TRANSIGHT CONSULTING, LLC
Transportation Engineering and Planning Services

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| Date: | May 23, 2025 |
| To: | Petra Schuetz |
| From: | Joe Bessman, PE |
| Project Reference No.: | 1539 |
| Project Name: | Coffin Butte Landfill – Open Record |


The purpose of this memorandum is to provide a formal response to public comments related to transportation that were received on the Coffin Butte Landfill conditional use application for expansion south of Coffin Butte Road as part of LU-24-027. Comments received from the public hearings are provided below followed by our response.

**Comment 1:** Traffic from the landfill has increased on Coffin Butte Road.

**Response:** Transight Consulting has been supporting Valley Landfills with transportation analysis of the Coffin Butte Road for the past five years, with various data collection efforts conducted by Benton County staff and third-party data collection firms throughout this period. In addition to the Coffin Butte Landfill, Coffin Butte Road served the adjacent Knife River Quarry, and connects to other rural uses to the west. Landfill demands constantly fluctuate (seasonally, daily, and even hourly), which is similar to travel demands along Highway 99W and to and from the surrounding rural uses.

The historical data collection conducted on Coffin Butte Road was not collected at landfill entrance, nor was data collection scheduled for the same specific time periods (or the same day of the week or month of the year), but rather to respond to specific Code requirements and issues raised. Throughout this period the data collection at Highway 99W/Coffin Butte Road reflects the most consistent count location throughout this period.

Traffic counts were collected at the Highway 99W/Coffin Butte Road intersection in March 2021, January 2022, September 2023, and April 2025. These traffic counts were specifically intended to capture the weekday evening commute period, which is the time period with the highest overall Total Entering Vehicles typically between the hours of 4:00 p.m. and 6:00 p.m. The January 2021, September 2023, and the April 2025 traffic counts included an extended time period from 2:00 to 6:00 p.m., with this data showing that even with the elevated landfill activity occurring earlier in the day, the peak hour at the highway intersection occurred within the 4:00 to 6:00 p.m. period, confirming that this does reflect the peak “design hour”.

While there are seasonal and day of week fluctuations, in review of the total entering traffic volumes (TEV) these unadjusted traffic counts show a relatively stable travel pattern, with the highest observed volumes in September 2023 and the lowest observed volumes in April 2025 (see Table 1). Increased activity occurred within the adjacent Knife River quarry to accelerate the removal of the material; this activity was captured in the September 2023 counts.

**Table 1. Summary of Historical Traffic Counts, Total Entering Vehicles**

| Location | March 2021 Weekday Traffic Counts | January 2022 Weekday Traffic Counts | September 2023 Weekday Traffic Counts | April 2025 Weekday Traffic Counts |
|---|---|---|---|---|
| Highway 99W/ Coffin Butte Rd | 836 Vehicles *4:35 to 5:35 PM* | 820 Vehicles *4:35 to 5:35 PM* | 894 Vehicles *4:35 to 5:35 PM* | 805 Vehicles *4:00 to 5:00 PM* |

Traffic volumes at the Highway 99W/Coffin Butte Road intersection show a fairly stable pattern throughout this time period. All of the traffic counts except the April 2025 data show a peak hour during the 4:35 to 5:35 p.m. period, with the April counts showing an earlier peak between 4:00 and 5:00 p.m. Further review was conducted specifically of eastbound and westbound traffic volumes on the west leg of the intersection from these same counts, with the travel patterns summarized in Table 2. This data consistently reviewed the 4:35 to 5:35 p.m. period to avoid time of day bias in this comparison, and reflects all the traffic arriving at the highway (including quarry trips, landfill trips, and other rural trips).

**Table 2. Summary of Historical Traffic Counts on West Approach of Highway 99W/Coffin Butte Rd**

| Direction | March 2021 Weekday Traffic Counts | January 2022 Weekday Traffic Counts | September 2023 Weekday Traffic Counts | April 2025 Weekday Traffic Counts |
|---|---|---|---|---|
| Eastbound | 38 Vehicles *(4:35 to 5:35 PM)* | 19 Vehicles *(4:35 to 5:35 PM)* | 49 Vehicles *(4:35 to 5:35 PM)* | 33 Vehicles *(4:35 to 5:35 PM)* |
| Westbound | 15 Vehicles *(4:35 to 5:35 PM)* | 9 Vehicles *(4:35 to 5:35 PM)* | 17 Vehicles *(4:35 to 5:35 PM)* | 6 Vehicles *(4:35 to 5:35 PM)* |
| Bi-Directional Total | 53 Vehicles | 28 Vehicles | 66 Vehicles | 39 Vehicles |

This data was prepared to reflect the peak traffic volumes on the system, which is the time period commonly referred to as the *System Peak Hour* or *Design Hour*. The April 2025 data collected at the landfill entrance shows that the peak landfill activity occurs earlier in the day, tapering into the evening commute period when the highway volume increases.

