From: Mark Yeager
To: Benton Public Comment
Subject: Landfill Leachate Testimony - LU-24-027 - In Opposition
Date: Wednesday, April 30, 2025 8:06:14 PM
Attachments: Leachate Letter to PC .pdf

Dear Planning Commissioners - following the discussion and dialogue at the first night of the public hearing process, I thought it might be helpful to provide some information on landfill leachate at Coffin Butte.

Thank you,

Mark Yeager

April 30, 2025

Chair Fowler and Members of the Planning Commission

LU-24-027, Letter in Opposition

RE: LANDFILL LEACHATE

My name is Mark Yeager, and I live at 37269 Helm Drive in Corvallis. I have lived at this residence since 1987. I am a professional Environmental and Civil Engineer in Oregon as well as a Certified Water Rights Examiner. I have served multiple appointments with the Benton County Solid Waste Advisory Council and the Disposal Site Advisory Committee. I also served on the Benton County Talks Trash workgroup and two subcommittees.

For over 40 years I have worked in the municipal engineering field focusing primarily on water supply, wastewater treatment, and stormwater management. I am providing these comments with background information to provide a better understanding of landfill leachate and **the undue burden it places on public facilities and services**.

Landfills are designed to contain waste materials. However, one of their most concerning byproducts often goes unnoticed - leachate. This toxic liquid forms when rainwater and decomposing waste mixes, percolates through the waste, and dissolves compounds creating a cocktail of hazardous chemicals, heavy metals, and organic pollutants. People also often throw liquid waste into their trash, and garbage generates liquids as it breaks down.

The Coffin Butte landfill has a large “working face” that is open at the surface and receives large amounts of rainwater most of the year. It rains a lot here in Oregon and especially at Coffin Butte, which receives about 50 inches of rain per year. In addition, the plastic cover that exists on most of the Coffin Butte landfill has been documented to have many tears and holes that allow rainwater into the buried trash (while methane and landfill gases to leak out).

Coffin Butte currently generates approximately 30 million gallons of leachate per year. About half of the leachate is hauled in tanker trucks to Corvallis wastewater treatment plant and half is hauled to the City of Salem. On a normal day, 15-20 tanker loads are hauled to these facilities.

Leachate, an extremely polluted wastewater, threatens ground and surface waters and requires adequate treatment before discharge. Co-treatment of leachate in municipal wastewater treatment plants (WWTPs) is a commonly practiced method for leachate

