

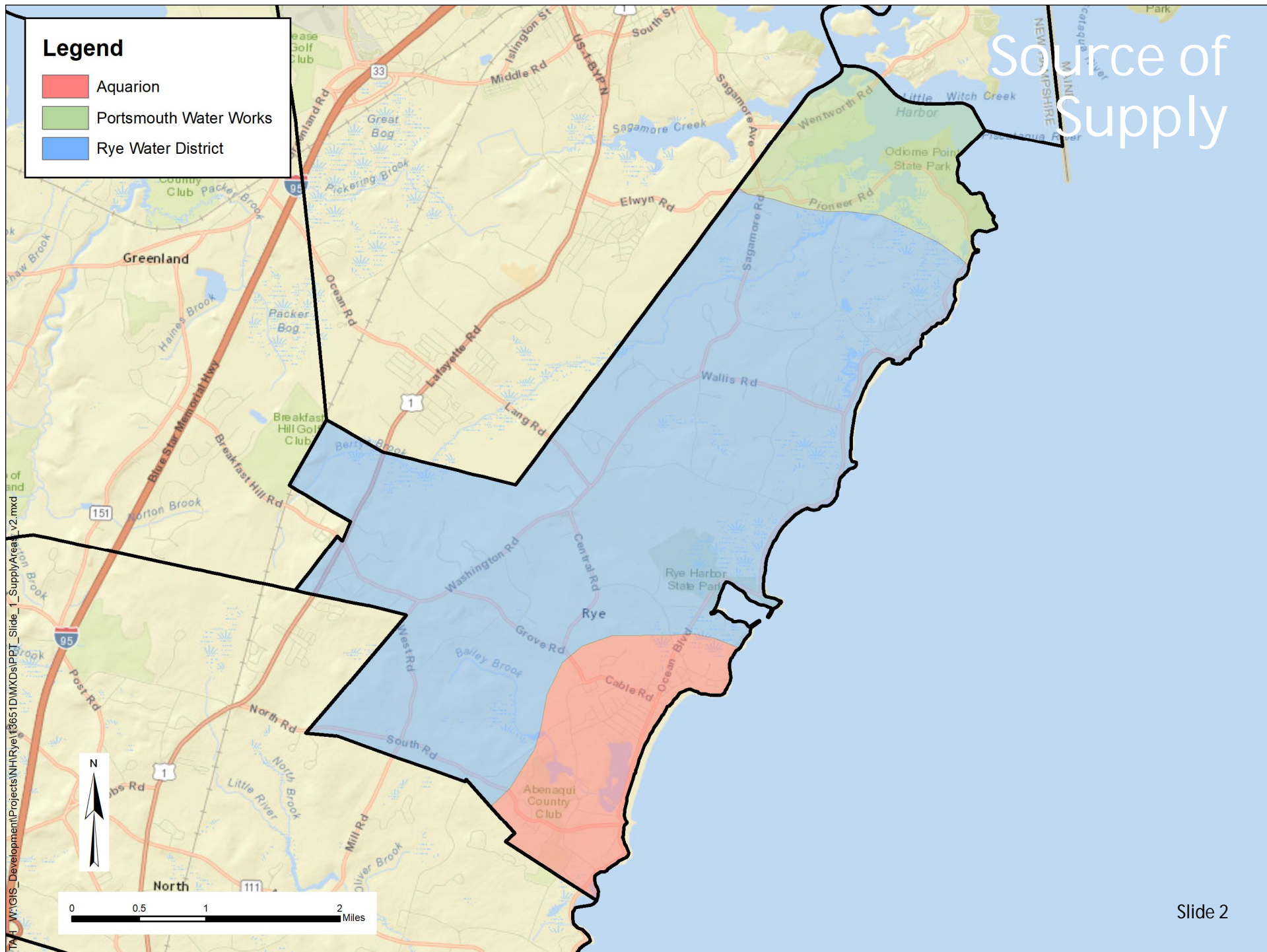
Rye Water 101

Presented by:
Rye Water District

Legend

- Aquarion
- Portsmouth Water Works
- Rye Water District


Source of Supply



RWD History

- Early 1940's - Established as the Wallis Sands Water Commission
- 1947 - Rye Water District was formed by the NH Legislature

RWD History



ü 1963 - First major expansion occurred with the booster station on Sagamore Road, water main and Washington Road Storage Tank.

