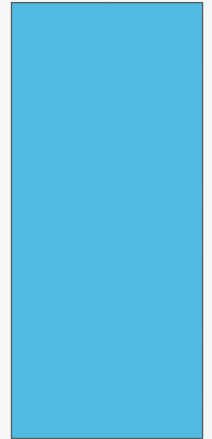


A WATERWORKS OVERVIEW

FRANKLIN DEPARTMENT OF PUBLIC WORKS

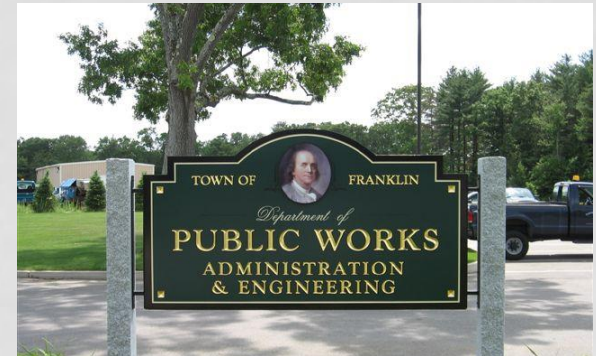
**ROBERT "BRUTUS" CANTOREGGI, DPW DIRECTOR
LAURIE RUSZALA, WATER & SEWER SUPERINTENDENT**



Franklin Town Council Meeting January 30th, 2019

FRANKLIN, AT A GLANCE

- **Population: 33,850+/-**
- **290 “lane-miles” of roadways**
- **Total Land: 27 square miles**
 - 4 Square Miles of Impervious
- **Drinking water supply from groundwater**
- **160 miles of water works**
- **148 miles of sewer works**
- **128+ miles of drain pipe**
 - 7,000+ Catch Basins
 - 600+ Outfalls
 - 200+ Treatment Basins



WATER WORKS

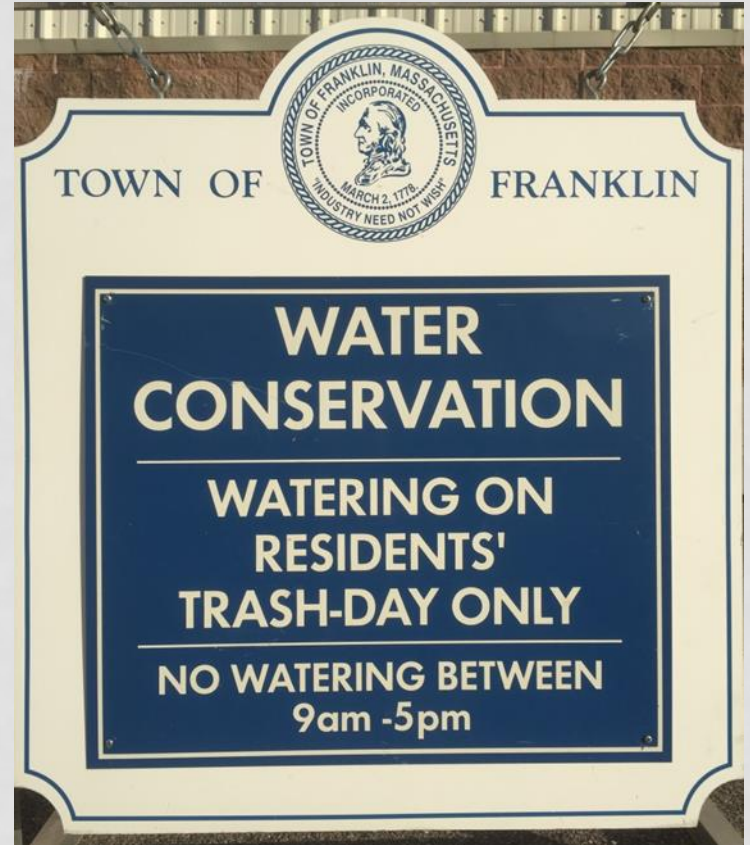
WATER: REGULATORY ISSUES

- Permit Requirements:
 - Average of 65 Gallons Per Resident Per Day (Or Less)
 - Less than 10% Unaccounted-for Water
- Could Not Meet Demand: Fire, Emergencies, and Development
- Conservation / Use



IMPLEMENTATION

- Public Education
- Water Conservation Program
- Repair Distribution System
- New Waterline / New Road Program
- Leak Detection Program
- Meter Replacement and Calibration Program



