San Leandro Shoreline Development Project EIR
for the City of San Leandro

State Clearing House Number: 2013072011
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1. Executive Summary

This chapter presents an overview of the proposed San Leandro Shoreline Development Project, herein referred to as “Project.” This executive summary also provides a summary of the alternatives to the Project, identifies issues to be resolved, areas of controversy, and conclusions of the analysis contained in Chapters 4.0 through 4.14 of this Draft Environmental Impact Report (Draft EIR). For a complete description of the Project, see Chapter 3, Project Description. For a discussion of alternatives to the Project, see Chapter 6, Alternatives to the Project.

This Draft EIR addresses the environmental effects associated with implementation of the Project. The California Environmental Quality Act (CEQA) requires that local government agencies, prior to taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An Environmental Impact Report is a public document designed to provide the public, local, and State governmental agency decision-makers with an analysis of potential environmental consequences to support informed decision-making.

This Draft EIR has been prepared pursuant to the requirements of CEQA (California Public Resources Code, Division 13, Section 21000, et seq.) and the State CEQA Guidelines (Title 14 of the California Code of Regulations, Division 6, Chapter 3, Section 15000, et seq.) in order to determine if approval of the identified discretionary actions and related subsequent development could have a significant impact on the environment. The City of San Leandro, as the Lead Agency, has reviewed and revised as necessary all submitted drafts, technical studies, and reports to reflect its own independent judgment, including reliance on applicable City technical personnel and review of all technical reports. Information for this Draft EIR was obtained from on-site field observations; discussions with public service agencies; analysis of adopted plans and policies; review of available studies, reports, data, and similar literature in the public domain; and specialized environmental assessments (e.g., air quality, greenhouse gas emissions, noise, geotechnical and transportation and traffic).

1.1 ENVIRONMENTAL PROCEDURES

This Draft EIR has been prepared to assess the environmental effects associated with approval and implementation of the Project. The six main objectives of this document as established by CEQA are:

- To disclose to decision-makers and the public the significant environmental effects of proposed activities.
- To identify ways to avoid or reduce environmental damage.
- To prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
- To disclose to the public reasons for agency approval of projects with significant environmental effects.
EXECUTIVE SUMMARY

- To foster interagency coordination in the review of projects.
- To enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation identified in the CEQA statute and in the CEQA Guidelines. It provides the information needed to assess the environmental consequences of a proposed project, to the extent feasible. EIRs are intended to provide an objective, factually supported, full-disclosure analysis of the environmental consequences associated with a proposed project that has the potential to result in significant, adverse environmental impacts. An EIR is also one of various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Prior to approving a proposed project, the lead agency must consider the information contained in the EIR, determine whether the EIR was properly prepared in accordance with CEQA and the CEQA Guidelines, determine that it reflects the independent judgment of the lead agency, adopt findings concerning the project’s significant environmental impacts and alternatives, and adopt a Statement of Overriding Considerations if the proposed project would result in significant impacts that cannot be avoided.

1.1.1 EIR ORGANIZATION

This Draft EIR is organized into the following chapters:

- **Chapter 1: Executive Summary.** Summarizes environmental consequences that would result from implementation of the Project, describes recommended mitigation measures, and indicates the level of significance of environmental impacts before and after mitigation.

- **Chapter 2: Introduction.** Provides an overview describing the Draft EIR document.

- **Chapter 3: Project Description.** Describes the Project in detail, including the site location and characteristics, objectives, and some of the technical elements of the proposed action.

- **Chapter 4: Environmental Evaluation.** Organized into 14 sub-chapters corresponding to the environmental resource categories identified in Appendix G of the CEQA Guidelines, this section provides a description of the physical environmental conditions in the vicinity of the Project as they existed at the time the Notice of Preparation was published, from both a local and regional perspective. Additionally, this chapter provides an analysis of the potential environmental impacts of the Project, and recommended mitigation measures, if required, to reduce the impacts to less than significant where possible, and to reduce their magnitude or significance when impacts cannot be reduced to a less-than-significant level. The environmental setting included in each sub-chapter provides baseline physical conditions, which provide a context, which the lead agency uses to determine the significance of environmental impacts resulting from the Project. Each sub-chapter also includes a description of the thresholds used to determine if a significant impact would occur; the methodology to identify and evaluate the potential impacts of the Project; and the potential cumulative impacts associated with the Project.

- **Chapter 5: Significant Unavoidable Adverse Impacts.** Identifies impacts that cannot be mitigated to a less-than-significant level, and therefore would remain significant and unavoidable.
**EXECUTIVE SUMMARY**

- **Chapter 6: Alternatives to the Project.** Considers alternatives to the Project, including the CEQA-required “No Project” alternative, a Relocated Hotel Alternative, and a Reduced Density/Intensity Alternative.

- **Chapter 7: CEQA-Mandated Sections.** Discusses growth inducement, cumulative impacts, and significant irreversible changes as a result of the Project.

- **Chapter 8: Organizations and Persons Consulted.** Lists the people and organizations that were contacted during the preparation of this EIR for the Project.

- **Appendices:** The appendices for this document contain the following supporting documents:
  - Appendix A: Notice of Preparation and Notice of Preparation Comments Letters
  - Appendix B: Urban Decay Analysis
  - Appendix C: Shade/Shadow Diagrams
  - Appendix D: Air Quality and Greenhouse Gas Background and Modeling Data
  - Appendix E: Health Risk Assessment
  - Appendix F: San Leandro Marina Opportunities and Constraints Analysis
  - Appendix G: Noise Monitoring Data
  - Appendix H: Transportation Impact Study
  - Appendix I: Water Supply Assessment (WSA) Request and WSA

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### 1.1.2 TYPE AND PURPOSE OF THIS DRAFT EIR

According to Section 15121(a) of the CEQA Guidelines, the purpose of an EIR is to:

> Inform public agency decision makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

As described in the CEQA Guidelines, different types of EIRs are used for varying situations and intended uses. Given the permitting and development actions that are related both geographically and as logical parts in the chain of contemplated actions for implementation, this Draft EIR has been prepared as a Project EIR, pursuant to Section 15161 of the CEQA Guidelines. As a Project EIR, the environmental analysis will focus primarily on the changes in the environment that would result from the development of The San Leandro Shoreline Development Project. This Project EIR will examine the specific short-term impacts (construction) and long-term impacts (operation) that would occur as a result of Project approval by the City of San Leandro City Council.

### 1.2 SUMMARY OF THE PROPOSED PROJECT

As a part of a public/private partnership, the City of San Leandro and Cal Coast Companies LLC propose to redevelop the 52-acre site land area (owned by the City) and 23-acre water area (owned by the City), which encompasses the San Leandro Marina and surrounding properties, with residential, commercial, and public recreational uses. Implementation of the Project would involve the removal of many of the structures on the site including the existing El Torito restaurant building, the Mulford Branch Library building, and the San Leandro Yacht Club building. Although direction from the San Leandro City Council...
to staff is to maintain the existing San Leandro Marina for as long as financially feasible, for the purpose of the environmental analysis, it is being assumed that the harbor masters office, fuel pump/dock, and the 462 existing boat slips in the harbor basin would eventually be removed by the City at such time as safe and navigable boating operations cease to exist. Additionally, five of the tees/holes on the nine-hole Marina Golf Course would need to be reconfigured in order to accommodate the housing that is proposed to be built on the grounds of the course; however, no tees/holes would be removed as part of the Project. The existing Marina Inn building and the Horatio’s restaurant building on the site would remain a part of the Project area.

New features on the site as a result of the Project include an approximately 150,000-square-foot office campus, a new 200-room hotel, an approximately 15,000-square-foot conference center, 354 housing units, 3 new restaurants totaling approximately 21,000 square feet, and a new parking structure. To accommodate this growth a variety of public amenities would be installed. Some of these amenities include a new approximately 2,500-square-foot community library/community meeting space, an aquatic center/dock, bocce ball courts, outdoor recreational areas, picnic areas, a perched beach, pedestrian piers, two miles of public promenade, a natural shoreline element along the interior of the harbor basin, a pedestrian/bicycle bridge, a boardwalk/lookout pier, several small finger piers, and refurbishment of existing public restrooms on site. Additionally, with implementation of the Project and removal of the existing boat slips, the harbor would only be open to non-motorized watercraft. For this reason, the Project includes the construction of a small boat launch, a kayak storage building, and an aeration fountain in the harbor basin to aide in water circulation.

1.3 SUMMARY OF PROJECT ALTERNATIVES

This Draft EIR analyzes alternatives to the Project that are designed to reduce the significant environmental impacts of the Project and feasibly attain most of the Project objectives. There is no set methodology for comparing the alternatives or determining the environmentally superior alternative under CEQA. Identification of the environmentally superior alternative involves weighing and balancing all of the environmental resource areas by the City. The following alternatives to the Project were considered and analyzed in detail:

- No Project
- Relocated Hotel Alternative
- Reduced Density/Intensity Alternative

Chapter 6, Alternatives to the Project, includes a complete discussion of these alternatives and of alternatives that were rejected for various reasons.

1.3.1 NO PROJECT ALTERNATIVE

Consistent with Section 15126.6 (e) (2) of the CEQA Guidelines, under the No Project Alternative, the Project site would remain in its existing condition. Although existing land use designations and zoning would allow for some future development under existing conditions, under this alternative, the Project site would not be further developed. Further, improvements proposed by the Project, such as removing the marina infrastructure, adding new housing units, new restaurants, commercial and retail uses, a new
parking structure, and public amenities, including a community library, aquatic center, and enhanced shoreline access would not occur.

1.3.2 RELOCATED HOTEL ALTERNATIVE

Under the Relocated Hotel Alternative, the proposed hotel would be relocated from its proposed location at the end of Mulford Point Drive. Potential locations that could accommodate the hotel include: the parking lot along Pescador Point Drive, which is southeast of the current proposed location; the parking lot along Mulford Point Drive, which is directly adjacent to the northeast of the proposed location; and on the corner of Monarch Point Drive and Monarch Bay Drive. Under this alternative, all other components, such as square footage, residential units, hotel rooms, and other development, of the Project would remain the same.

1.3.3 REDUCED DENSITY/INTENSITY ALTERNATIVE

Under the Reduced Density/Intensity Alternative, Project components, such as square footage, residential units, and hotel rooms would be reduced by 25 percent over what is proposed under the Project.

1.4 ISSUES TO BE RESOLVED

Section 15123 (b) (3) of the CEQA Guidelines requires that an EIR identify issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. With regard to the Project, the major issues to be resolved include decisions by the City of San Leandro, as Lead Agency, related to:

- Whether this Draft EIR adequately describes the environmental impacts of the Project.
- Whether the social and economic benefits of the Project override those environmental impacts that cannot be feasibly avoided or mitigated to a level of insignificance.
- Whether the proposed land use changes are compatible with the character of the existing area.
- Whether the identified mitigation measures should be adopted or modified.
- Whether there are other mitigation measures that should be applied to the Project besides those Mitigation Measures identified in the Draft EIR.
- Whether there are any alternatives to the Project that would substantially lessen any of the significant impacts of the Project and achieve most of the basic objectives.

1.5 AREAS OF CONTROVERSY

The City issued a Notice of Preparation (NOP) on July 3, 2013, and reissued an NOP December 11, 2013, as a result of minor revisions to the Project. Changes in the Project from the July 2013 to the December 2013 NOP include an increase in proposed residential units from 188 to 354, a reduction in office space from 250,000 square feet to 150,000 square feet, and an increase in parking spaces from 1,802 to 1,973. The CEQA-mandated scoping period for this EIR was between December 11, 2013 and January 9, 2014,
during which interested agencies and the public could submit comments about the Project. During this time, the City received comment letters from a variety of State and local agencies as well as several organizations, businesses and interested individuals.

The following is a list of issues that are likely to be of particular concern to agencies and interested members of the public during the environmental review process. While every concern applicable to the CEQA process is addressed in this Draft EIR, this list is not necessarily exhaustive, but rather attempts to capture those concerns that are likely to generate the greatest interest based on the input received during the scoping process.

- Air Quality from construction
- Operational traffic impacts
- Impacts to existing views in the vicinity of the Project

### 1.6 SUMMARY OF IMPACTS AND MITIGATION MEASURES
### TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

<table>
<thead>
<tr>
<th>Significant Impact</th>
<th>Significance Before Mitigation</th>
<th>Mitigation Measures</th>
<th>Significance With Mitigation</th>
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<tbody>
<tr>
<td><strong>AESTHETICS</strong></td>
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<tr>
<td>AES-1. The Project would not have a substantial adverse effect on a scenic vista.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>AES-2. The Project would not substantially degrade the view from a scenic highway, including, but not limited to, trees, rock outcroppings, and historic buildings.</td>
<td>No Impact</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>AES-3. The Project would not substantially degrade the existing visual character or quality of the site and its surroundings.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>AES-4. The Project would not expose people on- or off-site to substantial light or glare, which would adversely affect day or nighttime views in the area.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>AES-5. The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to aesthetics.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>AIR QUALITY</strong></td>
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<tr>
<td>AIR-1. Implementation of the Project would not conflict with or obstruct implementation of the applicable air quality plan.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
| AIR-2. During construction of the Project, construction activities would generate fugitive dust during ground-disturbing activities that exceeds the BAAQMD significance thresholds. | S                              | AIR-2: Applicants for new development projects within the Shoreline Development shall require their construction contractor(s) to comply with the following BAAQMD Best Management Practices for reducing construction emissions of PM$_{10}$ and PM$_{2.5}$:  

  - Water all active construction areas at least twice daily or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.  
  - Pave, apply water twice daily or as often as necessary to control dust, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.  
  - Cover all trucks hauling soil, sand, and other loose materials or... | LTS                            |                               |

**LTS** = Less Than Significant  **S** = Significant  **SU** = Significant Unavoidable Impact
### EXECUTIVE SUMMARY

**Table 1-1: Summary of Impacts and Mitigation Measures**

<table>
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<tbody>
<tr>
<td>AIR-3. During operation, the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>AIR-4: Construction and operation of the Project would cumulatively contribute to the non-attainment designations of the SFBAAB.</td>
<td>S</td>
<td>AIR-4: Implementation of Mitigation Measures AIR-2 and AIR-5 would reduce cumulative air quality impacts.</td>
<td>LTS</td>
</tr>
<tr>
<td>AIR-5: Construction activities of the Project could expose sensitive receptors to substantial concentrations of TAC and PM$_{2.5}$.</td>
<td>S</td>
<td>AIR-5: The construction contractor shall use equipment that meets the United States Environmental Protection Agency (EPA)-Certified Tier 3 emissions standards for off-road diesel-powered construction equipment greater than 50 horsepower. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine, as defined by</td>
<td>LTS</td>
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**LTS = Less Than Significant S = Significant SU = Significant Unavoidable Impact**
**TABLE 1-1  SUMMARY OF IMPACTS AND MITIGATION MEASURES**

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<tbody>
<tr>
<td>AIR-6. Operation of the Project would not expose sensitive receptors to substantial concentrations of air pollution.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>AIR-7. Implementation of the Project would not create or expose a substantial number of people to objectionable odors.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>AIR-8: Construction and operation of the Project would cumulatively contribute to the non-attainment designations of the SFBAAB.</td>
<td>S</td>
<td>AIR-8: Implementation of Mitigation Measures AIR-2 and AIR-5 would reduce cumulative air quality impacts.</td>
<td>LTS</td>
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</table>

**BIOLOGICAL RESOURCES**

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<tbody>
<tr>
<td>BIO-1A. Proposed development could adversely affect the monarch butterfly winter roosting habitat if adequate controls on tree removal and pruning are not implemented.</td>
<td>S</td>
<td>BIO-1A: Ensure Protection of Monarch Butterfly Colony. Proposed development shall be designed to avoid adverse impacts on monarch butterfly winter roosting habitat, including controls on removal and pruning of trees in the southeastern portion of the Project site where the monarch butterfly overwintering colony is located. A Monarch Butterfly Roosting Habitat Protection Program (MBRHP) shall be prepared by a qualified biologist and ensure adequate avoidance and protection of the winter roosting colony, consistent with the intent of Section 4-1-1000, Interference with Monarch Butterflies Prohibited, of the San Leandro Municipal Code.</td>
<td>LTS</td>
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The MBRHPP shall be submitted as part of the Site Plan Review and/or tentative map application, whichever is first, and shall include the following components:

- The MBRHPP shall be prepared by a qualified biologist experienced in management of monarch butterfly colonies in California, and shall describe existing winter roosting colony habitat essential to the monarch butterfly colony and required measures taken to ensure both roosting and wind buffering trees are adequately protected.

- All mature blue gum eucalyptus and pine trees in the colony and along the east edge of the South Golf Course Residential development shall be preserved and protected as part of the MBRHPP, with trunk locations and edge of canopy clearly mapped by engineered survey in relation to proposed building footprints, landscaping and other improvements that may otherwise disrupt their function in buffeting winds.

- As necessary to protect the wind buffering trees, the eastern edge of the proposed South Golf Course residential area may require relocation as part of the MBRHPP to provide a larger setback if there is a risk to these trees as a result of construction activities or future maintenance for fire fuel management, landscape maintenance, and other practices. Where private yards and/or common open space associated with the South Golf Course residential area extends under the canopy of the buffering trees, appropriate CCRs shall be developed to ensure long-term protection as part of future maintenance activities.

- The MBRHPP shall identify restrictions and seasonal controls on construction, tree removal, and vegetation management within 200 feet of the edge of trees known to support the winter roosting colony, including tree removal, pruning, and herbicide application, and appropriate timing of construction and required management within this zone. Grading and equipment operation, any tree removal, pruning, or herbicide application in the vicinity shall be restricted from August 1 through March 31 to prevent any inadvertent disturbance to the winter roosting colony.
### Table 1-1 Summary of Impacts and Mitigation Measures

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<tbody>
<tr>
<td>BIO-1B. Proposed development could result in inadvertent loss of special-status fish species and other aquatic species as part of in-water construction activities if adequate controls are not implemented.</td>
<td>S</td>
<td>BIO-1B: Prevent Inadvertent Loss of Special-Status Fish and Aquatic Life. Appropriate construction controls and restrictions shall be taken to prevent inadvertent loss of special-status fish species and other aquatic life as a result of construction activities within or near areas of tidal influence and open water habitat of San Francisco Bay to avoid possible inadvertent take of Central California Coastal steelhead, green sturgeon, Delta smelt, Sacramento splittail, Central Valley spring-run chinook salmon, and longfin smelt, if present in the area during the time of construction. This shall be accomplished with the following provisions:</td>
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<td>• The MBRHPP shall be submitted for review and approval as part of the Site Plan Review and/or tentative map application for the South Golf Course Residential development.</td>
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<td>• Adequate measures shall be taken to minimize disturbance and sedimentation in aquatic habitat of the bay, which may include installation of silt curtains around in-water construction zones, restrictions on in-water operations to low tide periods, and timing restrictions for in-water construction, among other possible controls and restrictions.</td>
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<td>• Any pumping as part of dewatering construction areas or as part of the proposed aeration fountain shall be adequately screened according to the latest screening guidelines of the CDFW, USFWS, and NOAA Fisheries to prevent entrainment of special-status fish and other aquatic life during their operation.</td>
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<td>• Any in-water construction activities shall be restricted to the period from June 15 through October when stray or dispersing special-status fish species would most likely not be expected within the affected areas.</td>
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<td>• The applicant shall obtain all necessary authorizations from the CDFW, NOAA Fisheries, and USFWS as required by federal and State law for potential harm to special-status fish species. Such authorization would be obtained as a result of interagency coordination through the Army Corps Section 404 consultation and the CDFW Section 2081 Incidental Take Permit process. The Project shall adhere to any additional conditions and restrictions.</td>
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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

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<tr>
<td>BIO-1C. Proposed development could result in inadvertent loss of bird nests in active use, which would conflict with the federal Migratory Bird Treaty Act and California Fish and Game Code if adequate controls and preconstruction surveys are not implemented.</td>
<td>S</td>
<td>BIO-1C: Ensure Avoidance of Bird Nests in Active Use. Tree removal, landscape grubbing, building demolition, and other construction activities, such as grading and utility installation shall be performed in compliance with the Migratory Bird Treaty Act and relevant sections of the California Fish and Game Code to avoid loss of nests in active use. This shall be accomplished by scheduling tree removal and building demolition outside of the bird nesting season (which occurs from February 1 to August 31) to avoid possible impacts on nesting birds if new nests are established in the future. Alternatively, if tree removal and building demolition cannot be scheduled during the non-nesting season (September 1 to January 31), a pre-construction nesting survey shall be conducted. The pre-construction nesting survey shall include the following:</td>
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<td>• A qualified biologist (Biologist) shall conduct a pre-construction nesting bird (both passerine and raptor) survey within seven calendar days prior to tree removal, landscape grubbing, other construction activities and/or building demolition.</td>
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<td>• If no nesting birds or active nests are observed, no further action is required and tree removal, landscape grubbing, other construction activities, and building demolition shall occur within seven calendar days of the survey.</td>
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<td>• Another nest survey shall be conducted if more than seven calendar days elapse between the initial nest search and the beginning of tree removal, landscape grubbing, other construction activities and building demolition.</td>
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<td>• If any active nests are encountered, the Biologist shall determine an appropriate disturbance-free buffer zone to be established around the nest location(s) until the young have fledged. Buffer zones vary depending on the species (i.e., typically 75 to 100 feet for passeresines and 300 feet for raptors) and other factors such as ongoing disturbance in the vicinity of the nest location. If necessary, the dimensions of the buffer zone shall be determined in consultation with the California Department of Fish and</td>
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| Wildlife.                                                                         |                               | - Orange construction fencing, flagging, or other marking system shall be installed to delineate the buffer zone around the nest location(s) within which no construction-related equipment or operations shall be permitted. Continued use of existing facilities such as surface parking and site maintenance may continue within this buffer zone.  
- No restrictions on grading or construction activities outside the prescribed buffer zone are required once the zone has been identified and delineated in the field and workers have been properly trained to avoid the buffer zone area.  
- Construction activities shall be restricted from the buffer zone until the Biologist has determined that young birds have fledged and the buffer zone is no longer needed.  
- A survey report of findings verifying that any young have fledged shall be submitted by the Biologist for review and approval by the City of San Leandro prior to initiation of any tree removal, landscape grubbing, building demolition, and other construction activities within the buffer zone. Following written approval by the City, tree removal, and construction within the nest-buffer zone may proceed. |                               | S                                                                            |
| BIO-2. The Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. | No Impact                     | N/A                                                                              | N/A                           |
| BIO-3. Proposed development would result in fills and modifications to jurisdictional waters, which would require appropriate controls, compensatory mitigation, and regulatory authorizations. | S                             | BIO-3: Provide Compensatory Mitigation for Wetland Modifications. A compensatory mitigation program shall be developed and implemented to provide adequate mitigation for jurisdictional waters affected by proposed improvements. A jurisdictional wetland delineation shall be prepared by a qualified wetland specialist and submitted for verification by the Army Corps. A Wetland Protection and Replacement Program (WPRP) shall be prepared by the qualified wetland specialist and implemented to provide compensatory mitigation at a minimum 2:1 ratio where wetland habitat is affected. | LTS                           |

LTS = Less Than Significant  S = Significant  SU = Significant Unavoidable Impact
EXECUTIVE SUMMARY

**TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

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</table>

shall minimize disturbance to unvegetated waters, and shall be reviewed and approved by regulatory agencies. The WPRP shall include appropriate implementation measures to prevent inadvertent loss and degradation of jurisdictional waters to be protected, and replacement for those wetland features eliminated or modified as a result of development. The WPRP shall contain the following components:

- Where verified waters of the U.S. are present and cannot be avoided, authorization for modifications to these features shall be obtained from regulatory agencies with jurisdiction. This includes the Army Corps through the Section 404 permitting process where waters of the United States are affected by the Project and the RWQCB as part of the Section 401 Certification process. Together with a Streambed Alteration Agreement (SAA) secured from CDFW, if required as part of the SAA Notification process for proposed fills to the man-made drainage and possibly the pond on the golf course. All conditions required as part of the authorizations by the Army Corps, RWQCB, and CDFW shall be implemented as part of the project.

- Consultation or incidental take permitting may be required under the California and federal Endangered Species Acts. The applicant shall obtain all legally required permits or other authorizations from the USFWS, NOAA Fisheries, and CDFW under the Endangered Species Acts.

- Install orange construction fencing around the boundary of all wetland areas and waters to be preserved at the interface with proposed fills and grading so that they are not disturbed during construction. The fencing shall be placed a minimum of 25 feet out from the boundary of the wetlands/waters but may need to be adjusted if restoration activities are to be conducted within this area. Grading, construction, and restoration work within the wetland/waters buffer zones shall be conducted in a way that avoids or minimizes disturbance of existing wetlands and aquatic habitat.

- A qualified biologist/restoration specialist shall be available during...
### SUMMARY OF IMPACTS AND MITIGATION MEASURES

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<tr>
<td>BIO-4. The Project would not 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.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>BIO-5. Proposed development would result in removal of trees regulated under City Ordinance, and possible damage to other trees unless adequate controls are implemented.</td>
<td>S</td>
<td>BIO-5A: Tree Protection and Replacement. The Project shall comply with Section 4-1906, Existing Trees on Development Sites, in Article 19, Landscape Requirements of the City of San Leandro Zoning Code. Compliance with the Zoning Ordinance shall be achieved through adherence with the following provisions: * All trees with a trunk diameter of 6 inches or greater shall</td>
<td>LTS</td>
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<td>BIO-5B, Proposed development would result in removal of trees regulated under City Ordinance, and interfere with Section 4-1-1000, Interference with Monarch Butterflies Prohibited, of the Municipal Code.</td>
<td>S</td>
<td>BIO-5B: Implement Mitigation Measure BIO-1A to ensure protection of trees supporting Monarch Butterfly colony.</td>
<td>LTS</td>
</tr>
<tr>
<td>BIO-6. The Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.</td>
<td>No Impact</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>BIO-7. Proposed development would result in a cumulative impact with regard to biological resources.</td>
<td>S</td>
<td>BIO-7: Implement Mitigation Measures BIO-1A, BIO-1B, BIO-1C, BIO-3, BIO-5A, and BIO-5B.</td>
<td>LTS</td>
</tr>
</tbody>
</table>

LTS = Less Than Significant  S = Significant  SU = Significant Unavoidable Impact
**Executive Summary**

**TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

<table>
<thead>
<tr>
<th>Significant Impact</th>
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</tr>
</thead>
<tbody>
<tr>
<td>CULT-1. The Project would adversely affect locally important on-site monuments.</td>
<td>S</td>
<td>CULT-1: Prior to the issuance of grading permits, the Project Applicant shall preserve or relocate the mosaic depicting the oyster beds associated with CHL #824, the plaque commemorating the dedication of the San Leandro channel as the Jack D. Maltester Channel, and the Lost Boats Memorial placed in memory of USS Argonaut and the USS Grampus. Following consultation between the City and Project Applicant with the Office of Historic Preservation regarding the CHL #824 and the United States Submarine Veterans of World War II regarding the Lost Ships Memorial, the City of San Leandro shall provide input regarding the Jack D. Maltester Channel plaque. If relocation of the monuments is recommended in order to preserve the monuments, the specific construction techniques shall be identified in order to limit any damage to the monuments.</td>
<td>LTS</td>
</tr>
</tbody>
</table>
| CULT-2. The Project would have the potential to cause a significant impact to an archaeological resource pursuant to CEQA Guidelines Section 15064.5. | S | CULT-2. Archeological resources are not known or likely on the Project site. The following measures shall be implemented to avoid inadvertent damage or loss if such resources are discovered during construction. A qualified archeologist shall be on-site to monitor the initial excavation of native soil once all pavement of engineered soil is removed from the Project site. After monitoring the initial excavation, the archeologist shall make recommendations for further monitoring if it is determined that the site has archeological resources. If the archeologist determines that no resources are likely to be found on-site, no additional monitoring shall be required. If currently unknown historic/prehistoric artifacts or human remains are discovered during ground disturbing activities, the following measures shall be implemented:  
  * In compliance with State law (Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code), in the event that historical artifacts are found, all work within 50 feet of the find shall stop and a qualified archaeologist shall examine the find. The archaeologist shall then submit a plan for evaluation of the resource to the City of San Leandro Planning Services Division for approval. If the evaluation of the resource | LTS |
### EXECUTIVE SUMMARY

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<tbody>
<tr>
<td>CULT-3. The Project would have the potential to directly or indirectly affect a unique paleontological resource or site, or unique geologic feature.</td>
<td>S</td>
<td>Concludes that the found resource is eligible for the California Register of Historic Resources, a mitigation plan shall be submitted to the City of San Leandro Planning Services Division for approval, which shall consider reasonable efforts for the resources to be preserved in place or left in an undisturbed state. If the artifacts and samples recovered during construction are determined to be significant and cannot be preserved in place, the artifacts shall be cataloged and curated by a qualified archaeologist and placed in an appropriate curation facility. The mitigation plan shall be completed before earthmoving or construction activities can recommence within the designated resource area.</td>
<td>LTS</td>
</tr>
<tr>
<td>CULT-4. The Project would have the potential to disturb human remains, including those interred outside of</td>
<td>S</td>
<td>CULT-4. No human remains are known or likely on the Project site. If human skeletal remains are uncovered during construction, the plan shall be submitted to the City for review and approval and the Project proponent shall implement the approval plan.</td>
<td>LTS</td>
</tr>
</tbody>
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### Table 1-1 Summary of Impacts and Mitigation Measures

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<tr>
<td>formal cemeteries.</td>
<td>S</td>
<td>contractor shall immediately halt work within 50 feet of the find, contact the Alameda County coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5(e)(1) of the CEQA Guidelines. The Coroner shall then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours, who will, in turn, notify the person the NAHC identifies as the Most Likely Descendant (MLD) of any human remains (Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 [as amended by AB 2641]). Further actions shall be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. Per Public Resources Code 5097.98, the contractor shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the human remains are located, is not damaged or disturbed by further development activity until the contractor has discussed and conferred, as prescribed in this section (California Public Resources Code Section 5097.98), with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. If the MLD does not make recommendations within 48 hours, the Project Applicant shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD’s recommendations, the Project Applicant or the descendent may request mediation by the NAHC.</td>
</tr>
<tr>
<td>CULT-5. The Project, in combination with past, present, and reasonably foreseeable projects, would not result in significant impacts with respect to cultural resources.</td>
<td>LTS</td>
<td>N/A</td>
</tr>
<tr>
<td>GEOLOGY, SOILS, AND SEISMICITY</td>
<td>S</td>
<td>GEO-1. Require geotechnical reports for all development within the Project site, as required by the San Leandro Municipal Code Section 7-12. The geotechnical reports shall consider the potential</td>
</tr>
</tbody>
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<tr>
<td>shaking, seismic-related ground failure, including liquefaction and lateral spreading.</td>
<td>S</td>
<td>earthquake related impacts of strong ground shaking amplification due to the soft underlying sediments, as identified in this DEIR. Seismic ground motion parameters shall be provided in the geotechnical reports in accordance with CBC requirements. The building plans shall incorporate all design and construction criteria specified in the report(s). The geotechnical engineer shall sign the improvement plans and approve them as conforming to their recommendations prior to issuance of building permits. The geotechnical engineer shall also assume responsibility for inspection of the work and shall certify to the City, prior to acceptance of the work that the work performed is adequate and complies with its recommendations. The geotechnical engineer of record shall prepare letters and as-built documents to document their observances during construction and to document that the work performed is in accordance with the project plans and specifications. As required by the City of San Leandro, all construction activities shall meet the CBC regulations for seismic safety (i.e. reinforcing perimeter and/or load bearing walls, bracing parapets, etc.). In addition, all project-related grading, trenching, backfilling and compaction operations shall be conducted in accordance with the City of San Leandro Engineering Department’s Standard Plans. All improvements shall conform to regulations for seismic safety contained in the CBC.</td>
<td>LTS</td>
</tr>
<tr>
<td>GEO-2. The Project could result in substantial soil erosion or the loss of topsoil.</td>
<td>S</td>
<td>GEO-2A. The Project civil engineer shall prepare an erosion control plan. The erosion control plan shall be submitted to the City as a part of building and/or grading plan submittal. The erosion control plan shall conform to the guidelines of the Clean Water Program and Utilize BMP’s detailed under section “C6 CASQA - BMPs Erosion Control” of the Program Resources. GEO-2B: The existing rip-rap providing coastal erosion protection shall be periodically refurbished to maintain effective erosion control. This may include local replacement of rip-rap boulders as well as periodic re-building of rip-rap armament sections degraded by wave attack and/or long-term erosion.</td>
<td>LTS</td>
</tr>
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### Table 1-1  Summary of Impacts and Mitigation Measures

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<tbody>
<tr>
<td>GEO-3A. The Project could result in a significant impact related to development on unstable geologic units and soils or result in lateral spreading, subsidence, liquefaction, or collapse.</td>
<td>S</td>
<td>GEO-3A. Project-specific geotechnical reports shall be prepared in accordance with the City’s grading permit regulations. The recommendations for both special foundations and other geotechnical engineering measures specified in project specific geotechnical reports shall be implemented during design and construction. These measures include use of deep foundations engineering and removal or improvement of potentially liquefiable soils. Documentation of the methods used shall be provided in the required design-level geotechnical report(s).</td>
<td>LTS</td>
</tr>
<tr>
<td>GEO-3B. The Project could result in a significant impact related to development on unstable geologic units and soils or result in lateral spreading.</td>
<td>S</td>
<td>GEO-3B. The potential for lateral spreading shall be evaluated as a part of the required geotechnical reports. Where necessary, corrective measures shall be included in the required design-level geotechnical report(s) and implemented during construction. These measures could include retaining structures to stabilize channel margins, use of deep foundations, removal or improvement of liquefiable soils, and/or the use of relatively rigid foundations.</td>
<td>LTS</td>
</tr>
<tr>
<td>GEO-3C. The Project could result in a significant impact related to development on unstable geologic units and soils or result in subsidence or collapse.</td>
<td>S</td>
<td>GEO-3C. Settlement of the existing fill and Bay Mud could have adverse effects on shallow foundations, underground utilities, pavements, and other improvements. Options to mitigate these effects include use of shallow ridged foundations for smaller structures, supporting larger structures with deep foundations such as driven piles, and installing flexible connections for utilities. Pre-loading consolidation (surcharging) prior to construction of new improvements could also be considered. The recommendations for both special foundations and other geotechnical engineering measures specified in project specific geotechnical reports shall be implemented during design and construction.</td>
<td>LTS</td>
</tr>
<tr>
<td>GEO-4. The Project could create substantial risks to property as a result of its location on expansive soil, as defined by Section 1803.5.3 of the California Building Code.</td>
<td>S</td>
<td>GEO-4. The Project geotechnical engineer shall make specific recommendations for mitigation of expansive soils under pavements and structures, including techniques such as capping expansive soils with a layer of non-expansive fill, or by lime treatment. Typical mitigation measures for pavements could include special pavement design, lime treatment of subgrade soils and/or sub-excavation of expansive soils and replacement with non-expansive fill. These recommendations shall be based on testing of the in-site fill.</td>
<td>LTS</td>
</tr>
</tbody>
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**Table Notes:**
- **GEO-3A:** Mitigation measures include deep foundations, removal of liquefiable soils, and documentation of methods used.
- **GEO-3B:** Mitigation measures include retaining structures, deep foundations, and flexible connections for utilities.
- **GEO-3C:** Mitigation measures include shallow ridged foundations, deep foundations, and pre-loading consolidation.
- **GEO-4:** Mitigation measures include capping expansive soils with non-expansive fill, lime treatment, and special pavement design.
EXECUTIVE SUMMARY

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<tbody>
<tr>
<td>GEO-5. The Project would not 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.</td>
<td>No Impact</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>GEO-6. The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to geology and soils.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**GREENHOUSE GAS EMISSIONS**

GHG-1: Implementation of the Project would directly or indirectly generate GHG emissions that may have a significant impact on the environment.

<p>| | | |</p>
<table>
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<tr>
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<tbody>
<tr>
<td>S</td>
<td>GHG-1A: Residential developments that include garage parking shall be electrically wired to accommodate electric vehicle charging. The location of the electrical outlets shall be specified on building plans and proper installation shall be verified by the San Leandro Building and Safety Division prior to issuance of a Certificate of Occupancy.</td>
<td>SU</td>
</tr>
<tr>
<td></td>
<td>GHG-1B: Electrical vehicle Level 2 charging stations shall be provided for the hotel and office land uses for the review and approval of the San Leandro Community Development Director. A minimum of one electric vehicle charging space shall be provided for every 25,000 square feet of non-residential building square footage. The location of the electrical vehicle charging stations shall be specified on site plans, and proper installation shall be verified by the Building and Safety Division prior to issuance of a Certificate of Occupancy.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GHG-1C: Applicant-provided appliances shall be Energy Star appliances (dishwashers, refrigerators, clothes washers, and dryers). Installation of Energy Star appliances shall be verified by the San Leandro Building and Safety Division during plan check.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GHG-1D: Applicants, or their designee, for large non-residential development projects (e.g., employers with 50 employees at work site) shall establish an employee trip commute reduction program (CTR), in conformance with the Bay Area Air Quality Management District’s Commuter Benefits Program (California Government Code</td>
<td></td>
</tr>
</tbody>
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| Section 65081) The program shall offer one of the following commuter benefit options:  
- Pre-tax benefit: Allow employees to exclude their transit or vanpooling expenses from taxable income, up to $130 per month.  
- Employer provided subsidy: Provide a subsidy to reduce or cover employees' monthly transit or vanpool costs, up to $75 per month.  
- Employer-provided transit: Provide a free or low-cost transit service for employees, such as a bus, shuttle or vanpool service.  
- Alternative commuter benefit: Provide an alternative commuter benefit that is as effective in reducing single-occupancy commute trips, as the options above.  
The employer shall also provide information about other commute options and connect commuters for carpooling, ridesharing, and other activities. The CTR program shall identify alternative modes of transportation to the Project Site, including transit schedules, bike and pedestrian routes, and carpool/vanpool availability. Information regarding these programs shall be readily available to employees and clients and shall be posted in a highly visible location and/or made available online. The project applicant shall consider the following additional incentives for commuters as part of the CTR program:  
- Preferential carpool parking.  
- Flexible work schedules for carpools.  
- Telecommute and/or flexible work hour programs.  
- Car-sharing program (e.g., Zipcar).  
- Bicycle end-trip facilities, including bike parking, showers, and lockers.  
The CTR program shall be prepared for the review and approval by the Community Development Director prior to occupancy permits. |
### Table 1-1  Summary of Impacts and Mitigation Measures

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<tr>
<td>GHG-1E: Applicants for new development projects within the San Leandro Shoreline Development shall achieve either the Build-it-Green GreenPoint Rated or US Green Building Council’s Leadership in Energy and Environmental Design (LEED) standards that are endorsed by the City.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>GHG-1F: Applicants for future projects within the Project shall design individual habitable residential and non-residential structures to be 15 percent more energy efficient than the current Building and Energy Efficiency Standards. The 15-percent reduction in building envelope energy use shall be based on the current Building and Energy Efficiency Standards (Title 24, Part 6, of the California Building Code) that is in place at the time building permits are submitted to the City. Architectural plans submitted to the City Building Division shall identify the requirement to reduce building energy use by 15 percent to meet this requirement.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>GHG-2. Implementation of the Project would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>GHG-3: Implementation of the Project would directly or indirectly generate GHG emissions that may have a cumulatively considerable and therefore significant impact on the environment.</td>
<td>S</td>
<td>GHG-3: Implementation of Mitigation Measures GHG-1A through GHG-1F would reduce cumulative GHG emissions impacts.</td>
<td>SU</td>
</tr>
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### HAZARDS AND HAZARDOUS MATERIALS

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<tbody>
<tr>
<td>HAZ-1. Implementation of the Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>HAZ-2. Implementation of the Project would not 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.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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<tbody>
<tr>
<td>HAZ-3. Implementation of the Project would not emit hazardous emissions or handle</td>
<td>No Impact</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>hazardous or acutely hazardous materials, substances, or waste within ¼-mile of</td>
<td></td>
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<tr>
<td>an existing or proposed school.</td>
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</tr>
<tr>
<td>HAZ-4. The Project would not be located on a site which is included on a list of</td>
<td>No Impact</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>hazardous materials sites compiled pursuant to Government Code Section 65962.5</td>
<td></td>
<td></td>
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<tr>
<td>and, as a result, create a significant hazard to the public or the environment.</td>
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<td></td>
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</tr>
<tr>
<td>HAZ-5. Implementation of the Project within 2 miles of a public airport would</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>not result in a safety hazard for people residing or working in the Project area.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>HAZ-6. The project would not be within the vicinity of a private airstrip and</td>
<td>No Impact</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>result in a safety hazard for people residing or working in the project area.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HAZ-7. Implementation of the Project would not impair implementation of, or</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>physically interfere with, an adopted emergency response plan or emergency</td>
<td></td>
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<tr>
<td>evacuation plan.</td>
<td></td>
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<tr>
<td>HAZ-8. Implementation of the project would not expose people or structures to a</td>
<td>No Impact</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>significant risk of loss, injury, or death involving wildland fires, including</td>
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<tr>
<td>where wildlands are adjacent to urbanized areas or where residences are</td>
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<tr>
<td>intermixed with wildlands.</td>
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<td></td>
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<tr>
<td>HAZ-9. Implementation of the Project, in combination with past, present, and</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>reasonably foreseeable projects, would result in less-than-significant cumulative</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>impacts with respect to hazards and hazardous materials.</td>
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</tbody>
</table>

### Hydrology and Water Quality

| HYDRO-1A. Construction activities could temporarily degrade water quality with    | S                              | HYDRO-1A. Minimize Impacts to Water Quality during Waterside Demolition and Construction Activities. The following mitigation measures are designed to avoid adverse impacts on water quality during waterside demolition and construction activities: | LTS |
| suspended sediment and turbidity and could result in the release of chemicals     |                               |                                                                                 |     |
| and hydrocarbon fuels into the water column.                                     |                               |                                                                                 |     |

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<tr>
<td>Piles shall be removed during low tide periods to minimize the amount of sediments re-suspended in the water column.</td>
<td></td>
<td>• When removing piles, the pile shall be hit or vibrated first to break the bond with the sediment, which would minimize the likelihood of the pile breaking and reduce the amount of sediment released into the water column.</td>
<td></td>
</tr>
<tr>
<td>Piles shall be pulled from the subsurface and quickly placed onto a receiving barge or land to minimize potential releases of creosote, petroleum sheens, and turbidity in the water column.</td>
<td></td>
<td>• A turbidity curtain shall be installed prior to removing or installing piles or any other waterside activities to minimize turbidity impacts in the water column.</td>
<td></td>
</tr>
<tr>
<td>Piles shall not be rinsed or washed. The storage area for the piles shall include straw bales, filter fabric, or other containment devices to contain runoff.</td>
<td></td>
<td>• Piles shall be pulled from the subsurface and quickly placed onto a receiving barge or land to minimize potential releases of creosote, petroleum sheens, and turbidity in the water column.</td>
<td></td>
</tr>
<tr>
<td>During removal of the existing dock system, floating rafts and/or trash and debris containment booms shall be placed under the docks and around the areas of demolition to contain debris that may be released during these activities.</td>
<td></td>
<td>• Any waterside construction activities shall be restricted to the period from June 15 through October when special-status fish species would most likely not be expected within the affected areas.</td>
<td></td>
</tr>
</tbody>
</table>

**HYDRO-1B.** Construction activities could temporarily degrade water quality with increases in suspended sediment and turbidity and could result in the release of chemicals and hydrocarbon fuels into the water column.

**HYDRO-1B. Minimize Potential for Fuel Releases During Waterside Demolition and Other Construction Activities.** The following mitigation measures are designed to avoid potential releases of fuel constituents into the water column during demolition/construction activities:

• A spill contingency plan shall be prepared that addresses the potential for an accidental release of fuel into navigable waterways. The plan shall include floating booms and absorbent materials to recover hazardous spills and include provisions for containment, removal, and disposal of spilled materials.

• No fueling, cleaning, or maintenance of vehicles or equipment.

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<tbody>
<tr>
<td>shall take place within an area where an accidental discharge to navigable waterways may occur.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>All vehicles and equipment operating within or adjacent to the marina or other waterways shall be visually inspected for fuel or waste releases before the beginning of the work day. If spillage or leaks occur during the work day, they shall be noted and recorded and immediate action shall be taken for removal and disposal.</td>
<td>S</td>
<td>Mitigation Measures: Floating booms shall be available for containing spills or debris discharged into the water during demolition and construction activities and any debris shall be removed as soon as possible but no later than the end of each day. If it is determined that a small portion of the Project site west of Monarch Bay Drive and/or the drainage channel along the west side of the golf course are jurisdictional wetlands or regulated waters by the Army Corps, a Section 404 permit shall be obtained from the Army Corps and a Section 401 water quality certification shall be obtained from the RWQCB. The permit and certification shall specify methods for protecting water quality during construction activities, including BMPs to minimize turbidity, control floating debris, and provide spill containment and cleanup equipment.</td>
<td>LTS</td>
</tr>
</tbody>
</table>

**Table Legend:**
- LTS = Less Than Significant
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- SU = Significant Unavoidable Impact
## EXECUTIVE SUMMARY

### Table 1-1 Summary of Impacts and Mitigation Measures

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<thead>
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<tbody>
<tr>
<td>HYDRO-3. The Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the amount of surface runoff in a manner which would result in substantial erosion or siltation on- or off-site.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>HYDRO-4. The Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial flooding on- or off-site.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>HYDRO-5. The Project would not 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.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>HYDRO-6. The Project would not otherwise substantially degrade water quality.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>HYDRO-7. The Project would place housing within the 100-year floodplain and within areas subject to sea level rise/coastal high hazard.</td>
<td>S</td>
<td>HYDRO-7: Minimize Potential for Flooding for Housing within the 100-Year Floodplain and within Areas Subject to Sea Level Rise/Coastal High Hazard. The current FEMA FIRM panels are undergoing revisions and it is possible that no portions of the Project site will be within the 100-year floodplain when the Project is scheduled to start construction. However, because a portion of the Project site is currently within the 100-year floodplain and a portion of the Project site could be designated as being within the 100-year floodplain, the following mitigation measures are applicable: Prior to the start of construction or development, the Applicant shall obtain a development permit from the City’s Floodplain Administrator. The application shall include the proposed elevation in relation to mean sea level of the lowest floor (including basement) of all structures and the proposed elevation in relation to mean sea level to which any structure will be flood-proofed in accordance with the City’s Municipal Code requirements under Chapter 7-9, Floodplain Management. All provisions for building within the 100-year floodplain that are</td>
<td>LTS</td>
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- A registered engineer or architect shall develop or review the structural design and plans for construction and certify that the design and methods of construction are in accordance with Federal, State, County, and City standards.
- Prior to the issuance of building permits, a Letter of Map Revision (LOMR) and elevation certificate shall be submitted to the City’s Chief Building Official. The bottom of the lowest horizontal structural member of the lowest floor shall be at or above the BFE, with a recommendation that the structures be one to three feet above the BFE. Also, any structure below the BFE in the VE zone shall be less than 299 square feet and shall only be used for storage parking, or access (SPA).
- Prior to the issuance of building permits, a Letter of Map Revision (LOMR) and elevation certificate shall be submitted to the City’s Chief Building Official. The bottom of the lowest horizontal structural member of the lowest floor shall be at or above the BFE. Also, any structure below the BFE in the VE zone shall be less than 299 square feet and shall only be used for storage parking, or access (SPA).
- Prior to the start of construction or development, the latest version of the FIRM maps shall be reviewed to determine if portions of the Project site are within the 100-year floodplain and to determine the status of actions taken by the City of San Leandro and the Alameda Public Works Department to remove 1,000 properties from the preliminary FIRM maps. If any portion of the Project site is determined to be within the 100-year floodplain, then the mitigation measures listed above shall be applicable.
- Prior to issuance of a tentative map, a sea level rise risk assessment shall be prepared and submitted to the City for areas of the Project that are subject to sea level rise. The risk assessment shall be prepared by a qualified engineer and shall be based on the estimated 100-year flood elevation and the best

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<tr>
<td>HYDRO-8. The Project would not 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.</td>
<td>No Impact</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>HYDRO-9. The Project would not result in inundation by seiche, tsunami, or mudflow.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>HYDRO-10. The Project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to hydrology and water quality.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
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**HYDRO-8.** The Project would not 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.

