

Correction 3/6/23: In the original set of appendices, Appendix H included a draft timeline instead of the final version and did not credit the author. Appendix H has been replaced with the correct, updated version.

Advisory Report

State Leadership Must Take Action to Protect Water Security for All Oregonians: APPENDICES

January 2023
Attachment to Report 2023-04



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Appendix A: Written Statement Regarding Tribal Water Security from the Confederated Tribes of the Umatilla Indian Reservation

Background

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) understand the Oregon Audits Division is producing an advisory report reviewing aspects of Oregon's approach to water governance. Their project will consider how Oregon's water security is impacted by its approach to governance and will include profiles of communities — including CTUIR - and individuals that are water insecure or have relevant concerns about their water security. For purposes of their report, the Audits Division is using the United Nations definition of water security; Water Security: *"water security; in short, water security is having access to enough safe, clean, and affordable water for all Oregon communities to sustain human wellbeing, protect livelihoods and socio-economic development, protect against pollution, and preserve ecosystems."*

CTUIR Department of Natural Resources (DNR) staff reviewed this opportunity with the CTUIR's Tribal Water Commission, and the Audits Division's suggested outline format for submitting information, and offers this document as a written statement to help inform the advisory report. Similar to the suggested outline, our information is organized as follows:

- 1) A brief CTUIR community profile;
- 2) Key CTUIR Perspectives on water;
- 3) CTUIR Water Governance Examples;
- 4) CTUIR Priorities;
- 5) CTUIR Vision Examples; and
- 6) Summary.

We understand portions of this submittal may be used to develop a profile of CTUIR in the report, and understand that CTUIR will have an opportunity to review and inform the draft profile.

1. The Confederated Tribes of the Umatilla Indian Reservation

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) is a confederacy of three tribes, the Cayuse, Walla Walla, and Umatilla, and Tribal membership numbers 3,165 as of September, 2022. About 28% of the membership are over 55, and nearly 30% are children under the age of 18. About half of CTUIR's members live on or near the Umatilla Indian Reservation (Figure 1).

The Tribes ceded 6.4 million acres to the US Government in current NE Oregon and SE Washington, and retained reserved treaty rights within these ceded lands. Importantly these rights include the rights to fish, hunt, and gather tribal First Foods, all of which depend on secure supplies of quality water.

The Treaty of 1855 also established a reservation homeland (Figure 1). Tribal water rights include instream flows to support treaty fishing rights in the Umatilla River basin and other Ceded river Basins. The water rights also include consumptive use water to meet the purposes for which the Umatilla Indian Reservation (UIR) was created, to serve as a homeland of the CTUIR. These consumptive uses

may include domestic, commercial, municipal, and industrial uses (DCMI) as well as use for agriculture. A Umatilla Basin water rights settlement, currently in negotiation, will establish water for both of the instream and consumptive use purposes.



Figure [1]. The Umatilla Indian Reservation and aboriginal title lands. Map produced by the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). Data depicted here are preliminary. No warranty is made for this information beyond the purposed intended by CTUIR staff. The data depicted in the map is the sole proprietary information and property of the Confederated Tribes of the Umatilla Indian Reservation. None of these data, or any information derived from these data, may be transmitted to third parties without the express and explicit authorization of the CTUIR. Any products generated from the data shall not be disclosed, licensed, in whole or part, to any third party without the CTUIR's express written permission. Other than copies for backup and archival purposes, you shall make no copies of the data, or any part thereof, without the express and explicit consent of the CTUIR. All data copies made shall remain the property of the CTUIR. Any damages of interests or property of the CTUIR shall be the sole liability and responsibility of the party disclosing the information without prior authorization.

2. Key CTUIR Perspectives on Water

The following is from the introduction of the Board-of-Trustees adopted Tribal Water Code, and summarizes key Tribal perspectives on water:

"...We must share water with all living things. If we do not share, our greed will harm us. We must not look upon waqts wit (life) as the .iciyapu. We must take care of the water. Seven generations in the past we had good water. Seven generations in the future we must give back the same that was lent to us by Attila (the Creator); cold, clean water. So we think of fourteen generations of cold, clean, plentiful water. As we did seven generations back, so should we be able to do seven generations in the future, go to any stream or river and get cold clean water to drink.

"CauSnimna inaknawiyaša naaman /Wax wawnak kes" Water keeps all our bodies for us. Cališ is apart of everything. It is within natitayt, it is within tiiocim, and it is within nfishux (the salmon). It is essential for the survival of all life. Cold, clean, healthy water is the life blood of the land. We drink water to remind us of who we are. Cates" cleanses and heals our bodies, "Plix iwa eauš". "

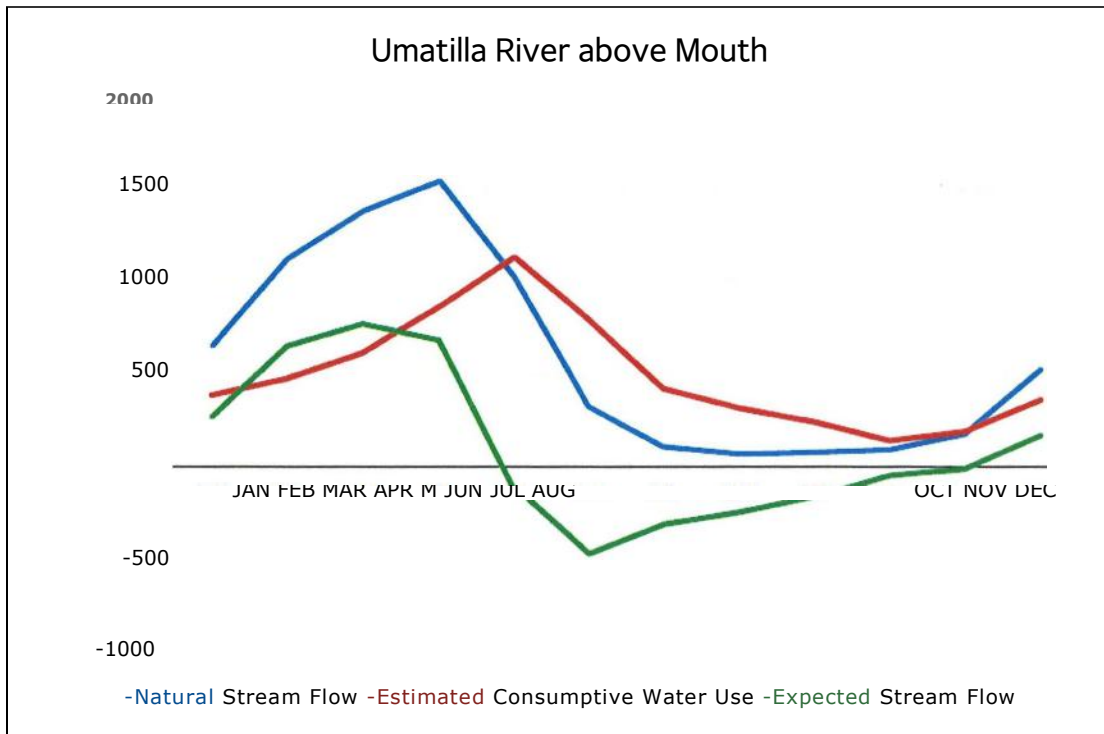
Water (Cuus), is a First Food of the CTUIR. In CTUIR creation belief and religious practice, Water and other First Foods promised to care for the Indian People, and in return, the People have a reciprocal responsibility to care for the First Foods. The serving order for First Foods is Water, Fish, Big Game, Roots, and Berries. Traditional meals begin and close with a sip of water to emphasize its importance to the other foods and the People. Therefore, water is not just a natural resource, it is a religious and cultural resource, and the emphasis on reciprocity is unique and distinct from EuroAmerican and western science water management practices.

Water is also central to cultural practices such as the sweathouse or sweat lodge. In this practice, water is part of the sweat ritual in terms of sprinkling or throwing water on heated rock within the sweathouse to generate steam and encourage the body to sweat, and then rinsing with freshwater after the steam bath. This is a practice that includes song and prayers, and again indicates at the central role water plays in Tribal religious and cultural practices. It also emphasizes the need for water to be both available and of high quality for human consumption and use and interaction in practices like the sweat.

CTUIR's water needs — including consumptive use needs for the Umatilla Indian Reservation tribal members - are currently insecure when evaluated against the "security" definition provided for this audit: *"...water security is having access to enough safe, clean, and affordable water for all Oregon communities to sustain human wellbeing, protect livelihoods and socio-economic development, protect against pollution, and preserve ecosystems."*

In the areas of CTUIR's rights and interests, water rights from streams and rivers are usually allocated over and above what the rivers produce on an annual basis (see Figure 2 below). This limits the ability of our river basins to provide quality water, habitat, and First Foods for use by the CTUIR community and for community cultural practices. Regionally, groundwater supplies — which are linked to surface waters — have been overused and their water quality sometimes degraded (e.g. nitrate contamination in the Lower Umatilla Basin groundwater). Finally, the CTUIR's Umatilla Basin water rights (including instream flow rights, and consumptive use rights from surface and groundwater), have not yet been recognized in a legal, enforceable manner to ensure those waters are present to meet the CTUIR's needs now and in the future.

Figure 2. A graph displaying the difference between estimated natural Umatilla River stream flows in cubic-feet-per-second, estimated out-of-stream consumptive uses, and projected stream flows (data source: Oregon Water



Resource Department Water Availability Reporting System).

The CTUIR currently relies wholly on groundwater to meet the consumptive needs of its membership.

Another key perspective of the CTUIR is that collaboration is required to reestablish and maintain water equity amongst Oregonians and Tribes located in Oregon. The complexity of issues, including intergovernmental relationships related to the CTUIR's Treaty of 1855, political boundaries, land-ownership patterns including tribal, non-tribal, federal, state, and municipal, the complex history of western United States water law and development, climate change, water supply, water demand, as well as other reasons, requires that CTUIR and others collaborate to resolve issues related to our mutual interests. The CTUIR has an established homeland and Ceded Basin, and will continue to reside on and in these areas, and fish, hunt, and gather, and we recognize that doing so results in a high and diverse number of relationships that require collaboration for progress.

3. Water Governance Examples

Here, we highlight some key examples to demonstrate the diversity of CTUIR's water governance experience. Our examples are organized around the following themes:

- Operations;
- Regulatory;
- Strategic planning;
- Research and studies;

Management and restoration;
Inter-governmental decision support, and
Negotiations.

This is not a complete list of our efforts, but rather one that illustrates the diversity of our work, and the temporal, geographic, and political scope of it. This list also demonstrates our organizational capacity and competence, and our ability to contribute to water governance solutions and progress.

Operations

- Umatilla Basin Project, 2000-Ongoing: Implementation of a water source exchange project where, based on summer instream flow targets, Umatilla Basin Irrigators stop diverting water from the Umatilla Basin in exchange for irrigation water from the Columbia River, thereby allowing Umatilla Instream flows for reintroduced salmon, steelhead, and lamprey. The CTUIR is part of an ongoing Umatilla Basin Project River Operations Committee that includes Umatilla Basin Irrigation districts, the Bureau of Reclamation, and the Oregon Department of Fish and Wildlife. The CTUIR also collaborates on exchange operations that are annually dependent on in-basin water availability to manage basin water supplies for instream flows and determine flow threshold points at which irrigation districts will switch to the Columbia River as an alternate water supply.
- Umatilla Indian Reservation Municipal Well and CTUIR Public Works infrastructure for the UIR community's domestic, commercial, municipal, and industrial water uses.

Regulatory

- CTUIR Umatilla Indian Reservation Water Code Adoption (1981) & Implementation (ongoing);
- CTUIR Adopts Tribal Water Quality Standards (1999);
- CTUIR Achieves Treatment-as-State Status for Tribal Water Quality Standards on UIR (2001);
- Oregon Fish Consumption Rate (FCR) Project (year); - A CTUIR-led, EPA-funded effort to collaborate with Oregon Department of Environmental Quality and Oregon stakeholders to raise the fish consumption rate, which had been 17.5 grams per day based on a national average, to a consumption rate of 175 grams/per day, so that water quality standards were more protective of fish consumers, including Tribes such as the CTUIR.
- Rules Advisory Committee Participation for OWRD and OWEB — multiple examples of participating in RACs for both OWRD, and OWEB.

Strategic Planning

- OWRD Integrated Water Resources Strategy Development 2010-12 - CTUIR staff served on policy and technical advisory committees;
- Senate Bill 839 Taskforce, 2013 — establishing a Water Supply Development Account to provide loans and grants for water resource projects that have economic, environmental, and community benefits. Before the Water Resources Department and Commission can begin developing rules and issuing grants and loans, SB 839 required the Governor, in consultation with Legislative leadership, to appoint a "Seasonally Varying Flows Task Force" that would create and submit a report to the Oregon

Legislature, Governor, and Water Resources Commission. This memo serves as the report required by SB 839 in accordance with ORS 192.245.

- House Bill 4113 Oregon Drought Task Force, 2016. Produced a "Report of the Task Force on Drought Emergency Response," which identified a number of recommendations to address drought issues in Oregon.
- Place Based Planning — Grande Ronde Basin, 2022. Basin planning effort to identify water sources, availability, needs, including consumptive and instream uses,
- Wallowa Dam Project (2018-Ongoing) - CTUIR participates, via a Memorandum of Agreement, with the Wallowa Lake Irrigation District, Nez Perce Tribe, and Oregon, to develop resources to safely reconstruct Wallowa Dam to restore storage capacity, provide instream flows to the Wallowa River and restore fish passage to Wallowa Lake, and to protect downstream municipalities.
- Walla Walla 2050 — A three sovereigns effort (OWRD, Washington Ecology, and CTUIR) to plan, develop, and sustainably manage water resources in the Walla Walla Basin, including to increase and legally protect instream flows in both states for native aquatic species;

Research & Studies

Multiple research efforts, including a NASA-funded effort (2000) to understand floodplain processes that influence stream temperatures and provide suitable habitat for native fish. Many Oregon streams are 303(d) listed for "temperature" as a pollutant, and understanding hyporheic exchange processes in floodplains, and how to restore those processes, is critical to restoring water quality in terms of temperature to meet water quality standards and for supporting native fish productivity for Tribal people's religious, cultural, and dietary purposes. Staff from CTUIR, and collaborators from academia and federal agencies, have thus far produced seven peer-reviewed science publications on topics related to hyporheic exchange. These publications help inform restoration of rivers in CTUIR's areas of rights and interests and floodplain understanding more broadly as well (regionally, nationally, and internationally).

Studies

- Groundwater Monitoring in the upper Umatilla Basin: 1979— current.
- Initiate the development of a collaborative groundwater numerical model of the Umatilla Structural Basin ([USGS Umatilla Basin Ground-Water Study](#)): 2003.
- Spring inventory and annual monitoring: 2009-present.
- Collaborative development of an upper Umatilla Basin conceptual model and groundwater budget: 2011/13, USGS Publication in 2017.
- Collaborative groundwater recharge and environmental tracer study of the upper Umatilla River Basin: 2015-2023.

River Restoration and Management

- Fish habitat enhancement in the John Day, Grande Ronde, Umatilla, and Walla Walla (bi-state) basins to improve water quality (temperature) and native fish habitat and fish productivity. These efforts are guided by the CTUIR's River Vision framework, which was designed to ensure key river restoration issues are identified and addressed consistently across CTUIR's areas of rights and interests;

- Instream flow leases/acquisitions and floodplain habitat acquisitions or conservation easements— successfully obtaining funding and using the funding to secure instream flows and floodplain and upland habitats then managing them consistently with river and upland visions; and
- Upland habitat management on the UIR and on off-reservation Tribal fee properties to improve watershed functions of water capture, storage, and release. These efforts are guided by an Upland Vision to ensure key upland issues are identified and addressed consistently across CTUIR's areas of rights and interests.

Decision Support to Oregon:

- OWRD Budgets Proposals to Oregon Legislature (annually); CTUIR provides input and supportive testimony.
- Decision support to OWEB — Project review teams to score and rank funding proposals, staff participation as OWEB Tribal Representative (years); and
- Advocacy for Oregon 100-Year Vision concept (2019-Ongoing).

Negotiations

- The Treaty of 1855, (12 Stat 945) established a CTUIR homeland and reserved pre-existing rights, including but not limited to fishing, hunting, and gathering. The subsequent 1908 Supreme Court Winter's Decision held that Tribes received a federal reserved water right to satisfy the principal purposes for which the Umatilla Indian Reservation was created with a priority date of the treaty (1855). Later, the 9th Circuit Court held instream flow rights had a time immemorial priority date to support fishing rights.
- Umatilla Basin Water Rights Settlement Negotiations (2011- Ongoing). The CTUIR is in productive, collaborative negotiations for its Umatilla Basin Water Rights with the State of Oregon (OWRD Director and staff), a Federal Negotiation Team, and multiple Umatilla Basin Water Rights Holders.

4. CTUIR Priorities

The CTUIR has the following on-going and water-related priorities. Please note this does not represent all of CTUIR's water-related work efforts:

- 1) Umatilla Basin Water Rights Settlement;
- 2) Ceded Tributary basins instream flow planning and implementation;
- 3) Columbia River Treaty Ecological Flows advocacy;
- 4) CTUIR feasibility study for wastewater treatment and reuse to conserve UIR groundwater;
- 5) Climate Change Adaptation
 - a. Instream flows enhancement and protection; and
 - b. Consumptive use waters for the community.

5. Example CTUIR Vision Statements

As requested by the Oregon Audits Division, the CTUIR offers the following examples of vision statements related to water:

- River Vision: *"The Umatilla and other basins include healthy rivers capable of providing First Foods that sustain the continuity of the Tribe's culture. This vision requires rivers that are dynamic, and shaped not only by physical and biological processes, but the interactions and interconnections between those processes."*
- Upland Vision: *"...healthy, resilient and dynamic upland ecosystems capable of providing First Foods that sustain the continuity of the Tribe's culture."*
- Umatilla Basin Water Rights: *"The CTUIR is committed to settling its water rights claims for current and future generations while providing certainty to the non-Indian communities and interests and accruing benefits across the basin, communities, and landscapes. "*

6. Summary

The CTUIR generally agrees with the provided characterization of "water security:" but we suggest Oregon consider refining the definition similar to the following:

"water security; in short, water security is the ability of all Oregon communities to access and interact with adequate, safe, clean, water to sustain human wellbeing, protect livelihoods and socio-economic development, protect against pollution, and preserve ecosystems."

But, recognize also that terms such as *"human well-being, livelihood, socio-economic, and ecosystems"* have tribal cultural contexts and perspectives that vary from other Oregon communities' perspectives. We strongly suggest our perspectives — including an emphasis on reciprocity — have and can continue to enrich and inform Oregon's water governance efforts.

The CTUIR *does not* currently enjoy water security as defined above because:

- 1) Instream flows are inadequate for quality water, native fish, and tribal member uses including cultural uses and to meet dietary needs (fish and other First Foods);
- 2) Fishing opportunities in Oregon rivers where CTUIR retains the right to harvest fish are inconsistent, infrequent, and offer low fish abundance, as opposed to providing regular, reliable harvest;
- 3) Water quality issues stemming from floodplain development and overdevelopment in CTUIR's areas of rights and interests impair hyporheic exchange and raise stream temperature, and pollutants and toxins from a variety of non-point sources (e.g. 6PPD from tire waste that causes salmon mortality) also impact water quality and threaten human health;
- 4) Climate change impacts to the hydrologic cycle are varied and resultant impacts to instream flows and native fish ecology detract from water security;
- 5) The CTUIR relies completely on groundwater for CTUIR consumptive uses on the Umatilla Indian Reservation, in a Umatilla Basin that includes four of Oregon's seven "Critical Groundwater Areas."

Oregon should continue and expand what it does well, including:

- 1) Funding floodplain and river restoration to the benefit of water quality and fisheries (e.g. OWEB programs and projects);

- 2) Increased surface and groundwater data collection to inform outreach and education to affected stakeholders;
- 3) Funding water projects with multiple benefits, including economic, social, and environmental;
- 4) Providing neutral facilitation on complex water governance and management issues;
- 5) Providing opportunities for Tribal representatives to sit on boards, commissions, committees, and taskforces related to water governance;
- 6) Continuing its outreach to Oregon tribes, as it has done in the 100-year vision community listening sessions, and the Oregon Tribal Water Task Force;
- 7) Recognizing Tribal sovereignty, and authorities and responsibilities of Treaty Tribes to manage and co-manage water in Tribal areas of rights and interests.

