Morrow and Umatilla Counties Drinking Water Roadmap

Public Meeting
April 22, 2026

Welcome and Introductions

Tamra Mabbott
Morrow County Planning Department, Director

Joseph P. Fiumara Jr, MSEH REHS
Umatilla County Public Health, Director

Ronan Igloria, PE
GSI Water Solutions, Principal

Isaac Estrada
Consor, Communications

Presentation Agenda

- Meeting Purpose
- Project Overview
- Public Water System (City) Connection Options
- Alternatives to City Connections
- Next Steps

Meeting Purpose

To provide a progress update on the Drinking Water Roadmap

Decisions have **not** been made

Maps shown are for **illustrative purposes**

Solutions presented are **concepts**

Project Overview – Goals

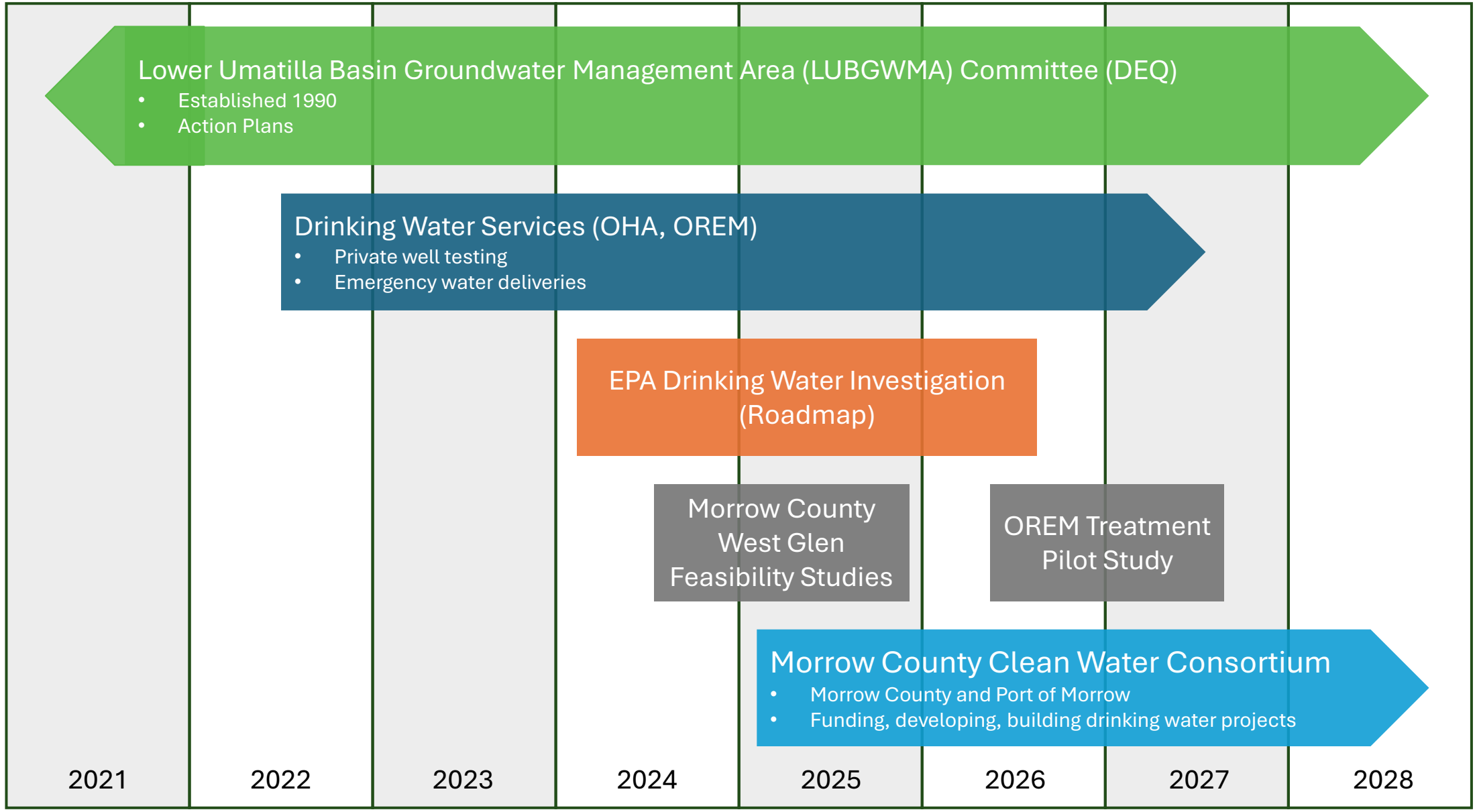
Understand the nature and extent of nitrate contamination for purposes of this project.

Engage and educate domestic well users and the community of drinking water issues related to the nitrate contamination.

