

Oregon Domestic Well Safety Program

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Oregon
Health
Authority



Environmental Public Health Section
Center for Health Protection
Public Health Division
Oregon Health Authority



Cordelia Schimpf

Domestic Well Safety Program Coordinator



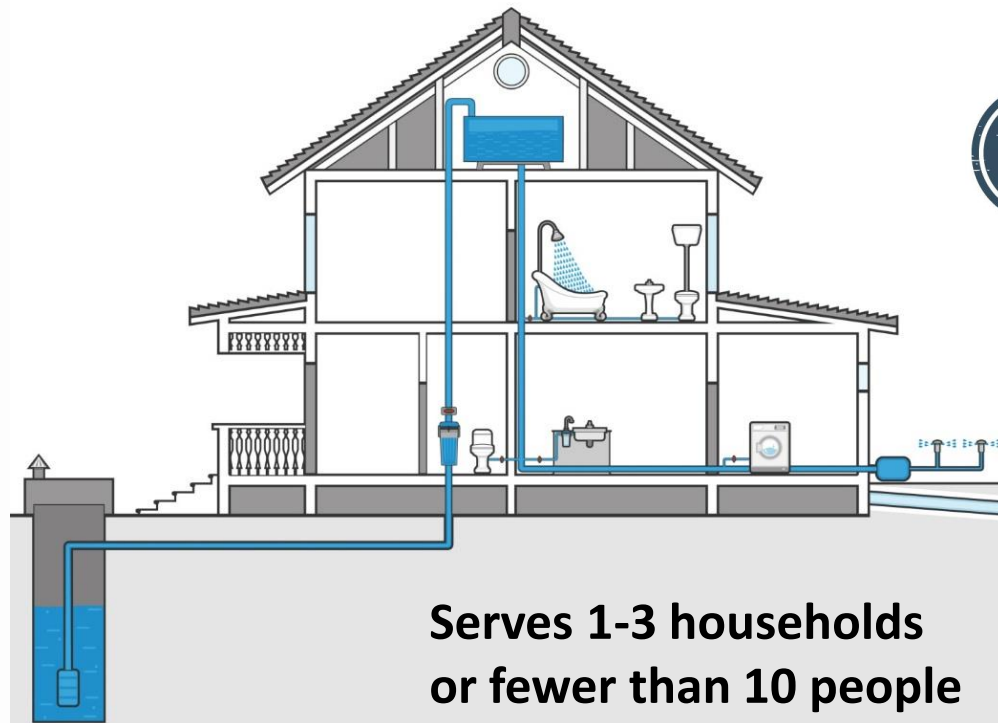
Curtis Cude

Healthy Waters Program Coordinator

- 💧 **Domestic Well Safety Program**
- 💧 Domestic Well Testing Act
- 💧 Wildfire-impacted Domestic Well Testing Project
- 💧 Lower Umatilla Basin Groundwater Management Area (LUBGWMA)
- 💧 Real Estate Transaction Data and Legislative Concept

Domestic Wells

Nearly 23% of Oregonians rely on domestic wells, or private wells, as their primary source of potable water.



**Serves 1-3 households
or fewer than 10 people**



**350,000 active wells
3,800 new wells/year**

image source: Allstate
<http://blog.allstate.com/well-water-buying-a-home/>

State Programs Providing Drinking Water Services

Water Resources Department (OWRD)

- 💧 Water rights
- 💧 Search well logs
- 💧 Well ID/tag
- 💧 Certify well construction professionals
- 💧 List of well construction professionals
- 💧 Well Abandonment, Repair and Replacement Fund (WAARF)

Salem, OR
www.oregon.gov/owrd

OHA Domestic Well Safety Program (DWSP)

- 💧 Provides information on health effects of drinking contaminated water
- 💧 Information on well treatment and maintenance
- 💧 Special testing and treatment projects

Portland, OR
www.healthoregon.org/wells

OHA Drinking Water Services (DWS)

- 💧 Enforces drinking water quality standards for public & community water systems
- 💧 Provides technical assistance to water systems
- 💧 Water system operator trainings

Portland, OR
www.healthoregon.org/dws

Dept of Environmental Quality (DEQ)

- 💧 Groundwater Protection Act
- 💧 Groundwater Management Areas
- 💧 Sample domestic well networks to monitor groundwater quality
- 💧 Well testing data from labs

Salem, OR
www.oregon.gov/deq

OHA Domestic Well Safety Program



Our Mission

Promote domestic well safety in Oregon.



Our Message

Protect health through regular testing and maintenance of domestic wells.



Our Role

Provide education and support the Domestic Well Testing Act

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Domestic Well Testing Act (ORS 448.271)

What is it?

In any **transaction for the sale or exchange of real estate that includes a well that supplies ground water for domestic purposes**, the seller of the real estate shall, upon accepting an offer to purchase that real estate, **have the well tested for arsenic, nitrate and total coliform bacteria.**

Currently the only law in place for domestic well water quality in Oregon.

