
Interim Report: Wildfire-Impacted Domestic Wells Testing Project

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Oregon
Health
Authority

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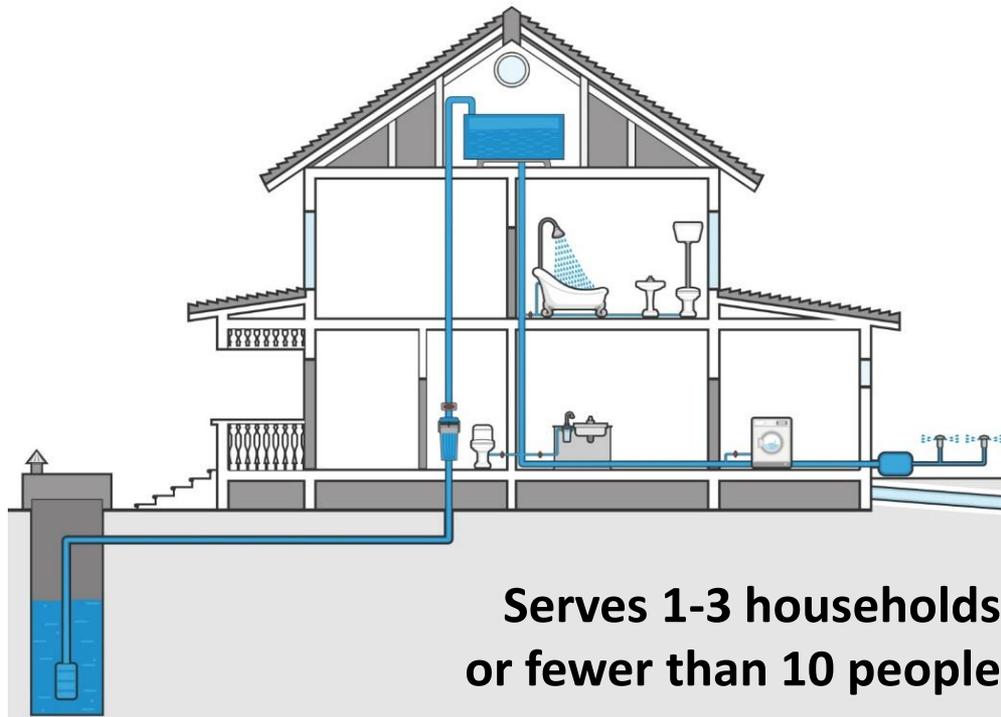
Curtis Cude

Healthy Waters Program Coordinator

- 💧 **Domestic Well Safety Program**
- 💧 Oregon 2020 Wildfires
- 💧 Wildfire-Impacted Domestic Well Testing Project
- 💧 Public Health Implications

Domestic Wells

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



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

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



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

Domestic Well Testing Act (ORS 448.271)

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 Safety Program
- 💧 **Oregon 2020 Wildfires**
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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

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Wildfire-impacted Domestic Wells Testing Project

Assessing damage to private wells

After the Fire

This tool is meant for properties that were damaged by wildfire or had a wildfire within 100 feet of the property.

Use this resource to assess damage level and identify next steps

Was the well or any of its components (including plumbing or structures burned or did the well lose pressure*?)

No

Level 1
Minimal

Yes

Does your well or distribution system contain synthetic (for example, PVC, plastic, rubber) components**?

No

Level 2
Moderate

Yes/Unsure

Level 3
Severe

Before testing, follow steps to assess damage to your well after the wildfire:

- 1) Assess
- 2) Protect
- 3) Test

Wildfire-impacted Domestic Wells Testing Project



Test for:

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

Wildfire-impacted Domestic Wells Testing Project



Follow-up communication:
💧 Notification of exceedances, information about the contaminants and health risks

