - ◊ Types of regulated development
     - ◊ Exempted projects
     - ◊ Allowances for re-development
     - ◊ Permit term
     - ◊ Protection of off-site properties
     - ◊ Rainfall data
   - Match new WMO regulations where the WMO is more restrictive than existing Village regulations, such as:
     - ◊ Projects requiring MWRD approval
     - ◊ Flood protection elevation
     - ◊ Compensatory storage
   - Match new WMO for projects regulated by the WMO and consider applying these requirements to projects that are not regulated by the WMO. In the cases listed below, the WMO would establish new or more restrictive regulations in the Village, but these regulations might be overly burdensome for certain types of projects regulated by the Village.
     - ◊ Long-term maintenance of stormwater management infrastructure – Stormwater detention facilities require maintenance, but the Village would have to

weigh the benefits of residents routinely maintaining private infrastructure against the amount of effort necessary to enforce the required maintenance.

◊ Allowable release rate – The WMO establishes an allowable release rate that in most cases would require significantly more detention volume than currently required by the Village. In may not be practical or possible to provide the required storage volume on single-family residential lots.

◊ Protection of depressional storage areas – Preserving existing depressional storage on a parcel reduces the impact of new impervious area on surrounding properties, but the presence of a depressional storage area on a parcel may not be discovered by the Village without submittal of a topographic site plan. If a topographic survey is required for every permit application, the permit for some small projects would cost more than the construction.

◊ Water quality – Improving the quality of stormwater runoff is important, but it may not be reasonable to require the infrastructure necessary to improve water quality for some of the minor projects regulated by the Village.

◊ Runoff volume reduction – Reducing the volume of runoff from a parcel reduces the impact of development on surrounding properties, but it may not be reasonable to require the infrastructure necessary to reduce the volume of runoff for some of the minor projects regulated by the Village.

◊ Inspection frequency – The WMO requires at least three erosion control inspections for each permitted development. It may not be practical for Village staff to inspect some of the minor projects regulated by the Village on three separate occasions.

- Match new WMO for projects regulated by the WMO, but do not apply these requirements to other projects regulated by the Village, such as:

  ◊ Buffer areas – The required buffer areas will be difficult, if not impossible, to meet on residential properties platted prior to the WMO.

  ◊ Wetland mitigation – Very few isolated wetlands exist within Village limits and those that do are likely to be found on public property, where they would be protected. Therefore, the value of wetland mitigation requirements in the Village is questionable.

  ◊ Riparian areas - The required setbacks will be difficult, if not impossible, to meet on residential properties platted prior to the WMO.

- Other

  ◊ Variances - Only the MWRD will be allowed to issue a variance for projects regulated by the new WMO; however, the Village should reserve the right to issue variances for all other regulated projects.

- ◊ Development requiring detention – The Village should maintain its existing detention regulations, which require detention for more types of development than the WMO, and consider crediting the storage volume within stormwater best management practices toward the required detention volume.

- ◊ Site stabilization – The existing Village regulations require stabilization within 30 days of removal of existing vegetation, while the new WMO requires stabilization within 14 days after construction activities have ceased. The Village should adopt both requirements as a dual performance standard for all development.

3. The following provisions of the Village Code should be amended.

   - Compliance with the Public Works and Engineering Design Guidelines is required by Title 14, Chapter 04, Section 130.A.1.a of the Village Code (General Construction Standards for Utilities in Public Rights-of-Way). A requirement to comply with these Guidelines should be added in Title 15, Chapter 32, Section 10 (Construction Permits Required).

   - Downspout Connections - Title 15, Chapter 24, Section 140 of the Village Code requires a direct connection of downspouts to storm sewers, which contradicts the Public Works and Engineering Design Guidelines (Paragraph II.C.8 and Paragraph II.D.5). The Village Code should be revised to eliminate this contradiction.

   - Public Nuisances - Title 9, Chapter 16, Section 020 of the Village Code effectively prohibits non-stormwater discharges to the drainage system; however, these regulations should clearly require the spiller to pay for cleaning a spill. They should also exempt non-stormwater discharges that are non-toxic, such as fire flows. The model Illicit Discharge and Connection Ordinance in Appendix 8 includes example language for these revisions.

Figure 22. New Residence with Rain Garden

4. The Village should review its Zoning Ordinance to determine whether the provisions which are related to stormwater management reflect should be revised.

5. The Village should develop site plan review checklists and site inspection forms to standardize its policies and procedures.

6. The Village should link as-built plans, maintenance agreements, and inspection reports to GIS.

SECTION 9

OPERATIONS & MAINTENANCE

"...proper maintenance of public properties...should keep public lands and infrastructure functioning well and strive for an appearance that reflects the high standards met by private property owners."

A 2020 Vision for Winnetka

9. OPERATIONS & MAINTENANCE

GOAL

Effectively maintain the storm and sanitary sewer systems to promote optimum performance.

OBJECTIVE

Schedule and fund regular maintenance of the storm and sanitary sewer systems, including stormwater Best Management Practices (BMPs).

STORM SEWER SYSTEM MAINTENANCE

The Village storm sewer system consists of 66.3 miles of sewer main, 2.6 miles of streams and ditches (maintained partly by the Park District and the Forest Preserve District), approximately 1,400 drainage structures, and eight pump stations. Typical system maintenance activities include: catch basin cleaning, television inspection, point repairs, sewer jetting, root cutting, street sweeping, leaf collection, and the removal of dead or dying trees along streams.

Each year, the Village plans to maintain 1/7 of the storm sewer system so that the entire system receives routine maintenance every seven years. $410,000 is budgeted for storm sewer maintenance in fiscal year 2013.

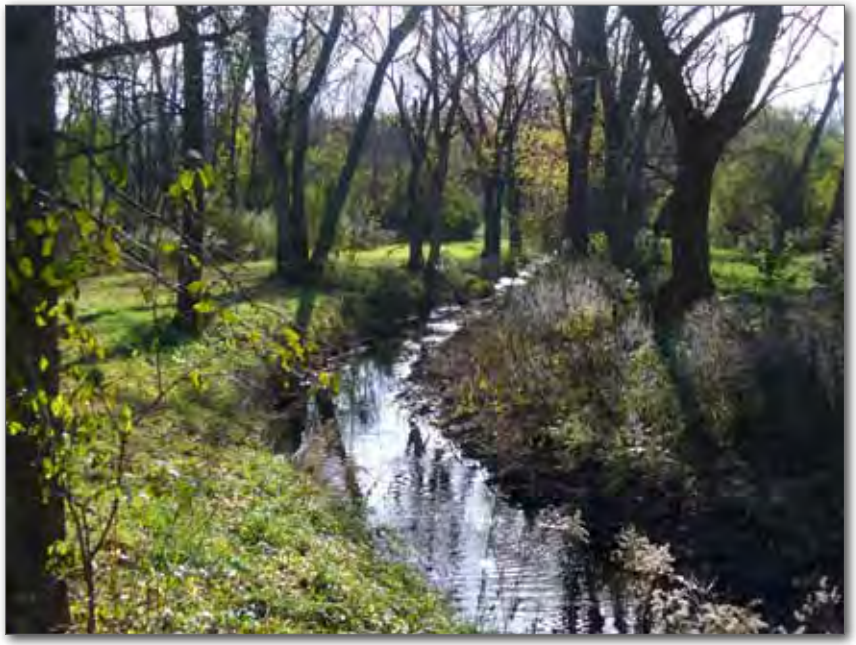


Figure 23. Drainage Ditch maintained by Village

SANITARY SEWER SYSTEM MAINTENANCE

The Village sanitary sewer system consists of 46.8 miles of sewer main, 1,131 manholes and one pump station. Typical system maintenance activities include: I/I monitoring, television inspection, point repairs, sewer jetting, root cutting, and sewer lining.

Each year, the Village plans to maintain 1/7 of the sanitary sewer system so that the entire system receives routine maintenance every seven years. $863,500 is budgeted for sanitary sewer maintenance in fiscal year 2013.

Source - USEPA

Figure 24. Storm Sewer System Maintenance

ACTION ITEMS

1. Continue to clean and maintain 35,300 lineal feet of sewer mains and 162 manholes so that 1/7 of the entire sanitary sewer system will be maintained each year.

2. Continue to clean and maintain 50,000 lineal feet of sewer mains and 200 catch basins so that 1/7 of the entire storm sewer system will be maintained each year.

3. Inventory stormwater BMPs and develop a plan for regular maintenance of the BMPs to ensure optimal effectiveness in reducing runoff volumes and increasing water quality.

SECTION 10

FINANCIAL PLAN

"…the development and ambience of the community continues to be emphasized, as do efforts to maintain the character of the Village and the elements that distinguish it from the typical suburban appearance of many Chicago metropolitan communities."

A 2020 Vision for Winnetka

10. FINANCIAL PLAN

GOAL

Fund stormwater management initiatives through a sustainable and equitable source of revenue.

OBJECTIVE

Implement a stormwater utility to fund most of the Village's stormwater management initiatives. Utilize General Fund reserves and revenues to keep stormwater fees as low as possible.

STORMWATER UTILITY FEASIBILITY

In order to determine the feasibility of implementing a stormwater utility to fund the planned capital improvements and necessary maintenance of the storm sewer system, the Village conducted a Stormwater Utility Feasibility Study in November, 2012. The results of the Study and the recommendations of the Final Report (prepared by Municipal & Financial Services Group, dated May 7, 2013) are summarized in this Section.

The total cost of the capital improvements completed on the Village's storm sewer system in the 1990s and 2000s totaled approximately $3.5 million. The total cost of the capital improvements planned by the Village over the next five years is over $41 million. These improvements cannot be funded by cash reserves or grants alone. Increasing property taxes would not be an equitable way to fund these improvements, since the value of property has very little correlation with its need for stormwater management and since tax-exempt properties benefit from the Village's stormwater infrastructure. A stormwater utility, however, is a feasible and equitable means of funding the planned stormwater capital improvements.

Using this approach, the Village would issue debt to fund the planned capital improvements and necessary maintenance of the storm sewer system and then pay the debt service using fees paid by property owners proportional to a property's use of the stormwater infrastructure. The implementation of a stormwater utility and associated stormwater fee will provide:

- A dedicated source of revenue for stormwater expenditures allowing for funding of significant capital investments required to improve the stormwater system;
- Increased equity for all parcel owners, as costs will be allocated based on stormwater contribution rather than property value and those that do not contribute to stormwater funding now will pay their fair share;
- Fiscal accountability, due to the fact that stormwater fee revenues can only be used for stormwater expenditures and would be adjusted based on needs;

- Increased public awareness of stormwater issues and the significant investments that are required to manage stormwater in the Village.

STORMWATER FEE STRUCTURE

The fee charged to each parcel would be based on a measurement of the impervious area on the parcel, since this is the single most important factor influencing the rate and volume of stormwater runoff. Impervious area data is also readily available for each parcel using the Village's GIS data. The normalized average residential parcel within the Village has approximately 3,400 square feet of impervious area, so this amount of impervious area would be considered one Equivalent Residential Unit (ERU) and the fee charged to each parcel would be expressed in terms of ERUs, allowing for fractions rounded to the nearest tenth.

STORMWATER FUNDING

Thirty-year bonds would be used to fund the planned stormwater capital improvement projects and maintenance needs. In order to minimize the stormwater fees necessary to pay the debt service for these bonds and ease the transition to stormwater utility funding, the Village would supplement stormwater fees with General Fund reserves and revenues. As the debt associated with the stormwater projects is retired, the Village would reduce the amount of the stormwater fee commensurately.

STORMWATER FEE

Table 3 provides an estimate of the stormwater fees based on Municipal & Financial Services Group's recommended fee structure and funding approach.

	FY14	FY15	FY16	FY17	FY18
Annual Stormwater Fee per ERU	$262.00	$356.00	$358.00	$360.00	$362.00

Table 3. Recommended Stormwater Fees
(Implementation planned to begin July 2014)

ACTION ITEMS

1. *Create a stormwater database billing file.* Review the draft impervious area database, parcel by parcel, to ensure an accurate impervious area is assigned to each parcel. Assign the impervious area and the associated stormwater fee to a billing account that identifies: the parcel impervious area, number of ERUs, stormwater bill, parcel identification number, parcel owner and billing address. Once the file has been developed, test the file for accuracy and make any necessary final adjustments.

2. *Legally establish the stormwater utility.* Review the draft stormwater utility ordinance provided by MFSG and revise it as necessary for Village Council approval and adoption.

3. *Finalize the stormwater fee.* Adjust the recommended fee stated in the Stormwater Utility Feasibility Study based on updated capital project costs. The fee can either be adopted as part of the stormwater utility ordinance or it can be adopted as a separate fee schedule referenced in the ordinance.

4. *Adopt policies and procedures for the stormwater utility.* These procedures will establish the day-to-day operation of the utility, including: billing on the current utility bill or as a separate bill, handling appeals, and updating the billing database.

5. *Provide public outreach and education.* Residents, businesses, and tax-exempt entities need to understand the reason for the stormwater utility before they begin paying the stormwater fee. The Village should employ a combination of the following public outreach and education strategies: provide information on a website; identify one individual as the contact for all information related to the stormwater utility; conduct a series of public meetings and forums; provide an online stormwater utility fee estimator; and conduct one-on-one meetings with key property owners.

