



Town of Framingham

Department of Public Works

Managing the Public Outreach, Regulatory, Funding, and Staffing Challenges of Framingham's Utility Infrastructure Program

Peter Sellers, Executive Director

Blake Lukis, Director, Water and Wastewater Division

James Barsanti, Asst. Director Water and Wastewater Division



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How Did We Get Here?

- Community, Infrastructure, and DPW Historical Perspectives
- Our Organization's Structure, Roles, and Responsibilities
- Customer Service, Building Support, and Funding Our Programs
- Summary of Wastewater System Accomplishments



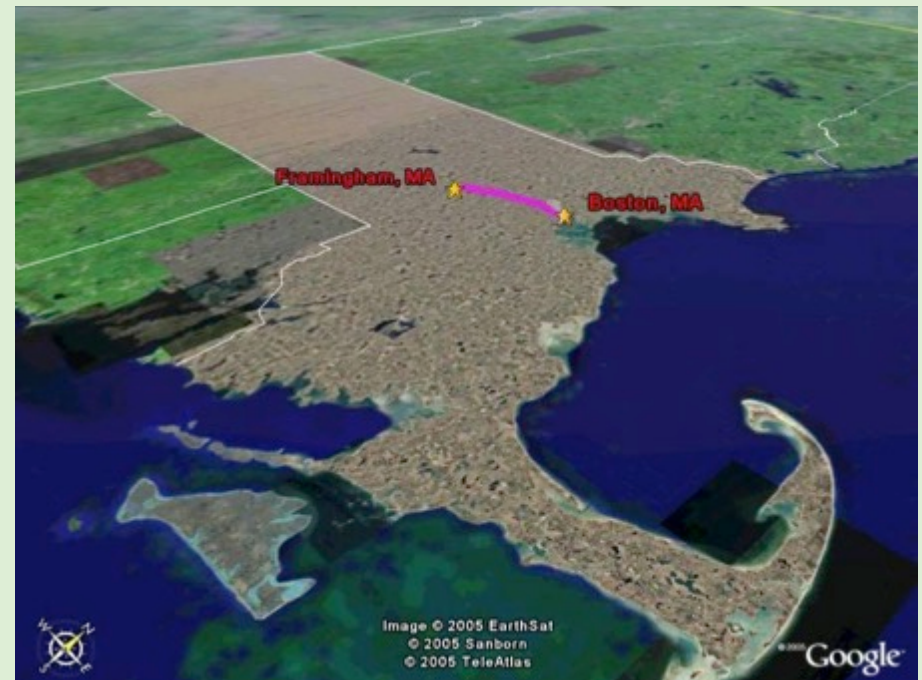


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Our Community

- Established in 1700
- Mix of Residential, Commercial, Industrial, Institutional, and Recreational Land Uses
- Corporate HQs - Bose, Staples, Genzyme, TJX
- Framingham State University and Mass. Bay Community College
- Metrowest Hub for Transportation and Commerce



