How to Build Resilience and Tap the Funding Pipeline through Master Planning

Session 30 – Asset Management 2: Tools and Resiliency
NEWEA 2022 Annual Conference | January 26, 2022
Overview

- About Agawam
- Climate Vulnerabilities
- Priority Actions to Build Resilience
- Stormwater Assessments and Master Planning
- Tapping Funding Opportunities
- Progression of Projects
- Key Takeaways
About Agawam

- Population 28,692
- 24.2 square miles, 129 miles of roads
- $111.6M Town Budget
- City dba Town of Agawam
- Home of Six Flags New England
- Lowest U.S. Zip Code
Climate Vulnerabilities

- Municipal Vulnerability Preparedness (MVP) Study in March 2020
- Top Hazards:
  - Severe Storms
  - Severe Winter Storms
  - Extreme Temperatures
  - Flooding (urban and riverine)
- Areas of Concern:
  - Transportation Infrastructure
  - Drinking and Storm and Wastewater Infrastructure
  - Flood Mitigation Infrastructure
  - Natural Resources
  - Social Vulnerabilities
Priorities to Build Resilience

- Improve education in the community around climate change impacts
- Evaluate and incorporate climate change impacts into municipal code
- Collaborate with and support resilience improvements at the regional WWTP
- **Enhance capital improvement plans for water, stormwater & drainage infrastructure**
- **Complete a Town-wide culvert assessment and improvement plan**
- Protect open space and improve drainage systems
- Pilot a green roof and other green infrastructure projects
- Install a pervious pavement project
Stormwater Assessments and Master Planning

- Stormwater Utility Feasibility Study
  - Robust Study and Public Engagement from 2016-2018
  - Identified Funding Gap of $1.5M annually
  - Stormwater Fee – community recognized needs, but hesitated due to impacts
  - Revisited fee in late 2019, but COVID in early 2020 put things on hold...
  - Town needed to act due to growing needs and aging infrastructure

Task force looking at stormwater drain system

When rain hits the ground, it can move in mysterious ways. If it hits earth, it often soaks in. If it hits a roadway, driveway, parking lot, or roadway, chances are it will run off into the nearest street drain, move through a series of pipes and then exit to a nearby stream, and the Westfield and Connecticut rivers. But it can go to many places, as well, especially where the drainage system itself is failing.

In Agawam, the Department of Public Works manages some 4,717 street drains, all of which total approximately 13,500 miles of drain pipe, and 2,000 manholes for stormwater flow. In the town’s 30.2 square miles, that outlet to surrounding waters is therefore involved, some 52 miles of sewer connections into the DWI. To meet or exceed stormwater regulations, the town’s stormwater program needs to keep a close eye on the health and maintenance of both the DWI and its outfalls. It’s not just about the town’s financial health; it’s also about protecting the environment.

Stormwater Program Existing and Future Needs/Costs

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<tr>
<th>Year (FY)</th>
<th>$1,000,000</th>
<th>$2,000,000</th>
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Stormwater panel’s focus turns to public outreach

By Michael J. Barry
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Getting Agawam residents and businesses to accept an entirely new tax, or fee, will take a massive public relations effort, local leaders agreed last week. The town’s Climate Resilience Advisory Task Force turned its attention to Section 20 in how it would tell Agawam residents on the need for a new utility fee to finance their property to reduce pollution to their stormwater system. The panel tasked with creating a plan for how to proceed.

Task force members last week generally agreed with those priorities, with an emphasis on lower quality rather than higher-mileage water entering the sewer. Most panel members also agreed they did not want to see a new fee until the town’s residential rate was down.
Stormwater Assessments and Master Planning

- Municipal Vulnerability Preparedness (MVP) Program Action Grant in August 2020
  - $216,750 grant award
  - $73,013 Town match (cash and in-kind services)
  - $289,763 total project value
- Project Tasks:
  1. Public Engagement
  2. Culvert Condition Assessment
  3. Priority Storm Drain Infrastructure Assessment
  4. Detention Basin Retrofit Evaluation
  5. Impervious Area Mitigation Strategy
  6. Climate Impact Assessment
  7. Municipal Code Review
  8. Capital Improvement Plan
  9. Stormwater Master Plan
Stormwater Assessments and Master Planning

- Catch basins, pipes, and outfalls
  - 3.8 miles of pipe inspected in priority areas
  - Most structures are in good or fair condition
  - 21 outfalls have significant damage or deterioration
  - 116 outfalls require maintenance
Stormwater Assessments and Master Planning