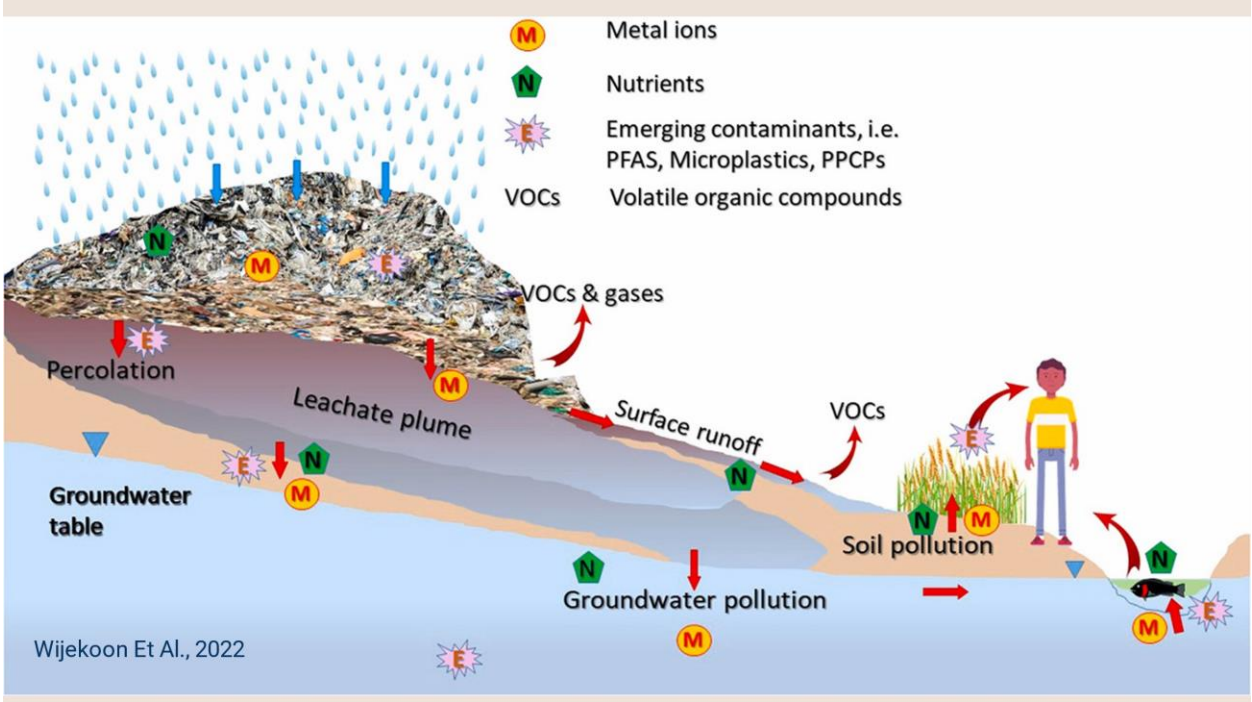
management. However, there is very little actual “treatment” that occurs when processed at a conventional municipal WWTP, and changing characteristics of leachate along with more stringent discharge limits in WWTPs have led to questions about sustainability of co-treatment. The solution to pollution should NOT be dilution, but that is essentially what is happening now.

The transport and discharge of leachate into WWTPs in Oregon is not regulated by DEQ. Quoting from DEQ’s guidance manual for landfills “This alternative is subject to any pretreatment and/or wastewater connection requirements of the authority operating the treatment works. Discharges to publicly-owned treatment works (POTW) are not directly regulated by the Department.”

Neither the Corvallis nor the Salem WWTPs have any special unit processes designed or operated to deal with landfill leachate. As a result, the leachate accepted at those facilities essentially passes through untreated, and what materials are removed likely end up in the wastewater sludge (biosolids), material that is land applied on local agricultural fields.

Generally, leachate has a high biochemical oxygen demand (BOD) and high concentrations of organic carbon, nitrogen, chloride, iron, manganese, and phenols. Many other chemicals may be present, including pesticides, pharmaceuticals, solvents, and heavy metals. We know that many inappropriate and illegal materials are being thrown in dumpsters. **Leachate also contains very high levels of PFAS**.

PFAS are widely used, long-lasting chemicals, components of which break down very slowly over time. Scientific studies have shown that exposure to some PFAS in the environment may be linked to harmful health effects in humans and animals.



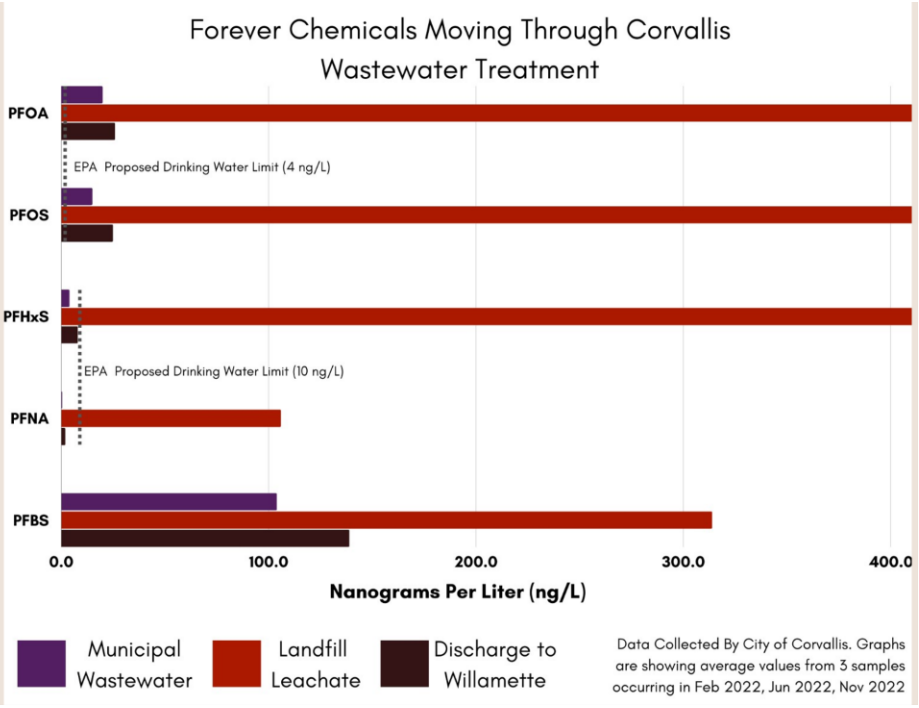
While the existing landfill will continue to generate leachate for decades to come, the proposed new landfill location will add to the volume of leachate that has to be managed. The Applicant is supposedly going to stop hauling leachate to Corvallis by the end of 2025, but they refuse to announce where they plan to take that portion of the leachate. Apparently, they have a couple more years to take leachate to Salem.

