Ad Hoc Stormwater, Wastewater and Water Citizens Advisory Committee
Wednesday, December 2, 2020 - 6:00 PM
Newberg City Hall
414 E First Street (teleconference meeting)

Join from a PC, Mac, iPad, iPhone or Android device:
Please click this URL to join. https://zoom.us/j/94583777944

Or join by phone:
Dial (for higher quality, dial a number based on your current location):
+1 669 900 6833, +1 253 215 8782, +1 346 248 7799, +1 929 205 6099,
+1 301 715 8592,+1 312 626 6799

Webinar ID: 945 8377 7944
Email any comments to Brett.Musick@newbergoregon.gov

I. **COMMITTEE INTRODUCTIONS**

II. **ELECTION OF COMMITTEE CHAIR AND VICE CHAIR**

III. **COMMITTEE PURPOSE AND GENERAL BACKGROUND**

IV. **NEW BUSINESS**

- Water Master Plan Technical Update Consultant Presentation, Murraysmith
- Wastewater Master Plan Technical Update Consultant Presentation, Keller

V. **PUBLIC COMMENTS**

VI. **ITEMS FROM STAFF**

VII. **ITEMS FROM COMMITTEE MEMBERS**

VIII. **ADJOURNMENT**

ACCOMMODATION OF PHYSICAL IMPAIRMENTS: In order to accommodate persons with physical impairments, please notify the Engineering Department of any special physical or language accommodations you may need as far in advance of the meeting as possible, and no later than two business days prior to the meeting. To request these arrangements, please contact the Engineering Department at (503) 537-1273. For TTY services please dial 711.

CAC Meeting 1
Water Master Plan Technical Update

Project Goals, Water Demand, Criteria, and Analysis Results

murraysmith

City of Newberg

Agenda

- Project Goals
- Water System Overview
- Analysis Process
- Water Demand
- Criteria – what defines good water service?
- Analysis results – where are improvements needed?

Project Goals

Plan for Riverfront water service

Provide fire flow for increased housing density – HB2001

Add seismic resilience to the CIP

Update system development charges (SDCs)

Support Urban Renewal program requirements

Riverfront Area Water Service

- Limited existing City water mains
- 2019 Riverfront Master Plan
  - Future zoning
  - Water main alignment
- This project
  - Estimate future water demand
  - Confirm pipe sizing

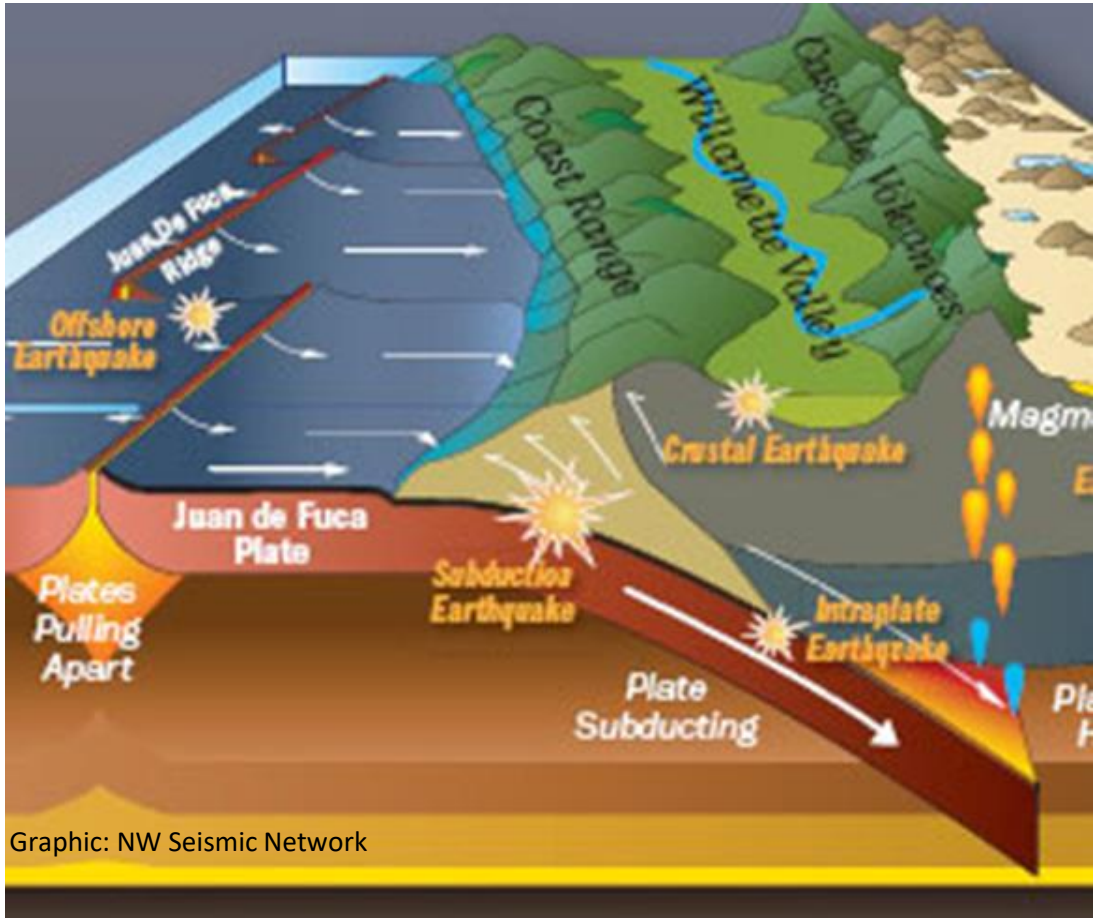
What is HB2001?

