Managing Per- and Polyfluoroalkyl Substances (PFAS) in Oregon

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House Interim Committee on Agriculture, Land Use, and Water

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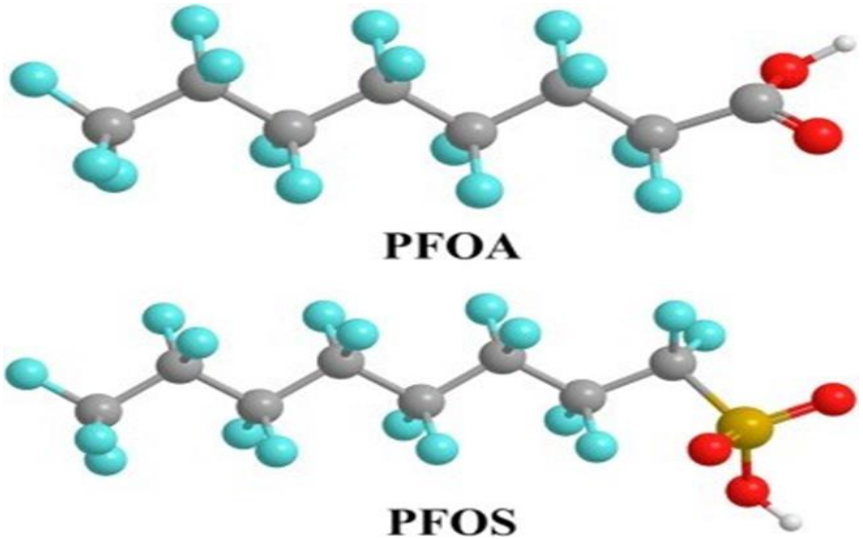
State of Oregon DEQ Department of Environmental Quality
Oregon Health Authority
oregon association of CLEAN WATER agencies
LOC League of Oregon Cities
SDAO Special Districts Association of Oregon

What are PFAS?

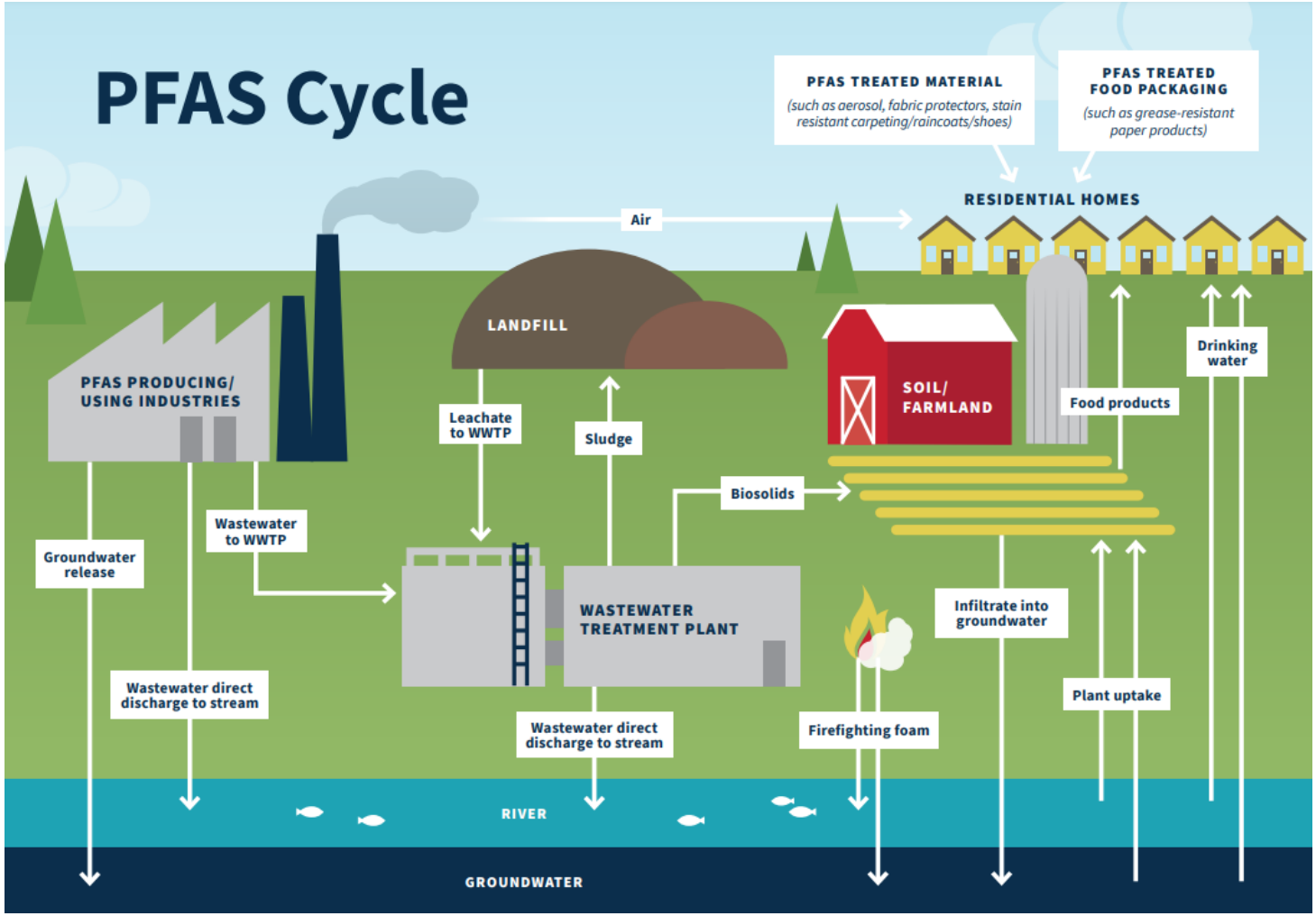
….and where are they found?



