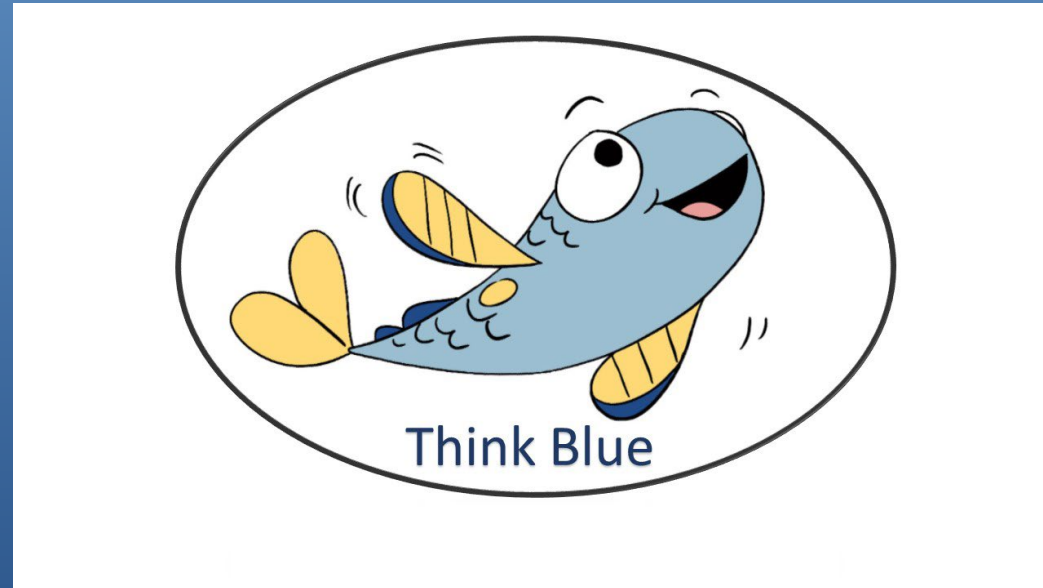


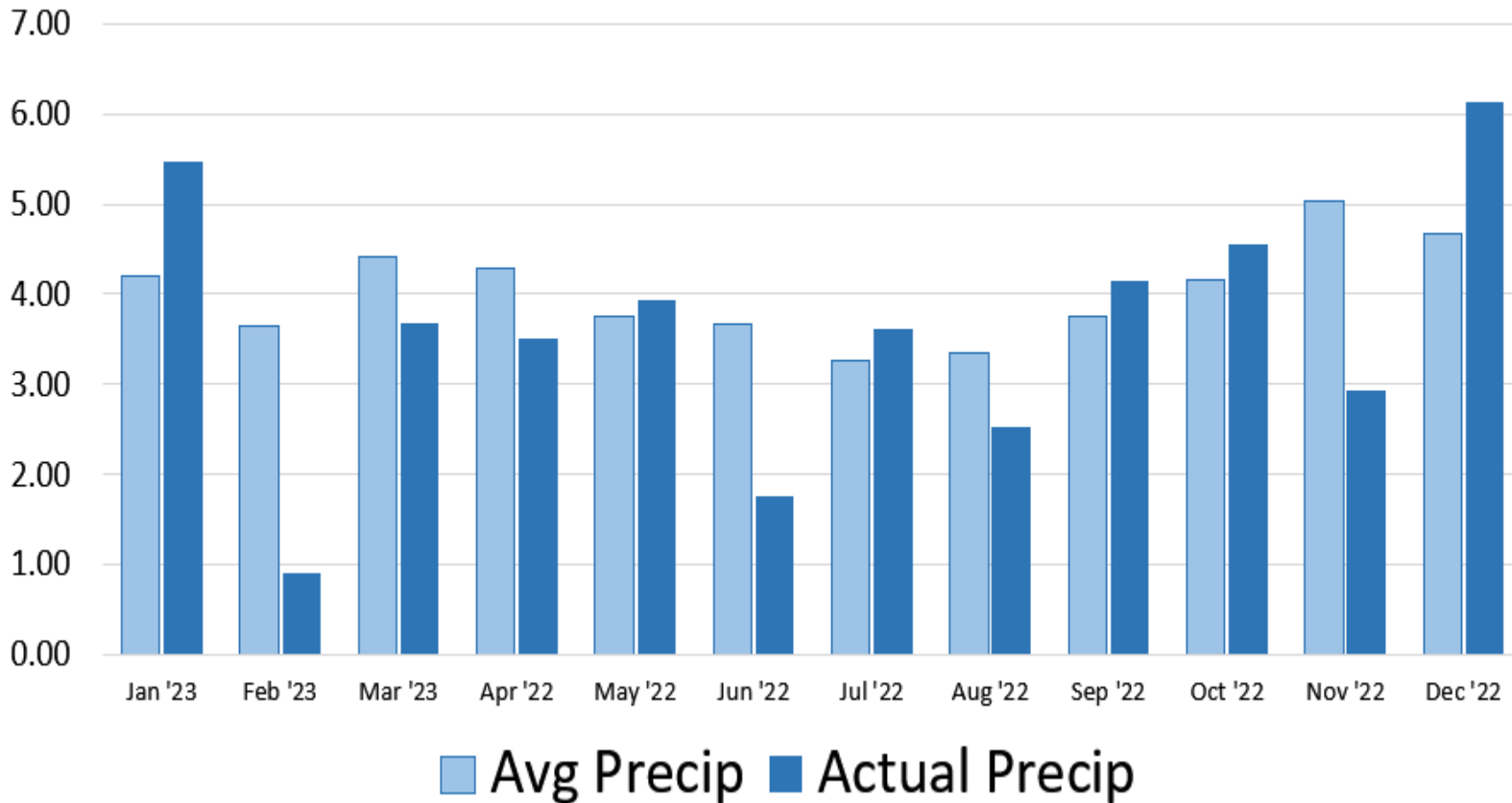
# Portsmouth and Pease Water Update



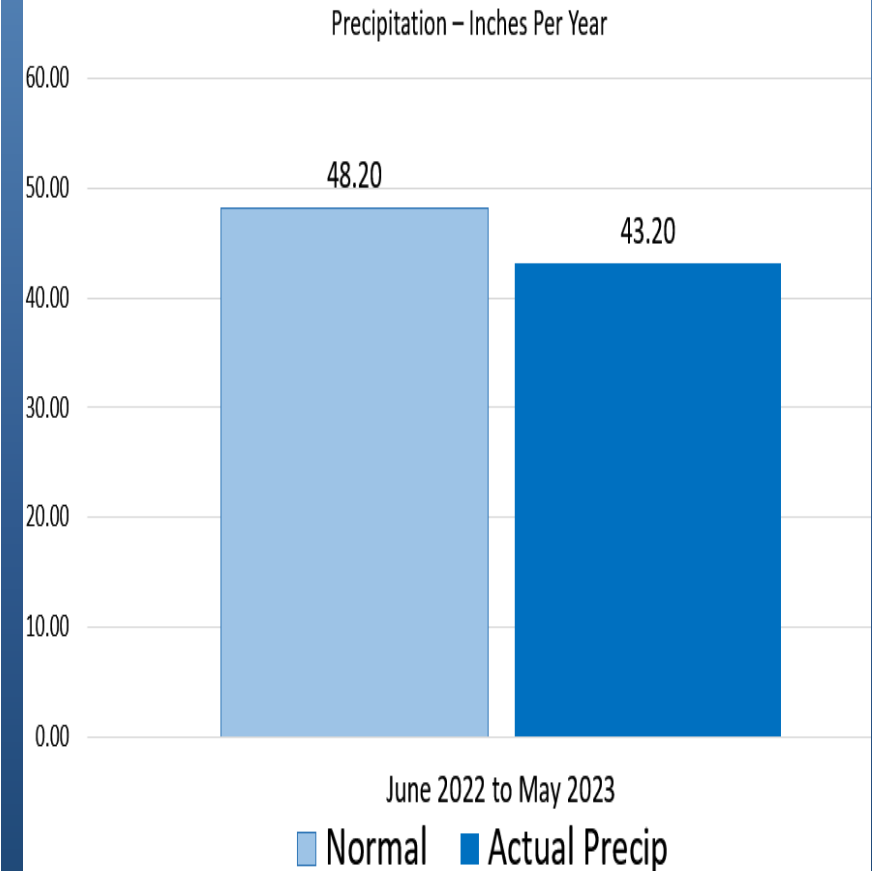
Safe Water Advisory Group  
June 7, 2023

