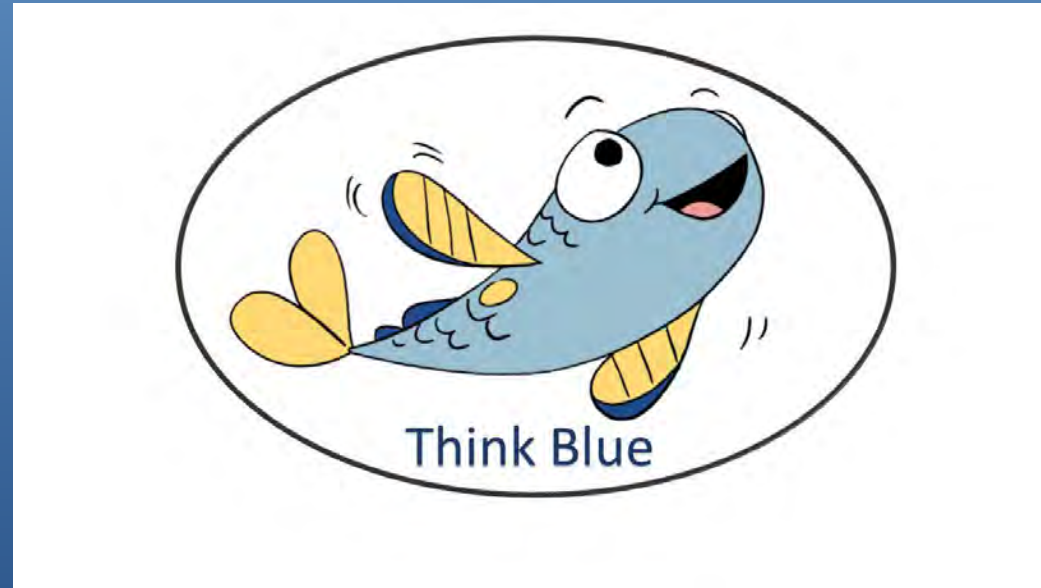


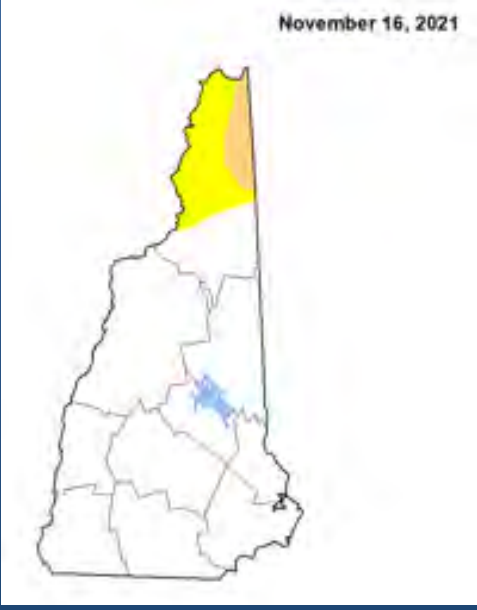
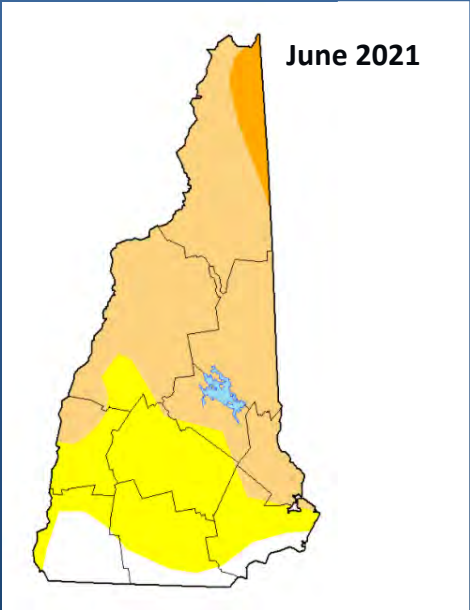
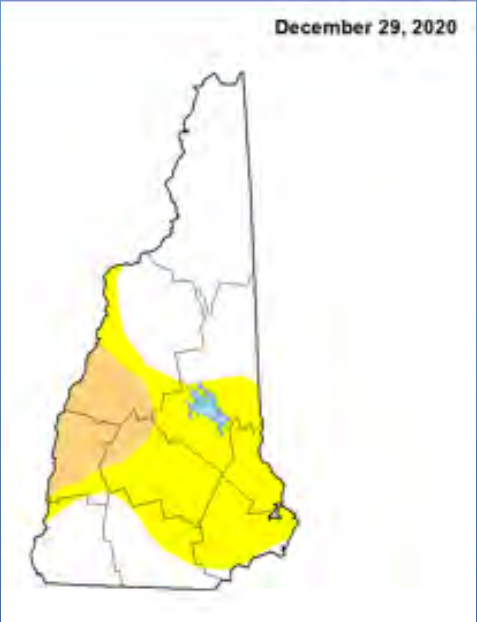
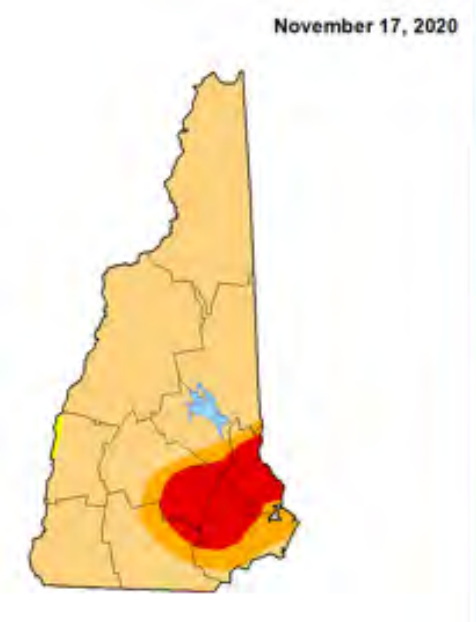
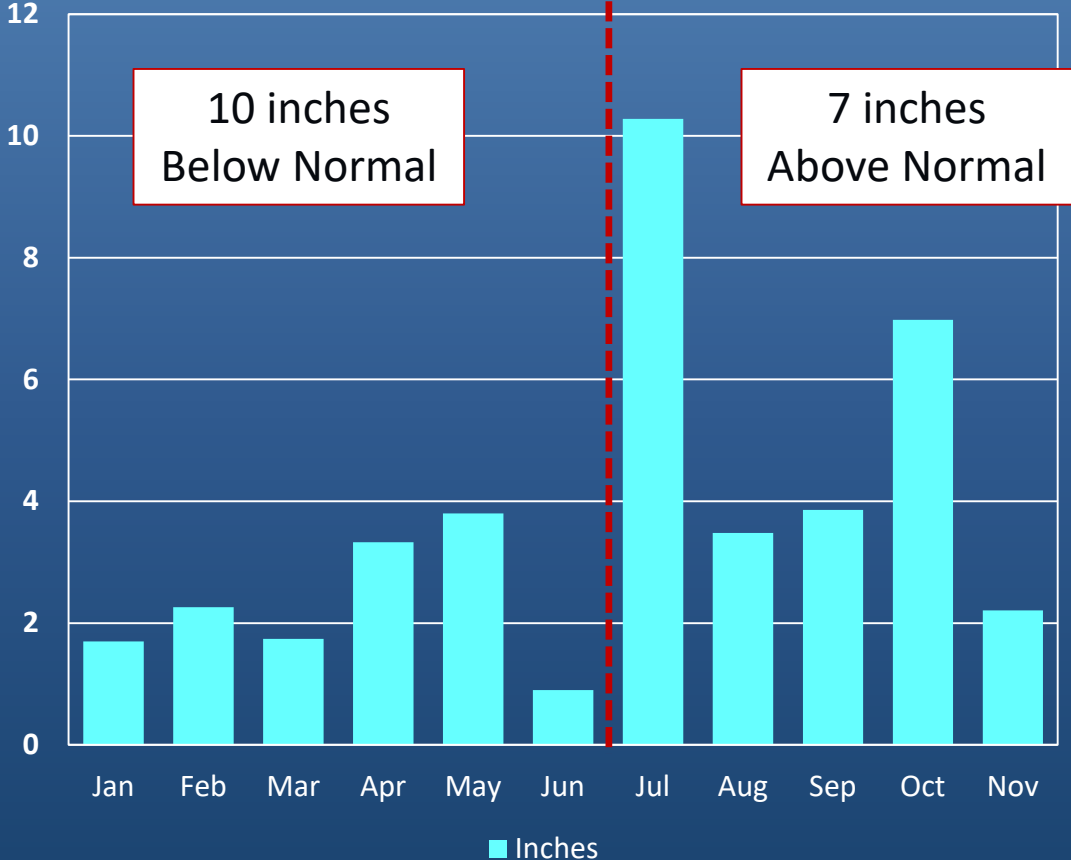
# Portsmouth Water – 2021 Year in Review