Source: https://paustenbachandassociates.com/services/pfoa-and-pfos/text

Source: https://ecology.wa.gov/Waste-Toxics/Reducing-toxic-chemicals/Addressing-priority-toxic-chemicals/PFAS

Generalized PFAS life-cycle



Source: Michigan EGLE

State of Oregon
DEQ Department of Environmental Quality

State and Federal Plans

- Tracking Federal and State Actions:
  - U.S. EPA's PFAS Strategic Roadmap
  - State regulations: environmental media, fire-fighting foam, consumer goods and biosolids

https://www.epa.gov/system/files/documents/2021-10/pfas-roadmap_final-508.pdf

Oregon DEQ Action on PFAS

- Ongoing implementation work
- OHA Drinking Water Methods and Sampling Study
- Interagency coordination
- ODEQ PFAS Strategic Plan:

Spring 2022	Summer 2022	Fall 2022	Dec 2022	Winter 2023
Establish governance team, staff working group, and Charter	Provide overview of existing work and alignment with US EPA PFAS Strategic Roadmap	Analyze program and cross-program gaps, opportunities, threats, and associated actions	Develop recommendations based on analysis	Finalize ODEQ PFAS Strategic Plan

Possible health effects of PFAS exposure

- Changes in blood lipid levels
- Changes in liver enzymes
- Small decreases in infant and fetal growth
- Lower antibody levels to vaccines in children
- Increased risk of high blood pressure in pregnant women
- Increased risk of kidney or testicular cancer in adults

Oregon drinking water health advisory levels for PFAS

PFAS compound	**Oregon Drinking Water Health Advisory Levels (HALs)*** parts per trillion (ppt) or nanograms per liter (ng/L)
PFOS	30 ppt
PFOA	30 ppt
PFNA	30 ppt
PFHxS	30 ppt

*Because these chemicals may have cumulative health effects, OHA will also calculate the sum of detections of the four PFAS chemicals with HALs in the table above.

EPA drinking water health advisory levels for PFAS

- 6/15/22: revised PFOS and PFOA lifetime HALs
  - PFOS 0.02 ppt (interim, under review)
  - PFOA 0.004 ppt (interim, under review)
  - PFBS 2000 ppt (final)
  - GenX 10 ppt (final)
- December 2022: Proposed MCLs for PFOS and PFOA
- December 2023: Final MCLs for PFOS and PFOA
- MCLs account for treatment efficacy and cost

No federal regulatory level (MCL) for PFAS in drinking water – **yet!*

Federally-mandated monitoring in water

Unregulated Contaminant Monitoring Rule (UCMR)

UCMR3 (2013-2015)

- Monitoring for six PFAS compounds: PFOS, PFOA, PFNA, PFHxS, PFHpA, and PFBS
- Public water systems serving more than 10,000 people and a limited number of smaller systems.

