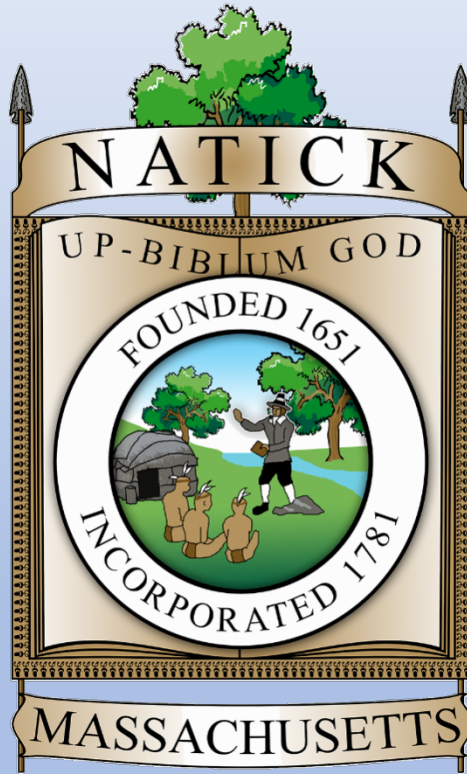


# Town of Natick

## Department of Public Works



## Overview – Finance Committee

February 3, 2021



# Department of Public Works

Administration

NATICK  
PUBLIC WORKS

Highway & Sanitation

Land Facilities & Natural  
Resources

Water & Sewer

Engineering



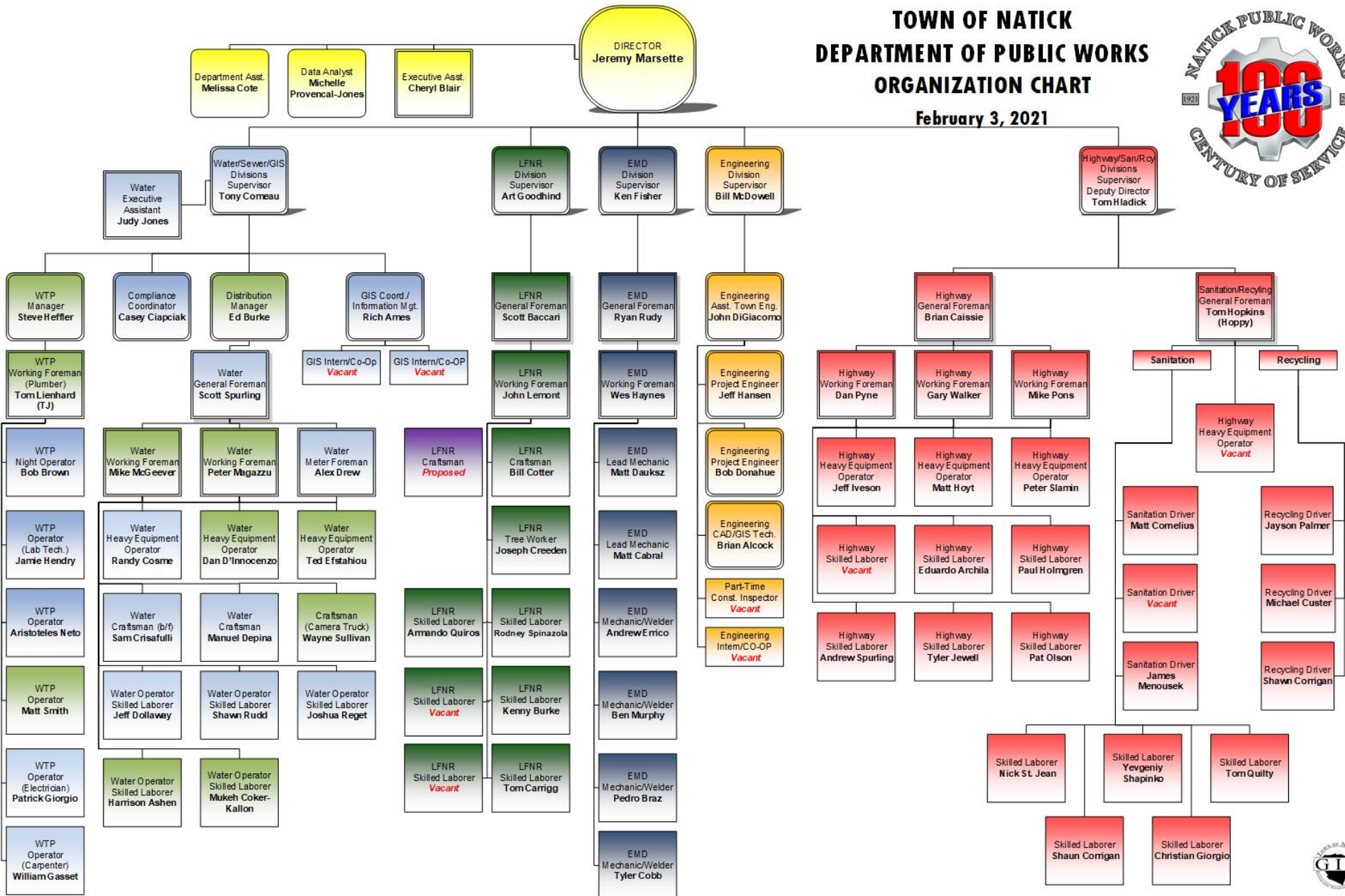
85 Dedicated Employees

Equipment Maintenance

Municipal Energy

# TOWN OF NATICK DEPARTMENT OF PUBLIC WORKS ORGANIZATION CHART

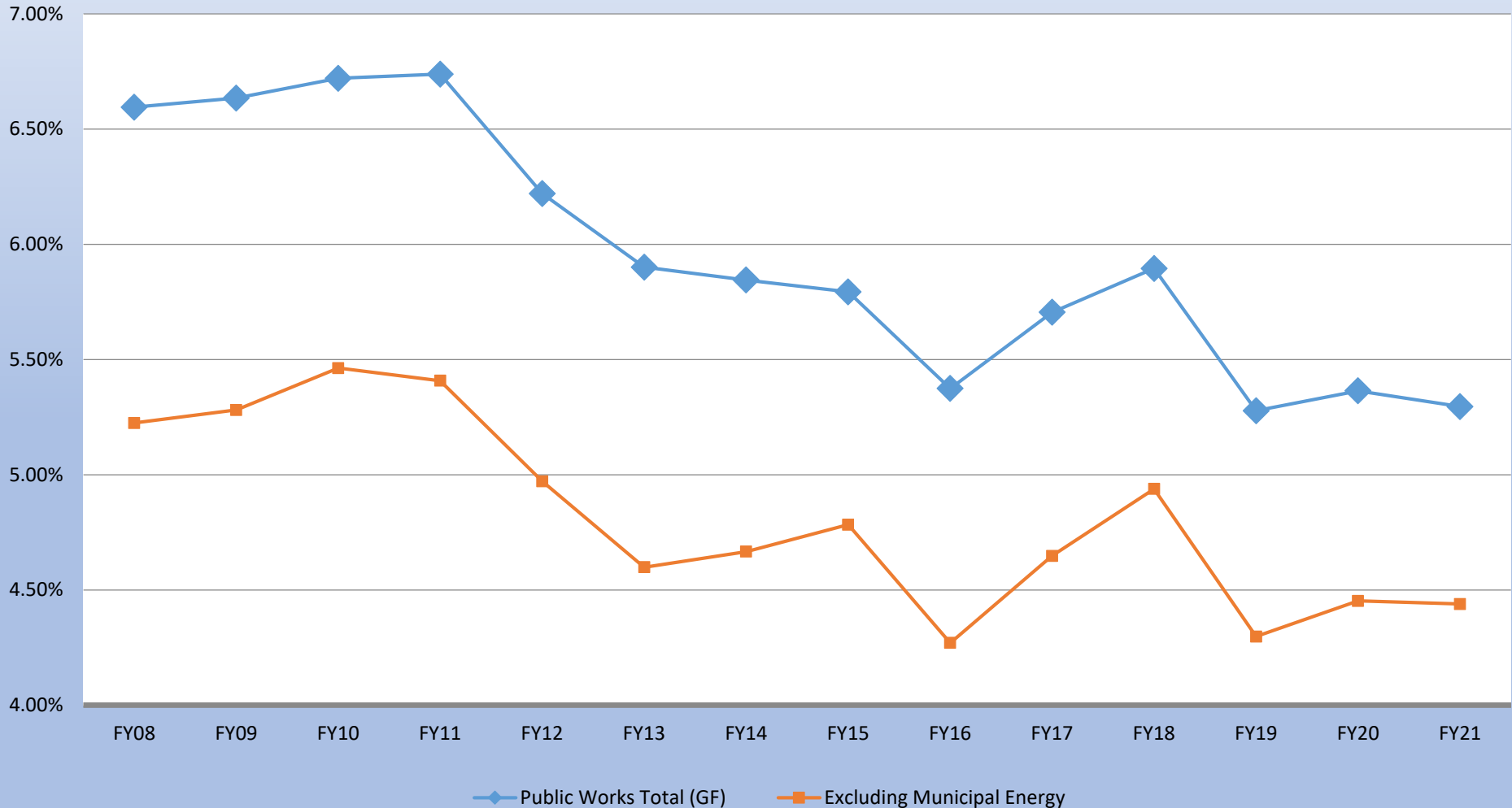
February 3, 2021





# General Fund Comparison History

## PUBLIC WORKS BUDGET AS A % OF TOTAL TOWN BUDGET





# Natick 2030+

## Existing Conditions Report

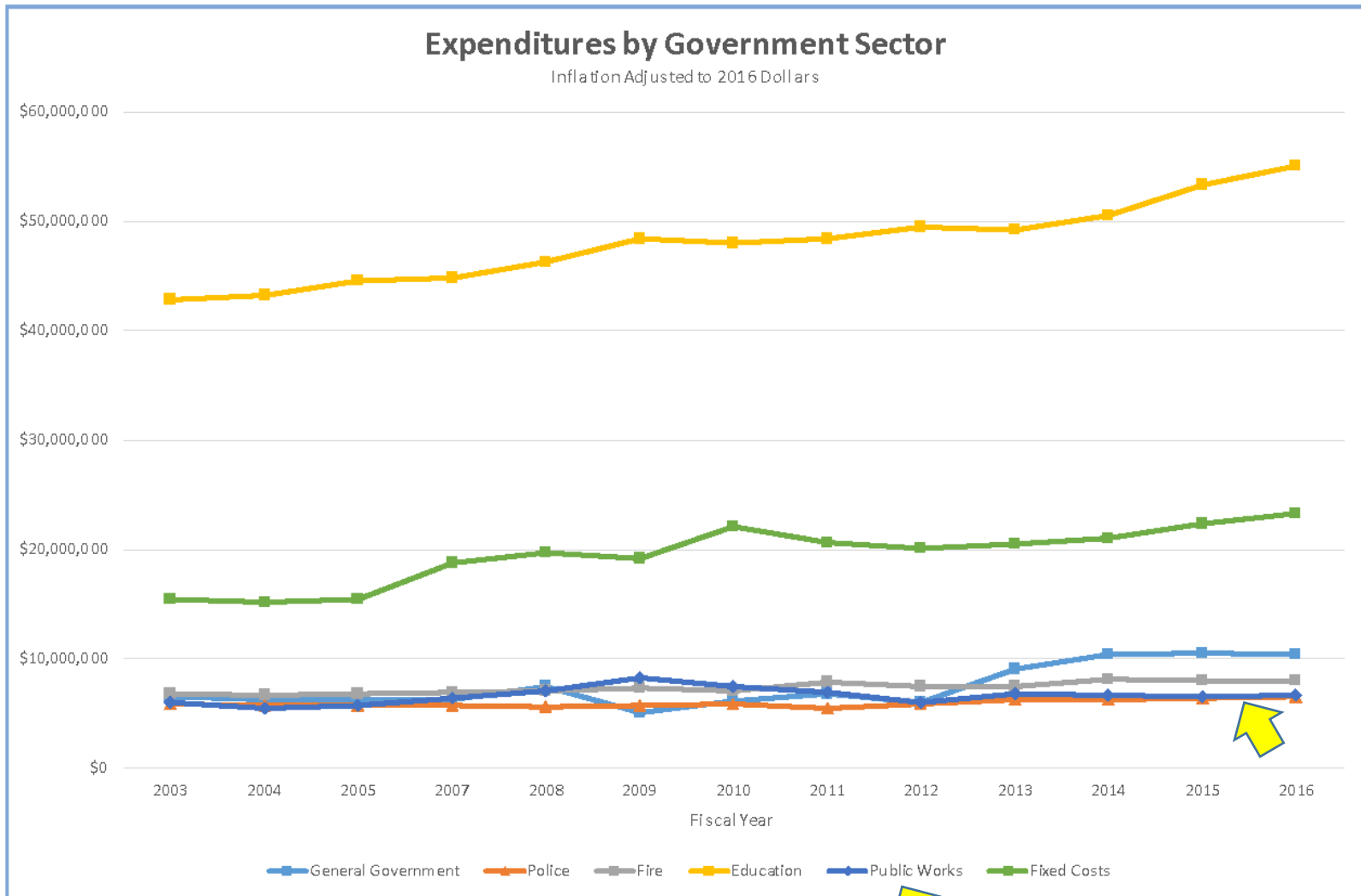


FIGURE 8.3: EXPENDITURES BY SECTOR



# Department Challenges

- COVID-19 Pandemic Continuity of Operations
- Staffing Resources
  - LFNR, Assistant Director, Asset Manager, Administrative Assistant-Highway & Sanitation, Stormwater Engineer
  - Water Operators/Equipment Maintenance Division Water Division turnover. Training/Staff Retention.
- Work Order/Asset Management/Time Tracking
- Regulatory Requirements
  - USEPA Municipal Separate Storm Sewer System (MS4) Stormwater Permit Implementation
  - MassDEP Poly-fluoroalkyl Substances (PFAS) Drinking Water Standard 2021
