

Town of North Reading

Proposed Water and Wastewater Systems

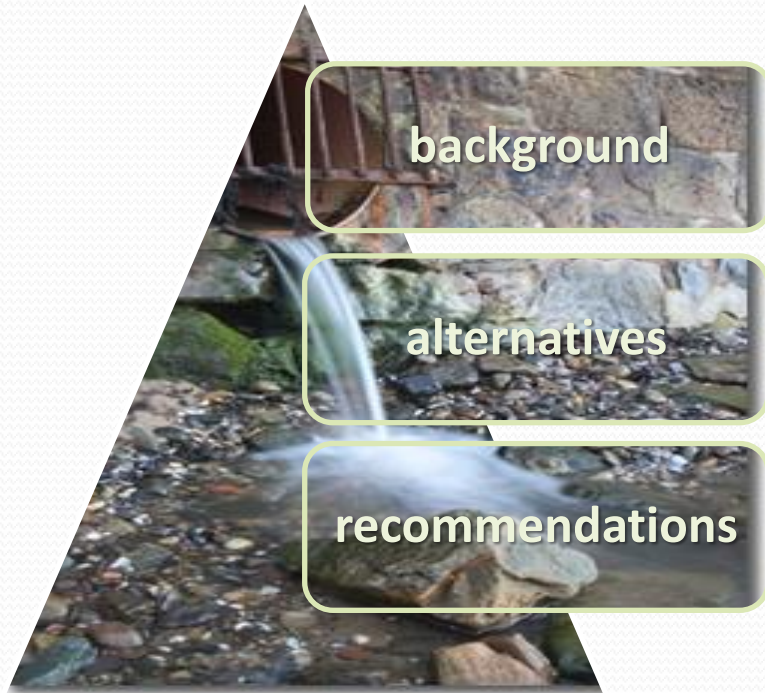
Public Workshop

March 16, 2016



Outline

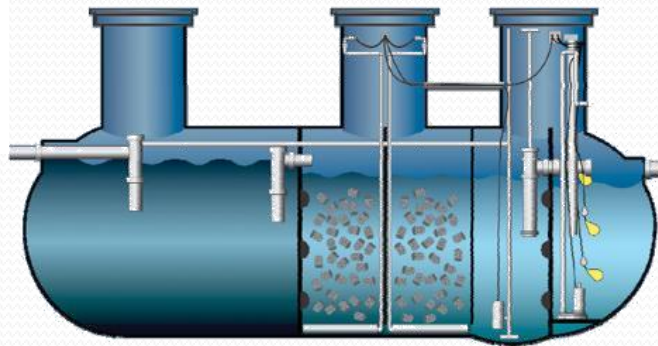
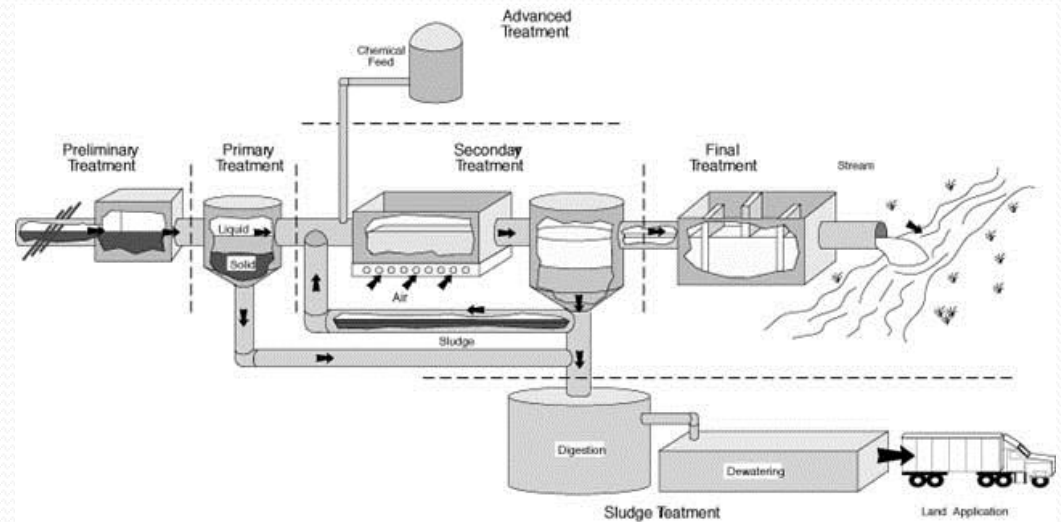
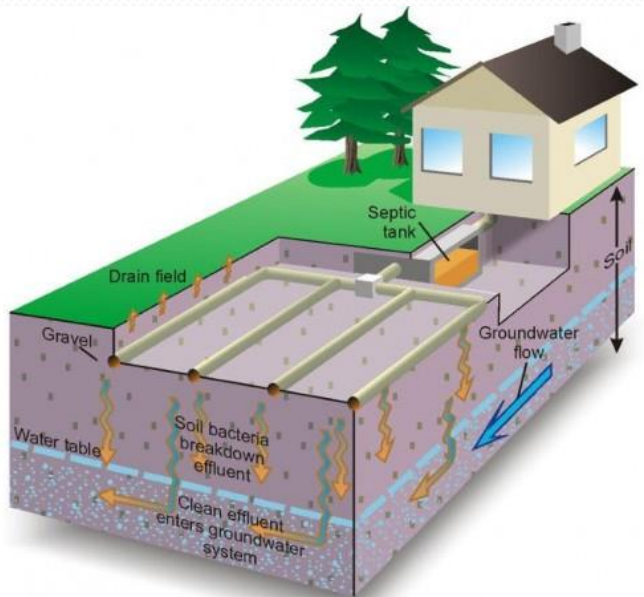
Proposed wastewater service



