Winnetka Village Council
STUDY SESSION
Village Hall
510 Green Bay Road
Tuesday, July 9, 2013
7:00 PM

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AGENDA

1) Call to Order

2) Draft Stormwater Master Plan 2

3) Willow Road Stormwater Tunnel – Engineering Procurement and Construction Contracting Methods.....47

4) Legislative Update – HB 183 "Concealed Carry"

5) Public Comment

6) Adjournment

NOTICE

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Agenda Item Executive Summary

Title: Draft Stormwater Master Plan

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

Agenda Date: 07/09/2013

Consent: ☐ YES ☑ NO

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

Item History:

None.

Executive Summary:

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 has determined that a Stormwater Master Plan process will facilitate concurrent 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 will be a document which helps the Village guide the stormwater program for the next five to 10 years and beyond.

The attached Stormwater Master Plan is a first draft for Village Council review and comment. B&W's focus to date has been on developing the goals, objectives and recommendations of the Plan. The overall appearance of the Plan will change drastically as the content is refined. The final document will include numerous photographs, figures, and exhibits to illustrate the text. At this point B&W is requesting the Council's feedback on this first draft.

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.

After Council reviews the draft Master Plan, the next step is to review elements of the draft Stormwater Master Plan with various stakeholder groups to solicit public input. At the Council's direction, B&W will facilitate four Open Houses to engage the public on specific sections (listed below in recommendation #2) of the Stormwater Master Plan. Feedback from the public will be reported to the Council and incorporated into the final draft of the Plan. It is anticipated these meetings would take place during October and early November, 2013.

Recommendation / Suggested Action:

Review B&W's Draft Stormwater Master Plan and provide policy direction. Possible actions for consideration follow:

1. Discuss and provide direction on goals, objectives and recommendations of the Draft Stormwater Master Plan.
2. Consider directing B&W to schedule a series of four stakeholder open houses to inform the community and gather input on certain sections of the Stormwater Master Plan.

Attachments:

1. Agenda Report
2. Draft Stormwater Master Plan

Agenda Report

Subject: **Draft Stormwater Master Plan**

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

Date: June 28, 2013

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 has determined that a Stormwater Master Plan process will facilitate concurrent 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 will be a document which helps the Village guide the stormwater program for the next five to 10 years and beyond.

The attached Stormwater Master Plan is a first draft for Village Council review and comment. B&W's focus to date has been on developing the goals, objectives and recommendations of the Plan. The overall appearance of the Plan will change drastically as the content is refined. The final document will include numerous photographs, figures, and exhibits to illustrate the text. At this point B&W is requesting the Council's feedback on this first draft. With Council's consensus, this fall, B&W will conduct stakeholder open houses on certain plan-related elements—helping to inform the community, as well as to gather input for finalizing the Master Plan.

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 and enhance 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; and

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

After Council reviews the draft Master Plan, the next step is to review elements of the draft Stormwater Master Plan with various stakeholder groups to solicit public input. At the Council's direction, B&W will facilitate four Open Houses to engage the public on specific sections (listed below in recommendation #2) of the Stormwater Master Plan. Feedback from the public will be reported to the Council and incorporated into the final draft of the Plan. It is anticipated these meetings would take place during October and early November, 2013.

Recommendation:

Review **B&W's Draft Stormwater Master Plan** and provide policy direction. Possible actions for consideration follow:

1. Discuss and provide direction on goals, objectives and recommendations of the Draft Stormwater Master Plan. Several recommendations warrant specific attention;

    - In Section 4, B&W recommends building-to-building canvassing to find and disconnect illegal connections to the sanitary sewer system in areas adjacent to future storm sewer capital improvement projects. B&W also recommends implementing a cost-sharing program for disconnection of sump pumps and foundation drains from the sanitary sewer system. Should the Village direct B&W to move forward with these recommendations?

    - In Section 7, B&W presents examples of various strategies to encourage the use of Stormwater Best Management Practices on private property. B&W recommends implementing an award or recognition program, and distribution of rain barrels. If the Village adopts a stormwater utility, B&W also recommends implementing a stormwater fee credit program and stormwater incentive program. Should the Village direct B&W to move forward with these recommendations?

2. Consider directing B&W to schedule a series of four Open Houses to engage the public on the following sections of the Stormwater Master Plan:

    - Floodplain Management – Property owners in the floodplain would receive an invitation to the Open House by direct mailing from the Village. Discussion topics at the meeting would include flood insurance, flood protection measures, substantial improvement requirements, flood warning systems, and flood response procedures.

    - Water Quality/Stormwater Best Management Practices – This Open House would likely be held in conjunction with a meeting of the Environmental and Forestry Commission. Discussion topics at the meeting would include water quality monitoring, strategies to encourage stormwater BMPs in private and public projects, and the Village's NPDES Phase II program.

    - Inflow and Infiltration – A third Open House would be held for any interested property owner or resident. Discussion topics at this meeting would include the Village's efforts to eliminate sources of I/I on public property and private property.

    - Development Policies and Regulations – Architects, engineers, and contractors that regularly work in Winnetka would receive an invitation to an Open House by direct mailing from the Village. Discussion topics at the meeting would include the pending Cook County Watershed Management Ordinance and recommended revisions to the Village Code.

Attachments:

1. Draft Stormwater Master Plan
2. Draft Implementation Plan
3. Draft Water Quality Data

ATTACHMENT #1

DRAFT STORMWATER MASTER PLAN

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 that offered input at public meetings as this Stormwater Master Plan was being developed.

Village of Winnetka, Illinois

Stormwater Master Plan

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2. Flood Risk Reduction Assessment: Additional Study Areas, prepared by Baxter & Woodman Consulting Engineers, Inc., December 2012
3. Sanitary Sewer Evaluation Survey-Flow Monitoring Study: Report, prepared by Strand Associates, Inc., dated August 2012
4. Water Quality Sampling Laboratory Reports
5. Stormwater Pollution Prevention Webpage Outline
6. Stormwater Pollution Prevention Public Education Materials
7. Model Illicit Discharge and Connection Ordinance
8. Stormwater Best Management Practices
9. Village of Winnetka Budget 4/1/2013-3/31/2014
10. Stormwater Utility Feasibility Study: Final Report, prepared by Municipal & Financial Services Group, May 2013

1. INTRODUCTION

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 the investment of millions of dollars 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.

