

# Groundwater Production and Water Quality

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Environmental Programs and Water Operations

February 13, 2024

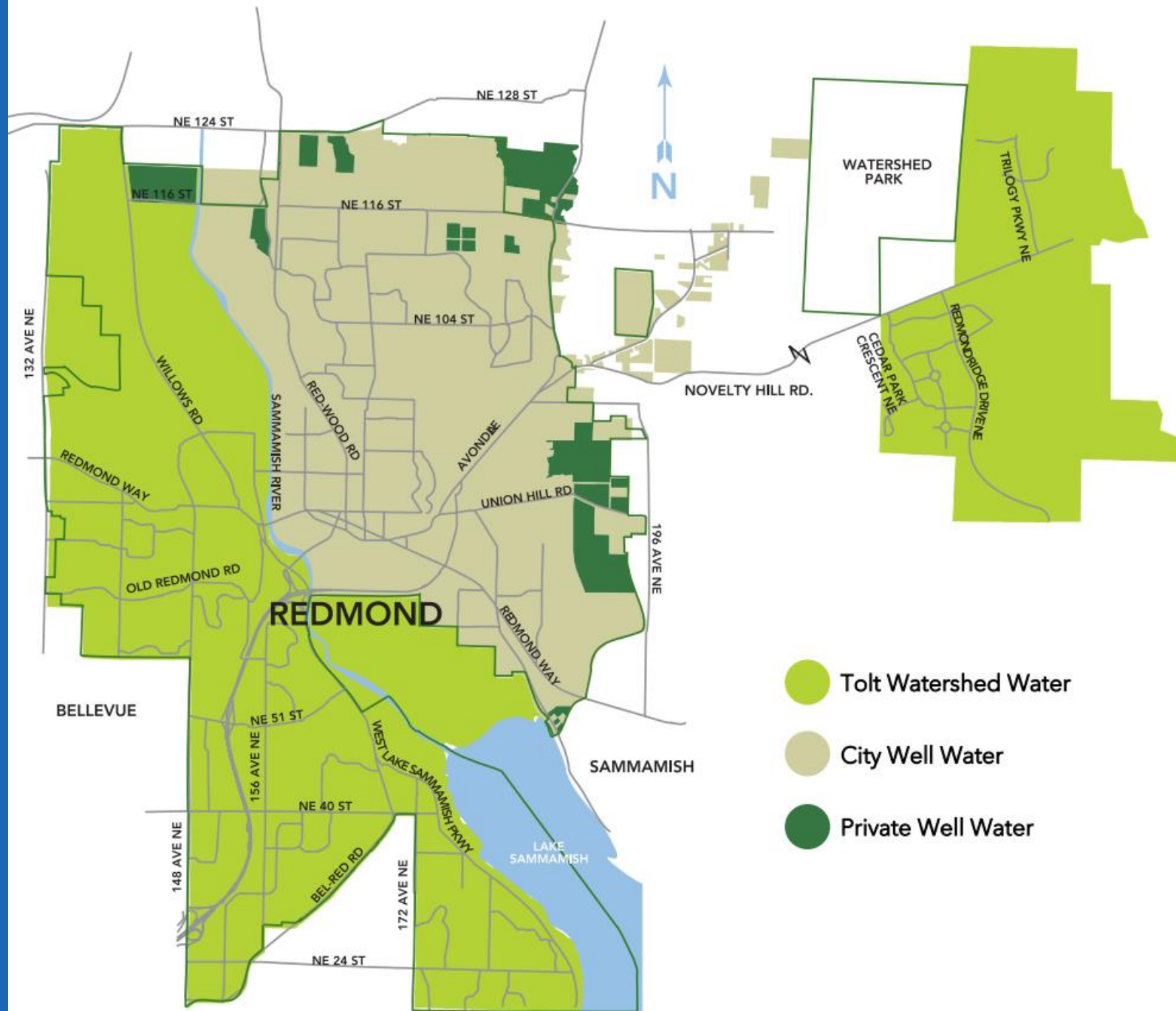




# Purpose

- Informational overview on groundwater production and water quality
- Public Works water management goals are to provide safe reliable drinking water and fire protection.
- Today's topics:
  - Water System
  - Aquifer 101
  - Water Quality Protection
  - Well Production

