CHAPTER 3
Project Impacts and Mitigation Measures

3.0 Introduction to Environmental Analysis

This chapter describes the relevant environmental and regulatory setting; identifies the significance criteria and thresholds relied upon in the analysis; and evaluates the direct, indirect, and cumulative environmental impacts of the Permanente Creek Restoration Plan (PCRP) to determine whether its implementation could result in one or more new significant impacts or a substantial increase in the severity of any significant impacts previously identified in the 2012 EIR. Based on the explanation provided in Section 2.3, *Focus of the Supplemental EIR*—including as summarized in Table 2-4, *Specific Areas of Focus for the Supplemental EIR*—the analysis of Project impacts in this chapter focuses on PCRP Reaches 6–13, 17, and 18 as key areas for evaluation specifically for seven resource areas: air quality, biological resources, cultural resources, energy conservation, geology and soils, greenhouse gas emissions, and hydrology and water quality. The remaining resource areas included in the CEQA Guidelines Appendix G Environmental Checklist are addressed in Section 3.8, *Project Consistency with 2012 EIR*. This initial section of Chapter 3 introduces key concepts and the framework for the analysis of potential resource impacts in this chapter.

3.0.1 Environmental Baseline

CEQA requires that an EIR "include a description of the physical environmental conditions in the vicinity of the project" (CEQA Guidelines Sections 15125[a] and 15126.2[a]). This environmental setting as of the date of the notice of preparation normally constitutes the baseline physical conditions by which a lead agency determines whether an impact would be significant. However, when a supplemental EIR (SEIR) is prepared, the lead agency's scope of environmental review is limited to whether the existing EIR is sufficient or whether further analysis is needed (CEQA Guidelines Sections 15162 and 15163). If further analysis is needed, then it is included in the SEIR. In the context of an SEIR, the CEQA baseline is adjusted such that the originally approved project is assumed to exist. Therefore, this SEIR analyzes the impacts of the PCRP by comparing existing conditions plus the PCRP against existing conditions plus the 2012 Reclamation Plan Amendment and 2012 EIR, and the creek restoration plans evaluated therein.

The mitigation measures imposed by the County in the context of the 2012 EIR are ongoing obligations for Lehigh. Compliance with those measures is enforceable by the County independent of its consideration of the PCRP. Because the 2012 mitigation measures are part of the baseline condition for this SEIR for purposes of CEQA, they are being carried forward (unchanged). See **Appendix H1**, *Summary of Impacts and Mitigation Measures for the 2012 Permanente Quarry Reclamation Plan Amendment*. Other conditions of approval for the 2012

approvals that would be implemented or occur as part of the baseline conditions for the PCRP are set forth in **Appendix H2**, *2012 Conditions of County Approval*.

3.0.2 Types of Impacts

Impacts analyzed are either project-specific or cumulative. The terms "direct impacts," "indirect impacts," and "cumulative impacts" are defined below, consistent with CEQA Guidelines Sections 15064(d) and 15355.

Direct and Indirect Impacts: Project impacts can be direct or indirect. Examples of direct physical changes in the environment (i.e., direct impacts) include dust, noise and odors generated during construction, or the loss of sensitive biological habitat due to grading and excavation during project construction or operation. An indirect physical change in the environment (i.e., an indirect impact) is not immediately related to the project, but flows from it. Stated another way, if a direct physical change in the environment in turn causes another change in the environment, then the other change is an indirect physical change in the environment. For example, the construction of new utility capacity may facilitate population growth in the service area due to the increased capacity, and that growth may in turn lead to an increase in air pollution. An indirect physical change is considered only if that change is a reasonably foreseeable consequence of the project. A change that is speculative or unlikely to occur is not reasonably foreseeable.

Cumulative Impacts: A cumulative impact occurs when two or more individual impacts, when considered together, are considerable or that compound or increase other environmental impacts, even if the individual effects of either one would not. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. The scenarios used for defining and analyzing cumulative impacts are discussed in Section 3.0.5.

3.0.3 CEQA Significance Criteria and Determinations

CEQA lead agencies rely on impact significance criteria as benchmarks to determine whether changes to the existing environment caused by a project or an alternative would cause a significant adverse effect. CEQA defines a significant impact on the environment as "a substantial, or potentially substantial, adverse change in the environment" (Public Resources Code Section 21068), and the CEQA Guidelines further clarify that a significant impact is a substantial adverse change "in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance" (14 Cal. Code Regs. Section 15382). To guide the County Planning Department (as the lead agency for the PCRP) in determining whether the Project or an alternative may cause a significant impact on the environment, the preparers of this SEIR (who are identified in Chapter 5, *Report Preparation*) have considered the series of questions routinely considered by the County pursuant to its own environmental checklist as well as those provided in CEQA Guidelines Appendix G. Case law interpreting CEQA has recognized that lead agencies generally have broad discretion to formulate significance thresholds and to draw significance conclusions based on information in the record for a particular project activity, including the impact's setting: "For example, an activity which may not be significant in an urban area may be significant in a rural area" (CEQA Guidelines Section 15064(a)(1)(b)). Impact conclusions reached in this SEIR are made based on information

in the County's official record, including credible science-based research, reference materials, and informed professional judgments of qualified scientists and SEIR preparers. Technical studies and analyses relied upon are cited in each section of the SEIR; additional Project-specific or site-specific analyses are provided in the appendices. Materials relied upon have been published, peer-reviewed, or independently reviewed on the County's behalf. They follow applicable protocols and otherwise are believed to be appropriate for consideration in the SEIR. Representatives of the County and members of the County's environmental consultant team who have the relevant professional credentials and experience independently reviewed all applicant-provided studies and technical reports on behalf of the County. All impact determinations are projections based on the expectation that the described impacts, or lack thereof, would occur if the Project or an alternative is approved and implemented.

The categories used to designate impact significance in the 2012 EIR were:

- **No Impact.** There would be no impact if there is no Project-caused change in the environment (for example, if the environmental resource does not occur within the Project site or the area of potential effect). For example, there would be no impact related to tree removal if no tree removal is proposed in the Project site.
- **Less than significant.** This determination applies if a Project-caused change would result, but that it would not exceed the applicable significance threshold.
- **Less than significant with mitigation incorporated.** This determination applies if the Project would result in an adverse impact that meets or exceeds the applicable significance threshold, but feasible mitigation is available that would eliminate any adverse impact or reduce it to a less-than-significant level.
- **Significant and unavoidable.** This determination applies if the Project would result in an adverse effect that meets or exceeds the applicable significance threshold but, even with the implementation of mitigation measures to lessen the impact, if available, the residual effect would remain significant.

In the context of this SEIR, the categories used to designate impact significance are whether the Project would cause any **new significant impact** or **substantially increase the severity of a significant impact** previously disclosed and evaluated in the 2012 EIR.

3.0.4 Mitigation Measures

As discussed in Section 3.0.1, *Environmental Baseline*, mitigation measures imposed as part of the 2012 EIR are part of the analytical baseline for this SEIR. Where the PCRP could result in a change in the baseline physical environment (including with the implementation of the 2012 EIR mitigation measures and conditions of approval) such that a new significant impact or a substantial increase in the severity of a previously identified significant impact could result, this SEIR identifies one or more new mitigation measures, the implementation of which could reduce the severity of the impact below established thresholds. Detailed analyses of impacts and the identification of mitigation measures specific to the PCRP are contained in this chapter.

3.0.5 Cumulative Effects Analysis

3.0.5.1 Cumulative Considerations in this SEIR

CEQA Guidelines Section 15130 requires a discussion of the cumulative impacts of a project when the project's incremental contribution to a significant cumulative effect is "cumulatively considerable." This means that the project's incremental effects are considerable when viewed in connection with the effects of past, current, and probable future projects. An incremental, project-specific contribution to a cumulative impact is less than cumulatively considerable and is not significant if, for example, the project is required to implement or fund its fair share of a mitigation measure(s) designed to alleviate the cumulative impact.

Consistent with CEQA, the analysis of potential cumulative impacts is "guided by the standards of practicality and reasonableness" (CEQA Guidelines Section 15130(b)). The purpose of the cumulative analysis is to allow decision-makers to better understand the impacts that might result from approval of past, present, and reasonably foreseeable future projects, in conjunction with the Project addressed in this SEIR.

The CEQA Guidelines advise that a discussion of cumulative impacts should reflect both their severity and the likelihood of their occurrence (CEQA Guidelines Section 15130(b)). Consistent with CEQA Guidelines Section 15130(b), the lead agency has prepared a list of past, present, and reasonably foreseeable future projects that could result in related or cumulative impacts. This list includes projects outside the control of the lead agency. The analysis of cumulative impacts also considers projections contained in planning documents designed to evaluate regional or area-wide conditions. Existing conditions within the cumulative impacts area of effect reflect a combination of the natural condition and the effects of past actions in the affected area. The following factors also were used to determine an appropriate list of projects to be considered in this cumulative analysis:

- **Similar Environmental Impacts** – The analysis considers "reasonably foreseeable" projects that would contribute to effects on resources also affected by the Project in the vicinity of the Project site.
- **Geographic Scope** – The appropriate geographic area of cumulative analysis is identified for the resource areas of focus in this SEIR as dictated by relevant physical and/or environmental boundaries. Where the relevant geographic scope has not changed subsequent to the 2012 EIR, the information is not repeated. For ease of reference, however, **Table 3.0-1** summarizes the different geographic areas used to evaluate cumulative impacts.
- **Timing and Temporal Scope** – Incremental impacts of the Project could combine with the incremental impacts of other projects to cause or contribute to cumulative effects if the Project's periods of activity or ongoing impacts would coincide in terms of timing with the effects of the other projects in the cumulative scenario. Where the relevant temporal scope has not changed subsequent to the 2012 EIR, the information is not repeated.

TABLE 3.0-1
GEOGRAPHIC CONSIDERATIONS IN CUMULATIVE ANALYSIS

Resource Area	Geographic Area
Aesthetics	Viewshed from U.S. 101 in Project vicinity
Air Quality	San Francisco Bay Area Air Basin and North Central Coast Air Basin
Biological Resources	Habitat Plan Area
Cultural Resources and Tribal Cultural Resources	Project site and vicinity
Energy	Countywide
Geology, Soils, and Paleontological Resources	Project site and vicinity in areas with similar soil and geologic conditions
Greenhouse Gases	Statewide
Hazards and Hazardous Materials	Project site, adjacent parcels, and truck hauling routes
Hydrology and Water Quality	Permanente Creek watershed, groundwater basins in the vicinity of the Project site
Mineral Resources	Countywide
Noise and Vibration	Project site and adjacent parcels
Transportation/Traffic	Adjacent roadways and highways
Utilities and Service Systems	Unincorporated County areas
Wildfire	Countywide, including in accordance with fire hazard maps prepared by the California Department of Forestry and Fire Protection (CAL FIRE) as part of the Fire and Resource Assessment Program (FRAP) (CAL FIRE 2022).

3.0.5.2 Characterization of Cumulative Effects Conclusions in this SEIR

The analysis documented in the 2012 EIR determined whether the 2012 Reclamation Plan Amendment, including the creek restoration activities proposed for implementation within the PCRA, would cause or contribute to any cumulatively significant impact and, if so, whether the contribution would be "cumulatively considerable" as defined by CEQA Guidelines Section 15065(a)(3). The analysis in this SEIR focuses on whether changes to the earlier-described project (i.e., the restoration plan refinements described in the Amended Consent Decree [Appendix B] and Updated 90% Design Memo [Appendix C]) would cause any new significant impact or any substantial increase in the severity of a significant impact already disclosed and evaluated in the 2012 EIR.

3.0.5.3 Cumulative Scenario

Section 6.1 of the Draft 2012 EIR (at page 6-2 et seq.) summarized the projects considered in the cumulative effects analysis for the 2012 EIR. Because the geographic scope of the 2012 Reclamation Plan Amendment, nature of potential direct and indirect effects, and the duration of the reclamation activities analyzed were more extensive than the change to that project reflected in the Updated 90% Design Memo that is the subject of this SEIR, the cumulative projects list in the 2012 EIR was predictably more extensive. For this SEIR, **Table 3.0-2** identifies a list of

projects that have potential to be part of the cumulative scenario. To identify them, the lead agency solicited input from agencies and others during the scoping process about past, other present, and reasonably foreseeable future projects that would cause impacts that could overlap with those of the PCRP. Table 3.0-2 also describes the approximate geographic location and timing of effects of each of the potentially cumulative projects. These projects include a range of project types. They primarily consist of infrastructure and capital improvement projects, as well as private site development projects. These projects are considered reasonably likely to be constructed and/or operated in a similar timeframe as the PCRP and could contribute incremental impacts that are similar to those of the PCRP. Because a number of the projects identified as cumulative projects are market-driven and/or have yet to be fully funded, the status and construction dates are not certain. Therefore, for the purposes of this cumulative analysis, the lead agency assumes they would cause impacts concurrently with this Project.

TABLE 3.0-2
CUMULATIVE PROJECTS LIST

Project Name	Location	Approximate Distance from Project Site (miles)	Project Description	Status and Estimated Schedule
Transportation demand strategies at Rancho San Antonio Open Space Preserve	Rancho San Antonio Open Space Preserve	0.5	Phased implementation of transportation demand management strategies designed to encourage alternative modes of transportation to the preserve.	Implemented in phases over several years; no confirmed plan/scope/timeline
Permanente Creek Trail	Charleston Road and Amphitheatre Parkway, City of Mountain View	6.5	Two creek crossings in the North Bayshore area.	Project is substantially complete
Colony Street Connection to Permanente Creek Trail	Colony Street, City of Mountain View	6.5	Pedestrian/bike bridge across Permanente Creek.	In design
McKelvey Park	McKelvey Park, City of Mountain View	4.5	Baseball park acts as a stormwater basin for creek flows and was done in partnership with Valley Water.	Complete
Permanente Creek Widening and New Bike/Ped Bridge	1860-2159 Landings Drive, City of Mountain View	6.5	Improvements to Permanente Creek and its riparian habitats through widening of the creek and restoration of native vegetation to support local biodiversity. A pedestrian-bicycle path is proposed along the eastern side of Permanente Creek and would connect to a new east-west pedestrian/bicycle bridge over the creek.	Approved

SOURCES: Midpeninsula Regional Open Space District 2021, City of Mountain View 2021

The County Planning Department received Lehigh's application for a proposed 2019 Reclamation Plan Amendment. However, the proposal became the subject of litigation and was withdrawn. The County Planning Department has determined that it is reasonably foreseeable that Lehigh will submit a new application for a Reclamation Plan Amendment while the CEQA process for

the PCRP is underway. Nonetheless, the details of a potential future application cannot be known with sufficient specificity to evaluate them as part of the cumulative effects analysis for the proposed creek restoration plan evaluated in this SEIR.

The U.S. Fish and Wildlife Service (USFWS) approved the Lehigh Permanente Site Operation and Maintenance Low-Effect Habitat Conservation Plan (LEHCP) and accompanying incidental take permit in 2022 for a 20-year permit term (GEI Consultants, Inc. 2022; USFWS 2022a, 2022b). The LEHCP includes portions of PCRP Reaches 8–12 and provides measures to protect the California red-legged frog from activities including stormwater capture/sedimentation basin operation and maintenance, erosion control, material transport, vehicle and equipment operation, and road and vegetation maintenance. Monarch butterfly host plant and nectar plant surveys also are required.

In addition to the previous project list, the Santa Clara County General Plan 1995-2010 (County of Santa Clara 1994), San Benito County 2035 General Plan (County of San Benito 2015), and Santa Clara Valley Habitat Plan (County of Santa Clara et al. 2012) were reviewed for potential future development projects, new roadway corridors, or changes in allowed development patterns that could result in cumulative impacts. None were identified in the Project vicinity. The surrounding area is General Plan designated and zoned for agricultural, rangeland, and open space uses—similar to existing conditions at the Project site and in the vicinity. The location of the California High-Speed Rail Authority stations and alignment were considered (components are proposed approximately 3 miles north of the Project site) and impacts related to biological resources are discussed. Significant, specific land use changes that would impact the cumulative scenario due to the Sargent Ranch Quarry project are not expected in the Project site.

3.0.6 References

California Department of Forestry and Fire Protection (CAL FIRE), 2022. Fire Hazard Severity Zone Viewer, accessed February 3, 2022, with a focus on Santa Clara County.

City of Mountain View, 2021. Email communication with Stephanie Williams, Planning Manager/Zoning Administrator, June 18, 2021.

County of San Benito, 2015. *San Benito County 2035 General Plan*. July 21, 2015. https://edcsanbenito.org/wp-content/uploads/2019/10/Adopted-2035-GPU-2.pdf.

County of Santa Clara, 1994. *Santa Clara County General Plan, 1995-2010.* December 20, 1994. https://plandev.sccgov.org/ordinances-codes/general-plan.

County of Santa Clara, City of San Jose, City of Morgan Hill, City of Gilroy, Santa Clara Valley Water District, Santa Clara Valley Transportation Authority, 2012. Santa Clara Valley Habitat Plan. August 2012. https://scv-habitatagency.org/178/Santa-Clara-Valley-Habitat-Plan.

GEI Consultants, Inc., 2022. Low-Effect Habitat Conservation Plan Permanente Site Operation and Maintenance. May 2022.

Midpeninsula Regional Open Space District, 2021. Email communication with Xucan Zhou, Planner II, June 15, 2021.

U.S. Fish and Wildlife Service (USFWS), 2017. Response to U.S. Army Corps of Engineers request for initiation of formal consultation on the proposed Permanente Creek Restoration Project (Corps file number 2008-00356), August 9, 2017.

USFWS, 2021. Email communication with Joseph Terry, Senior Fish and Wildlife Biologist, June 28, 2021.USFWS, 2022a. Formal Consultation on the Issuance of a Section 10(a)(1)(B) Incidental Take Permit for the Lehigh Southwest Cement Company's Permanente Site Operation and Maintenance Project Low-Effect Habitat Conservation Plan, Santa Clara County, California. May 27, 2022.

USFWS, 2022b. Findings and Recommendations Regarding the Issuance of Federal Fish and Wildlife Permit (ESPER004426) to Lehigh Southwest Cement Company to Allow Incidental Take of the California Red-legged Frog as a Result of the Low-Effect Habitat Conservation Plan for the Permanente Site Operation and Maintenance Project in Santa Clara County, California. June 15, 2022.

3.1 Air Quality

This section identifies and evaluates issues related to air quality to determine whether the PCRP, including its revisions to the 2011 Creek Restoration Plan that is a component of the 2012 Reclamation Plan Amendment, would cause one or more new significant impacts or a substantial increase in the severity of previously identified significant impacts than was disclosed in the 2012 EIR. To do this, as explained in Section ES.1, *Introduction*, and in Section 2.3, *Focus of the Supplemental EIR*, including as summarized in Table 2-4, *Specific Areas of Focus for the Supplemental EIR*, this analysis focuses on three things: (1) PCRP areas that are outside of the existing reclamation plan boundary (for which Grading Approval would be required); (2) PCRP areas within the reclamation plan boundary and within the 120-acre PCRA but outside of the PCRA's 49.2-acre disturbance area; and (3) more generally, whether the PCRP would include work at a greater intensity than previously considered in the 2012 EIR. As a result, Reaches 6–13 and Reaches 17 and 18 are key areas for evaluation.[1]

This section describes the physical and regulatory setting, the criteria used to evaluate the significance of potential impacts, the methods used in evaluating these impacts, and the results of the impact assessment relative to the 2012 EIR. This analysis is based in part on the Air Quality and Greenhouse Gas Emissions Technical Report provided in **Appendix D**, *Air Quality and Greenhouse Gas Emissions*. This technical report was prepared on the County's behalf.

The County received scoping comments from the Town of Los Altos Hills (Letter C) and a member of the public (Letter A) pertaining to emissions from both trucks serving the Project site and the facility itself contributing to asthma and other health concerns, especially for children. Copies of both letters are provided in **Appendix A**, *Scoping Report*.

3.1.1 Setting

3.1.1.1 Study Area

The study area for this analysis of potential impacts on air quality consists of the Project site located in an unincorporated area of the western foothills of Santa Clara County near the City of Cupertino, as illustrated in Chapter 2, *Project Description*, Figure 2-3, as well as the greater San Francisco Bay Area Air Basin (SFBAAB), which encompasses all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo and Santa Clara counties, and the southern portions of Solano and Sonoma counties.

3.1.1.2 Environmental Setting

Section 4.3.1 of the Draft 2012 EIR described the environmental setting for the 2012 EIR's consideration of air quality, including the general climate and meteorology (Section 4.3.1.1, page 4.3-1 et seq.); existing air quality (Section 4.3.1.1, page 4.3-2 et seq.), and sensitive uses

[1] See Section 2.4, *Correlation between 2012 EIR PCRA and the PCRP*, for a cross reference between the restoration activities described and analyzed in the 2012 EIR and the restoration activities described in the PCRP and analyzed in this SEIR. Section 2.5, *Permanente Creek Restoration Plan*, details the PCRP's proposed activities on a reach-by-reach basis.

(Section 4.3.1.1, page 4.3-4 et seq.). These descriptions remain accurate for purposes of this analysis of the PCRP, except as supplemented or emphasized below.

Geography and Climate

The *General Climate and Meteorology* discussion presented in Section 4.3.1.1 of the 2012 EIR remains relevant and accurate; nonetheless, additional details are provided herein. The PCRP would occur in the western foothills of Santa Clara County near the southern end of Santa Clara Valley (Valley), which is oriented northwest-southeast and bounded by the Santa Cruz Mountains to the west, the Diablo Range to the east, the San Francisco Bay to the north, and the convergence of the Gabilan Range and the Diablo Range to the south. The climate includes warm, dry summers and cool winters with modest rainfall (Bay Area Air Quality Management District [BAAQMD] 2019). Approximately 10 miles to the east-northeast of the Project area is the City of San Jose, where average maximum and minimum winter (i.e., January) temperatures are 58 degrees Fahrenheit (°F) and 41 °F, respectively, while average summer (i.e., July) maximum and minimum temperatures are 82 °F and 56 °F, respectively. Total precipitation in the area averages 15 inches per year, with most precipitation occurring from November through April (Western Regional Climate Center [WRCC] 2021).

As a result of the Valley's northwest-southeast axis, wind patterns in the Valley include north-northwesterly sea breeze typically developing during the daytime with stronger winds in the spring and summer (BAAQMD 2019). Based on data from January 2015 through December 2015 from the San Jose Station, winds blow from the southwest most of the time. Specifically, the winds from the southwest direction comprise about 36 percent of all hourly wind directions. The station rarely experienced winds at speeds greater than 13 miles per hour (mph) (WRCC 2016).

Air pollution in Santa Clara County can be high because of the large population base and extent of mobile sources in the area. Ozone is the primary pollutant of concern in the summer and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) is the primary pollutant of concern in the winter. Ozone frequently forms on hot summer days when the prevailing seasonal northerly winds carry ozone precursors southward across the county, causing health standards to be exceeded. The high population density, wood smoke, industrial and freeway traffic, and poor wintertime air circulation caused by extensive hills to the east and west that block wind flow into the region can cause many exceedances of $PM_{2.5}$ during the winter months.

Criteria Air Pollutants

The U.S. Environmental Protection Agency (U.S. EPA) has identified certain air pollutants that are a threat to public health and welfare. These pollutants are called "criteria" air pollutants because standards have been established for each of them to meet specific public health and welfare criteria (see Section 3.1.1.3, *Regulatory Setting*, below). The criteria air pollutants were described in Section 4.3 of the Draft 2012 EIR and are supplemented with the health-related information provided below.

Ozone

Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections in humans. It can also cause substantial damage to vegetation and other materials, when present in sufficiently high atmospheric concentrations. Ozone is not emitted directly into the atmosphere. Instead, it is a secondary air pollutant that is produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NO_X). ROG and NO_X are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately 3 hours.

Ozone is a regional air pollutant because it is not emitted directly by sources but is formed downwind from sources of ROG and NO_X under the influence of wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when long sunny days combine with regional subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds like ozone.

Ozone can cause the muscles in the airways to constrict, potentially leading to wheezing and shortness of breath (U.S. EPA 2021a). Ozone can make it more difficult to breathe deeply and vigorously; cause shortness of breath and pain when taking a deep breath; cause coughing and sore or scratchy throat; inflame and damage the airways; aggravate lung diseases such as asthma, emphysema, and chronic bronchitis; increase the frequency of asthma attacks; and make the lungs more susceptible to infection (U.S. EPA 2021a). Long-term exposure to ozone is linked to aggravation of asthma and is likely to be one of many causes of asthma development, and long-term exposures to higher concentrations of ozone may also be linked to permanent lung damage, such as abnormal lung development in children (U.S. EPA 2021a). Inhalation of ozone causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms, and exposure to ozone can reduce the volume of air that the lungs breathe in and cause shortness of breath (California Air Resources Board [CARB] 2021).

People most at risk from breathing air containing ozone include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers (U.S. EPA 2022). Children are at greatest risk from exposure to ozone because their lungs are still developing and they are more likely to be active outdoors when ozone levels are high, which increases their exposure (U.S. EPA 2021a).

Nitrogen Dioxide

Nitrogen dioxide (NO_2) is an air quality pollutant of concern because it acts as a respiratory irritant. NO_2 is a major component of the group of gaseous nitrogen compounds commonly referred to as NO_X. A precursor to ozone formation, NO_X is produced by fuel combustion in motor vehicles, industrial stationary sources (such as refineries, power plants, and chemical manufacturing facilities), ships, aircraft, and rail transit. Typically, NO_X emitted from fuel combustion is in the form of nitric oxide (NO) and NO_2, with the vast majority (95 percent) of the NO_X emissions being comprised of NO. NO is converted to NO_2 in the atmosphere when it reacts with ozone or undergoes photochemical reactions. Short-term exposures to NO_2 can potentially aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as

coughing, wheezing, or difficulty breathing), hospital admissions, and visits to emergency rooms, while longer exposures to elevated concentrations of NO_2 may contribute to the development of asthma and potentially increase susceptibility to respiratory infections (U.S. EPA 2021b).

Carbon Monoxide

Carbon monoxide (CO) is a non-reactive pollutant that is a product of incomplete combustion; it is mostly associated with emissions from motor vehicle traffic. High CO concentrations develop primarily during winter when periods of light winds combine with the formation of ground-level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced levels of oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia.

Particulate Matter

Particulate matter less than 10 microns in diameter (PM_{10}) and $PM_{2.5}$ represent fractions of particulate matter that can be inhaled into air passages and the lungs and can cause adverse health effects. Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, wildfire smoke, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. According to a study prepared by CARB, exposure to ambient $PM_{2.5}$, particularly diesel particulate matter (DPM), is associated with approximately 14,000 to 24,000 premature annual deaths per year statewide (CARB 2010). Particulate matter also can damage materials and reduce visibility.

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that can cause short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer-causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes over 200 compounds, including DPM emissions from diesel-fueled engines (CARB 2021). The main TAC of concern for the PCRP is DPM from off-road diesel equipment and on-road diesel vehicles, in addition to some trace metals found in fugitive dust in disturbance areas and on paved and unpaved roads.

Existing Air Quality

BAAQMD's regional monitoring network measures the ambient concentrations of criteria air pollutants. Monitoring on the Project site has not been completed; however, existing levels of air quality at the Project site can be inferred from ambient air quality measurements conducted by

BAAQMD at its closest air quality monitoring stations to the Project site, which are the Jackson Street San Jose monitoring station (approximately 11 miles to the east-northeast) and the University Avenue Los Gatos monitoring station (approximately 9 miles southeast). The San Jose station monitors ozone, PM_{10}, $PM_{2.5}$, and NO_2, and the Los Gatos station monitors ozone. **Table 3.1-1** shows a 3-year (2019 through 2021) summary of the most up-to-date available data monitored at the San Jose monitoring station. The data are compared to the California Ambient Air Quality Standards (state standards) and National Ambient Air Quality Standards (national standards). The data are similar to those disclosed in the 2012 EIR, with the exception of relatively high PM_{10} and $PM_{2.5}$ concentrations experienced in 2020, which were likely a result of the large wildfires in northern California that year (BAAQMD 2020a).

TABLE 3.1-1
AIR QUALITY DATA SUMMARY (2019–2021) FOR THE PROJECT AREA

Pollutant	Standard	Monitoring Data by Year		
		2019	2020	2021
Ozone				
Highest State 1-Hour Average (ppm)	0.09 ppm	0.095	0.106	0.098
Days over State Standard		1	1	3
Highest National 8-Hour Average (ppm)	0.070 ppm	0.081	0.085	0.084
Days over National Standard		2	2	4
Respirable Particulate Matter (PM_{10})				
Highest State 24-Hour Average (µg/m^3) Highest 24-hour average, µg/m^3	50 µg/m^3	77.1	137.1	45.1
Measured Days over State Standard		4	10	0
Measured Days over National Standard	150 µg/m^3	0	0	0
State Annual Average (µg/m^3)	20 µg/m^3	19.1	*	20.1
Fine Particulate Matter ($PM_{2.5}$)				
Highest National 24-Hour Average (µg/m^3) Highest 24-hour average, µg/m^3	35 µg/m^3	27.6	120.5	38.1
Measured Days over National Standard		0	12	1
State Annual Average (µg/m^3)	12 µg/m^3	9.1	11.5	8.9
Nitrogen Dioxide (NO_2)				
Highest National Hourly Average (ppm) Highest 24-hour average, µg/m^3	0.100 ppm	0.060	0.052	0.048
Measured Days over National Standard		0	0	0

NOTES:

Measurements are from the Jackson Street monitoring station in San Jose.

ppm = Parts per million
µg/m^3 = Micrograms per cubic meter
* = Insufficient data available to determine the value.

SOURCE: CARB 2022

As shown in Table 3.1-1, the state 1-hour ozone and federal 8-hour ozone standards were exceeded one to four times each year during the 3-year study period. The 24-hour state PM_{10} standard was exceeded four times in 2019 and ten times in 2020, with no exceedances in 2021. There were no exceedances of the national 24-hour or state annual average PM_{10} standards recorded during the 3-year study period, but insufficient data were available for 2020 relative to state annual average. The $PM_{2.5}$ 24-hour national standard was exceeded 12 times in 2020 and once in 2021, with no exceedances in 2019. The $PM_{2.5}$ annual average concentration did not exceed the state standard during the 3-year study period. There were no exceedances of the NO_2 standards during the 3-year study period.

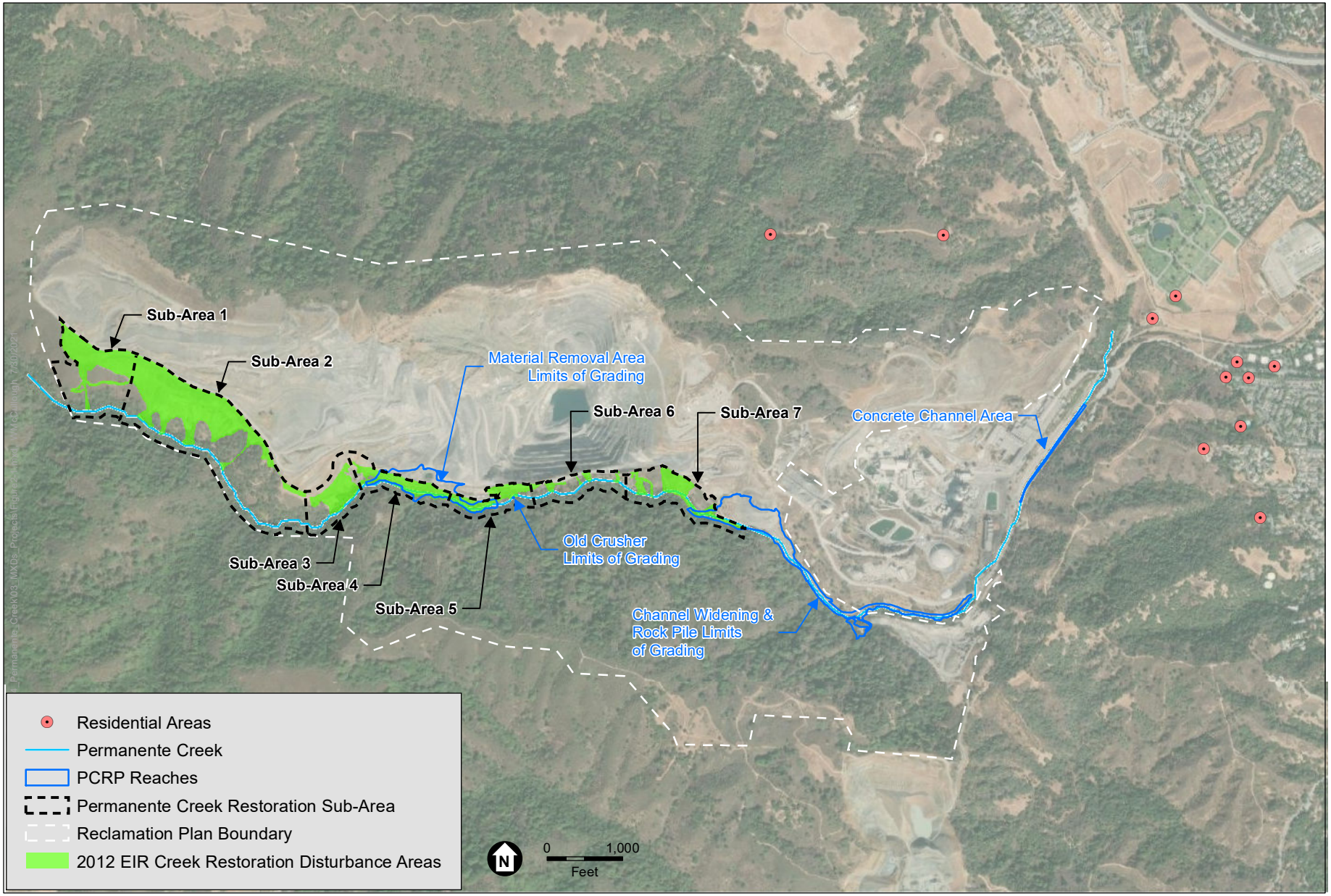
Sensitive Receptors

For the purposes of this air quality analysis, sensitive receptors are defined as facilities and land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals, and daycare centers. The reasons for greater-than-average sensitivity include pre-existing health problems, proximity to emissions sources, and/or duration of exposure to air pollutants. Schools, hospitals, and convalescent homes are relatively sensitive to poor air quality because children, elderly people, and the infirm are more susceptible to respiratory distress and other air quality-related health problems than the general public. Residential areas are sensitive to poor air quality because these sensitive individuals may be present at a residence. In addition, the majority of each 24-hour period tends to be spent by individuals in and around the residence, leading to greater exposure durations of the location's ambient air quality concentrations.

The description of sensitive residential land uses in the vicinity of the Project site presented in Draft 2012 EIR Section 4.3.1.1 remains accurate, with one exception. The 2012 EIR identified the caretaker's residence associated with the Historical Society that is located approximately 700 feet east of the East Materials Storage Area (EMSA) on the north side of Permanente Road as the closest residence. Lehigh has since confirmed that this residence would not serve as a dwelling during implementation of the PCRP. The next closest residences are approximately 2,000 feet to the east, south of Permanente Road. Residences in the vicinity of the Project site are shown in **Figure 3.1-1**.

3.1.1.3 Regulatory Setting

Section 4.3.1.2 of the Draft 2012 EIR (page 4.3-4 et seq.) described the regulatory setting for the analysis of potential impacts on air quality, including federal, state and local laws, regulations, plans and policies applicable to the analysis of the proposed creek restoration, and other Project components that were evaluated in the 2012 EIR. The section summarized federal and state ambient air quality standards and attainment status for criteria pollutants, BAAQMD plans and regulations, regulatory setting for odors and nuisances, regulatory setting for TACs, and the Santa Clara County General Plan. The description of the regulatory setting remains accurate for purposes of this analysis of the PCRP, except as supplemented or emphasized below.



SOURCE: Benchmark Resources, 2021

Permanente Creek Restoration Plan Draft Supplemental Environmental Impact Report

Figure 3.1-1
Residential Areas in the Vicinity of the Project Site

ESA

Established federal, state, and regional regulations provide the framework for analyzing and controlling air pollutant emissions and thus general air quality. The U.S. EPA is responsible for implementing the programs established under the federal Clean Air Act, such as establishing and reviewing the federal ambient air quality standards and reviewing State Implementation Plans (SIPs), described further below. However, the U.S. EPA has delegated the authority to implement many of the federal programs to the states while retaining an oversight role to ensure that the programs continue to be implemented. In California, CARB is responsible for establishing and reviewing the state ambient air quality standards, developing and managing the California SIP, securing approval of this plan from the U.S. EPA, and identifying TACs. CARB also regulates mobile emissions sources in California, such as construction equipment, trucks, and automobiles, and oversees the activities of air quality management districts, which are organized at the county or regional level. An air quality management district is primarily responsible for regulating stationary emission sources at facilities within its geographic areas, and for preparing the air quality plans that are required under the federal Clean Air Act and the 1988 California Clean Air Act. The BAAQMD is the regional agency with regulatory authority over emissions sources in the nine-county San Francisco Bay Area.

Federal and State Ambient Air Quality Standards

Criteria air pollutants are regulated through both national and state ambient air quality standards and emissions limits for individual sources. Regulations implementing the federal Clean Air Act and its subsequent amendments established national ambient air quality standards (national standards) for six criteria pollutants: ozone, NO_2, sulfur dioxide (SO_2), particulate matter (including PM_{10}, $PM_{2.5}$), CO, and lead. California has adopted more stringent state standards for most of the criteria air pollutants. In addition, California has established state ambient air quality standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Because of the meteorological conditions in the state, there is considerable difference between some of the state and federal standards in California, as shown in **Table 3.1-2**. As noted in the table, the federal primary standard for 8-hour ozone is now 0.070 parts per million (ppm), which is a reduction from the 0.075 ppm standard that was in place at the time of the 2012 EIR. All other ambient air quality standards are essentially the same as they were at the time of the 2012 EIR.

The ambient air quality standards are established to protect public health and welfare, and they incorporate a margin of safety. They are designed to protect those segments of the public most susceptible to respiratory distress, known as sensitive receptors, including people with asthma, the very young, elderly, people weak from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels somewhat above the ambient air quality standards before adverse health effects are observed.

Attainment Status

Under amendments to the federal Clean Air Act, U.S. EPA has classified air basins or portions thereof as either “attainment” or “non-attainment” for each criteria air pollutant, based on whether the national standards have been achieved. The California Clean Air Act, which is patterned after the federal Clean Air Act, also requires areas to be designated as “attainment” or “non-attainment” for the state standards. Thus, areas in California have two sets of attainment / non-attainment

TABLE 3.1-2
AMBIENT AIR QUALITY STANDARDS AND SAN FRANCISCO BAY AREA AIR BASIN ATTAINMENT STATUS

Pollutant	Averaging Time	State Standard	SF Air Basin Attainment Status for State Standard	National Primary Standard	SF Air Basin Attainment Status for National Standard
Ozone	8 hour	0.070 ppm	Non-Attainment	0.070 ppm	Non-Attainment
	1 hour	0.090 ppm	Non-Attainment	---	---
Carbon Monoxide	8 hour	9.0 ppm	Attainment	9 ppm	Attainment
	1 Hour	20 ppm	Attainment	35 ppm	Attainment
Nitrogen Dioxide	Annual Average	0.030 ppm	---	0.053 ppm	Attainment
	1 Hour	0.18 ppm	Attainment	0.100 ppm	Unclassified
Sulfur Dioxide	Annual Average	---	---	0.030 ppm	Attainment
	24 Hour	0.04 ppm	Attainment	0.14 ppm	Attainment
	1 Hour	0.25 ppm	Attainment	0.075 ppm	Attainment
Respirable Particulate Matter (PM10)	Annual Arithmetic Mean	20 μg/m3	Non-Attainment	---	---
	24 hour	50 μg/m3	Non-Attainment	150 μg/m3	Unclassified
Fine Particulate Matter (PM2.5)	Annual Arithmetic Mean	12 μg/m3	Non-Attainment	15 μg/m3	Unclassified/Attainment
	24 hour	---	---	35 μg/m3	Non-Attainment
Sulfates	24 hour	25 μg/m3	Attainment	---	---
Lead	Calendar Quarter	---	---	1.5 μg/m3	Attainment
	30 Day Average	1.5 μg/m3	---	---	Attainment
	3-month Rolling Average	---	---	0.15 μg/m3	Attainment
Hydrogen Sulfide	1 hour	0.03 ppm	Unclassified	---	---
Vinyl Chloride	24 hour	0.010 ppm	No information available	---	---
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	Unclassified	---	---

NOTES: ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter

SOURCE: BAAQMD 2017a.

designations: one set with respect to the national standards and one set with respect to the state standards. Table 3.1-2 shows the attainment status of the SFBAAB with respect to the national and state ambient air quality standards for different criteria pollutants. The attainment statuses relative to the state and federal ambient air quality standards are essentially the same as they were at the time of the 2012 EIR.

Federal

The U.S. EPA is responsible for implementing programs established by the federal Clean Air Act, such as establishing and reviewing the national standards for the following air pollutants: CO, ozone, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead. The federal CAA also requires the U.S. EPA to designate areas (counties or air basins) as attainment or non-attainment with respect to each criteria air pollutant, depending on whether the area meets the national standards. If an area is designated as non-attainment, it does not meet the national standards and is required to create and maintain a SIP for achieving compliance with the national standards. Conformity to the SIP is defined under the 1990 Clean Air Act Amendments as conformity with the plan's purpose in eliminating or reducing the severity and number of violations of the national standards and achieving expeditious attainment of these standards. Air quality within the SFBAAB is classified as nonattainment for the federal 8-hour ozone and 24-hour $PM_{2.5}$ standards.

The U.S. EPA has identified emissions standards for nonroad diesel engines and vehicles including four categories referred to as Tier 1, Tier 2, Tier 3, and Tier 4. The standards have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. Tier 1 is the least restrictive, and Tier 4 is the most restrictive.

State

CARB is the agency delegated responsibility for preparing and submitting the SIP to the U.S. EPA. CARB also oversees air quality policies in California and has established state standards for NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, ozone, lead, sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The state standards are at least as stringent (and typically more stringent) than the national standards.

The California Clean Air Act was approved in 1988. It requires each local air district in the state to prepare an air quality plan to achieve compliance with the state standards. Similar to the U.S. EPA, CARB designates counties or air basins in California as attainment or non-attainment with respect to the state standards. Air quality within the SFBAAB does not attain the state standards for ozone, PM_{10}, and $PM_{2.5}$.

