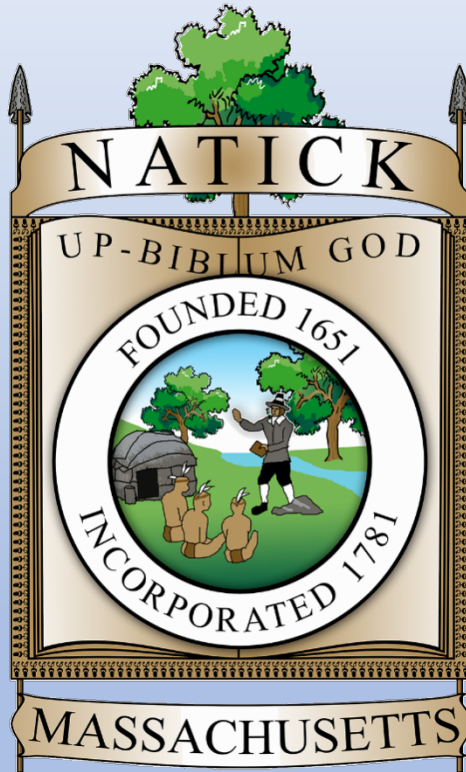


Town of Natick

Department of Public Works



Overview – Finance Committee

February 21, 2022



Department of Public Works

Administration

Highway & Sanitation

Land Facilities & Natural Resources

Water & Sewer

Engineering



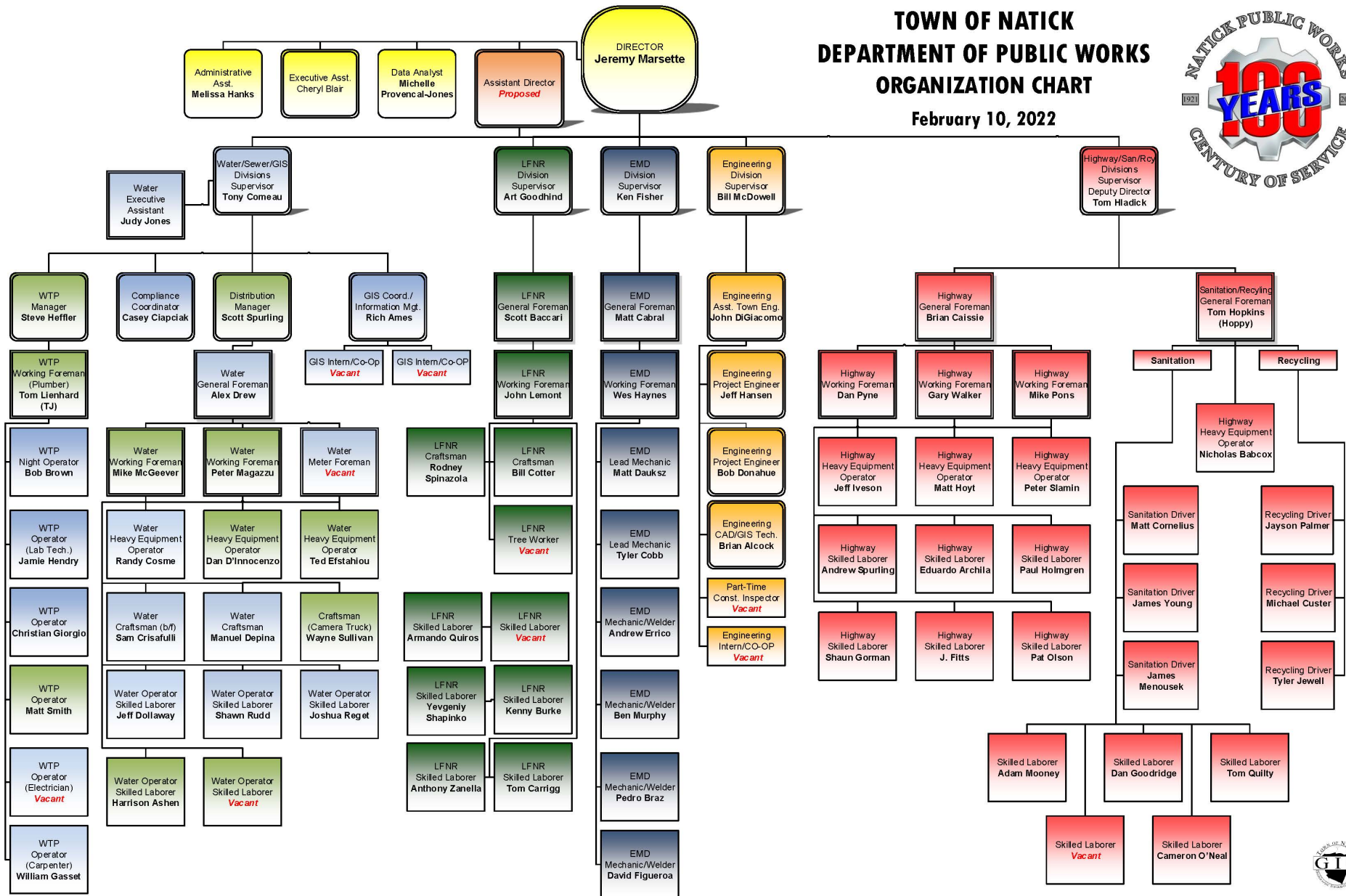
84 Dedicated Employees

Equipment Maintenance

Municipal Energy

TOWN OF NATICK DEPARTMENT OF PUBLIC WORKS ORGANIZATION CHART

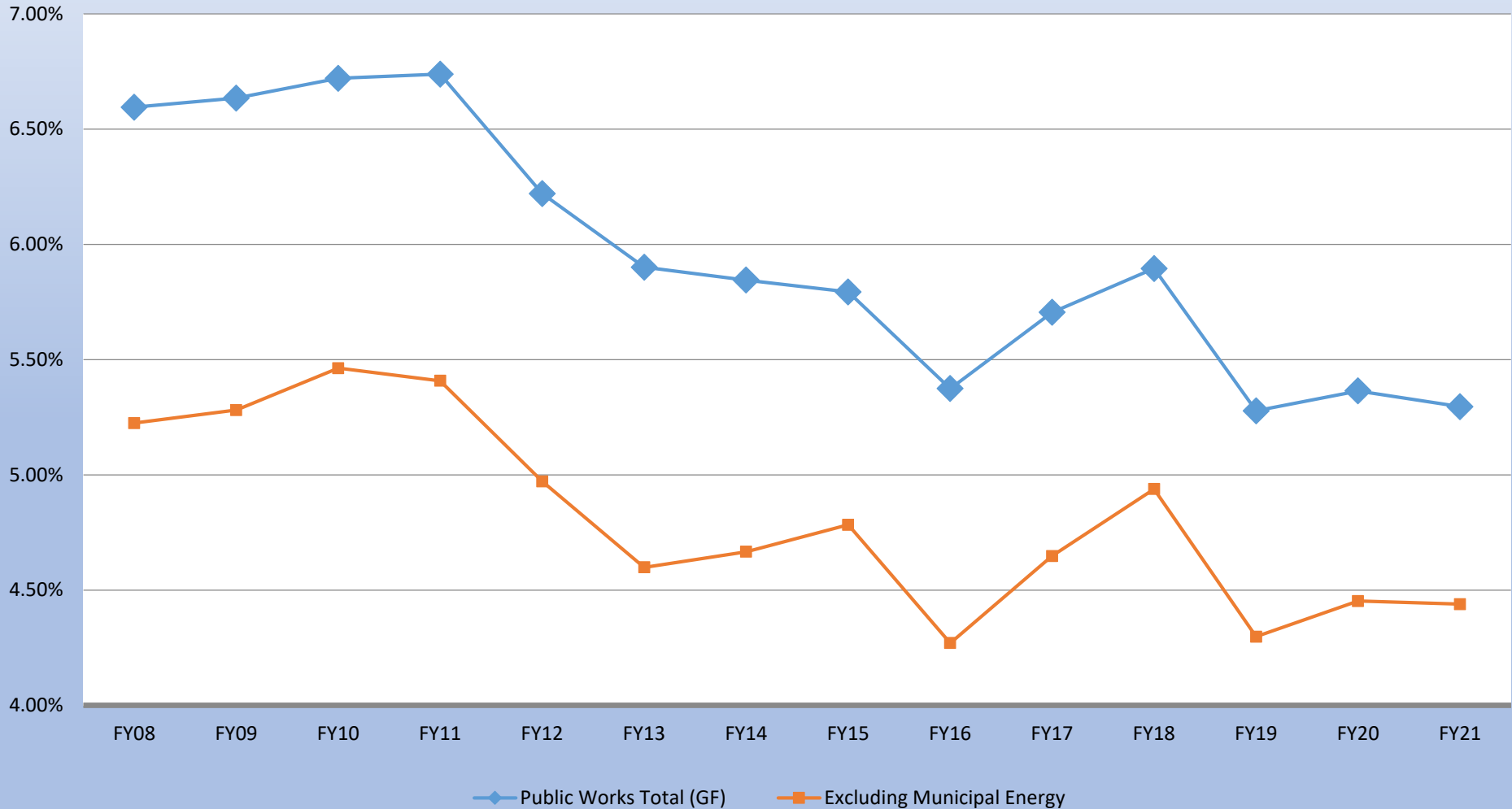
February 10, 2022





General Fund Comparison History

PUBLIC WORKS BUDGET AS A % OF TOTAL TOWN BUDGET





Natick 2030+

Existing Conditions Report

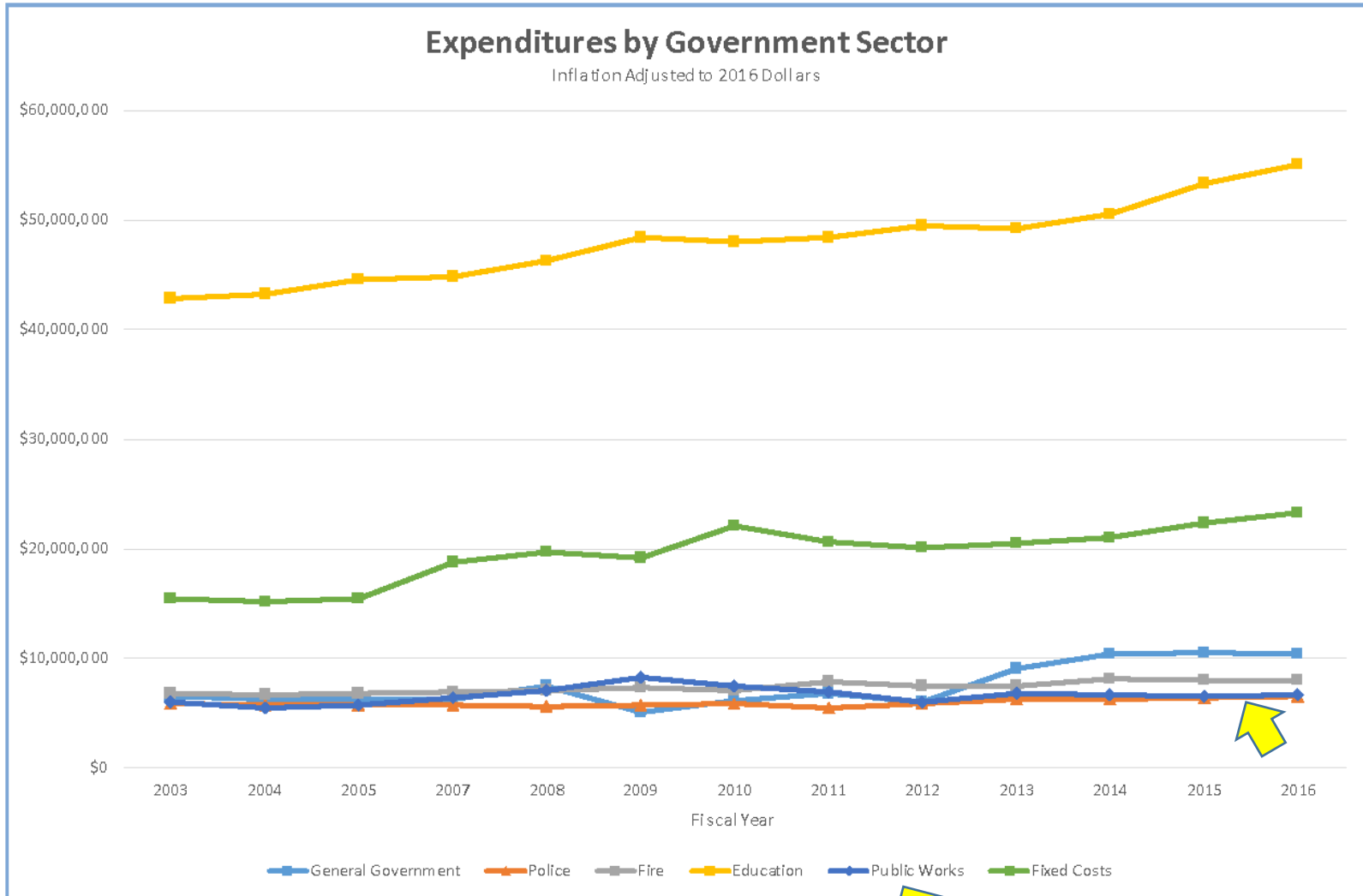
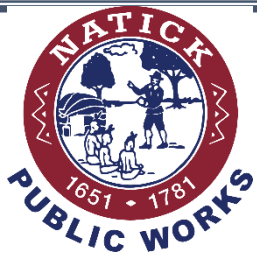


FIGURE 8.3: EXPENDITURES BY SECTOR



Department Challenges

- **COVID-19 Pandemic Continuity of Operations**
- **Supply Chain Issues – Increasing Cost and reduced availability of supplies/services**
- **Staffing Resources – Vacancies and Turnover**