Safe Water Advisory Group  
February 23, 2022

# 2021 Weather

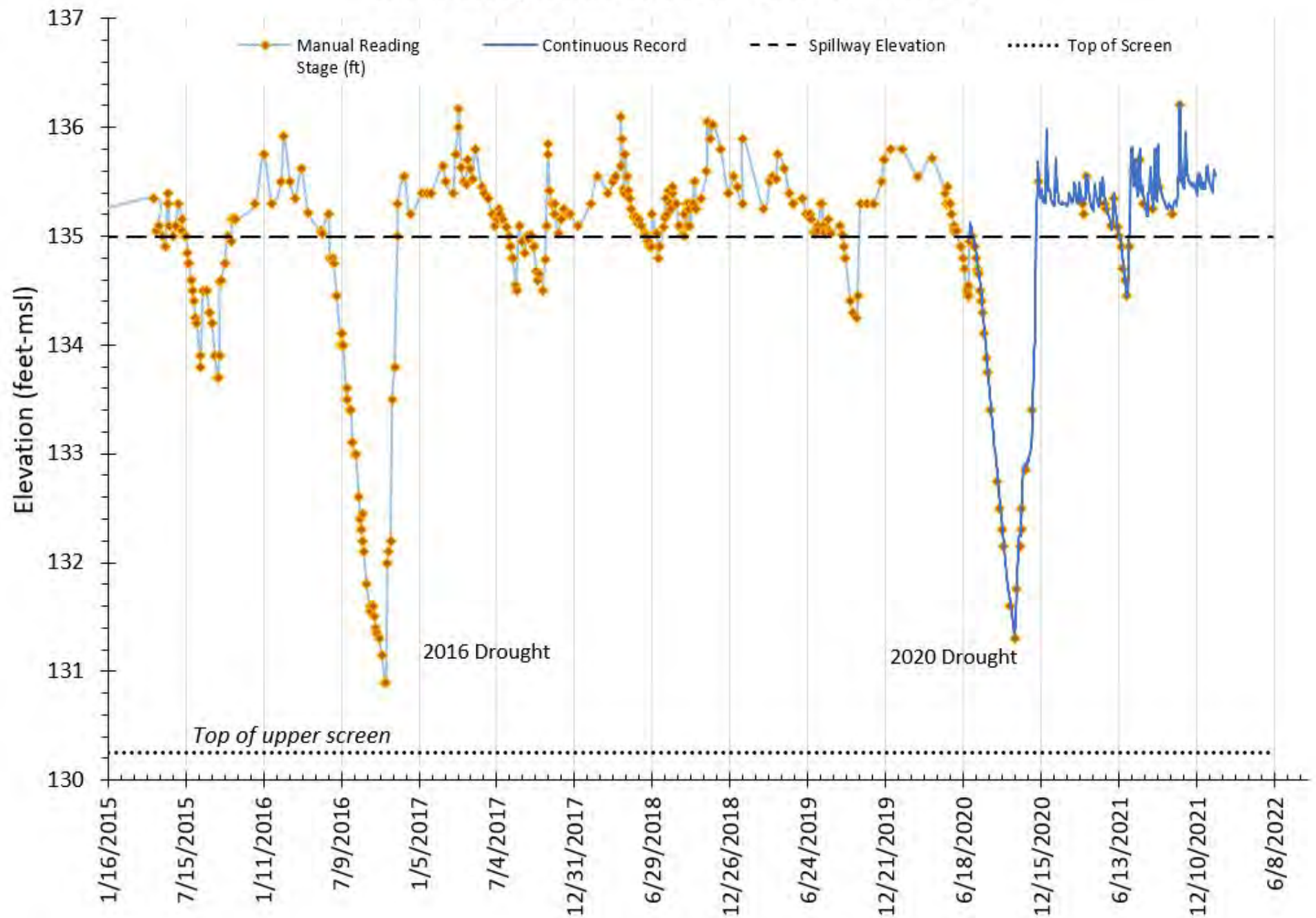
Inches Precipitation



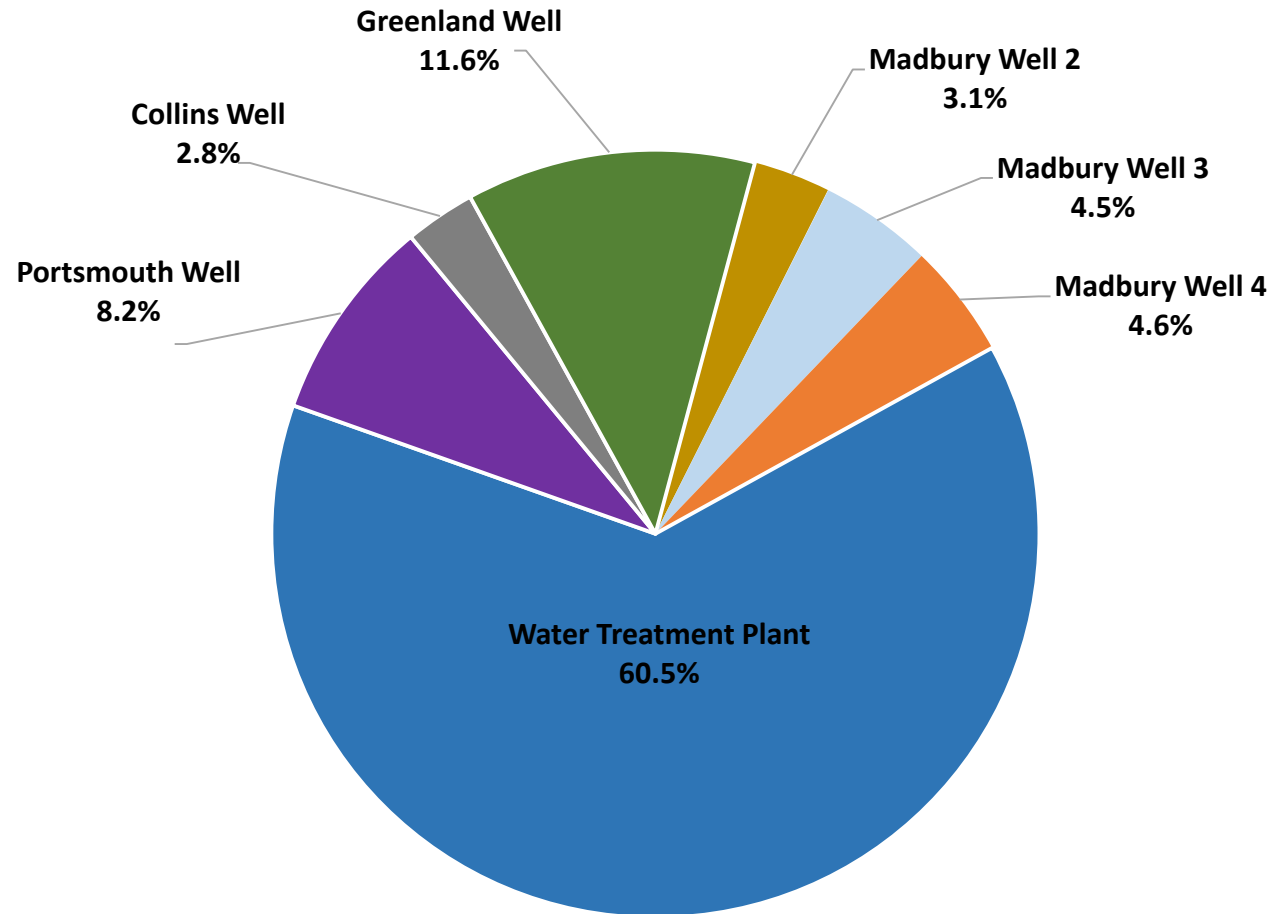
# 2021 Weather Summary (Boston Globe)

- Average Temperature was 54.6 degrees
  - 2.5 degrees above normal
  - Second-warmest year since 1872
- Warmest June on record
- Second warmest August on record
- Second warmest September on record
- Fourth warmest October on record