IMPLEMENTATION

- Conducted Annual Leak Detection Program
 - Exceed Permitted Standards of Once Every Three Years
 - Since 2001, over 750 Leaks Have Been Detected and Repaired
 - Tighter System, Reduction in Unaccounted-For Water, Improved System Management = Reduces Pumping & Treatment



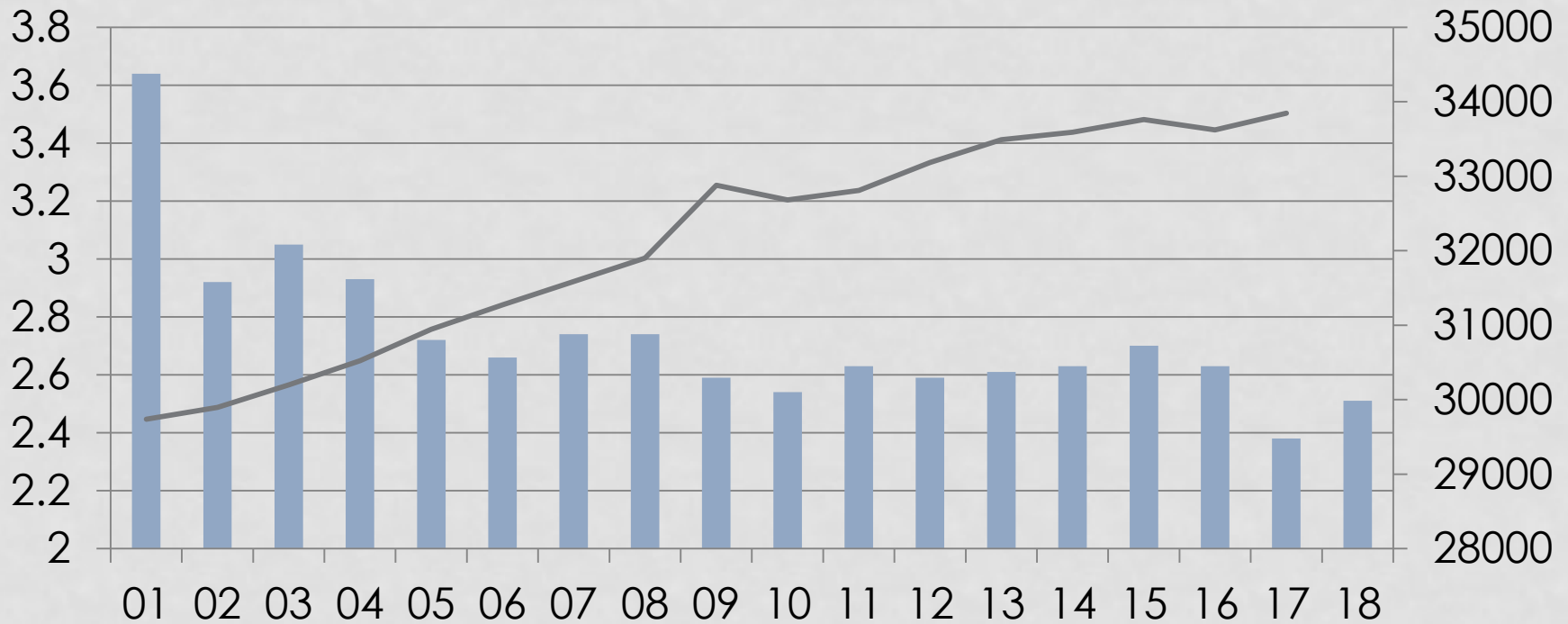
RESULTS

- Water Main Replacement Program Underway
 - Goal: Replace Entire System Within 80 Years
- Residents Happy With New Roads
- Strong Support From Town Council
 - \$5 Million Every 3 Years
- 2008, 2013, 2018 MassDEP Public Water System Award
- Increase In Water Cost