6. *Train Village staff responsible for customer service.* Staff should be prepared to answer questions about billing and respond to appeals. A flier listing the answers to frequently asked questions would help ensure consistent and accurate responses to the most common questions. Staff training should extend beyond the date the first stormwater bills are sent.

SECTION 11

IMPLEMENTATION PLAN

"A successful plan captures the imagination of residents,merchants and local officials, while reflecting a consensus view that allows diverse members f the community to support actions for the common good."

A 2020 Vision for Winnetka

11. IMPLEMENTATION PLAN

Village of Winnetka Stormwater Master Plan		2014				2015				2016				2017				2018				2019
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	and Beyond
Section 3: Stormwater Capital Improvements																						
1	Complete design of Winnetka PS, Spruce Street Outlet, NW Winnetka	■																				
1	Complete construction of Winnetka PS, Spruce Street Outlet, NW Winnetka	■	■	■	■																	
1	Complete design of Willow Road Tunnel	■	■	■	■	■	■	■	■													
1	Complete construction of Willow Road Tunnel									■	■	■	■	■	■	■	■	■	■	■	■	
2	Complete detailed topographic survey of Area N																					■
3	Evaluate the the feasibility of additional capital improvements																					■
Section 4: Inflow and Infiltration																						
1	Complete SSES - Phase 1	■																				
1	Complete SSES - Phase 2		■	■	■	■																
1	Complete SSES - Phase 3						■	■	■	■												
2	Complete building-to-building canvassing	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
3	Smoke test streets prior to capital improvements		■				■				■				■				■			■
Section 5: Floodplain Management																						
1	Conduct an annual Repetitive Loss Outreach project to each of the Repetitive Loss Areas	■				■				■				■				■				■
2	Develop and adopt a Repetitive Loss Area Analysis	■																				
3	Participate in the development of the Cook County All Hazards Mitigation Plan and adopt the Plan	■	■																			
Section 6: Water Quality																						
1	Continue to implement the current NPDES Phase II program	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2	Incorporate a stormwater pollution prevention webpage into the redesign of the Village's website	■																				
3	Develop a Stormwater Pollution Prevention Plan for the Public Works Facility and Village parks																■					
4	Incorporate stormwater pollution prevention training into Public Works employee training			■				■				■				■				■		■
5	Implement a water quality monitoring program	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
6	Participate in the ongoing TMDL development process and update the NPDES Ph II program	■	■	■	■	■	■	■	■													
7	Evaluate Village Code for updates			■	■																	
Section 7: Stormwater BMPs																						
1	Implement an award or recognition program for BMPs installed on private property									■	■	■	■	■	■	■	■	■	■	■	■	■
2	Participate with the MWRD to distribute rain barrels to interested residents	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3	Implement a formal process to incorporate stormwater BMPs in public improvements					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Section 8: Development Policies and Regs																						
1	Petition the MWRD to become an authorized municipality	■																				
2	Adopt the Countywide WMO by reference and the current stormwater management regulations	■																				
3	Amend the Village Code	■	■																			
4	Review the Zoning Ordinance		■																			
5	Develop site plan review checklists and site inspection forms		■																			
6	Link as-built plans, maintenance agreements, and inspection reports to GIS			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Section 9: Operations and Maintenance																						
1	Clean and maintain 1/7 of the sanitary sewer system	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2	Clean and maintain 1/7 of the storm sewer system	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3	Inventory stormwater BMPs and develop a plan for regular BMP maintenance																		■	■	■	■
Section 10: Financial Plan																						
1	Create a stormwater database billing file	■	■																			
2	Legally establish the stormwater utility	■	■																			
3	Finalize the stormwater fee	■	■																			
4	Adopt policies and procedures for the stormwater utility	■	■	■																		
5	Provide public outreach and education	■	■	■	■	■																
6	Train Village staff responsible for customer service	■	■	■	■	■																

GLOSSARY

Best Management Practices (BMPs) – A practice used to improve stormwater quality and reduce the flooding associated with increased impervious cover and surface runoff. Some stormwater BMPs occur naturally, such as wetlands, woods and other natural vegetation. Other stormwater BMPs are man-made structures, such as detention ponds, swales, rain gardens, or permeable pavement.

Community Rating System (CRS) – A voluntary program designed to reward a community for doing more than meeting the NFIP minimum requirements to reduce flood damages.

Equivalent Residential Unit (ERU) – The average amount of impervious area on a single-family residential parcel.

Federal Emergency Management Agency (FEMA) – The Federal agency responsible for implementing the NFIP.

General Permit (ILR10/ILR40) – Permits written to cover a category of discharges instead of an individual facility. Application for coverage under a general permit is by submitting a Notice of Intent to comply with the conditions of the general permit and is much less rigorous than applying for an individual permit.

Illinois Department of Natural Resources (IDNR) – The State agency responsible for implementing the NFIP in Illinois.

Illinois Environmental Protection Agency (IEPA) – The State agency that issues NPDES permits.

Inflow and Infiltration (I/I) – Terms used to describe the ways that groundwater and stormwater enter into a sanitary sewer system. Inflow is stormwater that enters into a sanitary sewer system at points of direct connection to the system. Infiltration is groundwater that enters a sanitary sewer system through cracks and/or leaks in the sanitary sewer pipes.

Metropolitan Water Reclamation District of Greater Chicago (MWRD) – An independent government and taxing body that manages water supply, wastewater, and stormwater in Cook County, Illinois.

National Flood Insurance Program (NFIP) – The program enabling property owners in participating communities to purchase insurance protection from the Federal government against losses from flooding.

National Pollutant Discharge Elimination System (NPDES) – The national program for issuing, modifying, revoking, and reissuing, terminating, monitoring and enforcing permits and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

Notice of Intent (NOI) – The mechanism used to register for coverage under a General NPDES Permit.

Repetitive Loss Property – A property for which two or more flood insurance claims of more than $1,000 have been paid within any 10-year period since 1978.

Total Maximum Daily Load (TMDL) – A regulatory term in the Clean Water Act describing the value of the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards.

Watershed Management Ordinance (WMO) – The Ordinance adopted by the MWRD to regulate stormwater management in Cook County.

EXHIBITS

"This Plan continues a tradition of community planning that has played a critical role in the development of the Winnetka we see today."