 - “Great Resignation” – Staff Retention
 - Assistant Director, Asset Manager, Craftsman-Highway & Sanitation, Stormwater Engineer
- **Regulatory Requirements**
 - US EPA Municipal Separate Storm Sewer System (MS4) Stormwater Permit Implementation
 - MassDEP Poly-fluoroalkyl Substances (PFAS) Drinking Water Standard 2021 (US EPA 2022?)
 - US EPA Drinking Water Standard - Lead and Copper Rule
 - MassDEP Water Management Act – Well Withdrawal Registration Renewals
 - Landfill Maintenance and Monitoring (Gas collection and PFAS)
 - Federal Motor Carrier Safety Administration (FMCSA) Regulations
 - MGL Chapter 149 Section 6 ½ - Municipal Compliance with OSHA
- **Work Order/Asset Management/Time Tracking**
- **Aging Infrastructure and Fleet – roads (public and private), water/sewer utilities, vehicles and equipment**



Department Challenges

REGULATORY REQUIREMENT

- Implement requirements of new MS4 Stormwater Management Permit – Effective July 2018 **(REG)**
- MassDEP PFAS (Polyfluoroalkyl Substances) Standard - Effective January 2021, US EPA 2022? **(REG, RISK)**
- MassDEP Water Management Act – Well Withdrawal Registration Renewals **(REG, RISK)**
- Stormwater Management Oversight Committee **(REG)**
- Water/Sewer System Resiliency /Redundancy **(RISK, REG)**
- Department Safety Program **(RISK,REG, BMP)**
- FMCSA Drug and Alcohol Clearinghouse
- West Street Landfill – PFAS Monitoring **(RISK, REG)**

BEST MANAGEMENT PRACTICE/FINANCIAL BENEFIT

- Improve customer service leveraging technology **(BMP, FIN)**
Online Pay, Social Media, MyWaste, Water Smart
- Continue Benchmarking against peers **(BMP)**
- Pursue alternative fuel vehicles **(FIN)**
- Engineering Document/Plan Management **(BMP)**
- Update and Reorganize Recycling Center **(BMP)**
- Pilot Program for Co-collection **(FIN)**
- Improve marketing and sale of recyclables **(FIN)**
- Complete Streets Implementation **(BMP)**