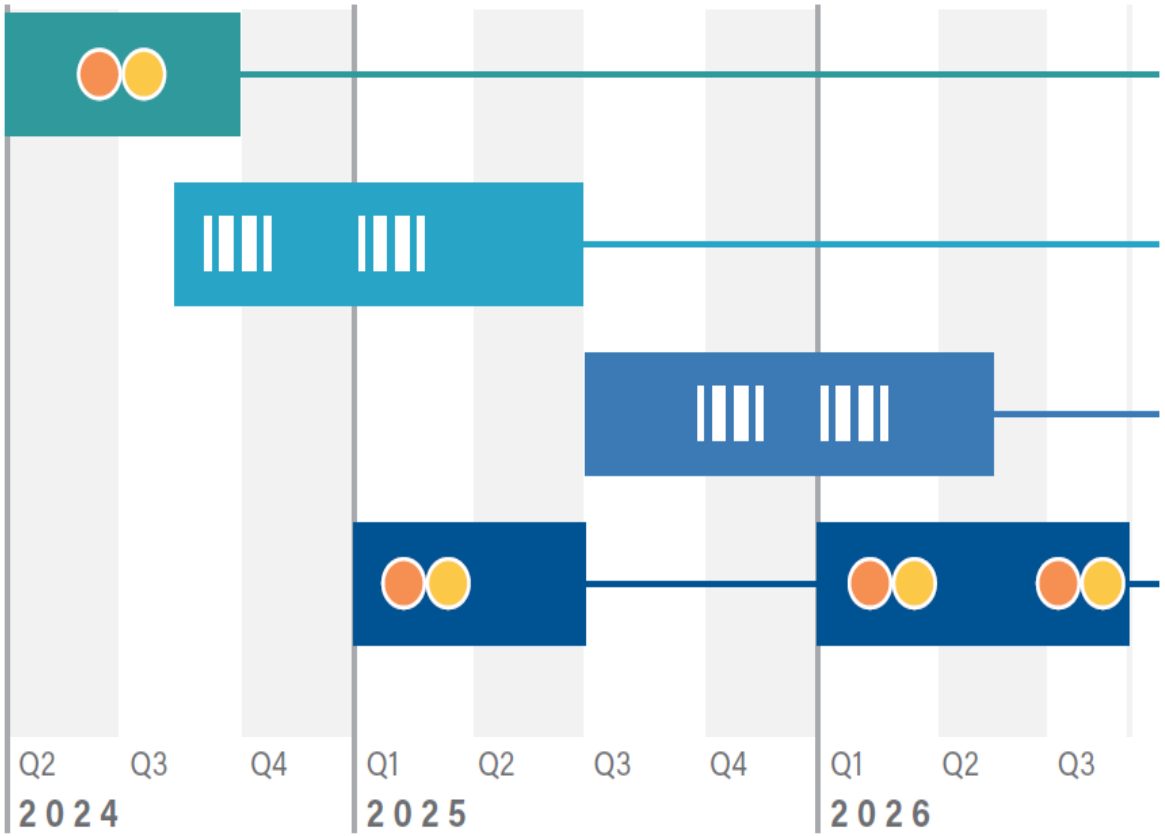
Develop an Action Plan to implement public water system connection and other alternatives.

Project Overview – Background

- Nitrate impacts to groundwater in LUBGWMA
- Drinking water-focused for domestic well users
- EPA research grant-funded
- County-led with state agency coordination


Lower Umatilla Basin Groundwater Management Area (LUBGWMA) Committee (DEQ)
• Established 1990
• Action Plans
Drinking Water Services (OHA, OREM)
• Private well testing
• Emergency water deliveries
EPA Drinking Water Investigation (Roadmap)
Morrow County West Glen Feasibility Studies
OREM Treatment Pilot Study
Morrow County Clean Water Consortium
• Morrow County and Port of Morrow
• Funding, developing, building drinking water projects
2021
2022
2023
2024
2025
2026
2027
2028

Project Phases and Timeline



Stage 1: Baseline Assessment and Prioritization
Baseline assessments, detailed workplans, alternatives analysis, QAPP and priority sampling plan

Stage 2: Feasibility of Public Water System Connection
Sampling and analysis for priority service extension areas and data gap areas; preliminary connection concepts

Stage 3: Follow-Up Sampling and Feasibility of Alt. Water Supply Options
Data gap sampling and refinements to connection concepts; preliminary concepts for alternate drinking water options

Stage 4: Development of Drinking Water Action Plan
Preliminary Drinking Water Action Plan (for connection concepts); Draft and Final DWAP (all concepts)

Major Deliverable (Workplan, QAPP, DWAP)
Formal Public/Stakeholder Project Update
Field Sampling and Data Collection Period