**HYDRO-9.** The Project would not result in inundation by seiche, tsunami, or mudflow.

**HYDRO-10.** The Project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to hydrology and water quality.

### LAND USE AND PLANNING

| LAND-1. The Project would not physically divide an established community. | LTS | N/A | N/A |
| LAND-2. The proposed Project would not conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. | LTS | N/A | N/A |

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<tbody>
<tr>
<td>LAND-3. The Project would not conflict with any applicable habitat conservation plan (HCP) or natural community conservation plan.</td>
<td>No Impact</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>LAND-4. The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to land use and planning.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
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**NOISE**

NOISE-1. The Project would expose people to or generate noise levels in excess of standards established in the General Plan and/or the applicable standards of other agencies.

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<tr>
<td>NOISE-1.</td>
<td>S</td>
<td>NOISE-1A: The project applicant shall submit an acoustic study to the satisfaction of the City's Chief Building Official with the applications for site plan review and/or Tentative Map, whichever is earlier. The study shall demonstrate that all development meets applicable exterior noise standards and all new residences meet an interior noise level due to exterior noise of 45 dBA CNEL consistent with State and local noise standards. The acceptable interior noise levels for all non-residential construction will be determined based on a case-by-case basis according to the type of activity proposed. This is in accordance with General Plan Policy 35.02, Residential Interior Noise Standard. The study shall be based on precise grading and architectural plans including specific construction method details and materials to calculate the necessary exterior to interior noise reduction of approximately 20 dBA to achieve 45 dBA CNEL for residential construction. The precise exterior to interior reduction would be determined in the acoustical study when precise grading plans with building elevations, footprints and architectural plans are available. The applicant shall incorporate into the Project design all required noise insulation features and techniques necessary to reduce interior noise levels to achieve the interior noise standard. To achieve the required interior noise levels, features such as upgraded exterior wall and roof assemblies, upgraded windows, and exterior doors may be required.</td>
<td>LTS</td>
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| NOISE-1B: All residential units of the Project shall include an alternative form of ventilation, such as noise-baffled passive air ventilation systems or mechanical air conditioning systems, that would allow windows to remain closed for prolonged periods of time to meet the interior noise standard of 45 dBA Ldn established by the City and the Uniform Building Code Requirements. | S                              | NOISE-2. For construction, grading, and demolition activities that would use vibration-intense equipment such as pile driving, rock blasting and vibratory rollers that would occur within 250 feet of existing residential, commercial, libraries, and hotel buildings, the following mitigation measures shall be implemented in close coordination with City of San Leandro staff so that alternative construction techniques or scheduling approaches are undertaken. For projects where vibration-intense equipment would be utilized within 250 feet of existing residential, commercial, libraries, and hotel buildings the following controls to reduce potential vibration impacts shall be implemented during construction, as practical:  
  - Prior to the issuance of building permits, City staff shall coordinate with the applicant and/or construction contractor to discuss alternative methods of construction for vibration-intense activities in close proximity to sensitive uses or existing structures. As part of this coordination, the applicant and/or construction contractor shall identify construction methods not involving vibration-intensive equipment or activities. For example, drilled foundation caisson holes that would produce less vibration than pile driving methods, or the use of non-explosive rock breaking methods.  
  - The project applicant or constructor contractor shall implement reduced-vibration alternative methods identified during project review during subsequent excavation, grading, and construction for work conducted in close proximity to sensitive structures or uses.  
  - If possible, vibration-intense construction activities should take place during times when nearby sensitive receptors, such as libraries and hotel rooms are at their lowest utilization/ | SU                            |
Prior to the issuance of building permits, the applicant and/or construction contractor shall inspect and report on the current structural condition of the existing buildings within 200 feet from where pile driving, rock blasting, or within 30 feet from where vibratory rollers would be used.

During construction, if any vibration levels cause cosmetic or structural damage to existing buildings in close proximity to a project site, the applicant shall immediately issue “stop-work” orders to the construction contractor to prevent further damage. Work shall not restart until the building is stabilized and/or preventive measures are implemented to relieve further damage to the building(s).

With implementation of the mitigation measures listed above, the project would reduce potential vibration impacts. It is not known at this point if implementation of these measures would be feasible and if they would provide enough reduction to mitigate levels below thresholds. Even with implementation of the mitigation measures above, the project could result in substantial vibration levels to uses in the vicinity of the project site. This impact would be significant and unavoidable.

NOISE-3. Implementation of the Project would result in a substantial permanent increase in ambient noise levels in the vicinity of the project site above levels existing without the Project.

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| NOISE-3: The existing single-family and multi-family residential uses along Marina Boulevard west of Aurora Drive would experience a noise increase of 4.1 dBA for all three scenarios due to project-related traffic. The resulting noise level at uses along this segment would be greater than 60 dBA $L_{dn}$, which is the exterior noise level that the City strives to achieve for residential exterior uses. According to the City’s General Plan Policies 35.03 and 35.04 listed above, the noise level increase greater than 3 dB and resulting in an ambient noise level greater than 60 dBA $L_{np}$ at noise-sensitive residential uses along this segment would be considered a significant impact. Potential mitigation measures to be considered would be the construction of noise barriers along this road, or resurfacing this segment with rubberized asphalt. However, the construction of noise barriers are not feasible as the residential areas front
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<tr>
<td>access Marina Boulevard; in addition, rubberized asphalt is only effective at roads</td>
<td>S</td>
<td>Construction equipment shall be well maintained and used judiciously to be as quiet as practical. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible; utilization “quiet” models of air compressors and other stationary noise sources where such technology exists. Select hydraulically- or electrically-powered equipment and avoid pneumatically powered equipment where feasible. Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project demolition or construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures; Locate stationary noise-generating equipment as far as possible from sensitive receptors that adjoin construction sites. Construct temporary noise barriers or partial enclosures to acoustically shield such equipment where feasible; Prohibit unnecessary idling of internal combustion engines;</td>
<td>LTS</td>
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<td>in which cars travel at high speeds, as it only reduces tire-asphalt noise, but</td>
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<td>the speed limit in that segment is low, making this solution not effective.</td>
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<tr>
<td>Therefore, no feasible mitigation measures are available to reduce these impacts.</td>
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<td>Therefore, on-road vehicle noise due to the project would result in substantial</td>
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<tr>
<td>permanent increases in ambient noise levels along Marina Boulevard west of Aurora</td>
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<tr>
<td>Drive, and this impact would be significant and unavoidable.</td>
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<tr>
<td>NOISE-4: The Project shall implement the following measures.</td>
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<tr>
<td>S NOISE-4: The Project shall implement the following measures.</td>
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<tr>
<td>* Construction equipment shall be well maintained and used judiciously to be as</td>
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<tr>
<td>quiet as practical. Equipment and trucks used for project construction shall</td>
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<tr>
<td>utilize the best available noise control techniques (e.g., improved mufflers,</td>
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<tr>
<td>equipment redesign, use of intake silencers, ducts, engine enclosures, and</td>
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<tr>
<td>acoustically attenuating shields or shrouds), wherever feasible;</td>
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<tr>
<td>* Utilize “quiet” models of air compressors and other stationary noise sources</td>
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<tr>
<td>where such technology exists. Select hydraulically- or electrically-powered</td>
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<tr>
<td>equipment and avoid pneumatically powered equipment where feasible. Impact tools</td>
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<tr>
<td>(e.g., jack hammers, pavement breakers, and rock drills) used for project</td>
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<tr>
<td>demolition or construction shall be hydraulically or electrically powered</td>
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<tr>
<td>wherever possible to avoid noise associated with compressed air exhaust from</td>
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<td>pneumatically powered tools.</td>
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<tr>
<td>However, where use of pneumatic tools is unavoidable, an exhaust muffler on the</td>
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<tr>
<td>compressed air exhaust shall be used. Quieter procedures shall be used, such as</td>
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<td>drills rather than impact equipment, whenever such procedures are available and</td>
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<td>consistent with construction procedures;</td>
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<tr>
<td>* Locate stationary noise-generating equipment as far as possible from sensitive</td>
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<tr>
<td>receptors that adjoin construction sites. Construct temporary noise barriers or</td>
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<td>partial enclosures to acoustically shield such equipment where feasible;</td>
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<tr>
<td>* Prohibit unnecessary idling of internal combustion engines;</td>
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<td>• Prior to initiation of on-site construction-related demolition or earthwork activities, a minimum 6-foot-high temporary sound barrier shall be erected along the project property line abutting adjacent operational businesses, residences or other noise-sensitive land uses. These temporary sound barriers shall be constructed with a minimum surface weight of four pounds per square foot and shall be constructed so that vertical or horizontal gaps are eliminated. These temporary barriers shall remain in place through the construction phase in which heavy construction equipment, such as excavators, dozers, scrapers, loaders, rollers, pavers, and dump trucks, are operating within 150 feet of the edge of the construction site by adjacent sensitive land uses. This measure could lower construction noise levels at adjacent ground floor residential units by up to 8 dBA, depending on topography and site conditions;</td>
<td></td>
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<tr>
<td>• Erect temporary noise control blanket barriers, if necessary, along building façades facing construction sites to prevent sleep disturbance. This mitigation would only be necessary if conflicts occurred which were irresolvable by proper scheduling;</td>
<td></td>
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</tr>
<tr>
<td>• To the maximum extent feasible, route construction-related traffic along major roadways and away from sensitive receptors;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Notify all businesses, residences or other noise-sensitive land uses within 500 feet of the perimeter of the construction site of the construction schedule in writing prior to the beginning of construction and prior to each construction phase change that could potentially result in a temporary increase in ambient noise levels in the project vicinity;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Signs shall be posted at the construction site that include permitted construction days and hours, a day and evening contact number for the job site, and a day and evening contact number for the on-site complaint and enforcement manager, and the City’s Chief Building Official, in the event of problems;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• An on-site complaint and enforcement manager shall be available to respond to and track complaints. The manager will be</td>
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<tr>
<td>NOISE-5. The Project would not result in exposure of people residing or working in the vicinity of the Project site to excessive aircraft noise levels, for a project located within an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport.</td>
<td>LTS</td>
<td>responsible for responding to any complaints regarding construction noise and for coordinating with the adjacent land uses. The manager will determine the cause of any complaints (e.g., starting too early, bad muffler, etc.) and coordinate with the construction team to implement effective measures (considered technically and economically feasible) warranted to correct the problem. The telephone number of the coordinator shall be posted at the construction site and provided to neighbors in a notification letter. The manager shall notify the City’s Chief Building Official of all complaints within 24 hours. The manager will be trained to use a sound level meter and should be available during all construction hours to respond to complaints; and * A preconstruction meeting shall be held with the Chief Building Official and the general contractor/on-site project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are fully operational. The above mitigation measures shall be identified in construction contracts and acknowledged by the contractor.</td>
<td>N/A</td>
</tr>
<tr>
<td>NOISE-6. The Project would not result in exposure of people residing or working in the Project site to excessive noise levels, for a project within the vicinity of a private airstrip.</td>
<td>No Impact</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>NOISE-7. This Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant impacts with respect to noise.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
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<td><strong>POPULATION AND HOUSING</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>POP-1. The Project would not induce substantial unexpected population growth, or growth for which inadequate planning has occurred, either directly or indirectly.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>POP-2. The Project would not displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>POP-3. The Project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>POP-4. This Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant impacts with respect to population and housing.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>PUBLIC SERVICES AND RECREATION</strong></td>
<td></td>
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</tr>
<tr>
<td>SVCS-1. The Project would not result in the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>SVCS-2. The Project, in combination with past, present and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to fire protection services.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>SVCS-3. The Project would not result in the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.</td>
<td>LTS</td>
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<td>SVCS-4. The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to police services.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>SVCS-5. The Project would not result in the need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>SVCS-6. The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to school services.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>SVCS-7. The Project would not result in the need for new or physically altered park facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>SVCS-8. The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to parks.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>SVCS-9. The Project would not result in the need for new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>SVCS-10. The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to the construction of other public facilities.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*LTS = Less Than Significant  S = Significant  SU = Significant Unavoidable Impact*
### Table 1-1  Summary of Impacts and Mitigation Measures

<table>
<thead>
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<tbody>
<tr>
<td><strong>TRANSPORTATION AND TRAFFIC</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>TRAF-1A: The proposed Project would contribute to unacceptable operation (from LOS C to LOS E in the AM and PM peak hours) at the intersection of Doolittle Drive and Marina Boulevard (#11) under baseline Plus Project conditions.</td>
<td>S</td>
<td>TRAF-1A.1: Convert the existing eastbound right-turn lane on Marina Boulevard to a shared through-right turn lane to provide one left-turn lane, one through lane and one shared through-right turn lane on the eastbound approach.</td>
<td>LTS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TRAF-1A.2: Optimize the cycle length of the traffic signal at the intersection of Doolittle Drive and Marina Boulevard (#11). The traffic signal does not operate in coordination with any other signal; therefore, the cycle length can be adjusted without affecting other signals in the system.</td>
<td></td>
</tr>
<tr>
<td>TRAF-1B: The proposed Project would contribute to unacceptable operation (from LOS D to LOS E in the PM peak hour) at the intersection of San Leandro Boulevard and Marina Boulevard (#18) under baseline Plus Project conditions.</td>
<td>S</td>
<td>TRAF-1B: Optimize the traffic signal timing splits at the intersection of San Leandro Boulevard and Marina Boulevard (#18).</td>
<td>LTS</td>
</tr>
<tr>
<td>TRAF-1C: The proposed Project would contribute to unacceptable operation (from LOS A to LOS F in the AM and from LOS B to LOS F in the PM peak hour) at the intersection of Aurora Drive and Marina Boulevard (#10) under baseline Plus Project conditions.</td>
<td>S</td>
<td>TRAF-1C: Install a modern mini-roundabout that could be accommodated within the existing right-of-way. Research has shown that roundabout-controlled intersections have similar low frequency and severity of crashes as all-way stop-controlled intersections. Further, the slower speed at roundabout also reduces the risk of injuries and fatalities for road users in the event of a crash. A conceptual drawing of a mini-roundabout is provided in Figure 4.13-5. Implementation of this mitigation measure would improve the operation of this intersection to LOS A in the AM, PM and Saturday midday peak hours. Alternatively, installation of a traffic signal would also mitigate the project impact as peak hour signal warrant is met. Upon implementation, the intersection would improve to LOS B in the AM peak hour and LOS A in the PM peak hour and Saturday midday peak hour.</td>
<td>LTS</td>
</tr>
<tr>
<td>TRAF-1D: The proposed Project would contribute to unacceptable operation (from LOS A to LOS F in the PM peak hour) at the intersection of Monarch Bay Drive and Mulford Point Drive (#19) under baseline Plus Project conditions.</td>
<td>S</td>
<td>TRAF-1D: Install a roundabout at the intersection of Monarch Bay Drive and Mulford Point Drive (#19).</td>
<td>LTS</td>
</tr>
</tbody>
</table>

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</table>
| TRAF-2A: The proposed Project would cause the I-880 northbound segment north of Davis Street to reduce from LOS E to LOS F in the PM peak hour under Year 2020 conditions | S | TRAF-2A: One of the following measures shall occur:  
* Widen I-880 to provide an additional travel lane in the northbound direction; or  
* Develop and implement a Transportation Demand Management (TDM) plan that would discourage single occupant vehicle trips. TDM measures may include:  
  ▪ Provide a shuttle service that operates between the Project site and key locations such as San Leandro and Coliseum BART stations and Oakland International Airport;  
  ▪ Facilitate carpool and ridesharing among residents of the Project | SU |
| TRAF-2B: The proposed Project would cause the volume-to-capacity (v/c) ratio on the northbound segment of Doolittle Drive, which would operate at Level of Service (LOS) F, to increase by 0.06 under Year 2020 conditions and by 0.04 under Year 2035 conditions in the PM peak hour. | S | TRAF-2B.1: Widen Doolittle Drive to provide an additional travel lane in the northbound direction; or  
TRAF-2B.2: Provide a shuttle service that operates between the Project site and key locations such as San Leandro and Coliseum BART stations and Oakland International Airport. | SU |
| TRAF-2C: The proposed Project would cause increases in delays at the Aurora Drive and Marina Boulevard (#10), Marina Boulevard and Merced Street (#12), Marina Boulevard and I-880 southbound off ramp (#14), and Monarch Bay Drive and Mulford Point Drive (#19) intersections, which would adversely impact the transit operations of AC Transit Line S, 75 and 89. | S | TRAF-2C: Implement Mitigation Measures TRAF-1A through TRAF-7F. Any roundabouts shall be designed to accommodate AC Transit busses. | LTS |
| TRAF-3. The proposed Project would not 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 | N/A | N/A |
| TRAF-4A: The location of the proposed northern driveway of the North Golf Course Residential component of the Project presents a potential sight distance challenge for cars pulling out of the driveway. | S | TRAF-4A: Remove the North Golf Course northern driveway from the Project plans. | LTS |

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<tr>
<td>TRAF-4B: The proposed southern driveway of the North Golf Course Residential component would potentially result in a design hazard due to its location in relation to the proposed Monarch Bay Drive and Mulford Point Drive intersection.</td>
<td>S</td>
<td>TRAF-4B: Move the Southern Driveway of the North Golf Course residential component to the north, to form a standard four-legged intersection. This measure shall be implemented in coordination with Mitigation Measure TRAF-1D.</td>
<td>LTS</td>
</tr>
<tr>
<td>TRAF-5. The proposed Project would not result in inadequate emergency access.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>TRAF-6. The proposed Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.</td>
<td>LTS</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>TRAF-7A. The addition of traffic associated with implementation of the proposed Project would cause the intersection level of service at Doolittle Drive and Marina Boulevard (#11) to reduce from LOS D to LOS F in the AM and PM peak hours under Near-Term Cumulative Conditions.</td>
<td>S</td>
<td>TRAF-7A: Implementation of Mitigation Measures TRAF-1A.1 – TRAF-1A.2 for the eastbound approach identified under the baseline Plus Project condition.</td>
<td>LTS</td>
</tr>
</tbody>
</table>
| TRAF-7B: The addition of traffic associated with implementation of the proposed Project would cause I-880 southbound ramps and Marina Boulevard (#14) to reduce to LOS E during both AM and Saturday peak hours, and would further reduce the service levels from LOS E to LOS F in the PM peak hour, under Near-Term Cumulative Conditions. | S                              | TRAF-7B.1: Modify the traffic signal to a two-phase operation to provide non-conflicting:  
  ▪ Eastbound and westbound through movements on Marina Boulevard during the first phase.  
  ▪ Southbound right-turn, northbound right-turn and westbound left-turn movements during the second phase.  
  TRAF-7B.2: Prohibit westbound U-turn movements. | SU                          |
| TRAF-7C: The proposed Project would cause operations at the intersection of San Leandro Boulevard and Marina Boulevard (#18) to reduce from LOS D to LOS E in the AM | S                              | TRAF-7C.1: Add a northbound left-turn lane on San Leandro Boulevard to provide two left-turn lanes: one through lane and one shared through-right turn lane. |                             |

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<tr>
<td>peak hour, adding to the existing substandard LOS F in the PM peak hour and cause the volume-to-capacity (v/c) ratio to increase by 0.07 under Near-Term Cumulative Conditions.</td>
<td>S</td>
<td>TRAF-7C.2: Restripe lanes on the west leg to provide two corresponding receiving lanes. The lane geometries before and after implementation of these Mitigation Measures are shown in the figure opposite.</td>
<td>SU</td>
</tr>
<tr>
<td>TRAF-7D: The proposed Project would cause the level of service at the intersection of Aladdin Avenue and Alvarado Street (#28) to reduce from LOS D to LOS E in the PM peak hour under Near-Term Cumulative Conditions.</td>
<td>S</td>
<td>TRAF-7D: Optimize traffic signal cycle length at the intersection of Aladdin Avenue and Alvarado Street. This signal does not operate in coordination with any other signal; therefore, the cycle length can be adjusted without affecting other signals in the system.</td>
<td>LTS</td>
</tr>
<tr>
<td>TRAF-7E: The proposed Project would cause the level of service at the intersection of Aurora Drive and Marina Boulevard (#10) to reduce from LOS A to LOS F in the AM peak hour and from LOS B to LOS F in the PM peak hour and from LOS B to LOS E in the Saturday peak hour.</td>
<td>S</td>
<td>TRAF-7E: Implementation of Mitigation Measure TRAF-1C, installing a mini-roundabout or a traffic signal, would lessen the near term cumulative impacts to less than significant. The mini-roundabout would improve the operations to LOS A in all three peak period hours. A traffic signal would improve the operation of the intersection to LOS B in the AM peak hour and LOS A in the PM and Saturday peak hours.</td>
<td>LTS</td>
</tr>
<tr>
<td>TRAF-7F: The proposed Project would cause the level of service at the intersection of Monarch Bay Drive and Mulford Point Drive (#19) to reduce from LOS A to LOS F in the PM peak hour.</td>
<td>S</td>
<td>TRAF-7F: Implement Mitigation Measure TRAF-1D by installing a roundabout. This would improve the operations to LOS A in the PM peak hour.</td>
<td>LTS</td>
</tr>
<tr>
<td>TRAF-7G: The proposed Project would cause the intersection level of service of the intersection of Doolittle Drive and Marina Boulevard (#11) to reduce from LOS D to LOS F in the AM and PM peak hours</td>
<td>S</td>
<td>TRAF-7G: Implement Mitigation Measures TRAF-1A.1 and TRAF-1A.2.</td>
<td>LTS</td>
</tr>
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<tr>
<td>TRAF-7H: The proposed Project would cause the intersection of Merced Street and Marina Boulevard (#12) to reduce from LOS D to LOS E during the AM and PM peak hours</td>
<td>S</td>
<td>TRAF-7H: Modify the traffic signal phasing and optimize cycle length and signal split timing based on real time traffic demands by improving operations of recently implemented, adaptive traffic signals at the intersection of Merced Street and Marina Boulevard (#12).</td>
<td>LTS</td>
</tr>
<tr>
<td>TRAF-7I: The proposed project would cause the operations at the intersection of I-880 southbound ramps and Marina Boulevard (#14) to reduce from LOS D to LOS E in the AM peak hour, adding to the existing substandard operations to further reduce the level of service from LOS E to LOS F in the PM and Saturday peak hours and cause the volume-to-capacity (v/c) ratios to increase by 0.10 during both periods, which is higher than the 0.05 allowed by the City.</td>
<td>S</td>
<td>TRAF-7I: By modifying the signal to a two-phase operation, implementation of Mitigation Measure TRAF-7B.1 (described above) would improve the operations to LOS C in the AM and Saturday peak hours, and to LOS D in the PM peak hour.</td>
<td>SU</td>
</tr>
<tr>
<td>TRAF-7J: The proposed Project would add to the Long-Term Cumulative No Project substandard LOS F operations at the intersection of San Leandro Boulevard and Marina Boulevard (#18) and cause the v/c ratio to increase by 0.07 in the AM peak hour and 0.10 in the PM peak hour.</td>
<td>S</td>
<td>TRAF-7J: Implementation of Mitigation Measures 7C.1 and 7C.2 would reduce the v/c ratios to a less-than-significant level.</td>
<td>SU</td>
</tr>
<tr>
<td>TRAF-7K: The proposed Project would cause the level of service at the intersection of Aladdin Avenue and Teagarden Street (#27) to reduce from LOS D to LOS E in the PM peak hour.</td>
<td>S</td>
<td>TRAF-7K: Optimize the traffic signal cycle length at the intersection of Aladdin Avenue and Teagarden Street (#27). This traffic signal does not operate in coordination with any other signal; therefore, the cycle length can be adjusted without affecting other signals in the system.</td>
<td>LTS</td>
</tr>
<tr>
<td>TRAF-7L: The proposed Project would cause the level of service at the intersection of Aurora Drive and Marina Boulevard (#10) to reduce from LOS A to LOS F in the AM peak hour and from LOS B to LOS F in the PM and Saturday peak hours.</td>
<td>S</td>
<td>TRAF-7L: Implementation of Mitigation Measure TRAF-1C, installing a mini-roundabout or a traffic signal, would lessen the impacts in the long term cumulative conditions to less than significant. The mini-roundabout would improve the operations to LOS A in the AM and PM peak hours and to LOS B in the Saturday peak hour. A traffic signal would improve the operation of this intersection to LOS B in the AM peak hour and LOS A in the PM and Saturday peak hours.</td>
<td>LTS</td>
</tr>
</tbody>
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## Table 1-1  **Summary of Impacts and Mitigation Measures**

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<tbody>
<tr>
<td>TRAF-7M: The proposed Project would cause the level of service at the intersection of Monarch Bay Drive and Mulford Point Drive (#19) to reduce from LOS A to LOS F in the PM peak hour.</td>
<td>S</td>
<td>TRAF-7M: Implement Mitigation Measure TRAF-1D by installing a roundabout at the intersection of Monarch Bay Drive and Mulford Point Drive (#19).</td>
<td>LTS</td>
</tr>
</tbody>
</table>

### UTILITIES AND SERVICE SYSTEMS

| UTIL-1. The Project would have sufficient water supplies available to serve the Project from existing entitlements and resources, and would not require new or expanded entitlements. | LTS                          | N/A                                      | N/A                         |
|UTIL-2. The Project would not require or result in the construction of new water facilities or expansion of existing facilities, the construction of which would cause significant environmental effects. | LTS                          | N/A                                      | N/A                         |
|UTIL-3. The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to water service. | LTS                          | N/A                                      | N/A                         |
|UTIL-4. Implementation of the Project would not exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board. | LTS                          | N/A                                      | N/A                         |
|UTIL-5. The Project would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects. | LTS                          | N/A                                      | N/A                         |
|UTIL-6. The Project would not result in the determination by the wastewater treatment provider, which serves the Project that it does not have adequate capacity to serve the Project’s projected demand in addition to the provider’s existing commitments. | LTS                          | N/A                                      | N/A                         |
|UTIL-7. The Project, in combination with past, present, and reasonably foreseeable projects would result in less than significant cumulative impacts with respect to wastewater service. | LTS                          | N/A                                      | N/A                         |

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</thead>
<tbody>
<tr>
<td>UTIL-8. The Project would be served by a landfill with sufficient permitted capacity to accommodate the Project’s solid waste disposal needs.</td>
<td>LTS</td>
<td>N/A</td>
<td>LTS</td>
</tr>
<tr>
<td>UTIL-9. The Project would comply with federal, State, and local statutes and regulations related to solid waste.</td>
<td>LTS</td>
<td>N/A</td>
<td>LTS</td>
</tr>
<tr>
<td>UTIL-10. The Project, in combination with past, present, and reasonably foreseeable development, would result in less than significant impacts with respect to solid waste.</td>
<td>LTS</td>
<td>N/A</td>
<td>LTS</td>
</tr>
<tr>
<td>UTIL-11. Implementation of the Project would result in an increase in energy consumption.</td>
<td>S</td>
<td>UTIL-11: Implementation of Mitigation Measures GHG-1A through GHG-1F would increase energy conservation and reduce impacts resulting from energy generation.</td>
<td>LTS</td>
</tr>
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2. **Introduction**

Pursuant to the California Environmental Quality Act (CEQA) Guidelines, Chapter 14 California Code of Regulations, Section 15378[a], The San Leandro Shoreline Development is considered a “project” subject to environmental review as its implementation is “an action [undertaken by a public agency] which has the potential for resulting in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment.” This Draft Environmental Impact Report (Draft EIR) provides an assessment of the potential environmental consequences of adoption and implementation of the San Leandro Shoreline Development project, herein referred to as the “Project.”

This Draft EIR identifies mitigation measures and alternatives to the Project that would avoid or reduce significant impacts. This Draft EIR compares the development of the Project with the existing baseline condition, described in detail in each section of Chapter 4.0, Environmental Analysis. The City of San Leandro (City) is the Lead Agency for the Project. This assessment is intended to inform the City’s decision-makers, other responsible agencies, and the public-at-large of the nature of the Project and its effect on the environment.

### 2.1 PROPOSED ACTION

If approved by the San Leandro City Council, the Project would result in the redevelopment of the properties surrounding the current San Leandro Marina. The Project site is 52 acres in land area and is owned by the City of San Leandro, and 23 acres of water area. The Project is the result of a public/private partnership between the City of San Leandro and Cal Coast Companies LLC. The Project includes a variety of components which are described in detail in Chapter 3 of this Draft EIR. The salient components include a new 150,000 square foot office campus, a new 200-room hotel, a new conference center, 354 new housing units, 3 new restaurants, and a new parking structure. Although direction from the San Leandro City Council to staff is to maintain the existing San Leandro Marina for as long as financially feasible, for the purpose of the environmental analysis, it is being assumed that the harbor masters office, fuel pump/dock, and the 462 existing boat slips in the harbor basin would eventually be removed by the City at such time as safe and navigable boating operations cease to exist. Since the Project is to be carried out as a partnership between the City and Cal Coast Companies LLC, and the City would need to issue a variety of discretionary permits, pursuant to section 21065 of the CEQA statute, the Project is defined as a “project” under CEQA and is subject to the provisions of the statute.

### 2.2 EIR SCOPE

This document is a project-level EIR that identifies and analyzes potential environmental impacts of the Project. This is in contrast to programmatic EIRs which are used to assess the impact of land use plans where specific uses and plans for construction have not yet been determined. As a project-level EIR or project EIR, the environmental analysis primarily focuses on the changes in the environment that would
result from the development of the San Leandro Shoreline Development Project. This Project EIR examines the specific short-term impacts (construction) and long-term impacts (operation) that would occur as a result of Project approval. For a complete listing of environmental topics covered in this Draft EIR, see Chapter 4.0, Environmental Evaluation.

2.3 ENVIRONMENTAL REVIEW PROCESS

2.3.1 DRAFT EIR

Given the magnitude and scope of the Project which relates to the potential for significant impacts on the environment, rather than prepare an Initial Study before preparing an EIR, the City decided to simply prepare a full EIR. In compliance with Section 21080.4 of the California Public Resources Code, the City circulated the Notice of Preparation (NOP) of an EIR for the Project to the Office of Planning and Research (OPR) State Clearinghouse and interested agencies and persons on July 3, 2013, and as a result of Project revisions as described in Chapter 1, Executive Summary, of this Draft EIR, reissued an NOP December 11, 2013 for a required 30-day review period. The NOP solicited comments from identified responsible and trustee agencies, as well as interested parties regarding the scope of the Draft EIR. Appendix A of this Draft EIR includes the reissued NOP as well as the comments received by the City in response to the NOP.

This Draft EIR will be available for review by the public and interested parties, agencies, and organizations for a 60-day comment period, 15 days longer than the required 45-day comment period. This extension has been made to account for the holiday season and to allow the public additional time to review and comment on this Draft EIR. During the comment period, the public is invited to submit written comments on the Draft EIR to the City of San Leandro Community Development Department. Comments should be submitted to:

Sally Barros
Principal Planner
Community Development Department
City of San Leandro
835 East 14th Street
San Leandro, CA 94577
SBarros@sanleandro.org

Written and/or verbal comments on the Draft EIR will also be accepted at a Shoreline Advisory Group meeting, a Planning Commission hearing and City Council work session, for which meeting dates will be legally noticed. Tentative Dates are:

- Shoreline Advisory Group meeting: 6 pm, January 14, 2015 at the Senior Community Center
- Planning Commission public hearing: 7 pm, January 15, 2015 in San Leandro City Council Chambers
- City Council work session: 7 pm, January 26, 2015 in San Leandro City Council Chambers.

2.3.2 FINAL EIR

Upon completion of the 60-day comment period, the City of San Leandro will review all comments received and prepare written responses for each comment. A Final EIR will then be prepared,
incorporating all of the comments received, responses to the comments, and any changes to the Draft EIR that result from the comments received. The Final EIR will then be considered by the City of San Leandro for certification as the environmental document for the Project. All persons who commented on the Draft EIR will be notified of the availability of the Final EIR and the dates of the public hearings before the City.

All responses to comments submitted on the Draft EIR by agencies will be provided to those agencies at least 10 days prior to certifying the EIR. The City Council will make findings regarding the impacts and mitigations as presented in the Final EIR. The Final EIR will need to be certified as complete by the City prior to making a decision to approve the Project.

The Planning Commission will consider and recommend on the Final EIR and the Project. After the City Council certifies the Final EIR, it will also consider the Project itself, which it may approve, deny, or approve with conditions. The City Council may require the mitigation measures specified in this Draft EIR as conditions of Project approval, and it may also require other feasible mitigation measures. Alternately, the City Council may find that the mitigation measures are outside the jurisdiction of the City to implement, or that there are no feasible mitigation measures for a given significant impact. In the latter case, the City Council may nonetheless determine that the Project is necessary or desirable due to specific overriding considerations, including economic factors, and may approve the Project after weighing its benefits against its unavoidable, significant impacts.

### 2.3.3 Mitigation Monitoring

Public Resources Code Section 21081.6 requires that the lead agency adopt a monitoring or reporting program for any project for which it has made findings pursuant to Public Resources Code 21081. Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR. The Mitigation Monitoring Program for the Project will be completed at the time of preparation of the Final EIR.
3. Project Description

The San Leandro Shoreline Development Project (referred to as the “Project”) is proposed as an integrated master planned development and a public/private partnership between Cal Coast Companies LLC and the City of San Leandro, on 52 acres of the City-owned shoreline and 23 acres of water area. This chapter provides a detailed description of the Project, including the location, setting, characteristics of the site, objectives of the Project, principal features, approximate construction phasing, as well as required permits and approvals. These activities and approvals collectively constitute the “Project” for the purposes of this EIR.

3.1 Project Site Location and Characteristics

3.1.1 Regional Location

As shown on Figure 3-1, Regional Location, the Project is located in the City of San Leandro, in the San Leandro Shoreline Area. The San Leandro Shoreline Area encompasses approximately 900 acres of mostly City-owned land situated on the eastern shore of the San Francisco Bay at the western end of Marina Boulevard. This area is commonly referred to as the Shoreline Recreational Area. The Shoreline Recreational Area is south of Oakland International Airport and is accessible via Interstate 880, located 1.2 miles east of the Project site.

3.1.2 Surrounding Land Uses

Land uses adjacent to the Project site are described below. As shown in Figure 3-2, Local Context, the San Francisco Bay is located directly west of the Project site.

To the north of the Project site, from west to east, lie the San Francisco Bay and residential uses along Neptune Drive and Marina Boulevard. Residential uses include single-family homes and multi-family residential units within the Mulford Gardens neighborhood. North of the Project site, across an inlet of the San Francisco Bay is East Bay Regional Park District’s Oyster Bay Regional Shoreline, Waste Management’s Davis Street Transfer Station, the City of San Leandro Water Pollution Control Plant, and Oakland International Airport.

The Marina Golf Course (part of the larger Monarch Bay Golf Club) is located on the eastern portion of the Project site, with residential uses located further east along Aurora Drive, West Avenue 133rd, and West Avenue 134th. Residential uses include single-family homes and multi-family residential units. The existing Mulford-Marina Branch Library is located at the corner of Aurora Drive and Fairway Drive. The new Kaiser Permanente San Leandro Medical Center is located approximately one mile to the east, between Marina Boulevard and Fairway Drive on Merced Street.
PROJECT LOCATION

Figure 3-1
Regional Location
PROJECT DESCRIPTION

Source: PlaceWorks, 2013

Key

San Leandro City Limit
Project Site
SAN LEANDRO SHORELINE DEVELOPMENT DRAFT EIR  
CITY OF SAN LEANDRO  

PROJECT DESCRIPTION

To the south of the Project site, west to east, is the San Francisco Bay, a public boat launch ramp, a small boat lagoon, the City’s Marina Park and Par Course, the Tony Lema Golf Course (part of the larger Monarch Bay Golf Club), the Seagate residential community, and the Marina Faire neighborhood.

Located within the Project site to the west of Monarch Bay Drive is Horatio’s Restaurant and The Marina Inn on San Francisco Bay (Marina Inn). No modifications are planned for these buildings; however, the adjacent parking lots would be modified as part of this Project resulting from the proposed road alignment.

3.2 GENERAL PLAN LAND USE DESIGNATION AND ZONING

The City of San Leandro General Plan (adopted in 2002) and Zoning Code provide a policy framework to ensure that future development in the City is consistent with its priorities and goals.

3.2.1.1 GENERAL PLAN DESIGNATION

The land use designations for the Project site are General Commercial and Parks and Recreation. The General Commercial designation is characterized by commercial uses providing a broader range of goods and services and serving a broader market than the neighborhood commercial areas. The Parks and Recreation designation denotes land, which is used for active recreational purposes, including neighborhood, community, and regional parks, golf courses, and the recreational amenities at the San Leandro Marina.

Approval of the Project, as described below, would require a General Plan amendment to make the entire site General Commercial.

3.2.1.2 ZONING

The current zoning designation for the site is CR Commercial Recreation. Uses allowed within the CR District include cafés, marine sales and service, park and recreation facilities, full-service restaurants and retail sales.

Approval of the Project, as described below, would involve a rezoning to Commercial Community (CC) with a Planned Development (PD) overlay.

3.3 STATEMENT OF OBJECTIVES

Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15124(b), the EIR must identify the objectives sought by the Project.

The objectives of the Project are to:

- Build an economically viable and vibrant mixed-use development which provides needed amenities and services to the residents of the City of San Leandro and creates a regional recreational and commercial destination, including:
- A banquet/conference facility for residents and others to hold large parties such as weddings, graduation parties, quinceañeras, and other events in San Leandro. The banquet/conference center is also needed to support tournaments at the Tony Lema Golf Course;
- A limited-service hotel, providing limited food and beverage service to hotel guests and not the general public;
- Multiple dining options;
- Housing units responsive to market demands to increase City housing stock, for above-moderate income units;
- Class A office space to attract innovative businesses and quality jobs for the citizens of San Leandro; and
- An enhanced Library/community building.

- Ensure the Project uses are synergistic and create a regional destination for dining, lodging, entertainment, and recreation.
- Provide recreation opportunities such as bocce ball courts, a small boat launch and public gathering spaces, a 20-foot-wide public promenade including lookout stations, to increase and enhance the public’s access to the Bay.
- Provide multiple areas for the public to enjoy scenic views and interact with the San Francisco Bay.
- Enhance connections between the San Leandro’s shoreline and the San Francisco Bay Trail.
- Remove current blight, including the former Blue Dolphin site pillars and fencing and the fenced former Boatworks site.
- Ensure the redeveloped portion of San Leandro Shoreline complements existing amenities and provides needed connection between the amenities and current shoreline uses.
- Ensure that development is provided in an environmentally sensitive manner, and promotes the latest trends in energy efficiency.
- Recognize the economic uncertainty of acquiring future funding for needed on-going channel and harbor dredging, the City’s existing debt burden related to past harbor improvements, and the City’s desire to plan for a successful transition from the existing blighted use to an environmentally and financially sustainable alternative that maintains the public’s access to the harbor basin and San Francisco Bay.

### 3.4 Project Characteristics

Pursuant to the CEQA Guidelines, Title 14 California Code of Regulations, Section 15378(a), the Project is considered a "project" subject to environmental review as its implementation is "an action [undertaken by a public agency], and issuance of a permit or entitlement which has the potential for resulting in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment...

1 Housing units would be to satisfy 2014-2022 Regional Housing Needs Allocation (RHNA) housing target for above-moderate income units of 1,161 units.
environment." This Draft EIR compares the construction and operation of the Project with the existing baseline condition, described in detail in each section of Chapter 4.0, Environmental Analysis.

The vision for the Project is to redevelop a portion of the Shoreline Recreational Area with attractive and desirable amenities available to all San Leandro residents, as well as create a regional destination for dining, lodging, entertainment, and recreation.

### 3.4.1 Project Background

This section describes the Project background and the proposed construction of the Project.

#### 3.4.1.1 Existing Site

The Project site includes a total of approximately 75 acres, consisting of 52 acres of land and a water surface area of approximately 23 acres, of the Shoreline Recreational Area. The Project site is generally located along both sides of Monarch Bay Drive between Marina Boulevard and Fairway Drive, with development centered primarily along Monarch Bay Drive. This site consists of two peninsulas, Mulford Point to the north and Pescador Point to the south, that encircle the boat harbor and includes existing commercial and recreational facilities. The Project site also includes portions of the existing 9-hole Marina Golf Course and an existing 2,000 square-foot public library building with a related parking lot.

There are approximately 1,950 existing parking lot spaces throughout the Project site.

The Shoreline Recreational Area includes three existing commercial enterprises and one partially demolished restaurant/banquet facility. These include the 131-room Marina Inn, opened in 1985; Horatio’s Restaurant, completed in 1978; and an El Torito Restaurant, which originally opened as part of the Tia Maria chain in 1970. The foundation and deck piers of the former Blue Dolphin Restaurant remain on-site.

Boating facilities currently include a 462-slip public boat harbor with a separate boat launch and support operations, and two private yacht clubs. Due to physical constraints caused by build-up of silt both in the harbor and the 2-mile federal channel, occupancy of the harbor currently stands at less than 30 percent.

There are two vehicular entrances to the Shoreline Recreational Area, one at Marina Boulevard (with direct access to Interstate 880), and a secondary access via Fairway Drive.

#### 3.4.1.2 Project Components

The San Leandro Shoreline Development Project is proposed as an integrated master planned development and a public/private partnership with the City and Cal Coast Companies LLC, on a 75-acre Project site, consisting of approximately 52 acres of City-owned shoreline and approximately 23 acres of water area. The Conceptual Site Plan for the Project is shown on Figure 3-3. Cal Coast Companies would build the Project; however, the City is financially responsible for the boat harbor and marina, including long-term maintenance and modifications. The City may enter into an agreement with Cal Coast Companies to finance and construct the waterside redevelopment on behalf of the City; the redevelopment features are included in the public amenities portion of the list below.
As described in Section 1.2, Summary of the Proposed Project, in Chapter 1 of this Draft EIR, the Marina would be maintained for as long as financially feasible; however, for the purpose of the environmental analysis, it is being assumed that the harbor master’s office, fuel pump/dock, and the 462 existing boat slips in the harbor basin would eventually be removed by the City.

The proposed components of the Project include:

- **150,000-square-foot office campus.** Envisioned as Class A office space to be flexible and remain competitive with future market conditions.

- **200-room limited-service hotel.** The limited-service hotel would provide amenities to guests including a business center, a fitness room, laundry facility, market pantry, an indoor and/or outdoor pool and whirlpool, and small meeting rooms. This hotel is envisioned as an extended-stay facility.

- **15,000-square-foot conference center.** The conference center business would be driven by the hotel, local businesses, and other hotels for small conferences and business meetings. Weekend activity would accommodate social events including weddings, anniversaries, graduations and community social events. In general, these events would be booked for Friday evenings after 4:00 p.m. and Saturday evenings after 5:00 p.m.

- **354 housing units:**
  - **220 Flats:** Of the approximately 220 flats, 61 mixed-use condominiums would be located at the southern boundary of the Project site off of Pescador Point Drive, and 159 market-rate apartments would be located at the northern boundary of the Project site along the San Francisco Bay. Parking for the 61 units would be provided by surface parking lot, and parking for the other 159 units would be provided by a combination of a parking structure and surface parking lot.
  - **92 Townhomes:** The approximately 92 townhomes would consist of attached and clustered units, approximately two to three stories in height, located at the northern boundary of the Project site, east of Monarch Bay Drive. Parking for the proposed townhomes would be provided by a combination of garages and surface lots.
  - **42 Single-Family Detached Homes:** The proposed single-family residential units would generally be located on the northern corner of Fairway and Monarch Bay Drive. Parking would be provided by garages and surface lots.

- **Three new restaurants (totaling 21,000 square feet):**
  - Restaurant at the end of Mulford Point: 8,000 square feet
  - Restaurant adjacent to hotel: 5,000 square feet
  - Café and small boat rental south of Horatio’s: 8,000 square feet.

- **Parking structure (approximately 35 feet (3 stories) in height providing approximately 800 parking spaces supporting office and multi-family residential uses).**

Public amenities include the following:

- **Approximately 2,500-square-foot community library/community meeting space on the site of the current Mulford-Marina Branch Library**
- **Aquatic Center/dock on south side of Pescador Point**
- **Bocce ball courts**
- **Community outdoor recreational areas (two)**
The Project proposes to utilize Marina Boulevard, Monarch Bay Drive, and Fairway Drive to provide access to the Project site. The existing roadways within the Project site, Mulford Point Drive and Pescador Point Drive would be reconfigured as shown on Figure 3-2. Mulford Point Drive would be replaced with a...
driveway that provides access to surface parking on Mulford Point, and Pescador Point Drive would be shortened to allow for park amenities

**Parking**

The Project proposes construction of 2,057 surface and structured parking spaces to provide parking for the office campus, conference center, retail and mixed-use, restaurant, hotel, library, and boat rental uses. These will replace the approximately 1,950 existing parking spaces located within the San Leandro Recreational Area. As a result, the Project proposes approximately 100 net new parking spaces. Table 3-1 shows the expected distribution of parking spaces.

<table>
<thead>
<tr>
<th>Location/Use</th>
<th>Parking Spaces</th>
<th>Parking Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restaurant #1</td>
<td>60</td>
<td>Surface</td>
</tr>
<tr>
<td>Restaurant #2</td>
<td>30</td>
<td>Surface</td>
</tr>
<tr>
<td>Hotel</td>
<td>320</td>
<td>Surface</td>
</tr>
<tr>
<td>Conference Center</td>
<td>200</td>
<td>Surface/Structure</td>
</tr>
<tr>
<td>Commercial Office</td>
<td>500</td>
<td>Structure</td>
</tr>
<tr>
<td>North Residential</td>
<td>308</td>
<td>Structure</td>
</tr>
<tr>
<td>South Mixed-Use</td>
<td>158</td>
<td>Surface</td>
</tr>
<tr>
<td>North Golf Course Residential</td>
<td>160</td>
<td>Surface/Garage</td>
</tr>
<tr>
<td>South Golf Course Residential</td>
<td>241</td>
<td>Surface/Garage</td>
</tr>
<tr>
<td>Public Library</td>
<td>80</td>
<td>Surface</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,057</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Cal Coast Companies LLC, 2014.

**Pedestrian and Bicycle Circulation**

The proposed public promenade is a 2-mile-long pedestrian path along the waterfront edge and would also provide a Class I bicycle path. Class II bicycle lanes on Monarch Bay Drive would be installed between Neptune Drive and Fairway Drive.

A network of dockside pedestrian lookouts would be constructed along the interior of the marina, as well as a pedestrian bridge providing access between Pescador Point and Mulford Point.

Sidewalks on both sides of Monarch Bay Drive between Mulford Point Drive and Fairway Drive would be constructed in order to provide continuous pedestrian pathways. Marked crosswalks on Monarch Bay Drive would be installed at Mulford Point Drive, Pescador Point Drive, and Fairway Drive. In addition, marked crosswalks and other crossing features would also be installed at Neptune Drive and at the conceptual location of the middle driveway of the North Golf Course Residential/Parking Structure Access.
Stormwater

The Project site is connected to the City’s storm drain system, and would be required to comply with Provision C.3 of the Municipal Regional Stormwater Permit in order to reduce post-construction stormwater pollutants.\(^2\) Compliance with Provision C.3 could include, but not limited to, incorporation of Low Impact Development practices, such as the use of bioswales, infiltration trenches, media filtration devices, pervious surface treatments, and bioretention areas.

Water Supply

The Project would continue to be provided with water services from the East Bay Municipal Utility District (EBMUD). Although existing infrastructure would be preserved in place where feasible, some infrastructure would potentially be relocated to the public right-of-way. In addition, extensions would be installed to provide water service to structures proposed by the Project.

Sanitary Sewer Service

The Project site would continue to be provided with sanitary sewer services by the City of San Leandro. As development occurs, extensions would be installed to provide sanitary sewer service to structures proposed by the Project, in addition to the potential relocation of some of the existing infrastructure to accommodate the Project.

Utilities

Electricity and natural gas would be supplied to the Project site by Pacific Gas & Electric (PG&E). Solid waste generated by the Project would be managed by the City’s waste hauler franchisee, which is currently Alameda County Industries.