PFAS into Willamette River

Because of the increasing concern related to PFAS compounds, the City of Corvallis began monitoring their background incoming wastewater along with the leachate from the landfill. When the landfill delivers the leachate to Corvallis, it is stored in tanks on site, and then slowly discharged into and mixed with sewage coming from the rest of the city.

The analysis confirmed that landfill leachate concentration of PFAS compounds is orders of magnitude greater than the background levels coming from the rest of the city. When mixed with the influent wastewater, it is “treated” and then discharged into the Willamette River. The concentration of several PFAS constituents being discharged into the river end up being higher than the background coming into the treatment plant. See the graph below.

Landfill leachate is especially high in PFAS



Another quote from the DEQ landfill guidance manual on landfills and leachate states “The Department recommends treatment methods that reduce leachate contaminants, not methods that transfer the environmental problem to another medium.”

What is happening with the current method of managing leachate from the landfill is exactly what DEQ recommends against. The contaminants from the leachate are not truly being reduced. While there may be some treatment of conventional pollutants like ammonia, other pollutants like heavy metals, pharmaceuticals, and PFAS are simply being either discharged into the river or end up in the sludge that is land applied and contaminating soil.

The Willamette River is a public facility. As such, the additional exposure to wildlife, recreational enthusiasts, and water users (both drinking water and agricultural) from leachate generated by the existing and proposed landfill expansion constitutes an undue burden in violation of BCC 215 (2).

Similarly, agricultural lands, some of which are public (OSU Soap Creek Beef Ranch), that receive sludge from these treatment plants are also subjected to an undue burden in violation of BCC 215(2). Portions of the Soap Creek Beef Ranch were historically the homestead of Letitia Carson and the focus of OSU’s Letitia Carson Legacy Project.

Portions of the existing landfill (Cells 1 an 1A) were “closed” in the 1970s, and 50 years later, those cells are still generating 2 million gallons of leachate per year. The engineer from Maul Foster Alongi gave the impression that overall leachate volumes will decrease over time, once the existing landfill is capped and closed. Given that cells 1 and 1A are still producing large quantities of leachate five decades later, it is apparent that (1) that this only happens over very long-time scales and (2) Republic hasn’t given any kind of timetable for closing the existing landfill – what if they decide to leave it in “interim cover” and seek future expansions or proceed to implement their 2021 plan to close the road and fill the valley with trash?

The fact that the staff and their consultants that are reviewing the application are not asking any questions about the fate and impacts of the landfill leachate is disappointing, to say the least. This is another example where the County does not seem to be seriously evaluating the long-term environmental impacts associated with hosting a massive landfill and its planned expansion.

I hope this information clarifies the landfill leachate situation at Coffin Butte. I urge the Planning Commission to deny this conditional use permit application.

Respectfully submitted,

Mark Yeager