ü 1977 - New well and pump station at Garland Road

§ Switched from Portsmouth supplied water to Rye only water.

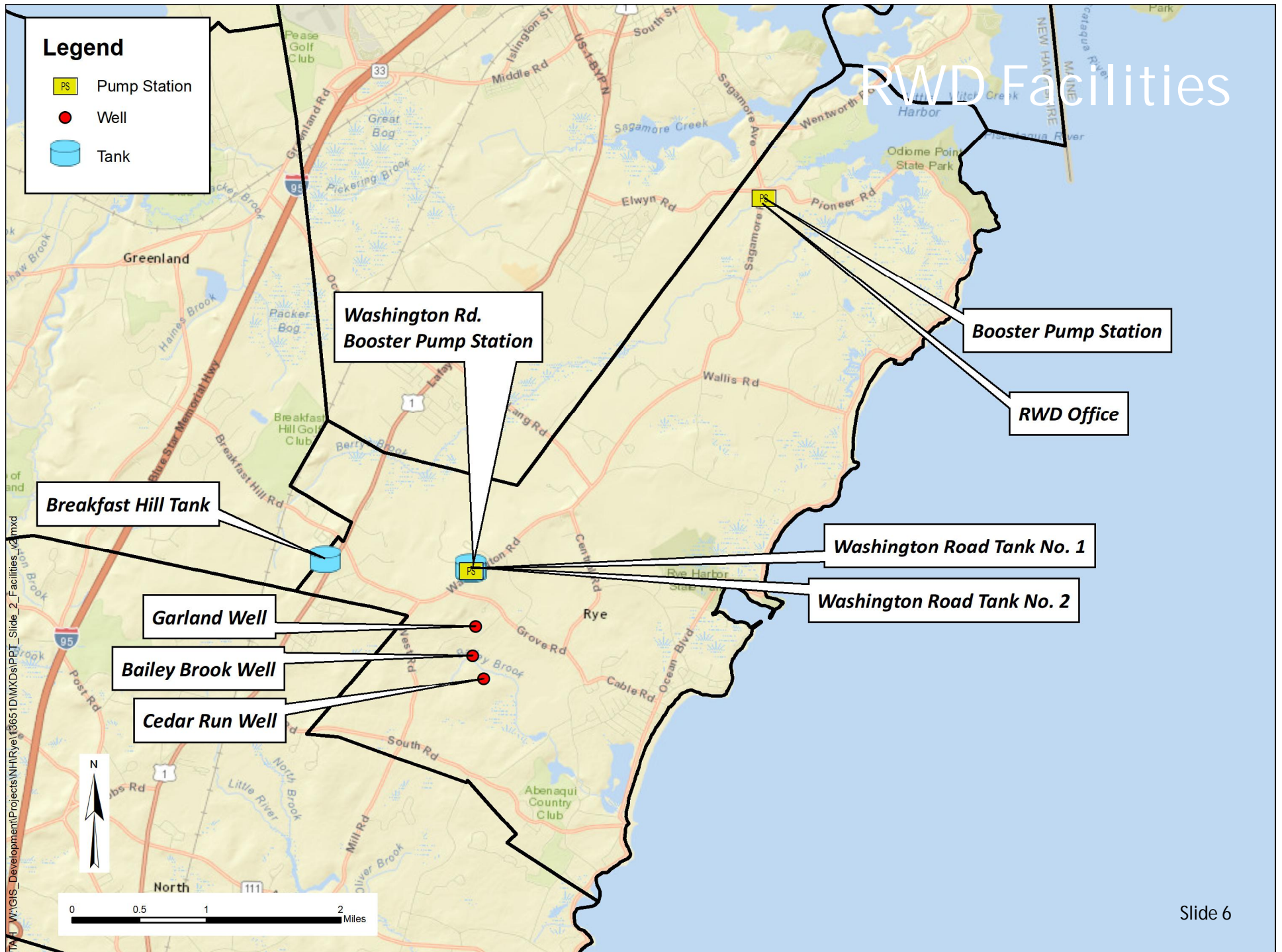
RWD History

- ü 1984 - Additional tank on Washington Road Tank Site
- ü 1986 - Bailey Brook Well
- ü 1996 - Breakfast Hill Tank, Washington Road booster pump station and new pressure zone.
- ü 2004 - Cedar Run Well