3.4.2 CONSTRUCTION PHASING

The anticipated construction phasing (dependent on market forces) for the Project will be as follows:

3.4.2.1 GRADING

Grading activities would generally occur during Phase 1 and Phase 2. Proposed development occurring on areas of existing surface parking lots (Phase 1 and Phase 3) would occur at one time, and proposed development occurring on the existing golf course (Phase 2) would occur during the start of that phase.

3.4.2.2 PHASE 1

- 200-room limited-service hotel (inclusive of pool).
- 15,000-square-foot conference center.

\(^2\) San Francisco Regional Water Quality Control Board (Region 2) Municipal Regional Stormwater Permit (Order No. R2-2009-0074) and NPDES Permit No. CAS612008, as amended by Order No. R2-2011-0083.
5,000-square-foot full-service restaurant.

8,000-square-foot full-service restaurant.

Between 50,000 and 100,000 square feet of office along Monarch Bay Drive and an 800-space parking structure, which would be shared with residential units. The office will be approximately 40 feet in height and the parking structure will depend on parking counts, but no more than 32 feet in height.

Up to 159 multi-family rental units. A mixed-use building (30,000-square-foot) containing a café/boat rental facility (8,000 square feet) and up to 61 condominium units on the former Boatworks site.

An approximately 2,500-square-foot Library/Community Building.

Associated infrastructure.

Removal of wood and concrete docks and associated piers, including Blue Dolphin Restaurant platform

Removal of the existing El Torito Restaurant building

Removal of the San Leandro Yacht Club building

Removal of public/private restrooms 'A', ‘E/F’, and ‘N/O’

Removal of harbormaster’s office, fuel pump/dock, and underground storage tank.

3.4.2.3 PHASE 2

64 2- to 3-story townhomes built on Monarch Bay Drive.

70 homes on Fairway Drive built within the redesigned Marina Golf Course:
  - Up to 42 2-story single-family detached homes.
  - Up to 28 townhomes.

Associated infrastructure.

Removal of golf course concession stands

3.4.2.4 PHASE 3

The balance of the 150,000 square feet of office (unless the market allows it to be absorbed during Phase 2). The parking structure will already have been built during Phase 1.

Associated infrastructure.

3.5 REQUIRED PERMITS AND APPROVALS

The City of San Leandro is the Lead Agency for the preparation and certification of the EIR. Responsible, trustee and other agencies will be consulted during the EIR process. Subsequent development entitlements for the Project will require approval of State, federal, and regional responsible and trustee agencies that may rely on the EIR for decisions in their areas of expertise.

The Project will also require a series of planning entitlements, including a General Plan amendment to change the land use designation from General Commercial and Parks/Recreation to General Commercial;
and a Rezone from CR Commercial Recreation to CC Commercial Community with a Planned Development Overlay, CC (PD) (see Table 3-2). These entitlements will be considered by the Planning Commission (recommending body) and City Council. Subsequent approvals to evaluate the design of the buildings, site plan, and landscape plans will be processed through the City’s Site Plan Review entitlement before the Planning Commission (recommending body) and City Council. Additionally, the City anticipates that the Project will require approvals/permits from responsible, trustee and other federal, State, and regional agencies, including but not limited to the San Francisco Bay Conservation and Development Commission (BCDC), the Army Corps of Engineers, Regional Water Quality Control Board (RWQCB) (San Francisco Bay Region), California Department of Fish and Wildlife and others, as appropriate.

Table 3-2 lists the approvals and permits for the Project:

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Permits/Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of San Leandro</td>
<td>General Plan Amendment to General Commercial</td>
</tr>
<tr>
<td></td>
<td>Zoning amendment to Commercial Community (CC) with a Planned Development Overlay (PD)</td>
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<tr>
<td></td>
<td>Development Agreement</td>
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<td>Subdivision Map</td>
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<td>Site Plan Review</td>
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<td></td>
<td>Development Plan and Design Guidelines</td>
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<tr>
<td></td>
<td>Demolition Permits</td>
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<tr>
<td></td>
<td>Grading Permits</td>
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<tr>
<td></td>
<td>Building Permits</td>
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<tr>
<td></td>
<td>Underground Storage Tank Removal Permit</td>
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<td></td>
<td>National Pollution Discharge Elimination System (NPDES) certification/</td>
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<tr>
<td></td>
<td>Stormwater Pollution Prevention Plan Encroachment permits</td>
</tr>
<tr>
<td>San Francisco Bay Conservation and Development Commission (BCDC)</td>
<td>Major Permit</td>
</tr>
<tr>
<td>Regional Water Quality Control Board (RWQCB)</td>
<td>Section 401 Clean Water Quality Certification</td>
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<tr>
<td></td>
<td>Waste Discharge Requirements (WDR) permit (for any dewatering activities)</td>
</tr>
<tr>
<td>Army Corps of Engineers (USACE)</td>
<td>Section 404 Permit</td>
</tr>
<tr>
<td>California Department of Fish and Wildlife</td>
<td>Section 2081(b) Permit</td>
</tr>
<tr>
<td></td>
<td>CDFW Section 2081 Incidental Take Permit</td>
</tr>
<tr>
<td>Bay Area Air Quality Management District (BAAQMD)</td>
<td>J Number for Demolition</td>
</tr>
</tbody>
</table>
4. **Environmental Analysis**

This chapter of the Draft EIR is made up of 14 sub-chapters. This introduction describes the organization of this Draft EIR and the assumptions and methodology of the cumulative impact analysis. The remaining 14 sub-chapters evaluate the direct, indirect, and cumulative environmental impacts of the Project. The potential environmental effects of the Project are analyzed for the following environmental issue areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Seismicity
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation and Traffic
- Utilities and Service Systems

Due to the past and current uses of the Project site, as well as site characteristics, no environmental impacts associated with agricultural and forestry resources and mineral resources are expected to occur as a result of the Project. These resource topics will not be addressed further in the Draft EIR.

**CHAPTER ORGANIZATION**

This chapter consists of 14 sub-chapters that evaluate the environmental impacts of the proposed San Leandro Shoreline Development Project. Each issue area uses generally the same organization and consists of the following subsections:

- The *Regulatory Framework* section describes which local, State and/or federal regulations are applicable to the Project.
- The *Existing Conditions* section describes current conditions with regard to the environmental issue area reviewed.
- The *Thresholds of Significance* section describes how an impact is judged to be significant in this Draft EIR. These standards are derived from CEQA Appendix G Guidelines unless stated otherwise. Where applicable, this section includes a subsection that describes thresholds that are not further discussed because the respective threshold does not apply to the Project and an impact discussion is not warranted in the Draft EIR.
ENVIRONMENTAL ANALYSIS

- The Impact Discussion assesses potential impacts (direct and indirect), and explains why impacts were found to be significant or less than significant.
- The Cumulative Impact Discussion section analyzes impacts that the Project may have when considered in addition to other past, present and reasonably foreseeable projects. (See further discussion below.)
- The Summary of Impacts and Mitigation Measures section numbers and lists identified impacts, and presents measures that would mitigate each significant impact. In each case, the significance following mitigation is also explained.

ASSUMPTIONS AND METHODOLOGY REGARDING CUMULATIVE IMPACTS

A cumulative impact consists of an impact created as a result of the combination of the project evaluated in the EIR, together with other reasonably foreseeable projects causing related impacts. Section 15130 of the CEQA Guidelines requires an EIR to discuss cumulative impacts of a project when the project’s incremental effect is “cumulatively considerable.”

Where the incremental effect of a project is not “cumulatively considerable,” a Lead Agency need not consider that effect significant, but must briefly describe its basis for concluding that the incremental effect is not cumulatively considerable. Where the cumulative impact caused by the project’s incremental effect and the effects of other projects is not significant, the EIR must briefly indicate why the cumulative impact is not significant.

The cumulative discussions in sub-chapters 4.1 through 4.14 explain the geographic scope of the area affected by each cumulative effect (e.g. immediate project vicinity, county, watershed, or air basin). The geographic area considered for each cumulative impact depends upon the impact that is being analyzed. For example, in assessing aesthetic impacts, only development within the vicinity of the Project site would contribute to a cumulative visual effect since the Project site is only visible within the vicinity of the site. In assessing macro-scale air quality impacts, on the other hand, all development within the air basin contributes to regional emissions of criteria pollutants, and basin-wide projections of emissions is the best tool for determining the cumulative impact.

The CEQA Guidelines provide two approaches to analyzing cumulative impacts. The first is the “list approach,” which requires a listing of past, present and reasonably anticipated future projects producing related or cumulative impacts. The second is the projections-based approach wherein the relevant growth projections contained in an adopted general plan or related planning document designed to evaluate regional or area-wide conditions are summarized. A reasonable combination of the two approaches may also be used.

The cumulative impact analysis in this Draft EIR relies on a combination of the two permissible approaches, with the applicable list of projects shown in Table 4-1. The cumulative analysis discussions contained in Chapters 4.1 through 4.14 include a discussion of the growth projections and references to specific projects as relevant to the impact analysis as of August 2014.
### Table 4-1: Cumulative Projects List

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Residential</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLN2009-00006-2450</td>
<td>Washington Avenue Apartments</td>
<td>Planned Development, GP Amendment and Rezone for 66 dwelling units (48 two-bedroom and 18 one-bedroom units) and a community building on approximately 2.85 acres. Approved October 20, 2011; Development Agreement allows for 5-year term with another 5-year renewal; no building permits applied for at this time.</td>
</tr>
</tbody>
</table>
| PLN2008-00030 | BRIDGE Housing Cornerstone Apartments, 1400 San Leandro Boulevard | Site Plan Review approval for 200-unit apartments and approximately 5,000 square feet of commercial space.  
- Phase 1: 115 rental units for families – 8 studios, 49 1-bedrm, 22 2-bedrm and 36 3-bedrm  
- Phase 2: 85 rental units for seniors – 77 1-bedrm and 8 2-bedrm  
Approved March 1, 2013; project under construction as of December 1, 2014. |
| PLN2012-00039 | Aurora Cottages, 13533-13547 Aurora Drive | Planned Development approval for six new two-family residences (12 new 3-bedroom units) on the site of four existing single-family dwellings. The project totals 16 residential units. Approved February 4, 2013; building permits have been reviewed and are ready to issue. |
| PLN2014-00019 | Tam Duplexes | Site Plan Review for 3 new duplexes for a total of 6 dwelling units (all 3-bedroom units.) Approval is pending; application is currently incomplete. |
| **Office/Other** |              |             |
| PLN2010-00032 | Heritage Baptist Church | Planned Development to allow the construction of additional related structures to add 24,020 square feet of new floor area for the existing congregation. Approved October 20, 2011; building permit issued for Phase I (11,108 sf of space) on November 13, 2013 and is under construction. Building permits for Phase II (remaining approx. 13,000 square feet) are anticipated within 18 months. Note that the premise upon which this was approved was that this would serve the existing congregation and no expansion of the existing use (in terms of outside rentals, establishment of an ancillary use such as a school or day-care) was allowed per the Conditions of Approval. |
| PLN2013-00045 | Westlake Office Complex, 1333 and 1696 Martinez Street | Approval of a Planned Development and Site Plan Review for 340,000 square feet, and up to a maximum of 500,000 square feet of office floor area. Term of the Development Agreement allows for a period of ten (10) years, with one automatic extension for another five (5)-year term upon completion of Phase 1.  
Phase 1 would include a minimum six-story 120,000 square foot building with surface parking at a maximum ratio of 3.6 spaces per 1,000 square feet of office area.  
Phase 2 would include a minimum six-story, 120,000 square foot building and a parking structure to accommodate a sufficient amount of parking spaces for Phase 2 and potentially for the future Phase 3. A two-story parking deck scenario would provide approximately 846 total spaces (or 3.3 spaces per 1,000 square feet of office area). A three-story parking deck scenario would provide approximately 1,065 total spaces (or 4.2 spaces per 1,000 square feet of office area).  
Phase 3 would include a minimum five-story 100,000 square foot building with a parking ratio of 3.0 spaces per 1,000 square feet of office area. A 3.5 garage deck above grade parking scenario would provide approximately 1,133... |
### CUMULATIVE PROJECTS LIST

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Name</th>
<th>Description</th>
</tr>
</thead>
</table>
| PLN2010-00026    | Waste Management of Alameda County, 2615 Davis Street                                          | Site Plan Review to construct the build-out of the Davis Street Transfer Station Master Plan Improvements, approved as a Conditional Use Permit in February 1998 under CU-96-1, with six facilities totaling approximately 353,000 square feet, including: Phase I:  
|                  |                                                                                                 | Food Waste/Organics Recycling Facility                                                                                                            |
|                  |                                                                                                 | Employee Building                                                                                                                                |
|                  |                                                                                                 | Single Stream Expansion Line (New SS Expansion)                                                                                                |
|                  |                                                                                                 | Phase II:                                                                                                                                      |
|                  |                                                                                                 | Food Waste/Organics/Green Waste Compost Facility                                                                                               |
|                  |                                                                                                 | Phase III:                                                                                                                                      |
|                  |                                                                                                 | Public Receiving (Disposal) Enclosure                                                                                                          |
|                  |                                                                                                 | Overhead Conveyance System                                                                                                                     |
|                  |                                                                                                 | Alternate Fuel (Clean Air) Retrofit                                                                                                            |
|                  |                                                                                                 | Vehicle Maintenance                                                                                                                            |
|                  |                                                                                                 | (Note that this project does not increase the allowable tons per day over what is currently approved under CU-96-1. It just allows for the enclosure of the existing processes and adds the processing component of composting of green waste and conversion to fuel.) |
|                  |                                                                                                 | Approved January 4, 2011; building permits under review for the Alternate Fuel (Clean Air) Retrofit                                              |
| PLN2013-00066    | Marathon Packing, 1000 Montague Street                                                           | Site Plan Review for addition of approximately 35,860 square feet to an existing packaging facility of 36,500 square feet, and a new detached storage building of approximately 3,200 square feet.  
|                  |                                                                                                 | Approved February 6, 2014; no building permits submitted to-date.                                                                               |
| PLN2014-00019    | Scandic Springs Manufacturing, 700 Montague Street                                              | Site Plan Review for addition of 12, 214 square feet of manufacturing space to an existing 22,750 square feet manufacturing facility. Approved August 12, 2014; no building permits submitted to-date. |
| PLN2014-00028    | 1717 Doolittle Drive                                                                             | Site Plan Review application has been submitted in August 2014 for a 161,000 square feet warehouse distribution building.                        |

### Long Range or Potential Projects

| N/A              | Future Bay Fair Transit Village TOD Plan                                                        | City received funding from MTC to conduct a PDA plan by late 2016 to complete the planning for the transit village; there is no “live” application for a development at this time. A TOD study finalized in March 2007 by BART (Bay Fair BART Transit Oriented Development and Access Plan) contemplated 620 to 860 new residential dwelling units. |
| N/A              | 1900 Marina Boulevard & 620-740 Marina Boulevard                                               | Developers have made preliminary inquiries regarding potential conversion of these two sites to residential mixed-use. However, both sites are zoned Industrial and would require a General Plan Amendment; as such, these proposals are highly unlikely. |

Source: City of San Leandro, December 2014.
4.1  AESTHETICS

This chapter discusses the existing aesthetic character of the Project site and its surroundings, and evaluates the potential impacts to aesthetics associated with development of the Project. The following evaluation assesses visual character, scenic vistas, scenic highways, and light and glare. The aesthetics evaluation in this EIR is based in part on visual simulations prepared by the EIR consultant.

4.1.1  ENVIRONMENTAL SETTING

4.1.1.1  REGULATORY FRAMEWORK

This section summarizes key State and City regulations and programs related to aesthetics at the Project site. There are no specific federal regulations applicable to aesthetics.

**San Leandro General Plan**

The City of San Leandro General Plan was adopted in 2002 and contains a vision for San Leandro through the year 2015 including policies and actions to help achieve that vision. The San Leandro General Plan\(^1\) in its Land Use, and Historic Preservation and Community Design Elements, contain goals and policies applicable to the aesthetics of the Project site, as summarized in Table 4.1-1. These goals and policies identify some of the methods for maintaining and enhancing the visual character and qualities of the City of San Leandro, particularly related to the Project site and the surrounding area.

The San Leandro General Plan details a particular vision for certain “focal points” in the City of San Leandro, including the San Leandro Marina, which is the location of the Project. The San Leandro Marina is designated as a focal point because it is the centerpiece of the City’s largest recreation area.\(^2\) As indicated in the San Leandro General Plan, the site “offers unique opportunities for new commercial uses that take advantage of the waterfront location, panoramic views, and proximity to nearby recreational amenities.”\(^3\) Aesthetic values are often highly subjective; however, this San Leandro General Plan language identifies key elements of the site’s aesthetic character. Additionally, because the Marina is referred to as the “crown jewel” in the City’s park system, the Land Use Element calls for future development to maintain high standards of quality.

The Historic Preservation and Community Design Element contains designated views, major gateways, key gateway streets, and activity centers, all of which are intended to build on the sense of place in the city. These elements are show in Figure 4.1-1, which was taken from the Historic Preservation and Community Design Element of the San Leandro General Plan. As seen in Figure 4.1-1, the San Leandro General Plan identifies a significant view from the Project site across the harbor and towards the San Francisco Bay.

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\(^1\) Note: The City of San Leandro General Plan 2002 was amended in 2001 to update the Housing Element.

\(^2\) City of San Leandro, *General Plan 2002*, Land Use Element, Chapter 3.3 Business and Industry, page 3-98.

\(^3\) City of San Leandro, *General Plan 2002*, Land Use Element, Chapter 3.3 Business and Industry, page 3-98.

Figure 4.1-1
Community Design Features
## Table 4.1-1  San Leandro General Plan Policies Relevant to Aesthetics

<table>
<thead>
<tr>
<th>Goal/Policy Number</th>
<th>Goal/Policy Text</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Land Use</strong></td>
<td></td>
</tr>
<tr>
<td>Policy 2.08</td>
<td><em>Privacy and Views</em>—Encourage residential alterations, additions, and new homes to be designed in a manner that respects the privacy of nearby homes and preserves access to sunlight and views. Wherever feasible, new or altered structures should avoid the disruption of panoramic or scenic views.</td>
</tr>
<tr>
<td>Policy 8.03</td>
<td><em>Aesthetics</em>—Upgrade the City’s commercial corridors by building upon their existing strengths and improving their aesthetic qualities. The City should implement programs to underground utilities, abate weeds and graffiti, eliminate litter, improve buffers to adjacent residential uses, control excessive signage, and provide streetscape amenities and landscaping along the corridors.</td>
</tr>
<tr>
<td>Policy 9.06</td>
<td><em>Gateway Improvements</em>—Encourage “gateway” improvements which enhance the approach routes to the Marina while minimizing the impacts of increased traffic on area neighborhoods. Improvements could include new signage, streetscape enhancement along Marina Boulevard and Fairway Drive, entry monuments and landscaping at the Marina itself, and longer-term circulation changes.</td>
</tr>
<tr>
<td>Policy 9.07</td>
<td><em>Urban Design</em>—Encourage cohesive urban design and high-quality architecture at the Marina. Buildings should be oriented to maximize water views and shoreline access. Architecture, signage, lighting, street furniture, landscaping, and other amenities, should be coordinated to achieve an integrated design theme.</td>
</tr>
</tbody>
</table>

| **Historic Preservation and Community Design** | |
| Goal 42 | *Sense of Place*—Promote a stronger “sense of place” in San Leandro. |
| Policy 40.04 | *Commemorative Art*—Promote murals, monuments, statues, and other forms of public art that commemorate San Leandro history and culture. Such projects should be incorporated in public buildings and major public works projects wherever feasible. |
| Policy 42.01 | *Gateways*—Develop landscaped gateway features to identify neighborhoods, business districts, and major city entryways. Gateways should incorporate design and graphic themes that help define a unique identity for each neighborhood and district. |
| Policy 42.03 | *Urban Design Improvements*—Use urban design elements such as bollards, pavers, fountains, signage, tree lighting, and street furniture (newspaper racks, benches, bus stops, planters, trash receptacles, bike racks, etc.) to establish a stronger design identity for San Leandro’s commercial areas and make the street environment more inviting for pedestrians. |
| Policy 42.04 | *Architectural Consistency*—In established neighborhoods, protect architectural integrity by requiring infill housing, replacement housing, and major additions or remodels to be sensitive to and compatible with the prevailing scale and appearance of adjacent development. |
| Policy 42.07 | *Visual Landmarks*—Promote the development of “signature” buildings and monuments that provide visual landmarks and create a more distinctive and positive impression of San Leandro within the greater Bay Area. Local design guidelines should ensure that such buildings and monuments respect the character, scale, and context of the surrounding area. |
| **Goal 43** | *Quality Construction and Design*—Ensure that new construction and renovation contributes to the quality and overall image of the community. |
| Policy 43.01 | *Promoting Quality Design*—Use the development review and permitting processes to promote high quality architecture and site design. Design review guidelines and zoning standards should ensure that the mass and scale of new structures are compatible with adjacent structures. |
| Policy 43.02 | *Architectural Diversity*—In newly developing neighborhoods, promote architectural diversity and variety. Encourage variations in lot sizes, setbacks, orientation of homes, and other site features to avoid monotony and maintain visual interest. |
| Policy 43.03 | *Multi-family Design*—Establish high standards of architectural and landscape design for multi-family housing development. Boxed or massive building designs should be avoided, ample open space and landscaping should be provided, and high quality construction materials should be used. |
| Policy 43.04 | *Permitting and Inspection*—Maintain building inspection and code enforcement procedures that ensure that all construction is properly permitted, and that construction is completed as approved. |
| Policy 43.05 | *Craftsmanship*—Encourage a high level of craftsmanship in new construction, and the use of exterior materials and façade designs that enhance the appearance of the City. |
### Table 4.1-1  San Leandro General Plan Policies Relevant to Aesthetics

<table>
<thead>
<tr>
<th>Goal/Policy Number</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Policy 43.06</td>
<td>Architectural Interest: Encourage new structures to incorporate architectural elements that create visual interest such as trellises, awnings, overhangs, patios, and window bays. Avoid solid or blank street-facing walls.</td>
</tr>
<tr>
<td>Policy 43.07</td>
<td>Commercial and Industrial Standards: Improve the visual appearance of the City’s commercial and industrial areas by applying high standards of architectural design and landscaping for new commercial and industrial development and the re-use or remodeling of existing commercial and industrial buildings.</td>
</tr>
<tr>
<td>Policy 43.08</td>
<td>Signage: Encourage commercial signage that is compatible with the building and streetscape, enhances the character of the surrounding area, and is not intrusive to nearby residential areas.</td>
</tr>
<tr>
<td>Goal 44</td>
<td>A More Visually Attractive City: Create a more visually attractive City, with well-landscaped and maintained streets, open spaces, and gathering places.</td>
</tr>
<tr>
<td>Policy 44.01</td>
<td>Greening San Leandro: Promote landscaping, tree planting, and tree preservation along San Leandro streets as a means of improving aesthetics, making neighborhoods more pedestrian-friendly, providing environmental benefits, and creating or maintaining a park-like setting.</td>
</tr>
<tr>
<td>Policy 44.03</td>
<td>Tree Removal and Replacement: Discourage the removal of healthy trees and require replacements for any trees that are removed from street rights-of-way. Where healthy trees must be removed, consider their relocation to other suitable sites instead of their disposal. Encourage the preservation and proper care of mature trees throughout the City, particularly those which may have historic importance or contribute substantially to neighborhood character.</td>
</tr>
<tr>
<td>Policy 44.04</td>
<td>Urban Open Space: Encourage the incorporation of landscaped open spaces, such as plazas, courtyards and pocket parks, within new development and redevelopment projects.</td>
</tr>
<tr>
<td>Policy 44.05</td>
<td>Street Beautification: Upgrade the City’s commercial thoroughfares by building upon their existing strengths and improving their aesthetic qualities. The City should implement programs to underground utilities, abate weeds and graffiti, eliminate litter, improve buffers to adjacent residential uses, prohibit excessive or out-of-scale signage, remove billboards, and provide streetscape amenities and landscaping along these thoroughfares.</td>
</tr>
<tr>
<td>Policy 44.06</td>
<td>Public Art: Encourage the siting of public art in civic open spaces, around public buildings, and within new development areas. Public art should reflect and express the diversity of the City.</td>
</tr>
<tr>
<td>Policy 44.07</td>
<td>Lighting: Encourage street and parking lot lighting that creates a sense of security, complements building and landscape design, is energy-efficient, and avoids conflicts with nearby residential uses.</td>
</tr>
</tbody>
</table>

Views are important to the character of San Leandro, particularly in the Marina area where panoramic views of the Bay and other landmarks are visible. Gateways are intended to distinguish San Leandro from surrounding cities as well as to distinguish the distinct neighborhoods within San Leandro. Activity centers, like the San Leandro Marina, are places in the community where people gather. Building and landscape design in these areas are meant to be oriented toward a pedestrian-friendly environment.

### City of San Leandro Zoning Code

The City of San Leandro Zoning Code contains several chapters that address aesthetic issues related to the Project. The Project site is currently zoned as a Commercial Recreation (CR) District but upon Project approval the site would be designated as Commercial Community (CC) with a Planned Development (PD) overlay. In Section 2-600, the Zoning Code states that the CC district is intended to provide sites for commercial centers containing a wide variety of commercial establishments. Uses including entertainment, restaurants, hotels and motels are permitted, subject to certain limitations necessary to avoid adverse impacts on adjacent uses.
The PD overlay is meant to establish a procedure for developing larger parcels, by way of eliminating rigidity and inequities that otherwise would result from a strict application of the zoning code and procedures which are designed primarily for smaller parcels (Section 3-1000). Additionally, the PD overlay would ensure thorough review procedures, encourage variety, avoid monotony, provide a mechanism for considering a variety of uses, encourage the allocation of improvements to public open space, and encourage the assembly of properties that might otherwise be developed in unrelated increments to the detriment of surrounding neighborhoods.

The Zoning Code contains a variety of development standards and required review processes applicable to the Project which pertain to aesthetics and are intended to preserve the character of the community, protect scenic resources, and prevent adverse impacts related to light and glare. In the base district, CC, development standards allow for a maximum height of 50 feet, a maximum floor area ratio (FAR) of 0.5, a minimum front setback of 10 feet, a minimum corner side setback of 10 feet and no required setback for interior side and rear yards. Additionally, a landscaped setback with a minimum depth of ten feet would be required to be provided within the front and corner side yards, and a minimum of 10 percent of the entire site must be landscaped. In order to prevent large blank walls, buildings over 25 feet in height with walls that extend longer than 100 feet, must provide architectural details such as offsets, recesses, reveals, window patterns, columns, or pilasters. Residential development in the CC district is subject to the same standards for height, density, and open space as would apply to residential development in the RM-2000 (22 dwelling units per acre) zone. The specific regulations for residential development are contained in sections 2-528, 2-540, and 2-558 of the Zoning Code. For the purposes of this Draft EIR, detailed site plans and architectural elevations that will be submitted for Site Plan Review will be evaluated under the Planned Development with respect to the CC district development standards.

Article 25 of the Zoning Code contains the regulations which apply to the City's review of development proposals. Under the proposed rezoning, a site plan would be required prior to the issuance of a building permit. The associated Site Plan Review regulations are contained in Section 5-2512 of the Zoning Code. This review would evaluate adherence to the standards discussed above, including height, setbacks, landscaping, and several other standards. Additionally, this review would confirm that buildings have adequate articulation, with appropriate window placement, use of detailing, or changes in building planes which provide visual interest. A public hearing before the Planning Commission and also one before the City Council would be required in accordance with the regulations pertaining to the Planned Development overlay. In addition to the review criteria listed above, the Planning Commission's review would also ensure that the development is compatible with its surroundings, and in conformance with the applicable policies in the Land Use Element including those listed above which pertain to aesthetics, views, gateways, and urban design.

City of San Leandro Municipal Code

Chapter 7-5, Building Code, of the San Leandro Municipal Code is based on and incorporates 2013 California Building Standards Code and sets forth provisions for building standards for development within the city. The Municipal Code establishes building standards for construction of things such as pedestrian walkways, seismic reinforcing, and soils and foundations.
AESTHETICS

CAL Green

California Green Building Standards Code of the California Code of Regulations, Title 24, Part 11, known as CALGreen, establish building standards aimed at enhancing the design and construction of buildings through the use of building concepts that have a reduced negative impact or positive environmental impact and encouraging sustainable construction practices. CALGreen includes standards for planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. Specifically, Section 5.106.8, Light Pollution Reduction, establishes Backlight, Uplight, and Glare (BUG) ratings to minimize the effects of light pollution for nonresidential development.

4.1.1.2 EXISTING CONDITIONS

Visual Character

Landscape and Visual Character of the Site and Surroundings

The Project site contains an aging marina which, at this time, is largely suffering from blight. As a result, the relatively flat site consists of a large amount of vacant parking space, small wooden buildings associated with marine uses, docks and piers (some of which are in a state of disrepair), the vacant Blue Dolphin and Boatworks sites, the currently operating Marina Inn, Horatio’s restaurant, El Torito, San Leandro Yacht Club, Spinnaker Yacht Club, and the Mulford-Marina Branch Library. A portion of the site at the southern end is unpaved and vacant (Boatworks site). Additionally, there are a variety of recreation and leisure facilities including bicycle and pedestrian paths, the nine-hole Marina Golf Course (including two relatively large water features), benches, picnic tables, barbecues, grass covered open space, trees, small and large boat launches, and observation points. Although there are existing public amenities such as benches, open space, and landscaped areas, an overall defined character is lacking and generally uninviting. Along the path of the outer boundary of the Project site along the water’s edge, there are no public benches or areas for seating. Currently the 462-slip public boat harbor is at 30 percent occupancy which contributes to the underutilized character of the site. However, the presence of the boats in the harbor provide an attractive aspect to the character of the site since it provides a visual link to the San Francisco Bay, and contributes to the overall character of the marine environment in the area. In addition, the site contains a public art installation as well as commemorative displays.

The character of the site is also impacted by the adjacent uses and the character of those sites. Views of the Project Site are shown in Figure 4.1-2. Residential uses in the Marina area generally encompass neighborhoods to the northeast and east, including the Mulford Gardens, Marina Faire, Little Alaska, and the Seagate and Marina Gardens developments. These areas generally comprise of dense tree canopy, large lots, remnant farms, and an eclectic mix of older and newer homes. To the south and southeast are recreation uses in the form of Marina Park and the Tony Lema 18-hole Golf Course, as well as the Marina Faire neighborhood and Heron Bay neighborhood further to the south. These areas are characterized by the large amount of open space in the area and the pedestrian-oriented amenities including several walking and biking paths, part of which is a segment of the San Francisco Bay Trail.

4 City of San Leandro, General Plan, page 3-25.
Figure 4.1-2
Views of the Project Site

Source: PlaceWorks, 2014.
The Marina Faire neighborhood includes some newer homes, including several two-story homes. Heron Bay was developed in the mid-1990s with a combination of small-lot single-family homes and garden court-type residential units. To the west is the San Francisco Bay. Uses further out to the north include the Oyster Bay Regional Shoreline, Oakland International Airport, the City’s Water Pollution Control Plant, and the Metropolitan Golf Links Golf Course. The Oyster Bay Regional Shoreline to the north is completely surrounded by the San Francisco Bay and industrial/commercial uses. The area surrounding the Oakland International Airport has an industrial character and contains a variety of airport-serving uses. The proximity of the airport to the Project site results in aircraft flying relatively low over the site affecting the visual character with their frequent presence.

The landscaping on the landside portion of the site west of Monarch Bay Drive is relatively sparse and the expanses of asphalt, rip rap and concrete dominate the site. Trees are dispersed throughout the site including a variety of deciduous and evergreen trees and several palm trees, particularly near the eastern end of the Marina, near Horatio’s restaurant and the Marina Inn. Additionally, landscaped areas with a variety of shrubs and small plants can be seen throughout the site surrounding paths and dividing portions of the parking lots. The Marina Golf Course contains several mature and well-established evergreen trees. These trees line much of the course and create a visual barrier between the golf course side of the site and the Marina side of the site.

The site’s position on the eastern edge of the San Francisco Bay and relatively flat topography allows for expansive views in all directions from the western portion of the site. This open character represents a departure from the visual character of the residential neighborhoods that exist east of the Project site. While a portion of the Mulford Gardens neighborhood is directly adjacent to the site, to the north, Monarch Bay Drive provides a visual separation because the shoreline is set back to the east, north of the site.

Views from the Project Site

As discussed above, the flat topography of the site combined with its location on the eastern shore of the San Francisco Bay allows for expansive views in nearly every direction. As show in Figure 4.1-3, on a clear day, distant views of the hills surrounding the Bay can be seen in all directions. To the northeast, views of the Oakland Piedmont hills area are possible. To the northwest, beyond the Oakland International Airport, one can see views of the Bay Bridge, the City of San Francisco, and far field views of the North Bay hills, including Mount Tamalpais. To the west, the hills across the Bay as well as development on the Peninsula are visible. To the southwest, the San Mateo Bridge and the open space provided by the San Francisco Bay allow for long-range, expansive views. To the east, partial views of the hills east of San Leandro are visible but these views are predominantly blocked by trees on the golf course and structures on the Project site.
Figure 4.1-3
Views from the Project Site

Source: PlaceWorks, 2014.
Views of the Project Site

From the residential development east of the Project site, views are largely obstructed by trees and shrubs along the eastern edge of the Marina Golf Course. However, partial views are available. From the north looking towards the site, due to the Marina jutting out into the Bay, clear views of the site are available from the portion of the Mulford Gardens neighborhood near the shore of the Bay, as well as from the Oyster Bay Regional Shoreline. From the west, passing boats would have a clear view of the site and the lack of any large distinguishing on-site features. From the south, the site can clearly be seen from Marina Park as well as the northwestern portion of the Tony Lema Golf Course.

There are no State-designated scenic highways within the City of San Leandro. The closest State-designated scenic highway is an 11-mile stretch of Interstate 580 starting at the northern border of San Leandro and extending to the interchange with State Route 24 (SR 24) in Oakland. The portion of Interstate 580 that goes through San Leandro is eligible to become a State-designated scenic highway. However, that portion of Interstate 580 is about 1.4 miles east of the Project site.

Light and Glare

Light pollution refers to all forms of unwanted light in the night sky around and above developed urban areas, including glare, light trespass, sky glow, and over-lighting. Views of the night sky are an important part of the natural environment. Excessive light and glare can also be visually disruptive to humans and nocturnal animal species, and often reflects an unnecessarily high level of energy consumption. Light pollution has the potential to become an issue of increasing concern as new development contributes additional outdoor lighting installed for safety and other reasons.

As a result of existing development and the site’s position on the Bay, the site generates and is subject to existing light and glare. Not only is there a large amount of reflection off of the Bay waters surrounding Marina, but also from the windows and other reflective surfaces of the docked boats and existing buildings on site. During daytime hours, the overall level of light is more prominent on the western portion of the site because of the large amount of tree cover on the Marina Golf Course and the lack of reflective surfaces there which limit the amount of light and glare experienced. Additionally, the trees which line the western edge of the Marina Golf Course create a partial barrier from the light from the Bay to enter the course. Overall, depending on the amount of cloud cover, the amount of reflective surfaces and thereby the overall level of light and reflection on the site has a baseline level that is relatively high but not uniform throughout the site.

4.1.2 Standards of Significance

The Project would result in a significant visual quality impact if it would:

1. Have a substantial adverse effect on a scenic vista.

---

2. Substantially degrade the view from a scenic highway, including, but not limited to, trees, rock outcroppings, and historic buildings.

3. Substantially degrade the existing visual character or quality of the site and its surroundings.

4. Expose people on- or off-site to substantial light or glare, which would adversely affect day or nighttime views in the area.

### 4.1.3 IMPACT DISCUSSION

This section discusses the impacts of the Project on aesthetic resources.

| AES-1 | **The Project would not have a substantial adverse effect on a scenic vista.** |

The Project would have a significant environmental impact if it would result in a substantial adverse effect on a scenic vista. Views from the Project site are limited due to the Project site’s relatively flat topography and, as a result, far-field views are generally obscured by existing vegetation and structures. However, as described above, the San Leandro General Plan identifies a Significant View from the Project site looking to the west, towards the San Francisco Bay. Construction of the Project would result in changes to this view.

The significant view as identified by the San Leandro General Plan is shown above in Figure 4.1-1. As shown, the near-field view is dominated by views of boats in the harbor. Mid-to-far-field views include views to the horizon including Mulford Point, San Francisco Bay, and the ridgeline of the Santa Cruz Mountains on the San Francisco Peninsula on clear days.

Photo simulations of the Project are shown below in Figures 4.1-5a through 4.1-12b. The near-field views would be substantially altered by the removal of the existing marina. This change would remove views of boats, docks and other marine-related activities. Existing marina views would be replaced by views of an open expanse of water that would include natural shorelines and public amenities. Although the subject matter of the view would change as a result of the Project, the Project would not result in a substantial adverse effect on near-field views.

The mid- to far-field views would also be altered by the Project due to the inclusion of two restaurants and the 200-room hotel on Mulford Point. The addition of these Project components would partially obstruct views of the horizon and of the ridgeline of the Santa Cruz Mountains on the San Francisco Peninsula. However, as shown below in Figures 4.1-11a and 4.1-12a, the existing views of the horizon are already partially obstructed by boat masts in the harbor and existing vegetation on Mulford Point. Although the inclusion of new structures on Mulford Point would alter the mid-to-far-field view, the Significant View would not be adversely affected because components of the view (Mulford Point, San Francisco Bay, and the Santa Cruz Mountains, etc.) would still be visible, and the views would not be substantially different. The Project also provides multiple opportunities where mid- to far-field views would be available, such as the public promenade, and pedestrian lookouts, which would maximize public views, along with shoreline access.
Although the Project would change the Significant View identified in the San Leandro General Plan, the major components of the view, both near-field and mid-to-far-field, would remain albeit in a slightly altered form. As a result, the project would result in a less-than-significant impact to scenic vistas.

Applicable Regulations:
- None

Significance Before Mitigation: Less than significant.

AES-2 The Project would not substantially degrade the view from a scenic highway, including, but not limited to, trees, rock outcroppings, and historic buildings.

The closest scenic highway is a portion of Interstate 580 starting at the northern border of San Leandro and extending north to SR 24 in the city of Oakland. There are no views of the site available from this scenic highway. Therefore, the Project would have no impact on views from a state scenic highway.

Applicable Regulations:
- None

Significance Before Mitigation: No impact.

AES-3 The Project would not substantially degrade the existing visual character or quality of the site and its surroundings.

The valuable visual features of the site occur on both its landside and waterside areas. On the landside, the golf course provides a landscaped open space that is man-made rather than natural. The golf course is lined with trees that largely block it from view of the neighboring residences and from the waterside Marina portion of the site. On the waterside, the existing boats in the marina and the open waters of the harbor are important visual features. Most of the Marina provides immediate and distant views of the Bay. As discussed above, however, the visual character of the site under existing conditions is also defined by the aging and underutilized Marina, which at this time, is visually uncoordinated. The vacant Boatworks site and remnants of the Blue Dolphin site, the high vacancy rate for the boat slips, as well as broad expanses of parking lot and sparse landscaping contribute to the lack of cohesion and appearance of disuse, increasing the dilapidated character.

The Marina is visually separated from the eastern portion of the site, which contains the Marina 9-hole Golf Course. The large open parking lots of the Marina are currently in contrast with the grass and tree-covered golf course. The Project would significantly alter the visual character of the site. On the landside, new residential development would replace a portion of the golf course. The residential development will be landscaped in accordance with the City’s standards and most of the existing trees will remain. Trees that are removed will be replaced in accordance with the City’s tree ordinance, as discussed below. The five golf course tees and holes in the development area will be reconfigured where they will still provide an open space quality, albeit man-made. Based on the above discussion, the Project will change the landside area but would not substantially degrade its visual character. On the water side, the 462-boat
harbor which is currently approximately 30 percent occupied will be replaced by open water in the harbor, with harbor-side shoreline enhancements, pedestrian paths and lookouts, a small boat launch and kayak storage, among other things. Existing parking lots and occasional wooden buildings will be replaced by the hotel, conference center, mixed use and other buildings. The new development will have spaces between the buildings, and a 20-foot-wide public promenade on the bayside of the project will provide continuous and unobstructed views of San Francisco Bay. The Project will also change the waterside portion of the site but will not substantially degrade its character. The Project will provide development with a mix of residential, commercial, and recreational uses intended to reactivate the Marina and that is oriented to preserve and enhance water views and shoreline access, especially as to views of the Bay, in compliance with San Leandro General Plan goals and policies.

In order to more clearly convey the changes to the visual character of the area that would result from the Project, a series of photo simulations were prepared from representative viewpoints across the Project site. Figure 4.1-4 shows the locations of all of the viewpoints described below. The simulations are based on the details provided in the preliminary site plan and are primarily intended to show how the massing of the proposed buildings would affect the visual character of the site. While simulations were prepared for purposes of the analysis, the representation is conceptual and does not necessarily reflect final architectural details. Please note that the block-like representation of the proposed structures are a conservative depiction and the overall design of these buildings would be subject to change as a result of the design review (Site Plan Review) process required by the City.

Given that Marina Boulevard is one of the major entry points to the Project site, Viewpoint A was prepared to show how the gateway to the site would be affected by the proposed development. As seen in Figure 4.1-5a, Viewpoint A – Existing View, there are existing gateway improvements, which serve to signal the entry to the site. The main difference that would result from implementation of the Project, as seen in Figure 4.1-5b, Viewpoint A – Photo Simulation, is the placement of the 3-story residential units on both sides of Monarch Bay Drive, on the northern part of the site, which would partially block existing public views of the Bay from this entry point. These components of the Project are identified as the North Golf Course Residential and North Residential components. While some existing views would be blocked by these new buildings, the addition of these residential units would replace parking areas and contribute to the visual quality of the site toward creating a more ordered urban neighborhood of multiple building forms, rather than the existing sparsely developed and dilapidated waterfront property. Moreover, the landscaping improvements and circulation changes associated with these residential units would be consistent with Policy 9.06 of the San Leandro General Plan, which calls for improvements to the approach routes to the Marina, including streetscape improvements and circulation changes. Additionally, as discussed above in the regulatory setting, the style of the buildings would be required to adhere to the San Leandro Zoning Code development standards and would undergo review by the Planning Commission and City Council, which would ensure adherence to standards which would affect the visual character including those pertaining to height, setbacks, architectural features, and urban design. Thus, the Project would preserve some of the existing Bay views and would provide attractive new development that provides many opportunities to view and enjoy the shoreline, harbor, and Bay amenities.

At this time public views of the Project site from the Mulford Gardens residential neighborhood area (to the east of the Project site) are limited due to the a large number of tall trees on the eastern side of the Marina Golf Course. Viewpoints B and C were prepared to show the impact that would occur in this area from construction of the Project with respect to visual character and public views.
Visual Simulation Viewpoints
As seen in Figure 4.1-6a, Viewpoint B – Existing View, the terminus of West Avenue 133rd is largely surrounded by tall trees and bushes, both in the foreground on residential properties, as well as on the border of the Marina 9-hole Golf Course. As a result of the trees on the border of the golf course and Monarch Bay Drive, views of the Marina itself and the San Francisco Bay are very limited under existing conditions. As seen in Figure 4.1-6b, Viewpoint B – Photo Simulation, the main change to the character of this viewpoint would be the addition of the North Golf Course residential units. The screening provided by the trees in the foreground, which are proposed to remain, helps to break up the mass of the new buildings. Moreover, the fact that the trees along the border of the golf course and Monarch Bay Drive block long range views under existing conditions helps to minimize the impact of these changes since the range of views would be similar under existing and Project conditions. The visibility of small portions of the proposed buildings behind the North Golf Course Residential component would have a minimal impact to public views since only small portions would be visible and there is a considerable distance from the existing views from West Avenue 133rd and the proposed buildings west of Monarch Bay Drive. A break in the row of housing adjacent to the terminus of West Avenue 133rd would allow for the retention of some of the longer range views onto the Marina, though there would still be trees blocking much of this view. Through that break in the North Golf Course Residential component, people standing at the end of West Avenue 133rd would be able to see small portions of the 150,000 square foot commercial campus which as seen in Figure 4.1-6b would be placed just north of the existing Horatio’s Restaurant. Compliance with the applicable development standards for height, setbacks, landscaping and architecture, and the relatively small visible portion of the buildings would ensure that all of these buildings would be compatible with their surroundings and in conformance with all of the policies in the San Leandro General Plan pertaining to urban design.

As seen in Figure 4.1-7a, Viewpoint C – Existing View, similar to Viewpoint B, the terminus of West Avenue 134th is largely surrounded by trees and other vegetation. As seen in Figure 4.1-7b, Viewpoint C – Photo Simulation, intervening landscaping and the distance of the proposed development from this public viewpoint, due to the buffering provided by the Marina 9-hole Golf Course, would serve to minimize the impact of the new buildings on this vantage point. The North Golf Course Residential buildings would block nearly all of the other proposed buildings west of the North Golf Course Residential. However, while small portions of the tops of buildings behind the North Golf Course Residential buildings may be visible, this would not result in a substantial change to existing views due to the screening that the existing trees provide. The required development standards review described above would ensure that all of these buildings would be compatible with their surroundings and in conformance with all of the policies in the San Leandro General Plan pertaining to urban design.

Viewpoint D shows the effect of the Project on the entry point to the south of the Project site and represents the view that pedestrians entering from Fairway Drive or people parking in the Monarch Bay Golf Club parking lot might see when looking toward the Project site. As seen in Figure 4.1-8a, Viewpoint D – Existing View, from the intersection of Fairway Drive and Monarch Bay Drive, there are existing long-range views of the San Francisco Bay as well as views of a portion of Faro Point which is occupied by Marina Park. Existing views of the Project site from this vantage point are characterized generally by open parking lots, sparse landscaping, and trees along Monarch Bay Drive. As seen in Figure 4.1-8b, Viewpoint D – Photo Simulation, the primary change to the character of this view point would result from the addition of the South Mixed-Use structure.
Figure 4.1-6a
Viewpoint B - Existing View
Figure 4.1-6b

Viewpoint B - Photo Simulation
Figure 4.1-7b

Viewpoint C - Photo Simulation
Figure 4.1-8a

Viewpoint D - Existing View
The addition of this structure would block some views of the Marina from this vantage point. Existing trees on the site and architectural features to break up the building mass would visually break up the South Mixed-Use structure from this viewpoint, which would preserve some views of Marina Park. Furthermore, existing long-range views of the San Francisco Bay and Marina Park, which add to the character of the site, would be retained.

Viewpoint E represents the view from Mulford Point, looking east toward the Project site. As seen in Figure 4.1-9a, Viewpoint E – Existing View, under existing conditions this vantage is characterized by open water with docked boats. The hills east of San Leandro and Oakland are visible in the background and the existing park on the south side of the Marina is visible on the right side of this viewpoint. With the eventual elimination of the boat slips and thereby the boats in the harbor, as seen in Figure 4.1-9b, Viewpoint E – Photo Simulation, this would increase the amount of open water in the harbor, enhancing the water views and shoreline setting of the site. Although improvements are proposed at both Pescador and Mulford Point, such as a community park and bocce ball courts, the hills in the background would remain visible from these park areas at this viewpoint. The elimination of the boats in the harbor would be a departure from the existing character of the site. As discussed before, the Marina area is envisioned in the San Leandro General Plan as the “crown jewel” of the City’s parks system and elimination of the boat slips would allow for additional public recreation opportunities in the form of small boat activities, including kayaking, paddle boarding, and canoeing. The shoreline and marine-based qualities of the site would be preserved as the sight of boats docked in the harbor would be replaced by the sight of the water itself and individuals recreating in the harbor. Removal of the harbor, resulting from siltation over time, would be in conformance with the San Leandro General Plan and would be a positive effect of the project. Additionally, the dilapidated Marina infrastructure visible on the left side of Figure 4.1-9a would be eliminated, including the removal of rip rap and restoration of the natural shoreline, with implementation of the Project. This would contribute to the orderly developed form of the area, adding to the vibrancy of the site.