Proposed water supply plan



Wastewater Alternatives



Project Background - Wastewater

- Primarily served through on-site septic systems
- Water quality impairments from inadequate systems
- Small parcels and poor soils
- Evaluated limited alternatives through Draft Environmental Impact Report (DEIR) process.



Goals Wastewater

- Improve surface and ground water quality
- Provide long-term sustainable option(s) for wastewater treatment and disposal
- Serve existing and future customer base
- Provide for economic development

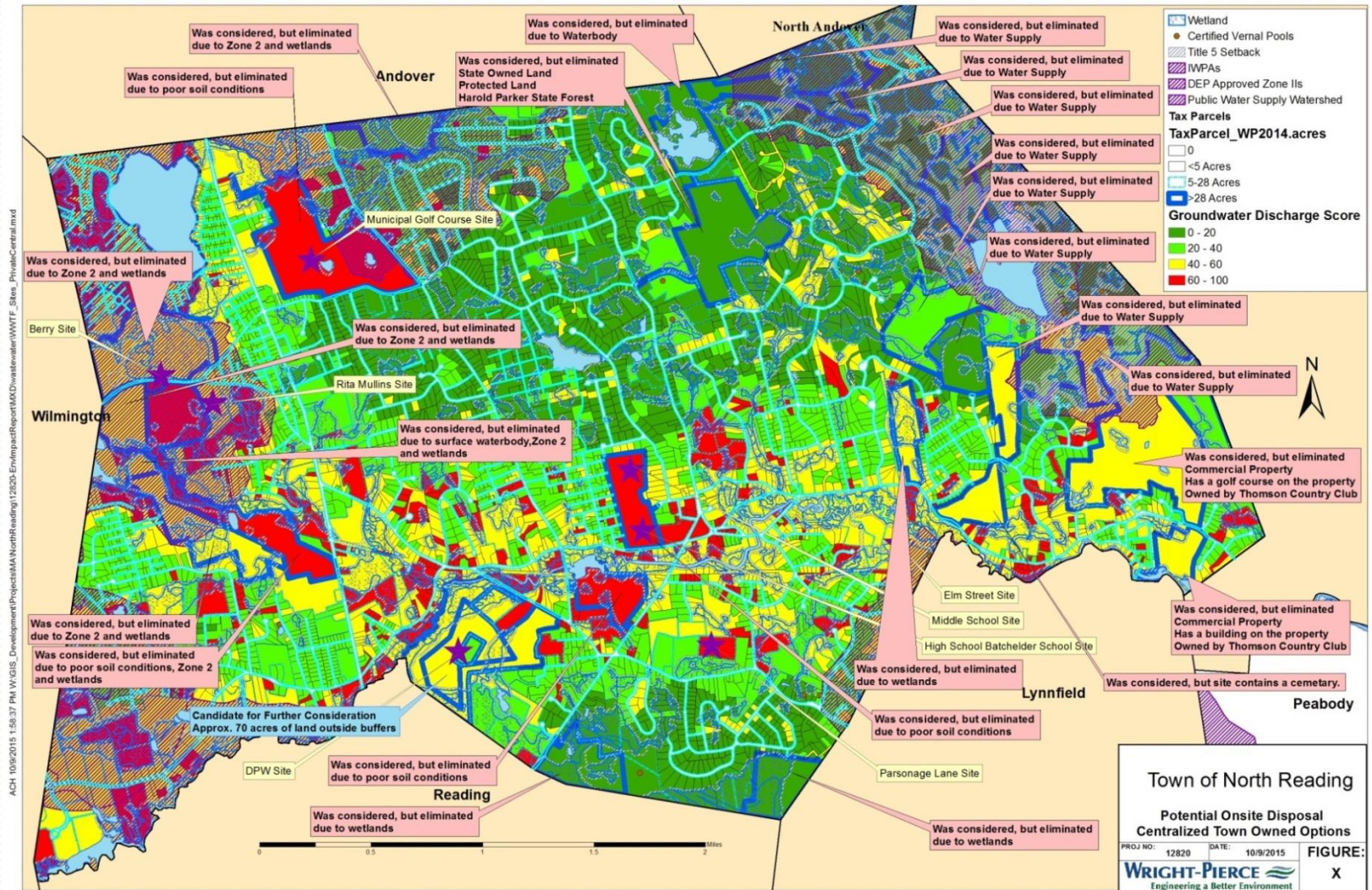


Screened Alternatives

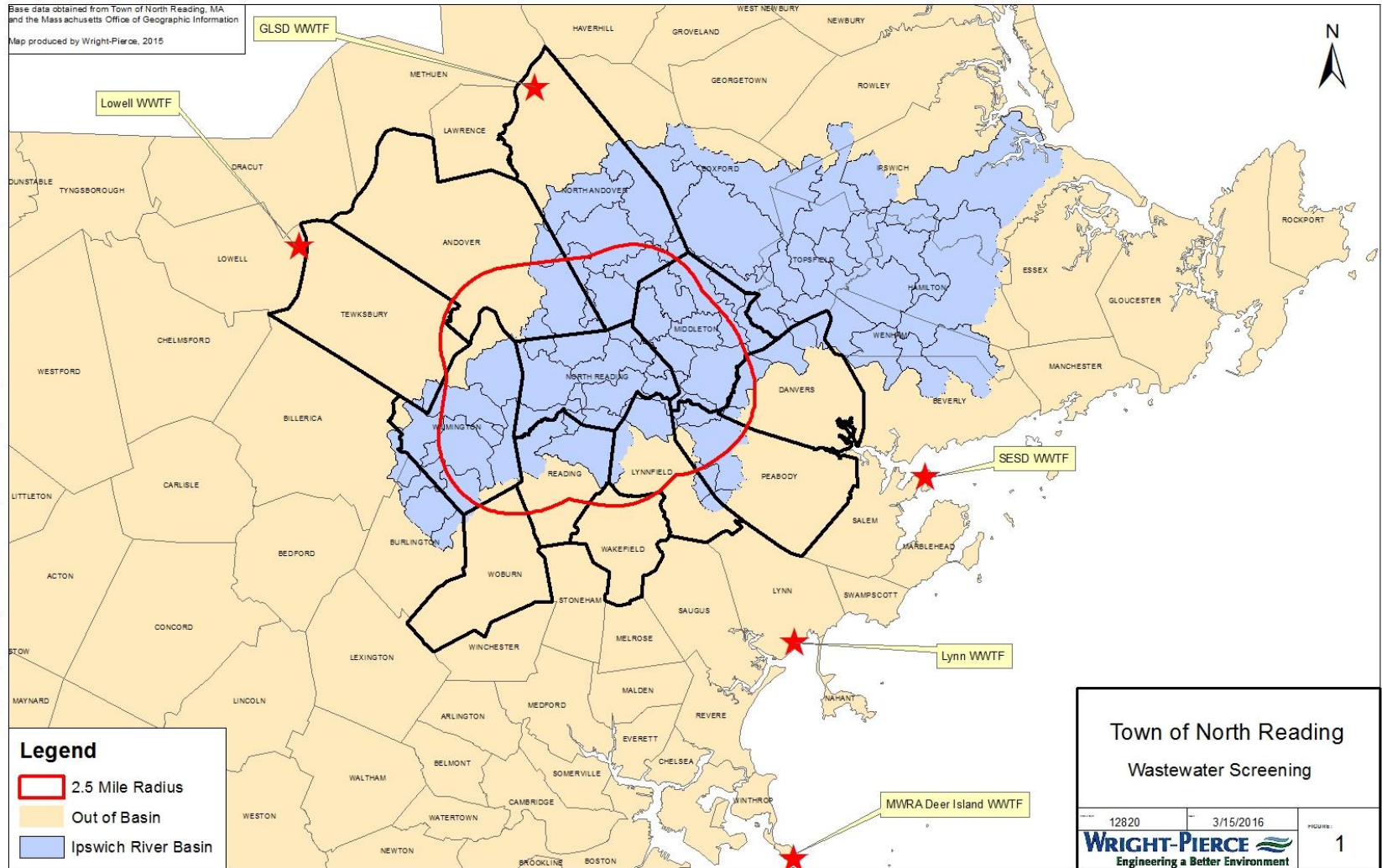
- No-build
- In-Town
 - centralized facility
 - decentralized facilities
- Out-of-Town
 - GLSD
