



## COASTAL COMMUNITY GRANTS: Stormwater Management

### City of Gardiner Downtown Stormwater Management Study



#### PARTNERS

The City of Gardiner and the Gardiner Main Street Program

#### PROJECT DESCRIPTION (completed September 2017)

The City of Gardiner completed an in-depth study to improve the accuracy of their GIS storm water database, assess the downtown portion of their storm water drainage system, evaluate alternatives for improvements to mitigate the impact of periodic flooding, make priority recommendations and provide budgetary estimates for recommended maintenance work. Hoyle, Tanner & Associates was retained as the project engineer.

#### 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 storm water system, so it is especially crucial to make sure pipes are clear and capable of carrying their maximum capacity. The venture of reducing storm water impacts in the City appears to be well supported by the citizens of the community.

## **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 storm water system are coming down the line.

## **For additional information**

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