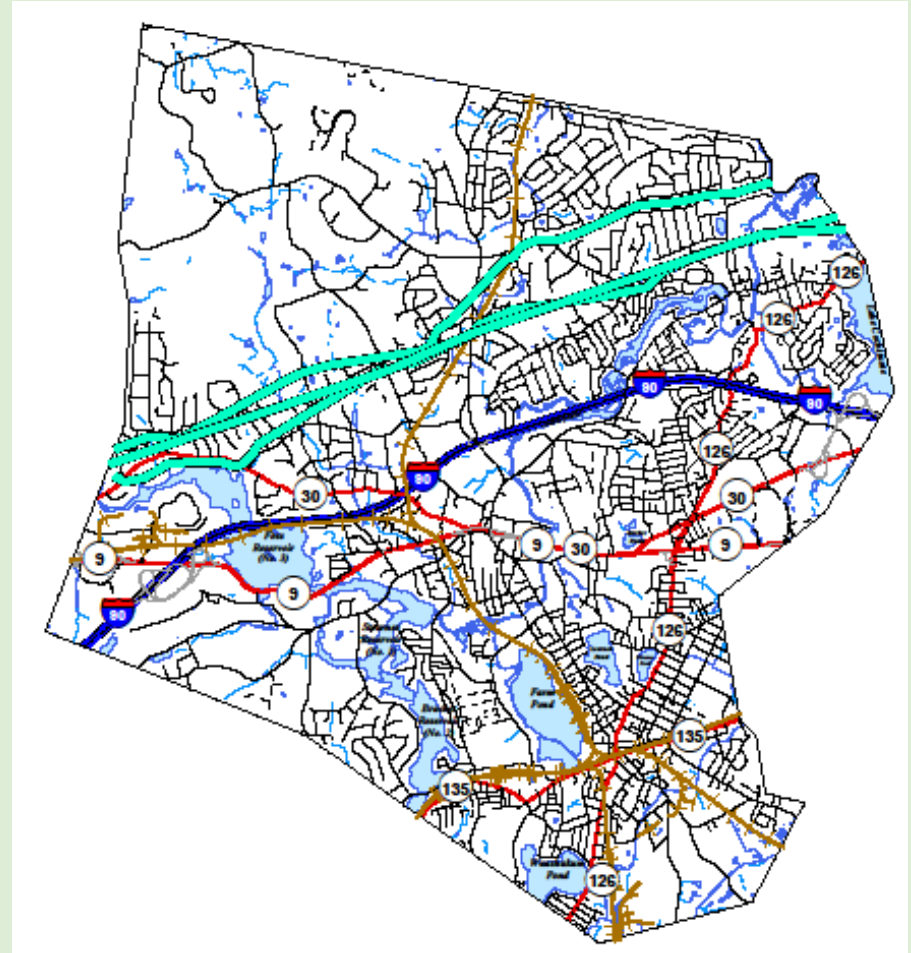


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Framingham - Who We Are, Our Challenges, and Complexities

- **Government**
 - Representative Town Meeting – 216 seats
 - 12 Standing Committees
 - Board of Selectmen, Town Manager
- **Population 68,000**
 - Tripled since 1945
 - 20,000 commercial & residential properties
- **Physical Impediments**
 - Crossed by 4 aqueducts
 - High Power Electric and Gas Transmission Lines
 - Bisected by Sudbury River, reservoirs
 - Transportation Hub for Regional Transit
 - ❑ MBTA/CSX railway
 - ❑ Mass. Pike (Route 90) Exits 12 & 13
 - ❑ State roads (Route 9, 30, 126, 135)



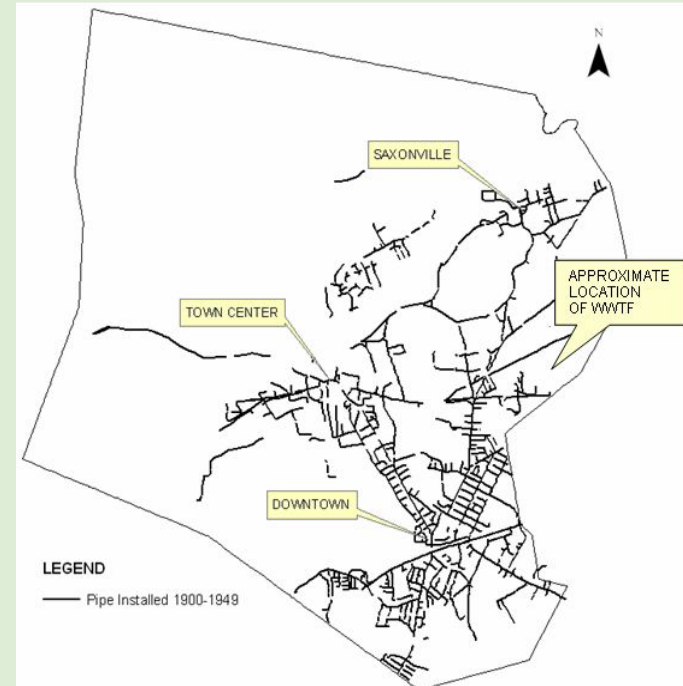


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1950s - Availability of MDC Wastewater Treatment Brings Growth Opportunities

- 1930s to 1950 - Wastewater treated locally at regional plant with Town of Natick (located at present Natick Mall site)
- Early 1950s - MDC Builds Nut Island Headworks in Quincy and Framingham Extension Sewer to convey Framingham wastewater to MDC System
- Available capacity resulted in burst of rapid system expansion and growth during the late 1950s and early 1960s