# Weather

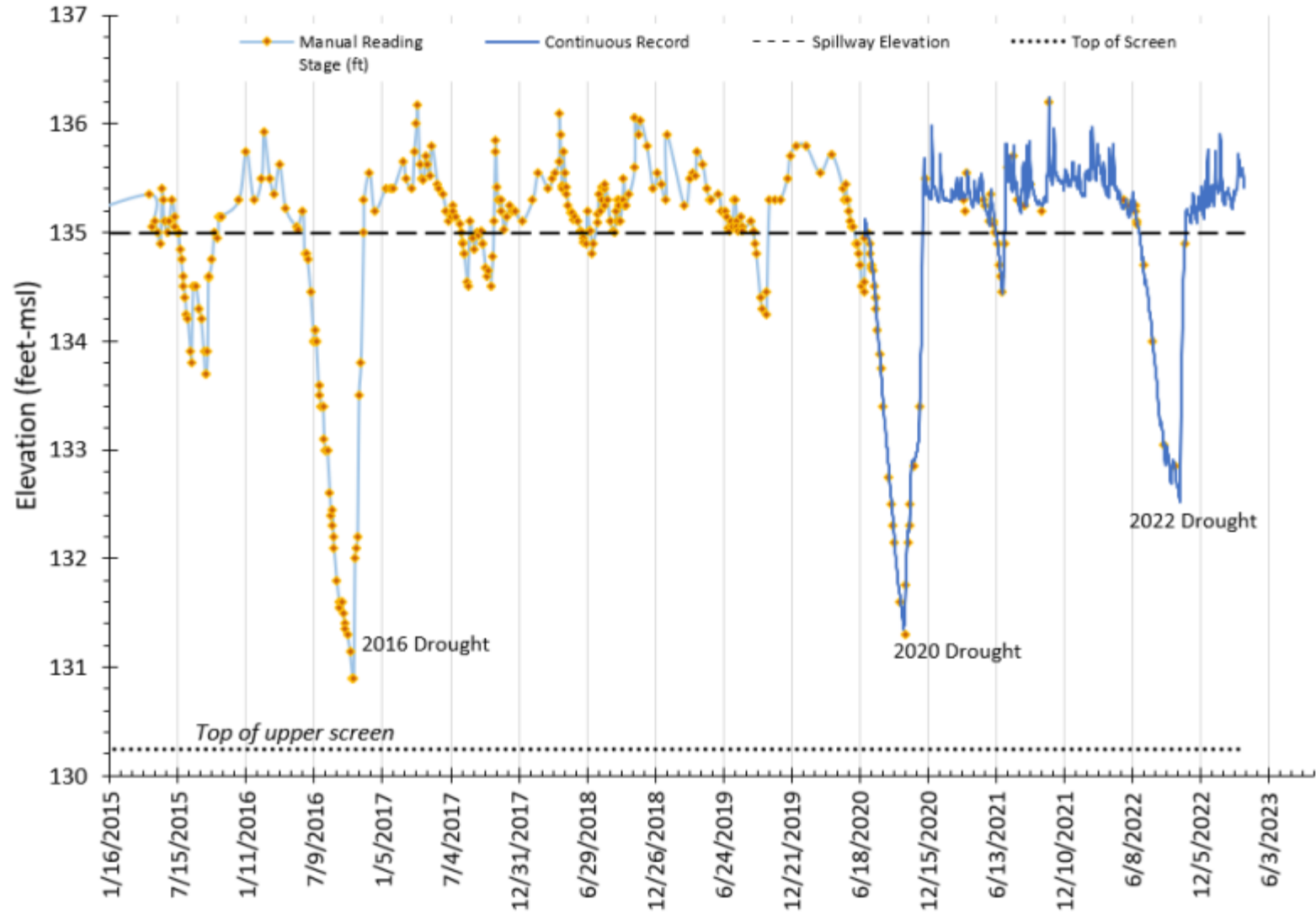
### Precipitation – Inches Per Month



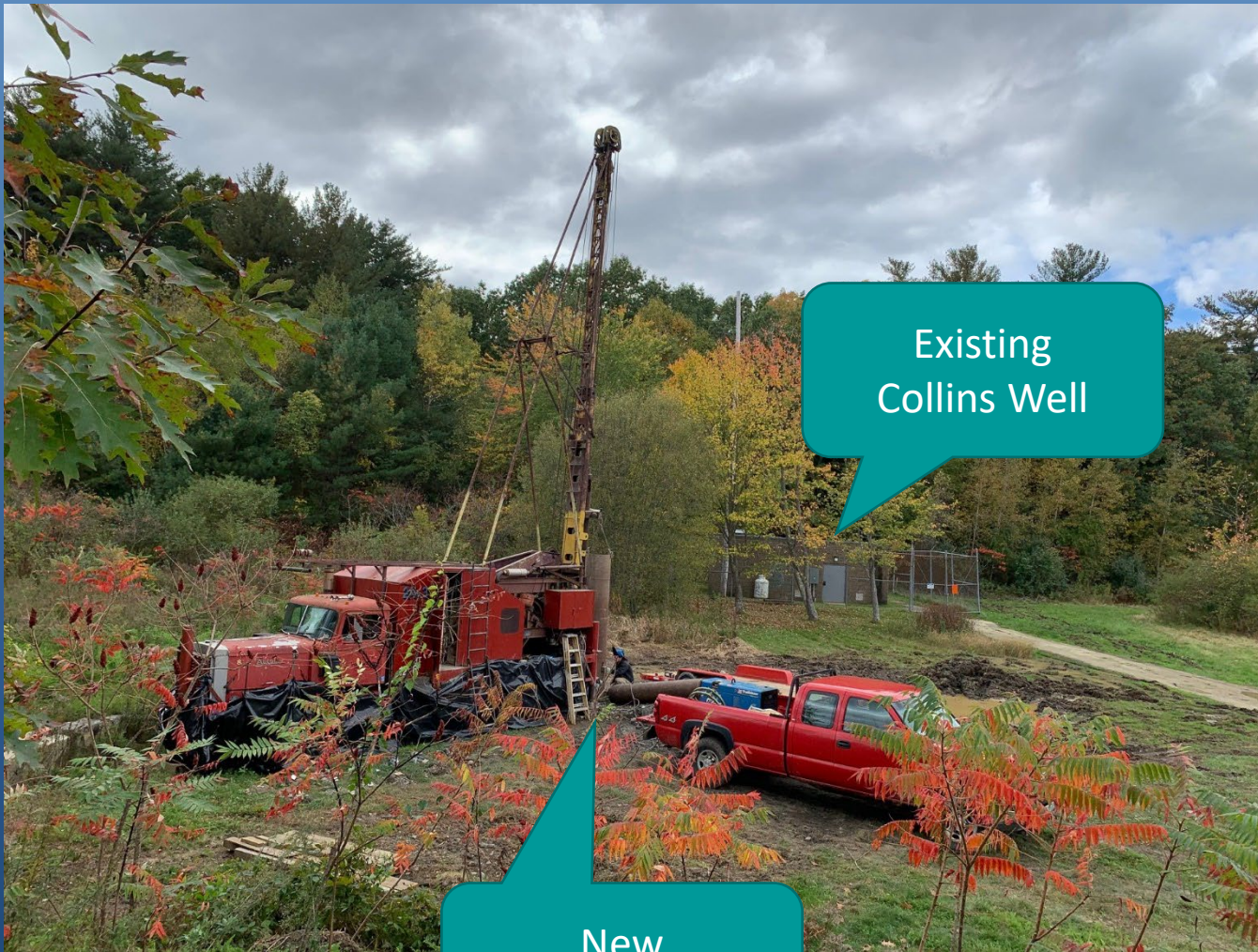
### Rolling 12-Month Total Precipitation



