



Pease Tradeport Water System Overview September 1, 2015

Portsmouth Water Division
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History of Portsmouth Water System

- 1797 - Portsmouth Aqueduct Company formed by act of NH Legislature
- Fountain Head Spring Developed (near current Haven Well) and piped to City
- 1867 – Sherburne and Concord Springs added
- 1891 – City takes over system
- 1950's – Pease Air Base takes over Haven Well and builds new tanks and pipes in Pease area for it's own, separate water system. Madbury Wells, Bellamy Reservoir and Madbury Water Treatment Facility are built by Air Force to replace water sources for City
- 1990's – Pease system turned over to Pease Development Authority. City takes over operations.

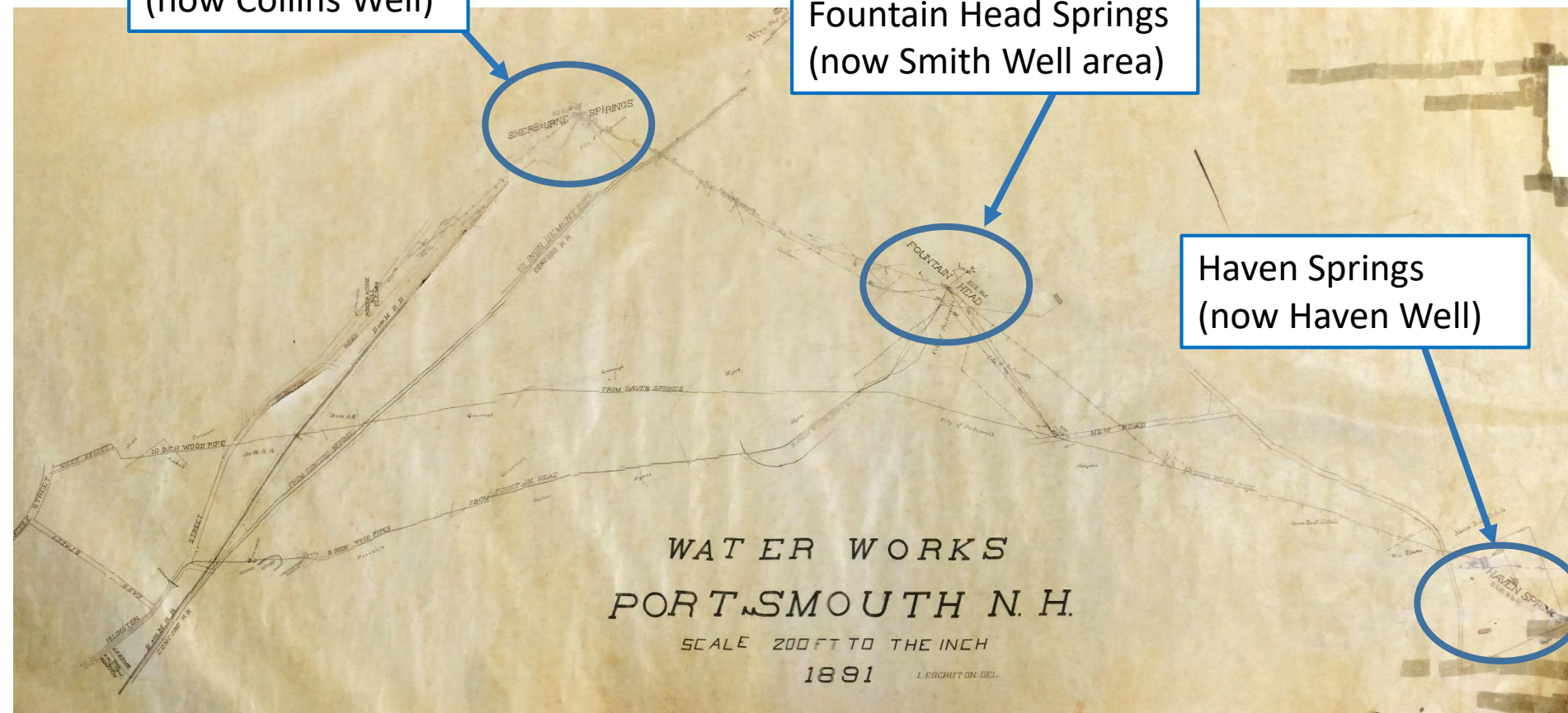
Water Sources in 1891

Sherburne Springs
(now Collins Well)