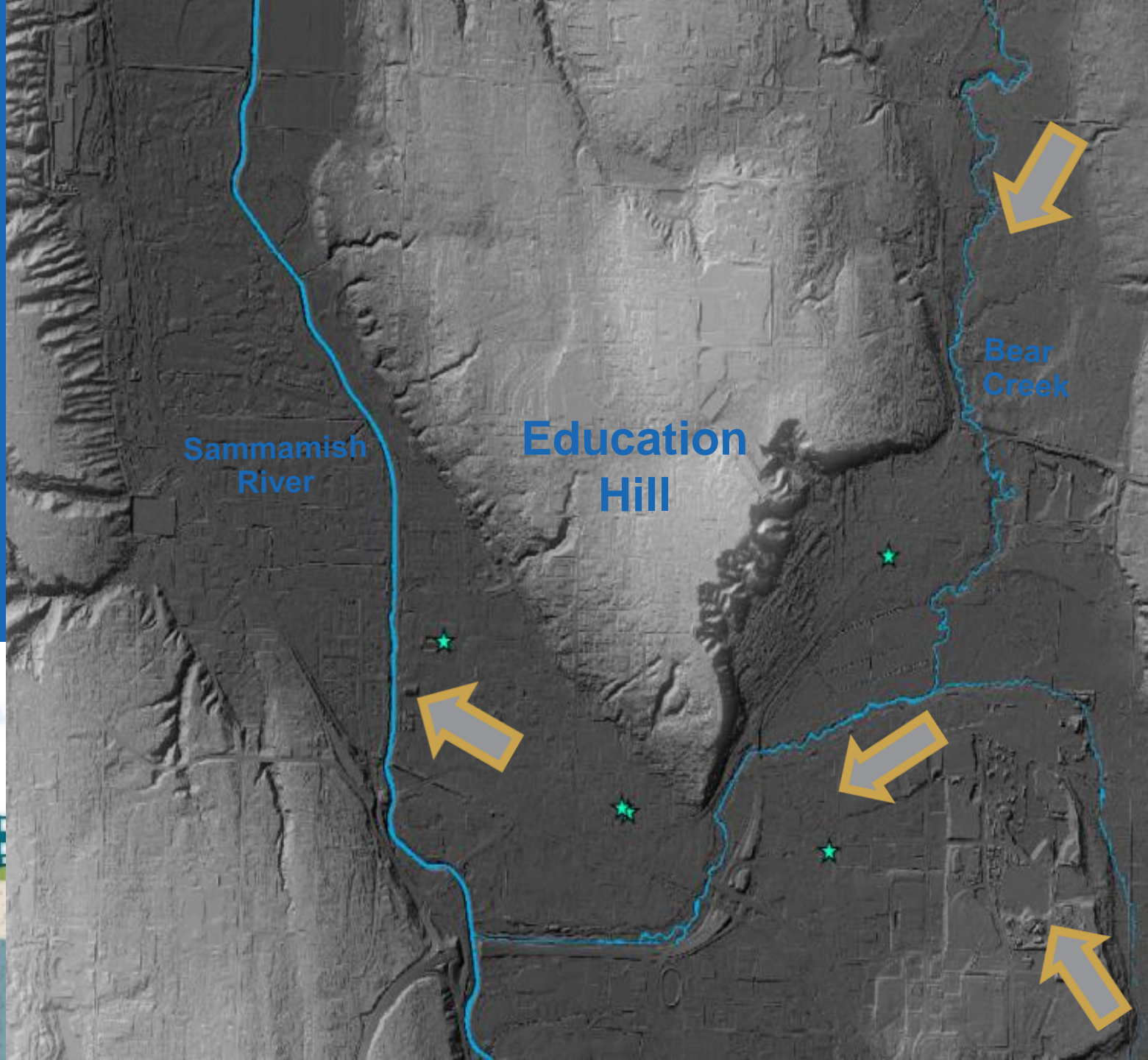
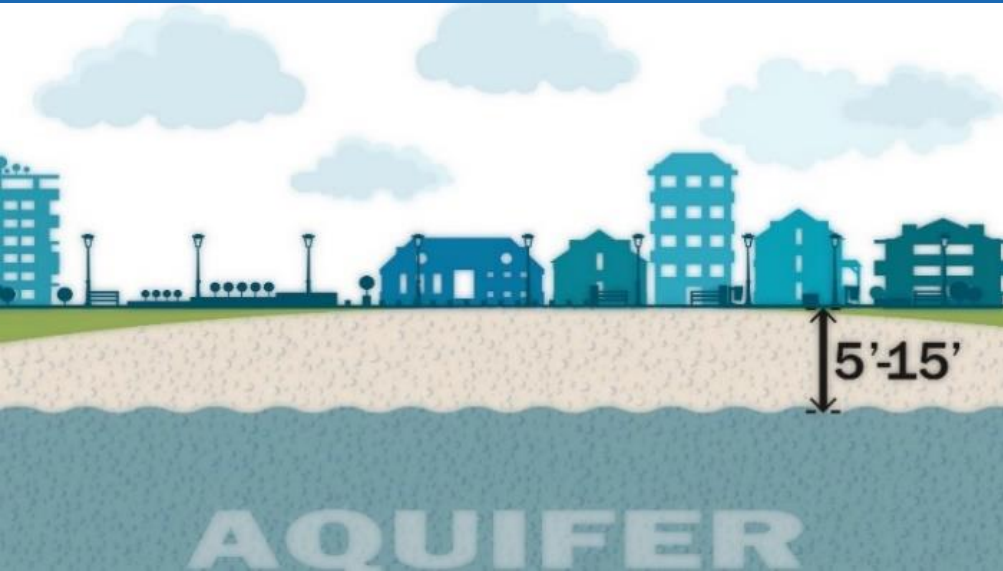
- 5 municipal wells
  - 40% well water
- Cascade Water Alliance
  - 60% of water from Tolt Reservoir
- Resilient and Flexible
- Regional Partnerships