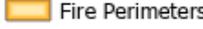
Domestic Wells Testing Results

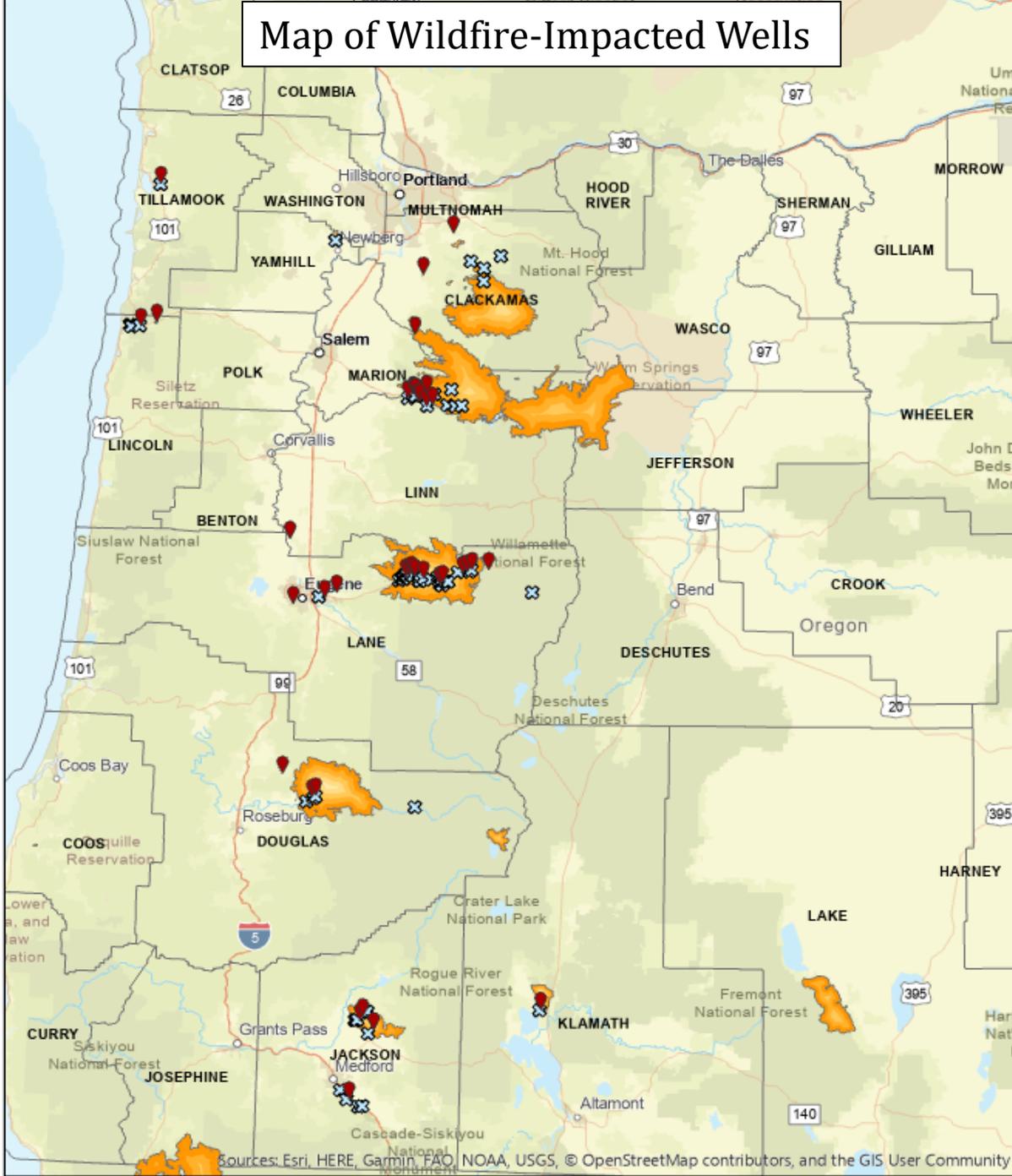
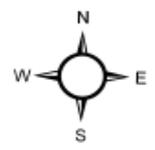
County	Number of Wells Tested	Number of Contaminated Wells	Number of contaminants	Contaminants of Concern				
				Total Coliform	E. coli	Arsenic	Lead	BTEX
Lane	46	17	21	15	3	3	0	0
Marion	3	1	1	0	0	1	0	0
Jackson	14	4	4	2	0	2	0	0
Clackamas	6	2	2	0	0	1	1	0
Douglas	8	2	3	2	1	0	0	0
Lincoln	7	2	2	2	0	0	0	0
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

- 43 (38%) of wells tested had one or more contaminants present
- Total coliform was the most frequent contaminant

Map of Wildfire-Impacted Wells

Legend

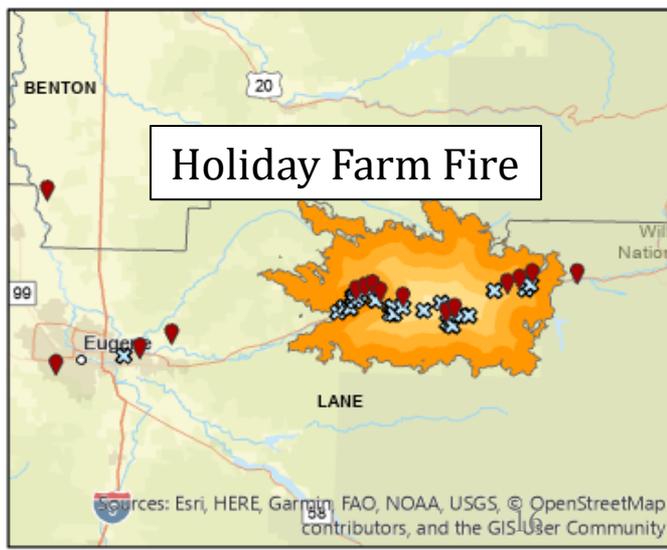
-  Fire Perimeters
- Testing Results**
-  Wells with no exceedances
-  Contaminated Wells



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



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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

Thank you!

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Kim Tham

Eric Main



Questions?



Visit us at: healthoregon.org/wells

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Domestic Well Safety Program (DWSP)

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