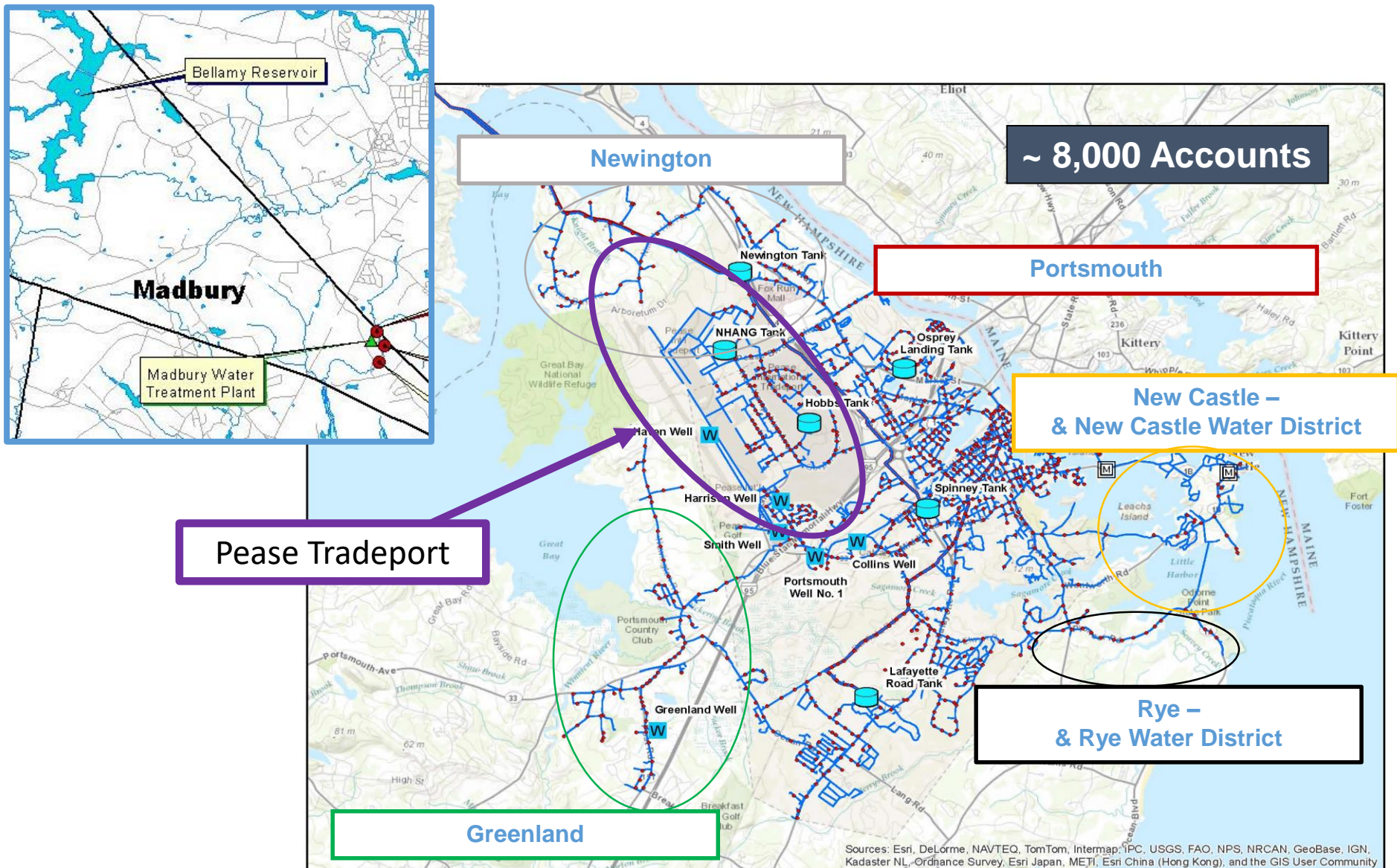
Fountain Head Springs
(now Smith Well area)

Haven Springs
(now Haven Well)

WATER WORKS
PORTSMOUTH N. H.
SCALE 200 FT TO THE INCH
1891
L. ESCRIBAN DEL.