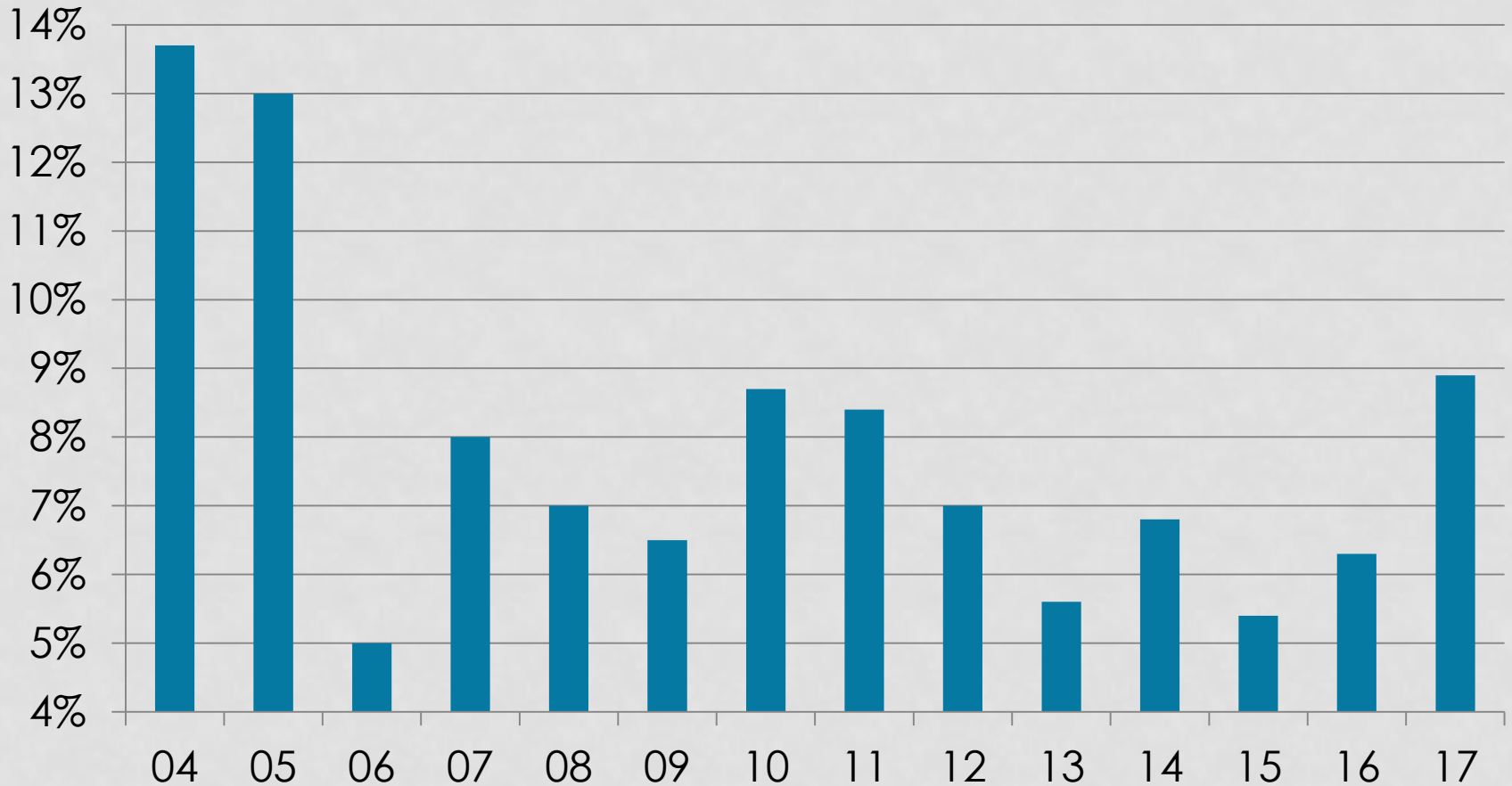


AVERAGE DAILY PUMPAGE (MGD)