- Parks/Landscape Maintenance - project timing for Schools, Cochituate Rail Trail, Dog Park and Park Renovations, playgrounds.
- MGL Chapter 149 Section 6 ½ - Municipal Compliance with OSHA
- Aging Infrastructure – roads (public and private), water/sewer utilities





# Department Challenges

## REGULATORY REQUIREMENT

- Implement requirements of new MS4 Stormwater Management Permit – Effective July 2018 (**REG**)
- MassDEP PFAS (Polyfluoroalkyl Substances) Standard - Effective January 2021 (**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

## 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**)
- ASE / EVT Certified Technicians (**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**)
- Electronic Annual Water Quality Report (**FIN**)

## RISK BY DEFERRED ACTION

- Implement Department wide Equipment Maintenance, Service Call and Work Order system (**BMP, RISK**)
- Implement Staffing Plan (**RISK**)
- Update Department Policies and Procedures (**BMP, RISK**)
- Develop and Administrate Department Safety Manual (**BMP, RISK**)
- Inventory Control System (**RISK**)
- Update EMD Shop Equipment (**RISK**)
- Inspection/Permitting Improvements (**BMP, RISK**)
- Roadway/Sidewalk Asset Management Plan (**BMP, RISK, FIN**)
- Town-wide Tree Inventory and Replacement (**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



# 2022 Staffing Needs

## Immediate

- Parks Craftsman – LNFR

## Near Term

- Assistant Director of Public Works - Administration
- Asset Manager – Administration
- Stormwater Engineer - Engineering
- Administrative Assistant - Highway & Sanitation Division

## Time Dependent

- Water Treatment Plant Operator
- Water/Sewer Administrative Assistant (Backflow and Compliance)
- Skilled Laborer – Water/Sewer Division





# LNFR Craftsman

## Staffing

- 1 FTE Craftsman– LNFR

## Purpose/Description

- Unmet needs townwide for parks maintenance
- Maintenance/Repairs Park Fixtures
  - Playgrounds, benches, hardscape, receptacles, nets, backstops, bleachers, fencing, etc.
- Manage Playground Safety Inspections
  - Certified Playground Safety Inspector (CPSI) from the National Recreation and Park Association
- Additional responsibilities for Cochituate Rail Trail and Kennedy Middle School
  - Mowing, debris removal, tree work, landscape beds, leaf removal, Synthetic Field Maintenance, etc.
- Support snow removal operations and assist in Division projects and maintenance tasks townwide



# 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



# Admin Assistant – Highway & Sanitation

- Highway & Sanitation Division one of two largest Public Works Divisions
  - No directly assigned administrative support
- Division Supervisor is also Deputy Director
  - fields 50 to 100 phone calls each day (more during storm events)
  - 650 See-click Fix Inquiries annually (3 year average – more recently)
- Approximately 65% of Division Supervisor/DD day is consumed by administrative activities
  - Daily solid waste tonnage slips
  - Daily recycling tonnage slips
  - Tracking and compiling Bulk Waste Collection Slips
  - Logging pot holes, drainage issues, maintenance requests, sanitation collection issues
  - Addressing damage claims
  - Responding to winter storm response inquiries and requests
- Department wide work order / asset management program (MS4 Permit Compliance)
- When Supervisor not available, the response to inquiries is delayed. Goal to reduce call back and response time
- Free up time for Division Supervisor to market the sale of recyclables from Recycling Center, increase public outreach regarding sanitation programs
- Free up some of the Deputy Director's time to assist Director with Department polices/practices/personnel management/collective bargaining/safety program
- Free up Director's time in tracking and managing landfill maintenance/monitoring activities