Viewpoint F represents the view experienced from the existing Horatio’s restaurant, looking to the west, onto the Marina. Due to the configuration of the existing boat slips, this view is dominated by docked boats and boat slips. As seen in Figure 4.1-10a, Viewpoint F – Existing View, very little of the westernmost finger of the Marina is visible at this time due to the boats which screen this portion of the Marina from view. The existing San Leandro Yacht Club building is visible on the right side of this picture. As described above, eventual elimination of the boat slips and boats docked in the harbor. Figure 4.1-10b, Viewpoint F – Photo Simulation, shows that with the elimination of the boats and slips, a much more expansive view onto the Marina and San Francisco Bay are allowed for. The hills on the peninsula become more visible and the westernmost portion of the Marina comes into view. The elimination of the boats in the harbor would represent a departure from the existing character of the site, however, this change would result in increased opportunities for public recreation, more expansive views, increased open space, and increased access to the shoreline and harbor basin. Moreover, since the Marina is envisioned as a center for recreation in San Leandro, this change is consistent with the San Leandro General Plan. As demonstrated in the photo simulations, the Project would result in a substantial change in character; however, this change is not adverse.
Figure 4.1-9b

Viewpoint E - Photo Simulation
Figure 4.1-9a
Viewpoint E - Existing View
Figure 4.1-10a
Viewpoint F - Existing View
Figure 4.1-10b
Viewpoint F - Photo Simulation
Viewpoints G1 and G2 show two viewing angles from the location of the existing Marina Inn. Viewpoint G1 looks to the northwest from the hotel and G2 looks to the southwest from the hotel. Figure 4.1-11a, Viewpoint G1 – Existing View, was taken from the third floor of the Marina Inn and shows the view experienced by people staying in the hotel. As shown, the foreground of the view is dominated by the existing boats, slips and large, heavy metal clad protective structures for boats in the harbor. In the background the hills across the San Francisco Bay to the west are visible, as well as the air traffic control tower for the Oakland International Airport and vegetation in the adjacent Oyster Bay Regional Shoreline. Figure 4.1-11b, Viewpoint G1 – Photo Simulation, shows that with implementation of the Project, the office buildings and conference center which would be built on the north side of the Marina would block much of the existing mid-field views of the Oakland International Airport and Oyster Bay Regional Shoreline vegetation. Additionally, the hotel proposed to be constructed on the western finger of the Marina would block a portion of the far-field view across the San Francisco Bay but would maintain some of the existing views. However, only a portion of this existing view would be blocked and the removal of the boats in the harbor would allow for more expansive near-field views. The Project would change the views from this vantage point but would maintain and improve views of open water across the harbor and would retain the shoreline and marine character of the views. The change to these views would be a change, but the impact would be less than significant.

Looking to the southwest from the Marina Inn, as seen in Figure 4.1-12a, Viewpoint G2 – Existing View, there are open parking lots, boat docks and ancillary facilities in the foreground. In the background, the end of Faro Point is visible and further in the background the hills across the San Francisco Bay are visible. Figure 4.1-12b, Viewpoint G2 – Photo Simulation, shows that there would not be a significant change in the character of the site from this viewpoint. The elimination of the boats and slips as well as the addition of the proposed aquatic center are the primary differences, however; the new aquatic center would be screened by trees and the elimination of the boats in the harbor would be consistent with the intent of the San Leandro General Plan for the reasons discussed above. The change to visual character reflected in these views would be less than significant.

Although the Project would alter the character of the Project site, as described, the changes would in many cases result in beneficial impacts through the incorporation of project components intended to provide attractive limited development that enhances the visual character as well as the recreational amenities of Project site. As a result, the Project would result in less-than-significant impacts and would not substantially degrade the visual character of the Project site.

**Urban Decay Analysis**

One way that the Project could affect the visual character within the vicinity of the Project site would be if it were to result in urban decay. Urban decay or urban blight can result if a new development project saturates a market, putting competitors out of business, thereby creating long-term vacancies in competitive centers that would, in turn, lead to urban decay. Concerns have been raised regarding the viability of existing hotels in light of the proposed 200-room hotel included in the Project. Therefore, an urban decay analysis was completed for this Project and is included in Appendix B.
Figure 4.1-11a
Viewpoint G1 - Existing View

AESTHETICS
Figure 4.1-11b
Viewpoint G1 - Photo Simulation
Figure 4.1-12b
Viewpoint G2 - Photo Simulation
According to the urban decay analysis, based on current demand, after the hotel component of the Project is constructed there would be a 74 percent overall occupancy rate within the Oakland-Hayward trade area and a 73 percent occupancy rate in the midscale and upper-midscale class market segment in this trade area. The analysis determined that the Project would not increase the aggregate supply levels for hotels such that the occupancy rate would fall below 60 percent, which is considered to be the threshold at which hotels generally become unprofitable and represent an unhealthy market. Moreover, this analysis found that it is unlikely that the Project would lower occupancy rates below 70 percent which is considered to be a healthy level. This means that the hotel market would not be overbuilt and it is unlikely that the Project would result in urban decay which could alter the visual character of the Project site or its surroundings. As a result, a less-than-significant impact would occur with respect to urban decay.

Shade and Shadows

In order to assess the potential changes to the character of the site resulting from shade and shadows that would result from structures proposed by the Project, a shading study was conducted. The diagrams included in Appendix C, Shade/Shadow Diagrams, show the shade/shadow on four days of the year; the spring equinox, summer solstice, fall equinox, and the winter solstice. Additionally, in order to provide a summary of the shade/shadow created by the Project, four times throughout each day are depicted: 9:00 a.m., 12:00 p.m., 3:00 p.m., and 6:00 p.m. The diagrams in Appendix C only include shade/shadow created by the Project buildings, as represented by worst-case building massing.

A significant impact to aesthetics could result with respect to shade and shadows if new development cast significantly large shadows on existing buildings, gathering areas, and/or its general surroundings, such that the character of the site was significantly, adversely altered. The diagrams showing the shade/shadow on the summer and winter solstice represent the extreme locations of the sun relative to the planet throughout the year and therefore show the most extreme shade/shadow created by the Project. The diagrams showing the shade/shadow on the spring and fall equinoxes represent average shade/shadow created by the Project. In order to determine whether or not the Project would substantially degrade the existing visual character or quality of the site and its surroundings as a result of shade and shadow impacts, the diagrams showing the shade/shadow on the summer and winter solstice are most useful for a conservative analysis. As these diagrams show, the shadows cast by the proposed buildings would not substantially shade existing buildings or gathering places, on- or off-site, under even the most extreme conditions. Moreover, these most extreme conditions, while cyclical, would be temporary. For these reasons, the shade/shadow impacts of the Project would not be significant.

Overall, as discussed above, the Project would result in substantial changes on the site which would affect the site’s visual appearance and character. However, since the proposed changes would be consistent with the San Leandro General Plan and would result in preservation of most views, increase in water views of the harbor through improvements to the promenade and addition of public lookouts, removal of dilapidated structures, provision of attractive low-profile structures and landscaping, and a more vibrant shoreline, the changes would not result in a degradation of the existing site character. Additionally, Project

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*Note: The shade/shadow analysis only depicts shade/shadow from buildings proposed by the Project, and does not include potential shade/shadow from landscaping features and/or existing structures.*
improvements would result in improvements to public spaces, such as the community park at the end of Mulford Point Drive. Furthermore, as shown in the Urban Decay Analysis prepared for the Project, since it is not anticipated that the Project would result in urban decay off-site, the Project would not have the potential to result in a degradation of the visual character of areas off-site. Therefore, a less-than-significant impact would result in this respect.

Applicable Regulations:
- San Leandro General Plan
- San Leandro Zoning Code

Significance Before Mitigation: Less than significant.

AES-4 The Project would not expose people on- or off-site to substantial light or glare, which would adversely affect day or nighttime views in the area.

Although the Project site has been historically developed and currently includes sources of light and glare, development of the Project would result in new structures and increased intensity of non-residential development and increased density of residential development. As a result, the Project would create additional sources of light and glare. Sources of nighttime light include street and parking lighting, lighting illuminated from new buildings, and outdoor security lights resulting in an increase in the total amount of light emanating from the Project site. In addition, the new residential uses within the site and adjacent residential properties would be sensitive receptors and would be affected by an increase in light and glare. However, all proposed development would be required to conform to San Leandro Zoning Code regulations pertaining to the abatement of unreasonable light and glare including those contained in Section 4-1732, Lighting; Section 4-1670, Performance Standards; Section 5-2512, Site Plan Review Standards; Section 4-1676, Airport Safety Zones; and Section 4-1806, Regulations for On-Premises Signs. Additionally, CALGreen Section 5.106.8 regulates light pollution by establishing maximum Backlight, Uplight and Glare (BUG) ratings for light fixtures. These regulations would assure that day and nighttime conditions would not be adversely affected by light with provisions including the requirement that outdoor parking area lighting create no cone of direct illumination greater than sixty degrees from a light source higher than six feet and that, that cone of direct illumination not shine directly onto an adjacent street, as described in Section 4-1732, Lighting. Implementation of these regulations would be assured by the necessary review by City Staff and Provision D., in Section 5-2512, Site Plan Review Standards which requires that site plans submitted to the City detail features, such as signs, fences, and lighting for buildings, parking lots, and/or driveways and minimize off-site glare. Glare would be minimized through compliance with Section 4-1670(D), which requires that mirror or highly reflective glass shall not cover more than 20 percent of a building surface visible from a street unless an applicant demonstrates to the satisfaction of the Zoning Enforcement Official that use of such glass would not significantly increase glare visible from adjacent streets or pose a hazard for moving vehicles. For these reasons, a less-than-significant impact would result with respect to substantial light or glare which would adversely affect day or nighttime views in the area.
AESTHETICS

Applicable Regulations:
- San Leandro General Plan
- San Leandro Zoning Code
- San Leandro Municipal Code

Significance Before Mitigation: Less than significant.

4.1.4 CUMULATIVE IMPACT DISCUSSION

AES-5 The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to aesthetics.

A cumulative impact would be considered significant if, taken together with past, present and reasonably foreseeable projects in the area, it would result in a substantial contribution to an adverse effect with respect to any of the standards of significance discussed above. The nature of the visual influence of physical development is such that multiple projects would contribute to a cumulative aesthetic impact only when located proximate to one another. In order to significantly impact visual quality, projects must be contained in the same view shed and visually associated within similar perspectives. For this reason, the following analysis accounts for the general vicinity of the Project site. Given that there are no vacant, developable lots in the direct vicinity nor are there any reasonably foreseeable projects proposed to be built in the direct vicinity of the Project site, the cumulative impacts with respect to aesthetics would be less than significant.

The Project site is bounded to the west by the San Francisco Bay, to the north by residential development, to the south by open space and recreation uses, and to the east by recreation and residential uses. This results in the Project site being relatively visually isolated. There are no vacant, developable lots in the direct vicinity nor are there any reasonably foreseeable projects proposed to be built in the direct vicinity of the Project site; therefore, the Project would not contribute to significant cumulative impact related to aesthetics. As a result, a less-than-significant cumulative impact would occur.

Applicable Regulations:
- None

Significance Before Mitigation: Less than significant.
4.2 AIR QUALITY

This chapter describes the existing air quality setting and evaluates the potential environmental impacts that could occur by adopting and implementing the San Leandro Shoreline Development (Project). “Emissions” refers to the actual quantity of pollutant, measured in pounds per day or tons per year. “Concentrations” refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter (µg/m³).

This chapter is based on the methodology recommended by the Bay Area Air Quality Management District (BAAQMD) for project-level review, based on preliminary information available. The analysis contained herein focuses on air pollution from regional emissions and localized pollutant concentrations from buildout of the Project. Transportation sector emissions are based on trip generation provided by Kittelson & Associates, Inc. Criteria air pollutant emissions modeling is included in Appendix D, Air Quality and Greenhouse Gas Modeling, of this Draft EIR. A health risk assessment (HRA) for construction and operational phases of the Project is included in Appendix E, Health Risk Assessment, of this Draft EIR.

4.2.1 ENVIRONMENTAL SETTING

California is divided geographically into air basins for the purpose of managing the air resources of the State on a regional basis. An air basin generally has similar meteorological and geographic conditions throughout. The State is divided into 15 air basins. San Leandro is in the San Francisco Bay Area Air Basin (SFBAAB or Air Basin). The discussion below identifies the natural factors in the Air Basin that affect air pollution. Air pollutants of concern are criteria air pollutants and toxic air contaminants (TACs). Federal, State, and local air districts have adopted laws and regulations intended to control and improve air quality. The regulatory framework that is potentially applicable to the Project is also summarized below.

4.2.1.1 SAN FRANCISCO AIR BASIN

The BAAQMD is the regional air quality agency for the Air Basin, which comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara Counties; the southern portion of Sonoma County; and the southwestern portion of Solano County. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions.¹

Meteorology

The Air Basin is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays, which distort normal wind flow patterns. The Coast Range² splits in the Bay Area, creating a western coast gap, the Golden Gate, and an eastern coast gap, the Carquinez Strait, which allows air to flow in and out of the Bay Area and the Central Valley.

¹ This section describing the air basin is from Bay Area Air Quality Management District, 2010 (Revised 2011), Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.
² The Coast Ranges traverses California’s west coast from Humboldt County to Santa Barbara County.
AIR QUALITY

The climate is dominated by the strength and location of a semi-permanent, subtropical high-pressure cell. During the summer, the Pacific high-pressure cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below the surface because of the northwesterly flow produces a band of cold water off the California coast.

The cool and moisture-laden air approaching the coast from the Pacific Ocean is further cooled by the presence of the cold water band, resulting in condensation and the presence of fog and stratus clouds along the Northern California coast. In the winter, the Pacific high-pressure cell weakens and shifts southward, resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms. Weak inversions coupled with moderate winds result in a low air pollution potential.

Wind Patterns

During the summer, winds flowing from the northwest are drawn inland through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately south of Mount Tamalpais in Marin County, the northwesterly winds accelerate considerably and come more directly from the west as they stream through the Golden Gate. This channeling of wind through the Golden Gate produces a jet that sweeps eastward and splits off to the northwest toward Richmond and to the southwest toward San Jose where it meets the East Bay hills.

Wind speeds may be strong locally in areas where air is channeled through a narrow opening, such as the Carquinez Strait, the Golden Gate, or the San Bruno gap. For example, the average wind speed at the San Francisco International Airport in July is about 17 knots (from 3:00 p.m. to 4:00 p.m.), compared with only 7 knots at San Jose and less than 6 knots at the Farallon Islands.

The air flowing in from the coast to the Central Valley, called the sea breeze, begins developing at or near ground level along the coast in late morning or early afternoon. As the day progresses, the sea breeze layer deepens and increases in velocity while spreading inland. The depth of the sea breeze depends in large part upon the height and strength of the inversion. Under normal atmospheric conditions, the air in the lower atmosphere is warmer than the air above it. An inversion is a change in the normal conditions that causes the temperature gradient to be reversed or inverted. If the inversion is low and strong, hence stable, the flow of the sea breeze will be inhibited, and stagnant conditions are likely to result.

In the winter, the Air Basin frequently experiences stormy conditions with moderate to strong winds as well as periods of stagnation with very light winds. Winter stagnation episodes (i.e., conditions where there is little mixing, which occur when there is a lack of or little wind) are characterized by nighttime drainage flows in coastal valleys. Drainage is a reversal of the usual daytime air-flow patterns; air moves from the Central Valley toward the coast and back down toward the Bay from the smaller valleys within the Air Basin.

Temperature

Summertime temperatures in the Air Basin are determined in large part by the effect of differential heating between land and water surfaces. Because land tends to heat up and cool off more quickly than water, a large-scale gradient (differential) in temperature is often created between the coast and the
Central Valley, and small-scale local gradients are often produced along the shorelines of the ocean and bays. The temperature gradient near the ocean is also exaggerated, especially in summer, because of the upwelling of cold water from the ocean bottom along the coast. On summer afternoons, the temperatures at the coast can be 35 degrees Fahrenheit cooler than temperatures 15 to 20 miles inland; at night, this contrast usually decreases to less than 10 degrees Fahrenheit.

In the winter, the relationship of minimum and maximum temperatures is reversed. During the daytime the temperature contrast between the coast and inland areas is small, whereas at night the variation in temperature is large.

**Precipitation**

The Air Basin is characterized by moderately wet winters and dry summers. Winter rains (November through March) account for about 75 percent of the average annual rainfall. The amount of annual precipitation can vary greatly from one part of the Air Basin to another, even within short distances. In general, total annual rainfall can reach 40 inches in the mountains, but it is often less than 16 inches in sheltered valleys.

During rainy periods, ventilation (rapid horizontal movement of air and injection of cleaner air) and vertical mixing (an upward and downward movement of air) are usually high, and thus pollution levels tend to be low (i.e., air pollutants are dispersed more readily into the atmosphere rather than accumulating under stagnant conditions). However, during the winter, frequent dry periods do occur where mixing and ventilation are low and pollutant levels build up.

**Wind Circulation**

Low wind speed contributes to the buildup of air pollution because it allows more pollutants to be emitted into the air mass per unit of time. Light winds occur most frequently during periods of low sun (fall and winter, and early morning) and at night. These are also periods when air pollutant emissions from some sources are at their peak, namely, commuter traffic (early morning) and wood-burning appliances (nighttime). The problem can be compounded in valleys when weak flows carry the pollutants up-valley during the day and cold air drainage flows move the air mass down-valley at night. Such restricted movement of trapped air provides little opportunity for ventilation and leads to buildup of pollutants to potentially unhealthful levels.

**Inversions**

As described above, an inversion is a layer of warmer air over a layer of cooler air. Inversions significantly affect air quality conditions because they influence the mixing depth (i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground). There are two types of inversions that occur regularly in the Air Basin. Elevation inversions are more common in the summer and fall, and

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1 When the air blows over elevated areas, it is heated as it is compressed into the side of the hill/mountain. When that warm air comes over the top, it is warmer than the cooler air of the valley.
radiation inversions\(^4\) are more common during the winter. The highest air pollutant concentrations in the Air Basin generally occur during inversions.

### 4.2.1.2 AIR POLLUTANTS OF CONCERN

A substance in the air that can cause harm to humans and the environment is known as an air pollutant. Pollutants can be in the form of solid particles, liquid droplets, or gases. In addition, they may be natural or man-made. Pollutants can be classified as primary or secondary. Usually, primary pollutants are directly emitted from a process, such as ash from a volcanic eruption, carbon monoxide gas from a motor vehicle exhaust, or sulfur dioxide released from factories. Secondary pollutants are not emitted directly. Rather, they form in the air when primary pollutants react or interact.

#### Criteria Air Pollutants

The pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and State law. Air pollutants are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NO\(_x\)), sulfur dioxide (SO\(_2\)), coarse inhalable particulate matter (PM\(_{10}\)), fine inhalable particulate matter (PM\(_{2.5}\)), and lead (Pb) are primary air pollutants. Of these, CO, SO\(_2\), NO\(_2\), PM\(_{10}\), and PM\(_{2.5}\) are “criteria air pollutants,” which means that ambient air quality standards (AAQS) have been established for them. ROG and NO\(_x\) are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O\(_3\)) and nitrogen dioxide (NO\(_2\)) are the principal secondary pollutants. Areas that meet AAQS are classified attainment areas, and areas that do not meet these standards are classified nonattainment areas.

A description for each of the primary and secondary criteria air pollutants and their known health effects is presented below.

- **Carbon Monoxide (CO)** is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little or no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, motor vehicles operating at slow speeds are the primary source of CO in the Air Basin. Emissions are highest during cold starts, hard acceleration, stop-and-go driving, and when a vehicle is moving at low speeds. New findings indicate that CO emissions per mile are lowest at about 45 miles per hour (mph) for the average light-duty motor vehicle and begin to increase again at higher speeds. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces its oxygen-carrying capacity. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia, as well as for fetuses. Even healthy people exposed to high CO concentrations can experience headaches, dizziness, fatigue, unconsciousness, and even death.\(^1\) The

\(^4\) During the night, the ground cools off, radiating the heat to the sky.

\(^1\) Bay Area Air Quality Management District (BAAQMD), 2010 (Revised 2011), Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.
Air Basin is designated under the California and National AAQS as being in attainment of CO criteria levels.  

- **Reactive Organic Gases (ROGs)** are compounds composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of ROGs. Other sources of ROGs include evaporative emissions from paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROGs, but rather by reactions of ROGs to form secondary pollutants such as O₃. There are no AAQS established for ROGs. However, because they contribute to the formation of O₃, BAAQMD has established a significance threshold for this pollutant.

- **Nitrogen Oxides (NOₓ)** are a by-product of fuel combustion and contribute to the formation of O₃, PM₁₀, and PM₂.₅. The two major components of NOₓ are nitric oxide (NO) and nitrogen dioxide (NO₂). The principal component of NO₂ produced by combustion is NO, but NO reacts with oxygen to form NO₂, creating the mixture of NO and NO₂ commonly called NOₓ. NO₂ acts as an acute irritant and in equal concentrations is more injurious than NO. At atmospheric concentrations, however, NO₂ is only potentially irritating. There is some indication of a relationship between NO₂ and chronic pulmonary fibrosis. Some increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 ppm. NO₂ absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The Air Basin is designated an attainment area for NO₂ under the National and California AAQS.

- **Sulfur Dioxide (SO₂)** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and from chemical processes at chemical plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO₂. When SO₂ forms sulfates (SO₄) in the atmosphere, together these pollutants are referred to as sulfur oxides (SOₓ). Thus, SO₂ is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO₂ may irritate the upper respiratory tract. At lower concentrations and when combined with particulates, SO₂ may do greater harm by injuring lung tissue. The Air Basin is designated an attainment area for SO₂ under the California and National AAQS.

- **Suspended Particulate Matter (PM₁₀ and PM₂.₅)** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM₁₀, include the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004-inch) or less. Inhalable fine particles, or PM₂.₅, have an aerodynamic diameter of 2.5 microns or less (i.e., 2.5 millionths of a meter or 0.0001 inch).

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Some particulate matter, such as pollen, occurs naturally. In the Air Basin most particulate matter is caused by combustion, factories, construction, grading, demolition, agricultural activities, and motor vehicles. Extended exposure to particulate matter can increase the risk of chronic respiratory disease. PM$_{10}$ bypasses the body’s natural filtration system more easily than larger particles and can lodge deep in the lungs. The U.S. Environmental Protection Agency (EPA) scientific review concluded that PM$_{2.5}$ penetrates even more deeply into the lungs, and this is more likely to contribute to health effects—at concentrations well below current PM$_{10}$ standards. These health effects include premature death in people with heart or lung disease, non-fatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing). Motor vehicles are currently responsible for about half of particulates in the Air Basin. Wood burning in fireplaces and stoves is another large source of fine particulates.\textsuperscript{11}

Both PM$_{10}$ and PM$_{2.5}$ may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems. These health effects include premature death; increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individual with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms.\textsuperscript{12} There has been emerging evidence that even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionths of a meter or <0.000004 inch), known as ultrafine particulates (UFPs), have human health implications, because UFPs toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs. However, the EPA and California Air Resources Board have yet to adopt AAQS to regulate these particulates. Diesel particulate matter (DPM) is also classified a carcinogen by the CARB. The Air Basin is designated nonattainment under the California AAQS for PM$_{10}$ and nonattainment under both the California and National AAQS for PM$_{2.5}$\textsuperscript{13,14}

\begin{itemize}
  \item Ozone (O$_3$) is commonly referred to as “smog” and is a gas that is formed when ROGs and NO$_x$, both by-products of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. O$_3$ is a secondary criteria air pollutant. O$_3$ concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions to the formation of this pollutant. O$_3$ poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. O$_3$ levels usually build up during the day and peak in the afternoon hours. Short-term exposure can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, it can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. Chronic exposure to high ozone levels can permanently damage
\end{itemize}

\textsuperscript{11} Bay Area Air Quality Management District (BAAQMD), 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.


\textsuperscript{13} California Air Resources Board (CARB), 2014, Area Designations: Activities and Maps, http://www.arb.ca.gov/desig/adm/adm.htm, June.

\textsuperscript{14} On January 9, 2013, the EPA issued a final rule to determine that the SFBAAB has attained the 24-hour PM$_{2.5}$ National AAQS. This action suspends federal State Implementation Plan planning requirements for the Bay Area. The SFBAAB will continue to be designated nonattainment for the National 24-hour PM$_{2.5}$ standard until such time as BAAQMD elects to submit a redesignation request and a maintenance plan to EPA and EPA approves the proposed redesignation.
lungs. O₃ can also damage plants and trees and materials such as rubber and fabrics. The Air Basin is designated nonattainment of the 1-hour California AAQS and 8-hour California and National AAQS for O₃.

- **Lead (Pb)** is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.

Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the EPA set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The EPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of the EPA’s regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically. The Air Basin is designated in attainment of the California and National AAQS for lead. Because emissions of lead are found only in projects that are permitted by BAAQMD, lead is not an air quality of concern for the Project.

**Toxic Air Contaminants**

Public exposure to TACs is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code define a TAC as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health.” A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 U.S. Code Section 7412[b]) is a toxic air contaminant. Under State law, the California Environmental Protection Agency (Cal/EPA), acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics “Hot Spot” Information and Assessment Act of 1987). The Tanner Air Toxics Act sets up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an “airborne toxics control measure” for sources that emit designated TACs. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to

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minimize emissions. To date, CARB has established formal control measures for 11 TACs that are identified as having no safe threshold.

Air toxics from stationary sources are also regulated in California under the Air Toxics “Hot Spot” Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment (HRA), and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

At the time of the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs. Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

In 1998, CARB identified diesel particulate matter (DPM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs.

4.2.1.3 REGULATORY FRAMEWORK

Federal and State Regulations

Ambient Air Quality Standards

The Clean Air Act (CAA) was passed in 1963 by the U.S. Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The CAA allows states to adopt more stringent standards or to include other pollution species specifics. The California Clean Air Act, signed into law in 1988, requires all areas of the State to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect “sensitive receptors” most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

19 California Air Resources Board (CARB), 1999. Final Staff Report: Update to the Toxic Air Contaminant List.
Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 4.2-1. These pollutants are ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM₂.₅), and lead (Pb). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

Regional Regulations

Bay Area Air Quality Management District

BAAQMD is the agency responsible for assuring that the National and California AAQS are attained and maintained in the Air Basin. BAAQMD is responsible for:

- Adopting and enforcing rules and regulations concerning air pollutant sources.
- Issuing permits for stationary sources of air pollutants.
- Inspecting stationary sources of air pollutants.
- Responding to citizen complaints.
- Monitoring ambient air quality and meteorological conditions.
- Awarding grants to reduce motor vehicle emissions.
- Conducting public education campaigns.
- Air Quality Management Planning.

Air quality conditions in the Air Basin have improved significantly since the BAAQMD was created in 1955. The BAAQMD prepares air quality management plans (AQMPs) to attain ambient air quality standards in the Air Basin. The BAAQMD prepares ozone attainment plans for the National O₃ standard and clean air plans for the California O₃ standard. The BAAQMD prepares these AQMPs in coordination with Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC). The most recently adopted comprehensive plan is the 2010 Bay Area Clean Air Plan, which was adopted by BAAQMD on September 15, 2010, and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools.

BAAQMD 2010 Bay Area Clean Air Plan

The purpose of the 2010 Bay Area Clean Air Plan is to: 1) update the Bay Area 2005 Ozone Strategy in accordance with the requirements of the California Clean Air Act to implement all feasible measures to reduce O₃; 2) consider the impacts of O₃ control measures on PM, TAC, and greenhouse gases (GHGs) in a single, integrated plan; 3) review progress in improving air quality in recent years; and 4) establish emission control measures in the 2009 to 2012 timeframe. The 2010 Bay Area Clean Air Plan also provides the framework for the Air Basin to achieve attainment of the California and National AAQS.

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## Table 4.2-1 Ambient Air Quality Standards for Criteria Pollutants

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Time</th>
<th>California Standard</th>
<th>Federal Primary Standard</th>
<th>Major Pollutant Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone (O&lt;sub&gt;3&lt;/sub&gt;)</td>
<td>1 hour</td>
<td>0.09 ppm</td>
<td>*</td>
<td>Motor vehicles, paints, coatings, and solvents.</td>
</tr>
<tr>
<td></td>
<td>8 hours</td>
<td>0.070 ppm</td>
<td>0.075 ppm</td>
<td></td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>1 hour</td>
<td>20 ppm</td>
<td>35 ppm</td>
<td>Internal combustion engines, primarily gasoline-powered motor vehicles.</td>
</tr>
<tr>
<td></td>
<td>8 hours</td>
<td>9.0 ppm</td>
<td>9 ppm</td>
<td></td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO&lt;sub&gt;2&lt;/sub&gt;)</td>
<td>Annual Average</td>
<td>0.030 ppm</td>
<td>0.053 ppm</td>
<td>Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.</td>
</tr>
<tr>
<td></td>
<td>1 hour</td>
<td>0.18 ppm</td>
<td>0.100 ppm</td>
<td></td>
</tr>
<tr>
<td>Sulfur Dioxide (SO&lt;sub&gt;2&lt;/sub&gt;)</td>
<td>Annual Arithmetic Mean</td>
<td>*</td>
<td>*</td>
<td>Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
<td>0.04 ppm</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Respirable Particulate Matter (PM&lt;sub&gt;2.5&lt;/sub&gt;)</td>
<td>Annual Arithmetic Mean</td>
<td>20 µg/m&lt;sup&gt;3&lt;/sup&gt;</td>
<td>*</td>
<td>Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
<td>50 µg/m&lt;sup&gt;3&lt;/sup&gt;</td>
<td>150 µg/m&lt;sup&gt;3&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Respirable Particulate Matter (PM&lt;sub&gt;10&lt;/sub&gt;)</td>
<td>Annual Arithmetic Mean</td>
<td>12 µg/m&lt;sup&gt;3&lt;/sup&gt;</td>
<td>12 µg/m&lt;sup&gt;3&lt;/sup&gt;</td>
<td>Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
<td>*</td>
<td>35 µg/m&lt;sup&gt;3&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>30-Day Average</td>
<td>1.5 µg/m&lt;sup&gt;3&lt;/sup&gt;</td>
<td>*</td>
<td>Present source: lead smelters, battery manufacturing &amp; recycling facilities. Past source: combustion of leaded gasoline.</td>
</tr>
<tr>
<td></td>
<td>Calendar Quarterly</td>
<td>*</td>
<td>1.5 µg/m&lt;sup&gt;3&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rolling 3-Month Average</td>
<td>*</td>
<td>0.15 µg/m&lt;sup&gt;3&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Sulfates (SO&lt;sub&gt;4&lt;/sub&gt;)</td>
<td>24 hours</td>
<td>25 µg/m&lt;sup&gt;3&lt;/sup&gt;</td>
<td>*</td>
<td>Industrial processes.</td>
</tr>
<tr>
<td>Visibility Reducing Particles</td>
<td>8 hours</td>
<td>ExCo =0.23/km visibility of 10± miles</td>
<td>No Federal Standard</td>
<td>Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>1 hour</td>
<td>0.03 ppm</td>
<td>No Federal Standard</td>
<td>Hydrogen sulfide (H&lt;sub&gt;2&lt;/sub&gt;S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.</td>
</tr>
</tbody>
</table>
**Table 4.2-1  Ambient Air Quality Standards for Criteria Pollutants**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Time</th>
<th>California Standard</th>
<th>Federal Primary Standard</th>
<th>Major Pollutant Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl Chloride</td>
<td>24 hour</td>
<td>0.01 ppm</td>
<td>No Federal Standard</td>
<td>Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.</td>
</tr>
</tbody>
</table>

**Notes:** ppm: parts per million; µg/m³: micrograms per cubic meter

* Standard has not been established for this pollutant/duration by this entity.

a. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked.


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**BAAQMD Community Air Risk Evaluation Program**

The BAAQMD’s Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposure to outdoor TACs in the Bay Area. Based on findings of the latest report, Diesel Particulate Matter (DPM) was found to account for approximately 85 percent of the cancer risk from airborne toxics. Carcinogenic compounds from gasoline-powered cars and light duty trucks were also identified as significant contributors: 1,3-butadiene contributed four percent of the cancer risk-weighted emissions, and benzene contributed three percent. Collectively, five compounds—diesel PM, 1,3-butadiene, benzene, formaldehyde, and acetaldehyde—were found to be responsible for more than 90 percent of the cancer risk attributed to emissions. All of these compounds are associated with emissions from internal combustion engines. The most important sources of cancer risk-weighted emissions were combustion-related sources of DPM, including on-road mobile sources (31 percent), construction equipment (29 percent), and ships and harbor craft (13 percent). A 75 percent reduction in DPM was predicted between 2005 and 2015 when the inventory accounted for CARB’s diesel regulations. Overall, cancer risk from TACs dropped by more than 50 percent between 2005 and 2015, when emissions inputs accounted for state diesel regulations and other reductions.21

Modeled cancer risks from TACs in 2005 were highest near sources of DPM: near core urban areas, along major roadways and freeways, and near maritime shipping terminals. Peak modeled risks were found to be located east of San Francisco, near West Oakland, and the Maritime Port of Oakland. BAAQMD has identified seven impacted communities in the Bay Area:

- Western Contra Costa County and the cities of Richmond and San Pablo
- Western Alameda County along the Interstate 880 (I-880) corridor and the cities of Berkeley, Alameda, Oakland, San Leandro, and Hayward
- San Jose
- Eastern side of San Francisco
- Concord

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21 Bay Area Air Quality Management District (BAAQMD), 2014. Improving Air Quality & Health in Bay Area Communities, Community Air Risk Program (CARE) Retrospective & Path Forward (2004 – 2013). April
4.2-12 DECEMBER 2014

AIR QUALITY

- Vallejo
- Pittsburgh and Antioch

As illustrated in Figure 4.2-1, the majority of the City of San Leandro, including the Project site, lies within the Western Alameda County impacted community.

The major contributor to acute and chronic non-cancer health effects in the Air Basin is acrolein (C3H4O). Major sources of acrolein are on-road mobile sources and aircraft, and areas with high acrolein emissions are near freeways and commercial and military airports. Currently CARB does not have certified emission factors or an analytical test method for acrolein. Since the appropriate tools needed to implement and enforce acrolein emission limits are not available, the BAAQMD does not conduct health risk screening analysis for acrolein emissions.

Alameda County Transportation Commission

The Alameda County Transportation Commission (Alameda CTC) is the congestion management agency (CMA) for Alameda County. Alameda CTC is tasked with developing a comprehensive transportation improvement program among local jurisdictions that will reduce traffic congestion and improve land use decision-making and air quality. Alameda CTC’s latest congestion management program (CMP) is the 2013 Congestion Management Program. Alameda CTC’s countywide transportation model must be consistent with the regional transportation model developed by the Metropolitan Transportation Commission (MTC) with the Association of Bay Area Governments (ABAG) data. The countywide transportation model is used to help evaluate cumulative transportation impacts of local land use decisions on the CMP system. In addition, Alameda CTC’s updated CMP includes multi-modal performance measures and trip reduction and transportation demand management (TDM) strategies consistent with the goals of reducing regional Vehicle Miles Travelled (VMT) in accordance with Senate Bill 375 (SB 375). Strategies identified in the 2013 CMP for Alameda County, where local jurisdictions are a responsible agency, include:

- **Designated CMP Roadway Network**: Identify and update a CMP roadway network to monitor performance in relation to established level of service (LOS) standards.
- **Level of Service Standards**: Establish LOS standards as a quantitative tool to analyze the effects of land use changes on the transportation network’s performance.
- **Multi-modal Performance**: Use established multi-modal performance measures to evaluate whether the transportation network is achieving the broad mobility goals in the CMP.
- **Travel Demand Management**: Implement TDM measures to reduce pressure on existing roadway and parking capacity by using incentives and disincentives to influence travel choice.

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Figure 4.2-1

BAAQMD Community Air Risk Evaluation (CARE) Program
Impacted Communities Proximate to San Leandro

Source: Bay Area Air Quality Management District, 2013; Alameda County, 2013; City of San Leandro, 2014; PlaceWorks, 2014.
AIR QUALITY

- **Land Use Analysis Program:** Assess the impacts of land use decisions made by local jurisdictions on regional transportation systems and ensure that significant impacts are appropriately mitigated.

- **Database and Travel Demand Model:** Approve that computer models used for sub-areas are consistent with the CMP model and standardized modeling assumptions.

- **Capital Improvement Program:** Develop a list of projects intended to maintain or improve the performance of the multimodal transportation system in Alameda County, to move people and goods, and to mitigate regional transportation impacts.

- **Program Conformance and Monitoring:** Ensure local government conformance with LOS standards, Trip Reduction Program, Land Use Analysis Program, and payment of membership dues. Monitor information provided by the local governments to determine whether the CMP objectives are being met.

**Plan Bay Area: Strategy for a Sustainable Region**

Plan Bay Area is the Bay Area’s Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS). The Plan Bay Area was adopted jointly by ABAG and MTC July 18, 2013. The SCS lays out a development scenario for the region, which when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by CARB. According to Plan Bay Area, the Plan meets a 16 percent per capita reduction of GHG emissions by 2035 and a 10 percent per capita reduction by 2020 from 2005 conditions.

As part of the implementing framework for Plan Bay Area, local governments have identified Priority Development Areas (PDAs) to focus growth. PDAs are transit-oriented, infill development opportunity areas within existing communities. Overall, well over two-thirds of all regional growth in the Bay Area by 2040 is allocated within PDAs. PDAs are expected to accommodate 80 percent (or over 525,570 units) of new housing and 66 percent (or 744,230) of new jobs in the region. The Project site is not within a PDA.

**4.2.1.4 EXISTING AIR QUALITY**

**Attainment Status of the SFBAAB**

Areas that meet AAQS are classified attainment areas, and areas that do not meet these standards are classified nonattainment areas. Severity classifications for O₃ range from marginal, moderate, and serious to severe and extreme. The attainment status for the Air Basin is shown in Table 4.2-2. The Air Basin is currently designated a nonattainment area for California and National O₃, California and National PM₂.₅, and California PM₁₀ AAQS.

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25 It should be noted that the Bay Area Citizens filed a lawsuit on MTC’s and ABAG’s adoption of Plan Bay Area.
26 Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013. Plan Bay Area: Strategy for a Sustainable Region, July 18.
### Table 4.2-2  
**Attainment Status of Criteria Pollutants in the San Francisco Bay Area Air Basin**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>State</th>
<th>Federal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone – 1-hour</td>
<td>Nonattainment (serious)</td>
<td>Nonattainment</td>
</tr>
<tr>
<td>Ozone – 8-hour</td>
<td>Nonattainment</td>
<td>Classification revoked (2005)</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>Nonattainment</td>
<td>Unclassified/Attainment</td>
</tr>
<tr>
<td>PM$_{2.5}$</td>
<td>Nonattainment</td>
<td>Nonattainment*</td>
</tr>
<tr>
<td>CO</td>
<td>Attainment</td>
<td>Attainment</td>
</tr>
<tr>
<td>NO$_2$</td>
<td>Attainment</td>
<td>Attainment</td>
</tr>
<tr>
<td>SO$_2$</td>
<td>Attainment</td>
<td>Attainment</td>
</tr>
<tr>
<td>Lead</td>
<td>Attainment</td>
<td>Attainment</td>
</tr>
<tr>
<td>Sulfates</td>
<td>Attainment</td>
<td>Unclassified/Attainment</td>
</tr>
<tr>
<td>All others</td>
<td>Unclassified/Attainment</td>
<td>Unclassified/Attainment</td>
</tr>
</tbody>
</table>

*On January 9, 2013, the EPA issued a final rule to determine that the Air Basin has attained the 24-hour PM$_{2.5}$ National AAQS. This action suspends federal State Implementation Plan planning requirements for the Bay Area. The Air Basin will continue to be designated nonattainment for the National 24-hour PM$_{2.5}$ standard until such time as BAAQMD elects to submit a re-designation request and a maintenance plan to EPA and EPA approves the proposed re-designation.*


### Existing Ambient Air Quality

#### Existing Air Quality Trends

Existing levels of ambient air quality and historical trends and projections in the vicinity of San Leandro have been documented by measurements made by the BAAQMD. The Oakland Monitoring Station is the closest air quality monitoring station to the City. However, the Oakland Monitoring Station does not monitor PM$_{10}$; therefore, data from the San Francisco Monitoring Station was used to supplement data for this criteria air pollutant. Data from these monitoring stations are summarized in Table 4.2-3. The federal PM$_{2.5}$ standard has been exceeded several times in the last five years. The State O$_3$ standard and the State PM$_{10}$ standards have been exceeded only once in the last five years. The State and federal CO and NO$_2$ and the Federal O$_3$ standards have not been exceeded in the last five years in the vicinity of the City.

#### Existing San Leandro Shoreline Development Emissions

The Project site includes a total of approximately 75 acres, consisting of 52 acres of land and a 23-acre public boat harbor. The boat slips are currently only 30 percent occupied (140 occupied boat slips), primarily due to the build-up of silt in the harbor and channel. The small fraction of boats within the harbor may be being used as housing.

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*The current estimated population within the Project site is between 16 to 20 live-aboard residents, based upon correspondence between Steve Noack (PlaceWorks) and Delmarie Snodgrass, City of San Leandro, September 5, 2014.*
### TABLE 4.2-3  AMBIENT AIR QUALITY MONITORING SUMMARY

<table>
<thead>
<tr>
<th>Pollutant/Standard</th>
<th>Number of Days Thresholds Were Exceeded and Maximum Levels During Such Violations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2009</td>
</tr>
<tr>
<td>Ozone (O&lt;sub&gt;3&lt;/sub&gt;)&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>State 1-Hour ≥ 0.09 ppm</td>
<td>0</td>
</tr>
<tr>
<td>State 8-hour ≥ 0.07 ppm</td>
<td>0</td>
</tr>
<tr>
<td>Federal 8-Hour &gt; 0.075 ppm</td>
<td>0</td>
</tr>
<tr>
<td>Maximum 1-Hour Conc. (ppm)</td>
<td>0.092</td>
</tr>
<tr>
<td>Maximum 8-Hour Conc. (ppm)</td>
<td>0.063</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>State 8-Hour &gt; 9.0 ppm</td>
<td>0</td>
</tr>
<tr>
<td>Federal 8-Hour ≥ 9.0 ppm</td>
<td>0</td>
</tr>
<tr>
<td>Maximum 8-Hour Conc. (ppm)</td>
<td>1.99</td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO&lt;sub&gt;2&lt;/sub&gt;)&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>State 1-Hour ≥ 0.18 (ppm)</td>
<td>0</td>
</tr>
<tr>
<td>Maximum 1-Hour Conc. (ppb)</td>
<td>62.0</td>
</tr>
<tr>
<td>Coarse Particulates (PM&lt;sub&gt;10&lt;/sub&gt;)&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>State 24-Hour &gt; 50 µg/m&lt;sup&gt;3&lt;/sup&gt;</td>
<td>0</td>
</tr>
<tr>
<td>Federal 24-Hour &gt; 150 µg/m&lt;sup&gt;3&lt;/sup&gt;</td>
<td>0</td>
</tr>
<tr>
<td>Maximum 24-Hour Conc. (µg/m&lt;sup&gt;3&lt;/sup&gt;)</td>
<td>36.0</td>
</tr>
<tr>
<td>Fine Particulates (PM&lt;sub&gt;2.5&lt;/sub&gt;)&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Federal 24-Hour &gt; 35 µg/m&lt;sup&gt;3&lt;/sup&gt;</td>
<td>1</td>
</tr>
<tr>
<td>Maximum 24-Hour Conc. (µg/m&lt;sup&gt;3&lt;/sup&gt;)</td>
<td>36.3</td>
</tr>
</tbody>
</table>

Notes: ppm: parts per million; ppb: parts per billion; µg/m<sup>3</sup>: micrograms per cubic meter; * = insufficient data; NA = Not Available

<sup>a</sup> Data from the Oakland 9925 International Boulevard Monitoring Station.

<sup>b</sup> Data from the San Francisco Arkansas Street Monitoring Station.


Other uses within the Project site include two golf courses, a small branch library, the Spinnaker Yacht Club, the San Leandro Yacht Club, the Marina Harbormaster’s office, The Marina Inn on San Francisco Bay, Horatio’s restaurant, El Torito restaurant, and several public and private (for berthers) bathroom facilities. Criteria air pollutants generated by existing land uses in the San Leandro Shoreline Development area were modeled with CalEEMod 2013.2.2, based on trip generation provided by Kittelson & Associates, emission rates for boats (pleasure-crafts), and based on fuel sales in the harbor provided by the City. Criteria air pollutant emissions are shown in Table 4.2-4.

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<sup>29</sup> Emission rates for boats estimated from Port of Los Angeles Baseline Air Emissions Inventory (Starcrest Consulting Group, LLC, 2005).
### Table 4.2-4 Criteria Air Pollutant Emissions Generated by Existing Land Uses within the San Leandro Shoreline Development

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>PM10</th>
<th>PM2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area&lt;sup&gt;a&lt;/sup&gt;</td>
<td>22</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Energy&lt;sup&gt;b&lt;/sup&gt;</td>
<td>&lt;1</td>
<td>1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>On-Road Mobile Sources&lt;sup&gt;a&lt;/sup&gt;</td>
<td>16</td>
<td>52</td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>Boats (Pleasure-Crafts)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>144</td>
<td>49</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>182</td>
<td>102</td>
<td>28</td>
<td>14</td>
</tr>
<tr>
<td><strong>Tons Per Year (tpy)</strong></td>
<td>33 tpy</td>
<td>19 tpy</td>
<td>5 tpy</td>
<td>3 tpy</td>
</tr>
</tbody>
</table>

Note: Emissions may not total to 100 percent due to rounding.

<sup>a</sup> Source: CalEEMod 2013.2.2. Based on year 2014 emission rates. No trip generation is assumed for the 16-20 live-aboard boat residences.

<sup>b</sup> Source: Starcrest, 2005. Port of Los Angeles Baseline Air Emissions Inventory.

### Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases. Residential areas are also considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, since the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the population.

Existing sensitive receptors proximate to the Project site include the on-site recreational facilities (i.e., the Marina Park and golf courses) and the abutting residential homes to the north and east. Additionally, guests of the existing hotel (The Marina Inn) may also be considered sensitive receptors. However, overall exposures to TACs for the visitors to the on-site recreational facilities and guests of the hotel would be relatively low and are considered short-term exposures. Unlike the exposures to TACs for nearby residences, the short-term exposures to TACs for hotel and recreational use sensitive receptors would not result in significant health risks.

Finally, students and staff of Garfield Elementary School, located approximately 1,100 feet northeast of the Project site, are considered sensitive receptors. The school-based receptors are located further from the Project site than the abutting residential homes to the north and east. Additionally, the exposure period for school-based receptors (e.g., 8 hours per day, 5 days per week, and 180-240 days per year) are much lower than for residential receptors (e.g., 24 hours per day, 7 days per week, and 350 days per year). Ultimately, the overall exposures to TACs for the sensitive receptors at Garfield Elementary School would
be much lower compared to TAC exposures for the nearby residences. Therefore, only the on-site and off-site residents were considered sensitive receptors for this evaluation.

4.2.2 **THRESHOLDS OF SIGNIFICANCE**

According to Appendix G of the CEQA Guidelines, the Project would have a significant effect on the environment with respect to air quality if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors).
4. Expose sensitive receptors to substantial pollutant concentrations.
5. Create objectionable odors affecting a substantial number of people.

### 4.2.2.1 BAAQMD SIGNIFICANCE CRITERIA

The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and greenhouse gas emissions. In June 2010, the BAAQMD’s Board of Directors adopted CEQA thresholds of significance and an update of the CEQA Guidelines. In May 2011, the updated BAAQMD CEQA Air Quality Guidelines were amended to include a risk and hazards threshold for new receptors and modified procedures for assessing impacts related to risk and hazard impacts.

On March 5, 2012, the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds of significance in the BAAQMD CEQA Air Quality Guidelines. The court did not determine whether the thresholds of significance were valid on their merits, but found that the adoption of the thresholds was a project under CEQA. The court issued a writ of mandate ordering the BAAQMD to set aside the thresholds and cease dissemination of them until the BAAQMD complied with CEQA.