Exploring Public Water System (City) Connection Concepts

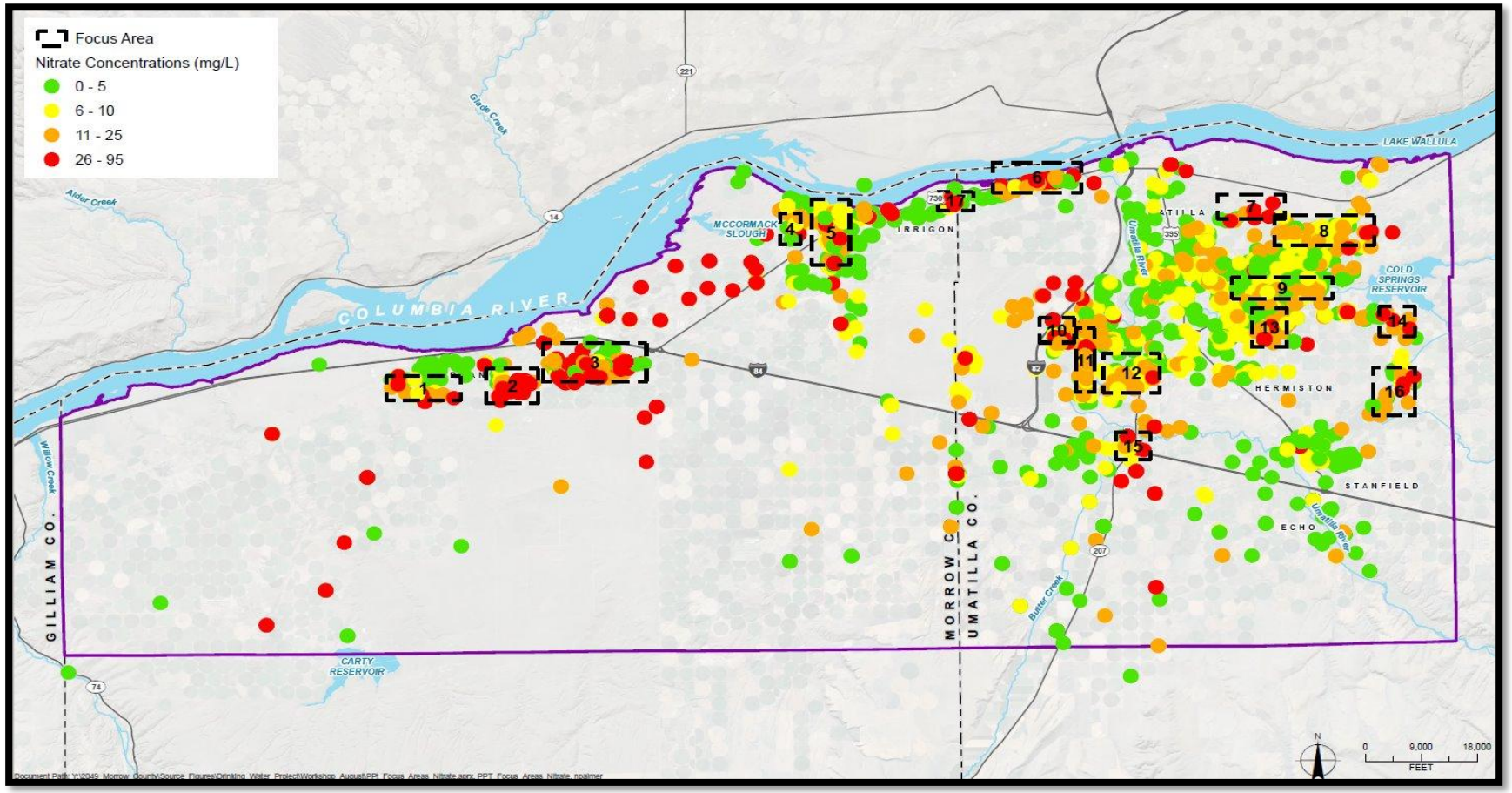
Considerations to Connect to Public (City) Water Systems

- ✓Outreach & community feedback
- ✓Challenges to develop City connections
- ✓City-specific issues
- ✓Developing feasible connection designs

Focus Areas

Represent different areas and residences (domestic well users) impacted by nitrate contamination in groundwater.

- Near city water systems
- Large/small clusters of homes further from cities
- Represent areas within each county



Sampling and Confirming Data

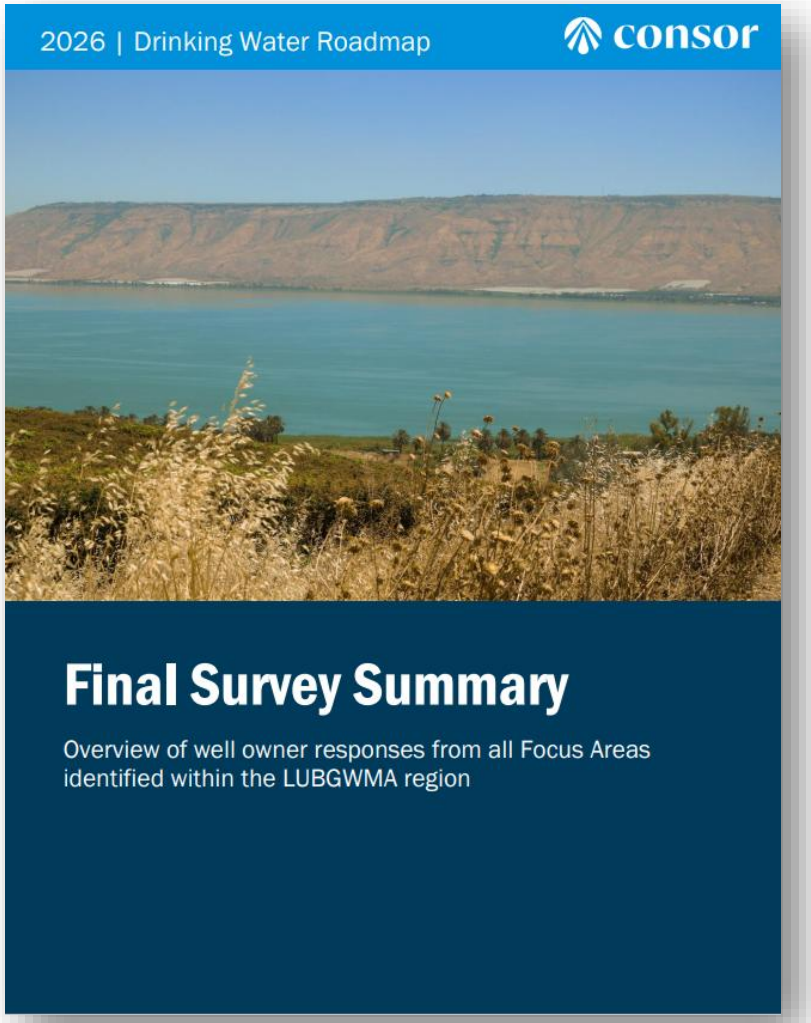
Using OHA data, the project team reviewed historical data to confirm areas of interest and conducted additional on-site sampling of targeted areas to confirm the validity and applicability of existing data for this work.

