

# CANARY MEDIA

Clean energy journalism for a cooler tomorrow

6 August 2024

## A huge landfill in Oregon is spewing methane. Its owners want to expand.

**Numerous safety violations have been detected at the fast-growing landfill. It's part of a larger pattern of problems with how the U.S. handles waste.**

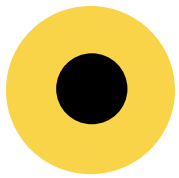


**ISOBEL WHITCOMB**

Isobel Whitcomb is a science and environmental journalist based in Portland, Oregon.

In rural Benton County, brigades of waste-collection vehicles lumber through forested hills and wheat fields, each truck trailed by an acrid stench. They're hauling trash from across the western half of the state to Coffin Butte Landfill. The site accepts waste from nearly two dozen of Oregon's 36 counties, and the pile towers high enough that some locals call it "the Great Pyramid of Benton County." Joel Geier, who lives half a mile away from Coffin Butte, prefers the moniker "Coughing Butte," due to the noxious, chemical smell that sometimes emanates from it.

"It can be nauseating," Geier said. The smell, sweet like nail polish remover, reminds him of the Monsanto plant near his childhood home in St. Louis, Missouri. "There's the offensiveness of it, and the knowledge that you're breathing in something that probably



# CANARY MEDIA

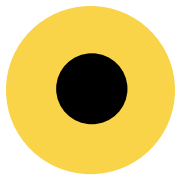
Clean energy journalism for a cooler tomorrow

landfills emit a cocktail of chemicals known to irritate the lungs, increase the risk of cancer, and cause reproductive issues.

Over the past decade, the amount of garbage imported by Coffin Butte Landfill has more than doubled. To continue to accommodate Oregon's garbage, Republic Services, the company that owns Coffin Butte, says that the landfill needs to expand. Neighbors of the landfill, concerned about its climate impact and the community's safety, believe that there are better ways to deal with all the incoming refuse.

Coffin Butte Landfill rises between steep hillsides at the opening of Soap Creek Valley, a lush basin scattered with homes. Just a mile down highway 99 is Adair Village – a former World War II training camp where about 1,000 people now live. The roughly 3,000 residents of these two communities drive past Coffin Butte on their way to work, school, or nearby Corvallis to run errands. And in recent decades, they have seen the landfill grow in size. “It has quite literally risen into view,” said Ken Eklund, a resident who moved to Soap Creek Valley in 2015. Since then, Eklund says that the landfill has doubled in height. Now, its tarped face is visible from his driveway.





# CANARY MEDIA

Clean energy journalism for a cooler tomorrow

Coffin Butte Landfill is covered to prevent gases like methane from escaping, but EPA inspections found that the cover was eroding in places. (E.J. Harris)

For many residents of Soap Creek Valley and Adair Village, Coffin Butte Landfill wasn't a major concern until about a decade ago. Under the ownership of Republic Services, which had acquired Coffin Butte in 2008, the landfill was taking trash from a larger swath of Oregon – and even occasionally Washington state. Then in 2016, the closure of another regional landfill led to an unprecedented amount of waste being diverted to Coffin Butte: an addition of more than 400,000 tons over the next year. Geier and other residents started noticing more and more trucks moving through their neighborhoods. On some days the stench was unbearable. “I wouldn't let my kids play outside on those days, I wouldn't go on a walk,” said Kate Harris, a resident of Soap Creek Valley.

In early 2021, Republic Services submitted an application for a permit to expand the landfill. At that point, the company was importing more than 1 million tons of trash to Coffin Butte each year – close to Benton County's 1.1-million-ton cap on waste deposited there annually. At this rate, the landfill would reach capacity within five years. The application proposed adding a second, 270-foot-tall pile of waste across Coffin Butte Road, which would buy the landfill another 12 years but close off what is the area's primary evacuation route in the event of wildfire. The proposal also sought to remove the tonnage cap on waste deposited at Coffin Butte.

In response, more than 100 community members rallied to oppose the expansion, giving testimony at hearings and writing letters to local newspapers. “The county thought that this was just going to slide in under the radar. They were completely caught off guard,” Eklund said. “They were not ready for the scrutiny.”