Oregon can further improve water governance and help increase water security for the CTUIR by:

- 1) Strategic and collaborative planning that includes early Tribal consultation to involve CTUIR in the decision processes related to water governance as part of continual efforts to ensure the diverse needs of Oregon's communities are represented in water management and policy decisions that affect water security;
- 2) Using peer-reviewed research results to inform water and water quality management and policy development;
- 3) Development and implementation of more robust and integrated funding programs for water infrastructure, including built infrastructure, (water storage, treatment, delivery, water data collection and data management systems), and natural infrastructure (e.g. watershed health, floodplain health, wetlands) and ensuring these programs are open to Oregon communities;
- 4) Increased measurement and monitoring of river flow and groundwater data to protect connected instream flows and groundwater;
- 5) Increased measurement and reporting of water quality for ground and surface waters;
- 6) Establish instream flow water rights in appropriate areas not already over-allocated so they can be regulated and protected;
- 7) Ensuring that Oregon's Columbia River water management is demonstrably considerate of and protective of Columbia River instream flows that are critical to Treaty Reserved fishing rights;
- 8) Improving coordination and integration between water management and land use decisions — particularly in floodplains — to better protect water quality and stream flow. For example, floodplain development negatively impacts rivers by simplifying aquatic habitat and increasing stream temperature, but it also may include appurtenant groundwater development that further reduces stream flows because ground and surface waters are connected;
- 9) Negotiating and establishing tribal water rights that diversifies CTUIR's water sources, and then protecting Tribal water rights from use by others when and where necessary (e.g. protection of instream flows off-reservation);
- 10) Placing and maintaining water management and policy issues in an "Environmental Justice" context to try and address the needs of Oregon's diverse communities, including Tribes; and
- 11) Reporting information on water as a public resource, including quantity and quality issues, and reporting on the use of public funds used in water development, protection, or restoration.

Appendix B: Written Statement Regarding Tribal Water Security from the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians

Department of Culture and Natural Resources
Confederated Tribes of Coos, Lower Umpqua and Siuslaw
1245 Fulton Ave
Coos Bay, Oregon 97420

Bonnie Crawford, MPA
Secretary of State
Oregon Audits Division

September 14, 2022

RE: Water Advisory Project – CTCLUSI Positions and Comments

Dear Bonnie Crawford,

Water is Life! Water is and always has been an important resource for the Confederated Tribes of Coos, Lower Umpqua, & Siuslaw Indians (CTCLUSI). The importance of water cannot be overstated. If water is managed first and foremost, everything else falls into place. Water and all other natural resources are cultural resources. They shape our culture and we them.

CTCLUSI has several water security concerns, including:

- Salt water intrusion- we have limited available fresh water on the coast (dunal aquifers fed by rain); in the event of droughts over several years, available fresh water will decrease. If industry increases, specifically on North Spit in Coos Bay (e.g. shipping container facility, and other prospective industries), salt water intrusion and ground water contamination can become a very real issue.
- Grandfather Water Rights (prior appropriations) and over allocated water permissions; We believe that the salmon people, lamprey and all other water dependent life should have first rights.
- Dredging-deepening and widening of the channel in Coos Bay will affect culturally significant species, such as shellfish, eel grass, and fin fish. Legacy contaminants will be resuspended in the water column and bioaccumulate in culturally significant species, which will ultimately affect human health if consumed. Submerged historical village sites and cultural artifacts may be damaged or destroyed during dredging activity. Widening and deepening the channel will directly kill many shellfish and also remove habitat for shellfish and nursery grounds for many fish species.
- Rain water collection. Are we going to be restricted in the future from collecting rain water because of climate change and droughts?
- Harmful Algal Blooms (HABs) and aquatic invasive species are expected to increase as temperatures increase due to climate change.

- Increased nutrient loading and sediment inputs due to fires, agriculture, and timber industry.
- Ocean Acidification and Hypoxia issues with increased levels of CO2 and higher temperatures

In the future, CTCLUSI envisions the renaming of our waterways in the local languages and the consideration of Environmental Personhood, with all the protections that it grants. We are concerned about continued unsustainable priority use designations for industry and private businesses, resulting in insufficient water to support our cultural and natural resources. We would like to see Work Force Development to help support industries and farmers adapt toward more sustainable practices that suite their particular region over the long-term.

We would like Oregon to:

- Stop overpromising water, specifically prioritizing private industry over ecosystem services and socioeconomics.
- Partner with Fish and Wildlife to adopt Traditional Ecological Knowledge (TEK) relating to the long-standing practice of the first salmon ceremony, which guarantees ample opportunities for salmon to migrate upriver and spawn without overfishing pressures brought upon by humans for at least a week.
- Address permitting and lessen the amount of water quality violations by prioritizing timely permit reviews; build capacity to ensure that permits are reviewed in a timely manner. Stop offering permit extensions without adequately reviewing permits that are knowingly in violation of impairing water quality and build capacity to enforce and hold accountable those that are in violation.
- Incentivize restoration- provide tax breaks for landowners that restore wetlands and riparian areas.
- Adopt nutrient standards.

“Water is Life”. Our culture and traditions are intimately tied to water. The waters are our highways, and our means to sustain us economically and spiritually. We hold water sacred and take rigorous measures to ensure that we are respecting water and not angering the water beings. If you take care of the Earth mother, she will take care of you.

CTCLUSI have been stewards of our lands and waters since time immemorial. The Tribe has an inherent right to access our ancestral waterways for cultural and religious purposes. With that being said, there needs to be enough water in those waterways in order for us as Tribal people to practice our culture and ceremonies and support our Tribal socioeconomics.

We have worked closely with ODEQ and EPA to develop our own Tribal Water Quality Standards, which are currently out for public comment. They will be adopted as soon as public comments are addressed and approved by the EPA. We would like to be at the table and help make decisions as it relates to water allocation and permitting within our ancestral territory. We look forward to partnering with the state and federal government and our sister Tribes in water resource stewardship.

John Schaefer
Interim Department Director

Appendix C: Written Statements Regarding Water Security from Lower Umatilla Basin Community Members

The following written statements were prepared by Morrow County community members and collected and submitted to the project team by Oregon Rural Action. Oregon Rural Action staff also translated statements that were originally prepared in Spanish. Both versions are included.

Oregon Secretary of State, Audit Division
Advisory Project: Oregon Water Governance Highlighting Water Insecurity
Interview: Oregon Rural Action and Community Members
August 10 & 15, 2022

Testimony: Alfredo Lopez
Location: Boardman, Oregon

My name is Alfredo Lopez, and it is going to be almost 29 years of me living in Morrow County now. I have been a semi truck mechanic for the past 20 years. I have had my property in Boardman for the last 18 years. I have my own well here in the house that we live in. When I purchased the house, I was required to install a filtration system so that we had access to the clean water. After we tested it recently, the nitrate level in our water came at 39.4ppm, which is almost 4 times the contaminant level. Today I share my testimony in hope that it will help me and my community to receive the necessary resources to ensure that we are a safe rural water community.

The first time I noticed there was something wrong with the water quality was when we had to clean the water heater from all the corrosion buildup from the water. My mother has had her house for about 8 years now and every 3 to 4 months I help her clean the water heater. In addition, the tubes in the house get a lot of build up. We have had to replace all the tubing in the house which was a pricey process.

About 2 years ago, I built a home on the property that I had owned for the last 18 years. I currently reside there with my family. However, before I was able to get a loan for the house I had to install a pricey filtration system that was around \$5000. It had to be effective for cleaning the nitrates out of the water. I recently tested my water and the nitrates were almost 4 times the contaminant level. I quickly learned that in order to have an effective filtration system, I have to change the filters out every 4 months. It costs me about \$280 each time I change the filters, so that totals to more than \$1120 of unnecessary expense if I only had clean water out my well.

In May, the Oregon Rural Action team came to me with information about the nitrates. I shared with them a few possible solutions including a special water district, a neighborhood well, or effective water filtering systems. Regardless of the best solution, I think it is important that all pertinent agencies come together on this issue to find the best solution for all the affected people.

I urge you to continue providing resources so that we have access to emergency water, well testing and treatment, until we become a rural community with safe water.

Sincerely,
Alfredo Lopez

Oregon Secretary of State, Audit Division
Advisory Project: Oregon Water Governance Highlighting Water Insecurity
Interview: Oregon Rural Action and Community Members
August 22, 2022

Testimony: Alejandro Rodriguez Sanchez
Location: Boardman, Oregon

Original statement in Spanish

Mi nombre es Alejandro Rodriguez Sanchez, vivo con mi esposa, dos hijas y un hijo, somos residentes de Boardman desde el 2009. Yo trabajo en la agricultura y he tenido diferentes trabajos en este ramo. He vivido en Boardman por trece años, nueve de los cuales han sido en la propiedad donde seguimos hasta ahora que está ubicada fuera de los limites de la ciudad y la cual cuenta con un pozo de agua y este no se comparte con ninguna otra familia.

Desde que compramos esta casa hace casi nueve años nos dijeron los antiguos dueños que el agua no era apta para consumo humano que se podía utilizar pero solo con un filtro de osmosis invertida el cual ya estaba instalado en la casa yo pensaba que con eso era suficiente para consumir el el agua y aunque nos hacian un análisis de la calidad de agua por parte de la compañía DEQ desconocemos los niveles de nitratos y de contaminantes que tenia el agua porque a pesar de ver los resultados no entendiamos por que estos venian escritos en Inglés.

Entonces fue hasta que mi esposa trato de investigar porque ya no nos hacen esas revisiones ella habló con una mujer de DEQ que casualmente habia llegado a tomar una prueba de agua, mi esposa le pregunto que cual era el motivo por el cual no se hacian tan seguido las pruebas de la calidad agua la mujer dijo que si, que la compañía si seguia haciendo las pruebas a

Translated to English

My name is Alejandro Rodriguez Sanchez, I live with my wife, two daughters and a son, we have been residents of Boardman since 2009. I work in agriculture and have had different jobs in this field. I have lived in Boardman for thirteen years, nine of which have been on the property we are still on which is located outside the city limits and which has a well and is not shared with any other family.

Since we bought this house almost nine years ago, the former owners told us that the water was not suitable for human consumption, that it could be used, but only with a reverse osmosis filter, which was already installed in the house. I thought that this was enough, to consume the water and although they did an analysis of the water quality by the DEQ company, we did not know the levels of nitrates and contaminants that the water had because despite seeing the results we did not understand why they were written in English.

So it was until my wife tried to investigate why they no longer do those checks for us, she spoke with a woman from DEQ who had coincidentally come to take a water test, my wife asked her what was the reason why they were not done as followed the water quality tests, the woman said yes, that the company was still testing the water quality and my wife asked for a history of the results of the tests that had been done. Over the

la calidad del agua y mi esposa le pidió un historial de los resultados de las pruebas que se le habían hecho durante los años pasados ya que no se habían recibido los resultados desde el 2014. Mi esposa le dio sus datos para que le pudiera mandar la información a través de un correo electrónico y mi esposa añadió que si esta información podría ser enviada en Español. Esta información aún no ha sido recibida. Yo tengo mucha preocupación ya que nosotros estuvimos consumiendo el agua de ese filtro por 7 años y ellos no tomaban prueba de la calidad del agua del filtro. Hace año y medio cambiamos el filtro ya que el anterior dejó de funcionar y con este nuevo filtro nos hicieron nuevas pruebas y estas salieron al límite permitido pero el agua para el resto de la casa tiene arriba de 38 el cual es alarmante porque entiendo que el máximo nivel de nitratos es de 10. Esto nos ocasiona dos problemas.

El principal problema es la salud porque tomamos agua del filtro por siete años al cual no le hicimos una prueba de calidad de agua y eso nos preocupa ya que no sabemos si habrá consecuencias posteriores que afecten nuestra salud. El segundo problema es económico ya que para obtener el agua se genera un consumo de luz y luego tenemos que comprar bultos de sal para suavizar un poco el agua. Hay un desgaste de nuestros electrodomésticos como la lavadora por ejemplo que ya fue reemplazada, las llaves de los baños y el boiler también se cambian porque hay mucha corrosión, otro gasto que impacta cada año son las tuberías del sistema de riego porque los minerales se adhieren a estas y el funcionamiento deja de trabajar de manera adecuada que por eso hay que reemplazarlas. También compramos agua embotellada porque el filtro no da un abasto de agua suficiente para las necesidades de la familia.

Nosotros utilizamos el agua para todo uso por ejemplo lavar la ropa, bañarse, en el sistema de

past years since the results had not been received since 2014.

My wife gave her information so that she could send the information via email and my wife added that if this information could be sent in Spanish. This information has not yet been received. I am very concerned since we have been consuming the water from that filter for 7 years and they did not test the quality of the water from the filter. A year and a half ago we changed the filter since the previous one stopped working and with this new filter they did new tests and these came out to the allowed limit but the water for the rest of the house is above 38 which is alarming because I understand that the maximum level of nitrates is 10. This causes us two problems. The main problem is health and the second problem is economic since to obtain the water, electricity consumption is generated and then we have to use packages of salt to soften the water a little, this causes us to wear out our appliances such as the washing machine that has

already been replaced, the faucets to the bathrooms because there is a lot of salt corrosion, the boiler was changed because there was a lot of corrosion and they had told us that it was changed in 2013. Another expense that impacts each year is the pipes of the irrigation system minerals stick to them and they stop working properly and need to be replaced. We also buy bottled water because the filter does not provide enough water for the needs of the family.

We use water for all purposes, for example washing clothes, bathing, in the irrigation system we only avoid the consumption of water in the body, that is, we do not drink it and we do not use it for cooking. They have analyzed the water and also given us the results.

I ask the competent authorities to help us solve this problem since, like those who live in the city,

riego solo evitamos el consumo de agua en el organismo o sea no la tomamos y no la utilizamos para cocinar. Sí han analizado el agua y también nos dieron los resultados. Mi familia y yo hemos firmado la petición confiando en una respuesta positiva por parte de las autoridades ya a la vez, Le pido a las autoridades competentes que nos ayuden a solucionar este problema ya que al igual que los que viven en la ciudad pagamos impuestos y merecemos el apoyo por nuestra salud y por la salud de la comunidad en general y principalmente de la salud de nuestros niños que son el futuro de nuestra sociedad y no queremos tener una sociedad enferma y decadente. De antemano gracias por el apoyo que nos puedan brindar ya que sabemos que el agua es indispensable para la vida.

Sinceramente,

Alejandro Rodriguez-Sanchez

we pay taxes and deserve support for our health and for the health of the community in general and mainly for the health of our children. that they are the future of our society and we do not want to have a sick and decadent society. Thank you in advance for the support you can give us as we know that water is essential for life.

Sincerely,

Alejandro Rodriguez-Sanchez

Oregon Secretary of State, Audit Division

Advisory Project: Oregon Water Governance Highlighting Water Insecurity

Interview: Oregon Rural Action and Community Members

August 5, 2022

Testimony: Dionicio Hernandez

Location: Boardman, Oregon

Original statement in Spanish

Mi nombre es Dionicio Hernandez, y he trabajado en agricultura en el condado de Morrow por 11 años y recientemente, en los últimos dos años, comencé a trabajar en la construcción. He estado viviendo en Boardman, Oregon durante casi 15 años. He vivido en el mismo domicilio aquí en Boardman por los últimos 10 años junto con mi esposa y mis tres hijos. Estamos compartiendo el pozo en nuestra propiedad con otras 2 familias. Hoy comparto mi testimonio, con la esperanza de que esto nos ayude a obtener los recursos necesarios para garantizar que seamos una comunidad rural de agua segura.

Translated to English

My name is Dionicio Hernandez, and I have worked in agriculture as a farmworker for 11 years and recently within the last two years, I started working in construction. I have been living in Boardman, Oregon for almost 15 years. I have been living in my current home for almost 10 years now along with my wife and three kids. We are sharing the well on our property with 2 other families. I am sharing my testimony today, with hopes that this will help us get the necessary resources to ensure that we are a safe rural water community .

Cuando nos informaron que nuestros nitratos estaban muy altos, descubrimos que nuestros resultados deberían ser menos de 10 para ser considerados seguros, y estábamos en 40, estábamos muy preocupados. Nos dijeron que no debíamos usar el agua de nuestra casa para beber o cocinar. Mi esposa, como madre, se preocupó cuando recibimos nuestros resultados porque los niños podían beber agua de la manguera cuando estaban jugando afuera. Se sintió decepcionada de que esto pudiera estar ocurriendo y no se está haciendo mucho para proteger a nuestras familias. Sabemos que en esta situación, los nitratos pueden causar enfermedades graves o uno puede enfermarse seguido y perder el trabajo, lo que genera un impacto económico además de nuestra salud.

Cuando nos mudamos a nuestra casa por primera vez en 2013, fue la primera vez que tuve que lidiar con un pozo, nunca antes había tenido uno. Al principio pregunté cuáles eran las cosas básicas que había que saber al respecto a los pozos. Todos dejaron claro que el agua no se bebe porque no está tratada y ahí fue cuando empecé a preguntarme por qué. Aproximadamente un año después, investigué cuál es la función de un pozo, y fue entonces cuando me di cuenta de lo necesario que es tener el conocimiento para saber cómo mantenerlo y qué estar revisando. Fue cuando tomé medidas para cambiar mi sistema.

En el pasado, teníamos un filtro principal que nos costaba alrededor de \$70. No funcionó como debería, creo que por sarro dejó de funcionar bien. Cambié el filtro pero al año y medio dejó de funcionar. Tuve que instalar plomería nueva en toda la casa debido al sarro y me costó alrededor de \$700, me tomó 2 días instalar todo. Ese trabajo generalmente cuesta \$3,000.

Desde abril, las cosas han sido preocupantes. Fue entonces cuando se analizó nuestra agua y descubrimos que había un problema grave en

When they informed us that our nitrates were very high, we found out that our results should be less than 10 in order to be considered safe, and we were at 40, we were very worried. We were told we shouldn't use the water in our house to drink or cook. My wife, as a mother, felt worried when we received our results because the children could drink water from the hose when they were playing outside. She felt disappointed that this could be occurring and not much is being done to protect our families. We know that in this situation, nitrates can cause serious illnesses or one can get sick often and lose work, which has an economic impact apart from our health.

When we first moved into our home back in 2013, it was the first time that I had to deal with a well, I never had one before this. At first I asked around what were the basic things to know about it. Everyone made it clear that you don't drink the water because it's not treated and that is when I started to wonder why. About a year later, I investigated what the function of a well is, and that is when I realized how necessary it is to have the knowledge to know how to maintain it and what to be checking for. It's when I took action to change my system.

In the past we had a main filter that cost us about \$70 . It didn't work as it should, I think due to rusting it stopped working well. I changed the filter but after a year and a half it stopped working. I had to install new plumbing in the whole house due to the harsh water and it cost me about \$700, it took me 2 days to put everything in. That job typically comes out to \$3,000.

Since April, things have been worrisome. That's when our water was tested and we discovered that there was a serious problem in our community. I started talking with my neighbors about why this was happening now. We discussed the possible contaminants such as

nuestra comunidad. Empecé a hablar con mis vecinos sobre por qué estaba pasando esto ahora. Discutimos los posibles contaminantes como

los pesticidas de la agricultura aquí. Comenzamos a recibir el servicio de entrega de agua, lo que realmente nos ayudó a eliminar un costo adicional para nosotros, y ya no tenemos que preocuparnos por salir a comprarla regularmente, lo cual ha sido agradable.

Recientemente también recibimos un nuevo sistema de filtración del condado, pero las cosas siguen siendo preocupantes, porque no sabemos si el filtro que recibimos del condado funcionará hasta que recibamos los resultados y veamos qué tan bien funciona. Veremos cuánto dura para mejorar la situación. Es fundamental que sigamos aprendiendo más sobre este problema y descubramos qué se debe hacer para proteger a los miembros de nuestra comunidad. Les pido de manera urgente continuar brindando recursos para que tengamos acceso a agua de emergencia, pruebas de pozos y tratamiento, hasta que nos convirtamos en una comunidad rural con agua segura.

Sinceramente,
Dionicio Hernandez

pesticides from the agriculture here. We started receiving water delivery service which has really helped eliminate an extra cost for us, and we no longer have to worry about going out to buy it regularly which has been nice.

We recently received a new filtration system from the county as well, but things are still worrisome, because we do not know if the filter we received from the county is going to work until we receive the results and see how well it works. We will see how long it lasts to improve the situation. It is critical that we continue to learn more about this issue and figure out what needs to be done to protect members in our community. I urge you to continue to provide resources so that we have access to emergency water, well testing, and treatment, until we become a safe rural water community.

Sincerely,
Dionicio Hernandez

Oregon Secretary of State, Audit Division
Advisory Project: Oregon Water Governance Highlighting Water Insecurity
Community Member Statement: Debbie Radie
August 15, 2022

My name is Debbie Radie and I have lived and worked in Morrow County for 32 years. I have been an active in the community as a resident and in my professional role, I am Vice President of Operations for Boardman Foods, Inc. As our company websites notes, we are a company located in Boardman, Oregon and committed to our family of customers, growers and employees and sustainable business practices to produce “the best onions in the country.”

I am a well owner and live in Irrigon. In June, when the County declared a water emergency, I became actively engaged in learning more about well safety. I was concerned as were my friends who also have wells on their property. We were concerned and uncertain about where to go to get reliable

information in a format that was bilingual and easy to understand. With so many issues related to well ownership it seems obvious to me that state agencies should provide more educational information. I believe this is an important issue that the State can provide. We need clear communication to well owners about well safety and the resources available to them when there is a concern.