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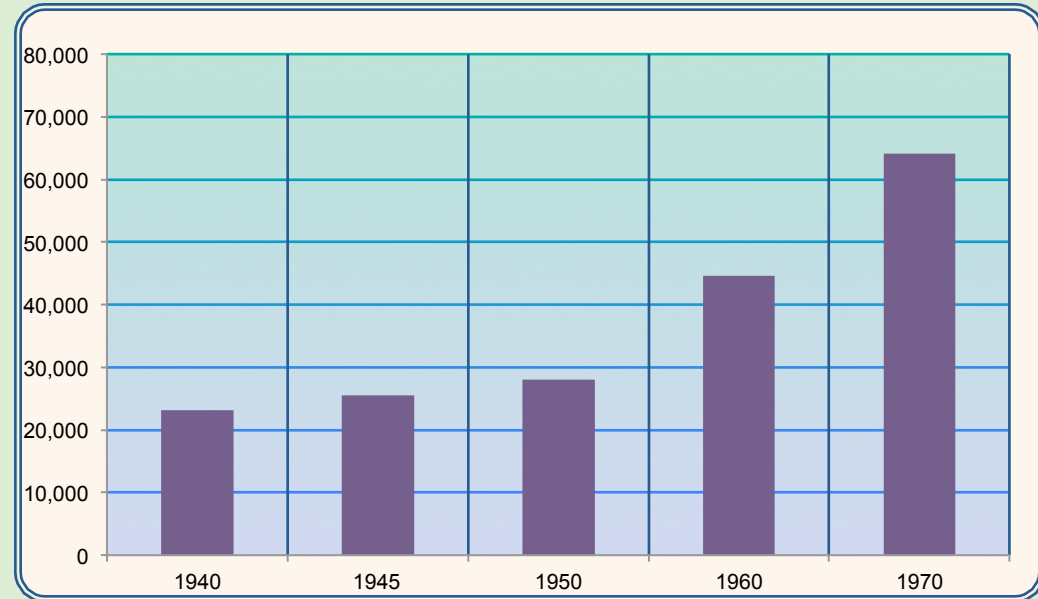
Population Growth Brings Demand for Infrastructure

1890s to 1946

- Construction of wastewater collection systems (and similar for water distribution systems)
- Gravity wastewater system construction (57 miles) matched steady and manageable growth rate

1946 to 1970

- Post WW II Boom
Population **tripled**
- Demand for wastewater infrastructure
136 miles of mains
40+ pump stations
- Construction of Massachusetts Turnpike in late 1950s
- Demand negated the community's ability to effectively and efficiently plan and construct infrastructure systems

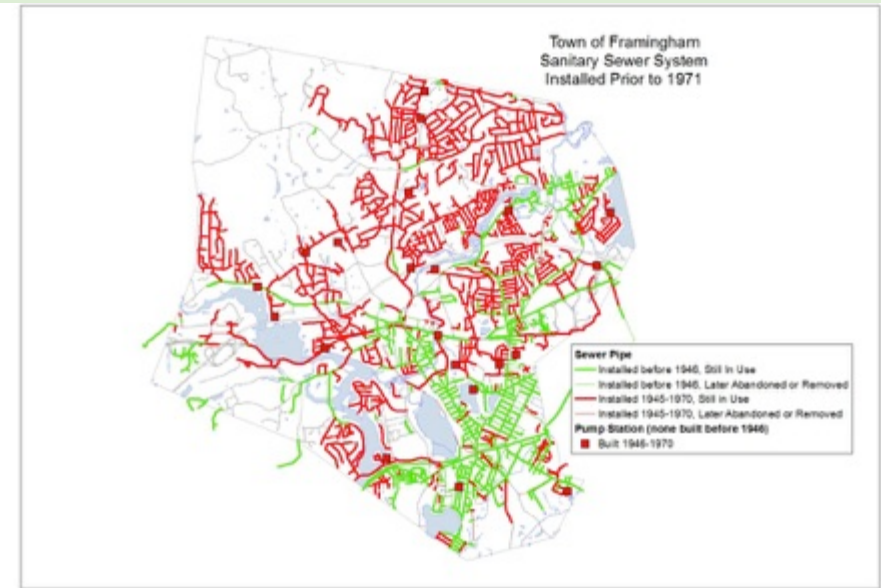
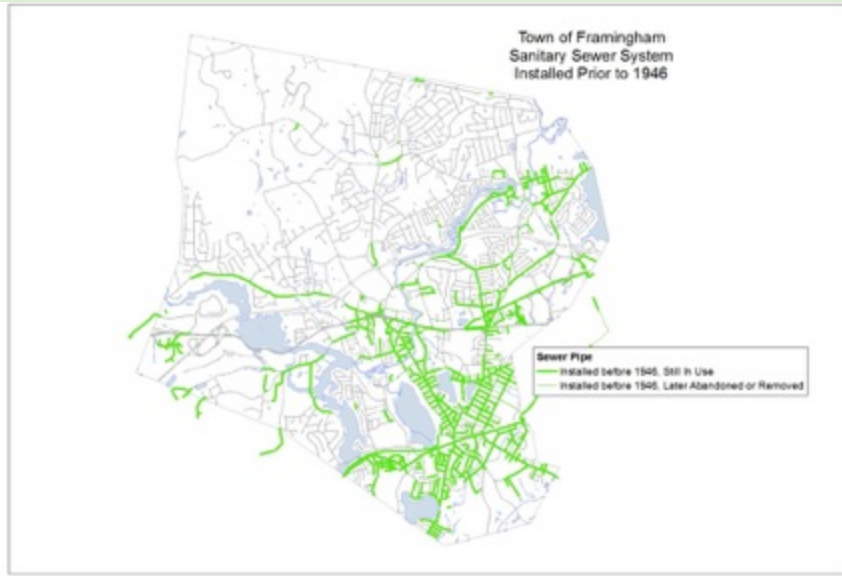