In December 2021, the Benton County Planning Commission denied the expansion request, but residents considered it only a temporary victory. Earlier this year, they began hearing talk that a second application was in the works. Sure enough, on July 19, Republic



# CANARY MEDIA

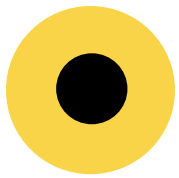
Clean energy journalism for a cooler tomorrow

one-room schoolhouse, the tight-knit community of Soap Creek Valley began meeting to organize and share information about Coffin Butte's hazards.

When plastic, food scraps, and other waste get thrown into landfills, they're compacted, covered in dirt or ash, and then blanketed under tarps. As the waste piles up, aerobic bacteria, which live only in the presence of oxygen, consume food scraps and oxygen, producing carbon dioxide. Over time, these bacteria deplete the oxygen in the landfill, creating the perfect environment for methanogens. These microbes feed on the carbon dioxide produced by aerobic bacteria, churning out methane.

The methane and carbon dioxide created through this process make up 90 percent of the gases released by landfills, said Steve Gerritson, a board member at the Institute for Energy and Resource Management and former member of President Bill Clinton's Clean Air Advisory Committee. Neither methane nor CO<sub>2</sub> poses an immediate risk to human health, but the other 10 percent of landfill gases, emitted by waste more resistant to decomposition, do. Plastic water bottles emit vinyl chloride, a sweet-smelling gas associated with liver, brain, lung, and blood cancers. Cosmetics break down to form benzene, which is associated with leukemia. Finally, as the wind blows the landfill's dirt covering, tiny waste particles also get pulled along on the breeze, including heavy metals and dioxins. "These are very dangerous to human health," said Gerritson. "They're not easily controlled." Multiple studies have found elevated rates of cancer and reproductive complications among people living near landfills.

As the residents fighting the Coffin Butte Landfill expansion researched these effects, they turned to environmental nonprofit Beyond Toxics, based in the nearby city of Eugene. Beyond Toxics began setting up air-quality monitors around houses near the landfill to track emissions of nitrogen dioxide, or NO<sub>2</sub>. In the short term, this gas, a byproduct of methane combustion, can cause respiratory irritation, increasing the risk of infections and asthma. In the long term, chronic exposure to NO<sub>2</sub> emissions can increase the risk of developing chronic lung disease. The monitors recorded NO<sub>2</sub> concentrations as high as 60-80 parts per billion – close to readings collected near freeways and well above the 30



# CANARY MEDIA

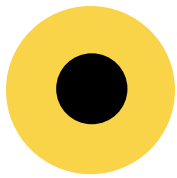
Clean energy journalism for a cooler tomorrow

ash from a nearby waste incinerator as daily cover for the landfill. This practice isn't inherently unsafe, according to Philipp Schmidt-Pathmann, founder and CEO of the Institute for Energy and Resource Management, a nonprofit that advocates for sustainable waste management. However, the Oregon Department of Environmental Quality safety protocol states that landfill cover should be wetted down before application to prevent particulates from becoming airborne. Beyond Toxics found that landfill operators were skipping this step – photo and video evidence showed plumes of ash blowing from the landfill.

“The problem with incinerator ash is it's full of heavy metals,” said Mason Leavitt, a cartographer and GIS technician at Beyond Toxics. “These can accumulate in the environment over time.” Another airborne waste product detected at the landfill was dry fiberglass dust. “It can cause microtears in your lung tissue,” Leavitt said. “It's technically not a hazardous substance, but it's a huge concern for workers and ... anyone working nearby.”

In a statement to Canary Media, Republic Services noted that incinerator ash is approved as landfill cover by the Oregon DEQ and that it arrives at Coffin Butte in a wetted-down, cement-like form. “It is not an airborne, flyaway material,” the statement read.