Water Usage Population



UNACCOUNTED-FOR WATER



WATER WORKS

FUTURE CONCERNS

IRON & MANGANESE ISSUES



IRON & MANGANESE ISSUES



WELLS #3 & #6

Well # 3

- Only pumping 0.25 MGD
- Permitted: 0.5 MGD

Well # 6

- Pumping “Nothing”!
Has been off since 2016
- Permitted: 0.72 MGD

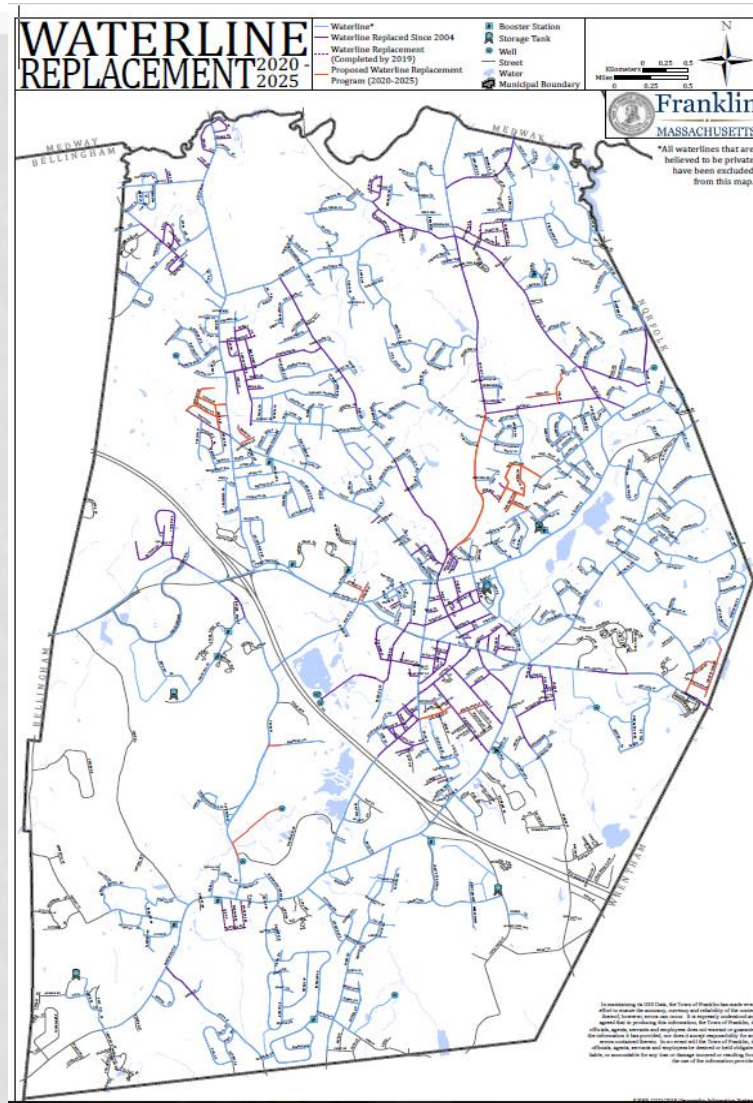
NEW TREATMENT PLANT FOR WELLS 3 & 6



NEW GROVE STREET PLANT

- 90% Designed
- Will be able to treat full 1.22 MGD from both wells combined.
- Installed a replacement well at both wells to increase production to permitted volume.
- Designed for expansion if ground water continues to deteriorate.
- #1 on the draft State SRF funding plan (2% Loan)
- Estimated Cost: \$11.8 Million
- Schedule:
 - Bid in Spring 2019
 - Construction to start Late Summer 2019
 - Operational Winter 2021

PROPOSED WATER MAIN REPLACEMENT PROGRAM



PROPOSED WATER MAIN REPLACEMENT PROGRAM

	Neighborhood	Street	From	To	Cost
Year 1	In Town Lincoln	Lincoln Street	Brook St	Squire St	\$ 1,900,000.00
Year 2	Mackintosh St	Pine Ridge Dr	Sherman Ave	Longhill Rd	\$ 2,000,000.00
	Mackintosh St	Mackintosh St	Pine Ridge Dr	Pine Ridge Dr	
	Mackintosh St	Dartmouth Rd	Mackintosh St	Dead End	
	Mackintosh St	Sargent Ln	Dartmouth Rd	Flintlock Rd	
Year 3	Arlington St	Arlington Street	Union St	Wachusett St	\$ 1,100,000.00
	Arlington St	Howard Street	Arlington St	Hutchinson St	
	Arlington St	Howard Place	Howard St	Dead End	
	Arlington St	North Park Dr	Wachusett St	Peck St	
Year 4	Country Club Dr	Country Club Dr	Pearly Ln	Cul-de-sac	\$ 1,200,000.00
	Country Club Dr	Tam-O-Shanter Rd	Jordan Rd	Country Club Dr	
	Country Club Dr	Burning Tree Rd	Jordan Rd	Country Club Dr	
	Country Club Dr	Jordan Road	East Central St	Burning Tree Rd	
Year 3	Janie Ave	Janie Ave	Oak St Ext	Eldon Dr	\$ 1,300,000.00
	Janie Ave	Eldon Dr	Pond St	Richard Ln	
	Janie Ave	Schofield Dr	Pond St	Oak St Ext	
	Janie Ave	Richard Ln	Schofield Dr	Dead End	
Total:					\$ 7,500,000.00