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Wastewater System Expansion - 1946 - 1971





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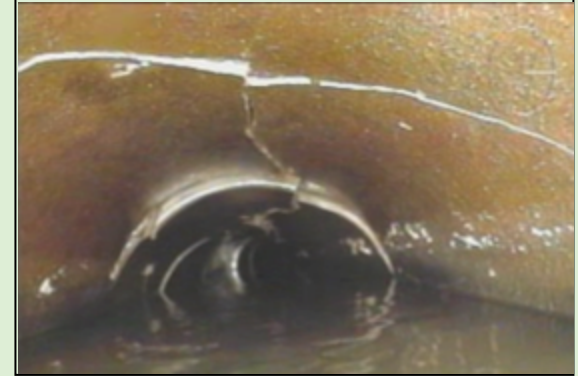
Growth Brings Challenges and Problems

- **Prior to 2002: Board of Public Works (BoPW)**
 - Part time
 - Chair signed all invoices
 - Made all decisions
 - 7 Directors in 11 years
- Philosophy: keep rates down, lowest in the state
- No documentation of assets, only anecdotal information
- No mapping
- No engineers
- Little accountability or authority

Tuberculated Pipe



Collapsed Sewer Pipe under Building



Hydrant—Out of Service

Deteriorated Pump Station Equipment





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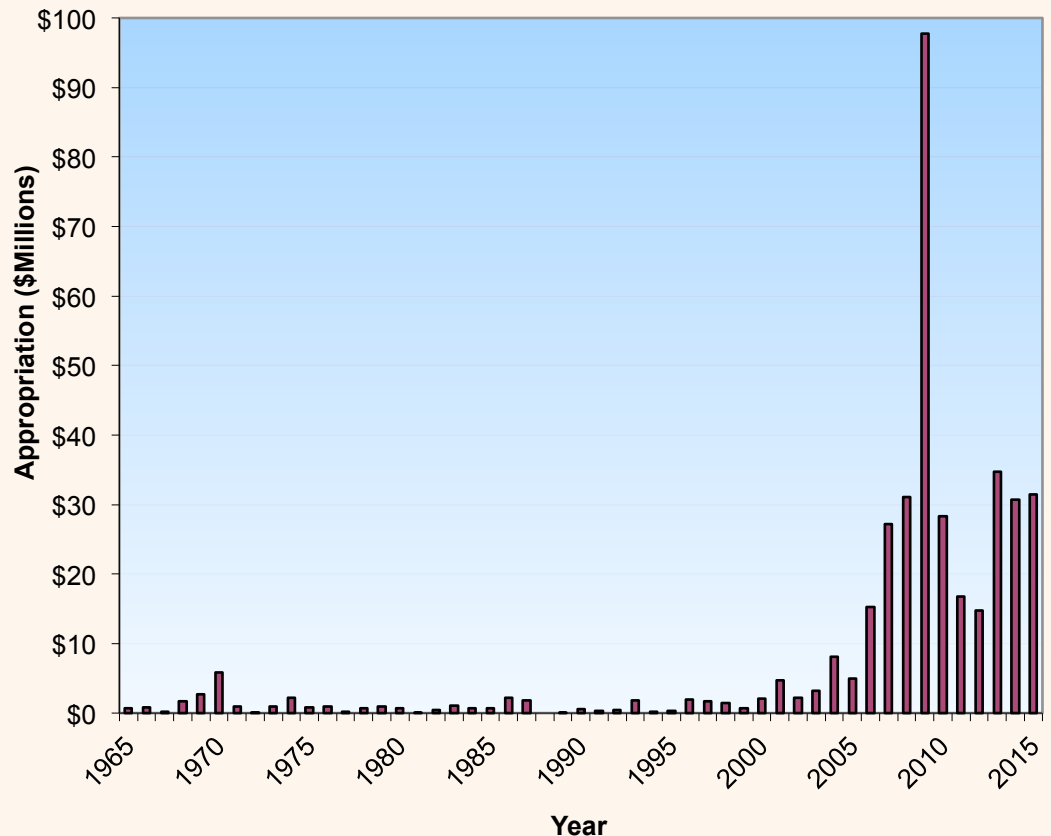
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Result: Minimal Capital Investment for over 40 years...

But they saw it coming...

From a 1973 Annual Report:
“Unless we provide a methodical program of maintenance and repair for our facilities we may one day be faced with a need for total replacement of all facilities. The cost would be too burdensome for the taxpayers to afford.”

