

4.16 Solid Waste

4.16.1 Introduction

This section addresses the generation and disposal of solid waste associated with the Project. Discussed is the environmental and regulatory settings, the baseline for determining environmental impacts, the significance criteria used for determining environmental impacts, and potential impacts associated with the construction, demolition, including the transitional phase, and operation and maintenance at the Rodeo Refinery and Santa Maria Site.

The Project also includes the Pipeline Sites—four regional pipelines serving the Santa Maria Site and the Rodeo Refinery. The Santa Maria Site is connected to the Rodeo Refinery by approximately 200 miles of subterranean pipeline, crossing San Luis Obispo, Santa Barbara, Kern, Kings, Fresno, Merced, Stanislaus, San Joaquin, Alameda and Contra Costa Counties. Phillips 66 proposes to empty and clean the pipelines at existing maintenance access points and to decommission or sell them; they would not be excavated as part of this Project. No physical changes would occur.

4.16.2 Environmental Setting

4.16.2.1 *Regional Setting*

Contra Costa County

The Rodeo Refinery is within the service area of Richmond Sanitary Service, which hauls municipal waste from the Refinery to a Class III landfill. The bulk of the other non-hazardous waste and recyclable waste generated by the Rodeo Refinery is taken to the Keller Canyon Landfill in Pittsburg by a contracted hauler. The Keller Canyon Landfill is a Class II landfill that accepts agricultural, construction/demolition, industrial, mixed municipal, and sludge waste up to the maximum permit amount of 3,500 tons per day (Contra Costa County 2015). The maximum permitted capacity is 75,018,280 cubic yards and the estimated closure date is 2050. As of December 31, 2020, the Keller Canyon Landfill had 49,441,787 cubic yards of remaining capacity (Contra Costa County 2021).

San Luis Obispo County

The Santa Maria Site is within the San Luis Obispo Integrated Waste Management Authority jurisdiction. Each jurisdiction is responsible for its own solid waste management. Solid waste generated in San Luis Obispo County is mostly residential waste, construction wastes, commercial and industrial wastes, and sludge residues. In most cases, solid waste is hauled directly to major Class III landfills in San Luis Obispo County including Cold Canyon, Chicago Grade, and City of Paso Robles. The remainder is taken to transfer stations, resource recovery centers, and composting facilities. According to the Department of Resources Recycling and Recovery (CalRecycle), in 2019 the residents and businesses of San Luis Obispo County disposed of 288,432 tons of solid waste in 14 permitted landfill facilities throughout the county (CalRecycle 2021).

4.16.2.2 *Local Setting*

Rodeo Refinery

Non-Hazardous and Recyclable Waste

Richmond Sanitary Service hauls approximately one-quarter ton per month of municipal waste from the Rodeo Refinery to a Class III landfill. Approximately 195 tons per month of other non-hazardous waste generated by the Rodeo Refinery is taken to Keller Canyon Landfill by a contracted hauler. The Rodeo Refinery generates approximately 1,900 pounds per month of “universal waste,” such as spent batteries and

lights that contain hazardous materials and therefore require special disposal separate from municipal trash. The Rodeo Refinery disposes of universal waste at a household hazardous waste collection facility or other authorized universal waste handler. The Rodeo Refinery has implemented a waste paper recycling program.

The Rodeo Refinery generates approximately 130 tons per year of additional non-hazardous waste that is sent to Keller Canyon Landfill due to maintenance turnaround activity. Turnarounds on various cycles are dependent upon the equipment and operating conditions of the individual processing units. The determining factors for a turnaround include regulatory inspection requirements, catalyst life, equipment fouling, and anticipated equipment life.

Santa Maria Site

Non-Hazardous and Recyclable Waste

The Santa Maria Site is served by South County Sanitary Services. Non-hazardous waste generated from demolition of the Santa Maria Refinery would likely be disposed of at the Cold Canyon Landfill. In 2016, the Cold Canyon landfill was expanded and has capacity to accept waste for at least 20 years at the current rate of disposal. The landfill has a maximum permitted throughput of 1,650 tons per day and total permitted capacity of 23,900,000 cubic yards with a remaining capacity of 14,500,000 cubic yards or 61 percent (San Luis Obispo County 2018).