Insert Figure 1 on this Page

Insert Figure 2 on this Page

2. OUR VISION

Winnetka is a unique, established Village located on the shore of Lake Michigan, just 16 miles north of the City of Chicago, so it is a very desirable place to live. 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. Furthermore, increased environmental awareness has led to studies showing that stormwater runoff from urbanized areas can impair rivers and lakes for designated uses such as public water supply, swimming, and fishing.

Insert Figure 3 on this Page

Insert Figure 4 on this Page

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;
- 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; and

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

3. STORMWATER CAPITAL IMPROVEMENTS

Goal

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

Objective

1. 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 ahead of improvements that address standing water and overland flow in streets and yards.

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) 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). Table 1 lists the capital improvements recommended in these Flood Risk Reduction Assessments. The total estimated cost to construct these improvements is $48.0M. Exhibit 1 shows the boundaries of each study area in the Flood Risk Reduction Assessments, while Exhibit 2 shows the study areas that would benefit from each recommended capital improvement project.

Insert Table 1 on this Page

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). These projects include: the Winnetka Avenue Pump Station Improvements, Lloyd Park Outlet, Tower/Foxdale Improvements, and Northwest Winnetka/Forest Glen Improvements. Final engineering for the Willow Road Tunnel is scheduled to begin in the fall of 2013. 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.

Insert Figure 5 on this Page

During the course of the Stormwater Utility Feasibility Study (prepared by Municipal & Financial Services Group, May 2013), the Village Council determined that the level of service for the Stormwater Utility should be limited to the five capital projects that are already programmed. If the Village adopts a Stormwater Utility, construction of the Winnetka Avenue Pump Station Improvements, Lloyd Park Outlet, Tower/Foxdale Improvements, and Northwest Winnetka/Forest Glen are all scheduled to be constructed by 2014. Construction of the Willow Road Tunnel project would not be completed until 2018.

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.

Recommendations

1. Complete design and construction of the Winnetka Avenue Pump Station Improvements, Lloyd Park Outlet, Tower/Foxdale Improvements, Northwest Winnetka/Forest Glen 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.

4. INFLOW AND 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

1. 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.

Insert Figure 6 on this Page

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.

Eliminating Sources of I/I on Public Property

The Village completed a study (prepared by Strand Associates, Inc., dated August 2012) 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 began in May 2013. This phase includes 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.

Insert Figure 7 on this Page

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).

Recommendations

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 capital improvement projects planned.

4. Implement a cost-sharing program for disconnection of sump pumps and foundation drains from the sanitary sewer system.

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

1. Advise property owners about flood hazards, flood insurance, and flood protection measures.

2. Adopt and enforce regulations that exceed the NFIP's minimum standards for new development and re-development.

3. Reduce future flood damage to existing buildings by helping property owners retrofit or relocate existing flood prone buildings.

4. Improve flood warning systems and flood response procedures.

THIS SECTION WILL BE FURTHER DEVELOPED ONCE THE VILLAGE COMPLETES A COMMUNITY ASSISTANCE VISIT AND MEETS WITH INSURANCE SERVICES OFFICE (ISO) TO DISCUSS ENTRY INTO THE COMMUNITY RATING SYSTEM (CRS) PROGRAM.

Insert Figure 8 on this Page

6. WATER QUALITY

Goals

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

Objectives

1. Conduct public education and outreach on stormwater quality.
2. Involve the public in Village efforts to protect and enhance stormwater quality.
3. Eliminate illicit discharges to the storm sewer system.
4. Prevent stormwater pollution from active construction sites.
5. Require new development and re-development projects to minimize stormwater runoff volume and provide water quality treatment for stormwater runoff after construction.
6. Prevent stormwater pollution resulting from municipal operations.
7. 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.

Insert Figure 9 on this Page

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:

Insert Figure 10 on this Page

- 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; and

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, but did not suggest any substantive changes to the program.

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.

Insert Table 2 on this Page

The results of the water quality testing summarized in Table 2 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 4.) 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.

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.

Insert Figures 11-23

Figures 11-23 demonstrate 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.

Recommendations

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 5. This webpage should include links to pertinent information, including public education materials (See Appendix 6), 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 3). 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.

6. Studies by the IEPA are underway that would establish Total Maximum Daily Load (TMDL) limits for pollutants of concern in both the Lake Michigan and Skokie River watersheds. 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 TMDL development process for both watersheds.

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).

Insert Table 3 on this Page

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

1. 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.

Insert Figure 24 on this Page

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.

Insert Figure 25 on this Page

- 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 (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.
    - Local Drainage Inspection Program (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.
    - Rain Garden Cost-Share (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.

Insert Figure 26 on this Page

- 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.

Insert Figure 27 on this Page

- Distribution Programs
    - Rain Barrel Program (Metropolitan Water Reclamation District of Greater Chicago) – Rain barrels are sold to residents ($58 plus tax) within the MWRDGC service area. An installation kit and delivery are included. Rain barrels may be purchased directly from the MWRDGC or from participating municipalities.
    - Rain Garden Program (Woodstock) – The City installed demonstration rain gardens in high visibility 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.

- Stormwater Utility Fee Discounts
    - Incentives and Credits (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 (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.

Insert Figure 28 on this Page

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.

Insert Figure 29 on this Page

Recommendations

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 8). 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 MWRDGC to distribute rain barrels to interested residents (See Appendix 8). Village participation may simply be advertising that rain barrels are available from the MWRDGC, or the Village could maintain a supply of rain barrels from the MWRDGC 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.

4. If the Village adopts a Stormwater Utility, the Village should consider implementing a stormwater fee credit program and a stormwater incentive program.

    a. A stormwater fee credit program could reduce the stormwater fee for non-residential properties that provide on-site stormwater management that

exceeds Village requirements. This program would limit the properties that are eligible for credits to those that have the ability to significantly reduce their stormwater contribution.

b. A stormwater incentive program could provide reimbursement for any property owner to purchase and install stormwater management controls. The Village would establish an annual budget for incentives and the budget would be used to fund the incentives on a first-come first-serve basis until the funds are exhausted during the year.