If this is a matter of state agency budgets, I would hope that funding for these important services to Oregonians would be considered at the next appropriate meeting of the Emergency Board or legislative session.

I remember years ago that our very good friends and community members, Ray and Carol Michaels, provided information on well safety. She was with OSU Extension and offered information at the county fair and other public events. Is this something that could be used as a model for widespread community outreach and considered for current funding?

As a well owner I recognize that I have personal responsibility for my family's health and safety. But I do not have access to the best scientific information I need. I so believe in education. Education needs to be widely available to people in our communities. As a community and business leader, I am going to work with others to put together a packet of information and distribute it in the community and I hope we can receive assistance from public health agencies to effectively get the word out.

Sincerely,
Debbie Radie

Oregon Secretary of State, Audit Division
Advisory Project: Oregon Water Governance Highlighting Water Insecurity
Interview: Oregon Rural Action and Community Members
July 7, 2022

Testimony: Flora Calvillo
Location: Boardman, Oregon

Original statement in Spanish

Mi nombre es Flora Calvillo soy de Boardman Oregon, y tengo desde el 1984 viviendo en esta área. Yo trabajo en las plantas del proceso, pero antes trabajé en el campo desde que llegué a este país. Soy madre de tres hijos y una hija. El más chico tiene 24 años. Hoy comparto mi testimonio con la esperanza de que haya un cambio para el bien de nuestra comunidad.

Como muchas personas más en esta comunidad, no sabemos qué nos tomamos. Ahora que vinieron a mi casa para hacerme la prueba del agua, mis resultados regresaron un poco más altos de lo que debería ser, 11.7. Me explicaron

Translated to English

My name is Flora Calvillo, I am from Boardman Oregon, and I have been living in this area since 1984. I work in the local processing plants, but before that I worked in the fields since I arrived in this country. I am the mother of three sons and one daughter. The youngest is 24 years old. Today I share my testimony with the hope that there will be a change for the good of our community.

Like many other people in this community, we don't know what we are drinking. Recently, my well water was tested and I discovered that my results came back a little higher than it should

que los nitratos pueden causar daño en el organismo, y pues esto me preocupa porque, ahora no se si debido a esto, me he enfermado antepasado. De hecho, el agua lo usamos para todo, es esencial para cada hogar. Lo utilizamos para bañar, para los trastes y la ropa. Para la comida estoy comprando unos galones para cocinar cada semana. Esto viene siendo un costo extra para nuestro hogar.

No es justo que no se esté regulando el agua de nuestros hogares rurales porque la ciudad debe saber cómo están los residentes de la área. Deberían saber cómo está su agua, como sale el agua para el que vive aquí, y ofrecernos esa educación sobre este tema, para estar más informados y poder protegernos mejor.

Teniendo unos filtros para tratamiento y la capacitación para estarlos manteniendo como se debe, nos ayudará, y luego también como si uno ya tiene más de edad, más de años y no puede arrimar su agua. Es por esto que les pido de manera urgente continuar brindando recursos para que tengamos acceso a agua de emergencia, pruebas de pozos y tratamiento, hasta que nos convirtamos en una comunidad rural con agua segura.

Sinceramente,
Flora Calvillo

be, 11.7. They explained to me that nitrates can cause harm to the body, and well, this worries me because, now I don't know if it is because of these nitrates that I have been sick in the past. We use water for everything, it is essential for every home. We use it to bathe, for dishes and to wash our clothes. For cooking I am buying a few gallons per week. This is an extra cost for our home.

It is not fair that the water in our rural homes is not being regulated because the city should know how the residents of the area are doing. They should know how our water is, how the water comes out for those who live here, and offer us the necessary education on this subject, so that we may be more informed and to be able to protect ourselves better.

Having some filters for treatment and the training to maintain them properly will help us. This is also a great help for those that are elderly and struggle to go bring water home regularly. This is why I urgently ask you to continue providing resources so that we have access to emergency water, well testing and treatment, until we become a rural community with safe water.

Sincerely,
Flora Calvillo

Oregon Secretary of State, Audit Division
Advisory Project: Oregon Water Governance Highlighting Water Insecurity
Interview: Oregon Rural Action and Community Members
August 10 & 15, 2022

Testimony: Froilan Rodriguez
Location: Boardman, Oregon

Original statement in Spanish

Mi nombre es Froilan Rodriguez, y he trabajado en agricultura en el condado de Morrow desde el año 1993. Ahora soy dueño de mi propio negocio manejando mi ganado. Actualmente somos 5 en

Translated to English

My name is Froilan Rodriguez, and I have worked in agriculture in Morrow County since 1993. I now own a small business handling my cattle. I have lived in Boardman for 16 years with my wife, and

mi hogar, tengo 3 hijas y mi esposa, ya llevamos 16 años viviendo en Boardman y precisamente en este domicilio. No estamos compartiendo el pozo, yo lo mande hacer y mide 128 pies de profundidad. Afortunadamente, nosotros somos unas de las familias en esta área que no tuvo resultados altos de los nitratos, fue un 3.85. Parece que hasta el momento, nuestro filtro funciona bien. Hoy comparto mi testimonio, con la esperanza de que esto nos ayude a obtener los recursos necesarios para garantizar que seamos una comunidad rural con agua segura.

Hace más o menos 7 años cuando puse el filtro en nuestra casa. Nosotros tenemos un sistema de filtración para toda la casa. Yo decidí poner un sistema de filtración por mi señora, y miraba que estaba sucia el agua y hasta iba a lavar a la lavandería porque la lavadora que teníamos en la casa no limpiaba bien debido al agua. El filtro que tenemos me salió en \$6500 en efectivo había opción de comprarlo en pagos, pero salía más caro en \$8000. Nos habían dicho que con este filtro, si se podía tomar el agua, y por los primeros dos años, si la consumimos, pero luego nosotros miramos que no estaba buena y no entendíamos porque. Cuando recién pusimos el filtro, la compañía donde lo compramos, pasaba regularmente cada 4-6 meses, ellos se comunicaban con nosotros para venir a cambiar el filtro. Eran más o menos \$250 cada vez que venían a dar el servicio, pero recientemente no han venido en más de un año.

En Junio, uno de los vecinos vino a invitarme a una junta comunitaria sobre esta situación. Ahí fue donde supimos que teníamos que mandar hacer la prueba al agua. Estábamos asustados porque no sabíamos ni de que se trataba, empezamos a oír de los efectos que podía tener en la salud, y pues uno se preocupa por los niños porque a veces se les ocurre tomar agua de la manguera, o de la llave por no ir agarrar del galón. No sabemos a qué grado puede afectar a

3 daughters. We do not share a well with neighbors, I had it built and it's 128 feet deep. Fortunately, we are one of the families in this area that did not have high nitrate results, 3.85. It seems that so far, our filter works fine. Today I share my testimony, hoping that this will help us obtain the necessary resources to ensure that we are a safe rural water community.

About 7 years ago I installed a filtration system for our house. We have a whole house filtration system. I decided to install a filtration system because my wife insisted the water wasn't clean. She even went to the laundromat because the washing machine that we had at home did not clean well due to the water. The filter we have cost me \$6,500 in cash. There was an option to buy it in payments, but it was more expensive for a total of \$8,000. They had told us that with this filter, we could drink the water, and for the first two years, we consumed it. Then we realized that it was not good but we did not necessarily understand why. Back when we had first installed the filter, the company where we bought it came by regularly, every 4-6 months, they contacted us to come and change the filter. It was about \$250 each time they came to service it, but recently they haven't come in over a year.

In June, one of the neighbors came to invite me to a community meeting about this situation. That's where we knew we had to have the water tested. We were scared because we didn't even know what it was about, we began to hear about the effects it could have on our health. We worried about the children because sometimes they happen to drink water from the hose, or from the tap because they don't want to go to the gallon. What is most concerning is that we do not know to what degree it can affect our health. I felt good when I received the results, honestly I expected worse with what I had heard from some neighbors.

la salud. Me senti bien cuando recibí los resultados, honestamente yo esperaba algo peor con lo que había escuchado de algunos vecinos.

Al final del día nosotros estamos en lo oscuro, si no fuera por ese vecino que andaba de puerta a puerta informando de la junta, tal vez no supiéramos lo que estaba pasando. No se escucha nada en los medios de comunicación en español. Solamente sabemos que no se debe tomar el agua pero no entendemos el porqué. Deberíamos tener acceso a esta información por nuestro bien estar, para proteger a nuestras familias, y para evitar problemas más graves en el futuro.

Les pido de manera urgente continuar brindando recursos para que tengamos acceso a agua de emergencia, pruebas de pozos y tratamiento, hasta que nos convirtamos en una comunidad rural con agua segura.

Sinceramente,
Froilan Rodriguez

At the end of the day we are in the dark, if it were not for that neighbor who went from door to door informing about the meeting, we might not know what was happening. Nothing is heard in the Spanish media. We only know that we shouldn't drink the water, but we do not understand why. We should have access to this information for our own good, to protect our families, and to prevent more serious problems in the future.

I urge you to continue providing resources so that we have access to emergency water, well testing and treatment, until we become a rural community with safe water.

Sincerely,
Froilan Rodriguez

Oregon Secretary of State, Audit Division
Advisory Project: Oregon Water Governance Highlighting Water Insecurity
Interview: Oregon Rural Action and Community Members
August 10 & 15, 2022

Testimony: James Ringel
Location: Boardman, Oregon

Original statement in Spanish

Mi nombre es James Ringel, estoy jubilado, pasé 28 años trabajando como mecánico. He vivido en mi dirección actual en Boardman, Oregón, durante los últimos 15 años. Cuando compré esta casa, los nitratos eran una preocupación, ha pasado más de una década y sigue siendo un problema. Hoy comparto mi testimonio, esperando que esto nos ayude a obtener los recursos necesarios para asegurar que seamos una comunidad rural con agua segura.

Translated to English

My name is James Ringel, I am retired, I spent 28 years working as a heavy duty railroad diesel mechanic. I have lived at my current address in Boardman, Oregon for the past 15 years. When I bought this home, the nitrates were a concern, it's been over a decade now and it continues to be a problem. Today I share my testimony, hoping that this will help us obtain the necessary resources to ensure that we are a safe rural water community.

Recientemente en las noticias, comencé a ver más y más artículos sobre los nitratos. El condado comenzó a probar los pozos para ver si teníamos algún problema. Lo siguiente que supe fue que mi vecina me hizo saber que tan grave podría ser esto para nuestra salud si estuviéramos bebiendo el agua, me ayudó a pensar en los momentos en los que realmente consumo el agua. Pensé que estaba bien porque generalmente bebo agua embotellada, pero cuando mis resultados fueron altos fue un 27.3, lo pensé más y consideré otros factores.

Yo creí que el agua que usaba para todo estaba bien. Compró agua embotellada regularmente para beber. Uso el agua de la llave para hacer cubitos de hielo de vez en cuando y uso el agua de la llave para cocinar, como para hacer espaguetis. Siempre pensé que estaba bien porque tengo un sistema de ósmosis, pero recientemente los resultados de las pruebas demostraron lo contrario. Resulta que mi sistema no funciona correctamente.

No me di cuenta de que mi agua estaba tan mala. Me han diagnosticado cáncer de piel y tengo muchos problemas estomacales. Mi médico me recomienda beber mucha agua. Bebo 10 botellas de agua al día. Siempre me siento hinchado y no estoy bien, pero me siguen diciendo que beba agua. Sin embargo, como bebo tanta agua, de vez en cuando se me acaba. Así que usé el agua de la llave cuando no tenía botellitas disponibles. Tengo problemas de espalda, así que si alguien no puede traerme agua, pensé que el filtro Brita era suficiente, pero luego aprendí que no ayuda con los nitratos. Ahora me pregunto si es por eso que tengo tantos problemas con mi salud. Escuché que se están haciendo algunos esfuerzos adicionales para asegurar que los hispanos de nuestra comunidad sepan lo que está pasando, pero se necesita hacer más para la comunidad en general. Presto atención a las

Recently in the news, I started seeing more and more articles coming out about the nitrates. The county started testing the wells to see if we had a problem. Next thing I knew my neighbor was letting me know how serious this could be for our health if we were drinking the water, she helped me think about moments where I actually do consume the water. I thought I was fine because I usually drink bottled water, but when my results came back high, a 27.3, I thought about it more and considered other factors.

I used to believe that the water I used for everything was fine. I buy bottled water regularly for drinking purposes. I use the tap water to make ice cubes once in a while and I use tap water for cooking such as making spaghetti. I always thought it was fine since I have an osmosis system, but recently the test results proved otherwise. Turns out my system isn't functioning properly.

I didn't realize my water was so bad. I have been diagnosed with skin cancer and I struggle with a lot of stomach issues. My doctor recommends I drink a lot of water. I drink 10 bottles of water a day. I always feel bloated and not right, but I keep getting told to drink water. However, since I drink so much water, every now and then, I run out. So I just used the tap water when I was out. I have a bad back so if someone can't bring me water, I thought the Brita filter was sufficient but then I learned that it doesn't help with nitrates. Now I wonder if this is why I have so many problems with my health. I hear that there is some extra efforts being done to ensure the Hispanics in our community know what's going on, but more needs to be done for the community as a whole. I pay attention to the news, and I still don't fully understand what needs to be done.

I urge you to continue providing resources so that we have access to emergency water, well

noticias y todavía no entiendo completamente lo que hay que hacer.

Les pido de manera urgente continuar brindando recursos para que tengamos acceso a agua de emergencia, pruebas de pozos y tratamiento, hasta que nos convirtamos en una comunidad rural con agua segura.

Sinceramente,
Jim Ringel

testing and treatment, until we become a rural community with safe water.

Sincerely,
Jim Ringel

Oregon Secretary of State, Audit Division
Advisory Project: Oregon Water Governance Highlighting Water Insecurity
Interview: Oregon Rural Action and Community Members
July 7, 2022

Testimony: Jose Zavala
Location: Boardman, Oregon

Original statement in Spanish

Mi nombre es Jose Zavala, y he trabajado en agricultura en el condado de Morrow por 20 años. He estado viviendo en Boardman, Oregon por los últimos 35 años. He vivido en el mismo domicilio aquí en Boardman por casi 10 años junto con mi esposa y mis tres hijas. Nosotros no estamos compartiendo un pozo de agua con otras familias debido a un problema que tuvimos. Espero que al compartir mi testimonio, ayude para que otras familias no tengan que continuar teniendo problemas con su agua, que viene siendo un costo que impacta nuestras vidas en relación a nuestra salud pero también económicamente.

Cuando yo compre esta casa, estaba compartiendo el pozo de agua con la con la vecina. Y en ese tiempo, el pozo se compartía con tres casas. Hubo un problema con la bomba y tuvimos que apagar el agua para arreglar ese problema. Duramos tres días sin servicio de agua. Nosotros decidimos mandar hacer un pozo para nosotros, y en ese tiempo, pues nos salió como en unos \$15,000. Durante este tiempo tuvimos

Translated to English

My name is Jose Zavala, and I have worked in agriculture here in Morrow County for 20 years. I have been living in Boardman, Oregon for the last 35 years. I have lived at the same address here in Boardman for almost 10 years along with my wife and three daughters. We are currently not sharing a well with other families due to a problem we had in the past. I hope that by sharing my testimony, it helps so that other families do not have to continue having problems with their well water, which has been a cost that impacts our lives in relation to our health, but also economically.

When I originally bought this house, I was sharing the well with neighbors. And at that time, the well was shared with three houses. There was a problem with the pump and we had to turn off the water to fix that problem. We lasted three days without water service. We decided to have a well dug for us separately, and at that time, it cost us about \$15,000. During this time we had

que tomar agua del galón y no pude regar mi yarda tampoco.

Nosotros nunca habíamos escuchado sobre lo de los nitratos, nunca habíamos hecho prueba del agua hasta que los vecinos empezaron a hablar conmigo sobre este problema. Resulta que nosotros tenemos un alto nivel de nitratos, nos llegaron los resultados de un 27.5, casi tres veces más alto de lo que debería de estar.

Se siente uno mal porque, estamos gastando en agua para tomar, sería mejor poder agarrar agua del pozo para tomar, entonces se ahorraría uno de ese costo. También estamos con la preocupación de que nos haya hecho daño en una forma. Nosotros no consumimos esta agua, ni para cocinar, pero de todo modos se siente uno en duda, que pueda estar ocurriendo esto en nuestra comunidad.

Estamos agradecidos por estar recibiendo el servicio de entrega de agua gratuita. Antes nosotros estábamos pagando por este servicio y ahora el condado nos está ayudando con esto mientras encuentran una solución.

Les pido de manera urgente continuar brindando recursos para que tengamos acceso a agua de emergencia, pruebas de pozos y tratamiento, hasta que nos convirtamos en una comunidad rural con agua segura.

Sinceramente,
Jose Zavala

to drink water from the gallon and I couldn't water my yard either.

We had never heard of nitrates, we had never had our water tested until the neighbors started talking to me about this problem. It turns out that we have a high level of nitrates, we received a result of 27.5, almost three times higher than it should be.

I feel bad because we are spending our money on water to drink, it would be better to be able to get water from the well to drink, then we would save on that cost. We are also concerned that the water could have harmed us in some way. We do not consume this water, not even for cooking, but in any case one feels in doubt that this may be happening in our community.

We are grateful to be receiving the free water delivery service. Before we were paying for this service, and now the county is helping us with this while they find a solution. I urge you to continue providing resources so that we have access to emergency water, well testing and treatment, until we become a rural community with safe water.

Sincerely,
Jose Zavala

Oregon Secretary of State, Audit Division
Advisory Project: Oregon Water Governance Highlighting Water Insecurity
Interview: Oregon Rural Action and Community Members
August 10 & 15, 2022

Testimony: Mike Brandt
Location: Boardman, Oregon

My name is Mike Brandt and I have served in the Marine Corps. My wife and I have been residents of Morrow County for the last 25 years. Since I purchased my home I have been aware of the contaminated water. In order to get my mortgage I had to install a water filtration system so that I had

access to clean water. I recently had my water tested and the nitrate levels are at 34.5, which are more than 3 times the contaminant level. Today I share my testimony, hoping that this will help us obtain the necessary resources to ensure that we are a safe rural water community.

About 25 years ago, I was forced to pay additionally for a water filtering system just so that I can get approved for my mortgage. It was a frustrating experience having to come up with an additional \$1500 to get a system that would clean contaminated water that other people are responsible for causing. In addition to the system, it was around \$100-200 to replace the filters each time they were serviced. They plugged up frequently so that the people that would come to service them eventually stopped coming and disappeared.

The water filter system was an expensive and frustrating experience that we decided to get a water delivery system with Desert Springs so that we had access to safe water. I still had to pay for the service, but at least I know the water is potable and safe to use. I also use the clean water that I buy for my animals since I don't know how nitrates impacts them.

From all the time I have been here, it is upsetting to see that not much has been done to find a long term solution. I hope that we as a community can have access to high quality water filters that will be effective with the high contaminated water. I hope that I am here to see the end of this water contamination crisis and we as a community can come together to find a long term solution.

I urge you to continue providing resources so that we have access to emergency water, well testing and treatment, until we become a rural community with safe water.

Sincerely,

Mike Brandt

Oregon Secretary of State, Audit Division
Advisory Project: Oregon Water Governance Highlighting Water Insecurity
Interview: Oregon Rural Action and Community Members
August 8, 2022

Testimony: Mayra Colin
Location: Boardman, Oregon

Original statement in Spanish

Mi nombre es Mayra Colin. Mis padres, Carlos y Maria Colin, junto con mis hermanos y primos, nos trajeron a vivir a Boardman en 1998. Desde entonces somos residentes de Boardman y vivimos en el mismo hogar al que llegamos en aquel entonces. Yo vivi fuera de Boardman muy poco tiempo mientras estudiaba pero después de terminar el colegio decidi regresar a vivir aqui porque aqui es donde quiero estar. Aqui me siento en casa. Ahorita en el hogar de mis

Translated to English

My name is Mayra Colin. My parents, Carlos and Maria Colin, along with my siblings and cousins, brought us to live in Boardman back in 1998. We have been Boardman residents ever since and live in the same home we came to back then. I lived outside of Boardman for a short time while I was in college but after I finished school I decided to move back here because this is where I want to be. Here I feel at home. Right now in my parents' home, in our home, we make up three

padres, en nuestro hogar, formamos tres generaciones; mis padres, mis tres hijos y yo. En este año, mis hijos cumplen 10, 9, y 7 años. Somos una familia unida y compartimos mucho tiempo juntos

Actualmente trabajo en Community Counseling Solutions aquí mismo en Boardman. Empecé a trabajar ahí en el 2011 y espero seguir ahí por muchos años más. Mis padres tienen un largo historial de trabajo en la agricultura y la cosecha en estas áreas desde que llegaron en los años 80.