- Requires cities to review zoning and include middle housing

Graphic by: Better Housing Together

- How does middle housing impact the water system?
  - Water use per person <= single family
  - Larger buildings/higher density = higher fire flow
  - Higher fire flow need = larger pipes

Why seismic resilience?



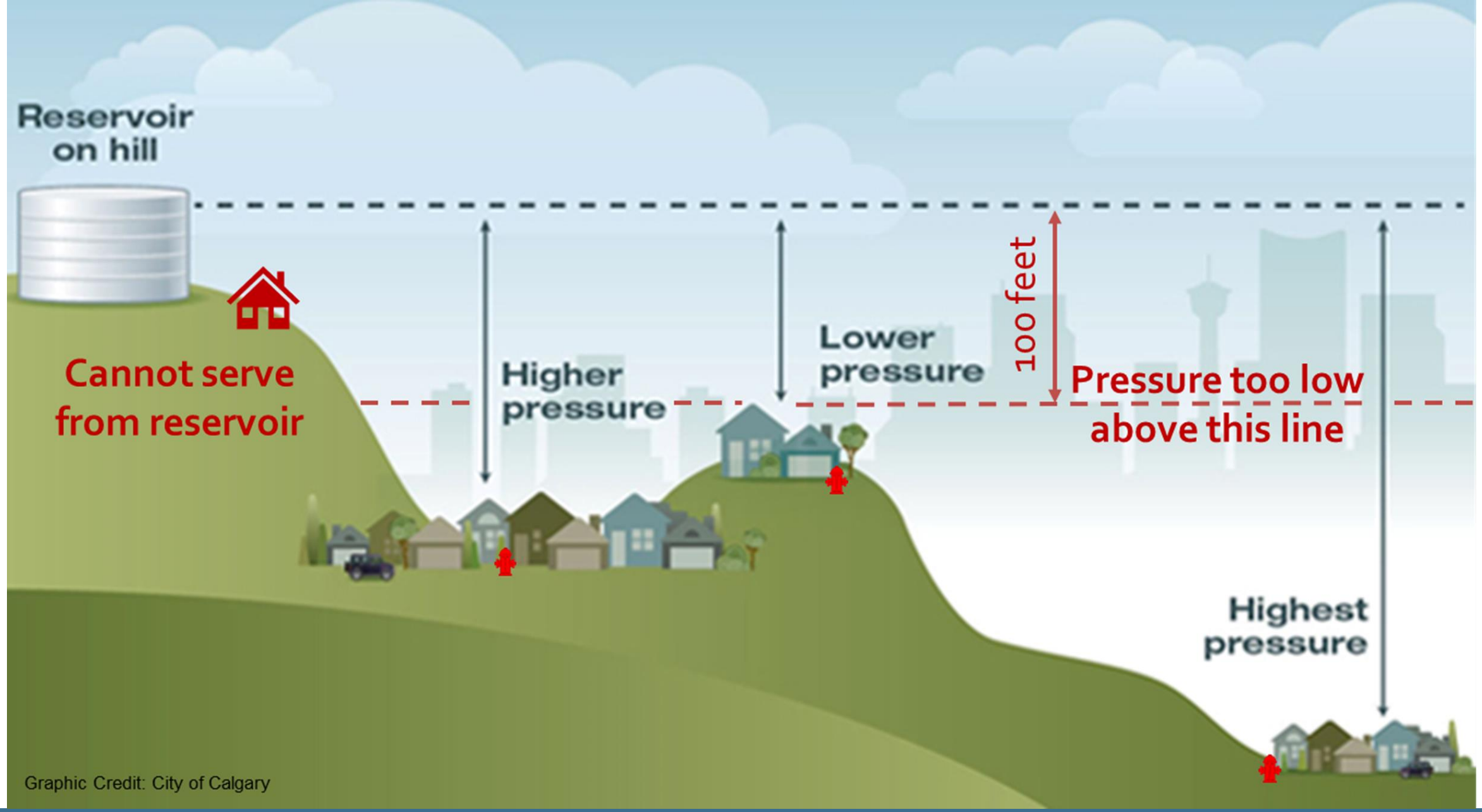
Graphic: NW Seismic Network

Oregon Water Master Plans require seismic resilience evaluations for the Cascadia Subduction Zone (CSZ) earthquake consistent with Oregon Resilience Plan

Why seismic resilience?

How does the water system become seismically resilient?