8. DEVELOPMENT POLICIES AND REGULATIONS

THIS SECTION WILL BE REVISED AND EXPANDED ONCE THE REVISED DRAFT WATERSHED MANAGEMENT ORDINANCE FOR COOK COUNTY IS AVAILABLE FOR PUBLIC REVIEW

Goal

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

Objective

1. 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 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 (MWRDGC), 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.

Insert Figure 30 on this Page

The MWRDGC has been granted the authority to adopt a stormwater management ordinance that would be effective throughout Cook County. A second draft of the pending Watershed Management Ordinance is expected to be published for public review and comment in the second quarter of 2013. Adoption of the Ordinance is expected later in 2013 with an effective date six months following adoption.

Recommendations

1. The Village should review and comment on the draft Watershed Management Ordinance once it has been published.

Insert Figure 31 on this Page

2. The Public Works and Engineering Design Guidelines should be revised as follows:
    - The Guidelines should specifically identify the need for an applicant to obtain coverage from the IEPA under General NPDES Permit No. ILR10 for projects that would disturb one acre or more.
    - The Guidelines require the re-establishment of vegetation within 30 days of the end of active disturbance. In order to maintain consistency with applicable IEPA regulations, the Village should add the requirement to initiate stabilization of disturbed areas within seven days of the end of active disturbance.
    - Requirements for green infrastructure and infiltration/reuse/evapotranspiration should be added to the general requirement to incorporate stormwater quality design practices whenever possible.
    - A requirement should be added to prepare a long-term management plan for stormwater BMPs and record the plan as a covenant running with the land whenever the development project would disturb one acre or more.
    - A few outdated requirements should be updated: (1) digital copies of as-built plans should be submitted with the hard copies; (2) digital video media should be submitted, rather than videotapes; and (3) inlet filter baskets should be required for inlet protection, rather than hay bales or filter fabric over an inlet.

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).

- Acceptable Hydraulic Models – Title 16, Chapter 68, Section 040.D of the Village Code lists programs acceptable for determining the base flood elevation. HEC-RAS should be added to this list. As an alternative, this provision could simply allow other models as approved by the Village Engineer.
- 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.

Insert Figure 32 on this Page

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

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

9. OPERATIONS AND MAINTENANCE

Goal

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

Objective

1. Schedule and fund regular maintenance of the storm and sanitary sewer systems, including stormwater 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.

Insert Figure 33 on this Page

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.

MAINTENANCE STATISTICS FOR COMPARABLE MUNICIPALITIES WILL BE INSERTED HERE.

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.

MAINTENANCE STATISTICS FOR COMPARABLE MUNICIPALITIES WILL BE INSERTED HERE.

Recommendations

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.

Insert Figure 34 on this Page

10. IMPLEMENTATION PLAN

SEE SEPARATE ATTACHMENT

11. 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.

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 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 (MWRDGC) – 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.

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.

ATTACHMENT #2

DRAFT IMPLEMENTATION PLAN

Village of Winnetka Stormwater Master Plan		Implementation Plan																					
		13	2014				2015				2016				2017				2018				2019
		Q4	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, Lloyd Park Outlet, Tower/Foxdale, NW Winnetka/Forest Glen																						
1	Complete construction of Winnetka PS, Lloyd Park Outlet, Tower/Foxdale, NW Winnetka/Forest Glen																						
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																						
4	Implement a cost-sharing program for disconnection of sump pumps and foundation drains																						
Section 5: Floodplain Management																							
TBD																							
Section 6: Water Quality																							
1	Continue to implement 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 TMDL development process for the Lake Michigan and Skokie River watersheds																						
Section 7: Stormwater BMPs																							
1	Implement an award or recognition program for BMPs installed on private property																						
2	Participate with the MWRDGC to distribute rain barrels to interested residents																						
3	Implement a formal process to incorporate stormwater BMPs in public improvements																						
4	Implement a stormwater fee credit program and a stormwater incentive program																						
Section 8: Development Policies and Regs																							
TBD																							
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																						

ATTACHMENT #3

DRAFT WATER QUALITY 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	0.12153	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			0.501	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	*		>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 (mg/l)		mg/L - 1,700 (AS); 910 (CS); 3.1 (HHS); 1.3		U	U		U								U	U	
Mercury, Dissolved (mg/l)	0.0022 (AS), 0.0011 (CS), 0.00012 (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)

= Water Quality Standard Consistently 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			0.288	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	*		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		0.00796	U	U						
Lead, Dissolved (mg/l)	*	*		U	U	U						
Mercury, Total (mg/l)		mg/L - 1,700 (AS); 910 (CS); 3.1 (HHS); 1.3		U	U	U						
Mercury, Dissolved (mg/l)	0.0022 (AS), 0.0011 (CS), 0.00012 (HHS)			U	U	U						
Nickel, Total (mg/l)				U	U	0.00585						
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)

= Water Quality Standard Consistently Not Met

TABLE 2 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

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 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.
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 400 mg/l was used for evaluation purposes. This number is based on field colormetric tests.

TABLE 2 FOOTNOTES

3. Water Quality Standards - Lake Michigan (Open Waters)

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.

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.

The water quality standards for Arsenic (trivalent, dissolved) are 0.34 mg/l (AS) and 0.148 mg/l (CS).

Agenda Item Executive Summary

Title: Willow Road Stormwater Tunnel – Engineering Procurement and Construction Contracting Methods

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

Agenda Date: 07/09/2013

Consent: ☐ YES ☑ NO

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

Item History:

None.

Executive Summary:

The Village has identified a major stormwater improvement project, consisting of a new storm sewer beneath Willow Road that would convey water from a roughly 900-acre drainage area on the west side of the Village eastward towards Lake Michigan. This project, known as the Willow Road Tunnel project, would combine improvements for 5 areas into a single project with a cost estimate of $34.5 million. This project would provide benefits to the North Willow Road, South Willow Road, Provident Avenue, Cherry Street Outlet and the Winnetka Avenue Underpass Study areas for the 100-year design storm event. Preliminary engineering and a detailed feasibility study have been completed for this project, and the next step is to contract with an engineering firm to develop the preliminary engineering into detailed engineering plans, permit applications, and construction bidding documents. Staff is proposing a two-step, qualifications-based process to select an engineering firm to complete this work.