 - MWRA
 - others



Wastewater Screening Analysis: In-Town System



Wastewater Alternatives: Out-of-Town



Wastewater Alternatives: Out of Town Options

Community/District	Municipal System (Y/N)	Capacity (Y/N)
Greater Lawrence Sanitary District	Y	Y
MWRA	Y	Y ¹
South Essex Sewerage District	Y	N
Lynn Regional Sanitary District	Y	N
Lynnfield	N	N
Middleton	N	N
Tewksbury	Y ²	N

1: MWRA is not actively expanding wastewater service area. Connection possible with significant I/I removal within MWRA system by connecting community

2: Tewksbury discharges its sewer to the Lowell Regional Wastewater Utility



Wastewater Alternatives

Out-of-Town/Out-of-Basin

- MWRA – pipes do not have capacity for NR flows
 - current Riverpark Drive flows to MWRA
 - potential Concord Street flows to MWRA (economic development initiative)
- GLSD – has capacity
 - wastewater conveyed through Andover
 - upgrades required to accommodate North Reading flows



Recommended Plan

- Blended approach with in-town & out-of-town options
- Connection to GLSD serving:
 - Martins Pond/Main Street/Concord Street
- Optimize HS WWTP & capture users in town center
- Other users remain on individual systems



RECOMMENDED



Proposed Water Supply Plan



Project Background

Description	Amount in millions gallons/day (MGD)
Town Sources	0.96
Andover	<u>1.50</u>
Total Available Capacity	2.46
Existing Peak Demand	<u>2.56</u>
Current Deficit	(0.10)
Projected Peak Demand	<u>2.58</u>
Future Deficit	(0.12)