# CANARY MEDIA

Clean energy journalism for a cooler tomorrow

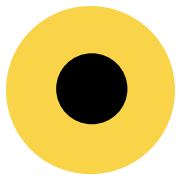


The landfill viewed from Coffin Butte Road, Soap Creek Valley's primary evacuation route in case of wildfire. (Isobel Whitcomb)

Robert Orton, a former mechanic at Coffin Butte Landfill, has experienced acute health effects from exposure to waste and its byproducts: breathing issues, skin and eye irritation, rashes, and chemical burns. He says that poor handling of waste contributed to these unsafe conditions. Typical safety protocol involves pressure-washing equipment, which becomes caked in waste, on top of the landfill each day. That location is critical to containing harmful contaminants. However, Orton says that mechanics at Coffin Butte were instructed to wash the equipment at their shop to avoid wetting down the landfill and producing runoff that Republic Services would then have to remediate. Trash and human feces accumulated on the unlined and uncovered soil next to the shop. “There was no way to contain these things within the shop floor. There was no procedure for it,” Orton said. (Republic Services denies that trucks are cleaned on unlined soil, stating that all equipment is pressure-washed atop the landfill.)

In 2022, an EPA inspection found explosive levels of methane at Coffin Butte Landfill. While the federal limit for methane concentrations is 500 parts per million, the EPA reported 21 readings exceeding 10,000 parts per million.

Orton said the unusually high readings were likely due to the large volume of waste being collected and the lack of maintenance to the landfill’s methane-extraction system – a network of pipes running through the landfill that pumps methane and other gases to flares. Waste clogs the extraction system, and over time, as the contents of the landfill decompose and shift, that can lead to cracks. Once, when repairing the extraction system, Orton encountered a leak so strong, his knees buckled. “You can’t take in the amount of



# CANARY MEDIA

Clean energy journalism for a cooler tomorrow

Soap Creek Valley fear that the increasing severity of wildfire conditions in Oregon could cause one of these blazes to spread to the surrounding hills. “We’re in a valley with limited ways out,” Eklund said. He worries that if the landfill caught fire, Coffin Butte Road would be impassable due to flames and toxic smoke from burning waste. “It’s a nightmare scenario.”

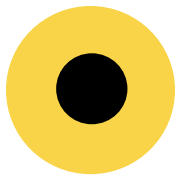


Republic Services denies many of the criticisms raised by residents, including claims that its gas-collection system is poorly maintained. In a February 2024 memo, Director of Public Affairs Ginger Rough wrote that Coffin Butte has three times more gas-collection wells than industry best practices and that Republic Services has invested \$7 million since 2019 to upgrade and expand the gas-collection system, including 57 new wells and 22,000 new feet of piping. She added that the company planned to add 4,500 more feet of piping in 2024.

However, the memo didn’t alleviate residents’ concerns. “None of these address the landfill’s known problem with methane, which is ... *it’s leaking out of everywhere*,” Eklund told Canary Media by email. “The large number of gas collection wells is just evidence that the landfill has a methane problem that they’ve been working to fix.”

Carbon Mapper, a tool that tracks CO<sub>2</sub> and methane emissions, has detected plumes of methane over Coffin Butte exceeding 1,000 kilograms per hour. A plume exceeding even 100 kilograms per hour is designated by the EPA as a “super-emitter event,” said Katherine Blauvelt, the circular-economy campaign director for Industrious Labs, a nonprofit working to clean up heavy industry.

While the problems at Coffin Butte are particularly egregious, they are ones that pervade our waste disposal system, Blauvelt said. Under the Clean Air Act, the EPA limits