The first step is a Request for Qualifications (RFQ). An RFQ is often used as a first step in the Request for Proposals (RFP) process, and is used to gather vendor information from multiple companies to generate a pool of prospects. This eases the RFP review process by preemptively short-listing candidates which meet the desired qualifications. With Council concurrence, staff plans to publish the RFQ in July, with a response due date in August. It is anticipated that after response evaluation, between three and five firms would be short-listed and provided with an RFP. An RFP is significantly more detailed than an RFQ and includes a detailed project approach, scope of services, deliverables, and a fee proposal. It is anticipated that an RFP would be issued to short-listed firms in September with responses due in October or early November. Interviews would be scheduled with the top two or three firms, with an anticipated contract award by the end of the year.

Staff has researched two principal delivery methods for public entities to purchase construction services - General Contracting Bidding and Construction Management. These approaches are detailed in the attached Agenda Report. Staff currently anticipates seven construction phases for the project, with the first phase, consisting of the outfall, energy dissipater, water quality structure and 96-inch RCP storm sewer along Willow Road from Lake Michigan to Provident Avenue, being contracted by the "Construction Manager At-Risk" contract delivery method.

Recommendation / Suggested Action:

Provide policy direction:
1. Review draft Request For Qualifications document for ENGINEERING SERVICES - DETAILED DESIGN AND PERMITTING FOR WILLOW ROAD STORMWATER TUNNEL AND AREA DRAINAGE IMPROVEMENTS and provide comments;
2. Provide comments on proposed engineering selection process;
3. Review proposed construction contract delivery methods and provide comments;
4. Consider authorizing staff to publish the Request For Qualifications.

Attachments:

1. Agenda Report
2. Draft Request for Qualifications for ENGINEERING SERVICES - DETAILED DESIGN AND PERMITTING FOR WILLOW ROAD STORMWATER TUNNEL AND AREA DRAINAGE IMPROVEMENTS

Agenda Report

Subject: **Willow Road Stormwater Tunnel – Engineering Procurement and Construction Contracting Methods**

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

Date: July 1, 2013

Engineering Procurement.

The Village has identified a major stormwater improvement project, consisting of a new storm sewer beneath Willow Road that would convey water from a roughly 900-acre drainage area on the west side of the Village eastward towards Lake Michigan. This project, known as the Willow Road Tunnel project, would combine improvements for 5 areas into a single project with a cost estimate of $34.5 million. This project would provide benefits to the North Willow Road, South Willow Road, Provident Avenue, Cherry Street Outlet and the Winnetka Avenue Underpass Study areas for the 100-year design storm event. This proposed improvement consists of an 8-foot diameter storm sewer underneath Willow Road running from approximately Glendale Avenue to Lake Michigan, a distance of 7,900 feet. Approximately 3,800 feet would be constructed by tunneling, the remainder by open cut methods. The project includes construction of additional storm sewer connected to the tunnel to provide relief to 5 drainage basins affected by frequent and/or severe stormwater flooding, construction of a structure to address water quality, and construction of an outlet structure to control water velocity and prevent erosion.

Preliminary engineering and a detailed feasibility study have been completed for this project, and the next step is to contract with an engineering firm to develop the preliminary engineering into detailed engineering plans, permit applications, and construction bidding documents. Staff is proposing a two-step, qualification-based process to select an engineering firm to complete this work.

The first step is a Request for Qualifications (RFQ). An RFQ is often used as a first step in the Request for Proposals (RFP) process, and is used to gather vendor information from multiple companies to generate a pool of prospects. This eases the RFP review process by preemptively short-listing viable candidate firms that meet the desired qualifications. With Council concurrence, staff plans to publish the RFQ in July, with a response due date in August. It is anticipated that after response evaluation, between three and five firms would be short-listed and subsequently provided with an RFP.

An RFP is significantly more detailed than an RFQ and includes a detailed project approach, scope of services, deliverables, and a fee proposal. It is anticipated that an RFP would be issued to short-listed firms in September with responses due in October or early November. Interviews would be scheduled with the top two or three firms, with an anticipated contract award by the end of the year.

Attachment #1 is a Draft RFQ, for Council review and comment.

Construction Contracting Methods

There are two principal delivery methods for public entities to purchase construction services - **General Contracting Bidding** and **Construction Management.**

GENERAL CONTRACTING BIDDING

Sometimes referred to as the traditional approach, this process is typified by a consecutive phased delivery of Design - Bid – Construct. It requires the services of a General Contractor, who in competition with other general contractors, provides a bid to build the project after all the design decisions and construction documents are complete. The award is made in a single lump sum construction contract or a unit price/not-to-exceed contract. The General Contractor signs an agreement directly with the Village to construct the project and can award the sub-trades without the Village's input or approval. The Contractor provides supervision and coordination on the construction site and may, at the firm's sole discretion, self-perform some of the trade work. The Contractor contracts for and is responsible for the performance of all his workers and any sub-trades. Any savings below the lump sum award or within the unit prices resulting from negotiations with the sub-trades or economies that are realized during construction, accrue entirely to the General Contractor.

This delivery method provides the lowest cost for a given set of documents, however because the cost is fixed for those documents, any changes in the scope of the work or ambiguities in the construction documents are open to interpretation/negotiation and subject to change orders for either time, dollars or both. These issues can lead to an adversarial relationship between the Village, Design Engineer, and Contractor.

The General Contracting delivery method is most successful in:

1. New, out of the ground construction
2. Linear projects such as roadway, sewer, stormwater and water main improvements, where the connecting work can be adequately detailed and graphically explained.
3. Projects where the schedule is not critical, complex or overly aggressive.
4. Projects where additive or deductive alternates can be easily identified and bid, so post bid scope adjustments can be made.

CONSTRUCTION MANAGEMENT

This delivery method brings the contractor into the design team and assists the Village in making schedule and scope decisions early in the process. It is typified by a consecutive phase methodology of Design – Estimate – Final Design – Bid – Build. Under the Construction Management approach, the purchase process is separated into two phases. The Construction Manager is first selected during the project's Preliminary Design phase. The selection is based on the Construction Manager's experience and qualifications and

competitive cost to provide three of the four construction cost categories: Preconstruction Services, General Conditions and Profit/Overhead (with the latter being expressed as a percent of the total project cost). Upon selection, these costs are then fixed and become part of the final construction cost. The Construction Manager then works with the Village and the design/engineering professionals to define the remaining trade costs by estimating the work at the end of each design phase and during the development of the final construction documents.