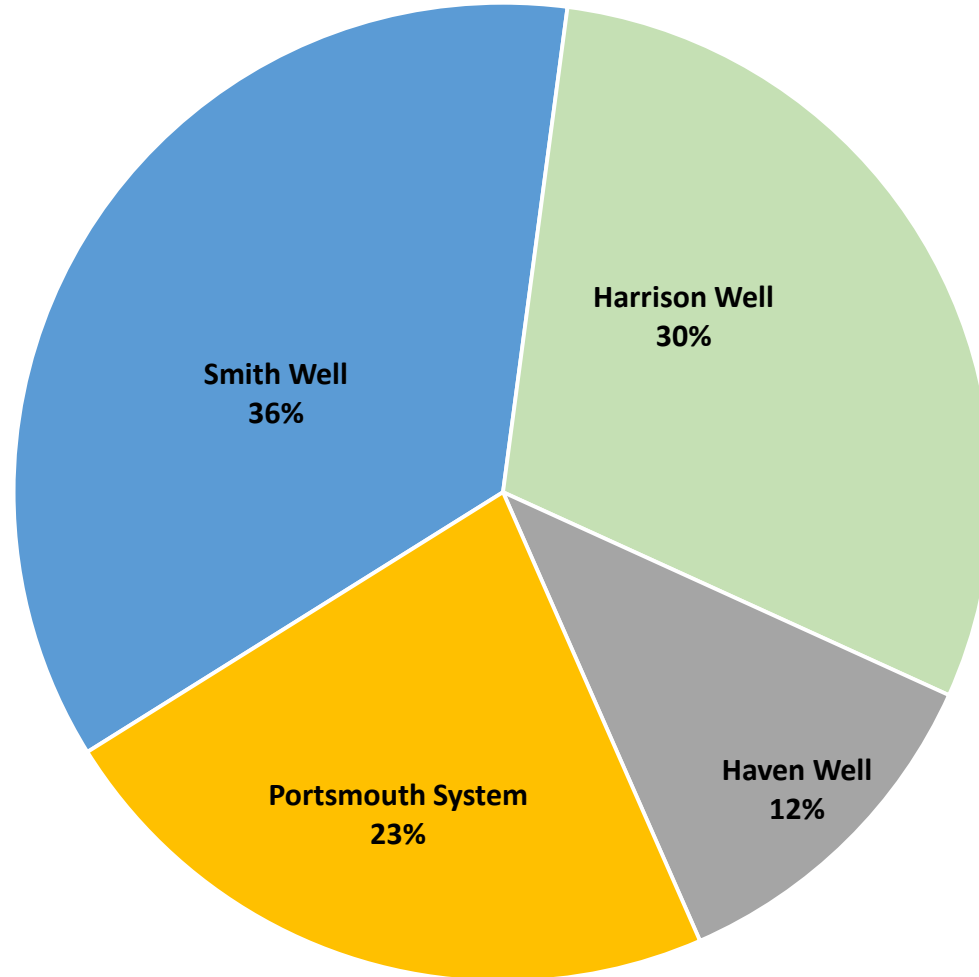
# Bellamy Reservoir Water Level



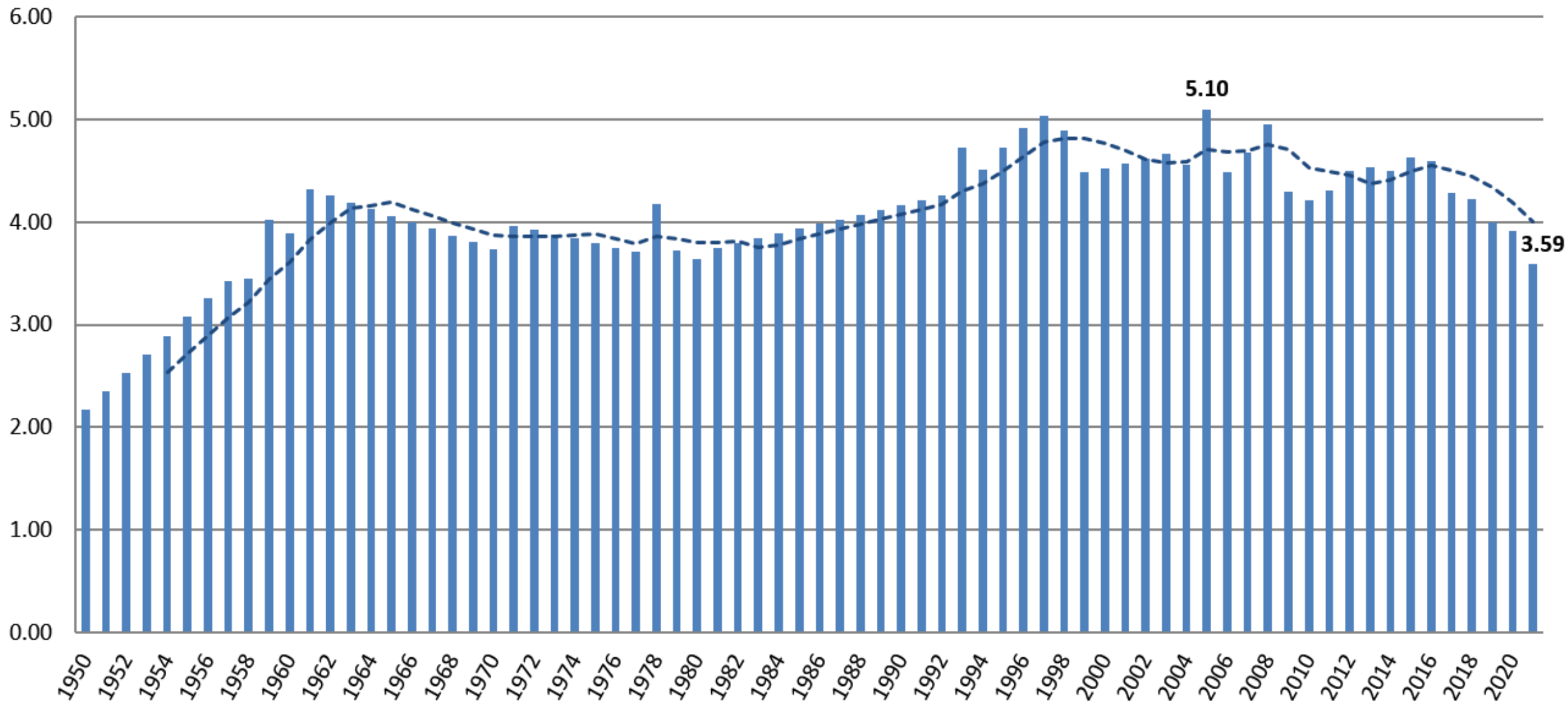
# Portsmouth Water Sources Source Percentages in 2021



**Pease Supply