Town of Framingham Infrastructure Capital Appropriations
(1965 - 2015)





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Problems Require Action - 2003 to 2007

- Development of Master Plans
- MWRA Coordination
 - Sulfides: Identify Sources and Establish Limits
 - I&I Reduction and SSES
 - 2003 [MWRA Settlement Agreement](#)
- MassDEP Coordination
 - Noted high SSOs in 2005
 - DPW proactively met with MassDEP, providing them with master plans
 - 2007 [Administrative Consent Order](#) – **but no fines**





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Action Leads to Transformation

- **2002 and on: Authority transitioned from BoPW to Executive Director**
- **Transformation**
 - Inventory assets, identify problems
 - Commission master plans
 - Build a GIS and Asset Database
 - Create work order systems
 - Preventative Maintenance Plans
 - Department structure: hierarchical to programmatic
 - Increased responsibility, authority, accountability
 - Recruited professional management to staff the department: a “job” became a “profession”
 - Communicate, communicate, communicate
 - Infrastructure needs
 - Master plan findings
 - Completed improvements
- **Result: increased credibility, groundwork for trust**



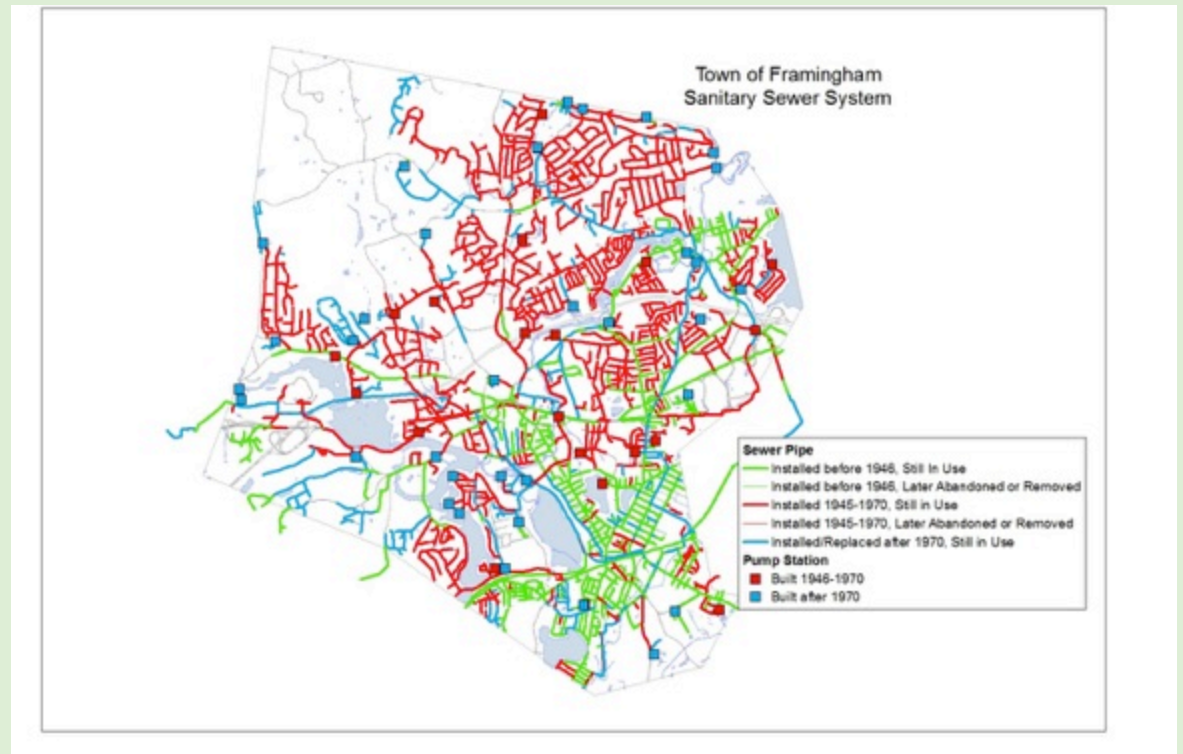


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System Components - 2016

- Average Daily Flow = 7 MGD
- 240 Miles of Mains
 - 50 Miles - 75 to 100 Years Old
- 7 Siphons
- 6,900 Manholes
- 44 Pump Stations
- 40 Miles of Cross Country Easements





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DPW Organizational Structure

Executive Director and Deputy Director - Work daily with Town Manager, Selectmen, other Town Department Heads, DPW management and senior staff, and community stakeholders

Division Director/Assistant Director* - Daily management and coordination of all Division activities

Operations Managers - Daily planning and quality assurance of system operation, reliability, and efficiency

Operations Supervisors* - Coordinate and oversee daily work activities of crews

Technicians and Heavy and Medium Equipment Operators - Operate, maintain, inspect, and repair system assets

