

Coffin Butte Landfill: How could site life change from the Baseline Scenario(s)?

<i>Factors that could impact airspace</i>	Background	Questions
<i>Landfill expansion (and removal of tonnage cap)</i>	<p>Republic Services is likely to apply to expand the landfill's permitted airspace. Republic Services currently operates under a 1.1 million annual tonnage cap. Under the terms of the 2020 Franchise Agreement, this cap would be eliminated if the Landfill is expanded.</p> <p>MORE: see "4. Landfill expansion and intake limit removal" section below.</p>	<p>If the tonnage cap were removed, by how many years could the Landfill's life be shortened, given the region's capacity for generating landfill material?</p>
<i>Quarry excavation schedule</i>	<p>Our baseline scenario assumes 100 percent of the Landfill's permitted airspace is made usable by excavating rock from the quarry.</p> <p>MORE: see "2. Quarry excavation" section below.</p>	<p>What is the likelihood that the quarry is not fully excavated by the time landfilling operations need to begin in that area? Or that it cannot ever be fully excavated? How would that impact the Landfill's lifespan?</p>
<i>Water table concerns</i>	<p>A portion of the Landfill's permitted airspace seems to lie below the groundwater level, and it is unclear whether DEQ regulations allow this airspace to be used, or if it would be cost effective for the Landfill owner to excavate the area.</p>	<p>To what extent do DEQ regulations address the water table issue and what steps would the Landfill operator need to take to turn this into "useable airspace?" How could overall site life be reduced by the water table issue? What role if any does Benton County have in protecting its groundwater?</p>

<p><i>Disaster concerns (Landfill fire, earthquake)</i></p>	<p>Although it rarely happens, landfills can catch fire, either on their surface or as exothermic reactions deep under their surface. The ubiquitous presence of methane, a flammable gas, is a risk factor. A landfill fire ignited by an area wildfire is a troubling possibility. Exothermic reactions are deep in the landfill itself and can take years to extinguish. The Landfill is in an earthquake zone and that could also cause loss of access to permitted airspace. (Note: there are regulations and plans in place at the landfill regarding disasters)</p>	<p>How can Benton County better assess the risks of losing access to permitted airspace due to disasters such as wildfire?</p>
<p>Factors related to annual tonnage (demand)</p>	<p>Background</p>	<p>Questions</p>
<p><i>Exceedance beyond tonnage cap</i></p>	<p>Benton County previously did not exercise its enforcement options under the 2000 Franchise Agreement, when Republic Services took in excess tonnages in 2017-2019.</p> <p>MORE: see “5. Intake Limit Exceeded” section below.</p>	<p>How often does Benton County review its Franchise Agreements for contract compliance? Does the county have enforcement plans? Are the contracts written in such a way that Benton County is incentivized to ignore exceedances of the tonnage cap or other aspects of the contract that would shorten landfill life?</p>
<p><i>Recession</i></p>	<p>A slowing or contracting economy, such as the Crash of 2008, generally reduces the volume of waste produced throughout the service area. We saw a decline in tonnage at Coffin Butte Landfill during 2006-2010.</p>	<p>Are current inflationary pressures likely to have any reduction in waste generation at Coffin Butte Landfill? Using history as a guide, how many recessions are we likely to experience between now and the Landfill’s baseline closure dates? How could recessions/inflation alter the Landfill’s projected site life?</p>
<p><i>Economic growth</i></p>	<p>If a slowing economy generally reduces waste production, a robust growth economy could increase it. EPA data from 2018 states that 4.9 pounds of municipal solid waste was generated per person per day.</p>	<p>How have waste generation rates changed over time, and specifically during periods of economic growth? Can we project any changes to a Landfill’s site life using the data available and forecasting that against the likelihood of economic expansion?</p>

<p><i>Reductions in waste generation (structural and societal)</i></p>	<p>Oregon environmental policy emphasizes recovery and reuse of solid waste, to insure highest practicable protection of the public health and welfare and air, water and land resources. Desire to decrease the size of wastestreams and increased awareness of the importance of a "circular economy" are prompting structural and societal changes to divert material from landfilling. Example: SB 582, an extended producer responsibility (EPR) law for packaging, became law in 2021, giving producer responsibility organizations (PROs) mandates to improve recycling and other waste diversion plans beginning in 2025.</p>	<p>What is the likelihood that counties in the service area will decrease the size of their wastestreams over the next 20 years? What proportion of the tonnage that currently goes into the Landfill is divertible material? What role can Benton County play in reducing waste generation and landfilling in county and in the Landfill service area?</p>
<p><i>Disposal alternatives</i></p>	<p>Outside of maximized recovery (recycling and composting), alternatives to landfilling exist in various forms, primarily in new disposal technology. An incinerator in Marion County burns waste and generates energy for example.</p>	<p>What other disposal alternatives exist in the U.S. and elsewhere in the world? Which ones are showing the greatest promise for success and replication (taking in factors like cost, longevity, political will, etc)? How readily could these be incorporated into the solid waste management plans for cities and counties in the service area? Will Benton County consider these alternatives in its own Sustainable Materials Management Plan?</p>
<p><i>Transportation alternatives</i></p>	<p>Solid waste is currently trucked to Coffin Butte Landfill. Alternative modes of transportation (barge, rail, etc.) are being used to haul trash from intermodal transfer stations to landfills in more remote, less-densely populated areas.</p>	<p>What are the options for transporting waste using via rail or boat? How could Western Oregon's current network of transfer stations play a role in diverting waste from Coffin Butte? What is the feasibility of using existing railroad networks to haul waste (consider costs, safety, reliability, etc.)?</p>
<p><i>Global health issues (pandemics)</i></p>	<p>The COVID-19 pandemic had a significant impact on Landfill tonnage, decreasing it dramatically in 2020, but waste generation surged back in 2021.</p>	<p>Is the COVID-19 pandemic still impacting waste generation? If so, how? What is the likelihood that we will experience other global health crises in the next two decades? How would that potentially extend or reduce the life of Coffin Butte Landfill?</p>