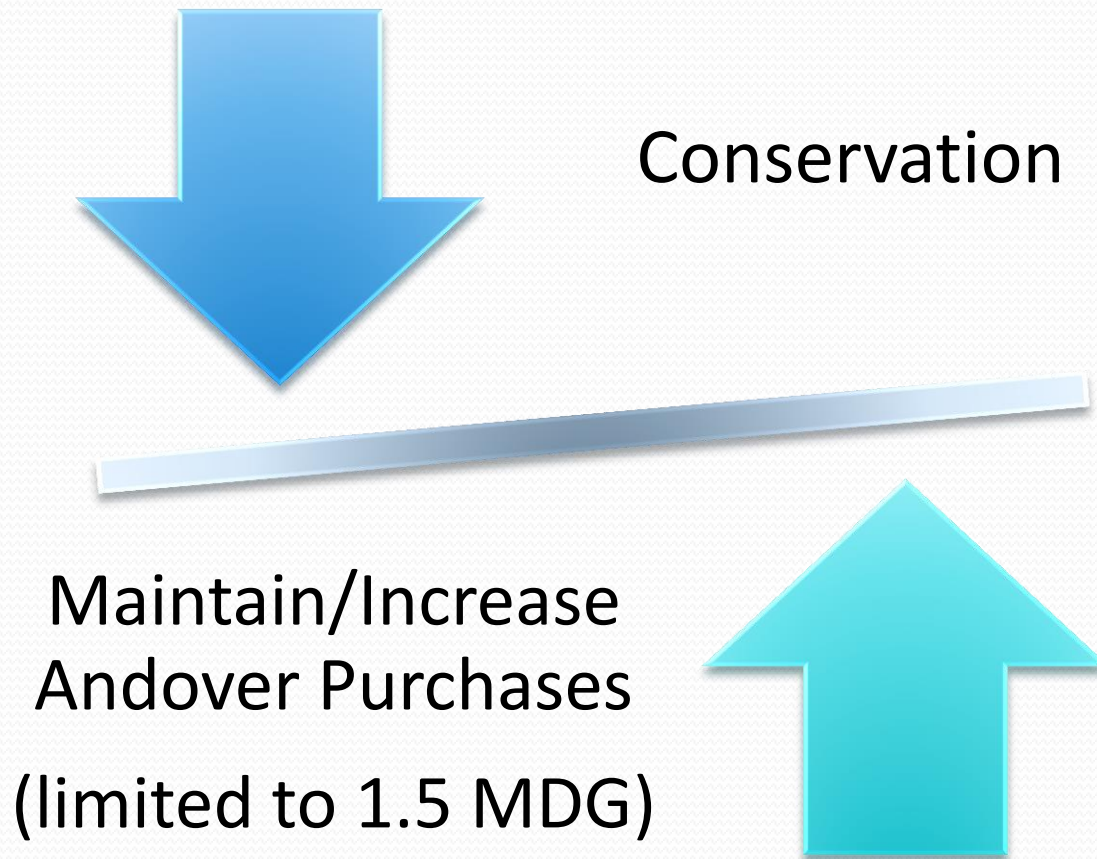
Goals for Future Water Supply

- Long-term, sustainable quality water supply
- Simplify water system
- Contain capital and O&M costs
- Serve existing and future customer base
- Reduce stress on Ipswich River

GOALS



Water Alternatives Considered



Water Alternatives Considered – cont.