Prepared an EPA-approved data quality assurance plan

22 Samples collected from well locations

Confirmed validity and consistency of historical data for use on this project

Well Owner Survey Feedback



Full report available at drinkingwaterroadmap.org

Survey Distribution

- Active from April 2025 to March 2026
- Mailed to all Focus Areas in Spanish & English
- 151 Responses – Even distribution across both Counties

Respondent Profile

Most wells belonged to a single household **84%**

Most indicated familiarity with nitrate **91%**

County Health Dept. leads in main source for information on nitrate contamination **70%**

Well Owner Survey – Brief Insights

Leading concerns across connection and non-connection options

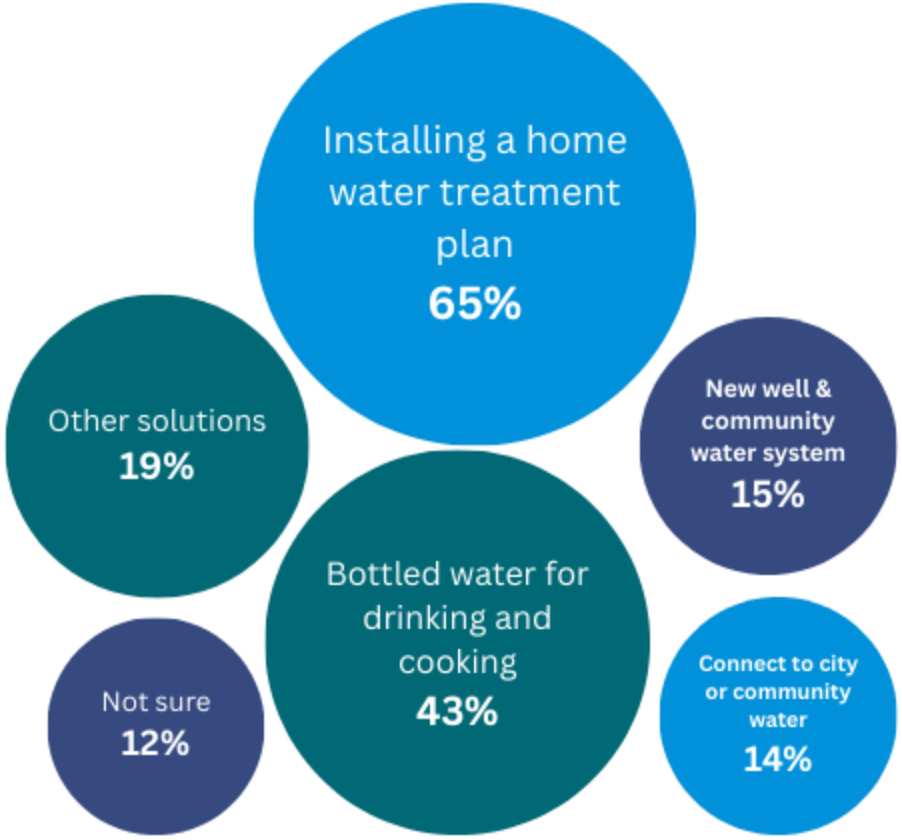
1. Cost
2. Ownership
3. Maintenance

“We would love soft sweet tasting water it would be healthier, but can it be done at a cost we can afford”

“Sharing a well is not a consideration for us”

“Do not want to rely on shared services or cost to maintain well”