# 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



# Highway & Sanitation Division

## Staffing

27 Employees

## Responsibilities

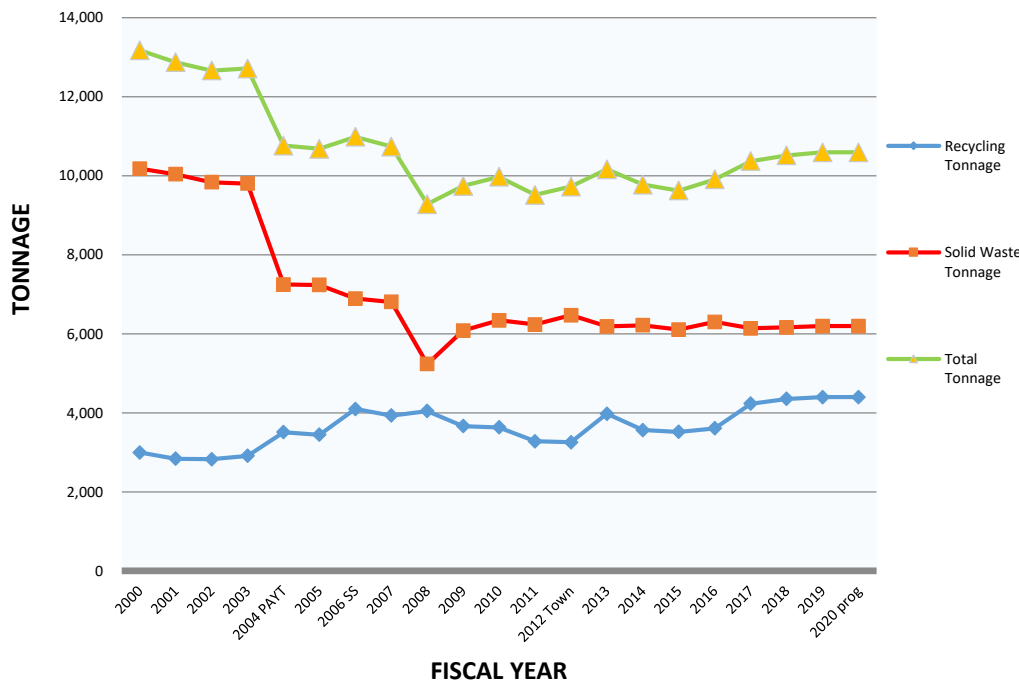
- Roadway Maintenance
- Street Sweeping
- Stormwater Maintenance
- Pavement Markings & Signage
- Curbside Waste and Recycling
- Bulk/Yard Waste Collection
- Recycling Center – West Street
- Monitoring/maintenance of the gas collection system and flaring station at the golf course