- Debris Management Plan - Emergency Response **(BMP)**
- Vegetation Management Plan **(BMP)**
- Complimentary Park/Field Improvements **(FIN)**

RISK BY DEFERRED ACTION

- Implement Department wide Equipment Maintenance, Service Call and Work Order system **(BMP, RISK, FIN)**
- Staff Retention/Recruitment - Implement Staffing Plan **(RISK)**
- Update Department Policies and Procedures **(BMP, RISK)**
- Develop and Administrate Department Safety Manual **(BMP, RISK)**
- Inventory Control System **(RISK)**
- Inspection/Permitting Improvements **(BMP, RISK)**
- Roadway/Sidewalk Asset Management Plan **(BMP, RISK, FIN)**
- Unaccepted Roadways **(BMP, RISK)**
- Annual Water Main Flushing Program **(RISK)**
- Facility Security **(RISK)**
- Update Water/Sewer Asset Management Plans - 20 Yr Asset Management Plan **(BMP, RISK, FIN)**
- Update Water and Sewer Regulations **(BMP, RISK)**

LEGEND:

REG – Regulatory Requirement

RISK – Risk by deferred action

BMP – Best Management Practice

FIN – Possible financial benefit



2023 Staffing Needs

Immediate

- Assistant Director of Public Works - Administration

Near Term

- Asset Manager – Administration
- Stormwater Engineer – Engineering
- Craftsman – Highway/Sanitation Division
- Skilled Laborer – Water/Sewer Division

Time Dependent

- Water Treatment Plant Operator
- Water/Sewer Administrative Assistant (Backflow and Compliance)
- Mechanic



Assistant Director of Public Works

- Manage Department Safety Program (MGL Chapter 149 Section 6 ½, OSHA)
- Manage Department Drug and Alcohol Testing Program
- Manage Environmental Compliance of Town 21E Sites and Municipal Landfill
- Support Personnel Management / Human Resource Functions (82 Employees)
 - Hiring and discipline
 - Job Descriptions
 - Collective Bargaining
 - Tracking Certifications, Licenses, and Training
- Support budget development and tracking (Divisions Budgets, Municipal Energy Division)
- Assist with Department Policies and Procedures (develop, update, and implement)
- Perform program analysis, comparisons, and studies
 - Natick Army Labs
 - Sanitation Program
 - Parks Maintenance
- Regulatory
 - USEPA MS4 Stormwater Permit
 - MassDEP PFAS Drinking Water Standards
- Capital Project Management
 - Increasing scale (roadway improvement projects, complete streets program)
 - Improve public participation and notification
- Currently Highway and Sanitation Division Supervisor also serves as Deputy Director (as time allows)
- Peer communities have Assistant Directors and larger administrative support staff
- Director of Public Works and Data Analyst positions are only non-union positions in Department
- Succession Planning



Asset Manager

- Support all Divisions within the Department of Public Works in reviewing potential areas to streamline and automate existing operations (identify, implement, and manage).
 - Permit Management/Monitoring/Reporting – Engineering, Water & Sewer
 - Interface resident concerns/complaints into Work Order System
 - Automate Equipment Maintenance Division's daily equipment repairs into Work Order System
 - Automate Highway & Sanitation Division's daily tasks into Work Order System
 - Automate Land Facilities Division's daily tasks into Work Order System
 - Automate Water & Sewer Division's Water Distribution daily tasks into Work Order System
 - Automate on-line bill pay for bulk pickups
 - Energy use and expense tracking
- Centralized resource for Department
 - parts and inventory tracking, databases, electronic work order systems, customer engagement
- Capital Replacement Research and Planning
- Develop standard and ad hoc reports
- Document automated practices and procedures
- Time & Attendance System
- Asset Management System



Stormwater Engineer

- USEPA Municipal Separate Storm Sewer System (MS4) Stormwater Permit
 - Phosphorus Management Plan
 - Tracking and reporting impervious cover changes / drainage System Mapping
 - Public Education and Outreach
 - Water quality testing of outfalls
 - Plan review/construction inspection for compliance
 - Permit Management/Monitoring/Reporting
- Stormwater Management and Erosion Control Bylaw – Town General Bylaw Article 79A
 - Plan reviews and site inspections
- Capital Project Management
 - Increasing scale (roadway improvement projects, complete streets program, stormwater projects)
 - Increase accountability and inspections for quality control
 - Utility coordination complexity
 - Improve public participation and notification
- No part-time Construction Inspectors (or interns) available



Highway Craftsman

Staffing

- 1 FTE Craftsman– Highway

Purpose/Description

- Unmet needs townwide for roadway and sidewalk maintenance
- Maintenance/Repairs
 - Roadway signage, pavement markings, guardrail, sidewalks, curbing, wheelchair ramps, pothole repair, etc.
- Would allow Division to more consistently field multiple work crews
- Support snow removal operations and assist in Division projects and maintenance tasks townwide



Administration Division

Staffing

4 employees

Responsibilities

- Customer Service
- Scheduling
- Human Resource Functions
- Payroll and Attendance
- Accounts Payable
- Requisitions and Purchase Orders
- Budget Preparation and Management
- Grants and Reimbursements
- Environmental Compliance 21E Sites and Landfill



Municipal Energy Division

Staffing

0 employees

Responsibilities

- Street Light Management (2,550 lights)
- Traffic Signal Support and Budgeting (21 Traffic Signals)
- Monitoring and Tracking Energy Use for all Municipal Facilities