Preferred solutions to addressing nitrate contamination



Well Owner Survey – Key Highlights

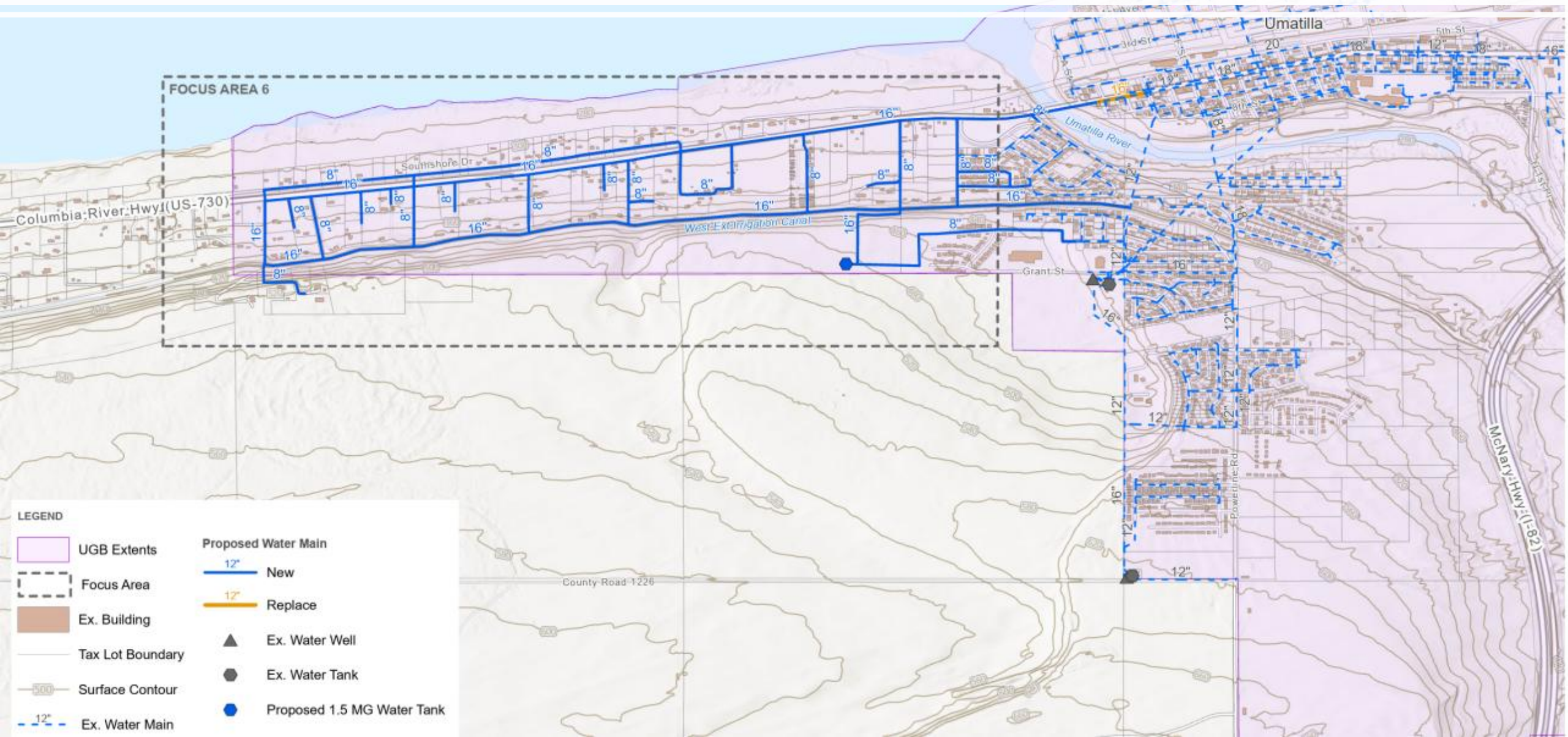
- Health Departments are the most trusted sources for information
- Cost is the leading concern across all water solutions
- Increased concerns about shared ownership of new treatment systems
- Increased interest in the potential sources of contamination
- Strong desire for independence from City systems
- Increased support for home treatment systems with many well owners wanting more information

Challenges to Develop Public Water System (City) Connections

- Financial
  - Affordability for new customers
  - Equity between existing and new customers
  - Long-term maintenance
- Governance
  - City vs. special district
- Annexation
  - Constraints on future development
- Planning and Administration
  - Road and sewer infrastructure
  - Irrigation needs/demands
  - Funding – near and long term
  - Public opinion
  - Water rights on served properties

Example Concept – Umatilla *(FA-6)*

**170 Estimated households in Focus Area*



Planning-level Cost Estimates

A preliminary planning-level cost estimate for the conceptual designs includes water mains, storage tanks, pump stations, and the residential service.

City of Boardman - $30 million (~240 households; ~1,690 acres)

City of Irrigon - $17 million (~280 households; ~700 acres)

City of Umatilla $16 million (~170 households; ~370 acres)

City of Hermiston - $32 million (~250 households; ~2,270 acres)

Potential Funding Options

A combination of funding sources can help address affordability issues

State and Federal funding programs

- Private grants
- Local Funding and Cost-Share Options
- Legislative and Special Allocations
- Partnership Opportunities

The Clean Water Consortium (formed by Port of Morrow and Morrow County) is one entity that is working toward securing funding to implement drinking water infrastructure projects (LUBGWMA in Morrow County)