RWD Facilities

Legend

- PS Pump Station
- Well
- Tank



RWD Distribution System

Legend

- PS Pump Station
- Well
- Tank
- Water Main

RWD Office

Washington Rd.
Booster Pump Station

Booster Pump Station

Breakfast Hill Tank

Washington Road Tank No. 1

Washington Road Tank No. 2

Garland Well

Bailey Brook Well

Cedar Run Well



0 0.5 1 2 Miles

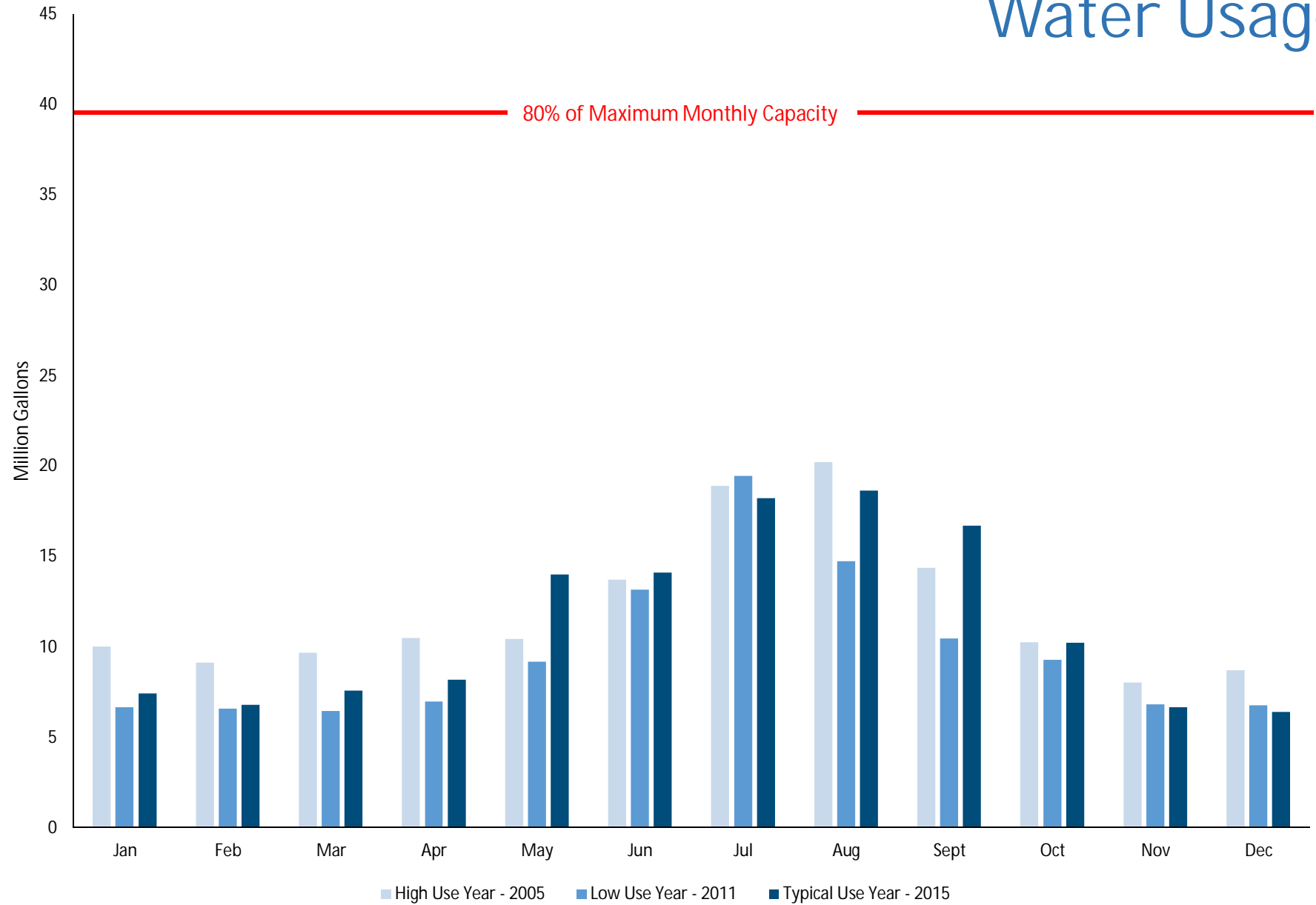
Maximum Well Capacities

Location	Maximum Flow (gpm)	Daily Production Volume (gal)	Monthly Volume (Million Gallons)	Annual Volume (Million Gallons)
Garland Well	470	676,800	20.30	243.6
Bailey Well	325	468,000	14.04	168.5
Cedar Run Well	340	489,600	14.69	176.3
System Total	1135	1,634,400	49.03	588.4

Operational Characteristics

- Garland well plus only one (alternating) bedrock well.
- pH adjustment of Garland well water
- Pumping into system to meet demand and filling tanks
- Spring/fall flushing

Water Usage



Sampling Requirements

- Bacteria Tests
- Lead and Copper
- General Source Sampling
- PFCs

Location	Date Sampled	Perfluorinated Compounds (PFCs) Results		
		PFOS*	PFOA*	PFHxS
Garland Well	Apr 2016	6 ppt	6 ppt	ND
	Jan 2017	6.9 ppt	7.1 ppt	ND
		7.8(DUP) ppt	7.8(DUP) ppt	ND
	Jul 2017	11 ppt	10 ppt	5 ppt