Toxic Air Contaminants

TACs are airborne substances that can cause short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. TACs include both organic and inorganic chemical substances. They may be emitted by a variety of common sources: gasoline stations, automobiles, diesel engines, dry cleaners, industrial operations, and painting operations. TACs are regulated differently than criteria air pollutants at both the federal and state levels. At the federal level, these pollutants are called "hazardous air pollutants." California's list of TACs identifies 243 substances, and the federal list of hazardous air pollutants identifies 189 substances.

CARB identified DPM as a TAC in 1998, based primarily on evidence demonstrating cancer effects in humans. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic and carcinogenic. Mobile sources such as trucks and buses are among the primary sources of diesel emissions, and DPM concentrations are higher near heavily traveled highways and rail lines with diesel locomotive operations. The risk from DPM, as determined by CARB, declined from 750 in one million in 1990 to 540 in one million in 2000, but remains the highest risk TAC to California's ambient air quality. In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines. Further regulations of diesel emissions by CARB include the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-road Diesel Vehicle Regulation, and the New Off-road Compression Ignition Diesel Engines and Equipment Program. These regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. Because new cleaner vehicles and equipment are put into service every year and older less-clean vehicles and equipment are retired every year, current diesel-powered vehicles and equipment result in fewer DPM exhaust emissions on average compared to those that were active in 2012.

In 2004, CARB adopted a measure to limit idling of diesel-fueled commercial motor vehicles. Heavy-duty diesel vehicles with a Gross Vehicle Weight Rating of 10,000 pounds or heavier are prohibited from idling for more than 5 minutes within California's borders. Exceptions to the rule apply for certain circumstances.

Local

Bay Area Air Quality Management District

The Project site is located within the jurisdiction of the BAAQMD, the local agency responsible for preparing, adopting, and implementing stationary and area air emissions control measures and standards. Specifically, BAAQMD conducts monitoring, evaluation, and education programs; implements control measures to reduce emissions from stationary sources; issues permits to operate for stationary sources and inspects emissions sources; and enforces air quality regulations.

BAAQMD Air Quality Plans

The 1977 Clean Air Act amendments require that regional planning and air pollution control agencies prepare a regional Air Quality Plan to outline the measures by which both stationary and mobile sources of pollutants can be controlled to achieve all standards specified in the Clean Air Act. The California Clean Air Act also requires development of air quality plans and strategies to meet state air quality standards in areas designated as non-attainment (except for areas designated as non-attainment for the state PM standards). Maintenance plans are required for attainment areas that had previously been designated non-attainment to ensure continued attainment of the standards. As indicated above, air quality plans developed to meet federal requirements are referred to as SIPs.

For state air quality planning purposes, the SFBAAB is classified as a serious non-attainment area for the 1-hour ozone standard. The "serious" classification triggers various plan submittal requirements and transportation performance standards. One such requirement is that the

BAAQMD update the Clean Air Plan every 3 years to reflect progress in meeting the air quality standards and to incorporate new information regarding the feasibility of control measures and new emission inventory data. BAAQMD also must review the Bay Area's record of progress in implementing previous measures. The plans for the SFBAAB are prepared with the cooperation of the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG). After the certification of the 2012 EIR, the BAAQMD adopted the most recent revision to the Clean Air Plan—the 2017 Bay Area Clean Air Plan (2017 CAP) (BAAQMD 2017b). The 2017 CAP serves to:

- Protect the environment and offer a long-range vision of how the Bay Area could function in a year 2050 post-carbon economy and describe a control strategy that the BAAQMD will implement over the next 3 to 5 years.
- Update the most recent BAAQMD ozone plan, the 2010 Clean Air Plan, to fulfill state ozone planning requirements. The 2017 control strategy includes all feasible measures to reduce emissions of ROG and NO_x and reduce the transport of ozone and its precursors to neighboring air basins.
- Build upon and enhance the BAAQMD's efforts to reduce emissions of fine particulate matter and TACs.

Under the California Clean Air Act, the BAAQMD is required to develop an air quality attainment plan for non-attainment criteria pollutants within the air district.

Santa Clara County General Plan

The 2012 EIR identifies air quality policies associated with the Health and Safety Chapter of the Santa Clara County General Plan, 1995-2010 (Santa Clara County 1994) that apply to the 2012 Reclamation Plan Amendment. The Santa Clara County General Plan, 1995-2010 remains current.

3.1.2 Significance Criteria

Consistent with the County of Santa Clara Environmental Checklist and the version of the CEQA Guidelines Appendix G Environmental Checklist that was in effect at the time, Section 4.3 of the 2012 EIR determined that the proposed Reclamation Plan Amendment, including creek restoration work within the PCRA, would have a significant impact if it would:

a) Conflict with or obstruct implementation of the applicable air quality plan;

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

c) Result in a cumulatively considerable net increase of any nonattainment pollutant (including releasing emissions that exceed quantitative thresholds for ozone precursors);

d) Expose sensitive receptors to substantial pollutant concentrations; or

e) Create objectionable odors affecting a substantial number of people.

Updates to the CEQA Guidelines Appendix G Environmental Checklist that were finalized in December 2018 made only non-substantive revisions to these significance criteria. Specifically, the content of criteria b) and c) have been combined and are now reflected as criterion b), and the odors criterion has been refined to include reference to "other emissions." The 2018 revised criteria b) and d) are shown below.

A project would result in a significant impact to air quality if it would:

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard;

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The 2018 revised criteria address the same types of impacts that are addressed in the 2012 EIR. Accordingly, the significance criteria used in the 2012 EIR remain relevant to this SEIR's consideration of whether the PCRP would cause any new significant impacts or a substantial increase in the severity of previously identified significant impacts than were disclosed in the 2012 EIR.

3.1.3 Direct and Indirect Effects

3.1.3.1 Methodology

Emissions Applicability Factors

The 2012 EIR evaluated impacts of Permanente Creek restoration within the PCRA. The PCRP area overlaps the PCRA in many respects (see Figure 2-3, *PCRA Subareas and PCRP Reaches*). Given that substantially similar restoration activities would be implemented in the areas of overlap, the emissions resulting from those activities have not been reevaluated as part of this assessment.

Emissions are estimated for the activities of each proposed PCRP phase and then scaled based on the percentage of PCRA area overlap associated with the 2012 EIR's assessed regions. These scaling values, referred to as Emissions Applicability Factors, have been determined for each PCRP phase. All emissions associated with PCRP components outside of the existing reclamation plan boundary are evaluated in this SEIR. See **Appendix D,** Table 1-1 for the percent of emissions by phase determined to be evaluated in the 2012 EIR and the Emissions Applicability Factors used to estimate emissions for evaluation in this SEIR.

Air Quality Plans

Before approving a project where an air quality plan consistency determination is required, BAAQMD recommends that the lead agency analyze the project with respect to the following questions:

(1) Does the project support the primary goals of the 2017 CAP?

(2) Does the project include applicable control measures from the 2017 CAP?

(3) Does the project disrupt or hinder implementation of any 2017 CAP control measures?

If the first two questions are concluded in the affirmative and the third question is concluded in the negative, then the BAAQMD considers the project consistent with the 2017 Clean Air Plan.

Any project that would not support the 2017 CAP goals would not be considered consistent with the 2017 CAP. Whether the PCRP supports these goals has been determined based on its consistency with CEQA thresholds of significance. If the CEQA thresholds of significance are exceeded, then the Project would not be considered to support the 2017 CAP goals, and the associated impact would be significant.

Criteria Pollutant Emissions

The analysis of criteria pollutants considers the impacts related to emissions of non-attainment pollutants and their precursors. Although ozone would not be directly emitted by PCRP-related construction equipment, the ozone precursors ROG and NO_x would be emitted and are therefore, along with particulate matter, the focus of the impact assessment. Given that ozone formation occurs through a complex photo-chemical reaction between NO_x and ROG in the atmosphere with the presence of sunlight, the impacts of ozone are typically considered on a basin-wide or regional basis instead of a localized basis. The ambient air quality standards for ozone are concentration-based; they are not based on the mass of their precursor pollutants (i.e., NO_x and ROG). It is not necessarily the mass of precursor pollutants that causes human health effects, as opposed to the concentration of resulting ozone or particulate matter. Because of the complexity of ozone formation and the non-linear relationship of ozone concentration with its precursor gases and given the state of environmental science modeling in use at this time, it is infeasible to convert specific emissions levels of NO_x or ROG emitted in a particular area to a particular concentration of ozone in that area. Meteorology, the presence of sunlight, seasonal impacts, and other complex chemical factors all combine to determine the ultimate concentration and location of ozone (South Coast Air Quality Management District [SCAQMD] 2014, San Joaquin Valley Air Pollution Control District [SJVAPCD] 2014).

Significance Thresholds

The 2012 EIR relied on the methods and significance thresholds identified in the BAAQMD's 2010 CEQA Guidelines as supported by Appendix D of the BAAQMD Guidelines and BAAQMD's Revised Draft Options and Justification Report. After certification of the 2012 EIR, the BAAQMD updated its CEQA Guidelines in 2017 to address the California Supreme Court's opinion in *California Building Industry Association v. BAAQMD* (2015) 62 Cal.4th 369. However, as it pertains to projects such as the PCRP that do not include proposed residences, the methods and significance criteria identified in the 2017 BAAQMD CEQA Guidelines are essentially the same as those identified in the 2010 BAAQMD CEQA Guidelines. The analysis presented in this SEIR uses the same general methodologies as those used for the 2012 EIR for ease in comparison.

Project-related air quality impacts typically fall into two categories: short-term impacts due to construction or decommissioning, and long-term impacts due to project operations. The PCRP would

generate air pollutant emissions on a short-term basis during construction over a period of approximately 6 years; there would be no long-term sustained operational impacts. Impacts related to the PCRP contributing to an existing or projected air quality violation and whether the PCRP would result in a cumulatively considerable net increase of any criteria pollutant or associated precursors are judged by comparing estimated direct and indirect PCRP exhaust emissions to the significance thresholds, which for short-term construction emissions are 54 pounds per day for ROG, NO_x, and $PM_{2.5}$; and 82 pounds per day for PM_{10}. Only the exhaust portion of $PM_{2.5}$ and PM_{10} emissions are compared against the construction thresholds. The BAAQMD considers implementation of its recommended mitigation measures for fugitive dust (BAAQMD 2017c) sufficient to ensure that construction-related fugitive dust is reduced to a less-than-significant level. Therefore, the BAAQMD recommends that analyses focus on implementation of dust control measures rather than comparing estimated levels of fugitive dust to a quantitative significance threshold. For long-term operations, the BAAQMD has two sets of significance thresholds, including daily thresholds that are the same as the construction thresholds, and annual thresholds that are 10 tons per year for ROG, NO_x, and $PM_{2.5}$; and 15 tons per year for PM_{10}. These significance thresholds are the same as those used in the 2012 EIR to evaluate impacts associated with criteria pollutants. Although emissions resulting from implementation of the PCRP would be considered short-term construction emissions and appropriately evaluated with respect to the BAAQMD construction significance thresholds, for purposes of continuity with the 2012 EIR, this analysis compares the PCRP emissions to both the average daily significance thresholds (i.e., the construction significance thresholds) as well as the annual significance thresholds.

Emissions Estimates

During construction (short-term), the PCRP would generate ozone precursors and affect local particulate concentrations primarily due to fugitive dust and diesel exhaust emissions from construction equipment.

Lehigh provided the County with scheduling assumptions for five main activity types that would be associated with the PCRP that would occur over eight phases (Lehigh 2023). The Project is proposed to occur 5 days a week, approximately 132 workdays per year during the dry seasons (i.e., April 15 through October 15) of 2024 through 2029. Below is a list of the PCRP phases by anticipated year of construction:

- 2024: Concrete Channel/Channel Widening (Phase 1).
- 2025: Rock Pile Area (Phase 1).
- 2026: Rock Pile Area (Phase 2).
- 2027: Channel Widening (Phase 2) and Old Crusher Foundation.
- 2028: Material Removal Area (Phase 1).
- 2029: Material Removal Area (Phase 2).

Lehigh provided a list of off-road construction equipment that would be used during each PCRP construction phase and indicated that each piece of equipment would comply with U.S. EPA Tier 4

non-road engine standards and would operate between 4 and 8 hours each workday for a specified number of days based on the applicable construction phase (Lehigh 2021, 2023). The average hours per day each equipment type would operate for a given construction phase were estimated by dividing the total operation hours per year by the estimated number of workdays for that phase. Engine horsepower ratings for the equipment types were estimated by Environmental Science Associates based on specification sheets found online for the provided equipment types, or California Emissions Estimator Model (CalEEMod) defaults were used. For the assumed engine horsepower ratings, amounts, and types of construction equipment that would be required to complete each phase of the PCRP, refer to Appendix D.

For on-road vehicle trips that would be associated with the PCRP, Lehigh has indicated that each construction phase would require between 8 and 16 worker one-way daily trips, 216 vendor truck one-way daily trips (except for the Concrete Channel and Older Crusher Foundation phases, which would require 25 vendor truck one-way daily trips), and 2 to 1,418 haul truck one-way total trips (Lehigh 2023). For the purposes of the on-road emissions estimates, it is assumed that worker vehicles would be light duty trucks (i.e., LDT1), vendor trucks would be a mix of heavy-duty trucks (i.e., LHDT1, LHDT2, and MHDT), and haul trucks would be heavy-heavy duty trucks (i.e., HHDT).

Construction-related on-site exhaust emissions were estimated based on the assumptions described above using the CalEEMod version 2020.4.0. On-road vehicle exhaust emissions, on the other hand, were estimated outside of CalEEMod. This is because CalEEMod version 2020.4.0 uses vehicle emission factors from CARB's EMFAC2017 model to estimate on-road mobile exhaust emissions, whereas CARB and U.S. EPA have adopted the EMFAC2021 version of the model. The PCRP's on-road vehicle exhaust emissions were estimated outside of CalEEMod using emissions factors for the vehicle types described above obtained from the EMFAC2021 model. BAAQMD currently recommends use of these models to estimate project emissions subject to CEQA; however, these emissions models were not available when the 2012 EIR was certified. Therefore, the emissions presented in the 2012 EIR were estimated using currently outdated emissions models. The comparison of the 2012 EIR emissions with the emissions estimated for the PCRP is valid for this SEIR because only the changes associated with the PCRP are subject to this CEQA review.

In addition, fugitive dust from bulldozing on the disturbance areas and travel on paved and unpaved roads were calculated using factors from U.S. EPA's AP-42, which is a compilation of emissions factors for various industries and activities. Emissions factors for grading equipment passes from AP-42, Chapter 11, were used to estimate fugitive PM_{10} and $PM_{2.5}$ bulldozing emissions, and factors from Chapter 13 were used to estimate paved and unpaved road re-suspended PM_{10} and $PM_{2.5}$ (U.S. EPA 1998, 2006, 2011). The 2012 EIR also reported metals sampled from overburden and road dust, which were speciated from the PM_{10} fugitive calculations. This information was also used in the health risk assessment (HRA) for the PCRP, as discussed below.

The modeled emissions for each construction phase of the PCRP were multiplied by the percent of emissions to be evaluated for the given construction phase based on the proposed creek reach area outside of the previously evaluated 2012 EIR disturbance areas to allow for evaluation of the

applicable emissions in this SEIR (see *Emissions Applicability Factors* discussion above). Calculated emissions for this SEIR were then summed and added to the baseline emissions (see Section 3.1.3.2) for comparison to BAAQMD's applicable regional significance thresholds and to determine if the PCRP could cause any new significant impact or any substantial increase in the severity of previously identified significant direct, indirect, and/or cumulative environmental effects compared with the Project analyzed in the 2012 EIR. Detailed emissions assumptions and summaries, including the CalEEMod and EMFAC2021 assumptions and output, are included in Appendix D, Exhibit A. For information about the 2012 Reclamation Plan Amendment emissions estimates, see Section 3.1.3.2, below. For all assumptions associated with the 2012 EIR emissions estimates, see 2012 EIR Appendix B.

Lehigh has committed to the following fugitive dust emission reduction measures, which for purposes of this analysis are considered equivalent to the BAAQMD's basic measures for dust control:

- Water unpaved roads (BMP-3, *Dust Control*, as set forth in Section 2.5.9.1, *Best Management Practices)*; and
- Water active areas consistent with a dust mitigation plan submitted by Lehigh to the BAAQMD in 2010 (Draft 2012 EIR, at page 4.3-19).

Therefore, due to BAAQMD guidance, PCRP fugitive dust-related PM_{10} emissions have been estimated mainly for disclosure, but also for the purpose of estimating, for the HRA, metals that could be entrained in the atmosphere with dust during construction (see below).

Health Impacts

After certification of the 2012 EIR, the California Supreme Court published its decision in *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502 (known as the "Friant Ranch" case), which held that CEQA requires that a connection be drawn between potential project emissions and human health impacts. The Court found that while there will be some scientific limits to the analytical tools available to draw and quantify these connections, the EIR "must adequately explain what the agency does know and why, given existing scientific constraints, it cannot translate potential health impacts further." The Court faulted the EIR in that case for "fail[ing] to indicate the concentrations at which [certain] pollutants would trigger identified symptoms." The Court concluded that "the public would have no idea of the health consequences that result when more pollutants are added to a nonattainment basin." The Court found that even if it were impossible to do more, the Friant Ranch EIR would have been found insufficient "because it failed to explain why it was not feasible to provide an analysis that connected the air quality effects to human health consequences."

The BAAQMD significance thresholds described above were set at emissions levels tied to the region's attainment status relative to the national and state ambient air quality standards designed to protect public health. They are emissions levels at which stationary pollution sources permitted by the BAAQMD must offset their emissions and CEQA projects must use feasible mitigations; they are not intended to be indicative of any localized human health impact that a project may have. Therefore, a PCRP-related exceedance of the mass regional emissions threshold (e.g.,

pounds per day or tons per year NO_x thresholds) prior to mitigation from construction-related activities could indicate that the PCRP could cause or contribute to the exposure of sensitive receptors to ground-level concentrations greater than health-protective levels.

Furthermore, models available today are designed to determine regional, population-wide health impacts, and cannot necessarily accurately quantify ozone-related health impacts caused by PCRP-related NO_x or VOCs emissions. Therefore, it is currently infeasible to connect NO_x emissions associated with a project of limited scope, such as the short-term PCRP, to ozone-related health impacts.

The primary health concern with exposure to NO_x emissions is the secondary formation of ozone. Given the complexity of ozone formation, and the state of environmental science modeling in use at this time, it is infeasible and would be speculative to determine whether, or the extent to which, a single project's precursor (i.e., NO_x and ROG) emissions would result in the formation of secondary ground-level ozone and the geographic and temporal distribution of such secondary formed emissions (SCAQMD 2014, SJVAPCD 2014). Meteorology, the presence of sunlight, seasonal impacts, and other complex chemical factors all combine to determine the ultimate concentration and location of ozone. Furthermore, available models today are designed to determine regional, population-wide health impacts, and cannot accurately quantify ozone-related health impacts caused by NO_x or ROG emissions from a local-level project of limited scope.

Community Health Risk Due to Toxic Air Contaminants

Impacts associated with the Project exposing sensitive receptors or the general public to substantial pollutant concentrations are evaluated by assessing the health risks posed by the placement of new sources of TAC emissions near existing sensitive receptors. Specifically, according to the BAAQMD, the Project would have a significant air quality impact if the construction phase would expose persons to substantial levels of TACs, such that the probability of contracting cancer exceeds 10 in one million, or if it would expose persons to pollutants such that a chronic Hazard Index of 1.0 would be exceeded. In addition, a significant impact would occur if the Project would result in an incremental increase in annual average concentrations of $PM_{2.5}$ of more than 0.3 microgram per cubic meter ($\mu g/m^3$) at a sensitive receptor location (BAAQMD 2017c).

In addition, for assessing community risks and hazards relative to the criteria discussed above, the BAAQMD recommends use of a 1,000-foot radius around the project property boundary where the siting of a new source or receptor should be quantitatively assessed, considering both individual and nearby cumulative sources (i.e., proposed project plus existing and foreseeable future projects). For this analysis, the closest sensitive receptors were evaluated, even though they are located farther than 1,000 feet from where PCRP activities would occur on site. Haul trucks and vendor trucks arriving and departing from the site are a source of TACs and would travel closer than 1,000 feet from sensitive receptors for brief periods of time along the truck route.

An HRA was conducted to evaluate the cancer risks and non-cancer health effects associated with exposure to TACs that would be emitted because of the PCRP. TACs associated with the Project include various metals within fugitive dust (such as mercury and chromium), crystalline silica, and DPM. Cancer risks are evaluated based on assumed lifetime exposure to TACs over the

expected lifespan of the Project. Non-cancer health risks evaluated include adverse health effects from both acute (highest 1-hour exposure) and chronic (average annual exposure). As recommended by BAAQMD, the HRA also calculated the annual average $PM_{2.5}$ concentrations.

The HRA follows the protocols outlined by the BAAQMD, CARB, the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA), and U.S. EPA. Consistent with guidelines and recommendations from these agencies, the HRA evaluated the incremental increase in lifetime cancer risks and non-cancer chronic and acute health risk from exposure to TAC emissions. At the time of the 2012 EIR, the OEHHA *2003 Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* was the applicable guidance document for conducting HRAs (OEHHA 2003). Consistent with the 2012 EIR, the HRA conducted for this SEIR assesses impacts from the PCRP based on the 2003 OEHHA guidance. After the 2012 EIR was certified, OEHHA released the *2015 Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, which revised some of the exposure parameters, such as breathing rates and age sensitivity factors. The 2015 OEHHA guidance was not available nor was its release reasonably foreseeable at the time the 2012 EIR was certified. For information and disclosure purposes, the HRA also presents the health risk values using the 2015 OEHHA Guidance.

Cancer risk is defined as the lifetime probability of developing cancer from exposure to carcinogenic substances. Cancer risks are expressed in the HRA as the chances in one million of contracting cancer (for example, 10 cancer cases among one million people exposed). Non-cancer adverse health risks are measured against a Hazard Index, which is defined as the ratio of the predicted incremental exposure concentrations of the various non-carcinogens from the Project to published reference exposure levels (RELs) that can cause adverse chronic (long-term) and acute (short-term) health effects.

For additional information related to the emissions sources, sensitive receptors, and the details regarding the HRA methodology, refer to Appendix D and its Exhibit B.

Odors

Impacts related to the PCRP creating or exposing a substantial number of people to objectionable odors is evaluated based on the potential for the PCRP to generate odors that could affect nearby sensitive receptors.

3.1.3.2 Baseline

Section 3.0.1, *Environmental Baseline*, explains that, in the context of an SEIR, the CEQA baseline is adjusted such that the originally approved Project is assumed. Therefore, the baseline used in this analysis to evaluate the impacts of the PCRP and alternatives consists of existing environmental conditions plus the 2012 Reclamation Plan Amendment and 2012 EIR, and the creek restoration plans evaluated therein. For purposes of this analysis of potential impacts on air quality, the baseline is described below.

2012 EIR Baseline

The baseline for the 2012 EIR reflects the physical environmental conditions in the vicinity of the PCRP area as they existed on June 29, 2007, when the County published the NOP in connection with Lehigh's amendment of the 1985 Reclamation Plan. As described in Draft 2012 EIR Section 4.3.2, documentation pertinent to the air quality analysis establishes that, by 2007, some materials storage already had occurred in the EMSA. The 2012 Reclamation Plan Amendment involved an existing quarry operation characterized by fluctuating production and associated air emissions, in response to continually changing market demands. The baseline air pollutant emissions identified in the 2012 EIR air quality analysis are based on an average over the 11-year period from January 1, 2000, to December 31, 2010, which includes periods of relatively high production as well as relatively low production at the Permanente Quarry in response to changing market demands. The daily and annual 2012 EIR baseline criteria pollutant emissions are shown in **Tables 3.1-3** and **3.1-4**.

The 2012 EIR included a health risk assessment and modeling of $PM_{2.5}$ concentrations. The 2012 EIR baseline health risk impacts are shown in **Tables 3.1-5** and **3.1-6**. The 2012 EIR baseline $PM_{2.5}$ concentrations are shown in **Table 3.1-7**.

2012 Emissions and Analysis

Criteria Pollutants

Baseline and maximum daily 2012 Reclamation Plan Amendment emissions and the net change in emissions compared to the BAAQMD daily thresholds (as disclosed in the 2012 EIR) are summarized in **Table 3.1-3**. Baseline and maximum annual 2012 Reclamation Plan Amendment emissions and the net change in emissions compared to the BAAQMD annual thresholds are summarized in **Table 3.1-4**. The 2012 Reclamation Plan Amendment emissions identified in the tables below include emissions associated with creek restoration activities proposed within the disturbance areas of the PCRA. As shown in Tables 3.1-3 and 3.1-4, the Reclamation Plan Amendment (including the proposed creek restoration work) was found to result in net emissions reductions for all nonattainment air pollutants (PM_{10}, $PM_{2.5}$, and the ozone precursors NO_x and ROG) due to its decreased emissions relative to the baseline emissions, and therefore was disclosed to not exceed the BAAQMD daily or annual thresholds of significance. The net emissions reductions were due to additional emission reduction measures associated with the Reclamation Plan Amendment that were not part of the baseline emissions scenario for the 2012 EIR. The additional emission reduction measures include: watering active areas consistent with a dust mitigation plan submitted to the BAAQMD in 2010; use of an overland conveyor system, powered by electric motors; and watering conveyor transfer points and screens associated with the overland conveyor system. Reclamation Plan Amendment-related criteria pollutant emissions were found to result in a less-than-significant impact.

TABLE 3.1-3
2012 RECLAMATION PLAN AMENDMENT MAXIMUM DAILY CRITERIA AIR POLLUTANT EMISSIONS (POUNDS/DAY)

Scenario	PM_{10}	$PM_{2.5}$	NO_x	ROG	CO	SO_2
Baseline Emissions	5,411	893	2,440	167	2,641	27
Reclamation Plan Amendment Emissions	1,970	311	2,124	123	1,891	32
Maximum Daily Incremental Change	(3,441)	(582)	(316)	(44)	(750)	5
BAAQMD Threshold	82	54	54	54	None	None
Significant Impact (Yes or No)?	No	No	No	No	--	--

SOURCE: Draft 2012 EIR Section 4.3.5.1, Table 4.3-3.

TABLE 3.1-4
2012 RECLAMATION PLAN AMENDMENT MAXIMUM ANNUAL CRITERIA AIR POLLUTANT EMISSIONS (TONS/YEAR)

Scenario	PM_{10}	$PM_{2.5}$	NO_x	ROG	CO	SO_2
Baseline Emissions	754	122	324	24	288	1
Reclamation Plan Amendment Emissions	291	45	301	18	222	3
Maximum Annual Incremental Change	(463)	(77)	(23)	(6)	(66)	2
BAAQMD Threshold	15	10	10	10	None	None
Significant Impact (Yes or No)?	No	No	No	No	--	--

SOURCE: Draft 2012 EIR Section 4.3.5.1, Table 4.3-4.

Toxic Air Contaminants

An HRA was conducted to analyze potential health risks from emissions associated with the 2012 Reclamation Plan Amendment. That HRA was part of the impact analysis in the 2012 EIR. The HRA was conducted in accordance with technical guidelines developed by federal, state, and regional agencies, including U.S. EPA *Haul Road Workgroup Recommendations Final Report* (U.S. EPA 2011), OEHHA *Air Toxics Hot Spots Program Guidance* (OEHHA 2003), and the BAAQMD's *Health Risk Screening Analysis Guidelines* (BAAQMD 2005).

The reported health risks for that analysis were associated with off-road equipment used for the quarrying and overburden activities. On-road haul truck activity included in the HRA analysis consists of trucks hauling material to customers from the rock plant and trucks associated with importing mulched green waste to mix with the West Materials Storage Area (WMSA) material as it is used to backfill the quarry pit in Phase 2. A summary of the 2012 EIR HRA impacts are shown in **Tables 3.1-5** and **3.1-6**.

TABLE 3.1-5
2012 RECLAMATION PLAN AMENDMENT HEALTH RISK SUMMARY

Risk	MEIR - Child Resident South of Stevens Creek Blvd. (per million)	Caretaker's Residence (per million)
Cancer – Draft 2012 EIR	8.98	8.61
BAAQMD significance thresholds	10	10
Exceeds threshold?	No	No

NOTE: MEIR: maximally exposed individual receptor.

SOURCE: Draft 2012 EIR Section 4.3.5.1, Tables 4.3-8 and 4.3-11.

TABLE 3.1-6
2012 RECLAMATION PLAN AMENDMENT ESTIMATED CHRONIC AND ACUTE HAZARD IMPACTS

Health Risk	Location	2012 EIR Value[a]
Chronic	MEIR	0.13
Acute	MEIR	0.52

NOTE:
a The chronic and acute risk values from the 2012 EIR were reported for the caretaker's residence.

SOURCE: Draft 2012 EIR Section 4.3.5.1, Tables 4.3-10 and 4.3-13.

$PM_{2.5}$ Concentrations

As shown in **Table 3.1-7**, the 2012 EIR determined that the maximum incremental annual $PM_{2.5}$ exhaust concentration at the maximally exposed individual receptor (MEIR) at the caretaker's residence would be 0.40 µg/m^3 without mitigation, which would exceed the BAAQMD threshold of 0.3 µg/m^3. The 2012 EIR identified Mitigation Measures 4.3-3a and 4.3-3b to reduce $PM_{2.5}$ concentrations to below the threshold. These mitigation measures would be implemented as part of the baseline condition, and compliance with the requirement to implement them would be an independently enforceable obligation of the 2012 approvals.

TABLE 3.1-7
ESTIMATED $PM_{2.5}$ CONCENTRATION IMPACTS (µG/M^3)

Location	Annual Average Concentration
2012 EIR Value[a] (Unmitigated)	0.40
2012 EIR Value[a] (Mitigated)	0.29

NOTE:
a The $PM_{2.5}$ concentration from the Draft 2012 EIR is reported for the caretaker's residence.

SOURCE: Draft 2012 EIR. Section 4.3.5.1, Table 4.3-15.

3.1.3.3 Discussion of Criteria with No Air Quality Impact

Criteria a) and e) as set forth in Section 3.1.2 were eliminated from more detailed consideration in the 2012 EIR for the reasons explained on Draft 2012 EIR pages 4.3-16 and 4.3-17. For similar reasons as explained there, the PCRP would not have the potential to cause a significant impact related to these criteria. The discussion associated with criterion a) has been revised as shown below to reflect the new applicable air quality plan, but there are no changes to the odors discussion of criterion e); therefore, this criterion is not considered further in this SEIR.

a) Whether the Project would conflict with or obstruct implementation of the applicable air quality plan.

The most recently adopted air quality plan for the PCRP area is the 2017 CAP. The 2017 CAP focuses on two closely related goals: protecting public health and protecting the climate. The 2017 CAP is an update to the BAAQMD's 2010 Ozone Strategy to comply with state air quality planning requirements. The 2017 CAP also serves as a multi-pollutant air quality plan to protect public health and the climate. The 2017 CAP control strategy includes revised, updated, and new measures in the three control measure categories: stationary sources, transportation, and buildings and energy.

Any project that would not support the 2017 Clean Air Plan goals would not be considered consistent with the 2017 CAP. The BAAQMD-recommended measure for determining PCRP support of these goals is consistency with CEQA thresholds of significance. If the CEQA thresholds of significance are exceeded, then the PCRP would not be considered to support the 2017 CAP goals, and the associated impact would be significant. As presented in the Impact 3.1-1 discussion below, the PCRP would not exceed the BAAQMD significance thresholds; therefore, the PCRP would be considered to support the primary goals of the 2017 CAP, and would have no significant impact.

2017 CAP Transportation Control Measure TR22, *Construction, Freight, and Farming Equipment*, would be the only measure applicable to the PCRP. It provides incentives for the early deployment of electric, Tier 3, and Tier 4 off-road engines used in construction, freight, and framing equipment. Lack of consistency with these incentives could be considered a significant impact associated with conflict with or obstruction of implementation of the applicable air quality plan. Lehigh has committed to using off-road diesel construction equipment compliant with U.S. EPA Tier 4 Final engine standards. Therefore, the PCRP would be consistent with the intent of Transportation Control Measure TR22, and there would be no significant impact.

In summary, the PCRP would support the primary goals of the 2017 CAP, it would include all applicable 2017 CAP control measures, and it would not disrupt or hinder implementation of any 2017 CAP control measures. Therefore, the PCRP would not conflict with or obstruct implementation of the 2017 CAP and there would be **no new significant impact and no substantial increase in the severity of the significant impact** than was identified in the 2012 EIR.

3.1.3.4 Direct and Indirect Effects of the Project

The analysis in this section evaluates the potential significance of the change in the physical environment that would be caused by implementation of the PCRP relative to the baseline condition, compares that impact conclusion with the impact conclusion reached in the 2012 EIR regarding the same consideration, and then makes a determination as to whether the implementation of the PCRP would cause one or more new significant impacts or more severe significant impacts than were disclosed in the 2012 EIR. For the reasons discussed below, implementation of the PCRP would not cause a new significant impact or a substantial increase in the severity of a significant impact than was disclosed in the 2012 EIR.

Impact 3.1-1: The PCRP would generate emissions of criteria air pollutants that could contribute to existing nonattainment conditions and further degrade air quality.

This impact analysis corresponds to 2012 EIR significance criteria b) and c) as set forth in Section 3.1.2 and addresses PCRP-related emissions of criteria air pollutants that could contribute to cumulative adverse air quality conditions and further degrade air quality. In the context of Impact 4.3-1 (page 4.3-18 et seq.), the 2012 EIR concluded that interim reclamation activities, including those proposed within the PCRA, would be less than significant because net emissions reductions would result for all nonattainment air pollutants (PM_{10}, $PM_{2.5}$, and the ozone precursors NO_x and ROG), and therefore would not exceed the BAAQMD daily or annual thresholds of significance. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criterion b) or c).

As presented in the *Emissions Estimates* discussion under *Criteria Pollutants*, in Section 3.1.3.1, *Methodology*, the criteria pollutant emissions that would be generated associated with the PCRP would be short term and periodic in nature and would occur during the dry seasons of years 2024 through 2029. Below are summaries of the PCRP criteria pollutant and ozone precursor emissions estimate results in terms of applicable PCRP emission estimates compared to the CEQA baseline. For summaries of the total PCRP emissions estimates by phase prior to and after the use of applicability factors to remove the emissions considered to have already been evaluated in the 2012 EIR, see Appendix D.

PCRP Emissions Estimates Compared to CEQA Baseline

Table 3.1-8 presents the net maximum pounds per day emissions relative to the PCRP emissions that were not evaluated in the 2012 EIR combined with the 2012 Reclamation Plan Amendment maximum daily incremental change emissions disclosed in 2012 EIR. As shown in the table, the PCRP maximum daily emissions reflect a slight increase in emissions for PM_{10}, $PM_{2.5}$, NO_x and ROG (but still an overall net emissions reduction in the context of the 2012 EIR) and no change for SO_2 compared to the maximum daily incremental change emissions disclosed in the 2012 EIR.

TABLE 3.1-8
MAXIMUM DAILY NET CRITERIA POLLUTANT EMISSIONS (POUNDS/DAY)

Scenario	PM_{10}	$PM_{2.5}$	NO_x	ROG	CO	SO_2
Reclamation Plan Amendment Maximum Daily Incremental Change Disclosed in 2012 EIR[a]	(3,441)	(582)	(316)	(44)	(750)	5
PCRP Maximum Daily Emissions (2023) not Evaluated in the 2012 EIR[b]	196.20	26.62	8.51	1.13	27.90	0.08
Net Emissions	(3,245)	(555)	(307)	(43)	(722)	5
BAAQMD Threshold	82	54	54	54	None	None
Significant Impact (Yes or No)?	No	No	No	No	--[c]	--[d]

NOTES:
a Reclamation Plan Amendment maximum daily incremental change emissions were estimated using AP-42, Offroad2007, and EMFAC2007, Version 2.3. Values in (parentheses) are net reductions for Reclamation Plan Amendment Project presented in the 2012 EIR minus baseline emissions.
b PCRP maximum daily emissions were estimated using CalEEMod version 2020.4.0, EMFAC2021, and U.S. EPA's AP-42.
c See Impact 3.1-2 for a discussion of CO significance.
d The Bay Area is in attainment for SO_2 standards so a CEQA threshold of significance has not been established by the BAAQMD.

SOURCE: Draft 2012 EIR Section 4.3.5.1, Table 4.3-3; Appendix D, Exhibit A.

Table 3.1-9 presents the net maximum tons per year emissions relative to the PCRP emissions that were not evaluated in the 2012 EIR combined with the 2012 Reclamation Plan Amendment maximum annual incremental change emissions disclosed in 2012 EIR. As shown in the table, the PCRP maximum annual emissions are not substantial and reflect only a slight increase in net emissions compared to the maximum annual incremental change emissions disclosed in the 2012 EIR.

TABLE 3.1-9
MAXIMUM ANNUAL NET CRITERIA POLLUTANT EMISSIONS (TONS/YEAR)

Scenario	PM10	PM2.5	NO_x	ROG	CO	SO_2
Reclamation Plan Amendment Maximum Daily Incremental Change Disclosed in 2012 EIR[a]	(463)	(77)	(23)	(6)	(66)	2
PCRP Maximum Annual Emissions (2023) not Evaluated in the 2012 EIR	11.45	1.71	0.56	0.07	1.84	0.01
Maximum Annual Incremental Change	(452)	(75)	(22)	(6)	(64)	2
BAAQMD Threshold	15	10	10	10	None	None
Significant Impact (Yes or No)?	No	No	No	No	--[c]	--[d]

NOTES:
a Reclamation Plan Amendment maximum daily incremental change emissions were estimated using AP-42, Offroad2007, and EMFAC2007, Version 2.3. Values in (parentheses) are net reductions for Reclamation Plan Amendment Project presented in the 2012 EIR minus baseline emissions.
b PCRP maximum daily emissions were estimated using CalEEMod version 2020.4.0, EMFAC2021, and U.S. EPA's AP-42.
c See Impact 3.1-2 for a discussion of CO significance.
d The Bay Area is in attainment for SO_2 standards so a CEQA threshold of significance has not been established by the BAAQMD.

SOURCE: Draft 2012 EIR Section 4.3.5.1, Table 4.3-4; Appendix D, Exhibit A.

Impact Conclusion

As can be seen from the data in Tables 3.1-8 and 3.1-9, implementation of the PCRP would continue to result in net emissions reductions when combined with the 2012 Reclamation Plan Amendment maximum daily incremental change emissions disclosed in 2012 EIR for all nonattainment air pollutants (PM_{10}, $PM_{2.5}$, and the ozone precursors NOx and ROG), and therefore would not exceed the BAAQMD daily or annual thresholds of significance.

As identified in the County's 2012 EIR, this would be a less-than-significant impact. Accordingly, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR relating to a contribution to existing nonattainment conditions. The significance of CO emissions from the Project is addressed in Impact 3.1-2, below.

Baseline Mitigation from 2012 EIR: None required.

Additional Mitigation: None required.

Impact 3.1-2: PCRP-related traffic would generate localized CO emissions on roadways and at intersections in the PCRP vicinity.

This impact analysis corresponds to 2012 EIR significance criterion d) as set forth in Section 3.1.2 and addresses PCRP-generated localized CO emissions. In the context of Impact 4.3-2 (page 4.3-21 et seq.), the 2012 EIR concluded that interim reclamation activities, including restoration activities within the PCRA, would result in a less-than-significant impact because traffic emissions would not lead to violations of the CO standards. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criterion d).

The 2017 BAAQMD CEQA Air Quality Guidelines recommend use of the same screening criteria for the evaluation of CO emissions on roadways and intersections as recommended in the 2012 Guidelines that were used in the 2012 EIR analysis. Under the recommended criteria, a project would result in a less-than-significant impact on localized CO concentrations if the following screening criteria are met:

1. The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans.
2. The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
3. The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

The PCRP would result in the temporary generation of vehicle trips but would not exceed the standards included in the Santa Clara County Congestion Management Plan established by the Santa Clara Valley Transportation Authority. Regarding the second and third criteria, intersection traffic volumes (including external PCRP traffic) would be substantially less than 44,000 and 24,000 vehicles per hour, respectively. The estimated increase in traffic volumes caused by reclamation-related traffic (a maximum of approximately 127 round trips per day) would not be substantial, nor would PCRP traffic significantly disrupt daily traffic flow on area roadways.

Based on the BAAQMD's criteria, PCRP-related traffic would not lead to violations of the CO standards and, therefore, no further analysis is required for CO impacts of the PCRP; as disclosed in the 2012 EIR, the impact continues to be less than significant.

Baseline Mitigation from 2012 EIR: None required.

Additional Mitigation: None required.

Impact 3.1-3: The PCRP would expose sensitive receptors to increased levels of toxic air contaminants, which could lead to an increase in the risk of cancer.

This impact analysis corresponds to 2012 EIR significance criterion d) as set forth in Section 3.1.2 and addresses exposure to TACs that would be generated by the PCRP that could lead to an increase in the risk of cancer. In the context of Impact 4.3-3 (page 4.3-26 et seq.), the 2012 EIR concluded that interim reclamation activities, including the restoration activities proposed within the PCRA, would result in total cancer risks that would be above the BAAQMD CEQA threshold of 10 in one million for the residence-adult but below the threshold for residence-child and school children; however, the significant impact was found to be reduced to a less-than-significant level with implementation of Mitigation Measures 4.3-3a and 4.3-3b (or, alternatively, Mitigation Measure 4.3-3c). As previously noted, all mitigation measures identified in the 2012 EIR and adopted as conditions of approval for the 2012 Project would be implemented as part of the baseline condition for the PCRP. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** related to cancer risk than was disclosed in the 2012 EIR related to significance criterion d).

Cancer risks were modeled for activities that would emit DPM and metals, which include diesel equipment and fugitive dust containing metals at the PCRP disturbance areas, as well as diesel trucks and fugitive dust containing metals on paved and unpaved roads. Cancer risk was calculated using the resulting DPM and metals concentrations modeled with AERMOD, along with equations and factors from the OEHHA 2003 *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2003; BAAQMD 2016). Cancer risk represents a cumulative exposure over the duration of the Project.

Table 3.1-10 presents the modeled cancer risk of 0.51 in one million at the MEIR location, which is a residence just south of Stevens Creek Boulevard, approximately 2,500 feet east of the Permanente Quarry entrance. This represents the cancer risk for the PCRP duration from 2024 through 2029, as cancer risk is cumulative over the exposure duration.

The MEIR identified in the 2012 EIR was modeled at the caretaker's residence, and the second-highest cancer risk was modeled at a residence near Stevens Creek Boulevard. For the purposes of this analysis, this is assumed to be the same residence as this HRA's MEIR. Cancer risk values for the 2012 EIR and this HRA are shown for the caretaker's residence and the residence just south of Stevens Creek Boulevard.