This approach, used successfully for the Village Yards Project, provides more frequent and accurate cost estimates. The Village and design professionals can use this information throughout the design process and not wait until construction documents are completed. Cost and schedule issues can be identified and dealt with earlier in the process - saving time and effort. One aspect of this approach that is attractive to owners is that if desired, the Construction Manager can be asked to convert an estimate to a Guaranteed Maximum Price (GMP) for the work at any point in the process. This transfers all the risk of cost overruns, except for those associated with changes in project scope, to the Construction Manager. Once the GMP is established, the project scope, the construction cost and a schedule for the work are then fixed.

Once the entire set or a portion of the construction documents are finalized, the Construction Manager completes the second phase of the purchase process. Bid scopes are prepared and the documents for competitive bids are released at the trade level. The Construction Manager receives and opens the bids (either publically or privately) and makes award recommendations to the Village for the lowest qualified bidders. Releasing the documents in packages allows the Construction Manager to identify and place orders for long lead items - fast tracking the delivery and saving time in the overall construction schedule. In order to assure contracting transparency, the sub-trades may be bid using the Village's competitive bidding procedures, as was done bidding for the Village Yards project. This establishes that contract pricing is open book, and that the Village is involved in the award process.

Once the entire project is awarded, the process continues in a very similar manner to the General Contracting delivery method with three important differences:

1. Any savings below the GMP amount, resulting from negotiations with the sub-trades or economies that are realized during construction, are returned in whole or part to the Village;
2. Since the GMP is based on the anticipated scope of the work and not the given set of documents, any ambiguities in the construction documents or unknowns are less subject to change orders for either time, dollars or both. The only changes that affect the GMP are changes in scope directed by the Village, and;
3. With the contractor as part of the team early on, the potential for adversarial relationships is minimized.

The Construction Manager delivery method is most successful in:

1. Complex or multi-phased projects.
2. Projects where the Village needs to fix the scope and cost early in the process
3. Complicated projects where there are a lot of unknowns or where the Village needs to keep some portion of the system in operation.
4. Projects that have aggressive or critical schedules.

Construction Management is performed "At Risk". The CM provides preconstruction consultation and estimating during the design phases, trade bidding services, supervision and coordination of the trades at the construction site. The Village signs a contract direct with the Construction Manager for a specific cost and a completion date. The Construction Manager is "at risk" should the GMP be exceeded or schedule be extended. The Construction Manager contracts directly with the sub-trades for the work and is responsible for the performance of all the trades. If a subcontractor does not perform for financial or quality reasons the Construction Manager must cure the problem at no additional cost to the Village.

For project construction, staff envisions seven phases. Phase 1 must be completed first. However after completion of Phase 1, several of the remaining phases could be constructed concurrently.

Phase 1. Outfall, Energy Dissipater, Water Quality Structure and 96-inch Reinforced Concrete Pipe (RCP) storm sewer along Willow Road from Lake Michigan to Provident Avenue. The tunnel component is from Poplar Street to Birch Street, and is part of this first phase. **It is anticipated that this phase would be contracted by the "Construction Manager At-Risk" contract delivery method.**

Phase 2. 96-inch RCP on Willow Road from Provident Road to Glendale Avenue. This project will be constructed as part of a Jurisdictional Transfer from IDOT to the Village. **It is anticipated that this phase, and remaining phases, would be contracted by the traditional (Design-Bid-Construct) contract delivery method.**

Phase 3. 48, 54 and 72-inch RCP storm sewer on Poplar Street, Cherry Street and Sheridan Road.

Phase 4. 84-inch RCP storm sewer on Winnetka Road, Essex Road and Sheridan Road.

Phase 5. 66-inch RCP on Birch Street.

Phase 6. 60-inch RCP on Provident Avenue and Blackthorn Road.

Phase 7. 96-inch RCP on Glendale Avenue, 60-inch RCP on Cherry and Ash Streets, 5' x 8' RCBC on Oak Street, and a 84-inch RCP on Hibbard Road. This phase cannot be constructed until Phase 2 is complete.

Recommendation:
Provide policy direction:

1. Review attached draft Request For Qualifications document for ENGINEERING SERVICES - DETAILED DESIGN AND PERMITTING FOR WILLOW ROAD STORMWATER TUNNEL AND AREA DRAINAGE IMPROVEMENTS and provide comments;
2. Provide comments on proposed engineering selection process;
3. Review proposed construction contract delivery methods and provide comments;
4. Consider authorizing staff to publish the Request For Qualifications.

Attachments:
1. Draft Request for Qualifications for ENGINEERING SERVICES - DETAILED DESIGN AND PERMITTING FOR WILLOW ROAD STORMWATER TUNNEL AND AREA DRAINAGE IMPROVEMENTS

REQUEST FOR QUALIFICATIONS

VILLAGE OF WINNETKA

ENGINEERING SERVICES
DETAILED DESIGN AND PERMITTING
WILLOW ROAD STORMWATER TUNNEL
AND AREA DRAINAGE IMPROVEMENTS

RFQ 13-***

ISSUED: July xx, 2013

RESPONSES DUE: August xx, 2013

PREPARED BY:
Steven M. Saunders, Director of Public Works
Village of Winnetka
1390 Willow Road
Winnetka, IL 60093
Telephone: 847-716-3534
Fax: 847-716-3599
ssaunders@winnetka.org

I. INTRODUCTION

The Village of Winnetka is requesting detailed qualifications from engineering firms to provide professional services for preliminary engineering, permitting, final engineering and construction oversight for the proposed Willow Road Stormwater Tunnel and for storm sewer improvements in the 5 associated drainage areas proposed to be connected to the tunnel. It is the Village's intention to proceed with consultant selection in two steps. The first is the Request for Qualifications (RFQ) as presented in this document. After review of the RFQ responses, the Village will issue a Request for Proposals (RFP) to select consultants.

