

ANALYSIS

Item 18: Oregon Health Authority Well Water Drinking Quality

Analyst: Tom MacDonald

Request: Allocate \$881,987 General Fund from a special purpose appropriation to address well water quality issues in Morrow and Umatilla counties.

Analysis: The Oregon Health Authority (OHA) requests \$881,987 General Fund to implement a workplan addressing water quality issues for households reliant on well water in the Lower Umatilla Basin Groundwater Management Area. In 1990, the Department of Environmental Quality (DEQ) designated this region, which consists of the northern portions of Morrow and Umatilla counties, as a groundwater management area due to unsafe nitrate levels caused by human activity. State agencies, local governments, and area partners subsequently formed the Lower Umatilla Basin Groundwater Management Committee to provide regular water quality monitoring and track compliance with a voluntary community action plan to reduce nitrate concentrations.

Despite this work, groundwater monitoring data indicates nitrate levels have not been sufficiently reduced and may pose a health risk to residents whose household drinking water is contaminated. Municipal water systems can mitigate this risk by installing a treatment system or using another public water system with support from the Drinking Water State Revolving Loan Fund if necessary. OHA has delegated authority from EPA to administer the federal Safe Water Drinking Act to regulate Oregon's public water systems and ensure these systems are regularly tested to meet safety standards. OHA does not regulate domestic wells and homeowners are otherwise not required under state law to test their wells for contaminants except as part of a home sale.

In January 2020, a coalition of environmental organizations petitioned the Environmental Protection Agency (EPA), which has broad authority under federal law to protect drinking water, to take emergency action to address nitrate levels in the Lower Umatilla Basin. While EPA has not taken such action to date, it encouraged OHA, DEQ, and the Oregon Department of Agriculture to implement a workplan to protect residents from nitrate-contaminated water. OHA's role focuses on increasing residents' awareness of well water nitrate contamination and reducing the associated risk to public health through well water testing and mitigation. The agency's work will be done in partnership with Morrow and Umatilla counties, community-based organizations (CBOs), and tribes. The following are the core elements of this work, which form the agency's General Fund request:

OHA Workplan	2021-23 Cost
Water treatment systems	\$250,000
Water sample testing (up to 800 wells)	\$200,000
County staff support	\$234,817
OHA Program Analyst 2 (existing position)	\$122,170
Outreach and education - CBOs and tribes	\$75,000
Emergency Board Request	\$881,987

The \$250,000 for water treatment includes the installation of certified point-of-use filtration systems and a two-year supply of replacement filters in households found to have nitrate levels exceeding 20 parts per million. The \$200,000 for water sample testing supports vouchers homeowners can redeem to have their well water tested by environmental laboratories. OHA estimates approximately 4,500 domestic wells serving 12,000 residents are in the Lower Umatilla Basin and up to 800 will be tested in areas identified to have elevated contaminants. Funding is also included for Morrow and Umatilla counties to each fund one position for local implementation of the workplan. The OHA Program Analyst 2 represents an existing position who already serves in a domestic well safety role. This position had been funded by a federal Centers for Disease Control and Prevention grant, which ended in 2020, and was then funded with one-time funds available for testing domestic wells in areas impacted by wildfires. OHA's plan is for this position to now serve as the lead staff member assigned to the workplan.

The Legislative Fiscal Office (LFO) recommends approval of OHA's request with one-time General Fund available from a special purpose appropriation made to the Emergency Board for caseload or other budget challenges faced by OHA or the Department of Human Services. For 2023-25, OHA will request \$2.3 million in on-going General Fund as part of its Agency Request Budget to establish a Domestic Well Safety Program. LFO notes that future consideration of ongoing funds for this purpose should first account for the potential use of non-General Fund resources. In its communication on the workplan, EPA made explicit its intention for the state to hold nitrate sources accountable by requiring them to assume some of the workplan's responsibilities. At this time, no such revenue is available to support the work outlined in the agency's Emergency Board request.

Recommendation: The Legislative Fiscal Office recommends that the Emergency Board allocate \$881,987 in one-time General Fund from the special purpose appropriation made to the Emergency Board for Oregon Health Authority or Department of Human Services caseload costs or other budget challenges, to the Oregon Health Authority Public Health Division to address the health risk of excessive nitrate levels in domestic wells located in the Lower Umatilla Basin Groundwater Management Area.

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Oregon Health Authority
Heath

Request: Allocate \$881,987 from a Special Purpose Appropriation established by the 2021 Legislature for caseload costs and other budget challenges at the Oregon Health Authority in order to address water quality issues in Morrow and Umatilla counties.

Recommendation: Approve the request on a one-time basis.

Discussion: The Oregon Health Authority (OHA) requests \$881,987 to address water quality issues in the Lower Umatilla Basin, an area of northern Morrow and Umatilla counties, which includes the cities of Hermiston, Boardman, Irrigon, Stanfield and Echo, and includes testing for domestic wells and providing point-of-use water treatment systems. The Lower Umatilla Basin Groundwater Management Area has a population of approximately 45,000 people served by a variety of water systems. Groundwater in the area was found to have unsafe levels of nitrates and nitrogen beginning in 1990, which stems from agricultural sources such as irrigation, fertilizer use, livestock manure, and the operations of concentrated animal feeding operations, as well as other sources such as septic systems and the application of processed food waste to agricultural land.