Alternatives to City Connection:
Small systems and individual home options

Types of Non-(City) Connection Options

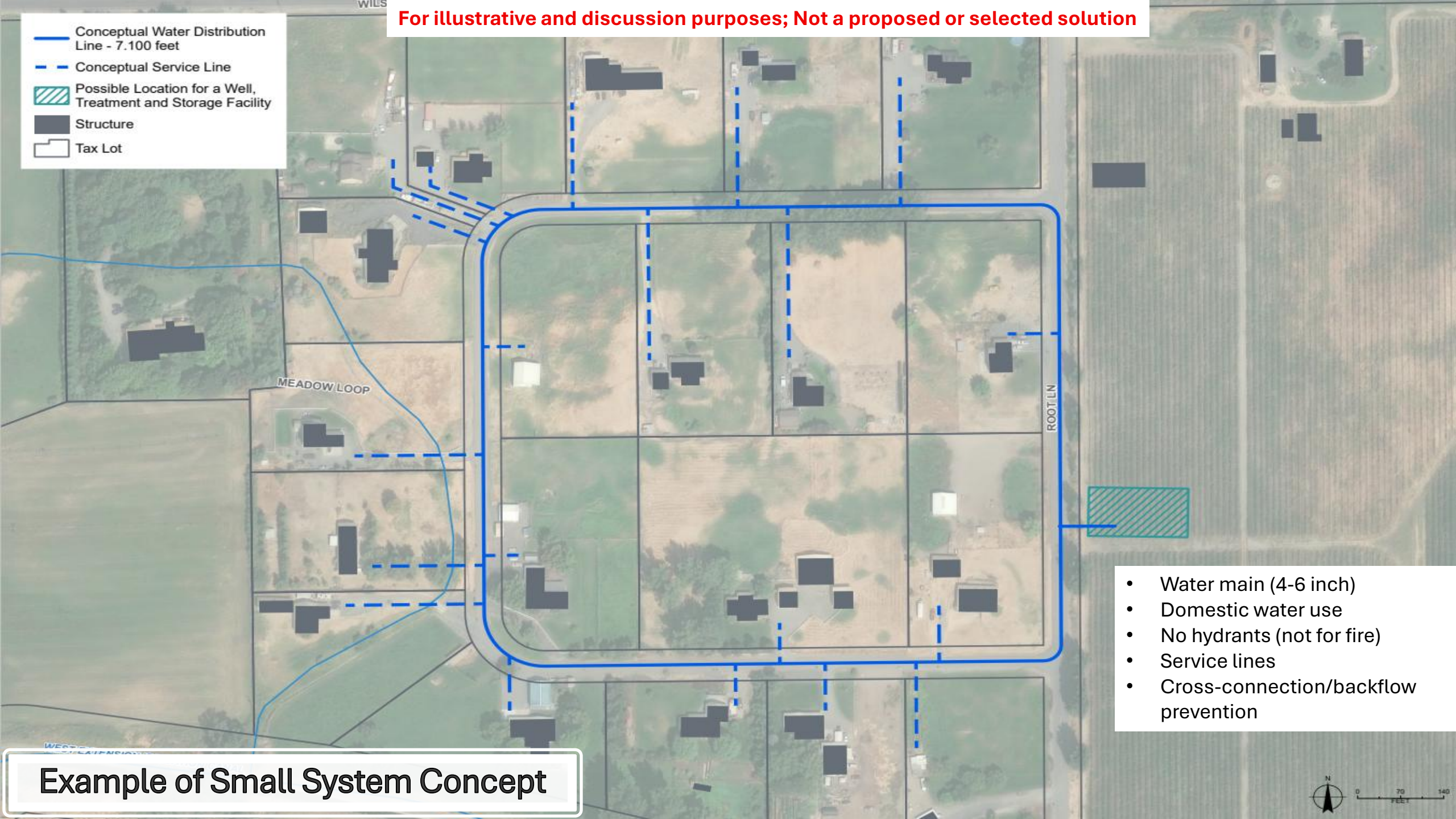
- “Small” Shared System Concepts
  - New well or well improvements assumed **with** treatment
  - Oregon Very Small System (OVS) or Community Water System (CWS)
- Non-system Concepts
  - Bulk water delivery (cistern/tanks)
  - Water harvesting (rainwater, solar)
- Aquifer recharge

Key Issues for Non-(City) Connection Options

- Operation and cost share agreement
- Domestic uses only vs. including irrigation uses
- Waste management (residuals from treatment)
- Shortage of water delivery options
- Public (homeowner) acceptance/preferences
- Affordability/cost