4.16.2.3 Regulatory Setting

State Regulations

Assembly Bill 341

AB 341, enacted in 2011, replaced the Integrated Waste Management Act (AB 939) to establish new diversion and recycling goals. While AB 939 had a diversion goal of 50 percent by the year 2000, AB 341 established a goal of 75 percent by 2020. Diversion includes waste prevention, reuse, and recycling. Unincorporated Contra Costa County has disposal rate targets of 3.9 pounds per resident per day and 20.1 pounds per employee per day. In 2019, the County had an annual per capita residential disposal rate of 2.4 pounds per day and 10.7 annual per capital employee disposal rate, thereby meeting waste diversion goals for 2010 (CalRecycle 2020b).

Local Regulations

Contra Costa County General Plan

The Contra Costa County General Plan contains goals and policies pertaining to solid waste within the Public Facilities/Services Element (Contra Costa County 2010). The Public Facilities/Services Element establishes goals and policies and implementation measures that address infrastructure and public services that must be provided. These goals and policies are summarized as follows:

Solid Waste:

- Consider solid waste disposal capacity in County land use planning and permitting; and
- Encourage solid waste resource recovery (including recycling, composting, and waste to energy) so as to extend the *life* of sanitary landfills, reduce environmental impacts, and to make use of a valuable resource.

Contra Costa County Code

The County Board of Supervisors adopted County Ordinance 2019-31 in conjunction with the 2019 California Green Building Standards (CALGreen) Code to provide a single set of construction waste management requirements that apply to projects in the unincorporated County area. The 2019 Code, as amended in Contra Costa County Code, requires that at least 65 percent by weight of job site debris generated by most types of building project types be recycled, reused, or otherwise diverted from landfill disposal. This requirement applies to demolition projects and most new construction, as well as the majority of building additions or alterations for more details. CalGreen requires submission of plans and reports with verifiable post-project documentation to demonstrate that at least 65 percent of the nonhazardous construction and demolition debris generated on the job site are salvaged for reuse, recycled or otherwise diverted.

County Code Section 74-4.006 contains the complete set of CALGreen requirements pertaining to waste and recycling, including the County's amendments. Section numbers used below are those of the 2019 CALGreen Code.

Non-Residential Mandatory Measures

Section 5.408.1, Construction waste management: Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1.

Exceptions:

- Excavated soil and land-clearing debris.
- The enforcing agency may identify alternate waste reduction requirements if the agency determines that an owner or contractor has adequately demonstrated that diversion facilities necessary for the owner to comply with this section do not exist or are not located within a reasonable distance from the jobsite.

Section 5.408.1.1, *Construction Waste Management Plan*: Submit a construction waste management plan for the project, signed by the owner, in conformance with Items 1 through 5 prior to issuance of building permit. The construction waste management plan shall be updated as necessary upon approval by the enforcing agency and shall be available during construction for examination by the enforcing agency. The plan must do all of the following:

1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project, or salvage for future use or sale.
2. Specify if construction and demolition waste materials will be sorted onsite (source-separated) or bulk mixed (single stream).
3. Identify diversion and disposal facilities where the construction and demolition waste material will be taken and identify the waste management companies, if any, that will be used to haul the construction and demolition waste material. A waste management company used to haul construction and demolition waste material must have all applicable County approvals.
4. Identify construction methods employed to reduce the amount of construction and demolition waste generated. Page 6 of 7
5. Specify that the amount of construction and demolition debris shall be calculated consistent with the enforcing agency's requirements for the weighing of debris. The owner shall ensure that all construction and demolition debris diverted or disposed are measured and recorded by weight or volume using the most accurate method of measurement available. To the extent practicable, all construction and demolition debris shall be weighed using scales. Scales shall be in compliance with all regulatory requirements for accuracy and maintenance. For construction and demolition

debris for which weighing is not possible due to lack of scales or not practical due to material being reused onsite or elsewhere or other considerations, a volumetric measurement shall be used. The owner shall convert volumetric measurements to weight using the standardized conversion factors approved by the enforcing agency for this purpose.