A 2020 Vision for Winnetka

EXHIBIT 1 - DRAINAGE AREAS MAP

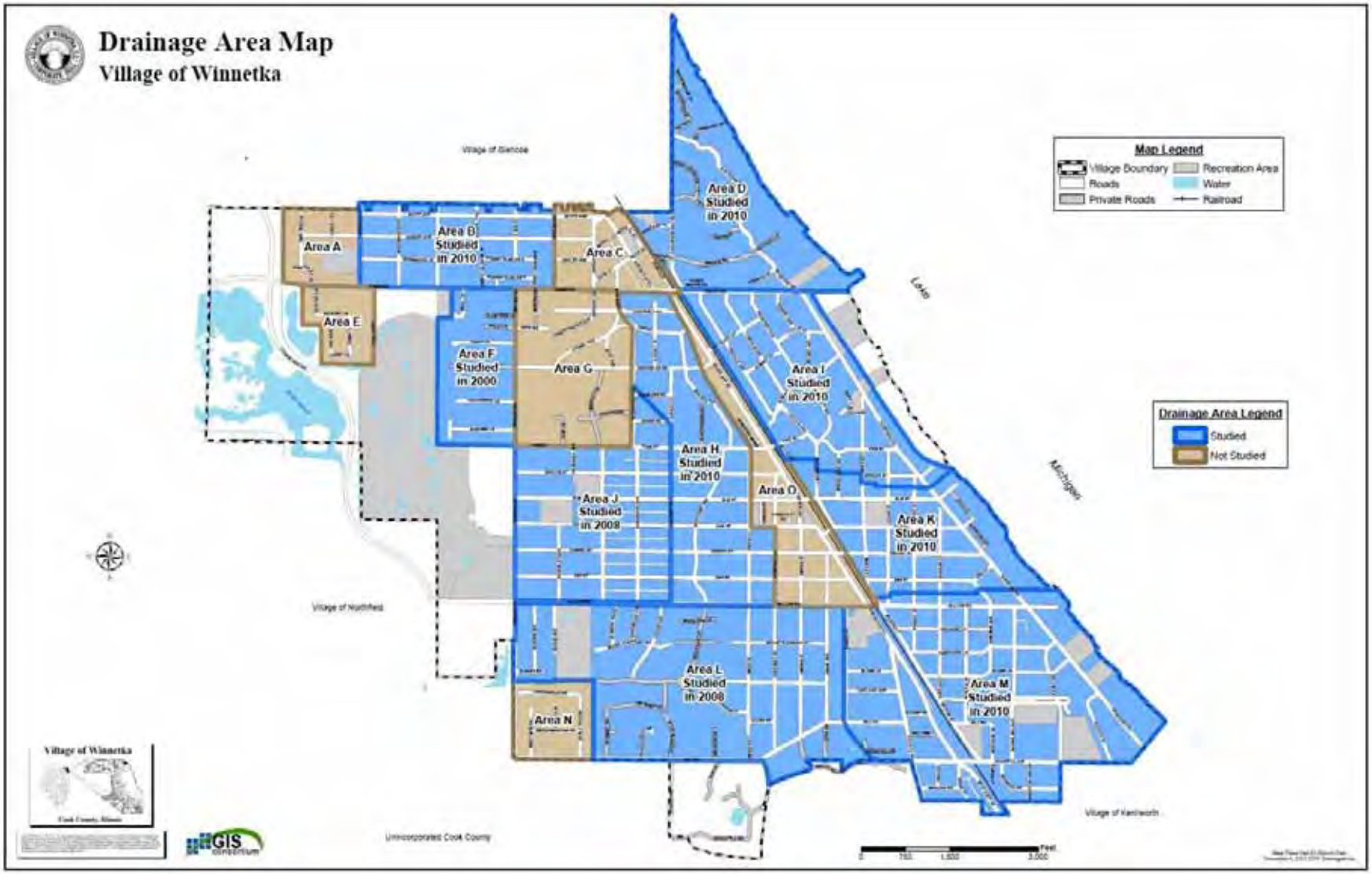


EXHIBIT 2 - STORMWATER CAPITAL IMPROVEMENTS PLAN

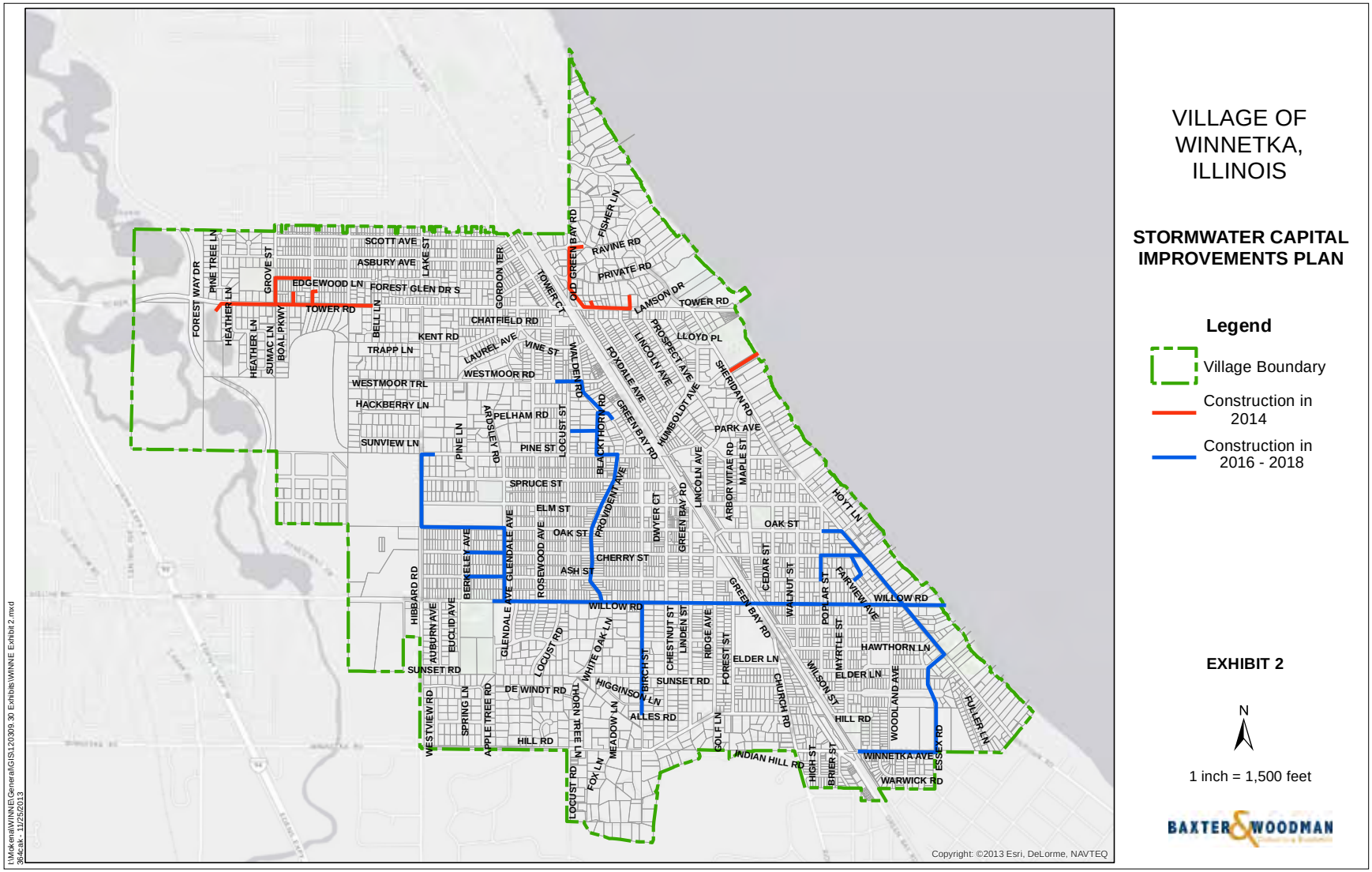


EXHIBIT 3 - SANITARY SEWER FIELD INVESTIGATION AND PILOT REHABILITATION PROJECT

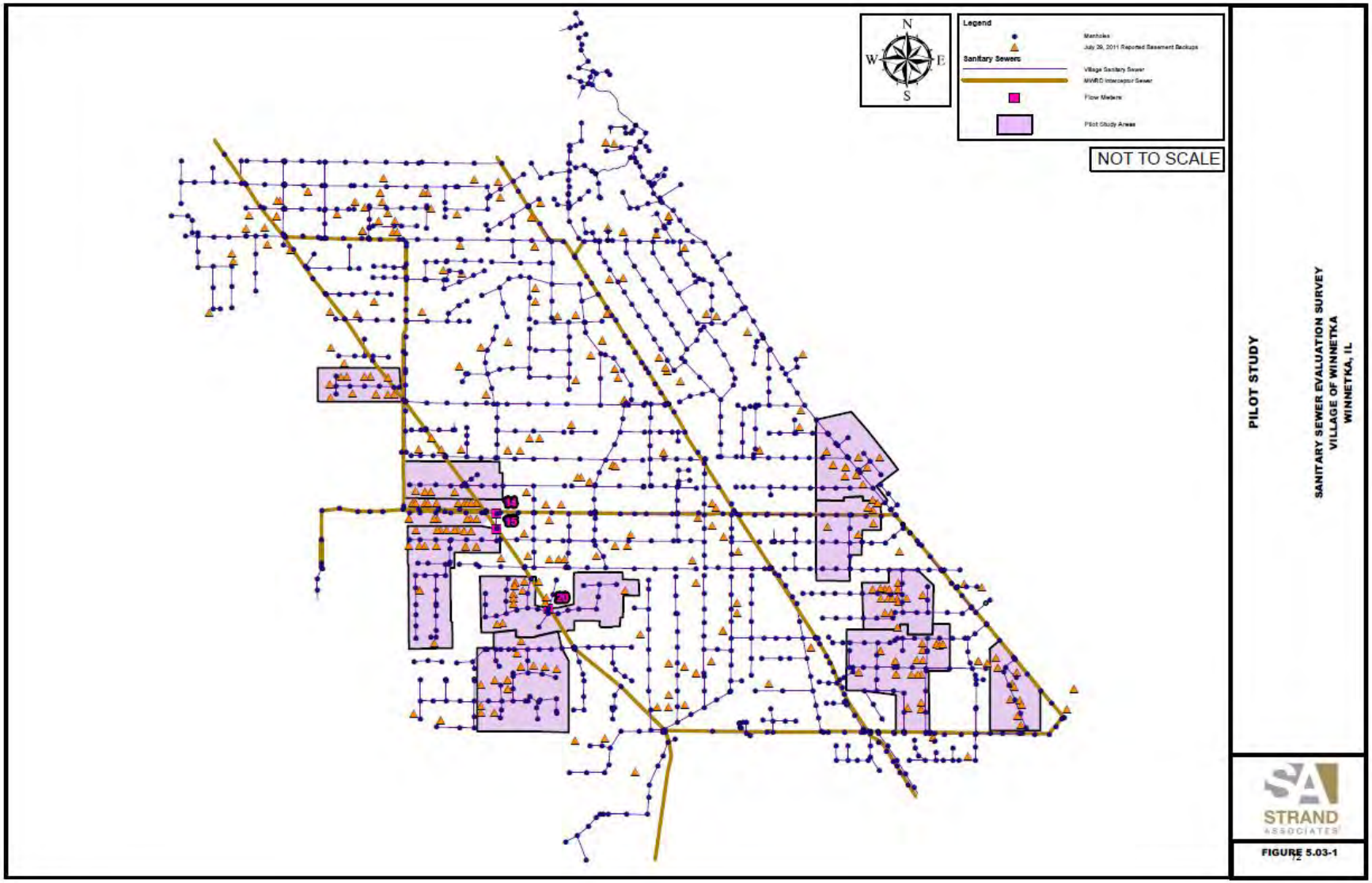


EXHIBIT 4 - WATER QUALITY SAMPLING LOCATIONS

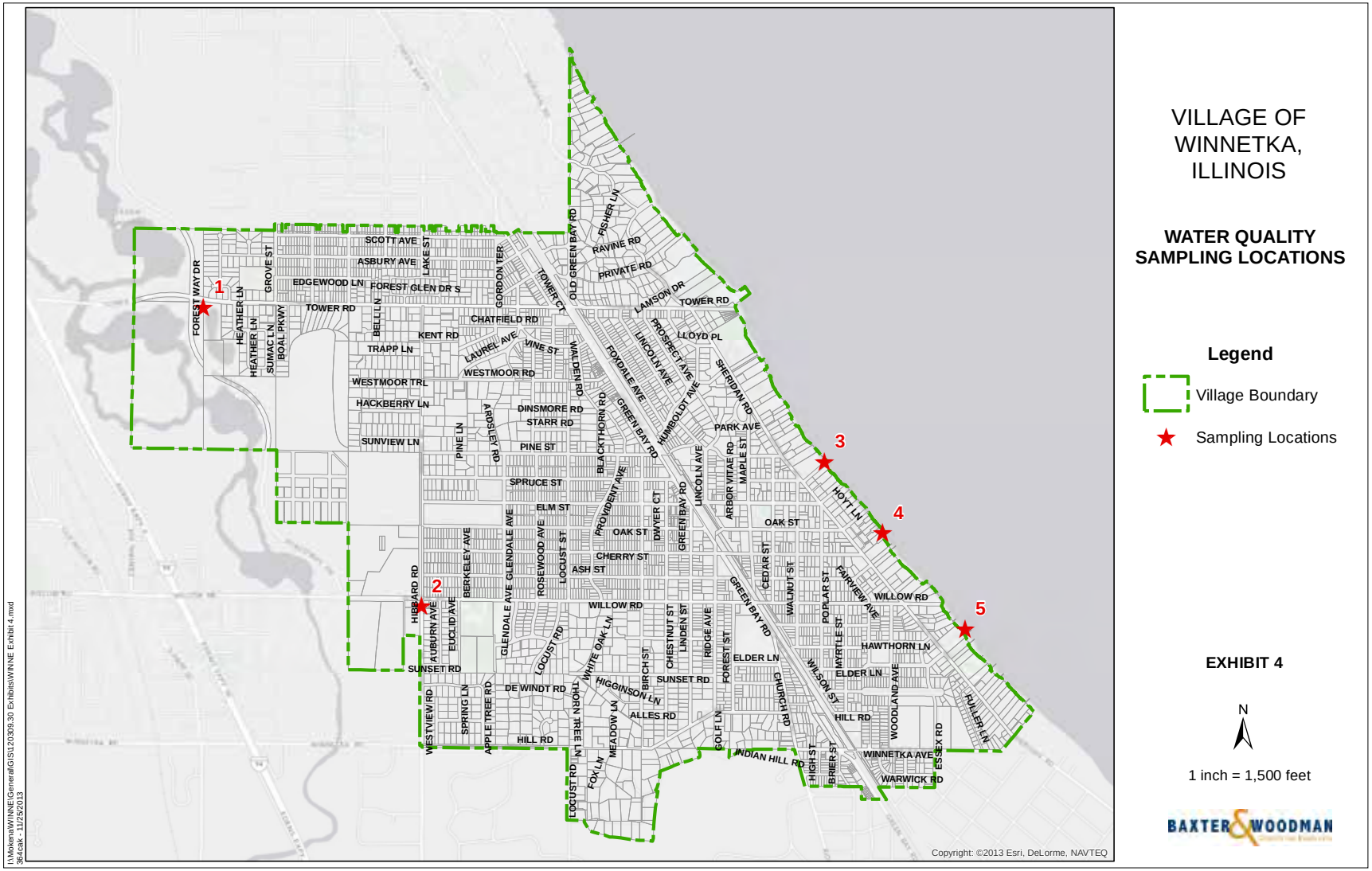


EXHIBIT 5 - SUMMARY OF WATER QUALITY MONITORING DATA

PARAMETER (units)	Water Quality Standards General Use [2]	Water Quality Standards Lake Michigan (Open Waters) [3]	SAMPLING LOCATION AND DATE														
			9/18/2012 (Wet Weather)					9/25/2012 (Dry Weather)					11/12/2012 (Wet Weather)				
			1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Flow (cfs)			X	<.01	0.5	0.29	0.14	X	X	0.1215	0.0625	X	X	X	0.023	0.018	X
Temperature (degress F)	*	*		63	63	63	64			68	65				51	51	
Dissolved Oxygen (mg/l)	5.0	*		3.2	8.84	8.91	5.51			8.44	7.24				9.45	10.07	
pH (SU)	6.5 - 9.0	7.0 - 9.0		7.8	7.6	8	7.9			8.4	8.4				7.8	7.8	
Total Dissolved Solids (mg/l)	*	1000, 180 (OW)		244	512		422			266					400	338	
Total Suspended Solids (mg/l)	narrative - offensive conditions			12.5	U		U			105					9.5	U	
Nitrite (mg/l)				U	U		U			U					1.18	U	
Nitrate (mg/l)		10		0.523	1.83		1.45			0.48					0.961	0.79	
Ammonia (mg/l)	15	0.02		0.501	0.1		1.01			1.31					1.93	U	
Total Kjeldahl Nitrogen (mg/l)				1.27	31		1.96			3.77					4	0.725	
Phosphorus, Total (mg/l)	*	0.007		0.322	0.264		0.305			0.983					0.866	0.363	
Conductivity (umhos/cm)				370	640		671			388					744	584	
Chloride (mg/l)	500	500, 12 (OW)		36.6	139		86.4			32.5					121	57.8	
Oil, Fats, and Grease (mg/l)	narrative - offensive conditions			U	U		1.37			1.98					5.83	1.86	
Fecal Coliform (no/100 ml)	200 per 100 ml	20 per 100 ml		>2419.6	33.1	>2419.6	>2419.6			>2419.6	770.1				>2419.6	770.1	
Arsenic, Total (mg/l)		0.05		U	U		U								U	U	
Arsenic, Dissolved (mg/l)	*	*		U	U		U								U	U	
Cadmium, Total (mg/l)				U	U		U								U	U	
Cadmium, Dissolved (mg/l)	*	*		U	U		U								U	U	
Chromium, Total (mg/l)				U	U		U								U	U	
Chromium, Dissolved (mg/l)	*	*		U	U		U								U	U	
Chromium, Hexavalent, Total (mg/l)	0.016 (AS), 0.011 (CS)	0.016 (AS), 0.011 (CS)		U	0.01		U								U	U	
Copper, Total (mg/l)				0.0383	0.109		0.0128								0.0378	0.0235	
Copper, Dissolved (mg/l)	*	*		0.028	0.105		0.0097								0.0289	0.0209	
Lead, Total (mg/l)		0.05		0.012	U		U								U	U	
Lead, Dissolved (mg/l)	*	*		U	U		U								U	U	
Mercury, Total (ng/l)		1,700 (AS); 910 (CS); 3.1 (HHS); 1.3 (WS)		U	U		U								U	U	
Mercury, Dissolved (ng/l)	2,200 (AS), 1,100 (CS), 12 (HHS)			U	U		U								U	U	
Nickel, Total (mg/l)				U	U		U								U	U	
Nickel, Dissolved (mg/l)	*	*		U	U		U								U	U	
Selenium, Total (mg/l)	1.0	0.01		U	U		U								U	U	
Selenium, Dissolved (mg/l)		0.005 (CS)		U	U		U								U	U	
Silver, Total (mg/l)	0.005			U	U		U								U	U	
Silver, Dissolved (mg/l)				U	U		U								U	U	
Zinc, Total (mg/l)				0.0145	0.015		0.0121								0.0254	0.012	
Zinc, Dissolved (mg/l)	*	*		U	0.0157		0.0117								0.0183	U	

Sampling Locations
1. Tower Road (and Forestway Drive)
2. Willow Road (and Hibbard Road)
3. Spruce Street (and Sheridan Road)
4. Cherry Street (and Sheridan Road)
5. Elder Lane (and Sheridan Road)