Key Considerations for Small System Concepts

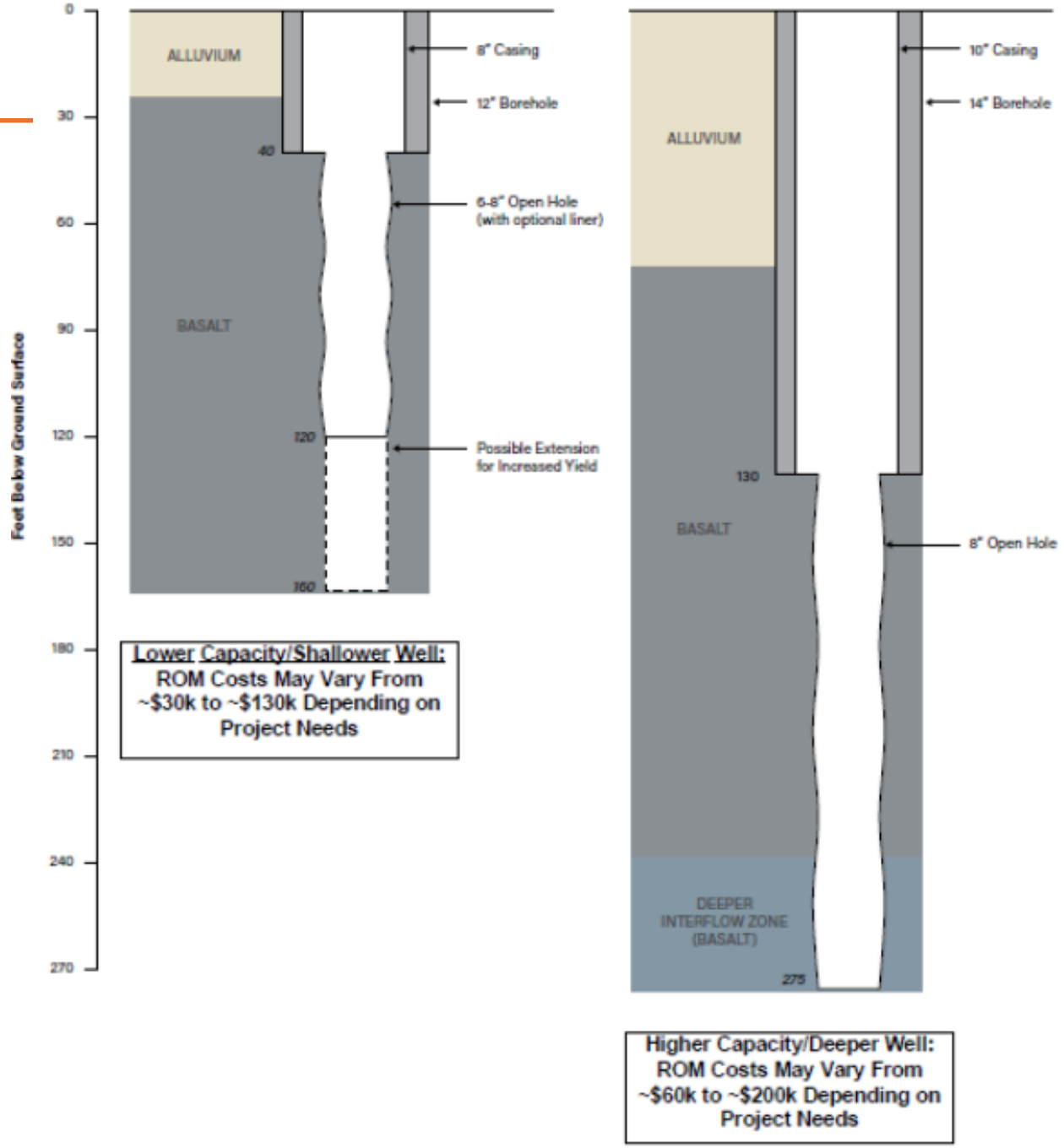
Governance	Infrastructure	Operations
Creating a water district	Location for centralized facilities	Qualified staffing (O&M)
Water rights	Storage for raw and finished water	On-site vs. off-site residual management (disposal)
Decision-making authority	Residuals handling	Consumables (chemicals, media replacement)
Fee structure and billing strategy	Site security and safety	Lab fees, administrative support
System O&M management	Installation and improvements	Power


For illustrative and discussion purposes; Not a proposed or selected solution
Conceptual Water Distribution Line - 7.100 feet
Conceptual Service Line
Possible Location for a Well, Treatment and Storage Facility
Structure
Tax Lot
MEADOW LOOP
ROOT LN
Water main (4-6 inch)
Domestic water use
No hydrants (not for fire)
Service lines
Cross-connection/backflow prevention
Example of Small System Concept

New vs. Existing wells

Key Considerations:

- Location
- Capacity needed
- Condition of well
- Control and appurtenances
- Testing
- Commissioning



Nitrate Treatment Options

Ion Exchange

- Requires media regeneration
- Disposal of concentrated waste (brine)
- Adds chloride to the finished water