Climate change and other environmental legislation
(A)

People worldwide are increasingly concerned about the threat of uncontrolled releases of greenhouse gases to their quality of life. Methane releases are a focus, because methane is a potent and quick-acting greenhouse gas. Landfills are major sources of greenhouse gas emissions, especially methane, in the United States.

(A) Concern by the public, science and industry, and financial entities about the climate crisis is manifesting in legislation. President Biden rolled out the U.S. Methane Emissions Reduction Action Plan in November 2021, followed by the Inflation Reduction Act of 2022, which provided for more than \$300 billion in strategic investments to address the climate crisis. This includes incentives to detect, monitor and reduce methane emissions.

MORE: see Appendix D below.

Are there plans to expand the requirements of the methane legislation to include landfills? If so, what is the likelihood of that passing and how could that impact Landfill operations? What other major pieces of legislation are circulating and gaining support? Do the climate pollution reduction incentives authorized in the Act present opportunities to fund waste-reduction projects in Benton County and throughout the Landfill service area? Are there opportunities for Benton County to begin the monitoring of methane emissions at Coffin Butte Landfill?

Climate change and other environmental legislation
(B)

(B) Regarding landfilling, the first effect of the EPA's focus on methane reduction is the Food Donation Improvement Act, signed into law in January 2023. America wastes about 30-40% of its food, and food waste is the most common material found in landfills, estimated at roughly a quarter of material. When landfilled, food waste converts readily to methane.

MORE: see Appendix D below.

How much food waste will the new legislation divert from landfills? How prohibitive is the "commerce clause" in diverting tonnage away from the Landfill? Is environmental legislation creating incentives and opportunities for Benton County and other counties in the service area to transition to cleaner, less wasteful trash management systems?

<p><i>Wildfires/ natural disasters (local and regional)</i></p>	<p>Fires, floods, spills, and other disasters can suddenly generate large amounts of landfill material. Disaster debris is not limited by the Landfill’s 1.1 million annual tonnage cap. Example: devastating wildfires in the mid-Willamette Valley in 2020 generated hundreds of thousands of tons of disaster debris, and Coffin Butte Landfill accepted roughly 300,000 tons of debris for landfilling in late 2020–early 2021.</p> <p>MORE: see “6. Disaster Debris” section below.</p>	<p>What is the forecast for wildfires and other disasters in the region? What options are there for disaster debris other than disposal at Coffin Butte Landfill?</p>
<p><i>Service area changes (closures and creation of other landfills/ facilities)</i></p>	<p>In recent years Coffin Butte Landfill has taken in 25% to 30% of the total trash generated and disposed of in Oregon, according to DEQ reports. Closure of other regional landfills could create an opportunity for Coffin Butte Landfill to grow its service area if an expansion is granted and the tonnage cap removed.</p>	<p>What is the current disposal picture for Western Oregon? How many landfills are operating and how much capacity is remaining in each? Are there landfills nearing capacity? How could these dynamics impact tonnage and airspace at Coffin Butte Landfill? Does Benton County have options for influencing or preparing for these outcomes?</p>
<p><i>Industry competition/ business choices</i></p>	<p>Republic Services competes with other trash haulers and Landfill owners and operators. Industry competition can yield either an increase or decrease in the Coffin Butte waste shed, depending on Republic Services ability to successfully gain or maintain existing contracts.</p>	<p>What market factors could impact Republic Services (and Coffin Butte's) customer base? Who are the other competitors in the market? Which municipalities and counties are nearing the end of their franchise or hauling agreements? Where are the new business opportunities? How could these increase or decrease tonnage coming to the Landfill?</p>
<p><i>Population growth/ change</i></p>	<p>The service area's population is forecast to grow modestly over the next 20 years, with annual growth rates of less than one percent. Under the 2020 Franchise Agreement, any additional waste tonnage generated would be subject to the Landfill’s intake cap unless an expansion is granted.</p>	<p>Can Benton County make educated guesses about actual population trends in the Landfill’s service area? Can Benton County make more detailed estimates about future waste generation in the service area? What options does Benton County have to influence a likely increase in waste generation, both in county and regionally?</p>