# Redmond's Alluvial Aquifer

## Aquifer Characteristics

- Shallow
- Unconfined
- Urban Setting



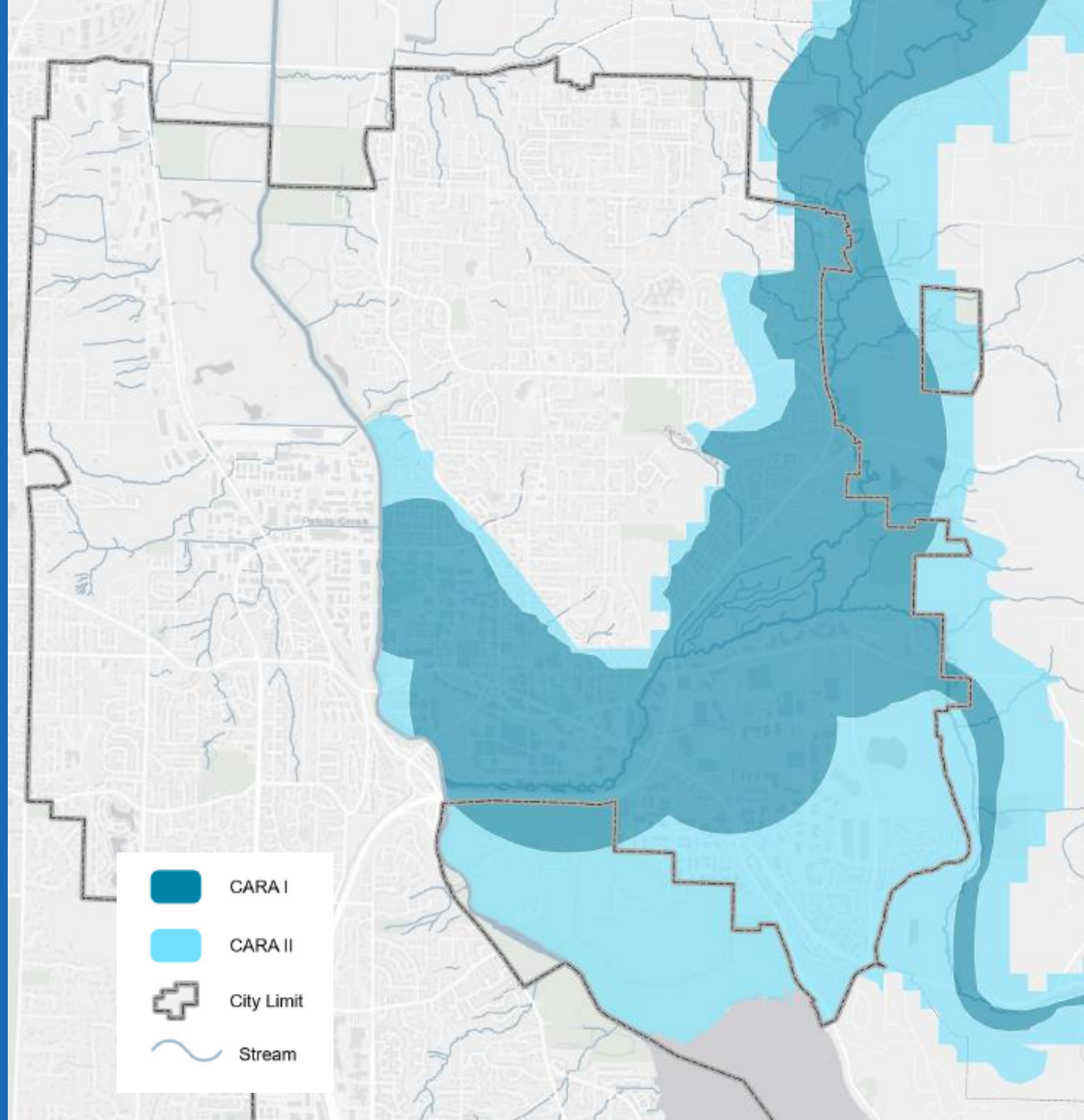