	Aug 2017	6 ppt	5 ppt	3 ppt
	Sept 2017	6 ppt	7 ppt	3 ppt
Bailey Well	Oct 2017	4 ppt	5 ppt	ND
	Apr 2016	ND	ND	ND
	Jan 2017	ND	2.5 ppt	ND
	Jul 2017	ND	ND	ND
	Aug 2017	ND	ND	ND
	Sept 2017	ND	ND	ND
Cedar Run Well	Oct 2017	ND	ND	ND
	Apr 2016	ND	2 ppt	ND
	Jan 2017	ND	3 ppt	ND
	Jul 2017	ND	ND	3 ppt
	Aug 2017	ND	ND	ND
	Sep 2017	ND	ND	ND
	Oct 2017	ND	ND	ND

* EPA Health Advisory for combined PFOS and PFOA values is 70 ppt

PFC Data Distribution System

Location	Date Sampled	Perfluorinated Compounds (PFCs) Results		
		PFOS*	PFOA*	PFHxS
Washington Rd Tanks Booster Pump Station	Aug 2017	7 ppt	4 ppt	ND
	Sept 2017	5 ppt	3 ppt	ND
	Oct 2017	4 ppt	2 ppt	ND

* EPA Health Advisory for combined PFOS and PFOA values is 70 ppt

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AQUARIAN ANALYTICAL LAB

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National Environmental Lab Accreditation Program
NELAP Accreditation #NH1004, VT1004, NH00035(ME)
MADEP Accreditation #M-NH035



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REPORT OF ANALYSIS

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Sample Collected By: K. Aspen
Date & Time Received: 05-Sep-17 10:50
Date & Time Reported: 04-Oct-17 10:06
Temp Rec'd: 6 °C