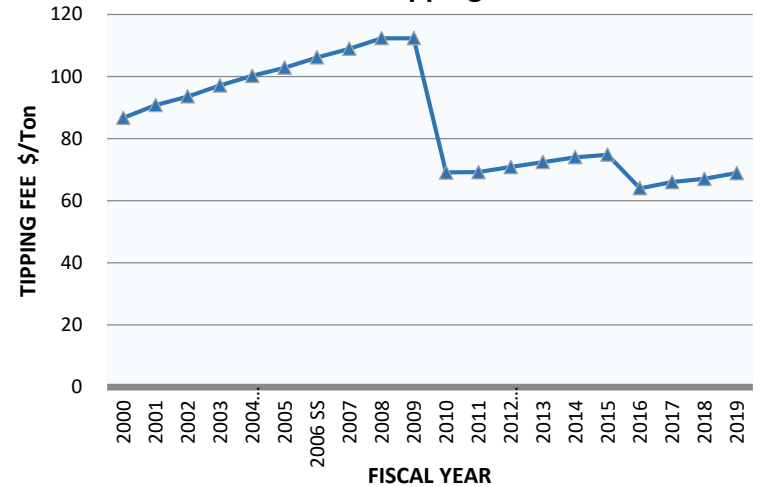
# Sanitation Program

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

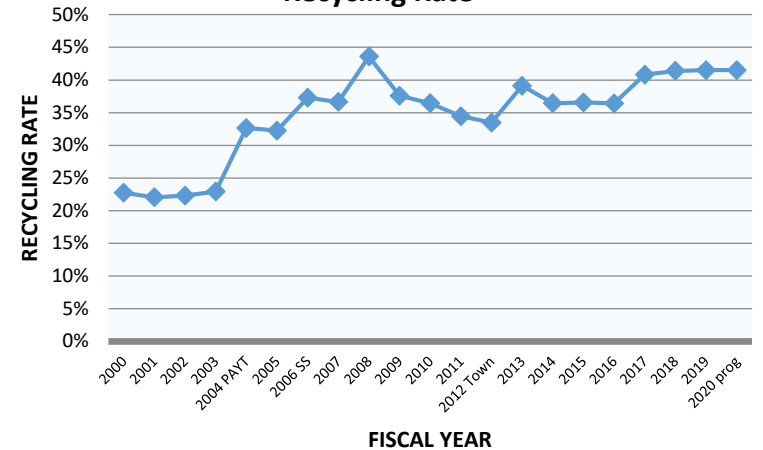
### Solid Waste and Recycling Tonnage



### Solid Waste Tipping Fee



### Recycling Rate



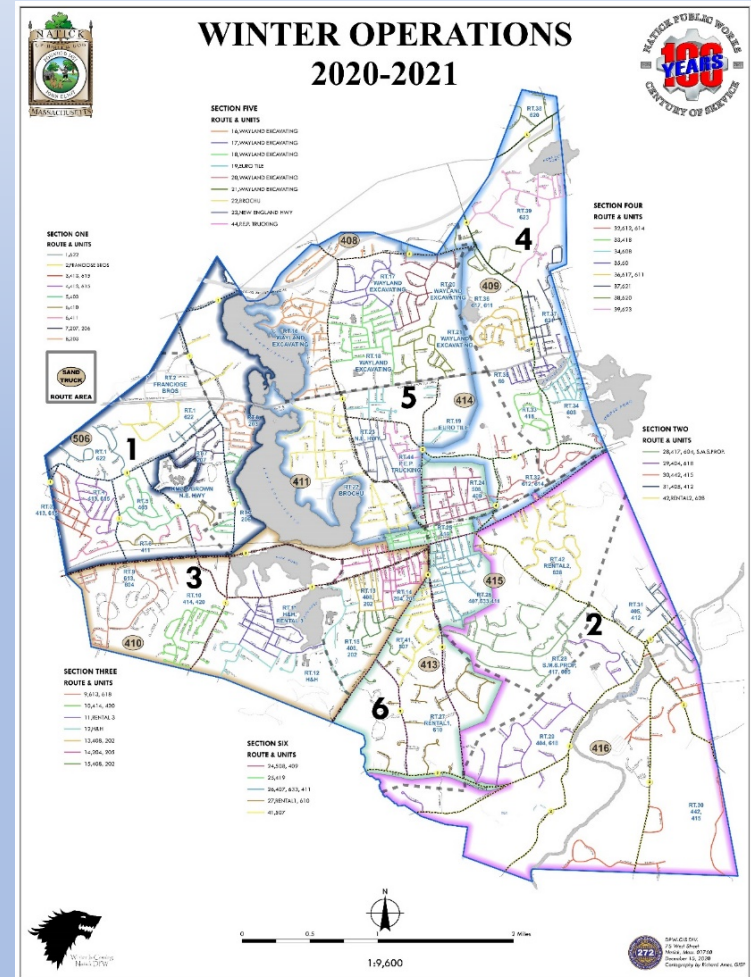


# Winter Operations

## ▪ “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

11 Employees

## Responsibilities

- Manage over 165 acres of active parks and play fields (60+ locations)
- Irrigation, Mowing, Turf Management, Line Marking
- Maintain Public Shade Trees (Town Tree Warden)
- Hazard Tree Removal