Estos últimos años no han sido fáciles para los residentes de nuestra comunidad por muchas cuestiones incluyendo la pandemia, la controversia con la vacuna, pérdidas de trabajo, cierre de escuelas y negocios, la tormenta de aire del Mayo 2020, el humo por las lumbres forestales en Septiembre 2020, las tormentas de nieve en los últimos tres inviernos y varias cosas más. Este año se podría decir que las preocupaciones habían aminorado hasta que nos llegó la noticia de la contaminación del agua en nuestro hogar y el hogar de muchas personas aquí presentes. Yo no puedo decir con certeza si padezco o si mi familia padece de algún síntoma relacionado con los efectos de los altos niveles de nitratos de agua. Pero lo que puedo decir con certeza es que sentimos miedo y preocupación al recibir la noticia.

Yo de niña escuchaba: no tomes esa agua por que no está buena. Esas son palabras empecé a decirles a mis hijos. No tomes esa agua hijo, no está buena. Pero ahora, tengo que reemplazar la palabra buena, con la palabra daño. Ahora tengo que decir, no tomes esa agua por que te hace daño. Tengo que decir, no tomes esa agua, está contaminada. Se pueden imaginar? El agua, el recurso principal, necesario para poder existir y que deberíamos tener para nuestra supervivencia, ahora está contaminada por altos niveles de nitrato. El agua, que debería ser limpia y pura, ahorita corre por la tubería de nuestras

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casas contaminada. Sale de las llaves de nuestros hogares, sucia, al nivel de corremos riesgos de salud. Entiendo perfectamente que existe un largo proceso desde que cae del cielo hasta que entra en nuestro organismo, pero que triste que por falta de atención de alguien o algo, ahora tenemos esta preocupación y sentimos miedo.

Mi familia, ya sea al igual o a diferencia de algunos de mis vecinos, hemos intentado limitar el consumo de esa agua. Mis padres y mis vecinos, han gastado mucho dinero en agua embotellada semanalmente, han gastado mucho dinero en garrafones de agua por años, y han instalado costosos filtros de agua que solo funcionaron unos cuantos años, y esto viene siendo la la razón que recibimos un resultado de 36.5. Todo esto ha salido demasiado caro y no creo justo ni sostenible tener que seguir haciéndolo por años y años más. Lo que necesitamos es agua segura en nuestros hogares y la necesitamos ahorita. Nuestros políticos necesitan ayudarnos a encontrar una solución a largo plazo, como crear un distrito de agua donde el agua pase por un sistema de filtración eficiente y seguro. El acceso al agua segura es importante para el bienestar de nuestra comunidad. Es importante para mis padres, para mis hijos, para mis vecinos, y todos los que estamos aquí presentes, porque todos formamos parte de esta comunidad de Boardman. Todos están contribuyendo a esta comunidad que va creciendo y es fundamental para el condado de Morrow County y el estado de Oregon.

Les pido de manera urgente continuar brindando recursos para que tengamos acceso a agua de emergencia, pruebas de pozos y tratamiento, hasta que nos convirtamos en una comunidad rural con agua segura.

Sinceramente,
Mayra Colin

understand that there is a long process from when it falls from the sky until it enters our body, but how sad that due to lack of attention from someone or something, now we have this concern and we feel fear.

My family, like my neighbors, has tried to limit the consumption of that water. My parents and neighbors have spent a lot of money on bottled water weekly, have spent a lot of money on water jugs for years, and have installed expensive water filters that only worked a few years, this being the reason our water test resulted in a 36.5. All this has been too expensive and I don't think it's fair or sustainable to have to continue doing it for years and years to come. What we need is safe water in our homes and we need it now. Our politicians need to help us find a long-term solution,

like creating a water district where the water goes through an efficient and safe filtration system. Access to safe water is important to the well-being of our community. It is important to my parents, to my children, to my neighbors, and to all of us here today, because we are all part of this Boardman community. Everyone is contributing to this growing community that is critical to Morrow County and the state of Oregon.

I urge you to continue to provide resources so that we have access to emergency water, well testing, and treatment, until we become a safe rural water community.

Sincerely,
Mayra Colin

Oregon Secretary of State, Audit Division
Advisory Project: Oregon Water Governance Highlighting Water Insecurity
Interview: Oregon Rural Action and Community Members
August 10, 2022

Testimony: Maria Elena Martinez
Location: Boardman, Oregon

Original statement in Spanish

Mi nombre es Maria Elena Martinez. He estado viviendo en Boardman durante los últimos 36 años. Soy madre de 6 hijos y vivo con mi esposo. Desafortunadamente, el año pasado tuve dos abortos espontáneos. Ahora, en retrospectiva, me pregunto si los nitratos en el agua me causaron este problema, porque antes yo bebía el agua e incluso cocinaba con el agua desde que empecé a vivir aquí. Nunca hubo nadie que me había advertido del peligro que existía. Si lo hubiera sabido, nunca hubiera bebido esta agua ni la hubiera usado para cocinar y tal vez nunca hubiera sucedido lo que me pasó a mí, perder mis embarazos. Desconocía esta información. Tal vez si hubiera sabido la información, si hubiera tenido esta información antes, no lo hubiera hecho. Por eso estoy compartiendo mi testimonio, no quiero que esto le pase a otras personas. Necesitamos agua potable limpia y segura en nuestra comunidad, para nosotros, para nuestros niños. Debemos evitar que otras personas se enfermen o sufran enfermedades graves y tragedias como la mía, a causa del agua contaminada.

Hace poco me enteré de los nitratos en el agua porque recién este año comenzaron a analizar el agua de nuestros pozos. Fue entonces cuando descubrimos que nuestros resultados eran altos, un 26, y nos enteramos de los efectos que podría tener en nuestra salud. Empecé a pensar en mis síntomas cuando estaba embarazada, antes de los abortos espontáneos, tenía tantos dolores de cabeza. ¿Podría ser ésta la razón?

Hay una necesidad urgente de informar mejor a nuestra comunidad. Se necesita mucho para

Translated to English

My name is Maria Elena Martinez. I have been living in Boardman for the past 36 years. I am a mother of 6, and I live with my husband. Unfortunately, last year I had two miscarriages. Now, hindsight, I wonder if the nitrates in the water caused me to have this problem, because I used to drink the water and even cooked with the water since living here. No one had ever warned me about the danger that existed. Had I known, I would have not never drunk this water or used it for cooking and perhaps what happened to me, losing my pregnancies would never have happened. I was unaware of this information. Maybe if I knew the information, if I had had this information before, I wouldn't have done it. That is why I am sharing my testimony, I don't want this to happen to other people. We need clean, safe drinking water in our community, for us, for our children. We must prevent other people from getting sick or experiencing serious illness and tragedies due to the contaminated water.

I recently learned about the nitrates in the water because just this year they started testing the water in our wells. That's when we discovered that our results came back high, a 26, and we learned about the effects it could have on our health. I started thinking about my symptoms back when I was pregnant, before the miscarriages, I had so many headaches. Could this be the reason?

There is an urgent need to better inform our community. A lot is needed to make sure this doesn't happen to more families. Many of us, well

asegurarse de que esto no le suceda a más familias. Muchos de nosotros, bueno la mayoría aquí de mi comunidad, tenemos niños pequeños. Estos niños son vulnerables cuando salen a jugar, les da sed y deciden beber de la manguera, no saben lo que están bebiendo ni con qué tipo de agua están jugando. Se debe hacer algo para proteger a nuestra comunidad, para proteger a los niños.

Les pido de manera urgente continuar brindando recursos para que tengamos acceso a agua de emergencia, pruebas de pozos y tratamiento, hasta que nos convirtamos en una comunidad rural con agua segura.

Sinceramente,
Maria Elena Martinez

the majority here from my community, have small children. These children are vulnerable when they go outside to play, they get thirsty and decide to drink from the hose, they do not know what they are drinking or what type of water they are playing with. Something must be done to protect our community, to protect the children. I urge you to continue to provide resources so that we have access to emergency water, well testing, and treatment, until we become a safe rural water community.

Sincerely,
Maria Elena Martinez

Oregon Secretary of State, Audit Division
Advisory Project: Oregon Water Governance Highlighting Water Insecurity
Interview: Oregon Rural Action and Community Members
August 17, 2022

Testimony: Orlando Velazquez
Location: Hermiston, Oregon

Original statement in Spanish

Mi nombre es Orlando Velazquez tengo 17 años y vivo en Hermiston Oregon, soy estudiante y trabajo en el área de la agricultura y también de vez en cuando limpio yardas, mi mamá también trabaja en la agricultura de Boardman. Como miembro de esta comunidad, comparto mis opiniones y observaciones con la esperanza que ayude a la comunidad que está directamente impactada.

Yo trabajaba en Boardman en el rancho y en algunos momentos vi que el agua salía como con tierra o cuando lavábamos los carros, Yo creo que lo mejor sería que se diera el agua potable a las familias que viven fuera de la ciudad que manden el agua del centro y que esto llegue a las orillas de la ciudad que haya un sistema que

Translated to English

My name is Orlando Velazquez. I am 17 years old and I live in Hermiston Oregon, I am a student and I work in the agriculture field, and also from time to time I do yard work. My mom also works in Boardman agriculture. As a member of this community, I share my thoughts and observations with hopes that it can help the community that is directly impacted.

I used to work in Boardman on a ranch, and at times I saw that the water came out with dirt or some sediment when we would wash the cars. I think it's necessary to ensure that people with wells have access to safe drinking water. There are so many families who live outside the city limits and we need to ensure that safe drinking water is being provided to them. Whether that

ayude a que el agua sea agua limpia. que se utilice la tecnología ya que estamos en pleno 2022 para poder usar en el tratamiento del agua por ejemplo filtros que sean efectivos para el consumo humano.

Pienso que sería importante hacer un buen uso de las redes sociales para compartir información y que esto genere un impacto en la comunidad porque ahorita pienso que ya es poca la gente que le gusta leer y si tu ves algo interesante o importante en el teléfono, es fácil de revisarlo y llenarse de información y compartirlo. Pienso que también es necesario tener la información disponible en español para nuestra comunidad hispana.

Es necesario estar mandando cartas en español o haciendo llamadas en su idioma y también como cuando van a vender una casa que se comparta la información sobre los nitratos. Nuestra gente merece que uno les hable principalmente con honestidad en la actualidad.

Les pido de manera urgente continuar brindando recursos para que tengamos acceso a agua de emergencia, pruebas de pozos y tratamiento, hasta que nos convirtamos en una comunidad rural con agua segura.

Sinceramente,
Orlando Velazquez

be a treatment system that helps make the water clean or by providing filters that are effective for human consumption.

I think it would be important to make good use of social media networks to share information regarding the nitrates issue in order to generate an impact on the community because right now I think there are few people who like to read and if you see something interesting or important on the phone, it is easy to review it, get informed, and share it. I think it is also necessary to have the information available in Spanish for our Hispanic community.

It is necessary to be sending letters in Spanish or making calls in their language and also, like when they are going to sell a house, to share information about nitrates. Our people deserve to be spoken to with honesty on what is going on in their community.

I urge you to continue providing resources so that we have access to emergency water, well testing and treatment, until we become a rural community with safe water.

Sincerely,
Orlando Velazquez

Oregon Secretary of State, Audit Division
Advisory Project: Oregon Water Governance Highlighting Water Insecurity
Interview: Oregon Rural Action and Community Members
July 8, 2022

Testimony: Mayra Colin
Location: Boardman, Oregon

Original statement in Spanish

Mi nombre es Paula Lopez, vivo en Boardman y voy a cumplir 26 años viviendo aqui, yo no trabajo pero soy ama de casa, asi es que mi trabajo es un trabajo de 24 horas siete dias a la

Translated to English

My name is Paula Lopez, I live in Boardman and I'm about to complete 26 years old living here. I don't work but I'm a stay at home mom, so my job is a 24/7 job with no pay. I live with my

semana, y sin pago. Vivo con mi esposo y mis dos hijas. Aparte de mantener mi propio hogar, también le apoyó mucho a mi suegra, y ella es la razón por la que comparto este testimonio con ustedes. Ella es grande de edad, y necesita nuestro apoyo para darle mantenimiento a la casa de ella, ella tiene un pozo de agua y recientemente recibimos noticia que su agua tiene altos niveles de nitratos. Le hicieron la prueba y el resultado fue un 40.1, eso es cuatro veces más de lo que debería estar basado en la información que recibimos en la junta comunitaria.

En la casa de mi suegra, se utiliza el agua en varias formas. La usamos para lavar los trastes, la ropa, para regar las plantas, la yarda, y para darle agua a los animales como las gallinas y los perros. Sabemos que el agua del pozo no se debe de tomar, porque puede haber bacteria y otras cosas que hacen daño como los nitratos, por el cual, tratamos de tomar precauciones, por ejemplo le pongo cloro al jabón para lavar los trastes y cuando se baña ella tiene que desinfectar la tina y con cloro con la intención de ojala minimizar el riesgo con contiene el agua.

Mi suegra tiene siete años viviendo en esa casa con el pozo y hemos comprado el agua, antes teníamos que estar comprando el agua directo de la tienda y el galón de cinco galones cuesta siete dólares. En este momento mi suegra tiene como cinco meses sin trabajo y esa entrada de dinero no llega y pues hace que los costos básicos como el lonche y el agua sean más difíciles de obtener. Son alimentos necesarios pero cuando compra uno por ejemplo tres galones o cuatro por semana que es lo que se está gastando ya es un coste de 28 dólares, el agua es esencial, todo el tiempo se está utilizando.

Yo pienso que estaria un poco más seguro con un filtro, porque me imagino que se minimizaran las bacterias en el agua. En realidad es necesario

husband and my two daughters. Aside from supporting my own home, I am also providing a lot of support for my mother-in-law, and she is the reason I am sharing this testimony with you. She is elderly, and she needs our support to maintain her house. She has a water well and recently we received news that her water has high levels of nitrates. Her well was tested and the result was a 40.1, that's four times what it should be based on the information we received at the community meeting.

In my mother-in-law's house, water is used in various ways. We use it to wash the dishes, the clothes, to water the plants, the yard, and to give water to animals like chickens and dogs. We know that the water from the well should not be consumed, because there may be bacteria and other things that cause harm such as nitrates, for which we try to take precautions, for example I put chlorine in the soap to wash the dishes and when bathing, my mother in law has to disinfect the tub with chlorine as well with the intention of hopefully minimizing the risk that the water contains.

My mother-in-law has been living in that house with the well for seven years and we have had to buy water for consumption, before we had to buy water directly from the store and a five-gallon jug would cost us seven dollars. Right now, my mother-in-law has been out of work for about five months and that income does not arrive and thus makes basic costs such as food and water more difficult to obtain. These are basic necessities, but when you buy for example three or four of those jugs per week, it's a cost of 28 dollars, which adds up for the entire month. Water is essential, it is being used all the time.

I think it would be a little safer with a filter, because I imagine that the bacteria in the water would be minimized. In fact, it is necessary for all those people who live in that rural area for the

para todas esas personas que viven en esa área rural por la salud y el bienestar de las personas que viven y en esa área para los niños y los mayores.

Por eso, les pido de manera urgente continuar brindando recursos para que tengamos acceso a agua de emergencia, pruebas de pozos y tratamiento, hasta que nos convirtamos en una comunidad rural con agua segura.

Sinceramente,
Paula Lopez

health and well-being of the people who live in that area and for the children and the elderly.

Therefore, I urgently ask you to continue providing resources so that we have access to emergency water, well testing and treatment, until we become a rural community with safe water.

Sincerely,
Paula Lopez

Oregon Secretary of State, Audit Division
Advisory Project: Oregon Water Governance Highlighting Water Insecurity
Interview: Oregon Rural Action and Community Members
August 16, 2022

Testimony: Reyes Calvillo
Location: Boardman, Oregon

Original statement in Spanish

Mi nombre es Reyes Calvillo yo vivo con mi esposa y mi hija en la comunidad de Boardman, por el momento trabajo en la construcción. Hemos vivido aquí desde hace diez años, somos dueños de la casa y esta casa tiene un pozo el cual es compartido con otras dos familias.

Nosotros siempre supimos que el agua estaba mal, desde el tiempo que hemos vivido aquí y nosotros hemos tomado precauciones evitando consumir el agua del pozo, también hemos notado que el agua mancha mucho por ejemplo los carros los deja con mancha blancas y hace corrosión en las llaves de los baños y el fregadero, también en el boiler ya que este se llena como de roca por los minerales. El cambiarlos así como eso de tener que comprar agua para cocinar y para tomar genera un impacto económico en la familia. He podido hablar con mis dos hermanos, ellos también tienen un pozo en sus casas y los dos me dijeron que el agua estaba mala los resultados que yo

Translated to English

My name is Reyes Calvillo. I live with my wife and daughter in the Boardman community. At the moment I work in construction. We have lived here for ten years, we own the house and this house has a well which is shared with two other families.

We always knew that the water was bad, since the time we have lived here and we have taken precautions to avoid consuming the water from the well, we have also noticed that the water stains a lot, for example, it leaves cars with white spots and causes corrosion in the surfaces. The faucets in the bathrooms and the sink, and even the boiler feels like a rock due to the mineral build up on these surfaces. Changing these faucets as well as having to buy water for cooking and drinking generates an economic impact on the family. I have been able to talk to my two brothers, they also have a well in their houses and they both told me that the water was bad, the results I had were 27.5. That is very

tuve fueron de 27.5 eso es muy elevado ya que me explicaron que el máximo nivel de nitratos es de 10 y los de ellos se asemejan a mis resultados. Hace como 10 años uno de mis hermanos hizo su pozo de agua, no tengo más detalles de cómo o en donde y quien hizo ese análisis pero en el análisis salió que el agua si era apta para el consumo humano.

Nosotros en todos estos años no habíamos instalado ningún filtro en la casa, pero hasta hace algunas semanas cuando se declaró estado de emergencia aqui en la comunidad fue que nos empezaron a dar el agua gratuita y después hicieron entrega de algunos filtros y a mi familia y a mi nos tocó recibir uno, fue cuando yo lo instalé. Algo que me gustaria saber es si mi filtro está funcionando y cómo hacer una evaluación de si el agua se puede consumir o no y si esta es de buena calidad. Comentó que me siento agradecido por toda la atención, información y ayuda de los que me han contactado en este caso el Departamento de Salud y el equipo de ORA ya que todo ha sido en el lenguaje que yo entiendo y que es mi Idioma el Español y me gustaria que eso continuara. Finalizó diciendo que mi familia y yo hemos firmado la petición ya que nosotros apoyamos a que nuestra comunidad sea una comunidad que tenga agua limpia y segura.

Sinceramente,
Reyes Calvillo

high since they explained to me that the maximum level of nitrates is 10 and theirs are similar to my results. About 10 years ago one of my brothers dug his water well. I don't have more details about how or where and who did that analysis, but the analysis found that the water was fit for human consumption.

In all these years we had not installed any filters in the house, but until a few weeks ago when a state of emergency was declared here in the community, they began to give us free water and then they delivered some filters, that's when I installed them. One thing I would like to know is if my filter is working and how to make an assessment of whether or not the water is drinkable and of good quality. I feel grateful for all the attention, information and help of those who have contacted me in this case, the Department of Health and the ORA team, since everything has been in the language that I understand and that Spanish is my language and I would like that to continue. My family and support our community being a community that has clean and safe water.

Sincerely,
Reyes Calvillo

Oregon Secretary of State, Audit Division
Advisory Project: Oregon Water Governance Highlighting Water Insecurity
Interview: Oregon Rural Action and Community Members
August 17, 2022

Testimony: Ricardo Garcia Lopez
Location: Boardman, Oregon

[Original statement in Spanish](#)

[Translated to English](#)

Mi nombre es Ricardo Garcia Lopez, vivo en Boardman desde el año pasado, y somos 7 personas rentando la propiedad, y trabajamos como choferes en el campo. Mi intención de compartir mi testimonio es de que se pueda ver una solución a este problema con el agua.

Yo me enteré que había un problema cuando vinieron unos miembros de la comunidad a compartir la información sobre los nitratos a nuestra casa. Nos hicieron la prueba del agua, y los resultados eran que si estaban los nitratos más altos del nivel que deben de estar, nuestro resultado fue un 11.3.

El propietario ha estado pendiente de que nosotros tengamos la información sobre el agua. el departamento de salud ha estado en comunicación con nosotros y también nos dijo de la ayuda con proporcionar el agua de galón gratuita y asistimos a la junta comunitaria y hemos estado en contacto con ORA team. Esto ha sido muy bueno, porque si no fuera por estos individuales, tal vez no supiera que había un problema.

Cómo nomas tengo un año viviendo aquí, he aprendido mucho de los vecinos que han tenido que lidiar con este problema de los pozos con mucho más tiempo. Es una batalla no poder usar el agua en formas que normalmente estoy acostumbrado a usarlo. Y el gasto que se hace cuando pagamos por los galones más las botellas de agua que se compran para ir al trabajo, es difícil.

Por esto les pido de manera urgente continuar brindando recursos para que tengamos acceso a agua de emergencia, pruebas de pozos y tratamiento, hasta que nos convirtamos en una comunidad rural con agua segura.