Sources  
Source Percentages in 2021**



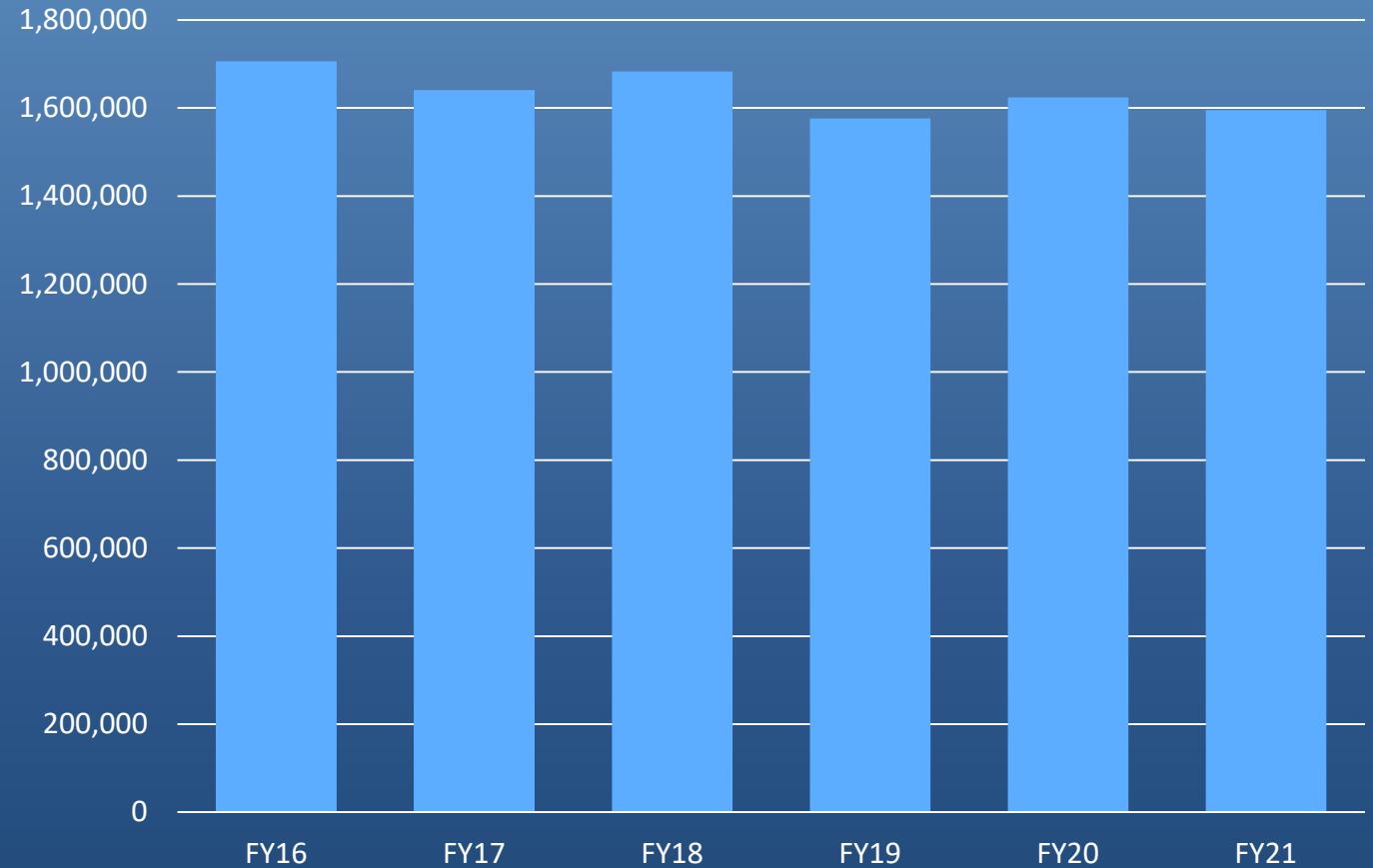
# Portsmouth Annual Water Pumpage - Million Gallons per Day and 5-Year Running Average - 1950 to 2021