TABLE 3.1-10
ESTIMATED CANCER RISK AT THE MEIR AND CARETAKER'S RESIDENCE

Risk	MEIR - Child Resident South of Stevens Creek Blvd. (per million)	Caretaker's Residence (per million)
Cancer - PCRP	0.51	0.03
Cancer – Draft 2012 EIR	8.98	8.66
Combined Total	9.49	8.70
BAAQMD significance thresholds	10	10
Exceeds threshold?	No	No

SOURCE: 2012 EIR Section 4.3.5.1, Tables 4.3-11 and 4.3-12; Appendix D, Exhibit B.

As shown in Table 3.1-10, the incremental risk at the MEIR, when added to the value from the 2012 EIR, is below the BAAQMD CEQA threshold of 10 in one million. This also is true for the value at the caretaker's residence. Most of the cancer risk is due to DPM that would be generated from on-road diesel trucks traveling past neighborhoods close to Stevens Creek Boulevard.

When the 2012 EIR was certified, the 2015 OEHHA guidance was not available nor was its release reasonably foreseeable. The impact conclusion in that certified EIR remains valid, as it was based on the latest analysis methodology at that time. However, since the updated guidance from OEHHA was used for this SEIR, the risk results from the 2012 EIR have been adjusted to illustrate what the risks would be using the most recent OEHHA guidance. This was done for information and disclosure purposes only and does not change the conclusion of the less-than-significant impact in the 2012 EIR.

Based on research conducted by OEHHA after the 2003 *Air Toxics Hot Spots Program* (used in the 2012 EIR) was promulgated, OEHHA found that children are more susceptible to the effects of carcinogens, in part due to their higher breathing rates resulting in increased intake of these compounds. Thus, the 2015 OEHHA guidance methods reflect this updated approach. The health risk values based on the exposure parameters from the OEHHA 2015 *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015) are provided herein. Using the exposure parameters from the 2015 OEHHA guidance, the cancer risk value for the 2012 EIR would be approximately 12.34 in one million, and the cancer risk value for the PCRP would be approximately 0.78 in one million, for a total risk of approximately 13.12 in one million. The 2012 EIR risk was multiplied by a factor of 1.37 to adjust it to 2015 OEHHA exposure parameters (the 2012 OEHHA result multiplied by the factor equals the 2015 OEHHA result or [8.98 per million] x 1.37 = [12.34 per million]). This factor was derived from breathing rate ratios from the 2015 OEHHA guidance to the 2003 OEHHA guidance. Based on the

exposure parameters from the 2015 OEHHA guidance, the risk from the PCRP on its own would neither cause a new significant impact nor result in a substantial increase in the severity of a significant impact than was disclosed in the 2012 EIR.

> **Baseline Mitigation from 2012 EIR:** Mitigation Measure 4.3-3a and either Mitigation Measure 4.3-3b or Mitigation Measure 4.3-3c. The full text of each measure is provided in Draft SEIR Table H1, *Impacts and Mitigation Measures for the 2012 Permanente Quarry Reclamation Plan Amendment*.
>
> **Additional Mitigation:** None required.

Impact 3.1-4: The PCRP would expose sensitive receptors to increased levels of toxic air contaminants, which could increase chronic and acute health risks.

This impact analysis corresponds to 2012 EIR significance criterion d) as set forth in Section 3.1.2 and addresses exposure to TACs that would be generated by the PCRP that could increase chronic and acute health risks. In the context of Impact 4.3-4 (page 4.3-31 et seq.), the 2012 EIR concluded that interim reclamation activities, including those within the PCRA, would result in a less-than-significant impact because the chronic hazard would be below the significance threshold of 1.0. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criterion d) relating to chronic hazard.

Chronic and acute, non-cancer health risks were evaluated based on emissions of pollutants with such health effects. DPM and some of the metals found in the fugitive dust at the PCRP disturbance areas and in road dust result in chronic health effects. In addition, some of the metals result in acute (short-term) health effects, but DPM does not have a short-term, acute health risk effect. Acute impacts were modeled at residential receptors and at locations where the public could have access on a short-term basis. As discussed in Draft 2012 EIR Section 4.3.1.1, these receptors include the trails north of the Project site and the Gate of Heaven cemetery to the northeast of the Project site.

Non-cancer adverse health risks, both for acute (short-term) and chronic (long-term) timeframes, are measured against a Hazard Index, which is defined as the ratio of the incremental exposure concentrations of the various non-carcinogens from the project to published RELs that can cause adverse health effects. OEHHA establishes the RELs based on epidemiological evidence. The ratio (referred to as the Hazard Quotient) of each substance with a non-carcinogenic effect that affects a certain organ system is added to produce an overall Hazard Index for that organ system. As a worst case, it was assumed that all of the toxic substances with established RELs would affect the same organ and the individual Hazard Quotients were summed to calculate an overall Hazard Index. If the Hazard Index exceeds 1.0, the potential health impact would be significant.

Table 3.1-11 presents the maximum chronic Hazard Index, plus the maximum acute Hazard Index. The maximum impact location for both the chronic and acute Hazard Indices is the MEIR located just south of Stevens Creek Boulevard. The maximum chronic and acute Hazard Index

values would occur based on activities in the years 2025 and 2029, respectively. As shown in Table 3.1-11, the maximum chronic and acute Hazard Indices for the PCRP combined with the 2012 EIR index values indicates that the impacts associated with the 2012 Reclamation Plan Amendment would continue to be less than significant, and there would be no new significant impact and no substantial increase in the severity of a previously-identified significant impact. The maximum acute Hazard Index would be due primarily to nickel (as a component in fugitive dust from the roadway).

TABLE 3.1-11
ESTIMATED CHRONIC AND ACUTE HAZARD IMPACTS

Health Risk	PCRP Hazard Index	Location	Year	2012 EIR Value[a]
Chronic	0.01	MEIR	2025	0.13
Acute	0.06	MEIR	2029	0.52

NOTE:
a The chronic and acute risk values from the 2012 EIR were reported for the caretaker's residence.

SOURCE: Draft 2012 EIR Section 4.3.5.1, Tables 4.3-13 and 4.3-14; Appendix D, Exhibit B.

Baseline Mitigation from 2012 EIR: None required.

Additional Mitigation: None required.

Impact 3.1-5: The PCRP would increase exhaust emissions of $PM_{2.5}$, which could adversely affect human health.

This impact analysis corresponds to 2012 EIR significance criterion d) as set forth in Section 3.1.2 and addresses exposure to $PM_{2.5}$ exhaust emissions that would be generated by the PCRP that could affect human health. In the context of Impact 4.3-5 (page 4.3-32 et seq.), the 2012 EIR concluded that interim reclamation activities, including those proposed within the PCRA, would result in $PM_{2.5}$ exhaust concentrations that would be above the BAAQMD CEQA threshold of 0.3 $\mu g/m^3$; however, the significant impact was found to be reduced to a less-than-significant level with implementation of Mitigation Measures 4.3-3a and 4.3-3b (or, alternatively, Mitigation Measure 4.3-3c). These mitigation measures would continue to be implemented as an ongoing, independently enforceable obligation of the 2012 approvals. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criterion d) relating to $PM_{2.5}$ exhaust-related impacts on human health.

An analysis was conducted to determine the maximum annual increase in $PM_{2.5}$ exhaust concentrations for sensitive receptors in the vicinity of the PCRP. BAAQMD policy is to conduct this analysis for exhaust emissions only. Under the PCRP, Lehigh would continue to comply with its existing Fugitive Dust Control Plan (dated January 21, 2011).

As shown in **Table 3.1-12**, the maximum incremental annual $PM_{2.5}$ concentration at the MEIR south of Stevens Creek Boulevard would be 0.001 µg/m^3, which would be below the BAAQMD threshold of 0.3 µg/m^3 and would therefore result in a less-than-significant impact. Therefore, implementation of the PCRP would not result in a new significant and no substantial increase in the severity of a significant $PM_{2.5}$ concentration impact than was disclosed in the 2012 EIR.

TABLE 3.1-12
ESTIMATED PM2.5 CONCENTRATION IMPACTS (µG/M^3)

Location	Annual Average Concentration
PCRP MEIR – South of Stevens Creek Boulevard	0.001
2012 EIR Value – South of Stevens Creek Boulevard	Not Reported
PCRP MEIR – Caretaker's Residence	<0.001
2012 EIR Value – Caretaker's Residence	0.29
Total at Caretaker's Residence	0.29

SOURCE: See Appendix D, Exhibit B.

Baseline Mitigation from 2012 EIR: Mitigation Measure 4.3-3a and either Mitigation Measure 4.3-3b or Mitigation Measure 4.3-3c. The full text of each measure is provided in Draft SEIR Table H1, *Impacts and Mitigation Measures for the 2012 Permanente Quarry Reclamation Plan Amendment*.

Additional Mitigation: None required.

3.1.4 Cumulative Analysis

The Draft 2012 EIR analyzed potential cumulative effects in Section 6.2.3, *Air Quality* (pages 6-15 and 6-16), concluding that the 2012 Reclamation Plan Amendment, including the creek restoration activities that would occur within the PCRA, would not result in a cumulatively considerable contribution to any significant cumulative effect. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** in the cumulative context than was disclosed in the 2012 EIR.

3.1.4.1 Criteria Pollutants

The geographic scope of potential cumulative criteria air pollutant impacts encompasses the Project vicinity, Project site, areas along the access and hauls routes to the Project site, and the SFBAAB. The temporal scope includes construction, operation, and maintenance of the Project. The past, present, and reasonably foreseeable future projects described as part of the cumulative scenario include transportation demand management strategies at Rancho San Antonio Open Space Preserve, improvements to Permanente Creek Trail, a baseball park, and a creek widening project that could increase the criteria air pollutant emissions within the Project vicinity and SFBAAB. According to the BAAQMD, no single project is sufficient in size to, by itself, result in nonattainment of ambient

air quality standards within the regional air basin. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. In addition, according to the BAAQMD *CEQA Air Quality Guidelines*, if a project exceeds the identified significance thresholds, its emissions would be considered cumulatively considerable, resulting in significant adverse air quality impacts on the region's existing air quality conditions (BAAQMD 2017c). Alternatively, if a project does not exceed the identified significance thresholds, then the project would not be considered cumulatively considerable and would result in less-than-significant air quality impacts.

As described in Section 3.1.3, *Direct and Indirect Effects*, in the context of Impact 3.1-1, Project emissions of ROG, NO_x, PM_{10}, $PM_{2.5}$, and CO would not exceed the applicable BAAQMD thresholds; therefore, the PCRP would not be cumulatively considerable, and the cumulative impact regarding criteria pollutants would be less than significant.

Baseline Mitigation from 2012 EIR: None required.

Additional Mitigation: None required.

3.1.4.2 Toxic Air Contaminants

The BAAQMD's *CEQA Air Quality Guidelines* include standards and methods for determining the significance of cumulative health risk impacts for individual projects (BAAQMD 2017b). The method for determining health risk requires the tallying of health risk from permitted sources and major roadways in the vicinity of a project, then adding the project impacts to determine whether the cumulative health risk thresholds are exceeded. Cumulative health impacts of cancer risks, chronic impacts, and $PM_{2.5}$ concentrations are analyzed.

BAAQMD has developed a geo-referenced database of permitted TAC emissions sources throughout the San Francisco Bay Area and has developed the *Stationary Source Risk & Hazard Analysis Tool* (2020b) for estimating health risks from permitted sources. The risk and $PM_{2.5}$ values for the two stationary sources closest to the PCRP are shown in **Table 3.1-13**. Based on the BAAQMD stationary source risk tool, these sources contribute negligible cancer, chronic, and $PM_{2.5}$ risks to the closest receptor (BAAQMD 2020b). BAAQMD also has developed a geo-referenced database of mobile sources and has estimated risk and $PM_{2.5}$ values from highways, major streets, and rail throughout the SFBAAB. Risk and $PM_{2.5}$ values provided by BAAQMD in a geographic information system (GIS) database are shown in a screenshot at the end of Appendix D, Exhibit B. These values are shown for the MEIR location in Table 3.1-13. In addition, the values disclosed in the 2012 EIR for the 2012 Reclamation Plan Amendment cement trucks on Stevens Creek Boulevard are also included in the table to show the health impacts resulting from ongoing truck traffic on Stevens Creek Boulevard associated with the hauling of cement and aggregate from the Lehigh Quarry site.

TABLE 3.1-13
CUMULATIVE HEALTH IMPACTS

Facility/Source Type	Address	Cancer Risk (per million)	Acute Hazard Index[a]	Chronic Hazard Index[a]	PM2.5 (µg/m^3)[a]
Reclamation Plan Amendment Cement Trucks Disclosed in 2012 EIR	Stevens Creek Boulevard east of Ridgeway Drive	8.98	0.52	0.13	0.29
Nearby Major Streets	N/A	0.15	N/A	N/A	0.003
Rail	N/A	1.01	N/A	N/A	0.002
Nearby Highways	N/A	3.85	N/A	N/A	0.108
Santa Clara Co. Fire Dept.	22620 Stevens Creek Blvd	1.32	0	0	0
Sunny View Retirement Community	22445 Cupertino Road	2.92	0	0	0
PCRP MEIR	South of Stevens Creek Boulevard	0.51	0.06	0.01	0.001
Total: PCRP + Cumulative		18.74	0.58	0.14	0.404
BAAQMD Cumulative Significance Criteria		**100**	**10**	**10**	**0.8**
Significant Cumulative Impact?		**No**	**No**	**No**	**No**

NOTES:
a The locations of maximum impact disclosed in the 2012 EIR are reported at the caretaker's residence, so adding the maximum impacts together is an overestimate of what the actual maximum cumulative impact would be at the MEIR sensitive receptor for the PCRP (located adjacent to Stevens Creek Boulevard).

SOURCES: Draft 2012 EIR Section 4.3.5.1, Table 4.3-11; Appendix D, Exhibit B; BAAQMD, 2020b, Permitted Stationary Source Risks and Hazards map.

Table 3.1-13 shows the cumulative cancer risk, chronic hazard, and $PM_{2.5}$ concentrations (in µg/m^3) associated with trucks on Stevens Creek Boulevard and the PCRP. As indicated in Table 3.1-13, the cumulative total cancer risk, acute and chronic hazard, and $PM_{2.5}$ concentrations would be below the respective BAAQMD significance thresholds; therefore, the proposed PCRP would not be cumulatively considerable, and the cumulative health risk impact would be less than significant.

Baseline Mitigation from 2012 EIR: None required.

Additional Mitigation: None required.

3.1.5 References

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3.2 Biological Resources

This section identifies and evaluates issues related to vegetation and wildlife resources, both aquatic and terrestrial, to determine whether the PCRP, including its revisions to the 2011 Creek Restoration Plan that are a component of the 2012 Reclamation Plan Amendment, would cause one or more new significant impacts or a substantial increase in the severity of significant impacts than were disclosed in the 2012 EIR. To do this, this analysis focuses on three things: (1) PCRP areas that are outside of the existing Reclamation Plan boundary (for which Grading Approval would be required); (2) PCRP areas within the Reclamation Plan boundary and within the 120-acre PCRA but outside of the PCRA's 49.2-acre disturbance area; and (3) more generally, whether the PCRP proposes work at greater intensity than previously considered in the 2012 EIR. As a result, Reaches 6–13 and Reaches 17 and 18 are key areas for evaluation.[1]

This section describes the physical and regulatory setting, the criteria used to evaluate the significance of potential impacts, the methods used in evaluating these impacts, and the results of the impact assessment relative to the 2012 EIR. The analysis is based in part on the technical reports listed below. These technical reports were prepared by or on behalf of Lehigh and reviewed by the County and its environmental consultant to ensure that they can be relied on (in combination with other materials included in the formal record) in the preparation of this Draft SEIR. A copy of each report is provided in Appendix E, *Biological Resources*.

- GEI Consultants, Inc. & AECOM. 2016. Revised Draft Biological Assessment for the Permanente Creek Restoration Project. Prepared for Lehigh Southwest Cement Company, May 2016 (Appendix E1).
- GEI Consultants, Inc. 2021. Aquatic Resources Report. Preliminary Delineation of Waters of the United States, Including Wetlands (Appendix E2).
- Waterways Consulting, Inc., 2022. Technical Memorandum, Permanente Creek Restoration Project: Temporary Riparian Vegetation Impact Assessment, August 26, 2022 (Appendix E3).
- GEI Consultants, Inc. 2022. Low-Effect Habitat Conservation Plan, Permanente Site Operation and Maintenance. Prepared for Lehigh Southwest Cement Company, Cupertino, CA.

The 2016 reports in Appendices E1 and E2 were based on an earlier design level than the Updated 90% Design Memo provided in Appendix C of this SEIR. Lehigh is in the process of updating these 2016 reports to reflect the current design; nonetheless, considered together with the Updated 90% Design Memo, the information contained in the 2016 reports in Appendix E1 and Appendix E2 remains informative.

[1] See Section 2.4, *Correlation between 2012 EIR PCRA and the PCRP*, for a cross reference between the restoration activities described and analyzed in the 2012 EIR and the restoration activities described in the PCRP and analyzed in this SEIR. Section 2.5, *Permanente Creek Restoration Plan*, details the PCRP's proposed activities on a reach-by-reach basis. See Section ES.1, *Introduction*, and Section 2.3, *Focus of the Supplemental EIR*, for additional details about the identification of these reaches as areas of focus for the SEIR.

The County received scoping input from the California Department of Fish and Wildlife (CDFW) (Letter H), the Midpeninsula Regional Open Space District (MidPen) (Letter F), and a member of the public (Letter E) regarding aquatic and riparian communities and habitats, special-status species, birds and nests, and other biological resources-related considerations. A copy of each of these letters is included in Appendix A, *Scoping Report*. These comments are considered in the analysis provided below.

3.2.1 Setting

3.2.1.1 Study Area

The "study area" for this analysis of potential impacts on biological resources consists of the Project site described in Section 2.3.2 of the Project Description and shown in Figure 2-3. As described in the Draft 2012 EIR Section 4.4.1.1 *Study Area* (page 4.1-1 et seq.), the study area is located in unincorporated western Santa Clara County, in the eastern foothills of the Santa Cruz Mountains, which are part of the California Coast Range. Natural communities in the region range from tidal salt marshes to chaparral to oak woodlands. The area surrounding the quarry remains generally undeveloped and contains high-quality habitat for a number of sensitive species. As stated above, Reaches 6–13 and Reaches 17 and 18 of Permanente Creek are the focus of this analysis.

3.2.1.2 Environmental Setting

Section 4.4.1 of the Draft 2012 EIR described the environmental setting for the 2012 EIR's consideration of biological resources, including biological communities and wildlife habitat types (Section 4.4.1.2, page 4.4-2 et seq.), jurisdictional waters and wetlands (Section 4.4.1.2, page 4.4-12), special-status species (page 4.4.1.2, page 4.4-2 et seq.), and sensitive natural communities (page 4.4.1.2, page 4.4-17). Rare plants were deemed absent from the site following two protocol-level rare plant surveys (page 4.4-13). Based on review of documents produced for the site in the intervening years (see Appendix G) and historical imagery on Google Earth, biological resources descriptions remain accurate for purposes of this analysis of the PCRP.

The listing status of five species in the Project region changed since publication of the 2012 EIR. The foothill yellow-legged frog (*Rana boylii*) Central Coast Distinct Population Segment (DPS) became a state-listed endangered species in 2020 and was proposed as a federal threatened species in December 2021. The mountain lion (*Puma concolor*) Southern California/Central Coast Evolutionarily Significant Unit (ESU) became a state candidate for listing as threatened in 2020. The monarch butterfly (*Danaus plexippus*) was named a candidate for federal listing status in December 2020. Two native bumblebees, western bumblebee (*Bombus occidentalis occidentalis*) and crotch bumblebee (*B. crotchii*), are candidates for state listing as of September 2022. These bumblebees have not been recorded in the PCRP area (CDFW 2022) and would be unlikely to be impacted by Project activities. Habitat for foothill yellow-legged frog does not occur in the Project area; hence, no changes are needed to reflect the Project baseline for this species. Mountain lions occur in remote habitats on the San Francisco Peninsula, potentially including forested areas surrounding the quarry; monarch butterflies are known to overwinter in

trees in San Mateo and Santa Cruz counties; hence, brief descriptions of these species are provided below.

Mountain Lion (Puma concolor) Southern California/Central Coast ESU

Mountain lions, or cougars, are solitary, opportunistic large predators that are often found in mountainous areas. They also occur in forests, wetlands, or deserts where they have adequate open space to range. Their home ranges are large, from 20 to more than 100 square miles. Cougars feed on deer and smaller mammals; females raise litters of one to four young every 2 years. They range from Canada into South America, but have declined greatly due to hunting, poaching, poisoning, and habitat loss and fragmentation. Cougars have low potential to occur at the Project site due to human traffic and disturbance, but they may occasionally cross the site between nearby areas of suitable habitat.

Monarch butterfly (Danaus plexippus)

The monarch butterfly is a federal candidate species and a California special animal. This species migrates along the Pacific Coast and often overwinters in wind-protected groves of trees, such as eucalyptus and Monterey cypress, between October and March. Their breeding and larval habitat is on milkweed plants in open fields and meadows. Monarch butterflies occur in the PCRP area; however, the area does not provide suitable overwintering roost trees, and no milkweed plants were observed during focused surveys in June 2021. Thus, monarchs are unlikely to overwinter or roost in the PCRP area.

3.2.1.3 Regulatory Setting

Section 4.4.1.3 of the Draft 2012 EIR (page 4.4-17 et seq.) described the regulatory setting for the analysis of potential impacts on biological resources, including federal, state, and local laws, regulations, plans, and policies applicable to the analysis of the proposed creek restoration and other Project components that were considered in the 2012 EIR. The section summarized provisions of the Federal Endangered Species Act and Federal Migratory Bird Treaty Act. It also summarized relevant provisions of the Surface Mining and Reclamation Act, CEQA, California Oak Woodlands Conservation Act, and California Fish and Game Code, including the California Endangered Species Act, California Native Plant Protection Act, and laws governing nesting birds, fully protected species, and sensitive natural communities. Section 4.4.1.3 of the Draft 2012 EIR (page 4.4-22 et seq.) further summarized provisions relating to jurisdictional waters subject to oversight by the U.S. Army Corps of Engineers (USACE), the San Francisco Bay Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Game pursuant to the Clean Water Act and the Porter Cologne Water Quality Control Act; and local plans and policies such as the Santa Clara County General Plan (1994) and Santa Clara County Oak Woodlands Impact Guidelines (County of Santa Clara 2011). The description of the regulatory setting remains accurate for purposes of this analysis of the PCRP.

3.2.2 Significance Criteria

Consistent with the County of Santa Clara Environmental Checklist and the version of the CEQA Guidelines Appendix G Environmental Checklist that was in effect at the time, Section 4.4 of the 2012 EIR determined that the proposed Reclamation Plan Amendment, including creek restoration work within the PCRA, would have a significant impact if it would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW[2] or the USFWS.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

d) Have a substantial adverse effect on oak woodland habitat as defined by Oak Woodlands Conservation Law (conservation/loss of oak woodlands) (Pub. Res. Code §21083.4).

e) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

g) Conflict with any local policies or ordinances protecting biological resources:

   i. Tree Preservation Ordinance (Section C16)

   ii. Wetland Habitat (General Plan Policy R-RC 25-30)

   iii. Riparian Habitat (General Plan Policy R-RC 31-41)

The County prepared the 2012 EIR pursuant to the provisions of CEQA and the CEQA Guidelines that were current at the time. Since then, the Environmental Checklist Form in CEQA Guidelines Appendix G has been revised to address legislative changes to CEQA, clarify certain portions of the existing CEQA Guidelines, and update the CEQA Guidelines to be consistent with more recent court decisions. The thresholds and analyses contained in the 2012 EIR are supplemented in this SEIR to reflect the latest CEQA Guidelines, current as of the publication of this SEIR. Accordingly, criterion c) above is revised as follows:

c) Have a substantial adverse effect on *state or* federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

CEQA Guidelines Section 15065 directs lead agencies to find that a project may have a significant impact if it has the potential to substantially degrade the quality of the environment;

[2] Since the 2012 EIR was published, on January 1, 2013 the California Department of Fish and Game changed its name to the California Department of Fish and Wildlife.

substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or wildlife community; or reduce the number or restrict the range of an endangered, rare, or threatened species. CEQA Guidelines Section 15380 provides that a plant or wildlife species, even if not on one of the official lists, may be treated as "rare or endangered" if, for example, it is likely to become endangered in the foreseeable future. In addition to the above, the CDFW and USFWS consider a project to have a significant impact if it were to cause a change in species composition or result in the measurable degradation of sensitive habitats, such as wetlands.

3.2.3 Direct and Indirect Effects

3.2.3.1 Methodology

The effects of implementing the Project are evaluated for biological resources that may be impacted during and as a result of the implementation of restoration proposed as part of the PCRP. Direct and indirect impacts on biological resources, including special-status plant and wildlife species and sensitive natural communities, could occur during on-land or in-water construction activities, or following the completion of restoration activities, as a result of alteration of the Permanente Creek channel, bed, banks, and floodplain. Effects following completion of the Project are expected to be beneficial to biological resources. The impact analyses determine whether the Project would cause one or more new significant impacts or a substantial increase in the severity of significant impacts than was identified in the 2012 EIR. The severity of an impact is determined based on the significance criteria identified in Section 3.2.2.

Compliance with applicable federal, state, and local laws and regulations is assumed in the analysis of impacts because these regulatory requirements are mandatory and the application of the associated protective measures (such as standard construction best management practices [BMPs], monitoring and reporting plans, and the application of corrective actions) are non-discretionary, and are proven to minimize and/or avoid biological resource impacts. Further, regulatory agencies with technical jurisdiction and authority for oversight would require adherence to regulatory requirements as a condition of Project or permit approval and would continue to enforce applicable requirements throughout Project construction/restoration and operation phases. The analysis considers whether compliance with regulatory requirements designed to protect biological resources would be adequate such that the PCRP would not cause a new significant impact or a substantial increase in the severity of a significant impact than was identified in the 2012 EIR related to biological resources.

3.2.3.2 Baseline

Section 3.0.1, *Environmental Baseline*, explains that, in the context of an SEIR, the CEQA baseline is adjusted such that the originally approved Project is assumed. Therefore, the baseline used in this analysis to evaluate the impacts of the PCRP and alternatives consists of existing environmental conditions plus the 2012 Reclamation Plan Amendment and 2012 EIR, and the creek restoration plans evaluated therein. For purposes of this analysis of potential impacts on

biological resources, the baseline includes the existing surface mining disturbance area, plus restoration of the full 49.2-acre disturbance area identified in the 2011 Creek Restoration Plan.

3.2.3.3 Discussion of Criteria with No Biological Resources Impact

Criteria e) and g) as set forth in Section 3.2.2 were eliminated from more detailed consideration in the 2012 EIR for the reasons explained in Draft 2012 EIR Section 4.4.4 (pages 4.4-31 and 4.4-32).

The reasons explained there apply also to this SEIR; thus, these criteria are similarly not considered further. As discussed in the 2012 EIR (page 4.4-31) for criterion e), creek restoration activities would be conducted for the most part in habitats already impacted by mining activities. Further, the applicant-proposed measures (APMs) identified in Section 2.5.9.2 of Chapter 2, *Project Description*, are consistent with the APMs that were evaluated as part of the 2012 EIR and similarly would protect nesting and breeding habitats. Ultimately, following construction, Project activities would result in beneficial effects to the Permanente Creek riparian corridor. No impacts were identified on mountain lion, which became a state candidate threatened species in 2020; hence, no APMs or mitigation measures are warranted to reduce impacts on this species. For criterion g), as discussed in the 2012 EIR (page 4.4-32), application for a tree removal permit would not be required by the Project. The Revegetation Plan for the Project would include replanting oak woodland.

3.2.3.4 Direct and Indirect Effects of the Project

This analysis evaluates the potential significance of the change in the physical environment that would be caused by implementation of the PCRP relative to the baseline condition, compares that impact conclusion with the impact conclusion reached in the 2012 EIR regarding the same consideration, and then makes a determination as to whether the implementation of the PCRP would cause one or more new significant impacts or a substantial increase in the severity of significant impacts than was disclosed in the 2012 EIR. For the reasons discussed below, implementation of the PCRP would not cause a new significant impact or a substantial increase in the severity of a significant impact than was disclosed in the 2012 EIR.

Impact 3.2-1: The Project may have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species.

California Red-legged Frog (CRLF)

This impact analysis corresponds to significance criterion a) as set forth in Section 3.2.2 and addresses impacts on sensitive aquatic species; California red-legged frog (CRLF) is the only sensitive aquatic species found at the Project site. In the context of Impact 4.4-4 (page 4.4-36 et seq.), the 2012 EIR concluded that the proposed reclamation activities, including creek restoration activities within the PCRA, would have less-than-significant impacts on CRLF, based on surveys showing that no frogs had been found within the 2012 Project area. Since the 2012 EIR, additional habitat assessments, surveys, and monitoring for CRLF during Lehigh's activities have provided additional information regarding the CRLF population currently found in and downstream of the PCRP area. This information is summarized in the Low-Effect HCP (LEHCP)

for ongoing routine operation and maintenance of existing facilities and associated Biological Opinion (USFWS 2022b). Specifically, CRLF were previously identified in Ponds 9, 14, 21, and 22 (see Figure 2-2), and downstream of the 2012 disturbance area, but the PCRA boundary extends farther downstream (Figure 2-3) and the Project would impact aquatic habitat for CRLF in Ponds 9 and 13.[3]

The new and expanded restoration area would require vegetation removal and grading in occupied CRLF habitat, temporarily affecting aquatic and upland habitat, as well as permanent removal of suitable aquatic habitat at Pond 13 (Appendix E1). To address this potential new significant impact of the PCRP, a new mitigation measure is identified below (Mitigation Measure 3.2-1, *California Red-legged Frog*). The implementation of Mitigation Measure 3.2-1 would ensure Lehigh obtains coverage for take of CRLF incidental to Project implementation and that appropriate impact avoidance and minimization measures are implemented. In addition, as described in the LEHCP, implementation of the PCRP would restore and enhance more CRLF habitat than was proposed in the 2012 EIR and would more than double the amount of suitable habitat for this species in the affected area, ultimately providing a beneficial effect to this species. Thus, with the implementation of Mitigation Measure 3.2-1 below, based on the Biological Opinion (USFWS 2022b), the impacts of the PCRP on CRLF and its habitat would remain less than significant.

Baseline Mitigation from 2012 EIR: None required.

Additional Mitigation:

Mitigation Measure 3.2-1, California Red-legged Frog. The Applicant shall obtain authorization for incidental take of CRLF through consultation under Section 7 of the federal Endangered Species Act between USACE and USFWS. All requirements imposed by USACE and USFWS under Section 7 shall be fulfilled by the Applicant. The Applicant shall also implement avoidance and minimization measures consistent with the 2014 Programmatic Biological Opinion for CRLF (USFWS 2014), the 2022 Section 10(a)(1)(B) Incidental Take Permit for the Lehigh Southwest Cement Company's Permanente Site Operation and Maintenance Project (USFWS 2022b), or alternative Project-specific measures identified in the formal Section 7 consultation with USFWS. At a minimum, the following measures shall be implemented:

- Qualified biologists and monitors approved by USFWS shall be retained to ensure all required impact avoidance and minimization measures are properly implemented. Biologists and monitors shall have authority to stop work if environmental requirements are not being fulfilled and if a CRLF is determined to be in danger.

- Employee education training shall be conducted for on-site employees working on PCRP activities. Personnel shall be required to attend the presentation, which shall

[3] Input received from the USFWS regarding Lehigh's Updated 90% Design Memo notes CRLF breeding habitat in Pond 14 (USFWS 2022a); however, the Project would not affect Pond 14, as that off-channel feature is downstream from the PCRP boundary. See Appendix C, which explains that Pond 14 is not involved in the proposed restoration work.

describe CRLF characteristics and natural history; avoidance, minimization, and conservation measures; legal protection of CRLF; and other related issues.

- To the extent practicable, restoration activities in the Permanente Creek channel and suitable pond habitats shall be conducted between August 15 and October 15, to minimize potential impacts on CRLF tadpoles.

- Specific methodology for capture and relocation of CRLF found in PCRP work areas shall be developed and approved by USFWS before on-site PCRP activities begin. This methodology shall identify the on-site location(s) to which CRLF shall be relocated.

- Preconstruction surveys for CRLF shall be conducted by a USFWS-approved biologist/monitor within 24 hours before the start of initial PCRP ground disturbance. If any CRLF adults, subadults, juveniles, tadpoles, or eggs are observed and determined to be in potential danger, a USFWS-approved biologist shall remove them from the work area and relocate them in compliance with established USFWS-approved methodology.

- To the maximum extent practicable, PCRP activities in CRLF habitat shall not occur during rain events or within 24 hours following a rain event. A USFWS-approved biologist/monitor shall inspect work areas and all equipment/materials for the presence of CRLF before Project activities resume after rain events. Any CRLF found in the work area shall be avoided and allowed to leave on its own or relocated in compliance with established USFWS-approved methodology.

- Restoration activities within suitable aquatic habitat for CRLF shall be conducted under the supervision of a USFWS-approved biologist/monitor. Aquatic habitat shall be surveyed for CRLF at the beginning of each day and periodically throughout the workday. Any CRLF in the work area and determined to be in potential danger shall be relocated in compliance with established USFWS-approved methodology.

- Plastic monofilament netting, loosely woven netting, or other materials using fixed weaves, polypropylene, polymer, or other synthetic materials shall not be used during Project implementation.

- For on-site storage of pipes, conduits, and other materials that could provide shelter for CRLF, an open-top trailer shall be used to elevate the materials above ground.

- Trenches or pits 1 foot or deeper to be left unfilled for more than 48 hours shall be securely covered with boards or other materials to prevent CRLF from falling into them. If this is not possible, dirt or wooden ramps or other structures of suitable surface that provide adequate footing for CRLF shall be placed in the trench or pit to allow for their unaided escape. The trench, pit, or hole shall be inspected by a USFWS-approved biologist/monitor each workday morning prior to initiation of work and in the late afternoon no more than 1 hour after work has ceased to determine if any individuals have become trapped. If the ramps fail to allow the animal to escape, a USFWS-approved biologist shall remove the CRLF and transport it to a safe location in compliance with established capture and relocation methodology.

- A USFWS-approved biologist shall remove aquatic exotic wildlife species such as bullfrogs and crayfish (if any) during PCRP activities.

With the implementation of Mitigation Measure 3.2-1, the Project's impacts on CRLF would be reduced to a less-than-significant level.

Aquatic Life

This impact analysis corresponds to significance criterion a) as set forth in Section 3.2.2 and addresses impacts on sensitive aquatic species. In the context of Impact 4.4-5 (page 4.4-37 et seq.), the 2012 EIR concluded that the proposed reclamation activities including excavation, grading, and boulder removal could result in exposing limestone from which selenium could leach into Permanente Creek. Selenium is a bioaccumulative pollutant that causes deformities in larval and juvenile fish and bird species which feed on them. The amount and extent of leaching was impossible to determine because it depended on the amount of limestone exposed, the amount of selenium present, and the amount of precipitation and other environmental conditions which promote leaching.

The potential for selenium toxicity was reduced by application of Mitigation Measure 4.4-5, *Selenium-related Impacts on Aquatic Habitat*, which applied stormwater control and monitoring to minimize runoff; however, because the potential for selenium-contaminated runoff could not be eliminated, the 2012 EIR determined this impact to be significant and unavoidable for the duration of Project implementation. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criterion a) with respect to aquatic organisms. The new restoration area is now subject to the facility-wide Individual National Pollutant Discharge Elimination System (NPDES) permit, Operations & Maintenance Plan, and Stormwater Pollution Prevention Plan (SWPPP), which implement safeguards to reduce contaminants in stormwater runoff from the newly constructed slopes and operate to reduce the risk identified in the 2012 Reclamation Plan Amendment. Further, recent analysis suggests that creek restoration excavation activity is unlikely to result in selenium mobilization in exceedance of RWQCB water quality standards (Golder 2022). Thus, the continuing potential for selenium reaching Permanente Creek in runoff is considered a less-than-significant impact with the implementation of Mitigation Measure 4.4-5 from the 2012 EIR.

> **Baseline Mitigation from 2012 EIR:** Mitigation Measure 4.4-5, the text of which is provided in Draft SEIR Table H1, *Impacts and Mitigation Measures for the 2012 Permanente Quarry Reclamation Plan Amendment*.
>
> **Additional Mitigation:** None required.

Nesting Birds

This impact analysis corresponds to significance criterion a) as set forth in Section 3.2.2 and addresses impacts on nesting birds. In the context of Impact 4.4-1 (page 4.4-32 et seq.), the 2012 EIR concluded that the proposed reclamation activities, including creek restoration activities proposed within the PCRA, would result in a less-than-significant impact with respect to nesting

migratory birds with application of APMs BIO-1 (Special Status Avian Species, Non-breeding Season) and BIO-2 (Special Status Avian Species, Breeding Season Surveys). For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criterion a) with respect to nesting birds. The new restoration area would similarly require removal of trees, shrubs, and other vegetation capable of supporting nesting birds (as analyzed in the 2012 EIR). Pursuant to APM BIO-1 in Section 2.5.9 of Chapter 2, Lehigh would conduct vegetation removal outside the nesting season if possible. If vegetation removal is conducted during the nesting season, Lehigh would provide for preconstruction nesting surveys by a qualified biologist, avoidance of active nests with a suitable buffer identified by a qualified biologist, and monitoring by a qualified biologist to modify buffers if nesting birds appear distressed by Project activities. Nest buffers would be maintained until young have fledged or the nest is abandoned. These measures would ensure that Project impacts on nesting birds would be less than significant.

Baseline Mitigation from 2012 EIR: None required.

Additional Mitigation: None required.

Bats

This impact analysis corresponds to significance criterion a) as set forth in Section 3.2.2 and addresses impacts on special-status bat species. In the context of Impact 4.4-2 (page 4.4-34 et seq.), the 2012 EIR concluded that the proposed reclamation activities, including creek restoration activities proposed within the PCRA, would reduce impacts with respect to roosting bats with application of APMs BIO-3 (Roosting Bats, Non-roosting Season), BIO-4 (Roosting Bats, Non-hibernation and Non-maternity Seasons), and BIO-5 (Roosting Bats, Maternity Roosting Season). In addition to these APMs, to result in a less-than-significant impact, Mitigation Measures 4.4-2a, Use of Buffers Near Active Roosts; 4.4-2b, Roosting Bats, Maternity Roosting Season; and 4.4-2c, Bat Roost Replacement were applied. Each of these measures shall be implemented as part of the baseline condition for the PCRP. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criterion a) with respect to roosting bats. The new restoration area would require removal of additional mature trees, some of which may be capable of supporting roosting bats, while the 2012 restoration area required removal of trees and of structures capable of supporting roosting bats; these impacts are potentially significant, but, as in the 2012 EIR, impacts on roosting bats would be reduced to a less-than-significant level by the implementation of APMs BIO-3, BIO-4, and BIO-5 in Section 2.5.9 of Chapter 2, *Project Description*, and by the implementation of Mitigation Measures 4.4-2a, 4.4-2b, and 4,4-2c from the 2012 EIR.

Baseline Mitigation from 2012 EIR: Mitigation Measures 4.4-2a and 4.4-2c. The text of each is provided in Draft SEIR Table H1, *Impacts and Mitigation Measures for the 2012 Permanente Quarry Reclamation Plan Amendment*. Mitigation Measure 4.4-2b from the 2012 EIR also would contribute to a conclusion of less-than-significant impacts on roosting bats, but for purposes of this SEIR has been replaced by Mitigation Measure 3.2-2, *Roosting Bats, Maternity Roosting Season*. Mitigation Measure 3.2-2

reflects revisions made to the 2012 EIR's Mitigation Measure 4.4-2b to address input received from CDFW and USFWS in the context of this SEIR.

Additional Mitigation:

Mitigation Measure 3.2-2: Roosting Bats, Maternity Roosting Season. Nighttime evening emergence surveys, acoustic surveys, inspection for guano and culled insect parts, and/or visual inspection for roosts within large tree cavities shall be conducted by a qualified biologist during the maternity season (April 1 to August 31) to determine presence/absence of bat maternity roosts in and within 100 feet of Project work areas. All active roosts identified during surveys shall be protected by a buffer to be determined by a qualified bat biologist in consultation with CDFW. The buffer shall be determined by the type of bat observed, topography, slope, aspect, surrounding vegetation, sensitivity of roost, type of potential disturbance, etc. Each exclusion zone shall remain in place until the end of the maternity roosting season. If no active roosts are identified, then work may commence as planned. Survey results are valid for 30 days from the survey date. Should work commence later than 30 days from the survey date, surveys shall be repeated.

Operations may continue for many years. Surveys do not need to be repeated annually unless additional clearing of potential roosting or hibernation habitat could occur outside of the non-roosting season.

San Francisco Dusky-footed Woodrat

This impact analysis corresponds to significance criterion a) as set forth in Section 3.2.2 and addresses impacts on San Francisco dusky-footed woodrat, a special-status species. In the context of Impact 4.4-3 (page 4.4-36), the 2012 EIR concluded that the proposed reclamation activities, including creek restoration activities within the PCRA, had potential to disturb woodrat nests, but would result in a less-than-significant impact with respect to San Francisco dusky-footed woodrat with application of APM BIO-6, San Francisco Dusky-footed Woodrat. APM BIO-6 as set forth in Section 2.5.9.2 in Chapter 2, *Project Description*, is substantively similar to APM-BIO-6 from the 2012 EIR. For purposes of the PCRP, APM-BIO-6 requires surveys in all suitable habitat, avoidance of active woodrat stick nests where feasible, and dismantling and reconstructing any active woodrat stick nests where complete avoidance is infeasible. If young are found, the nests shall be reconstructed and left undisturbed until the young are independent. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criterion a) with respect to dusky-footed woodrat. The new, expanded restoration area similarly would require vegetation removal, grading, or other ground disturbance in wooded or scrub habitats where this species is known to nest, which has the potential to injure or disturb nesting woodrats. Impacts on dusky-footed woodrat would remain less than significant by application of APM BIO-6 in all suitable habitat where nesting woodrats may be found.

Baseline Mitigation from 2012 EIR: None required.

Additional Mitigation: None required.

Impact 3.2-2: The Project may have a substantial adverse effect on riparian habitat or other sensitive natural community.