Sinceramente,
Ricardo Garcia Lopez

My name is Ricardo Garcia Lopez, I have lived in Boardman since last year, and there are 7 people renting the property where I currently reside. We all work as drivers in the fields. My intention with sharing my testimony is that hopefully a solution can be offered to resolve this problem within our community.

I found out there was a problem when some community members came to share information about nitrates at our house. They tested our water, and the results showed that the nitrate levels were higher than they should be given our result was an 11.3.

The owner has been providing us with the information we need regarding the water. The health department has also been in communication with us and also told us of the resources that are available to us, such as providing the free gallon water. We also attended the community meeting and have been in contact with the ORA team. This has been very good, because if it wasn't for these individuals, I might not have known there was a problem.

As I have only lived here for a year, I have learned a lot from the neighbors who have had to deal with this problem of the wells for much longer. It's been challenging, not being able to use water in ways I'm normally used to using it. And the extra expense when we pay for the gallons or cases of the bottled water to take to work, makes things difficult.

This is why I urgently ask you to continue providing resources so that we have access to emergency water, well testing and treatment, until we become a rural community with safe water.

Sincerely,
Ricardo Garcia Lopez

Oregon Secretary of State, Audit Division
Advisory Project: Oregon Water Governance Highlighting Water Insecurity
Interview: Oregon Rural Action and Community Members
August 10 & 15, 2022

Testimony: Selene Andrade
Location: Boardman, Oregon

My name is Selene Andrade, and I finished school recently and started working as a nurse. I have lived in Morrow Country since 2011. My family and I lived in Boardman for 6 years before moving to Irrigon. We have lived in Irrigon for the last 5 years. I have lived here with my parents and two other siblings. We have shared a well with our neighbors since we moved here. There was already a filter installed but I am sure how it works or if it even works. Today I share my testimony, hoping that this will help us receive the resources to make sure that we are a safe water community.

When we decided to move to Irrigon we were not informed of everything that it meant to own a well, the only thing we knew was that we were sharing one and that there was a separate bill with the electricity company for that. We never looked into the water quality or checked to see the effectiveness of the filter system that was already here. The neighbors just said that the water sucked and there was not much we could do. Occasionally we would use it to cook or drink out of it, but for the most part we always bought water bottles from the store.

In May, some members from Oregon Rural Action came by to see if they can get a water sample to test it. We gave them the water sample and within a couple weeks they called my dad and let him know that the nitrate levels came back normal (0.25), which was a good thing. At the end of the day, there is still a lot of skepticism about how clean the water is from our well. They might have let us know that there are no nitrates but it doesn't feel safe to drink out of that water.

I urge you to continue providing resources so that we have access to emergency water, well testing and treatment, until we become a rural community with safe water.

Sincerely,
Selene Andrade

Oregon Secretary of State, Audit Division
Advisory Project: Oregon Water Governance Highlighting Water Insecurity
Interview: Oregon Rural Action and Community Members
August 17, 2022

Testimony: Salvador Pacheco
Location: Boardman, Oregon

[Original statement in Spanish](#)

Mi nombre es Salvador Pacheco tengo 73 años, yo tengo mucho tiempo viviendo en esta área, ya ni me acuerdo cuánto tiempo ha sido, fuimos de

[Translated to English](#)

My name is Salvador Pacheco, I'm 73 years old, I've been living in this area for a long time, I don't even remember how long it's been, we were

los primeros que compramos aquí en esta área y ya hace mucho tiempo y por eso se me olvido. Yo soy dueño de mi casa.

Me di cuenta que había un problema con el agua, cuando cambiaba los filtros del calentador de agua. Tenía tres filtros y seguido tenía que cambiar la resistencia, pero cuando cambiaba los filtros, estaban llenos de sarro. Seguido teníamos que estar reemplazando estos filtros.

Antes si tomábamos el agua del pozo, porque no sabíamos que nos podía hacer daño. Pero ya que notamos que tenía sarro, y manchaba las plantas, mejor empezamos a comprar agua embotellada para consumir. Solamente usaba agua de la llave para el baño, para lavar los trastes, y también para regar mis plantas.

Recientemente nos hicieron una prueba del agua y nos dieron el resultado de 32.6, aprendí que esto es más alto de lo que debería estar, tres veces más alto que el nivel apropiado. Fui a la junta comunitaria porque un vecino me invitó, aunque no oigo bien, y ahí fue donde me enteré que iban a estar regalando agua.

Me interesa aprender que se puede hacer para arreglar esta situación, tal vez haciendo los pozos con más profundidad para que tengamos acceso a agua más buena. Y también pienso que estaría bueno informar bien a la gente, para que no se enfermen como yo, no sé si es por el agua que he sufrido de una grave infección de los riñones, tuve que ir al hospital de Seattle, y me limpiaron la sangre para quitarme la infección, y ahora tengo muchas complicaciones de la salud. A veces me desanimo porque yo he batallado mucho con mi salud, pero tenemos que seguir adelante. Por eso me gustaria tener un pozo más profundo aquí, quizás ya no viva, pero que esté el agua buena para el bien de la comunidad.

Les pido de manera urgente continuar brindando recursos para que tengamos acceso a agua de emergencia, pruebas de pozos y tratamiento,

among the first to buy property here in this area and it's been a long time and that's how come I forgot how long it's been. I am the owner of my house.

I found out there was a problem with the water when I was changing the filters on the water heater. It had three filters and I often had to change these filters. When I changed the filters they were full of scale.

Back then, we did drink the water from the well, because we didn't know that it could harm us. But since we noticed that it had scale or build up, and it was staining the plants, we thought we better start buying bottled water to consume. I only used tap water for the bathroom, to wash the dishes, and also to water my plants.

We recently had our water tested and got a result of 32.6. I learned that this is higher than it should be, three times higher than the appropriate level. I went to the community meeting because a neighbor invited me, even though I can't hear well, and that's when I found out that they were going to be giving away emergency water.

I am interested in learning what can be done to fix this situation, perhaps making the wells deeper so that we have access to better water. And I also think it would be good to inform people better, so that they don't get sick like me, I don't know if it's because of the water that I suffered from a serious kidney infection, I had to go to the hospital in Seattle, and they cleaned my blood to remove the infection, and now I have many health complications. Sometimes I get discouraged because I have struggled a lot with my health, but we must find the will to carry on. That's why I would like to have a deeper well here, maybe I won't be living anymore, but I hope that there is good water for the good of the community by then.

hasta que nos convirtamos en una comunidad rural con agua segura.

Sinceramente,
Salvador Pacheco

I urge you to continue providing resources so that we have access to emergency water, well testing and treatment, until we become a rural community with safe water.

Sincerely,
Salvador Pacheco

Appendix D: Written Statement Regarding Community Water Security from Oregon Rural Action

Oregon Secretary of State, Audit Division

Advisory Project on Oregon Water Governance/Water Insecurity

Oregon Rural Action and Community Members

Ensuring Rural Water is Safe: People & Nitrate-Contaminated Water in the Lower Umatilla Basin

Follow-up: September 23, 2022

Thank you for the opportunity to provide an update to follow up on our August 2022 interviews.

Oregon Rural Action and directly impacted community members continue to be concerned about the immediate and long-term health risks and need for safe drinking water, and the lack of urgency and any specific state action to date to ensure safe drinking water for all residents in the Lower Umatilla Basin (LUB).

Since August:

- Based on continued outreach and conversations with community members, more people are learning for the first time that their drinking water wells are contaminated and they should not drink, cook or boil the water. Overall, people are very thankful for the information and Morrow County's emergency response including the current water distribution service and the initial installation of filtration systems for some households. However, people wonder how long the free water will be available and for those who have received a filtration system, some people are concerned about whether they can trust that the systems are working and the water from their tap is safe. In addition, people are concerned that the filtration systems (reported to be 2 gallons) do not provide enough water sufficient for a family for drinking and cooking. Filter installation of county/local business-purchased systems has been on hold while waiting for the state to identify the appropriate filtration systems.
- As of September 15, 2022, the Morrow County response includes \$500,000 for testing, water, and filters; a total of 485 households/wells tested; more than 200 tested above 10 mg/L; 162 households are receiving water delivery through the delivery service; 20 filtration systems that have been installed with the help of the county are reducing nitrates in the water to below 10 mg/L. Not all households whose wells have tested above 10 mg/L have received a filtration system. In addition, not all households with domestic wells in the LUB have been identified and tested.
- Oregon Rural Action has participated in regular virtual meetings of the state's 'Technical Working Group' led by the Governor's Regional Solutions Coordinator. Participants include staff or related state agencies, counties, cities, and a business coalition. However at this point, little has been accomplished. There continues to be a significant disconnect between the state and county/local entities concerning basic communication and understanding of the needs let alone developing a coordinated response to meet the immediate need for water, testing, filtration, and information.

- As of September 2022, no elected or state agency decision maker other than Morrow County Commissioner Jim Doherty has reached out to listen to the needs of directly impacted community members. This includes the staff of the Oregon Health Authority, Oregon Department of Environmental Quality, and Oregon Department of Agriculture. On September 15, 2022, 100 community members in Morrow County held a meeting and invited federal, state, and county elected leaders and state administrative officials to hear their concerns and commit to ensuring safe drinking water. People were disappointed that neither the Governor’s staff nor state agency staff was available to attend nor did they offer a statement. Only one state legislator attended virtually. Attached are related media articles and photos.
- A total of 498 people who live in the LUB have signed a petition calling for “emergency water, well testing, and water treatment until we can become a Safe Rural Water Community.”

The lack of state action is of great concern.

30 Years: As we discussed, the state has known for 30 years that groundwater, the primary source of drinking water for the region, has high concentrations of nitrates that can cause harm to human health. Multiple state agencies have failed to meet their regulatory authority to protect the groundwater and ensure safe drinking water in the LUB; the Lower Umatilla Ground Water Management Committee has been unable to meet the state-required goal to reduce the nitrates back to below 7 mg/L. In addition, the education and information efforts of state agencies, including OHA’s Well Safety Program, and education and outreach of the LUBGWMA Committee have failed to effectively inform residents with domestic wells and the public of the risks.

Almost 3 Years: The state of Oregon has been on notice and in conversation with the EPA specifically regarding the public health risk from nitrate exposure in the LUBGWMA. (See the January 2020 EPA Petition for Emergency Action Pursuant to Safe Drinking Water Act Section 1431 to Address Nitrate in LUBGMWA in North Central Oregon.) It took two years for the state to develop a multi-agency workplan. In December 2021, the state submitted a workplan to the EPA, entitled “State of Oregon Workplan: Protection Public Health from Nitrate Exposure in the Lower Umatilla Basin Ground Water Management Area.” During the development of this plan, OHA informed the EPA that the state’s primary program to inform domestic well owners had lost funding. The Domestic Well Safety Program “will go dormant until we secure further funding.” (See September 30, 2020, OHA letter to EPA).

The December 2021 OHA, DEQ, and ODA workplan states that “Oregon’s goal is to eliminate LUBGWMA domestic well water consumer exposure to high nitrates, which under the federal Safe Drinking Water Act is defined as a level above 10 mg/l. While efforts are underway to reduce the introduction of nitrates into the groundwater, additional efforts are needed to protect public health from exposure to elevated nitrates in domestic well tap water. This can be accomplished through enhanced outreach and education, increased domestic well sampling and, where necessary, point of use or whole house domestic water treatment or substitution with bottled/trucked water. OHA has identified four elements of a workplan to accomplish this goal.” (State of Oregon Workplan, page 3) The state workplan components include:

- Conduct outreach and education regarding nitrate contamination;
- Perform a detailed hazard assessment;
- Offer free drinking water testing;

- Provide alternative water where necessary.

As of this spring when Morrow County began to test domestic wells, this workplan had yet to be implemented.

July 2022: Following Morrow County’s declaration of a water emergency in June 2022, the EPA sent a letter dated July 29, 2022, to the Oregon Health Authority, Oregon Department of Environmental Quality, and Oregon Department of Agriculture. The letter noted that while the EPA “supports the general framework of Oregon’s plan to mitigate health risks from nitrate-contaminated drinking water,” outlined in the December 2021 workplan, the EPA raised concerns about the “lack of sufficient detail” in the state plan. The EPA then “identified criteria we believe critical for an effective drinking water response action in the LUB.” (July 29, 2022, EPA letter to OHA, DEQ, and ODA, pages 1-2)

“The EPA considers that an adequate response plan to address the immediate health risks in the LUB must include the following minimum components:

- Coordination - An effective response plan includes a communication plan that identifies how information and responsibilities will be shared among the Governor’s Office, state agencies, Umatilla and Morrow Counties and any private businesses or local utilities...so that each entity’s efforts serve a singular and coordinated response.
- Identification of Impacted Residences - a hazard assessment, in part, should identify each resident that obtains drinking water from a private well in the LUBGWMA.
- Education and Outreach - Public education and outreach should be conducted in a form and manner reasonably calculated to reach all impacted LUB residents...
- Drinking Water Testing - An effective response plan provides laboratory analysis of a drinking water sample from the residence of any private well user in the LUB that requests testing, unless a nitrate test strip demonstrates that the nitrate concentration of the well is below 5 mg/L. Testing should be provided at no cost to LUB residents.
- Provision of Alternative Water - Alternative drinking water should be offered to each resident where the drinking water sample exceeds the federal maximum contaminant level (MCL) of 10 mg/L based on laboratory analysis. Alternative water should be provided as needed for drinking, cooking maintaining oral hygiene, and dishwashing at no cost to residents and in a manner that minimizes the burden on the impacted resident to obtain safe drinking water. This can include reverse osmosis filter systems and maintenance, water delivery, or connecting to a public water system. To the extent certain LUB residences will be connected to a public water system, they should receive alternative water until construction is completed. Residences provided RO treatment units should be offered regular maintenance at no cost to the resident. The alternate water supply and any necessary maintenance shall be made available to the impacted resident until sampling shows that nitrate concentrations in their private well no longer exceed the MCL.
- Public Records - An effective response plan maintains and regularly publishes records such that LUB residents and the general public can better understand the scope and severity of nitration contamination in the LUB and measure Oregon’s progress in implementing a response plan. Information important for public review includes (a) the number and general location of private drinking water wells in the LLUBGWMA; (b) quantitative data regarding Oregon’s public

outreach efforts and the responses received, including the number of residents that responded to public notices and the number of residences that received and rescinded to personal communications; (c) the number of residents that requested and were provided drinking water testing and the results; (d) the number of residences that were offered and accepted alternative drinking water, specifying the method of water delivery; (e) quantitative data regarding efforts to regularly maintain RO treatment units; and (f) groundwater monitoring results from the LUBGWMA Well Network and synoptic events, as they occur.” (July 29, 2022, EPA letter to OHA, DEQ, and ODA, page 3)

September 23, 2022, Oregon Emergency Board:

We are thankful that OHA submitted a request for \$882,000 approved by the Oregon Emergency Board on Friday, September 23, 2022, “to support immediate public health work addressing water quality issues in

Morrow and Umatilla counties.” We are also thankful for OHA’s response to State Senator Hansell’s question about flexibility to meet local needs.

However, this amount does not begin to meet the immediate health risks, let alone implement the state’s workplan with the required minimum components as outlined by the EPA for an adequate response. In addition, the dollars secured simply replace funding lost by the state’s Domestic Well Safety Program which to date has been an inadequate outreach and education effort. And “vouchers” for testing and filtration systems are not a plan. Offering vouchers does not take into account the experience of the past 6 months about what is required for successful outreach and education effort to ensure people have access to safe drinking water - nor the minimum components of a successful plan articulated by the EPA.

And yet we have a successful state/local public health partnership model to base this work on. As noted in our August interview, the Oregon Health Authority’s partnership over the past 2 years with county public health and community-based organizations successfully increased COVID-19 Latinx vaccination rates. Oregon Rural Action served as a key community-based organization in Morrow and Umatilla Counties. However, the success of this model is predicated on state and community-based organizations utilizing their respective resources and expertise: OHA provided adequate financial and technical support; community-based organizations utilized their community relationships and knowledge including language and culture. We request that the OHA department leading the effort to protect public health from nitrite exposure in the Lower Umatilla Basin Ground Water Management Area utilize this effective model to meet the immediate need for safe drinking water in the Lower Umatilla Basin.

In addition, while initial discussions with OHA this spring indicated a need, no dollars are available at this point for a needed health assessment.

Equity and Environmental Justice

Finally, as has been discussed, a majority of the community members directly impacted in Morrow County are Hispanic and low-income; the demographics of Morrow and Umatilla Counties are more ethnically diverse with a higher representation of Hispanic persons and a higher poverty rate as

compared to the state; a majority of people work in the fields and food processing plants of the region's economic engine, industrial agriculture - a primary source of the nitrate pollution.

As has been discussed in our August interviews, an effective response plan centers on the needs and utilizes the expertise of the people most directly impacted. Doing so also ensures that state agency commitments to the principles of equity and environmental justice are more than paper statements. (See Oregon Health Authority's "Equity Advancement Plan 2021-2023," "Public Health Modernization, Environmental Public Health," and the Oregon Department of Environmental Quality's 1997 statement, "Environmental Justice Policy.")

The need for safe drinking water in the LUB is immediate and long-term. On behalf of community members, thank you for your time and assistance.

Appendix E: 2017 Integrated Water Resources Strategy Recommended Actions

Limited Water Supplies & Systems, Water Quality & Quantity Information, and Water Management Institutions

- 1.A Conduct Additional Groundwater Investigations
- 1.B Improve Water Resources Data Collection and Monitoring
- 1.C Coordinate Inter-Agency Data Collection, Processing, and Use in Decision-Making

Out-of-Stream Needs / Demands

- 2.A Regularly Update Long-Term Water Demand Forecasts
- 2.B Improve Water-Use Measurement and Reporting
- 2.C Determine Unadjudicated Water Right Claims
- 2.D Authorize the Update of Water Right Records with Contact Information
- 2.E Regularly Update Oregon's Water-Related Permitting Guide

Instream Needs / Demands

- 3.A Determine Flows Needed (Quality and Quantity) to Support Instream Needs
- 3.B Determine Needs of Groundwater-Dependent Ecosystems

Water and Energy

- 4.A Analyze the Effects on Water from Energy Development Projects and Policies
- 4.B Take Advantage of Existing Infrastructure to Develop Non-Traditional Hydroelectric Power
- 4.C Promote Strategies That Increase/Integrate Energy and Water Savings

Climate Change

- 5.A Support Continued Basin-Scale Climate Change Research Efforts
- 5.B Assist with Climate Change Adaptation and Resiliency Strategies

Extreme Events

- 5.5A Plan and Prepare for Drought Resiliency
- 5.5B Plan and Prepare for Flood Events
- 5.5C Plan and Prepare for a Cascadia Subduction Earthquake Event

Water and Land Use

- 6.A Improve Integration of Water Information into Land Use Planning (& Vice-Versa)
- 6.B Improve State Agency Coordination
- 6.C Encourage Low Impact Development Practices and Green Infrastructure

Water-Related Infrastructure

- 7.A Develop and Upgrade Water and Wastewater Infrastructure
- 7.B Encourage Regional (Sub-Basin) Approaches to Water and Wastewater Systems
- 7.C Ensure Public Safety / Dam Safety

Education and Outreach

- 8.A Support Implementation of Oregon's K-12 Environmental Literacy Plan
- 8.B Provide Education and Training for Oregon's Next Generation of Water Experts
- 8.C Promote Community Education and Training Opportunities
- 8.D Identify Ongoing Water-Related Research Needs

Place-Based Efforts

- 9.A Continue to Undertake Place-Based Integrated Water Resources Planning
- 9.B Coordinate Implementation of Existing Natural Resource Plans
- 9.C Partner with Federal Agencies, Tribes, and Neighboring States in Long-Term Water Resources Management

Water Management and Development

- 10.A Improve Water-Use Efficiency and Water Conservation
- 10.B Improve Access to Built Storage

- 10.C Encourage Additional Water Reuse Projects
- 10.D Reach Environmental Outcomes with Non-Regulatory Alternatives
- 10.E Continue the Water Resources Development Program
- 10.F Provide an Adequate Presence in the Field
- 10.G Strengthen Oregon's Water Quantity and Water Quality Permitting Programs

Healthy Ecosystems

- 11.A Improve Watershed Health, Resiliency, and Capacity for Natural Storage
- 11.B Develop Additional Instream Protections
- 11.C Prevent and Eradicate Invasive Species
- 11.D Protect and Restore Instream Habitat and Habitat Access for Fish and Wildlife
- 11.E Develop Additional Groundwater Protections

Public Health

- 12.A Ensure the Safety of Oregon's Drinking Water
- 12.B Reduce the Use of and Exposure to Toxics and Other Pollutants
- 12.C Implement Water Quality Pollution Control Plans

Funding

- 13.A Fund Development and Implementation of Oregon's Integrated Water Resources Strategy
- 13.B Fund Water Resources Management Activities at State Agencies
- 13.C Invest in Local or Regional Water-Planning Efforts
- 13.D Invest in Feasibility Studies for Water Resources Projects
- 13.E Invest in Implementation of Water Resources Projects

Appendix F: Updated 100-Year Water Vision for Oregon (Original Vision Statement and Objectives)

Updated Water Vision



Oregon's 100-Year Water Vision: A Call to Action

Preparing a Secure, Safe, and Resilient Water Future for All Oregonians

Vision Statement

To address changes in climate and population dynamics, Oregonians will take care of our water to ensure we have enough clean water for our people, our economy, and our environment, now and for future generations. Oregonians will invest strategically in infrastructure and ecosystems across all regions to support resilient communities, vibrant local economies, and a healthy environment for all who live here.