# Water FY Sales Trend (Total Units)

	Water Units Billed
FY16	1,706,083
FY17	1,640,856
FY18	1,682,823
FY19	1,576,453
FY20	1,624,340
FY21	1,583,537

6 year ave. (16 to 21) = 1,635,632





# Water Main Replacements:

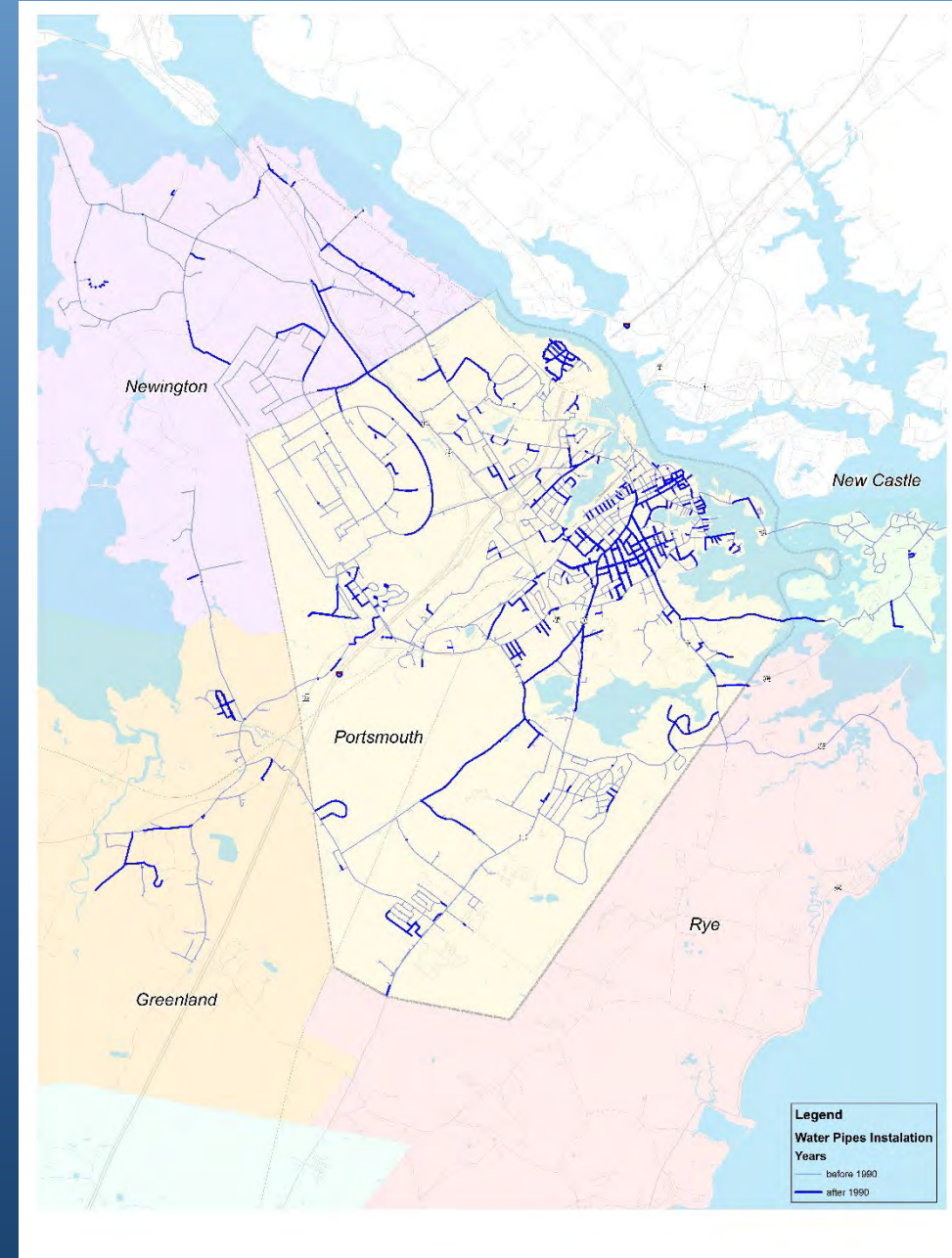


**58.6 Miles of Pipe**  
**~ 2 miles/year**

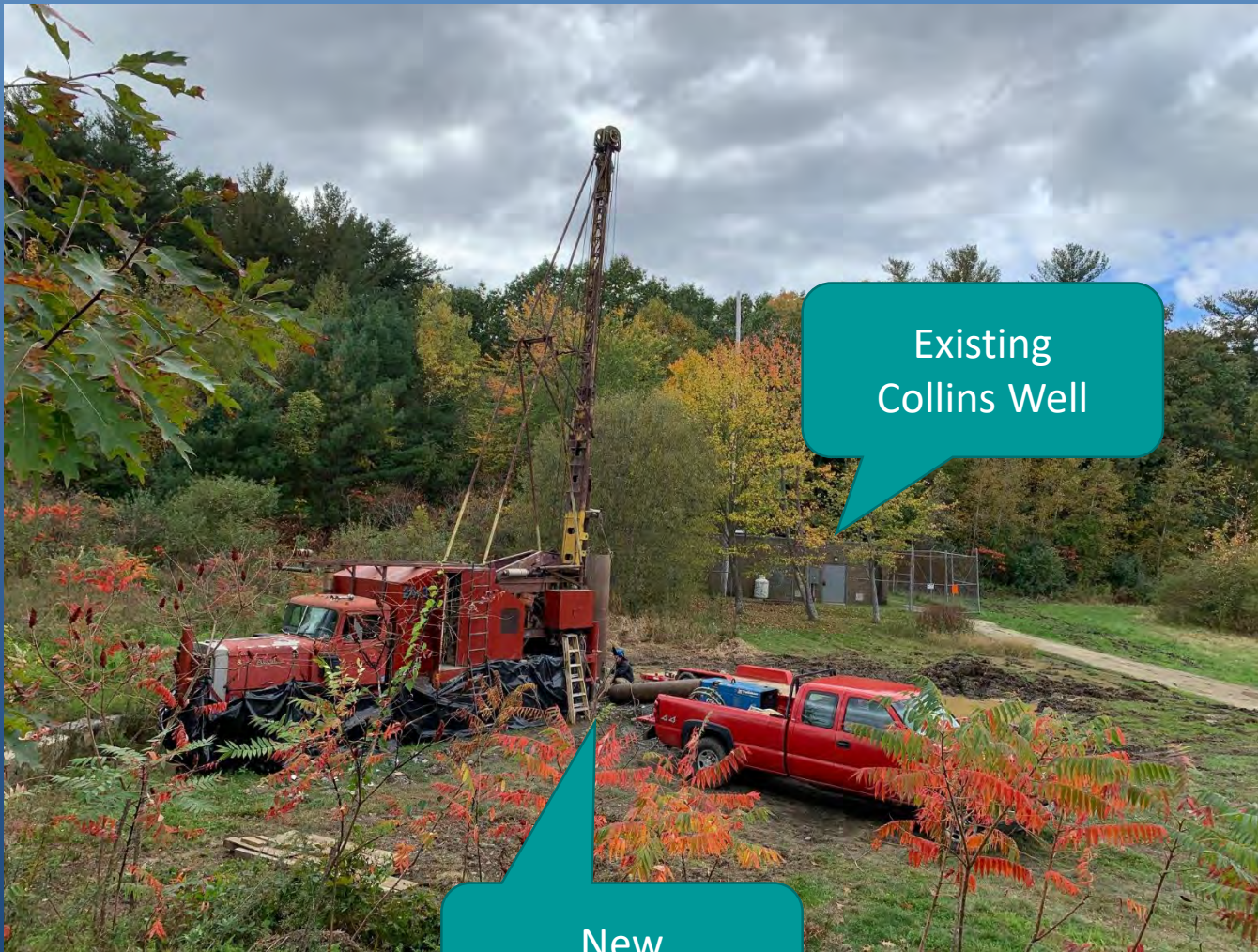
1991-2000 – 16.5 miles

2001-2010 – 18.6 miles

2011-2020 – 23.6 miles



# Collins Well Upgrades

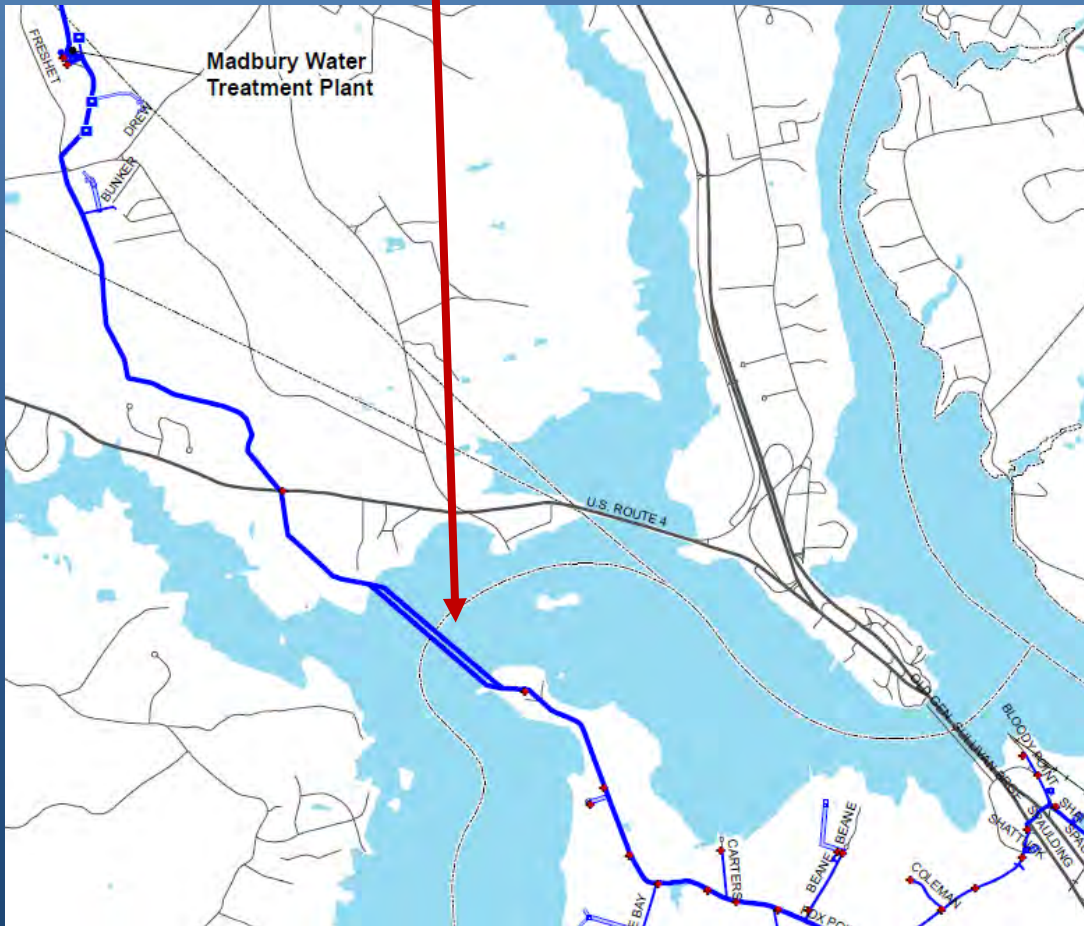


Existing  
Collins Well

New  
Collins Well B

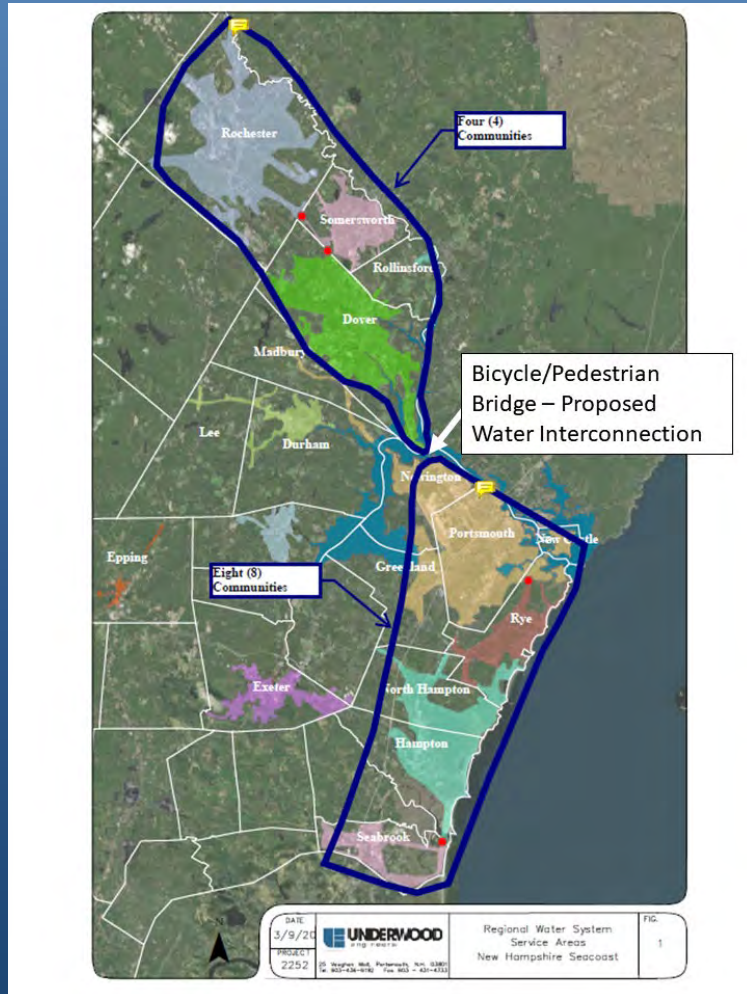
- New well complete and well screen installed
- Well purging/cleaning this week and next
- Pump testing and permitting to follow