# Critical Aquifer Recharge Area

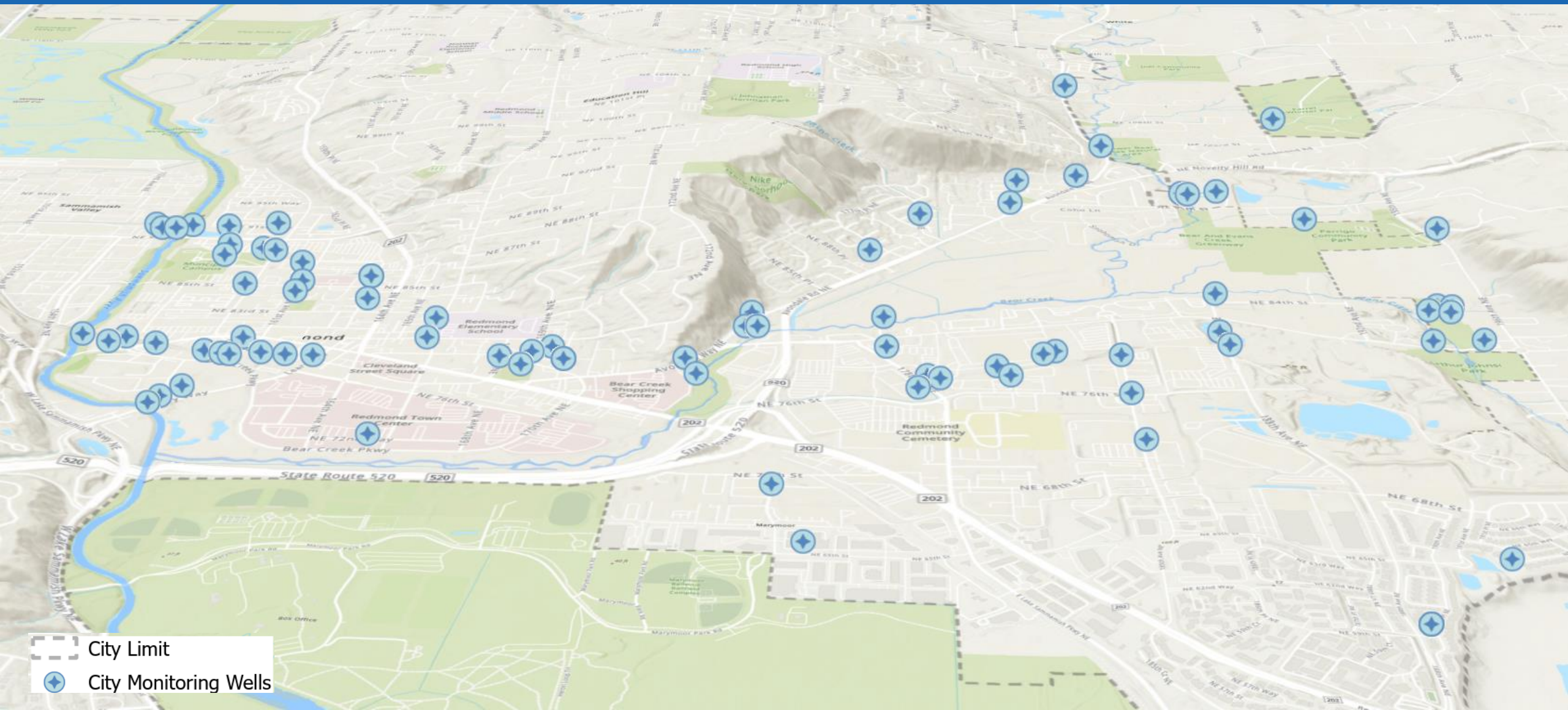
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## Protection Efforts

