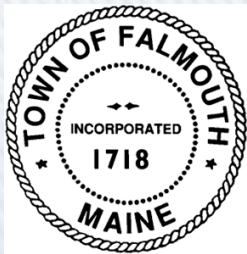


# Draft Public Water System Analysis Falmouth, Maine

July 25, 2016



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Engineering a Better Environment



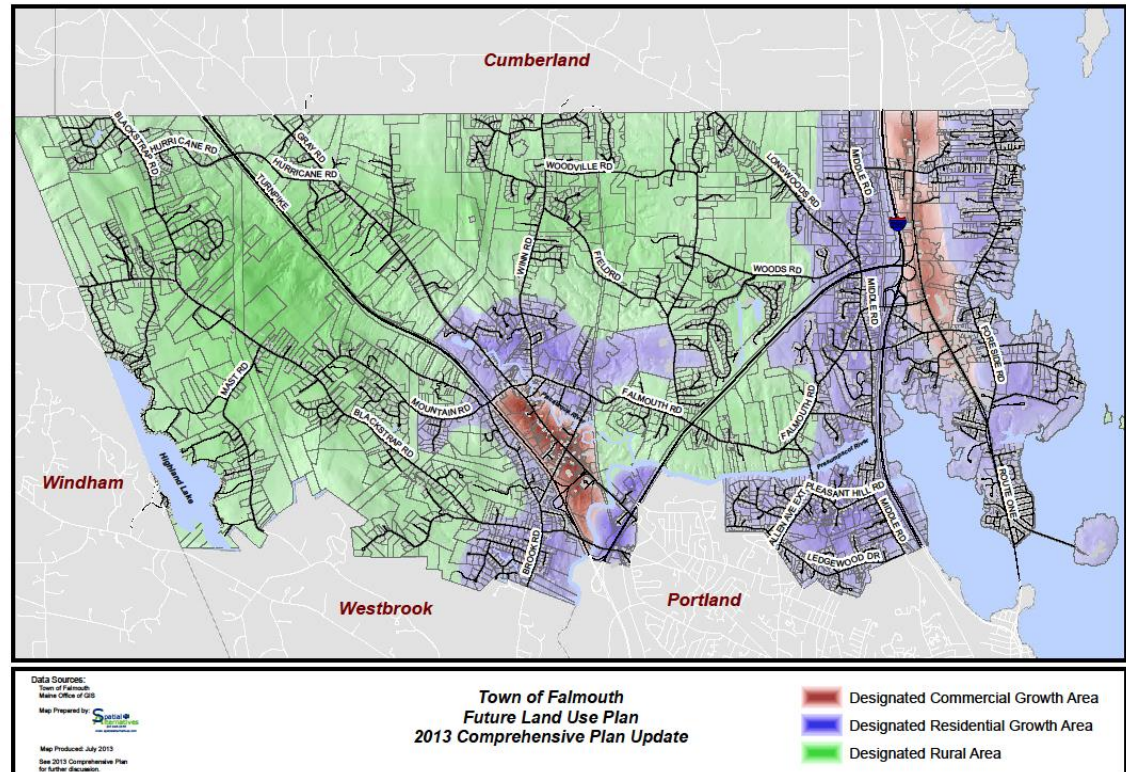
**Portland Water District**  
Portland, ME

# Impetus for the Public Water Analysis

- Public inquiry regarding pending reconstruction (2017-2018) of Middle Road near Town of Cumberland line where there is currently no public water service
  - Cumberland is extending water line to Falmouth Town line. Is this an opportunity to add water line in Falmouth as well and close loop?
- Pro-active utility planning is recommended action in 2013 Comprehensive Plan