Following the court’s order, the BAAQMD released revised CEQA Air Quality Guidelines in May 2012 that include guidance on calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures, and which set aside the significance thresholds. The BAAQMD recognizes that lead agencies may rely on the previously recommended Thresholds of Significance contained in its CEQA Guidelines adopted in 1999. The Alameda County Superior Court, in ordering BAAQMD to set aside the thresholds, did not address the merits of the science or evidence supporting the thresholds. The City finds, therefore, that despite the Superior Court’s ruling, and in light of the subsequent case history discussed below, the science and reasoning contained in
the BAAQMD 2011 CEQA Air Quality Guidelines provide the latest state-of-the-art guidance available. For that reason, substantial evidence supports continued use of the BAAQMD 2011 CEQA Air Quality Guidelines.

On August 13, 2013, the First District Court of Appeal reversed the trial court judgment and upheld the BAAQMD’s CEQA Guidelines. In addition to the City’s independent determination that use of the BAAQMD’s CEQA Guidelines is supported by substantial evidence, they have been found to be valid guidelines for use in the CEQA environmental review process. On November 26, 2013, the California Supreme Court granted review on the issue of whether CEQA requires analysis of how existing environmental conditions affect a project (California Building Industry Association v Bay Area Air Quality Management District, Case No. A135335 and A136212).

While the outcome of this case presents uncertainty for current project applicants and local agencies regarding proper evaluation of toxic air contaminants in CEQA documents, local agencies still have a duty to evaluate impacts related to air quality and greenhouse gas emissions. In addition, CEQA grants local agencies broad discretion to develop their own thresholds of significance, or to rely on thresholds previously adopted or recommended by other public agencies or experts so long as they are supported by substantial evidence. Accordingly, the City of San Leandro is using the BAAQMD’s 2011 thresholds to evaluate project impacts in order to protectively evaluate the potential effects of the project on air quality and community risk and hazards.

Criteria Air Pollutant Emissions and Precursors

Regional Significance Criteria

The BAAQMD’s criteria for regional significance for projects that exceed the screening thresholds are shown in Table 4.2-5. Criteria for both the construction and operational phases of the Project are shown.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Construction Phase</th>
<th>Operational Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average Daily Emissions (lbs/day)</td>
<td>Average Daily Emissions (lbs/day)</td>
</tr>
<tr>
<td>ROG</td>
<td>54</td>
<td>54</td>
</tr>
<tr>
<td>NOx</td>
<td>54</td>
<td>54</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>82 (Exhaust)</td>
<td>82</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>54 (Exhaust)</td>
<td>54</td>
</tr>
<tr>
<td>PM₁₀ and PM₂.₅</td>
<td>Best Management Practices</td>
<td>None</td>
</tr>
<tr>
<td>Fugitive Dust</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Local CO Hotspots

Congested intersections have the potential to create elevated concentrations of CO, referred to as CO hotspots. The significance criteria for CO hotspots are based on the California AAQS for CO, which is 9.0 ppm (8-hour average) and 20.0 ppm (1-hour average). However, with the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology, the SFBAAB is in attainment of the California and National AAQS, and CO concentrations in the SFBAAB have steadily declined. Because CO concentrations have improved, the BAAQMD does not require a CO hotspot analysis if the following criteria are met:

- The Project is consistent with an applicable congestion management program established by the County Congestion Management Agency for designated roads or highways, the regional transportation plan, and local congestion management agency plans.
- The Project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The Project traffic would not increase traffic volumes at affected intersection 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).

Community Risk and Hazards

The BAAQMD’s significance thresholds for local community risk and hazard impacts apply to both the siting of a new source and to the siting of a new receptor. Local community risk and hazard impacts are associated with TACs and PM$_{2.5}$ because emissions of these pollutants can have significant health impacts at the local level. For assessing community risk and hazards, sources within a 1,000-foot radius are considered. Sources are defined as freeways, high volume roadways (with volume of 10,000 vehicles or more per day or 1,000 trucks per day), and permitted sources.

- The Project would generate TACs and PM$_{2.5}$ during construction activities that could elevate concentrations of air pollutants at the surrounding residential receptors. The thresholds for construction-related local community risk and hazard impacts are the same as for Project operations. The BAAQMD has adopted screening tables for air toxics evaluation during construction. Construction-related TAC and PM$_{2.5}$ impacts should be addressed on a case-by-case basis, taking into consideration the specific construction-related characteristics of each project and proximity to off-site receptors, as applicable.

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30 Bay Area Air Quality Management District, 2011 (revised), California Environmental Quality Act Air Quality Guidelines.
31 Bay Area Air Quality Management District, 2011 (revised), California Environmental Quality Act Air Quality Guidelines.
32 Students and staff of Garfield Elementary School are located further from the Project site than the abutting residential homes to the north and east. Additionally, the exposure period for school-based receptors (e.g., 8 hours per day, 5 days per week, and 180-240 days per year) are much lower than for residential receptors (e.g., 24 hours per day, 7 days per week, and 350 days per year). Ultimately, the overall exposures to TACs for the sensitive receptors at Garfield Elementary School would be much lower compared to TAC exposures for the nearby residences. Therefore, only the on-site and off-site residents were considered sensitive receptors for this evaluation.
33 Bay Area Air Quality Management District, 2010, Screening Tables for Air Toxics Evaluations during Construction.
34 Bay Area Air Quality Management District, 2011 (revised), California Environmental Quality Act Air Quality Guidelines.
- The Project involves construction of new residential units and new commercial and recreational facilities, and is therefore not a major source of operational TACs and stationary PM$_{2.5}$. BAAQMD thresholds related to siting new sources of TACs and PM$_{2.5}$ near existing or planned sensitive receptors is not applicable.

- The Project is a sensitive land use that would warrant an on-site community risk and hazards evaluation. Therefore, the community risk and hazards thresholds for operation of the Project are applicable.

The thresholds identified below are applied to the Project’s operational phase (siting new receptors) and construction emissions:

**Community Risk and Hazards – Project**

Project-level emissions of TACs or PM$_{2.5}$ from individual sources within 1,000 feet of the Project that exceed any of the thresholds listed below are considered a potentially significant community health risk:

- Non-compliance with a qualified Community Risk Reduction Plan;
- An excess cancer risk level of more than 10 in one million, or a non-cancer (i.e., chronic or acute) hazard index greater than 1.0 would be a significant cumulatively considerable contribution;
- An incremental increase of greater than 0.3 micrograms per cubic meter (µg/m$^3$) annual average PM$_{2.5}$ from a single source would be a significant cumulatively considerable contribution.$^{35}$

**Community Risk and Hazards – Cumulative**

Cumulative sources represent the combined total risk values of each of the individual sources within the 1,000-foot evaluation zone. A project would have a cumulative considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000-foot radius from the fence line of a source or location of a receptor, plus the contribution from the Project, exceeds the following:

- Non-compliance with a qualified Community Risk Reduction Plan; or
- An excess cancer risk levels of more than 100 in one million or a chronic non-cancer hazard index (from all local sources) greater than 10.0; or
- 0.8 µg/m$^3$ annual average PM$_{2.5}$.\textsuperscript{36}

**Odors**

The BAAQMD's thresholds for odors are qualitative. The BAAQMD does not consider odors generated from use of construction equipment and activities to be objectionable. For operational phase odor impacts, a project that would result in the siting of a new source of odor or exposure of a new receptor to existing or planned odor sources should consider odor impacts. The BAAQMD considers potential odor impacts to be significant if there are five confirmed complaints per year from a facility, averaged over three years. The BAAQMD has established odor screening thresholds for land uses that have the potential

\textsuperscript{35} Bay Area Air Quality Management District, 2011 (revised), California Environmental Quality Act Air Quality Guidelines.

\textsuperscript{36} Bay Area Air Quality Management District, 2011 (revised), California Environmental Quality Act Air Quality Guidelines.
to generate substantial odor complaints, including wastewater treatment plants, landfills or transfer stations, composting facilities, confined animal facilities, food manufacturing, and chemical plants.  

4.2.3 IMPACT DISCUSSION

Methodology

Criteria air pollutants emissions from construction and operation of the Project were calculated using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2. Transportation emissions are based on trip generation provided by Kittelson & Associates. Construction emissions are based on the tentative construction schedule provided by the project developer. A Health Risk Assessment (HRA) for construction activities was conducted for the Project using Lakes Environmental ISCST3. A HRA for operational activities was conducted using BAAQMD’s screening analysis tools.

This section discusses the air quality impacts of the Project. This discussion is organized by and responds to each of the potential impacts identified in the thresholds of significance.

AIR-1 Implementation of the Project would not conflict with or obstruct implementation of the applicable air quality plan.

Large projects that exceed regional employment, population, and housing planning projections have the potential to be inconsistent with the regional inventory compiled as part of BAAQMD’s Bay Area 2010 Clean Air Plan. The Project would generate an increase in 586 people and 927 employees within the Project site and would affect regional vehicle miles traveled (VMT). As described in Chapter 4.11, Population and Housing, the Project would not exceed the level of population or housing foreseen in City or regional planning efforts; and therefore, would not have the potential to substantially affect housing, employment, and population projections within the region, which is the basis of the Bay Area 2010 Clean Air Plan projections. Additionally, the net increase in regional emissions generated by the Project would not exceed the BAAQMD’s emissions thresholds (see AIR-3). These thresholds are established to identify projects that have the potential to generate a substantial amount of criteria air pollutants. Because the Project would not exceed these thresholds, the Project would not be considered by the BAAQMD to be a substantial emitter of criteria air pollutants. Therefore, the Project would not conflict with or obstruct implementation of the Bay Area 2010 Climate Action Plan and impacts would be considered less than significant.

Applicable Regulations:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building and Energy Efficiency Standards

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17 Bay Area Air Quality Management District, 2011 (revised), California Environmental Quality Act Air Quality Guidelines.

18 Existing residences include an estimated 16-20 people living in houseboats on the Marina (Chapter 4.11, Population and Housing). There are an estimated 76 existing employees. For the proposed Project, there are a projected 970 residents and 1,003 employees.
Title 24, Part 11, CCR: Green Building Standards Code
CARB Rule 2485 (13 CCR Chapter 10, Section 2485), Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
CARB Rule 2480 (13 CCR Chapter 10, Section 2480), Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
CARB Rule 2477 (13 CCR Section 2477 and Article 8), Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate
BAAQMD, Regulation 2, Rule 2, New Source Review
BAAQMD, Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
BAAQMD Regulation 6, Rule 1, General Requirements
BAAQMD Regulation 6, Rule 2, Commercial Cooking Equipment
BAAQMD Regulation 7, Odorous Substances
BAAQMD Regulation 8, Rule 3, Architectural Coatings
BAAQMD Regulation 8, Rule 4, General Solvent and Surface Coatings Operations
BAAQMD Regulation 8, Rule 7, Gasoline Dispensing Facilities
BAAQMD Regulation 11, Rule 2, Asbestos, Demolition, Renovation and Manufacturing

Significance Before Mitigation: Less than significant.

AIR-2 During construction, the Project could violate an air quality standard or contribute substantially to an existing or projected air quality violation.

BAAQMD has identified thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors including ROG, NOX, PM_{10} and PM_{2.5}. Development projects below the significance thresholds are not expected to generate sufficient criteria pollutant emissions to violate any air quality standards or contribute substantially to an existing or projected air quality violation.

Construction Emissions

Construction activities produce combustion emissions from various sources, such as on-site heavy-duty construction vehicles, vehicles hauling materials to and from the site, and motor vehicles transporting the construction crew. Site preparation activities produce fugitive dust emissions (PM_{10} and PM_{2.5}) from demolition and soil-disturbing activities, such as grading and excavation. Air pollutant emissions from construction activities on-site would vary daily as construction activity levels change.

The Project would result in overlapping construction sub-phases and substantial demolition export that would occur proximate to existing sensitive land uses to the north and east of the Project site. Therefore, a quantified analysis of the Project’s construction emissions was conducted using CalEEMod based on information available.
Construction exhaust emissions are based on the preliminary construction schedule developed for the Project. The Project site would be developed in up to three construction phases; however, the balance of the office uses may be developed in Phase 2. Because condensing the Project construction activities into two development phases would generate higher average daily construction emissions, air quality modeling is conservatively based on a two-phased development. The first phase would include redevelopment along the shoreline on the western portion of the site and the library on Fairway Drive. The second phase encompasses the inland residential development within the Marina Golf Course and the balance of the office land uses within the office park. The Spinnaker Yacht Club may remain on-site and be repurposed or replaced as the proposed Aquatic Center. The Project would be developed based on the market demand for the proposed non-residential and residential Project components. Phase 1 could commence as early as 2016 and is estimated to take approximately three and one-half years to complete. Phase 2 would commence following completion of Phase 1 and could commence as early as 2020 and is estimated to take approximately one and a half years to complete. Buildout of the Project is forecast to occur as early as 2021.  

To determine potential construction-related air quality impacts, criteria air pollutants generated by Project-related construction activities are compared to the BAAQMD significance thresholds in Table 4.2-5 for average daily emissions. Average daily emissions are based on the annual construction emissions divided by the total number of active construction days. As shown in Table 4.2-6, criteria air pollutant emissions from construction equipment exhaust would not exceed the BAAQMD average daily thresholds. Consequently, construction-related criteria pollutant emissions from exhaust are less than significant.

Fugitive dust

As identified above, the Project would warrant substantial asphalt and some minor building demolition. In addition, ground-disturbing activities would generate fugitive dust. Fugitive dust emissions (PM$_{10}$ and PM$_{2.5}$) are considered to be significant unless the Project implements the BAAQMD’s Best Management Practices (BMPs) for fugitive dust control during construction. PM$_{10}$ is typically the most significant source of air pollution from the dust generated from construction. The amount of dust generated during construction would be highly variable and is dependent on the amount of material being demolished, the type of material, moisture content, and meteorological conditions. If uncontrolled, PM$_{10}$ and PM$_{2.5}$ levels downwind of actively disturbed areas could possibly exceed State standards. Consequently, construction-related criteria pollutant emissions are potentially significant.

Impact AIR-2: During construction of the Project, construction activities would generate fugitive dust during ground-disturbing activities that exceeds the BAAQMD significance thresholds.
### Table 4.2-6  San Leandro Shoreline Development Construction-Related Criteria Air Pollutant Emissions Estimates

<table>
<thead>
<tr>
<th>Year</th>
<th>ROG</th>
<th>NOx</th>
<th>Fugitive PM$_{10}$</th>
<th>Exhaust PM$_{10}$</th>
<th>Fugitive PM$_{2.5}$</th>
<th>Exhaust PM$_{2.5}$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>1</td>
<td>8</td>
<td>1</td>
<td>&lt;1</td>
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</tr>
<tr>
<td>2017</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>2018</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>2019</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Phase 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>&lt;1</td>
<td>2</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>2020</td>
<td>3</td>
<td>3</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Total Construction Emissions</td>
<td>8</td>
<td>30</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### Table 4.2-6  San Leandro Shoreline Development Construction-Related Criteria Air Pollutant Emissions Estimates

<table>
<thead>
<tr>
<th>Criteria Air Pollutants (average lbs/day)$^g$</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROG</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Average Daily Construction Emissions all Phases$^c$</td>
</tr>
<tr>
<td>BAAQMD Average Daily Project-Level Threshold</td>
</tr>
<tr>
<td>Exceeds Average Daily Threshold</td>
</tr>
</tbody>
</table>

Note: Emissions may not total to 100 percent due to rounding.
BMP: Best Management Practices; NA: not applicable

a. Construction phasing is based on the preliminary information provided by the developer. Where specific information regarding Project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast Air Quality Management District of construction equipment and phasing for comparable projects. Modeling is conservative because it assumes an earlier start date which reflects slightly higher emission rates from off-road equipment and on-road vehicles. Vehicle/equipment turnover as well as changes in emissions regulations result in lower emissions rates in later years.
b. Includes implementation of best management practices for fugitive dust control required by BAAQMD as mitigation, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, and daily street sweeping.
c. Average daily emissions are based on the construction emissions divided by the total number of active construction days. Phase 1 and Phase 2 construction activities would not overlap. The total number of construction days is estimated to be 1,255.

Source: CalEEMod 2013.2.2.

### Mitigation Measure AIR-2:
Applicants for new development projects within the Shoreline Development shall require their construction contractor(s) to comply with the following BAAQMD Best Management Practices for reducing construction emissions of PM$_{10}$ and PM$_{2.5}$:

- Water all active construction areas at least twice daily or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.
- Pave, apply water twice daily or as often as necessary to control dust, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.
AIR QUALITY

- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- Sweep daily (with water sweepers using reclaimed water if possible) or as often as needed all paved access roads (e.g., Monarch Bay Drive and Fairway Drive), parking areas and staging areas at the construction site to control dust.
- Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the Project site, or as often as needed, to keep streets free of visible soil material.
- Hydro-seed or apply non-toxic soil stabilizers to inactive construction areas.
- Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.)
- Limit vehicle traffic speeds on unpaved roads to 15 mph.
- Replant vegetation in disturbed areas as quickly as possible.
- Install sandbags or other erosion control measures to prevent silt runoff from public roadways.

The City of San Leandro Building Official or their designee shall verify compliance that these measures have been implemented during normal construction site inspections.

Significance After Mitigation: Less than significant. Mitigation Measure AIR-2 would require adherence to the current BAAQMD's basic control measures for reducing construction emissions of PM and would ensure impacts from fugitive dust generated during construction activities are less than significant.

**AIR-3**

During operation, the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Long-term air pollutant emissions generated by a mixed-use development are typically associated with the burning of fossil fuels in cars (mobile sources); energy use for cooling, heating, and cooking (energy); and landscape equipment (area sources). The primary source of long-term criteria air pollutant emissions generated by the Project would be emissions produced from Project-generated vehicle trips. The Project would generate a total of 9,046 average daily trips during a weekday and 8,171 average daily trips on the weekend, which is a net increase of 6,525 additional average daily trips during a weekday and 5,764 additional average daily trips on the weekend compared to existing conditions. Table 4.2-7 identifies the net increase in criteria air pollutant emissions associated with the Project.

As shown in Table 4.2-7, the net increase in operational emissions generated by the Project would not exceed the BAAQMD daily or annual thresholds. Consequently, the Project would not cumulatively contribute to the nonattainment designations of the Air Basin, and regional operational phase air quality impacts would be less than significant.
### Table 4.2-7 San Leandro Shoreline Development Criteria Air Pollutants Emissions Forecast

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria Air Pollutants (average lbs/day)</th>
<th>ROG</th>
<th>NOx</th>
<th>PM₁₀</th>
<th>PM₂.₅</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Existing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area a</td>
<td>22</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Energy a</td>
<td>&lt;1</td>
<td>1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>On-Road Mobile Sources b</td>
<td>10</td>
<td>30</td>
<td>19</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Boats (Pleasure-Crafts) b</td>
<td>144</td>
<td>49</td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>176</td>
<td>80</td>
<td>28</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td><strong>Project</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area a</td>
<td>48</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Energy a</td>
<td>&lt;1</td>
<td>4</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>On-Road Mobile Sources b</td>
<td>27</td>
<td>82</td>
<td>52</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>75</td>
<td>86</td>
<td>52</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Change from 2014 Land Uses</td>
<td>-101</td>
<td>7</td>
<td>25</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>BAAQMD Average Daily Project-Level Threshold</td>
<td>54</td>
<td>54</td>
<td>82</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td><strong>Exceeds Average Daily Threshold</strong></td>
<td></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria Air Pollutants (tons/year)</th>
<th>ROG</th>
<th>NOx</th>
<th>PM₁₀</th>
<th>PM₂.₅</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Existing Tons per Year (tpy)</strong></td>
<td>32</td>
<td>15</td>
<td>5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Project Tons per Year (tpy)</strong></td>
<td>14</td>
<td>16</td>
<td>10</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Change from 2014 Land Uses</td>
<td>-18</td>
<td>1</td>
<td>5</td>
<td>&lt;1</td>
<td></td>
</tr>
<tr>
<td>BAAQMD Annual Project-Level Threshold</td>
<td>10 tpy</td>
<td>10 tpy</td>
<td>15 tpy</td>
<td>10 tpy</td>
<td></td>
</tr>
<tr>
<td><strong>Exceeds Annual Threshold</strong></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

a. CalEEMod 2013.2. Based on year 2020 emission rates. No trip generation is assumed for the 16-20 live-aboard boat residences.
b. Starcrest, 2005. Port of Los Angeles Baseline Air Emissions Inventory

Note: Emissions may not total to 100 percent due to rounding. New buildings would be constructed to the 2013 Building & Energy Efficiency Standards (effective July 1, 2014). Assumes all fireplaces are gas-burning fireplaces in accordance with BAAQMD Regulation 6, Rule 3. New buildings would be constructed to the 2013 Building & Energy Efficiency Standards (effective July 1, 2014). Average daily emissions are based on the annual operational emissions divided by 365 days.

Source: CalEEMod 2013.2. Based on year 2020 emission rates.

**Applicable Regulations:**

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 CCR: Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building and Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code
- CARB Rule 2485 (13 CCR Chapter 10, Section 2485), Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
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- CARB Rule 2480 (13 CCR Chapter 10, Section 2480), Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- CARB Rule 2477 (13 CCR Section 2477 and Article 8), Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate
- BAAQMD, Regulation 2, Rule 2, New Source Review
- BAAQMD, Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
- BAAQMD Regulation 6, Rule 1, General Requirements
- BAAQMD Regulation 6, Rule 2, Commercial Cooking Equipment
- BAAQMD Regulation 7, Odorous Substances
- BAAQMD Regulation 8, Rule 3, Architectural Coatings
- BAAQMD Regulation 8, Rule 4, General Solvent and Surface Coatings Operations
- BAAQMD Regulation 8, Rule 7, Gasoline Dispensing Facilities
- BAAQMD Regulation 11, Rule 2, Asbestos, Demolition, Renovation and Manufacturing

Significance Before Mitigation: Less than significant.

AIR-4 Implementation of the Project would result in a cumulatively considerable net increase of criteria pollutants for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

This section analyzes potential impacts related to air quality that could occur from a combination of the Project with other past, present, and reasonably foreseeable projects within the Air Basin. Any project that produces a significant project-level regional air quality impact in an area that is in nonattainment adds to the cumulative impact. Due to the extent of the area potentially impacted from cumulative project emissions (the Air Basin), a project is cumulatively significant when project-related emissions exceed the BAAQMD emissions thresholds shown in Table 4.2-5. As described in this report, the Project would have a significant construction impact (see AIR-2), and on-site and off-site community risks and hazards (see AIR-5).

Therefore, the Project’s contribution to cumulative air quality impacts would be significant.

Impact AIR-4: Construction and operation of the Project would cumulatively contribute to the non-attainment designations of the SFBAAB.

Mitigation Measure AIR-4: Implementation of Mitigation Measures AIR-2 and AIR-5 would reduce cumulative air quality impacts.

Significance After Mitigation: Less than significant. Mitigation Measures AIR-2 would reduce impacts from fugitive dust generated during construction activities. Mitigation Measure AIR-5 would reduce exposures of sensitive receptors to substantial concentrations of TACs and PM2.5. With these mitigation measures, regional and localized construction emissions would not exceed the BAAQMD significance thresholds. Consequently, the Project would not cumulatively contribute to the
nonattainment designations of the Air Basin and impacts would be less than significant with mitigation.

AIR-5  
Construction of the Project could expose sensitive receptors to substantial concentrations of air pollution.

On-Site and Off-Site Community Risk and Hazards During Construction

The Project would elevate concentrations of TACs and PM$_{2.5}$ in the vicinity of sensitive land uses during construction activities. Construction activities could occur proximate to sensitive receptors both on-site and off-site. Additional sensitive receptors would be the on-site residents living in the North Residential Apartments or the South Mixed-Use Condos/Apartments during the second phase of construction. Consequently, a full health risk assessment (HRA) of TACs and PM$_{2.5}$ is warranted.

Sources evaluated in the HRA include off-road construction equipment and heavy-duty diesel trucks along the truck route. The US EPA ISCST3 dispersion modeling program was used to estimate excess lifetime cancer risks and acute and chronic non-cancer hazard indexes at the nearest sensitive receptors. Results of the analysis are shown in Table 4.2-8.

<table>
<thead>
<tr>
<th>Receptor</th>
<th>Project Level Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cancer Risk – Adult (per million)</td>
</tr>
<tr>
<td>Off-Site Resident</td>
<td>8.3</td>
</tr>
<tr>
<td>On-Site Resident$^a$</td>
<td>2.6</td>
</tr>
<tr>
<td>Threshold</td>
<td>10</td>
</tr>
</tbody>
</table>

Exceeds Threshold

<table>
<thead>
<tr>
<th>Exceeds Threshold</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

$^a$ On-site residents (living in the North Residential Apartments or the South Mixed-Use Condos/Apartments) would only be exposed to construction emissions during the second phase of construction. Off-site residents would be exposed to construction emissions for all construction phases. Source: Lakes AERMOD View, 8.7, 2014.

The results of the HRA are based on the maximum receptor concentration over a 5-year construction exposure period for off-site receptors and 1.5-year construction period for on-site receptors, assuming 24-hour outdoor exposure, and averaged over a 70-year lifetime. The results of the HRA indicate that the incremental cancer risk for off-site residents proximate to the site during the construction period is 8.3 per million for the adult-scenario, which would not exceed the cancer risk threshold; and 44 per million for the child scenario, which would exceed the cancer risk threshold. The results of the HRA indicate that the incremental cancer risk for on-site residents proximate to the site during the second phase of construction is 2.6 per million for the adult-scenario, which would not exceed the threshold; and 14 per million for the child scenario, which would exceed the cancer risk threshold. For non-carcinogenic effects, the hazard index identified for each toxicological endpoint totaled less than one for both off-site and on-site residents. Therefore, chronic non-carcinogenic hazards are within acceptable limits. In addition, PM$_{2.5}$ annual concentrations would exceed the BAAQMD significance thresholds for off-site residents.
Consequently, the Project would expose sensitive receptors to substantial concentrations of air pollutant emissions during construction, and impacts would be *significant*.

**Impact AIR-5:** Construction activities of the Project could expose sensitive receptors to substantial concentrations of TAC and PM$_{2.5}$.

**Mitigation Measure AIR-5:** The construction contractor shall use equipment that meets the United States Environmental Protection Agency (EPA)-Certified Tier 3 emissions standards for off-road diesel-powered construction equipment greater than 50 horsepower. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine, as defined by CARB regulations. Prior to construction, the project engineer shall ensure that all demolition and grading plans clearly show the requirement for EPA Tier 3 or higher emissions standards and Level 3 diesel emissions control for construction equipment over 50 horsepower. During construction, the construction contractor shall maintain a list of all operating equipment in use on the Project Site for verification by the City of San Leandro Building Official or their designee. The construction equipment list shall state the makes, models, and numbers of construction equipment on-site. Equipment shall properly service and maintain construction equipment in accordance with the manufacturer’s recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with California Air Resources Board’s Rule 2449.

**Significance After Mitigation:** Less than significant. Mitigation Measures AIR-5 would reduce the Project’s localized construction emissions. The mitigated health risk values were calculated and are summarized in Table 4.2-9. The results indicate that with mitigation, the excess cancer risk for the adult and child exposure scenarios would be less than the threshold values. Additionally, the PM$_{2.5}$ annual concentrations would be below the significance threshold with mitigation. Consequently, the Project would not expose sensitive receptors to substantial concentrations of air pollutant emissions during construction and impacts would be less than significant with mitigation.

**Table 4.2-9 Construction Risk Summary with Mitigation**

<table>
<thead>
<tr>
<th>Receptor</th>
<th>Cancer Risk – Adult (per million)</th>
<th>Cancer Risk – Child (per million)</th>
<th>Chronic Hazards</th>
<th>PM$_{2.5}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Site Resident</td>
<td>1.4</td>
<td>7.9</td>
<td>0.05</td>
<td>0.24</td>
</tr>
<tr>
<td>On-Site Resident*</td>
<td>0.3</td>
<td>1.6</td>
<td>0.01</td>
<td>0.08</td>
</tr>
<tr>
<td>Threshold</td>
<td>10</td>
<td>10</td>
<td>1.0</td>
<td>0.3 µg/m$^3$</td>
</tr>
</tbody>
</table>

Exceeds Threshold: No No No No

* On-site residents (living in the North Residential Apartments or the South Mixed-Use Condos/Apartments) would only be exposed to construction emissions during the second phase of construction. Off-site residents would be exposed to construction emissions for all construction phases.

Source: Lakes AERMOD View, 8.7, 2014.
**AIR-6  ** Operation of the Project would not expose sensitive receptors to substantial concentrations of air pollution.

**CO Hotspots**

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the State one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9.0 ppm. Because CO is produced in the greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds.

The Project would generate 1,040 new external trips during the weekday morning peak hour, 1,060 new external trips during the weekday evening peak hour, and 860 new external trips during the Saturday midday hour. The Project would not conflict with Alameda CTC’s CMP because it would not hinder the capital improvements outlined in the CMP or alter regional travel patterns. Alameda CTC’s CMP must be consistent with MTC’s/ABAG’s Plan Bay Area, and an overarching goal of the regional plan is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth in outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle VMT and associated GHG emissions reductions. The Project would be consistent with the overall goals of the MTC/ABAG’s Plan Bay Area. Furthermore, the Project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour or to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited. Trips associated with the Project would not exceed the screening criteria of the BAAQMD. Localized air quality impacts related to mobile-source emissions would therefore be less than significant.

**Toxic Air Contaminants - Siting of Sensitive Receptors**

On-site health risks and hazards imposed by existing sources (e.g., stationary sources and traffic on adjacent streets and freeways) on the sensitive receptors of the Project (i.e., residents) were evaluated pursuant to BAAQMD’s methodology. BAAQMD has developed screening thresholds for assessing potential health risks from stationary and mobile sources. Sources located within 1,000 feet of the Project are included in BAAQMD’s screening thresholds. To evaluate nearby sources, BAAQMD’s database of existing sources and freeway and surface streets screening tables for Alameda County were used.

Stationary sources near the Project site were identified using BAAQMD’s Stationary Source Screening Analysis Tool. Two stationary sources were identified (County of Alameda Public Works emergency gasoline generator and San Leandro Marina gasoline dispensing). However, the gas dispensing operation is located at the San Leandro Marina and will be removed as part of the Project. Therefore, there will be no emissions from this source in the future and it does not require additional evaluation.

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There were no roadways identified within 1,000 feet of the Project site with over 10,000 average daily traffic trips.\textsuperscript{42} The closest high volume roadway, Marina Boulevard, has a traffic volume larger than 10,000 vehicles per day east of Aurora Drive. West of Aurora Drive, the traffic volumes are less than 10,000 vehicles per day. Additionally, the Transportation Impact Analysis for the Project indicates that the twenty-four hour vehicle counts for the portion of Marina Boulevard west of Aurora Drive would be less than 10,000 vehicles.\textsuperscript{41} Because the traffic volumes are less than 10,000 vehicles per day west of Aurora Drive and the intersection of Marina Boulevard and Aurora Drive is located more than 1,000 feet from the Project site, emissions of vehicles on Marina Boulevard do not require additional evaluation.

Lastly, the Oakland International Airport (Airport) is located approximately 1 mile northwest of the Project site. Although the Airport is located over 1,000 feet away from the Project site, air emissions from aircraft, ground service equipment (GSE), auxiliary power units, and fuel storage and handling have the potential to impact areas over 1,000 feet away. The results of a Health Risk Assessment conducted for the Oakland Airport in 2003 indicated that the incremental cancer risk to off-site residents and children in the Project site area was less than 10 in one million (i.e., BAAQMD’s significance threshold) and therefore, no adverse health impacts are expected.\textsuperscript{44} In addition, a mitigation measure requiring conversion of all diesel GSE at the Airport, which accounted for 60 percent of the cancer risk, to alternative fuels by 2010 results in lower incremental cancer risks than previously predicted. Based on these results, air emissions from the Airport were not evaluated further.

BAAQMD provides screening tables that indicate predicted community risk impacts for roadways.\textsuperscript{45} The results of the on-site community risk summary are provided in Table 4.2-10.

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Project Level Risk</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cancer Risk</td>
<td>Chronic Hazards</td>
<td>PM$_{2.5}$</td>
</tr>
<tr>
<td>County of Alameda Public Works</td>
<td>0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Threshold</td>
<td>10</td>
<td>1.0</td>
<td>0.3 µg/m$^3$</td>
</tr>
<tr>
<td>Exceeds Threshold</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

The results of the cancer risk screening analysis for all stationary and mobile sources within 1,000 feet of the Project are less than the BAAQMD threshold of 10 in a million for a lifetime cancer risk and the non-carcinogenic chronic hazard index of 1.0. In addition, PM$_{2.5}$ concentrations are below the BAAQMD significance threshold of 0.3 µg/m$^3$. Therefore, the results of this screening level risk assessment, with

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\textsuperscript{42} California Environmental Health Tracking Program (CEHTP), 2007. Traffic linkage tool can be accessed at http://www.ehib.org/traffic_tool.jsp


\textsuperscript{44} Port of Oakland, 2003. Draft Ambient Air Quality Human Health Risk Assessment for the Oakland International Airport. Prepared for the Port of Oakland by CDM.

\textsuperscript{45} BAAQMD Roadway Analysis Tables can be accessed from BAAQMD’s website at http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx
respect to on-site risk during the operational phase of the Project, indicate that the impact would be less than significant.

Three new restaurants are proposed as part of the Project. One or more of these restaurants could have char broilers, which produce VOCs and PM_{10} emissions. However, the char broilers would be subject to permitting by BAAQMD under Rule 2, Commercial Cooking Equipment, and would be required to install control devices in order to reduce emissions. All commercial cooking operations that are subject to the rule must also register their char broiler and control equipment with the BAAQMD and pay applicable fees. With implementation of these requirements, emissions from the char broilers would be less than significant and would not pose a health risk to Project occupants.

**Applicable Regulations:**
- CARB Rule 2485 (13 CCR Chapter 10, Section 2485), Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- CARB Rule 2480 (13 CCR Chapter 10, Section 2480), Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- CARB Rule 2477 (13 CCR Section 2477 and Article 8), Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate
- BAAQMD, Regulation 2, Rule 2, New Source Review
- BAAQMD, Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
- BAAQMD Regulation 6, Rule 1, General Requirements
- BAAQMD Regulation 6, Rule 2, Commercial Cooking Equipment
- BAAQMD Regulation 7, Odorous Substances
- BAAQMD Regulation 8, Rule 3, Architectural Coatings
- BAAQMD Regulation 8, Rule 4, General Solvent and Surface Coatings Operations
- BAAQMD Regulation 8, Rule 7, Gasoline Dispensing Facilities
- BAAQMD Regulation 11, Rule 2, Asbestos, Demolition, Renovation and Manufacturing

**Significance Before Mitigation:** Less than significant.

**AIR-7 Implementation of the Project would not create or expose a substantial number of people to objectionable odors.**

The Project would construct new residential, commercial, office, conference center, and restaurant land uses within the Project site. Construction and operation of these types of projects (residential, commercial, office, civic, restaurant) would not generate substantial odors or be subject to odors that would affect a substantial number of people. The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. Residential, commercial, office, restaurant, recreational, and civic (library) uses are not associated with foul odors that constitute a public nuisance.
During operation, residential units and the restaurants could generate odors from cooking. Odors from cooking are not substantial enough to be considered nuisance odors that would affect a substantial number of people. Furthermore, nuisance odors are regulated under BAAQMD Regulation 7, Odorous Substances, which requires abatement of any nuisance generating an odor complaint. BAAQMD’s Regulation 7, Odorous Substances, places general limitations on odorous substances and specific emission limitations on certain odorous compounds. In addition, odors are also regulated under BAAQMD Regulation 1, Rule 1-301, Public Nuisance, which states that “no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property.”

During construction activities, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. Any construction-related odor emissions would be temporary and intermittent. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment. By the time such emissions reach any sensitive receptor sites, they would be diluted to well below any level of air quality concern. Impacts would be less than significant.

Therefore, because existing sources of odors are required to comply with BAAQMD Regulation 7, impacts to siting of new sensitive land uses would be less than significant.

Applicable Regulations:
- California Health & Safety Code, Section 114149
- BAAQMD Regulation 1, Rule 1-301, Public Nuisance
- BAAQMD Regulation 7, Odorous Substances

Significance Before Mitigation: Less than significant.

4.2.4 CUMULATIVE IMPACT DISCUSSION

AIR-8 Implementation of the Project would cumulatively contribute to air quality impacts in the San Francisco Bay Area Air Basin.

As described under AIR-4, regional air quality impacts were identified as significant; therefore, in combination with past, present, and reasonably foreseeable projects, the Project would result in a significant cumulative impact with respect to air quality. Therefore, the impact would be significant.

46 It should be noted that while restaurants can generate odors, these sources are not identified by BAAQMD as nuisance odors since they typically do not generate significant odors that affect a substantial number of people. Larger restaurants that employ five or more people are subject to BAAQMD Regulation 7, Odorous Substances.
**Impact AIR-8:** Construction and operation of the Project would cumulatively contribute to the non-attainment designations of the SFBAAB.

**Mitigation Measure AIR-8:** Implementation of Mitigation Measures AIR-2 and AIR-5 would reduce cumulative air quality impacts.

**Significance After Mitigation:** Less than significant. Mitigation Measures AIR-2 would reduce impacts from fugitive dust generated during construction activities. Mitigation Measure AIR-5 would reduce exposures of sensitive receptors to substantial concentrations of TACs and PM2.5. With these mitigation measures, regional and localized construction emissions would not exceed the BAAQMD significance thresholds. Consequently, the Project would not cumulatively contribute to the nonattainment designations of the Air Basin and impacts would be less than significant with mitigation.
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4.3 BIOLOGICAL RESOURCES

This chapter describes existing biological resources within the vicinity of the Project site and evaluates the potential biological resources impacts associated with future development that could occur by implementing the Project. A summary of the relevant regulatory setting and existing conditions is followed by a discussion of the Project-specific and cumulative impacts.

Biological resources associated with the Project site were identified through a review of available background information and field reconnaissance surveys. Available documentation was reviewed to provide information on general resources in the San Leandro area, presence of sensitive natural communities, and the distribution and habitat requirements of special-status species, which have been recorded from or are suspected to occur in the Project vicinity. This included records maintained by the California Natural Diversity Data Base (CNDDB), the National Wetland Inventory, the California Native Plant Society’s (CNPS) Inventory of Rare and Endangered Plants of California (electronic edition); and the San Leandro Marina Opportunities and Constraints Analysis. Field reconnaissance surveys were conducted by the EIR biologist on June 18, 2013 and August 2, 2014 to confirm existing vegetation and wildlife resources, presence or absence of any sensitive resources, and determine potential impacts of the Project.

4.3.1 ENVIRONMENTAL SETTING

4.3.1.1 REGULATORY FRAMEWORK

This section summarizes key federal, State, regional, and City regulations and policies pertaining to biological resources that are applicable to the Project.

Federal Regulations

The federal laws that regulate the treatment of biological resources include the Endangered Species Act, NPDES program, the Migratory Bird Treaty Act, and the Clean Water Act. The following sections outline the relevant principles of each.

Federal Endangered Species Act

The United States Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries) are responsible for implementation of the federal Endangered Species Act (ESA). The Act protects fish and wildlife species that are listed as threatened or endangered and their habitats. Endangered species, subspecies, or distinct population segments are those that are in danger of extinction through all or a significant portion of their range. Threatened species, subspecies, or distinct population segments are those that are likely to become endangered in the near future.

Clean Water Act

The federal Clean Water Act (CWA) is administered by the United States Environmental Protection Agency (EPA) and the United States Army Corps of Engineers (Army Corps). The Army Corps is responsible for regulating the discharge of fill material into waters of the United States, including lakes, rivers, streams, and their tributaries, as well as wetlands. In 2008, Army Corps published the *Wetlands Regulatory Assistance Program: Regional Supplements to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, which provides detailed information for the Arid West Region. Wetlands are defined for regulatory purposes as areas “inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”

The discharge of dredged or fill material into waters of the United States is subject to permitting under Section 404 (Discharges of Dredge or Fill Material) of the CWA. Section 401 (Certification) specifies additional requirements for permit review, particularly at the State level. Project proponents must obtain a permit from the Army Corps for all discharges of dredged or fill material into waters of the United States, including wetlands, before proceeding with a proposed action. The Army Corps permits must be certified by the State Water Resources Control Board (SWRCB) in order to be valid. Thus, certification from the SWRCB should be requested at the same time an application is filed with the Army Corps.

Certification from the California Regional Water Quality Control Board (RWQCB) is also required when a proposed activity may result in discharge into navigable waters, pursuant to Section 401 of the CWA and EPA 404(b)(1) Guidelines.

National Pollutant Discharge Elimination System Program

The 1972 amendments to the federal Water Pollution Control Act established the National Pollutant Discharge Elimination System (NPDES) permit program to control discharges of pollutants from point sources (Section 402). The NPDES Permit Program is the primary federal program that regulates point source and nonpoint-source discharges to waters of the United States. The SWRCB issues both general and individual NPDES permits for certain activities.

Migratory Bird Treaty Act

The USFWS is also responsible for implementing the Migratory Bird Treaty Act (MBTA). The MBTA implements a series of treaties between the United States, Mexico, and Canada that provide for the international protection of migratory birds. The MBTA prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the USFWS; this prohibition includes whole birds, parts of birds, and bird nests and eggs. Nests of bird species regulated under the MBTA are protected when in active use during the breeding season. Examples of permitted actions that do not violate the law are the possession of a hunting license to pursue specific game birds, legitimate research activities, display in zoological gardens, bird-banding, and similar activities.

State Regulations

State laws regulating biological resources include the California Endangered Species Act, the California Fish and Game Code, and the California Native Plant Protection Act, each of which is described below.
California Endangered Species Act

The California Endangered Species Act (CESA) establishes State policy to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The CESA mandates that State agencies should not approve projects that jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. For projects that would affect species that are on the federal and State lists, compliance with the federal ESA satisfies the CESA if the California Department of Fish and Wildlife (CDFW) determines that the federal incidental take authorization is consistent with CESA under California Fish and Game Code Section 2080.1. For projects that would result in take of species that are only State-listed, the Project proponent must apply for a take permit under Section 2081(b) of the California Fish and Game Code. A Habitat Conservation Plan (HCP) must also accompany an application for an incidental take permit. The purpose of the HCP is to ensure that the effects of the permitted action or listed species are adequately minimized and mitigated.

California Fish and Game Code

Under the California Fish and Game Code, the CDFW provides protection from “take” for a variety of species, including Fully Protected species. “Fully Protected” is a legal protective designation administered by the CDFW, intended to conserve wildlife species that are at risk of extinction, within California. Lists have been created for birds, mammals, fish, amphibians, and reptiles. The California Fish and Game Code sections dealing with Fully Protected species state that these animals “...may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected” species. However, taking may be authorized for necessary scientific research. In 2003, the code sections dealing with fully protected species were amended to allow CDFW to authorize take resulting from recovery activities for state-listed species.

The CDFW also protects streams, water bodies, and riparian corridors through the streambed alteration agreement process under Section 1601 to 1606 of the California Fish and Game Code. The Fish and Game Code stipulates that it is “unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake” without notifying CDFW, incorporating necessary mitigation, and obtaining a streambed alteration agreement. Through policy, CDFW asserts jurisdiction to the top of the banks of all streams, including intermittent and ephemeral streams, extending laterally to the upland edge of adjacent riparian vegetation. The CDFW uses the Cowardin system for wetland identification and classification, which typically results in a larger jurisdictional area than federal jurisdiction under the CWA. Under this system, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year.

California Native Plant Protection Act

The California Native Plant Protection Act of 1977 (CNPPA) prohibits importation of rare and endangered plants into California, “take” of rare and endangered plants, and sale of rare and endangered plants. CESA defers to the CNPPA, which ensures that State-listed plant species are protected when State agencies are involved in projects subject to CEQA. In this case, plants listed as rare under the CNPPA are not protected under CESA; however, impacts to endangered, rare, or threatened species, including plants, are evaluated under CEQA.
Local Regulations

San Leandro General Plan

The Open Space, Parks and Conservation Element of the 2002 San Leandro General Plan contains a number of policies and actions are related to the conservation of important biological and wetland resources, as shown in Table 4.3-1.

San Leandro Municipal Code

The San Leandro Municipal Code contains provisions related to the preservation or replacement of trees on development sites, as addressed in Section 4-1906, Existing Trees on Development Sites, in Article 19, Landscape Requirements of the Zoning Code. All trees with a trunk diameter equal or greater than 6 inches in diameter as measured 4½ feet above existing grade. Regulated trees are to be identified on-site plans, together with information on species, size and extent of drip line. The site plans are to indicate which trees are proposed for removal, and a “limit of grading” line, where applicable. A tree report may also be required, to be prepared by a certified arborist, providing additional information on tree health, appearance, and suitability for preservation. Decision-makers may require that significant trees, based on size, age, prominence and/or habitat value, and/or that replacement trees be provided as part of the final landscape plan for the project.

The Municipal Code also contains provisions related to the protection of monarch butterflies at the marina and golf courses. Section 4-1-1000, Interference with Monarch Butterflies Prohibited, of the Municipal Code reads as follows:

It is declared to be unlawful for any persons to molest or interfere with, in any way, the peaceful occupancy of the Monarch Butterflies during the entire time they remain within the San Leandro Marina, Tony Lema Golf Course and Marina Golf Course of the City of San Leandro, in whatever spot therein they may choose to stop, provided, however, that if said butterflies should at any time swarm in, upon, or near the private dwelling house or other buildings of a citizen of the City of San Leandro in such a way as to interfere with the occupancy and use of said dwelling or other buildings, that said butterflies may be removed, if possible, to another location upon the application of said citizen to the City Manager.

4.3.12 Existing Conditions

Vegetation and Wildlife Habitat

The Project site has been extensively modified by past fill activity, and subsequent development with marina, riprap, roadways, structures, landscaping and golf course improvements along the shoreline of San Francisco Bay. Coastal saltmarsh, eel grass beds and other sensitive natural communities that most likely once characterized the area have been eliminated by these past fill activities. Scattered individual plants of the coastal salt marsh community have become established along the riprap slopes of the shoreline in some locations, including pickleweed (Salicornia virginica), saltgrass (Distichlis spicata), marsh gumplant (Grindelia stricta var. angustifolia), and alkali heath (Frankenia salina).
<table>
<thead>
<tr>
<th>Goal/Policy Number</th>
<th>Goal/Policy/Action Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecosystem Management.</td>
<td>Promote the long-term conservation of San Leandro’s remaining natural ecosystems, including wetlands, grasslands, and riparian areas. Future development should minimize the potential for adverse impacts to these ecosystems and should promote their restoration and enhancement.</td>
</tr>
<tr>
<td>Mitigation of Development Impacts.</td>
<td>Require measures to mitigate the impacts of development or public improvements on fish and wildlife habitat, plant resources, and other valuable natural resources in the City.</td>
</tr>
<tr>
<td>Habitat Restoration.</td>
<td>Encourage the restoration of native vegetation in the City’s open spaces as a means of enhancing habitat and reducing wildfire hazards.</td>
</tr>
<tr>
<td>Species of Special Concern.</td>
<td>Ensure that local planning and development decisions do not damage the habitat of rare, endangered, and threatened species, and other species of special concern in the City and nearby areas.</td>
</tr>
<tr>
<td>Biological Assessments.</td>
<td>Require biological assessments for development in areas where special status species may be present. Require mitigation in accordance with state and federal regulations where potential adverse impacts exist.</td>
</tr>
<tr>
<td>San Leandro Shoreline Marshlands.</td>
<td>Continue the restoration of the San Leandro Shoreline Marshlands as a unique natural area. The emphasis in this area should be on resource conservation, trails, and ecological study.</td>
</tr>
<tr>
<td>San Leandro Shoreline Marshlands – Enhancement Program.</td>
<td>Continue to monitor the progress of the San Leandro Shoreline Marshlands Enhancement Program. Conduct periodic assessments of hydrology, vegetation, and wildlife in this area, and make adjustments to the management program based on the findings.</td>
</tr>
<tr>
<td>Predator Control Plan.</td>
<td>Pursuant to the development agreement for Heron Bay, ensure that a predator control plan (controlling feral and domestic animals) is implemented in the San Leandro Shoreline Marshlands. Consider additional measures to improve marsh health, such as a cordgrass control plan.</td>
</tr>
<tr>
<td>Intergovernmental Coordination.</td>
<td>Coordinate with the appropriate regional, state, and federal agencies and other organizations in their efforts to conserve and enhance ecological resources in San Leandro. Refer local projects to these agencies as required for their review and comment.</td>
</tr>
</tbody>
</table>

Source: San Leandro General Plan, Open Space, Parks, and Conservation Element.