Legend
* = See Explanation in Footnotes
U = Undetected
X = No Flow Encountered

= Water Quality Standard Not Met

PARAMETER (units)	Water Quality Standards General Use [2]	Water Quality Standards Lake Michigan (Open Waters) [3]	SAMPLING LOCATION AND DATE									
			3/11/2013 (Wet Weather)					4/29/2013 (Dry Weather)				
			1	2	3	4	5	1	2	3	4	5
Flow (cfs)			X	9	0.63	0.17	0.33	X	5.94	5.42	0.25	0.42
Temperature (degress F)	*	*		42	39	39.5	40		51.8	50	50	51.8
Dissolved Oxygen (mg/l)	5.0	*		9.9	10.34	10.66	10.52		9.6	10.4	10.14	9.79
pH (SU)	6.5 - 9.0	7.0 - 9.0		7.5	6.8	7.2	7.2		8.4	7.2	8.4	8.4
Total Dissolved Solids (mg/l)	*	1000, 180 (OW)		306	440	314			732	460		1050
Total Suspended Solids (mg/l)	narrative - offensive conditions			11	U	49			7	52.5		2
Nitrite (mg/l)				0.272	0.214	0.14			U	U		U
Nitrate (mg/l)		10		0.26	0.184	0.15			2.06	1.36		2.82
Ammonia (mg/l)	15	0.02		0.288	0.27	0.272			1.32	4.63		0.408
Total Kjeldahl Nitrogen (mg/l)				1.11	1.15	1.42			6.57	11.4		1.34
Phosphorus, Total (mg/l)	*	0.007		0.289	0.26	0.0983			0.126	0.234		0.168
Conductivity (umhos/cm)				588	841	618			1140	764		1730
Chloride (mg/l)	500	500, 12 (OW)		107	189	134			162	179		381
Oil, Fats, and Grease (mg/l)	narrative - offensive conditions			U	U	U			U	U		U
Fecal Coliform (no/100 ml)	200 per 100 ml	20 per 100 ml		1413.6	1533.1	>2419.6	-	-	387.3	>2419	1299.7	>2419
Arsenic, Total (mg/l)		0.05		U	U	U						
Arsenic, Dissolved (mg/l)	*	*		U	U	U						
Cadmium, Total (mg/l)				U	U	U						
Cadmium, Dissolved (mg/l)	*	*		U	U	U						
Chromium, Total (mg/l)				U	U	U						
Chromium, Dissolved (mg/l)	*	*		U	U	U						
Chromium, Hexavalent, Total (mg/l)	0.016 (AS), 0.011 (CS)	0.016 (AS), 0.011 (CS)		U	U	U						
Copper, Total (mg/l)				0.0204	0.0153	U						
Copper, Dissolved (mg/l)	*	*		0.0146	0.0103	U						
Lead, Total (mg/l)		0.05		0.008	U	U						
Lead, Dissolved (mg/l)	*	*		U	U	U						
Mercury, Total (ng/l)		1,700 (AS); 910 (CS); 3.1 (HHS); 1.3 (WS)		U	U	U						
Mercury, Dissolved (ng/l)	2,200 (AS), 1,100 (CS), 12 (HHS)			U	U	U						
Nickel, Total (mg/l)				U	U	0.0059						
Nickel, Dissolved (mg/l)	*	*		U	U	U						
Selenium, Total (mg/l)	1.0	0.01		U	U	U						
Selenium, Dissolved (mg/l)		0.005 (CS)		U	U	U						
Silver, Total (mg/l)	0.005			U	U	U						
Silver, Dissolved (mg/l)				U	U	U						
Zinc, Total (mg/l)				0.0217	0.0236	0.0716						
Zinc, Dissolved (mg/l)	*	*		0.0124	0.0129	0.0179						

Sampling Locations
1. Tower Road (and Forestway Drive)
2. Willow Road (and Hibbard Road)
3. Spruce Street (and Sheridan Road)
4. Cherry Street (and Sheridan Road)
5. Elder Lane (and Sheridan Road)

Legend
* = See Explanation in Footnotes
U = Undetected
X = No Flow Encountered
= Water Quality Standard Not Met

EXHIBIT 5 FOOTNOTES

1. SAMPLING NOTES

Location 1 has a flap gate which was closed on each day samples were collected
U = undetected by laboratory analysis
X - if there was no flowing water, then a sample was not collected

2. WATER QUALITY STANDARDS - GENERAL USE STREAMS

- water quality standards for waters without a specific designation
AS = acute standard; CS = chronic standard; HHS = human health standard

Temperature
Varies based by season, ecological damage, and other factors.

Dissolved Oxygen
A) During the period of March through July
i) 5.0 mg/L at any time; and
ii) 6.0 mg/L as a daily mean averaged over 7 days.
B) During the period of August through February,
i) 3.5 mg/L at any time;
ii) 4.0 mg/L as a daily minimum averaged over 7 days; and
iii) 5.5 mg/L as a daily mean averaged over 30 days.

Total Dissolved Solids
No numeric standard for General Use Streams but 500 mg/l for Public and Food Processing Water Supply and 1,500 mg/l for Secondary Contact and Indigenous Aquatic Life waterbodies.

Total Suspended Solids/Fats, Oils and Grease
No numeric standard, however, narrative standard for waters of State to be free of sludge, oil, color, turbidity, etc. other than natural origin.

Total Ammonia Nitrogen
Acute Standards, Chronic Standards, and Sub-Chronic Standards for Total Ammonia Nitrogen vary based on temperature and pH of waterbody and not calculated as part of this study.
In no case shall total ammonia nitrogen exceed 15 mg/l.

Phosphorus
Phosphorus as P shall not exceed 0.05 mg/l in any reservoir or lake with a surface areas of 20 acres or more, or in any stream at the point where it enters any such reservoir or lake.

Fecal Coliform
A) During the months May through October, based on a minimum of five samples taken over not more than a 30 day period, fecal coliform (STORET number 31616) shall not exceed a geometric mean of 200 per 100 ml, nor shall more than 10% of the samples during any 30 day period exceed 400 per 100 ml in protected waters. Protected waters are defined as waters which, due to natural characteristics, aesthetic value or environmental significance are deserving of protection from pathogenic organisms. Protected waters will meet one or both of the following conditions:
i) presently support or have the physical characteristics to support primary contact;
ii) flow through or adjacent to parks or residential areas.
B) Waters unsuited to support primary contact uses because of physical, hydrologic or geographic configuration and are located in areas unlikely to be frequented by the public on a routine basis as determined by the Agency at 35 Ill. Adm. Code 309.Subpart A, are exempt from this standard.

Metals
The water quality standards for Cadmium (dissolved), Chromium (trivalent, dissolved), Copper (dissolved), Lead (dissolved), Nickel (dissolved), and Zinc (dissolved) varies based on hardness values. A hardness value of 300 mg/l was used for evaluation purposes. This number is based on field colormetric tests.
The water quality standards for Arsenic (trivalent, dissolved) are 0.36 mg/l (AS) and 0.19 mg/l (CS).

EXHIBIT 5 FOOTNOTES

3. WATER QUALITY STANDARDS - LAKE MICHIGAN (OPEN WATERS)

Temperature

Varies based by season, ecological damage, and other factors.

Dissolved Oxygen

Must not be less than 90% of saturation, except due to natural causes

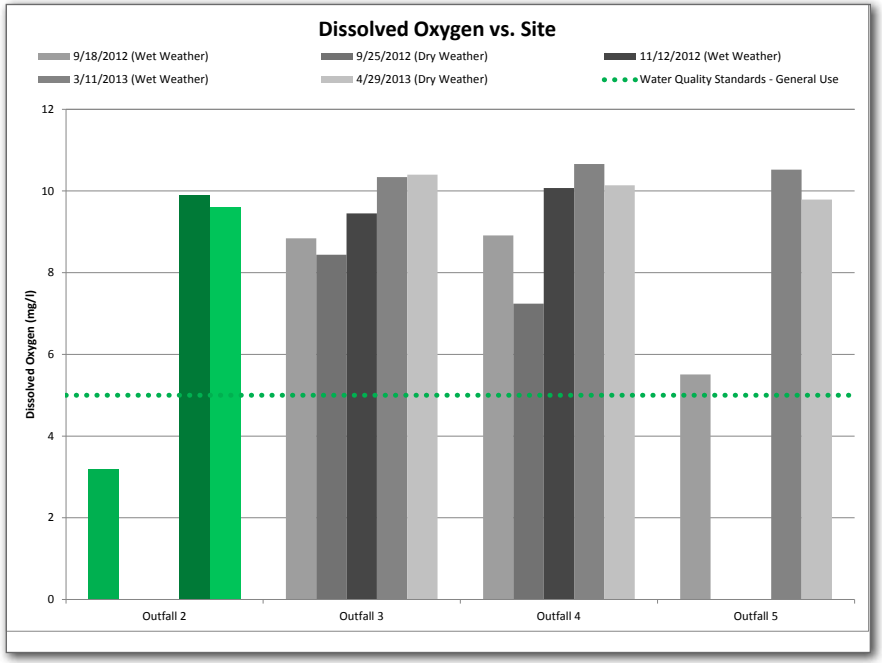
Fecal Coliform

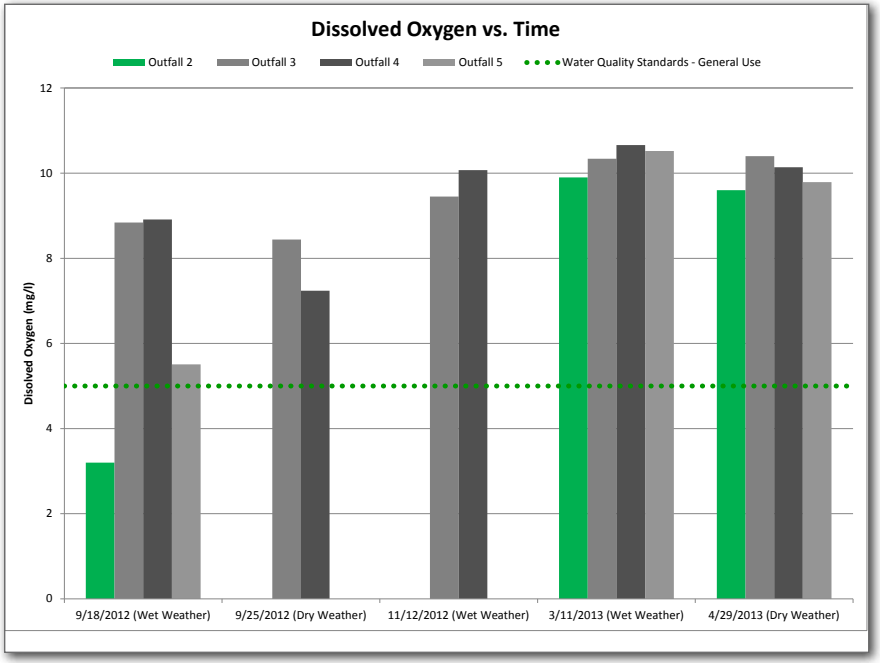
Based on a minimum of five samples taken over not more than a 30-day period, fecal coliform (STORET number 31616) must not exceed a geometric mean of 20 per 100 ml in the Open Waters of Lake Michigan as defined in Section 302.501. The remaining waters of the Lake Michigan Basin must not exceed a geometric mean of 200 per 100 ml, nor shall more than 10% of the samples during any 30 day period exceed 400 per 100 ml.
USEPA & IEPA are also using E. coli sampling to identify fecal matter concerns.

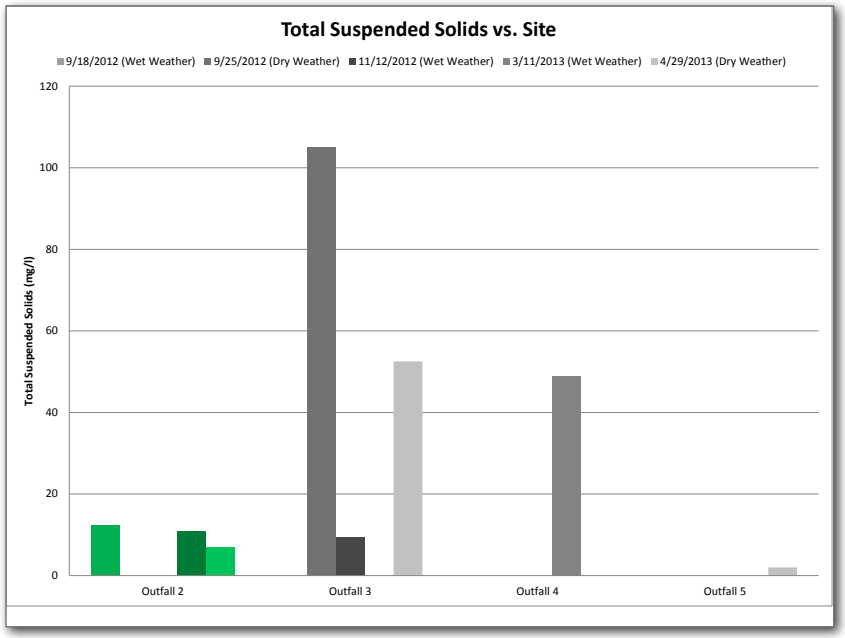
Metals

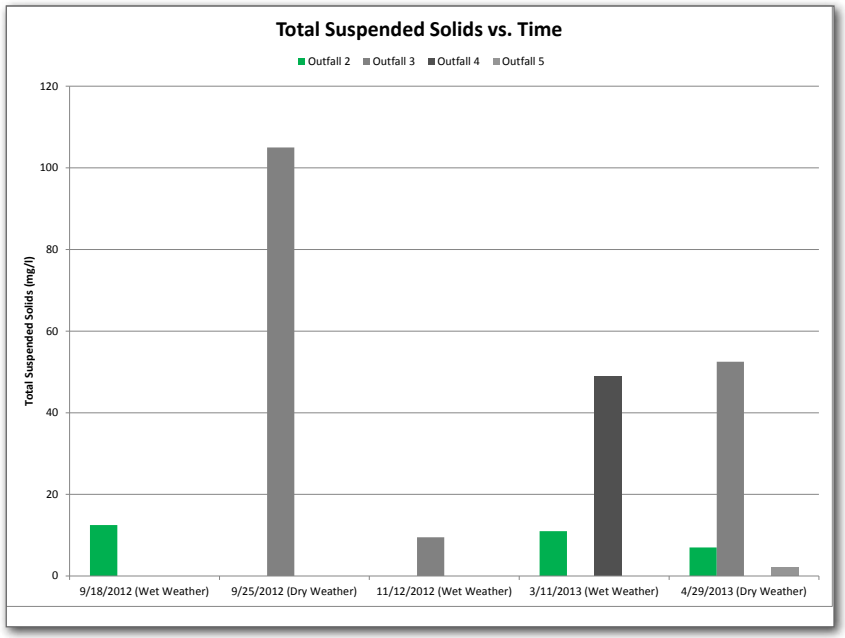
The water quality standards for Cadmium (dissolved), Chromium (trivalent, dissolved), Copper (dissolved), Lead (dissolved), Nickel (dissolved), and Zinc (dissolved) varies based on hardness values. A hardness value of 130 mg/l was used based area source water reports.
The water quality standards for Arsenic (trivalent, dissolved) are 0.34 mg/l (AS) and 0.148 mg/l (CS).