# 2013 Comprehensive Plan Policies

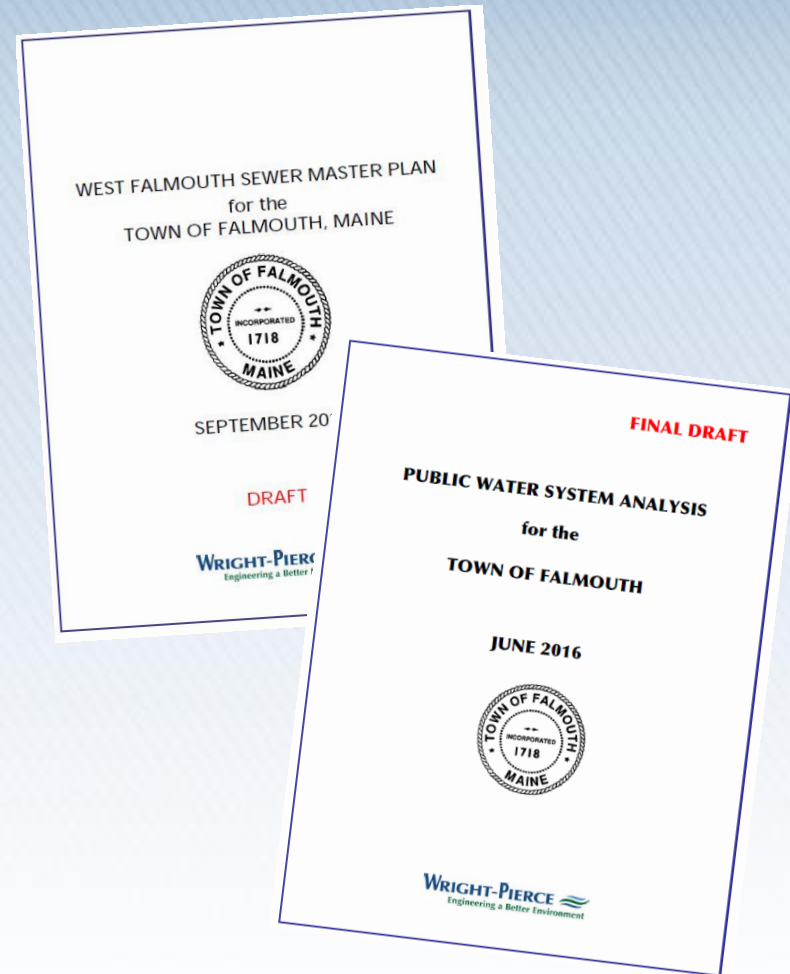
- Plan established Growth + Rural Areas
- Policy: Increase share of growth in growth area to a significant majority of all new residential growth



# Implementation of 2013 Comp Plan - Pro-Active Utility Planning

“Establish plans for designated growth area” for:

- Targeted sewer service expansion – **2015**
- Potential additional public water service in cooperation with the Portland Water District (PWD) - **2016**