- Optimize/Expand local sources
 - unreliable/declining capacity
 - diminishing water quality
 - Ipswich River basin – cannot increase withdrawals
 - no viable surface/groundwater supplies
 - existing facilities require significant investment



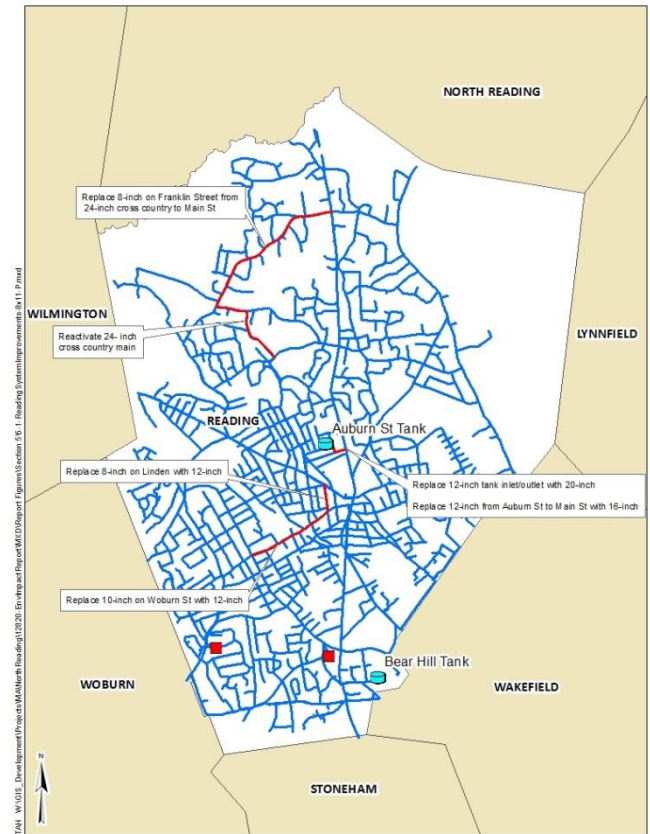
Water Alternatives Considered – cont.

- Develop alternative supply sources
 - interconnections to neighboring communities
 - ◆ limited/no excess capacity
 - MWRA – has capacity to give
 - ◆ Wilmington – poor infrastructure
 - ◆ Reading – strong pipe network; MWRA redundancy



Recommended Plan

- Service from MWRA
 - capacity to serve future needs
 - redundancy/reliability
 - reduced stress on Ipswich River