# Bellamy Reservoir Water Level



# Collins Well Upgrades



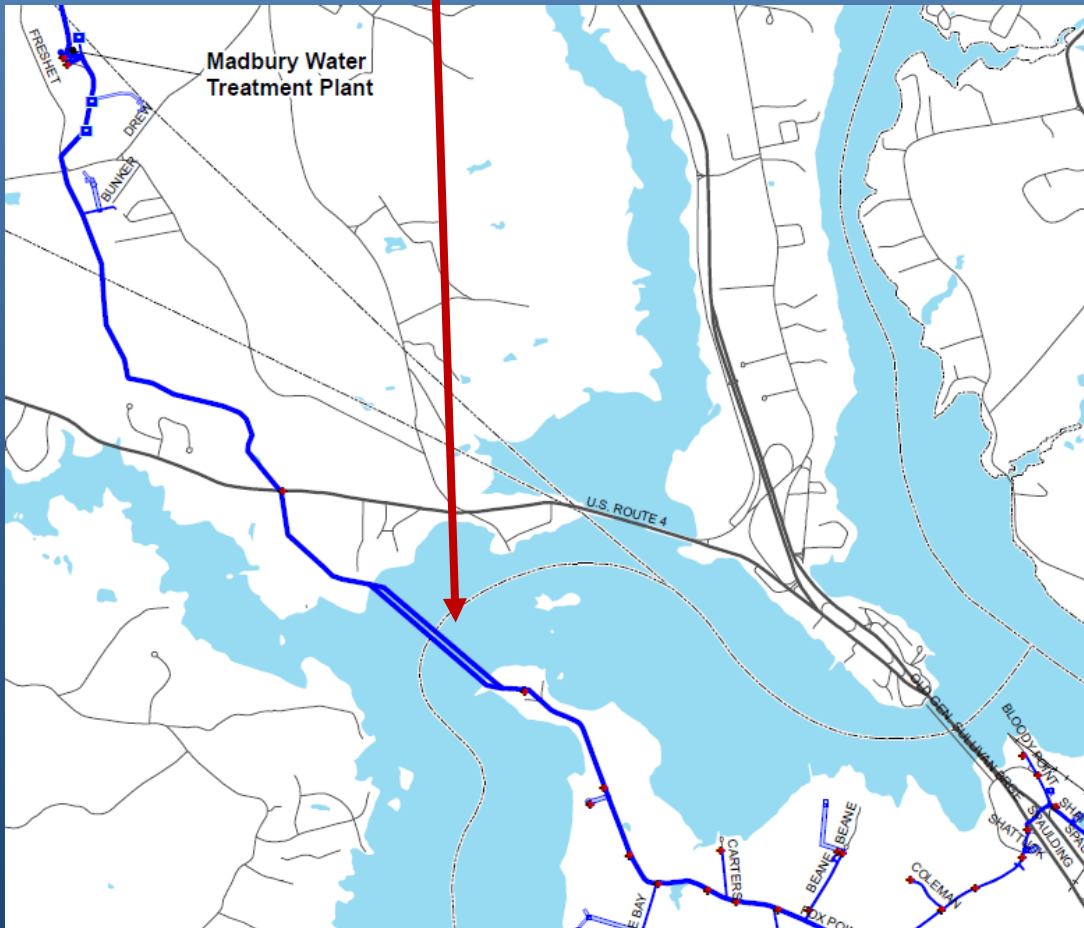
Existing  
Collins Well

New  
Collins Well B

- New well complete and well screen installed
- Well purging/cleaning this week and next
- Pump testing complete
- Awaiting response from NHDES regarding approval

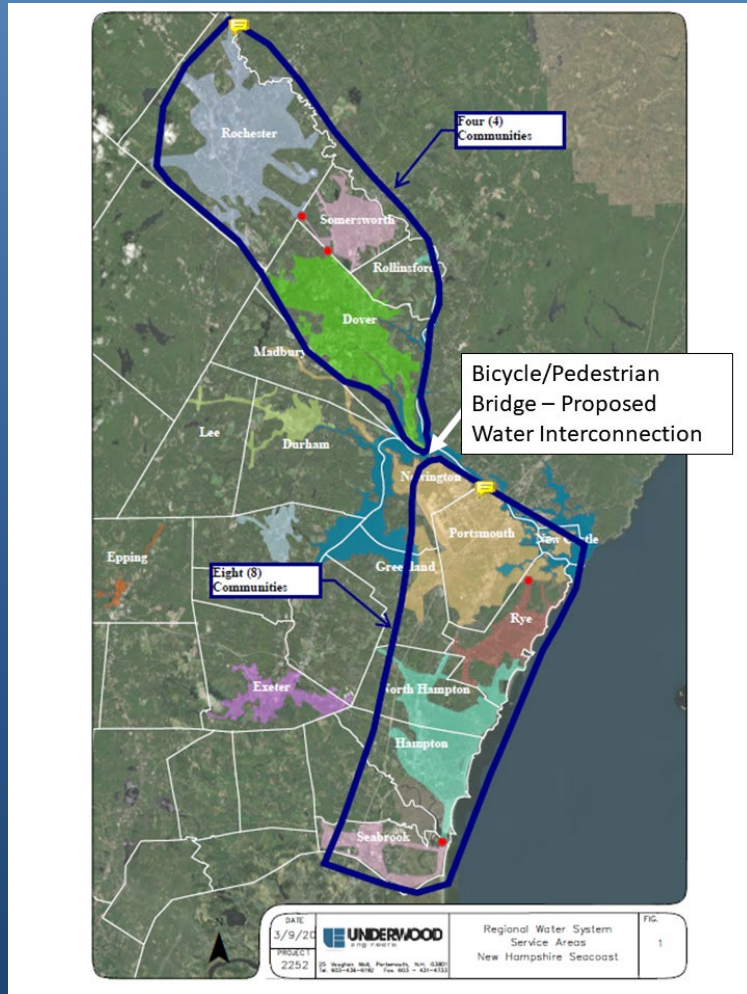



# Little Bay Water Transmission Main Replacement




- Wetlands permit proceeding with NHDES – Public Hearing held last Wednesday
- Other permits and licenses pending
- Bid in June/July 2023 or 2024
  - Allow time for contractor to procure pipe
- Construction, winter of 2023/2024 Or 2024/2025

# Portsmouth – Dover Emergency Interconnection





**NEW HAMPSHIRE DRINKING WATER  
& GROUNDWATER TRUST FUND**



January 18, 2022

**Commission Members**

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

- \$223,000 grant to fund design of pipe across bicycle/pedestrian bridge
- \$7.2 Million cost estimate
- \$3.5 Million Congressional Earmark for Construction
- We will continue to pursue other grant funds to pay for construction



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
12/14/2021	ND	135,102,720
1/12/2022	ND	145,754,577
2/10/2022	ND	160,343,640
2/16/2022	ND	163,485,793
3/16/2022	ND	174,946,090
4/13/2022	ND	189,692,270
5/17/2022	ND	207,992,500
6/16/2022	ND	228,834,350
7/18/2022	ND	256,890,179
8/16/2022	ND	287,679,548
9/20/2022	ND	315,416,836
10/19/2022	ND	332,261,840
11/16/2022	ND	345,721,188
12/14/2022	ND	359,024,412
2/6/2023	ND	384,703,033

\* NH Regulated PFAS (PFOA, PFOS, PFHxS & PFNA)  
ND = None Detected at Method Detection Limit (2 ppt)