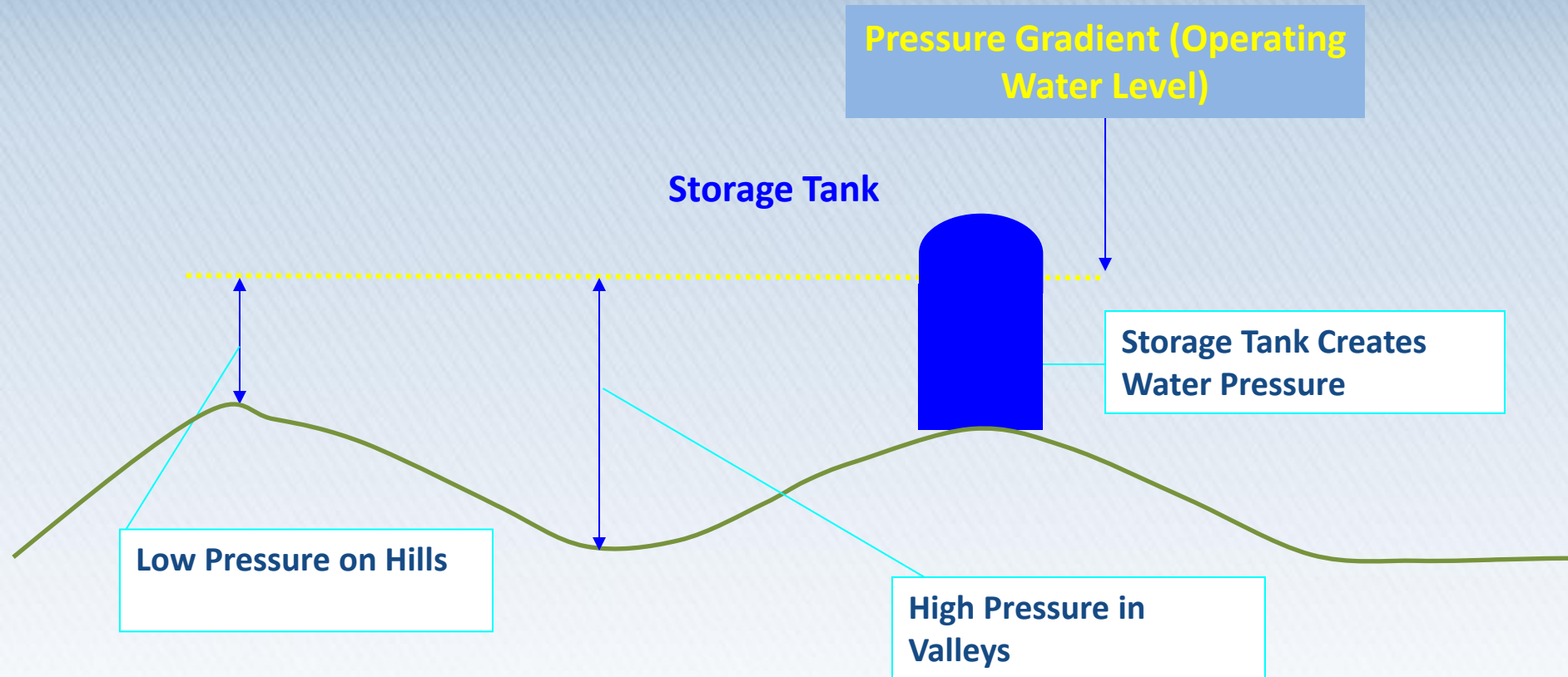


# Scope of Public Water Study



1. Are there public water system limitations to serve infill development?
2. Are there areas in Growth Area currently not served by the existing water system?
3. What might conceptual water service plans for unserved areas look like?