II. PROJECT DESCRIPTION

The Village has identified a major stormwater improvement project, consisting of a new storm sewer beneath Willow Road that would convey water from a roughly 900-acre drainage area on the west side of the Village eastward towards Lake Michigan. This project, known as the Willow Road Tunnel project, would combine improvements for 5 areas into a single project with a cost estimate of $34.5 million. This project would provide benefits to the North Willow Road, South Willow Road, Provident Avenue, Cherry Street Outlet and the Winnetka Avenue Underpass Study areas for the 100-year design storm event. This proposed improvement consists of an 8-foot diameter storm sewer underneath Willow Road running from approximately Glendale Avenue to Lake Michigan, a distance of some 7,900 feet. Approximately 3,800 feet would be constructed by tunneling, the remainder by open cut methods. The project includes construction of additional storm sewer connected to the tunnel to provide relief to 5 drainage basins affected by frequent and/or severe stormwater flooding, construction of a structure to address water quality, and construction of an outlet structure to control water velocity and prevent erosion.

The Village has completed a detailed feasibility analysis of the proposed project, consisting of the review of the following factors:

- Soil Borings
- Railroad Coordination
- Outfall Conditions
- Regulatory & Permitting Considerations
- Construction Costs and Methods
- Utility Conflicts

The Village has also evaluated an alternate route consisting of using Ash Street rather than Willow Road for the main run of storm sewer, and has concluded that Willow Road is the preferred route.

For project construction, the Village envisions seven phases. Phase 1 must be completed first. However after completion of Phase 1, several of the remaining phases could be constructed concurrently.

1. Outfall, Energy Dissipater, Water Quality Structure and 96-inch RCP storm sewer along Willow Road from Lake Michigan to Provident Avenue. The tunnel component is from Poplar Street to Birch Street, and is part of this first phase. It is anticipated that this phase may be contracted by the "Construction Manager At-Risk" contract delivery method.
2. 96-inch RCP on Willow Road from Provident Road to Glendale Avenue. This project will be constructed as part of a Jurisdictional Transfer from IDOT to the Village. The road plans have been prepared by others.
3. 48, 54 and 72-inch RCP storm sewer on Poplar Street, Cherry Street and Sheridan Road.
4. 84-inch RCP storm sewer on Winnetka Road, Essex Road and Sheridan Road.
5. 66-inch RCP on Birch Street.
6. 60-inch RCP on Provident Avenue and Blackthorn Road.
7. 96-inch RCP on Glendale Avenue, 60-inch RCP on Cherry and Ash Streets, 5' x 8' RCBC on Oak Street, and a 84-inch RCP on Hibbard Road. This phase cannot be constructed until phase 2 is complete.

III. SCOPE OF WORK

A general scope of work is outlined in the following paragraphs. It is the Village's intention to proceed as follows:

A. Project Management - Overall management of the work including planning, meeting, coordinating, scheduling, quality control, reporting and invoicing. The Consultant will be required to communicate with fully private entities such as Union Pacific Railroad (UPRR), public and private utilities such as North Shore Gas Company, AT&T, Comcast, and others, as well as with other federal and state governmental entities identified in the Permitting section, local entities including Winnetka Park District, Winnetka School District 36, and New Trier High School District, and the Public as needed concerning project functions, design, schedules, and other requirements. The Consultant shall provide services to document all phases of design and construction of the project.

The Village and Consultant Project Managers will meet periodically as required (typically at two-week intervals during the planning and design phase of the project). These Progress Meetings will be used to coordinate the work effort and resolve problems, and the meetings will be required throughout the duration of the design of the project.

It is the Village's intent to you the "Construction Manager-At Risk" form of agreement for the first phase of the project (i.e., the Willow Road Tunnel). For the remaining phases, the Village plans to use the General Contractor form of agreement. To that end, the design professional shall:

1. Participate as a member of the Village's CM at Risk Prequalification Committee and CM at Risk Selection Committee.
2. When authorized by the Village, prepare for reproduction and distribution all project design documents, that are required for the solicitation and receipt of qualifications and proposals from CM at Risk firms. The Designer shall prepare all addenda (to include questions from CM at Risk firms and Designer responses), subject to the approval of the Village. The Designer shall attend a pre-proposal conference, and existing site and building tour if either or both are to be scheduled, taking note of all questions asked. Relevant questions submitted in writing shall be answered by the Designer by means of written addenda to the RFQ or RFP described below, as required.
3. As a member of the Village's CM at Risk prequalification committee, shall review and evaluate in conjunction with the Prequalification Committee, the Statements of Qualifications received from CM at Risk firms on the basis of the evaluation criteria established in the RFQ and shall make appropriate recommendations regarding the selection of qualified CM at Risk firms to receive a request for proposals from the Village.
4. As a member of the Village's CM at Risk selection committee, review and evaluate the RFP's received from prequalified CM at Risk firms on the basis of the evaluation criteria included in the RFP. The Designer shall make appropriate recommendations regarding the evaluation and ranking of RFP's and the conducting of interviews, if any. If the Selection Committee elects to conduct interviews of the CM at Risk firms, the Designer shall participate in conducting interviews.

B. Preliminary Engineering - The Consultant will review the initial concept, all technical issues, and all project requirements with the Village. Following is a listing of proposed activities:

1. Review the previous drainage investigations which are available on the FTP site.
2. Identify required permits, license agreements, and easements.
3. Verify the existing master plan hydrologic and hydraulic models for the basins in this project and modify as necessary for their purposes.
4. Conduct a field survey as necessary and establish control for the project.
5. Review the existing soils and pavement reports and supplement as necessary.
6. Identify and locate utilities along the proposed alignments and locate potential conflicts.
7. Produce a report detailing the results of their studies.
8. Perform the preliminary design of the storm sewer system(s).
9. Develop a preliminary construction-phasing plan which integrates the construction of all the project work elements into a practical and feasible

sequence. This includes a report on construction methods and contracting alternatives.

10. Develop a traffic control plan that is compatible with the phasing plan.
11. Develop a mitigation plan to address potential geotechnical and environmental conflicts.
12. Provide Design Services in a manner consistent with the CM at Risk Delivery Method for all phases of design. For the construction projects, the Village envisions using the CM at Risk for Phase 1 (i.e., the Willow Road Tunnel as described in Section II.1 above). For the remaining phases, the Village envisions using the traditional General Contractor format.
13. Prepare plans and specifications for discrete portions of the program that can be incorporated into separate bid packages as enumerated in Section II, and identify and describe any multiple bid packages or fast-tracked construction that may be used and any separate bid packages that may be required.