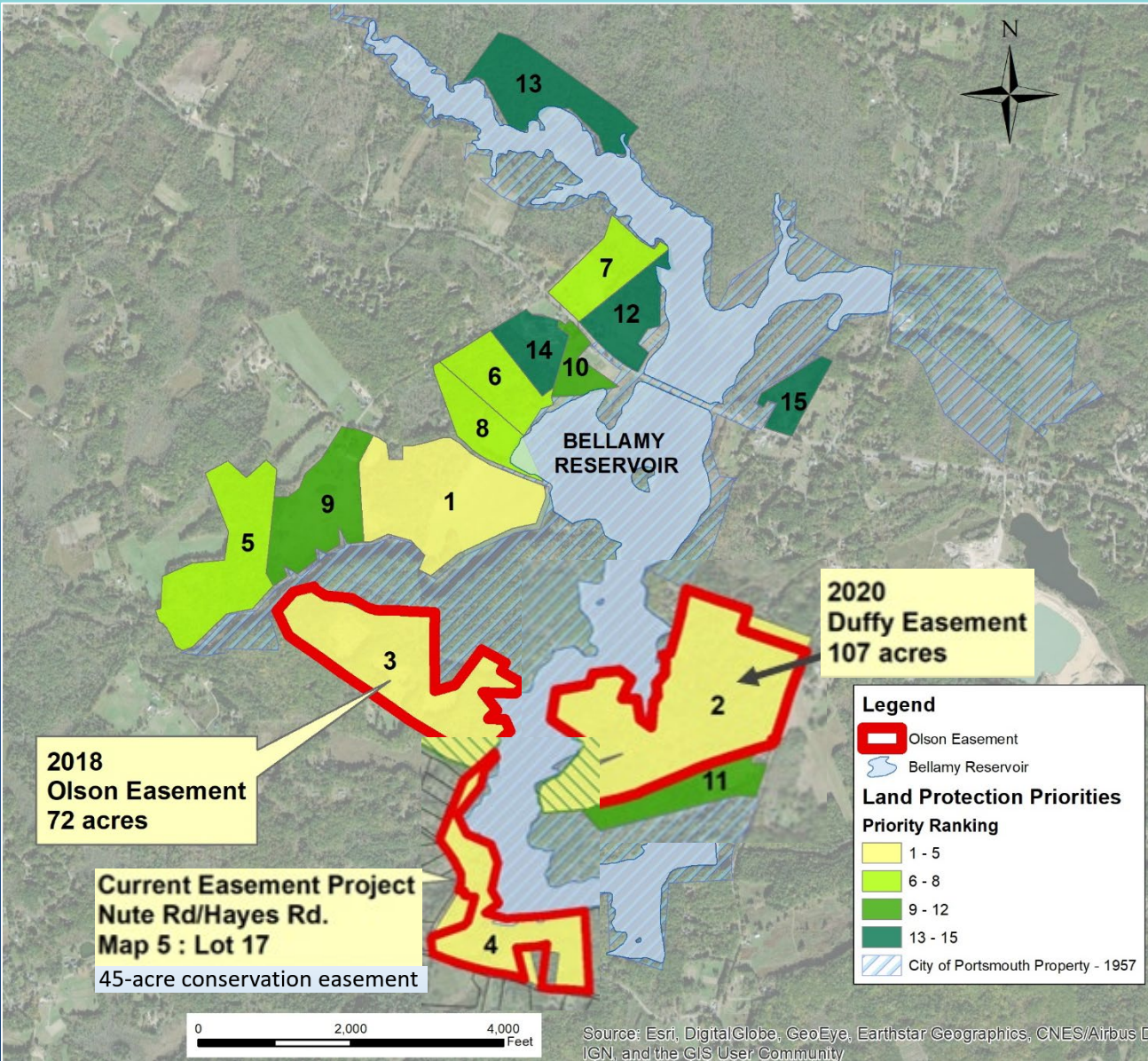
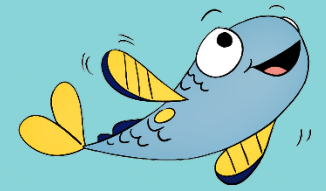
# Pease Water PFAS Treatment System Performance