- 148 Culverts

- **Very Good Condition**
- **Very Poor Condition**
- **Good Condition**
- **Poor Condition**

- **Fair Condition**
Stormwater Assessments and Master Planning

- 54 projects ranging from $30,000 to $3,160,000
- Annual allocation for numerous lower priority projects
- $30,375,000 – opinion of probable cost
- 10-year CIP projection

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<tr>
<th>Project Type</th>
<th>Estimated Cost (2021 $)</th>
<th>Percentage (%)</th>
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<tbody>
<tr>
<td>Culvert Replacement &amp; Rehabilitation Projects</td>
<td>$8,740,000</td>
<td>28.8%</td>
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<td>Detention Basin Projects</td>
<td>$2,310,000</td>
<td>7.6%</td>
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<td>Storm Drain Rehabilitation &amp; Upgrade Projects</td>
<td>$14,235,000</td>
<td>46.8%</td>
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<td>Public Outreach Projects</td>
<td>$90,000</td>
<td>0.3%</td>
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<td>Reoccurring Annual Allocation Projects</td>
<td>$5,000,000</td>
<td>16.5%</td>
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<td><strong>TOTAL COST</strong></td>
<td><strong>$30,375,000</strong></td>
<td><strong>100%</strong></td>
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Tapping Funding Sources

- Stormwater Master Plan completed in June 2021
- Presentation to City Council June 28th
  - ARP funds available – timing was perfect
  - $8.4M for High Priority Capital Projects
  - Compelling case to jump start $30M+ stormwater program
- MA Department of Ecological Restoration Grants Received for 2 High Priority Culvert Designs in 2020-2021
- FY2021 and FY2022 DPW Stormwater Funding Available for Design
- FY2023 DPW Stormwater Budget under Review
- Stormwater utility to be revisited . . .
Tapping Funding Sources

- MassDEP State Revolving Loan (SRF) Loan Applications in August 2021
  - Town reviewed needs across multiple utilities
  - Construction funding for stormwater projects combined with water, sewer, and roads
  - Stormwater designs to be funded through FY2022 and FY2023 general funds
  - SRF debt service to be paid through bonds and water/sewer enterprise funds

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<tr>
<th>Project</th>
<th>Infrastructure</th>
<th>Cost</th>
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<tr>
<td>1A: Stormwater and Sewer Improvements in West</td>
<td>Culverts, Stormwater Improvements and Sewer Lining: Southwick St, North St, Memorial Park, Belvidere, and Brookline</td>
<td>$4.6M</td>
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<td>1B: Belvidere and Brookline Water Main Replacement</td>
<td>AC Main Replacement: Belvidere and Brookline</td>
<td>$2.06M</td>
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<td>2A: Stormwater and Sewer Improvements in East</td>
<td>Stormwater and Sewer Improvements: School St, Ramah Circle, James St, Maynard St, Fairview St, and Federal St Ext</td>
<td>$4.22M</td>
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<td>2B: Northeast Water Main Replacement</td>
<td>AC Main Replacement: James St, Maynard St, Duclos St, Federal St Ext, and Elise St.</td>
<td>$6.18M</td>
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**Total**: $17.06M
Tapping Funding Sources

- Asset Management Plan Grant for Stormwater, Water, and Sewer – expected in 2022 for 2023 completion: expand utility assessments and position for funding
- Water and Sewer Rate Study Underway . . .
- Stormwater Utility to be Revisited . . .
Progression of Projects

- Projects in Design for 2022 / 2023 Construction ($8.4M):
  - Meadow St Drainage Improvements and Water Main Replacement - $3M
  - May Hollow Brook Culvert Replacement - $2.2M
  - North Street Culvert Replacement - $1.8M
  - South Park Terrace and Lealand Ave Drainage Upgrades - $1.4M
Key Takeaways

- Evaluate all funding sources and secure some “seed money”
- Develop a comprehensive planning strategy
- Make a compelling case with better data and prioritized projects
- Engage leadership to gain support
- Engage with funding agencies to ID key projects and eligibility
- Continually evaluate project priorities and opportunities for funding
- Be prepared to take advantage of funding opportunities
- Collaborate with municipal staff, agencies, and consultants
Questions and Discussion

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Stormwater Artwork by Agawam Middle School Students