Landscaping encompasses the golf course area and has been planted in scattered locations of the marina, composed of primarily non-native turf, groundcovers, shrubs and trees. Dominant tree species include: Monterey pine (Pinus radiata), blue gum eucalyptus (Eucalyptus globulus), black acacia (Acacia melanoxylon), and coast redwood (Sequoia sempervirens). Ruderal (weedy) grassland cover borders the managed greens and other landscaped areas, supporting non-native grasses and forbs such as wild oat (Avena spp.), bromes (Bromus spp.), lotus (Lotus scoparius), and English plantain (Plantago lanceolata). Invasive species such as sweet fennel (Foeniculum vulgare), yellow star thistle (Centaurea solstitialis), and tarweed (Madia sp.) are also present where routine maintenance has not been performed.

A drainage channel and two man-made ponds also occur on the golf course. Cattail (Typha latifolia) form a dense cover of freshwater marsh along the drainage channel, which extends for about 1,000 feet along the western edge of the golf course parallel to Monarch Bay Drive. Emergent vegetation is largely absent around the man-made ponds, which are carefully managed to minimize interruption to golf play.

The wildlife habitat values on the Project site have been greatly influenced by development and human activity. Impervious surfaces, turf, and routine maintenance limit protective cover and foraging.
opportunities. Wildlife in developed areas are typically acclimated to human activity, and include species common in urban and suburban habitats such as scrub jay, mourning dove, house finch, house sparrow, American robin, mockingbird, Norway rat, and house mouse. The mature trees provide roosting and potential nesting substrate for birds, and the grove of eucalyptus in the southeastern edge of the golf course provide winter roosting habitat for a colony of monarch butterflies, as discussed further below under Special-Status Species.

The scattered marshland plants along the riprap shoreline of the marina provide little habitat value for native wildlife, but the open waters of the bay provide foraging and resting opportunities for a variety of bird species including gulls, ducks and shorebirds. At low tides, invertebrate populations in exposed mudflats provide important foraging opportunities for resident and migratory shorebirds and waterfowl. The rock shoreline harbors small shore crabs and isopods and the intertidal and sub-tidal zone supports native oyster, numerous clams and mussels including Japanese littleneck and shot-shelled clams. The open waters of the bay provides dispersal and foraging opportunities for estuarine and marine fish and other aquatic life. Anglers along the shoreline frequently catch striped bass, California bat ray, white croaker, and leopard shark, as well as several surf perch species.

**Special-Status Species**

According to records maintained by the CNDDB and other sources, numerous special-status species have been reported from the shoreline of San Leandro and the bay. Figures 4.3-1 and 4.3-2 show the reported occurrences of special-status plant and animal species, according to records maintained by the CNDDB. Additional information on special-status species known or suspected from the site vicinity is provided in the 2007 San Leandro Marina Opportunities and Constraints Analysis, although most of these suspected occurrences were reported from areas outside of the Project site, in the southern portion of the San Leandro Marina study area south of Monarch Bay Golf Course where natural marshland and wetland habitat remains. A table of special-status species known or suspected from the site vicinity, excerpted from the 2007 San Leandro Marina Opportunities and Constraints Analysis is contained in Appendix F.

**Special-Status Animal Species**

As indicated in Figure 4.3-2, most of the reported occurrences of special-status animal species from the surrounding area are typically associated with coastal salt marsh and aquatic habitat of the bay, which has long been extirpated from upland areas on the Project site. These include: the State and federally endangered California clapper rail (*Rallus longirostris obsoletus*), the federally threatened California black rail (*Laterallus jamaicensis coturniculius*), and the state and federally endangered salt-marsh harvest mouse (*Reithrodontomys raviventris*), as well as salt-marsh wandering shrew (*Sorex vagrans halicoetes*), Alameda song sparrow (*Melospiza melodia pusillula*), and salt-marsh common yellowthroat (*Geothlypis trichas*) all three of which are not listed under the Endangered Species Acts but are considered California Species of Special Concern (“SSC”) species by the CDFW.

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Special-Status Plant Species

Source: California Natural Diversity Database, 2008; City of San Leandro, 2013; Alameda County, 2013; PlaceWorks, 2014.

Figure 4.3-1

San Francisco Bay

- California seablite (Cs)
- Congdon's tarplant (Ct)
- Marin knotweed (Mk)
- Northern Coastal Salt Marsh (NCSM)
- Point Reyes salty bird's-beak (PRsb)
- alkali milk-vetch (am)
- woodland woollythreads (ww)
- Project Boundary

Special-Status Animal Species

Source: California Natural Diversity Database, 2008; City of San Leandro, 2013; Alameda County, 2013; PlaceWorks, 2014.
Burrowing owl, also recognized as a SSC species, have been reported from the North Field at the Oakland Airport, and the state and federally endangered California least tern (*Sterna antillarum browni*) and the federally threatened western snowy plover (*Charadrius alexandrinus nivosus*) have been observed west of Runway 11/29 at the Oakland International Airport. Burrowing owl typically occurs in low grasslands, and marginally suitable habitat for this species occurs around the perimeter of the golf course on the Project site, although no occurrences have been reported in the past. California least tern and western snowy plover reportedly nested along the margins of the western runway at Oakland Airport, but haven’t done so for over a decade and suitable nesting habitat for these species is absent on the Project site.

A winter roosting colony of monarch butterfly (*Danaus plexippus*) occurs in the grove of blue gum eucalyptus in the southeastern portion of the Project site. This species has no legal protective status under the Endangered Species Acts, but roosting colonies are recognized as important biological resources by the CDFW and are subject to CEQA review with a State-wide ranking by the CNDDB of S3 or vulnerable (vulnerable in the state due to a restricted range, relatively few populations). According to monitoring performed by The Xerces Society from 2005 to 2009, an estimated 5,000 monarch butterflies overwintered in the rows of blue gum eucalyptus on the Project site, but this is a considerable reduction from the tens of thousands of monarchs observed in the late 1990s. The following provides a summary of the characteristic habitat and natural history of monarch butterflies, which are applicable to the wintering colony on the Project site.

Monarch butterflies are a migratory species that cannot survive the colder winter months in most parts of North America, and travel to their overwintering areas during the fall months. Monarchs that live west of the Rocky Mountains migrate to coastal areas of California, while those that live east of the Rockies travel to a few sites in the mountains of Central Mexico. In coastal California, overwinter sites range from northern Baja California to southern Mendocino County. In California, clustering behavior begins once migrating monarchs reach their overwintering sites in the fall. The duration of residence is generally used to differentiate the types of monarch wintering habitats, with sites that support clusters of wintering monarchs for a few days to a month are referred to as temporary habitats. Sites that host clusters of wintering monarchs for one to six months are referred to as overwintering habitats.

In the fall months, typically in September and October, numerous, generally small temporary aggregations are formed, especially in areas where nectar plants are plentiful. Monarchs at many of these sites disperse to part-term or full-term overwintering sites as nectar sources, air temperature, and day length decrease. Some sites may serve as overwintering sites one year and temporary sites another year, or a mixture of the two. Occasionally, previously utilized overwintering sites and/or temporary sites are abandoned for one or more seasons as a natural phenomenon.

Overwintering sites are characterized by groves of trees of mixed height and diameter. Often there is a small clearing within a stand of trees, or formed by a combination of the trees and surrounding topography, to provide shelter for the butterfly. These overwintering sites protect the butterfly from prevailing on-shore winds and freezing temperatures, and provide opportunities for sunning and other behaviors. The vegetation serves as a thermal “blanket” which moderates extreme weather conditions. At some locations, topographic features as well as nearby buildings or other man-made structures may provide some protection as well.
Many of the best overwintering sites provide a heterogeneous mixture of habitat conditions and resultant microclimatic conditions that assist the Monarchs in surviving seasonal changes in climatic conditions during the winter. For example, overwintering habitat must provide wind-protected roost locations (usually tree branches that are 15 to 50 feet above ground), with buffered temperatures, relatively high humidity, and filtered sunlight throughout the fall and winter months. As weather conditions and exposure to sunlight vary over the winter months, high habitat heterogeneity at an overwintering site permits the Monarch roosts to satisfy their thermoregulatory needs by moving from tree to tree in response to changes in weather conditions. Thus during the early part of the overwintering period (October – November), when daily temperature maxima are relatively high, monarchs tend to cluster in locations that provide brief morning insolation, with mid-day and afternoon shade. Later in the season (December – February), when temperature maxima are lower, they tend to roost in trees that receive afternoon sunlight. Trees surrounding roost locations, known as windbreak or buffer trees, provide both wind protection and ameliorate microclimatic conditions near the roost trees.

A number of special-status fish species are known from the larger San Francisco Bay and may occasionally disperse through the open waters in the site vicinity. Although spawning and rearing habitat is absent on the Project site, these species could occasionally disperse or seasonally be present along the shoreline or in the marina basin. These include: Central California Coastal steelhead (*Oncorhynchus mykiss*), green sturgeon (*Acipenser medirostris*), Delta smelt (*Hypomesus transpacificus*), Sacramento splittail (*Pogonichthys macrolepidotus*), Central Valley spring-run chinook salmon (*Oncorhynus tshawytscha*), and longfin smelt (*Spirinchus thaleichthys*). Steelhead, green sturgeon, and Delta smelt are federally listed threatened species, longfin smelt is state-listed as threatened, and the remainder are recognized as California SSC by the CDFW.

In addition, a number of native bird species could possibly nest in the existing trees and undeveloped areas on the Project site, particularly the mature pines and blue gum eucalyptus on the golf course. If any active nests are present or new nests are established in the future, they would be protected under the federal Migratory Bird Treaty Act (MBTA) while in use (see discussion above under Federal Regulations in Section 4.3.1.1, Regulatory Framework). Active nests of native bird species are also protected under State Fish and Game Code. Of particular concern is the potential for tree nesting by raptors such as red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), great-horned owl (*Bubo virginianus*), and white-tailed kite (*Elanus leucurus*) and nests of burrowing owl, which nests in ground squirrel burrows and other locations on the ground, and northern harrier (*Circus cyaneus*) which typically nests in shrubs and marshland cover. Raptors tend to be susceptible to human disturbance in the vicinity of the nest location.

**Special-Status Plant Species**

As indicated in Figure 4.3-1, special-status plant species reported from the site vicinity include: alkali milk vetch (*Astragalus tener* var. *tener*), Point Reyes salty bird’s-beak (*Cordylanthus maritimus* ssp. *palustris*), Congdon’s tarplant (*Hemizonia parryi* ssp. *congdonii*), California seablite (*Suaeda californica*), among others. None of these species have any state or federally listing status under the Endangered Species Acts, but are maintained on CNPS List 1B, (rare, threatened, or endangered in California and elsewhere). A historic occurrence of Congdon’s tarplant was reported from just east of the Project site, but this population has presumably been extirpated by past residential and other development activities. No
occurrences of special-status plant species are suspected to occur on the Project site given the extent of past and on-going habitat disturbance.

**Wetlands and Waters**

Portions of the Project site are considered wetlands or unvegetated waters of the U.S. (see discussion above under Clean Water Act and California Fish and Game Code in Section 4.3.1.1 Regulatory Framework). Figure 4.3-3 shows the extent of wetlands as mapped by the National Wetland Inventory, which uses a broad definition of wetlands that includes unvegetated features such as the open waters of the San Francisco Bay. These include areas of tidal and intertidal open waters associated with San Francisco Bay, which occupy an estimated 2.54 acres of the Project site, generally below the Mean High Water elevation. The two ponds on the golf course occupy an estimated 1.82 acres. Because they are man-made and not hydrologically connected to navigable waters such as the bay, and generally do not support any wetland vegetation, they are most likely not regulated by the Army Corps, RWQCB, and CDFW. A final determination on whether they are considered regulated waters would have to be made by the regulatory agencies. The northern, larger pond is lined and receives reclaimed water from the City’s treatment plant for use in irrigating the golf course turf. The smaller, southern pond is unlined and receives irrigation and stormwater runoff in the winter rainy season.

In addition to the features mapped as part of the National Wetland Inventory, a drainage channel was also observed along the western edge of the golf course as indicated in Figure 4.3-3, extending for a distance of about 1,000 feet and supporting a dense cover of cattail marsh. The drainage appears to be of man-made origins, but conveys surface water flows that presumably are discharged into the marina. The Army Corps would have to make a determination on whether the drainage channel and on-site man-made on-site ponds are regulated waters of the U.S.

**4.3.2 THRESHOLDS OF SIGNIFICANCE**

According to Appendix G of the CEQA Guidelines, the Project would result in a significant biological resources impact if it would:

1. 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 by the California Department of Fish and Wildlife, or U.S. Fish and Wildlife Service.

2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife, or U.S. Fish and Wildlife Service.

3. 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.

4. 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.

5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
Figure 4.3-3
Potential Wetlands and Waters

Source: National Wetlands Inventory (NWI), 1997; City of San Leandro, 2013; Alameda County, 2013; PlaceWorks, 2014; Environmental Collaborative, 2014.
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

4.3.3 IMPACT DISCUSSION

This section analyzes potential project-specific and cumulative impacts to biological resources.

| BIO-1 | The Project would have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations by the California Department of Fish and Wildlife, or U.S. Fish and Wildlife Service. |

Construction activities associated with Project implementation could affect a number of special-status species known or suspected from the Project site, including the winter roost colony of monarch butterflies, special-status fish species that could be present in the open water habitat of San Francisco Bay, and possibly the nests of birds when in active use which are protected under State and federal regulations. Due to the extent of past and on-going development, no other special-status species are suspected to occur on the Project site with the possible exception of occasional fly-overs by bird species dispersing along the shoreline of the bay in search of suitable habitat. The following provides a summary of potential impacts on special-status species known or suspected from the Project site.

Monarch Butterflies Overwintering Colony

The Project avoids the stand of blue gum eucalyptus where the winter roosting colony of monarch butterflies congregates at the eastern edge of the gold course. No specific plans are proposed to remove or alter any of the trees in this area, or the surrounding golf course and ruderal grasslands at the eastern edge of the Project site. However, the South Golf Course Residential component of the Project includes new townhomes located immediately adjacent to the row of blue gum eucalyptus and pines to the west that most likely provide important wind buffering functions, and could provide nectaring and resting locations for individual butterflies. Although it appears these new residences would avoid most of the dripline of this row of buffering trees, detailed information on the location of individual tree trunks and relationship to the limits of proposed construction have not been provided and there remains a possibility that construction and/or vegetation management activities by future residents could adversely affect these trees and result in indirect adverse effects on the butterfly colony. Changes in microclimate, including removal or pruning of important buffer trees, could lead to further decline or eventual loss of the colony if adequate controls are not taken. Short-term impacts such as construction-generated fumes and dust could adversely affect roosting butterflies if construction is initiated or performed in close proximity during the overwintering period, generally from October 1 to March 1. This would be considered a significant impact.

Impact BIO-1A: Proposed development could adversely affect the monarch butterfly winter roosting habitat if adequate controls on tree removal and pruning are not implemented.
Mitigation Measure BIO-1A: Ensure Protection of Monarch Butterfly Colony. Proposed development shall be designed to avoid adverse impacts on monarch butterfly winter roosting habitat, including controls on removal and pruning of trees in the southeastern portion of the Project site where the monarch butterfly overwintering colony is located. A Monarch Butterfly Roosting Habitat Protection Program (MBRHPP) shall be prepared by a qualified biologist and ensure adequate avoidance and protection of the winter roosting colony, consistent with the intent of Section 4-1-1000, Interference with Monarch Butterflies Prohibited, of the San Leandro Municipal Code. The MBRHPP shall be submitted as part of the Site Plan Review and/or tentative map application, whichever is first, and shall include the following components:

- The MBRHPP shall be prepared by a qualified biologist experienced in management of monarch butterfly colonies in California, and shall describe existing winter roosting colony habitat essential to the monarch butterfly colony and required measures taken to ensure both roosting and wind buffering trees are adequately protected.

- All mature blue gum eucalyptus and pine trees in the colony and along the east edge of the South Golf Course Residential development shall be preserved and protected as part of the MBRHPP, with trunk locations and edge of canopy clearly mapped by engineered survey in relation to proposed building footprints, landscaping and other improvements that may otherwise disrupt their function in buffeting winds.

- As necessary to protect the wind buffering trees, the eastern edge of the proposed South Golf Course residential area may require relocation as part of the MBRHPP to provide a larger setback if there is a risk to these trees as a result of construction activities or future maintenance for fire fuel management, landscape maintenance, and other practices. Where private yards and/or common open space associated with the South Golf Course residential area extends under the canopy of the buffering trees, appropriate CCRs shall be developed to ensure long-term protection as part of future maintenance activities.

- The MBRHPP shall identify restrictions and seasonal controls on construction, tree removal, and vegetation management within 200 feet of the edge of trees known to support the winter roosting colony, including tree removal, pruning, and herbicide application, and appropriate timing of construction and required management within this zone. Grading and equipment operation, any tree removal, pruning, or herbicide application in the vicinity shall be restricted from August 1 through March 31 to prevent any inadvertent disturbance to the winter roosting colony.

- The MBRHPP shall be submitted for review and approval as part of the Site Plan Review and/or tentative map application for the South Golf Course Residential development.

Significance After Mitigation: Less than significant.

Special-Status Fish Species

The Project would include improvements to areas of tidally influenced open water, and could have direct and indirect effects on a number of special-status fish species, such as Central California Coastal steelhead, green sturgeon, Delta smelt, Sacramento splittail, Central Valley spring-run Chinook salmon, and longfin smelt, if present in the area during the time of construction. Project-related improvements that could affect open water habitat of the bay include modifications to the existing riprap shoreline,
removal of the existing pilings, docks and piers in the existing marina, creation of enhanced natural shoreline along the interior of the existing marina, installation of new piers, docks and pedestrian bridge over the mouth of the entrance to the existing marina, and installation of an aeration fountain to improve water quality in the existing marina basin. Construction could result in disturbance to aquatic habitat of the bay, requiring drilling and excavation for pier/dock installation and shoreline modifications, and suspending silts and other substrate within the construction zone. This could result in a temporary reduction in water quality, or inadvertent injury or loss of individual special-status fish species, if present within the construction zone. The new piers and docks would shade areas of open water, but the removal of the existing dock system in the marina basin would result in a substantial net reduction in shading of open water habitat as part of the Project. Details of the Aeration fountain are not available, but special-status and other fish species could be routinely entrained in the pumping system if adequate screening at the intake locations is not provided and maintained. Appropriate construction avoidance measures would be necessary to prevent possible loss of one or more of these species, and appropriate authorizations may be required from NOAA Fisheries, USFWS, and/or CDFW where “take” of special-status fish species may occur as a result of the in-water activities of the Project. This would be considered a significant impact.

Impact BIO-1B: Proposed development could result in inadvertent loss of special-status fish species and other aquatic species as part of in-water construction activities if adequate controls are not implemented.

Mitigation Measure BIO-1B: Prevent Inadvertent Loss of Special-Status Fish and Aquatic Life.

Appropriate construction controls and restrictions shall be taken to prevent inadvertent loss of special-status fish species and other aquatic life as a result of construction activities within or near areas of tidal influence and open water habitat of San Francisco Bay to avoid possible inadvertent take of Central California Coastal steelhead, green sturgeon, Delta smelt, Sacramento splittail, Central Valley spring-run chinook salmon, and longfin smelt, if present in the area during the time of construction. This shall be accomplished with the following provisions:

- Adequate measures shall be taken to minimize disturbance and sedimentation in aquatic habitat of the bay, which may include installation of silt curtains around in-water construction zones, restrictions on in-water operations to low tide periods, and timing restrictions for in-water construction, among other possible controls and restrictions.

- Any pumping as part of dewatering construction areas or as part of the proposed aeration fountain shall be adequately screened according to the latest screening guidelines of the CDFW, USFWS, and NOAA Fisheries to prevent entrainment of special-status fish and other aquatic life during their operation.

- Any in-water construction activities shall be restricted to the period from June 15 through October when stray or dispersing special-status fish species would most likely not be expected within the affected areas.

- The applicant shall obtain all necessary authorizations from the CDFW, NOAA Fisheries, and USFWS as required by federal and State law for potential harm to special-status fish species. Such authorization would be obtained as a result of interagency coordination through the Army Corps Section 404 consultation and the CDFW Section 2081 Incidental Take Permit process. The Project shall adhere to any additional conditions and restrictions required as part of the authorizations from regulatory agencies.
Significance After Mitigation: Less than significant.

Nesting Birds

The mature trees, dense landscaping, and even the exterior of the existing buildings to be demolished could be used for nesting by raptors and more common bird species. These nests would be protected under the MBTA and California Fish and Game Code when in active use. The MBTA prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the USFWS; this prohibition includes whole birds, parts of birds, and bird nests and eggs. Tree and vegetation removal, building demolition, and other construction activities during the breeding season could result in the incidental loss of fertile eggs or nestlings or nest abandonment if any active nests are present. This would be considered a significant impact.

Impact BIO-1C: Proposed development could result in inadvertent loss of bird nests in active use, which would conflict with the federal Migratory Bird Treaty Act and California Fish and Game Code if adequate controls and preconstruction surveys are not implemented.

Mitigation Measure BIO-1C: Ensure Avoidance of Bird Nests in Active Use. Tree removal, landscape grubbing, building demolition, and other construction activities, such as grading and utility installation shall be performed in compliance with the Migratory Bird Treaty Act and relevant sections of the California Fish and Game Code to avoid loss of nests in active use. This shall be accomplished by scheduling tree removal and building demolition outside of the bird nesting season (which occurs from February 1 to August 31) to avoid possible impacts on nesting birds if new nests are established in the future. Alternatively, if tree removal and building demolition cannot be scheduled during the non-nesting season (September 1 to January 31), a pre-construction nesting survey shall be conducted. The pre-construction nesting survey shall include the following:

- A qualified biologist (Biologist) shall conduct a pre-construction nesting bird (both passerine and raptor) survey within seven calendar days prior to tree removal, landscape grubbing, other construction activities and/or building demolition.

- If no nesting birds or active nests are observed, no further action is required and tree removal, landscape grubbing, other construction activities, and building demolition shall occur within seven calendar days of the survey.

- Another nest survey shall be conducted if more than seven calendar days elapse between the initial nest search and the beginning of tree removal, landscape grubbing, other construction activities and building demolition.

- If any active nests are encountered, the Biologist shall determine an appropriate disturbance-free buffer zone to be established around the nest location(s) until the young have fledged. Buffer zones vary depending on the species (i.e., typically 75 to 100 feet for passerines and 300 feet for raptors) and other factors such as ongoing disturbance in the vicinity of the nest location. If necessary, the dimensions of the buffer zone shall be determined in consultation with the California Department of Fish and Wildlife.

- Orange construction fencing, flagging, or other marking system shall be installed to delineate the buffer zone around the nest location(s) within which no construction-related equipment or
operations shall be permitted. Continued use of existing facilities such as surface parking and site maintenance may continue within this buffer zone.

- No restrictions on grading or construction activities outside the prescribed buffer zone are required once the zone has been identified and delineated in the field and workers have been properly trained to avoid the buffer zone area.

- Construction activities shall be restricted from the buffer zone until the Biologist has determined that young birds have fledged and the buffer zone is no longer needed.

- A survey report of findings verifying that any young have fledged shall be submitted by the Biologist for review and approval by the City of San Leandro prior to initiation of any tree removal, landscape grubbing, building demolition, and other construction activities within the buffer zone. Following written approval by the City, tree removal, and construction within the nest-buffer zone may proceed.

**Significance After Mitigation:** Less than significant.

**BIO-2**

The Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

No riparian or other sensitive natural community types are present on the Project site, and none would be affected by the Project. Coastal salt marsh and well-developed riparian habitat are absent, and existing vegetative cover is generally limited ornamental landscaping, including areas of turf, shrubs and groundcovers and tree plantings. The narrow band of freshwater marsh along the drainage channel at the western edge of the golf course is dominated by cattail, which is an opportunistic species that quickly colonizes areas with permanent to semipermanent surface water. This feature may be a regulated wetland, and would receive protection as such if jurisdictional, as discussed further below under BIO-3.

**Applicable Regulations:**

- None

**Significance Before Mitigation:** No impact.

**BIO-3**

The Project would 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.

Implementation of the Project would result in direct and indirect effects on jurisdictional wetlands and other waters. This includes disturbance to areas in open water and the shoreline of San Francisco Bay and upland areas in the golf course. Modification in areas within or adjacent to tidal influence includes removal of existing pilings and docks, demolition of the existing Harbor Master office, construction of new docks and launching piers, installation of the aeration fountain in the middle of the marina basin, and
changes to the existing riprap shoreline to accommodate the proposed enhanced natural shoreline areas, perched beach and steps, and pedestrian bridge at the mouth of the existing marina basin. Details on the extent of dredging and fills in tidal areas and adjacent shoreline have not yet been refined as part of the project, but encompass most of the shoreline to the existing marina basin and several new piers and promenade treatments along the shoreline to the bay. Modifications below the Mean High Water would be regulated activities subject to authorization from the Army Corps and RWQCB. Fills in the golf course area include culverting of a portion of the drainage channel along the east side of Monarch Bay Drive and eliminating the southern pond. An estimated 600 linear feet of the existing man-made drainage ditch in the golf course area (see Figure 4.3-3) would also be filled to accommodate the North Golf Course Residential area, affecting an estimated 0.11 acre of cattail dominated freshwater marsh. Although it is a man-made drainage ditch, based on the presence of wetland vegetation and hydrologic connection to the bay, it appears this feature may be considered jurisdictional wetlands by the Army Corps and/or CDFW. The southern pond would also be filled to accommodate the South Golf Course Residential area. However, this pond is a man-made waterbody that contains no prominent wetlands and appears to be hydrologically isolated, and may therefore not be a jurisdictional water regulated by the Army Corps, RWQCB and/or CDFW.

Modifications to regulated waters would require appropriate authorizations from State and federal regulatory agencies, including the Army Corps and RWQCB under Section 404 and 401 of the Clean Water Act, and possibly CDFW under the Streambed Alteration Agreement program. Further review would be provided by these regulatory agencies when a permit application was formally submitted for authorization of activities within jurisdictional limits. If regulated wetland habitat is affected, possibly including the linear drainage channel on the east side of Monarch Bay Drive, a compensatory mitigation program will likely be required as part of the regulatory agency authorizations. A program to monitor and maintain any created habitat provided as mitigation would be a requirement of the regulatory agency authorizations, ensuring adequate compensatory mitigation and successful establishment of any replacement marshland and adjunct upland vegetation. As discussed in Section 4.8, Hydrology and Water Quality, best management practices (BMPs) would be utilized to prevent any construction-generated sediments or pollutants from entering the surrounding wetlands and open water habitat, although no stormwater pollution program has been prepared for the Project. Overall, if the waters described above are determined to be regulated waters and not exempt as man-made features, this would be considered a significant impact.

Impact BIO-3: Proposed development would result in fills and modifications to jurisdictional waters, which would require appropriate controls, compensatory mitigation, and regulatory authorizations.

Mitigation Measure BIO-3: Provide Compensatory Mitigation for Wetland Modifications. A compensatory mitigation program shall be developed and implemented to provide adequate mitigation for jurisdictional waters affected by proposed improvements. A jurisdictional wetland delineation shall be prepared by a qualified wetland specialist and submitted for verification by the Army Corps. A Wetland Protection and Replacement Program (WPRP) shall be prepared by the qualified wetland specialist and implemented to provide compensatory mitigation at a minimum 2:1 ratio where wetland habitat is affected, shall minimize disturbance to unvegetated waters, and shall be reviewed and approved by regulatory agencies. The WPRP shall include appropriate implementation measures to prevent inadvertent loss and degradation of jurisdictional waters to be
protected, and replacement for those wetland features eliminated or modified as a result of development. The WPRP shall contain the following components:

- Where verified waters of the U.S. are present and cannot be avoided, authorization for modifications to these features shall be obtained from regulatory agencies with jurisdiction. This includes the Army Corps through the Section 404 permitting process where waters of the United States are affected by the Project and the RWQCB as part of the Section 401 Certification process. Together with a Streambed Alteration Agreement (SAA) secured from CDFW, if required as part of the SAA Notification process for proposed fills to the man-made drainage and possibly the pond on the golf course. All conditions required as part of the authorizations by the Army Corps, RWQCB, and CDFW shall be implemented as part of the project.

- Consultation or incidental take permitting may be required under the California and federal Endangered Species Acts. The applicant shall obtain all legally required permits or other authorizations from the USFWS, NOAA Fisheries, and CDFW under the Endangered Species Acts.

- Install orange construction fencing around the boundary of all wetland areas and waters to be preserved at the interface with proposed fills and grading so that they are not disturbed during construction. The fencing shall be placed a minimum of 25 feet out from the boundary of the wetlands/waters but may need to be adjusted if restoration activities are to be conducted within this area. Grading, construction, and restoration work within the wetland/waters buffer zones shall be conducted in a way that avoids or minimizes disturbance of existing wetlands and aquatic habitat.

- A qualified biologist/restoration specialist shall be available during construction to provide situation-specific wetland avoidance measures or planting recommendation, as needed.

- Success criteria, maintenance and long-term management responsibilities, monitoring requirements, and contingency measures in the WPRP shall be specified. Monitoring shall be conducted by the qualified wetland specialist for a minimum of five years and continue until the success criteria are met. Permanent monitoring transects shall be established as part of the program and vegetation data collected in the spring and summer months when plant identification is possible. Photo stations shall be established along each monitoring transect, and photographs taken every year during the required monitoring period.

- Annual monitoring reports shall be prepared by the qualified wetland specialist and submitted to resource agency representatives and the City’s Planning Services and Building and Safety Services Divisions by December 31 of each monitoring year for a minimum of five years or longer, until the defined success criteria are met. The annual report shall summarize the results of the monitoring effort, performance standards, and any required contingency measures, and shall include photographs of the monitoring transects and program success. Maps shall be included in the monitoring report to show the location of monitoring transects and photo stations.

**Significance After Mitigation:** Less than significant.
BIO-4 The Project would not 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.

The Project would result in modifications to existing wildlife habitat but would not interfere with existing movement opportunities and use of native wildlife nursery areas. Most of the Project site is developed with parking lots, structures, irrigated turf of the golf course, and landscaping. Wildlife habitat values are generally limited, with the exception of the open waters of marina basin and San Francisco Bay, which would be improved through removal of much of the existing dock system and creation of enhanced natural shoreline along lower segments of the existing riprap. Most of the existing mature trees would be retained, including the monarch butterfly roosting habitat at the southeast edge of the golf course, serving to protect the resting, perching, and foraging opportunities they provide wildlife. New landscaping would replace areas where existing trees, shrubs and groundcovers would be removed, serving to replace their habitat functions for birds and other wildlife common in suburban habitats. Potential adverse impacts on fish and other aquatic species during construction would be avoided through restrictions implemented as conditions of approval of regulatory agencies such as the Army Corps and RWQCB, as addressed above under Impact BIO-1 and Impact BIO-3, which would ensure any substantial impacts on special-status species and more common aquatic species are adequately avoided. These include restrictions on timing of in-water dredging and construction activities to avoid periods when listed species have a higher likelihood of being present, typically from October 15th to July 1st. This would be considered a less-than-significant impact.

Applicable Regulations:
- Clean Water Act
- California Endangered Species Act
- National Pollutant Discharge Elimination System Program

Significance Before Mitigation: Less than significant.

BIO-5 The Project could conflict with local ordinances protecting biological resources, such as the City’s tree preservation ordinance and monarch butterfly protection ordinance.

In general, the Project would not conflict with any relevant goals and policies in the City of San Leandro General Plan related to protection of biological and wetland resources. Potential impacts on special-status species, wetlands or important wildlife resources would be addressed through adherence to relevant policies and actions in the General Plan, implementation of recommended mitigation measures, and through habitat enhancement efforts undertaken as part of implementing the Project, including the natural shoreline element along the southwest and southeast interior borders of the harbor basin.

Relevant policies and actions from the General Plan particularly applicable to the Project are listed above in Table 4.3-1. Consistency with Policies 26.02 and 26.04, and Action 26.04-A would be achieved through compliance with mitigation measures developed as part of this EIR. As discussed below under Section 4.3.5, this includes Mitigation Measure BIO-1A to address potential impacts on monarch butterfly.
Mitigation Measure BIO-1B to address potential impacts on special-status fish species, Mitigation Measure BIO-1C to address potential impacts on possible bird nests in active use, Mitigation Measure BIO-3 to address potential impacts on any regulated waters, Mitigation Measure BIO-5 to address potential impacts on regulated trees. The biological resource assessment conducted by the EIR biologist and provided as part of this EIR serves to address the requirement for a biological assessment to determine presence or absence of any special-status species as called for in Action 26.04-A. Very little natural habitat remains on the Project site, and areas of “enhanced natural shoreline” are to be incorporated into the Project, consistent with Policy 26.01 and 26.03.

A number of trees would be removed to accommodate the Project, including scattered trees in the reconfigured parking area at the marina and trees planted on the golf course area. These consist of ornamental species planted as landscaping, including Monterey pine, fruitless pear, and blue gum eucalyptus. Many of these trees would qualify as a regulated tree under Section 4-1906, Existing Trees on Development Sites, in Article 19, Landscape Requirements of the City’s Zoning Code. According to the landscape requirements, all trees with a trunk diameter of six inches or greater are to be identified on site plans, together with information on species, size and extent of drip line. The site plans are to indicate which trees are proposed for removal, and a “limit of grading” line, where applicable. A tree report, prepared by a certified arborist, may also be required by the City to provide additional information on tree health, appearance, and suitability for preservation. The City may require that replacement trees be provided as part of the final landscape plan for removal of trees of significant size that cannot be avoided. Until a thorough inventory of all regulated trees is prepared, and a review of the accompanying tree report and final landscape plans showing proposed replacement provided by the applicant, there remains a possible conflict with the relevant section of the Zoning Code over the possible loss of trees of significant size. This would be considered a significant impact.

**Impact BIO-5A:** Proposed development would result in removal of trees regulated under City Ordinance, and possible damage to other trees unless adequate controls are implemented.

**Mitigation Measure BIO-5A: Tree Protection and Replacement.** The Project shall comply with Section 4-1906, Existing Trees on Development Sites, in Article 19, Landscape Requirements of the City of San Leandro Zoning Code. Compliance with the Zoning Ordinance shall be achieved through adherence with the following provisions:

- All trees with a trunk diameter of 6 inches or greater shall be identified on site plans prior to site plan approval, together with information on species, size, assigned tree number, trunk location determined by engineer survey, and extent of drip line.
- A tree report shall be prepared by a certified arborist prior to site plan approval, providing additional information on tree health, appearance, and suitability for preservation of each regulated tree.
- All grading, improvement plans, and construction plans prepared for building permits shall clearly indicate trees proposed to be removed, altered, or otherwise affected by development construction, together with the “limit of grading” line.
- Adequate measures shall be defined in the tree report to protect all trees to be preserved. This shall include installation of temporary construction fencing at the perimeter of the protected area, restrictions on construction within the fenced areas unless approved as a condition of the
application and performed under the supervision of the certified arborist, and prohibition on parking or storing of vehicles and other construction equipment within the protected area.

- Where avoidance of a regulated tree is not feasible, replacement tree plantings shall be provided prior to site plan approval as part of the final landscape plan.

**Significance After Mitigation:** Less than significant.

As discussed under Impact BIO-1, the Project could also result in adverse impacts on the monarch butterfly colony if appropriate avoidance measures aren’t implemented in accordance with Section 4-1-1000, Interference with Monarch Butterflies Prohibited, of the Municipal Code. The proposed South Golf Course residential component of the Project includes new townhomes located adjacent to the row of blue gum eucalyptus and pines to the west of the monarch butterfly roosting area, and these trees most likely provide important wind buffering functions, and could provide nectaring and resting locations for individual butterflies. Without property controls and management, proposed construction and/or vegetation management activities by future residents could adversely affect these trees and result in indirect adverse effects on the butterfly colony, which would be in conflict with the provisions in the Municipal Code. This would be considered a significant impact.

**Impact BIO-5B:** Proposed development would result in removal of trees regulated under City Ordinance, and interfere with Section 4-1-1000, Interference with Monarch Butterflies Prohibited, of the Municipal Code.

**Mitigation Measure BIO-5B:** Implement Mitigation Measure BIO-1A to ensure protection of trees supporting Monarch Butterfly colony.

**Significance After Mitigation:** Less than significant.

**BIO-6 The Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.**

The Project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved conservation plan. No such plans have been adopted encompassing the Project vicinity, and no impacts are anticipated.

**Applicable Regulations:**

- None.

**Significance Before Mitigation:** No impact.

**4.3.4 CUMULATIVE IMPACT DISCUSSION**

**BIO-7 The Project, in combination with past, present and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to biological resources.**
The potential impacts of the Project on biological resources tend to be site-specific, and the overall cumulative effect would be dependent on the degree to which significant vegetation and wildlife resources are protected on a particular site. This includes preservation of well-developed native vegetation (e.g., marshlands, native grasslands, oak woodlands, riparian scrub and woodland, etc.), populations of special-status plant or animal species, and wetland features (including seasonal wetlands and drainages). Environmental review of specific development proposals in the vicinity of a development site should serve to ensure that important biological resources are identified, protected, and properly managed, and to prevent any significant adverse development-related impacts, including development for the remaining undeveloped lands in the surrounding incorporated and unincorporated lands. Adherence to relevant policies and actions from the City of San Leandro General Plan call for identification and protection of sensitive biological resources, and adequate mitigation and resource agency authorization where potential impacts exist for a project. In general, anticipated development in the Project site vicinity would be located in areas that have already been heavily modified by past development, and do not contain sensitive biological resources.

To some degree, cumulative development contributes to an incremental reduction in the amount of existing wildlife habitat, particularly for birds and larger mammals. Habitat for species intolerant of human disturbance can be lost as development encroaches into previously undeveloped areas, disrupting or eliminating movement corridors and fragmenting the remaining suitable habitat retained within parks, private open space, or undeveloped properties. New development in the west Alameda County area encompassing San Leandro would result in further conversion of existing natural habitats to urban and suburban conditions, limiting the existing habitat values of the surrounding area. This could include further loss of wetlands and sensitive natural communities, reduction in essential habitat for special-status species, removal of mature native trees and other important wildlife habitat features, including obstruction of important wildlife movement corridors. Additional development may contribute to degradation of the remaining aquatic habitat in the creeks and other open waters of the San Francisco Bay if adequate protective measures are not implemented. Grading associated with construction activities generally increases erosion and sedimentation, and urban pollutants from new development would reduce water quality. However, other development would similarly be subject to regulatory controls on erosion and sedimentation after grading, and compliance with numerous water quality regulations. Compliance with this comprehensive regulatory scheme would minimize the potential for water quality degradation for cumulative development to a less-than-significant level.

However, with regard to future development and its relationship to surrounding habitat, most of the Project site vicinity is already extensively disturbed by urban and suburban uses. Wildlife in the area has already become acclimated to human activity, and proposed development is not expected to disrupt important movement corridors or access to surrounding habitat. Monarch butterflies are experiencing significant declines throughout their range in North America, but the monarch butterfly colony on the Project site would be avoided by proposed construction with the appropriate controls recommended to preserve buffer trees, and the Project would have no contribution to cumulative impacts on this species. The shoreline habitat of the marina and bay would be enhanced as part of the Project, with appropriate controls during construction and operation to avoid and minimize any potential adverse contribution to decline in water quality and aquatic habitat of the San Francisco Bay. Therefore, the Project’s contribution to cumulative impacts on biological resources would be significant and the mitigations recommended throughout this chapter would serve to address significant Project-specific impacts and their contribution to cumulative impacts.
Impact BIO-7: Proposed development would result in a cumulative impact with regard to biological resources.

Mitigation Measure BIO-7: Implement Mitigation Measures BIO-1A, BIO-1B, BIO-1C, BIO-3, BIO-5A, and BIO-5B.

Significance After Mitigation: Less than significant.
4.4 CULTURAL RESOURCES

This chapter discusses the regulatory framework and existing conditions of the Project site and analyzes potential impacts to cultural resources that could result from buildout of the Project. Cultural resources include historical, architectural, archaeological, and paleontological resources.

4.4.1 ENVIRONMENTAL SETTING

4.4.1.1 REGULATORY FRAMEWORK

This section describes the policies and regulations that apply to cultural resources in the City of San Leandro.

Federal Regulations

National Historic Preservation Act of 1966

The National Historic Preservation Act of 1966 established the National Register of Historic Places (National Register) as the official designation of historical resources, including districts, sites, buildings, structures, and objects. For a property to be eligible for listing in the National Register, it must be significant in American history, architecture, archaeology, engineering, or culture, and must retain integrity in terms of location, design, setting, materials, workmanship, feeling, and association. Resources less than 50 years in age are not eligible for the National Register unless specified as of exceptional importance. Though a listing in the National Register does not prohibit demolition or alteration of a property, the California Environmental Quality Act (CEQA) requires the evaluation of project effects on properties that are listed in the National Register.

State Regulations

California Environmental Quality Act

Section 15064.5 of the CEQA Guidelines states that a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant impact on the environment. The CEQA Guidelines define four ways that a property can qualify as a significant historical resource for purposes of CEQA compliance:

- The resource is listed in or determined eligible for listing in the California Register of Historical Resources, as determined by the State Historical Resources Commission.
- The resource is included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code, or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- The lead agency determines the resource to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural analysis of California, as supported by substantial evidence in the light of the whole record.
The lead agency determines that the resource may be a historical resource as defined by the Public Resources Code Sections 5020.1(j) or 5024.1 (CEQA Guidelines Section 15064.5) which means, in part, that it may be eligible for the California Register.

In addition, Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines specify lead agency responsibilities to determine whether a project may have a significant effect on archaeological resources. If it can be demonstrated that a project will damage a unique archaeological resource, the lead agency may require reasonable efforts for the resources to be preserved in place or left in an undisturbed state. Preservation in place is the preferred approach to mitigation. The Public Resources Code also details required mitigation if unique archaeological resources are not preserved in place.

Section 15064.5 of the CEQA Guidelines specifies procedures to be used in the event of an unexpected discovery of Native American human remains on non-federal land. These provisions not only protect such remains from disturbance, vandalism, and inadvertent destruction but also establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project. Such discoveries would establish the Native American Heritage Commission (NAHC) as the authority to identify the most likely descendant and mediate any disputes regarding disposition of such remains.

California Register of Historic Resources (California Register)

The California Register establishes a list of properties to be protected from substantial adverse change (Public Resources Code Section 5024.1). The State Office of Historic Preservation (OHP) has determined that buildings, structures, and objects 45 years or older may be of historical value. A historical resource may be listed in the California Register if it meets any of the following criteria:

- It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- It is associated with the lives of persons important in California’s past.
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value.
- It has yielded or is likely to yield information important in prehistory or history.

The California Register includes properties that are listed or have been formally determined eligible for listing in the National Register, State Historical Landmarks, and eligible Points of Historical Interest. Other resources that may be eligible for the California Register, which require nomination and approval for listing by the State Historic Resources Commission, include resources contributing to the significance of a local historic district, individual historic resources, historical resources identified in historic surveys conducted in accordance with OHP procedures, historic resources or districts designated under a local ordinance consistent with the procedures of the State Historic Resources Commission, and local landmarks or historic properties designated under local ordinance.
California Historical Building Code, California Code of Regulations, Title 24, Part 8

The California Historical Building Code, defined in Sections 18950 to 18962 of Division 13, Part 2.7 of Health, and Safety Code, provides regulations and standards for the rehabilitation, preservation, restoration (including related construction), or relocation of historical buildings, structures, and properties deemed by any level of government as having importance to the history, architecture, or culture of an area.

Health and Safety Code Sections 7052 and 7050.5

Section 7052 of the Health and Safety Code states that the disturbance of Native American cemeteries is a felony. Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If determined to be Native American, the coroner must contact the California NAHC.

California State Senate Bill 18

Senate Bill (SB) 18, which went into effect January 1, 2005, set forth requirements for local governments (cities and counties) to consult with Native American tribes to aid in the protection of traditional tribal cultural places through local land use planning. The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early stage of planning for the purpose of protecting or mitigating impacts to cultural places. The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy prior to the making of individual site-specific, project-level land use designations by a local government. Under SB 18, local governments are required to conduct consultation with California Native American tribes when a General Plan Amendment occurs or if open space is being developed for the first time.

Public Resources Code Section 5097

Public Resources Code Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on non-federal public lands. The disposition of Native American burials fall within the jurisdiction of the NAHC, which prohibits willfully damaging any historical, archaeological, or vertebrate paleontological site or feature on public lands.

Local Regulations

City of San Leandro General Plan

The City of San Leandro General Plan was adopted in 2002 and contains a vision for San Leandro through the year 2015 including policies and actions to help achieve that vision. The Historic Preservation and Community Design Element contains goals and policies to preserve the city’s legacy of historic resources, enhance the aesthetic character of the city, and maintain features that make San Leandro unique. The San
Leandro General Plan defines historic preservation as the “sensitive maintenance, continued use, and restoration of older buildings and sites having historic, architectural, aesthetic, or cultural value.”

The Historic Preservation and Community Design Element seeks to establish a preservation program by creating an inventory of structures of historic value within the city. Utilizing the National Register and the Secretary of the Interior’s Standards as a starting point, the General Plan calls for the additional criteria to be considered:

- “Historic Sites and Structures” include individual buildings or sites determined to have special historic, cultural, educational, archaeological, or aesthetic value.
- “Historic Districts” include geographic areas with large concentrations of historic structures.
- “Neighborhood Conservation Districts (Heritage Neighborhoods)” are areas characterized by older (pre-1940) housing stock, along with historic street furniture, signs, and landscape design elements.

Table 4.4-1 provides a list of the San Leandro General Plan goals and policies related to cultural resources that are applicable to the Project site and future development under the Project:

### 4.4.1.2 EXISTING CONDITIONS

This section provides an overview of the history of the City of San Leandro and of resources of historical significance that may be affected by the Project.

**Paleontological Resources**

Paleontological resources (fossils) are the remains and/or traces of prehistoric plant and animal life exclusive of human remains or artifacts. Fossil remains such as bones, teeth, shells, and wood are found in the geologic deposits (rock formations) in which they were originally buried. Paleontological resources represent a limited, non-renewable, sensitive scientific and educational resource. The potential for fossil remains at a location can be predicted through previous correlations established between the fossil occurrence and the geologic formations where they were buried. For this reason, geologic knowledge of a particular area and the paleontological resource sensitivity of particular rock formations, make it possible to predict where fossils will or will not be encountered. However, the San Leandro General Plan EIR does not identify any paleontological resources at the Project site.

**Archaeological Resources**

Archaeological resources are the physical remnants of prehistoric or historic human activity. These can include human remains and artifacts, including but not limited to tools, portions of building structure or foundation, food, and refuse. The Project site is in the territory that was once controlled by the Ohlone Indians, commonly known as the Costanoans, at the time of the European settlement.