# Water Systems 101 – Pressure Zones



**Portland Water District requires a minimum of 40 psi of pressure**

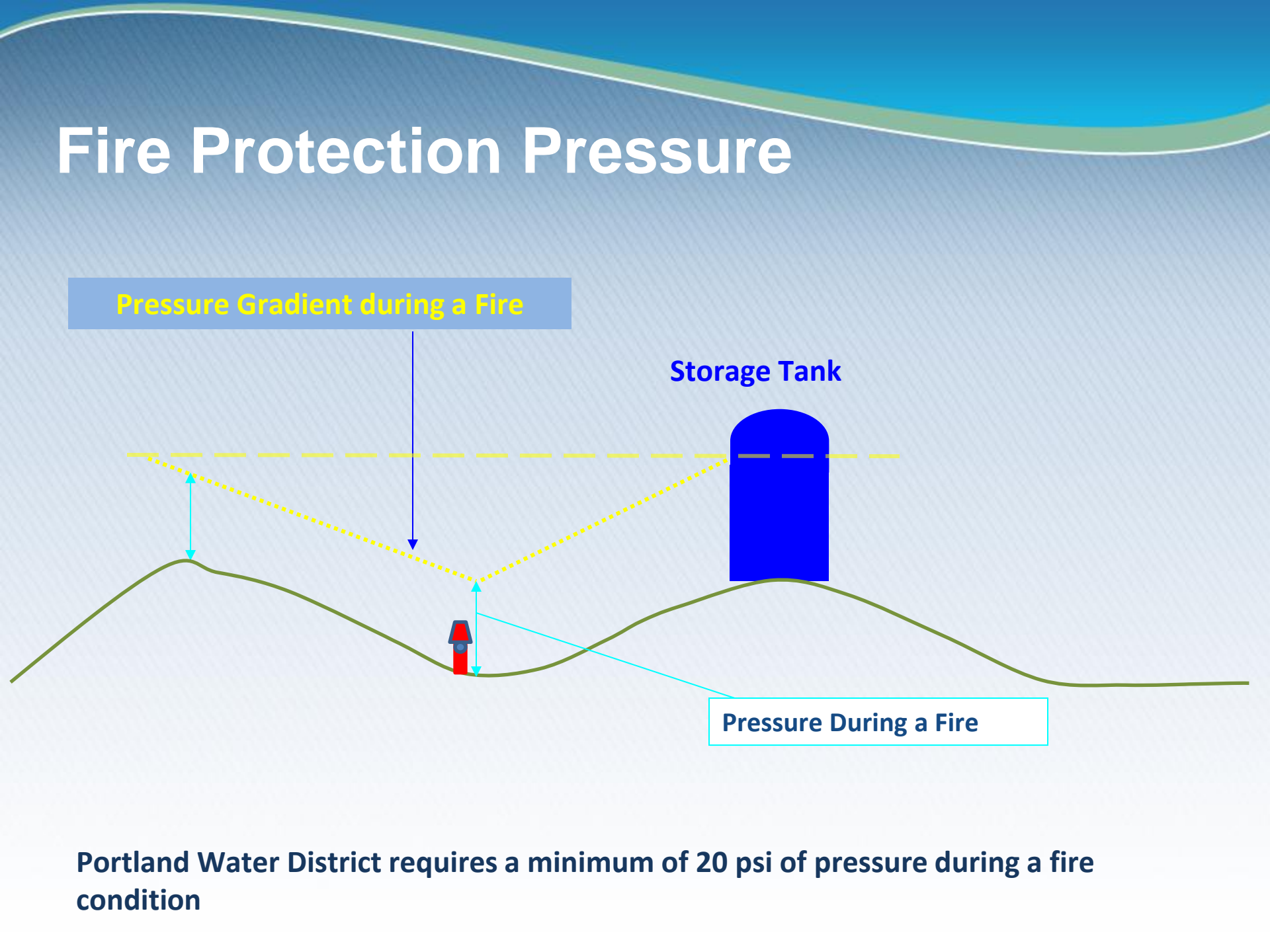
# Fire Protection Pressure

Pressure Gradient during a Fire

Storage Tank

Pressure During a Fire

Portland Water District requires a minimum of 20 psi of pressure during a fire condition