Administrative* - Logistics, billing, purchasing and procurement, budgeting and financial planning

Engineering and Public Outreach* - Execute planning, design, and construction of capital improvements, operations support, permitting for development projects, public way access, and street openings, utility coordination, communications, outreach, media

**Positions Added from 2002 to 2005*





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Quality and Customer Focus - Managing the Town's Investments

- Intentionally Build Credibility - Differentiate from the Past
- Professional Pride At All Levels in All Aspects of Our Work
- Documentation - GIS Mapping, Work Order System
- Operations and Customer Focus - Acknowledge, Respond, Follow up
- Ongoing System Monitoring, Preventative Maintenance, Repair, and Renewal
- Communications and Outreach





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Improvements Require Community Understanding and Support

- Community Meetings
- Town Meeting
- Social Media
- Business Outreach
- Utility Coordination
- School Outreach
- Agency Coordination





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Teamwork - Key Roles and Responsibilities for Capital Projects

- **Dedicated Staff Needed to Execute Projects to Prevent Consuming all of Operations' Time**
- **Operations Capital Projects Coordinators** - Liaison between Operations (Water/Wastewater and Highway Divisions) and Capital Engineering and Contractor
- **Chief Engineer** - Program Manager, Standards Adherence and Coordination of Information Transfer between Capital and Municipal Engineering
- **Capital Project Manager and Directors** - Daily project activities, consultant, contractor Police/Fire /School Transportation coordination, resident and business issues/impacts, traffic management, 24/7 availability
- **Communications Project Manager** - Information management, notifications, outreach





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Reversing The Trend - A Typical Year in Framingham!



South Concord Street Roadway Reconstruction Project



2011 CAPITAL CONSTRUCTION



Cohasset Area Water Main and Sewer Main Replacement Project



Pleasant Street Water Transmission Main Project



Water Street Roadway Reconstruction Project



"A" Street Waste Water Management Facility



Central Street Siphon/Sudbury River Interceptor Project



East Framingham Sewer Improvement Project



State Street Roadway Reconstruction Project



Grove and Peab Street Sewer Main Replacement Project



Pleasant Street & Grove Street Pump Station Replacement Project



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Keeping the Community Informed - Communications and Outreach

- **Constant and Consistent**

- Written Notifications
- Door Hangers
- Project Maps



- **Community/Town Meetings**

- **Business Liaison**

- **Website/Social Media**

- Traffic Alerts
- Weekly Construction Schedules
- Capital Improvements Page
- Facebook/Twitter/Patch
- Video

- **School Presentations**



Community Outreach & Assistance

Public Meetings

- Project Overview & Information
- Meet the Team
- Discuss the Impacts
- Enjoy the refreshments

Informational Magnets ~ Don't lose our number, we can help!

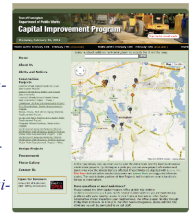


Construction Notices

Keeping you informed is our priority, advanced notice of temporary construction impacts whenever possible.

Get connected, stay informed visit BuildingFramingham.com

- Find out what's going on in your area.
- Register for email alerts on traffic and temporary service interruptions.
- Stay up to date on project information.
- View project photo galleries to see the progress of the work.
- Support local businesses, view a list of businesses within the construction zones.



Our commitment to you...