Portsmouth Regional Water System



Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, iPC, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

Portsmouth Regional Water System

- Bellamy Reservoir
- Madbury Water Treatment Facility
- 8 Wells (6 Portsmouth, 2 Pease)
- 5 Storage Tanks (3 Portsmouth, 2 Pease)
- Two Pressure Zones (Portsmouth and Pease)
- 3.5 to 6.5 Million Gallons a Day total demand



Portsmouth Regional Water System

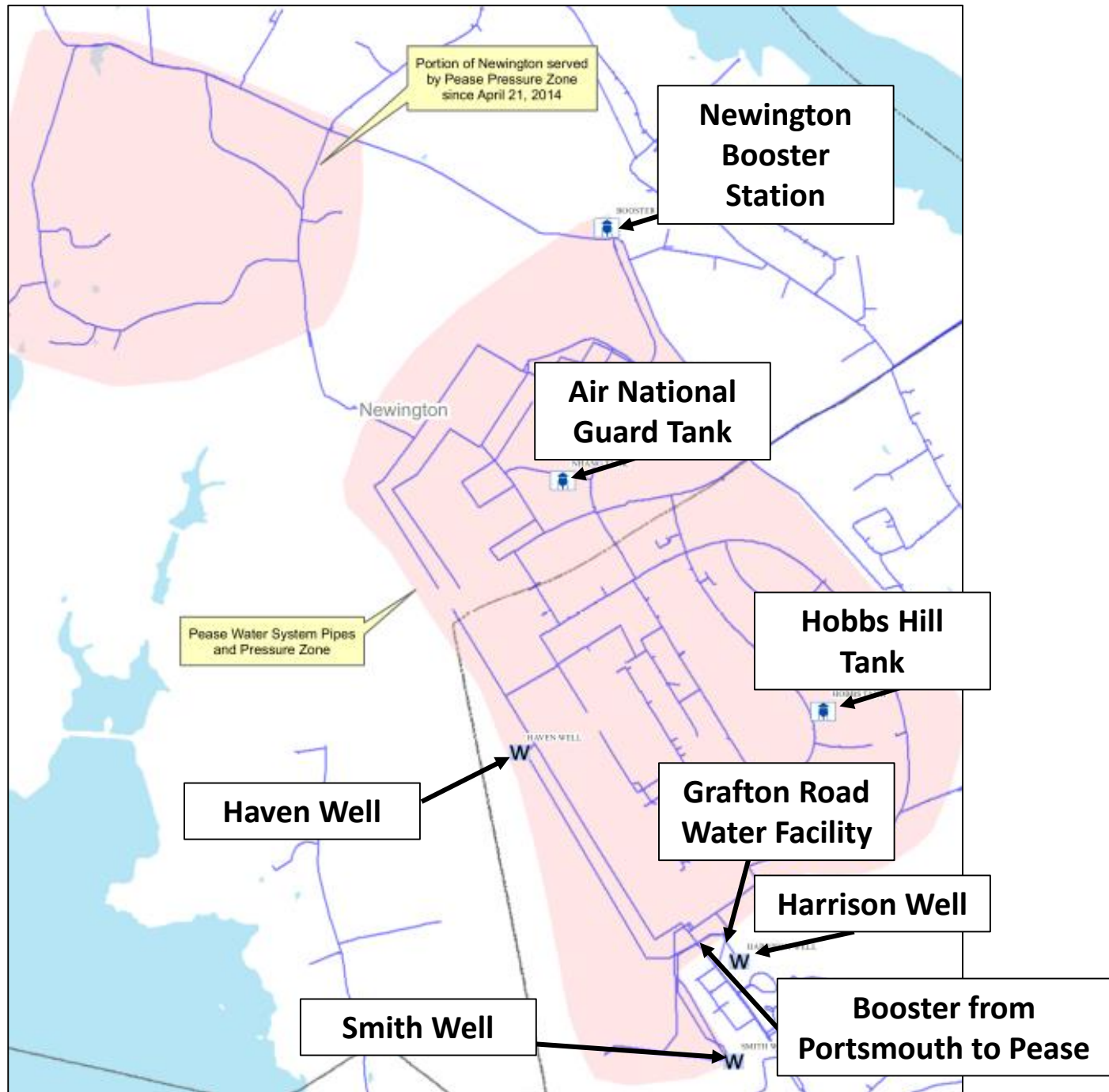
- 190 miles of pipe
- 972 Fire Hydrants
- 2,840 Valves
- 8,203 Meters/Customers



Pease International Trade Port Water System

- Built in the 1950's for the Pease Air Force Base
- Turned over to Pease Development Authority (PDA) in the 1990's
- Operated by the City of Portsmouth under agreements with PDA since 1992
- Three groundwater sources:
 - Haven Well (originally developed in 1870 by the City of Portsmouth's water system)
 - Smith Well (installed in 1958 as part of Air Base water system)
 - Harrison Well (reactivated in 2007)
- Two 366,000 Gallon Elevated Storage Tanks
 - Hobbs Hill Landing (slated to be replaced in 2014-2015)
 - Air National Guard
- 30 miles of water main
- 122 Customers (as of June 2015)
- Average Day Water Demand of 450,000 GPD (2011 to 2014)
- Peak Day Water Demand of 1,098,000 GPD (May 27, 2015)
- Growing customer base which includes Lonza, who are currently fitting out one of their buildings which will need an additional 150,000 to 250,000 GPD.