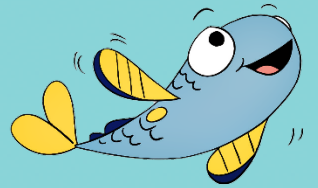
# Watershed Protection



**NHDES Source Water Protection Award - 2023**



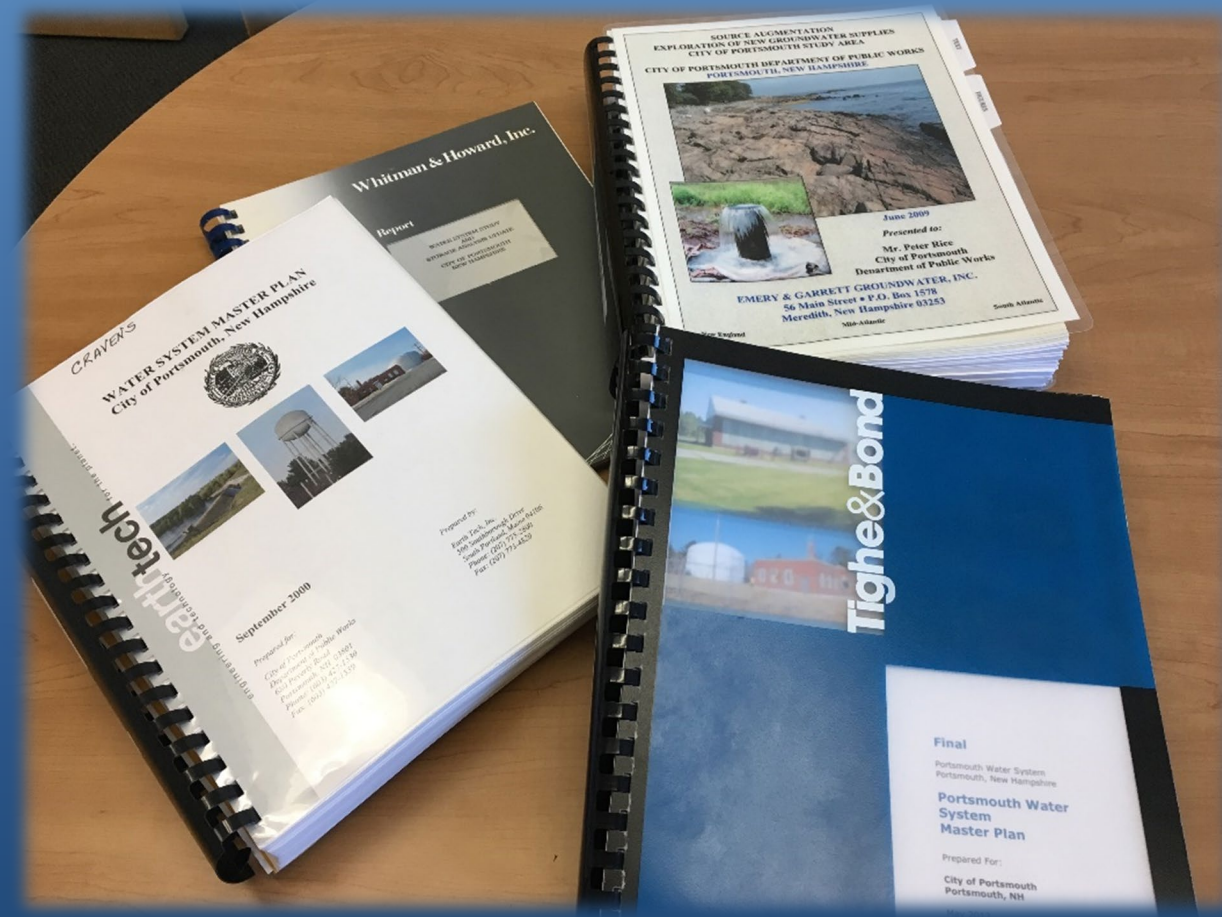
# Earth Day Outreach



Portsmouth Staff - 2023 Earth Day Event

# Long-Term Planning

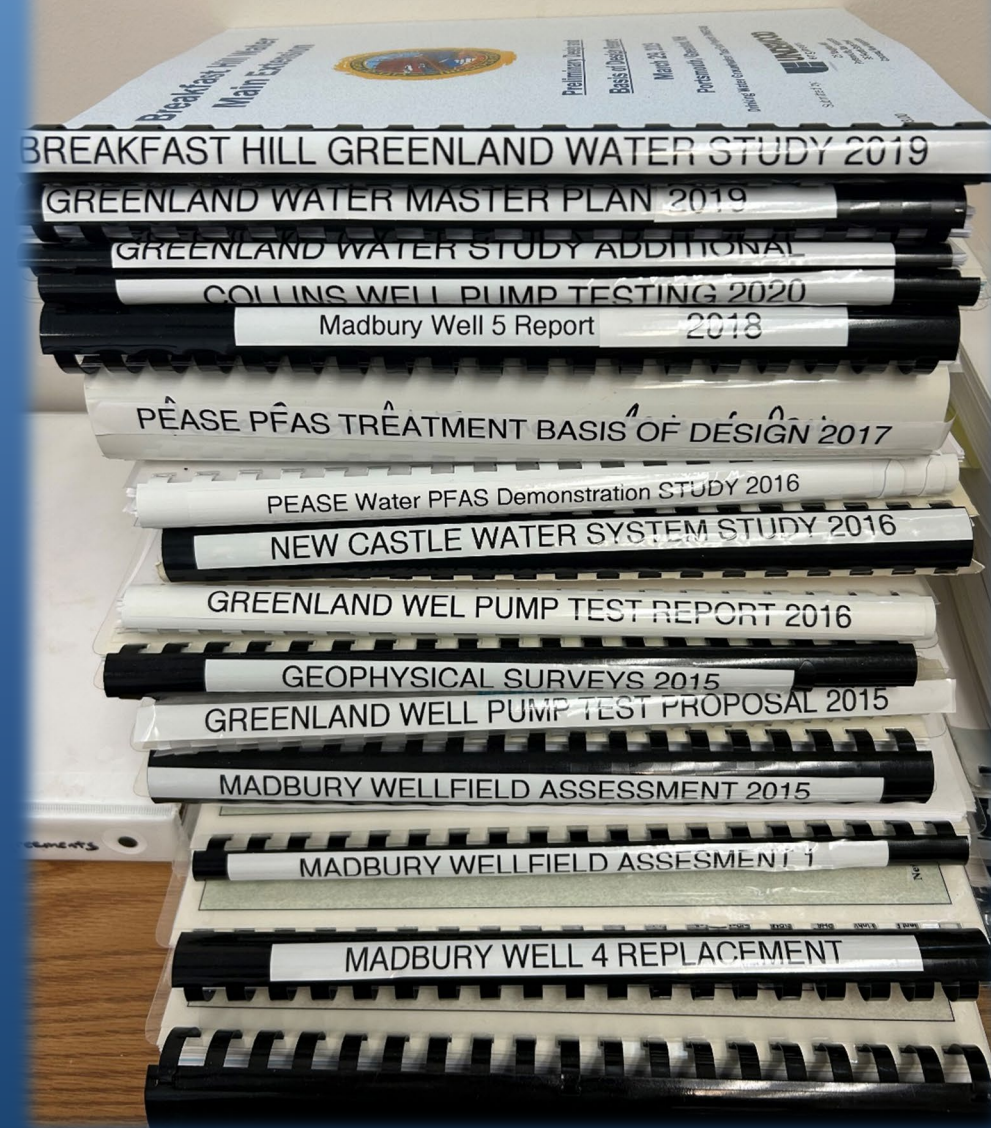
- Water System Master Plans
- 1979 – Master Plan Study
- 1994 – Distribution System Storage and Pressure Study
- 2000 – Master Plan Study
- 2001 – Surface Water Treatment Study
- 2009 – Groundwater Supply Study
- 2013 – Master Plan Study





# Ongoing Planning Since 2013

- Madbury Wellfield Assessment
  - Madbury Well 4 Replacement
  - Madbury Well 5 Permitting and Construction
  - Madbury Well 2 and 3 Upgrades
- Greenland Well Upgrades
  - Pump Testing
  - Well and Building Replacement
- Groundwater Study
- Pease PFAS Treatment
  - Treatment Assessment
  - Treatment Piloting
  - Design and Construction
  - Ongoing Piloting
- New Castle Water System Study
  - New Castle and Peirce Island Waterline Upgrades
- Collins Well
  - Pump Testing
  - Collins Well #2 installation and permitting
- Greenland Breakfast Hill area water study