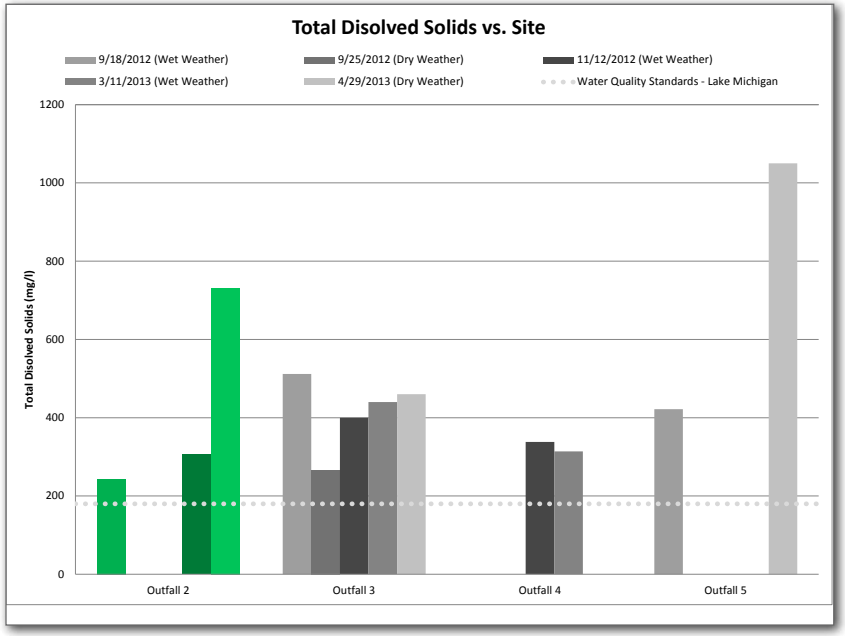
EXHIBIT 6 - WATER QUALITY MONITORING RESULTS

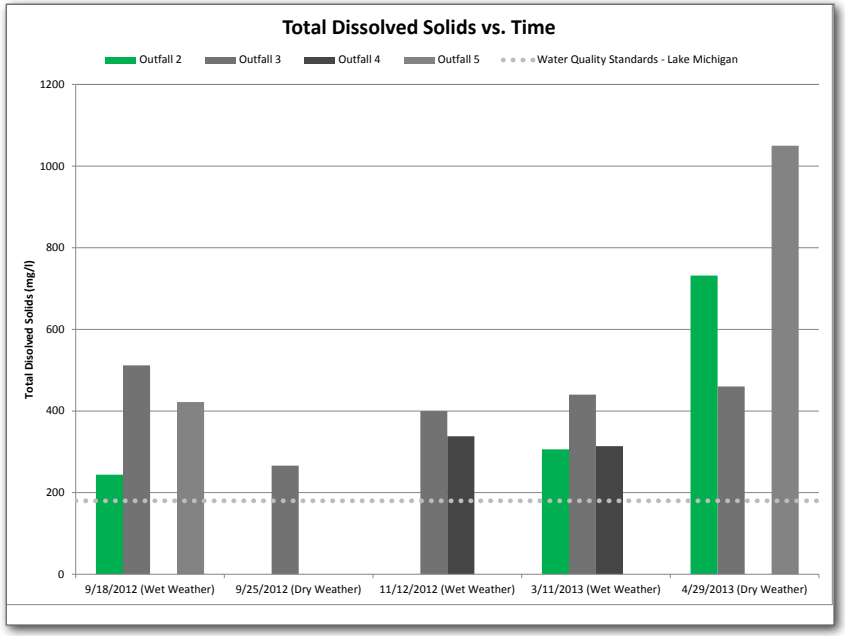


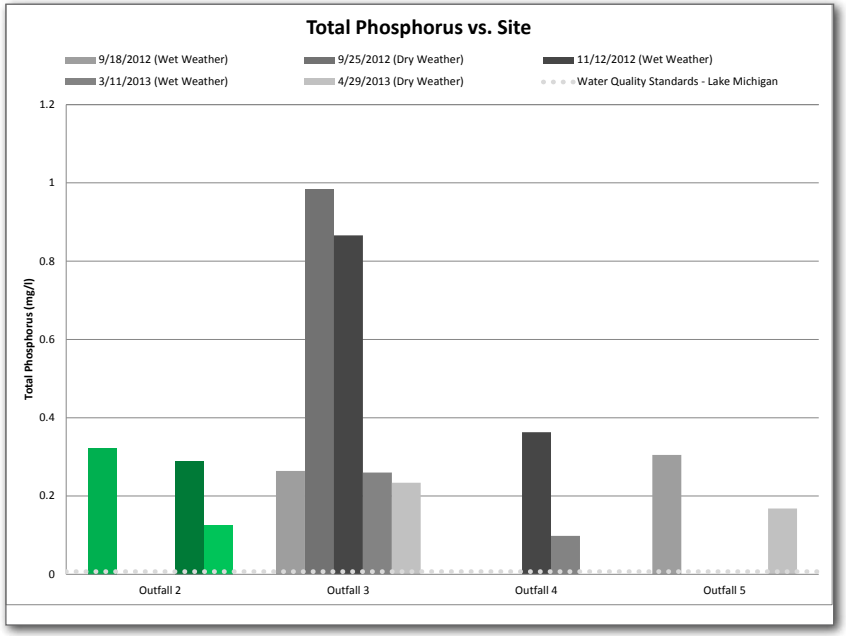


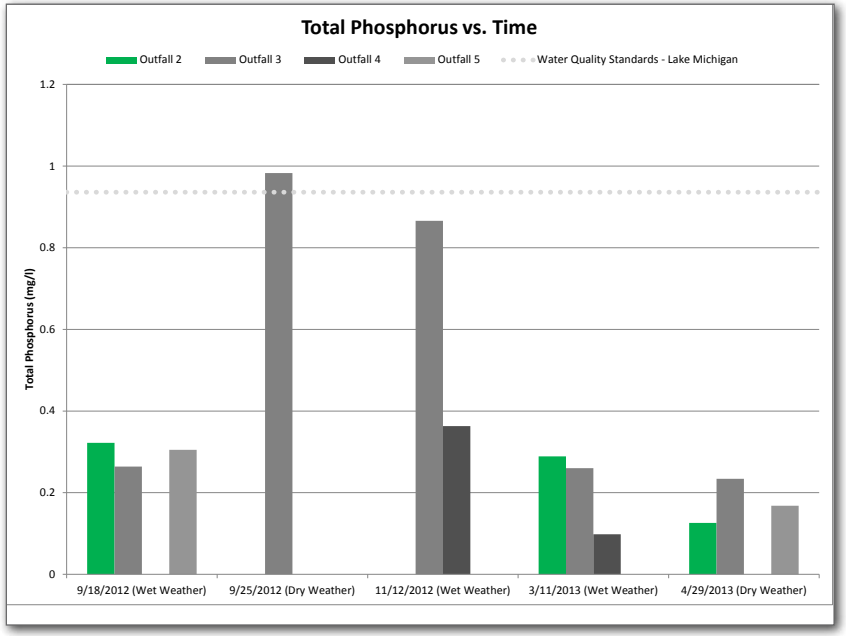

Total Suspended Solids vs. Site
9/18/2012 (Wet Weather)
9/25/2012 (Dry Weather)
11/12/2012 (Wet Weather)
3/11/2013 (Wet Weather)
4/29/2013 (Dry Weather)
Total Suspended Solids (mg/l)
120
100
80
60
40
20
0
Outfall 2
Outfall 3
Outfall 4
Outfall 5

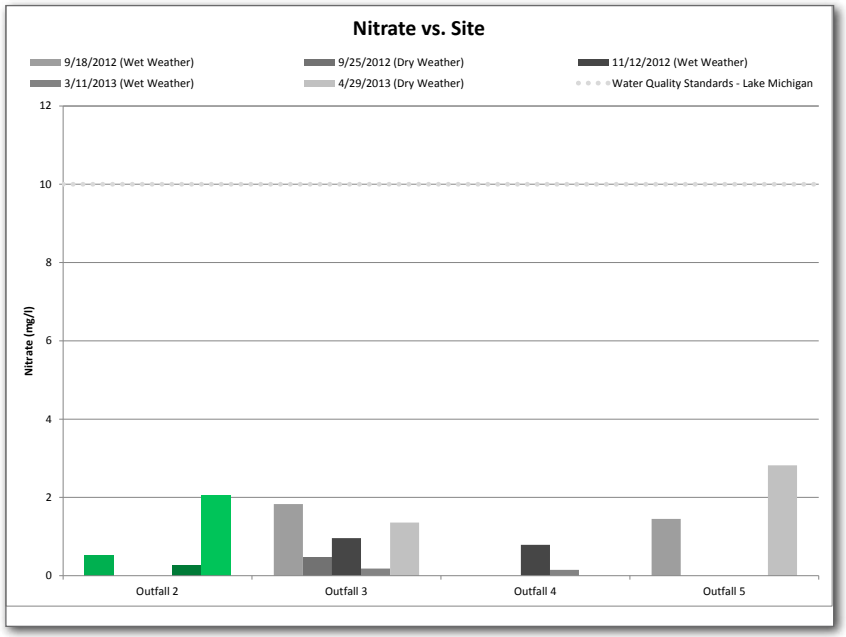

Total Suspended Solids vs. Time
Outfall 2
Outfall 3
Outfall 4
Outfall 5
Total Suspended Solids (mg/l)
120
100
80
60
40
20
0
9/18/2012 (Wet Weather)
9/25/2012 (Dry Weather)
11/12/2012 (Wet Weather)
3/11/2013 (Wet Weather)
4/29/2013 (Dry Weather)

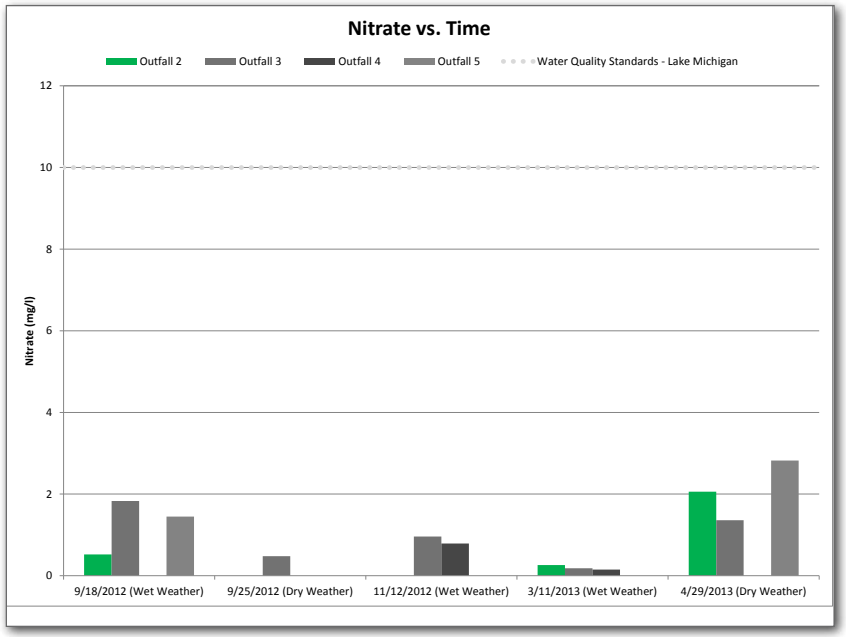

Total Disolved Solids vs. Site
9/18/2012 (Wet Weather)
9/25/2012 (Dry Weather)
11/12/2012 (Wet Weather)
3/11/2013 (Wet Weather)
4/29/2013 (Dry Weather)
Water Quality Standards - Lake Michigan
Total Disolved Solids (mg/l)
1200
1000
800
600
400
200
0
Outfall 2
Outfall 3
Outfall 4
Outfall 5

