

From: [Mark Henkels](#)
To: [Coffin Butte Landfill Appeals](#); [Mark Henkels](#)
Subject: Statement in Opposition to the Landfill Expansion, LU-24-027
Date: Monday, October 6, 2025 8:40:05 PM
Attachments: [Coffin Butte Comment October 6 2025 on Climate Change and Coffin Butte MH.docx](#)

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I have attached a comment regarding why the landfill should not be expanded. I have also pasted my comment below.

Thank you for your attention. Please contact me with any questions or concerns regarding this comment or my procedures here.

Wish you well.

Mark Henkels
7540 NE Pettibone Drive
Corvallis, OR 97330
<mphcorvallis@gmail.com>
(541) 231-9386

To: Commissioners Malone, Shepherd, and Wyse

From: Mark Henkels, Ph.D. <mphcorvallis@gmail.com>, 7540 NE Pettibone Drive, Corvallis, OR 97330

Date: October 6, 2025

Re: Climate Change Impacts of the Proposed Expansion, LU-24-027. A statement in opposition to expansion of the Coffin Butte landfill

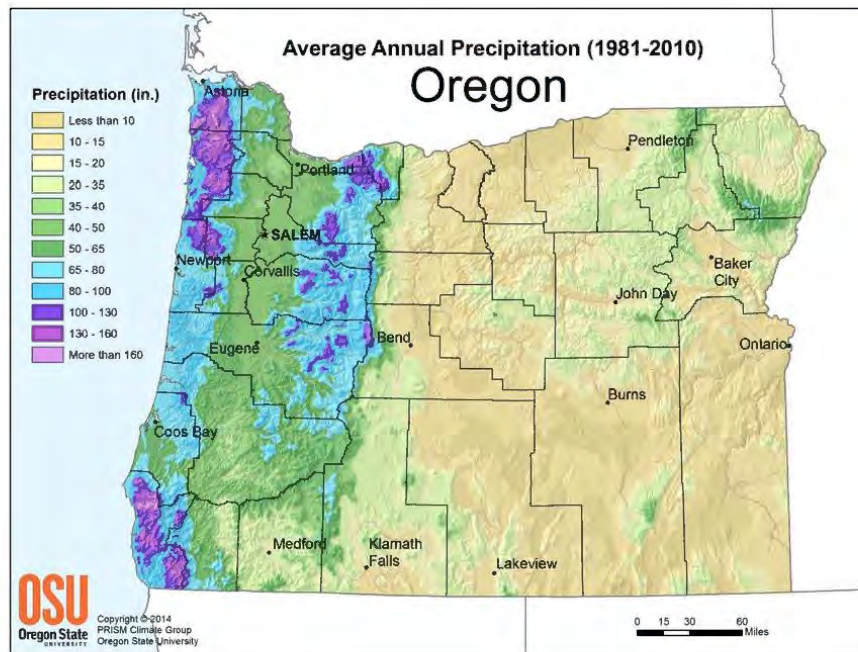
Please reject Republic Services' request to get the waiver required to expand the Coffin Butte Landfill. Any decision regarding Coffin Butte's future should consider the unpredictable impacts that climate change might have on the facility. I very briefly do so here. Climate change makes it likely that current analysis underestimates how the proposed expansion will affect adjacent property, the character of the area, and facilities, utilities or services available to the area.

At least two aspects of climate change enhance the uncertainty and risks the expansion creates. The expansion and the associated increased volume of annuals dumping would greatly magnify how ugly Coffin Butte is for users of E.E. Wilson and drivers and residents to the east south, and would extend and disproportionately increase the ongoing odor and pollution. My primary concern here, however, is how climate change increases the likelihood of polluted run-off and fire related to the expansion.

Some precipitation inevitably sinks into any landfill's deposited materials, generating leachate and stimulating the production of methane. To reduce the problems of leachate and methane production, modern landfills such as Coffin Butte cover the surface with impermeable material to reduce the liquid getting into the deposited materials. Accordingly, acres of plastic or rubber-like cover the existing operating landfill. Although some water always gets in despite the cover, most of the rain or melting snow runs off the site, picking up anything on the

surface or leaking out from below. At Coffin Butte, these substances flow downstream towards E.E. Wilson to the east or to Soap Creek and then the Luckiamute to the west.

Even in normal times, the volume of precipitation falling on the 59 acre proposed expansion area is great. Because of its location at the edge of Central Coast Range and north of the Mary's Peak rain shadow, precipitation at the Coffin Butte site is between 50-65 inches on average. One inch of rain over one acre equals approximately 27,154 gallons. This means that the 59 acres of the expansion receive between (50 inches X 59 acres X 27,154 gallons) = 80,104,300 gallons and (65 inches X 59 acres X 27,154 gallons) = 104,135,590 gallons per average year.



The entirety of consequences of displacing this much water after it has contacted the surface of the landfill is unknowable, but extreme precipitation events certainly enhance the harmful flow. One irony of climate change is that while overall precipitation in the Willamette region is predicted to decline, rainfall in the Spring is expected to increase. According to the Oregon Watershed Enhancement Board there will be increased intensity and number of days featuring “atmospheric rivers”. (www.oregon.gov/oweb/Documents/climate-R3-variables.pdf) Such weather brings massive and unpredictable run-off and flooding.