- 2023 – Lafayette Road and Southern area of System Water Study (will commence this summer)





	WATER FUND-Issued Debt	
11/01/02	03 SRF-Constitution Avenue	4,800,000
12/01/02	03 SRF-Spinney Tank	1,162,560
06/01/08	08 SRF-Madbury Treatment Plant-Design	2,000,000
01/15/09	09 Madbury Treatment Plant-Refunded	7,921,500
02/01/12	12 SRF-Madbury Treatment Plant	5,000,000
06/25/14	14 Hobbs Hill Water Tank	3,500,000
06/23/15	15 Water Improvements	4,800,000
06/15/16	16 Water Improvements	4,100,000
06/23/17	17 Water Improvements	2,250,000
06/20/18	18 Pleasant St Water Line	600,000
06/20/18	18 Water Improvements	2,500,000
06/20/19	19 Annual Waterline Replacement	500,000
06/20/19	19 Annual Waterline Replacement	2,200,000
04/06/21	20 Water System Upgrades (Part I)	4,023,000
04/06/21	21 Water System Upgrades	2,750,000
06/23/22	20 Water System Upgrades (Part II)	600,000
06/23/22	22 Water System Upgrades (Part I)	6,600,000
	<b>Total Bonded Water Projects</b>	<b>55,307,060</b>
	<b>Pease Air Force PFAS Treatment Agreements</b>	<b>17,300,000</b>
	<b>Total Water System Projects</b>	<b>72,607,060</b>