# Fire Protection affects Home Insurance



- Insurances Services Organization (ISO) rates communities and establishes fire ratings
- Fire ratings impact private property insurance rates



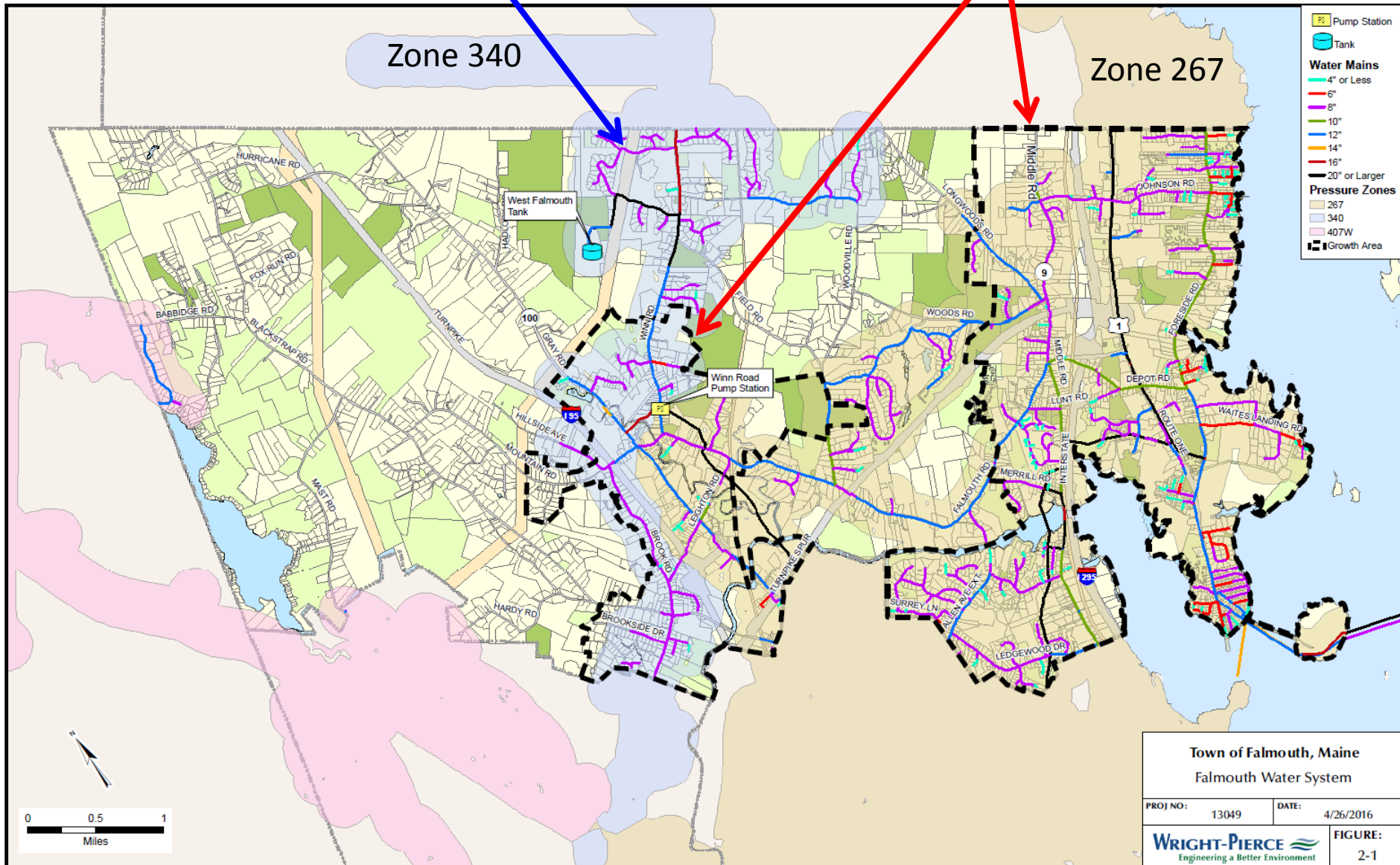
# How Are Water Main Extensions Funded?