# Water & Sewer Division

## Staffing

28 Employees

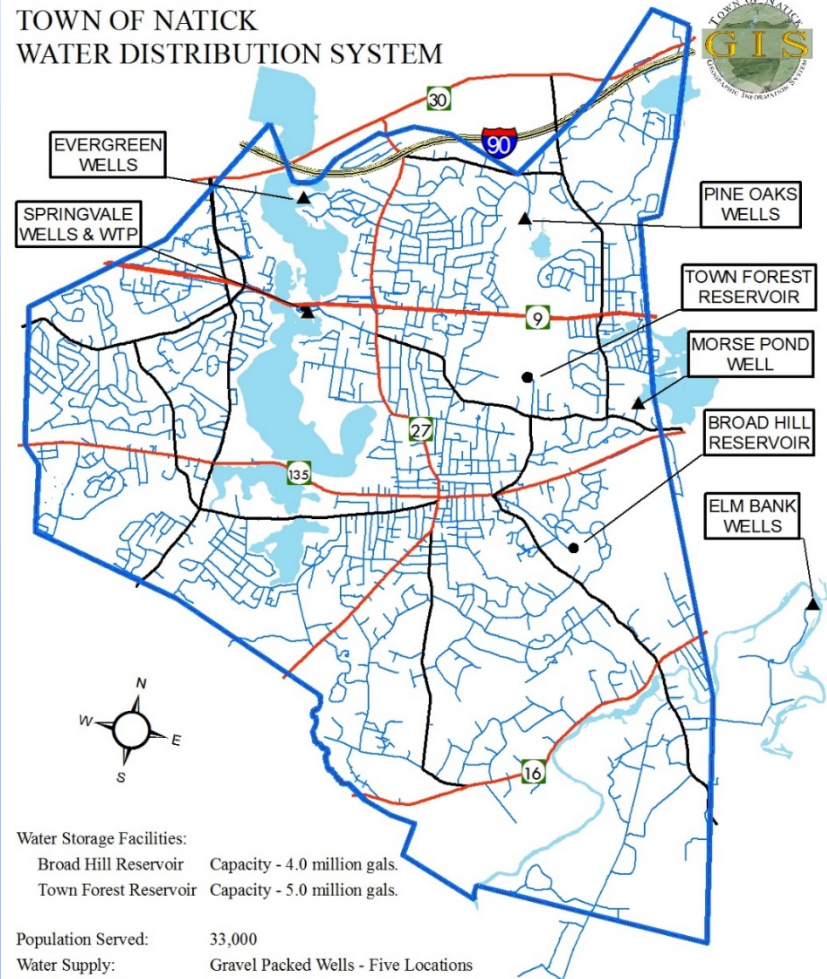
- **System Overview: Five Major Sections**
  - Water Distribution
  - Water Treatment
  - Sewer Collection & Pumping
  - Metering, Backflows & Data Management
  - Capital Improvements
  - On call 24 hours per day, 365 days per year



# 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



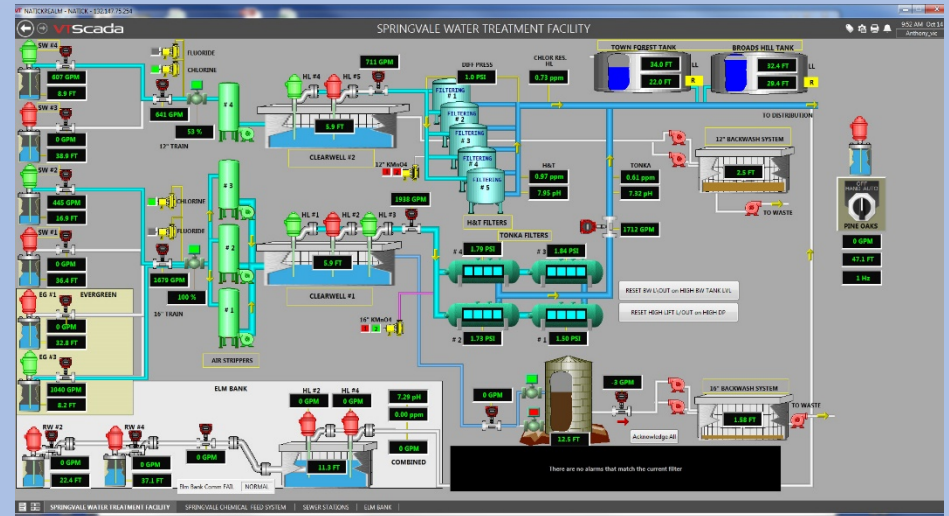
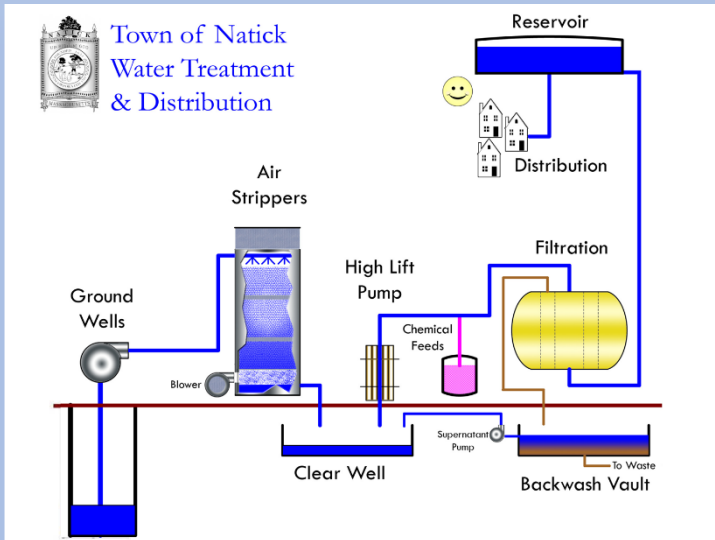