Last 20 Years:

\$55.3 Million Capital  
Projects

\$17.3 Million Air Force  
Reimbursement

\$72.6 Million Total



Spinney Water Tank - 2002



Pease Water Tank - 2016



Newington Booster Station and Tank Aeration - 2019



Madbury Water Treatment Facility - 2011



Pease Water Treatment Facility - 2021



# Well Upgrades



Harrison Well (Pease)  
Replacement and Reactivation  
2006  
324,000 Gallons-per-Day



Greenland Well Replacement  
and New Pumphouse  
2018  
648,000 Gallons-per-Day



Madbury Well 5  
Installation and Permitting  
2018  
720,000 Gallons-per-Day



Collins Well 2  
2021 (ongoing)



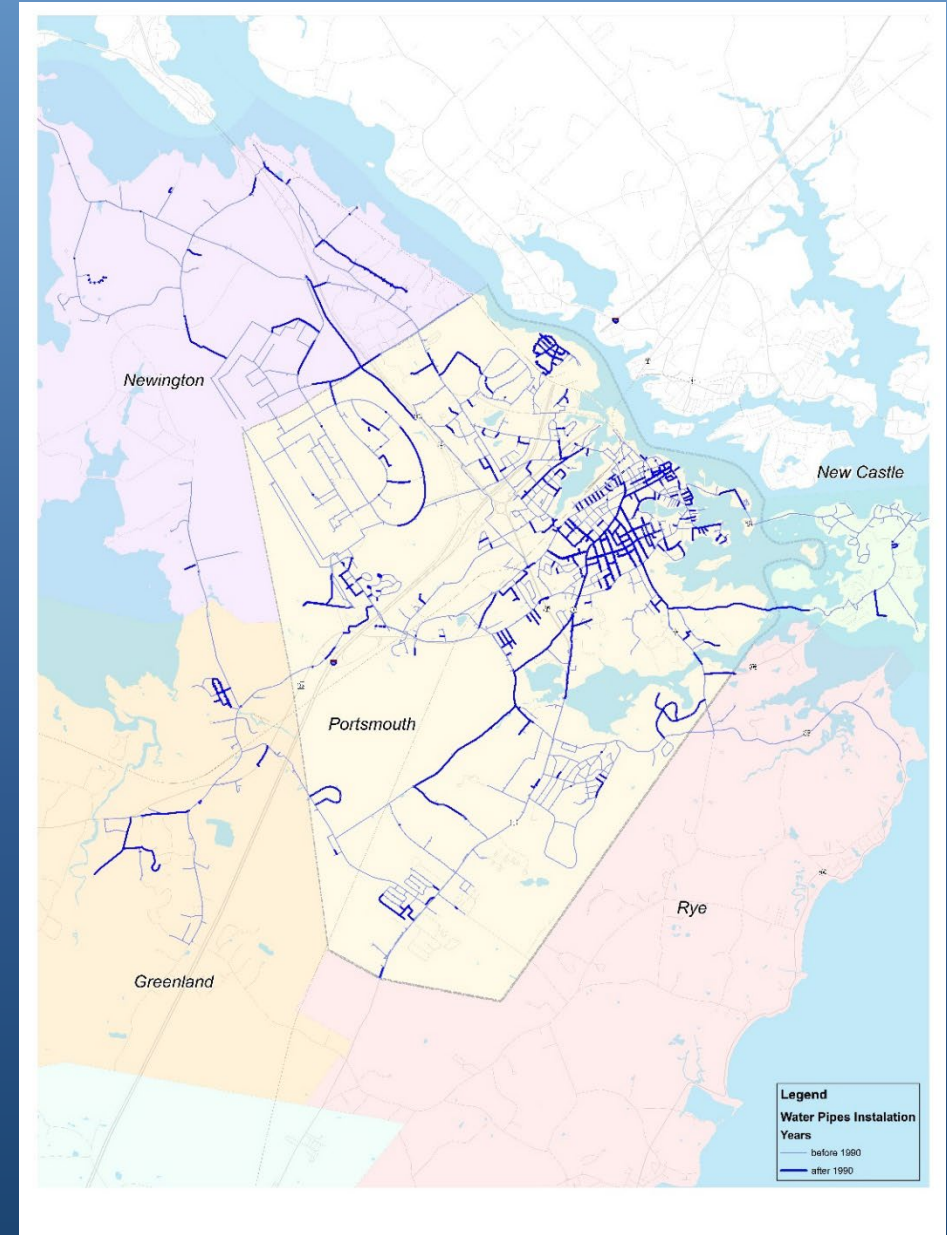
# Water Main Replacements – Last 20 Years:



**42.2 Miles of Pipe**

2001-2010 – 18.6 miles

2011-2020 – 23.6 miles

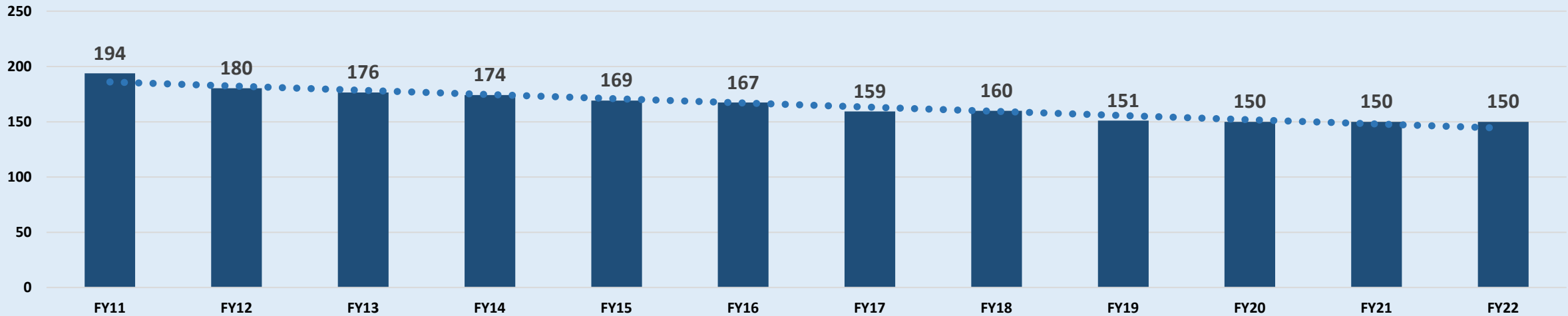




# Water Efficiency Program:



Trend - Average Residential Water Use Average (gallons per day)