Electricity

Heating Fuel

Natural Gas

Diesel/Gasoline

Propane



Engineering Division

Staffing

5 Employees

Responsibilities

- Engineering Support and Peer Review Services for Town Boards, Committees and Departments
- Construction Inspection and Management
- Capital Project Design and Management
- Stormwater Permit Compliance Management
- Plan and Records Management
- Pavement Management
- Utility Mark Outs
- DPW Permit Management (Street Opening, Water, Sewer, Trench Permits)



Equipment Maintenance Division

Staffing

9 Employees

Responsibilities

- Maintain 220 registered vehicles including hybrid cars, cruisers, fire trucks, loaders, sanders, rubbish trucks, plows, sweepers and dump trucks.
- Maintain additional equipment including Bucket Truck, lawn mowers, snow blowers, pumps, light towers and emergency generators (500 total pieces)
- Computerized Preventive Maintenance Program
- Vehicle/Equipment Procurement
- Vehicle Insurance Claim Management
- Surplus Property Disposition



Fuel Management System Equipment Maintenance Division

- **Fuel Usage Monitoring**
180,000 Gallons Annually
- **Remote Inventory Management**
Two 10,000 gallon Tanks
- **Automated vehicle-by-vehicle tracking**
Daily Fueling
Fuel Computer and Unique Ring
15,000 Transactions Annually
- **Secure**





Highway & Sanitation Division

Staffing

27 Employees

Responsibilities

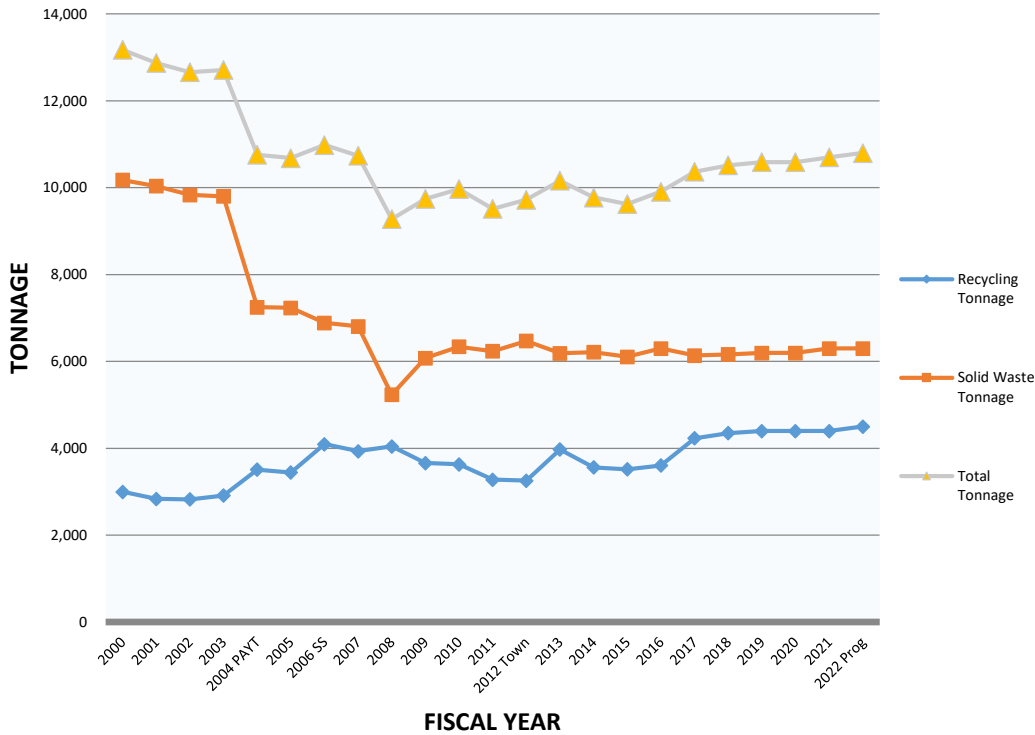
- Roadway Maintenance
- Street Sweeping
- Stormwater Maintenance
- Pavement Markings & Signage
- Curbside Waste and Recycling
- Bulk/Yard Waste Collection
- Recycling Center – West Street
- Monitoring/maintenance of the gas collection system and flaring station at the golf course



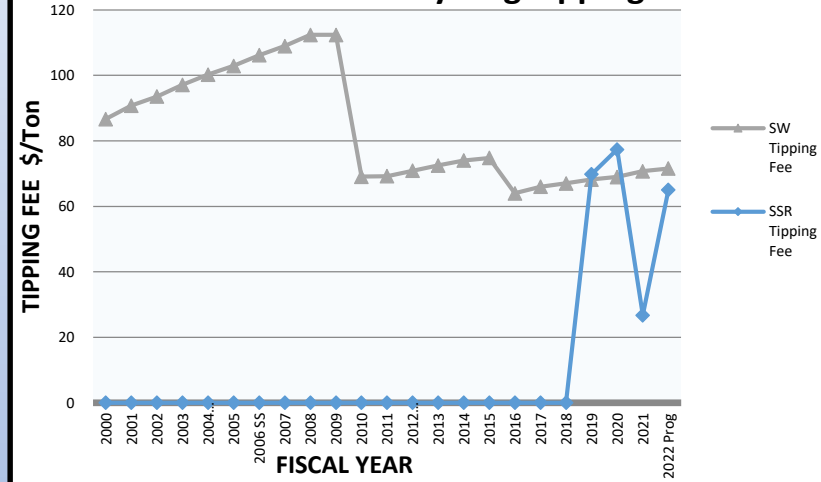
Sanitation Program

- Pay-as-You-Through Program
- MaDEP Grants and Incentives
- Textile Recycling, Curbside Organics