Of 60 public water systems serving the Lower Umatilla Basin, 18 have been affected by high nitrate levels and seven additional water systems have levels of nitrates approaching the maximum contaminant level and may need to take action in the near future. OHA estimates there are approximately 4,500 domestic wells in the Lower Umatilla Basin serving approximately 12,000 residents of which approximately 500 wells may have high levels of nitrates. Public water systems having nitrate levels above the drinking water standard are required to mitigate the problem by either installing a treatment system, obtaining a new water source, or connecting to another public water system meeting the nitrate standard. Funding for public water systems to undertake these projects is available through the State Revolving Loan Fund but domestic wells have generally been considered the responsibility of the property owner.

The Department of Environmental Quality (DEQ), Water Resources Department and Oregon Department of Agriculture (ODA), local governments and private industry all work to reduce the concentration of nitrates and nitrogen in groundwater. DEQ issues wastewater permits for industrial food-processing facilities, which limit the amount of wastewater which can be applied to farmland. ODA regulates dairy farms and concentrated animal feeding operations as well as irrigation water. The Lower Umatilla Basin Groundwater Management Committee is one forum for state agencies, local government, and private industry to develop plans to reduce nitrate and nitrogen pollution, but efforts to date have largely relied on voluntary action. Recent monitoring suggests efforts at regulation have not been successful in making drinking water in the Lower Umatilla Basin safe. Testing found concentrations of nitrates at four times the maximum safe level in some areas. In response, Morrow County declared a local state of emergency, provided bottled water to local residents and conducted testing activities, and Umatilla County developed a plan to test domestic wells.

As a result of the ongoing problem of groundwater contamination, a group of environmental groups petitioned the United States Environment Protection Agency (EPA) in 2020 to take emergency action under the Safe Drinking Water Act in the two counties. EPA has broad authority to issue orders to ensure prompt action to protect public health with regard to safe drinking water; OHA has delegated authority from the EPA to administer the Safe Drinking

Water Act in Oregon. State authority for safe drinking water is limited to public water systems, while the EPA has authority to protect all drinking water and the authority to issue orders regarding both public and private water systems. The EPA directed Oregon to develop a plan to respond to the groundwater emergency in Morrow and Umatilla counties, which is largely outlined below. The EPA also urged Oregon to abandon voluntary practices and to ensure efforts to clean up the groundwater in the Lower Umatilla Basin are paid for by the largest polluters. OHA believes, absent an effective state response to this issue, that the EPA would issue an order requiring the state to address the contamination, and that implementing the state's plan allows the state to maintain more control over policy and implementation while responding to contamination.

In response to the EPA's direction, OHA proposes to address drinking water safety in the Lower Umatilla Basin through outreach and education, health assessment, domestic well water screening and testing, and treatment and maintenance. OHA requests \$881,987 General Fund to be used as follows:

Purpose	Amount
Water Treatment Systems	\$250,000
Contracts with counties for well water screening, community engagement and technical assistance	\$234,817
Domestic well follow-up testing	\$200,000
Outreach, education and technical assistance (Tribes and community-based organizations)	\$75,000
Domestic Well Safety Program Analyst (OHA position)	\$122,170
Total	\$881,987

With these amounts, OHA estimates it will be able to perform follow-up testing for up to 800 domestic wells and perform water screening events at up to 4,500 wells. OHA estimates it will cost approximately \$2,500 per household to purchase and install point-of-use water filtration systems, which means the \$250,000 requested for this purpose will serve approximately 100 households. OHA plans to prioritize households for this assistance based on the severity of the nitrate contamination and the need of the households.

While OHA has approximately \$1.0 million General Fund in its Emerging Event fund to respond to emergency public health issues, this funding has been largely exhausted in 2021-23 due to the need to respond to extreme heat, wildfires, COVID-19, and monkeypox. The Department of Administrative Services, Chief Financial Office recommends approving this request on a one-time basis. Funding for this proposal beyond 2021-23 needs to be reviewed alongside other requests affecting the 2023-25 biennium (OHA estimates it will cost \$2.3 million General Fund to continue this work in 2023-25). The source of funding to pay for the cleanup is also an important point in the policy discussion; the EPA has directed Oregon to ensure the largest polluters pay for efforts to mitigate groundwater contamination and address the public health hazard.

Legal References: Allocate \$881,987 from the Special Purpose Appropriation made to the Emergency Board by chapter 669, section 267 (1) to supplement the appropriation made by chapter 668, section 1 (1), Oregon Laws 2021, for the Oregon Health Authority, Health Systems, Health Policy and Analytics and Public Health, for the 2021-23 biennium.