Section 5.408.1.3, *Waste Stream Reduction Alternative*: The combined weight of new construction disposal that does not exceed two pounds per square foot of building area may be deemed to meet the 65 percent minimum requirement as approved by the enforcing agency

Section 5.408.1.4, *Documentation*: A construction waste management final report containing information and supporting documentation that demonstrates compliance with Section 5.408.1, Section 5.408.1.1, Items 1 through 5, and, when applicable, Section 5.408.1.3, shall be provided to the enforcing agency before the final inspection. The required documentation shall include, but is not necessarily limited to, the following:

1. Documentation of the quantity by weight of each material type diverted or disposed, consistent with the requirements of Section 5.408.1.1, Item 5, and receipts or written certification from all receiving facilities used to divert or dispose waste generated by the project that substantiate the amounts specified on the construction waste management final report; or
2. For projects that satisfy the waste stream reduction alternative specified in Section 5.408.1.3, documentation of the quantity by weight of each new construction material type disposed and the total combined weight of new construction waste disposed as a result of the project, the corresponding pounds of new construction disposal per square foot of the building area, and receipts or written certification from all receiving facilities used to dispose waste generated by the project that substantiate the amounts specified on the construction waste management final report.

Section 5.408.2, *Universal Waste*: Additions and alterations to a building or tenant space that meet the scoping provisions in Section 301.3 for nonresidential additions and alterations, shall require verification that Universal Waste items such as fluorescent lamps and ballast and mercury containing thermostats as well as other California prohibited Universal Waste materials are disposed of properly and are diverted from landfills. A list of prohibited Universal Waste materials shall be included in the construction documents.

Excavated soil and land clearing debris: 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled onsite until the storage site is developed. Exception: Reuse, either onsite or offsite, of vegetation or soil contaminated by disease or pest infestation.

Contra Costa Countywide Integrated Waste Management Plan

As required by the California Integrated Waste Management Act, Contra Costa County adopted a Countywide Integrated Waste Management Plan and Source Reduction and Recycling Element. The Integrated Waste Management Act establishes waste management goals, objectives, and policies related to solid waste disposal; facilities siting; household hazardous waste collection and disposal; and implementing programs to achieve plan goals. The Countywide Integrated Waste Management Plan and Source Reduction and Recycling Element establishes policies and goals related to source reduction, recycling, composting, special waste, and public information and education, and programs designed to achieve its Source Reduction and Recycling Element goals.

San Luis Obispo County General Plan

The Energy chapter of the General Plan's Conservation and Open Space Element contains the following goals and policies related to solid waste (San Luis Obispo County 2015):

- **Goal E 5:** Recycling, waste diversion, and reuse programs will achieve as close to zero waste as possible.

- **Policy E 5.1:** Source reduction and waste diversion: Encourage source reduction and diversion of solid waste

Integrated Waste Management Authority

In 2018, the San Luis Obispo Integrated Waste Management Authority adopted its *Regional Strategy to Meet California's Solid Waste Diversion Mandates*. This strategy provides guidelines for the Authority's compliance with the state's mandates, including AB 341 and related legislation.

San Luis Obispo County Municipal Code

San Luis Obispo County Municipal Code (Title 8, Chapter 8.12, Solid Waste Management), regulates wastes handled within the county. San Luis Obispo County Integrated Waste Management Authority Ordinance No. 2008-3 establishes requirements for recycling materials generated from residential facilities, commercial facilities, and special events. These requirements should increase diversion of recyclable materials from landfill disposal, reduce GHG emissions by recycling more materials, and avoid the potential financial and other consequences of failing to meet and maintain AB 939 requirements (San Luis Obispo County 2015).

4.16.3 Significance Criteria

Based on CEQA Guidelines Appendix G, a project would cause adverse impacts to solid waste service systems if it would:

- a. Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?
- b. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

4.16.4 CEQA Baseline

Baseline conditions reflect the 2019 operation and maintenance of the Rodeo Refinery and Santa Maria Site as petroleum refineries, including operation and maintenance activities. The baseline setting also includes the applicable regulatory framework to protect environmental resources, which are described above.