Portland Water District  
Portland, ME

- Portland Water District (PWD) owns and operates Public Water System in Falmouth
- PWD specifies System Requirements
- Customers fund Water Main Extensions
- Sometimes there are Partnership Opportunities

# Current Water System      Growth Area

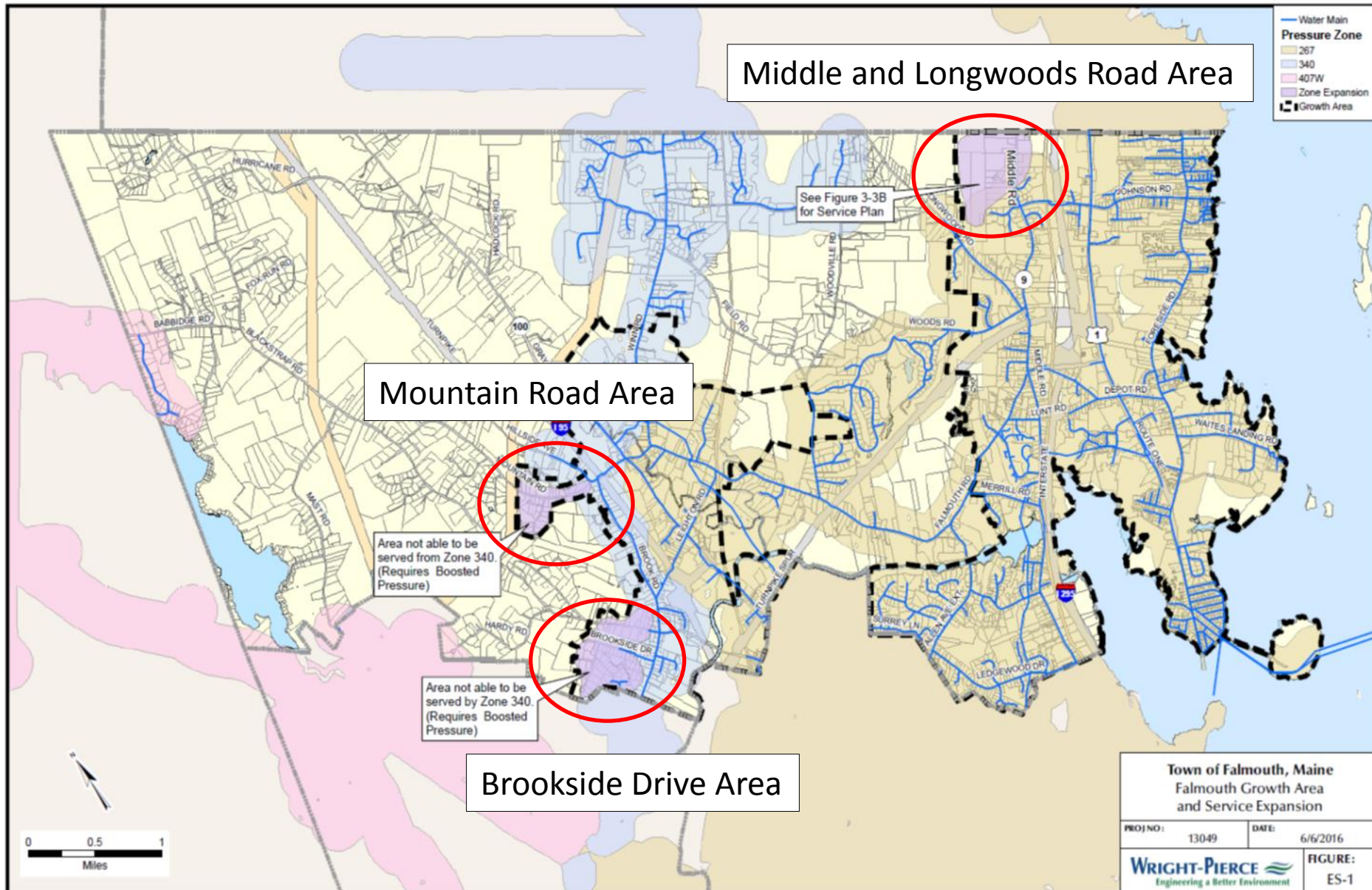


# What was studied?

- Current water system adequacy:
  - Service pressure
  - Fire protection
  - Reliability (proper looping of pipes)
- Maintenance & Capital needs
- Infrastructure required to serve all of growth areas



# Three areas without public water



# What did we learn re. Fire Protection?



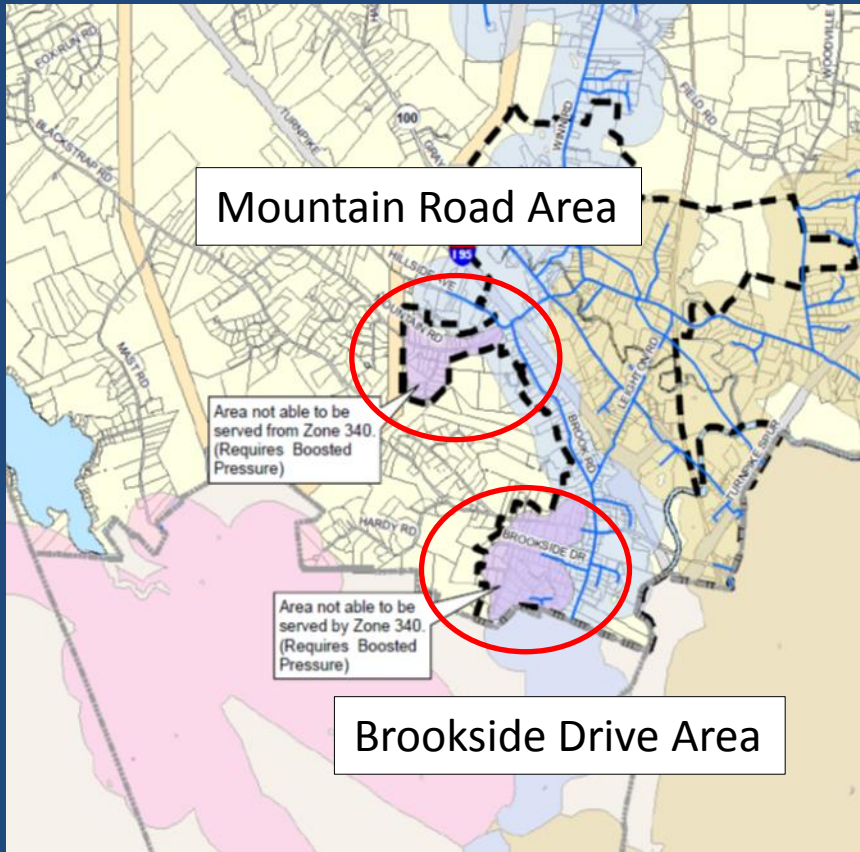
- Public fire protection in Falmouth Growth Area is excellent
- Extensions of water mains or service to additional customers in Growth Area will not impact fire protection in Town

# What did we learn re. residential service?

- Infill development will *not* impact service to current customers
- The three remaining growth areas can be served by the PWD
- Infrastructure needs to address deficiencies were determined