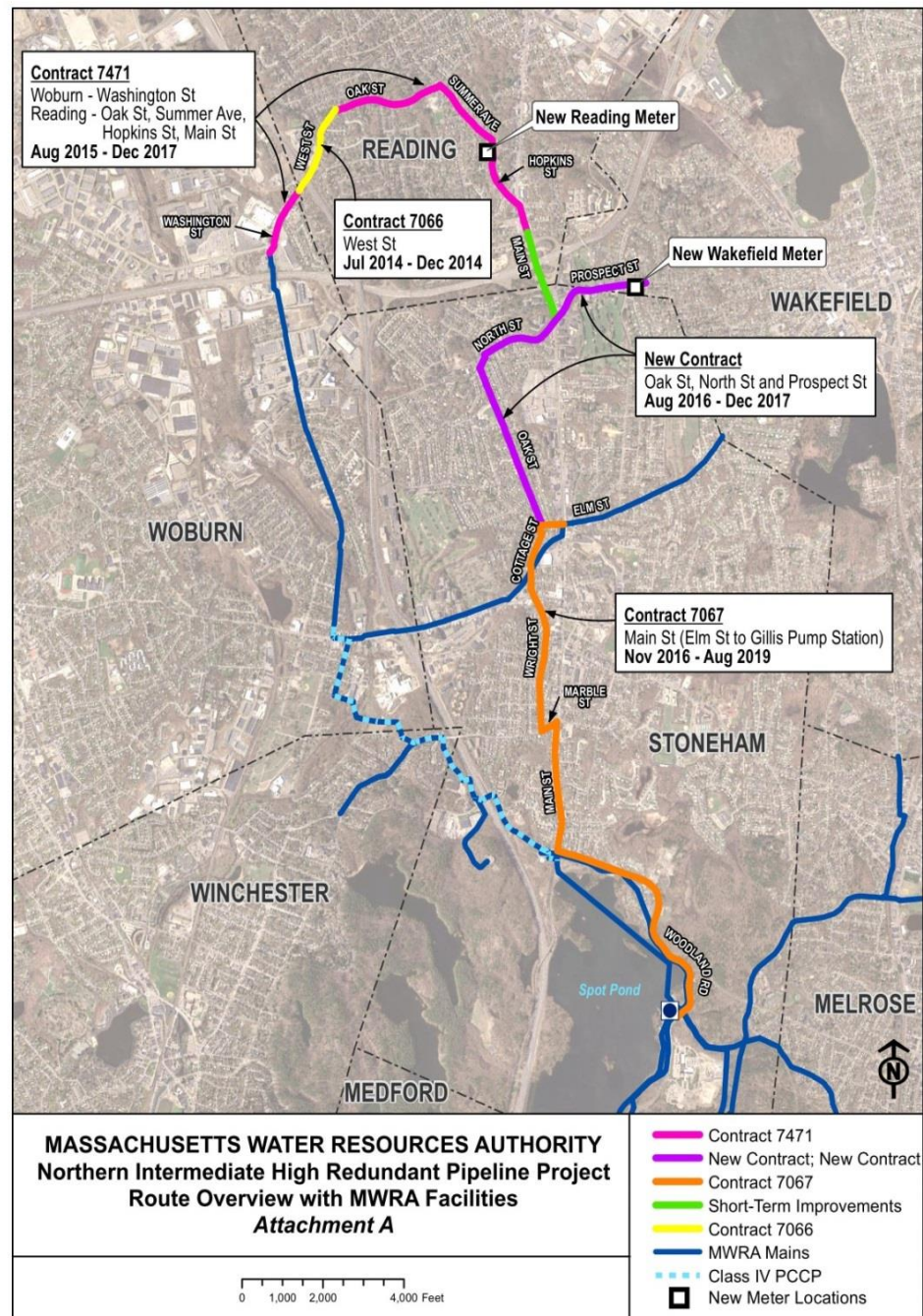
Recommended Plan – cont.

- Pump from Reading
 - 2.5+ miles of pipe upgrades in Reading
 - booster pump station for North Reading
 - maintain Andover connections as back-up
 - abandon existing supplies and facilities



MWRA Redundancy

Increased reliability!



Stay with Existing Infrastructure	Switch to MWRA Service
\$21M in investments over next 5+ years	\$17.13M investment over 3+ years
Cannot increase capacity	Nearly unlimited capacity
Cannot support growth	Satisfies future conditions
Andover rates unknown	Not dependent upon Andover
Major regulatory risk (Ipswich)	Minor regulatory risk
Increased manpower & O&M	Reduced labor



Aid and Assistance

- Community Compact Cabinet
- MassWorks Infrastructure Program
- Clean Water State Revolving Loan Fund
- State Legislators and Grants



MWRA and Town of “Reading” are making a Major Commitment and Investment



Economic Development Impacts

- Water infrastructure system is VITAL to:
 - community long-term health
 - environment
 - economic development
- Need additional water capacity to capture new growth



MWRA Connection through Reading

- Communities collaborating since 2014
- Estimated project cost = \$9.45 million
 - bonded over 20 years, 0% interest loan eligible
- \$7.68 million MWRA “buy-in”
 - financed by MWRA; re-paid by Town; grant eligible?
 - 25 years at 0% interest



Implementation Schedule

- Permitting/Agreement Phase – 2016
- Design – 2016/2017
- Construction – 2017 - 2019
- Target date for MWRA connection - July 2019
- Decommission water treatment plants/wells



Schedule

Activity	2016	2017	2018	2019	2020
Permitting/agreement	→				
Design	→				
Construction		→			
Connect to MWRA				★	
Decommission facilities					→



Questions / Discussion



For more information, please visit our website:

<http://www.northreadingma.gov/water-division/pages/waterwastewater-deir>