



Legislation Text

File #: Res. 2020-113, **Version:** 1

City Council Meeting Date: December 1, 2020

To: Mayor and City Council
City Administrator

From: David E. Bennett, Public Works Director/City Engineer

Consider Resolution adopting the 2020 Surface Water Management Plan.

Action Requested:

The Northfield City Council approves the attached Resolution Adopting the 2020 Surface Water Management Plan.

Summary Report:

In 2007 the City adopted its Surface Water Management Plan; however, when the plan was updated the surface water model was not updated. The modeling information is from the 1995 Surface Water Management Plan. The modeling information is outdated and the amount of rainfall in a storm event has changed.

The 1995 model used the modeling methodology at that time called TP-40 statistical probability of rainfalls amounts and recurrence. That statistical information has been updated with Atlas-14 rainfall data. This is the current statistical rainfall information that is used by cities.

The City hired Bolton & Menk, Inc. to update its surface water model and also look into 18 different properties/areas that the City has either received calls/concerns of flooding or observed flooding from large rain events.

The surface water modeling report includes the following.

- Pipe Capacity - this has identified areas in the system that are under capacity and should be evaluated for possible upgrades in future CIP work
- 100-Year Pond Flooding and Peak Elevation - this will establish the regulator elevations at which homes/building need to build above
- Update to hydraulic model that is more dynamic and can easily be built upon as the City grows
- Capital Improvement Planning
- Climate Adaptation and Resiliency strategies

Key takeaways from the report include the following.

- 100-year Pond Flooding (7.3 Inch Rainfall in 24-hours), 2 properties impacted and 41 with limited freeboard

- Storm sewer network - generally has capacity for the 10-year storm (4.7 Inch Rainfall in 24 Hours) flooded intersections not causing property damage
- Future Growth Areas - Pond Sizing based on future land uses
- Neighborhood recommendations and costs

Staff recommends Council adopt the new 2020 Surface Water Management Plan. The plan will be used as regulatory flood control requirements for building permits, Climate Adaptation and Resiliency Strategies and future Capital Improvement Planning.

Alternative Options:

Financial Impacts:

The recommendations in the report will be considered and evaluated with future City Capital Improvement Plans.

Tentative Timelines:

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| ✓ November 17, 2020 | City Council Draft Report Presentation |
| ✓ November 18, 2020 | EQC Draft Report Presentation |
| Action Tonight December 1, 2020 | City Council Adopt Report |