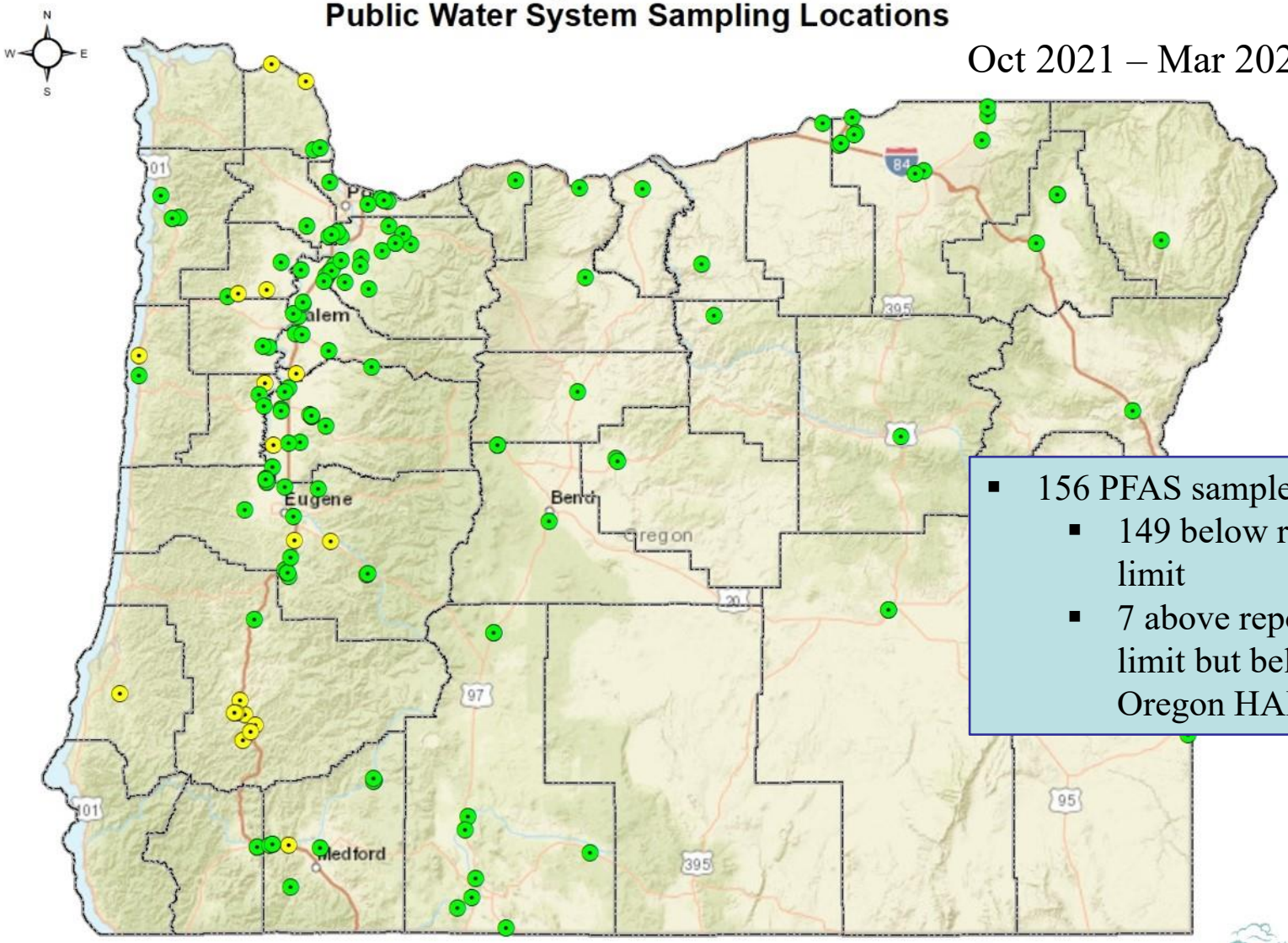
Results for Oregon: *65 PWSs monitored and* ***no detections***

UCMR5 (2023-2025)

- Monitor all public water systems serving more than 3,300 people
- Monitor a sample of systems serving fewer than 3,300 people
  - Subject to appropriations and lab capacity
- Monitoring for 29 PFAS (and lithium) at lower limits of detection

PFAS Screening and Assessment Project
Public Water System Sampling Locations

Oct 2021 – Mar 2022



- 156 PFAS samples
  - 149 below reporting limit
  - 7 above reporting limit but below Oregon HALs

PFAS Sampling Point (~center of public water system service district)

- Groundwater Source
- Surface Water Source

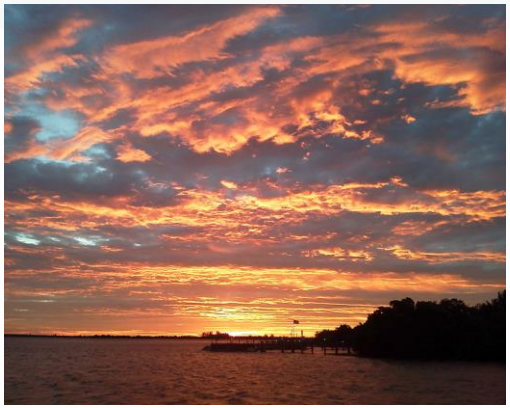
Oregon Health Authority

DEQ State of Oregon Department of Environmental Quality

Funding for PFAS treatment

- The Bipartisan Infrastructure Law provides **grants** through the State Revolving Fund to reduce drinking water exposure to PFAS or other contaminant not federally regulated (e.g., cyanotoxins, manganese)
- Water systems can use funds to provide treatment, develop a new source, or connect to another public water system
- At least 25% of funds must go to disadvantaged communities
  - Below the state median household income
- Covers planning, design, and construction costs
- Set-asides for administration of the funds or additional testing
- No state match is required
- Oregon's annual allotment for next 5 years: $9,940,000