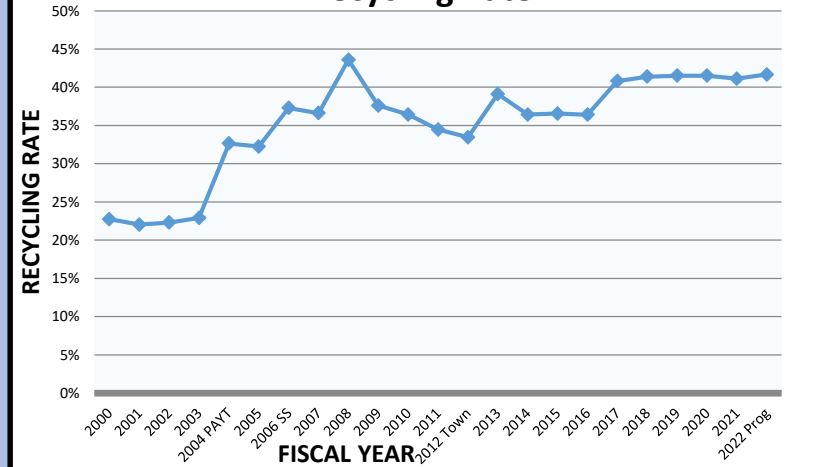
Solid Waste and Recycling Tonnage



Solid Waste and Recycling Tipping Fees



Recycling Rate



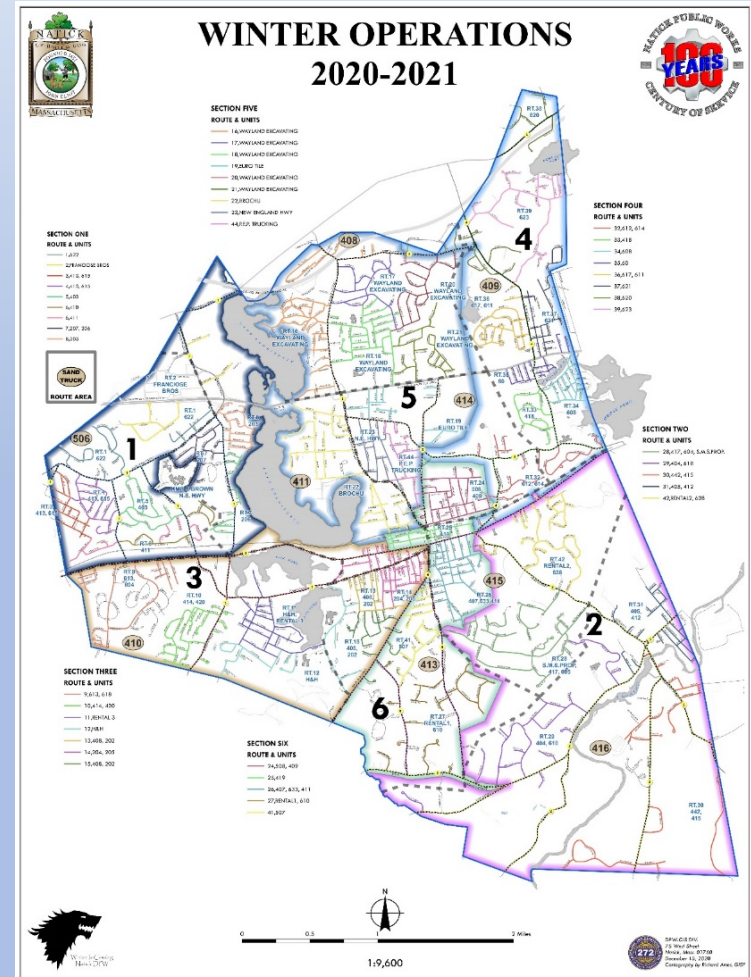


Winter Operations

▪ “All Hands on Deck” Incident Command Management



- 10 Sanders Town-Wide
 - 9 Zones
- 55 Pieces of Town Operated Snow Fighting Equipment
- 25 Pieces of Contracted Equipment
 - 44 Plow Routes





Winter Operations

Snow & Ice Policy

Sanding Routes

9 Separate Routes

Plowing Routes

6 Zones, 44 Routes

Plow/Sand Assignments

Storm Summaries

FY19 Storm & Material Totals

46.5 Inches of Snow

248 Tons Sand

3,410 Tons Salt

28,200 Gallons Liquid Deicer



- 160 Miles Roadway
- 40 miles Sidewalk
- 18 School/Municipal Parking Lots



Land Facilities and Natural Resources

Staffing

12 Employees

Responsibilities

- Manage over 165 acres of active parks and play fields (60+ locations)
- Municipal and School Building Landscape Maintenance
- Irrigation, Mowing, Turf Management, Line Marking
- Maintain Public Shade Trees (Town Tree Warden)
- Hazard Tree Removal
- Cochituate Rail Trail, Dog Park