C. Permitting - The proposed project will require permits from various regulatory agencies and units of government. The Village's preliminary evaluation indicates that permits will be required from the following agencies:

1. US Army Corps of Engineers
2. Illinois Environmental Protection Agency
3. Illinois Department of Natural Resources
4. Metropolitan Water Reclamation District of Greater Chicago
5. North Cook County Soil & Water Conservation District
6. Illinois Department of Transportation
7. Union Pacific Railroad

D. Final Engineering – Based on comments from the Preliminary Engineering and Permitting phases, the Consultant will prepare final construction documents suitable for bidding to include plans, specifications, cost estimates, surveys, and geotechnical investigations.

E. Construction Oversight – Following are services required of the consultant during the construction phase of the projects:

1. Provide construction observation
2. Respond to and track Requests for Information
3. Review and approve shop drawings
4. Review and recommend changes
5. Review and approve payment applications
6. Conduct punchlist inspections
7. Assist in project closeout

F. Outreach – Public outreach is required throughout the course of the project. Potential meetings include:

1. Village Council briefings
2. Public information meetings at the 65% design stage for each phase of the project
3. Public information meetings required for permits
4. Pre-construction public information meetings?

IV. SUBMITTAL REQUIREMENTS

The deadline for submittals is **4:00 p.m. on August xx, 2013**. Five (5) paper copies and one (1) electronic copy of the submittal should be delivered to:

Raymond D. Restarski, Purchasing Agent
Village of Winnetka
510 Green Bay Road
Winnetka, IL 60093
(847) 716-3504
(847) 446-1139 (fax)
rrestarski@winnetka.org

A Pre-Submittal Meeting will be held at 9:00 am. local time on July xx, 2013, in the Council Chamber, **Village Hall, 510 Green Bay Road, Winnetka, IL 60093.** All firms interested in responding to the RFQ are encouraged to attend. All submitters will be held responsible for any information conveyed at the meeting. Further information about the meeting is contained in the RFQ.

To be considered for this project, the Consultant must submit an informative statement of interest to the Village, which also includes the following information, organized in the following manner to facilitate review:

A. Consultant Information

1. Company offices from which the project will be staffed.

2. Identify the staff members who will be assigned to this project and the qualifications of each individual, including resumes.

3. Related experience of project personnel.

4. List similar projects completed within the last five years, by the staff members that will be assigned to this project. Include a project description, date of project completion, and the name and telephone number of a representative of the contracting jurisdiction.

5. A list of contracts completed using the CM At-Risk contracting method.

6. A completed compliance affidavit (Attachment 1)

B. Approach to Project

The Consultant will propose a scope of work based upon the preliminary scope contained herein, and describe its approach in performing the proposed scope. For the proposed scope of work, the Consultant must specifically address the Village's use of the CM at Risk delivery method. Schedule

C. Schedule

A preliminary schedule for completing the project is required. This schedule should address all work and meetings recommended by the Consultant and which clearly corresponds to the Consultant's approach to the project.

V. QUALFICATION EVALUATION

Statements of qualifications will be evaluated by the Village according to the following criteria:

- Responsiveness to the RFQ
- Qualifications of the Project Team
- Qualifications of the Firm
- Work Plan and Project Approach using the Contracting Delivery Methods noted

The Village is placing significant importance on the consultant's qualifications and work plan as they pertain to the complexity of the project which includes:

- Multiple projects and phases
- Potential for multiple contractors with differing delivery methods
- Significant and overlapping regulatory review and permitting
- Budget and schedule controls

The consultant must clearly present their qualifications, philosophy and experience in engineering and managing similar projects with similar complexity and delivery methods.

Each submittal will be evaluated upon a scale of 1 to 10 for each of the above factors. Based on the qualification evaluation, it is the Village's intention to issue a RFP to select consultants. The Village President and Board of Trustees reserve the right to reject any and all submittals.

VI. INDEMNIFICATION

Respondents to this RFP shall understand that the successful proposer shall indemnify and hold harmless the Village of Winnetka, its agents, and its employees against any and all lawsuits, claims, demands, liabilities, losses or expenses, including court costs, and attorney's fees, for or on account of any injury to any person or any death at any time resulting from such injury, or any damaged property, which may be alleged to have arisen out of the negligent acts, errors, or omissions of the Consultant. It is further understood that this indemnification shall not be construed to cover the negligent acts or omissions of the Village of Winnetka, its agents, or its employees. It is additionally understood that this indemnification shall not be construed to cover the negligent acts or omissions of parties unrelated to this contract.

VII. LIST OF AVAILABLE DOCUMENTS

The following documents are available for review and downloading at the following ftp site, XXXXXX.

- Project Map
- Christopher B. Burke Engineering, Ltd. Report, June 2011
- Christopher B. Burke Engineering, Ltd. Report, October 2011
- Staff Tunnel Feasibility, September 2012
- Baird Outfall Report, June 2012
- Willow Road Jurisdictional Plans

In addition, the Village will have digital copies available at the pre-submittal meeting.

VIII. ATTACHMENTS

1) Compliance Affidavit

ATTACHMENT 1

COMPLIANCE AFFIDAVIT

As a condition of entering into a contract with the Village of Winnetka, and under oath and penalty of perjury and possible termination of contract rights and debarment, the undersigned deposes and states that he has the authority to make any certifications required by this Affidavit on behalf of the bidder, and that all information contained in this Affidavit is true and correct in both substance and fact.

Section 1: BID RIGGING AND ROTATING

1. This bid is not made in the interest of, or on behalf of an undisclosed person, partnership, company, association, organization or corporation;

2. The bidder has not in any manner directly or indirectly sought by communication, consultation or agreement with anyone to fix the bid price of any bidder, or to fix any overhead profit or cost element of their bid price or that of any other bidder, or to secure any advantage against the Village of Winnetka or anyone interested in the proper contract;

3. This bid is genuine and not collusive or sham;

4. The prices, breakdowns of prices and all the contents quoted in this bid have not knowingly been disclosed by the bidder directly or indirectly to any other bidder or any competitor prior to the bid opening;

5. All statements contained in this bid are true;

6. No attempt has been or will be made by the bidder to induce any other person or firm to submit a false or sham bid;

7. No attempt has been or will be made by the bidder to induce any other person or firm to submit or not submit a bid for the purpose of restricting competition;

8. The undersigned on behalf of the entity making this proposal or bid certifies the bidder has never been convicted for a violation of State laws prohibiting bid rigging or rotating.