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1 City of San Leandro, *General Plan*, page 7-1.
2 City of San Leandro, *General Plan*, page 7-7.
### Table 4.4-1  San Leandro General Plan Policies Pertaining to Cultural Resources

<table>
<thead>
<tr>
<th>Goal/Policy Number</th>
<th>Goal/Policy Text</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Land Use</strong></td>
<td></td>
</tr>
<tr>
<td>Policy 11.06</td>
<td>Preserve and enhance the City’s cultural and historic resources, and encourage and acknowledge their contribution to the City’s economic development.</td>
</tr>
<tr>
<td><strong>Historic Preservation &amp; Community Design</strong></td>
<td></td>
</tr>
<tr>
<td>Goal 38</td>
<td>Identify, preserve, and maintain San Leandro’s historic resources and recognize these resources as an essential part of the City’s character and heritage.</td>
</tr>
<tr>
<td>Policy 38.01</td>
<td>Take a broad and comprehensive approach to historic preservation in San Leandro. Preservation efforts should recognize the City’s cultural history as well as its architectural history, its neighborhoods as well as individual buildings, its natural landscape as well as its built environment, and its archaeology as well as its living history.</td>
</tr>
<tr>
<td>Policy 38.02</td>
<td>Recognize the potential for publicly sponsored historic preservation programs and privately initiated historic preservation efforts to enhance San Leandro’s identity as an attractive and distinct community.</td>
</tr>
<tr>
<td>Policy 38.03</td>
<td>Develop and maintain programs that recognize and protect historic sites, structures, trees, and other landscape features.</td>
</tr>
<tr>
<td>Policy 38.04</td>
<td>Encourage the formation of local historic districts in areas where historic sites and structures are concentrated. Such districts should provide for the preservation, restoration, and public recognition of the resources contained therein.</td>
</tr>
<tr>
<td>Policy 38.05</td>
<td>Promote the conservation of historic neighborhoods and the restoration of historic features in such neighborhoods, including structures, street lamps, signage, landscaping, and architectural elements.</td>
</tr>
<tr>
<td>Policy 38.06</td>
<td>Update, expand, and maintain inventories of San Leandro’s historic resources, using criteria and survey methods that are consistent with state and federal guidelines.</td>
</tr>
<tr>
<td>Policy 38.07</td>
<td>Ensure that new development, alterations, and remodeling projects on or adjacent to historic properties are sensitive to historic resources and are compatible with the surrounding historic context. Ensure that the San Leandro Zoning Ordinance and any future design guidelines include the necessary standards and guidelines to implement this policy.</td>
</tr>
<tr>
<td>Policy 38.08</td>
<td>Encourage the relocation of older structures into designated historic districts as an alternative to demolition and an incentive for restoration.</td>
</tr>
<tr>
<td>Policy 38.09</td>
<td>Strongly encourage the maintenance and upkeep of historic properties to avoid the need for costly rehabilitation and demolition. Demolition should only be allowed if the City determines that is necessary to protect health, safety, and welfare, and that the structure has no reasonable economic use.</td>
</tr>
<tr>
<td>Policy 38.10</td>
<td>Promote the upgrading and restoration of historic structures to meet current seismic safety codes, thereby reducing the potential for damage in an earthquake. Seismic rehabilitation projects should be sympathetic to the architectural character of the structure.</td>
</tr>
<tr>
<td>Policy 38.11</td>
<td>In the event that a historic structure is damaged by fire or earthquake to the point where demolition is necessary, encourage the new structure to respect the historic architectural character and form of the building it replaces.</td>
</tr>
<tr>
<td>Policy 38.12</td>
<td>Recognize the potential for prehistoric and historic archaeological resources and ensure that future development takes the measures necessary to identify and preserve such resources.</td>
</tr>
<tr>
<td><strong>Goal 39</strong></td>
<td>Make protection of historic resources a high City priority, to be implemented through improved record keeping, adequately funded programs, and more effective regulatory measures.</td>
</tr>
<tr>
<td>Policy 39.01</td>
<td>Recognize the importance of local historic and cultural resources in the City’s long-range planning activities, including the General Plan, redevelopment project plans, and area or neighborhood plans. Maintain a historic preservation component in the General Plan, with periodic updates to reflect changing conditions, additional listings, and new preservation programs.</td>
</tr>
<tr>
<td>Policy 39.02</td>
<td>Ensure that day-to-day planning and building activities, including the issuance of building permits, demolition permits, zoning approvals, site plan approvals, and use permits, are consistent with and further the achievement of local historic preservation goals.</td>
</tr>
<tr>
<td>Policy 39.03</td>
<td>Maintain a City Historic Preservation Ordinance that provides for the protection of historic resources within the City of San Leandro.</td>
</tr>
</tbody>
</table>

Source: City of San Leandro General Plan, Chapter 7, Historic Preservation and Community Design Element.
Cultural Resources

The Ohlone were hunter-gatherers who settled in large, permanent villages, often situated near fresh water sources. Due to the site’s proximity to a year-round water source in San Lorenzo Creek, and the presence of well-drained soils, it would have been a likely area for prehistoric people to live or gather resources.³

According to the San Leandro General Plan,⁴ archaeologists and historians have identified at least ten archaeological sites in the city between San Leandro Creek, north of the Project site, and San Lorenzo Creek, south of the Project site. They are not visibly evident, and mostly consist of remnant shell mounds that have been destroyed or covered by development. The Project site is not within nor does it contain any of these sites. Furthermore, Tom Origer and Associates conducted a cultural resources survey of the Project site for the presence of archaeological artifacts, utilizing archival research and on-site fieldwork. No prehistoric or historic-period archaeological resources were discovered within the Project site.⁵

Historical Resources

Local Historical Context

Before the first European settlers arrived, the area now known as San Leandro was home to Native Americans for more than 3,000 years.⁶ As previously mentioned, at least ten archaeological sites have been identified in the city between San Leandro Creek, north of the Project site, and San Lorenzo Creek, south of the Project site, consisting primarily of remnant shell mounds. However, as stated above, a cultural resources survey conducted by Tom Origer & Associates concluded that there were no artifacts found on the Project site itself. Between 1820 and 1842, the area now known as San Leandro was divided through Spanish land grants; most of modern-day San Leandro was contained within the cattle ranches of Ignacio Peralta and Don Jose Joaquin Estudillo.⁷ As settlers, squatters, and “49ers” arrived in the early 1850s, the town was laid out in a grid of streets and became the seat of Alameda County in 1856. A catastrophic earthquake destroyed the County Courthouse in 1868, causing the county seat to be relocated to Oakland. The agricultural town continued to prosper and was incorporated as a City in 1872, reaching 2,300 residents by the turn of the twentieth century. At this time, farms and orchards in the city produced a variety of fruits and vegetables, including cherries, tomatoes, onions, potatoes, asparagus, sugar beets, rhubarb, and apricots.⁸

San Leandro continued to grow at a moderate pace during the first part of the twentieth century and had 14,000 residents by 1940.⁹ Neighborhoods took shape, and railroad corridors running through the city were developed with industry. Downtown was the center of commerce and civic life. It was in the 1940s and 1950s that much of San Leandro’s current form and character took shape. Nearly half of the city’s current housing stock was added during this era, initially created by the need for wartime housing and

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² City of San Leandro, General Plan, page 7-2.
⁴ City of San Leandro, General Plan, page 2-2.
⁵ City of San Leandro, General Plan, page 2-2.
⁶ City of San Leandro, General Plan, page 2-2.
sustained by veterans and their families. The city’s neighborhood shopping centers and commercial strips along East 14th Street date from this period. The city was among the fastest growing industrial centers in the Bay Area during the post-war years, adding 6,000 manufacturing jobs between 1947 and 1954. By the 1960s, the city’s pace of growth reached its natural limit; hills became barriers for expansion and the city’s shoreline was acquired for park use and new development shifted to smaller infill sites around the city.

Today, virtually none of the early settlement architectural sites exist. One exception, the Alta Mira Club and original home of Ignacio Peralta, still stands and is a designated California Historical Landmark and has been on the National Register of Historic Places since 1978. Several residential buildings built between 1870 and 1900 are still standing throughout the city, and were built in the vernacular or Victorian style of the time. From the early twentieth century, the Casa Peralta, originally built as a Victorian residence and remodeled as a Moorish villa in 1926, has been on the National Register of Historic Places since 1982.

Other structures of historic value within the city include distinctive commercial buildings from the early 1900s, such as the Daniel Best Building, and pre-World War II residential buildings characterized by well-maintained California bungalows, Craftsman and Prairie-style homes, and Mediterranean-style cottages.

Federally and State Recognized Historic Resources

The National Register requires that buildings be 50 years or older or prior to eligibility for a listing, while the State OHP has determined that buildings, structures, and objects 45 years or older may be of historical value and therefore eligible for inclusion on the California Register. There are no structures on the Project site that are listed on the National Register of Historic Places. As discussed earlier, two structures in the city are listed on the National Register of Historic Places. The Alta Mira Club is approximately 2.6 miles northeast of the site and Casa Peralta is approximately 2.4 miles from the site.

In general, buildings on the Project site have been constructed in the 1960s or later and are not architecturally distinctive, and are unlikely to meet the eligibility criteria for inclusion on the California Register. However, the Project site includes part of the San Leandro Marina (Mulford Point) that is the former site of oyster beds and is listed as California Historical Landmark #824 (CHL #824). A plaque at the southern end of Mulford Point Drive marks the historical importance of the site part as part of the Bay Area’s role in the single most important fishery in the state during the 1890s.

Locally Recognized Historic Resources

The City of San Leandro has developed a list of historic and potentially historic buildings within its jurisdiction, which includes local, State, and federally designated historic properties. As discussed earlier and demonstrated in the San Leandro General Plan, the former site of San Leandro oyster beds is recognized as CHL #824, and the associated plaque itself as a Historic Landscape Element by the City of San Leandro. The City also has a defined neighborhood called Orchard Street Neighborhood of a historic

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10 City of San Leandro, General Plan, page 7-2.
11 City of San Leandro, General Plan, page 7-2.
13 City of San Leandro, General Plan, pages 7-8 to 7-9.
resource as historically sensitive. This neighborhood along with other locally recognized historic resources are mainly located in the central part of the city, a distance of approximately 2.4 miles northeast to the Project site.\footnote{City of San Leandro, General Plan, page 7-5.}

The Project site contains three monuments that are not directly related to events that occurred within the Project site. One is for California Historic Landmark (CHL) #824, commemorating the oyster beds that lined the shore at the turn of the 20th century. A plaque was erected at this location but has since been stolen. A mosaic of the oyster beds is located at the end of Mulford Point.

There is also a plaque commemorating the dedication of the San Leandro channel as the Jack D. Maltester Channel. Maltester served as mayor of San Leandro for 20 years. The United States Congress made the designation in 1986 and the plaque was erected on the south side of Pescador Point in 1987.

The third monument is the Lost Boats Memorial placed by the United States Submarine Veterans of World War II in 1986 and dedicated in 2001. It was placed in memory of the USS Argonaut and the USS Grampus, both submarines lost during World War II. The monument is located near the end of Mulford Point and includes a torpedo and flag poles.

**History of the Project Site**

A review of historical maps of the Project site indicate that the area was once home to Wick’s Landing, a warehouse depicted on the 1859 General Land Office (GLO) plat for the Rancho San Leandro.\footnote{Beard, Vicki, 2014, *A Cultural Resources Survey for the San Leandro Shoreline Development Project*, page 6.} The building warehoused hay, produce, game, and other goods that were transported across the bay from this location before railroads existed.\footnote{Simons, Cynthia, 2008, *Images of America, San Leandro*, Charleston SC: Arcadia Publishing, page 20.} From 1878 on, the site was known as Mulford Landing. No other buildings or structures are shown within the Project site prior to 1969, when the San Leandro marina first appears on the USGS map.\footnote{Beard, Vicki, 2014, *A Cultural Resources Survey for the San Leandro Shoreline Development Project*, page 6.}

### 4.4.2 Standards of Significance

The Project would result in a significant impact to cultural resources if it would:

1. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
3. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
4. Disturb any human remains, including those interred outside of formal cemeteries.
4.4.3 IMPACT DISCUSSION

This section analyzes potential project-specific and cumulative impacts to cultural resources.

CULT-1 The Project would cause a substantial adverse change in the significance of a local historical resource as defined in CEQA Guidelines Section 15064.5.

As mentioned previously, there are no structures in the Project site listed on the National Register of Historic Places; however, as mentioned above, there are two structures within the city that are listed on the National Register, though both are located at a distance from the Project site where it is unlikely that any impacts are expected to occur to the structures. As stated above, the Casa Peralta is approximately 2.4 miles northeast of the Project site in the central part of the city, and the Alta Mira is approximately 2.6 miles northeast of the Project site.

Buildout of the project would result in the removal of the harbormaster’s office, two sets of public restrooms, two existing restaurants, and a foundation from a third building. These buildings were constructed in the 1960s or later and are not architecturally distinctive and would unlikely meet the eligibility criteria for inclusion on the California Register. Given that there are no structures on the Project site listed on the National Register, and the structures on the Project site do not appear to meet the eligibility criteria for inclusion on the California Register, a less-than-significant impact would occur.

As described above, the Project site contains three monuments that are not directly related to events that occurred within the Project site, and do not mark specific locations within the Project site. These monuments include the following:

- A mosaic depicting the oyster beds associated with CHL #824.
- A plaque commemorating the dedication of the San Leandro channel as the Jack D. Maltester Channel.
- A Lost Boats Memorial placed in memory of USS Argonaut and the USS Grampus.

Construction of the Project may require demolition or relocation of the monuments depending upon their location. Although the three monuments that are not directly related to events that occurred within the Project site, each was placed in honor of historically-important events and are considered locally important historic resources. Demolition or relocation of the monuments would result in a significant impact.

Impact CULT-1: The Project would adversely affect locally important on-site monuments.

Mitigation Measure CULT-1: Prior to the issuance of grading permits, the Project Applicant shall preserve or relocate the mosaic depicting the oyster beds associated with CHL #824, the plaque commemorating the dedication of the San Leandro channel as the Jack D. Maltester Channel, and the Lost Boats Memorial placed in memory of USS Argonaut and the USS Grampus. Following consultation between the City and Project Applicant with the Office of Historic Preservation regarding the CHL #824 and the United States Submarine Veterans of World War II regarding the Lost Ships Memorial, the City of San Leandro shall provide input regarding the Jack D. Maltester Channel plaque. If
relocation of the monuments is recommended in order to preserve the monuments, the specific construction techniques shall be identified in order to limit any damage to the monuments.

**Significance After Mitigation:** Less than significant.

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**CULT-2**

The Project would have the potential to cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.

The Project site is not an identified prehistoric site and because the site has already been significantly disturbed, the likelihood that as-yet-undiscovered archaeological resources are present on-site is low. Policy 38.12 of San Leandro General Plan recognizes the potential for archaeological resources and ensures that new development takes measures necessary to identify and preserve such resources. Although it is unlikely that archaeological resources are located within the Project site, there is still a potential that an archaeological resource could be both discovered and substantially adversely changed (e.g., during project construction, grading or related activities). As a result, a **significant** impact would occur.

**Impact CULT-2:** The Project would have the potential to cause a significant impact to an archaeological resource pursuant to CEQA Guidelines Section 15064.5.

**Mitigation Measure CULT-2:** Archeological resources are not known or likely on the Project site. The following measures shall be implemented to avoid inadvertent damage or loss if such resources are discovered during construction. A qualified archeologist shall be on-site to monitor the initial excavation of native soil once all pavement of engineered soil is removed from the Project site. After monitoring the initial excavation, the archeologist shall make recommendations for further monitoring if it is determined that the site has archeological resources. If the archeologist determines that no resources are likely to be found on-site, no additional monitoring shall be required.

If currently unknown historic/prehistoric artifacts or human remains are discovered during ground disturbing activities, the following measures shall be implemented:

- In compliance with State law (Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code), in the event that historical artifacts are found, all work within 50 feet of the find shall stop and a qualified archaeologist shall examine the find. The archaeologist shall then submit a plan for evaluation of the resource to the City of San Leandro Planning Services Division for approval. If the evaluation of the resource concludes that the found resource is eligible for the California Register of Historic Resources, a mitigation plan shall be submitted to the City of San Leandro Planning Services Division for approval, which shall consider reasonable efforts for the resources to be preserved in place or left in an undisturbed state. If the artifacts and samples recovered during construction are determined to be significant and cannot be preserved in pace, the artifacts shall be cataloged and curated by a qualified archaeologist and placed in an appropriate curation facility. The mitigation plan shall be completed before earthmoving or construction activities can recommence within the designated resource area.

**Significance After Mitigation:** Less than significant.
CULT-3 The Project would have the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

The San Leandro General Plan EIR does not identify paleontological resources at the Project site, and the Project site is already highly developed with numerous ground-disturbing activities occurring in the past. However, there could be fossils of potential significance that have not been previously discovered and/or recorded. The San Leandro General Plan does not contain any policies related to paleontological resources that would serve to protect unknown resources associated with the Project. It is possible that that a paleontological resource could be both discovered and substantially adversely changed (e.g., during project construction, grading or related activities). As a result, a significant impact would occur.

Impact CULT-3: The Project would have the potential to directly or indirectly affect a unique paleontological resource or site, or unique geologic feature.

Mitigation Measure CULT-3: Paleontological resources are not known or likely on the Project site. The following measures shall be implemented to avoid inadvertent damage or loss if such resources are discovered during construction. In the event that fossils or fossil-bearing deposits are discovered during construction, excavations within 50 feet of the find shall be temporarily halted or diverted. The contractor shall notify a qualified paleontologist to examine the discovery. The paleontologist shall document the discovery as needed in accordance with Society of Vertebrate Paleontology standards, evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies, such as the Bureau of Land Management (BLM), US Geological Survey (USGS), to determine procedures that would be followed before construction is allowed to resume at the location of the find. If in consultation with the paleontologist, it is determined that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the Project on the qualities that make the resource important. The plan shall be submitted to the City for review and approval and the Project proponent shall implement the approval plan.

Significance After Mitigation: Less than significant.

CULT-4 The Project would have the potential to disturb human remains, including those interred outside of formal cemeteries.

Although no known ethnographic sites have been recorded within the Project site, there could be human remains located within the Project site that are not recorded. It is possible that ground-disturbing construction associated with development of the Project could uncover and adversely affect such remains. As a result, a significant impact would occur.

Impact CULT-4: The Project would have the potential to disturb human remains, including those interred outside of formal cemeteries.

Mitigation Measure CULT-4: No human remains are known or likely on the Project site. If human skeletal remains are uncovered during construction, the contractor shall immediately halt work within 50 feet of the find, contact the Alameda County coroner to evaluate the remains, and follow the
procedures and protocols set forth in Section 15064.5(e)(1) of the CEQA Guidelines. The Coroner shall then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours, who will, in turn, notify the person the NAHC identifies as the Most Likely Descendant (MLD) of any human remains (Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 [as amended by AB 2641]). Further actions shall be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery.

Per Public Resources Code 5097.98, the contractor shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the human remains are located, is not damaged or disturbed by further development activity until the contractor has discussed and conferred, as prescribed in this section (California Public Resources Code Section 5097.98), with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. If the MLD does not make recommendations within 48 hours, the Project Applicant shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD’s recommendations, the Project Applicant or the descendent may request mediation by the NAHC.

**Significance After Mitigation:** Less than significant.

### 4.4.4 CUMULATIVE IMPACTS

Cumulative impacts would occur when a series of actions leads to the loss of a substantial type of site, building, or resource. For example, while the loss of a single historic neighborhood may not be significant to the character of the neighborhood or streetscape, continued loss of such resources on a project-by-project basis could result in a cumulative significant impact. However, similar to the Project, other projects throughout the City would be required to comply with existing federal, State, and local regulations and policies listed above in the Regulatory Framework. Accordingly, potential cumulative impacts related to cultural resources would be less than significant.

As there are no historic structures and no known archaeological resources, paleontological resources, or human remains within the Project site, buildout of the Project would not create, nor contribute to a cumulative impact on cultural resources. Additionally, the existing federal, State, and local regulations and policies described throughout this chapter serve to protect any as-yet-undiscovered cultural resources in the City of San Leandro. Continued compliance with these regulations and implementation of existing policies, including applicable San Leandro General Plan policies, would prevent impacts; therefore, a less-than-significant cumulative impact would occur.
Applicable Regulations:
- California Register of Historic Resources (California Register)
- California Historical Building Code, California Code of Regulations, Title 24, Part 8
- Health and Safety Code Sections 7052 and 7050.5
- Public Resources Code Section 5097
- San Leandro General Plan

Significance Before Mitigation: Less than significant.
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4.5 GEOLGY, SOILS, AND SEISMICITY

This chapter provides an overview of the regulatory framework and existing geologic conditions on the Project site and evaluates potential environmental impacts of the Project related to geology, soils, and seismicity.

4.5.1 ENVIRONMENTAL SETTING

4.5.1.1 REGULATORY FRAMEWORK

This section summarizes key State and local regulations pertaining to geology, soils, and seismicity that are applicable to the Project. There are no federal regulations relating to geology, soils, and seismicity applicable to the Project.

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures used for human occupancy. The main purpose of the Act is to prevent the construction of buildings used for human occupancy on top of active faults. The Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards, such as ground shaking or landslides.

The law requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones or Alquist-Priolo Zones) around the surface traces of active faults, and to issue appropriate maps. The maps are then distributed to all affected cities, counties, and State agencies for their use in planning and controlling new or renewed construction. Generally, construction within 50 feet of an active fault zone is prohibited.

San Leandro is listed as a city affected by Alquist-Priolo Earthquake Fault Zones.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, passed in 1990, addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides. Under this Act, seismic hazard zones are mapped by the State Geologist to assist local governments in land use planning. Section 2691(c) of the

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1 Called the Alquist-Priolo Special Studies Zones Act until renamed in 1993.
GEOLOGY, SOILS, AND SEISMICITY

Act states that “it is necessary to identify and map seismic hazard zones in order for cities and counties to adequately prepare the safety element of their general plans and to encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety.” Section 2697(a) of the Act states that “cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard.”

California Building Code

The California Building Code (CBC), known as the California Building Standards Code, is included in Title 24 of the California Code of Regulations. The CBC incorporates the International Building Code, a model building code adopted across the United States.

The CBC is updated every three years, and the current 2013 CBC took effect January 1, 2014. The 2013 CBC has been adopted for use by the City of San Leandro according to Chapter 7 of Title 7 of the San Leandro Municipal Code. Through the CBC, the State provides a minimum standard for building design and construction. The CBC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control.

Local Regulations

San Leandro General Plan

The City of San Leandro General Plan contains a goal and policies to minimize the risk of natural hazards, including earthquakes and landslides, in Chapter 6, Environmental Hazards, of the General Plan. The relevant goal and policies are listed in Table 4.5-1.

San Leandro Municipal Code

Chapter 7-12, Grading, Excavations, and Fills

Chapter 7-12, Grading, Excavations, and Fills, of the City of San Leandro Municipal Code maintains a grading ordinance to mitigate hazards associated with erosion and land stability. The ordinance establishes criteria for permits and identifies grading plan submittal and construction requirements.

Clean Water Program

The Alameda County Clean Water Program facilitates local compliance with the Federal Clean Water Act. The City of San Leandro participates in the program. The Program establishes Best Management Practices (BMP’s) for erosion control during and after construction. BMP’s related to erosion control address preservation of existing vegetation, streambank stabilization, slope drains, and earth dikes and drainage swales, to name a few.

An erosion and sedimentation control plan must be submitted with a grading permit application, along with a drainage plan and pollution control plan. These plans ensure that any runoff from a project site meets regional water quality standards.
### Existing Conditions 4.5.1.2

#### Geology and Soils

**Regional Geology**

The Project site is in the northern portion of the Coast Ranges geomorphic province of California, which is characterized by northwest-trending mountain ranges and valleys that generally parallel the major geologic structures such as the San Andreas and Hayward faults. The oldest widespread rocks in the region are highly deformed sedimentary, metamorphic and volcanic rocks of the Franciscan Assemblage, which formed during the Mesozoic Era (225 to 65 million years ago). These rocks are in fault contact with similar age sedimentary rocks of the Mesozoic Great Valley Sequence. The Mesozoic rocks are, in turn, overlain by a diverse sequence of Cenozoic Era (younger than 65 million years) sedimentary and volcanic rocks. Since their deposition, the Mesozoic and Cenozoic rocks have been extensively deformed by repeated episodes of folding and faulting. The Bay Area experienced several episodes of uplift and faulting during late Tertiary Period (approximately 25 million to 2 million years ago), that produced the region’s characteristic northwest-trending mountain ranges and valleys, which include the eastern San Francisco Bay hills and San Francisco Bay.

Worldwide climate fluctuations during the Pleistocene age (approximately 1.8 million to 11,000 years ago) resulted in several distinct glacial periods. A lowering of sea level accompanied each glacial advance as water became stored in vast ice sheets. Melting of the continental glaciers during warm intervals caused corresponding rises in sea level. High sea levels favored rapid and widespread deposition in the bay and surrounding floodplains. Low sea levels during glacial advances steepened the gradients of streams and rivers draining to the sea, thereby encouraging erosional down-cutting. The most recent glacial interval ended approximately 11,000 years ago. Evidence suggests that during the maximum extent of this latest glaciation, sea level was approximately 300 to 400 feet below its present elevation and the valley now occupied by San Francisco Bay drained to the Pacific Ocean more than 30 miles west of the Golden Gate.
Near the beginning of the Holocene age (approximately 11,000 years ago), the rising sea reentered the Golden Gate, and sediments accumulated rapidly beneath the rising San Francisco Bay and on the surrounding floodplains. Being geologically recent, these surface deposits are generally less dense, weaker, and more compressible than the deeper, well-consolidated Pleistocene-age soils that predate the last sea-level rise.

**Site Geology**

The Project site lies along the eastern margin of San Francisco Bay on the low-lying coastal plain and adjacent filled portions of the bay. An 1878 topographic map of the area, shows that prior to fill placement the original coastline was located east of Monarch Bay Drive as illustrated on Figure 4.5-1. The entire Project site is relatively low-lying with elevations ranging up to about 10 feet above mean sea level. Roughly, the western two-thirds of the project site, including the existing marina and the surrounding buildings, has been constructed by filling on the shallow margin of San Francisco Bay. Review of historic aerial photographs covering the time period from 1947 to 2012 indicate that some fill was placed periodically during the first half of the twentieth century. By 1947, a low levee had been constructed along the existing coastline. Some small structures were present at Mulford point at that time; however, the site was largely undeveloped. By 1959, the Marina Golf Course in the eastern portion of the site had been constructed. By the early 1960s, the existing marina fill had been placed and development began in the Marina area. By 1968, fill for the Marina Park to the south of the project site had been placed and the park was under construction.

The marina construction included dredging to increase water depth and provide access for boats. Dredging was performed in the marina area and in the channel that leads to San Francisco Bay. Additional dredging has been performed periodically to maintain boating access. Currently there are three maintained channels associated with the Marina: a main access channel leading from San Francisco Bay into the Marina; an auxiliary access channel along the southern side of the southern dike leading to the boat-launching ramp; and, an interior channel leading to the boat berthing area within the marina.

Dredging and filling plans for the marina indicate that the marina fill was constructed by first constructing a series of clamshell dredged dikes (rock dikes were specified at the tips of the western and northern dikes) around the perimeter of the areas to be filled and then filling the interior with either hydraulically placed fill and/or clamshell dredged material. The fill was placed using both hydraulic and clamshell methods and consists of material derived from Bay Mud and the underlying alluvial sediments.

West of the original coastline, the fill was placed over soft estuarine deposits referred to as Bay Mud. Borings drilled as part of the marina dredging plan development indicate that within the project site the Bay Mud is relatively thin, ranging up to about 10 feet in thickness. The Bay Mud is underlain by older, better consolidated, alluvial and estuarine deposits of Pleistocene and Holocene age.

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6 Thompson and West, 1878, "Map Number Three, Alameda County Farm Map", Oakland, California.
Historic Shoreline and Fill Areas

**Explanation**

**Fill**  Area Of Manmade Fill

**Alluvium**  Clay, Silt and Sand Deposited By Streams

Source: Google Maps, 2014.

Figure 4.5-1

Historic Shoreline and Fill Areas
Geotechnical investigations have been conducted for construction of various buildings and other improvements (proposed and existing) on the marina fill dikes. Borings drilled for these improvements generally encountered 5 to 13 feet of fill underlain by 3 to 16 feet of Bay Mud, which was in turn underlain by older, firmer alluvial, and estuarine deposits.

East of the historic shoreline the project site is underlain by alluvial sediments. These sediments typically consist of interbedded clay and silt with some sand. Little or no Bay Mud is likely to be present in this area.

**Liquefaction**

Liquefaction is a phenomenon where loose, saturated, non-cohesive soils such as silts, sands, and gravels undergo a sudden loss of strength during earthquake shaking. The test borings performed at the site for previous developments encountered potentially liquefiable sands and silts within the alluvial sediments and in the dredged fill created from the alluvial sediments. These materials are intermixed with clays that would not normally be subject to liquefaction.

**Regional Faulting, Seismicity, and Seismic Hazards**

**Regional Faulting and Seismicity**

Seismic activity within the Coast Ranges is generally associated with active faults of the San Andreas system, which includes major active faults both east and west of the site, as shown in Figure 4.5-2. Over the width of the San Francisco Bay Region, approximately 1.5 inches/year of relative horizontal movement occurs between the North American and Pacific Plates. This movement is partially accommodated by creep and earthquakes occurring along active faults. The approximate distances and directions to major active Bay Area faults are summarized in Table 4.5-2.

As indicated in the above table, the active fault nearest the site is the Hayward fault, which is located approximately 3.8 miles northeast of the east end of Project site. The Hayward fault is a northwest-trending zone approximately 51 miles long, which extends from southeastern San Jose, through the East Bay communities, into San Pablo Bay. Beneath San Pablo Bay, faulting generally steps right (east) to the Rodgers Creek fault. To the south, the Hayward fault merges with the Calaveras fault.

Although the City of San Leandro is listed as an area affected by the Alquist-Priolo Fault Zones, the Project site is not in one of the Alquist-Priolo Earthquake Fault Zones. The closest such zone is along the Hayward Fault approximately 3.8 miles northeast of the Project site.

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Source: Alan Kropp & Associates.

“Active” Regional Faults (Surface Displacement within the Last 11,000 years)

4) Background data: USGS 10m DEM.

Figure 4.5-2
Regional Fault Map
Several large earthquakes have occurred throughout the region during historic times. These included several earthquakes on the Hayward fault as well as earthquakes on the San Andreas and Calaveras faults. Commonly, historic earthquakes are characterized in terms of Local Magnitude (ML), which has also come to be known as Richter Magnitude (M). A brief summary of information on historic earthquakes in the area is given below.

Three earthquakes larger than M 6.0 are thought to have occurred on the Hayward fault during historical time.10 On October 21, 1868, an earthquake of approximately M 6.8 occurred on the southern segment of the Hayward fault. This earthquake reportedly produced surface ground rupture from Oakland to the Warm Springs district of Fremont, a length of approximately 30 miles. The other two earthquakes occurred in 1858 (M 6.1) and 1911 (M 6.6). Both of these earthquakes were also centered in the southern portion of the Hayward fault.11

The largest historical earthquake in the Bay Area occurred on the San Andreas fault near San Francisco in 1906. That earthquake, of M 8.3, caused widespread damage throughout the region. More recent earthquakes in the region include the October 17, 1989, Loma Prieta earthquake on the San Andreas fault (M 7.1); the Hollister, Coyote Lake, and Morgan Hill earthquakes of 1974, 1979, and 1984, on the Calaveras fault, (M 5.2, M 5.9, and M 6.2, respectively); the 1957 Daly City earthquake on the San Andreas fault (M 5.3); two Santa Rosa earthquakes of 1969 on the Rodgers Creek fault (M 5.6 and M 5.7); and the South Napa earthquake in August 2014 (M 6.0).

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10 Toppozada, Tousson R., and David L. Parke, 1982. Area Damaged by the 1868 Hayward Earthquake and Recurrence of Damaging Earthquakes near Hayward, California Department of Conservation, Division of Mines and Geology Special Publication 62.
The most recent significant earthquake in the area was the Loma Pieta earthquake of October 17, 1989. This earthquake had a magnitude of 7.1 and was centered approximately 49 miles southeast of San Leandro. Strong ground shaking occurred in the San Leandro area and property damage in the area was light to moderate.

In 2008, The Working Group on California Earthquake Probabilities (WGCEP), in conjunction with the United States Geological Survey (USGS), published an updated report evaluating the probabilities of significant earthquakes occurring in the Bay Area over the next three decades. The WGCEP report indicates that there is a 0.63 (63 percent) probability that at least one magnitude 6.7 or greater earthquake will occur in the San Francisco Bay region before 2036. This probability is an aggregate value that considers seven principal Bay Area fault systems and unknown faults (background values). The findings of the WGCEP report are summarized in Table 4.5-3.

### Table 4.5-3 Earthquake Probability

<table>
<thead>
<tr>
<th>Fault System</th>
<th>Probability of at Least One Magnitude 6.7 or Greater Earthquake in 2007-2036</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hayward – Rodgers Creek</td>
<td>0.31</td>
</tr>
<tr>
<td>Calaveras</td>
<td>0.07</td>
</tr>
<tr>
<td>San Andreas</td>
<td>0.21</td>
</tr>
<tr>
<td>Concord-Green Valley</td>
<td>0.03</td>
</tr>
<tr>
<td>San Gregorio</td>
<td>0.06</td>
</tr>
<tr>
<td>Greenville</td>
<td>0.03</td>
</tr>
<tr>
<td>Mount Diablo Thrust</td>
<td>0.01</td>
</tr>
<tr>
<td>Background</td>
<td>0.14</td>
</tr>
</tbody>
</table>


The WGCEP report indicates that between 2007 and 2036 there is a 14 percent chance that an earthquake with a magnitude of greater than 6.7 may occur in the Bay Area on a fault system not characterized in the study.

### 4.5.2 Standards of Significance

The Project would result in a significant geology, soils, and seismicity impact if it would:

1. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

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4.5.3 IMPACT DISCUSSION

This section analyzes potential project-specific and cumulative impacts to geology and soils.

**GEO-1**

The Project could expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking; seismic-related ground failure; including liquefaction and lateral spreading.

Large earthquakes could generate strong to violent ground shaking at the Project site and could cause damage to structures and threaten public safety. San Leandro lies within a seismically active region that includes much of western California. Several active faults are present in the region, including the Hayward, Calaveras, and San Andreas faults. These faults are capable of generating large earthquakes that could produce strong to violent ground shaking at the Project site. WGCEP has estimated that there is a 63 percent chance of a large earthquake (magnitude 7 or greater) in the Bay Area by the year 2036. At present, it is not possible to predict precisely when or where earthquakes will occur on these faults.

During an earthquake, seismic risk to a structure would depend on the distance to the earthquake epicenter, the characteristics of the earthquake, the subsurface conditions underlying the structure and its immediate vicinity, and the characteristics of the structure. The Project site is located on relatively thick, alluvial deposits that could cause amplification of ground shaking. In addition, a thin layer of soft Bay Mud overlies the alluvium in the western portion of the Project site and could increase the shaking.

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amplification. This is considered a significant impact. Impacts and related mitigations for potential liquefactions hazards are addressed in Impact GEO-3.

The Project site is flat; there is no potential for landslide impacts.

**Impact GEO-1:** The Project could expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking, seismic-related ground failure, including liquefaction and lateral spreading.

**Mitigation Measure GEO-1:** Require geotechnical reports for all development within the Project site, as required by the San Leandro Municipal Code Section 7-12. The geotechnical reports shall consider the potential earthquake related impacts of strong ground shaking amplification due to the soft underlying sediments, as identified in this DEIR. Seismic ground motion parameters shall be provided in the geotechnical reports in accordance with CBC requirements. The building plans shall incorporate all design and construction criteria specified in the report(s). The geotechnical engineer shall sign the improvement plans and approve them as conforming to their recommendations prior to issuance of building permits. The geotechnical engineer shall also assume responsibility for inspection of the work and shall certify to the City, prior to acceptance of the work that the work performed is adequate and complies with its recommendations. The geotechnical engineer of record shall prepare letters and as-built documents to document their observances during construction and to document that the work performed is in accordance with the project plans and specifications. As required by the City of San Leandro, all construction activities shall meet the CBC regulations for seismic safety (i.e. reinforcing perimeter and/or load bearing walls, bracing parapets, etc.).

In addition, all project-related grading, trenching, backfilling and compaction operations shall be conducted in accordance with the City of San Leandro Engineering Department’s Standard Plans. All improvements shall conform to regulations for seismic safety contained in the CBC.

**Significance After Mitigation:** Less than significant.

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**GEO-2** The Project could result in substantial soil erosion or the loss of topsoil.

**Soil Erosion or Loss of Topsoil**

Proper drainage and control of runoff is important in controlling erosion and flooding both during and after construction. Surface drainage ditches and storm drains must be regularly maintained to continue functioning as designed. In addition, proper drainage and erosion control during grading is necessary to

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14 Seismic design provisions of the CBC generally prescribe minimum lateral forces, applied statistically to the structure and combined with the gravity forces of dead and live loads. The CBC-prescribed lateral forces generally are substantially smaller than the expected peak forces that would be associated with a major earthquake. Therefore, when built according to CBC standards, structures are anticipated to (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage but with some nonstructural damage; and (3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Conformance to the current building code standards does not guarantee that significant structural damage will not occur in the event of a maximum magnitude earthquake; but it is reasonable to expect that a well-designed and well-constructed structure would not collapse or cause loss of life in a major earthquake.
control erosion. Typically, erosion impacts are greatest in the first two years after construction, the time generally required to reestablish a good vegetation cover on areas of disturbed soil.

Coastal Erosion

The San Leandro shoreline is exposed to wave attack. The coastline within the vicinity of the Project site is armored with rip-rap to control erosion. No areas of significant coastal erosion were observed within the Project site. The existing erosion protection may require periodic maintenance to maintain effective erosion control.

Impact GEO-2: The Project could result in substantial soil erosion or the loss of topsoil.

Mitigation Measure GEO-2A: The Project civil engineer shall prepare an erosion control plan. The erosion control plan shall be submitted to the City as a part of building and/or grading plan submittal. The erosion control plan shall conform to the guidelines of the Clean Water Program and Utilize BMP’s detailed under section “C6 CASQA - BMPs Erosion Control” of the Program Resources.

Mitigation Measure GEO-2B: The existing rip-rap providing coastal erosion protection shall be periodically refurbished to maintain effective erosion control. This may include local replacement of rip-rap boulders as well as periodic re-building of rip-rap armament sections degraded by wave attack and/or long-term erosion.

Significance After Mitigation: Less than significant.

GEO-3  The Project could result in a significant impact related to development on unstable geologic units and soils or result in lateral spreading, subsidence, liquefaction, or collapse.

Liquefaction

Given the Project site is located in a seismically active region, future earthquakes are likely during the life of the Project and the risk of liquefaction could be significant.

Potential liquefaction at the Project site would likely be settlement of the ground surface and the localized expulsion of sand and water onto the ground surface (i.e., sand boils). Liquefaction could also result in excessive settlement of improperly designed foundations and possibly lateral spreading (the lateral spreading hazard to be discussed in subsequent section). Depending on the amount of ground or foundation settlement, damage to the planned buildings could be moderate. Other areas such as parking lots and landscape areas could also undergo settlement and ground deformation as a result of liquefaction. This is considered to be a significant impact.

Impact GEO-3A: The Project could result in a significant impact related to development on unstable geologic units and soils or result in lateral spreading, subsidence, liquefaction, or collapse.

Mitigation Measure GEO-3A: Project-specific geotechnical reports shall be prepared in accordance with the City’s grading permit regulations. The recommendations for both special foundations and
other geotechnical engineering measures specified in project specific geotechnical reports shall be implemented during design and construction. These measures include use of deep foundations engineering and removal or improvement of potentially liquefiable soils. Documentation of the methods used shall be provided in the required design-level geotechnical report(s).

**Significance After Mitigation:** Less than significant.

### Lateral Spreading

Lateral spreading is a phenomenon in which relatively flat land areas undergo sudden lateral movement generally toward a slope or channel margin during an earthquake. Lateral spreading occurs most frequently where there is laterally continuous liquefiable layer or layers present extending to or near a slope. Within the Project site lateral spreading could be a risk along the channel margins created by the dredged channels both inside and outside of the marina and adjacent fill dikes. This is considered to be a **significant** impact.

**Impact GEO-3B:** The Project could result in a significant impact related to development on unstable geologic units and soils or result in lateral spreading.

**Mitigation Measure GEO-3B:** The potential for lateral spreading shall be evaluated as a part of the required geotechnical reports. Where necessary, corrective measures shall be included in the required design-level geotechnical report(s) and implemented during construction. These measures could include retaining structures to stabilize channel margins, use of deep foundations, removal or improvement of liquefiable soils, and/or the use of relatively rigid foundations.

**Significance After Mitigation:** Less than significant.

### Settlement (Subsidence, Collapse)

Settlement, also referred to as subsidence and/or collapse, is a process in which compressible soils undergo a reduction in volume in response to an increase in pressure. This pressure can be the result of the addition of soil material or structures. Soils most susceptible to settlement are soft, saturated clays and silts such as the Bay Mud dredged fill materials that underlies the area west of the original shoreline. The existing fills were placed more than 50 years ago by placing soil and rock material over the underlying Bay Mud. Since that time the Bay Mud and fill has consolidated under the load exerted by the existing fills and it is likely that the potential for additional settlement under existing conditions is low. However, the Project would include construction of new structures, which would place a load on their foundations and the underlying materials as well as potentially the placement of some new fill. For buildings constructed with shallow foundations such as slabs or spread footings, the new load would be applied directly to the existing fill materials. Larger buildings would likely be constructed using deep foundations such as driven piles, which apply the load to the alluvial materials beneath the Bay Mud, which are firmer and less prone to settlement. If not properly engineered, buildings could undergo excessive settlement. Parking areas, underground utilities and/or other non-building improvements could also be impacted by new fill placement. This is considered to be a **significant** impact.

**Impact GEO-3C:** The Project could result in a significant impact related to development on unstable geologic units and soils or result in subsidence or collapse.
Mitigation Measure GEO-3C: Settlement of the existing fill and Bay Mud could have adverse effects on shallow foundations, underground utilities, pavements, and other improvements. Options to mitigate these effects include use of shallow ridged foundations for smaller structures, supporting larger structures with deep foundations such as driven piles, and installing flexible connections for utilities. Pre-loading consolidation (surcharging) prior to construction of new improvements could also be considered. The recommendations for both special foundations and other geotechnical engineering measures specified in project specific geotechnical reports shall be implemented during design and construction.

Significance After Mitigation: Less than significant.

GEO-4 The Project could create substantial risks to property as a result of its location on expansive soil, as defined by Section 1803.5.3 of the California Building Code.

Expansive Soils

The fill and native soils that cover the Project site east of the historic shoreline are moderately to highly expansive. Expansive soils undergo a significant volume change as a result of wetting or drying. This volume change could cause damage to improperly designed foundations and pavements. Where buildings are constructed in areas containing expansive soils this impact can be effectively mitigated through use of appropriate foundations, by capping expansive soils with a layer of non-expansive fill, or by lime treatment. Typical mitigation measures for pavements include special pavement design, lime treatment of subgrade soils and/or sub-excavation of expansive soils and replacement with non-expansive fill. This is considered to be a significant impact.

Impact GEO-4: The Project could create substantial risks to property as a result of its location on expansive soil, as defined by Section 1803.5.3 of the California Building Code.

Mitigation Measure GEO-4: The Project geotechnical engineer shall make specific recommendations for mitigation of expansive soils under pavements and structures, including techniques such as capping expansive soils with a layer of non-expansive fill, or by lime treatment. Typical mitigation measures for pavements could include special pavement design, lime treatment of subgrade soils and/or sub-excavation of expansive soils and replacement with non-expansive fill. These recommendations shall be based on testing of the in-site fill materials. The recommendations shall be submitted to the City as a part of building and/or paving plan submittal.

Significance After Mitigation: Less than significant.

GEO-5 The Project would not 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.

Development at the Project site would not require the use of septic tanks or alternative wastewater disposal systems. Wastewater will be discharged into the existing public sanitary sewer system, which is
serviced by the City of San Leandro, that provides wastewater collection and treatment services to the City’s residents. Wastewater is eventually conveyed to the City’s Water Pollution Control Plant located at 3000 Davis Street, San Leandro. As such, there would be no impact from implementation of the Project where soils might otherwise not be capable of supporting the use of septic tanks or alternative wastewater disposal systems.

Significance Before Mitigation: No impact.

4.5.4 CUMULATIVE IMPACTS

GEO-6 The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to geology and soils.

The following cumulative analysis considers the Project site in the context of the City of San Leandro as well as other past, present, and foreseeable projects in the vicinity. The City of San Leandro is largely built out. However, as remaining development proceeds within the City, the number of structures that may be subject to risks from geologic and seismic hazards is likely to increase. All new development in the City of San Leandro would be subject to CBC requirements, as well as the requirements embedded in the City’s building permit process (e.g., requirement for geotechnical reports prior to grading permit, as required by Municipal Code Section 7-12). Compliance with CBC requirements, and the requirements of the Clean Water Program for erosion-control BMPs, along with compliance with the City’s Municipal Code Chapter 7-12, as described in the Regulatory Framework of this draft EIR, would result in a less than significant cumulative impacts associated with soil erosion, loss of topsoil, and development-related impacts that pertain to seismically induced ground-shaking, liquefaction, and expansive soils.

Given the distance of known active faults from the Project site, the risk of primary fault rupture is judged to be low. Although the Project could be located on an unstable geologic unit(s) its development would not contribute to an associated cumulative impact given the site-specific nature of impacts related to geology and soils. The cumulative impacts associated with implementation of the Project, together with other past, present, and reasonably foreseeable projects in the surrounding area, would therefore result in a less-than-significant cumulative impact with respect to geology and soils.

Applicable Regulations:
- San Leandro General Plan
- San Leandro Municipal Code

Significance Before Mitigation: Less than significant.
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4.6 GREENHOUSE GAS EMISSIONS

This chapter evaluates the potential for land use changes associated with adopting and implementing the San Leandro Shoreline Development (Project) to cumulatively contribute to greenhouse gas (GHG) emissions impacts. Because no single project is large enough individually to result in a measurable increase in global concentrations of GHG emissions, global warming impacts of a project are considered on a cumulative basis. This chapter is based on the methodology recommended by the Bay Area Air Quality Management District (BAAQMD) for project-level review, based on preliminary information available. Transportation sector emissions are based on trip generation provided by Kittelson & Associates, Inc. GHG emissions modeling is included in Appendix D, Air Quality and Greenhouse Gas Modeling, of this Draft EIR.

4.6.1 ENVIRONMENTAL SETTING

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHGs, to the atmosphere. The primary source of these GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO$_2$), methane (CH$_4$), and ozone (O$_3$)—that are the likely cause of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified by the IPCC that contribute to global warming to a lesser extent are nitrous oxide (N$_2$O), sulfur hexafluoride (SF$_6$), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001). The major GHGs are briefly described below.

- **Carbon dioxide (CO$_2$)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration. It can also enter as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.

- **Methane (CH$_4$)** is emitted during the production and transportation of coal, natural gas, and oil. Methane emissions also result from livestock, other agricultural practices, and from the decay of organic waste in landfills and water treatment facilities.

- **Nitrous oxide (N$_2$O)** is emitted during agricultural and industrial activities as well as during the combustion of fossil fuels and solid waste.

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1 Water vapor (H$_2$O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop rather than a primary cause of change.

2 Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (CARB, 2014). However, State and national GHG inventories do not yet include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

Fluorinated gases are synthetic, strong GHGs that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances. These gases are typically emitted in smaller quantities, but because they are potent GHGs, they are sometimes referred to as high global-warming-potential (GWP) gases.

- **Chlorofluorocarbons (CFCs)** are GHGs covered under the 1987 Montreal Protocol and used for refrigeration, air conditioning, packaging, insulation, solvents, or aerosol propellants. Since they are not destroyed in the lower atmosphere (troposphere), CFCs drift into the upper atmosphere where, given suitable conditions, they break down the ozone layer. These gases are therefore being replaced by other compounds that are GHGs covered under the Kyoto Protocol.

- **Perfluorocarbons (PFCs)** are a group of human-made chemicals composed of carbon and fluorine only. These chemicals (predominantly perfluoromethane \([\text{CF}_4]\) and perfluoroethane \([\text{C}_2\text{F}_6]\)) were introduced as alternatives, along with HFCs, to ozone-depleting substances. In addition, PFCs are emitted as by-products of industrial processes and are used in manufacturing. PFCs do not harm the stratospheric ozone layer, but they have a high GWP.

- **Sulfur Hexafluoride (SF\(_6\))** is a colorless gas soluble in alcohol and ether, and slightly soluble in water. SF\(_6\) is a strong GHG used primarily in electrical transmission and distribution systems as an insulator.