OFFICE OF THE DIRECTOR

Kate Brown, Governor

Oregon
Health
Authority

500 Summer St. NE E-20

Salem, OR 97301

Voice: 503-947-2340

Fax: 503-947-2341

August 25, 2022

Senator Peter Courtney, Co-Chair
Representative Dan Rayfield, Co-Chair
Joint Emergency Board
900 Court Street NE
H-178 State Capitol
Salem, OR 97301

Dear Co-Chairs:

Nature of the Request

The Oregon Health Authority (OHA) Public Health Division requests \$881,987 General Fund to support the state's actions in the Lower Umatilla Basin Groundwater Management Area (LUBGWMA) to mitigate exposure risks to domestic well users from excessive levels of nitrate in domestic well drinking water.

The U.S. Environmental Protection Agency (EPA), responding to a legal petition under the Safe Drinking Water Act, expects the State of Oregon, and OHA as the agency with drinking water primacy under federal law, to mitigate exposure to nitrates in domestic well water to residents in the LUBGWMA.

OHA is requesting the \$881,987 from the \$100 million General Fund special purpose appropriation the Legislature approved in House Bill 5006 (2021 regular session; \$55 million) and increased in House Bill 5202 (2022 regular session; \$45 million) for OHA and ODHS caseload costs and other budget challenges that the agencies are unable to mitigate.

Agency Action

The federal Safe Drinking Water Act defines high nitrate in drinking water as a level exceeding 10 milligrams per liter (mg/l). Exposure to high nitrate and nitrite concentrations in drinking water can cause methemoglobinemia (i.e., decreased ability of the blood to carry oxygen to tissues), which is a serious health concern for infants and pregnant or nursing women. Related symptoms of high nitrate exposure include decreases in blood pressure, increased heart rate, headaches, abdominal cramps, vomiting and in some cases death. In 1990, the Oregon Department of Environmental Quality (DEQ) designated the LUBGWMA,

encompassing northern portions of Morrow and Umatilla counties, due to the presence of high levels of nitrates in groundwater resulting from human activities consistent with Oregon Revised Statutes 468 B.180.

OHA estimates there are approximately 4,500 domestic wells in the LUBGWMA, serving an estimated 12,000 household members. The demographics of the area tend to be, compared to the state, more ethnically diverse, with a higher representation of Hispanic and American Indian/Alaska Native populations and with a higher poverty rate.

EPA and OHA, along with the Oregon Department of Environmental Quality and the Oregon Department of Agriculture, have been communicating on this issue focusing on two lines of action. The first of these is reducing the release of nitrates to the environment to reduce and reverse contamination of groundwater in the LUBGWMA. This action is the focus of natural resource agencies. The other is taking immediate public health actions to protect people in the region who rely on domestic wells for drinking water, which is OHA's focus. This request represents a critical component of OHA's actions to protect public health and to begin implementation of a workplan in partnership with Morrow and Umatilla Counties to mitigate risks to domestic well water users in the LUBGWMA. The letter from the EPA is attached. The state's workplan is also attached.

The purpose of the funding request is to provide the General Fund budget necessary to cover actions of OHA and its local partners through June 30, 2023. The funding would be used for the immediate phase of public health work related to community outreach and education, domestic well screening, testing and interpretation, and mitigation measures (i.e., water treatment) such as point of use filtration. Here is a breakdown of how OHA would use the \$881,987 General Fund budget:

- \$75,000 – Contractual funds and special payments to be allocated to local community-based organizations and the Confederated Tribes of the Umatilla Indian Reservation to support culturally and linguistically appropriate outreach, education and technical assistance efforts.
- \$200,000 – Contractual funds for certified environmental laboratories to honor vouchers for follow up water sample testing of up to 800 wells where screening indicates elevated contaminants.
- \$250,000 – For point of use water treatment systems (installation and maintenance) for home water taps, with priority on homes with nitrate levels exceeding 20 parts per million for this initial phase of the project.

- \$122,170 – To support one Domestic Well Safety Program Analyst 2 position in Public Health. (In August 2020, the Centers for Disease Control and Development zeroed out a grant that had supported this position in OHA from 2013-2020.) This position would serve as lead staff for overall workplan implementation, including design of outreach and education actions and materials, contract and data management, technical expertise in testing, project design, management, oversight and hazard assessment.
- \$234,817 – Contractual funds to Morrow and Umatilla counties to hire one staff each (pricing equivalent to one Program Analyst 2 position for Morrow County and one Environmental Health Specialist 3 position for Umatilla County) to support local implementation of the OHA action plan, including support for well water screening events for up to 4500 wells, obtaining follow up water samples, and associated community engagement and technical assistance.

OHA will be including a policy package in its 2023-25 Agency Request Budget to support continuation of this work.

Action Requested

The Oregon Health Authority (OHA) Public Health Division requests \$881,987 General Fund to support the cost of implementing OHA's workplan to mitigate exposure to excessive levels of nitrates to domestic well users in the LUBGWMA through June 30, 2023.

Legislation Affected

Oregon Laws 2021, Chapter 668 1(1), increase General Fund \$881,987

Sincerely,



Patrick M. Allen
Director

EC: Patrick Heath, Department of Administrative Services
George Naughton, Department of Administrative Services
Tom MacDonald, Legislative Fiscal Office
Amanda Beitel, Legislative Fiscal Office