NEW GROWTH

1,000 +/- UNITS APPROVED, PLANNED & PROPOSED

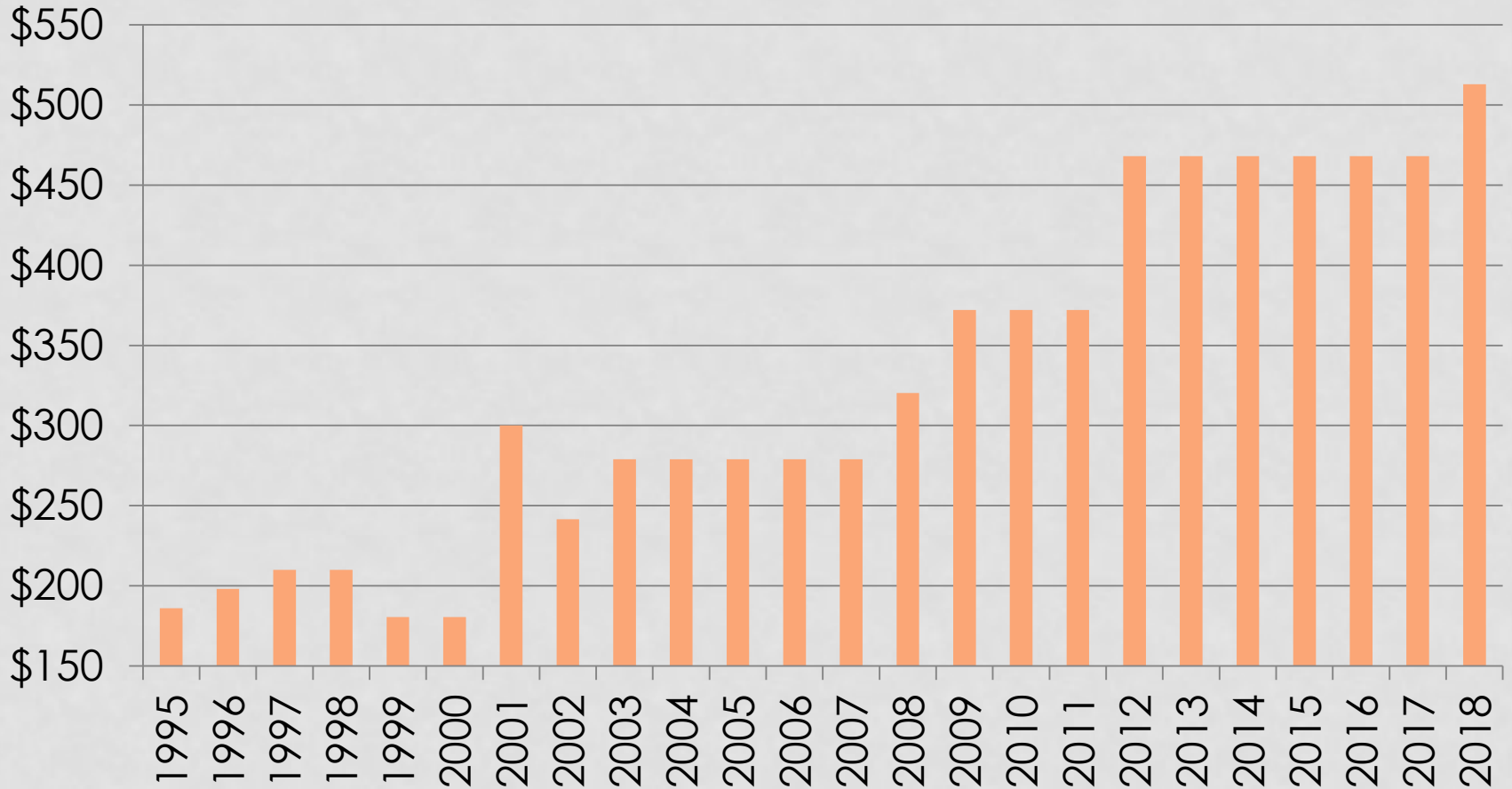


NEW GROWTH

1,000 +/- UNITS APPROVED, PLANNED & PROPOSED

- Potential new demand for residential growth on water system would be 176,000 gallons per day.
- Unknown new demands and expansion of desirable industrial, commercial and other non-residential ventures.
- Increase “wear and tear” on drinking water and sewer systems.
- Attempts to modify the existing MassDEP groundwater withdrawal permit would be time consuming, expensive, and may not produce the desired results.