This data shows that the critical weekday p.m. peak hour volumes at OR 99W/Coffin Butte Road have been fairly stable over this five-year period, and volumes from Coffin Butte Road during the peak hour have also been relatively consistent. The measured traffic volumes remain within the normal seasonal fluctuation expected for this type of use and do not reflect an increasing trend.

**Comment 2:** Landfill trucks are heavier than other types of trucks and can accelerate pavement wear and maintenance on Coffin Butte Road.

**Response:** There are a variety of trucks that enter and exit the Coffin Butte landfill. Review of data captured at the landfill entrance between 7:00 a.m. and 9:00 p.m. show that trucks account for about two-thirds of all the Coffin Butte landfill trips. These truck types range from single-unit box trucks to semi-trucks, but the increased loading does increase pavement wear in comparison to the impact of passenger vehicles.

The modification of circulation and access will add truck trips in the section of Coffin Butte Road between the current landfill entrance and the new expansion entrance; this section of roadway will be

reconstructed to current Benton County standards for a *Collector Road* and a *Freight Route* as addressed within the application. The design of this roadway extension will address the additional truck travel along Coffin Butte Road and the maintenance impacts of these trips.

**Comment 3:** The removal of the tonnage cap could increase travel to Coffin Butte at a much higher rate than area population growth. The traffic study does not account for programmatic/landfill management changes that could drastically increase travel.

**Response:** Landfill tonnage is a common metric to associate with landfill trips, but there are multiple factors that influence trip rates at a landfill. Waste management often involves siting transfer stations within close proximity to the population served, so that residential vehicles and contractors can make shorter trips to these facilities. This waste is then hauled by larger transfer trucks to regional facilities like the Coffin Butte landfill. This process of consolidating refuse from multiple individual sources results in a lower number of trips per ton as the haul distance increases. Based on discussions with the Republic Services team, there are no plans to increase the Coffin Butte operations beyond current area population growth.

Within the literature review section of the submitted traffic study we reviewed other landfill applications prepared at other sites across the US. One of these studies was conducted at the Twin Creeks Landfill, and this report was prepared to address a tonnage increase from 750,000 per year to a maximum of 1,400,000 tons. This study found that nearly doubling the tonnage resulted in only +6 weekday p.m. peak hour truck trips, which was due to the dispersion of trips throughout the day, reduced waste transport later into the evening period, and the use of larger trucks to support the longer-distance waste transfer.

The traffic study prepared for Coffin Butte recognizes that landfill trips can vary seasonally, by day of the week, and in response to population growth. While changes due to the tonnage cap were not directly assessed or considered within the February 2024 Transportation Impact Analysis, the traffic study considered the relocation of truck trips between the scales and the new landfill entrance and increased the existing traffic volumes by 50% (+57 additional peak hour trips). This change in travel is well beyond the projected population growth identified for Linn-Benton County that identifies annual growth of about 1% annually, or State of Oregon projections showing a population change of about 1.7% annually. Applying these growth rates would only result in a 10% to 20% increase in traffic volumes throughout the design and construction of the expansion site and its seven-year lifespan.

While a specific tonnage limit was not specifically considered or assessed within the Coffin Butte traffic study, the submitted analysis demonstrates that there is ample capacity on the system to support a higher tonnage limit, particularly if the additional materials were to arrive from other waste transfer stations using larger transfer trucks.

**Comment 4:** The activity on Coffin Butte Road will be so intense as to effectively "close" the road for public use.

**Response:** Coffin Butte Road is a low-volume Benton County designated *Collector* Road and *Freight Route.* The traffic volumes have been reviewed over the past five years to establish the current travel levels of the landfill, and to show estimates of activity with the proposed expansion site.

The proposed modifications to the landfill access with the expansion site will not change the current traffic volumes between Highway 99W and the existing landfill entrance, which reflects the highest-volume portion of this corridor (all trucks and passenger vehicles destined to the landfill will continue to use this portion of the road, as well as public trips from rural areas to the west). Within this area, traffic counts

from April 2025 show a peak bi-directional volume east of the landfill entrance between 10:25 a.m. and 11:25 a.m. of about 160 total vehicles on this roadway segment (from the landfill and other public trips). This level of travel is well below the capacity of the facility, and while Benton County does not have specific volume thresholds for its rural Collectors, this value (approximately 1,600 vehicles per day) is about 60% of a typical rural Collector volume range (which is generally between 300 and 2,600 vehicles per day per the Federal Highway Administration's 2023 publication *Highway Functional Classification: Concepts, Criteria, and Procedures*).

## NEXT STEPS

Thank you for the opportunity to clarify these transportation materials for the Coffin Butte Landfill, if you have any questions I can be reached at (503) 997-4473 or via email at joe@transightconsulting.com.