# Water & Sewer Division

## Springvale WTP

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





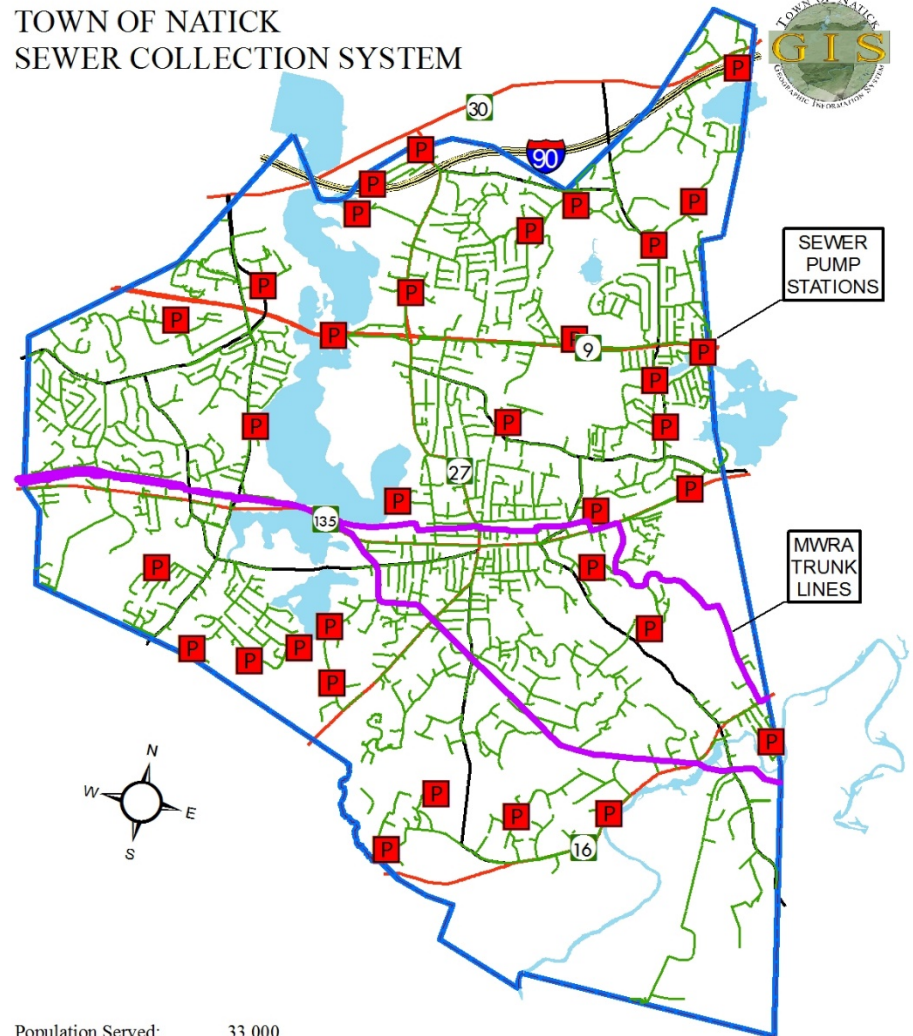
# Water & Sewer Division

## ■ 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





# 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](http://www.natickma.gov/249/Public-Works)

Online Bill Payments

See Click Fix

My Waste Notification

WaterSmart