4.16.5 Approach to Analysis

The Project would involve construction and demolition activities at the Rodeo Site that would occur in phases over a period of approximately 21 months and is assumed to begin as early as the first quarter of 2022. All demolition and construction associated with the Rodeo Refinery would occur within its boundaries (except for one laydown area). Similarly, all demolition at the Santa Maria Site would occur within the existing refinery boundaries.

Refer to Section 4.9, *Hazards and Hazardous Materials*, for discussion related to hazardous waste generation and disposal, including hydro carbon-containing soils and other hazardous waste debris.

4.16.6 Direct and Indirect Impacts of the Proposed Project

Table 4.16-1 presents a summary of the potential solid waste impacts associated with construction and demolition, as well as significance determinations for each impact.

Table 4.16-1. Summary of Impacts

Impact	Significance Determination		
	LTS	LTSM	SU
Impact 4.16-1. Would the proposed Project generate solid waste in excess of state or local standards or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			
Rodeo Refinery and Santa Maria Site			
<i>Construction/Demolition, Including Transitional Phase^a</i>	✓		
<i>Operation and Maintenance</i>	✓		

Notes: LTS = Less than significant, no mitigation proposed
LTSM = Less-than-significant impact with mitigation
SU = Significant and unavoidable

^a. Transitional phase applies only to Rodeo Refinery

IMPACT 4.16-1

- a. *Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?***
- b. *Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?***

Construction and Demolition: Less Than Significant, No Mitigation Proposed

Rodeo Refinery

Grading and demolition would be required as a part of construction of the Project. The existing Carbon Plant would be demolished. New Project equipment would be constructed on previously developed land at the Rodeo Site that currently includes three storage tanks, which would be demolished as part of the Project. There may also be additional demolition activities (e.g., of pipe supports, concrete slabs, equipment replacement in-kind, equipment refurbishment) associated with proposed new interconnecting piping and other in-plant utilities. Other demolition materials include asphalt and concrete and typical construction debris, such as packaging materials. Demolition activities would require the offsite transport and disposal of approximately 19,400 tons of non-hazardous solid waste, or approximately 46 tons per day. It is expected that 80 percent would be recyclable scrap and 20 percent would be non-recyclable demolition debris. Solid waste generated by the Project would be transported to the Keller Canyon Landfill, which has an allowable throughput of 3,500 tons per day, and an estimated closure date of 2050.

The 2019 CalGreen Code, as amended in Contra Costa County Code, requires that at least 65 percent by weight of job site debris generated by most types of building project types be recycled, reused, or otherwise diverted from landfill disposal. This requirement applies to demolition projects and most new construction. As detailed in Section 4.16.2.3, *Regulatory Setting*, CalGreen requires submission of a project-specific Construction Waste Management Plan and reports with verifiable post-project documentation to demonstrate that at least 65 percent of the nonhazardous construction and demolition debris are salvaged for reuse, recycled or otherwise diverted. The Construction Waste Management Plan must be updated as necessary upon approval by Contra Costa County and be available during construction for examination. Debris that cannot be recycled would be sent to a sanitary landfill in compliance with the *Countywide Integrated Waste Management Plan*.

By diverting 80 percent of construction and demolition debris, the Project would exceed the Contra Costa County and CalGreen requirement of 65 percent of debris to be recycled, reused, or otherwise diverted from Keller Canyon Landfill, and therefore, would comply with management and reduction statutes and regulations related to solid waste. Implementation of a project-specific Construction Waste Management Plan that must meet the requirements of Contra Costa County Code, and providing verifiable post-project documentation to demonstrate compliance, would ensure that the amount of solid waste diverted to the Keller Canyon Landfill would be minimized. In addition, generation and disposal of solid waste would be short term occurring during the 21-month construction and demolition period.

Based on the short term construction and demolition period, compliance with CalGreen requirements, and the Keller Canyon Landfill having adequate capacity to support the daily solid waste disposal needs of the Project, the Project would not substantially affect the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals, and would comply with solid waste management and reduction regulations. Therefore, impacts related to solid waste would be less than significant.