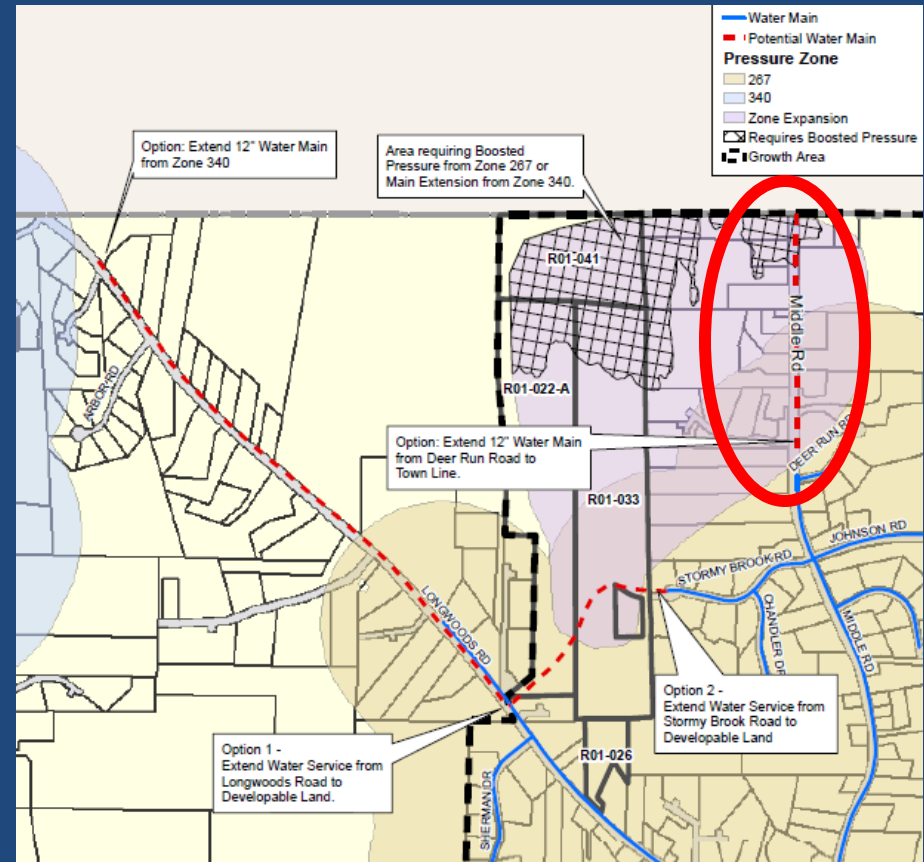
# Brookside Drive and Mountain Road Areas



- Water lines can be extended, but not enough pressure in zone 340 to serve.
- Requires boosted pressure
- Little vacant land available for development
- Refer homeowner interest to PWD

# Middle Road Area

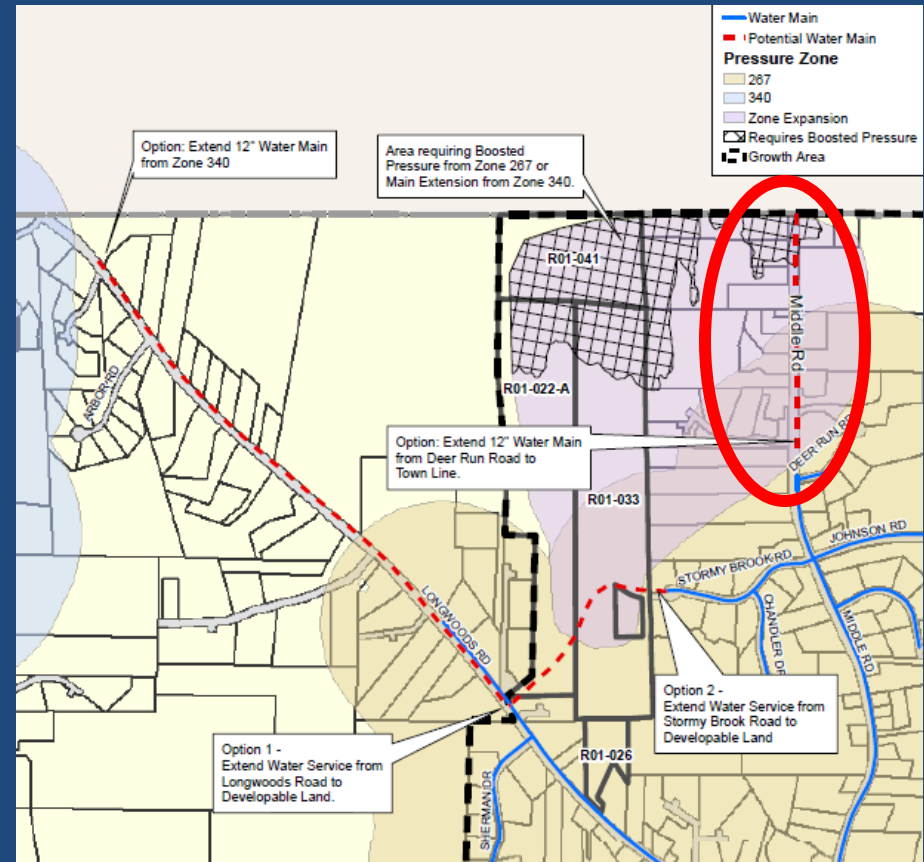
- Extension of 12" main from Cumberland line to Deer Run Road
- Benefit: Close water line loop, serve +/- 16 properties
- Cost: new 12" main @ 3,000 lf = \$750,000
- Limited development potential
- Funding plan?