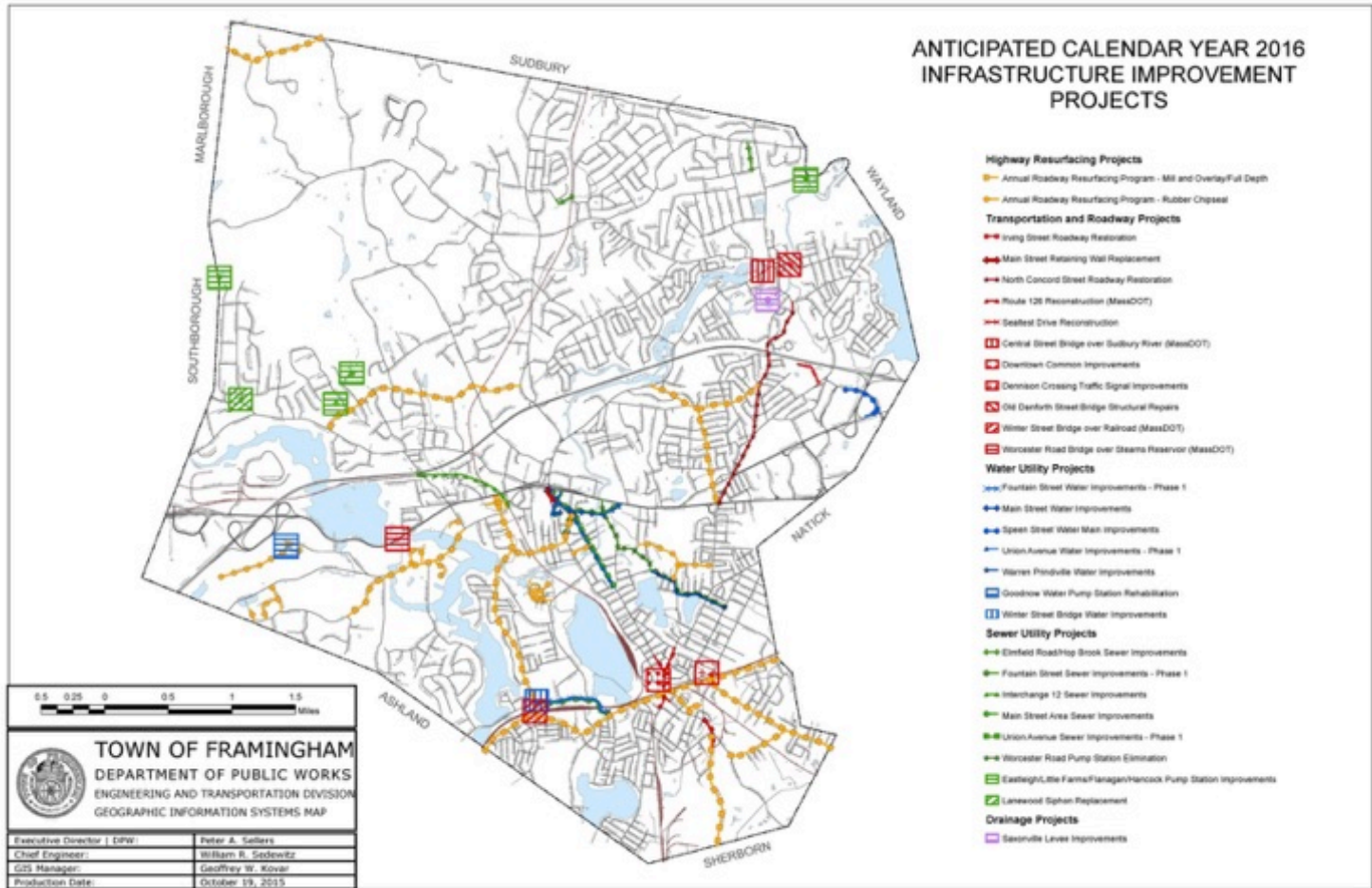
Residents, business owners and commuters can reach our on-call construction management staff 24 hours a day, 7 days a week by calling the Capital Construction Hotline (508) 532-6040.



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Building a Culture of Ongoing Improvements -2016 Proposed Infrastructure Improvements



