City of Gardiner
Downtown Stormwater Management Study

"Knowing what is under those roads and sidewalks, its condition and needed repairs, will allow us to improve our roads and sidewalks in the most economical and efficient manner possible."

Mayor Thom Harnett

PARTNERS
Gardiner Main Street. Hoyle, Tanner & Associates was retained as project engineer.

PROJECT DESCRIPTION (completed February 2018)
The City of Gardiner conducted a study to assess portions of its downtown storm drainage system, evaluate alternatives for improvements to mitigate the impacts of periodic flooding, make priority recommendations and provide budget estimates for the recommended work. The study reflects the potential for redevelopment of an underutilized downtown industrial site.

ISSUE AREA
Downtown Gardiner on the north side from the intersection of Bridge Street and Maine Avenue, south to the Cobbossee Stream, along the stream to Harden Street, northwest to Willow Street, north along Willow and Hillcrest Streets to Spring Street, and back to the intersection of Bridge Street and Maine Avenue. Downtown Gardiner on the south side from the Maine Avenue bridge, south to the intersection of River Avenue and Cottage Street, west to Brunswick Avenue, down Brunswick Avenue to West Street, following West Street north to Water Street and following the Cobbossee Stream back to the Maine Avenue bridge.

APPLICABILITY TO OTHER MUNICIPALITIES
Many small Maine towns have a commercial area that has dated and/or insufficient infrastructure. Those towns often do not have the financial option to start fresh with their infrastructure. This model of inventorying what you have, and building new thinking into existing practices is a financially accessible approach.

CHALLENGE AND APPROACH

The City of Gardiner is densely developed in some sections with a very hilly terrain and significant flooding during heavy rain events. The existing information on stormwater infrastructure was very limited and based on DPW employee recollection of historic installations. Many pipes had unknown origin or discharge prior to this project. This project began with a survey of existing infrastructure to determine as much information as possible prior to maintenance and engineering recommendations. Following visual survey, sections with unknown infrastructure or unknown condition were selected for CCTV camera inspection. The results of both the visual survey and CCTV camera inspection were compiled to evaluate locations in need of maintenance or improvements. These needs were then prioritized based on effects on public safety, coordination with the City paving plan, and other criteria. When presented in a public forum, residents had anecdotal stories of water issues that went back years. It was helpful to hear these stories and to show that the municipality is working on a solution.

RESULTS

This project resulted in a Recommendations Workbook with 61 maintenance-related recommendations and 19 engineering-related recommendations complete with a severity rating for the City to use to identify necessary improvements as they move forward. In addition, 17 improvements were identified as high priority to be addressed by the City. This Workbook and identified priorities will assist the City in making future decisions regarding capital improvement projects.

NEXT STEPS AND OPPORTUNITIES

Following this project, the City will be addressing these improvements in conjunction with their paving program. This should provide some cost benefit to addressing issues in the stormwater system. Additionally, the City will be undertaking several of the larger, high priority, projects outside of their paving program to provide immediate relief in problematic areas.

LESSONS LEARNED

The hilly terrain in Gardiner limits the amount of infiltration and detention time the City can get in its stormwater system, so it is especially crucial to make sure pipes are clear and capable of carrying their maximum capacity. The venture of reducing stormwater impacts in the City appears to be well supported by the citizens of the community.

RECOMMENDATIONS TO THE MAINE COASTAL PROGRAM

The MCP was so helpful in this process. By making grant money available, it allowed staff at the City of Gardiner to focus and identify a problem that has been plaguing our riverfront city for many years. We have now created a plan to mitigate much of our problem with storm water when we begin other infrastructure projects throughout Gardiner. It also allows for leadership to identify projects that we can fix locally without paying for outside contractors.

Now that the study has been completed, I hope that MCP may help with identifying particular grants that would help pay for some of the larger projects.

APPLICABILITY FOR OTHER MUNICIPALITIES

The field survey and CCTV portions of this project were very beneficial in this community where there was so much unknown infrastructure. The prioritized list of recommended improvements will aid the City in upcoming budget seasons to have a better idea of exactly what improvements for the stormwater system are coming down the line.

For more information

http://www.gardinermaine.com/

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