



Agenda Item Executive Summary

Title: Stormwater Report – Year in Review

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

Agenda Date: 12/16/2014

Consent: YES NO

- | | |
|-------------------------------------|-------------------------|
| <input type="checkbox"/> | Ordinance |
| <input type="checkbox"/> | Resolution |
| <input type="checkbox"/> | Bid Authorization/Award |
| <input type="checkbox"/> | Policy Direction |
| <input checked="" type="checkbox"/> | Informational Only |

Item History:

2014 Stormwater Monthly Reports

Executive Summary:

During 2014, the Village has made significant progress in its efforts to mitigate stormwater and sanitary sewer flooding and backups, and to further stormwater management and planning. The Village has completed several projects, advanced the Northwest Winnetka and Willow Road Stormwater Tunnel projects, and completed planning and funding activities. The attached report details the Village's 2014 stormwater activities and planned 2015 activities.

Recommendation:

Informational Report

Attachments:

Agenda Report

Agenda Report

Subject: Stormwater Report – Year in Review

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

Date: December 9, 2014

During 2014, the Village has made significant progress in its efforts to mitigate stormwater and sanitary sewer flooding and backups, and to further stormwater management and planning. The Village has completed several projects, advanced the Northwest Winnetka and Willow Road Stormwater Tunnel projects, and completed planning and funding activities. Following are details of 2014 activities:

Construction projects

1. Northeast Winnetka – Lloyd Outlet Project. This project consisted of constructing a separate outlet from the northern portion of the northeast Winnetka watershed, diverting stormwater from an existing Lake Michigan outlet at Spruce Street to a new outlet across the south end of Lloyd Park. By reducing the amount of stormwater that must discharge to the Lake at Spruce Street, this project provides stormwater relief in the southern portion of the watershed along Sheridan Road near Maple, Pine, and Spruce Streets. The project was completed for a total cost of \$296,299 including engineering.
2. Northeast Winnetka – Tower/Old Green Bay Relief Sewer Project. This project consisted of constructing a new large-diameter stormwater sewer system underneath Tower Road between Lincoln Avenue and Old Green Bay Road, and under Old Green Bay Road between Tower Road and Hubbard Place. The project provides increased flood protection for homes along and north of Tower Road by directing stormwater to an existing storm sewer, with excess capacity, that discharges to Lake Michigan at the Sheridan Road Ravine. Construction was completed this summer, and once the final contractor payment is processed it is anticipated that the total cost of this project, including engineering, will be \$1,350,000.
3. Winnetka Avenue Pump Station Improvements. This project involved replacing the existing pumps at the Winnetka Avenue Pump Station with higher capacity pumps, increasing station capacity by 50%, from 40,000 GPM to 60,000 GPM. The project also included an automated system for cleaning debris from the intake grates, increasing the functionality and reliability of the pump station. This improvement will reduce tailwater effects in the Hill, Hibbard, and Willow Road storm sewers, providing increased flood protection to areas of southwest Winnetka. This project was completed for a cost of \$1,073,581, including design and construction engineering.

4. Manhole Rehabilitation Project (awarded). Engineering and bidding were completed for a project to rehabilitate approximately 177 sanitary manholes to reduce Inflow/Infiltration (I/I) of stormwater into the sanitary sewer system. Excessive I/I can cause surcharging of sanitary sewers and lead to basement backups. Rehabilitation activities under this contract include replacement of frames and covers, chimney seals, and lining of manholes. Construction will commence in spring of 2015, at an estimated cost of \$196,226.
5. Northwest Winnetka/Forest Glen Improvements (awarded). Engineering design, permitting, bidding, and contract award were completed for the Northwest Winnetka stormwater improvements. This project consists of constructing a new, large-diameter storm sewer system under Tower Road, Grove Street, Edgewood Lane, and Forest Glen Drive, to provide increased flood protection for these areas. Stormwater will be conveyed to the Tower Road lagoon located on Cook County Forest Preserve District property, south of Tower Road and west of Heather Lane. The project also includes reconstruction of Tower Road as a concrete pavement, and other utility work. The project was awarded for \$6,117,230, and construction will commence in spring, 2015.
6. Ash Street Pump Station project (awarded). This project consists of replacement and upgrading of the existing pump station at Ash Street and Hibbard Road. The existing pumps are beyond the end of their useful life and are undersized compared to the discharge point. The project has been awarded for \$255,150. Construction will begin in spring of 2015.