PFAS activities by OHA



- Cross-agency coordination on PFAS issues
- Develop OR specific DW HALs for 4 PFAS compounds (2021)
- PFAS assessment and sampling project (late 2021 to early 2022)
  - Map potential PFAS contamination sites, sample for PFAS at nearby PWSs, analysis by DEQ lab
- Advise on steps to reduce risk and notify public if PFAS are found
- Support to EPA and PWSs for upcoming UCMR5
- Provide technical support to PWSs & track results of voluntary PFAS monitoring

Exposure Reduction and Health Protection

- Reduce or eliminate known high occupational or environmental exposures
- Numerous sources of PFAS in consumer products, food items, house dust
  - Not all necessarily at harmful levels
  - Interventions to reduce exposure need more study
- Exposure reduction ideally needs to be on institutional level, such as the agreement between EPA and 3M to limit manufacturing of some PFAS

Oregon Association of Clean Water Agencies (ACWA)

- Public wastewater and stormwater management agencies dedicated to protecting water quality

- 120 member agencies serving over 3 million Oregonians

- Working collaboratively to support sustainable environmental outcomes and ensure that standards and regulations are science based, achievable, and affordable.

Local Clean Water Agency Roles

- Committed to protecting public health, safety and the environment!
- PFAS are ubiquitous in products used in everyday life
- Wastewater and drinking water utilities are receivers of PFAS—not generators
- Wastewater and drinking water facilities aren't designed to treat PFAS, which don't break down
- Focus should be: identify sources, assess risk, reduce human exposure, and eliminate PFAS sources

Tackling PFAS in OR—ACWA Updates

- Established ACWA Work Group in 2019
- Encouraged early sampling/analysis
- Tracked regulatory, legislative, and research activity
- Developed outreach communications

ACWA PFAS Action Plan…

1. Summarize the state of PFAS science, policy, and recommended actions
2. Grow PFAS data in Oregon to improve the scientific basis for future policies
3. Coordinate research opportunities to leverage resources and improve the science in Oregon
4. Provide communication and outreach tools for public clean water agencies

ACWA Priority PFAS Actions…

- Biosolids study: Collaboration with DEQ, members, and OSU
- EPA grant: toxics reduction strategy for PFAS and phthalates

--Sampling/source identification

--Product purchasing guidelines

--Industrial source research

--Industrial toxics pollution prevention resources

--Public education

Concluding Remarks

- Drinking water data to date does not indicate extensive statewide contamination
- Collective effort needed by federal, state and local government, and industry
- Implementation of EPA, state, and local PFAS plans and guidance
  - all prioritize building on existing data and science-based assessments of impacts and risks
- Priority actions:
  - identifying impacted areas and remediation solutions, and
  - source reduction efforts that address PFAS compounds used in consumer products and industrial processes through targeted regulatory actions and collaborative efforts
- Additional Oregon studies needed to determine PFAS sources, impacted locations, and exposure risks
- Maintaining or increasing state agency capacity to address PFAS is critical
- State and local PFAS studies are needed, but would require funding to state and/or partners

PFAS Resources

- US EPA PFAS Strategic Roadmap: Commitments to Action 2021-2024
  https://www.epa.gov/system/files/documents/2021-10/pfas-roadmap_final-508.pdf
- Oregon Health Authority – Drinking Water Services
  www.healthoregon.org/dwpfas
  - PFAS Drinking Water Health Advisory Levels
  - PFAS Monitoring by Public Water Systems in Oregon
  - PFAS Screening and Assessment Project
  - Links to PFAS information from other organizations
- Oregon Health Authority – Environmental Public Health
  www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/HEALTHYNEIGHBORHOODS/TOXICSUBSTANCES/Pages/PFAS.aspx
  - General PFAS information (FAQs)
- Toxic Substances and Disease Registry
  https://www.atsdr.cdc.gov/pfas/health-effects/index.html
  - PFAS exposure and health information
- National Academies
  https://www.nationalacademies.org/our-work/guidance-on-pfas-testing-and-health-outcomes
  - Clinical recommendations

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