- Final upgrade goal is to bring well back to its 400 gallon-per-minute capacity. Existing well is pumping at 227 gpm.

# Little Bay Water Transmission Main Replacement



- Wetlands permit proceeding with NHDES
- \$6.14 million – current total cost estimate
- Working with landowners for construction site access agreements
  - Two Durham properties
  - Newington – Town property
- Bid in June/July 2022
  - Allow time for contractor to procure pipe
- Construction, winter of 2022/2023

# Portsmouth – Dover Emergency Interconnection



NEW HAMPSHIRE DRINKING WATER & GROUNDWATER TRUST FUND

January 18, 2022

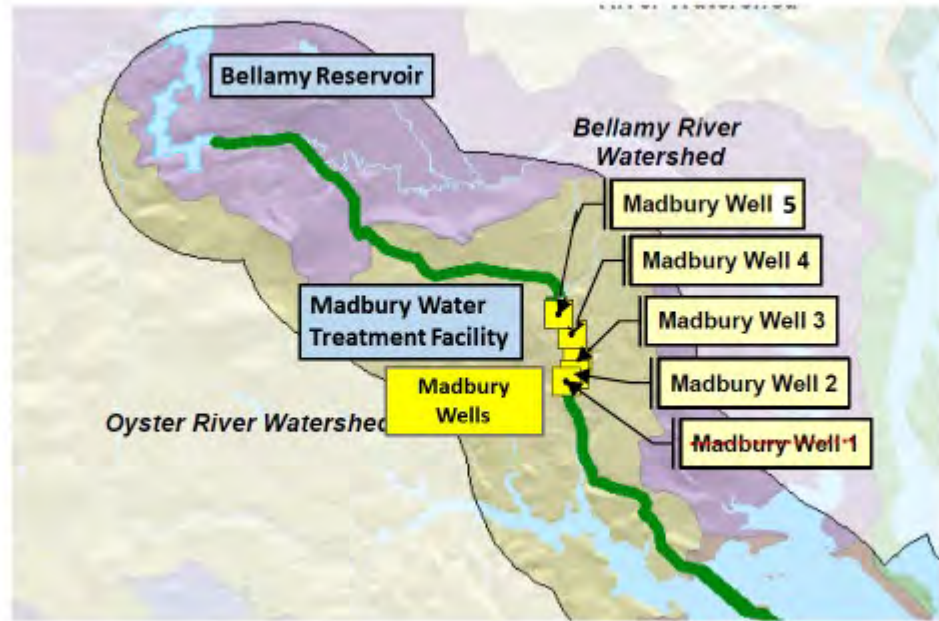
**Commission Members**

<b>Senator Chuck Morse,</b> <i>Chair</i>	Brian Goetz <a href="mailto:bgoetz@cityofportsmouth.com">bgoetz@cityofportsmouth.com</a>	John Storer <a href="mailto:j.storer@dover.nh.gov">j.storer@dover.nh.gov</a>
<b>Senator Tom Sherman,</b> <i>Vice Chair</i>	Deputy Director Portsmouth Water Works	Community Services Director Dover Water Department
<b>Bruce Cohen,</b> NH State Representative	680 Peverly Hill Road Portsmouth, NH 03801	271 Mast Road Dover, NH 03820
<b>Linda Gould,</b> NH State Representative		

Subject: Portsmouth – Dover Emergency Interconnection

- \$223,000 grant to fund design of pipe across bicycle/pedestrian bridge
- Construction in 2024
- We will continue to pursue other grant funds to pay for construction