This impact analysis corresponds to significance criterion b) as set forth in Section 3.2.2 and addresses riparian and other sensitive natural communities. In the context of Impact 4.4-6 (page 4.4-38 et seq.), the 2012 EIR concluded that boulder removal, vegetation removal, pipe installation, and soil treatment would temporarily disrupt riparian vegetation communities along Permanente Creek. This effect was considered less-than-significant because riparian tree removal was not expected, the disturbed area would be revegetated, and the long-term impact of the Project would be beneficial through creation of additional riparian habitat. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criterion b). The PCRP would similarly cause a temporary loss of riparian vegetation during ground disturbance activities associated with habitat restoration, such as from vegetation removal and grading; grading limits cover 13.4 acres for Reaches 8–13 and 7.72 acres for Reaches 17 and 18, including both riparian and upland areas. While individual trees would be removed, over the long term, the acreage of riparian community along Permanente Creek would increase as a result of Project implementation because the Project would improve riparian habitat conditions by connecting existing patchy riparian vegetation at the Project site into a more continuous corridor along the creek, which would be seeded with native species, improving habitat quality for wildlife (Appendix G1). Thus, the impact would remain less than significant with no mitigation required.

Baseline Mitigation from 2012 EIR: None required.

Additional Mitigation: None required.

Impact 3.2-3: The Project may have a substantial adverse effect on state or federally protected wetlands.

This impact analysis corresponds to significance criterion c) as set forth in Section 3.2.2 and addresses wetlands. In the context of Impact 4.4-8 (page 4.4-41 et seq.), the 2012 EIR concluded that the proposed creek restoration activities within the PCRA, including ground disturbance and revegetation adjacent to wetlands along the creek, could increase erosion into wetlands and waters. To reduce this impact to a less-than-significant level, the 2012 EIR identified Mitigation Measure 4.4-8a, Wetland Identification and Avoidance, and Mitigation Measure 4.4-8b, Wetland Monitoring Plan. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criterion c). The new restoration area would similarly have potential to impact wetlands and waters of Permanente Creek. The area of impact may be larger, as the PCRP implementation area extends farther downstream along Permanente Creek than the PCRA. The impacts on wetlands and waters along the creek would be temporary during construction; ultimately, restoration would improve conditions along the creek and allow for the creation of natural wetlands (see Appendices G1 and G3). As part of the baseline condition, the implementation of Mitigation Measure 4.4-8a would continue to require an updated wetland

delineation and permitting, which would avoid jurisdictional wetlands and waters when possible, while Mitigation Measure 4.4-8b would require monitoring and mitigation in accordance with permits, for areas where impacts could not be avoided. With the ongoing implementation of these measures, impacts on wetlands and waters of the PCRP would be less than significant.

> **Baseline Mitigation from 2012 EIR:** Mitigation Measures 4.4-8a and 4.4-8b. The text of each is provided in Draft SEIR Table H1, *Impacts and Mitigation Measures for the 2012 Permanente Quarry Reclamation Plan Amendment*.
>
> **Additional Mitigation:** None required.

Impact 3.2-4: The Project may have a substantial adverse effect on oak woodland habitat.

This impact analysis corresponds to significance criterion d) as set forth in Section 3.2.2 and addresses oak woodlands. In the context of Impact 4.4-7 (page 4.4-39 et seq.), the 2012 EIR concluded that ground disturbance, equipment use, and other reclamation activities within the PCRA could impact oak woodland habitat, and that this would result in a less-than-significant impact after replanting. Additional oak woodland habitat would be removed to implement the PCRP outside the existing Reclamation Plan boundary; however, the oak woodland habitat would be replanted and so the conclusion is the same as was reached in the 2012 EIR: less than significant after replanting. The 2012 EIR also noted that oak woodlands could be indirectly impacted by introduction of pathogens such as Sudden Oak Death (*Phytophthora ramorum*). To ensure that this impact would remain less than significant, the 2012 EIR required the implementation of Mitigation Measure 4.4-7, Sudden Oak Death Minimization Measures. With the continued implementation of the mitigation measure identified in the 2012 EIR and APM BIO-7 identified in Section 2.5.9.2 of Chapter 2, *Project Description*, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criterion d). The new restoration area similarly would temporarily impact oak woodland habitat during restoration activities, and have potential to spread pathogens from human and vehicle traffic during construction. With implementation of the APM and mitigation measures, impacts on oak woodlands would be less than significant.

> **Baseline Mitigation from 2012 EIR:** Mitigation Measure 4.4-7, the text of which is provided in Draft SEIR Table H1, *Impacts and Mitigation Measures for the 2012 Permanente Quarry Reclamation Plan Amendment*.
>
> **Additional Mitigation:** None required.

Impact 3.2-5: The Project may conflict with the provisions of an adopted habitat conservation plan.

As discussed in the 2012 EIR (page 4.4-32) the Project site is not within the boundaries of the Santa Clara Valley Habitat Conservation Plan. The Lehigh Permanente Site Operation and Maintenance Habitat Conservation Plan (LEHCP) was adopted in 2022 and includes portions of PCRP Reaches 8–12. The LEHCP provides measures for avoiding, monitoring, minimizing, and mitigating adverse effects on the CRLF from activities including stormwater capture/

sedimentation basin operation and maintenance, erosion control, material transport, vehicle and equipment operation, and road and vegetation maintenance. Monarch butterfly host plant and nectar plant surveys are also required. The LEHCP provides measures for the protection of CRLF, including relocation, in coordination with USFWS, to suitable on-site habitat outside the work area. The PCRP would adhere to all provisions of the LEHCP; thus, there would be no conflict with habitat conservation plan provisions, and no impact under this criterion. Accordingly, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR regarding conflict with the provisions of an adopted habitat conservation plan.

Baseline Mitigation from 2012 EIR: None required.

Additional Mitigation: None required.

3.2.4 Cumulative Analysis

The Draft 2012 EIR analyzed potential cumulative effects in Section 6.2.4, *Biological Resources* (page 6-17 et seq.), concluding that the Reclamation Plan Amendment, including creek restoration within the PCRA, would not result in a cumulatively considerable contribution to any significant cumulative effect. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** in the cumulative context than was disclosed in the 2012 EIR.

With the implementation of the APMs and mitigation measures identified in this SEIR and the 2012 EIR (which would be independently enforceable obligations of the 2012 approvals and any future Project approvals), short-term and long-term impacts of the PCRP on biological resources would be less than significant or beneficial. Once reclamation is completed, woodland, grassland, and riparian areas would be increased in size, and aquatic habitat conditions would be improved as a result of the restoration of Permanente Creek, which would improve habitat for special-status species temporarily impacted by the Project.

The federal threatened CRLF is present within the new and expanded restoration area, and vegetation removal and grading would temporarily impact aquatic and upland habitat, and permanently remove suitable aquatic habitat at Pond 13. This represents a minor change in the impact analyzed in the cumulative context in the 2012 EIR. However, the implementation of new Mitigation Measure 3.2-1 would require Lehigh to obtain incidental take coverage for this species, while implementing conservation and avoidance measures for its protection. Given these measures and given the expansion of restored habitats that would support CRLF compared with the prior analysis, cumulative impacts on CRLF would remain less than significant. Following implementation of the Project, habitat restoration in the PCRP area would have beneficial effects for this species.

The cumulative projects listed for this SEIR (Table 3.0-2) include transportation demand management from the Midpeninsula Open Space District; this group of projects is projected but does not have a start date. Four additional projects in Mountain View include two trail

enhancements and a new bridge on Permanente Creek, and a baseball park/stormwater detention basin. These projects have the potential to contribute to cumulative impacts on CRLF, nesting birds, roosting bats, San Francisco dusky-footed woodrat, and aquatic organisms during Project construction/active restoration. As indicated in Section 3.2.3.1, *Methodology*, requisite compliance with applicable federal, state, and local laws and regulations would be mandatory for projects included in the cumulative scenario, and the application of associated protective measures (such as BMPs, monitoring and reporting plans, and the application of corrective actions) would be non-discretionary and shown to minimize and/or avoid significant impacts on biological resources. Further, as noted in the 2012 EIR Section 4.41.7 (pages 4.4-17 through -26), federal and state regulatory agencies with technical jurisdiction and authority for oversight of biological resources, such as the USACE for jurisdictional wetlands and waters and the USFWS for threatened and endangered species, would require adherence to regulatory requirements as a condition of their approval for the cumulative projects. In this regulatory environment, no significant cumulative effect is anticipated, and the PCRP's incremental impacts on affected resources would cause **no new significant impact** and **no more significant impact** in the cumulative environment than was disclosed in the 2012 EIR.

3.2.5 References

County of Santa Clara, 2011. Santa Clara County Planning Office Guide to Evaluating Oak Woodlands Impacts. July 28, 2011. https://stgenpln.blob.core.windows.net/document/Oakwoodlands_Guide.pdf

GEI Consultants, Inc., 2022. Low-Effect Habitat Conservation Plan, Permanente Site Operation and Maintenance. Prepared for Lehigh Southwest Cement Company, Cupertino, CA.

Golder. 2022. Water Quality Evaluation, Permanente Creek Restoration Project, Lehigh Southwest Cement Company and Hanson Permanente Cement, Inc. Permanente Quarry, Cupertino, CA. August 26.

U.S. Fish and Wildlife Service (USFWS), 2014. Programmatic Biological Opinion for Issuance of Permits under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act, including Authorizations under the 22 Nationwide Permits for Projects that May Affect the Threatened California Red-Legged Frog in Nine San Francisco Bay Area Counties, California (Service file number 0SESMF00-2014-F-0389).

USFWS, 2022a. Email from Joseph D. Terry to Pat Angell, consultant to the County Planning Department regarding Lehigh Permanente Quarry - Revised Plans for Permanente Creek Restoration Project. November 15, 2022.

USFWS, 2022b. Formal Consultation on the Issuance of a Section 10(a)(1)(B) Incidental Take Permit for the Lehigh Southwest Cement Company's Permanente Site Operation and Maintenance Project Low-Effect Habitat Conservation Plan, Santa Clara County, California. Sacramento Fish and Wildlife Office, Sacramento, CA.

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3.3 Cultural Resources

This section evaluates cultural resources issues to determine whether the Permanente Creek Restoration Plan (PCRP), including its revisions to the 2011 Creek Restoration Plan that are a component of the 2012 Reclamation Plan Amendment, would cause one or more new significant impacts or a substantial increase in the severity of a significant impact relative to the impacts disclosed in the 2012 EIR.

To do this, as explained in Section 2.3, *Focus of the Supplemental EIR*, and as summarized in Table 2-4, *Specific Areas of Focus for the Supplemental EIR*, this analysis focuses on PCRP areas in two locations: (1) outside of the existing Reclamation Plan boundary (for which Grading Approval would be required); and (2) within the Reclamation Plan boundary and the 120.2-acre Permanente Creek Restoration Area (PCRA), but outside of the PCRA's 49.2-acre disturbance area. In addition, more generally, the analysis evaluates whether the PCRP proposes work at greater intensity than previously considered in the 2012 EIR. As a result, Reaches 6–13 and Reaches 17 and 18 are key areas for evaluation.[1]

This section describes the physical and regulatory setting, the criteria used to evaluate the significance of potential impacts, the methods used in evaluating these impacts, and the results of the impact assessment relative to the 2012 EIR. This analysis is based in part on information contained in the *Cultural Resources Inventory and Evaluation Report for the Permanente Creek Restoration Project* (GEI Consultants, Inc. and AECOM 2016) on Lehigh's behalf. Unauthorized public disclosure of this report could result in a significant invasion of privacy, damage to a historic property, or impede the use of a traditional religious site by practitioners. County staff members and preparers of this Draft SEIR who have the appropriate credentials to review the report have done so and have independently determined that it is suitable to be relied upon, in combination with other materials included in the formal record, in the preparation of this Draft SEIR.

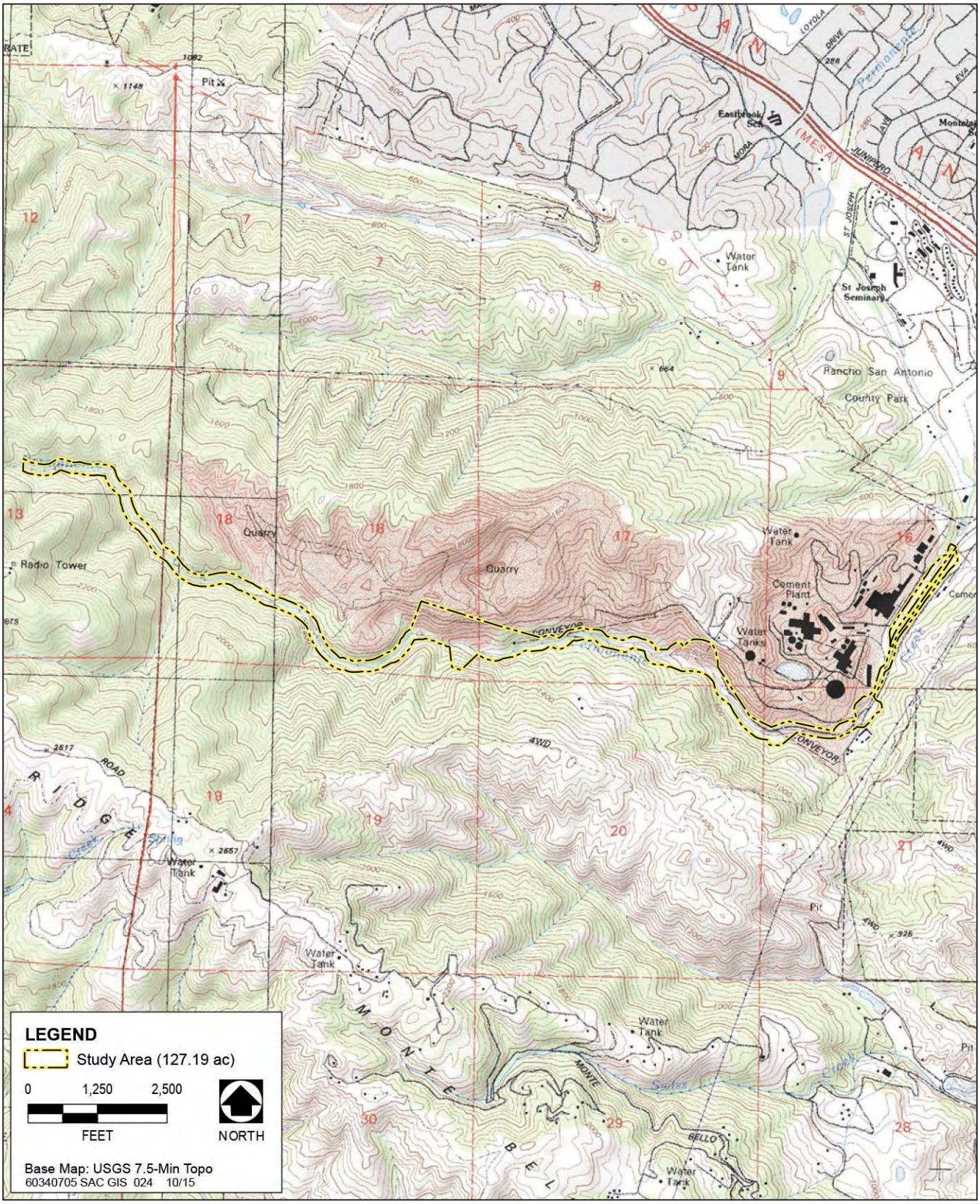
The County received scoping comments regarding cultural resources from the Native American Heritage Commission (Letter B), the Midpeninsula Regional Open Space District (Letter F), and a private citizen (Letter E). A copy of each letter is provided in **Appendix A**, *Scoping Report*. These comments are addressed in the following analysis.

3.3.1 Setting

3.3.1.1 Study Area

The study area for this analysis of potential impacts on cultural resources includes the 127.19-acre area outlined with a dashed yellow line on **Figure 3.3-1**, *Study Area*.

[1] See Section 2.4, *Correlation between 2012 EIR PCRA and the PCRP*, which correlates the restoration activities described and analyzed in the 2012 EIR with those described in the PCRP and analyzed in this SEIR. Section 2.5, *Permanente Creek Restoration Plan*, details the PCRP's proposed activities on a reach-by-reach basis.



SOURCE: AECOM, 2016

Permanente Creek Restoration Plan Supplemental Environmental Impact Report

Figure 3.3-1
Study Area

ESA

3.3.1.2 Environmental Setting

Section 4.5.1 of the Draft 2012 EIR described the environmental setting for the 2012 EIR's consideration of cultural resources: the prehistoric setting (page 4.5-3 et seq.), ethnographic setting (page 4.5-4), and historic setting (page 4.5-4 et seq.). A summary of research was also provided (page 4.5-12 et seq.). These descriptions remain accurate for purposes of this analysis of the PCRP, except as supplemented below.

In May 2015, AECOM cultural resources specialists conducted a records search at the California Historical Resources Information System's Northwest Information Center in Rohnert Park. The records search included the entire study area and a 0.5-mile-wide buffer around the outside boundary of the study area. The materials reviewed included Northwest Information Center base maps indicating previous investigations and previously reported cultural resources; historic maps and literature pertaining to Santa Clara County; and national and state cultural resource inventories.

The records search identified six cultural resources within the study area, all of which date to the historic era and are related to either agriculture or the Kaiser Permanente Quarry (now known as the Permanente Quarry); no prehistoric archaeological resources have been identified in the study area. AECOM conducted a cultural resources pedestrian survey of the study area on May 10–12, 2015. Survey transects were spaced 15–50 feet apart, depending on terrain. Much of the study area could not be surveyed because detritus on steep slopes made conditions too dangerous for prolonged walking, although all exposed bedrock was inspected. Visibility in surveyed areas varied greatly; some areas had excellent visibility while vegetation or quarry debris effectively obscured the entire surface in other areas. Overall visibility was fair to good, with surface visibility of approximately 40–50 percent.

Archaeological Resources

The records search identified one previously recorded historic-era archaeological resource in the study area, Henry J. Kaiser's Cabin and Accessory Structure (P-43-0001869). The pedestrian survey did not identify any prehistoric archaeological resources or any new historic-era archaeological resources.

Kaiser's Cabin and Accessory Structure (P-43-001869)

This archaeological resource consists of Kaiser's Cabin and Accessory Structure. The structure may have been built as early as the 1860s, but the build date is not definitely known. Henry J. Kaiser rebuilt the structure in 1939 and it was used as a speakeasy during the Prohibition era. The structure is dilapidated and overgrown with vegetation. The resource was first recorded by Jurich and Grady (2007) and subsequently updated by Maggi et al. (2011).

Maggi et al. (2011) performed additional archival research; they did not revisit all of the site's associated structures, but they confirmed Jurich and Grady's description of the resource as being in an advanced state of dilapidation. The resource was revisited in May 2015 during the AECOM investigation (AECOM 2016) and found to be in the same condition as described in the first two visits. Only the walls of Kaiser's Cabin and a chimney are left standing and a great amount of

debris is present within the walls, mostly wooden planks. The two outbuildings are likewise dilapidated. No evidence of a subsurface deposit (e.g., outhouse, privy pit) was noted, but visibility in the area was extremely poor because of vegetation and cabin debris.

P-43-0001869 has not been formally evaluated for being eligible for listing in the National Register of Historic Places (National Register) or the California Register of Historical Resources (California Register); however, Jurich and Grady (2007) state that if it were evaluated, the site would likely be found eligible under Criterion B/2 for its association with Henry J. Kaiser. For purposes of this analysis, the resource is considered eligible for listing in the National Register and California Register.

Built-Environment Resources

Six historic-age built-environment resources are located in the study area. These resources consist of the Kaiser Permanente Quarry Mining District and five contributing resources: the Permanente Quarry Conveyor System, Permanente Road, the railroad segment, the railroad maintenance shed building, and the Permanente Creek Bridge. These resources are discussed below.

Kaiser Permanente Quarry Mining District (P-43-001867)

The Kaiser Permanente Quarry Mining District contains seven contributing buildings and structures, rural landscape features, a historic-era archaeological site (Henry J. Kaiser's Cabin and Accessory Structure [P-43-001869]), and one noncontributing structure, the Permanente Quarry Pump House. The contributing built-environment resources identified as part of previous cultural resources studies were the quarry's main pit, a storage area, a cement plant, a crusher, the quarry conveyor system, Permanente Road, and a railroad segment. Also included as rural landscape features were the foothills along Permanente Creek, and intact vegetation communities such as oak woodland, oak savanna, woodland/chaparral, and chaparral.

Three previously identified contributing built-environment resources are present within the study area. Two additional contributing resources, a railroad maintenance shed and a bridge, were identified within the study area during AECOM's May 2015 survey. Below is a discussion of their current conditions and recommended contribution to the eligibility of the Kaiser Permanente Quarry Mining District.

Permanente Quarry Conveyor System (P-43-002690) and Crusher—Contributor

The Permanente Quarry Conveyor System extends for approximately 2 miles and has a 48-inch belt on the conveyor. Other parts of this system include the remnants of a 1940s-era crusher near Permanente Creek and a 560-foot-long tunnel. The conveyor system is mostly elevated and is approximately 30 feet high in some areas.

Construction of the Permanente Quarry Conveyor System began in 1939. By 1943, the conveyor system had been expanded westward through a 560-foot tunnel to the southwest, originating from a crusher near Permanente Creek near the Lower Quarry. The conveyor system branched out northward from this location and ultimately extended for 2 miles. The 48-inch belt on the conveyor system initially was claimed to be capable of moving 1,000 tons of material in an hour.

It was an important part of the quarry operations and was used as an efficient way to transport material.

The remnant of the crusher near Permanente Creek is located near what was once the Lower Quarry. The crusher was located at the upper terminus of the conveyor belt. Limestone rock was crushed here before traveling on the conveyor belt to the processing plant. The conveyor branched out northward from this location to two other crushers, between the two quarry locations, and ultimately extended for 2 miles. The upper terminus and crusher located near Permanente Creek remain today in ruins, with only some structural members remaining. A new larger crusher has been installed east of this terminus.

As part of this Project, AECOM revisited portions of the conveyor system within the study area to assess their condition. No changes were noted and the system continues to appear to contribute to the Kaiser Permanente Quarry Mining District.

Permanente Road (P-43-001868)—Contributor

Permanente Road starts within the quarry, extends down to and across Permanente Creek to the south, and continues alongside the creek. Sections of the road have been widened and regraded in some areas. The road varies in width, but generally is approximately 8 feet wide.

Permanente Road was constructed in the 1890s as a wagon road. The road was used as part of mining operations in the quarry and to access Kaiser's cabin. As part of this Project, AECOM revisited portions of the road within the study area to assess its condition. No changes were noted. Permanente Road continues to appear to contribute to the Kaiser Permanente Quarry Mining District.

Permanente Railroad Segment (CA-SCL-892H [P-43-001833])—Contributor

The railroad segment is approximately 0.5 mile long and consists of two steel tracks with wood ties. Several sections of track are missing ties and have been overgrown by vegetation. The line travels in a northeast-southwest direction. The segment within the study area begins just east of the Permanente Creek Bridge and terminates at the railroad maintenance shed.

The Permanente Railroad was built circa 1940 and consisted of a network of 10 tracks inside what was then known as the Kaiser Permanente Cement Plant. As part of this Project, AECOM revisited portions of the railroad within the study area to assess its condition. No changes were noted. The railroad segment continues to appear to contribute to the Kaiser Permanente Quarry Mining District.

Permanente Railroad Maintenance Shed—Contributor

Associated with the railroad segment is a maintenance shed. This is a wood-frame building with a rectangular plan, a concrete slab foundation, and a front gable roof. The building is entirely sheathed in corrugated metal siding. It is open on its east elevation with a smaller opening on its west elevation. Railroad tracks lead into the building and there is a large concrete-lined trench in the center of the foundation. Surrounding the building are mature trees, shrubs, and gravel roads.

As part of their analysis, Maggi et al. (2011) identified the shed building, but they did not describe the building in detail, nor did they discuss it as part of the evaluation of the railroad. AECOM (2016) reassessed the resource for this Project. The shed was constructed circa 1948 during the post–World War II boom, a time of peak performance for the quarry. The shed building was constructed out of necessity to service the plant's two locomotives; it contributes to the significance of the Kaiser Permanente Quarry Mining District under National Register/California Register Criterion A/1 because the maintenance shed played an important role in the operation of the railroad system used by the quarry. Material from the quarry was transported by the plant's locomotives and transferred to the Southern Pacific Railroad tracks just outside the quarry facility. The materials were then distributed to various destinations. The maintenance shed was used to keep the quarry's locomotives in working condition, thereby contributing to the significance of the railroad and the Kaiser Permanente Quarry Mining District.

Permanente Creek Bridge—Contributor

The Permanente Creek Bridge is a steel and concrete bridge that carries the two-lane Permanente Road over Permanente Creek. The bridge is approximately 200 feet long and 25 feet wide and features curved closed concrete railings. A date stamp reading "1941" is located on the north railing's northeast corner.

This bridge appears to contribute to the Kaiser Permanente Quarry Mining District. According to historic maps, no road existed in this area before 1941, the date of the bridge's date stamp. The Permanente Creek Bridge was likely constructed during this period of the quarry's expansion. As quarry operations increased during World War II, it became increasingly imperative to build a reliable road to access the facility. That also required a bridge to cross Permanente Creek. The bridge served a functional yet important purpose to the daily operations of the quarry facility.

District Evaluation

The Kaiser Permanente Quarry was constructed between 1939 and 1967. The Kaiser Permanente Quarry Mining District was evaluated in 2007 by Jurich and Grady and recommended as eligible for the National Register under Criterion A for its association with the development of Shasta Dam and the rebuilding of Pearl Harbor during World War II, and under Criterion B for its association with Henry J. Kaiser. Its period of significance extends from 1939, the beginning of the quarry operations, to 1969, the year when Kaiser died.

Maggi et al. (2011) revisited the Kaiser Permanente Quarry Mining District and reassessed the site for National Register/California Register eligibility as part of the Permanente Quarry Facility Comprehensive Reclamation Plan Project. They recommended the district as eligible under National Register/California Register Criterion A/1, as representing an important local development pattern that significantly reflects how the contemporary industrial base of the County of Santa Clara and California evolved from the end of the Great Depression through the periods during and after World War II.

In addition, Maggi et al. (2011) recommended that the Kaiser Permanente Quarry Mining District appears eligible under National Register/California Register Criterion C/3, because it represents a distinctive creative act in the field of engineering. As part of that evaluation, the district's

boundary was modified to include the railroad line and its associated shed, the hillside above the easterly terminus of the conveyor system and powerhouse, and the greater area of the cabin, which includes the road, the Lower Quarry, and the crusher and historic landscape features. The boundary change includes portions of the study area for this Project. The areas surveyed by AECOM in 2015 for this Project remain unchanged, and the eligibility recommendations made by Jurich and Grady (2007) and Maggi et al. (2011) for the District remain valid.

3.3.1.3 Regulatory Setting

Section 4.5.1.6 of the Draft 2012 EIR (page 4.5-19 et seq.) described the regulatory setting for the analysis of potential impacts on cultural resources. The regulatory setting discussed federal, state, and local laws, regulations, plans, and policies applicable to the analysis of the proposed creek restoration and other Project components considered in the 2012 EIR. The section summarized provisions related to the National Register; the California Office of Historic Preservation, California Register, and CEQA (specifically regarding historical resources); and the County's Historic Preservation Ordinance. These descriptions remain accurate for purposes of this analysis of the PCRP.

3.3.2 Significance Criteria

Consistent with the County of Santa Clara Environmental Checklist and the version of the CEQA Guidelines Appendix G Environmental Checklist that was in effect at the time, Section 4.5 of the 2012 EIR determined that the proposed 2012 Reclamation Plan Amendment, including creek restoration work within the PCRA, would have a significant impact if it would:

(a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5 of the CEQA Guidelines, or the County's Historic Preservation Ordinance (Section 17 of the County Ordinance Code)—i.e., relocation, alterations, or demolition of historical resources;

(b) Cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5 of the CEQA Guidelines;

(c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (now addressed in Section 3.5, *Geology and Soils*);

(d) Disturb any human remains, including those interred outside of formal cemeteries; or

(e) If within the New Almaden Historic area, conflict with Santa Clara County General Plan policies of this designated special policy area.

3.3.3 Direct and Indirect Effects

3.3.3.1 Methodology

Based on independent review of the technical reports noted above and included in the County's formal record for this Project, the preparers of this SEIR evaluated activities proposed as part of the PCRP to determine whether related impacts would cause any new significant impact or any

substantial increase in the severity of a significant impact on cultural resources relative to the impacts disclosed in the 2012 EIR.

3.3.3.2 Baseline

Section 3.0.1, *Environmental Baseline*, explains that in the context of an SEIR, the CEQA baseline is adjusted such that the originally approved project is assumed to exist. Therefore, the baseline used here to evaluate the impacts of the PCRP and alternatives consists of existing environmental conditions plus the 2012 Reclamation Plan Amendment and 2012 EIR, and the creek restoration plans evaluated therein.

Thus, for purposes of this analysis of potential impacts on cultural resources, the baseline includes removal of the Permanente Quarry Conveyor System, including the related tunnel, and partial removal of remnants of the 1940s-era crusher (the "old crusher foundation") as part of the 2012 Reclamation Plan Amendment. These actions were analyzed and found to result in a significant and unavoidable impact on historical resources (Impact 4.5-1, 2012 EIR). Three mitigation measures address this impact:

- Mitigation Measure 4.5-1a: Documentation
- Mitigation Measure 4.5-1b: Salvage and Relocation
- Mitigation Measure 4.5-1c: Public Education and Interpretation

These mitigation measures would be implemented as part of the baseline condition for the PCRP because they are independently enforceable obligations of the 2012 approvals.

3.3.3.3 Discussion of Criteria with No Cultural Resources Impact

Criterion (e) as set forth in Section 3.3.2 was eliminated from more detailed consideration in the 2012 EIR for the reasons explained on Draft 2012 EIR page 4.5-24. For the reasons explained there, this criterion also would not be affected by the PCRP and is not considered in this SEIR.

3.3.3.4 Direct and Indirect Effects of the Project

The following analysis evaluates the potential significance of the change in the physical environment that would be caused by implementation of the PCRP relative to the baseline condition; compares that impact conclusion with the impact conclusion reached in the 2012 EIR regarding the same consideration; and then determines whether implementing the PCRP would cause one or more new significant impacts or a substantial increase in the severity of a significant impact relative to the impacts disclosed in the 2012 EIR. For the reasons discussed below, implementing the PCRP would not cause a new significant impact or a substantial increase in the severity of a significant impact relative to the impacts disclosed in the 2012 EIR.

Impact 3.3-1: Project activities could cause an adverse change in the significance of a historical resource pursuant to Section 15064.5 of the CEQA Guidelines and the County's Historic Preservation Ordinance.

Five contributing built-environment resources—the Permanente Quarry Conveyor System, Permanente Road, the Permanente Railroad segment, the Permanente Railroad maintenance shed, and the Permanente Creek Bridge—are a part of the Kaiser Permanente Quarry Mining District located within the study area. No stream restoration work for the Project would affect the Permanente Railroad segment, the Permanente Railroad maintenance shed, or the Permanente Creek Bridge. These resources would remain and would continue to display their character-defining features and historical significance.

Portions of the Permanente Quarry Conveyor System include foundations associated with a 1940s-era rock crusher that would be partially removed per the Amended Consent Decree as part of the Project. The removal of these features was analyzed as part of the 2012 EIR, which identified a significant and unavoidable impact on historical resources. Thus, the removal of these features (which has been carried forward as part of the PCRP) would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR with respect to these resources or the Kaiser Permanente Quarry Mining District.

Removing rock material would reduce the width of Permanente Road within Reaches 8–12. However, the road's character-defining features, including the gravel and dirt, and its circulation pattern would not be altered. The road would retain integrity of location, setting, feeling, and association. Its integrity of design, material, and workmanship would be slightly altered, but it would retain sufficient integrity to convey its significance as a contributor to the Kaiser Permanente Quarry Mining District. The district as a whole also would retain integrity, and the proposed stream restoration would not affect most of its contributing features, including the main pit, storage area, cement plant, conveyor system, quarry, and railroad, and the remains of Kaiser's cabin. The Kaiser Permanente Quarry Mining District would retain sufficient contributors to communicate its significance as an industrial base (National Register/California Register Criterion A/1), for its association with Kaiser (National Register/California Register Criterion B/2), and as an engineering accomplishment (National Register/California Register Criterion C/3). Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR with respect to changes in the width of Permanente Road.

> **Baseline Mitigation from 2012 EIR:** Mitigation Measure 4.5-1a, Mitigation Measure 4.5-1b, and Mitigation Measure 4.5-1c. The full text of each measure is provided in Draft SEIR Table H1, *Impacts and Mitigation Measures for the 2012 Permanente Quarry Reclamation Plan Amendment*.
>
> **Additional Mitigation:** None required.

Impact 3.3-2: Project activities could cause an adverse change in the significance of an archaeological resource as defined in Section 15064.5 of the CEQA Guidelines.

Site P-43-0001869 has not been formally evaluated as eligible for listing in the National Register or California Register, although Jurich and Grady (2007) state that if evaluated, the site would likely be found eligible under Criterion B/2 for its association with Henry J. Kaiser. For purposes of this analysis, the resource is considered eligible for listing in the National Register and California Register. The resource is located in a portion of the study area where little ground disturbance would occur; contractors would enter the area on foot and manually remove vegetation and replant native species. No impact on the resource would occur; therefore, implementation of the Project would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR related to the eligibility of Site P-43-0001869 for listing in the National Register and California Register.

No additional historic-era or prehistoric archaeological resources were identified in the study area during the 2015 survey or previous survey efforts. Although there is no indication that the study area contains unrecorded archaeological resources, the possibility of accidentally uncovering undocumented archaeological resources cannot be discounted entirely. Accidental damage to or destruction of a previously unrecorded and unique archaeological resource would be a potentially significant impact. In the unlikely event that archaeological materials are discovered during project activities, implementation of Mitigation Measure 4.5-2 from the 2012 EIR would ensure that work would cease in the immediate area and a qualified archaeologist would be hired to document the find, assess its significance, and recommend further treatment. Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

> **Baseline Mitigation from 2012 EIR:** Mitigation Measure 4.5-2. The full text of this measure is provided in Draft SEIR Table H1, *Impacts and Mitigation Measures for the 2012 Permanente Quarry Reclamation Plan Amendment*.
>
> **Additional Mitigation:** None required.

Impact 3.3-3: Project activities could disturb human remains, including those interred outside of formal cemeteries.

Although there is no indication that the study area has been used for human burials, the possibility cannot be discounted entirely. In the unlikely event that human remains are discovered during Project activities, implementation of Mitigation Measure 4.5-4 from the 2012 EIR would ensure that work would cease in the immediate area and the County Coroner would be contacted to assess the find. The measure would ensure that any discoveries would be handled in accordance with state law and would reduce the significance of this impact. Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

Baseline Mitigation from 2012 EIR: Mitigation Measure 4.5-4. The full text of this measure is provided in Draft SEIR Table H1, *Impacts and Mitigation Measures for the 2012 Permanente Quarry Reclamation Plan Amendment*.

Additional Mitigation: None required.

3.3.4 Cumulative Analysis

The Draft 2012 EIR analyzed potential cumulative effects in Section 6.2.5, *Cultural and Paleontological Resources* (page 6-18 et seq.), concluding that the creek restoration work within the PCRA (as a component of the Reclamation Plan Amendment) "would have no impact to cultural resources" and therefore could not cause or contribute to any significant adverse cumulative effect. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** in the cumulative context relative to the impacts disclosed in the 2012 EIR.

The 2012 EIR analyzed cumulative impacts on historic resources, including the loss of the Permanente Quarry Conveyor System and crusher, and concluded that its loss would not considerably contribute to a significant cumulative impact on Kaiser-associated resources in the Bay Area. The current Project would alter the width of Permanente Road, a contributing feature within the Kaiser Permanente Quarry Mining District. However, this alteration would not result in a cumulatively considerable contribution to a significant cumulative impact.

3.3.5 Confidential References

GEI Consultants, Inc. and AECOM. 2016. *Cultural Resources Inventory and Evaluation Report for the Permanente Creek Restoration Project, Santa Clara County, California*. Prepared for Leigh Hanson. March 2016.

Jurich, D., and A. Grady. 2007. *Archaeological and Historic Properties Survey Report for the Hanson Permanente Cement Reclamation Plan*. Prepared by PBS&J. Prepared for the County of Santa Clara.

Maggi, F., S. Winder, and J. Kusz. 2011. *Historic Resource Evaluation, Permanente Quarry Facility Comprehensive Reclamation Plan Project, Lehigh Southwest Cement Company, 24001 Stevens Creek Blvd., Cupertino, Santa Clara County, California.* Prepared by Archives & Architecture. Prepared for County of Santa Clara.

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3.4 Energy

This section identifies and evaluates issues related to energy to determine whether the PCRP, including its revisions to the 2011 Creek Restoration Plan that are a component of the 2012 Reclamation Plan Amendment, would cause one or more new significant impacts or a substantial increase in the severity of significant impacts than were disclosed in the 2012 EIR. To do this, as explained in Section ES.1, *Introduction*, and in Section 2.3, *Focus of the Supplemental EIR*, including as summarized in Table 2-1, *Specific Areas of Focus for the Supplemental EIR*, this analysis focuses on three things: (1) PCRP areas that are outside of the existing Reclamation Plan boundary (for which Grading Approval would be required); (2) PCRP areas within the Reclamation Plan boundary and within the 120-acre PCRA but outside of the PCRA's 49.2-acre disturbance area; and (3) more generally, whether the PCRP would include work at a greater intensity than previously considered in the 2012 EIR. As a result, Reaches 6–13 and Reaches 17 and 18 are key areas for evaluation.[1]

This section identifies and evaluates issues related to energy in the context of the Project. It includes the physical and regulatory setting, the criteria used to evaluate the significance of potential impacts, the methods used in evaluating these impacts, and the results of the impact assessment. This analysis is based in part on the Air Quality and Greenhouse Gas Emissions Technical Report provided in **Appendix D**, *Air Quality and Greenhouse Gas Emissions.* The technical report provided in Appendix D was prepared on the County's behalf. No scoping comments were received regarding energy (**Appendix A**, *Scoping Report*).

3.4.1 Setting

3.4.1.1 Study Area

The study area for this analysis of potential impacts related to energy consists of Santa Clara County, as well as statewide.

3.4.1.2 Environmental Setting

Section 4.6.1.1 of the Draft 2012 EIR described the environmental setting for the 2012 EIR's consideration of energy conservation, including information about energy production and distribution in California and local energy production and distribution (page 4.6-1 et seq.). These descriptions remain accurate for purposes of this analysis of the PCRP, except as supplemented or emphasized below. However, the energy resources associated with the PCRP would be limited to construction and transportation fuels (i.e., diesel fuel and gasoline). Therefore, these specific energy resources are the focus of this analysis.

[1] See Section 2.4, *Correlation between 2012 EIR PCRA and the PCRP*, for a cross reference between the restoration activities described and analyzed in the 2012 EIR and the restoration activities described in the PCRP and analyzed in this SEIR. Section 2.5, *Permanente Creek Restoration Plan*, details the PCRP's proposed activities on a reach-by-reach basis.

California Fuel Use

California's energy system includes electricity, natural gas, and petroleum. According to the California Energy Commission (CEC), California's energy system generated 72 percent of the electricity, 48 percent of the natural gas, and less than 1 percent of the petroleum consumed or used in the state in 2019. The rest of the state's energy is imported and includes petroleum crude oil imported from Alaska and foreign sources (CEC 2021a, 2021b). Construction of the Project would require the use of construction and transportation fuels in the form of gasoline and diesel.

Gasoline

Gasoline is by far the largest transportation fuel by volume used in California. Nearly all the gasoline used in California is obtained through the retail market. In 2020, approximately 12.5 billion gallons of gasoline were sold in California's retail market, which was a 19 percent drop compared to gallons sold in 2019 (CDTFA 2021a). The drop in 2020 gasoline sales could be related to reduced economic activity associated with the Covid-19 pandemic.

Diesel

Diesel fuel is the second largest transportation fuel by volume used in California behind gasoline. According to the U.S. Department of Energy's Energy Information Administration, nearly all semi-trucks, delivery vehicles, buses, trains, ships, boats and barges, farm, construction, and military vehicles and equipment have diesel engines. In 2020, 3.0 billion gallons of diesel were sold in California, which was a 3 percent drop compared to gallons sold in 2019 (CDTFA 2021b). The drop in 2020 diesel sales could be related to reduced economic activity associated with the Covid-19 pandemic.

Santa Clara County Fuel Use

Regular unleaded gasoline is primarily used to fuel passenger cars and small trucks. Diesel fuel is primarily used in large trucks and construction equipment. Both are widely used within and across all parts of Santa Clara County. It is estimated that there were 397 fuel stations in Santa Clara County in 2020, which is a drop of seven fuel stations in the county relative to 2019 (CEC 2021d). The CEC estimates that in 2020 the total sales of gasoline and diesel in Santa Clara County were 511 million gallons and 71 million gallons, respectively. These gasoline and diesel fuel use amounts represent decreases of approximately 18 percent and 17 percent, respectively, relative to the estimated fuel use amounts for 2019 (CEC 2021d). Similar to as mentioned above for statewide fuel use, the countywide drop in 2020 fuel sales could be related to reduced economic activity associated with the Covid-19 pandemic.

3.4.1.3 Regulatory Setting

Section 4.6.1.2 of the Draft 2012 EIR (page 4.6-3 et seq.) described the regulatory setting for the analysis of potential impacts related to energy conservation, including federal, state, and local laws, regulations, plans, and policies applicable to the analysis of the proposed creek restoration; and other Project components that were considered in the 2012 EIR. The section summarized the federal Energy Policy and Conservation Act and the Energy Policy Act of 2005, as well as the State of California Integrated Energy Policy and the County of Santa Clara General Plan. The description

of the regulatory setting remains accurate for purposes of this analysis of the PCRP, except as supplemented or emphasized below.

Federal

National Energy Conservation Policy Act

The National Energy Conservation Policy Act (NECPA) serves as the underlying authority for federal energy management goals and requirements. Signed into law in 1978, it has been regularly updated and amended by subsequent laws and regulations. This act is the foundation of most federal energy requirements. NECPA established energy-efficiency standards for consumer projects and includes a residential program for low-income weatherization assistance, grants, and loan guarantees for energy conservation in schools and hospitals, and energy-efficiency standards for new construction. Furthermore, the NECPA established fuel economy standards for on-road motor vehicles in the United States. The National Highway Traffic and Safety Administration (NHTSA), which is part of the U.S. Department of Transportation (USDOT), is responsible for establishing additional vehicle standards and revising existing standards under the NECPA. The USDOT is authorized to assess penalties for noncompliance. This regulatory program has resulted in improved fuel economy throughout the United States' vehicle fleet (NHTSA 2014, 2018).

State

California Integrated Energy Policy

In 2002, the Legislature passed Senate Bill 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels, for the California Energy Policy Report. The plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emissions vehicles and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access.

The CEC has adopted the latest update, 2019 Integrated Energy Policy Report, which assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety. The 2019 Integrated Energy Policy Report covers a broad range of topics, including energy efficiency, building energy efficiency standards, achieving 60 percent renewables by 2030, and the California Energy Demand Forecast (CEC 2021c).