Domestic Well Testing Act



Purpose

- 💧 Buyers are informed of water quality
- 💧 DWSP notifies well users of any exceedances
- 💧 Informs public health action

Domestic Well Testing

Test every year

Safe Limit

- Coliform Bacteria Absent
- Nitrates Less than 10 ppm



Test 1x or every 3 – 5 years if elevated

- Arsenic Less than 10 ppb

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2020 Oregon Wildfires



September 2020

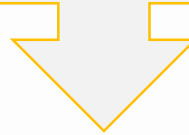
Oregon Wildfires

- 💧 Widespread evacuations, fire-related fatalities, and exposure to harmful levels of smoke
- 💧 Destroyed over 4,000 homes and damaged nearly 1,000.
- 💧 Declared a federal disaster for Oregon

2020 Oregon Wildfires

October 2020: Oregon Legislature Funds

- 💧 \$600,000 to OHA for domestic well water testing
- 💧 Estimated 2,000 households impacted by wildfires



February 2020 – June 2023: Wildfire-impacted Domestic Wells Testing Project

Eligibility criteria:

- 💧 The property was impacted by the 2020 Oregon wildfires
- 💧 The well water is used for drinking, bathing cooking and washing dishes
- 💧 The well is not part of a regulated water system

Wildfire-impacted Domestic Wells Testing Project



Testing

- ◆ Coliform and E. coli bacteria
- ◆ Nitrate
- ◆ Arsenic
- ◆ Lead
- ◆ Volatile organic compounds (VOC): benzene, toluene, ethylbenzene, and xylenes (BTEX)

Follow-up communication

- ◆ Notification of exceedances, information about the contaminants and health risks


Domestic Wells Testing Results

County	Number of Wells Tested	Number of Contaminated Wells	Number of contaminants	Contaminants of Concern				
				Total Coliform	E. coli	Arsenic	Lead	BTEX
Lane	46	17	21	15	3	3	0	0
Marion	3	1	1	0	0	1	0	0
Jackson	14	4	4	2	0	2	0	0
Clackamas	6	2	2	0	0	1	1	0
Douglas	8	2	3	2	1	0	0	0
Lincoln	7	2	2	2	0	0	0	0
Linn	24	13	16	7	0	9	0	0
Klamath	2	1	1	0	0	0	1	0
Tillamook	2	1	1	1	0	0	0	0
Yamhill	1	0	0	0	0	0	0	0
Total	113	43	51	29	4	16	2	0

- OHA enrolled 234 well users, received 113 lab results
- 43 (38%) of wells tested had one or more contaminants
- Total coliform was the most frequent contaminant

Map of Wildfire-Impacted Wells

Legend

 Fire Perimeters

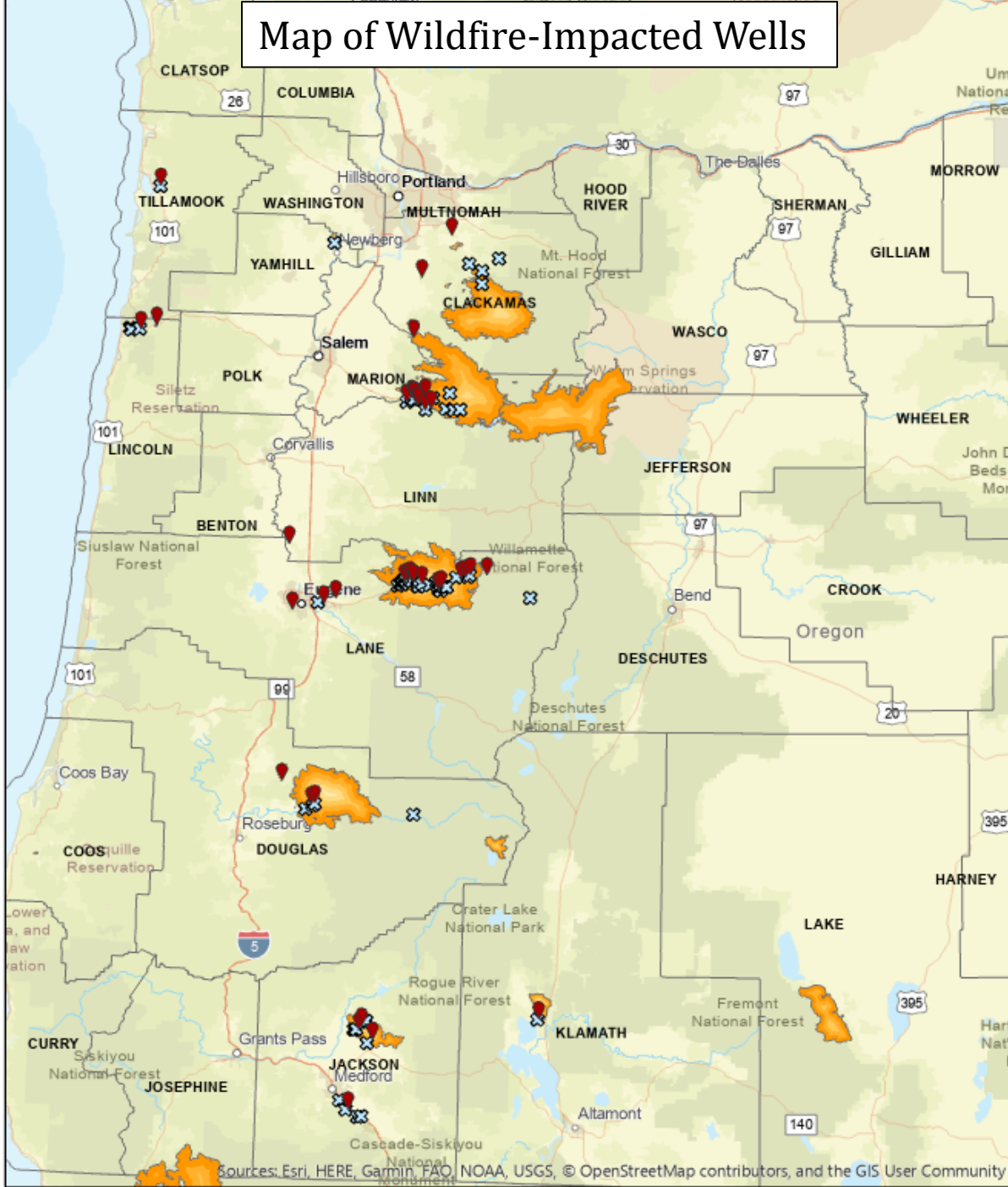
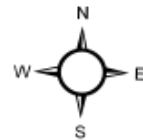
Testing Results