ANNUAL COST PER RESIDENT



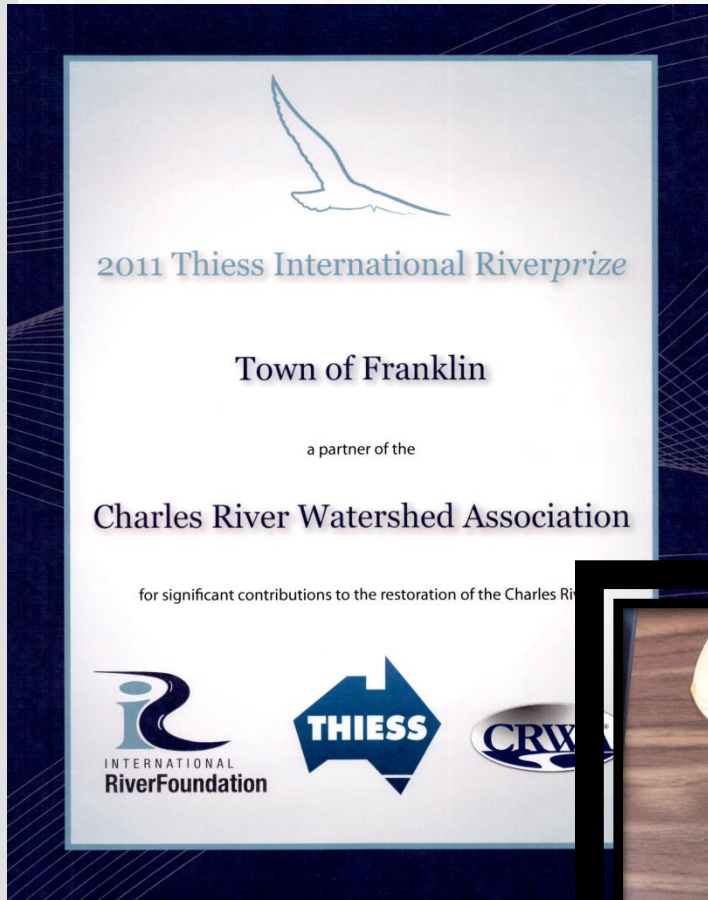
GRANTS

- September 2018 – (\$79,380) GAP Grant for “Energy Efficiency Improvements at Drinking Water Facilities”
- March 2015 – (\$120,000) Sustainable Water Management Initiative (SWMI) Grant Awarded for “Design & Construction of Stormwater Infiltration Systems”
- September 2014 – (\$117,650) 319 Grant Awarded for “Phase II of Stormwater BMP Retrofits”
- March 2014 – (\$120,000) SWMI Grant Awarded for “Regional Evaluation of Water Management Alternatives to Reduce Streamflow Impacts In the Upper Charles River Watershed”
- March 2013 – (\$85,000) SWMI Grant Awarded for “Well Pumping and Recharge Strategies for Streamflow Augmentation”

GRANTS

- July 2012 – (\$50,000) US EPA Grant Awarded for a Town-Wide “Green Stormwater Infrastructure (GSI) Implementation Strategy”
- 2011 – (\$300,000) US EPA Pilot Study for “Sustainable Stormwater Funding Evaluation for the Upper Charles River Communities of Bellingham, Franklin and Milford, MA”
- 2010 – (\$131,000) Construction of s319 Grant for Phase I of Stormwater BMP Retrofits: 3 Detention Basin Retrofits
- 2010 – (\$40,000) “Building Blue in Franklin” Project by CRWA to Develop A Sub-Watershed Management Plan
- 2007 – (\$42,000) Coastal Zone Management Grant for a Stormwater Utility Feasibility Study

RESULTS / RECENT ACCOLADES



QUESTIONS?



"Gettin' it done"