



DEPARTMENT OF
**PUBLIC
WORKS**

MEMORANDUM

Date: March 25, 2025
To: Utilities Committee
From: Laura Jungwirth, Director of Public Works
Pete Neuberger, Deputy Director of Public Works/City Engineer
Subject: Northland – Bellaire Flood Study Update

On November 20, 2024, The Appleton Common Council authorized the Department of Public Works (DPW) to contract with stormwater consultant Brown and Caldwell (B&C) for the 2024D Northland Creek and Bellaire Watersheds Stormwater Evaluation in response to significant flooding that occurred following severe rainfall events in July 2024. The study limits are approximately bound by I-41 to the north, STH 441 to the east, Mason Street to the west, and Packard Street to the south.

DPW staff have been coordinating closely with Brown and Caldwell and would like to report the following progress and the ongoing and upcoming tasks anticipated for this contract.

Completed Tasks

- Kickoff meeting held December 11, 2024.
- Reviewed location and description of July 2024 and historic flooding reports with DPW.
- Updated the previously developed system models to reflect current industry standard rainfall distributions and depths.
- Merged previously developed Northland model and Bellaire model into one combined model incorporating both watersheds.
- Performed field site visits to verify previously modeled existing conditions, including flow paths.

Ongoing Tasks

- Performing subwatershed-level inlet capacity calculations.
- Running sensitivity analyses for two different antecedent moisture conditions.
- Running sensitivity analyses for concept-level scenarios using 10-year and 100-year storm events to narrow down potential locations and types of practices for more detailed evaluation.

Future Tasks

- Evaluate individual storage and conveyance alternative components and present initial findings to DPW for initial feedback.
- For highest ranked components, evaluate potential conflicts with other utilities and develop preliminary cost estimates.
- Develop WinSLAMM water quality models to identify potential stormwater pollution reduction measures that could be incorporated into the alternatives under consideration.
- Group most highly ranked individual alternative components into three combined alternatives and present to Utilities Committee with recommendations for approval.
- Develop design refinements for selected combined alternative to facilitate resolution of utility conflicts in preparation of future design phases.
- Prepare a technical memorandum documenting the procedures, recommended improvements, and conclusions for all tasks under this project.