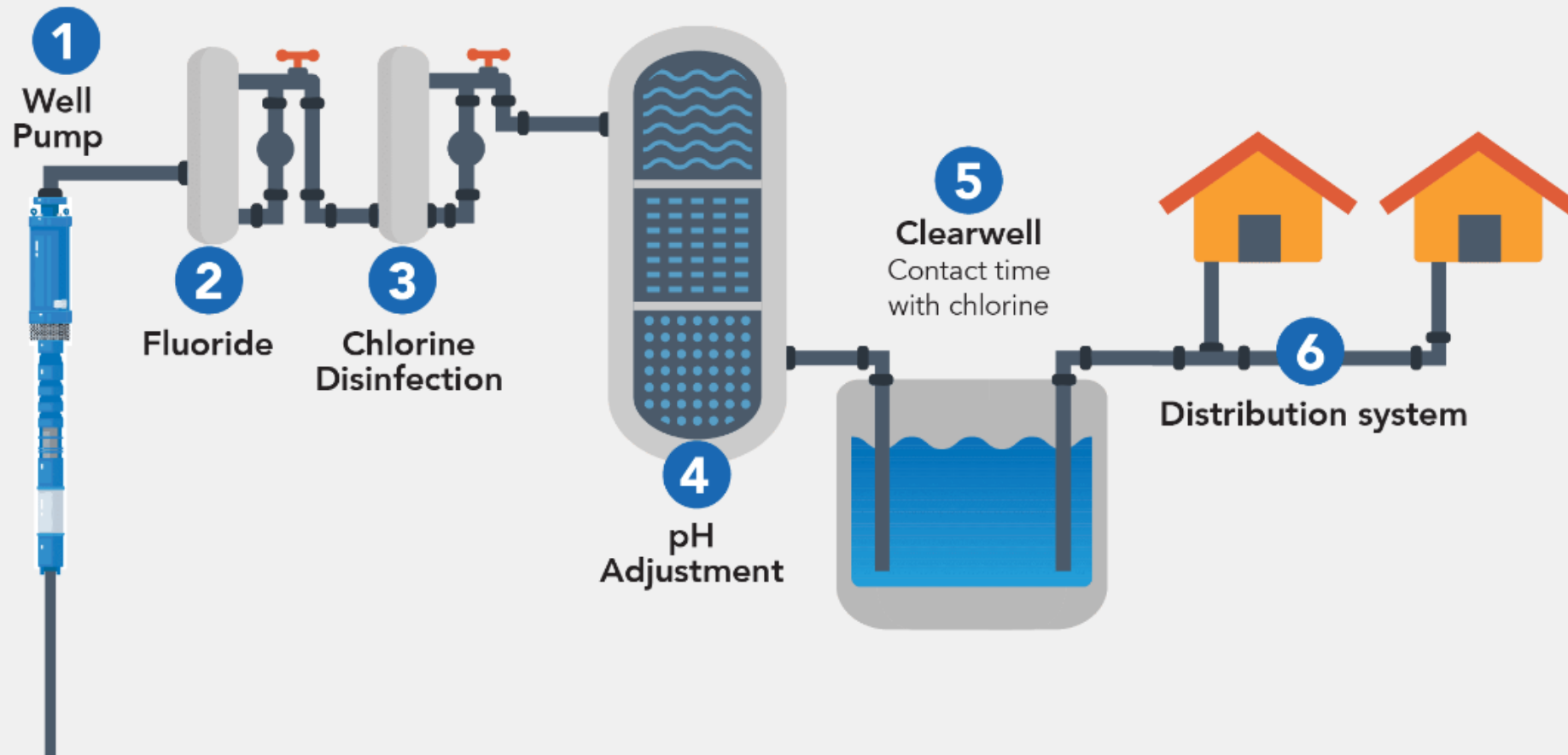
- Policy review
- Development review
- Business assistance
- Groundwater monitoring