Laboratory ID: 1709028-01
Sample Matrix: Well Water
Sample Description: 2041010001, Garland, Rye, NH
NHDES Site Number: Grove Rd LF
Date & Time Sample Collected: 01-Sep-17 10:00

Parameters

Parameters	Result	Units	Analyzed	Analyst	Method
PERFLUOROOCTANE SULFONATE - PFOS	6	ng/L	19-Sep-17	SUBL	PFC Isotope
PERFLUOROUNDECANOIC ACID - PFUnA	<5	ng/L	19-Sep-17	SUBL	PFC Isotope
PERFLUOROPENTANOIC ACID - PFPeA	<2	ng/L	19-Sep-17	SUBL	PFC Isotope
PERFLUOROHXANOIC ACID - PFHxA	<2	ng/L	19-Sep-17	SUBL	PFC Isotope
PERFLUORODODECANOIC ACID - PFDaA	<5	ng/L	19-Sep-17	SUBL	PFC Isotope
PERFLUOROOCTANOIC ACID - PFOA	7	ng/L	19-Sep-17	SUBL	PFC Isotope
PERFLUORODECANOIC ACID - PFDA	<5	ng/L	19-Sep-17	SUBL	PFC Isotope
PERFLUORODECANE SULFONATE - PFDS	<5	ng/L	19-Sep-17	SUBL	PFC Isotope
PERFLUOROHEXANE SULFONATE - PFHXS	3	ng/L	19-Sep-17	SUBL	PFC Isotope
PERFLUOROBUTANOIC ACID - PFBA	<5	ng/L	19-Sep-17	SUBL	PFC Isotope
PERFLUOROBUTANE SULFONATE - PFBS	<5	ng/L	19-Sep-17	SUBL	PFC Isotope
PERFLUOROHEPTANOIC ACID - PFHPA	<2	ng/L	19-Sep-17	SUBL	PFC Isotope
PERFLUORONONANOIC ACID - PFNA	<2	ng/L	19-Sep-17	SUBL	PFC Isotope
PERFLUOROTETRADECANOIC ACID - PFTEDA	<5	ng/L	19-Sep-17	SUBL	PFC Isotope
PERFLUORO-N-TRIDECANOIC ACID - PFTRDA	<5	ng/L	19-Sep-17	SUBL	PFC Isotope
PERFLUOROOCTANESULFONAMIDE - FOSA	<5	ng/L	19-Sep-17	SUBL	PFC Isotope

Parameters

PERFLUOROOCTANE SULFONATE - PFOS
PERFLUOROUNDECANOIC ACID - PFUnA
PERFLUOROPENTANOIC ACID - PFPeA
PERFLUOROHXANOIC ACID - PFHxA
PERFLUORODODECANOIC ACID - PFDaA
PERFLUOROOCTANOIC ACID - PFOA
PERFLUORODECANOIC ACID - PFDA
PERFLUORODECANE SULFONATE - PFDS
PERFLUOROHEXANE SULFONATE - PFHXS
PERFLUOROBUTANOIC ACID - PFBA
PERFLUOROBUTANE SULFONATE - PFBS
PERFLUOROHEPTANOIC ACID - PFHPA
PERFLUORONONANOIC ACID - PFNA
PERFLUOROTETRADECANOIC ACID - PFTEDA
PERFLUORO-N-TRIDECANOIC ACID - PFTRDA
PERFLUOROOCTANESULFONAMIDE - FOSA

Notes:

ng/L is equivalent to Parts per Trillion (ppt)

PFC Isotope analysis was performed by
South Central Connecticut Regional Water Authority

More information regarding PFC's is available on the New Hampshire DES website:
<http://des.nh.gov/organization/commissioner/pfoa.htm>

Respectfully Submitted: 
James R. Sherburne, Laboratory Director

PFC Results



Capital Planning

Short Term

- Garland Well Improvements
- Water Main Renewals
- Additional Source Investigation

Long Term

- Water Main Renewals
- Central Water Treatment Plant

Discussion



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