Premise

Many areas of Oregon are known for clean and reliable water. As identified in Oregon's [Integrated Water Resources Strategy](#), some of the forces that combine to place significant stress on Oregon's water and water systems include:

- 1) Climate change and associated increases in temperature, wildfire, drought, damaging floods, and harmful algal blooms;
- 2) A half century of underinvestment in built and natural water infrastructure;
- 3) Our changing population and associated development – growing in some areas, shrinking in others; and
- 4) Too much demand for too little water for in-stream and out-of-stream uses.

These factors impact the quality and quantity of water for our communities, including water in our rivers, lakes, oceans, reservoirs, and aquifers. Simply put, if we are not willing to roll up our sleeves and work together to invest in the ecosystems that sustain us along with built and natural water infrastructure, we place the safety of our communities, the health of our people and environment, and Oregon’s economic future at risk.

Goals

Each goal below is important. No single goal can be fully realized independent of the others. Recognizing that tension, we need to invest in a range of innovative solutions that work in balance for our shared water future.

Health: Clean water for all who live in Oregon

Water should be fishable, swimmable, and drinkable. Investments in ecosystem health, and built and natural infrastructure will provide reliable access to clean water.

Economy: Sustainable and clean water to support local economic vitality

Diverse and resilient agricultural, timber, fishing, hi-tech, energy, and recreation economies require a reliable and clean water supply. Investments in built and natural water infrastructure will support high quality jobs across all Oregon communities.

Environment: Adequate cool, clean water to sustain Oregon’s ecosystems for healthy fish and wildlife

Cool, clean water and healthy forests, wetlands, riparian areas, streams, and estuaries provide essential natural processes that maintain and enhance water quality for fish and wildlife. Investments in ecosystems also provide recreational opportunities for those who live in and visit Oregon.

Safety: Resilient water supplies and flood protection systems for Oregon’s communities

Natural and built water systems designed to protect communities, and increase their resiliency to disasters like earthquakes, wildfires, floods, drought, and sea level rise, are important for all Oregon communities. Investments in those systems will help create safer communities and healthier ecosystems.

Call to Action

Oregon’s limited water supplies are already being shaped by climate and population changes. We must both act now and plan for the long term. How we choose to care for our water will determine if we pass a legacy of clean and sustainable water to future generations.

Principles

Note: The following principles were raised during the 2019 Vision outreach conversations. Some of them mirror [principles](#) in the Integrated Water Resources Strategy (IWRS). Where the concepts are similar, the IWRS principles are referenced. Information gathered through the fall will also be used as part of the next update to the IWRS.

While the Vision goals reflect *the needs we have* for water, our principles guide how *people can work together* to achieve a secure, safe, and resilient water future for all who live here.

Balancing Interests: Water is an essential but limited resource. We recognize there is not enough water to meet every ‘want.’ We will seek to balance interests across all of our water goals, and recognize the best solutions should address multiple uses. (*IWRS Principles - Balance, Sustainability, Interconnection/Integration*)

State Framework with Regional and Local Flexibility: Water challenges and opportunities vary greatly from region to region across the state. Successful strategic solutions and investments will build on flexible approaches that respect regional differences. These approaches should be both supported and bounded by a state framework, grounded in current water law, with clear policies to define the direction. (*IWRS Principles - Science-Based, Flexible Approaches, Implementation, Facilitation by the state*)

Tribal Sovereignty: Oregon’s water future is best implemented when we work in partnership with the sovereign tribes in Oregon, respecting both treaty rights and tribal cultural connections to water.

Equity & Transparency: The benefits of clean and reliable water are shared by all who live here, along with our native fish and wildlife. We will build a more equitable water future by ensuring our water decisions and investments are inclusive and transparent, with opportunities for all communities to participate. (*IWRS Principles - Public Process*)

Affordability: Improvements to our infrastructure and ecosystems come with costs. We will ensure that those costs are not disproportionately borne by those who can least afford it. (*IWRS Principles - Reasonable Cost*)

Infrastructure & Ecosystems: Oregon’s water goals can be met in many ways. We recognize that built systems like dams, pipes, levees are only one part of the solution. Natural systems like wetlands, estuaries, and rivers themselves must also be part of Oregon’s water future - both as natural infrastructure that provides clean water for human use, and as the components of a healthy ecosystem for fish and wildlife.

Coordination & Collaboration: We support formation of regional, coordinated, and collaborative partnerships that include representatives of local, state, federal, and tribal government, private and non-profit sectors, stakeholders, and the public to plan and invest strategically. (*IWRS Principles - Collaboration, Incentives*)

Engaged Oregonians: Engaged community members and water leaders are key to helping all of us who live in Oregon understand the value water as part of our culture, our communities, and our ecosystems. We will cultivate leaders in communities across Oregon that understand the importance of conserving and keeping our water clean, and recognize the need for coordinated water investments.

Innovation: Working with creative individuals and businesses across the state, we will invest in innovative solutions that balance the advantages of built, and natural infrastructure, while also protecting ecosystem values.

Best Use of Available Science Combined with Local Knowledge: The best solutions come when we recognize that both science and local knowledge have value. We will build investment approaches that allow for learning, adaptation, and innovative ideas. (*IWRS Principles - Science-Based, Flexible Approaches*)

Water as a public resource: Public investments in our water future should result in public benefits

Oregon's Water Challenges

Acknowledgements: Water is not like other kinds of infrastructure or natural resources. It is a public resource, but is managed by both public and private entities. It has cultural significance, and is essential to sustain life. There is a finite amount of water and it moves across the landscape while also varying in availability from year to year. Each of us has our own unique background that influences our perspectives on water and water infrastructure. This history forms the foundation for the different ways we each envision our water future. When we each bring that background to a common table, there can be disagreements. Respecting our different perspectives, the lessons we have learned, and the unique water challenges we've faced in our history will be important to develop a shared water future. Below are a list of common challenges and opportunities that will benefit from the focused attention of Oregonians with diverse perspectives.

Water System Challenges

Water Availability

System challenge: Many of Oregon's water delivery systems are outdated and inefficient, increasing the chance that water will not be available for communities when it is most needed.

System opportunity: We can incentivize water conservation and reuse, and invest in modern water delivery systems statewide. Efficiency gains and updated systems will help improve water reliability for cities and counties, tribes, ecosystems, and the many aspects of a thriving economy that depend on water.

Clean Water

System Challenge: Not all parts of Oregon have reliable access to clean water, resulting in increased health risks for those who live here.

System Opportunity: We can invest in resilient built and natural water infrastructure, and reduce pollutants to provide clean water for all Oregon communities.

Ecosystems

System Challenge: Not all watersheds provide cool, clean water and habitat for fish and wildlife, threatening the sustainability of those species in Oregon.

System opportunity: We can increase investments in watersheds to store, filter, and deliver water for fish and wildlife.

Community Security

System challenge: Too much of Oregon's built infrastructure is neglected and not keeping communities safe, while we have not fully realized the benefits of natural infrastructure and ecosystems to protect communities from harmful floods and provide resilience to drought.

System opportunity: We can modernize our flood protection infrastructure where appropriate, while fully incorporating the benefits of natural infrastructure and ecosystems. Combined, these will help mitigate impacts of increased flooding and drought, while reducing the impacts of sea level rise to coastal communities

Management Challenges

Data & Information Services

Management Challenge: Communities across Oregon lack basic data and information to make strategic, long-term decisions about water investments and water management.

Management Opportunity: Good data is the foundation of wise and coordinated decisions. We can work across agencies at all levels, with tribes, and with the private sector to improve access to accurate, relevant, trusted, and current water data and infrastructure condition. We can also use science and information to anticipate future trends. Access to quality information will help communities strategically plan for and invest in their water future.

Community Capacity

Management Challenge: Communities with fewer resources are challenged to strategically plan for and invest in their water future and need access to a skilled workforce to implement, manage, and monitor water projects.

Management Opportunity: We can begin investing now in strong community capacity and a skilled water workforce in every region across Oregon.

Investments in Water

Management Challenge: We have underinvested in our built and natural water infrastructure, and our ecosystems. Investments in water planning and projects are not fully coordinated at the community, regional or state levels, and there has not been a concerted conversation about how Oregon will fund its future water needs.

Management Opportunity: We can coordinate our current investments and seek new sustainable, dedicated public and private funding for restoration of ecosystems, and built and natural infrastructure. Coordinated and new investments will ensure communities – including Oregon's federally recognized tribes and those people living in disproportionately impacted and rural communities – can afford and access adequate clean water, and return it to our rivers for downstream users, fish, and wildlife.

Water Investment Decision-Making

Management challenge: Oregon lacks a cohesive governance system to strategically prioritize water investments at the local and regional levels, leaving those decisions to a wide array of individuals, governments, and other interests with overlapping priorities and investment needs.

Management Opportunity: Learning from other successful models, Oregon can implement best approaches to ensure water planning and investment decisions are strategic and coordinated across jurisdictions, and with public and private partners. This system can successfully combine a state-level framework with local and regional planning and flexibility.

Education & Culture

Management Challenge: Community leaders across Oregon have limited awareness of Oregon's water challenges, the urgency to act now, and potential water solutions.

Management Opportunity: We can work with communities to build a culture and leadership that prioritizes water at the local, regional, and statewide levels.

Water Vision Phase II Outcomes and Objectives

The state received a diversity of feedback on what the focus of next steps in the process should entail. These ranged from a full overhaul of Oregon's water rights, land use laws, and water quality laws, to focusing only on investments in water infrastructure.

The next phase will address two key outcomes: 1) improving funding coordination and increasing funding available in both the short and long term for built and natural water infrastructure and ecosystems, and 2) developing and investing in the public engagement, governance, information, and capacity systems needed to ensure communities can strategically plan for, design, and implement water investments. With those two outcomes in mind, the next phase will focus specifically on the following objectives:

Community Capacity: Recommend approaches to help communities engage individuals equitably, and expand capabilities to strategically plan for and implement actions to pursue their water futures.

Water Investment Governance: Recommend a framework for local, regional, and statewide governance that will lead to state-supported, regionally appropriate approaches to prioritize water investments with a focus on ensuring all individuals are represented.

Water Funding: Recommend approaches to increase funding coordination, identify early investment needs and funding gaps, and new funding sources that support community water planning, implementation, innovation, and evaluation.

Engaging Oregonians: Recommend approaches to help Oregonians better understand the vital importance of water, the water challenges we face, and the need for all of us to work together and support strategic water investments.

Data and Information Systems: Recommend data needs, tools, and information delivery systems that will help local communities and funders better understand current water and infrastructure conditions, and future water trends, to inform strategic decision-making at all levels.

The process will not focus on policy or statutory changes, except those recommended as a part of the advisory council process to advance the objectives outlined above.

While the process will highlight broad-scale investment opportunities for the 2021 legislative session, the next phase is not intended to prioritize individual community project investments. Rather, the process will help to establish a state and regional framework for how investments should be strategically coordinated and prioritized.

Appendix G: Oregon state agencies with a nexus to water

The Audits Division spoke with or received information or feedback from the following agencies during this project:

- **Water Resources Department:** WRD's mission is to serve the public by practicing and promoting responsible water management through two key goals; to directly address Oregon's water supply needs, and to restore and protect streamflows and watersheds in order to ensure the long-term sustainability of Oregon's ecosystems, economy, and quality of life.
 - WRD oversees water quantity and appropriation. This includes regulating surface and groundwater use through a water rights system and participating in local water planning efforts, among many other water related responsibilities.
- **Department of Environmental Quality:** DEQ's mission is to be a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water. The Water Quality Program's mission is to protect and improve Oregon's water quality,
 - DEQ oversees Oregon's water quality. This agency implements state and federal water quality policy and standards, among many other related responsibilities.
- **Oregon Health Authority Drinking Water Services:** DWS's mission is to administer and enforce drinking water quality standards for public water systems in the state of Oregon.
 - OHA-DWS implements the federal Safe Drinking Water Act. This agency regulates public drinking water systems, among many other related responsibilities.
- **Oregon Watershed Enhancement Board:** OWEB's mission is to help protect and restore healthy watersheds and natural habitats that support thriving communities and strong economies.
 - OWEB provides lottery funded grants to Oregonians to help care for local streams, rivers, wetlands, and natural areas.
- **Oregon Parks and Recreation Department:** OPRD's mission is to provide and protect outstanding natural, scenic, cultural, historic and recreational sites for the enjoyment and education of present and future generations.
 - OPRD administers the federal Scenic Waterways Act. This agency manages state parks and beaches for recreation and ecosystem protection.
- **Oregon Department of Agriculture:** ODA's mission is to ensure healthy natural resources, environment, and economy for Oregonians now and in the future through inspection and certification, regulation, and promotion of agriculture and food.
 - ODA administers the Agricultural Water Quality Management Program, which is responsible for developing plans and ensuring rule compliance to prevent and control water pollution from agricultural activities and soil erosion on rural lands. The program is also responsible for ensuring that farmers and ranchers help achieve water quality standards and meet the agricultural pollutant load allocations assigned by DEQ.
- **Oregon Department of Forestry:** ODF's mission is to serve the people of Oregon by protecting, managing, and promoting stewardship of Oregon's forests to enhance environmental, economic, and community sustainability.

- ODF develops, enforces and monitors practices under the Oregon Forest Practices Act, which includes rules on stream protection.
- **Oregon Department of Fish and Wildlife:** ODFW's mission is to protect and enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations
 - ODFW implements fish and wildlife protection and management policies, including regulating fish harvests and protecting and enhancing fish populations through habitat improvement and the rearing and release of fish into public waters.
- **Department of State Lands:** DSL's mission is to ensure Oregon's school land legacy and protect wetlands and waterways of the State through superior stewardship and service.
 - DSL manages state owned lands, including submersible lands and lands underlying tidally influenced waterways.
- **Department of Land Conservation and Development:** DLCD's mission is to help communities and citizens plan for, protect and improve the built and natural systems that provide a high quality of life. In partnership with citizens and local governments, DLCD fosters sustainable and vibrant communities and protects our natural resources legacy.
 - DLCD's programming focuses on land use, and water is appurtenant to land. DLCD provides technical assistance and funding to jurisdictions when putting together land use plans, and houses the state's ocean and coastal services program, which has a strong nexus to water.
- **Department of Energy:** ODOE's mission is to help Oregonians make informed decisions and maintain a resilient and affordable energy system.
 - ODOE promotes energy efficiency standards, including water efficiency for faucets, shower heads, commercial dishwashers, and residential sprinklers. ODOE also has a Nuclear Safety and Emergency Preparedness Division.
- **Oregon Department of Transportation:** ODOT's mission is to provide a safe and reliable multimodal transportation system that connects people and helps Oregon's communities and economy thrive.
 - ODOT does some work in the area of water resources and water quality management and treatment to mitigate impacts to water on a project basis.
- **Business Oregon:** Business Oregon's mission is to invest in Oregon businesses, communities, and people to promote a globally competitive, diverse, and inclusive economy.
 - Business Oregon administers multiple funding programs, both state and federal. Funding for water projects primarily comes through loan programs for water infrastructure, with some grant programs to assist communities planning water projects.
- **Regional Solutions:** Regional Solutions is a team of staff comprised of representatives from the Governor's Office and five state agencies, including: DEQ, DLCD, ODOT, OHCS, and Business Oregon. The team's goal is to create better communication and working relationships between agencies on tangible, priority economic projects, to leverage agency resources to assist communities, to make permitting and other regulatory processes more understandable and efficient, to use Oregon's sustainable community objectives as a guide to achieving priorities, and to strengthen the relationship between government and higher education.

The following agencies also have a nexus to water but were not interviewed for this project.

- **Department of Geology and Mineral Industries**
- **Oregon State Marine Board**
- **Oregon Public Utilities Commission**
- **Office of Emergency Management**

JETTY CREEK TIMELINE


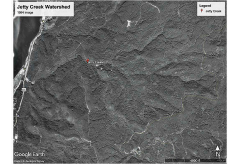

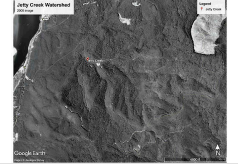



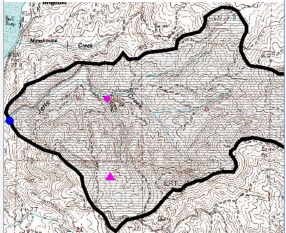



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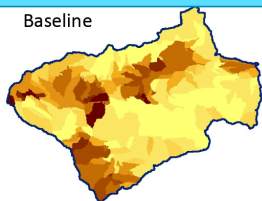









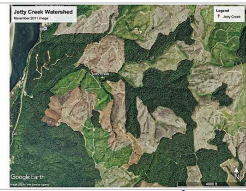

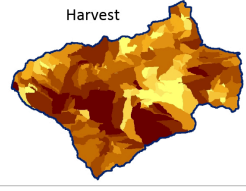

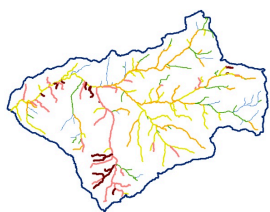
20 years of clearcuts & pesticide spray:
Watch what happens to a small Oregon town's drinking water . . .


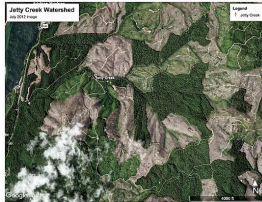



Appendix H: Timeline of Events in the Jetty Creek Watershed, 1994 - 2021

















by Betsy Herbert, Ph.D.