Pease Tradeport Water System



Smith Well

Installed in 1957



250 GPM Pump



Harrison Well

Installed in 1957

Replaced in 2006

225 GPM Pump



Haven Well

Installed in 1875 (Haven Springs)

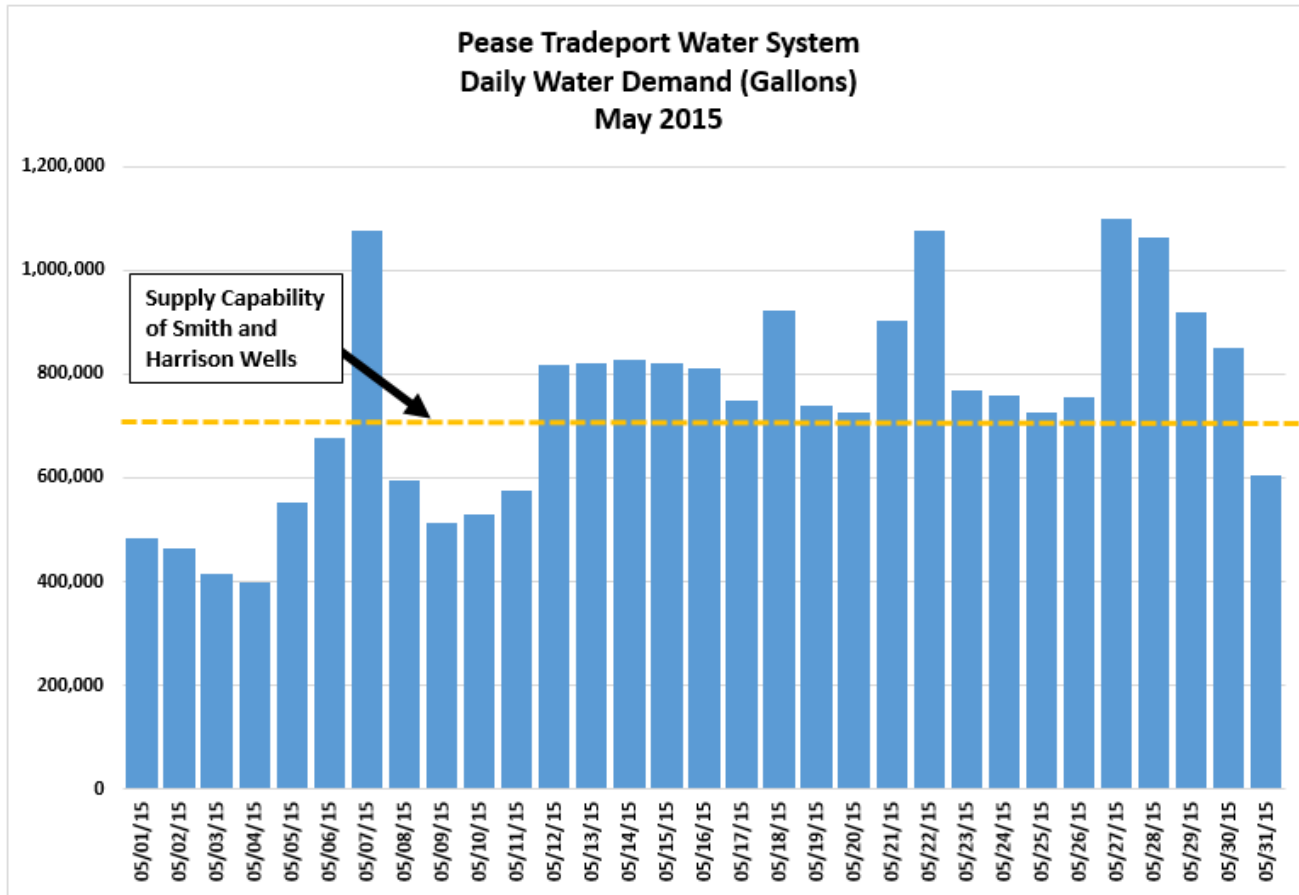
Part of Pease Air Base: 1956 to 1992

PDA/Portsmouth: 1992 to 2014

500 GPM Pump



May 2015 Pease Water System Demand



Pease Booster – Supplying Water To Pease System from Portsmouth

Installed in 1990's

Two 450 GPM Pumps

