

The Town of Ayer

HOW AYER LEVERAGED AMP GRANT FUNDS TO GO FROM REACTIVE TO PROACTIVE IN MANAGING ITS STORMWATER SYSTEM

Community Profile

Utility

Ayer Department of Public Works (DPW)

System

Stormwater

Total Project Cost

\$121,250

2021 AMP Grant

\$72,750

Utility Profile

- 22 miles of drainage pipes
- 1,082 catch basins
- 373 drain manholes
- 143 outfalls
- 84 culverts
- 14 natural drainage conveyances
- 21 mapped treatment units and retention basins

Ayer, a town of approximately 8,500 people in Central Massachusetts, had taken a reactive approach to maintaining its stormwater infrastructure, with the Town only repairing or replacing parts of the system that were no longer operational. In 2021, Ayer applied for and was awarded an Asset Management Planning (AMP) Grant from the Massachusetts Clean Water Trust.

Activity Summary

- Updated and improved the Town's existing Geographic Information System (GIS) data by expanding the numbers of assets on record
- Completed a **condition assessment** of their stormwater infrastructure
- Performed a **criticality analysis** to develop a **Priority List of Assets** and a **Secondary List of Assets** to help prioritize activities in five-year cycles
- Developed a **Capital Improvement Plan** for stormwater infrastructure to proactively plan for system improvements

Case Study - Ayer

Grappling with a Reactive Approach

The Town utilized GIS to record its assets, combined with maintenance such as catch basin cleaning, street sweeping, and outfall inspections, which allowed its stormwater drainage system to continue functioning. However, Ayer's DPW didn't have enough money allocated to stormwater repairs to maintain the entire system using this approach. "We would only fund enough on an annual basis to replace stormwater infrastructure on the roads we were paving" said Dan Van Schalkwyk, the Town's DPW director.

Gathering Data to Develop an Asset Management Plan

Working with the engineering firm Tighe & Bond, the Town's existing stormwater inventory was expanded to include potential culvert locations identified by the Town, as well as predicted culverts based on state-provided road and hydrography data. Field forms were used to collect additional data during field assessments. The conditions of drainage pipes and structures were recorded over a 10-day period using a specialized camera that can capture high-resolution video without confined space entry. A criticality model was then used to categorize asset risk based on state of repair and likely consequences of failure. Their new stormwater asset management system, which was created in conjunction with a 300-page asset management plan, uses the same GIS program that Ayer used previously.

Developing a Guidebook for Infrastructure Repairs

The Town targeted its data collection to focus on the areas most likely to need repair. Once Ayer had a clearer picture of its stormwater infrastructure, Van Schalkwyk said, "It helped be a guidebook for the DPW to implement infrastructure repairs moving forward." This targeted approach prevents degraded assets from causing emergency failures and saves the Town money by allowing the DPW to plan less expensive, incremental repairs on stormwater assets instead of total replacements.

A Proactive Approach to Communications and Planning

A major benefit of the AMP was the advantage that the influx of information gave the DPW in communicating the situation with the Town Administration as well as the public. Van Schalkwyk added, "Just the sheer number of assets that we have that we need to maintain... it really was a help toward the Town understanding." The Five-Year Action Plan included in the report also provides an estimate of how rates will have to be adjusted to fund maintenance in the future. This information motivated the Town to implement an enterprise fund to ensure that stormwater repairs are appropriately funded.