Willow Road Stormwater Tunnel and Area Drainage Improvements

1. Contracted with MWH for Willow Road Tunnel engineering. In January, 2014, the Village contracted with MWH Global to complete engineering for the Willow Road Stormwater Tunnel and Area Drainage Improvements (STADI) project. The contract was the result of a two-stage RFQ/RFP process and consists of work necessary to advance the project from the initial preliminary stages through design, permitting, and bidding. The contract is structured with 3 intermediate review points to allow for Council and public review and discussion at key points during project development, and to allow decision points for the Council to move forward with the project or terminate the project. The value of the awarded contract was \$2,023,818.
2. Completed preliminary/review engineering and Review Point #1. The first review point discussed above took place in June of 2014 and consisted of a Concept Review, Permit Plan, and Hydrologic/Hydraulic Model Verification. MWH confirmed that the Willow Road STADI Project can provide flood-prone portions of Winnetka with a significant reduction in the risk of structure or major roadway flooding for local rainfall events up to the 1% Annual Chance Storm. Moreover, these and previous analyses suggest that this approach may be the only technically feasible option for providing the reliable supplemental drainage capacity needed to meet the Village's performance objectives. However, a comprehensive water quality management plan must be developed to demonstrate how the project can be implemented without adverse impacts on conditions in Lake Michigan or at Winnetka's beaches. The Village Council directed MWH to proceed with preliminary engineering and phase 1 permitting tasks as outlined in the project scope of services, and with the final development and implementation of a supplemental program of water quality sampling and analysis.

3. Working towards 30% drawings, cost estimates, and designs in anticipation of Review Point #2 in early 2015. Pursuant to Council direction, MWH collected additional water quality data, survey results, and geotechnical information that are needed to move the project forward to a 30% design and complete the initial Joint Permit Application to the IEPA, U.S. Army Corps of Engineers, and the Illinois Department of Natural Resources. As part of that design effort, an updated opinion of probable construction costs is being prepared to assess how changes in project details and requirements may impact the current construction budget. This information will be presented in Review Point #2 in early 2015.

Planning/Study/Funding projects

1. Completed and adopted Stormwater Master Plan. On April 17, 2014, the Village Council adopted the Village's Stormwater Master Plan, culminating nearly 2 years of work. Prepared by Baxter & Woodman Consulting Engineers, the Stormwater Master Plan provides a comprehensive statement of the Village's current stormwater management policies and activities, in order to facilitate the implementation of planned improvements, and to provide a guide for policy and decision-making over the next five to 10 years on matters related to managing the volume and quality of stormwater runoff and sanitary sewer discharges in an environmentally sensitive and sustainable way. The plan builds on previous studies and plans and addresses areas such as stormwater management and flood reduction, sanitary sewers, water quality, floodplain management, maintenance, and funding sources.
2. Implemented stormwater utility. On March 4, 2014, the Village Council adopted Ordinance MC-2-2014, implementing a stormwater utility fee to fund ongoing and proposed stormwater management activities. This action followed approximately 16 months of feasibility and implementation study, and results in a consistent, equitable, and transparent funding source for the Village's stormwater activities.
3. Obtained \$2 million Metropolitan Water Reclamation District (MWRD) funding for the Northwest Winnetka project. In 2013, staff submitted several projects to the MWRD for consideration under their proposed Phase II Stormwater Funding program, under which MWRD partners with municipalities to fund local stormwater projects. The Village's Northwest Winnetka project was selected for funding, and an Intergovernmental Agreement was approved in August, 2014, securing \$2 million in MWRD funding.
4. Completed Flood Solutions Project using funding from Illinois DCEO "IKE" grant program. In 2012, the Village partnered with the Villages of Glenview and Niles to apply for disaster mitigation and planning funding made available as a result of Hurricane Ike, which affected the Chicago area in September 2008. In 2013, the Villages were awarded funding, and in 2014 the Villages completed the Water Solutions Project, resulting in flood hazard mitigation plan supplements, adoptable by each municipality, that build from a process of research, analysis, and public participation, and provide clear recommendations for action. The project deliverables will serve as a public process and solution template that can be repeated and implemented on a neighborhood-by-neighborhood basis, throughout each of the Villages, as a part of each Village's stormwater and flood mitigation plans, and in conjunction with the Cook County All Hazards Mitigation Plan currently under development.

The Village adopted the Water Solutions Project as an addendum to the Stormwater Master Plan by resolution in September, 2014.

During 2015, the Village will move forward with construction of the following projects:

1. Northwest Winnetka Stormwater Improvements.
2. Ash Street Pump Station Improvements
3. Sanitary Manhole Rehabilitation Improvements
4. Sanitary Sewer Lining Improvements

The Village will also hold Review Point #2 for the Willow Road STADI project, and, if authorized by the Council, will proceed with engineering and permit submittals for the project.

Recommendation:

Informational report.