Boosts water from Portsmouth to Pease



Newington Booster

Installed in 1957

Currently in design for Replacement

**Boosts Pressure from Madbury
to Portsmouth System**

**Pumps to Pease system are no
longer in use**



Grafton Road Water Facility

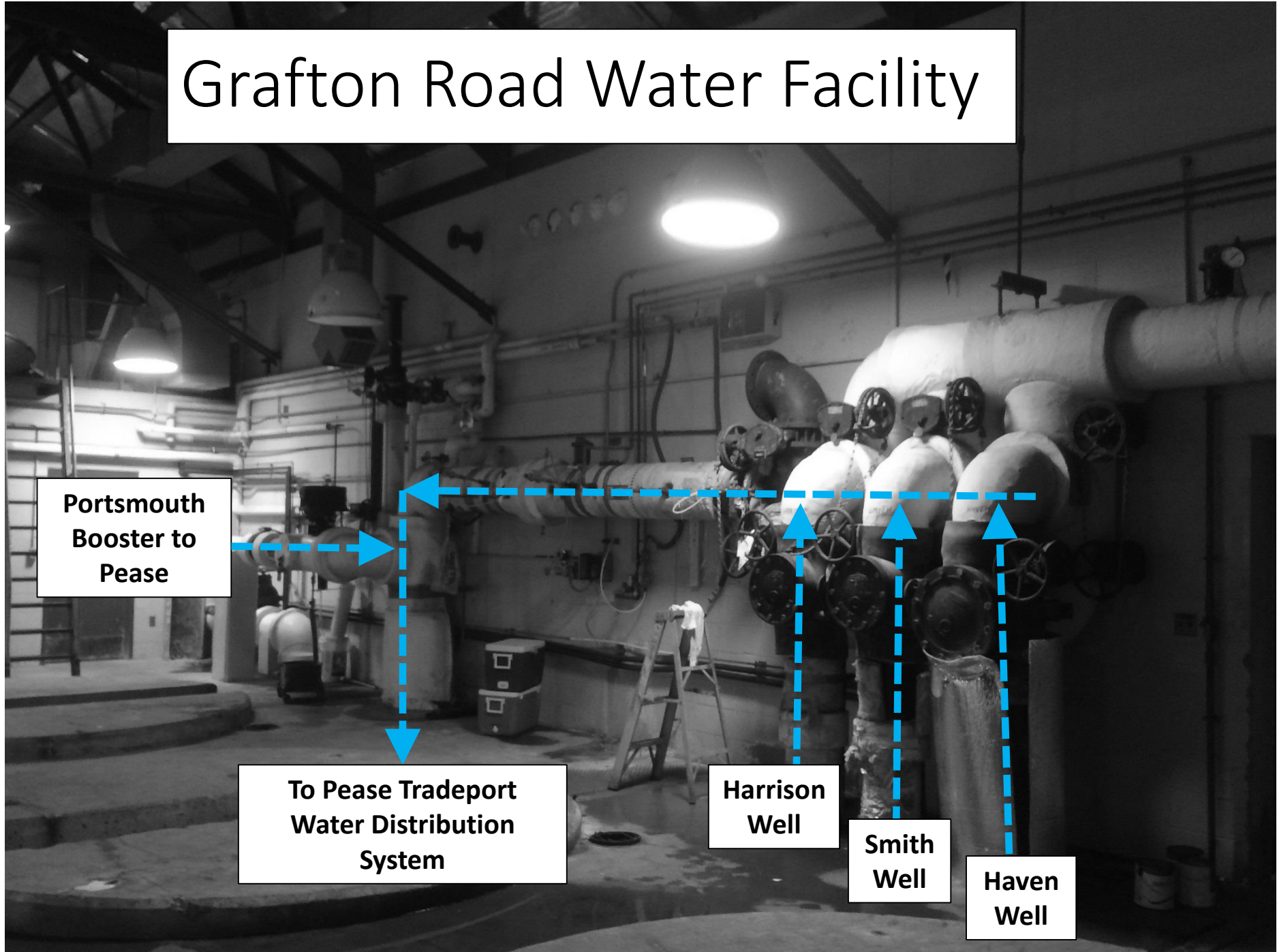
Portsmouth
Booster to
Pease

To Pease Tradeport
Water Distribution
System

Harrison
Well

Smith
Well

Haven
Well



Grafton Road Water Facility Recommended PFC Treatment Option

