# 4.0 Environmental Impacts Analysis

This chapter examines the potential environmental impacts of the Phillips 66 Santa Maria Refinery Demolition and Remediation Project (Project). Each issue area analyzed in this chapter provides background information and describes the environmental setting (baseline conditions) to help the reader understand the underlying conditions against which an impact is evaluated. In addition, each section describes how an impact on those underlying conditions is determined "significant" or "less than significant." Finally, the individual sections recommend mitigation measures to reduce significant impacts. Throughout this chapter, impacts are identified with a letter-number designation (e.g., impact AQ.1, impact BIO.3). Corresponding mitigation measures are connected numerically to their impacts (e.g., AQ.1-1 and BIO.3-1).

This chapter also provides a discussion of the baseline settings determination to be used by all of the issue areas, as discussed below.

This Environmental Impact Report (EIR) includes many references that have been abbreviated to acronyms. A list of acronyms is included following the Table of Contents.

## Assessment Methodology

The analysis of each issue area begins with an examination of the existing physical setting (baseline conditions as determined pursuant to Section 15125(a) of the California Environmental Quality Act [CEQA] Guidelines, see below) that may be affected by the Project. The effects of the Project are defined as changes to the environmental setting attributable to the Project components.

Thresholds of significance are identified for each issue area. The thresholds of significance serve as benchmarks for determining if a component action will result in a significant adverse environmental impact when evaluated against the baseline. According to Section 15382 of the CEQA Guidelines, a significant effect on the environment means "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project."

The impacts of the activities that occur related to the Project are described and evaluated in respective sections of this EIR, and the County of San Luis Obispo (County), as CEQA Lead Agency, and other state and local responsible agencies have the authority to impose mitigation measures, conditions, or regulations to reduce or mitigate potential impacts.

## Baseline Determination

The purpose of an EIR is to identify the project's significant effects on the environment and indicate the manner in which those significant effects can be mitigated or avoided (California Public Resources Code § 21002.l(a)):

> *To decide whether a given project's environmental effects are likely to be significant, the Lead Agency must use some measure of the environment's state absent the project, a measure sometimes referred to as the 'baseline' for environmental analysis" (Communities for a Better Environment, supra, 48 Cal.4th at p. 315.).*

An EIR typically evaluates the potential physical changes to the environment by comparing existing physical conditions (i.e., the baseline) with the physical conditions that are predicted to exist with the implementation of the Project. The difference between these two sets of physical conditions is the relevant physical change to the environment. After the project's predicted environmental effects have been quantified, one can then determine whether those environmental effects are "significant" for purposes of CEQA. Thus, the baseline is a fundamental component of the analysis used to determine whether a proposed project may cause environmental effects and, if so, whether those effects are significant. CEQA Guidelines § 15125 states the following:

> *Generally, the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation [NOP] is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. Where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project's impacts, a lead agency may define existing conditions by referencing historic conditions, or conditions expected when the project becomes operational, or both, that are supported with substantial evidence.*

The SMR operates under a County issued permit (1990 County conditions for SMR operations under County DP/CDP D890287) which allows for the processing of crude oil.

Establishment of baseline conditions using an average of operational characteristics over the last five years of operations is appropriate because the SMR has occupied the site for nearly 70 years, the operational intensity has varied from year to year, and the SMR only very recently (January 2023) stopped receiving and processing crude oil. A summary of annual output over the past five full years (2017–2021) prior to the application submittal in 2022 is provided in Table 4.1. These numbers represent the crude oil received and processed from the offshore and onshore sources delivered to the SMR as refinery "feed". Table 4.1 also includes wastewater processed, coke handled, daily average truck trips, and annual rail traffic.

**Table 4.1 SMR Five-Year Operating History Summary**

| Year | Crude Oil Throughput, Average Barrels per Day | Wastewater Treated, million gal/year | Coke Handled, tons/year | Daily Average Truck Trips | Annual Rail Cars/Trains |
|---|---|---|---|---|---|
| 2017 | 31,126 | 138.5 | 290,737 | 41 | 99/13 |
| 2018 | 29,638 | 142.5 | 276,856 | 36 | 135/17 |
| 2019 | 27,342 | 151.4 | 209,624 | 35 | 104/13 |
| 2020 | 26,236 | 124.9 | 267,294 | 41 | 64/8 |
| 2021 | 22,093 | 128.6 | 215,303 | 30 | 106/14 |
| Average | 27,287 | 137.2 | 251,963 | 37 | 102/13 |

Source: San Luis Obispo County Air Pollution Control District annual emissions reports, form 17 and form 23. Included in Phillips 66 Application materials.