An example of the possible consequences for the local environment and services can be seen in the Rapid City, South Dakota landfill where, in 2018, “a storm caused a landfill detention pond to flood onto the Johnson’s property. Since then, there have been nearly a dozen similar cases of toxic runoff onto the couple’s land. Trash from the landfill has also fallen or been blown by the wind onto the property, and contaminated compost has been burned right up to the shared border of the properties.” (“Ranchers Raise Alarm: Polluted Stormwater Runoff from Rapid City Landfill Likely Flowing into Rapid Creek.” PR Newswire, May 22, 2023) Those involved in the case also note that there could be PFAs in the runoff.

A study of landfill emissions published in Environmental Science and Technology found that: “Rainfall played a considerable role in mediating PPCP (Pharmaceuticals and Personal Care Products, such as birth control and opioids) concentration in leachates. The PPCP responses to five rainfall episodes further verified the influence of rainfall and demonstrated that the tendency to PPCP concentration increase was related to rainfall precipitation. Torrential rain events (i.e., 24 h cumulative precipitation of 50–99.9 mm) led to the most significant increases in PPCP concentrations in landfill leachates.” (“Rainfall Influences Occurrence of Pharmaceutical and Personal Care Products in Landfill Leachates: Evidence from Seasonal Variations and Extreme Rainfall Episodes”, April 1, 2021, Vol 355, Issue 8).

Beside the potential for increased intense run-off and flooding affecting the proposed expansion area, climate change is also going to enhance the likelihood of fire. Many studies highlight the increased risks of fire in Western Oregon, such as in the EPA report “Climate Change Indicators: Wildfires” (<https://www.epa.gov/climate-indicators/climate-change-indicators-wildfires>) The possibility of a fire spreading to the area of the dump and affecting operation or perhaps even igniting the material beneath is increasing. As noted in the Oregon Department of Energy 2023 report, OCCRI’s Sixth Climate Assessment Outlines Climate Change Effects on Oregon, “As global temperatures increase, wildfires are expected to become larger and fire seasons increasingly extreme in Oregon and across the West.” From any angle of observation, it is clear that a wildfire in the surrounding area could reach Coffin Butte. Because of the content in the landfill, the consequences of Coffin Butte igniting are far more serious than even the hazards posed by the increasing number, intensity, and smoke from of forest fires right now.

In conclusion, as you consider the possible impacts of the expansion, keep in mind that estimates of the warming climate and the consequences seen in flooding and fire have consistently been too low. Therefore the possible negative impacts on the adjacent properties, public services such as recreation, and Benton County’s health and overall quality of life have probably also been underestimated.

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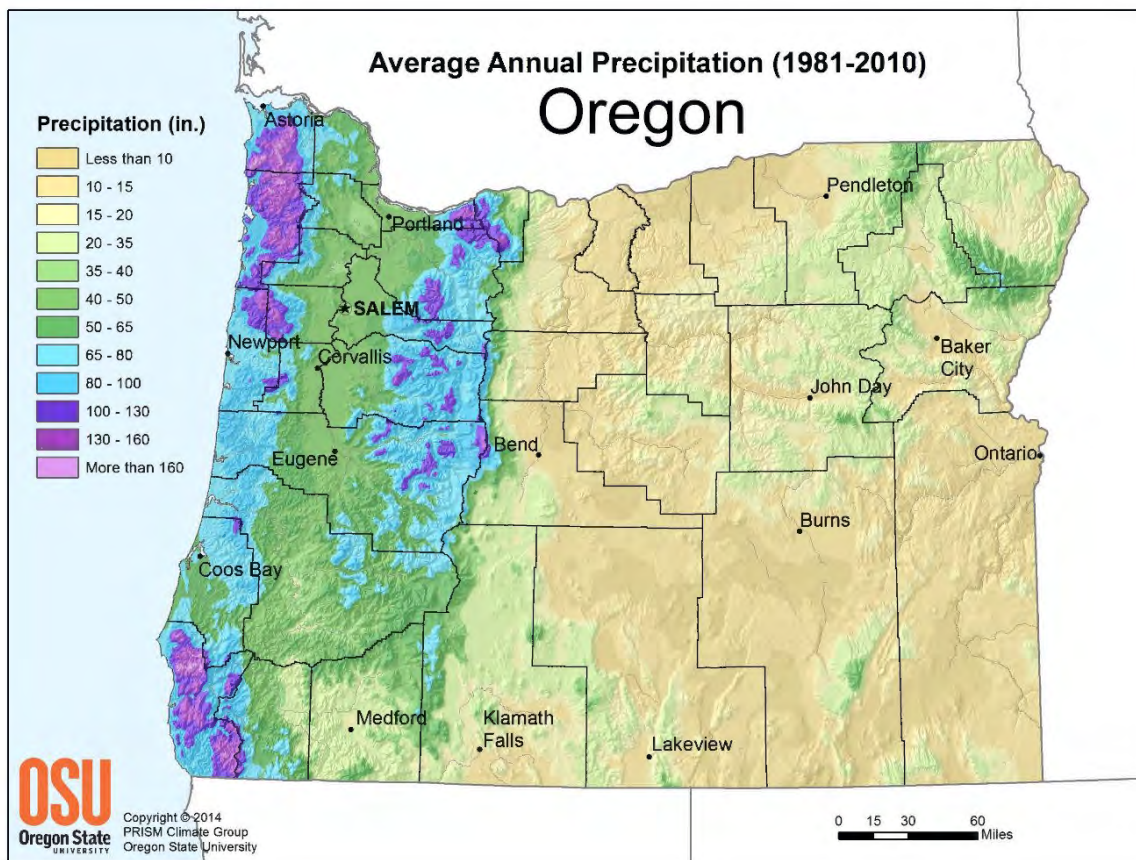
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