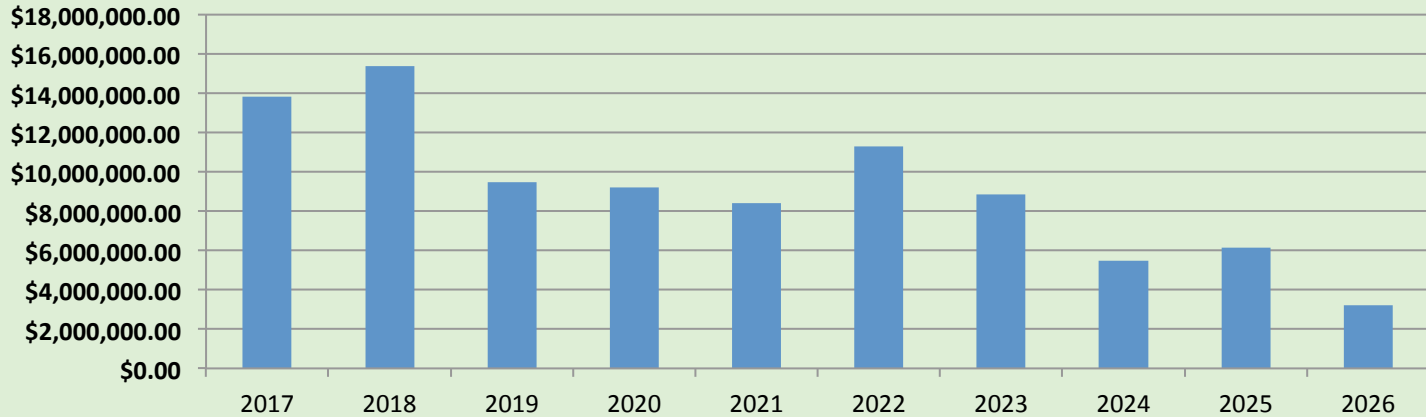


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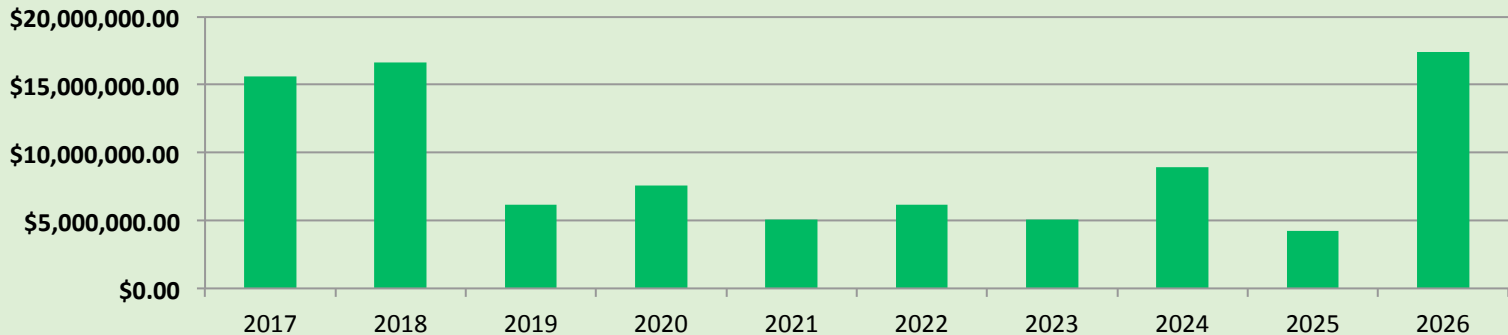
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Planned Capital Improvements 2017 - 2026

Capital Improvement Plan - Water 2017 - 2026



Capital Improvement Plan - Wastewater 2017 - 2026





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Finding the Money - Funding Sources for Improvements

- Enterprise Fund - Rate Increases 5% to 10%/Yr.
 - Rates at Median Among MWRA Communities
- State Grants – Mass. Life Sciences, MassWorks \$14M
- MWRA grants \$10M
- Federal grants – ARRA \$5M
- Mitigation & Earmarked Funds \$1.5M
- State revolving fund (SRF) low interest loans \$50M+

And last but definitely not least...

- ***Town of Framingham Water/Sewer Capital Budget (since 2004)
over \$325M!***

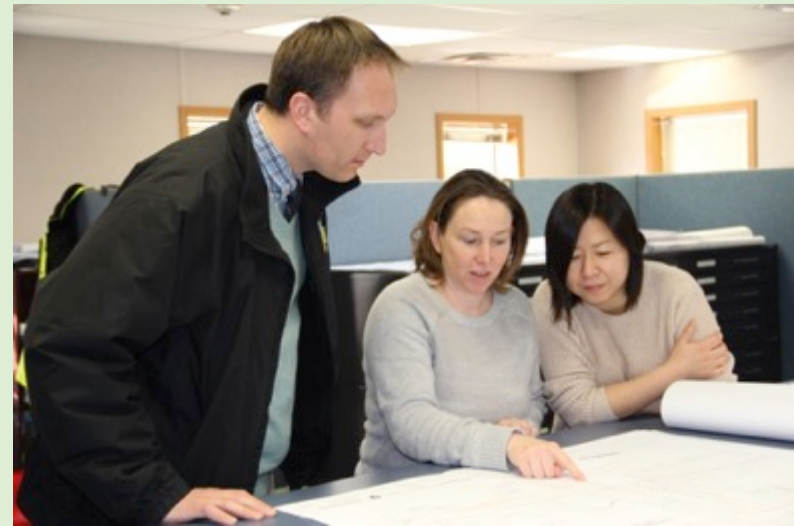


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Accomplishments and Results - 2005 to 2015

- \$15M to \$30M (~10 to 20 Projects) Per Year
 - Collections System - 16.9 Miles of Sewer Replaced, 10.5 Miles Rehabilitated (10% of System), ~1,000 Manholes
 - Wastewater Pump Stations (43)
 - Eliminated - 7
 - Rehab./Repl. - 8
 - R/R in Process - 7
- Operations Efficiency - Eliminating SSOs, Reducing Inflow/Infiltration, Reducing Energy Usage
- **Necessity for Infrastructure Investment Part of the Town Government and Community's Culture**





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Acknowledgements



- Department of Public Works – Water and Wastewater, Fleet and Facilities, Highway and Sanitation Divisions, Capital and Municipal Engineering, Construction Management, Conservation, Administration
- Town Departments – Town Manager/Board of Selectmen, Police, Fire, Finance, School, Inspectional Services, Planning, Human Resources, Technology Services, Legal
- Consultants, Contractors, Manufacturer's Representatives, Suppliers