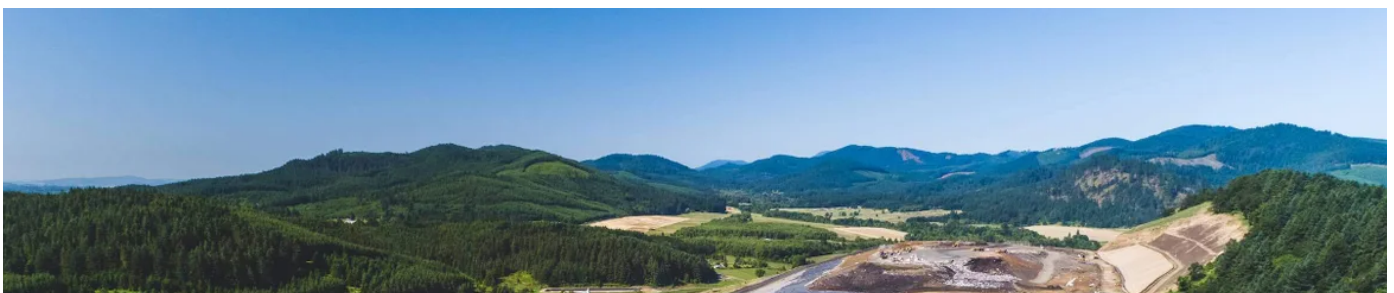
# CANARY MEDIA

Clean energy journalism for a cooler tomorrow

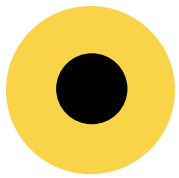
In the case of Coffin Butte, inspectors didn't just find explosive methane levels, they found malfunctioning extraction systems and eroding covers. Similar violations have repeatedly been discovered elsewhere. At Brent Run Landfill outside Flint, Michigan, an EPA inspector detected failures in the gas-extraction system and 19 methane leaks exceeding EPA limits. After an expansion of Los Angeles County's Chiquita Canyon Landfill, an EPA inspection uncovered 14 violations of national emissions standards, including failure to maintain the gas extraction system leading to the release of hazardous air pollutants. An Industrious Labs analysis published in May examining landfills across eight states found that nearly 96 percent of EPA inspections reported methane emissions exceeding the safe limit of 500 parts per million.

The EPA has committed to addressing these widespread regulatory failures – on July 23, the agency announced that it would update emissions standards for landfills in 2025. But tighter emissions standards don't address a major root cause of the problem.

There are financial incentives for landfill operators to minimize maintenance costs while bringing in more waste, says Schmidt-Pathmann of the Institute for Energy and Resource Management. "Waste is a profit-oriented business in the U.S.," he added. For landfills like Coffin Butte, more waste means more revenue. According to Beyond Toxics' Leavitt, Coffin Butte Landfill trucks in 30 percent of Oregon's market share of waste. Less than 6 percent of that waste originates in Benton County. Some municipalities like Benton County, which receives compensation from Republic Services for hosting the landfill, also have a financial incentive to maintain landfills. "It pays the bills," Schmidt-Pathmann said.







# CANARY MEDIA

Clean energy journalism for a cooler tomorrow

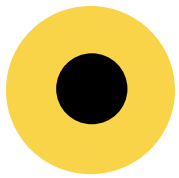


Coffin Butte Landfill viewed from overhead, with Soap Creek Valley in the background. (E.J. Harris)

Activists believe there are alternatives to expanding Coffin Butte – and to landfills in general. Schmidt-Pathmann points out that most U.S. municipalities have little infrastructure in place to properly sort waste. As a result, recyclable materials easily become contaminated and wind up in landfills. But other countries, such as Germany and the Netherlands, have successfully implemented waste-sorting systems that have decreased the amount of waste disposed of at landfills to just 1 percent, while some German cities have achieved a zero-waste designation. A few municipalities in the United States are following that example.

In December 2023, Lane County, Oregon, which neighbors Benton County, voted to build a new resource recovery facility that will sort garbage, comingled recycling, and organic waste to produce biogas and marketable recycled materials. Advanced equipment will be able to recover recyclables that would otherwise head to the landfill. According to [Lane County](#), it will be “the most technologically advanced waste processing facility in the country,” diverting an estimated 80,000 tons from the county’s landfill annually. If Benton County adopted this approach, the Coffin Butte expansion wouldn’t be necessary, Beyond Toxics’ Leavitt pointed out.

The 2024 application for expansion of Coffin Butte Landfill appears to take into consideration some of the residents’ concerns: The new plan would keep Coffin Butte Road open, even adding bike lanes and trees to shield the landfill from view. The planned



# CANARY MEDIA

Clean energy journalism for a cooler tomorrow

costs – both monetary and nonmonetary – of hosting Coffin Butte. Long after that landfill runs out of space, it will need to be managed. “You will have to maintain a landfill forever. It’s like taking a loan from the bank without ever planning to pay it back,” Schmidt-Pathmann said. “At some point, the bank – or the environment – will come collecting.”



**CANARY** MEDIA

## Daily newsletter

Subscribe to receive Canary's latest news

**Subscribe**



[About](#)

[Sponsorship charter](#)

[Got a tip?](#)

[Contact](#)

[Privacy policy](#)

[Careers](#)

[RSS feed](#)

© 2024 Canary Media