Water & Sewer Division

Staffing

28 Employees

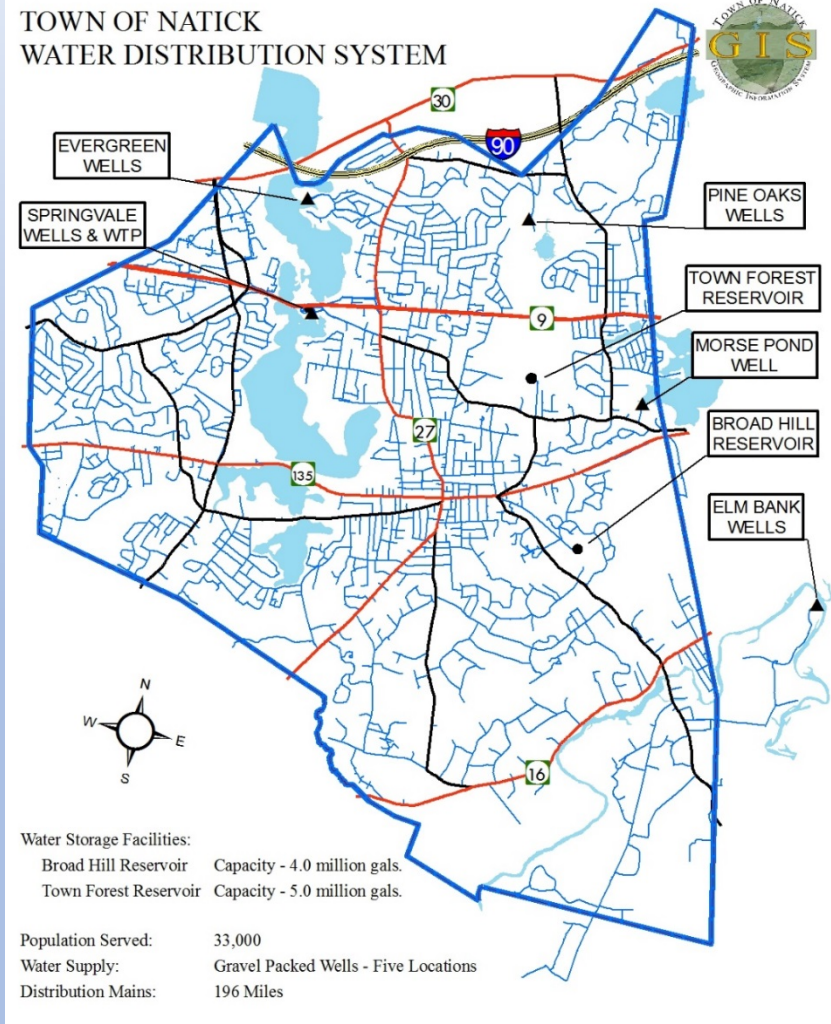
- **System Overview: Five Major Sections**
 - **Water Distribution**
 - **Water Treatment**
 - **Sewer Collection & Pumping**
 - **Metering, Backflows & Data Management**
 - **Capital Improvements**
 - **On call 24 hours per day, 365 days per year**



Water & Sewer Division

- **Water Distribution**
 - 196 miles of mains
 - 9 million gallons of storage
 - 1,400 hydrants
 - 12,000 Services
 - Continuously test and monitor water quality

TOWN OF NATICK
WATER DISTRIBUTION SYSTEM

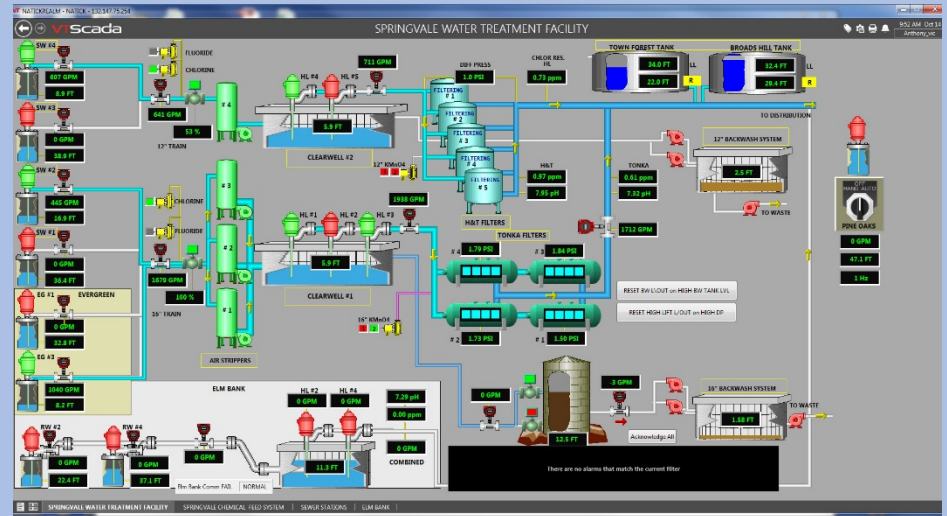
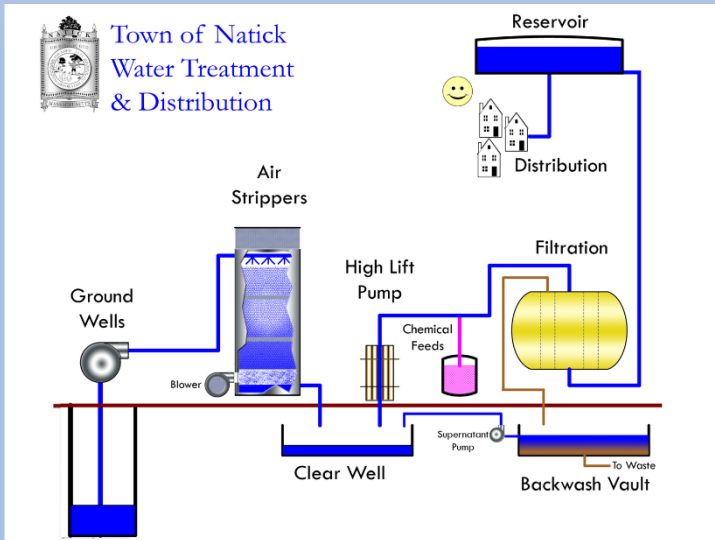