Construction Equipment Idling

The California Air Resources Board also has adopted a regulation for the use of off-road diesel vehicles that is designed to reduce emissions from diesel-powered construction vehicles by imposing idling limitations on owners, operators, renters, or lessees of off-road diesel vehicles. The regulation requires an operator of applicable off-road vehicles (self-propelled diesel-fueled

vehicles 25 horsepower and up that were not designed to be driven on-road) to limit idling to no more than 5 minutes.

Advanced Clean Truck Regulation

The Advanced Clean Truck Regulation is part of a holistic approach to accelerate a large-scale transition of zero-emissions medium-and heavy-duty vehicles from Class 2b to Class 8. The regulation requires manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines to sell zero-emissions trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emissions truck/chassis sales would need to be 55 percent of Class 2b to 3 truck sales, 75 percent of Class 4 to 8 straight truck sales, and 40 percent of truck tractor sales. When compared to diesel vehicles, zero-emissions vehicles are two to five times more energy efficient, reduce dependence on petroleum, and reduce greenhouse gas (GHG) emissions substantially (CARB 2021).

Local

Santa Clara County General Plan

Part 2, *Countywide Issues & Policies*, and Part 3, *Rural Unincorporated Area Issues & Policies*, of the Santa Clara County General Plan include the following policy, which is relevant to the Project (County of Santa Clara 1994).

> ***Policy C-RC 78*[2]:** The objectives of the state energy plan should be implemented at the local and regional level through an overall strategy consisting of:
>
> a. reducing transportation energy demand and oil-dependency;
>
> b. conserving energy in residential, commercial, agricultural, and industrial sectors; and
>
> c. increasing consumer and general public awareness through education.

3.4.2 Significance Criteria

Consistent with CEQA, Section 4.6.3 of the 2012 EIR explained that it is appropriate to evaluate the potential energy impacts of proposed projects with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy, and accordingly, determined that the Reclamation Plan Amendment, including creek restoration work within the PCRA, would have a significant impact if it would:

a) Fail to include means for avoiding or reducing wasteful and/or unnecessary consumption of energy; or

b) Not comply with existing energy standards, including standards for energy conservation.

[2] The 2012 EIR mistakenly referred to Policy C-RC 78 as Policy C-RC 77.

Updates to the CEQA Guidelines Appendix G Environmental Checklist that were finalized in December 2018 added for the first time the energy significance criteria noted below. Implementation of the Project would have a significant impact on energy if it were to:

- Result in wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

These new criteria are consistent with those used in the 2012 EIR, which focus on wasteful and/or unnecessary consumption of energy and compliance with existing energy standards, including standards for energy conservation. Accordingly, the criteria used in the 2012 EIR remain relevant to this SEIR's consideration of whether the PCRP would cause any new significant impact or a substantial increase in the severity of a significant impact than disclosed in the 2012 EIR.

3.4.3 Direct and Indirect Effects

3.4.3.1 Methodology

The 2012 EIR analyzed fuel consumption-related impacts of the restoration activities proposed to occur within the PCRA. Given the similarity in restoration activities analyzed within the PCRA and proposed to occur as a result of the PCRP, fuel consumption impacts have not been reanalyzed in the areas of overlap as part of this assessment.

This impact analysis evaluates the potential for the Project to result in a substantial increase in energy demand and/or wasteful use of energy. The impact analysis is informed by Appendix F of the CEQA Guidelines. The potential impacts are analyzed based on an evaluation of whether construction energy use estimates for the PCRP would be considered excessive, wasteful, or inefficient in a way that would cause a new significant impact or a substantial increase in the severity of a significant energy-related impact than was identified in the 2012 EIR.

This fuel use analysis incorporates the assumptions identified in the Air Quality and Greenhouse Gas Emissions Technical Report provided in Appendix D, *Air Quality and Greenhouse Gas Emissions*. Because the California Emissions Estimator Model (CalEEMod) program used for the air quality and GHG emissions technical analysis does not display the amount and fuel type for construction-related sources, additional calculations were conducted and are summarized below and provided in **Appendix F**, *Energy: Fuel Use Calculations*. Off-road equipment inventories and construction activity assumptions were used to estimate the amounts of fuel that would be consumed by off-road equipment during construction of the PCRP. Fuel consumption factors for off-road equipment were derived from equipment inventory data using the California Air Resources Board (CARB) off-road emissions inventory database. Average off-road equipment inventories and construction activity assumptions identified in the calculations of air pollutant and GHG emissions (see Appendix D) were used to estimate the amounts of fuel that would be consumed by off-road equipment during construction of the PCRP.

Fuel use associated with commuting workers and truck hauling during construction of the PCRP were also estimated, using trip data projected for the PCRP and relevant information about vehicle fuel economy (see Appendix F for all fuel consumption factors and assumptions). As with the criteria pollutants and GHG emissions, the modeled fuel use for each construction phase was multiplied by the percent of emissions to be evaluated for the given construction phase based on the proposed creek reach area outside of the previously evaluated 2012 EIR disturbance areas to allow for evaluation of the applicable fuel use (see *Emissions Applicability Factors* in Section 3.1.3.1, *Methodology*, and Appendix D, Exhibit A). Calculated fuel uses then were summed, averaged over the6-year PCRP construction period, and added to the baseline emissions (see Section 3.4.3.2, *Baseline*) to determine if the PCRP would have the potential for new significant direct, indirect, and/or cumulative environmental effects compared with the creek restoration project previously analyzed in the 2012 EIR. For information about the 2012 Reclamation Plan Amendment fuel use estimates, see Section 3.4.3.2, below, and 2012 Draft EIR Section 4.6. Detailed fuel use assumptions and summaries for the PCRP, including the fuel consumption factors, are included in Appendix F.

3.4.3.2 Baseline

Section 3.0.1, *Environmental Baseline*, explains that, in the context of an SEIR, the CEQA baseline is adjusted such that the originally approved project is assumed to have been implemented. Therefore, the baseline used in this analysis to evaluate the impacts of the PCRP and alternatives consists of existing environmental conditions plus the 2012 Reclamation Plan Amendment and 2012 EIR, and the creek restoration plans evaluated therein. For purposes of this analysis of potential impacts related to energy, the baseline is described below.

2012 EIR Baseline and Reclamation Plan Amendment Fuel Use

The baseline fuel use identified in the 2012 EIR analysis is based on averages derived from fuel purchases over the 11-year period from January 1, 2000, to December 31, 2010, which includes periods of relatively high production as well as relatively low production at the Permanente Quarry in response to changing market demands. Baseline and maximum annual 2012 Reclamation Plan Amendment fuel use estimates are summarized in **Table 3.4-1**. As shown in Table 3.4-1, the 2012 Reclamation Plan Amendment Phase 1 was found to result in a net increase in diesel use of 183 percent, and a net decrease in gasoline use of 37 percent.

TABLE 3.4-1
2012 RECLAMATION PLAN AMENDMENT ANNUAL FUEL USE (GALLONS/YEAR)

Scenario	Diesel	Gasoline
Baseline Fuel Use	822,554	12,615
Reclamation Plan Amendment Phase 1 Fuel Use	2,327,866	7,933
Maximum Annual Incremental Change	1,505,312	(4,682)
Percent Incremental Change	183%	(37%)

The 2012 EIR found that since the 2012 Reclamation Plan Amendment included a means for avoiding or reducing wasteful and/or unnecessary consumption of fossil fuels by installing a conveyor system that can be powered in part with energy generated by renewable sources, which would result in energy efficiency, it would cause a less-than-significant impact. No mitigation measures were required.

3.4.3.3 Discussion of Criteria with No Energy Impact

Criterion b) as set forth in Section 3.4.2 was eliminated from more detailed consideration in the 2012 EIR for the reasons explained on Draft 2012 EIR pages 4.6-5 and 4.6-6. For similar reasons as explained there, the PCRP would not have the potential to cause a significant impact related to this criterion, and there are no changes to the compliance with existing energy standards discussion of criterion b).

3.4.3.4 Direct and Indirect Effects of the Project

The analysis in this section evaluates the potential significance of the change in the physical environment that would be caused by implementation of the PCRP relative to the baseline condition, compares that impact conclusion with the impact conclusion reached in the 2012 EIR regarding the same consideration, and then makes a determination as to whether the implementation of the PCRP would cause one or more new significant impacts or a substantial increase in the severity of significant impacts than were disclosed in the 2012 EIR. For the reasons discussed below, implementation of the PCRP would not cause a new significant impact or a substantial increase in the severity of a significant impact than was disclosed in the 2012 EIR.

Impact 3.4-1: The Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction.

This impact analysis corresponds to 2012 EIR significance criterion a) as set forth in Section 3.4.2 and addresses whether the Project, including the restoration activities proposed within the PCRA, would result in the wasteful consumption of energy resources. In the context of Impact 4.6-1 (page 4.6-6 et seq.), the 2012 EIR concluded that interim reclamation activities, including those within the PCRA, would result in a less-than-significant impact with regard to gasoline and diesel use. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** related to significance criterion a).

As presented in Section 3.4.3.1, *Methodology*, the fuel use associated with the PCRP would be short term and periodic in nature and would occur during the dry seasons of 2024 through 2029. Below is a summary of the PCRP fuel use estimate results in terms of applicable PCRP fuel use compared to the CEQA baseline. For summaries of the total PCRP fuel use estimates by phase prior to and after the use of applicability factors to remove the fuel use considered to have already been evaluated in the 2012 EIR, see Appendix F.

PCRP Fuel Use Estimates Compared to CEQA Baseline

Table 3.4-2 presents the PCRP fuel use amounts that were not evaluated in the 2012 EIR, the 2012 Reclamation Plan Amendment annual incremental fuel use change disclosed in 2012 EIR (see Section 3.4.3.2 for details), and the net change associated with the combined two fuel use amounts. As shown in the table, the PCRP annual fuel use volumes reflect 3 percent and 19 percent increases in net diesel fuel and gasoline consumption, respectively, compared to the annual incremental change in fuel use disclosed in the 2012 EIR. Most of the fuel that would be consumed associated with the PCRP would be from the use of trucks and automobiles. It should be noted that current and future vehicle fleets will operate more efficiently and consume less fuel due to federal and statewide regulatory programs compared to those that were in place in 2012.

PCRP fuel use would represent a short-term increase of less than 0.06 percent of diesel and less than 0.0002 percent of gasoline sold in Santa Clara County in 2020 (CEC 2021d). Construction activities and the corresponding fuel energy consumption would be temporary, localized, and necessary. In addition, as described in Section 3.6, *Greenhouse Gas Emissions*, the continued implementation of 2012 EIR Mitigation Measure 4.8-1b to reduce the GHG emissions impact to a less-than-significant level would require reclamation-related replacement of on-road and off-road vehicles and construction equipment with lower GHG-emitting engines, such as electric or hybrid, which would also reduce PCRP vehicle and equipment fuel use. Therefore, construction-related fuel consumption by the PCRP would not result in inefficient, wasteful, or unnecessary energy use, and implementation of the PCRP would result in **no new significant impact** and **no substantial increase in the severity of a significant impact** regarding the wasteful or inefficient use of energy than was disclosed in the 2012 EIR., The impact that was disclosed in the 2012 EIR would remain less than significant even taking into account the additional fuel use for the PCRP.

TABLE 3.4-2
2012 RECLAMATION PLAN AMENDMENT ANNUAL FUEL USE (GALLONS/YEAR)

Scenario	Diesel	Gasoline
Reclamation Plan Amendment Incremental Change Disclosed in 2012 EIR[a]	1,505,312	(4,682)
PCRP Fuel Use not Evaluated in the 2012 EIR	38,077	898
Net Fuel Use	1,543,389	(3,784)
Percent Incremental Increase	3%	19%

NOTES:
a Values in (parentheses) are net reductions for Reclamation Plan Amendment presented in the 2012 EIR minus baseline emissions.

SOURCE: Draft 2012 EIR Section 4.6.5; Appendix F.

Baseline Mitigation from 2012 EIR: None required.

Additional Mitigation: None required.

3.4.4 Cumulative Analysis

The Draft 2012 EIR analyzed potential cumulative effects in Section 6.2.6, *Energy Conservation* (pages 6-20 and 6-21), and concluded that the Reclamation Plan Amendment, including creek restoration within the PCRA, would not have a cumulatively significant impact on energy resources. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a previously identified significant impact** in the cumulative context.

As discussed above, there would be no impact with respect to compliance with existing energy standards, including standards for energy conservation. Therefore, the PCRP could not cause or contribute to any potential significant cumulative impact in this regard. The potential for the PCRP to cause or contribute to a potential significant cumulative impact with respect to the remaining energy-related consideration is evaluated below.

The geographic context for potential cumulative impacts related to equipment and vehicle fuel use is within the Project's construction equipment and truck trip delivery radius and workers' average travel radius because these are the areas within which energy resources would be demanded and supplied for the PCRP. The PCRP would use energy resources during construction; therefore, it could contribute to potential cumulative impacts during this phase.

Regarding the efficiency of fuel use, there is no existing significant adverse condition (such as a shortage) that would be worsened or intensified by the PCRP. Past, present, and reasonably foreseeable future projects in proximity of the PCRP site could require gasoline or diesel but would not combine with the fuel demands of the PCRP to cause a significant adverse cumulative impact relating to the wasteful, inefficient, or unnecessary consumption or use of fuel. In the event of a future shortage, higher prices at the pump would curtail unnecessary trips that could be termed "wasteful" and would moderate choices regarding vehicles, equipment, and fuel efficiency. Under these conditions, the PCRP's less-than-significant impact identified in Section 3.4.3, *Direct and Indirect Effects*, for Impact 3.4-1 relating to wasteful, inefficient, or unnecessary consumption or use of fuel would not be cumulatively considerable.

3.4.5 References

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3.5 Geology, Soils, Seismicity, and Paleontology

This section identifies and evaluates issues related to geology, soils, seismicity, and paleontology to determine whether the PCRP, including its revisions to the 2011 Creek Restoration Plan that are a component of the 2012 Reclamation Plan Amendment, would cause one or more new significant impacts or a substantial increase in the severity of significant impacts than were disclosed in the 2012 EIR. To do this, this analysis focuses on three things: (1) PCRP areas that are outside of the existing Reclamation Plan boundary (for which Grading Approval would be required); (2) PCRP areas within the Reclamation Plan boundary and within the 120-acre PCRA but outside of the PCRA's 49.2-acre disturbance area; and (3) more generally, whether the PCRP would propose work at greater intensity than previously considered in the 2012 EIR. As a result, Reaches 6–13 and Reaches 17 and 18 are key areas for evaluation.[1]

This section describes the physical and regulatory setting, the criteria used to evaluate the significance of potential impacts, the methods used in evaluating these impacts, and the results of the impact assessment relative to the 2012 EIR. This analysis is based in part on information contained in the following documents:

- The Geologic and Geomorphic Assessment of Permanente Creek prepared by Golder Associates (Golder), dated October 31, 2019 (**Appendix G1**).
- The report prepared by Golder for its slope stability analysis completed in July 2021 (**Appendix G2**).
- An additional slope stability analysis conducted by Stantec Consulting Services Inc. (Stantec) in August 2022 (**Appendix G6**).
- The *Permanente Creek Restoration Plan Updated 90% Level Submittal Design Basis Technical Memorandum* prepared by Waterways Consulting, Inc., dated August 26, 2022 (**Appendix C**).

The preparers of this Draft SEIR independently reviewed these and other materials prepared by or on behalf of Lehigh and determined that those materials could be relied on (in combination with other materials included in the formal record) in the preparation of this Draft SEIR.

The County received no scoping comments regarding geology, soils, seismicity, or paleontology in response to the Notice of Preparation (**Appendix A**, *Scoping Report*).

[1] See Section 2.4, *Correlation between 2012 EIR PCRA and the PCRP*, for a crosswalk between the restoration activities described and analyzed in the 2012 EIR and the restoration activities described in the PCRP and analyzed in this SEIR. Section 2.5, *Permanente Creek Restoration Plan*, details the PCRP's proposed activities on a reach-by-reach basis.

3.5.1 Setting

3.5.1.1 Study Area

The "study area" for this analysis of potential impacts related to geology, soils, seismicity, and paleontology consists of the Project site described in Section 2.3.2 of the Project Description and shown in **Figure 2-3**.

3.5.1.2 Environmental Setting

Section 4.7.1 of the Draft 2012 EIR described the environmental setting for the 2012 EIR's consideration of geology, soils, and seismicity, including site geology and soils (Section 4.7.1.1, page 4.7-1 et seq.); naturally occurring asbestos, crystalline silica, and trace metal concentrations (Section 4.7.1.2, page 4.7-8 et seq.); regional faulting and seismicity (Section 4.7.1.3, page 4.7-11 et seq.); geologic hazards (Section 4.7.1.4, page 4.7-17 et seq.); and seismic hazards (Section 4.7.1.5, page 4.7-21 et seq.). These descriptions remain accurate for purposes of this analysis of the PCRP except as supplemented below.

Site Geology and Soils

The areas of the PCRP that are outside the Reclamation Plan boundary and thus were not covered in the 2012 EIR are the concrete channel area (Reach 6) and Reaches 7–11. Reaches 6 and 7–9 are underlain primarily by the Santa Clara Formation (described in detail in Section 4.7.1.1 of the Draft 2012 EIR, page 4.7-5), which was formed by prehistoric stream deposits composed of loose to slightly consolidated conglomerate, sandstone, siltstone, and claystone. Similar to the surficial materials within the Reclamation Plan boundary, the overlying surficial materials in Reaches 6–9 contain disturbed mixtures of alluvium, colluvium, and overburden material with minor (if present) native, intact soil horizons. The surficial materials and native soils have low shrink-swell behavior and thus are considered non-expansive. Reach 10 is underlain by graywacke sandstone (Ks) and Reach 11 is underlain by metabasalts (KV) (i.e., altered igneous rocks), which could include greenstone. (Bedrock underlying Reaches 10 and 11 is described in Section 4.7.1.1 of the Draft 2012 EIR, page 4.7-2.) Surficial materials in Reaches 10 and 11 are similar to those in Reaches 6–9, as described above. The Berrocal Fault (described in detail in Section 4.7.1.3 of the Draft 2012 EIR, page 4.7-17) crosses Reach 9 at about the halfway point of the reach. As discussed in the 2012 EIR, some of the slope failures observed on the Project site may be associated with zones of weakness and sheared rock located along strands of the Berrocal Fault.

Paleontological Resources

Paleontological resources setting information was included in Section 4.5, *Cultural and Paleontological Resources,* in the 2012 EIR. The descriptions presented in the environmental setting for paleontological resources in that section remain accurate for purposes of this analysis of the PCRP.

3.5.1.3 Regulatory Setting

Section 4.7.1.6 of the Draft 2012 EIR (page 4.7-23 et seq.) described the regulatory setting for the analysis of potential impacts related to geology, soils, and seismicity, including federal, state, and local laws, regulations, plans, and policies applicable to the analysis of the proposed creek restoration and other Project components considered in the 2012 EIR. The section summarized provisions of the Federal Mine Safety and Health Act of 1977 administered by the Mine Safety and Health Administration, the Surface Mining and Reclamation Act, the California Building Code, and County ordinances, local plans, and policies. The description of the regulatory setting remains accurate for purposes of this analysis of the PCRP except as supplemented below.

Santa Clara County General Plan

The Santa Clara County General Plan (1994) recognizes paleontological sites as having scientific value and the potential to increase knowledge of the natural world, and includes a goal (Goal 5.1) to protect and preserve paleontological resources. Policies C-RC 49 and R-RC 81 state that heritage resources, which include paleontological resources, in Santa Clara County and rural unincorporated areas should be preserved. Policies C-RC 50 and R-RC 82 provide a countywide general approach to heritage resource protection, which involves (1) inventory and evaluation of heritage resources, (2) prevention or minimization of adverse impacts on heritage, and (3) restoration, enhancement, and commemoration of resources as appropriate. Additional policies and recommendations set guidance for implementing the general approach. The following policies are relevant to the evaluation of the potential paleontological resources impacts of the Project:

> ***Policy R-RC 85****:* No heritage resource shall knowingly be allowed to be destroyed or lost through a discretionary action (zoning, subdivision site approval, Grading Approval, building permit, etc.) of the County of Santa Clara unless:
>
> a. The site or resource has been reviewed by experts and the County Historic Heritage Commission and has been found to be of insignificant value; or
>
> b. There is an overriding public benefit from the project and compensating mitigation to offset the loss is made part of the project.
>
> ***Policy R-RC 86****:* Projects in areas found to have heritage resources shall be conditioned and designed to avoid loss or degradation of the resources. Where conflict with the resource is unavoidable, mitigation measures that offset the impact may be imposed.
>
> ***Policy R-RC 88****:* For projects receiving environmental assessment, expert opinions and field reconnaissance may be required if needed at the applicant's expense to determine the presence, extent, and condition of suspected heritage resources and the likely impact of the project upon the resources.
>
> ***Policy R-RC 92****:* The participation of concerned citizens and professionals dealing with heritage resources in the identification of sites and the review and conditioning of projects by its boards and commissions shall be encouraged by the County.

3.5.2 Significance Criteria

Consistent with the County of Santa Clara Environmental Checklist and the version of the CEQA Guidelines Appendix G Environmental Checklist that was in effect at the time, Section 4.7 of the 2012 EIR determined that the proposed 2012 Reclamation Plan Amendment, including creek restoration work within the PCRA, would have a significant impact if it would:

a) Expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving:

   i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;

   ii. Strong seismic ground shaking;

   iii. Seismic-related ground failure, including liquefaction; and/or

   iv. Landslides;

b) Result in substantial soil erosion or the loss of topsoil;

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property;

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater;

f) Cause substantial compaction or over-covering of soil either on-site or off-site;

g) Cause substantial change in topography or unstable soil conditions from excavation, grading, or fill; or

h) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

Updates to the CEQA Guidelines Appendix G Environmental Checklist that were finalized in December 2018 made only non-substantive revisions to these significance criteria. Specifically, the resource topic areas addressing paleontological resources and unique geological features were removed as a cultural resources criterion and were added to the significance criteria considered in the geology, soils, and seismicity analysis. As a result, potential impacts of the PCRP on paleontological resources and unique geological features are analyzed in this section. Accordingly, these criteria remain relevant to this SEIR's consideration of whether the PCRP would cause any new significant impacts or a substantial increase in the severity of significant impacts than were disclosed in the 2012 EIR.

3.5.3 Direct and Indirect Effects

3.5.3.1 Methodology

The evaluation of environmental impacts associated with geology, soils, seismicity, and paleontology was supported by the technical reports completed by Golder and, more recently, by Stantec. Golder provided geotechnical support to Waterways Consulting, Inc., during the completion of the 70% Design Submittal (Golder 2017), and Stantec contributed to the refinements reflected in the Updated 90% Design Memo (Appendix G6, Appendix C) after significant recent additional geotechnical investigation (Golder 2012, 2017, 2018, see also Appendix G1 and Appendix G2). The Stantec memorandum (Appendix G6) characterizes the most recent understanding of Project site geology, seismic setting, and slope stability conditions, and provides the basis of the analysis for geologic conditions, slope stability, and other geotechnical aspects of the PCRP. This collective analysis provides an adequate technical understanding of the geologic and seismic conditions and the potential for slope instability during and after the PCRP's restoration activities. The impact analyses determine whether and to what degree the PCRP would affect slope stability, the existing regional and local seismic regimes, erosion potential, and paleontological resources. Based on this, the analysis determined whether the PCRP would cause a new significant impact or a substantial increase in the severity of a significant impact than identified in the 2012 EIR. The severity of an impact is determined based on the significance criteria identified in Section 3.5.2.

CEQA does not generally require lead agencies to consider how existing hazards or conditions might affect a project's users or residents, except where the project would significantly exacerbate an existing environmental hazard.[2] Accordingly, hazards resulting from a project that places development in an existing seismic hazard area or an area with unstable soils are not considered impacts under CEQA unless the project would significantly exacerbate the seismic hazard or unstable soil conditions. Thus, the following analysis evaluates whether the Project would exacerbate future slope instability, seismic hazards, or erosion potential, and result in a substantial risk of loss, injury, or death.

3.5.3.2 Baseline

Section 3.0.1, *Environmental Baseline*, explains that in the context of an SEIR, the CEQA baseline is adjusted such that the originally approved project is assumed. Therefore, the baseline used in this analysis to evaluate the impacts of the PCRP and alternatives consists of existing environmental conditions plus the 2012 Reclamation Plan Amendment and 2012 EIR, and the creek restoration plans evaluated therein. For purposes of this analysis of potential impacts related to geology, soils, seismicity, and paleontology, this means that the baseline includes the existing earthquake, fault rupture, and landslide potential at the Project site and the erosion potential as mitigated in accordance with the 2012 EIR and 2012 Reclamation Plan Amendment approvals. The baseline also includes the existing physical conditions of Permanente Creek and its adjacent riparian area (including the potential for previously unidentified paleontological resources to be present) in the PCRP implementation area outside the 2012 Reclamation Plan boundary, inside

[2] *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369.

the 2012 Reclamation Plan boundary but outside the approved disturbance envelope for the PCRA.

3.5.3.3 Discussion of Criteria with No Impact on Geology, Soils, Seismicity or Paleontology

Criteria d) and e) as set forth in Section 3.5.2 were eliminated from more detailed consideration in the 2012 EIR for the reasons explained on Draft 2012 EIR pages 4.7-28 and 4.7-29. For the reasons explained there, these criteria also are not considered in this SEIR.

In addition, criterion f) has been eliminated from further discussion because the PCRP would not cause substantial compaction or over-covering of soil either on-site or off-site. The Project involves creek restoration where, depending on the specific reach, a substantial amount of fill material (overburden, native landslide deposits, sediment) would be removed from areas adjacent to and within the existing stream channel. Following removal, these materials would be characterized, transported, and placed at an alternate, suitable location on Lehigh's property, within the 2012 Reclamation Plan boundary. Characterization and placement of these materials would be in accordance with Best Management Practice (BMP)-6 (see Section 2.5.9.1, *Best Management Practices*). These sediment materials would not cause substantial compaction or over-covering of soil horizons on or off the Project site because most of the Project site is overlain by rock or overburden and previous site disturbance has removed the native topsoil.

3.5.3.4 Direct and Indirect Effects of the Project

The analysis in this section evaluates the potential significance of the change in the physical environment that would be caused by implementation of the PCRP relative to baseline conditions, compares that impact conclusion with the impact conclusion reached in the 2012 EIR regarding the same consideration, and then makes a determination as to whether the implementation of the PCRP would cause one or more new significant impacts or a substantial increase in the severity of significant impacts than were disclosed in the 2012 EIR. For the reasons discussed below, implementation of the PCRP would not cause a new significant impact or a substantial increase in the severity of a significant impact than was disclosed in the 2012 EIR.

Impact 3.5-1: Restoration activities proposed under the PCRP could cause slope instability and failure if restoration components are not properly engineered and constructed.

This impact analysis corresponds to significance criteria a.iv), c), and g) as set forth in Section 3.5.2 and addresses slope instability under static and seismic conditions. In the context of Impact 4.7-1 (page 4.7-36 et seq.), the 2012 EIR concluded that, upon final reclamation, restoration with respect to slope stability would be similar or improved as a result of the restoration efforts; however, it further concluded that interim activities associated with PCRA improvements could result in further slumping or shallow sliding of overburden materials farther downslope. Mitigation Measure 4.7-1 was prescribed to increase the stability of slopes during slope grading activities to prevent overburden or native materials from moving downslope or into Permanente Creek. Mitigation Measure 4.7-1 reduced this impact to a less-than-significant level. The PCRP would involve the same or substantially similar restoration activities compared to

those originally proposed in the PCRA, and Mitigation Measure 4.7-1 would be implemented as part of the baseline condition for the interim activities (i.e., road grading, material removal) associated with PCRP improvements. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criteria a.iv), c), and g).

Slope instability could occur in channel reaches where PCRP restoration activities increase slope steepness, remove slope toe[3] support, or otherwise alter slope configuration. This is especially the case in the Rock Pile Area (Reach 11) and the Material Removal Area (Reaches 17 and 18), where the efforts to remove overburden and establish the channel on bedrock could require deep excavations with slopes that could become unstable if over-steepened. APM-GEO-1 (as set forth in Section 2.5.9.2 in Chapter 2, *Project Description*) would require the Project Geotechnical Engineer and/or Project Engineering Geologist to inspect all interim and final cut slopes as the Project progresses so that any potential areas of concern can be identified early in the process and remedial measures developed, if required. Geotechnical remedial measures could include the removal of additional material, slope laybacks and benching, engineered drainage controls, or slope buttresses consisting of compacted rockfill. Ongoing geotechnical inspection of interim alluvial/overburden slopes or final bedrock slopes by registered geotechnical engineers and/or certified engineering geologists would ensure that unstable slope conditions would be identified and corrected.

In addition to APM-GEO-1, the PCRP has incorporated as part of the Project Stantec's recommendations for rock and soil/fill slopes (Appendix G6):

> **Rock Slopes**: For planning purposes, slopes greater than 20 feet in height in greenstone[4] should not exceed slope angles of 2:1 (H:V).[5] Slopes less than 20 feet should perform adequately at 1.5:1.0; however, localized areas of instability may be encountered. Cut slopes in limestone and sandstone greater than 20 feet in height should not exceed 1:1 and slopes less than 20 feet should be limited to no steeper than 3/4:1.
>
> **Fill or Soil Slopes:** For planning purposes, permanent slopes comprised of mining overburden, alluvium, colluvium, or other site derived fill should not exceed 2:1 (H:V).

The section below discusses potential slope instability in each key channel reach of the PCRP.

[3] The "toe" refers to the lowest part of a slope or cliff. Removal or excavation into a slope toe can reduce the stable equilibrium of a slope and lead to failure.

[4] Greenstone is basalt that has undergone alteration.

[5] Slope steepness is expressed as H:V, which means Horizontal (H) to Vertical (V). For example, a slope of 2:1 (H:V) is a slope that extends horizontally 2 feet for every 1 foot of height gain and has an angle of 26.6 degrees, also referred to as a 50 percent slope.

Potential Slope Instability in Key Reaches

Reach 6

Reach 6 is identified as the "Concrete Channel Area" and is shown on Sheet L1 in Appendix C. There are no slope instability concerns in Reach 6 because the restoration activities do not require native or engineered slopes to be altered or reengineered.

Reaches 8–10

Reaches 8–10 are within the area referred to as the "Channel Widening Area" and are shown on Sheets C11, C12, C13, C14, C15, C16, C17, and C18 in Appendix C. Culvert 8 would be removed from Reach 9 (Sediment Removal Area) and the area would be restored with a floodplain bench incorporated along the northern bank. Restoration in Reach 9 involves minor grading to achieve the recommended 2:1 slopes, but the proposed grading would not require slope stabilization.

Biomechanical bank stabilization treatments, including vegetated rock slope protection, would be installed to provide channel stability in Reach 8 along the southern bank to support the toe of the hillslope where Culvert 7 would be removed and in Reach 10 where Culvert 9 would be removed. Vegetated rock slope protection would be constructed using boulders of specified sizes with live plant (typically willow) cuttings (stakes)[6] placed within the rock matrix during installation. Vegetated rock slope protection would be used where the south bank would be left in an over-steepened condition after culvert removal. Slope protection would not be necessary where Culvert 9 is removed if bedrock is exposed during excavation. The proposed biomechanical slope stabilization would be adequate to protect interim and final slopes in Reaches 8–10. The PCRP would cause **no new significant impact** and **no substantial increase in the severity of a previously identified significant impact** associated with unstable slopes.

Reach 11 (Rockpile Area)

Reach 11 is within the area referred to as the "Rock Pile Area" and is shown on Sheet C19 in Appendix C. Substantial excavation is required to remove the Rock Pile, which is an existing, large stockpile of aggregate material consisting primarily of mining overburden, artificial fills, and some natural landslide deposits overlying a native bedrock slope. Excavation and removal of the Rock Pile fills could cause instability and failure on the north slope of this reach if the material destabilizes during excavation, or if the native bedrock slope exposed after removal becomes unstable.

Stantec performed two-dimensional, limited equilibrium slope stability analysis to support the environmental review and subsequent permitting processes for the Project based on the Updated 90% Design Memo (Appendix G6). Stantec evaluated the stability of proposed slopes at the Rock Pile Area and the Material Removal Area (discussed below) under both static and pseudo-static (earthquake) conditions. The minimum acceptable Factors of Safety (FOS)[7] for the analyses were

6 Cuttings are capable of regenerating into mature plants.

7 The Factor of Safety (FOS) is found by dividing the forces that resist movement in the slope (such as cohesion in clays) by the forces that cause movement (i.e., gravity or water). A slope that is stable would have a FOS of 1.0 or greater, while slopes below 1.0 would have the potential to fail as a landslide or slump. For example, the less steep a slope is, the higher its FOS, as it is less prone to failure.

1.3 for static conditions and 1.0 for pseudo-static conditions based on mining industry standards (Appendix G6). Analysis of pseudo-static model conditions applied a horizontal seismic coefficient of 0.15 times the force of gravity (*g*) to the static condition models to be consistent with previous studies and to evaluate stability for earthquakes with magnitudes up to 8.25. Slope stability analyses conducted by Stantec focused on the areas with the greatest excavation depths including the Rock Pile removal area (Cross-section A; see Appendix C, Sheet C19) and the 1250 Pond area, discussed below (Cross-sections C and E; see Appendix C, Sheet C24). Stantec adjusted the limits of the analyses to evaluate both the global slope stability and the stability in the area immediately adjacent to the PCRP grading. The slope configurations analyzed by Stantec for the Rockpile Area exceed the minimum acceptable FOS.

APM-GEO-1 would require Lehigh's Project Geotechnical Engineer and/or Project Engineering Geologist to inspect and evaluate the nature and stability of the Rock Pile overburden material during excavation and the exposed native bedrock slope after excavation. If the inspection identifies existing or potential slope instability hazards, the engineer and/or geologist would recommend strategies to increase stability and avoid failure. In addition, Stantec's recommendations for final slope inclinations (listed above) have been incorporated as part of the Project, and the geotechnical inspection required under APM-GEO-1 would ensure that these slope angles are achieved.

The proposed design for the Rock Pile Area would improve the overall stability of the slope as compared to existing conditions. Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a previously identified significant impact** associated with unstable slopes in Reach 11.

Reach 13

Reach 13 is within the area referred to as the "Rock Pile Area" and is shown on Sheet C19 in Appendix C. Restoration activities in Reach 13 include removal of the dam infrastructure, construction of a restored channel through the abandoned Pond 13, removal of sediments, and installation of native vegetation. Restoration in this area would not rework existing slopes or create new slopes; thus, slope stabilization is not required.

Reaches 17 and 18

Reaches 17 and 18 are within the area referred to as the "Material Removal Area" as shown on Sheets C23 and C24 in Appendix C. Within Appendix C, see also Appendix L, *Material Removal Area Lower Limit of Potential Finished Grade Figures*. Reaches 17 and 18 include the Material Removal Area and the old concrete crusher foundation. Proposed restoration activities in Reaches 17 and 18 are the same as or substantially similar to those analyzed in the 2012 EIR and would include removing fill and overburden materials to form a more uniform profile gradient. Excavations at depths of 15–40 feet could be encountered in certain areas, but bedrock is expected to be close to the surface throughout Reaches 17 and 18. Areas requiring excavation could have interim instability, and although the reaches would be stable after restoration, implementation of Mitigation Measure 4.7-1 as identified in the 2012 EIR (which would be implemented under baseline conditions) would ensure that interim grading activities associated with the PCRP would not cause temporary, localized slope failure. Removing the relic concrete

structures and cutting back the old concrete crusher foundation could cause temporary instability within the channel if these structures contribute to the channel stability in these reaches.

Material removal in Reaches 17 and 18 could threaten foundation support for the Upper Water Treatment System, Pond 1250, and associated infrastructure (Appendix G1, page 13), which are located along the top of the creek bank and access road to Permanente Creek. These facilities are currently needed for ongoing quarry operations. If it is determined that these facilities are essential for post-PCRP activities associated with quarry dewatering and reclamation, they would be removed from their current location and relocated. Relocation would eliminate the need for embankment and foundation support structures in the channel to buttress the north toe of slope. The final slope following facility relocation would be graded at 2:1 (H:V), adhering to Stantec's recommendation for final slope inclinations.

Stantec (Appendix G6) analyzed the stability of slope cross sections in the Pond 1250 area (Cross-sections C and E; see Appendix C, Sheet C24) to evaluate the stability under different proposed slope configurations and excavation depths. The cross sections used in the analysis extend to the top of the surrounding slopes to evaluate the impacts of grading on global stability. The results of the analysis indicated that the proposed slope configurations exceed the minimum acceptable FOS (Appendix G6).

Restoration work in Reaches 17 and 18 would require the removal of sediment material and relic structures that could lead to localized slope instability. Lehigh would continue to be required to adhere to Mitigation Measure 4.7-1 (stabilization of interim slopes), which is an independently enforceable obligation of the 2012 Reclamation Plan Amendment approval; and APM-GEO-1 (Project Engineer inspections), which would minimize the potential for slope instability. Thus, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a previously identified significant impact** associated with unstable slopes in Reaches 17 and 18.

> **Baseline Mitigation from 2012 EIR:** Mitigation Measure 4.7-1, the text of which is provided in Draft SEIR Table H1, *Impacts and Mitigation Measures for the 2012 Permanente Quarry Reclamation Plan Amendment*.
>
> **Additional Mitigation:** None required.

Impact 3.5-2: Seismic ground shaking and associated ground failures could disrupt or damage restoration elements of the PCRP.

This impact analysis corresponds to significance criteria a.i), a.ii), a.iii), and c) as set forth in Section 3.5.2 and addresses hazards associated with seismic ground shaking and related ground failures such as surface fault rupture and liquefaction. In the context of Impact 4.7-2 (page 4.7-37 et seq.), the 2012 EIR concluded that the proposed reclamation activities, including creek restoration activities proposed within the PCRA, would result in a less-than-significant impact with respect to seismic ground shaking from a major earthquake. Seismic ground shaking could

result in injury to site workers or damage to equipment and structures, or could trigger slope failures. In addition, Impact 4.7-2 determined that a large earthquake on the San Andreas Fault could result in minor ground deformation along traces of the Berrocal or Monte Vista fault zones. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criteria a.i), a.ii), a.iii), and c).

The regional seismic setting has not changed since the publication of the 2012 EIR. No new active faults have been identified within the Project site and the probability of a regional earthquake has not increased since publication of the 2012 EIR. Restoration activities would occur only on the surface and would not require activities that could trigger minor or micro-earthquakes such as deep excavations, tunneling, deep borings, or blasting. The PCRP would improve slope stability by exposing native bedrock slopes and by removing overburden on steep slopes, thereby reducing the potential for seismically induced slope failure. Soils along Permanente Creek have the potential to liquefy under seismic loading (2012 EIR, page 4.7-22 et seq.); however, the PCRP improvements would not be adversely affected by liquefaction or its associated ground failures because liquefiable soils material (e.g., saturated coarse-grained overburden material or saturated fill) would be removed and replaced with engineered streambed material (ESM).

Baseline Mitigation from 2012 EIR: None required.

Additional Mitigation: None required.

Impact 3.5-3: Earthmoving, excavation, and other ground disturbance associated with the restoration could temporarily promote accelerated erosion and soil loss.

This impact analysis corresponds to significance criterion b) as set forth in Section 3.5.2 and addresses accelerated erosion and soil loss. In the context of Impact 4.7-3 (page 4.7-39 et seq.), the 2012 EIR concluded that earthmoving and other ground disturbance associated with the phased reclamation of the site, including within the PCRA, could temporarily promote accelerated erosion and soil loss, and that this would result in a less-than-significant impact. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criterion b).

There are areas of accumulated overburden materials within the PCRP restoration area that could be susceptible to accelerated erosion. However, the potential for soil loss within the PCRP restoration area is low because there are limited areas containing developed soil horizons. The PCRP proposes to remove the overburden from the Permanente Creek channel, which would in turn remove materials susceptible to accelerated erosion. Additionally, the stream channel would be reconstructed with ESM, which would further stabilize the channel and reduce the potential for excessive erosion.

As described in detail in the analysis of Impact 3.7-2 within Section 3.7, *Hydrology and Water Quality*, surface treatments and grade control elements have been incorporated into the PCRP design to minimize and/or avoid episodic or chronic releases of sediments to the creek. In addition to ESM, these elements include floodplain armor to protect newly developed floodplains, vegetated rock slope protection, border sills and weirs, rapidly growing vegetation, and BMPs. In particular, BMP-7 outlines the methods Lehigh must use to minimize erosion (see Section 2.5.9.1, *Best Management Practices*).

The PCRP would be an overall improvement to the hydrologic regime along Permanente Creek and would reduce erosion and sediment transport, improve water quality, create greater long-term slope stability, and minimize sediment sources. Consequently, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR regarding accelerated erosion and soil loss.

Baseline Mitigation from 2012 EIR: None required.

Additional Mitigation: None required.

Impact 3.5-4: Project activities could directly or indirectly destroy a unique paleontological resource or site.

This impact analysis corresponds to significance criterion h) as set forth in Section 3.5.2 and addresses hazards associated with destruction of a paleontological resource or unique geological feature. In the context of Impact 4.5-2 (page 4.5-28 et seq.), the 2012 EIR concluded that the PCRA would cause no adverse effect on a known unique geological feature, and that although there is no indication that the Reclamation Plan area—including the PCRA—contains unique or significant fossils or that paleontologically sensitive rock formations would be disturbed, the possibility of encountering fossils in the course of earthmoving operations cannot be discounted entirely, especially considering the scale of earthmoving operations proposed under the 2012 Reclamation Plan Amendment. Should a fossil be identified during the Reclamation Plan Amendment activities approved in 2012, Mitigation Measure 4.5-3 would require Lehigh to cease all activity within 100 feet of the fossil until it was evaluated by a qualified paleontologist. Mitigation Measure 4.5-3 reduced this impact to a less-than-significant level and would be implemented as part of the baseline condition during implementation of restoration activities for the PCRP. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criterion h).

Similar to the PCRA, the PCRP area does not contain known unique geological features that would be destroyed or lost by the Project. The probability of encountering a fossil during PCRP restoration activities is lower than it would be during the reclamation activities analyzed in the 2012 EIR because the PCRP restoration would occur within a smaller footprint and the underlying Franciscan mélange, containing greenstone, chert, and limestone, is generally consistent throughout the PCRP area. Fossil remains typically are not found in the Franciscan

mélange because these rocks were formed in a subduction zone, are altered or metamorphosed,[8] and are highly deformed. The possibility of identifying intact fossils is remote. The overburden material could contain fossils, given that it is reworked limestone; however, the probability is low that a fully intact fossil would be identified within the overburden material.