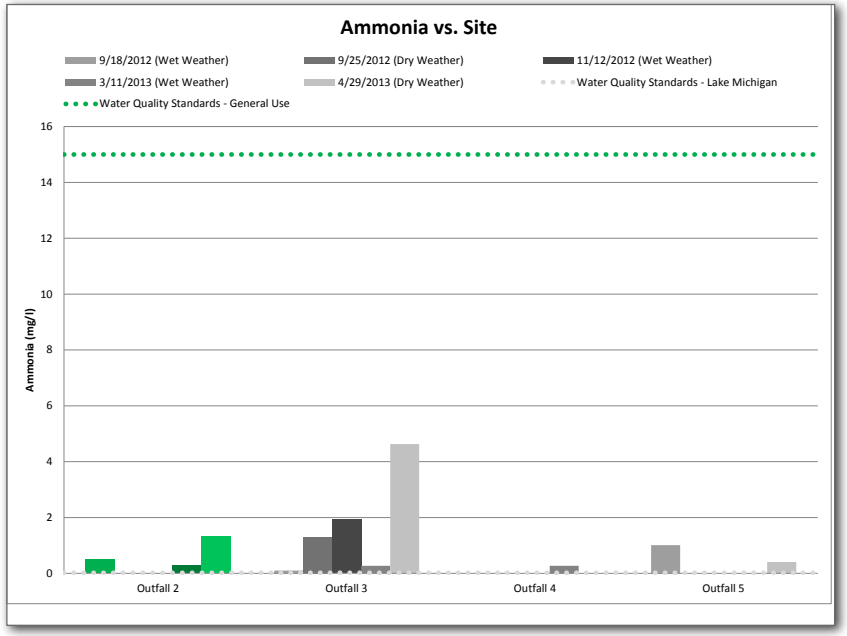

Total Dissolved Solids vs. Time
Outfall 2
Outfall 3
Outfall 4
Outfall 5
Water Quality Standards - Lake Michigan
Total Disolved Solids (mg/l)
1200
1000
800
600
400
200
0
9/18/2012 (Wet Weather)
9/25/2012 (Dry Weather)
11/12/2012 (Wet Weather)
3/11/2013 (Wet Weather)
4/29/2013 (Dry Weather)

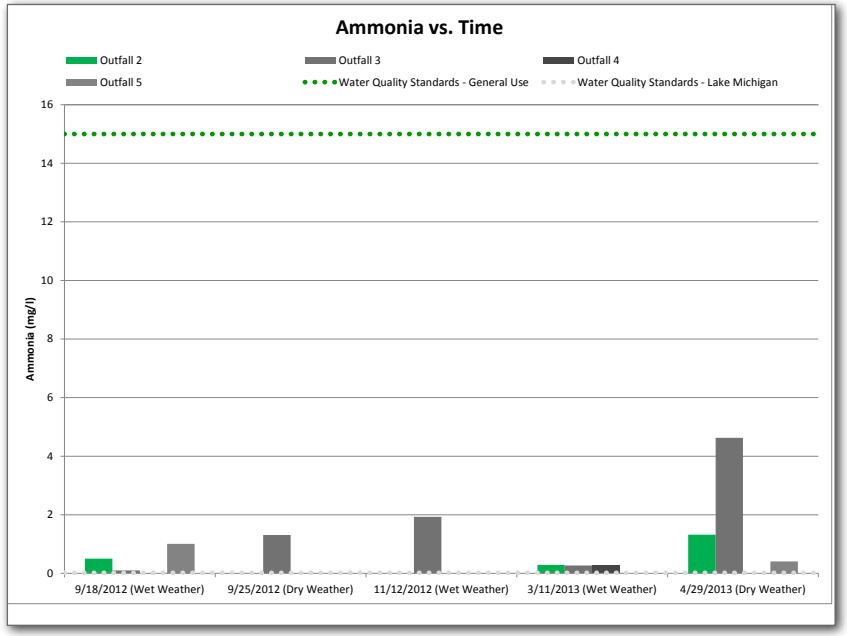

Total Phosphorus vs. Site
9/18/2012 (Wet Weather)
9/25/2012 (Dry Weather)
11/12/2012 (Wet Weather)
3/11/2013 (Wet Weather)
4/29/2013 (Dry Weather)
Water Quality Standards - Lake Michigan
Total Phosphorus (mg/l)
1.2
1
0.8
0.6
0.4
0.2
0
Outfall 2
Outfall 3
Outfall 4
Outfall 5

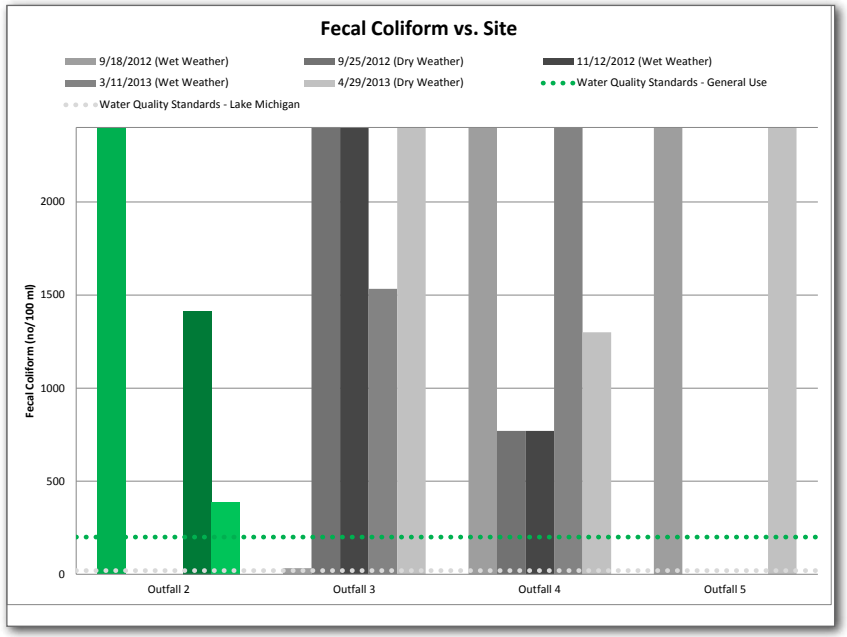

Total Phosphorus vs. Time
Outfall 2
Outfall 3
Outfall 4
Outfall 5
Water Quality Standards - Lake Michigan
Total Phosphorus (mg/l)
1.2
1
0.8
0.6
0.4
0.2
0
9/18/2012 (Wet Weather)
9/25/2012 (Dry Weather)
11/12/2012 (Wet Weather)
3/11/2013 (Wet Weather)
4/29/2013 (Dry Weather)

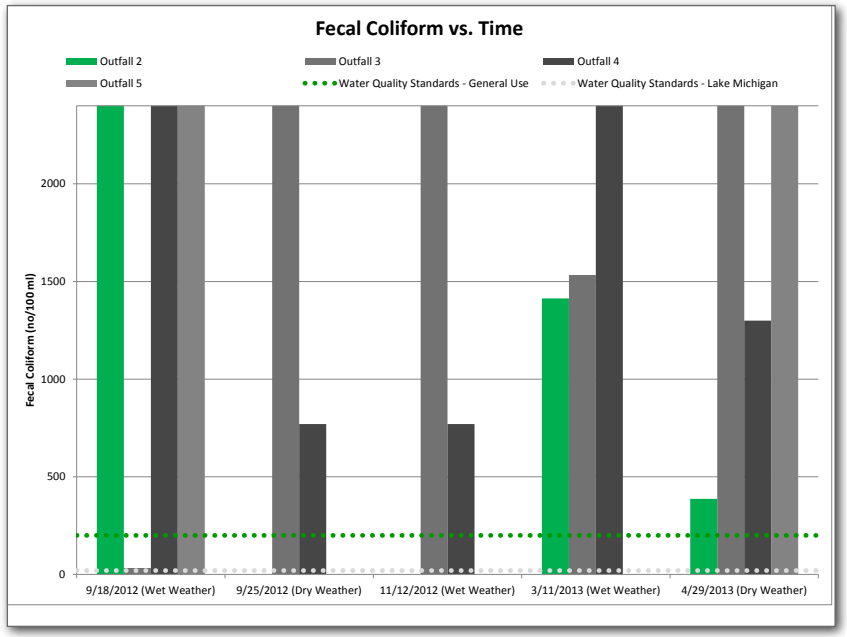

Nitrate vs. Site
9/18/2012 (Wet Weather)
9/25/2012 (Dry Weather)
11/12/2012 (Wet Weather)
3/11/2013 (Wet Weather)
4/29/2013 (Dry Weather)
Water Quality Standards - Lake Michigan
Nitrate (mg/l)
12
10
8
6
4
2
0
Outfall 2
Outfall 3
Outfall 4
Outfall 5

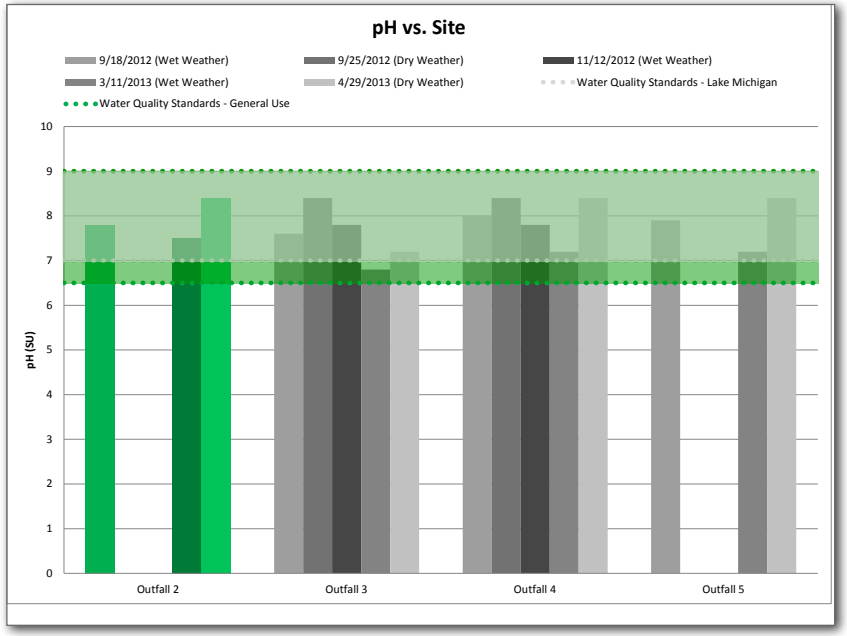

Nitrate vs. Time
Outfall 2
Outfall 3
Outfall 4
Outfall 5
Water Quality Standards - Lake Michigan
Nitrate (mg/l)
12
10
8
6
4
2
0
9/18/2012 (Wet Weather)
9/25/2012 (Dry Weather)
11/12/2012 (Wet Weather)
3/11/2013 (Wet Weather)
4/29/2013 (Dry Weather)

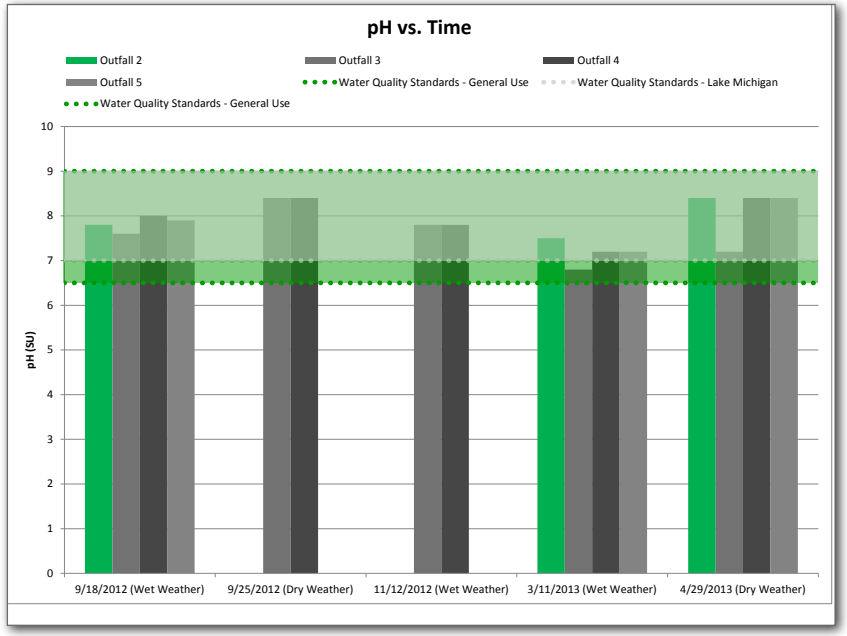

Ammonia vs. Site
9/18/2012 (Wet Weather)
9/25/2012 (Dry Weather)
11/12/2012 (Wet Weather)
3/11/2013 (Wet Weather)
4/29/2013 (Dry Weather)
Water Quality Standards - Lake Michigan
Water Quality Standards - General Use
Ammonia (mg/l)
0
2
4
6
8
10
12
14
16
Outfall 2
Outfall 3
Outfall 4
Outfall 5

