

2020 COMPREHENSIVE STORM SEWER SYSTEM PLAN UPDATE

CITY OF ISANTI, MINNESOTA

A. PURPOSE

The purpose for this report is to update the City's 2007 Comprehensive Storm Sewer System Plan based on recent improvements and current population projections.

This report evaluates the impact of the recent and projected development on the proposed storm sewer system infrastructure and incorporates the studies, permits, and procedures that have been adopted since the 2007 Comprehensive Storm Sewer System Plan:

- In 2011, the Anoka Conservation District created a report titled City of Isanti Stormwater Retrofit Assessment evaluating water quality in the City of Isanti what improvements could be made to the system. This report has been used to obtain Board of Water and Soil Resources (BWSR) grant money.
- In 2013, in order to comply with all of the above referenced new ordinances, procedures, and inspections the City adopted a Storm Water Utility Fee to distribute the costs of maintaining the City storm water management system proportionately across all property owners independent of tax status.
- On September 20, 2016 the City of Isanti became a Municipal Separate Storm Sewer System (MS4) community and began the implementation process to comply with the MS4 General Stormwater Permit. The City has since updated City Ordinances, established Construction Site Stormwater Runoff Control Practices, Began Construction Enforcement, adopted Enforcement Response Procedures, and Illicit Discharge Procedures.
- In 2016, the City also completed a Storm Sewer Apron and Pond Inventory Report where it identified maintenance needs throughout the storm sewer system.
- In 2016, A rain garden incentive program has also been adopted by the City.
- In 2018, a 2019-2028 Capital Improvement Plan was adopted that identified proposed improvement projects scheduled through 2028.

All of these procedures and ordinances shall be incorporated into the City of Isanti 2020 Comprehensive Plan and supersede the findings of the 2007 Comprehensive Storm Sewer System Plan.

The intent of this update is to complete the following:

- Identify improvements completed since the 2007 Comprehensive Plan,
- Identify new improvements that were not included in the previous plan, and
- Estimate project costs associated with the identified improvements.

B. SUMMARY OF INFRASTRUCTURE REVISIONS FROM THE 2007 COMPREHENSIVE PLAN

Section IV of the 2007 report describes the existing infrastructure that was in place at that time, and the identified deficiencies. For this report, we have reviewed the improvements made to the system since 2007 and have the following updates:

IV. Existing Storm Sewer System

A. Collection System

Improvements that have been completed since the 2007 Comprehensive Plan include:

- An annual storm system maintenance program was put into place in 2016. 3 of 5 years have been completed, restoring storm aprons, brushing out and dredging ponds to restore the system to the original designed function.
- Weekly inspections are performed by the City on all construction sites through out the City to verify storm water runoff is meeting NPDES requirements.

B. Detention, Treatment and Disposal

Improvements that have been completed since the 2007 Comprehensive Plan include:

- New construction is required to design infiltration basins that reduce or maintain the site runoff from the predevelopment condition.
- A storm water pond was constructed at the intersection of Palomino Road and Railroad Avenue.
 1. This pond was constructed to improve water quality to the Rum River.

Section VII of the 2007 report describes the recommendations for infrastructure improvements. For this report, we have reviewed the improvements made to the system since 2007 and evaluated the system to meet future needs and have the following updates:

VII. Recommendations for Storm Sewer System

A. Collection System

The 2007 Comprehensive Storm Sewer System Plan identified two proposed projects:

1. Drainage issues on Elizabeth Street and 2nd Avenue. – **(COMPLETED in 2008)**
2. As construction projects are completed in areas for which storm sewer is inadequate, upgrades to the existing storm sewer should be completed. These will be identified on a case-by-case basis, primarily in areas that are not currently served by storm sewer. – **(Not Complete)**

The City has identified another drainage issue in the ditch on the east side of Whiskey Road from Oakwood Street to Nina Street. This may require re grading the ditch bottom along Whiskey Road and replacing some section of the existing storm sewer system.

B. Treatment and Disposal

The 2007 Comprehensive Storm Sewer Priority Areas map identifies areas of the City with inadequate storm water treatment or fully land locked basins. As future construction projects occur in these areas, infiltration basins, rain gardens, and storm pipe network improvements will be evaluated.

The 2011 Storm Water Retrofit Assessment identified 8 recommended improvements in different catchment areas.

- The primary recommendation is to add rain gardens in the existing fully developed areas that have inadequate storm water treatment. These rain gardens will be evaluated with

each future reconstruction project that may occur. The City rain garden incentive program is also supporting the addition of these rain gardens.

- The Storm Water Retrofit Assessment also identifies locations for ponding or filtration modifications.
 1. Federated Co-Op Basin – Add a vertical riser to outlet and double basin area.
 2. VFW – Construct a rain garden with a sand filter.
- The 2019-2028 Capital Improvement Plan includes a 5-year pond maintenance program that is designed to restore the existing ponds and storm aprons to their designed function.

An updated Comprehensive Storm Sewer Priority Area Map showing the location of the priority projects is included in the appendix.

C. Summary of Storm Sewer System Improvements

- Many studies, report, assessments, procedures, and permit requirements have been adopted since the 2007 Comprehensive Storm Sewer System Plan.
- The City has many requirements to meet now that it is an MS4 community.

Table 10 below shows the updated priority project list and estimated project costs in 2020 dollars.

Table 10 – Storm Sewer System Improvement Projects

Project	Trigger	Estimated Cost	Planning Horizon
Storm Water Projects			
Storm Pond Maintenance	Regular Pond Maintenance	\$220,000	2020-2021
Whiskey Road Ditch Improvements	Flooding, Restricted Flow	\$50,000	Current
Rain Gardens	Rate Control, Volume Control	Site Specific	Current
Federated Co-Op Basin	Rate Control, Volume Control	\$30,000	1-5 years
VFW Sand Filter	Rate Control, Volume Control	\$60,000	1-5 years