Baseline Mitigation from 2012 EIR: Mitigation Measure 4.5-3, the text of which is provided in Draft SEIR Table H1, *Impacts and Mitigation Measures for the 2012 Permanente Quarry Reclamation Plan Amendment*.

Additional Mitigation: None required.

3.5.4 Cumulative Analysis

The Draft 2012 EIR analyzed potential cumulative effects in Section 6.2.7, *Geology, Soils and Seismicity* (page 6-21), concluding that the 2012 Reclamation Plan Amendment, including creek restoration within the PCRA, would not result in a cumulatively considerable contribution to any significant cumulative effect. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** in the cumulative context than was disclosed in the 2012 EIR.

The PCRP would improve slope stability within the study area by removing unstable overburden and requiring 2:1 (H:V) final slopes. Further, Lehigh would implement Mitigation Measure 4.7-1 from the 2012 EIR to address potential interim instability of construction slopes. The PCRP would not contribute to a cumulative impact on local or regional slope stability, because the Project's slope stability improvements would be localized conditions within the Reclamation Plan boundary within the PCRP project site and would not affect slope stability elsewhere in the reclamation area or off-site. Further, the Project would not exacerbate existing or future seismic hazards, including seismically induced slope failure and ground collapse, that would otherwise not occur or be present without the Project. The Project would not contribute to a cumulative loss of paleontological resources because the potential for recovering intact, scientifically significant fossil remains within the PCRP is extremely low. However, if a fossil is identified, then the implementation of Mitigation Measure 4.5-3 as part of the baseline condition (because it is an ongoing, independently enforceable obligation of the 2012 approval) would require that it be evaluated and recovered before work in the area could continue.

Baseline Mitigation from 2012 EIR: Mitigation Measure 4.7-1 and Mitigation Measure 4.5-3. The text of each is provided in Draft SEIR Table H1, *Impacts and Mitigation Measures for the 2012 Permanente Quarry Reclamation Plan Amendment.*

Additional Mitigation: None required.

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[8] Sedimentary rocks and igneous rocks that are changed through pressure and heat.

3.5.5 References

Golder Associates Inc. (Golder), 2017. *Geotechnical Plan Review—Permanente Creek Restoration Plan, 70% Design Submittal, Lehigh Permanente Quarry*. Technical memorandum from Ken Haskell and William Fowler (Golder) to Erika Guerra and Talia Flagan (Lehigh). October 27, 2017.

Golder, 2018. *Geotechnical Plan Review—Permanente Creek Restoration Plan, 90% Design Submittal, Lehigh Permanente Quarry.* Technical memorandum from William Fowler (Golder) to Erika Guerra and Talia Flagan (Lehigh). November 15, 2017.

Golder, 2021. Response to Permanente Creek Restoration Plan Supplemental EIR: Data Request 3, Prepared by ESA, Dated June 25, 2021. Letter. Prepared by George Wegmann and William Fowler (Golder) for Erika Guerra (Lehigh). July 23, 2021.

3.6 Greenhouse Gas Emissions

This section identifies and evaluates issues related to greenhouse gas (GHG) emissions to determine whether the PCRP, including its revisions to the 2011 Creek Restoration Plan that are a component of the 2012 Reclamation Plan Amendment, would cause one or more new significant impacts or a substantial increase in the severity of significant impacts than was disclosed in the 2012 EIR. To do this, as explained in Section ES.1, *Introduction*, and in Section 2.3, *Focus of the Supplemental EIR*, including as summarized in Table 2-1, *Specific Areas of Focus for the Supplemental EIR*, this analysis focuses on three things: (1) PCRP areas that are outside of the existing reclamation plan boundary (for which Grading Approval would be required); (2) PCRP areas within the reclamation plan boundary and within the 120-acre PCRA but outside of the PCRA's 49.2-acre disturbance area; and (3) more generally, whether the PCRP would include work at a greater intensity than previously considered in the 2012 EIR. As a result, Reaches 6–13 and Reaches 17 and 18 are key areas for evaluation.[1]

This section describes the physical and regulatory setting, the criteria used to evaluate the significance of potential impacts, the methods used in evaluating these impacts, and the results of the impact assessment relative to the 2012 EIR. This analysis is based in part on the Air Quality and Greenhouse Gas Emissions Technical Report (a copy of which is provided in **Appendix D**), which was prepared on the County's behalf. The County received no scoping comments pertaining to GHG emissions (**Appendix A**, *Scoping Report*).

3.6.1 Setting

3.6.1.1 Study Area

The study area for this analysis of potential impacts related to GHG emissions consists of the San Francisco Bay Area Air Basin (SFBAAB), which encompasses all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo and Santa Clara counties, and the southern portions of Solano and Sonoma counties, as well as statewide.

3.6.1.2 Environmental Setting

Section 4.8.1.1 of the Draft 2012 EIR described the environmental setting for the 2012 EIR's consideration of GHG emissions, including information about the effects of climate change and sources of GHG emissions (page 4.8-1 et seq.). These descriptions remain accurate for purposes of this analysis of the PCRP, except as supplemented or emphasized below.

Climate Change

There is general scientific consensus that climate change is occurring and is almost certainly attributed to human activities. Man-made emissions of GHGs, if not sufficiently curtailed, will

[1] See Section 2.4, *Correlation between 2012 EIR PCRA and the PCRP*, for a cross reference between the restoration activities described and analyzed in the 2012 EIR and the restoration activities described in the PCRP and analyzed in this SEIR. Section 2.5, *Permanente Creek Restoration Plan*, details the PCRP's proposed activities on a reach-by-reach basis.

likely contribute further to continued increases in global temperatures. Strong scientific evidence documents that the climate is changing and that its impacts are widespread and occurring now. In California, this evidence includes increases in extreme heat, wildfires, extreme storms, coastal flooding and erosion, and reductions in Sierra Nevada springtime snowpack and threats to water availability (California Air Resources Board [CARB] 2014). Globally, climate change has the potential to adversely affect numerous environmental resources through potential, although uncertain, impacts related to future air and water temperatures, precipitation patterns, and an array of other factors. According to the Intergovernmental Panel on Climate Change (IPCC), human activities affect all the major climate system components, including (IPCC 2021):

- Changing global surface temperatures.
- Reduction in arctic sea ice area.
- Decreased ocean surface pH (a measure of acidity).
- Increased global mean sea level change.

Also, many secondary effects are projected to result from global warming, including impacts on agriculture, changes in disease vectors, changes in habitat suitability, and potential for reduction of biodiversity. While the possible outcomes and feedback mechanisms involved are not fully understood and much research remains to be done, the potential for substantial environmental, social, and economic consequences over the long term are great.

Greenhouse Gases

State-regulated GHG emissions that result from human activities primarily include carbon dioxide (CO_2), with much smaller amounts of nitrous oxide (N_2O), methane (CH_4, often from unburned natural gas), sulfur hexafluoride (SF_6) from high-voltage power equipment, nitrogen trifluoride (NF_3) from microelectronics and semi-conductor manufacturing, and hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs) from refrigeration/chiller equipment. Because these GHGs have different warming potentials (i.e., the amount of heat trapped in the atmosphere by a certain mass of the gas), and CO_2 is the most common reference gas for climate change, GHG emissions are often quantified and reported as CO_2-equivalent (CO_2e) emissions. For example, while SF_6 represents a small fraction of the total annual GHGs emitted worldwide, this gas is very potent, with 22,800 times the global warming potential of CO_2. Therefore, an emission of 1 metric ton of SF_6 would be reported as 22,800 metric tons CO_2e. The global warming potential of CH_4 and N_2O are 25 times and 298 times that of CO_2, respectively (CARB 2016).

In 2019, the United States emitted about 6.56 billion tons of CO_2e, representing a 1.7 percent decrease from 2018. This decrease was driven largely by a decrease in emissions from fossil fuel combustion resulting from a decrease in total energy use in 2019 compared to 2018 and a continued shift from coal to natural gas and renewables in the electric power sector. Of the five major sectors nationwide (residential and commercial, industry, agriculture, transportation, and electricity), transportation accounts for the highest fraction of GHG emissions (approximately 29 percent), followed closely by the electric power industry (approximately 25 percent) and general industry (approximately 23 percent) (U.S. EPA 2021).

Statewide emissions of GHG from relevant source categories for 2014 through 2020 are summarized in **Table 3.6-1**. Specific contributions from individual air basins, such as the SFBAAB, which encompasses the Project site, are included in the emissions inventory but are not itemized by air basin. In 2020, California produced 369.1 million gross metric tons of CO_2e emissions, which was a 9 percent drop in emissions compared to 2019 driven by the Covid-19 pandemic-related shutdown. Transportation was the source of 37 percent of the state's GHG emissions, followed by industrial at 20 percent, electricity generation at 16 percent, commercial and residential sources at 11 percent, agriculture at 9 percent, high global warming potential[2] at 6 percent, and recycling and waste comprising the remaining 2 percent (CARB 2022a).

TABLE 3.6-1
CALIFORNIA GREENHOUSE GAS EMISSIONS (MILLION METRIC TONS CO_2E)

Emissions Inventory Category	2014	2015	2016	2017	2018	2019	2020	
Transportation	157.7	161.5	165.2	166.6	165.3	162.4	135.8	36.8%
Electric Power	89.8	86.0	70.4	64.2	65.0	60.2	59.5	16.1%
Industrial	85.2	83.2	81.6	81.7	81.9	80.4	73.3	19.9%
Commercial & Residential	35.6	36.3	37.2	37.6	37.4	40.5	38.7	10.5%
Agriculture	33.9	32.6	32.2	31.7	32.2	31.4	31.6	8.6%
High Global Warming Potential	17.7	18.6	19.4	20.1	20.5	20.7	21.3	5.8%
Recycling and Waste	8.3	8.4	8.5	8.6	8.7	8.8	8.9	2.4%
Total Gross Emissions	**428.2**	**426.6**	**414.5**	**410.5**	**411.0**	**404.4**	**369.1**	**100.0%**

SOURCE: CARB 2022a.

3.6.1.3 Regulatory Setting

Section 4.8.1.2 of the Draft 2012 EIR (page 4.8-2 et seq.) described the regulatory setting for the analysis of potential impacts related to GHG emissions, including federal, state, and local laws, regulations, plans, and policies applicable to the analysis of the proposed creek restoration and other Project components that were considered in the 2012 EIR. The section summarized the federal Clean Air Act requirements for GHG emissions, the U.S. Environmental Protection Agency's (U.S. EPA) GHG Reporting Rule, California Executive Order S-3-05, Assembly Bill (AB) 32, the Climate Change Scoping Plan, revisions to the CEQA Guidelines, mandatory and voluntary carbon credits, the Climate Registry, the Bay Area Air Quality Management District's (BAAQMD) Bay Area 2010 Clean Air Plan, and the *County of Santa Clara Climate Action Plan for Operations and Facilities*. The description of the regulatory setting remains accurate for purposes of this analysis of the PCRP, except as supplemented or emphasized below.

[2] The California GHG inventory category High Global Warming Potential includes gas emissions from releases of ozone depleting substance substitutes, SF_6 emissions from electricity transmission and distribution systems, and gases that are emitted in semiconductor manufacturing processes.

Federal

U.S. Environmental Protection Agency (U.S. EPA)

GHGs are air pollutants covered by the Clean Air Act (*Massachusetts v. U.S. EPA* (2007) 549 U.S. 497). Accordingly, the U.S. EPA prescribes (and from time-to-time revises) standards applicable to the emissions of GHGs from new motor vehicles or new motor vehicle engines. The 2012 EIR considered the U.S. EPA's finding that six GHGs, taken in combination, endanger both the public health and the public welfare of current and future generations, and that the combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the greenhouse effect as air pollution that endangers public health and welfare under Clean Air Act Section 202(a).

Pursuant to 40 Code of Federal Regulations (CFR) Part 52, Proposed Prevention of Significant Deterioration, and Title V Greenhouse Gas Tailoring Rule, U.S. EPA has mandated that Prevention of Significant Deterioration (PSD) and Title V requirements apply to facilities whose stationary source CO_2e emissions exceed 100,000 tons per year (U.S. EPA 2019).

U.S. Supreme Court Decision in Utility Air Regulatory Group v. U.S. EPA

In *Utility Air Regulatory Group v. U.S. EPA* (2014) 573 U.S. 302, the U.S. Supreme Court held that U.S. EPA may not treat GHG emissions as an air pollutant for purposes of determining whether a source is a major source required to obtain a PSD or Title V permit. The Court also held that PSD permits that are otherwise required (based on emissions of other pollutants) may continue to require limitations on GHG emissions based on the application of best available control technology (BACT). In accordance with the Supreme Court decision, on April 10, 2015, the D.C. Circuit issued an amended judgment in *Coalition for Responsible Regulation, Inc. v. U.S. Environmental Protection Agency* (2012) 684 F.3d 102, which vacated the PSD and Title V regulations under review in that case to the extent that they require a stationary source to obtain a PSD or Title V permit solely because the source emits or has the potential to emit GHGs above the applicable major source thresholds. The D.C. Circuit also directed U.S. EPA to consider whether any further revisions to its regulations are appropriate and, if so, to undertake to make such revisions. In response to the Supreme Court decision and the D.C. Circuit's amended judgment, the U.S. EPA intends to conduct future rulemaking action to make appropriate revisions to the PSD and operating permit rules (U.S. EPA 2019).

State

A variety of statewide rules and regulations have been implemented or are in development in California that mandate the quantification or reduction of GHGs. Under CEQA, analysis and mitigation of GHG emissions and climate change in relation to a proposed project is required where the lead agency determines that a project would result in a significant addition of GHGs to the atmosphere. State regulations identified in the 2012 EIR are supplemented with the following information.

Executive Order B-30-15

In April 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. Reaching this emissions reduction target will make it possible for California to reach its ultimate goal of reducing emissions

80 percent under 1990 levels by 2050, as identified in Executive Order S-3-05. Executive Order B-30-15 also specifically addresses the need for climate adaptation and directs state government to:

- Incorporate climate change impacts into the state's Five-Year Infrastructure Plan.
- Update the Safeguarding California Plan, the state climate adaption strategy to identify how climate change will affect California infrastructure and industry and what actions the state can take to reduce the risks posed by climate change.
- Factor climate change into state agencies' planning and investment decisions.
- Implement measures under existing agency and departmental authority to reduce GHG emissions (OGB 2015).

Executive Order B-30-15 required CARB to update the AB 32 Climate Change Scoping Plan to incorporate the state's target from 2020 to 2030. CARB adopted the 2017 Scoping Plan for achieving the 2030 target, which takes into account the key programs associated with implementation of the AB 32 Scoping Plan—such as GHG reduction programs for cars, trucks, fuels, industry, and electrical generation—and builds upon, in particular, existing programs related to the Cap-and-Trade Regulation; the Low Carbon Fuel Standard; much cleaner cars, trucks, and freight movement; power generation for the state using cleaner renewable energy; and strategies to reduce methane emissions from agricultural and other wastes by using it to meet the state's energy needs. The 2017 Scoping Plan also addresses, for the first time, GHG emissions from natural and working lands, including the energy, transportation, industry, water, waste management, agriculture, and natural and working lands sectors (CARB 2017). The 2017 Scoping Plan does not address construction or restoration projects such as the PCRP.

The 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045. The actions and outcomes in the plan are intended to significantly reduce fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon. The 2022 Scoping Plan identities a construction equipment sector action for the Scoping Plan Scenario that commits to 25 percent of energy demand to be electrified by 2030 and 75 percent electrified by 2045 (CARB 2022b).

Senate Bill 32 and Assembly Bill 197

On August 23, 2016, the California Assembly passed Senate Bill (SB) 32, legislation that would extend California's landmark climate change legislation to require that California reduce its emissions to 40 percent below 1990 levels by 2030, an extension of AB 32's goal to reduce emissions to 1990 levels. SB 32 became fully enacted the next day when AB 197 was passed, as an amendment to SB 32 stated that it would only become operative if AB 197 was enacted. AB 197's key components are the following:

- Direct CARB to incorporate environmental justice and social costs when designing climate change regulations.
- Create a new entity called the Joint Legislative Committee on Climate Change Policies, authorized to do fact-finding and make recommendations to the Legislature regarding the state's climate change programs.
- Make substantial changes to how CARB functions, including increasing the board member size, adjusting the terms of service, and strengthening the board member service disqualification process.
- Decrease CARB's reliance on cap-and-trade to achieve reductions and instead direct CARB to prioritize direct emissions reductions at large stationary sources.

Executive Order B-55-18

In September 2018, Governor Edmund G. Brown Jr. issued Executive Order B-55-18 directing the achievement of carbon neutrality as soon as possible and no later than 2045. Achieving this ambitious goal requires both significant reductions in GHG emissions and removal of CO_2 from the atmosphere, including sequestration in forests, soils, and other natural landscapes. Reaching carbon neutrality requires working across all sectors. Executive Order B-55-18 ordered:

1. A new statewide goal to be established to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.
2. CARB to work with relevant state agencies to develop a framework for implementation and accounting that tracks progress toward this goal.
3. CARB to work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.
4. The California Natural Resources Agency, the California Environmental Protection Agency, CARB, and the California Department of Food and Agriculture to include sequestration targets in the Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal.
5. All policies and programs undertaken to achieve carbon neutrality to seek to improve air quality and support the health and economic resiliency of urban and rural communities, particularly low-income and disadvantaged communities.
6. All policies and programs undertaken to achieve carbon neutrality to be implemented in a manner that supports climate adaptation and biodiversity, including protection of the state's water supply, water quality, and native plants and animals.
7. State agencies to engage the support, participation, and partnership of universities, businesses, investors, and communities, as appropriate, to achieve the goals contained in this order.

Advanced Clean Truck Regulation

The Advanced Clean Truck Regulation is part of a holistic approach to accelerate a large-scale transition of zero-emissions medium-and heavy-duty vehicles from Class 2b to Class 8. The regulation has two components including a manufacturer sales requirement and a reporting requirement (CARB 2021):

- **Zero-emissions truck sales**: Manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines would be required to sell zero-emissions trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emissions truck/chassis sales would need to be 55 percent of Class 2b to 3 truck sales, 75 percent of Class 4 to 8 straight truck sales, and 40 percent of truck tractor sales.
- **Company and fleet reporting:** Large employers including retailers, manufacturers, brokers, and others are required to report information about shipments and shuttle services. Fleet owners with 50 or more trucks are required to report about their existing fleet operations. This information will help identify future strategies to ensure that fleets purchase available zero-emissions trucks and place them in service where suitable to meet their needs.

Local

Bay Area Air Quality Management District

The BAAQMD lays the groundwork for GHG emissions reductions through the 2017 Clean Air Plan (2017 CAP). The 2017 CAP provides a long-term vision of how the Bay Area could function in a year 2050 post-carbon economy and describes a control strategy to be implemented by BAAQMD. The 2017 CAP also includes measures to reduce GHG emissions; however, the measures do not address construction or restoration projects such as the PCRP (BAAQMD 2017a).

County of Santa Clara

In September 2009, the County released its *County of Santa Clara Climate Action Plan for Operations and Facilities* (County of Santa Clara 2009). This plan presented several solutions and policies that focus on County operations, facilities, and employee actions to reduce GHG emissions associated with energy and water consumption, solid waste, and fuel consumption. Since the plan focuses primarily on steps needed to reach the 10 percent reduction (13,346 metric tons) goal by 2015, it is now outdated. In addition, this plan applies to County government operations and facilities only, and thus it would not pertain to the PCRP.

On December 18, 2018, the Board of Supervisors of the County of Santa Clara adopted Resolution BOS-2018-145 to reaffirm and augment the County's GHG emissions reduction targets and establish a 100 percent carbon neutral by 2045 commitment for County of Santa Clara operations (County of Santa Clara 2018). The resolution applies to County government operations and facilities only; it would not pertain to the PCRP.

3.6.2 Significance Criteria

Consistent with the County of Santa Clara Environmental Checklist and the version of the CEQA Guidelines Appendix G Environmental Checklist that was in effect at the time, Section 4.8 of the 2012 EIR determined that the Reclamation Plan Amendment, including creek restoration work within the PCRA, would have a significant impact if it would:

a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG.

Updates to the CEQA Guidelines Appendix G Environmental Checklist that were finalized in December 2018 made no revisions to these significance criteria. Accordingly, these criteria remain relevant to this SEIR's consideration of whether the PCRP would cause any new significant impacts or a substantial increase in the severity of significant impacts than were disclosed in the 2012 EIR.

3.6.3 Direct and Indirect Effects

3.6.3.1 Methodology

Greenhouse Gas Emissions

Significance Thresholds

The 2012 EIR relied on the methods and significance threshold identified in the BAAQMD's 2010 CEQA Guidelines as supported by Appendix D of the BAAQMD Guidelines and BAAQMD's Revised Draft Options and Justification Report. After adoption of the 2012 EIR, the BAAQMD updated its CEQA Guidelines in 2017 to address the California Supreme Court's opinion in *California Building Industry Association v. BAAQMD* (2015) 62 Cal.4th 369, regarding analysis of exposure of new sensitive receptors to toxic air pollution and odors. However, the methods and GHG emissions significance criteria were not updated—the methods and significance criteria identified in the 2017 BAAQMD CEQA Guidelines for GHG emissions are the same as those identified in the 2010 BAAQMD CEQA Air Quality Guidelines (BAAQMD 2010) and used in the 2012 EIR.

In accordance with the BAAQMD CEQA Air Quality Guidelines, the 2012 EIR considered implementation of the Reclamation Plan Amendment to have a significant impact if it would emit GHG emissions greater than the BAAQMD's significance threshold of 1,100 metric tons per year CO_2e from operational sources other than permitted stationary sources.[3] The 1,100 metric tons CO_2e per year significance threshold was designed for the BAAQMD to meet the AB 32 goal of reducing GHG emissions to 1990 levels by 2020 by accounting for the Bay Area's share of land use sector GHG emissions reductions beyond the amount determined to be achievable at the state level. It is based on the AB 32 GHG reduction goals and a "gap analysis" that attributes an appropriate share of GHG emissions reductions to new land use development projects in the BAAQMD's jurisdiction. In 2022, the BAAQMD adopted CEQA Thresholds for Evaluating the Significance of Climate Impacts due to operations of Land Use Projects and Plans; however, those thresholds focus on residential and commercial projects, and do not address construction emissions such as those that would be generated by the PCRP. The BAAQMD has not yet developed a corresponding mass emissions threshold that extends beyond 2020 to be aligned with the SB 32 target for 2030. Although use of the 1,100 metric tons CO_2e significance threshold was appropriate at the time of the 2012 EIR certification, that threshold is no longer appropriate for

[3] The 2012 Reclamation Plan Amendment did not propose any new or expanded stationary sources that emit GHGs.

analyzing the long-term GHG emissions of post-2020 proposed projects without an adjustment to be consistent with SB 32.

The PCRP would not involve long-term operational emissions, and short-term construction emissions would cease in 2027. AB 32 includes a statewide GHG reduction target to achieve 1990 levels by the year 2020, while SB 32 extends the statewide target to a reduction of 40 percent below 1990 levels by 2030. An appropriate threshold for PCRP is one that is adjusted to account for the SB 32 target, recognizing that important state initiatives (most notably, the vehicle fuel efficiency standards and the Renewables Portfolio Standard) are scheduled to reduce emissions substantially as the decade progresses. The most conservative approach would be to use a threshold based on the 2030 target, which would be consistent with a 2016 white paper by the Association of Environmental Professionals (AEP) Climate Change Committee recommendation that when a project is built out before the next milestone target year adopted by the state, the milestone year should be used as the basis for the project-level threshold (AEP 2016). Note that the AEP white paper is advisory only and is not binding guidance or an adopted set of CEQA thresholds.

Because BAAQMD has not adopted GHG-related CEQA significance thresholds for the SB 32 horizon year of 2030 that are relevant to the Project, and the County does not currently have a "qualified" GHG reduction strategy available, a specific Project-level threshold has been identified consistent with CEQA Guidelines Section 15064.4.[4] The 2020 mass emissions threshold is adjusted downward by 40 percent to be consistent with the 2030 SB 32 horizon year target, as shown below. Nevertheless, because the significance threshold used in the 2012 EIR was appropriate at the time of its certification, the total 2012 Reclamation Plan Amendment emissions, as revised to include the proposed PCRP emissions, are evaluated in this analysis using the 1,100 metric tons CO_2e significance threshold. For informational purposes, the proposed PCRP incremental emissions beyond the emissions estimated for the 2012 Reclamation Plan Amendment in the 2012 EIR are also compared to the adjusted 2030 emissions threshold that is 40 percent below the 2020 mass emissions threshold of 1,100 metric tons CO_2e per year, which is equivalent to 660 metric tons CO_2e per year.

The significance thresholds discussed above are designed for long-term operational emissions. Because the PCRP would result in short-term activities to restore and modify approximately 9,000 linear feet of Permanente Creek and would not involve long-term operations, its total short-term emissions were amortized over the 20-year life of the 2012 Reclamation Plan Amendment (see 2012 EIR Section 2.1) before comparison to the significance thresholds.

Emissions Estimates

Project-related GHG emissions typically fall into two categories: short-term emissions due to construction, and long-term emissions due to project operations; however, for the PCRP, GHG emissions would be generated on a short-term basis during construction over a period of

[4] A qualified GHG reduction plan is a previously adopted plan or mitigation program that a lead agency may use to determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements of the plan and the plan was prepared pursuant to the requirements of CEQA Guidelines Section 15183.5.

approximately 6 years, and there would be no long-term sustained operational emissions. The PCRP would generate GHG exhaust emissions from construction equipment and vehicles. The construction-related scheduling, equipment, and trips assumptions and methods used to estimate GHG emissions associated with the PCRP are generally the same as those described for the air quality analysis in Section 3.1 (see *Criteria Pollutants Emissions* in Section 3.1.3.1, *Methodology*, and Appendix D, Exhibit A). To estimate CO_2e emissions, global warming potentials from the IPCC Fourth Assessment Report (AR4) were applied to the CH_4 and N_2O emissions.

As with the criteria pollutants, the modeled GHG emissions for each construction phase were multiplied by the percent of emissions to be evaluated for the given construction phase based on the proposed creek reach area outside of the previously evaluated 2012 EIR disturbance areas to allow for evaluation of the applicable emissions (see *Emissions Applicability Factors* in Section 3.1.3.1, *Methodology*, and Appendix D, Exhibit A). Calculated emissions then were summed, amortized over the 20-year life of the 2012 Reclamation Plan Amendment, and added to the baseline emissions (see Section 3.6.3.2, *Baseline*) for comparison to BAAQMD's regional significance threshold to determine if the PCRP would have the potential for new significant direct, indirect, and/or cumulative environmental effects compared with the 2011 Creek Restoration Plan previously analyzed in the 2012 EIR. The incremental amortized PCRP emissions also are compared to the adjusted emissions threshold (refer to *Significance Thresholds* discussion above). Detailed emissions assumptions and summaries, including the California Emissions Estimator Model (CalEEMod) and EMFAC2021 assumptions and output, are included in Appendix D, Exhibit A.

Conflicts with Applicable Plans, Policies, or Regulations

The BAAQMD CEQA Guidelines state that a project or plan that is consistent with an adopted GHG reduction strategy would be considered to have a less-than-significant impact. As noted above in Section 3.6.1.3, *Regulatory Setting*, the state has adopted the 2017 Scoping Plan and the 2022 Scoping Plan, the BAAQMD has adopted the 2017 CAP, and the County has adopted a Climate Action Plan for reducing GHG emissions. These plans, however, are not applicable to emissions generated by projects such as the PCRP.

Regarding SB 32, California's climate change legislation updated to require California to reduce its emissions to 40 percent below 1990 levels by 2030, PCRP's consistency with this goal is addressed through the comparison of its estimated incremental emissions to the adjusted significance threshold of 660 metric tons CO_2e (see *Significance Thresholds*, above).

3.6.3.2 Baseline

Section 3.0.1, *Environmental Baseline*, explains that, in the context of an SEIR, the CEQA baseline is adjusted such that the originally approved project is assumed. Therefore, the baseline used in this analysis to evaluate the impacts of the PCRP and alternatives consists of existing environmental conditions plus the 2012 Reclamation Plan Amendment and 2012 EIR, and the creek restoration plans evaluated therein, as well as the approved 2012 EIR mitigation measures

that are conditions of the 2012 Reclamation Plan Amendment approval. For purposes of this analysis of potential impacts related to GHG emissions, the baseline is described below.

2012 EIR Baseline

The baseline for the 2012 EIR reflects the same physical environmental conditions in the vicinity of the PCRP as identified in Section 3.1.3.2 for the air quality analysis. The baseline GHG emissions identified in the 2012 EIR analysis are based on an average over the 11-year period from January 1, 2000, to December 31, 2010, which includes periods of relatively high production as well as relatively low production at the Permanente Quarry in response to changing market demands. The annual 2012 EIR baseline GHG emissions are shown in **Table 3.6-2**.

TABLE 3.6-2
2012 RECLAMATION PLAN AMENDMENT MAXIMUM ANNUAL GHG EMISSIONS (METRIC TONS/YEAR)

Scenario	CO_2	CH_4	N_2O	Total CO_2e
Baseline Emissions	15,707	<1	<1	15,842
2012 Reclamation Plan Amendment Emissions	20,587	1	<1	20,762
Maximum Annual Incremental Change	4,880	<1	<1	4,920
BAAQMD Threshold	--	--	--	1,100
Significant Impact (Yes or No)?	--	--	--	Yes

SOURCE: Draft 2012 EIR Section 4.8.5, Table 4.8-2.

2012 Emissions and Analysis

Baseline and maximum annual 2012 Reclamation Plan Amendment GHG emissions are summarized in Table 3.6-2, and the net change is compared to the BAAQMD annual significance threshold. As shown in Table 3.6-2, the 2012 Reclamation Plan Amendment was found to result in net GHG emissions that would exceed the significance threshold, and therefore was disclosed to result in a significant impact.

3.6.3.3 Direct and Indirect Effects of the Project

The analysis in this section evaluates the potential significance of the change in the physical environment that would be caused by implementation of the PCRP relative to the baseline condition, compares that impact conclusion with the impact conclusion reached in the 2012 EIR regarding the same consideration, and then makes a determination as to whether the implementation of the PCRP would cause one or more new significant impacts or a substantial increase in the severity of significant impacts than were disclosed in the 2012 EIR. For the reasons discussed below, implementation of the PCRP would not cause a new significant impact or a substantial increase in the severity of a significant impact than was disclosed in the 2012 EIR.

Impact 3.6-1: The PCRP could result in an increase in greenhouse gas emissions and contribute to climate change.

This impact analysis corresponds to significance criterion a) as set forth in Section 3.6.2 and addresses PCRP-generated GHG emissions that could contribute to climate change. In the context of Impact 4.8-1 (page 4.8-11 et seq.), the 2012 EIR concluded that interim reclamation activities, including those proposed within the PCRA, would result in net GHG emissions that would exceed the 1,100 metric tons per year threshold established by BAAQMD and would be significant; however, the significant impact was found to be reduced to a less-than-significant level with implementation of Mitigation Measures 4.8-1a and 4.8-1b. Mitigation Measure 4.8-1a required the preparation of an annual GHG emissions inventory for the 2012 Reclamation Plan Amendment, and Mitigation Measure 4.8-1b required the preparation and implementation of a GHG Emissions Reduction Plan containing quantifiable strategies to ensure that the 2012 Reclamation Plan Amendment-related incremental increase of GHG emissions do not exceed 1,100 metric tons CO_2e per year. For the reasons discussed below, the PCRP would not cause a new significant impact or a substantial increase in the severity of a significant impact related to significance criterion a).

As presented in the *Emissions Estimates* discussion in Section 3.6.3.1, *Methodology*, the GHG emissions that would be generated by the PCRP would be short term and periodic in nature and would occur during the dry seasons of 2024 through 2029. Below are summaries of the PCRP GHG emissions estimate results in terms of applicable PCRP emissions estimates compared to the CEQA baseline. For summaries of the total PCRP emissions estimates by phase prior to and after the use of applicability factors to remove the emissions considered to have already been evaluated in the 2012 EIR, refer to Appendix D. It should be noted that current equipment and vehicle fleets operate more efficiently and generate fewer GHG emissions than those that were in place in 2012.

PCRP Emissions Compared to CEQA Baseline

Table 3.6-3 presents the net annual PCRP emissions that were not evaluated in the 2012 EIR combined with the 2012 Reclamation Plan Amendment maximum annual incremental change emissions disclosed in 2012 EIR. As shown in the table, the PCRP amortized emissions would not be substantial in comparison to the maximum annual emissions disclosed in the 2012 EIR—the PCRP amortized emissions would slightly increase the net total maximum annual emissions by approximately 9 percent.

TABLE 3.6-3
MAXIMUM ANNUAL NET GHG EMISSIONS (METRIC TONS/YEAR)

Scenario	CO_2	CH_4	N_2O	Total CO_2e
2012 Reclamation Plan Amendment Maximum Annual Incremental Change Disclosed in 2012 EIR*	1,060	<1	<1	1,100
PCRP Amortized Emissions not Evaluated in the 2012 EIR	87.94	<1	<1	90.14
Net Emissions	1,148	<1	<1	1,190
Net Emissions with Incorporation of 2012 EIR Mitigation Measures 4.8-1a and 4.8-1b	---	---	---	1,100
BAAQMD Threshold	---	---	---	1,100
Significant Impact (Yes or No)?				No

NOTES:
* 2012 Reclamation Plan Amendment emissions reflect implementation of 2012 EIR Mitigation Measures 4.8-1a and 4.8-1b.
SOURCE: Draft 2012 EIR Section 4.8.5, Table 4.8-2, and Appendix D, Exhibit A.

Impact Conclusion

With the continued implementation of 2012 EIR Mitigation Measures 4.8-1a and 4.8-1b pursuant to baseline conditions, implementation of the PCRP would result in revised 2012 Reclamation Plan Amendment emissions that would not exceed the BAAQMD's annual operational significance threshold of 1,100 metric tons CO_2e per year, and the impact would be less than significant (see Table 3.6-3). In addition, the proposed PCRP incremental amortized emissions would be substantially less than the adjusted significance threshold of 660 metric tons CO_2e per year, indicating that the proposed PCRP would be aligned with the SB 32 emissions reduction target for 2030 Accordingly, no new mitigation measures are merited or recommended. Further, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR.

> **Baseline Mitigation from 2012 EIR:** Mitigation Measures 4.8-1a and 4.8-1b. The text of each is provided in Draft SEIR Table H1, *Impacts and Mitigation Measures for the 2012 Permanente Quarry Reclamation Plan Amendment*.
>
> **Additional Mitigation:** None required.

Impact 3.6-2: The PCRP would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG.

As noted above in Section 3.6.1.3, *Regulatory Setting*, the state has adopted the 2017 Climate Change Scoping Plan, the BAAQMD has adopted the 2017 CAP, and the County has adopted a Climate Action Plan for reducing GHG emissions. These plans, however, are not applicable or have limited applicability to emissions generated by projects such as the PCRP. Regarding SB 32, the PCRP's consistency with this goal is addressed through the comparison of its estimated incremental emissions to the adjusted significance threshold of 660 metric tons CO_2e per year.

Also, the 2017 Climate Change Scoping Plan includes a mobile source strategy that relies on the implementation of the federal phase 2 standards for medium- and heavy-duty vehicles and deploying increasing numbers of zero-emissions trucks primarily for classes 3 through 7 last-mile delivery trucks. While these strategies are not applied at a project-level, truck fleets would be subject to regulations adopted pursuant to these strategies including those truck fleets used to transport materials to and from the Project site.

In addition, the 2022 Scoping Plan identifies a construction equipment sector action for the Scoping Plan Scenario that commits to 25 percent of energy demand to be electrified by 2030 and 75 percent electrified by 2045. A similar commitment is not proposed for the PCRP-related construction equipment. However, the PCRP would be completed prior to the 2030 compliance date associated with the construction equipment sector action; therefore, it would not be directly applicable to the PCRP.

In summary, the PCRP would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Therefore, no impact would result and implementation of the PCRP would result in **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR.

Baseline Mitigation from 2012 EIR: None required.

Additional Mitigation: None required.

3.6.4 Cumulative Analysis

The Draft 2012 EIR analyzed potential cumulative effects in Section 6.2.8, *Greenhouse Gas Emissions* (page 6-22), concluding that the 2012 Reclamation Plan Amendment, including creek restoration within the PCRA, would not result in a cumulatively considerable contribution to any significant cumulative effect with implementation of Mitigation Measures 4.8-1a and 4.8-1b. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** in the cumulative context than was disclosed in the 2012 EIR.

GHG emissions-related impacts are by their nature exclusively cumulative impacts; there are no non-cumulative GHG emissions impacts from a climate change perspective. Thus, the analysis and conclusions provided in Section 3.6.3, *Direct and Indirect Effects*, for Impacts 3.6-1 and 3.6-2 also are the cumulative effects analysis of GHG emissions. In summary, PCRP emissions of GHGs would be less than significant with the ongoing implementation of the 2012 EIR mitigation measures (see Impact 3.6-1), and the Project would not conflict with any plans, policies, or regulations to reduce GHGs (see Impact 3.6-2). Thus, the PCRP would not result in a cumulatively considerable contribution to a cumulative GHG emissions impact.

Baseline Mitigation from 2012 EIR: Mitigation Measures 4.8-1a and 4.8-1b. The text of each is provided in Draft SEIR Table H1, *Impacts and Mitigation Measures for the 2012 Permanente Quarry Reclamation Plan Amendment*.

Additional Mitigation: None required.

3.6.5 References

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3.7 Hydrology and Water Quality

This section identifies and evaluates issues related to surface water and groundwater hydrology, water quality, and flood hazards to determine whether the PCRP, including its revisions to the 2011 Creek Restoration Plan that are a component of the 2012 Reclamation Plan Amendment, would cause one or more new significant impacts or a substantial increase in the severity of one or more significant impacts previously disclosed and evaluated in the 2012 EIR. To do this, this analysis focuses on three things: (1) PCRP areas that are outside of the existing Reclamation Plan boundary (for which Grading Approval would be required); (2) PCRP areas within the Reclamation Plan boundary and within the 120-acre PCRA but outside of the PCRA's 49.2-acre disturbance area; and (3) more generally, whether the PCRP proposes work at greater intensity than previously considered in the 2012 EIR. As a result, Reaches 6–13 and Reaches 17 and 18 are key areas for evaluation.[1]

This section describes the physical and regulatory setting, the criteria used to evaluate the significance of potential impacts, the methods used in evaluating these impacts, and the results of the impact assessment relative to the 2012 EIR. This analysis is based in part on information contained in the following technical reports prepared on behalf of Lehigh:

- Waterways Consulting, Inc., 2022. Permanente Creek Restoration Plan: Updated 90% Level Submittal, Design Basis Technical Memorandum, August 2022 (**Appendix C**).
- GEI Consultants, Inc., 2021. Aquatic Resources Report, Preliminary Delineation of Waters of the United States, Including Wetlands, November 2021 (**Appendix E2**).

The preparers of this Draft SEIR independently reviewed these reports and other materials prepared by or on behalf of Lehigh and determined that they can be relied on (in combination with other materials included in the formal record) in the preparation of this Draft SEIR. Public comments received by the County on the Notice of Preparation (**Appendix A**, *Scoping Report*) that are relevant to water resources included concerns that implementing the PCRP could degrade surface water quality by depositing sediment and other pollutants into Permanente Creek; result in altered streamflows in surface waters downgradient of the Project site, causing flood hazard risks; and contribute overburden or sediments from erosion on haul roads and spoil piles to surface waters. These considerations are addressed in this section.

3.7.1 Setting

3.7.1.1 Study Area

The "study area" for this analysis of potential impacts related to surface water and groundwater hydrology, water quality, and flood-related hazards consists of the Project site described in Section 2.3.2 of the Project Description and shown in **Figure 2-3**. It also includes Permanente

[1] See Section 2.4, *Correlation between 2012 EIR PCRA and the PCRP*, which correlates the restoration activities described and analyzed in the 2012 EIR with the restoration activities described in the PCRP and analyzed in this SEIR. Section 2.5, *Permanente Creek Restoration Plan*, details the PCRP's proposed activities on a reach-by-reach basis.

Creek downgradient of the Project site in the lower portions of the Permanente Creek watershed, as described in the environmental setting for the 2012 EIR's consideration of hydrology and water quality (Draft 2012 EIR Section 4.10.1.2, page 4.10-1 et seq.).

3.7.1.2 Environmental Setting

Section 4.10.1 of the Draft 2012 EIR described the environmental setting for the 2012 EIR's consideration of hydrology and water quality, including climate and precipitation (Section 4.10.1.1, page 4.10-1 et seq.); surface water hydrology, drainage, water quality, and flooding (Section 4.10.1.2, page 4.10-1 et seq.); and groundwater hydrology and groundwater quality (Section 4.10.1.3, page 4.10-17 et seq.). These descriptions remain accurate for purposes of this analysis of the PCRP except as supplemented below.

Boulder Removal

The County's conditions of approval (COAs) of the 2012 Reclamation Plan Amendment (see Appendix H to this SEIR) included COAs 38–41, which address water quality, reclamation, and restoration of Permanente Creek within the PCRA. COA 39 required the identification and removal of limestone boulders within the PCRA that previously dispersed into Permanente Creek as a result of mining operations, unless it is demonstrated that the boulders are not a significant source of selenium, and that removing the boulders would result in impacts on Permanente Creek habitat by destabilizing the creek channel or increasing the mobilization of sediment in surface waters. If all such circumstances were identified, the boulders would be allowed to remain in place, consistent with the "Best Management Practice for Removal of Limestone Boulders from Permanente Creek" defined in the 2012 Reclamation Plan Amendment (County of Santa Clara 2013).

In 2012, consistent with COA 39, the Permanente Quarry submitted a detailed survey that provided the County a detailed description of the location, size, and condition of boulders in the Permanente Creek corridor; documentation of the associated impacts on the creek that would result from removal of the boulders; and a water quality analysis that assessed the potential for the boulders to leach selenium into the waters of Permanente Creek (County of Santa Clara 2013). These submitted materials identified that removing the boulders would likely result in substantial stability impacts on the creek channel and that the boulders are not a significant source of selenium. These materials were peer reviewed by an independent third-party geologist and other technical consultants retained by the County, who concurred with these conclusions. After the evaluation of boulder removal associated with COA 39, it was determined that the identified boulders would remain in place. All other 2012 Reclamation Plan Amendment conditions of approval regarding creek restoration still apply (see Appendix H).

