

Program Element # 75: Lower Umatilla Basin Groundwater Management Area Services

OHA Program Responsible for Program Element: Public Health Division/Center for Health Protection
Environmental Public Health/Domestic Well Safety

- Description.** Funds provided under this Agreement for this Program Element may only be used in accordance with, and subject to, the requirements and limitations set forth below, to deliver **Lower Umatilla Basin Groundwater Management Area Services**.

This Program Element is to support existing staff or hire one staff each to support local implementation of the Oregon Health Authority's (OHA) Public Health Workplan to reduce exposure to high levels of nitrates in domestic well drinking water found in the Lower Umatilla Basin Groundwater Management Area (LUBGWMA). Local implementation activities shall include support for well water screening events for up to 4500 wells, obtaining water samples, support actions to provide residents access to OHA-funded water treatment systems, engaging in activities to identify potential alternative water sources and providing community engagement and technical assistance.

In accordance with Oregon's Groundwater Quality Protection Act of 1989, the Oregon Department of Environmental Quality (DEQ) and Oregon Department of Agriculture (ODA) declared the LUBGWMA in 1990 due to regional nitrate-nitrogen concentrations in groundwater exceeding 7 milligrams per liter (mg/L). This area straddles the northern portions of Morrow and Umatilla counties, and encompasses the cities of Hermiston, Boardman, Irrigon, Stanfield, Echo and nearby unincorporated areas. Over the past 30 years DEQ, ODA and local governmental and nongovernmental organizations have partnered to establish a groundwater management area committee, provide regular nitrate level monitoring, develop educational materials and identify and organize data to track compliance with the voluntary community action plan designed to reduce groundwater nitrate concentrations. However, monitoring well network data show these actions have not sufficiently reduced the nitrate-nitrogen levels to the federal Safe Drinking Water standard of 10 mg/L.

The federal Safe Drinking Water Act defines high nitrate as a level exceeding 10 mg/L. Exposure to nitrate levels from 11 mg/L to 100 mg/L means the water is not safe to drink for babies or people who are or may become pregnant. High nitrate concentrations in drinking water can cause methemoglobinemia (decreased ability of the blood to carry oxygen to tissues). At these levels it is relatively safe in the short-term for healthy adults to drink for up to a year. Exposure longer than a year may pose a risk, and OHA advises people who fit this description to consult with their health care provider. Nitrate levels above 100 mg/L mean the water is not safe to drink or use to cook. It is safe for other uses, such as bathing, washing dishes, doing laundry or watering a garden. Nitrate levels at or below 10 mg/L mean the water is safe for all uses, including drinking.

OHA, together with DEQ, ODA and the Oregon Water Resources Department (WRD) have been in conversation with the US Environmental Protection Agency (EPA) about the state response to elevated nitrates in the LUBGWMA for a number of years. OHA's component of the state response is to coordinate and support implementation of a workplan, described below, focused on understanding and reducing risks to people who rely on domestic wells for drinking water. The workplan is intended to be carried out in partnership with LPHAs of Morrow and Umatilla counties, community-based organizations (CBOs) and other local partners.

The Oregon Legislature provided funding to OHA to staff the effort, provide contract support to environmental laboratories to test domestic wells, provide contract support to water treatment professionals to install and maintain point-of-use water treatment in qualified households, provide contract support to community-based organizations to support outreach and education, and provide contract support to LPHAs to deliver **Lower Umatilla Basin Groundwater Management Area**

Services. For each component of the workplan, all partners will work together to demonstrate accountability for the resources allocated for this work. As an example, OHA will require laboratory reports showing high levels of nitrates as proven need for water treatment service and supplies.

Workplan activities include:

- Conduct outreach and education. OHA, LPHA and partner CBO staff will work together to adapt existing and develop new culturally and linguistically accessible communication materials focused on households with lower income, including people of color and disproportionately at-risk communities and to conduct outreach and education campaigns with partners and community members.
- Conduct well water screening and or testing events, support sample collection and result interpretation. OHA received resources to sample domestic well water quality to inform the well user about existing water quality issues and assist water treatment professionals in providing effective water treatment. Vouchers will be made available to redeem at local environmental laboratories to test domestic well samples for nitrate, arsenic, lead, total coliform and E. coli, iron, manganese, and hardness. OHA, LPHA and partner CBO staff will partner in the following and related actions to ensure successful uptake of domestic well testing resources:
 - Hold community screening and or testing events for well owners/users to bring samples of water for onsite evaluation. Screening would indicate whether follow up testing is needed.
 - When and where necessary (for example, when transportation of samples to laboratories is a burden), coordinate community-wide follow up sample collection events.
 - Provide educational support to interpret test results and provide guidance to well users.
- Support water treatment and maintenance activities. OHA will contract with one or more local water treatment companies to install certified point-of-use treatment systems and to provide two rounds of replacement filters in households found to have nitrate levels exceeding 10 mg/L. OHA, LPHA and partner CBO staff will work together to direct well users with elevated nitrate concentrations to drinking water treatment resources provided by OHA.
- Support water delivery activities. OHA, LPHA, partner CBO staff and other partners will work together to refer well users with elevated nitrate concentrations to alternative drinking water sources and water delivery.
- Exploration of long-term solutions. OHA, LPHA and partner CBO staff may work together with other state and local agency partners and community members to identify opportunities and funding sources to implement potential long-term solutions, including drilling a new well to a safer source or connecting to existing/forming new community water systems with regulated water treatment.
- Support OHA analysis of demographic and environmental data. LPHA will coordinate with and provide available data to OHA in its preparation of a demographic analysis of affected communities and health assessment of nitrate risks.