The reconfiguration of the Rodeo Refinery in Contra Costa County in the San Francisco Bay Area resulted in the shut-down of crude oil processing at the SMR in January 2023. The SMR continues to operate, without crude oil processing, at a reduced level associated with the reduction in inventory of previously produced materials (coke and sulfur) being transported from the site.

To allow for a straightforward assessment of the Project impacts and to accurately reflect the environmental setting historically on the Nipomo Mesa, the baseline for purposes of environmental review was considered to be the physical environmental conditions up to January 2023, with an SMR operational baseline of the average of the last full five years of SMR operations prior to the application submittal in 2022 (2017–2021). See Table 4.1.

Adjustment of the baseline to account for the operations of the SMR historically is appropriate since these facilities have undergone CEQA review, are fully permitted to operate, and have all the necessary entitlements for operation, and has been operating in the very recent past. In addition, use of the 5 year historical operations period to establish baseline as opposed to a future "closed condition" is appropriate because: (i) the plant had ceased processing crude oil only three month prior to when the NOP was published; and (ii) comparing the Project's impacts against historic operations would more accurately assess and disclose the Project's impacts to what the community around the Project site had been experiencing and was accustomed to over the last 70 years while the plant was in operation.

### Project Impact Analysis

Based upon the Notice of Preparation (NOP) and scoping comments, 16 issue/resource areas were identified where potentially significant impacts could occur from the Project. The impact analysis for each of these issue areas is provided in the following subsections of Chapter 4.0. The analysis of each issue area has defined the study area for purposes of the impact analysis. In most cases, the study area is the region that is in the vicinity of the Project.

For each identified issue area, the following framework was used:

- Environmental Setting;
- Regulatory Setting;
- Thresholds of Significance;
- Impact Assessment Methodology;
- Project-Specific Impacts and Mitigation Measures;
- Residual Impacts;
- Mitigation Measure Impacts to Other Issue Areas; and
- Cumulative Impacts.

The residual impact is the impact classification after any mitigation has been applied. If an impact is found to be *less than significant*, then the residual impact would remain *less than significant* with or without mitigation. All residual impacts identified in this document have been classified according to the following criteria:

- ***Class I - Significant and Unmitigable*:** Significant adverse impacts that cannot be effectively mitigated. No measures can be taken to avoid or reduce these adverse effects to insignificant or negligible levels.

- ***Class II – Less Than Significant with Mitigation*:** These impacts are potentially similar in significance to those of Class I impacts but can be eliminated or reduced below an issue area's thresholds of significance by the implementation of mitigation measures.
- ***Class III – Less Than Significant*:** An adverse impact that does not meet or exceed an issue area's thresholds of significance. Generally, no mitigation measures are required for such impacts, although they may still be recommended should the lead or responsible agency deem it appropriate to reduce the impact to the maximum extent feasible.
- ***Class IV - Beneficial*:** Effects are beneficial to the environment.
- ***No Impact* -** A change that results in no impact on the environment relative to the environmental baseline.

If the impact remains at or above the pertinent threshold of significance after mitigation is applied, it is deemed to be *significant and unavoidable, Class I*. If a "significant impact" is reduced, based on compliance with mitigation, to a level below the pertinent threshold of significance, it is determined to no longer have a significant effect on the environment (i.e., to be *less than significant with mitigation, Class II*). If an action creates an adverse impact above the baseline condition, but such impact does not meet or exceed the pertinent threshold of significance, it is determined to be *less than significant, Class III*. An action that provides an improvement to an environmental issue area in comparison to the baseline information is recognized as a *beneficial* impact, *Class IV*.

**Formulation of Mitigation Measures and Mitigation Monitoring and Reporting Program**

When significant impacts are identified, feasible mitigation measures are formulated to eliminate or reduce the severity of the impacts and focus on the protection of sensitive resources. The effectiveness of a mitigation measure is subsequently determined by evaluating the impact remaining after its application. The impacts remaining after mitigation are considered residual impacts. The residual impacts can be either *significant* or *less than significant*. Implementation of more than one mitigation measure may be needed to reduce an impact below a level of significance. The mitigation measures recommended in this document are identified in the impact sections and presented in a Mitigation Monitoring and Reporting Program, provided in Chapter 7.0 of the EIR.