In 2013, the Permanente Quarry entered into a settlement agreement with the Sierra Club that extends beyond the 2012 Reclamation Plan Amendment COA. The settlement agreement was amended in 2016 to reflect the Project being considered here. The Amended Consent Decree (Appendix B) included provisions that boulders sourced from limestone-containing mine wastes or overburden not to be used as part of the PCRP. The boulders identified in the detailed survey

reside in the Material Removal Area; Lehigh would evaluate which boulders to use or remove as part of the PCRP in accordance with the provisions of the Amended Consent Decree.

Quarry Drainage and Surface Water Quality

The Draft 2012 EIR describes drainage patterns and water quality associated with the quarry area (Section 4.10.1.2, page 4.10-3 et seq.). At the time the Draft 2012 EIR was being written, water that drained to the quarry pit, including the majority of runoff from the West Material Storage Area, was pumped out of the pit and discharged directly to Permanente Creek. As described in the Draft 2012 EIR under "Surface Water Quality" (Section 4.10.1.2, page 4.10-4), an important characteristic of the Project area with respect to water quality is the leachability of various constituents, particularly selenium, from rocks at the site. In the vicinity of the quarry, previous investigations documented that the existing concentrations of total dissolved solids (TDS), sulfate, some metals including selenium and mercury, and suspended sediments are relatively high in stormwater and in Permanente Creek. Subsequent study has confirmed that mercury is not a concern.[2]

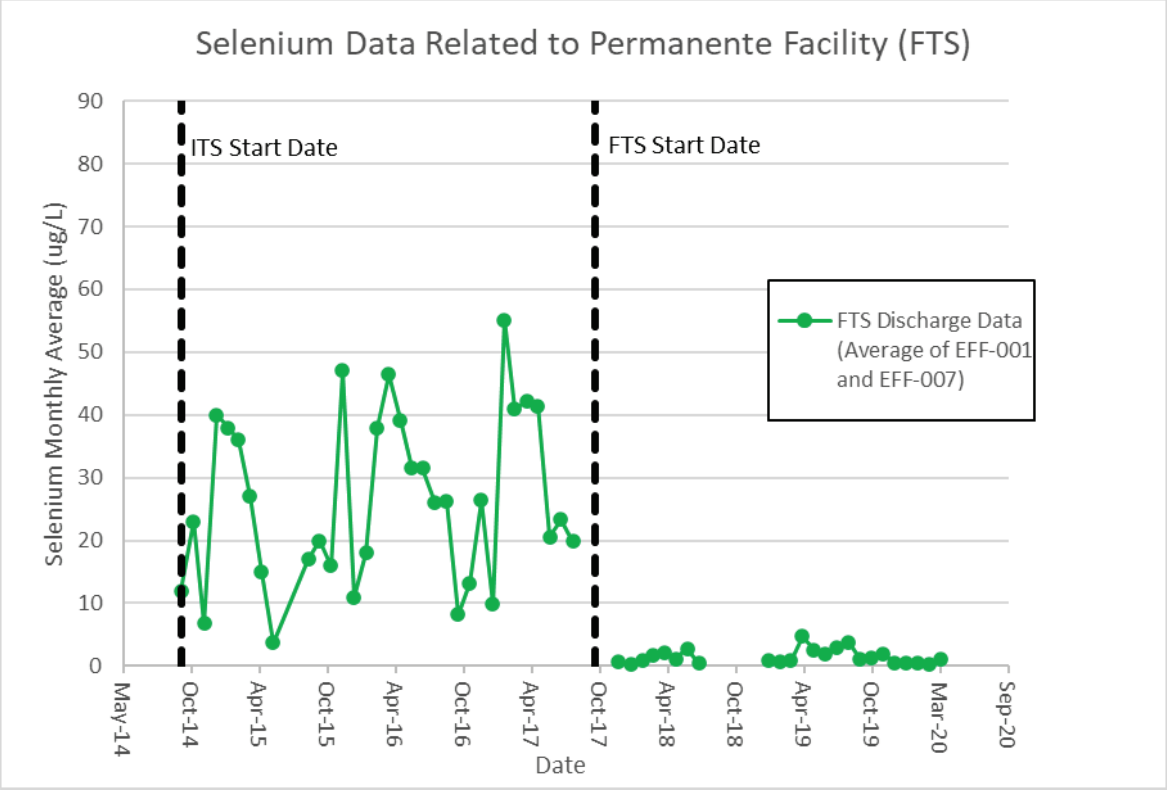
Permanente Creek is listed as impaired for diazinon, selenium, trash, and water toxicity on the 303(d) list of impaired water bodies for the waters within the region of the San Francisco Bay Regional Water Quality Control Board (RWQCB) (U.S. EPA 2021). Additionally, the upper Permanente Creek watershed has been documented as having a generally high sediment yield, in part because of historical activities associated with the quarry and the management of overburden storage. Current regulatory requirements and on-site controls largely control current inputs. Pursuant to the terms of the facility's National Pollutant Discharge Elimination System (NPDES) permit (Order No. R2-2019-0024, NPDES Permit No. CA0030210), the listed impairments, to the extent applicable to the upper Permanente Creek watershed (selenium and water toxicity), are being addressed via the discharge requirements contained therein (San Francisco Bay Regional Water Quality Control Board, 2019)

Since the County's certification of the 2012 EIR, and to comply with the requirements of the facility's NPDES permit and the associated Cease and Desist Order R2-2014-0011 as amended by the San Francisco Bay RWQCB through Order No. R2-2017-0031, Lehigh implemented significant infrastructure improvements to treat and control process and stormwater flows at the facility (process and/or stormwater flows related to the quarry, West Material Storage Area, East Material Storage Area, and cement plant) to reduce discharges containing selenium and other pollutants to Permanente Creek.

The facility's process water treatment system, called the Final Treatment System (FTS; an Upper FTS and Lower FTS location exist), treats all process and commingled stormwater flows at the facility and is effective at reducing pollutants, including selenium and other metals, to below numeric limits required by the quarry's NPDES permit. Before the FTS was installed, Lehigh

[2] Evaluation by the San Francisco Bay Regional Water Quality Control Board of discharge and receiving water samples as part of Lehigh's most recent National Pollutant Discharge Elimination System permit/waste discharge requirements (Regional Water Board Order No. R2-2019-0024) concluded that Lehigh needed no restrictions (e.g., discharge or other limits) on mercury, as all the levels (discharge and ambient background conditions) were below regulatory criteria.

installed an Interim Treatment System to provide partial treatment of quarry pit flows while optimizing the design for the FTS. Lehigh has also made improvements to drainage swales and enhanced stormwater controls on-site for the remaining stormwater discharge not sent to the FTS (e.g., the Pond 20 drainage area) (Lehigh 2018). Additionally, areas within the East Material Storage Area were covered with non-limestone materials and hydroseeded in 2015. Ongoing surface water quality monitoring at the quarry (Golder 2020a) demonstrates that, in general, on-site selenium concentrations in the stormwater runoff and slope-toe seeps have been decreasing since these other improvements (Sutro 2018). Baseline water quality at the facility and in Permanente Creek, especially downstream of Discharge Points EFF-001 (Upper FTS) and EFF-007 (Lower FTS) to Permanente Creek, are significantly improved overall (Figure 3.7-1) as compared to the description presented in the Draft 2012 EIR under "Surface Water Quality" (Section 4.10.1.2, page 4.10-4 et seq.).



NOTE: Any gaps in the data represent periods of no discharge. Routine water quality monitoring at National Pollutant Discharge Elimination System (NPDES) Discharge Points EFF-001 and EFF-007 have documented monthly average selenium concentrations ranging from less than 1 microgram per liter (µg/L) to Non-Detect, below the NPDES effluent limitation of 3.7 µg/L, from April 2018 to the most recently reported monitoring period in November 2021. The facility has not discharged from either of these locations since March 2020.

SOURCES: U.S. EPA 2022; Lehigh 2018.

Figure 3.7-1
Monthly Average Selenium Concentration in Quarry Discharges to Permanente Creek

3.7.1.3 Regulatory Setting

Section 4.10.1.4 of the Draft 2012 EIR (page 4.10-17 et seq.) described the regulatory setting for the analysis of potential impacts on hydrology and water quality, including federal, state, and local laws, regulations, plans and policies applicable to the analysis of the proposed creek restoration and other Project components that were considered in the 2012 EIR. The section summarized provisions of the Federal Emergency Management Agency (FEMA); the Clean Water Act, including the NPDES Program (Clean Water Act Section 402); the Porter-Cologne Water Quality Control Act; the Surface Mining and Reclamation Act; and County ordinances and other local plans, and policies. The description of the regulatory setting remains accurate for purposes of this analysis of the PCRP except as supplemented below.

State

NPDES Construction General Permit

The State of California adopted an NPDES construction general permit on September 2, 2009 (Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ) (Construction General Permit). The Construction General Permit regulates stormwater management at construction sites. Dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, must obtain coverage under the general permit for discharges of stormwater associated with construction activity. The Project would be required to comply with the permit requirements to control stormwater discharges from the sites where Project elements are being constructed or implemented. Construction activity subject to the Construction General Permit includes clearing, grading, and disturbances to the ground, such as stockpiling or excavation. Portions of the Project may fall under the Type 1 Linear Underground/Overhead Projects (or "LUP") category, which covers construction activities associated with the installation of underground linear facilities (such as pipelines and substructures), if the following conditions are met:

(1) Construction occurs on unpaved improved roads, including their shoulders or land adjacent to them.

(2) The areas disturbed during a single construction day are returned to their preconstruction condition, or to an equivalent condition (i.e., disturbed soils such as those from trench excavation are hauled away, backfilled into the trench, and/or placed in spoils piles and covered with plastic), at the end of that same day.

(3) Vegetated areas disturbed by construction activities are stabilized and revegetated at the end of the construction period.

(4) When required, adequate temporary soil stabilization best management practices (BMPs) are installed and maintained until vegetation has reestablished to meet the permit's minimum cover requirements for final stabilization.

In the study area, the Construction General Permit is implemented and enforced by the San Francisco Bay RWQCB, which administers the stormwater permitting program. To obtain coverage under this permit, project operators must electronically file permit registration

documents, which include a Notice of Intent, a Stormwater Pollution Prevention Plan (SWPPP), and other compliance-related documents. An appropriate permit fee must also be mailed to the State Water Resources Control Board (SWRCB).

The SWPPP identifies BMPs that must be implemented to reduce construction effects on receiving water quality based on potential pollutants. The BMPs identified are directed at implementing both sediment and erosion control measures and other measures to control potential chemical contaminants. In addition, the SWPPP must contain a visual monitoring program and a sediment monitoring plan if the site discharges directly to a water body listed on the Clean Water Act Section 303(d) list for sediment. Examples of typical construction BMPs include scheduling or limiting certain activities to dry periods, installing sediment barriers such as silt fence and fiber rolls, and maintaining equipment and vehicles used for construction. Non-stormwater management measures include installing specific discharge controls during certain activities, such as paving operations, vehicle and equipment washing, and fueling. The SWPPP also describes the BMPs for reducing pollutants in stormwater discharges after all construction phases have been completed at the site (post-construction BMPs). Dischargers are responsible for notifying the RWQCB of violations or incidents of non-compliance, and for submitting annual reports identifying deficiencies of the BMPs and explaining how the deficiencies were corrected.

The Construction General Permit requires a site-specific risk-level assessment,[3] an active stormwater effluent monitoring and reporting program during construction (for Risk Level 2 and 3 sites), rain event action plans for certain higher risk sites,[4] and numeric effluent limitations for pH and turbidity. It also includes requirements for qualified professionals who prepare and implement the plan: The risk assessment and SWPPP must be prepared by a state-certified Qualified SWPPP Developer and SWPPP implementation must be overseen by a state-certified Qualified SWPPP Practitioner.

Individual NPDES Permit

Subsequent to the 2012 EIR, the facility obtained an individual facility-wide NPDES permit, NPDES Permit Number CA0030210, currently embodied in RWQCB Order Number R2-2019-0024 (Individual NPDES Permit). The facility has an updated SWPPP and Municipal Regional NPDES Stormwater Permit (Golder 2020b) that conform to the requirements in the Individual NPDES Permit. The SWPPP is intended to achieve two purposes:

(1) Identify and evaluate sources of pollution associated with industrial activities that could affect the quality of stormwater and authorized non-stormwater discharged from the facility.

(2) Identify site-specific BMPs that the facility must implement to minimize or prevent discharge of pollutants associated with industrial activities that may be in stormwater.

[3] The Construction General Permit defines three levels of risk that may be assessed for a construction site: Risk Levels 1, 2, and 3. Risk is calculated based on the "project sediment risk," which determines the relative amount of sediment that can be discharged given the project and location details, and the "receiving water risk" (the risk that sediment discharges pose to the receiving waters).

[4] Those sites that have a high potential for mobilizing sediment in stormwater and drain to a sediment-sensitive water body.

The SWPPP addresses elimination of non-stormwater discharges, pollutant sources and associated BMPs, stormwater management, sedimentation and erosion control practices, preventative maintenance and good housekeeping practices, spill prevention and response, inspections, recordkeeping, and employee training.

Anti-Degradation Policy

The SWRCB's Anti-Degradation Policy, known as the Statement of Policy with Respect to Maintaining High Quality Water in California (SWRCB Resolution No. 68-16), restricts degradation of surface water and groundwaters in circumstances specified by Resolution 68-16. Specifically, this policy protects water bodies where existing quality is higher than necessary for the protection of beneficial uses and requires that existing high quality be maintained to the maximum extent possible.

Under the Anti-Degradation Policy, any actions that can adversely affect water quality in high-quality surface waters and groundwaters must: (1) be consistent with maximum benefit to the people of California; (2) not unreasonably affect present and anticipated beneficial uses of the water; and (3) not result in water quality less than that prescribed in water quality plans and policies. Furthermore, any actions that can adversely affect surface waters of the United States are also subject to the federal Anti-Degradation Policy (Code of Federal Regulations Title 40, Section 131.12) developed under the Clean Water Act. Discharges from the Project that could affect surface water quality would be required to comply with both the state and federal anti-degradation policies, included as part of the NPDES permit requirements for point discharges.

California Fish and Game Code

The California Department of Fish and Wildlife (CDFW) is authorized, under Fish and Game Code Sections 1600–1616, to regulate activities that would substantially divert, obstruct the natural flow of, or substantially change rivers, streams, and lakes. CDFW's jurisdictional limits are defined in Fish and Game Code Section 1602 as the "bed, channel, or bank of any river, stream, or lake."

In practice, CDFW may exert authority over activities that would adversely affect any fish and wildlife resources associated with such features. The Fish and Game Code prohibits activities that would "deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake," or that would obstruct the flow or alter the bed, channel, or bank of a river or stream (including intermittent and ephemeral streams) where there may be substantial adverse effects on a fish or wildlife resource, unless the applicant provides a notification of lake or streambed alteration and enters into a Lake and Streambed Alteration Agreement (LSAA) with CDFW that includes measures to protect fish and wildlife resources.

3.7.2 Significance Criteria

Consistent with the County of Santa Clara Environmental Checklist and the version of the CEQA Guidelines Appendix G Environmental Checklist that was in effect at the time, Section 4.10 of

the 2012 EIR determined that the proposed 2012 Reclamation Plan Amendment, including creek restoration work within the PCRA, would have a significant impact if it would:

a) Violate any water quality standards or waste discharge requirements;

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);

c) Substantially alter the existing drainage pattern of a site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or sedimentation on- or off-site;

d) Substantially alter the existing drainage pattern of a site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;

f) Otherwise substantially degrade water quality;

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows;

i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam; or inundation by seiche, tsunami, or mudflow;

j) Be located in an area of special water quality concern (e.g., the Los Gatos or Guadalupe watershed);

k) Be located in an area known to have high levels of nitrates in well water;

l) Result in a septic field being constructed on soil where a high water table extends close to the natural land surface;

m) Result in a septic field being located within 50 feet of a drainage swale, 100 feet of any well, water course or water body, or 200 feet of a reservoir at capacity; or

n) Conflict with the *Water Collaborative Guidelines and Standards for Land Uses Near Streams* (Water Collaborative Guidelines).

Updates to the CEQA Guidelines Appendix G Environmental Checklist that were finalized in December 2018 made only non-substantive revisions to these significance criteria. Specifically, the criteria were revised to include a consideration of whether project inundation by floodwaters would result in the release of pollutants and whether implementation of a project would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Accordingly, these criteria remain relevant to this SEIR's consideration of

whether the PCRP would cause any new significant impacts or a substantial increase in the severity of significant impacts than were disclosed in the 2012 EIR.

3.7.3 Direct and Indirect Effects

3.7.3.1 Methodology

The impacts of implementing the PCRP are evaluated for surface water hydrology and water quality impacts that may occur during Project construction and after the completion of the proposed restoration activities. Direct and indirect impacts on surface water hydrology and water quality could occur during on-land or in-water construction activities or after the completion of restoration activities, due to long-term effects related to the alteration of the Permanente Creek channel, bed, banks, and floodplain. The impact analyses determine whether and to what degree the Project could change the existing hydrology, water quality, and flooding conditions described in Section 3.7.1 and identify whether the Project would cause a new significant impact or a substantial increase in the severity of a significant impact than identified in the 2012 EIR. The severity of an impact is determined based on the significance criteria identified in Section 3.7.2.

Compliance with applicable federal, state, and local laws and regulations is incorporated into the analysis of impacts because such compliance is mandatory and the application of the associated protective measures (such as BMPs, monitoring and reporting plans, and corrective actions) is proven to minimize and/or avoid impacts on hydrology or water quality. Further, regulatory agencies with technical jurisdiction and authority for oversight would require adherence to regulatory requirements as a condition of Project or permit approval and would continue to enforce applicable requirements throughout the Project's construction and operation phases.

The analysis considers whether compliance with regulatory requirements designed to protect water resources would be adequate such that the Project would not cause a new significant impact or a substantial increase in the severity of a significant impact than identified in the 2012 EIR related to hydrology and water quality.

3.7.3.2 Baseline

Section 3.0.1, *Environmental Baseline*, explains that in the context of an SEIR, the CEQA baseline is adjusted such that the originally approved project is assumed. Therefore, the baseline used in this analysis to evaluate the impacts of the PCRP and alternatives consists of existing environmental conditions plus the 2012 Reclamation Plan Amendment and 2012 EIR, and the creek restoration plans evaluated therein.

For purposes of this analysis of potential impacts on hydrology and water quality, the baseline includes the area of existing surface mining disturbance and the approved extent of disturbance and reclamation, including mitigation measures and COAs imposed as part of the 2012 EIR and 2012 Reclamation Plan Amendment. This includes restoration of Permanente Creek within the 49.2-acre disturbance area identified within the PCRA. The baseline also includes the existing physical conditions of Permanente Creek, its adjacent riparian area, and drainage patterns within

the PCRA but outside the approved disturbance envelope, and existing physical conditions within the PCRP implementation area but outside the existing Reclamation Plan boundary.

3.7.3.3 Discussion of Criteria with No Impact on Hydrology or Water Quality

As set forth in Section 4.10.4 of the Draft 2012 EIR, criteria b), g), i), k), l), m), and n) were eliminated from more detailed consideration in the 2012 EIR for the reasons explained on Draft 2012 EIR pages 4.10-27 to 4.10-29. For the reasons explained there, and as supplemented below, these criteria also are not analyzed further in this SEIR.

Related to criterion n), although the PCRP includes new and additional work in and adjacent to Permanente Creek compared to that described in the 2012 EIR within the PCRA, implementation of the PCRP would not conflict with the *Water Collaborative Guidelines and Standards for Land Uses Near Streams* (County of Santa Clara 2007). The Water Collaborative Guidelines were developed collaboratively among the participating jurisdictions and stakeholders and do not represent a substantial departure from existing County policies and practices. Rather, they supplement, clarify, and provide information to the Water Collaborative Guidelines' users, such as the County, but do not impose any new regulatory requirements relevant to the PCRP.

Existing County policies, standards, discretionary permit requirements, and review procedures, including those under CEQA, are substantially consistent with the Water Collaborative Guidelines. Therefore, other than the issues addressed below in the context of the County's Environmental Checklist and the version of the Environmental Checklist that was in effect at the time of the 2012 EIR, no other aspects of the PCRP would conflict with the Water Collaborative Guidelines, and this issue is not discussed further.

3.7.3.4 Direct and Indirect Effects of the Project

The analysis in this section evaluates the potential significance of the change in the physical environment that would be caused by implementation of the PCRP relative to baseline conditions, compares that impact conclusion with the impact conclusion reached in the 2012 EIR regarding the same consideration, and then makes a determination as to whether the implementation of the PCRP would cause one or more new significant impacts or a substantial increase in the severity of significant impacts than were disclosed in the 2012 EIR. For the reasons discussed below, implementation of the PCRP would not cause a new significant impact or a substantial increase in the severity of a significant impact than was disclosed in the 2012 EIR.

Impact 3.7-1: Construction of the PCRP would not violate water quality standards, waste discharge requirements, or otherwise substantially degrade water quality.

This impact analysis corresponds to significance criteria a) and f) as set forth in Section 3.7.2 and addresses whether implementation of the PCRP would violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface water or groundwater quality such that a new significant impact, or a substantial increase in the severity of a significant impact than identified in the 2012 EIR, would occur. In the context of Impact 4.10-2 (page 4.10-

42 et seq.), the 2012 EIR concluded that interim activities proposed within the PCRA would involve active ground disturbance by excavation, grading, stockpiling, hauling, and conveyor operation. Such activities have the potential to produce runoff, to be subject to erosion, and to discharge sediment and other pollutants to Permanente Creek. Sediment control BMPs would be implemented as needed in accordance with the drainage plan and SWPPP, but more rigorous control would be necessary to avoid introducing sediment, waterborne selenium, and TDS into the drainage channels, desiltation basins, and Permanente Creek. However, implementation of Mitigation Measures 4.10-2a and 4.10-2b would reduce the impact to a less-than-significant level by requiring the aggressive use of interim BMPs to protect areas that are disturbed, temporarily inactive, and partially reclaimed from stormwater runoff and erosion. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criteria a) and f).

Project construction would include staging of construction equipment and material, earthwork, demolition and removal of existing in-channel features (such as culverts and pond impoundments), channel realignment, placement of fill and gravels, vegetation removal, and riparian planting. Stormwater runoff from disturbed soils associated with construction activities is a common source of pollutants (mainly sediment) introduced to receiving waters. Earthwork can render soil and sediments more susceptible to erosion from stormwater runoff, causing these materials to migrate in stormwater runoff to downgradient water bodies. In addition, Project construction could involve the use of various materials typically associated with construction activities, such as solvents, oil and grease, and petroleum hydrocarbons. If handled in a manner inconsistent with manufacturer recommendations or safety recommendations and requirements, these materials could be inadvertently released, mobilized, and transported off-site by stormwater runoff.

As described in Section 2.5.6, *Vegetation and Erosion Protection*, and Section 2.5.9, *Best Management Practices and Applicant-Proposed Measures*, BMPs and applicant-proposed measures (APMs) would help avoid or minimize impacts related to water quality. Additionally, because the PCRP exceeds 1 acre in size, Lehigh would be required to comply with the Construction General Permit and to prepare a SWPPP describing the BMPs it must implement to control potential water quality pollutants and prevent or minimize erosion and sedimentation. The BMPs are designed to prevent pollutants from contacting stormwater, to contain erosion, and prevent stormwater pollutants generated during construction on-site from entering off-site receiving waters.

Typical BMPs include the placement of fiber rolls or gravel barriers to detain small amounts of sediment from disturbed areas, and temporary or permanent covering of stockpiles to prevent rainfall from contacting the stockpiled material. In addition to erosion control BMPs, SWPPPs include BMPs for preventing the discharge of pollutants other than sediment (e.g., paint, solvents, concrete, petroleum products) to downstream waters. BMPs for pollutants include conducting routine inspections of equipment for leaks, maintaining and managing material containers to ensure that they are intact and clearly labeled, and ensuring that construction materials are disposed of in accordance with applicable regulations. Under the provisions of the Construction General Permit,

the state-certified QSD is responsible for determining the site's risk level for sediment transport, developing the SWPPP, and managing its implementation. Compliance with the Construction General Permit is required by law and has proven effective in protecting water quality at construction sites.

Further, the Project would be required to obtain a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers, a Clean Water Act Section 401 water quality certification from the San Francisco Bay RWQCB, and a Fish and Game Code Section 1600 LSAA from CDFW before initiating any construction activities. These permits require targeted avoidance and minimization measures, performance standards, and implementation of BMPs that are specific to construction within and adjacent to stream channels, floodplains, and the riparian zone. Typical requirements include minimizing vegetation removal, using hand tools to reduce soil disturbance for earthwork on or near steep slopes, restricting vehicle refueling or maintenance within stream channels, implementing erosion and control measures, diverting runoff from steep erodible areas to stable locations, and implementing seasonal work windows to avoid construction within flowing waters.

Summary

Compliance with the requirements of the Construction General Permit, Section 404 Clean Water Act permit, Section 401 water quality certification, and Section 1600 LSAA, in addition to implementation of the BMPs and APMs proposed as part of the Project, would avoid or minimize the discharge of pollutants to surface waters or groundwater, and would minimize or eliminate potential degradation of surface water or groundwater quality during construction of the Project. For example, consistent with the recommendation made in the *Permanente Creek Restoration Plan Updated 90% Level Submittal Design Basis Technical Memorandum* (90% Design Memo) (Appendix C) and as stated in BMP-8 in Section 2.5.9.1, of Chapter 2, *Project Description*, Lehigh would conduct construction activities only during the summer months when Permanente Creek flow and precipitation is typically at a seasonal low, reducing the potential for storm runoff–based erosion and the transport of sediment to downstream waters. Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR related to the violation of water quality standards, waste discharge requirements, or the degradation of water quality.

> **Baseline Mitigation from 2012 EIR:** Mitigation Measures 4.10-1a: and 4.10-1b. The text of each is provided in Draft SEIR Table H1, *Impacts and Mitigation Measures for the 2012 Permanente Quarry Reclamation Plan Amendment*.
>
> **Additional Mitigation:** None required.

Impact 3.7-2: The PCRP would not substantially alter existing drainage patterns, including through the alteration of Permanente Creek, in a manner that would result in substantial erosion, sedimentation, or additional sources of polluted runoff.

This impact analysis corresponds to significance criteria c) and e) as set forth in Section 3.7.2 and addresses whether alterations to Permanente Creek, including the bed, banks, channel alignment, floodplain, riparian zone, and adjacent slopes and access roads, would alter the hydrologic regime along Permanente Creek such that substantial erosion and/or sedimentation occurs, including as a result of slope instability. In the context of Impact 4.10-3 (page 4.10-47 et seq.), the 2012 EIR analysis determined that the actions proposed for the PCRA would result in a less-than-significant impact because they would stabilize slopes adjacent to the creek; remove active sources of sediment, selenium (i.e., removal of limestone boulders), and TDS; revegetate eroded soil areas; remove instream structures; and regrade and restore the creek within several reaches. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criteria c) and e).

After the completion of the PCRP, the improved and restored channel of Permanente Creek would cause the creek to follow a new course. Depending on the change in the water surface slope, the geometry of the altered channel bed and banks, and the establishment of floodplain areas, an increase in flow depth within Permanente Creek could translate to an increase in flow velocity and a subsequent increase in the channel's capacity to erode and mobilize bed and bank sediments (hydromodification). Understanding sediment transport and the conditions under which sediment is deposited or eroded from altered streams is important to understanding and managing hydromodification, erosion, and sedimentation. The 90% Design Memo (Appendix C) describes in detail the model analyses conducted to inform the design of the PCRP such that hydromodification-related impacts are avoided, as summarized in the following discussion.

The PCRP has been designed to ensure channel stability and maintain the continuity of natural sediment transport within the improved and restored channel it would establish in Permanente Creek. Also, floodplain areas constructed as part of the PCRP would create depositional zones for sediment to reduce sediment transport and improve water quality as compared to the baseline.

Pre- and post-Project channel hydraulics were modeled as part of Project design development to ensure channel stability (Appendix C), including during the years immediately after construction while vegetation is becoming established and exposed soils have a greater potential for erosion. Channel hydraulics were modeled using Hydrologic Engineering Center River Analysis System (HEC-RAS) 5.0.4 river analysis software[5] under a range of flow regimes (1.5-year, 10-year, and 100-year flows). HEC-RAS results confirmed that appropriate bankfull channel dimensions were incorporated into PCRP designs based on drainage areas and watershed characteristics. Model results were also used to evaluate the sizing of streambed gravels (e.g., engineered streambed material), and channel stability and erosion protection. Based on the HEC-RAS modeling, surface treatments and grade control elements have been incorporated into the PCRP design to minimize

[5] HEC-RAS river analysis software was developed by the U.S. Army Corps of Engineers and is a standard model used for such assessments.

and/or avoid episodic or chronic releases of sediments to the creek during Project implementation. A full description of the design elements is presented in Appendix C; those relevant to erosion, sedimentation, and water quality are summarized below:

(1) **Use of engineered streambed material[6] (ESM) as channel substrate where the bed is reconstructed, consistent with CDFW design guidelines.** ESM would be mixed based on engineering requirements incorporated into the Project design and placed in appropriate locations to look and behave like a natural streambed (see Appendix C, Sheet C36). The ESM material has been designed to remain stable during the 100-year recurrence interval flow, with only minor adjustments to channel shape in reaches with bed slopes less than approximately 6–8 percent. In steeper reaches, the ESM is designed to adjust as occurs naturally in streams to form new pools and altered step geometry in response to flood flows.

(2) **Use of floodplain armor to protect newly constructed floodplain surfaces.** The floodplain armor has been sized similarly to ESM, using CDFW design guidelines, and is designed to be stable under design flood flows while providing appropriately sized material to enhance constructed floodplain habitats. Sufficient fine material has been included to ensure that vegetation can establish. As with the ESM, the floodplain armor has been designed to remain stable during a 100-year flood event.

(3) **Use of vegetated rock slope protection, including boulders of a specified gradation with live stakes[7] to protect newly constructed streambanks that are steeper than 2:1 horizontal:vertical (H:V)**. Rock slope protection is proposed to provide channel stability at the removal areas for Culverts #7 and #9, where the south bank would be left in an over-steepened condition after culvert removal, and where the floodplain bench conforms to the inlet of Culvert #6 at the downstream end of the Channel Widening Area.

(4) **Use of boulder sills.** Boulder sills would periodically extend across the proposed floodplains to serve as grade control if significant erosion were to occur along floodplain areas.

(5) **Use of boulder weirs**. Weirs would be incorporated into the ESM and keyed into the floodplain armor to provide grade control at locations of energy dissipation where channel flow plunges into pools.

(6) **Rapidly establishing vegetation.** In disturbed work areas, vegetation that can rapidly establish roots would be used to stabilize soils and reestablish a dense riparian canopy. Vegetation, including live stakes, container plants, and seeding, would be established to provide rooting strength to help reinforce substrate along the channel, at floodplain and riparian areas, and on newly constructed creek banks. Revegetation would also be the primary means of erosion control on slopes above the limits of floodplain armor (i.e., 10-year water surface). These areas would be seeded and planted.

(7) **Erosion control BMPs.** Although revegetation would be the primary means of erosion control, mulch, erosion control fabric and fiber rolls, and sediment barrier fencing would also be used while vegetation becomes established and/or as appropriate, pending constructed geometry and on slopes over 2.5:1 (H:V).

6 ESM refers to a well-graded mixture of boulders, cobble, gravel, sand, and fines, proportioned in a way that is stable under design flood flows and still meets habitat enhancement goals.

7 "Live stakes" are live plant cuttings, typically taken from willows, capable of regenerating into mature plants.

Further, although the PCRP ultimately would reduce erosion and sedimentation, some minor erosion of fine sediment would occur in the first year as vegetation becomes established. PCRP implementation would be phased (see Section 2.5.7, *Construction Sequencing*), so the area of potential short-term erosion would be limited in any given year.

In 2022, Golder Associates (Golder) assessed the potential for PCRP implementation to result in water quality impacts from polluted runoff caused by the leaching of selenium, molybdenum, and other metals after the use of on-site materials as backfill and the exposure of natural bedrock[8] as part of channel restoration (see Appendix G3). Sampling and geochemical analysis of the materials proposed for use as fill indicates that they have a low potential to leach selenium and other metals at levels above surface water or groundwater quality standards, and that such materials are therefore suitable for use as fill material and would not cause water quality to exceed regulatory standards or waste discharge requirements. Further, the results of Golder's water quality analysis (Appendix G3) determined that the removal of overlying material and the exposure of existing bedrock (primarily greenstone and Santa Clara Formation deposits) for the restored creek channel would not contribute to an increase of instream concentrations of constituents of concern (i.e., selenium and metals). Additionally, the primary area where limestone would naturally remain, e.g., Reach 18, would consist of non-disturbed bedrock, which, as demonstrated by upstream conditions, is not expected to contribute metals to the water column. Therefore, significant changes in the natural system would not occur and new source material would not be exposed to potentially undergo oxidation and mobilization of selenium based on the limestone bedrock present.

Although the creation of floodplain benches would allow for significant sediment storage within the PCRP reaches, sediment mobilized from Project areas or areas outside the influence of the Project may accumulate in unanticipated locations within the reconstructed channel segments. Such an accumulation could lead to on- or off-site erosion or sedimentation. To address this, Lehigh would evaluate areas of significant aggradation[9] as part of the monitoring and adaptive management program (see Section 2.5.8, *Monitoring and Adaptive Management*). In addition, corrective measures would be proposed to ensure that sediment and/or debris does not accumulate at locations that could affect Project stability. Lehigh would inspect each PCRP reach during the first year after construction following storms that deliver 1.5 inches or more of rainfall. If erosion or sedimentation does occur, the cause would be evaluated and adaptive management practices would be developed to help stabilize the area. The default approach at areas of erosion would be the installation of additional vegetation.

The 2012 EIR concluded that reclamation activities proposed within the PCRA would be an overall improvement to the hydrologic regime along Permanente Creek and would reduce erosion and sediment transport, improve water quality, and create greater long-term slope stability, thereby minimizing sediment sources. The 2012 EIR stated that the PCRP would remove soils,

8 Natural bedrock consists of limestone, greenstone, graywacke, Santa Clara Formation, and undisturbed soil/colluvium. See Section 3.5, *Geology and Soils*.

9 Aggradation is the process by which sediment is built up over time in a river system due to the deposition of sediment in areas in which the supply of sediment is greater than the amount of material that the system is able to transport.

rock, and overburden that may contain limestone from the creek channel, and posited that the removal activities might be a major source of selenium within Permanente Creek. Given the Project controls discussed in other sections of this SEIR, removal activities are not expected to be a significant source of selenium. Further, removal of the material from the creek channel could result in a slight improvement to receiving water quality in Permanente Creek. Consequently, the PCRP is not expected to be a significant source of selenium within Permanente Creek. Further, the PCRP would result in reduced erosion and sediment transport, reducing the exposure of selenium-bearing soils eroded and transported under low- and high-flow (i.e., flood flow) scenarios.

Based on the Project-proposed specific design elements and construction techniques described above, implementation of the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR relating to the alteration of drainage patterns in a manner which would result in substantial erosion, sedimentation, or additional sources of polluted runoff.

Baseline Mitigation from 2012 EIR: None required.

Additional Mitigation: None required.

Impact 3.7-3: The PCRP would not substantially alter existing drainage patterns, including through the alteration of Permanente Creek, such that conveyance capacity is exceeded and flooding on- or off-site occurs.

This impact analysis corresponds to significance criteria d) and e) as set forth in Section 3.7.2 and addresses whether alterations to the Permanente Creek bed, banks, channel alignment, floodplain, riparian zone, and adjacent slopes and access roads would alter the hydrologic regime along Permanente Creek to such a degree that flooding occurs on- or off-site. In the context of Impact 4.10-4 (page 4.10-48 et seq.), the 2012 EIR analysis determined that the actions proposed for the PCRA would not increase 100-year flows in Permanente Creek. Further, Mitigation Measure 4.10-4 in the 2012 EIR requires Lehigh to design and construct detention facilities that would manage increased runoff, reduce excessive discharges to Permanente Creek, and develop the capacity to detain and release the 100-year flow, using on-site detention ponds to ensure that off-site, downstream flows do not cause an increased flooding risk or result in hydromodification. Lehigh remains subject to Mitigation Measure 4.10-4 and the PCRP would not conflict with the implementation of Mitigation Measure 4.10-4.

Under existing conditions, the quarry pit captures drainage from 361.5 acres. Pit water can be pumped to Permanente Creek via the Upper and Lower FTS at an approved maximum discharge of 6.2 cubic feet per second pursuant to the current NPDES permit (Order No. R2-2019-0024, Permit No. CA0030210). This condition is proposed to continue through Phase 1 of the 2012 Reclamation Plan Amendment, including the implementation of restoration activities in the PCRA. As described in Section 4.10.1.4 of the Draft 2012 EIR (page 4.10-17 et seq.), with respect to conveyance capacities, the *Santa Clara County California Drainage Manual* (Drainage

Manual) (see Draft 2012 EIR, page 4.10-26) requires that new stormwater drainage systems and channels be designed to convey the 10-year storm without surcharge, and to safely convey the 100-year flow. The Drainage Manual identifies multiple design standards, methods of analyses, and engineering tools required for the planning and design of stormwater drainage systems and flood control facilities within the county. The hydrologic analyses presented in the 2012 EIR are consistent with the Drainage Manual. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criteria d) and e).

The PCRP was designed with the HEC-RAS 5.0.4 river analysis hydrologic model to verify that channel dimensions are appropriately sized to convey flood flows and remain stable under a range of flow regimes (1.5-year, 10-year, and 100-year flows), and to confirm that bankfull channel dimensions are adequate so that infrastructure and access roads remain stable in 100-year flood flows. The results of hydrologic modeling are presented in the 90% Design Memo (Appendix C). Based on the model analysis and design, the PCRP would benefit Permanente Creek by increasing hydraulic capacity. Construction of broader and more functional floodplains and the removal of culverts and other instream structures would increase hydraulic capacity, provide additional storage of extreme flood flows, and increase the sediment storage capacity and attenuate the downstream transport of sediment during extreme flood events. The proposed design would not significantly alter depth or velocities in downstream reaches. There would be no substantial change in runoff flow rates because neither the drainage pattern of the tributary area nor the volume of flows within the channel would be altered. Therefore, there would be no substantial increase in the rate or volume of surface runoff or instream flows as compared to that disclosed in the 2012 EIR. For these reasons, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** related to the alteration of drainage that could cause on- or off-site flooding.

> **Baseline Mitigation from 2012 EIR:** Mitigation Measure 4.10-4, the text of which is provided in Draft SEIR Table H1, *Impacts and Mitigation Measures for the 2012 Permanente Quarry Reclamation Plan Amendment*.
>
> **Additional Mitigation:** None required.

Impact 3.7-4: The PCRP would not place structures that would impede or redirect flood flows within a 100-year flood hazard area.

This impact analysis corresponds to significance criterion h) as set forth in Section 3.7.2 and addresses whether implementing the PCRP would impede or redirect flood flows associated with a 100-year flood event. In the context of Impact 4.10-4 (Final 2012 EIR, page 3.1-43 et seq.), the 2012 EIR concluded that interim reclamation activities proposed within the PCRA would not increase 100-year flood flows or increase flood risks related to the 100-year flood event as compared to the baseline level through Phase 1 of the 2012 Reclamation Plan Amendment. For the reasons discussed below, the implementation of restoration activities as described in the

PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR for significance criterion h).

As described in the Draft 2012 EIR (Section 4.10.1.2, page 4.10-16), FEMA is responsible for mapping areas subject to flooding during a 100-year flood event (i.e., a flood event that has a 1 percent chance of occurring in a given year). According to FEMA, and as described in the Draft 2012 EIR, the 100-year flood hazard zone for Permanente Creek extends upstream to, and includes, Reach 6 and Reach 7 (the "Concrete Channel Area") (Draft 2012 EIR Figure 4.10-1, page 4.10-2). Within and near Reaches 6 and 7, the 100-year flood hazard zone for Permanente Creek is relatively narrow, extending 200–300 feet across. As described in Section 2.5.1, within Reaches 6 and 7, Lehigh would plant native riparian vegetation and trees on the southern bank along the concrete channelized portion of Permanente Creek to improve shading and reduce vegetation growth within the channel to improve sediment transport and enhance fish passage. The development of a mature riparian canopy along the southern bank of the creek in the upland slopes above the concrete channel is proposed to shade the concrete channel, and thus to reduce solar heat gain on instream flow and discourage the establishment of cattails. Accordingly, implementation of the PCRP would not include the placement of structures within a 100-year flood hazard area. Additionally, the reduction of vegetation, such as cattails, within the Permanente Creek channel would improve flood conveyance capacity. Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** than was disclosed in the 2012 EIR related to redirecting flood flows associated with a 100-year flood hazard area.

> **Baseline Mitigation from 2012 EIR:** Mitigation Measure 4.10-4, the text of which is provided in Draft SEIR Table H1, *Impacts and Mitigation Measures for the 2012 Permanente Quarry Reclamation Plan Amendment*.
>
> **Additional Mitigation:** None required.

3.7.4 Cumulative Effects

The Draft 2012 EIR analyzed potential cumulative effects in Section 6.2.10, *Hydrology and Water Quality* (page 6-23 et seq.). Revisions to the analysis presented in the Final 2012 EIR in Section 4.2.7 (pages 4-22 and 4-23) concluded that the 2012 Reclamation Plan Amendment, including creek restoration within the PCRA, would not result in a cumulatively considerable contribution to any significant cumulative effect. For the reasons discussed below, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** in the cumulative context than was disclosed in the 2012 EIR.

As described in the 2012 EIR, the two primary impacts relevant to cumulative impacts from PCRP implementation are water quality and changes to drainage patterns that cause hydromodification and/or on- and off-site flooding.

Project construction activities would be consistent with the Construction General Permit; compliance is required by law, and the provisions of the permit and BMPs for the construction and post-construction phases have proven effective in protecting water quality at construction sites and downgradient receiving waters. NPDES general permits are designed to establish the regulatory requirements for a broad range of construction activities under differing site conditions with similar discharge characteristics (SWRCB 2012). A standard set of permit requirements prescribed via the Construction General Permit provides effective protection of water resources and ensures compliance with water quality standards for discharges of stormwater from construction sites with common receiving waters.

In this way, the Construction General Permit addresses cumulative discharges and/or pollutants arising from construction sites throughout the state. For example, two adjacent construction sites would be required to implement BMPs to reduce and control the release of sediment and/or other pollutants in any runoff leaving their respective sites. The runoff water from both sites would be required to achieve the same action levels, measured as a maximum amount of sediment or pollutant allowed per unit volume of runoff water. Thus, even if the runoff waters were to combine after leaving the sites, the sediments and/or pollutants in the combined runoff would still be at concentrations (amount of sediment or pollutants per volume of runoff water) below action levels and would not combine to cause any cumulatively considerable contribution to any significant cumulative effect.