Water & Sewer Division

Springvale WTP

- Average 3 million gallons per day
- 1.2 billion gallons annually





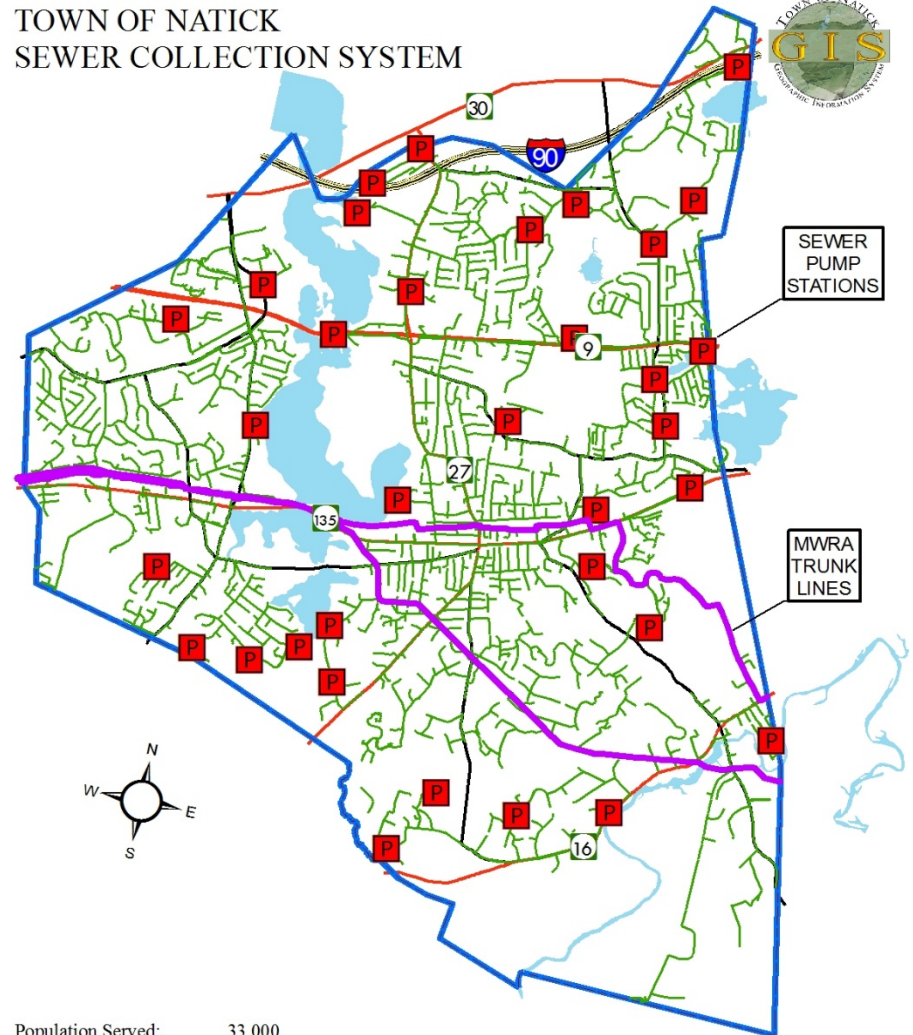
Water & Sewer Division

■ Sewer Collection

- 150 miles of mains
- 34 pump stations
- Sewer is pumped to MWRA for treatment



TOWN OF NATICK
SEWER COLLECTION SYSTEM



Population Served:	33,000
Pump Stations:	34
Collection Mains:	150 Miles



Water Main Flushing Program

- Uni-Directional Flushing Program
- Gate Valve and Hydrant Maintenance
- Water Quality and Hydraulic Improvements
- Increased Service Life



80 Year Old Unlined Water Pipe



Infiltration/Inflow Removal Program

- MWRA Grants and Loans
 - \$2 Million Grant, \$2.4 Million Loan
 - \$1.1 Million Remaining
- I/I Stabilization Fund
 - \$11.82 / GPD
- MWRA Assessment \$5.5 million
 - Based on 2.94 MGD (average)
- Flow reduction
 - 1.42 MGD (average) since 1997
 - 50% Reduction





Geographic Information System

Staffing

1 Employee (within Water/Sewer Division)

Responsibilities

- Asset Management
- Data Layer Management
- Townwide GIS Support
- Water meter reading system management



Public Works Information

Public Works Makes It Happen – American Public Works Association

<https://www.youtube.com/watch?v=TQ4eyYJEoww>

Like us on Facebook: @NatickPublicWorks



Follow us on Twitter: @NatickDPW



www.natickma.gov/249/Public-Works

Online Bill Payments

See Click Fix

My Waste Notification

WaterSmart