Santa Maria Site

Demolition of the Santa Maria Site would generate solid waste in the form of steel, crushed concrete, and dirt. It is expected that the majority of the demolition debris would be recycled as scrap metal. Some of the crushed concrete and dirt would be re-used onsite as fill to level the sites of demolished process equipment, pipe support, and buildings. The remainder would be disposed of at a regional landfill, likely Cold Canyon Landfill. In 2016, the Cold Canyon Landfill was expanded and has capacity to accept waste for at least 20 years at the current rate of disposal. The landfill has a maximum permitted throughput of 1,650 tons per day and total permitted capacity of 23,900,000 cubic yards, with a remaining capacity of 14,500,000 cubic yards or 61 percent (San Luis Obispo County 2018).

It is estimated that 28 tons per day of debris would be generated during the 21-month demolition period at the Santa Maria Site. As with the Rodeo Refinery, Phillips 66 is required to comply with the 2019 CalGreen Code. Implementation of a project-specific Construction Waste Management Plan that must meet the requirements of CalGreen Code, and provide verifiable post-project documentation to demonstrate compliance, would ensure that the amount of solid waste diverted to the Cold Canyon Landfill would be minimized. In addition, generation and disposal of solid waste would be short term occurring during the 21-month construction and demolition period.

Based on the short term construction and demolition period, compliance with CalGreen requirements, and the Cold Canyon Landfill having adequate capacity to support the daily solid waste disposal needs of the Project, the Project would not substantially affect the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals, and would comply with solid waste management and reduction regulations. Therefore, impacts related to solid waste would be less than significant.

Operation and Maintenance: Less Than Significant, No Mitigation Proposed

Rodeo Refinery

Under baseline conditions, normal operations produce one-quarter ton per month of municipal waste from the Rodeo Refinery to a Class III landfill. Approximately 195 tons per month of other non-hazardous waste generated by the Rodeo Refinery is taken to Keller Canyon Landfill by a contracted hauler. The Rodeo Refinery generates approximately 1,900 pounds per month of “universal waste,” such as spent batteries and lights that contain hazardous materials and therefore require special disposal separate from municipal trash. The Rodeo Refinery disposes of universal waste at a household hazardous waste collection facility or other authorized universal waste handler.

The Rodeo Refinery generates approximately 11 tons per month of additional non-hazardous waste that is sent to Keller Canyon Landfill due to maintenance turnaround activity. Turnarounds on various cycles are dependent upon the equipment and operating conditions of the individual processing units.

The determining factors for a turnaround include regulatory inspection requirements, catalyst life, equipment fouling, and anticipated equipment life.

The Project would result in the elimination or alteration of some existing non-hazardous solid waste streams at the Rodeo Refinery. Solid waste from the Carbon Plant would cease. The nature and quantity of process wastes from the Rodeo Site would increase above the baseline condition from the processing of renewable feedstocks. Process waste generation and disposal is addressed in Section 4.9, *Hazards and Hazardous Materials*.

The Rodeo Refinery is currently complying with federal, state, and county requirements related to management of solid waste, and would continue to do so under the Project. In addition, Phillips 66 has an ongoing recycling program that would be employed during operation and maintenance of the Project. No aspects of the Project would affect the continued compliance with these existing solid waste statutes and regulations. Because employment would remain the same as under baseline conditions, waste generation is unlikely to increase under the Project; however, if any additional waste quantities above baseline are generated the amounts would not be considered a substantial increase compared to the baseline solid waste generation from normal operations at the Rodeo Refinery. Therefore, operation and maintenance impacts would be less than significant.

Santa Maria Site and Pipeline Sites

With demolition of the Santa Maria Site and non-operation of the Pipeline Sites the Project would reduce the amount of solid waste generated at each site. At this time, it is speculative to assume a future land use at the Santa Maria Site; therefore, the amount of future solid waste that would be generated is unknown. Any proposed reuse of the site would be subject to separate permitting and approval processes. Given the capacity of the Cold Canyon Landfill, it is expected that operation and maintenance would not substantially affect the permitted capacity at local landfills. Therefore, the impact would be less than significant.

Mitigation Measure: None Required

4.16.7 References

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