After construction, the PCRP would result in an overall improvement to the hydrologic regime along Permanente Creek and in a reduction of erosion and sediment transport, water quality improvements, and greater long-term slope stability, which would reduce sediment sources. The PCRP additionally would benefit Permanente Creek by increasing hydraulic capacity. Construction of broader, more functional floodplains and the removal of culverts and other instream structures would increase hydraulic capacity, provide additional storage of extreme flood flows, increase sediment storage capacity, and attenuate the downstream transport of sediment during extreme flood events. The proposed design would not significantly alter depth or velocities in downstream reaches and would reduce the potential for on- or off-site flooding as compared to existing conditions. Through the implementation of BMPs, surface treatments, PCRP design elements, and monitoring and adaptive management (described in Sections 2.5.6 through 2.5.9), the Project's incremental contribution to sedimentation, hydromodification, flooding, and flood hazards would not be cumulatively significant.

For these reasons, implementation of the PCRP would not create any new significant impact or a substantial increase in the severity of a significant cumulative impact to hydrology or water quality than was disclosed and evaluated in the 2012 EIR.

3.7.5 References

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U.S. EPA, 2022. NPDES Monitoring Data for Facility CA0030210 from January 2012 to January 2022. Available: https://echo.epa.gov/trends/loading-tool/get-data/monitoring-data-download. Accessed January 25, 2022.

3.8 Project Consistency with 2012 EIR

3.8.1 Introduction

The County prepared the 2012 EIR pursuant to the provisions of CEQA (Public Resources Code Section 21000 et seq.) and the CEQA Guidelines (California Code of Regulations Title 14, Section 15000 et seq.) that were current at the time. Since then, the Environmental Checklist Form in CEQA Guidelines Appendix G has been revised to address the analysis and mitigation of potential significant impacts on tribal cultural resources (September 27, 2016) and to reflect a comprehensive update to the CEQA Guidelines (December 28, 2018) that addressed legislative changes to CEQA, clarified certain portions of the existing CEQA Guidelines, and updated the CEQA Guidelines to be consistent with more recent court decisions. The thresholds and analyses in this SEIR reflect the latest CEQA Guidelines, current as of the publication of this SEIR.

The following sections discuss the consistency of the Permanente Creek Restoration Plan (PCRP) with the 2012 EIR for the resources that are not otherwise discussed in this SEIR. The analysis reflects the current criteria and thresholds in CEQA Guidelines Appendix G; lists the significance determination for each resource area based on the analysis in the 2012 EIR, where applicable; and determines whether further analysis is required or whether the analysis from the 2012 EIR is sufficient. Further analysis would be required if substantial evidence in the record presents new significant effects or a substantial increase in the severity of significant effects disclosed in the prior EIR (Public Resources Code Section 21166; CEQA Guidelines Section 152162[a]). This could be true, for example, if newly proposed activities would occur outside the boundary of an area previously analyzed or at a greater intensity than previously evaluated. By comparison, a prior EIR is sufficient where changes to a project, changes in circumstances, or new information of substantial importance would not result in a new significant effect or a substantial increase in the severity of a significant effect relative to the impacts disclosed in the prior EIR.

For this Project, changes are reflected in the PCRP, which updates Lehigh's March 2011 draft 2011 Creek Restoration Plan to propose creek restoration activities outside of the existing Reclamation Plan boundary (i.e., in Reaches 6–8) and within the restoration area referred to in the 2012 EIR as the Permanente Creek Restoration Area (PCRA) but located outside of the PCRA's disturbance area. See Section ES.2.2, *Focus of This SEIR*, for details. The County has determined, based on the detailed analysis in Sections 3.1 through 3.7 and as summarized below, that no additional changes to the 2012 EIR are needed for it to provide sufficient documentation of the environmental impacts of the PCRP.[1]

[1] Informed by the scoping process (summarized in **Appendix A**, *Scoping Report*), the County Planning Department initially determined that there was a potential for the PCRP to result in a new significant impact or a substantial increase in the severity of a significant impact relative to the impacts disclosed in 2012 EIR in seven resource areas: air quality; biological resources; cultural resources; energy; geology, soils, seismicity, and paleontology; greenhouse gas emissions; and hydrology and water quality. This is why these topics are analyzed in greater detail in this SEIR than the topics described below, although the conclusions ultimately are the same for all topics: No additional changes to the 2012 EIR are needed for it to provide sufficient documentation of the environmental impacts of the PCRP.

3.8.2 Aesthetics, Visual Quality, and Light and Glare

Issues (and Supporting Information Sources):		*2012 EIR Determination*	*2012 EIR Sufficient*	*Further Analysis Required*
I.	**AESTHETICS —** Except as provided in Public Resources Code Section 21099, would the project:			
a)	Have a substantial adverse effect on a scenic vista?	Significant and Unavoidable	☒	☐
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Significant and Unavoidable	☒	☐
c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Significant and Unavoidable	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	Less than Significant with Mitigation	☒	☐
e)	If subject to Architecture and Site Approval (ASA), be generally in non-compliance with the Guidelines for ASA.	No Impact	☒	☐
f)	If within a Design Review Zoning District for purposes of viewshed protection (d, -d1, -d2), conflict with applicable General Plan Policies or Zoning Ordinance provisions.	No Impact	☒	☐

3.8.2.1 Discussion of Aesthetics

a, b, c) The 2012 EIR concluded that the 2012 Reclamation Plan Amendment, including the proposed restoration activities within the PCRA, would result in significant and unavoidable impacts on scenic vistas, scenic resources within a state scenic highway, and the visual character or quality of public views of the site. However, as noted in the 2012 EIR (page 4.1-23), the PCRA is not visible because of the site's topography and public inaccessibility. Therefore, activities occurring in the PCRA would not contribute to the significant and unavoidable impact determination for these criteria. PCRP activities would occur in the same area as the PCRA, with the exception of a 12.9-acre portion within the existing Reclamation Plan boundary where creek restoration activities were not analyzed in the 2012 EIR, and an additional 2.5-acre area outside the Reclamation Plan boundary where work would occur pursuant to the PCRP. As shown in Figure 2-3 in Chapter 2, *Project Description*, both of these areas are located in the immediate vicinity of Permanente Creek and would not be visible for the same reasons as described above. Therefore, the PCRP would similarly not contribute to the visual and aesthetic impacts described in the 2012 EIR. The PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impacts disclosed in the 2012 EIR for these significance criteria.

d) The 2012 EIR concluded that new sources of light or glare could adversely affect day or nighttime views in the PCRA, but that implementing Mitigation Measure 4.1-7 would reduce the potential impact to a less-than-significant level. This mitigation measure

pertains to night lighting of the East Materials Storage Area and would not have any interaction with activities proposed in the PCRA or the PCRP. No night lighting is expected to occur with proposed PCRP activities. Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

e) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would result in no impact regarding compliance with the Guidelines for ASA because the criterion applies to the construction or major modification of buildings and development projects. The PCRP would similarly not result in development subject to ASA. Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

f) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would result in no impact regarding a conflict with applicable Santa Clara County General Plan (General Plan) policies or zoning ordinance provisions. This criterion applies to the construction or major modification of buildings and structures. The PCRP does not propose to construct any buildings; therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

3.8.2.2 Consistency Conclusion for Aesthetics

Consistent with the findings of the 2012 EIR, implementation of the PCRP would result in **no new significant impacts** and **no substantial increase in the severity of significant impacts** relative to the impacts disclosed in the 2012 EIR related to aesthetics.

3.8.3 Agriculture and Forestry Resources

Issues (and Supporting Information Sources):	*2012 EIR Determination*	*2012 EIR Sufficient*	*Further Analysis Required*
II. AGRICULTURE AND FORESTRY RESOURCES — In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:			
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	No Impact	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact	☒	☐

Issues (and Supporting Information Sources):	*2012 EIR Determination*	*2012 EIR Sufficient*	*Further Analysis Required*
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	No Impact	☒	☐
d) Result in the loss of forest land or conversion of forest land to non-forest use;	No Impact	☒	☐
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.	No Impact	☒	☐

3.8.3.1 Discussion of Agriculture and Forestry Resources

a) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would result in no impact regarding the conversion of Farmland to non-agricultural use because the Farmland Mapping and Monitoring Program classifies the PCRA as "Other Land." The 2012 EIR also concluded that the Project would not convert any farmland classified by the *Soils of Santa Clara County* report as prime to non-agricultural use. PCRP activities would occur in the same area as the PCRA, with the exception of a 12.9-acre portion within the existing Reclamation Plan boundary where creek restoration activities were not analyzed in the 2012 EIR, and an additional 2.5-acre area outside the Reclamation Plan boundary where work would occur pursuant to the PCRP. These areas are classified as "Other Land," with a small portion classified as "Urban and Built-Up Land" (DOC 2021). PCRP activities would occur on some of the same soils as described in the 2012 EIR: "Pits, mine" and "Mouser-Maymen complex," neither of which is classified as prime in the *Soils of Santa Clara County* report (see 2012 EIR page 4.2-7, Figure 4.2-1, *Soil Types in the Project Area*). Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

b) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would not conflict with existing zoning for agricultural use and that the Project area is not subject to a Williamson Act contract. PCRP activities would occur in the same area as the PCRA, with the exception of the areas described above under criterion a). A portion of the PCRP area is zoned Exclusive Agriculture (see 2012 EIR page 4.11-5, Figure 4.11-1, *Santa Clara County Zoning Designations*). As discussed in the 2012 EIR, the General Plan envisioned lands within this zoning district as areas for agricultural and open space uses. The PCRP is designed to reclaim lands for future open space uses; therefore, PCRP activities would not conflict with the underlying zoning designation. The PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

c, d) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would not conflict with existing zoning for, or cause rezoning of, forest land or timberland; and that they would not result in the loss of forest land or convert forest land to non-forest use. It also concluded that no trees would be removed in the PCRA as a result of the 2012 project. Instead, as with the PCRP, reclamation would result in revegetation and maintenance of revegetated areas. Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impacts disclosed in the 2012 EIR for these significance criteria.

e) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would not involve other changes in the environment that could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. As with the 2012 project, there is no active farmland in the PCRP or on adjacent parcels, and the PCRP would not convert forest land to non-forest use. The PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

3.8.3.2 Consistency Conclusion for Agriculture and Forestry Resources

Consistent with the findings of the 2012 EIR, implementation of the PCRP would result in **no new significant impacts** and **no substantial increase in the severity of significant impacts** relative to the impacts disclosed in the 2012 EIR related to agriculture and forestry resources.

3.8.4 Hazards and Hazardous Materials

Issues (and Supporting Information Sources):	*2012 EIR Determination*	*2012 EIR Sufficient*	*Further Analysis Required*
IX. HAZARDS AND HAZARDOUS MATERIALS — Would the project:			
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less than Significant	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Less than Significant	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No Impact	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	No Impact	☒	☐

Issues (and Supporting Information Sources):		*2012 EIR Determination*	*2012 EIR Sufficient*	*Further Analysis Required*
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No Impact	☒	☐
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No Impact	☒	☐
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	No Impact	☒	☐
h)	Provide breeding grounds for vectors;	Less than Significant	☒	☐
i)	Result in a safety hazard due to proposed site plan (i.e., parking layout, access, closed community, etc.)	No Impact	☒	☐
j)	Involve construction of a building, road or septic system on a slope of 30% or greater	No Impact	☒	☐
k)	Involve construction of a roadway greater than 20% slope for a distance of 300 feet or more.	No Impact	☒	☐

3.8.4.1 Discussion of Hazards and Hazardous Materials

a) The 2012 EIR concluded that required compliance with laws and regulations governing the transport, use, and disposal of hazardous materials would be sufficient to ensure that the impacts associated with the potential to create a significant hazard to the public or the environment during PCRA reclamation and restoration activities would be less than significant. The PCRP activities would be implemented using construction methods and equipment similar to those described for the PCRA and would be subject to the same compliance with required hazardous materials laws and regulations for the transport, use, and disposal of hazardous materials. Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

b) As discussed under criterion a), above, the PCRP activities would be implemented using construction methods and equipment similar to those described for the PCRA in the 2012 EIR and would be subject to the same required compliance with laws and regulations governing the transport, use, and disposal of hazardous materials. Accidents or mechanical failure involving heavy equipment or leaks and spills from storage tanks could result in the accidental release of small quantities of fuel, lubricants, hydraulic fluid, or other hazardous substances; however, any such spills would be readily cleaned up in compliance with regulatory requirements and would not create a significant hazard to the public or the environment. Further, as described in Section 3.7, *Hydrology and Water Quality*, impacts associated with the potential for an upset or accident to create a significant hazard to the public or the environment would be less than significant as a result of compliance with National Pollutant Discharge Elimination System requirements (including implementation of a storm water pollution prevention plan and associated best management practices during Project construction activities. The PCRP would cause **no**

new significant impact and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

c) The 2012 EIR concluded that although hazardous materials and wastes have been and continue to be present in the 2012 project area, the proposed reclamation and restoration activities within the PCRA would cause no impact related to criterion c) because no schools are located within 0.25 mile of the proposed activities. Impacts related to potential hazardous emissions are analyzed in Section 3.1, *Air Quality*. The PCRP activities would occur in the same area as the PCRA, with the exception of a 12.9-acre area within the existing Reclamation Plan boundary where creek restoration activities were not analyzed in the 2012 EIR, and an additional 2.5-acre area outside the Reclamation Plan boundary where work would occur pursuant to the PCRP. These areas are located along a narrow strip of land along Permanente Creek that also would not be located within 0.25 mile of a school. The PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

d) The 2012 EIR concluded that the 2012 project area for the proposed reclamation and restoration activities within the PCRA is not listed on any regulatory agency's list of hazardous materials sites. As with the 2012 project, the 2.5-acre PCRP area outside the Reclamation Plan boundary is not listed on any regulatory agency's list of hazardous materials sites. The PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

e) The 2012 EIR concluded that the PCRA is not located in an area covered by an airport land use plan or a public airport land use plan, or within the vicinity of a private airstrip, and that therefore, no airport-related safety hazard for people residing or working in the PCRA would result. Also, based on the intended future open space use of the PCRA, it is not expected that anyone would reside or work within the PCRA once reclamation is complete. As with the 2012 project, the 2.5-acre PCRP area outside the Reclamation Plan boundary is not located in an area covered by an airport land use plan or a public airport land use plan, or within the vicinity of a private airstrip, and it is not expected that anyone would reside or work within the PCRP area outside the Reclamation Plan boundary once the PCRP is complete. The PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

f) The 2012 EIR concluded that the PCRA would not impair implementation of or physically interfere with the County Emergency Operations Plan or result in the complete or partial closure of public roadways, interfere with any identified evacuation route, restrict access for emergency response vehicles, or restrict access to critical facilities such as hospitals or fire stations, because the PCRA is located entirely on private property. As with the PCRA, the 2.5-acre PCRP area outside the Reclamation Plan boundary would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The PCRP would cause **no new significant impact**

and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

g) Reclamation-related activities conducted as part of the PCRA would be substantially similar to existing quarry operations, and the types of equipment used to conduct existing mining operations would continue to be used to implement PCRA reclamation activities. Existing regulations governing the use of construction equipment in fire-prone areas would continue to apply. These regulations restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that has an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided on-site for various types of work in fire-prone areas. Because there would be no change in the exposure of people or structures to risks involving wildland fires relative to baseline conditions, the 2012 EIR concluded that the PCRA would cause no impact related to criterion g). The PCRP would be implemented using construction methods and equipment similar to those described for the PCRA reclamation activities. The PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion. See Section 3.8.14, *Wildfire*, for additional discussion of wildfire-related considerations.

h) The 2012 EIR stated that the sedimentation basins proposed in the PCRA would be managed with inspection and vegetation removal to avoid attracting mosquitoes, and that the basins would not provide breeding grounds that would promote mosquito population growth because they would be designed to drain completely after storm events. As a result, the 2012 EIR concluded that the PCRA would not provide a source of standing water that could provide breeding grounds for mosquitoes, which can be vectors for disease transmission. No new sedimentation basins are proposed as part of the PCRP. The PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

i) Implementation of the PCRP would consist of backfilling, grading, slope stability work, revegetation, and other reclamation activities similar to those described in the 2012 EIR for the PCRA. As described in the 2012 EIR, the PCRP does not include a "site plan" as such, and safety hazards related to the placement and stability of backfill material are addressed in Section 3.5, *Geology, Soils, Seismicity, and Paleontology*. The PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

j, k) As described in the 2012 EIR for the PCRA, the PCRP would not involve construction of any buildings, roads, or septic systems on a slope of 30 percent or greater or a roadway greater than 20 percent slope for a distance of 300 feet or more. Safety hazards related to slope stability and the placement and stability of backfill material are addressed in

Section 3.5, *Geology, Soils, Seismicity, and Paleontology*. The PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

3.8.4.2 Consistency Conclusion for Hazards and Hazardous Materials

Consistent with the findings of the 2012 EIR, implementation of the PCRP would result in **no new significant impacts** and **no substantial increase in the severity of significant impacts** relative to the impacts disclosed in the 2012 EIR related to hazards and hazardous materials.

3.8.5 Land Use and Planning

Issues (and Supporting Information Sources):		*2012 EIR Determination*	*2012 EIR Sufficient*	*Further Analysis Required*
XI.	**LAND USE AND PLANNING —** Would the project:			
a)	Physically divide an established community?	No Impact	☒	☐
b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	No Impact	☒	☐
c)	Conflict with the West Valley Hillsides Preservation Area?	No Impact	☒	☐
d)	Be incompatible with adjacent land uses?	Less than Significant	☒	☐

3.8.5.1 Discussion of Land Use and Planning

a) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would not physically divide an established community. PCRP activities would occur in the same area as the PCRA, with the exception of a 12.9-acre portion within the existing Reclamation Plan boundary where creek restoration activities were not analyzed in the 2012 EIR, and an additional 2.5-acre area outside the Reclamation Plan boundary where work would occur pursuant to the PCRP. PCRP activities similarly would not propose any structures, facilities, or land use changes that would create a physical barrier within any community. The PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

b) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. PCRP activities would be similar to the restoration activities analyzed in the 2012 EIR. For example, creek restoration on the Project site pursuant to the PCRP would further General Plan Policy R-LU 197, which recommends that the "natural beauty of the West Valley hillsides area… be maintained for its contribution to the overall quality of life of current and future generations" (Draft 2012 EIR, page 4.11-4), and restoration of the Project site would be

consistent with the General Plan, zoning, and land use and planning policies. Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

c) The 2012 EIR concluded that the only special planning area applicable to the project site is the West Valley Hillsides Preservation Area. The proposed reclamation and restoration activities within the PCRA would be consistent with the policies for this area as it would reclaim existing land disturbance to conform to the surrounding topography in contour and vegetation and make the reclaimed lands suitable for future open space uses. The 2012 project would not require alterations to land use designations, nor would it introduce new urban uses to the PCRA. PCRP activities would be similar to those analyzed in the 2012 EIR; therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

d) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would result in a less than significant impact regarding compatibility with adjacent uses. The 2012 project would have adverse effects on adjacent recreational, open space, and residential land uses due to visual impacts, air pollutant emissions, noise, and traffic. Those effects were evaluated and mitigation measures recommended as appropriate in the applicable resource analysis sections of the 2012 EIR. Upon the completion of restoration activities, the compatibility of the PCRA with adjacent land uses would be improved. PCRP activities would be similar to those analyzed in the 2012 EIR; therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

3.8.5.2 Consistency Conclusion for Land Use and Planning

Consistent with the findings of the 2012 EIR, implementation of the PCRP would result in **no new significant impacts** and **no substantial increase in the severity of significant impacts** relative to the impacts disclosed in the 2012 EIR related to land use and planning.

3.8.6 Mineral Resources

Issues (and Supporting Information Sources):	*2012 EIR Determination*	*2012 EIR Sufficient*	*Further Analysis Required*
XII. MINERAL RESOURCES — Would the project:			
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	Less than Significant	☒	☐
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	Less than Significant	☒	☐

3.8.6.1 Discussion of Mineral Resources

a, b) As described in the 2012 EIR, the existing Permanente Quarry pit has been the source of mineral extraction at the site for more than 100 years, and the reserves of limestone that feasibly can be extracted are approaching their limits. For these reasons, the 2012 EIR concluded that the quarry pit likely no longer meets the criteria for designation of lands containing significant mineral deposits and would be eligible for the termination of its designated status. Lehigh would retain the property, which contains other areas designated as significant mineral resources, and would retain its ability to process those areas. Therefore, the impact of implementing reclamation activities, including as described for the PCRA, on mineral resources of regional and local significance would be less than significant. For these reasons, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion, including within the 2.5-acre PCRP area outside the Reclamation Plan boundary.

3.8.6.2 Consistency Conclusion for Mineral Resources

Consistent with the findings of the 2012 EIR, implementation of the PCRP would result in **no new significant impacts** and **no substantial increase in the severity of significant impacts** relative to the impacts disclosed in the 2012 EIR related to mineral resources.

3.8.7 Noise

Issues (and Supporting Information Sources):	*2012 EIR Determination*	*2012 EIR Sufficient*	*Further Analysis Required*
XIII. NOISE — Would the project result in:			
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less than Significant with Mitigation	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	No Impact	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No Impact	☒	☐

3.8.7.1 Discussion of Noise

a) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would exceed County noise standards and increase ambient noise levels at noise-sensitive uses in the vicinity of the 2012 project. However, implementation of Mitigation Measures 4.13-1a and 4.13-1b would reduce the impact to a less-than-significant level. These mitigation measures pertain to the restriction of heavy equipment

operations in the northeastern portion of the East Materials Storage Area. The only PCRP activity that would occur near the East Materials Storage Area would be the installation of vegetation along the concrete channel area, which would not involve operation of heavy equipment. Noise generated by other PCRP activities would not result in impacts on sensitive receptors, given the distances to such receptors and intervening site topography. Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

b) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would result in no impact regarding exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. Like the 2012 project, the PCRP would employ conventional earthmoving activities, and the equipment and techniques used would not cause excessive groundborne vibration. No blasting would occur as part of the PCRP. The distance to the closest sensitive receptor from on-site Project equipment would be greater than under the 2012 project; therefore, the PCRP activities would likewise not be perceivable. Thus, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

c) The 2012 EIR concluded that the PCRA is not located in an area covered by an airport land use plan or a public airport land use plan, or within the vicinity of a private airstrip. Therefore, the 2012 EIR concluded that no airport-related safety hazards for people residing or working in the project area would result. For the same reasons, PCRP activities would not result in exposure of residents or workers to excessive noise levels. The PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

3.8.7.2 Consistency Conclusion for Noise

Consistent with the findings of the 2012 EIR, implementation of the PCRP would result in **no new significant impacts** and **no substantial increase in the severity of significant impacts** relative to the impacts disclosed in the 2012 EIR related to noise.

3.8.8 Population and Housing

Issues (and Supporting Information Sources):	*2012 EIR Determination*	*2012 EIR Sufficient*	*Further Analysis Required*
XIV. POPULATION AND HOUSING — Would the project:			
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	No Impact	☒	☐

Issues (and Supporting Information Sources):	*2012 EIR Determination*	*2012 EIR Sufficient*	*Further Analysis Required*
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact	☒	☐

3.8.8.1 Discussion of Population and Housing

a) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would result in no impact regarding the direct or indirect inducement of substantial population growth in the vicinity of the PCRA. Up to 14 additional employees would be required to implement restoration within the PCRA. Given the small number of additional staff members, the 2012 EIR anticipated that the temporary positions would be filled from the local labor pool available in Santa Clara County, with workers expected to commute to the site rather than moving to the project area. As a result, the additional employees would not directly induce population growth in the project vicinity. Worker levels for implementation of restoration activities described in the PCRP would be similar to PCRA staffing; therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

b) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would not displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere. As with the 2012 project, no housing exists and no people are living within the PCRP area. Therefore, no existing housing or people would be displaced. The PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

3.8.8.2 Consistency Conclusion for Population and Housing

Consistent with the findings of the 2012 EIR, implementation of the PCRP would result in **no new significant impacts** and **no substantial increase in the severity of significant impacts** relative to the impacts disclosed in the 2012 EIR related to population and housing.

3.8.9 Public Services

Issues (and Supporting Information Sources):	*2012 EIR Determination*	*2012 EIR Sufficient*	*Further Analysis Required*
XV. PUBLIC SERVICES —			
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:			
i) Fire protection?	No Impact	☒	☐
ii) Police protection?	No Impact	☒	☐
iii) Schools?	No Impact	☒	☐
iv) Parks?	No Impact	☒	☐
v) Other public facilities?	No Impact	☒	☐

3.8.9.1 Discussion of Public Services

a.i–v) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would result in no impact regarding public services. Implementation of the 2012 project would not result in the construction of new facilities or expansion of existing government facilities for public services. Up to 14 additional employees would be required for the implementation of restoration activities within the PCRA. Worker levels for implementation of the PCRP would be similar to PCRA staffing. Given the small number of additional staff members, it is anticipated that the temporary positions would be filled from the local labor pool available in Santa Clara County, with workers expected to commute to the site rather than moving. Because the staff increase would come from the local labor pool, these workers are considered part of the existing demand for fire protection services, police protection, school facilities, parks, and other public facilities such as libraries or medical facilities. Therefore, the PCRP would not cause an increased demand or need for school facilities, parks, or other public facilities. The PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

3.8.9.2 Consistency Conclusion for Public Services

Consistent with the findings of the 2012 EIR, implementation of the PCRP would result in **no new significant impacts** and **no substantial increase in the severity of significant impacts** relative to the impacts disclosed in the 2012 EIR related to public services.

3.8.10 Recreation

Issues (and Supporting Information Sources):	*2012 EIR Determination*	*2012 EIR Sufficient*	*Further Analysis Required*
XVI. RECREATION —			
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	No Impact	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	No Impact	☒	☐
c) Be on, within or near a public or private park, wildlife reserve, or trail or affect existing or future recreational opportunities?	Less than Significant	☒	☐
d) Result in loss of open space rated as high priority for acquisition in the "Preservation 2020" report?	No Impact	☒	☐

3.8.10.1 Discussion of Recreation

a, b) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would result in no impact regarding the deterioration of parks and recreational facilities, nor would the project include the construction or expansion of such facilities. PCRP activities would occur in the same area as the PCRA, with the exception of a 12.9-acre portion within the existing Reclamation Plan boundary where creek restoration activities were not analyzed in the 2012 EIR, and an additional 2.5-acre area outside the Reclamation Plan boundary where restoration work would occur pursuant to the PCRP. As discussed above in Section 3.8.8, *Population and Housing*, the number of workers required for PCRP activities would be similar to the number needed to implement restoration in the PCRA as analyzed in the 2012 EIR. Consistent with the assumptions underlying the analysis in the 2012 EIR, workers for the PCRP are anticipated to come from the local labor pool and thus are considered part of the existing demand for parks and recreational facilities. Therefore, the PCRP would not cause an increased demand or need for such facilities. Like the 2012 project, the PCRP would not include the construction of any new recreation-related facilities. The PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impacts disclosed in the 2012 EIR for these significance criteria.

c) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would result in no impact regarding effects on existing or future recreational opportunities within a public or private park or trail, or a wildlife reserve. The 2012 project would have a less-than-significant impact regarding indirect effects on the quality of recreational opportunities at existing parks, open space preserves, and trails surrounding the project area. Effects identified during construction included degradation of views from the increased presence of construction equipment and increased levels of dust and noise in the project vicinity. These effects were primarily related to reclamation activities in the East Materials Storage Area that were considered above the baseline for quarry operations. PCRP activities would occur in the same general area as the PCRA along

Permanente Creek. PCRP activities would be similar to activities under the 2012 project; therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

d) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would result in no impact regarding the loss of open space as described in the "Preservation 2020" report. The Permanente Creek area was rated as a high priority for acquisition in the "Preservation 2020" report because of its watershed, viewshed, and urban buffer quality. The proposed restoration of the PCRA and PCRP activities would make these lands suitable for future open space uses. The 2012 project and the PCRP would restore open space acres set aside to provide physical separation of on-site operations from surrounding off-site uses. Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

3.8.10.2 Consistency Conclusion for Recreation

Consistent with the findings of the 2012 EIR, implementation of the PCRP would result in **no new significant impacts** and **no substantial increase in the severity of significant impacts** relative to the impacts disclosed in the 2012 EIR related to recreation.

3.8.11 Transportation

Issues (and Supporting Information Sources):	*2012 EIR Determination*	*2012 EIR Sufficient*	*Further Analysis Required*
XVII. TRANSPORTATION — Would the project:			
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	Less than Significant	☒	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Not evaluated in 2012 EIR	☐	☒
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Less than Significant	☒	☐
d) Result in inadequate emergency access?	No Impact	☒	☐
e) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks	No Impact	☒	☐
f) Cause substantial damage or wear of public roadways by increased movement of heavy vehicles	Less than Significant	☒	☐

3.8.11.1 Discussion of Transportation

a) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would result in no impact regarding a conflict with the Santa Clara Valley

Transportation Authority's Congestion Management Program or a conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. The 2012 project would have a less-than-significant impact regarding increases in traffic volumes on area roadways, but would not conflict with measures of effectiveness for the performance of the circulation system. As discussed above in Section 3.8.8, *Population and Housing,* the number of workers required for PCRP activities would be similar to the number analyzed in the 2012 EIR. The number of worker trips and truck trips for PCRP activities would be similar and spread throughout the day. In addition, the PCRP would not affect transit or alternative transportation facilities, nor would it conflict with policies, plans, or programs addressing the circulation system. Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

b) Because the impact relative to significance criterion b) was not analyzed in the 2012 EIR, the checklist above indicates "further analysis required." As analyzed below, the Project would cause a less-than-significant impact related to a conflict or inconsistency with CEQA Guidelines Section 15064.3(b).

CEQA Guidelines Section 15064.3(a) states that vehicle miles traveled (VMT) is generally the most appropriate measure of transportation impacts. As discussed in Section 15064.3(a), VMT in this context refers to the amount and distance of *automobile* [emphasis added] travel attributable to a project. Increased VMT exceeding an applicable threshold could constitute a significant impact. For construction traffic, a qualitative analysis of VMT impacts is often appropriate (CEQA Guidelines Section 15064.3[b][3]).

According to technical guidance by the Governor's Office of Planning and Research, absent substantial evidence indicating that a project would generate a potentially significant level of VMT or be inconsistent with a sustainable communities strategy or general plan, projects that generate fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact (OPR 2018).

As discussed above in Section 3.8.8, *Population and Housing,* and in Section 3.1, *Air Quality*, the number of workers required for PCRP activities would be similar to the number analyzed in the 2012 EIR. The PCRP would not require operational worker trips. Well under 110 construction-generated trips per day would occur during the peak construction traffic period. For these reasons, the impact of VMT generated by PCRP activities would be **less than significant**, and the Project would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3(b).

c) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would have a less-than-significant impact regarding hazardous design features. PCRP activities would have effects on local roadways similar to those of the 2012 project. PCRP operations and associated vehicle trips would not cause any significant impacts on local traffic conditions; therefore, the PCRP would cause **no new significant**

impact and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

d) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would have no impact regarding inadequate emergency access. As under the 2012 project, emergency access under the PCRP would be limited to Permanente Road. However, PCRP activities would be similar to those under the 2012 project and would not contribute to any adverse consequences caused by the lack of a secondary access point. Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

e) The Project site is about 6 miles from the nearest airport, and does not (and would not under PCRP activities) place any object within the flight path for airplanes in the area. The PCRP would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that would result in substantial safety risks. Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

f) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would have a less-than-significant impact regarding substantial damage to or wear of public roadways. PCRP activities would be similar to those under the 2012 project; therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

3.8.11.2 Consistency Conclusion for Transportation

Consistent with the findings of the 2012 EIR, implementation of the PCRP would result in **no new significant impacts** and **no substantial increase in the severity of significant impacts** relative to the impacts disclosed in the 2012 EIR related to transportation.

3.8.12 Tribal Cultural Resources

Assembly Bill (AB) 52 substantially amended CEQA in 2014 by creating a separate category of cultural resources, "tribal cultural resources," and by establishing that a project that may cause a substantial adverse change in the significance of a tribal cultural resource is one that may have a significant effect on the environment (Public Resources Code Sections 21074 and 21084.2). AB 52 applies to any project for which a notice of preparation is filed on or after July 1, 2015.

The 2012 EIR evaluated potential impacts on tribal cultural resources solely as impacts on archaeological resources because it was prepared before the provisions of AB 52 and related amendments to the CEQA Guidelines pertaining to tribal cultural resources took effect. Potential

impacts on known significant archaeological sites located in the vicinity of the proposed project were evaluated in Draft 2012 EIR Section 4.5, *Cultural Resources* (page 4.5-1 et seq.). Consistent with AB 52 and Public Resources Code Section 21084.3(a), the County Planning Department, when feasible, avoids damaging effects on any tribal cultural resources, which could include sites, features, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe. The County Planning Department initiated consultation by letter to Quirina Luna Geary, Chairwoman of the Tamien Nation, dated December 21, 2021 (County of Santa Clara Department of Planning and Development 2021a), with the goal of avoiding inadvertent discoveries of Native American human remains and to protect tribal cultural resources, the locations of which may be known only to the Tribe or its members. The County did not receive a reply to the letter.

Issues (and Supporting Information Sources):	*2012 EIR Determination*	*2012 EIR Sufficient*	*Further Analysis Required*
XVIII. TRIBAL CULTURAL RESOURCES —			
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:			
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources. Code Section 5020.1(k), or	Not evaluated in 2012 EIR	☐	☒
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	Not evaluated in 2012 EIR	☐	☒

3.8.12.1 Discussion of Tribal Cultural Resources

a.i, a.ii) Because the 2012 EIR did not analyze impacts relative to significance criteria a.i) and a.ii), the checklist above indicates "further analysis required." As analyzed below, the Project would result in a less-than-significant impact with implementation of Mitigation Measure 4.1-7, described in the 2012 EIR, related to a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or that is determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Public Resources Code Section 5024.1(c).

As discussed in Section 3.3, *Cultural Resources*, there are no known archaeological sites within the study area and no indication that the study area contains unrecorded archaeological resources (which could also encompass tribal cultural resources). Though unlikely, the possibility of accidentally uncovering undocumented archaeological resources

cannot be entirely eliminated. Accidental damage to or destruction of a previously unrecorded and unique archaeological resource that could also be considered a tribal cultural resource would be a potentially significant impact. In the unlikely event that tribal cultural resource materials are discovered during Project activities, implementation of Mitigation Measure 4.5-2 from the 2012 EIR would ensure that work would cease in the immediate area and that a qualified archaeologist would be hired to document the find, assess its significance, and recommend further treatment, and thereby would reduce the impact to a less-than-significant level. The Project would result in impacts on tribal cultural resources that would be **less than significant with mitigation incorporated**.

3.8.12.2 Consistency Conclusion for Tribal Cultural Resources

Implementation of the PCRP would result in potential impacts on tribal cultural resources that were not analyzed in the 2012 EIR. Based on the analysis above, these impacts would be **less than significant with mitigation incorporated**. Because the implementation of Mitigation Measure 4.5-2 is required by the 2012 EIR, no new mitigation measures are required. In summary, the PCRP would result in **no new significant impacts** and **no substantial increase in the severity of significant impacts** relative to the impacts disclosed in the 2012 EIR.

3.8.13 Utilities and Service Systems

Issues (and Supporting Information Sources):	*2012 EIR Determination*	*2012 EIR Sufficient*	*Further Analysis Required*
XIX. UTILITIES AND SERVICE SYSTEMS — Would the project:			
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Less than Significant	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	No Impact	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	No Impact	☒	☐
d) 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?	Less than Significant	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	No Impact	☒	☐

3.8.13.1 Discussion of Utilities and Service Systems

a) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would result in no impact regarding the construction or expansion of new water or wastewater treatment facilities. There would be a temporary increase in water use for dust suppression and revegetation activities for the 2012 project, as would also occur with the PCRP, but no new facilities would be necessary. Wastewater would continue to be handled by an existing septic system and portable toilets. The 2012 project and PCRP activities would improve stormwater conveyance by restoring the creek to a more natural condition, but no specific stormwater facilities are proposed. No new electric power, natural gas, or telecommunication facilities would be constructed by the PCRP. Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

b) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would have sufficient water supplies to serve the project. As discussed above under criterion a), there would be a temporary increase in water for dust suppression and revegetation activities to implement the PCRP. Although revegetation and associated water demand would occur in some areas not contemplated in the PCRA (e.g., concrete channel area), the amount of additional water would be within the overall water demand for the 2012 project. Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

c) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would result in no impact regarding wastewater because no such service is available in the project area. Existing wastewater needs are handled by a septic system and portable toilets. No change to wastewater services would result from implementation of the PCRP; therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

d) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would not exceed solid waste reduction standards or the capacity of facilities that would serve the project. The number of workers necessary for PCRP activities would be within a similar range as those required for the 2012 project. The PCRP activities that would generate solid waste would likewise be relatively similar to those conducted for the PCRA. The volume of solid waste for PCRP activities would represent a similarly minor portion of the overall solid waste that would be generated by non-PCRA reclamation activities under the 2012 project, and would be accommodated by existing area landfills. Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

e) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would result in no impact regarding with compliance with federal, state, and local management and reduction statutes and regulations related to solid waste. As under the 2012 project, Lehigh would continue to adhere to all applicable laws and regulations pertaining to solid waste disposal, including the Surface Mining and Reclamation Act performance standards. Construction and demolition debris generated by reclamation activities, including from the Permanente Quarry Conveyor System, concrete road segments, discarded tractor tires, and the "old concrete crusher foundation" would be sent to a recycling facility certified to divert more than 65 percent of solid waste from landfills (County of Santa Clara Department of Planning and Development 2021b; CalRecycle 2021). Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

3.8.13.2 Consistency Conclusion for Utilities and Service Systems

Consistent with the findings of the 2012 EIR, implementation of the PCRP would result in **no new significant impacts** and **no substantial increase in the severity of significant impacts** relative to the impacts disclosed in the 2012 EIR related to utilities and service systems.

3.8.14 Wildfire

Issues (and Supporting Information Sources):	*2012 EIR Determination*	*2012 EIR Sufficient*	*Further Analysis Required*
XX. WILDFIRE — If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:			
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	No Impact	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	Not evaluated in 2012 EIR	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Not evaluated in 2012 EIR	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Not evaluated in 2012	☐	☒

3.8.14.1 Discussion of Wildfire

The PCRP is located in Moderate and High fire hazard severity zones within a State Responsibility Area, according to fire hazard mapping prepared by the California Department of Forestry and Fire Protection (CAL FIRE 2007). Specific criteria pertaining to potential wildfire-related impacts are discussed below.

a) The 2012 EIR concluded that the proposed reclamation and restoration activities within the PCRA would not impair implementation of or physically interfere with the County Emergency Operations Plan existing at that time (2008) (see Section 4.9, *Hazards and Hazardous Materials*, criterion f), page 4.9-13). The proposed reclamation activities would not result in the complete or partial closure of public roadways, interfere with any identified evacuation route, restrict access for emergency response vehicles, or restrict access to critical facilities such as hospitals or fire stations. The PCRP would similarly not result in impacts regarding the current plan (County of Santa Clara Office of Emergency Services 2017, 2019). Therefore, the PCRP would cause **no new significant impact** and **no substantial increase in the severity of a significant impact** relative to the impact disclosed in the 2012 EIR for this significance criterion.

b) Because the 2012 EIR did not analyze an impact relative to significance criterion b), the checklist above indicates "further analysis required." As analyzed below, the Project would result in a less-than-significant impact related to the exacerbation of wildfire risks, and associated exposure of Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

As discussed in the 2012 EIR, the reclamation and restoration activities proposed as part of the 2012 project would be substantially similar to existing operations at the quarry, including materials movement by haul truck, grading, and revegetation. Although the use of fuels and construction equipment could produce a spark or flame near areas of high wildland fire risk, this is the same risk that exists under baseline conditions. PCRP activities would occur in the same area as the PCRA, with the exception of a 12.9-acre portion within the existing Reclamation Plan boundary where creek restoration activities were not analyzed in the 2012 EIR, and an additional 2.5-acre area outside the Reclamation Plan boundary where work would occur pursuant to the PCRP. PCRP activities would be similar to those under the 2012 project. Existing regulations governing the use of construction equipment in fire-prone areas would continue to apply. Specifically, the California Public Resources Code includes fire safety requirements that: restrict the use of equipment that may produce a spark, flame, or fire near flammable materials on days when a burning permit is required (Section 4427); require the use of spark arrestors on construction equipment that use an internal combustion engine (Section 4442); specify requirements for the safe use of gasoline-powered tools in fire hazard areas (Section 4431); and specify fire suppression equipment that must be provided on-site for various types of work during the highest fire danger period (Section 4428). Construction would be temporary and no operational impacts would result upon the conclusion of restoration activities. Therefore, PCRP activities would not significantly exacerbate wildfire risks, and the impact would be **less than significant**.

c) Because the 2012 EIR did not analyze an impact relative to significance criterion c), the checklist above indicates "further analysis required." As analyzed below, the Project would result in a less-than-significant impact related to the installation or maintenance of infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts on the environment.

PCRP activities would not require the installation of fuel breaks, emergency water sources, power lines, or other utilities that would exacerbate fire risks. In the channel widening area, an existing concrete access road would be partially reduced in width. A new dirt access road would be constructed for maintenance of Pond 13 near the Rock Pile. To ensure the geotechnical stability of the slope exposed below the Rock Pile and the proposed access road, Lehigh proposes to have these areas inspected by the geotechnical engineer or Project geologist to evaluate the nature and stability of the exposed material and provide recommendations, as necessary. Road improvements would allow for emergency access and would not exacerbate wildfire risks. The impact would be **less than significant**.

d) Because the 2012 EIR did not analyze an impact relative to significance criterion d), the checklist above indicates "further analysis required." As analyzed below, the Project would result in a less-than-significant impact related to the exposure of people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes.

As discussed in detail in Section 3.7, *Hydrology and Water Quality*, implementation of the PCRP would result in an improved and restored channel segment of Permanente Creek. The PCRP has been designed to ensure channel stability through the use of engineered streambed material, floodplain armor, vegetated rock slope protection, rapidly establishing vegetation, and erosion control best management practices. The proposed design would not significantly alter creek depth or velocities downstream. Runoff flow rates would not change substantially because neither the drainage pattern of the tributary area nor the volume of flows within the channel would be altered. Therefore, there would be no substantial increase in the rate or volume of surface runoff that could result in downslope or downstream flooding, or landslides. The impact would be **less than significant**.

3.8.14.2 Consistency Conclusion for Wildfire

Implementation of the PCRP would result in **no new significant impacts** and **no substantial increase in the severity of significant impacts** relative to the impacts disclosed in the 2012 EIR, and **less-than-significant** impacts for wildfire criteria that were not analyzed in the 2012 EIR.

3.8.15 References

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