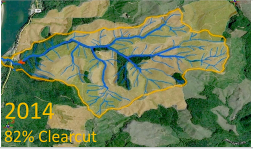

Photos courtesy of Trygve Steen, Rich Felley, Don Best & Nancy Webster









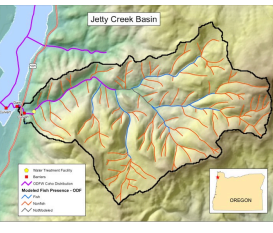






	Date	Event	Agency Response	Notes	Caption	Photos & maps (thumbnails)
	1994	Intact Jetty Creek Watershed, the primary source of drinking water for the Oregon coastal town of Rockaway Beach.		Jetty Creek watershed is 2.1 sq. miles or 1,344 acres. ***** Note the lack of both roads and clearcuts	1994 image from Google ***** USGS Black & White Aerial Photo Image	
	2000	MORE ROADS and a clearcut at edge Jetty Creek watershed		The single clearcut in the upper right corner is only partially in the Jetty Creek watershed.	2000 image from Google ***** USGS Black & White Aerial Photo Image	
	2002	Two clearcuts completed by Stimson Timber, primary landowner in Jetty Creek watershed	Acreage unknown; ODF destroys records of forest operations after 7 years		2003 image from USDA showing 2002 Stimson Timber clearcuts ***** Color Photo Aerial Image	
	10/1/02	Oregon Department of Environmental Quality (DEQ) identifies 2002 clearcuts in Jetty Creek watershed as potential "higher risk" contaminating source to Rockaway Beach drinking water	DEQ has no legal authority under Safe Drinking Water Act to restrict contaminating sources; source water protection in Oregon is "voluntary"	The two 2002 clearcuts were identified by DEQ in as higher risk contaminating sources to drinking water. (SOURCE WATER ASSESSMENT SUMMARY BROCHURE ROCKAWAY BEACH WATER DEPARTMENT PWS # 4100708)	2002 DEQ map of Rockaway Beach Water system's source watershed with pink arrows showing "area-wide" managed forests as contaminating sources	
	1/14/05	Oregon Health Authority (OHA) Water Quality Alert issued to Rockaway Beach Water system; Sampling dates were 9/15/04 & 11/30/04		First ever water quality alert for carcinogenic toxins issued to Rockaway Beach TOTAL TRIHALOMETHANES (TTHMs) and TOTAL HALOACETIC ACIDS (HAAs); safe levels exceeded. See records here. ; Both toxins are disinfection byproducts (DBPs) caused when chlorine interacts with organic materials (sediment) present in water. Jetty Creek water diverted for September 2004 was 28.74 acre feet; well water used for that month was 8.4 acre feet; for November 2004 Jetty Creek water used was 20.31 AF and well water used was 13.14 AF; see DWR Rockaway Beach Entity Water Use Report		
	8/16/05	OHA Water Quality Alert issued to Rockaway Beach Water system; Sampling date was 05/25/05		TTHMs safe levels exceeded See records here. Jetty Creek water diverted for sampling month of May was 24.52 acre feet; well water used for that month: 13.09 acre feet; see DWR Rockaway Beach Entity Water Use Report	8/2005 Image from State of Oregon ***** Note, much larger area of clearcuts	

	Date	Event	Agency Response	Notes	Caption	Photos & maps (thumbnails)
	2006	The 1,344 acre Jetty Creek watershed has 931 acres of forest cover after recent clearcutting by Stimson Timber		Sediment yield calculated as 2006 baseline (2011 unpublished presentation: Hydrological Impact Assessment-Oregon Coast Pilot Projects, hydrologist Shreevita Basu) Note that the areas with higher sediment yields align closely with the clearcuts in the photo above	Darker colors mean more sediment yield from catchments ***** compare to 2005 & 2011 post-logging maps	Baseline 
	2/23/07	OHA Water Quality Alert issued to Rockaway Beach Water system; Sampling date was 1/08/07		TTHMs safe levels exceeded See records here . Rockaway Beach failed to report water usage for entire year of 2007; see DWR water use report-surface water ; see DWR water use report groundwater		
	6/1/09	Rockaway Beach water rates at \$24-27/per 800 cu feet (approx. 6,000 gallons)		2009 Rockaway Beach City Council resolution		
	8/31/09	Rockaway Beach receives \$2,407,870 state & federal loans for new water treatment plant	OHA tells Rockaway Beach that new water treatment plant needed with membrane filter, to treat higher levels of turbidity (sediment)	(FinancialServices/SZ9002 Rockaway Beach Contract.doc) Net revenues of Rockaway Beach Water System shall be used to repay the loans; rates and fees to be set to enable repayment of loan, as specified in Special Conditions of the contract		
	6/23/10	OHA Water Quality Alert issued to Rockaway Beach Water system; Sampling date was 06/15/10		TTHMs safe levels exceeded See records here . Rockaway Beach failed to report water usage for entire year of 2010; see DWR water use report-surface water ; see DWR water use report groundwater		
	9/1/10	OSU hydrologist Kevin Bladon publishes paper demonstrating the increasing need for source water protection from land disturbance		"Implications of land disturbance on drinking water treatability in a changing climate: Demonstrating the need for 'source water supply and protection' strategies" Water Research 45(2): 461-72 Read article here .		
	9/14/10	OHA Water Quality Alert issued to Rockaway Beach Water system; Sampling date was 8/30/10		TTHMs safe levels exceeded See records here . Rockaway Beach failed to report water usage for entire year of 2010; see DWR water use report-surface water ; see DWR water use report groundwater		
	12/8/10	OHA Water Quality Alert issued to Rockaway Beach Water system; Sampling date was 11/30/10		TTHMs safe levels exceeded twice in 4th quarter; See records here . Rockaway Beach failed to report water usage for entire year of 2010; see DWR water use report-surface water ; see DWR water use report groundwater		
	2011	Rockaway Beach residents observe aerial pesticide spray with helicopters in the watershed	Records of pesticide spraying are kept by the applicators for only 3 years & not public information OAR 603-057-0410 ; annual reports of past pesticide spraying retained by Oregon Department of Agriculture (ODA), but are confidential & not available to the public OAR 603-057-0417 .			
	2011	Jetty Creek forest cover is 54% less than in 2006; now estimated at 428 acres		(2011 unpublished presentation: Hydrological Impact Assessment-Oregon Coast Pilot Projects, hydrologist Shreevita Basu)	11/2011 USDA Satellite Image ***** Many new clearcuts, very little forest is left	
	2011	Sediment yield increases significantly in Jetty Creek after forest clearcutting		2011 sediment yield calculated; compare to 2006 baseline map; (2011 unpublished presentation: Hydrological Impact Assessment-Oregon Coast Pilot Projects, hydrologist Shreevita Basu)	Darker colors mean more sediment yield from catchments ***** compare to 2006 baseline map	Harvest 
	2011	Summer streamflow decreases 30-40 percent in some reaches of Jetty Creek watershed, compared to 2006 baseline		Reduction in streamflow calculated; (2011 unpublished presentation: Hydrological Impact Assessment-Oregon Coast Pilot Projects, hydrologist Shreevita Basu)	Reaches shown in bright red = 30-40% decrease in summer streamflow; Reaches shown in brown = 20-30% decrease in summer streamflow	

	Date	Event	Agency Response	Notes	Caption	Photos & maps (thumbnails)
!	3/23/11	OHA Water Quality Alert issued to Rockaway Beach Water system; Sampling date was 4/28/11		TTHMs safe levels exceeded See records here . Rockaway Beach failed to report water usage for entire year of 2011; see DWR water use report-surface water ; see DWR water use report groundwater		
!	4/28/11	Rockaway Beach Water System's annual average for TTHMs in water exceeds the level considered safe for this carcinogen	OHA requires Rockaway Beach to send out a public notice	OHA contacts Rockaway Beach Water System: The running annual average for TTHMs was over the maximum contaminant level. This is the first time the Annual Average for TTHMs has exceeded a safe level. This is of special concern, because significant peaks are possibly hidden in the average and TTHMs are carcinogenic. See detailed report here . Rockaway Beach failed to report water usage for entire year of 2011; see DWR water use report-surface water ; see DWR water use report groundwater		
\$\$	5/4/11	Rockaway Beach completes construction of new water treatment plant; contract cost \$2.4 million; financed by State of Oregon; city to pay back \$1.7 million (2009 Rockaway Beach contract)		New plant uses a membrane filtration system to treat the 109 million gallons of water used annually by the City of Rockaway Beach. Read news article here .		
	7/1/11	Rockaway Beach residents Nancy Webster and Judy Coleman hike the watershed, observing recent clearcuts		They encounter two loggers working in the area who tell them that the Jetty Creek headwaters had some of the best drinking water in Tillamook County. The loggers said they were concerned that this logging would harm the drinking water source & suggested that we contact ODF to express our concerns about future pesticide spraying.		
!	7/8/11	OHA Water Quality Alert issued to Rockaway Beach Water system; Sampling date 6/28/11:		TTHMs exceeded running average for several quarters; OHA Water quality alerts continue after new water treatment plant up and running. See detailed report here . Rockaway Beach failed to report water usage for entire year of 2011; see DWR water use report-surface water ; see DWR water use report groundwater		
!	10/7/11	OHA Water Quality Alert issued to Rockaway Beach Water system; Sampling date 9/28/11		TTHMs safe levels exceeded See records here . Rockaway Beach failed to report water usage for entire year of 2011; see DWR water use report-surface water ; see DWR water use report groundwater		
!	10/7/11	OHA Water Quality Alert issued to Rockaway Beach Water system; Sampling date 9/28/11		HAA's safe levels exceeded See records here . Rockaway Beach failed to report water usage for entire year of 2011; see DWR water use report-surface water ; see DWR water use report groundwater		
!	5/21/12	OHA Water Quality Alert issued to Rockaway Beach Water system; Sampling date 5/10/12	OHA tells Rockaway Beach it needs to upgrade water treatment plant	TTHMs safe levels exceeded See records here . Rockaway Beach failed to report water usage for entire year of 2012; see DWR water use report-surface water ; see DWR water use report groundwater	7/2012 Google Earth Satellite Image ***** Shows much larger area of clearcuts	
	9/16/12	Rockaway Beach Citizens for Watershed Protection (RBCWP) is formed.		After watching aerial pesticide spraying of a recent clearcut in Jetty Creek only a half mile from her home, Nancy Webster joins with other neighbors to discuss drinking water quality alerts, pesticide spraying, and clearcutting in their drinking water source.		
	10/6/12	RBCWP bring concerns to Rockaway Beach City Council about pesticides sprayed in watershed polluting drinking water & pesticide drift	Concerns dismissed; City Council could have raised issues to DEQ, but they did not.	Citizens attending the city council meeting report that local real estate developers in attendance opposed any action that draws attention to water quality issues in Rockaway Beach		
!	10/10/12	OHA Water Quality Alert issued to Rockaway Beach Water system; Sampling date 9/25/12		TTHMs safe levels exceeded. See records here . Rockaway Beach failed to report water usage for entire year of 2012; see DWR water use report-surface water ; see DWR water use report groundwater		
!	10/10/12	OHA Water Quality Alert issued to Rockaway Beach Water system; Sampling date 9/25/12		HAA's safe levels exceeded See records here . Rockaway Beach failed to report water usage for entire year of 2012; see DWR water use report-surface water ; see DWR water use report groundwater		
	10/13/12	Nancy Webster of Rockaway Beach Citizens for Watershed Protection raises pesticide risk issues with ODF stewardship forester	ODF can't legally stop pesticide spraying, which is regulated by ODA	Email 10/13/12 between Nancy Webster & Stewardship Forester Ed Wallmark		
\$\$	2012	City of Rockaway Beach submits corrective action plan for water treatment plant to OHA; cost estimate \$400K		Read article here		




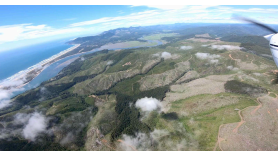


















	Date	Event	Agency Response	Notes	Caption	Photos & maps (thumbnails)
	4/3/13	OHA Water Quality Alert issued to Rockaway Beach Water system; Sampling date 3/21/13		HAA's safe levels exceeded See records here. Jetty Creek water usage for March 2013 was 26.87 AF; well usage was not reported for 2013; see DWR water use report-surface water ; see DWR water use report groundwater		
	4/3/13	OHA Water Quality Alert issued to Rockaway Beach Water system; Sampling date 3/21/13		TTHMs safe levels exceeded See records here. Jetty Creek water usage for March 2013 was 26.87 AF; well usage was not reported for 2013; see DWR water use report-surface water ; see DWR water use report groundwater	2013 Oblique Aerial Photo by Don Best ***** Shows extensive Jetty Creek watershed clearcuts	
	5/6/13	60 residents attend first public meeting regarding pesticide use on lands that provide municipal drinking water.		Organized by Bob Rees from the North Coast State Forest Coalition and held at the Rockaway Beach City Hall.		
	7/1/13	OHA Water Quality Alert issued to Rockaway Beach Water system; Sampling date 6/25/13		HAA's safe levels exceeded See records here. Jetty Creek water usage for June 2013 was 27.82 acre feet; see DWR water use report-surface water ; Rockaway Beach failed to report groundwater usage for entire year of 2013; see DWR water use report groundwater		
	7/1/13	OHA Water Quality Alert issued to Rockaway Beach Water system; Sampling date 6/25/13		TTHMs safe levels exceeded See records here. Rockaway Beach failed to report groundwater usage for entire year of 2013; see DWR water use report groundwater see DWR water use report-surface water ;		
	7/1/13	RBCWP submits white paper about clearcutting & aerial spray impacts on drinking water to governor's staff	Rockaway citizens' concerns are dismissed.	Rockaway Citizens meets with governor's staff & DEQ, but RBCWP requests for follow-up meeting were never acknowledged		
	2013	Pesticides aerial sprayed in headwaters of Jetty Creek by Stimson Timber:		Toxins: Clopyralid, Glyphosate, Imazapyr, Metsulfuron methyl, Sulfometuron Methyl; surfactant, and Chemical additives Cross hair and Syl-Tac and MSO.		
	2013	Public comments submitted: People should not be exposed to these toxic chemicals, which can persist in soil and move into surface and ground water.	ODF and OHA claim these pesticides are safe when used as directed. Neither ODF or OHA have authority to stop pesticide application. OHA does not monitor pesticide drift in air.	Emails between Nancy Webster and ODF staff member David Farrar July 2013		
	6/24/13-12/31/13	Pesticide application: Aerial spray north of treatment plant in Jetty Creek by Olympic Resource Management:		Toxins: Oust Extra, Glyphosate, Accord XRT, Chopper, and MSO surfactant.		
	8/21/13	Rockaway Beach/Jetty Creek featured in front page story in The Oregonian: "Seeking Purity, from Forest to Faucet"		Read Oregonian article here. Nancy Webster interviewed by investigative reporter Scott Learn about deficiencies in Oregon's forest practice regulation; 11 of the 18 public water systems on the coast have received DEQ water quality alerts		
	9/18/13	DEQ & Tillamook Estuaries Partnership detect pesticide sulfometuron-methyl in Rockaway Beach raw drinking water		(p. 24, 2015 DEQ final draft) Rockaway Beach Water District spoiled prior test between August 13-26 because of plant tests done at sampling time. So had to be re-done in September.		
	9/24/2013	OHA Water Quality Alert issued to Rockaway Beach Water system; Sampling date 9/12/13		TTHMs safe levels exceeded See records here. Rockaway Beach failed to report water usage for entire year of 2013; see DWR water use report-surface water ; see DWR water use report groundwater		
	10/10/13 - 12/31/13	"2013 Mt Beaver Control" 500 acre county-wide rodenticide ground application; within 100 feet of numerous fish-bearing & domestic use streams		Toxin: chlorophacinone Statutory written plan required; included; FERNS notification # 2013-511-00314		
	12/4/2013	OHA Water Quality Alert issued to Rockaway Beach Water system; Sampling date 11/21/13		Rockaway Beach has now received more OHA water quality alerts than any other public water system on the Oregon Coast. Carcinogenic TTHMs safe levels exceeded See records here. Rockaway Beach failed to report water usage for entire year of 2013; see DWR water use report-surface water ; see DWR water use report groundwater		
	12/17/2013	NOAA and EPA issue finding that Oregon Forest Practices fail to protect water quality in coastal zone	ODF continues to treat forest practice rules as best management practices	(OR CZARA Decision Doc 12-17-13.pdf); Four deficiencies cited: inadequate riparian buffers, inadequate landslide prevention, inadequate mitigation for forest roads, inadequate pesticide mitigation		

















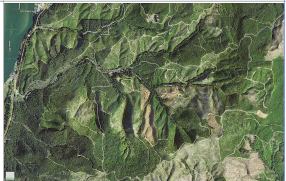


	Date	Event	Agency Response	Notes	Caption	Photos & maps (thumbnails)
💰	2014	City of Rockaway Beach completes construction of enhanced treatment (pressurized sand filters)		USWA_00708RockawayBeach.pdf (DEQ source water assessment, p. 8)		
☠️	1/1/14 - 12/31/14	"Roadside spraying" county wide within ORM lands; no application method described; within 100 feet of fish-bearing & domestic water use streams		Toxins: LV6, Escort; Common: Glyphosate, Imazapyr, Triclopyr Statutory written plan required; included; FERNs notification # 2014-511-00003		
🪵	02/28/14 - 12/31/14	"Jetty Tie Road" 110 foot logging road construction	ODF waives 15 day waiting period	No statutory plan required; FERNs notification #2014-511-00052		
☠️	5/1/14 - 9/30/14	"2014 county wide scotch broom spray" 100 acres; within 100 feet of streams or lakes; ground application		Toxin: triclopyr Statutory written plan required; included; FERNs notification # 2014-511-00103		
📢	9/4/2014	More than 200 people attend the first RBCWP town hall meeting, featuring a panel discussion of aerial spraying with Lisa Arkin and Laurie Bernstein, Beyond Toxics.			7/2014 Google Earth Satellite image	
🪵	2014	Jetty Creek watershed now 82% clearcut since 2000		Beyond Toxics organization does analysis of percent clearcut in Jetty Creek watershed.	2014 Analysis of Jetty Creek Watershed ***** 82 % Clearcut	
👥	11/2/14	RBCWP joins planning meeting with Cameron LaFollette from Oregon Coast Alliance				
💡	11/10/14	High Country News features Nancy Webster of RBGWP in cover story		Read High Country News article here	High Country News ***** Cover Story Features Nancy Webster	
👥	12/17/14	Jetty Creek Scoping Project for improving fish passage & building a drinking water settling pond.				
💡	2015	DEQ completes final draft of report linking private forests to water quality risks		Private forest land is the source of drinking water for 40% of Oregon's water providers; "managed forests" listed as "higher risk" impact for drinking water		
👥	1/1/15	RBCWP invited to Newport Town Hall meeting to discuss "Community Dialogue on Forestry, Pesticides, and Health."				
💡	1/30/15	EPA & NOAA find Oregon's Forest Practice Rules not in compliance with Clean Water Act in the coastal zone	ODF continues to use existing Forest Practice Rules	Forestry regulations found insufficient to protect water quality from weak stream side buffers, impacts of legacy roads, impacts from landslides & pesticides Read finding here		
!	2/1/15 - 2/15/15	OHA issues major violation to Rockaway Beach Water District for failing to report turbidity & treatment monitoring required by federal Surface Water Treatment Rule		Returned to compliance 04/03/15; Read violation report here ; Jetty Creek water usage for February 2015 20.48 acre feet; well water usage for February 2015 zero AF; see DWR water use report-surface water ; see DWR water use report groundwater		
💡	2/1/15	RBCWP interviews Shane Anderson, filmmaker of "Behind the Emerald Curtain."				
🪵	3/26/15- 12/32/15	"Rockaway PCT" 79.7 acre pre-commercial thinning within 100 ft. Of Jetty Creek		Statutory written plan required; included in file; Summary 2015-511-04819.pdf		
👥	4/22/15	RBCWP sponsors free showing of film " Drift: A Community Seeking Social Justice " at the Coliseum Theater in Tillamook, Oregon.		Timber companies complain to Coliseum Theater about showing the film. Watch film on YouTube		
☠️	4/26/15 -12/31/15	"Countywide scotch broom spray" within 100 feet of fish-bearing stream		Toxins: triclopyr with acid; chemical additives: Forest Crop Oil Statutory written plan required; included; FERNs notification # 2015-511-06201		
☠️	4/27/15 - 12/31/15	"County wide roadside spray" including Jetty Creek watershed; within 100 feet of fish-bearing & D streams and domestic water supply		Toxins: glyphosate, imazapyr, and triclopyr with acid and 2,4-D with ester; chemical additive: Forest Crop Oil Statutory written plan required; included; FERNs notification # 2015-511-06202		
☠️	4/28/15 - 12/31/15	"Paradise Pole" 17.5 acre herbicide application within 100 feet of fish-bearing stream;		Toxins: glyphosate and imazapyr and sulfometuron methyl and metsulfuron methyl; chemical additives: Crosshair and Syul-Tac and MSO Concentrate Statutory written plan required; included; FERNs notification # 2015-511-06533		







	Date	Event	Agency Response	Notes	Caption	Photos & maps (thumbnails)
	7/4/15 - 10/31/15	"Rockaway Roadside Spray" on ORM timberlands; within 100 feet of fish-bearing streams		Toxins: 2,4-D with acid and glyphosate and triclopyr with acid; chemical additive: MSO concentrate Statutory written plan required; included; FERNs notification # 2015-511-09445		
	7/13/15 - 12/31/15	"PCT #5" 84 acre pre-commercial thin; within 100 feet of fish-bearing streams; partially in Jetty Creek watershed		Statutory written plan required; none found in file FERNs notification #2015-511-10329		
	7/20/15 - 12/31/15	"PCT #6", 80 acre pre-commercial thinning in Jetty Creek within 100 feet of fish-bearing and domestic use streams		Statutory written plan required; none found in file; FERNs notification #2015-511-10705		
	8/1/15	Rockaway Beach water rates double since 2009 to \$48-54/800 cu ft. (approx. 6,000 gallons)		Before treatment plant was built water rates were \$24-\$27/800 cu. ft;		
	8/9/15	RBCWP meets with Ed Armstrong, Commissioner from DEQ.		Ed Armstrong was a former resident of Tillamook County		
	8/17/15	Rockaway Beach applies to Department of Water Resources (DWR) for emergency water use from Spring Creek		DWR Application # LL1607 approved with consent of Neah Kahnle School District at rate of 51 cubic feet per second (cfs)		
	9/17/15	Second annual RBCWP town hall meeting in Rockaway Beach. "Safeguarding the Future of Coastal Clean Water and Air." Coming together of many environmental groups; Slide presentation explains risks of aerial pesticide spraying as practiced in Oregon		Presenters include: Lisa Arkin, Executive Director, Beyond Toxics; Deke Gunderson, Ph.D. - Environmental Science professor at Pacific University. Greg Haller - Conservation Director, Pacific Rivers Council. Chandra LeGue - Western Oregon Field Coordinator, Wild Oregon, Geoff Wullschlager - City Manager, Wheeler, Oregon.		
	10/14/15 - 12/31/15	"Boomer Trap Paradise Pole" 17 acre rodenticide ground application targeting mountain beaver; within 100 feet of fish-bearing stream		Toxin: Rozol pellets Statutory written plan required; included; FERNs notification # 2015-511-13039		
	10/10/15 - 12/31/15	"Rockaway Pile Burn" 431 acres in and around Jetty Creek watershed		FERNs notification #2015-511-12980; Burn permit required; none found in file		
	10/22/15	Premier of "Behind the Emerald Curtain" documentary film by Shane Anderson, Pacific Rivers		RBCWP interviewed by Shane Anderson; Watch trailer here	Screen shot of 2015 official trailer for the film	
	2016	Oregon Department of Fish & Wildlife (ODFW) releases Jetty Creek map showing presence of native fish			ODFW Fish Map ***** Purple = Coho Blue = Fish Red = Non-fish ***** "Olympic Line" Logged in 2020 involves Fish Bearing Stream	
	5/30/16 - 12/31/16	"Tillamook 2016" Herbicide application ground spot application, undisclosed acreage, within 100 feet of stream		Toxins: triclopyr with ester and triclopyr with acid and triclopyr with amine and 2,4-D with ester and 2,4-D with amine and glyphosate with chemical additives MSO concentrate	8/1/2016 Google Earth Satellite image ***** Red O in area where 10/1/2016 ground image was taken	
	6/26/16	RBCWP accompanies Oregon Wild and North Coast State Forest Coalition on ecological & forest management hike				
	7/9/16 - 12/31/16	"Hatchet " 35 acre herbicide application, ground, pressurized, broadcast; within 100 feet of fish-bearing streams		Toxins: clopyralid and sulfometuron methyl Statutory written plan required; included; FERNs notification # 2016-511-07995		
	7/12/16 - 12/31/16	"Red Alder Slash 2016 2" 129 acre Pre-commercial thinning in Jetty Creek watershed within 100 feet of fish-bearing & domestic use streams		Statutory written plan required; included; FERNs notification # 2016-511-08038	10/1/2016 Ground image of upper Jetty Creek watershed, looking southwest	
	9/1/16 - 12/31/16	"Maple Clump 2.0" 47 acre herbicide application, within 100 feet of fish-bearing streams; ground manual spot application;		Toxin: Imazapyr Statutory written plan required; included; FERNs notification # 2016-511-10209		