All changes to this Program Element are effective the first day of the month noted in the Issue Date of Exhibit C of the Financial Assistance Award unless otherwise noted in Exhibit C of the Financial Assistance Award.

2. Definitions Specific to Lower Umatilla Basin Groundwater Management Area Services.

- a. **LUBGWMA:** The Lower Umatilla Basin Groundwater Management Area boundaries are defined in the north as the Columbia River, in the south as the 2N/3N Township boundary, in the east as the 29E/30E Range boundary and in the west as the 22E/23E Range boundary (also the Morrow / Gilliam County line). For more information see <https://lubgwma.org/>.

3. **Alignment with Modernization Foundational Programs and Foundational Capabilities.** The activities and services that the LPHA has agreed to deliver under this Program Element align with Foundational Programs and Foundational Capabilities and the public health accountability metrics (if applicable), as follows (see [Oregon’s Public Health Modernization Manual](http://www.oregon.gov/oha/PH/ABOUT/TASKFORCE/Documents/public_health_modernization_manual.pdf), (http://www.oregon.gov/oha/PH/ABOUT/TASKFORCE/Documents/public_health_modernization_manual.pdf):

- a. **Foundational Programs and Capabilities** (As specified in Public Health Modernization Manual)

Program Components	Foundational Program					Foundational Capabilities						
	CD Control	Prevention and health promotion	Environmental health	Population Health	Access to clinical preventive services Direct services	Leadership and organizational competencies	Health equity and cultural responsiveness	Community Partnership Development	Assessment and Epidemiology	Policy & Planning	Communications	Emergency Preparedness and Response
<i>Asterisk (*) = Primary foundational program that aligns with each component</i>					<i>X = Foundational capabilities that align with each component</i>							
<i>X = Other applicable foundational programs</i>												
Conduct outreach and education			*	X			X	X			X	
Conduct well water screening events, support sample collection and result interpretation			*	X	X		X	X			X	
Support water treatment and maintenance activities			*	X	X		X	X		X		

- b. **The work in this Program Element helps Oregon’s governmental public health system achieve the following Public Health Accountability Metric, Health Outcome Measure:** Not applicable.

The work in this Program Element helps Oregon’s governmental public health system achieve the following Public Health Accountability Metric, Local Public Health Process Measure: Not applicable.

4. Procedural and Operational Requirements. By accepting and using the Financial Assistance awarded under this Agreement and for this Program Element, LPHA agrees to conduct activities in accordance with the following requirements:

LPHA must:

- a. Submit local program budget to OHA for approval.
- b. Use funds for this Program Element in accordance with its local program budget, which has been approved by OHA. Modification to the local program budget may only be made with OHA approval.
- c. Direct staff to participate in meetings with OHA, LPHA and partner CBO staff to plan activities and discuss ongoing progress.
- d. Conduct outreach and education.
 - (1) Direct staff to work together with OHA and partner CBO staff to adapt existing and develop new culturally and linguistically accessible communication materials focused on households with lower income, including populations historically experiencing health inequities.
 - (2) Direct staff to work together with OHA and partner CBO staff to conduct outreach and education campaigns with partners and community members.
- e. Conduct well water screening and or testing events, support sample collection and provide result interpretation. Direct staff to partner in the following and related actions to ensure successful uptake of domestic well testing resources.
 - (1) Hold community screening and or testing events for well owners/users to bring samples of water for onsite evaluation to indicate whether follow up testing is needed.
 - (2) When and where necessary (for example, when transportation of samples to laboratories is a burden), coordinate community-wide follow up sample collection events.
 - (3) Provide educational support to interpret test results and provide guidance to well users.
- f. Support water treatment and maintenance activities. Direct staff to work together with OHA and partner CBO staff to refer well users with elevated nitrate concentrations to drinking water treatment resources provided by OHA.
- g. Support exploration of long-term solutions. Staff may work together with state and other local agency partners to identify opportunities and funding sources to implement potential long-term solutions, including drilling a new well to a safer source or connecting to existing/forming new community water systems with regulated water treatment.
- h. Support OHA analysis of demographic and environmental data. Direct staff to coordinate with and provide available data to OHA in its preparation of a demographic analysis of impacted communities and health assessment of nitrate risks.

5. General Revenue and Expense Reporting. LPHA must complete an “Oregon Health Authority Public Health Division Expenditure and Revenue Report” located in Exhibit C of this Agreement. These reports must be submitted to OHA each quarter on the following schedule:

Fiscal Quarter	Due Date
First: July 1 – September 30	October 30
Second: October 1 – December 31	January 30
Third: January 1 – March 31	April 30

6. Reporting Requirements.

- a. LPHA must support and contribute in an ongoing basis to safe drinking water progress and accountability reporting as requested by and or developed for policy makers or affected communities.
- b. Share any LPHA-produced materials developed and data collected specific to the LUBGWMA domestic well water to OHA. Examples of materials and data may include, but are not limited to:
 - (1) Web content,
 - (2) Formal written reports or memos,
 - (3) Letters to decision-making bodies,
 - (4) Fact sheets,
 - (5) Presentations,
 - (6) Maps depicting well data,
 - (7) Laboratory reports of well test results,
 - (8) Lists of households having received treatment systems, and
 - (9) Information about outreach activities; for example, date and location of information booths; content, timing, reach and impact of radio ads; content, reach of and engagement with social media posts; etc.

7. Performance Measures.

- a. LPHA must operate the **Lower Umatilla Basin Groundwater Management Area Services** in a manner designed to make progress toward achieving the following Public Health Accountability Metric, Local Public Health Process Measure: Not applicable.