# Water Efficiency Rebates – Through FY22

## 1,496 Total Rebates

### City of Portsmouth - Water and Sewer Division Water Efficiency Rebate Program - Status Report



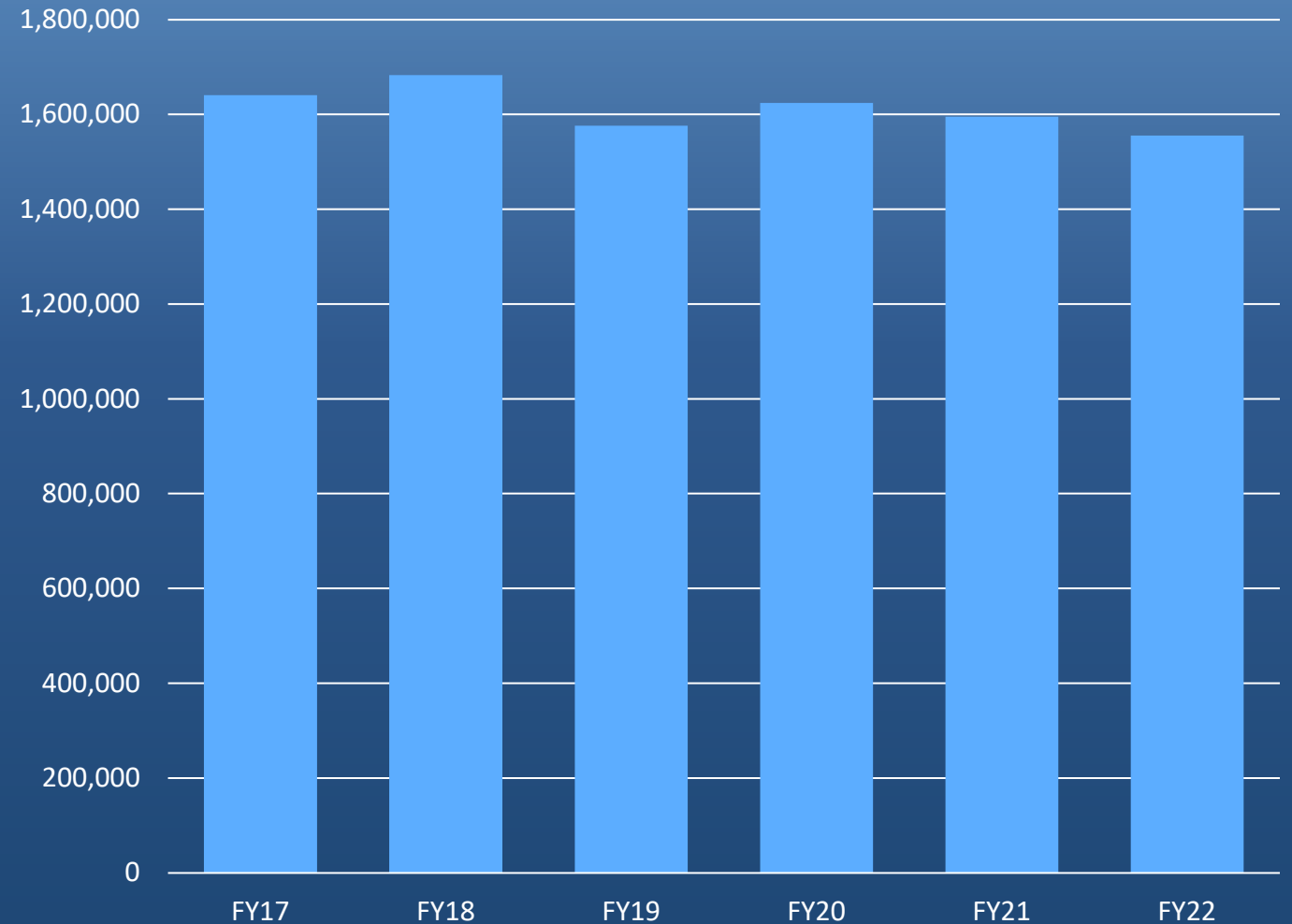
Date: 6/20/2022

#### Total Rebates Issued

Rebate Type	FY16	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL	Rebate/ each	Total Rebates
Low-Flow Toilet	253	368	161	79	102	98	87	1148	\$100	\$114,800
High-Efficiency Washing Machine	34	24	26	36	68	95	65	348	\$150	\$52,200
	287	392	187	115	170	193	152	1496		\$167,000

# Water FY Sales Trend (Total Units)

	Water Units Billed
FY17	1,640,856
FY18	1,682,823
FY19	1,576,453
FY20	1,624,340
FY21	1,583,537
FY22	1,551,734



Year	Supply	Sales	Meter Adjust	Non Rev Sales	Flushing	Line Loss	Total Sales Non Rev	Diff
15	4.58	3.37	0.09	0.04	0.04	0.19	3.74	0.85
16	4.57	3.50	0.09	0.04	0.04	0.19	3.87	0.71
17	4.30	3.36	0.09	0.04	0.04	0.19	3.73	0.58
18	4.40	3.45	0.09	0.04	0.04	0.19	3.82	0.59
19	4.00	3.23	0.09	0.04	0.04	0.19	3.60	0.41
20	3.97	3.33	0.09	0.04	0.04	0.19	3.70	0.28
21	3.87	3.25	0.09	0.04	0.04	0.19	3.62	0.26
22	3.87	3.34	0.09	0.04	0.04	0.19	3.71	0.16