- Identify critical water infrastructure
- Understand seismic risk to critical infrastructure
- Mitigate risks
  - Retrofit storage, replace vulnerable pipe
  - Emergency response planning



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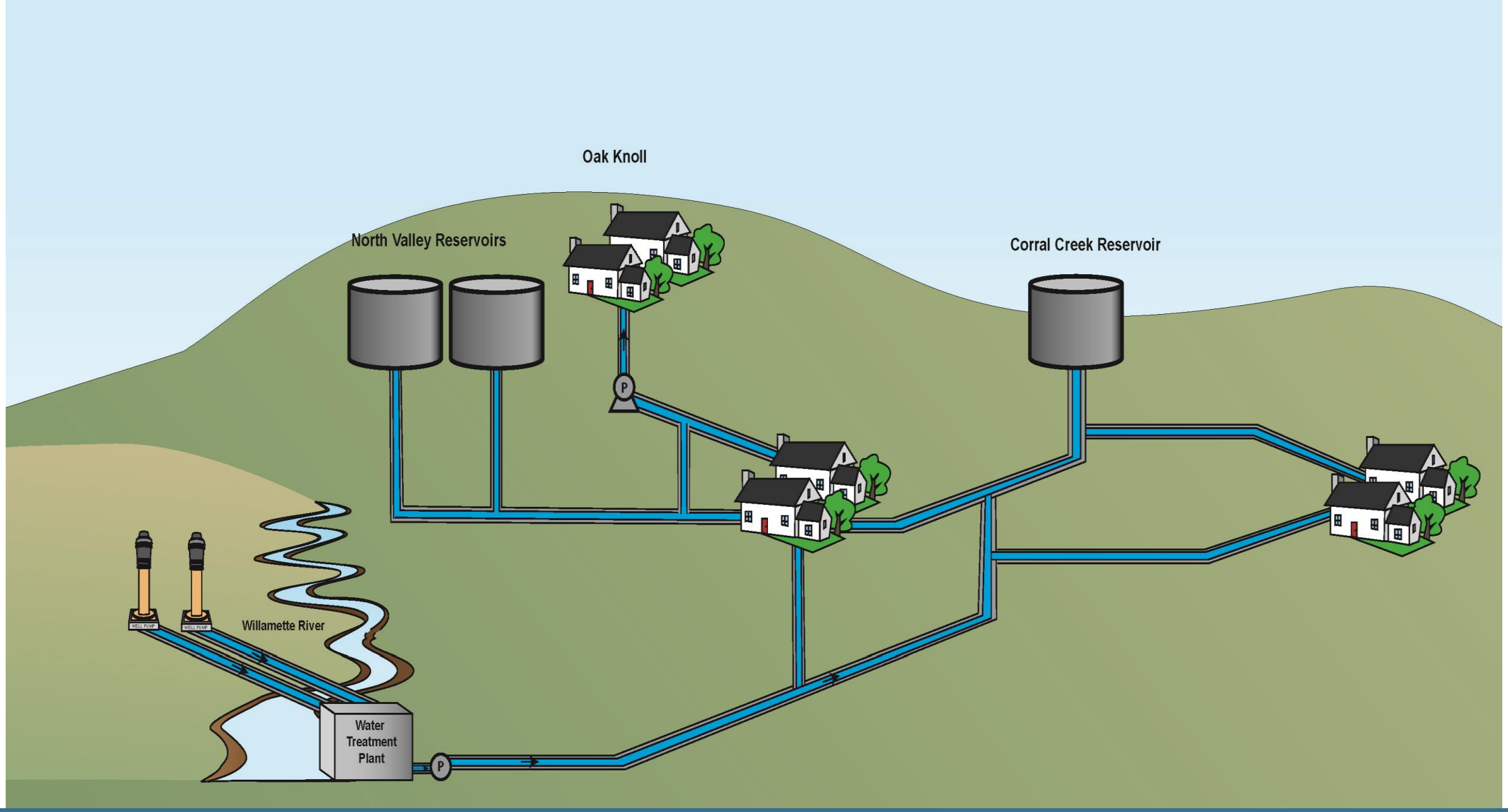

Oak Knoll
North Valley Reservoirs
Corral Creek Reservoir
P
Willamette River
WELL PUMP
WELL PUMP
Water
Treatment
Plant
P

Analysis Process

Water Demand

- How has existing demand changed since 2017?
- How much water will future Riverfront development need?
- How will middle housing change water demand and fire flow needs?