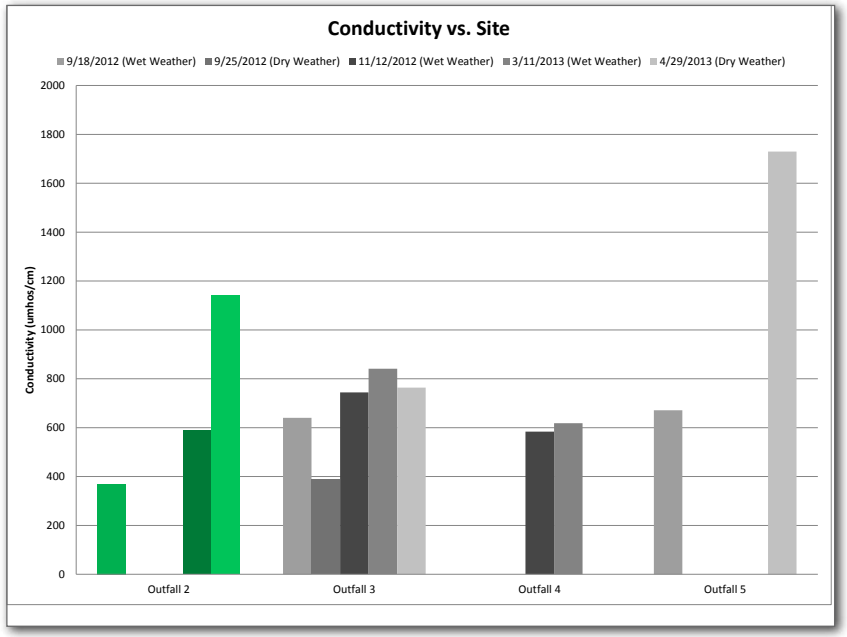

Ammonia vs. Time
Outfall 2
Outfall 3
Outfall 4
Outfall 5
Water Quality Standards - General Use
Water Quality Standards - Lake Michigan
Ammonia (mg/l)
0
2
4
6
8
10
12
14
16
9/18/2012 (Wet Weather)
9/25/2012 (Dry Weather)
11/12/2012 (Wet Weather)
3/11/2013 (Wet Weather)
4/29/2013 (Dry Weather)


Fecal Coliform vs. Site
9/18/2012 (Wet Weather)
9/25/2012 (Dry Weather)
11/12/2012 (Wet Weather)
3/11/2013 (Wet Weather)
4/29/2013 (Dry Weather)
Water Quality Standards - General Use
Water Quality Standards - Lake Michigan
Fecal Coliform (no/100 ml)
0
500
1000
1500
2000
Outfall 2
Outfall 3
Outfall 4
Outfall 5


Fecal Coliform vs. Time
Outfall 2
Outfall 3
Outfall 4
Outfall 5
Water Quality Standards - General Use
Water Quality Standards - Lake Michigan
Fecal Coliform (no/100 ml)
0
500
1000
1500
2000
9/18/2012 (Wet Weather)
9/25/2012 (Dry Weather)
11/12/2012 (Wet Weather)
3/11/2013 (Wet Weather)
4/29/2013 (Dry Weather)


pH vs. Site
9/18/2012 (Wet Weather)
9/25/2012 (Dry Weather)
11/12/2012 (Wet Weather)
3/11/2013 (Wet Weather)
4/29/2013 (Dry Weather)
Water Quality Standards - Lake Michigan
Water Quality Standards - General Use
pH (SU)
0
1
2
3
4
5
6
7
8
9
10
Outfall 2
Outfall 3
Outfall 4
Outfall 5


pH vs. Time
Outfall 2
Outfall 3
Outfall 4
Outfall 5
Water Quality Standards - General Use
Water Quality Standards - Lake Michigan
pH (SU)
0
1
2
3
4
5
6
7
8
9
10
9/18/2012 (Wet Weather)
9/25/2012 (Dry Weather)
11/12/2012 (Wet Weather)
3/11/2013 (Wet Weather)
4/29/2013 (Dry Weather)


Conductivity vs. Site
9/18/2012 (Wet Weather)
9/25/2012 (Dry Weather)
11/12/2012 (Wet Weather)
3/11/2013 (Wet Weather)
4/29/2013 (Dry Weather)
Conductivity (umhos/cm)
0
200
400
600
800
1000
1200
1400
1600
1800
2000
Outfall 2
Outfall 3
Outfall 4
Outfall 5

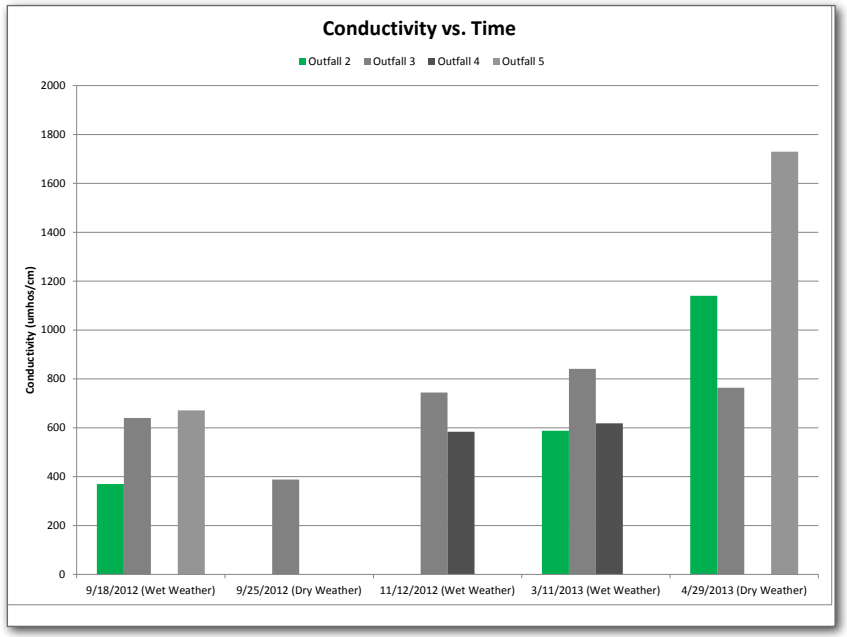

Conductivity vs. Time
Outfall 2
Outfall 3
Outfall 4
Outfall 5
Conductivity (umhos/cm)
0
200
400
600
800
1000
1200
1400
1600
1800
2000
9/18/2012 (Wet Weather)
9/25/2012 (Dry Weather)
11/12/2012 (Wet Weather)
3/11/2013 (Wet Weather)
4/29/2013 (Dry Weather)

EXHIBIT 7 - SIDE-BY-SIDE COMPARISON OF STORMWATER REGULATIONS

	Village of Winnetka	Cook County Watershed Management Ordinance	Village of Glenview	Lake County Watershed Development Ordinance	Recommendations
Administrative Requirements					
Size of regulated development	Any	Any qualified sewer construction[1], any development in a flood protection area or impacting a wetland, any substantial improvements to buildings in the floodplain, and development disturbing more than 0.5 acre	Excavation or fill, or any combination thereof, will exceed 100 cubic yards or 5,000 square feet; Fill will exceed three feet in vertical height at its highest point, measured from the natural ground surface; Excavation will exceed four feet in vertical depth at its deepest point; removal of more than 5,000 square feet of vegetative cover on sites 10 acres or larger	Any development in a floodplain or impacting a wetland, a public road development creating at least 1.5 ac and 1.5 ac/mile of new impervious area, any development disturbing 5000 square feet	Maintain existing Village regulations, but the submittal requirements should be appropriate for the size and type of development. The Village's existing submittal requirements should remain unchanged for smaller projects outside the floodplain and wetlands. The submittal requirements for projects regulated by the Cook County Watershed Management Ordinance (WMO) would have to match the WMO requirements at a minimum.
Types of regulated development	Any construction activity on any property in the Village	Any human-induced activity or change to real estate	Altering the terrain on a site and/or providing construction on a site and/or providing landscaping on a site.	Completion of a final plat, or man-made change to private or public real estate	Maintain existing Village regulations
Exempted projects	Ordinary repairs	Agriculture or gardening, installation/renovation/replacement of utilities, maintenance of lawns and impervious areas, improvements to buildings in the floodplain which are not a substantial improvement	Excavation or removal of vegetation in public utility easements by public utility companies for the purpose of installing underground utilities; tilling of the soil for fire protection purposes; engaging in certain farming, agricultural, or conservation enterprises[2]	Maintenance of buildings, facilities, and roads, gardening and agricultural practices, minor construction activity outside of floodplains and wetlands that does not affect stormwater runoff rates or volumes	Maintain existing Village regulations
Projects requiring MWRD/County approval	Construction of sewer serving a non-residential building or a residential building with 25 or more units, connection to MWRD facilities, disturbance of an area tributary to an MWRD permitted detention facility, or disturbance of an area subject to an MWRD encumbrance for detention	Development in combined sewer areas, qualified sewer construction[1], connection to MWRD facilities, development draining to waterways or Lake Michigan, development modifying an existing detention basin or the service area of an existing detention basin, new sewer connections for existing non-residential development	Development in combined sewer areas, qualified sewer construction, connection to MWRD facilities, development draining to waterways or Lake Michigan, development modifying an existing detention basin or the service area of an existing detention basin, new sewer connections for existing non-residential development	Public road development, Forest Preserve development, base flood elevation analyses of more than 100 ac. (riverine) or 20 ac. (depressional) tributary area, and local unit of government development in the floodplain	Match new Cook County Watershed Management Ordinance
Allowances for re-development	For improvements to an existing home causing an increase in impermeable lot coverage $\geq$ 25%, detention is required for only the incremental volume of runoff from the new impervious area. For new home construction on a previously developed lot, detention is required for the incremental volume of runoff from the maximum impermeable lot coverage compared to the existing condition. [3]	Reduce the retention requirements[4] and waive the requirements for additional detention[5] under certain circumstances	Additions or structural site changes to existing commercial or multi-family developments may get relief from the full detention requirements based on Village Engineering review of existing site conditions. In no case will the volume be less than 50% of required.	None	Maintain existing Village regulations
Permit term	15 months after the permit is issued	3 years after the permit is issued	1 year after the permit is issued	3 years after the permit is issued and not more than 180 days after modification of NFIP regs, FIRM or FIS	Maintain existing Village regulations

	Village of Winnetka	Cook County Watershed Management Ordinance	Village of Glenview	Lake County Watershed Development Ordinance	Recommendations
Long-term maintenance	Not required	Required for detention ponds, sewer construction, wetland mitigation, and riparian area mitigation	Not required (1-year maintenance bond required)	Required for all stormwater management system components that are part of a major development	Match new Cook County Watershed Management Ordinance (WMO) requirements for projects regulated by the WMO and consider applying these requirements (or a modified version of the requirements) to projects that are not regulated by the WMO
Variances	Village can amend or vary its standards and conditions whenever it is in the best interest of the public health, safety, and welfare	MWRD may issue a variance based on certain criteria[6]	The Village Engineer can grant a variance from the Village standards based on unique conditions and characteristics of a project, when the variance can be shown to benefit the Village.	The County or a Certified Community may issue a variance based on certain criteria[7]	Only the MWRD will be allowed to issue a variance for projects regulated by the new Cook County Watershed Management Ordinance (WMO). The Village should reserve the right to issue variances for all other regulated projects.
Runoff Requirements					
Protection of off-site properties	No new building, structure, or addition is allowed which will result in an increase in runoff onto an adjacent property without making adequate provision for the additional runoff. No grading is allowed which will cause water to be diverted, detained, or concentrated onto an abutting or nearby property.	No increase of flood elevations or decrease flood conveyance capacity upstream or downstream	No adverse impact on adjacent properties	All concentrated discharges must be conveyed into a maintainable outlet with adequate downstream capacity and must not result in an increased flood and drainage hazard	Maintain existing Village regulations
Development requiring detention	Infill development, re-development of individual lots increasing impermeable lot coverage $\geq$ 25%, single family residential subdivisions, multi-family residential development and commercial developments	Residential subdivisions on 5-acres or more, 0.5 acres or more of multi-family residential and non-residential development on 3-acres or more, and right-of-way development totaling 1-acre or more new impervious area	Single family homes in a multi-family development of three or more lots, or comprising an area greater than 1 acre with 2 or more lots, all multi-family developments and all commercial and industrial developments	More than 1 acre of new impervious surface, more than 3 acres of development[8], or an impervious surface area ratio of 50% or greater[8]	Maintain existing Village regulations and consider crediting the storage volume within stormwater best management practices toward the required detention volume
Allowable release rate	Undeveloped 3-year runoff rate	100-year = 0.30 cfs/ac until January 1, 2019 and 0.15 cfs/ac after January 1, 2019	Undeveloped 3-year runoff rate	100-year = 0.15 cfs/ac, 2-year = 0.04 cfs/ac (Squaw Creek Watershed 0.09 cfs/ac and 0.02 cfs/ac)	Match new Cook County Watershed Management Ordinance (WMO) requirements for projects regulated by the WMO and consider applying these requirements to projects that are not regulated by the WMO
Rainfall data	Bulletin 70	Bulletin 70	Bulletin 70	Bulletin 70	Maintain existing Village regulations
Protection of depressional storage	Not required	Required	Required, including for depressional storage areas identified in Village's Flood Risk Reduction Program.	Required for depressional storage greater than 0.75 acre feet	Match new Cook County Watershed Management Ordinance (WMO) requirements for projects regulated by the WMO and consider applying these requirements to projects that are not regulated by the WMO. Small projects that do not require submittal of a grading plan should be exempt from these requirements.