Section 2: TAX COMPLIANCE

1. The undersigned on behalf of the entity making this proposal or bid certifies that neither the undersigned nor the entity is barred from contracting with the Village of Winnetka because of any delinquency in the payment of any tax administered by the State of Illinois, Department of Revenue, unless the undersigned or the entity is contesting, in accordance with the procedures established by the appropriate revenue

act, liability of the tax or the amount of tax;

2. The undersigned or the entity making this proposal or bid understands that making a false statement regarding delinquency of taxes is a Class A Misdemeanor and in addition voids the contract and allows the municipality to recover all amounts paid to the entity under the contract in civil action.

Section 3: EQUAL EMPLOYMENT OPPORTUNITY

This EQUAL OPPORTUNITY CLAUSE is required by the Illinois Human Rights Act, 775 ILCS 5/101 et seq.

In the event of the contractor's non-compliance with any provision of the Equal Employment Opportunity Clause, the Illinois Human Rights Act, or the Rules and Regulations for Public Contracts of the Department of Human Rights, the contractor may be declared non-responsive and therefore ineligible for future contractor subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and the contract may be canceled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies involved as provided by statute or regulations.

During the performance of this contract, the contractor agrees:

1. That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin or ancestry; and further that it will examine all job classifications to determine if minority persons or woman are underutilized and will take appropriate action to rectify any such underutilization;

2. That, if it hires additional employees in order to perform this contract, or any portion hereof, it will determine the availability (in accordance with the Department's Rules and Regulations for Public Contract's) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized;

3. That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service.

4. That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other such agreement or understanding, a notice advising such labor organization or representative of the contractor's obligation under the Illinois Human Rights Act and the Department's Rules and Regulations for Public Contract. If any such labor organization or representative fails or refuses to cooperate with the contractor in its efforts to comply with such Act and Rules and Regulations, the contractor will promptly so notify the Department and

contracting agency will recruit employees from other sources when needed to fulfill its obligation hereunder.

5. That it will submit reports as required by the Department's Rules and Regulations for Public Contracts, furnish all relevant information as may from time to time be requested by the Department or contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's Rules and Regulations for Public Contracts.

6. That it will permit access to all relevant books, records, accounts, and work sites by personnel of the contracting agency and the Department for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Departments Rules and Regulations for Public Contracts.

7. That it will include verbatim or by reference the provisions of this Equal Opportunity Clause in every subcontract it awards under which any portion of the contract obligations are undertaken or assumed, so such provisions will be binding upon such subcontractor. In the same manner as the other provisions of this contract, the contractor will be liable for compliance with applicable provisions of this clause by such subcontractors; and further it will promptly notify the Department in the event any subcontractor fails or refuses to comply therewith. In addition, the contractor will not utilize any subcontractor declared by the Illinois Human Rights Department to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

Section 4: ILLINOIS DRUG FREE WORK PLACE ACT

The undersigned will publish a statement:

1. Notifying employees that the unlawful manufacture, distribution, dispensation, possession, or a use of a controlled substance is prohibited in the work place;

2. Specifying the actions that will be taken against employees for violating this provision;

3. Notifying the employees that, as a condition of their employment to do work under the contract with the Village of Winnetka, the employee will:

    A. Abide by the terms of the statement;

    B. Notify the undersigned of any criminal drug statute conviction for a violation occurring in the work place not later than five (5) days after such a conviction.

4. Establishing a drug free awareness program to inform employees about:

    A. The dangers of drug abuse in the work place;

B. The policy of maintaining a drug-free work place;

C. Any available drug counseling, rehabilitation or employee assistance programs;

D. The penalties that may be imposed upon an employee for drug violations.

5. The undersigned shall provide a copy of the required statement to each employee engaged in the performance of the contract with the Village of Winnetka, and shall post the statement in a prominent place in the work place.

6. The undersigned will notify the Village of Winnetka within ten (10) days of receiving notice of an employee's conviction.

7. Make a good faith effort to maintain a drug free work place through the implementation of these policies.

8. The undersigned further affirms that within thirty (30) days after receiving notice of a conviction of a violation of the criminal drug statute occurring in the work place he shall:

A. Take appropriate action against such employee up to and including termination; or

B. Require the employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a federal, state, or local health, law enforcement, or other appropriate agency.

Section 5: SEXUAL HARRASSMENT POLICY

The undersigned on behalf of the entity making this proposal or bid certifies that a written sexual harassment policy is in place pursuant to Public Act 87-1257, effective July 1, 1993, 775 ILCS 5/2-105 (A).

This Act has been amended to provide that every party to a public contract must have written sexual harassment policies that include, at a minimum, the following information:

1. The illegality of sexual harassment;

2. The definition of sexual harassment under State law;

3. A description of sexual harassment, utilizing examples;

4. The vendor's internal complaint process, including penalties;

5. The legal recourse, investigative and complaint process available through the Department of Human Rights, and the Human Rights Commission;

6. Directions on how to contact the Department and Commission;

7. Protection against retaliation as provided by 6-101 of the Act.

Section 6: VENDOR INFORMATION

1. Is the bidder a publicly traded company? (yes or no) _____
If the answer is yes, state the number of outstanding shares in each class of stock. Provide the name of the market or exchange on which the company's stock is traded.

_____

_____

_____

_____

2. Is the bidder 50% or more owned by a publicly traded company? (yes or no) _____

If the answer to the above question is yes, name the publicly traded company or companies owning 50% or more of your stock, state the number of outstanding shares in each class of stock and provide the name of the market or exchange on which the stock of such company or companies is traded.

_____

_____

_____

_____

IT IS EXPRESSLY UNDERSTOOD THAT THE FOREGOING STATEMENTS AND REPRESENTATIONS AND PROMISES ARE MADE AS A CONDITION TO THE RIGHT OF THE BIDDER TO RECEIVE PAYMENT UNDER ANY AWARD MADE UNDER THE TERMS AND PROVISIONS OF THIS BID.

SIGNATURE:_____

NAME:_____ TITLE: _____
(print or type)

Subscribed and sworn to me this _____day of_____, 2012, A.D.

By:
(Notary Public)

-Seal-