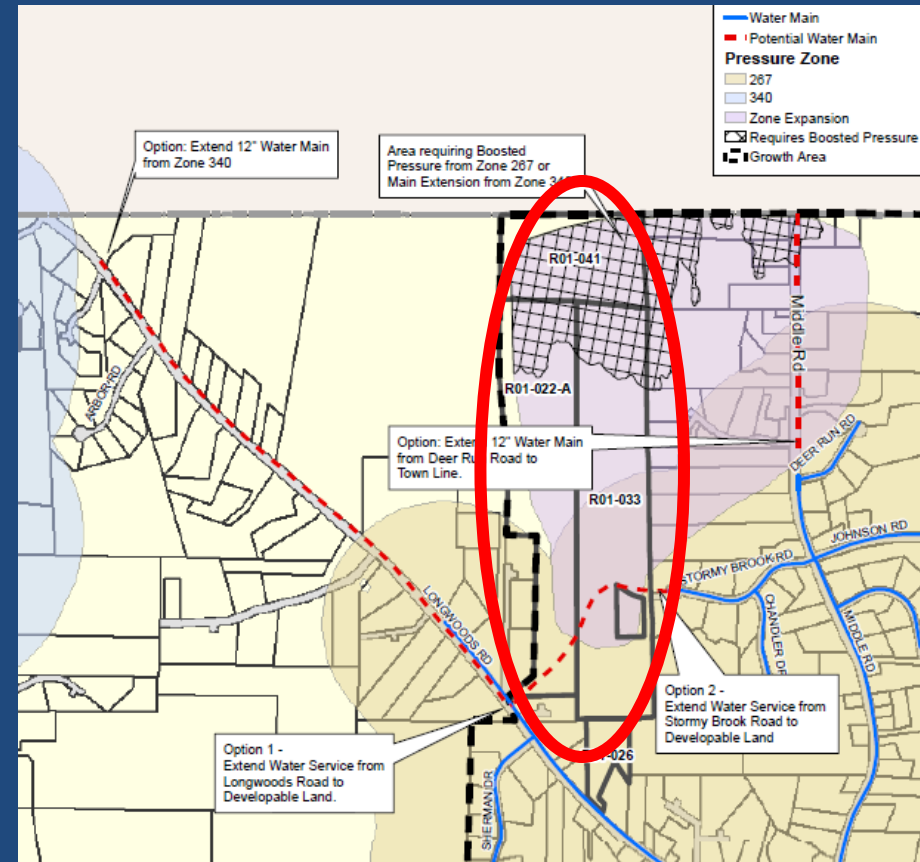
# Middle Road – Funding Considerations

- Homeowner interest?
- Council interest?
- PWD possible interest to share in cost to upgrade to 16”
- USDA Water System Loan/Grant Program
  - Falmouth not eligible (<10,000 population requirement)
  - Loan only
  - Service connections not eligible



# Longwoods Road Area

- Vacant Land with development potential; recently rezoned to Residential B
- Extend main from Longwoods Road to Stormy Brook Road + booster pumping station **OR** Extend main from high pressure zone 340 without pumping



Cost would be for developer. Require service plan.

# Public Outreach of Draft Study

- July 6: Public Forum (1 resident)
- E-mail comments: Middle Road, Blackstrap Road
- TBD: Meet with Middle Road residents



# Study Conclusions



- Good to know Growth Area is in great shape water-wise.
- No Town-funded construction is being recommended by staff at this time.
- Study will be helpful to assess future work.

# Thank You



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