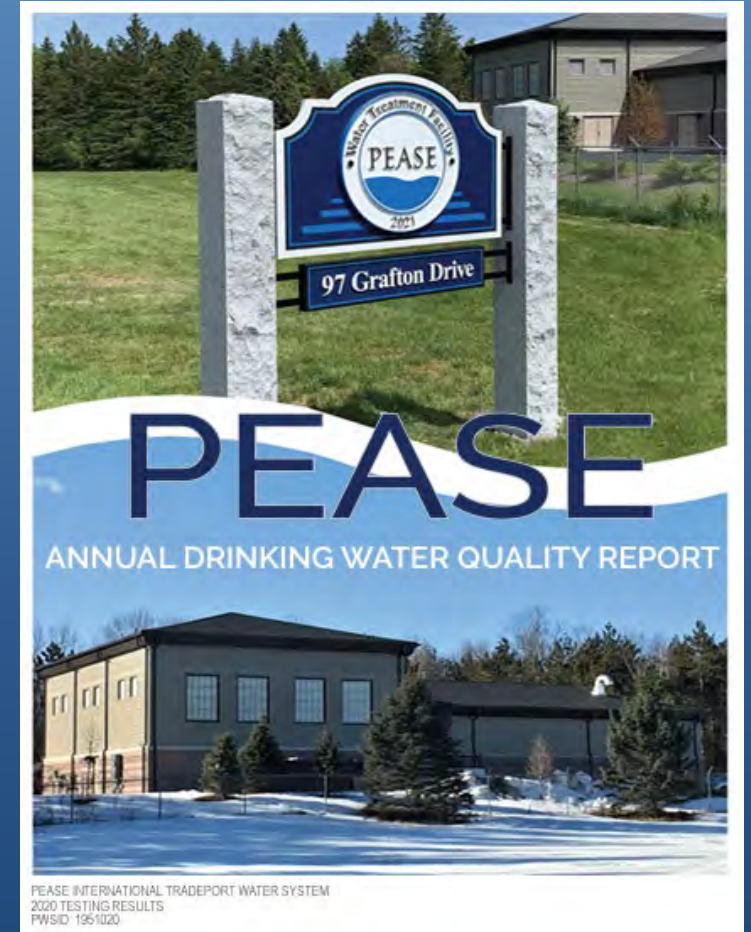
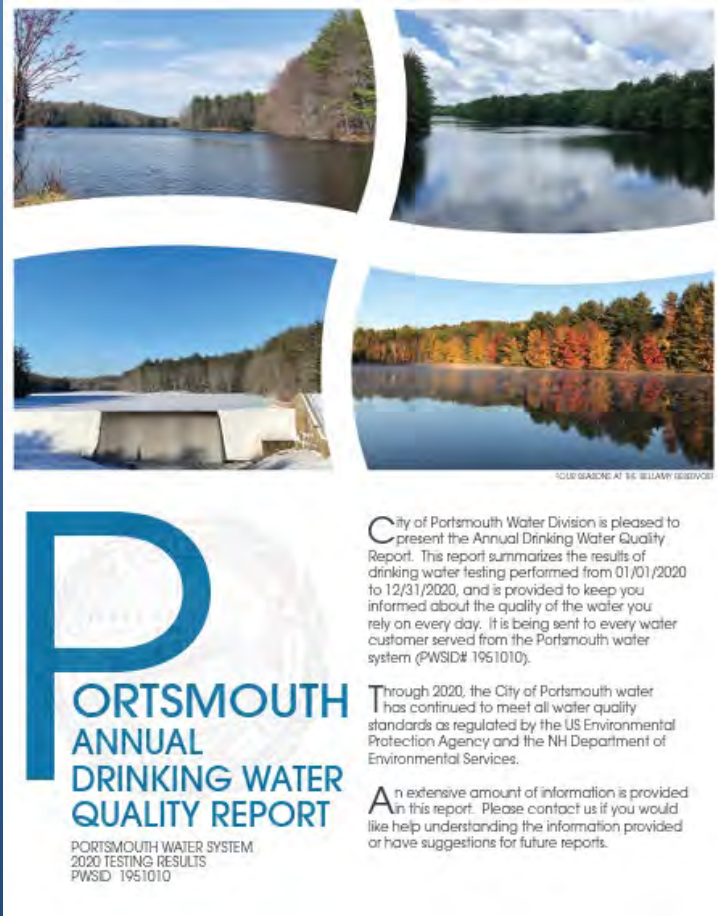
# Madbury Well Upgrades



- - Project Underway
- - New Wells will be connected to system
  - Well 4R
  - Well 5
- - Brief shutdown after first of year to install new pipe

# Water Quality

- Both water systems met all drinking water standards in 2021



# Pease Water PFAS Treatment System Performance



## PEASE WATER TREATMENT FACILITY PFAS RESULTS - POST TREATMENT

SAMPLED	PFAS*	Gallons Treated
4/27/2021	ND	2,717,039
5/4/2021	ND	4,354,049
5/11/2021	ND	6,387,665
5/12/2021	ND	6,830,373
5/18/2021	ND	9,391,617
6/15/2021	ND	23,133,046
7/19/2021	ND	41,445,555
8/4/2021	ND	52,901,428
8/5/2021	ND	53,782,078
8/11/2021	ND	58,558,918
8/18/2021	ND	64,975,798
8/25/2021	ND	69,830,038
9/15/2021	ND	86,914,498
10/13/2021	ND	106,446,219
11/17/2021	ND	123,708,814

ND = None Detected at Method Reportable Limit (2 ppt)

# PFAS Average – 12 Month Rolling

## New Hampshire Regulated Compounds

### - All Sources In Compliance

	Parts Per Trillion (PPT)	NH MCL	RAW*	MADBURY WTP FINISHED	MADBURY WELL 2	MADBURY WELL 3	MADBURY WELL 4	PORTSMOUTH WELL	COLLINS WELL	GREENLAND WELL	PEASE WTP
PFHxS	ng/L	18	0	0	0	0	0	7	2	2	0
PFOS	ng/L	15	0	0	0	0	0	5	4	5	0
PFOA	ng/L	12	1	2	2	3	0	6	4	4	0
PFNA	ng/L	11	0	0	0	0	0	0	0	0	0



# PFPrA Finding

Pilot Study with National Research Defense Council (NRDC) to test tap samples for more expansive, targeted list of PFAS

One residential tap sample from City of Portsmouth was analyzed as part of the pilot study by Eurofins labs - sample analyzed for 70 PFAS

PFPrA detected at 35 ppt

Follow-up sampling will occur in early March 2022:

- Tap sample at DPW (previous sample location not available)
- Samples at Madbury Water Treatment Facility and Portsmouth Well
- EPA lab will analyze for PFPrA
- Duplicate samples with Eurofins laboratory