	Village of Winnetka	Cook County Watershed Management Ordinance	Village of Glenview	Lake County Watershed Development Ordinance	Recommendations
Water quality	Design practices required whenever possible	Incorporated into runoff volume reduction requirements	Not required	Incorporated into runoff volume reduction requirements; hydrocarbon removal technology required for parking > 25 stalls and vehicle fueling and servicing facilities	Match new Cook County Watershed Management Ordinance (WMO) requirements for projects regulated by the WMO and consider applying these requirements to projects that are not regulated by the WMO. Small projects that do not require submittal of plans prepared by a professional engineer should be exempt from these requirements.
Runoff volume reduction	Not required	Retain and infiltrate the first inch of runoff from the impervious area of development	Natural measures that reduce runoff are highly encouraged	Incorporate infiltration, evapotranspiration, reuse, or other methods to the maximum extent practicable[9]	Match new Cook County Watershed Management Ordinance (WMO) requirements for projects regulated by the WMO and consider applying these requirements to projects that are not regulated by the WMO. Small projects that do not require submittal of plans prepared by a professional engineer should be exempt from these requirements.
Floodplain Requirements					
Flood protection elevation	100-year flood elevation plus 1 foot of freeboard	100-year flood elevation plus 2 feet of freeboard	100-year flood elevation plus 1 foot of freeboard	100-year flood elevation plus 2 feet of freeboard	Match new Cook County Watershed Management Ordinance (WMO) requirements for all regulated projects
Compensatory storage	1 to 1	1.1 to 1	1 to 1	1.2 to 1 for riverine floodplain; 1.0 to 1 for non-riverine floodplain	Match new Cook County Watershed Management Ordinance (WMO) requirements for all regulated projects
National Flood Insurance Program compliance	Yes	No. The new Cook County Watershed Management Ordinance does not require a permit for every improvement to buildings in the floodplain. Instead it only requires a permit for substantial improvements to buildings in the floodplain.	Yes	Yes	Maintain existing Village regulations
Natural Area Requirements					
Buffer areas	U.S. Army Corps of Engineers requirements	U.S. Army Corps of Engineers requirements and 30- to 100-feet[10] for isolated wetlands	U.S. Army Corps of Engineers requirements	U.S. Army Corps of Engineers requirements and 30-feet to 100-feet[11]	Match new Cook County Watershed Management Ordinance (WMO) requirements for projects regulated by the WMO, but do not apply these requirements to other projects regulated by the Village
Wetland mitigation	U.S. Army Corps of Engineers requirements	U.S. Army Corps of Engineers requirements and 1.5:1 to 3:1[12] for isolated wetlands	U.S. Army Corps of Engineers requirements	U.S. Army Corps of Engineers requirements and 1.5:1 to 6:1 for isolated wetlands[13]	Match new Cook County Watershed Management Ordinance (WMO) requirements for projects regulated by the WMO, but do not apply these requirements to other projects regulated by the Village
Riparian areas	U.S. Army Corps of Engineers requirements	U.S. Army Corps of Engineers requirements and 30-feet to 100-feet[14] for isolated wetlands	U.S. Army Corps of Engineers requirements	Incorporated into buffer area requirements	Match new Cook County Watershed Management Ordinance (WMO) requirements for projects regulated by the WMO, but do not apply these requirements to other projects regulated by the Village

Exhibits

	Village of Winnetka	Cook County Watershed Management Ordinance	Village of Glenview	Lake County Watershed Development Ordinance	Recommendations
Construction Site Requirements					
Inspection frequency	IEPA requirements for construction sites over 1 acre and prior to backfilling a new pipe trench	IEPA requirements for construction sites over 1 acre, after mobilization and installation of initial erosion and sediment control practices, during excavation, and at the completion of the development	IEPA requirements even for construction sites less than 1 acre, at rough grading and final inspection	IEPA requirements even for construction sites less than 1 acre, upon completion of sediment and runoff control measures, after stripping and clearing, after rough grading, after final grading, after seeding and landscaping, after final stabilization, and after removal of sediment and erosion controls	Match new Cook County Watershed Management Ordinance (WMO) requirements for projects regulated by the WMO and consider applying these requirements to projects that are not regulated by the WMO
Site stabilization	Within 30 days of removal of existing vegetation	Within 14 days after construction activities have ceased	Within 14 days after construction activities have ceased	Within 14 days after construction activities have ceased	Adopt both requirements as a dual-performance standard for all regulated development.

Footnotes:

1. Qualified sewer construction includes all public and private new sewers and new sewer connections exterior to a building envelope, except: sewer services serving less than three private single-family homes, storm sewer tributary to a waterway in separate sewer areas, septic system sewers, footing drains, grey water harvesting sewers, and sewers and sewer connections outside MWRD boundaries.
2. Tilling of the soil, or construction of grassed waterways, terraces, surface water diversions, grade stabilization structures, provided that the activity is located on property zoned solely for farming or agricultural purposes.
3. These allowances are not made for redevelopment of a site with a different use (single family to multi-family or commercial)
4. For redevelopment with site constraints that prevent use of retention-based practices to retain the control volume in full, a co-applicant may reduce existing impervious area within the redevelopment area by 5% for every 25% of control volume, however, the co-applicant shall: (1) demonstrate that site limitations prevent the co-applicant from providing the entire control volume onsite; and (2) Provide the control volume onsite to the maximum extent practicable with retention-based practices.
5. Refer to Article 5, Section 505 of the Cook County Watershed Management Ordinance.
6. Refer to Article 11 of the Cook County Watershed Management Ordinance.
7. Refer to Article V, Section A of the Lake County Watershed Development Ordinance.
8. (unless the total new impervious surface area is less 0.5-acre)
9. Refer to Article IV, Section B, Paragraph 1.d of the Lake County Watershed Development Ordinance.
10. Minimum isolated buffer widths are as follows: 30-feet from the boundary of standard isolated wetlands greater than or equal to 0.10-acre and less than 0.5-acre in area; 50-feet for standard isolated wetlands greater than or equal to 0.5-acre in area; or 100-feet for high quality isolated wetlands.
11. Refer to Article IV, Section B, Paragraph 1.i of the Lake County Watershed Development Ordinance.
12. Mitigation impacting an isolated wetland must replace the lost wetland environment as follows: standard isolated wetlands less than 0.10-acre in aggregate do not require mitigation; standard isolated wetlands greater than or equal to 0.10-acre in aggregate at a minimum ratio of 1.5:1 for each acre impacted; high quality isolated wetlands at a minimum ratio of 3:1 for each acre impacted; a greater compensation ratio may be required where unique wetland functions are threatened.

13. Mitigation shall provide for the replacement of the wetland environment lost to development at the following proportional rates: for wetland impacts to areas that are not high-quality aquatic resources under Categories I, II, and III, a minimum of 1.5:1 mitigation ratio shall be required or a minimum 1:1 mitigation ratio for fully certified wetland mitigation bank credits; a minimum of 3:1 for wetland impacts that are high-quality aquatic resources; a minimum of 6:1 for wetland impacts that are high-quality forested wetlands; for wetland impacts to open waters that are not high-quality aquatic resources under Categories I, II, and III, a minimum of 1:1 mitigation ratio shall be required.

14. The boundaries of riparian environments are established as follows: for any jurisdictional Waters of the U.S. that does not qualify as wetlands, the riparian environment shall be 50-feet from the ordinary high water mark (OHWM); for any isolated waters that do not qualify as wetlands, the riparian environment shall be 30-feet from the OHWM; for any jurisdictional Waters of the U.S. or for any isolated waters that do not qualify as wetlands, and which have a Biological Stream Characterization of "A" or "B", the riparian environment shall be 100-feet from the OHWM; for any jurisdictional Waters of the U.S. or isolated waters that do not qualify as wetlands identified as a Biologically Significant Stream, the riparian environment shall be 100-feet from the OHWM.

APPENDICES

"A plan is a vision for a community as expressed by its citizens. The key to creating a vision is effective public participation throughout the plan development process."

A 2020 Vision for Winnetka

ATTACHMENT #6
Resolution R-14-2014

A RESOLUTION
APPROVING AND ADOPTING
THE VILLAGE OF WINNETKA, ILLINOIS, STORMWATER MASTER PLAN

WHEREAS, since 1994, the Village of Winnetka has completed a number of stormwater capacity improvements, including new and replacement storm sewers, stormwater pumping stations, and outfall improvements; and

WHEREAS, in recent years, the Village of Winnetka has been impacted by several severe rain storms that overwhelmed the Village's sewer systems and caused widespread flash flooding and basement back-ups, which have highlighted a need for additional improvements throughout the Village; and

WHEREAS, in response to widespread flooding in September 2008, the Village retained an engineering firm to conduct a Flood Risk Reduction Assessment of the western Winnetka study area, which led to the development of flood protection projects at the 10-year flood event level for eight areas that flooded significantly during heavy rains; and

WHEREAS, following significant flash flooding events in the summer of 2011, the Council of the Village of Winnetka ("Village Council") expanded the scope of work to analyze 25-, 50-, and 100-year design storm events and to recommend alternatives to reduce the risk of future flooding; and

WHEREAS, the Village has since entered into contracts to begin implementing some of the stormwater management recommendations, while continuing to work on an implementation and financing strategy, as well as working on stormwater infrastructure maintenance plans, water quality planning, the evaluation of stormwater regulations, and the identification and development of corrective remedies for sanitary sewer inflow and infiltration; and

WHEREAS, on June 12, 2012, the Village awarded a contract to Baxter & Woodman Consulting Engineers (B&W) to assist the Village in developing a stormwater master plan that will provide a comprehensive statement of the Village's existing stormwater management policies and activities, and that will provide a long-term guide for policy and decision-making on matters related to managing the volume and quality of stormwater runoff and sanitary sewer discharges in an environmentally sensitive and sustainable way, over the next five to ten years; and

WHEREAS, the draft stormwater master plan prepared by B&W incorporated the results of several Flood Risk Reduction Assessments, a Sanitary Sewer Flow Monitoring Study and subsequent Sanitary Sewer Evaluation Surveys, and a Stormwater Utility Feasibility Study; and

WHEREAS, the Village Council considered a preliminary draft of the proposed stormwater master plan at its July 9, 2013, study session, after which B&W revised the proposed plan to reflect the Village Council's comments and policy direction; and

WHEREAS, the Village Council considered and provided final comment on B&W's pre-final draft stormwater master plan at the December 10, 2013, study session; and

WHEREAS, pursuant to Village Council comments and directives, B&W has prepared a final draft of the plan, titled "Village of Winnetka, Illinois, Stormwater Master Plan" ("Stormwater Master Plan"), a copy of which is attached hereto as Exhibit A; and

WHEREAS, the Stormwater Master Plan contains more fully developed goals, objectives, and recommendations, includes illustrations, and incorporates historical documents as exhibits; and

WHEREAS, the Village has been soliciting public comment on the final draft of the Stormwater Master Plan, which has been posted on the Village of Winnetka stormwater management website since February; and

WHEREAS, the Village Council finds and determines that it is in the best interests of the health, safety and general welfare of the Village and its residents that the Village develop a clear, comprehensive, and forward-looking framework for its stormwater management program, to provide a foundation for future policy decisions and to guide the Village's stormwater management program for five to 10 years; and

WHEREAS, the Village Council further finds and determines that the attached Stormwater Master Plan provides such a unified framework for the Village's stormwater management program; and

WHEREAS, the Village of Winnetka is a home rule municipality in accordance with Article VII, Section 6 of the Constitution of the State of Illinois of 1970 and, pursuant thereto, has the authority, except as limited by said Section 6 of Article VII, to exercise any power and perform any function pertaining to the government and affairs of the Village, including the power to regulate for the protection of the public health, safety and welfare; and

WHEREAS, the Village Council finds that developing a clear, comprehensive and forward-looking framework for its stormwater management program to provide a foundation for future policy decisions and to guide the Village's stormwater management program for five to 10 years, as set out in the Village of Winnetka Stormwater Master Plan attached hereto as Exhibit A, is a matter pertaining to the affairs of the Village.

NOW THEREFORE, be it resolved by the Council of the Village of Winnetka as follows:

SECTION 1: The Council of the Village of Winnetka ("Village Council") adopts the foregoing recitals as its findings, as if fully set forth herein.

SECTION 2: Subject to the condition stated in Section 4 of this Resolution, the Village Council hereby approves and adopts the "Village of Winnetka Stormwater Master Plan," in the form attached to this resolution as Exhibit A, and incorporated by reference as if fully set forth herein.

SECTION 3: The adoption and approval of the attached "Village of Winnetka Stormwater Master Plan" ("Plan") shall not be construed as either an authorization or a directive to allocate or expend funds in implementing the projects defined in said Plan, and the Village Council expressly reserves all right, authority and discretion to determine the timing and extent to which the Plan may be implemented and the manner in which such implementation shall be financed.

SECTION 4: This Resolution is adopted by the Council of the Village of Winnetka in the exercise of its home rule powers pursuant to Section 6 of Article VII of the Illinois Constitution of 1970.

SECTION 5: This Resolution shall take effect immediately upon its adoption.

ADOPTED this ___ day of _____, 2014, pursuant to the following roll call vote:

AYES: _____

NAYS: _____

ABSENT: _____

Signed:

_____
Village President

Countersigned:

_____
Village Clerk