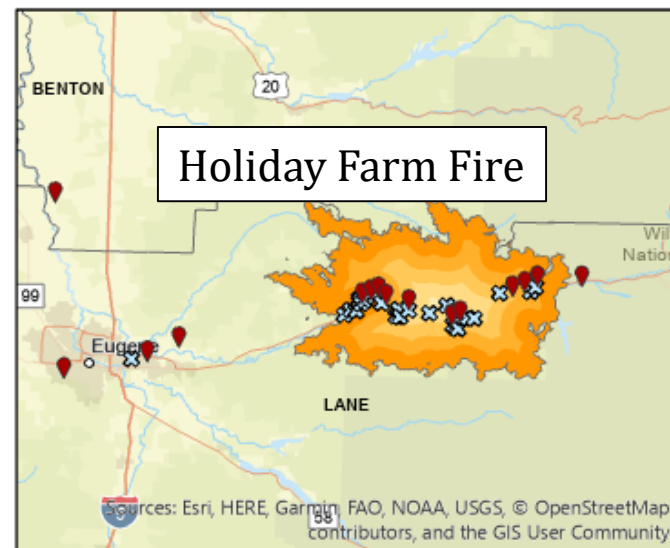
Wells with no exceedances



Contaminated Wells



Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community



Lessons Learned

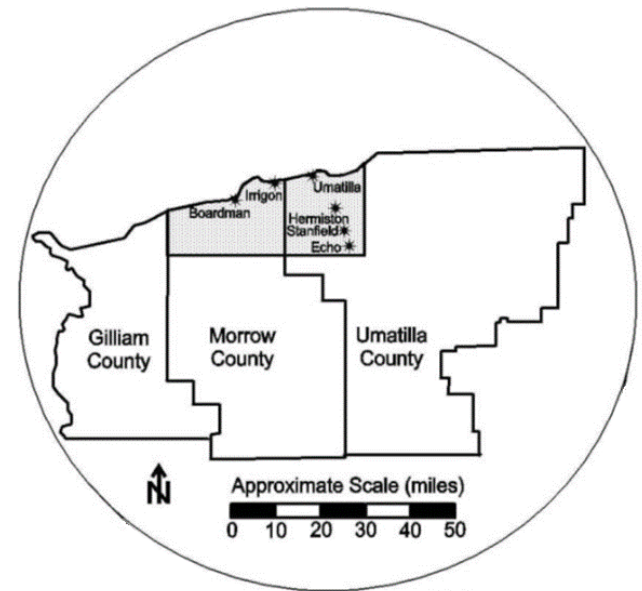


- Wildfire recovery time
- Infrastructure recovery cost
 - Testing hesitancy
 - Water Well Abandonment, Repair, and Replacement Fund: Oregon Water Resources Department (OWRD)
- No BTEX exceedances
- Integrating recovery and resilience activities for all-hazards preparedness and protections

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Lower Umatilla Basin Groundwater Management Area (LUBGWMA)

- Est. 12,000 household members served by domestic well water
- Array of potential health effects from high nitrates
- Diverse, lower income population
- OHA response is workplan to test and treat w/local partners, Emergency Board request



Lower Umatilla Basin Groundwater Management Area (LUBGWMA)

- OHA is partnering with local accredited laboratories to complete well testing in the LUBGWMA
 - Applications for free well testing vouchers opening soon
 - Testing package: nitrate, arsenic, lead, bacteria, iron, manganese, hardness



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Real Estate Transaction Data

Legislative concept

- OHA currently has a backlog of RET data since the program lost funding
- Next opportunity Legislative Session 2023





Thank you!

Questions?



Visit us at: healthoregon.org/wells

Domestic Well Safety Program

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