Criteria

- What determines adequate water service?
- Has that changed since 2017?

Capacity Modeling

- Using water system hydraulic model, test existing system against criteria.
- What are the deficiencies?

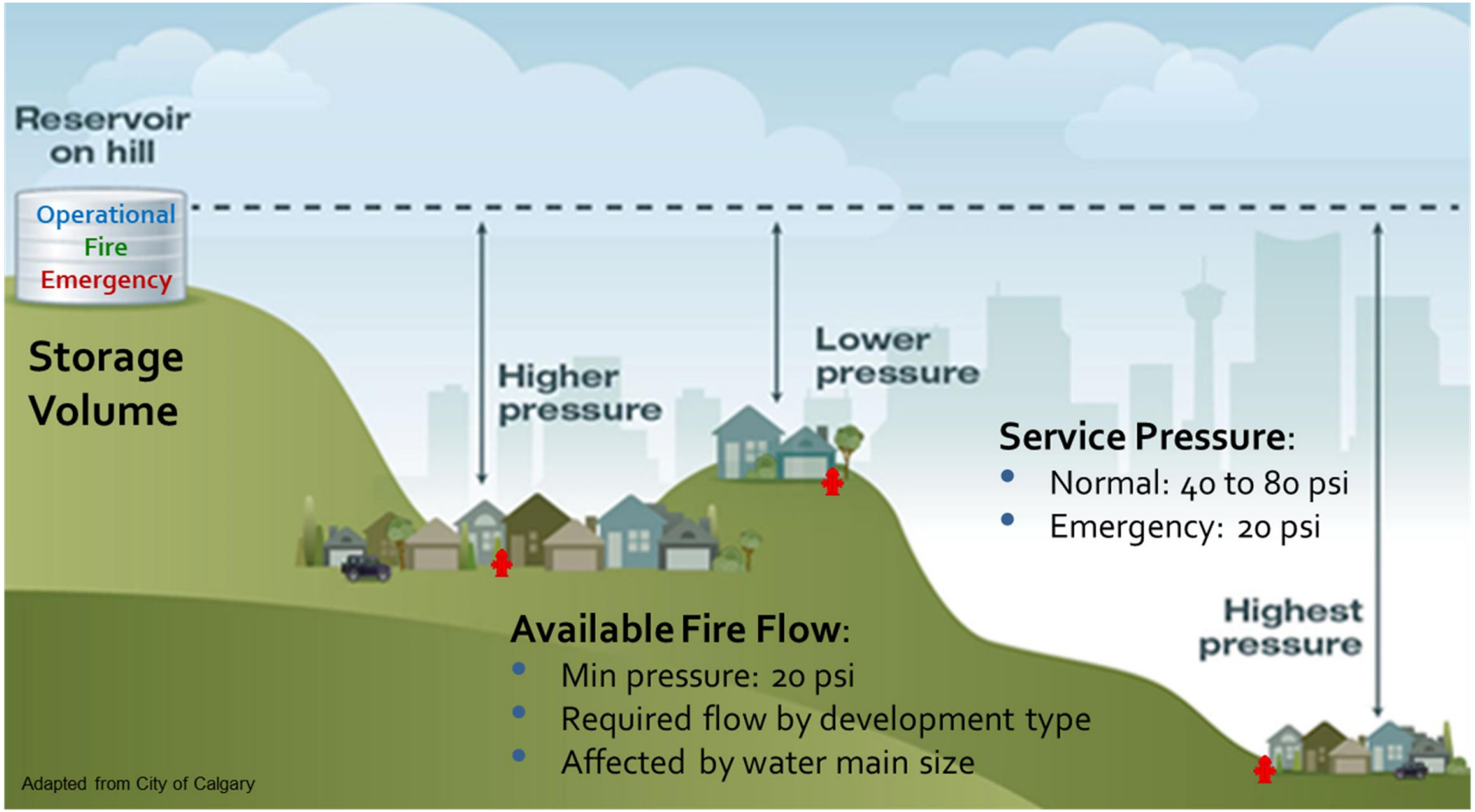
Water Demand

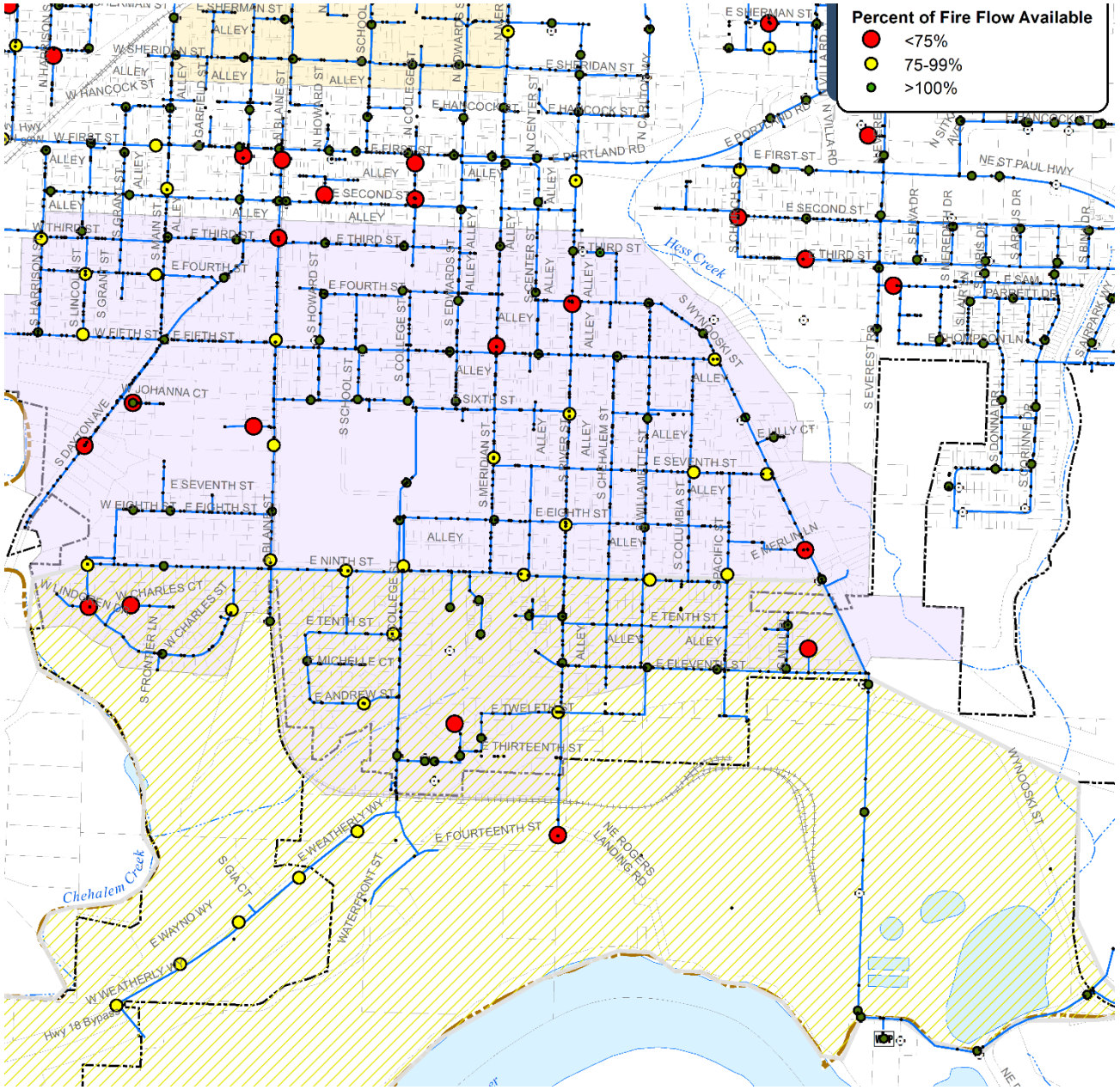
Current (2019)	2.27
20-year	3.89
Riverfront	0.17
20-year + Riverfront	4.06

- Average Daily Demand (ADD) = annual water use/365 days
- Maximum Day Demand (MDD) = 2 x ADD

- **Current** - only minor change since 2017
- **20-year future -** 2017 estimate + Riverfront

Criteria – What defines good water service?





Fire Flow Analysis Results

- **Riverfront**
  - Reduced fire flow in dead end mains
  - Future pipe looping improves available fire flow

- **IBTER South of Downtown**
  - Small diameter grid can't supply 2,000 gpm fire flow

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Questions?

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