# Monitoring Well Network



# Well System Overview





# Water Quality Sampling



1,321 regulatory drinking water samples collected in 2023



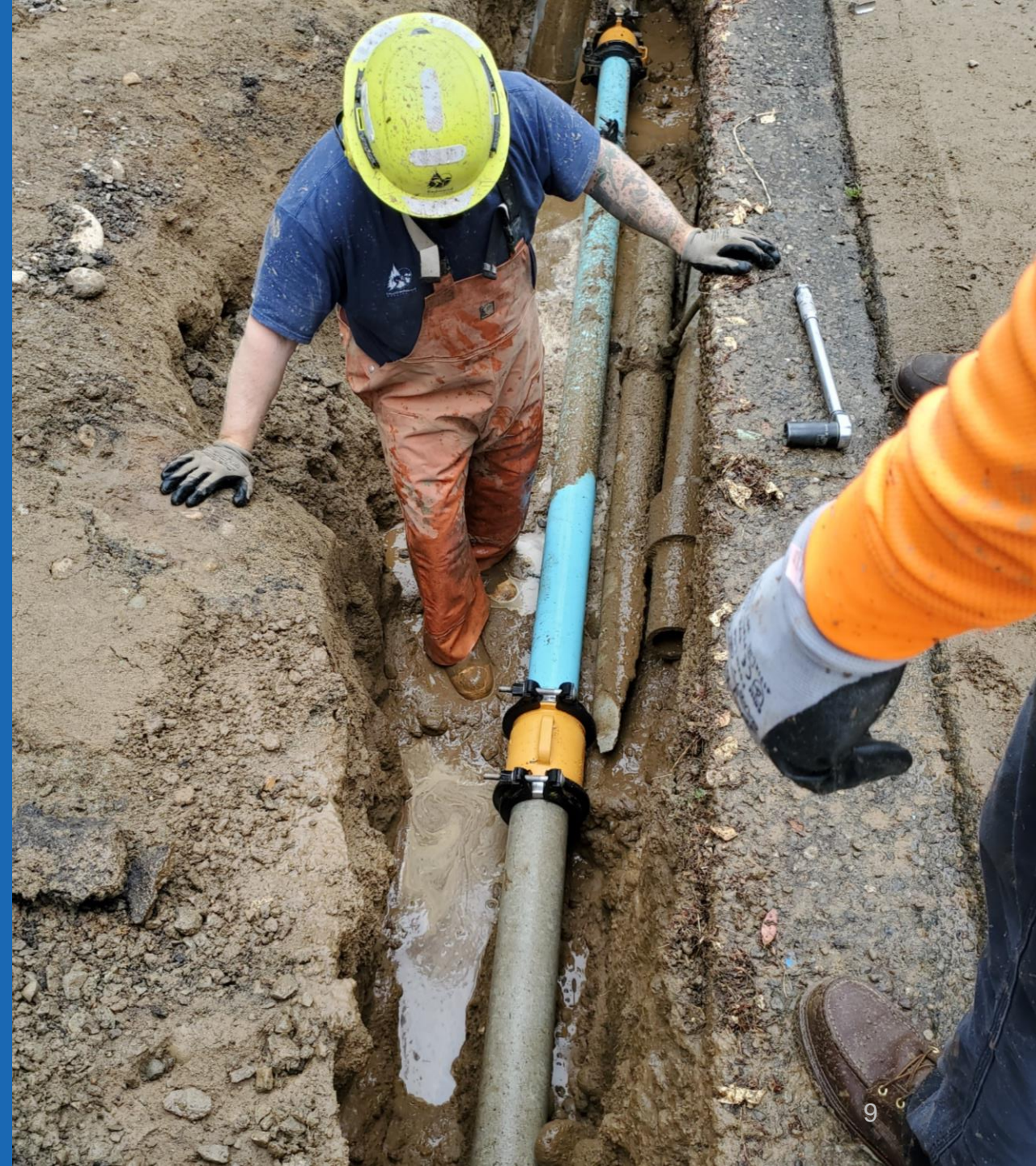
Regulatory Sampling	Frequency
Field Chlorine residual monitoring	Daily
Routine total coliform	Weekly
Fluoride split for all wells	Monthly
Disinfection Byproducts	Quarterly
Nitrate	Annually
Lead and Copper	Triennially
PFAS	Triennially
Unregulated Contaminant Monitoring Rule	Every 3-5 years
Volatile organic compounds	Every 6 years
Radionuclides	Every 6 years
Asbestos	Every 9 years
Inorganic chemicals	Every 9 years
Herbicides	Every 9 years



# Water Distribution System

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- Development Support
- Pressure Reducing Valves
- System Isolation Valves
- Main and Service Line Repairs
- Cross Connection Control Program







# Meeting Demand

## Peak Season

- Well Production 3.3 MGD
- CWA Supply 5.9 MGD



## Protecting Quantity

- Optimizing maintenance schedule
- Temporary Construction Dewatering regulations
- Tracking policy changes
- Assessing Well 4
- Advanced Metering Infrastructure Pilot



# Next Steps

- Water System Plan
- Budget offers
  - Groundwater Management
  - Safe Drinking Water
- Water Utility CIP
- TCD Regulations
- Future Well 4 Recommendations





# Thank You

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Any Questions?