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	9/2/16	Jones & Perry research published: "Summer streamflow deficits from regenerating Douglas-fir forest in the Pacific Northwest"		Plantation-style forestry shown to reduce stream flows Read article here.		
	10/16/16	RBCWP organizes "Save Short Sand Town Hall," an all-day workshop in Manzanita, Oregon to discuss Boise Cascade's poisoning of Short Sand Beach with pesticide residue.		Private forest clearcuts draining to public recreation areas Oswald West State Park & Short Sand Beach to be sprayed with a mix of dangerous chemicals		
	1/6/17	After pushback from the timber industry, DEQ scraps 2015 report linking private forests to water quality risks	State Forester Peter Dougherty states there is no evidence showing forest practices harm water quality.	"After Pushback, Oregon Scraps Report Linking Private Forests To Water Quality Risks," Peter Schick, OPB Read OPB article here		
	4/11/2017 - 12/31/17	"Olympic Line Pre" Road construction and landing expansion in headwaters of Jetty Creek watershed	Headwaters streams not protected by forest practice rules	Statutory written plan not required; FERNs notification # 2013-511-03705		
	3/18/17	"All Aboard the Clearcut Express," launched in Portland. RBCWP participates in the launch		Tri-Met light rail MAX train wrapped in an informational sign sponsored by Oregon Wild Read about "All Aboard the Clearcut Express." here.	Oregon Wild photo ***** "Welcome to Oregon Home of the Clear-Cut"	
	4/19/17	RBCWP joins other Oregonians in Salem for the "Rally for the Water and Wildlife."		Read about "Rally for the Water and Wildlife" here		
	4/25/17	Release of "360 Degrees of Oregon Forest Practices: How Oregon's Forestry Laws are Wreaking Havoc on Coastal Drinking Water," a documentary film produced by the University of Oregon School of Journalism.				
	May 2017	Lincoln County voters passed Measure 21-177, banning aerial pesticide spraying in the county	State law pre-empts county's power to ban pesticides	Ordinance will later be overturned by Circuit & Appeals Court rulings		
	5/12/17	RBCWP member Glenna Gray, organizes book release event for "May the Forest Be With You"			"May the Forest Be With You," edited by Gray, celebrates forests and trees & shines light on consequences of logging as it is currently practiced	
	5/13/17	Jetty Creek Excursion: Rockaway Citizens hike with Western Oregon College Green Team and Environment Club to see what trees are left standing after last clearcut.			6/2017 Google Earth Satellite Image ***** The last area of older forest in remains in the center.	
	7/8/17- 12/31/17	"Alder Slash" 1749 acre pre-commercial thinning throughout Tillamook county, within 100 feet of numerous fish-bearing & domestic use streams		Statutory written plan required; included in file; Summary 2017-511-08054.pdf		
	7/19/17	RBCWP hosts presentation by Chuck Willer, Coast Range Association: "Western Oregon's Private Forests & Their Role in our Region"				
	7/26/17	RBCWP announces ODF plans for extensive spraying on state lands across Oregon north coast.		Read news article about extensive spraying		
	7/27/17	RBCWP calls on Governor Kate Brown to order immediate cease to the toxic sprays on state lands until public notification can be guaranteed.	Request dismissed.			
	8/01/17 - 8/31/17	OHA issues major violation to Rockaway Beach Water District for failing to report turbidity & treatment monitoring required by federal Surface Water Treatment Rule		Returned to compliance 10/04/1 See violation record here		

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	9/17/17	RBCWP organizes town hall meeting in Rockaway Beach. : "Say 'Yes' to Better Forestry" with presenters Peter Hayes, forester, and Ernie Niemi, economist.				
	10/20/17	RBCWP organizes presentation in Hebo, Oregon entitled "Clean Waters Forum, Are Our Coastal Drinking Waters at Risk?"		Presenters: Lisa Arkin, Jason Gonzales, Susan Katz, M.D.		
	11/1/17	Rockaway Beach water rates almost triple , increasing again from 2009 to \$68-74/800 cu ft. (approx. 6,000 gallons) to cover cost of treatment plant		2009 water rates were \$24-27/per 800 cu.ft (approx. 6,000 gallons)		
	11/12/17	RBCWP speakers series "The Legacy of Agent Orange in Oregon Forests" by photographer and writer Roger Dorband				
	3/21/18	OHA issues "BOIL WATER" Advisory to Rockaway Beach	Affected 20 homes; Advisory lifted 3/22/18	Loss of water pressure due to a landslide; 60 feet of pipe need to be replaced; Read report here		
	5/15/18	University of Oregon economist Ed Whitelaw writes about his 2017 class study of Jetty Creek, which concludes that logging causes turbidity		Op-ed Published in Register Guardian: "Turbid waters point to need for better forest practices," by Ed Whitelaw and Winston Hovekamp; Read Op-ed here		
	5/26/18 - 12/31/18	Aerial herbicide application to 496 acres various sites in Tillamook County including Jetty Creek; Syl-Tac, and Crosshair		Toxins: glyphosate, metsulfuron methyl, sulfometuron methyl, imazapyr, aminopyralid and Metsulfuron methyl with additives of Super Spread, MSO Targeted plants include native species Elderberry, Salmonberry, Thimbleberry, Cascara Buckthorn; Statutory written plan required; included in file; Summary 2018-511-07155.pdf		
	6/13/18	RBCWP organizes forestry & pesticide monitoring workshop. Presenter: Jason Gonzales, Oregon Wild				
	9/11/18	RBCWP public meeting with Jason Gonzales discussing Spray Free Coast & coastal community organizing				
	10/9/18	RBCWP speaker series: Jeremy Sappinton, public health professor, discusses industrial forest pesticide applications & potential public health concerns				
	11/1/18	RBCWP joins forces with other environmental groups to support a statewide ballot initiative to protect forests and drinking water				
	11/13/2018	RBCWP speaker series: Erin Grady Civil Liberties Defense Center: "In Defense of Coastal Forests: Know Your Rights"		Read article about event here		
	2/19/19 - 12/12/19	"PCT 19" pre-commercial thinning 674 acres throughout Tillamook County including 114 acres in Jetty Creek watershed; within 100 feet of numerous fish-bearing & salmon, steelhead & bull trout streams		Statutory written plan required; included in file; Summary 2019-511-02021.pdf		
	2/1/19	RBCWP celebrates new name for organization: North Coast Communities for Watershed Protection (NCCWP).		The organization has expands to more than 700 members, including neighboring north coast communities concerned about clearcutting and toxic spray in drinking watersheds Read about it here		
	4/26/19 - 12/31/19	Aerial, ground pressurized & broadcast herbicide application; 411 acres; within 100 ft. of numerous fish-bearing, domestic use & salmon, steelhead & bull trout streams in Tillamook County		Includes Jetty Creek watershed; Toxins: glyphosate, metsulfuron methyl, sulfometuron methyl, imazapyr, aminopyralid, and metsulfuron methyl with chemical additives Super Spread MSO, Syl-Tac, and Crosshair Summary 2019-511-05120.pdf		
	5/14/19	NCCWP speaker series: Attorney Mary Scurlock presents: "Private Forest, Public Waters & How Oregon is Failing its Forest Streams."		Read article here.		

	Date	Event	Agency Response	Notes	Caption	Photos & maps (thumbnails)
	5/22/2019	Nancy Webster is featured in Video "TROUBLED WATERS, in Oregon Forests," produced by Wild Salmon Center, Portland		Watch the video here	Image captured from "TROUBLED WATERS" video ** Nancy Webster on LightHawk flight observing coastal clearcut logging	
	5/22/2019	Flyover reveals recent major clearcut logging in Jetty Creek watershed		Image at 2 minutes 53 seconds in "TROUBLED WATERS, in Oregon Forests" Watch the video here	Jetty Creek Watershed with "Olympic Line" logged in 2020 in center among clouds	
	5/24/19 - 12/31/19	"2019 PCT 2" 39 acre pre-commercial thinning including part of Jetty Creek watershed				
	6/1/19	NCCWP tables at Farmers Markets			NCCWP Tables at local Farmers Markets	
	6/11/19	NCCWP speaker series: Economist Ernie Niemi: "Big Timber and You: The Economics Made Easy," Astoria, OR		Read Ernie Niemi article here		
	6/13/19	Beyond Toxics offers free FERNs Training: A forest pesticide monitoring workshop.				
	7/2/19	NCCWP joins other organizations at Hug Point to "Rally for the Trees."		North coast communities oppose clearcuts in local drinking watersheds Read news article here	Scene from Hug Point ***** "Rally for the Trees"	
	7/4/19	NCCWP "Forest Fairies" take first place for nature representation at Manzanita Independence Day pageant		Event to call attention to the plight of local forests Read news article here		
	7/9/19	NCCWP speaker series: Ecology professor Trygve Steen: "The Pacific Northwest's Forest Management Crisis Continues"		Read news article here		
	7/11/19	Secretary of State receives ballot initiatives 35 Oregon Forest Waters Protection Act , 36 Protect Forest Waters from Clearcut Logging , & 37 Protect Forest Waters from Aerial Pesticide Spray		NCCWP submits more signatures than any other Oregon group for these ballot initiatives. Read about these ballot initiatives here		
	7/21/19	NCCWP co-sponsors statewide petition to Governor Kate Brown to stop aerial spraying	No action.			
	8/13/19	Tour of the Neah Kah Nie Water District watershed		The tour is led by Richard Felley, General Manager of the Neahkahnie Water District and Trygve Steen, Ph.D., PSU professor & forestry expert.	Group that participated in the watershed tour **	
	8/19/19	NCCWP speaker series: Lisa Arkin, Beyond Toxics: "What are Timber Industries' Practices Doing to Our Watersheds?"				
	9/1/19	Circuit Court strikes down Lincoln county ordinance banning aerial pesticide use, citing the Oregon Pesticide Control Act, state law which says only the state can regulate pesticide use.	State law pre-empts county ordinances	Read article here		
	9/1/19 - 12/31/19	"Boomer Bait" 809 acre Rodenticide application throughout Tillamook County, including Jetty Creek watershed; within 100 feet of numerous fish-bearing & salmon, steelhead & bull trout streams and within 300 feet of wetlands & eagle nests		Toxin: Rozol (aimed at killing native Mt. beavers) Mt. Beavers are a native rodent that play a valuable role in ecosystem functions. They are poisoned because they eat new tree seedlings. There are alternatives to poison that prevent this activity. Statutory written plan required; none found in file; Summary 2019-511-06470.pdf		
	9/21/19	CBS <i>This Morning</i> interviews NCCWP's Nancy Webster about "How to Protect Trees of the Pacific Northwest"		A private forest manager states on camera that he finds clearcuts "aesthetically pleasing" Watch the clip here .	Nancy Webster, founder of NCCWP, is interviewed by CBS "This Morning" reporters	

	Date	Event	Agency Response	Notes	Caption	Photos & maps (thumbnails)
	9/28/19	NCCWP event: "Look Up! It's a Watershed Moment" an all-day art, performance, and forest waters educational forum.		Keynote speaker Ralph Bloemers, Crag Law Center. Read news article here	Scene from NCCWP's parade ***** "Look Up! It's a Watershed Moment"	
	10/4/2019	Oregon Secretary of State rejects ballot initiative for tighter restrictions on clearcutting & aerial pesticide spraying.		Read Oregonian article here		
	11/18/19	NCCWP speaker series: Conrad Gowell, Native Fish Society. "Sustainability of Wild Fish & the Risks They Face"				
	11//2019	NCCWP collects signatures in Manzanita for statewide ballot measure, "Forest Water Protection Act".			Nancy Webster and friend collecting Ballot Measure Signatures in Manzanita	
	2020	NCCWP signs petition to Governor Kate Brown requesting moratorium on pesticide aerial spraying, slash burning, & prescribed burning during the Covid-19 pandemic.	Request for aerial pesticide moratorium dismissed; burning was restricted			
	2020	Citizen Science Project: Smoke Monitoring.				
	1/11/20	NCCWP joins Informational rally in Wheeler. Theme: "Ask Stimson to Stop Spraying and Clearcutting above Wheeler."		Event in response to Stimson Lumber Company's proposed ground-spray pesticides on 93 acres of their clearcut land near Wheeler, Oregon residential areas. Read news release here		
	2/10/20	Oregon environmental groups, timber companies strike 'extraordinary' compromise , signaling end to November ballot fight		NCCWP refuses to sign onto the compromise (MOU) because it doesn't address worst impacts to drinking water: Clearcutting, toxic pesticide spraying & because NCCWP wants to keep speaking out about needed forestry reform Read Oregon Live article here		
	2/12/20	State of Oregon Court of Appeals reverses lower court decision rejecting Ballot Initiatives 35, 36, & 37.		Reasons for rejecting Ballot initiatives found bogus; Anantha v. Clarno, 302 Or. App. 196, 461 P.3d 282 (Or. Ct. App. 2020)		
	2/29/20	NCCWP speaker series: Deke Gundersen, toxicologist, Pacific University. "Pesticides and Environmental Justice: Impacts on Community Health"		Event draws residents from along the Oregon coast. Read about it here		
	6/20	Hydrologist Kevin Bladon publishes research showing that sediment increases tenfold in logged areas over uncut areas inside stream buffers.		"Quantifying effects of forest harvesting on sources of suspended sediment showing an Oregon Coast Range headwater stream" Forest Ecology and Management 466:118123. Read the article here		
	6/20	Hydrologist Catalina Seguro publishes research showing streamflow 50% lower in a 40 yr-old plantation relative to 110-yr-old forest.		"Long-term effects of forest harvesting on summer low flow deficits in the Coast Range of Oregon," Seguro et al; Journal of Hydrology Read the article here		
	9/11/20	Oregonian/Propublica publish "Big money bought the forests. Small timber communities are paying the price"		Excerpt: "In western Oregon, at least 40% of private forestlands are now owned by investment companies that maximize profits by purchasing large swaths of forestland, cutting trees on a more rapid cycle than decades ago, exporting additional timber overseas instead of using local workers to mill them and then selling the properties after they've been logged." Read the article here		
	11/24/20 - 12/18/20	129 citizens & NCCWP members submitted public comments to ODF opposing the Olympic Line clearcut because of impacts to drinking water and other environmental impacts	ODF dismisses comments; ODF rejects request for extension of 15 day waiting period due to upcoming holiday & COVID.	ODF does not have the authority to "disapprove" a forest operation See ORS 527674	Spring 2021 Google Earth Satellite Image ***** Shows "Olympic Line" Clearcuts	
	12/5/20 - 05/21	"Olympic Line" 56 acres of clearcuts within 50 feet of Jetty Creek fish-bearing & domestic us streams & wetlands		Statutory written plan required; none found in file; Summary 2020-511-12574.pdf	Aerial image of the clearcuts during "Olympic Line" photo by Trygve Steen	

	Date	Event	Agency Response	Notes	Caption	Photos & maps (thumbnails)
	12/31/20	Jetty Creek featured in ProPublica/OPB article: "Timber Tax Cuts Cost Oregon Towns Billions. Then Polluted Water Drove Up the Price"		Excerpt: "More than two dozen communities have had at least 40% of the forests around drinking water sources cut down in the past 20 years....Rural communities in Oregon paid millions of dollars for clean, safe drinking water because the state didn't protect their watersheds from logging-related contamination." Read article here		
	01/09/21 - 05/03/21	"Crossover Salvage" 10 acre clearcut in Jetty Creek watershed, within 100 ft of fish-bearing stream		Statutory written plan required; none found in file; Summary 2020-511-12979.pdf	In background, "Crossover Salvage" logging in progress; In foreground, 2014 clearcut shows poor regeneration & much bare soil; photo by Trygve Steen	
	3/2/21	Pesticides used in forestry detected in clams, mussels & oysters off along Oregon coast (Portland State University study)		Scully-Engelmeyer K, et al., "Exploring Biophysical Linkages between Coastal Forestry Management Practices and Aquatic Bivalve Contaminant Exposure." <i>Toxics</i> . 2021; 9(3):46. Read article here		
	3/17/21	Betsy Herbert, Ph.D., testifies on behalf of NCCWP to the Oregon State Legislature in support of HB 2594, Directing the Department of Forestry to Better Protect Community Drinking Water Supplies	HB 2594 failed	Read HB 2594 & testimony here		
	4/18/21	Nancy Webster, Betsy McMahon & Ron Byers, Esq. present comments on behalf of NCCWP to NOAA.		Comments request emphasis on drinking water and watershed protection in the EIS of the HCP for western Oregon forests.		
	5/1/21	"Olympic Line" extensive blowdown along Jetty Creek and in watershed area feeding Jetty Creek		Intermittent stream channel with narrow 20 foot strip of trees for protection is blowing down severely in just five months,	Extensive blowdown in "Olympic Line" stream buffers; Soil exposed by the blowdown likely to wash down into Jetty Creek creating turbidity & water treatment problems; photo by Trygve Steen	
	5/22/21 - 12/31/21	"2021 PCT Alder Slash" 956 acre pre-commercial thinning throughout Tillamook County, including Jetty Creek watershed; within 100 ft of numerous fish-bearing & salmon, steelhead & bull trout streamss & wetlands		Statutory written plan required; none found in file; Summary 2021-511-05908.pdf		
	6/1/21	Oregon Appeals Court affirms lower court ruling striking down Lincoln County's local ordinance to ban aerial pesticide spraying		Read news article here		
	6/17/21	Betsy Herbert, Ph.D., submits public records act request to ODF, requesting all records of logging and pesticide spraying in the Jetty Creek watershed back to 2002.	ODF charges \$725 for the records. Reason: High cost because records are not kept at the watershed scale.	Approximately half the records provided are not within the watershed. No records before 2015 are provided. ODF destroys all records of forest operations after 7 years.		
	8/5/21 - 12/31/21	"124 PCT" 51 acre pre-commercial thinning including parts of Jetty Creek watershed, & within 100 feet of a fish-bearing stream				
	7/22/21	Betsy Herbert, Ph.D., testifies on behalf of NCCWP to DEQ's forum re: "DEQ's Obligations Regarding Protection of Community Drinking Water Supplies from Impacts of Industrial Forest Practices"	TBD	Dr. Herbert testifies that DEQ has the authority to override ODF's forest practices if DEQ finds that the regulations are not sufficient to protect water quality.		
	9/8/21	Ron Byers, Esq. & Trygve Steen, Ph.D. testify on behalf of NCCWP before the Board of Forestry urging prioritization of watershed and drinking water protections in ODF goals.				

	Date	Event	Agency Response	Notes	Caption	Photos & maps (thumbnails)
	9/29/21	"Extraordinary compromise" known as Private Forest Accord reached between fisheries advocates and timber industry		Agreement expands stream side buffer zones throughout private forest lands, more restrictions on forest roads, and logging on steep slopes; DOES NOT ADDRESS clearcutting, cumulative impacts from forest operations on water quality/ quantity, DOES NOT PROHIBIT pesticide spraying in drinking watersheds, DOES NOT REQUIRE 80-year rotations in drinking watersheds.		
	10/7/21	DEQ lists community water systems that qualify as "impaired" for turbidity; Jetty Creek is not on the list	TBD	Dr. Betsy Herbert publicly asks DEQ why Jetty Creek is not listed as impaired after being 95% clearcut over 20 years, receiving more water quality alerts for disinfection byproducts than any other water system on the coast, and Rockaway Beach not reporting their water usage for most of those years.		
	12/3/21	ODF adds "Drinking Water Protection" as a new goal in their draft Forest Management Plan for state lands in western Oregon		Previous testimony by Forest/Waters Coalition, NCCWP & others helped to make this possible		



This report is intended to promote the best possible management of public resources.
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