Reverse Osmosis

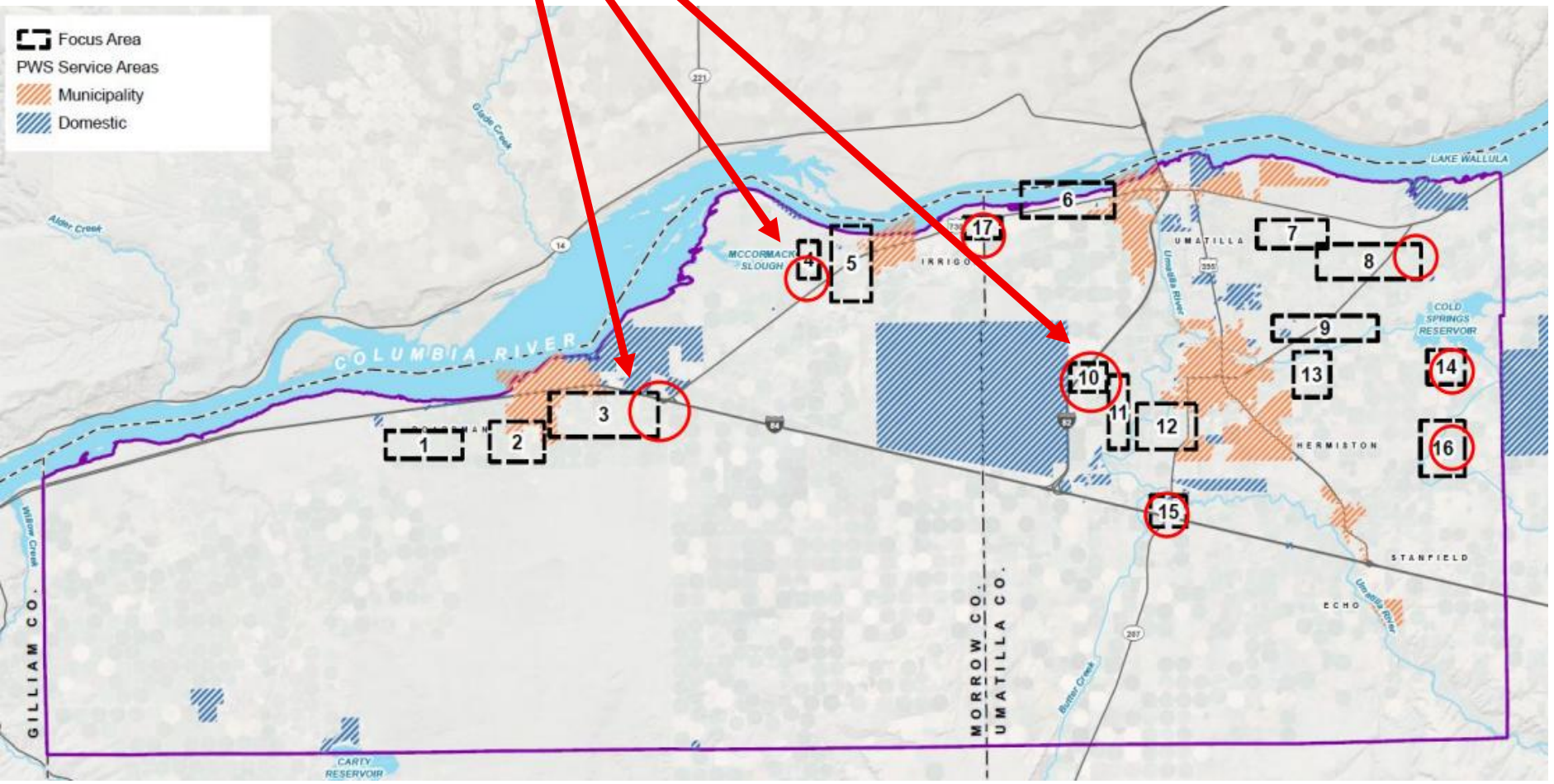
- High energy use
- Concentrated waste stream

Biological Reduction

- Low energy use
- No concentrated waste stream

Public Acceptance for Alternatives to Connection Options

Focus Areas **3, 4, 10** were selected as case studies



Results indicated in-home treatment as the preferred option **74%**

However, **50%** were open to learning more or consider a shared system depending on:

- ✓ **Cost**
- ✓ **System management**
- ✓ **Reliability**

Public Acceptance for Alternatives to Connection Options

Other challenges in the area included:

- **Vacant properties**
- **Empty lots**
- **Residents renting their home**
- **Conflicts with neighbors**

“Do shared systems offer a choice to be connected? What are the cost for these options? Would water quality and taste change?”

“Contamination or well water delivery problems effects all… there is no neighbor to turn to while a well system is down”

Water Delivery

- Source of bulk water for delivery
  - Area cities have varying policies regarding bulk water distribution.
  - Desert Springs is one provider of bottled water for the area and has capacity to provide bulk water (not interested in hauling water).

- Currently little to no capacity to haul potable water in the area.
  - Local capacity could grow depending on future demand.

Summary of Preliminary Cost Information

- **Planning Level <u>Capital</u> Costs - preliminary:**
  - City-connection concept (average): $29M (~$120,000/home)
  - West Glen/Paul Smith city-connection*: $3.5M (~$40,000/home)
  - West Glen/Paul Smith community well (with treatment)*: $6.6M (~$70,000/home)
  - General small community system (well improvements with treatment): $2.8M (~$110,000/home)

- **Potential monthly "operating" costs – preliminary**
  - City-connection concepts: ~$100-160/month (assuming grant-funded capital)
  - Small community system treatment O&M costs: ~$600/month (per home)
  - Water delivery (6000 gal/month): ~$2000-3000/month

** Per Feasibility Study prepared by Meier Engineering for Morrow County, Sept. 2025*

Overall Considerations among Options

- Initial capital costs and funding sources (to build)
- Long-term affordability (monthly cost)
- Long-term viability and sustainability to operate and maintain
- Effectiveness in addressing nitrate (water quality generally)
- Cooperation and alignment among neighbor property owners/residents
- Homeowner preferences

Next Steps: Stage 4 Milestones

Questions?

Contact Information

Counties:

Morrow County: mchealth@co.morrow.or.us or call (541) 676-5421
Umatilla County: Health@umatillacounty.gov or call (541) 278-6394

Project Team:

Ronan Igloria – rigloria@gsiws.com
Isaac Estrada – isaac.Estrada@consoreng.com

Stay Connected

Project Website: Drinkingwaterroadmap.org
E-mail Updates: Write down your email into the sign-in sheet to be included in future project updates.