Measures that have been incorporated as part of an applicant's project design are considered Applicant-proposed measures and are not considered as mitigation measures under CEQA. If they eliminate or reduce a potentially significant impact to a level below the threshold of significance, they eliminate the potential for that significant impact since the "measure" is a component of the action. However, if the Project is approved, the Applicant-proposed measures would be part of the conditions of approval.

Public Resources Code Section 21081.6 establishes two distinct requirements for agencies involved in the CEQA process. Subdivisions (a) and (b) of the section relate to mitigation monitoring and reporting, and the obligation to mitigate significant effects where possible. Pursuant to subdivision (a), whenever a public agency completes an EIR and makes a finding pursuant to Section 21081(a) of the Public Resources Code taking responsibility for mitigation identified in the EIR, the agency must adopt a program of monitoring or reporting which will ensure that mitigation measures are complied with during implementation of an approved project.

The County will be responsible for the monitoring of the mitigation measures adopted pursuant to this EIR. One important step in monitoring is defining the responsibility of the Applicant to support this process. Mitigation measure EM.1 defines this process and is required to support all other mitigation measures and Applicant-proposed measures defined in this EIR.

*EM.1* ***County Environmental Monitor:*** *The Applicant shall provide the funding for a County Environmental Monitor to oversee and monitor compliance with County Conditions of Approval and EIR mitigation measures. The Environmental Monitor shall assist the County in condition compliance and mitigation monitoring for all applicable demolition construction, soil remediation, and site restoration stages of the Project.*

*The Environmental Monitor will prepare a working monitoring plan that reflects the County-approved environmental mitigation measures/conditions of approval. This plan will include:*

1. *goals, responsibilities, authorities, and procedures for verifying compliance with environmental conditions of approval/mitigation measures;*

2. *lines of communication and reporting methods;*

3. *tracking construction crew training regarding environmental sensitivities;*

4. *daily and weekly reporting of compliance;*

5. *authority to stop work; and*

6. *action to be taken in the event of non-compliance.*

*The Environmental Monitor shall be a County employee or under contract to the County of San Luis Obispo, and the entire expense of retaining and supervising the Environmental Monitor, including the County's administrative and overhead fees, shall be paid by the Applicant.*

*The Applicant shall also be responsible for funding work required by mitigation measures requiring use of individuals with special expertise (e.g., botanist, wildlife biologist). The County's Environmental Monitor will retain and coordinate with specialists as necessary to ensure their availability at appropriate times (i.e., prior to issuance of construction permits, during construction or post-approval, etc.). The Environmental Monitor will coordinate with the Applicant's construction site monitors and permitting and responsible agencies.*

***Monitoring/compliance: Prior to issuance*** *of a construction permit, the Applicant shall provide a detailed Project description, detailed technical work related to any of the Conditions of Approval, and the construction work schedule, including any additional technical work/oversight conducted by the Applicant. This information will be used to obtain the monitor's work scope. Once the consultant is selected and costs are obtained, a trust account will be established to deposit the required funds.* ***Prior to ground disturbance****, all construction workers shall be informed about the monitor and their*

*role at the work site. This may be included as a part of any preconstruction meeting.* ***During construction****, all approved protection measures, if any, shall be kept in good working order by the Applicant and any necessary corrective measures addressed promptly by the Applicant upon discovery. The monitor shall be present as specified in the approved work scope.* ***Prior to final inspection/occupancy of the construction permit****, the Environmental Monitor shall submit to the County a final post-construction compliance report. Any outstanding items identified shall be addressed to the satisfaction.*

***Submittal Timing:*** *Prior to ground disturbance or County permit issuance* ***Approval Trigger:*** *Issuance of County permit* ***Responsible Party:*** *The Applicant or designee* ***What is required:*** *Detailed Project Description, Schedule, and Work Plan, and a Cost-Accounting contract funding the County Environmental Monitor* ***To whom it is submitted and approved by:*** *County Department of Planning and Building.*

### Cumulative Projects Impact Analysis

Each issue area in this chapter includes a cumulative impact analysis, which identifies the potential impacts of the Project that might not be significant when considered alone, but that might contribute to a significant impact in conjunction with other projects in the Project vicinity. The list and description of cumulative projects is included in Chapter 3.0, Cumulative Study Area.