- **Hydrochlorofluorocarbons (HCFCs)** contain hydrogen, fluorine, chlorine, and carbon atoms. Although they are ozone-depleting substances, they are less potent than CFCs. They have been introduced as temporary replacements for CFCs.

- **Hydrofluorocarbons (HFCs)** contain only hydrogen, fluorine, and carbon atoms. They were introduced as alternatives to ozone-depleting substances to serve many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are also used in manufacturing. They do not significantly deplete the stratospheric ozone layer, but they are strong GHGs.\(^4,5\)

GHGs are dependent on the lifetime or persistence of the gas molecule in the atmosphere. Some GHGs have stronger greenhouse effects than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 4.6-1. The GWP is used to convert GHGs to CO\(_2\)-equivalence (CO\(_2\)e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC’s Second Assessment Report GWP values for CH\(_4\), a project that generates 10 metric tons (MT) of CH\(_4\) would be equivalent to 210 MT of CO\(_2\).\(^6\)


\(^6\) CO\(_2\)-equivalence is used to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. The global warming potential of a GHG is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.
<table>
<thead>
<tr>
<th>GHG</th>
<th>Atmospheric Lifetime (Years)</th>
<th>Second Assessment Report Global Warming Potential Relative to CO₂&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Fourth Assessment Report Global Warming Potential Relative to CO₂&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Dioxide (CO₂)</td>
<td>50 to 200</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Methane (CH₄)&lt;sup&gt;c&lt;/sup&gt;</td>
<td>12 (±3)</td>
<td>21</td>
<td>25</td>
</tr>
<tr>
<td>Nitrous Oxide (N₂O)</td>
<td>120</td>
<td>310</td>
<td>298</td>
</tr>
<tr>
<td>Hydrofluorocarbons:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HFC-23</td>
<td>264</td>
<td>11,700</td>
<td>14,800</td>
</tr>
<tr>
<td>HFC-32</td>
<td>5.6</td>
<td>650</td>
<td>675</td>
</tr>
<tr>
<td>HFC-125</td>
<td>32.6</td>
<td>2,800</td>
<td>3,500</td>
</tr>
<tr>
<td>HFC-134a</td>
<td>14.6</td>
<td>1,300</td>
<td>1,430</td>
</tr>
<tr>
<td>HFC-143a</td>
<td>48.3</td>
<td>3,800</td>
<td>4,470</td>
</tr>
<tr>
<td>HFC-152a</td>
<td>1.5</td>
<td>140</td>
<td>124</td>
</tr>
<tr>
<td>HFC-227ea</td>
<td>36.5</td>
<td>2,900</td>
<td>3,220</td>
</tr>
<tr>
<td>HFC-236fa</td>
<td>209</td>
<td>6,300</td>
<td>9,810</td>
</tr>
<tr>
<td>HFC-4310mee</td>
<td>17.1</td>
<td>1,300</td>
<td>1,030</td>
</tr>
<tr>
<td>Perfluoromethane: CF₄</td>
<td>50,000</td>
<td>6,500</td>
<td>7,390</td>
</tr>
<tr>
<td>Perfluoroethane: C₂F₆</td>
<td>10,000</td>
<td>9,200</td>
<td>12,200</td>
</tr>
<tr>
<td>Perfluorobutane: C₃F₁₀</td>
<td>2,600</td>
<td>7,000</td>
<td>8,860</td>
</tr>
<tr>
<td>Perfluoro-2-methylpentane: C₆F₁₄</td>
<td>3,200</td>
<td>7,400</td>
<td>9,300</td>
</tr>
<tr>
<td>Sulfur Hexafluoride (SF₆)</td>
<td>3,200</td>
<td>23,900</td>
<td>22,800</td>
</tr>
</tbody>
</table>

Notes: The IPCC has published updated global warming potential (GWP) values in its Fifth Assessment Report (2013) that reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO₂ (radiative forcing is the difference of energy from sunlight received by the earth and radiated back into space). However, GWP values identified in the Second Assessment Report are still used by BAAQMD to maintain consistency in GHG emissions modeling. In addition, the 2008 Scoping Plan was based on the GWP values in the Second Assessment Report.

<sup>a</sup> Based on 100-Year Time Horizon of the GWP of the air pollutant relative to CO₂. Intergovernmental Panel on Climate Change. 2001. Third Assessment Report: Climate Change 2001. New York: Cambridge University Press.

<sup>b</sup> Based on 100-Year Time Horizon of the GWP of the air pollutant relative to CO₂. Intergovernmental Panel on Climate Change. 2007. Fourth Assessment Report: Climate Change 2001. New York: Cambridge University Press.

<sup>c</sup> The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO₂ is not included.

California’s Greenhouse Gas Sources and Relative Contribution

California is the tenth largest GHG emitter in the world and the second largest emitter of GHG in the United States, surpassed only by Texas; however, California also has over 12 million more people than the state of Texas.\(^7\) Because of more stringent air emission regulations, in 2001 California ranked fourth lowest in carbon emissions per capita and fifth lowest among states in CO\(_2\) emissions from fossil fuel consumption per unit of Gross State Product (total economic output of goods and services).\(^8\)

The California Air Resources Board (CARB) last update to the statewide GHG emissions inventory that used the Second Assessment Report GWPs was conducted in 2012 for year 2009 emissions.\(^9\) California’s transportation sector is the single largest generator of GHG emissions, producing 37.9 percent of the State’s total emissions. Electricity consumption is the second largest source, producing 22.7 percent. Industrial activities are California’s third largest source of GHG emissions at 17.8 percent.\(^10,11\)

In 2013, the statewide GHG emissions inventory was updated for 2000 to 2012 emissions using the GWPs in IPCC’s Fourth Assessment Report. Based on these GWPs, California produced 459 MMT CO\(_2\)e GHG emissions in 2012. California’s transportation sector remains the single largest generator of GHG emissions, producing 36.5 percent of the State’s total emissions. Electricity consumption made up 20.7 percent, and industrial activities produced 19.4 percent. Other major sectors of GHG emissions include commercial and residential, recycling and waste, high global warming potential GHGs, agriculture, and forestry.\(^12\)

Human Influence on Climate Change

For approximately 1,000 years before the Industrial Revolution, the amount of GHGs in the atmosphere remained relatively constant. During the 20th century, however, scientists observed a rapid change in the climate and climate change pollutants that is attributable to human activities. The amount of CO\(_2\) has increased by more than 35 percent since preindustrial times and has increased at an average rate of 1.4 parts per million (ppm) per year since 1960, mainly due to combustion of fossil fuels and deforestation.\(^13\) These recent changes in climate change pollutants far exceed the extremes of the ice

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\(^9\) Methodology for determining the statewide GHG inventory is not the same as the methodology used to determine statewide GHG emissions under Assembly Bill 32 (AB 32) (2006).

\(^10\) CO\(_2\)-equivalence is used to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. The global warming potential of a GHG is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.


ages, and the global mean temperature is rising at a rate that cannot be explained by natural causes alone.  

Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants.\(^{15}\)

Projections of climate change depend heavily upon future human activity. Therefore, climate models are based on different emission scenarios that account for historic trends in emissions as well as observations on the climate record that assess the human influence of the trend and projections for extreme weather events. Climate-change scenarios are affected by varying degrees of uncertainty. For example, climate trends include varying degrees of certainty on the magnitude of the direction of the trends for:

- warmer and fewer cold days and nights over most land areas;
- warmer and more frequent hot days and nights over most land areas;
- an increase in frequency of warm spells/heat waves over most land areas;
- an increase in frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) over most areas;
- areas affected by drought increases;
- intense tropical cyclone activity increases; and
- increased incidence of extreme high sea level (excludes tsunamis).

IPCC’s “2007 IPCC Fourth Assessment Report” projects that the global mean temperature increase from 1990 to 2100 under different climate-change scenarios will range from 1.4 to 5.8 degrees Celsius (2.5 to 10.4 degrees Fahrenheit). In the past, gradual changes in the earth’s temperature changed the distribution of species, availability of water, etc. However, human activities are accelerating this process so that environmental impacts associated with climate change no longer occur in a geologic time frame, but within a human lifetime.\(^{16}\)

**Potential Climate Change Impacts for California**

Like the variability in the projections of the expected increase in global surface temperatures, the environmental consequences of gradual changes in the Earth’s temperature are also hard to predict. In California and western North America, observations of the climate have shown: 1) a trend toward warmer winter and spring temperatures, 2) a smaller fraction of precipitation falling as snow, 3) a decrease in the amount of spring snow accumulation in the lower and middle elevation mountain zones, 4) shift in the timing of snowmelt of 5 to 30 days earlier in the spring, and 5) a similar shift (5 to 30 days earlier) in the timing of spring flower blooms.\(^{17}\) According to the California Climate Action Team—a committee of State agency secretaries and the heads of agency, boards, and departments, led by the Secretary of the California Environmental Protection Agency—even if actions could be taken to immediately curtail climate

\(^{14}\) At the end of the last ice age, the concentration of CO\(_2\) increased by around 100 ppm (parts per million) over about 8,000 years, or approximately 1.25 ppm per century. Since the start of the industrial revolution, the rate of increase has accelerated markedly. The rate of CO\(_2\) accumulation currently stands at around 150 ppm/century—more than 200 times faster than the background rate for the past 15,000 years.

\(^{15}\) California Climate Action Team, 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature, March.


\(^{17}\) California Climate Action Team, 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature, March.
change emissions, the potency of emissions that have already built up, their long atmospheric lifetimes (see Table 4.6-1), and the inertia of the Earth’s climate system could produce as much as 0.6 degrees Celsius (1.1 degrees Fahrenheit) of additional warming. Consequently, some impacts from climate change are now considered unavoidable. Global climate change risks to California are shown in Table 4.6-2 and include public health impacts, water resources impacts, agricultural impacts, coastal sea level impacts, forest and biological resource impacts, and energy impacts. Specific climate change impacts that could affect San Leandro include health impacts from deterioration of air quality, water resources impacts from a reduction in water supply, increased energy demand, and sea level rise (see also Chapter 4.8, Hydrology and Water Quality, for flood impacts).

**4.6.1 REGULATORY FRAMEWORK**

This section describes the federal, State and local regulations applicable to GHG emissions.

**Federal Regulations**

The United States Environmental Protection Agency (EPA) announced on December 7, 2009 that GHG emissions threaten the public health and welfare of the American people and GHG emissions from on-road vehicles contribute to the threat. The EPA’s endangerment findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings did not in and of themselves impose any emission reduction requirements, but allowed the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation.18

The EPA’s endangerment finding covers emissions of six key GHGs—CO₂, CH₄, N₂O, hydrofluorocarbons, perfluorocarbons, and SF₆—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the Project because they constitute the majority of GHG emissions from the onsite land uses, and per BAAQMD guidance are the GHG emissions that should be evaluated as part of a GHG emissions inventory.

**US Mandatory Report Rule for GHGs (2009)**

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 metric tons (MT) or more of CO₂ per year are required to submit an annual report.

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### TABLE 4.6-2 SUMMARY OF GHG EMISSIONS RISKS TO CALIFORNIA

<table>
<thead>
<tr>
<th>Impact Category</th>
<th>Potential Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Health Impacts</td>
<td>Poor air quality made worse</td>
</tr>
<tr>
<td></td>
<td>More severe heat</td>
</tr>
<tr>
<td>Water Resources Impacts</td>
<td>Decreasing Sierra Nevada snow pack</td>
</tr>
<tr>
<td></td>
<td>Challenges in securing adequate water supply</td>
</tr>
<tr>
<td></td>
<td>Potential reduction in hydropower</td>
</tr>
<tr>
<td></td>
<td>Loss of winter recreation</td>
</tr>
<tr>
<td>Agricultural Impacts</td>
<td>Increasing temperature</td>
</tr>
<tr>
<td></td>
<td>Increasing threats from pests and pathogens</td>
</tr>
<tr>
<td></td>
<td>Expanded ranges of agricultural weeds</td>
</tr>
<tr>
<td></td>
<td>Declining productivity</td>
</tr>
<tr>
<td></td>
<td>Irregular blooms and harvests</td>
</tr>
<tr>
<td>Coastal Sea Level Impacts</td>
<td>Accelerated sea level rise</td>
</tr>
<tr>
<td></td>
<td>Increasing coastal floods</td>
</tr>
<tr>
<td></td>
<td>Worsened impacts on infrastructure</td>
</tr>
<tr>
<td>Forest and Biological Resource Impacts</td>
<td>Increased risk and severity of wildfires</td>
</tr>
<tr>
<td></td>
<td>Lengthening of the wildfire season</td>
</tr>
<tr>
<td></td>
<td>Movement of forest areas</td>
</tr>
<tr>
<td></td>
<td>Conversion of forest to grassland</td>
</tr>
<tr>
<td></td>
<td>Declining forest productivity</td>
</tr>
<tr>
<td></td>
<td>Increasing threats from pest and pathogens</td>
</tr>
<tr>
<td></td>
<td>Shifting vegetation and species distribution</td>
</tr>
<tr>
<td></td>
<td>Altered timing of migration and mating habits</td>
</tr>
<tr>
<td></td>
<td>Loss of sensitive or slow-moving species</td>
</tr>
<tr>
<td>Energy Demand Impacts</td>
<td>Potential reduction in hydropower</td>
</tr>
<tr>
<td></td>
<td>Increased energy demand</td>
</tr>
</tbody>
</table>


### Update to Corporate Average Fuel Economy Standards (2010/2012)

The current Corporate Average Fuel Economy (CAFE) standards (for model years 2011 to 2016) incorporate stricter fuel economy requirements promulgated by the federal government and California into one uniform standard. Additionally, automakers are required to cut GHG emissions in new vehicles by roughly 25 percent by 2016 (resulting in a fleet average of 35.5 miles per gallon [mpg] by 2016). Rulemaking to adopt these new standards was completed in 2010. California agreed to allow automakers who show compliance with the national program to also be considered to be in compliance with State requirements. The federal government issued new standards in 2012 for model years 2017–2025, which will require a fleet average of 54.5 mpg in 2025.

### EPA Regulation of Stationary Sources Under the Clean Air Act (Ongoing)

Pursuant to its authority under the CAA, the EPA has been developing regulations for new stationary sources such as power plants, refineries, and other large sources of emissions. Pursuant to the President’s 2013 Climate Action Plan, the EPA will be directed to also develop regulations for existing stationary sources.
**State Regulations**

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Executive Order S-03-05, Assembly Bill 32 (AB 32), and Senate Bill 375 (SB 375).

**Executive Order S-03-05**

Executive Order S-3-05, signed June 1, 2005, set the following GHG reduction targets for the State:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

**Assembly Bill 32, the Global Warming Solutions Act (2006)**

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in AB 32, the Global Warming Solutions Act. AB 32 was passed by the California State legislature on August 31, 2006, to place the State on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in Executive Order S-03-05.

**CARB 2008 Scoping Plan**

The final Scoping Plan was adopted by CARB on December 11, 2008. AB 32 directed CARB to adopt discrete early action measures to reduce GHG emissions and outline additional reduction measures to meet the 2020 target. In order to effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 MT of CO2e per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

The 2008 Scoping Plan identified that GHG emissions in California are anticipated to be approximately 596 MMT CO2e in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 MMT CO2e (471 million tons) for the State. The 2020 target requires a total emissions reduction of 169 MMT CO2e, 28.5 percent from the projected emissions of the business-as-usual (BAU) scenario for the year 2020 (i.e., 28.5 percent of 596 MMT CO2e).\(^{19,20}\)

Since release of the 2008 Scoping Plan, CARB has updated the Statewide GHG emissions inventory to reflect GHG emissions in light of the economic downturn and of measures not previously considered in the 2008 Scoping Plan baseline inventory. The updated forecast predicts emissions to be 545 MMT CO2e by 2020. The revised BAU 2020 forecast shows that the State would have to reduce GHG emissions by 21.7 percent from BAU. The new inventory also identifies that if the updated 2020 forecast includes the

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\(^{20}\) CARB defines BAU in its Scoping Plan as emissions levels that would occur if California continued to grow and add new GHG emissions but did not adopt any measures to reduce emissions. Projections for each emission-generating sector were compiled and used to estimate emissions for 2020 based on 2002–2004 emissions intensities. Under CARB’s definition of BAU, new growth is assumed to have the same carbon intensities as was typical from 2002 through 2004.
reductions assumed from implementation of Pavley (26 MMT CO₂e of reductions) and the 33 percent RPS (12 MMT CO₂e of reductions) the forecast would be 507 MMT CO₂e in 2020, and then an estimated 80 MMT CO₂e of additional reductions are necessary to achieve the statewide emissions reduction of AB 32 by 2020, or 15.7 percent of the projected emissions compared to BAU in year 2020 (i.e., 15.7 percent of 507 MMT CO₂e).²¹

Key elements of CARB’s GHG reduction plan that may be applicable to the Project include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance efficiency standards (adopted and cycle updates in progress);
- Achieving a mix of 33 percent for energy generation from renewable sources (anticipated by 2020);
- A California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system for large stationary sources (adopted 2011);
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets (several Sustainable Communities Strategies have been adopted);
- Creating target fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State’s long-term commitment to AB 32 implementation (in progress).

Table 4.6-3 shows the anticipated reductions from regulations and programs outlined in the 2008 Scoping Plan. Although local government operations were not accounted for in achieving the 2020 emissions reduction, CARB estimates that land use changes implemented by local governments that integrate jobs, housing, and services result in a reduction of 5 MMT CO₂e, which is approximately 3 percent of the 2020 GHG emissions reduction goal. In recognition of the critical role local governments play in the successful implementation of AB 32, CARB is recommending GHG reduction goals of 15 percent of 2014 levels by 2020 to ensure that municipal and community-wide emissions match the State’s reduction target.²² Measures that local governments take to support shifts in land use patterns are anticipated to emphasize compact, low-impact growth over development in greenfields, resulting in fewer Vehicle Miles Travelled (VMT).²³

²² The Scoping Plan references a goal for local governments to reduce community GHG emissions by 15 percent from current (interpreted as 2008) levels by 2020, but it does not rely on local GHG reduction targets established by local governments to meet the State’s GHG reduction target of AB 32.
### Table 4.6-3 Scoping Plan GHG Reduction Measures and Reductions Toward 2020 Target

<table>
<thead>
<tr>
<th>Recommended Reduction Measures</th>
<th>Reductions Counted toward 2020 Target of 169 MMT CO₂e</th>
<th>Percentage of Statewide 2020 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cap and Trade Program and Associated Measures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>California Light-Duty Vehicle GHG Standards</td>
<td>31.7</td>
<td>19%</td>
</tr>
<tr>
<td>Energy Efficiency</td>
<td>26.3</td>
<td>16%</td>
</tr>
<tr>
<td>Renewable Portfolio Standard (33 percent by 2020)</td>
<td>21.3</td>
<td>13%</td>
</tr>
<tr>
<td>Low Carbon Fuel Standard</td>
<td>15</td>
<td>9%</td>
</tr>
<tr>
<td>Regional Transportation-Related GHG Targets³</td>
<td>5</td>
<td>3%</td>
</tr>
<tr>
<td>Vehicle Efficiency Measures</td>
<td>4.5</td>
<td>3%</td>
</tr>
<tr>
<td>Goods Movement</td>
<td>3.7</td>
<td>2%</td>
</tr>
<tr>
<td>Million Solar Roofs</td>
<td>2.1</td>
<td>1%</td>
</tr>
<tr>
<td>Medium/Heavy Duty Vehicles</td>
<td>1.4</td>
<td>1%</td>
</tr>
<tr>
<td>High Speed Rail</td>
<td>1.0</td>
<td>1%</td>
</tr>
<tr>
<td>Industrial Measures</td>
<td>0.3</td>
<td>0%</td>
</tr>
<tr>
<td>Additional Reduction Necessary to Achieve Cap</td>
<td>34.4</td>
<td>20%</td>
</tr>
<tr>
<td>Total Cap and Trade Program Reductions</td>
<td>146.7</td>
<td>87%</td>
</tr>
<tr>
<td><strong>Uncapped Sources/Sectors Measures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Global Warming Potential Gas Measures</td>
<td>20.2</td>
<td>12%</td>
</tr>
<tr>
<td>Sustainable Forests</td>
<td>5</td>
<td>3%</td>
</tr>
<tr>
<td>Industrial Measures (for sources not covered under cap and trade program)</td>
<td>1.1</td>
<td>1%</td>
</tr>
<tr>
<td>Recycling and Waste (landfill methane capture)</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Total Uncapped Sources/Sectors Reductions</td>
<td>27.3</td>
<td>16%</td>
</tr>
<tr>
<td>Total Reductions Counted toward 2020 Target</td>
<td>174</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Other Recommended Measures – Not Counted toward 2020 Target</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State Government Operations</td>
<td>1.0 to 2.0</td>
<td>1%</td>
</tr>
<tr>
<td>Local Government Operations³</td>
<td>To Be Determined</td>
<td>NA</td>
</tr>
<tr>
<td>Green Buildings</td>
<td>26</td>
<td>15%</td>
</tr>
<tr>
<td>Recycling and Waste</td>
<td>9</td>
<td>5%</td>
</tr>
<tr>
<td>Water Sector Measures</td>
<td>4.8</td>
<td>3%</td>
</tr>
<tr>
<td>Methane Capture at Large Dairies</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Total Other Recommended Measures – Not Counted toward 2020 Target</td>
<td>42.8</td>
<td>NA</td>
</tr>
</tbody>
</table>

Notes: The percentages in the right-hand column add up to more than 100 percent because the emissions reduction goal is 169 MMT CO₂e and the Scoping Plan identifies 174 MMT CO₂e of emissions reductions strategies. MMT CO₂e: million metric tons of CO₂e. Reductions represent an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target. According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 million metric tons of CO₂e (or approximately 1.2 percent of the GHG reduction target). However, these reductions were not included in the Scoping Plan reductions to achieve the 2020 target. Source: California Air Resources Board, 2008, Climate Change Scoping Plan: A Framework for Change.
2014 Update to the Scoping Plan

CARB recently completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The final Update to the Scoping Plan was released in May 2014, and CARB adopted it at the May 22, 2014 board hearing. The Update to the Scoping Plan defines CARB’s climate change priorities for the next five years and lays the groundwork to reach post-2020 goals in Executive Orders S-03-05 and B-16-2012. The update includes the latest scientific findings related to climate change and its impacts, including short-lived climate pollutants. The GHG target identified in the 2008 Scoping Plan is based on IPCC’s GWPs identified in the Second and Third Assessment Reports (see Table 4.6-1). IPCC’s Fourth and Fifth Assessment Reports identified more recent GWP values based on the latest available science. CARB recalculated the 1990 GHG emission levels with the updated GWPs in the Fourth Assessment Report, and the 427 MMT CO$_2$e 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, is slightly higher, at 431 MMT CO$_2$e.²⁴

The update highlights California’s progress in meeting the near-term 2020 GHG emission reduction goals defined in the original 2008 Scoping Plan. As identified in the Update to the Scoping Plan, California is on track to meeting the goals of AB 32. However, the Update to the Scoping Plan also addresses the State’s longer-term GHG goals within a post-2020 element. The post-2020 element provides a high-level view of a long-term strategy for meeting the 2050 GHG goals, including a recommendation for the State to adopt a mid-term target. According to the Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with, or exceeds, the trajectory created by statewide goals.²⁵

According to the Update to the Scoping Plan, reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing toward California’s 2050 climate targets will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit.²⁶

Senate Bill 375

In 2008, Senate Bill 375 (SB 375), the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reduction targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intention is to reduce GHG emissions from light-duty trucks and automobiles (excluding emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Metropolitan Transportation Commission (MTC) is the MPO for the nine-county San Francisco Bay Area

region. MTC’s targets are a 7 percent per capita reduction in GHG emissions from 2005 by 2020, and 15 percent per capita reduction from 2005 levels by 2035.\textsuperscript{27}

**Plan Bay Area: Strategy for a Sustainable Region**

Plan Bay Area is the Bay Area’s Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS). The Plan Bay Area was adopted jointly by ABAG and MTC July 18, 2013.\textsuperscript{28} The SCS lays out a development scenario for the region, which when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by CARB. According to Plan Bay Area, the Plan meets a 16 percent per capita reduction of GHG emissions by 2035 and a 10 percent per capita reduction by 2020 from 2005 conditions.

As part of the implementing framework for Plan Bay Area, local governments have identified Priority Development Areas (PDAs) to focus growth. PDAs are transit-oriented, infill development opportunity areas within existing communities. Overall, well over two-thirds of all regional growth in the Bay Area by 2040 is allocated within PDAs. PDAs are expected to accommodate 80 percent (or over 525,570 units) of new housing and 66 percent (or 744,230) of new jobs in the region.\textsuperscript{29} The Project site is not within a PDA.\textsuperscript{30}

**Assembly Bill 1493**

California vehicle GHG emission standards were enacted under AB 1493 (Pavely I). Pavely I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavely I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model year 2017 through 2025 light-duty vehicles (see also the discussion on the update to the CAFE standards under Federal Laws, above). In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. Under California’s Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.\textsuperscript{31}

\textsuperscript{27} California Air Resources Board, 2010. Staff Report, Proposed Regional Greenhouse Gas Emission Reduction Targets for Automobiles and Light Trucks Pursuant to Senate Bill 375, August.

\textsuperscript{28} It should be noted that the Bay Area Citizens filed a lawsuit on MTC’s and ABAG’s adoption of Plan Bay Area.

\textsuperscript{29} Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013. Plan Bay Area: Strategy for a Sustainable Region, July 18.

\textsuperscript{30} Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013. Plan Bay Area, http://geocommons.com/maps/141979.

\textsuperscript{31} See also the discussion on the update to the CAFE standards under Federal Laws, above. In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. Under California’s Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.
Executive Order S-01-07

On January 18, 2007, the State set a new low carbon fuel standard (LCFS) for transportation fuels sold within the State. Executive Order S-01-07 sets a declining standard for GHG emissions measured in carbon dioxide equivalent gram per unit of fuel energy sold in California. The LCFS requires a reduction of 2.5 percent in the carbon intensity of California’s transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the “fuel cycle” using the most economically feasible methods.

Executive Order B-16-2012

On March 23, 2012, the State identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate zero-emissions vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directs the number of zero-emission vehicles in California’s State vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are zero-emission by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions from the transportation sector 80 percent below 1990 levels.

Senate Bills 1078 and 107, and Executive Order S-14-08

A major component of California’s Renewable Energy Program is the renewable portfolio standard (RPS) established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. CARB has now approved an even higher goal of 33 percent by 2020. In 2011, the State legislature adopted this higher standard in SBX1-2. Executive Order S-14-08 was signed in November 2008, which expands the State’s Renewable Energy Standard to 33 percent renewable power by 2020. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

California Building Code

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2013 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On May 31, 2012, the CEC adopted the 2013 Building and Energy Efficiency Standards, which went into effect on July 1, 2014. Buildings that are constructed in accordance with the 2013 Building and Energy Efficiency Standards are 25 percent (residential) to 30 percent (non-residential) more energy efficient than the 2008 standards as a result of better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses.
On July 17, 2008, the California Building Standards Commission adopted the nation’s first green building standards. The California Green Building Standards Code (Part 11, Title 24, known as “CALGreen”) was adopted as part of the California Building Standards Code (Title 24, CCR). CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011, and have since been updated in 2013 and became effective January 1, 2014.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non-federally regulated appliances. Though these regulations are now often viewed as “business as usual,” they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

Local Regulations

City of San Leandro Climate Action Plan

The City of San Leandro prepared a Climate Action Plan (CAP) that was adopted on December 21, 2009. The CAP guides the City of San Leandro towards a sustainable future that reduces GHG emissions from current levels, while promoting economic prosperity for present and future generation. To achieve the City’s vision, the City’s CAP includes municipal and community emissions inventories for 2005 and 2020 forecasts; a GHG reduction goal to reduce GHG emissions by 25 percent below 2005 level by 2020; and GHG reduction measures to achieve the City’s GHG reduction target. The GHG reduction measures include measures to reduce energy use in buildings, transportation emissions, solid waste disposal, and GHG emissions from municipal operations. The City has been tracking and monitoring GHG emissions in the City in accordance with the goals of the CAP. The last progress report on the City’s CAP was prepared in 2013.

City of San Leandro Municipal Code

The City of San Leandro Municipal Code contains ordinances for the City. Title 3, Chapter 3-7, Construction and Demolition Debris Waste Reduction and Recycling Requirement, establishes regulations to comply with the California Waste Management Act of 1989. The City of San Leandro has adopted construction and demolition debris diversion requirements that are consistent with the new requirements under CALGreen for mandatory construction recycling. Construction and demolition debris recycling requirements vary by project type. Pursuant to the Article 2, projects involving construction, demolition or

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32 The green building standards became mandatory in the 2010 edition of the code.
renovation that have a project valuation in excess of $100,000 are required to adhere to the City’s construction and demolition diversion requirements. Applicants for any covered project are required to recycle or divert (recycle or salvage) at least 100 percent of asphalt and concrete and recycle 50 percent of the remainder of the construction and demolition debris. Applicants of covered projects are required to complete and submit a Debris Recycling Statement (DRS) on a form approved by the City. The DRS form completed by an applicant is required to include:

- The estimated volume or weight of the construction and demolition debris, by type of material generated.
- The estimated volume or weight of materials that can feasibly be diverted via reuse or recycling.
- The vendor or facility that the applicant proposes to use to salvage, collect and/or receive diverted material.
- The estimated volume or weight of materials that will be deposited in a landfill.

### 4.6.1.2 Existing Conditions

**Existing San Leandro Shoreline Development Emissions**

Portions of the approximately 52-acre land area and 23-acre water area of the Project site are currently occupied by a public boat harbor and various commercial and recreational uses. The boat slips are currently only 30 percent occupied (140 occupied boat slips), primarily due to the build-up of silt in the harbor and channel. The smaller fraction of boats within the harbor may be being used as housing.\(^{35}\) Other uses within the Project site include a golf course, the library, the Spinnaker Yacht Club, the San Leandro Yacht Club, the marina office, El Torito restaurant, and several bathroom facilities, among other uses. GHG emissions generated by existing land uses in the San Leandro Shoreline Development were modeled with CalEEMod 2013.2.2, based on trip generation provided by Kittelson & Associates, and emission rates for boats (pleasure-crafts), based on fuel sales in the harbor provided by the City.\(^{36}\) GHG emissions are shown in Table 4.6-4.

### 4.6.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, the Project would result in a significant GHG emissions impact if it would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

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\(^{35}\) The current estimated population within the Project site is between 16 to 20 live-aboard residents, based upon correspondence between Steve Noack (PlaceWorks) and Delmarie Snodgrass, City of San Leandro, September 5, 2014.

\(^{36}\) Emission rates for boats estimated from *Port of Los Angeles Baseline Air Emissions Inventory* (Starcrest Consulting Group, LLC, 2005).
**GREENHOUSE GAS EMISSIONS**

**Table 4.6-4**  
GHG Emissions Generated by Existing Land Uses within the San Leandro Shoreline Development

<table>
<thead>
<tr>
<th>Category</th>
<th>Existing 2014 (MTCO\textsubscript{2}e/Year)</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area\textsuperscript{a}</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Energy\textsuperscript{a}</td>
<td>664</td>
<td>13</td>
</tr>
<tr>
<td>On-Road Mobile Sources\textsuperscript{a}</td>
<td>4,298</td>
<td>84</td>
</tr>
<tr>
<td>Waste\textsuperscript{a}</td>
<td>129</td>
<td>3</td>
</tr>
<tr>
<td>Water/Wastewater\textsuperscript{a}</td>
<td>11</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Boats (Pleasure-Crafts)\textsuperscript{b}</td>
<td>39</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>5,141</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note: Emissions may not total to 100 percent due to rounding.

\textsuperscript{a} CalEEMod 2013.2.2. Based on year 2014 emission rates. No trip generation is assumed for the 16-20 live-aboard boat residences.

\textsuperscript{b} Starcrest, 2005. Port of Los Angeles Baseline Air Emissions Inventory.

**4.6.2.1 BAAQMD PROJECT-LEVEL SIGNIFICANCE CRITERIA**

The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and GHG emissions. In June 2010, the BAAQMD’s Board of Directors adopted CEQA thresholds of significance and an update of the CEQA Guidelines. In May 2011, the updated BAAQMD CEQA Air Quality Guidelines were amended to include a risk and hazards threshold for new receptors and modified procedures for assessing impacts related to risk and hazard impacts.

On March 5, 2012, the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds of significance in the BAAQMD CEQA Air Quality Guidelines. The court did not determine whether the thresholds of significance were valid on their merits, but found that the adoption of the thresholds was a project under CEQA. The court issued a writ of mandate ordering the BAAQMD to set aside the thresholds and cease dissemination of them until the BAAQMD complied with CEQA.

Following the court’s order, the BAAQMD released revised CEQA Air Quality Guidelines in May 2012 that included guidance on calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures, and which set aside the significance thresholds. The BAAQMD recognizes that lead agencies may rely on the previously recommended Thresholds of Significance contained in its CEQA Guidelines adopted in 1999. The Alameda County Superior Court, in ordering BAAQMD to set aside the thresholds, did not address the merits of the science or evidence supporting the thresholds. The City finds, therefore, that despite the Superior Court’s ruling, and in light of the subsequent case history discussed below, the science and reasoning contained in
the BAAQMD 2011 CEQA Air Quality Guidelines provide the latest state-of-the-art guidance available. For that reason, substantial evidence supports continued use of the BAAQMD 2011 CEQA Air Quality Guidelines.

On August 13, 2013, the First District Court of Appeal reversed the trial court judgment and upheld the BAAQMD’s CEQA Guidelines. In addition to the City’s independent determination that use of the BAAQMD’s CEQA Guidelines is supported by substantial evidence, they have been found to be valid guidelines for use in the CEQA environmental review process. On November 26, 2013, the California Supreme Court granted review on the issue of whether CEQA requires analysis of how existing environmental conditions affect a project (California Building Industry Association v Bay Area Air Quality Management District, Case No. A135335 and A136212).

In addition, CEQA grants local agencies broad discretion to develop their own thresholds of significance, or to rely on thresholds previously adopted or recommended by other public agencies or experts so long as they are supported by substantial evidence. Accordingly, the City of San Leandro is using the BAAQMD’s 2011 thresholds to evaluate project impacts in order to protectively evaluate the potential effects of the project on GHG emissions.

**Greenhouse Gas Emissions**

In the absence of an applicable qualified GHG reduction strategy, BAAQMD has identified screening criteria and significance criteria for development projects that would be applicable to the Project. If a project exceeds the Guidelines’ GHG screening-level sizes, the project would be required to conduct a full GHG analysis using the following BAAQMD’s significance criteria:

- 1,100 MT of CO$_2$e per year; or
- 4.6 MT of CO$_2$e per service population (SP).

Land use development projects include residential, commercial, industrial, and public land use facilities. Direct sources of emissions may include on-site combustion of energy, such as natural gas used for heating and cooking, emissions from industrial processes (not applicable for most land use development projects), and fuel combustion from mobile sources. Indirect emissions are emissions produced off-site from energy production, water conveyance due to a project’s energy use and water consumption, and non-biogenic emissions from waste disposal. Biogenic CO$_2$ emissions are not included in the quantification of a project’s GHG emissions, because biogenic CO$_2$ is derived from living biomass (e.g., organic matter present in wood, paper, vegetable oils, animal fat, food, animal, and yard waste) as opposed to fossil fuels. Although GHG emissions from waste generation are included in the GHG inventory for the Project, the efficiency threshold of 4.6 MTCO$_2$e per service population identified above do not include the waste sector and therefore are not considered in the evaluation.

BAAQMD does not have thresholds of significance for construction-related GHG emissions, but requires quantification and disclosure of construction-related GHG emissions.
4.6.3 IMPACT DISCUSSION

Methodology

GHG emissions from construction and operation of the Project were calculated using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2. Transportation emissions are based on trip generation provided by Kittelson & Associates. Construction emissions are based on the construction schedule provided by the City.

This section discusses the GHG emissions impacts of the Project. This discussion is organized by and responds to each of the potential impacts identified in the thresholds of significance.

| GHG-1 | Implementation of the Project could directly or indirectly generate GHG emissions that may have a significant impact on the environment. |

A project does not generate enough GHG emissions on its own to influence global climate change; therefore, the GHG chapter measures a project’s contribution to the cumulative environmental impact. Development under the Project would contribute to global climate change through direct and indirect emissions of GHG from transportation sources, energy (natural gas and purchased energy), water use and wastewater generation, and solid waste generation. Construction emissions (total and amortized over a 30-year duration) are provided for informational purposes. The total and net increases in GHG emissions associated with the Project are shown in Table 4.6-5.

BAAQMD does not have thresholds of significance for construction-related GHG emissions. GHG emissions from construction activities are one-time, short-term emissions and therefore, would not significantly contribute to long-term cumulative GHG emissions impacts of the Project. One-time, short-term emissions are converted to average annual emissions by amortizing them over the service life of a building. For buildings in general, it is reasonable to look at a 30-year timeframe as this is a typical interval before a new building requires the first major renovation. As shown in Table 4.6-5, when amortized over an average 30-year project lifetime, average annual construction emissions from the Project would represent a nominal source of GHG emissions and would not exceed BAAQMD’s de minimus bright line threshold of 1,100 MTCO₂e. Construction emissions are less than significant.

As shown in Table 4.6-5, the net increase GHG emissions generated by the operational phase of the Project would exceed BAAQMD’s bright-line significance criteria of 1,100 MTCO₂e; and therefore, GHG emissions impacts are evaluated based on the Project-efficiency. As identified in Table 4.6-5, the Project would exceed the BAAQMD performance criteria of 4.6 MTCO₂e/SP. Consequently, GHG emissions impacts of the Project are significant.

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### Table 4.6-5  SAN LEANDRO SHORELINE DEVELOPMENT GHG EMISSIONS FORECAST

<table>
<thead>
<tr>
<th>Category</th>
<th>Existing 2014</th>
<th>Project 2020</th>
<th>Percent of Total</th>
<th>Change From Existing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Construction Emissions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Construction Emissions</td>
<td>NA</td>
<td>6,754</td>
<td>NA</td>
<td>6,754</td>
</tr>
<tr>
<td>30-Year Amortized Construction</td>
<td>NA</td>
<td>225</td>
<td>NA</td>
<td>225</td>
</tr>
<tr>
<td><strong>Operational Emissions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area</td>
<td>&lt;1</td>
<td>37</td>
<td>&lt;1</td>
<td>37</td>
</tr>
<tr>
<td>Energy</td>
<td>664</td>
<td>3,060</td>
<td>23</td>
<td>2,396</td>
</tr>
<tr>
<td>On-Road Mobile Sources</td>
<td>4,298</td>
<td>10,027</td>
<td>74</td>
<td>5,729</td>
</tr>
<tr>
<td>Waste</td>
<td>129</td>
<td>355</td>
<td>3</td>
<td>226</td>
</tr>
<tr>
<td>Water/Wastewater</td>
<td>11</td>
<td>73</td>
<td>1</td>
<td>61</td>
</tr>
<tr>
<td>Boats (Pleasure-Crafts)</td>
<td>39</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>-39</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>^5,141</td>
<td>13,552</td>
<td>100%</td>
<td>8,410</td>
</tr>
<tr>
<td>Total without Waste</td>
<td>5,013</td>
<td>13,197</td>
<td>—</td>
<td>8,184</td>
</tr>
<tr>
<td>Service Population (SP)</td>
<td>92</td>
<td>1,973</td>
<td>—</td>
<td>1,881</td>
</tr>
<tr>
<td>MTCO2e/SP</td>
<td>54.5</td>
<td>6.7</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>BAAQMD Efficiency Threshold</td>
<td>—</td>
<td>4.6 MTCO2e/SP</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Exceeds BAAQMD Target?</strong></td>
<td>—</td>
<td>Yes</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Note: Emissions may not total to 100 percent due to rounding. New buildings would be constructed to the 2013 Building & Energy Efficiency Standards (effective July 1, 2014). Assumes all fireplaces are gas-burning fireplaces in accordance with BAAQMD Regulation 6, Rule 3.

- a. CalEEMod 2013.2.2. Based on year 2014 emission rates. No trip generation is assumed for the 16 live aboard boat residences.
- c. BAAQMD did not include solid waste emissions when developing the per capita significance thresholds. Therefore, total GHG emissions with and without the Waste Generation sector are included. If these emissions are included in the analysis for the Project, Project per capita emissions would be 6.9 MTCO2e/SP/yr.
- d. Service population (SP) is based on 16 residents and 76 employees (existing) and 970 residents and 1,003 employees (Project).

**Impact GHG-1**: Implementation of the Project would directly or indirectly generate GHG emissions that may have a significant impact on the environment.

**Mitigation Measure GHG-1A**: Residential developments that include garage parking shall be electrically wired to accommodate electric vehicle charging. The location of the electrical outlets shall be specified on building plans and proper installation shall be verified by the San Leandro Building and Safety Division prior to issuance of a Certificate of Occupancy.

**Mitigation Measure GHG-1B**: Electrical vehicle Level 2 charging stations shall be provided for the hotel and office land uses for the review and approval of the San Leandro Community Development Director. A minimum of one electric vehicle charging space shall be provided for every 25,000 square feet of non-residential building square footage. The location of the electrical vehicle charging stations...
shall be specified on site plans, and proper installation shall be verified by the Building and Safety Division prior to issuance of a Certificate of Occupancy.

Mitigation Measure GHG-1C: Applicant-provided appliances shall be Energy Star appliances (dishwashers, refrigerators, clothes washers, and dryers). Installation of Energy Star appliances shall be verified by the San Leandro Building and Safety Division during plan check.

Mitigation Measure GHG-1D: Applicants, or their designee, for large non-residential development projects (e.g., employers with 50 employees at work site) shall establish an employee trip commute reduction program (CTR), in conformance with the Bay Area Air Quality Management District’s Commuter Benefits Program (California Government Code Section 65081). The program shall offer one of the following commuter benefit options:

- Pre-tax benefit: Allow employees to exclude their transit or vanpooling expenses from taxable income, up to $130 per month.
- Employer provided subsidy: Provide a subsidy to reduce or cover employees’ monthly transit or vanpool costs, up to $75 per month.
- Employer-provided transit: Provide a free or low-cost transit service for employees, such as a bus, shuttle or vanpool service.
- Alternative commuter benefit: Provide an alternative commuter benefit that is as effective in reducing single-occupancy commute trips, as the options above.

The employer shall also provide information about other commute options and connect commuters for carpooling, ridesharing, and other activities. The CTR program shall identify alternative modes of transportation to the Project Site, including transit schedules, bike and pedestrian routes, and carpool/vanpool availability. Information regarding these programs shall be readily available to employees and clients and shall be posted in a highly visible location and/or made available online. The project applicant shall consider the following additional incentives for commuters as part of the CTR program:

- Preferential carpool parking.
- Flexible work schedules for carpools.
- Telecommute and/or flexible work hour programs.
- Car-sharing program (e.g., Zipcar).
- Bicycle end-trip facilities, including bike parking, showers, and lockers.

The CTR program shall be prepared for the review and approval by the Community Development Director prior to occupancy permits.

Mitigation Measure GHG-1E: Applicants for new development projects within the San Leandro Shoreline Development shall achieve either the Build-it-Green GreenPoint Rated or US Green Building Council’s Leadership in Energy and Environmental Design (LEED) standards that are endorsed by the City.

Mitigation Measure GHG-1F: Applicants for future projects within the Project shall design individual habitable residential and non-residential structures to be 15 percent more energy efficient than the
current Building and Energy Efficiency Standards. The 15-percent reduction in building envelope energy use shall be based on the current Building and Energy Efficiency Standards (Title 24, Part 6, of the California Building Code) that is in place at the time building permits are submitted to the City. Architectural plans submitted to the City Building Division shall identify the requirement to reduce building energy use by 15 percent to meet this requirement.

**Significance After Mitigation:** Significant and unavoidable. Mitigation Measures GHG-1A and GHG-1B would require applicants for new development projects within the San Leandro Shoreline Development to designate spaces for electric vehicle charging in residential units and in the hotel and office developments in order to encourage residents and other motorists to take zero- or near-zero emission vehicles or alternative modes of transportation. Mitigation Measure GHG-1C would require installation of energy efficient appliances to reduce natural gas consumption and energy demand from new buildings. Mitigation Measure GHG 1D would require employers to establish employee trip commute reduction program to promote alternative modes of transportation to the Project Site and reduce GHG emissions from mobile sources. Furthermore, adherence to the City’s Green Building Checklist (Mitigation Measure GHG-1E) to ensure compliance with the 2013 California Green Building Standards Code would ensure that new buildings are energy efficient by requiring both residential and nonresidential construction to be constructed to be more energy efficient. Mitigation Measures GHG-1A through GHG-1F would reduce operational GHG emissions to the extent practicable. However, the amount of reduction in emissions cannot be quantified, therefore it is not known whether the reductions would fall below the significance threshold. As such, GHG emissions would continue to exceed the BAAQMD regional significance thresholds and GHG-1 would remain significant and unavoidable.

### GHG-2 Implementation of the Project would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

The following plans have been adopted and are applicable for the Project:

**CARB’s Scoping Plan**

In accordance with AB 32, CARB developed the Scoping Plan to outline the State’s strategy to achieve 1990 level emissions by year 2020. To estimate the reductions necessary, CARB projected statewide 2020 BAU GHG emissions (i.e., GHG emissions in the absence of statewide emission reduction measures). CARB identified that the State as a whole would be required to reduce GHG emissions by 28.5 percent from year 2020 BAU to achieve the targets of AB 32. The revised BAU 2020 forecast shows that the state would have to reduce GHG emissions by 21.6 percent from BAU without implementation of the Pavley GHG emission standards for passenger vehicles and the 33 percent renewable portfolio standard (RPS) for electricity, or 15.7 percent from the adjusted baseline (i.e., with Pavley and 33 percent RPS).

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Statewide strategies to reduce GHG emissions include the LCFS; California Appliance Energy Efficiency regulations; California Building Standards (i.e., CALGreen and the 2008 Building and Energy Efficiency Standards); California Renewable Energy Portfolio standard (33 percent RPS); changes in the corporate average fuel economy standards (i.e., Pavley I and Pavley II); and other measures that would ensure the State is on target to achieve the GHG emissions reduction goals of AB 32. Statewide GHG emissions reduction measures that are being implemented over the next six years would reduce the Project’s GHG emissions.

New residential and non-residential construction for the Project would be subject to the current building and energy efficiency standards. The new buildings would be constructed in conformance with CALGreen, which requires high-efficiency water fixtures for indoor plumbing and water efficient irrigation systems. Therefore, impacts would be less-than-significant.

MTC’s Plan Bay Area

To achieve ABAG’s/MTC’s sustainable vision for the Bay Area, the Plan Bay Area land use concept plan for the region concentrates the majority of new population and employment growth in the region in PDAs. PDAs are transit-oriented, infill development opportunity areas within existing communities. Overall, well over two-thirds of all regional growth by 2040 is allocated within PDAs. PDAs are expected to accommodate 80 percent (or over 525,570 units) of new housing and 66 percent (or 744,230) of new jobs.

The Project site is not within a PDA identified in Plan Bay Area. However, the Project is an infill development project that would improve the existing facilities along the shoreline and increase residential and non-residential land uses intensity at the Project site. In addition, the Project would improve non-motorized access to the harbor and would develop a Class I bicycle facility along the waterfront. Consequently, the Project is consistent with the overall goals of Plan Bay Area, which include concentrating new development in locations where there is existing infrastructure. Therefore, the Project would not conflict with land use concept plan in Plan Bay Area.

City of San Leandro Climate Action Plan

The City of San Leandro prepared a CAP to reduce community and municipal GHG emissions. The measures identified in the City’s CAP represent the City’s actions to reduce GHG emissions in the City. While this CAP is not a “qualified” CAP because it does not meet the objectives identified in CEQA Guidelines Section 15183.5 the overall goals of the CAP help the City reduce GHG emissions. Therefore, a qualitative consistency analysis of the Project design features that achieve the applicable community actions in the City’s CAP is provided below:

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40 In order to tier off a GHG reduction plan, Section 15183.5 of the CEQA Guidelines requires that the plan include a GHG emissions inventory of existing conditions and an emissions forecast, identify a GHG reduction target for the forecast year that would not cumulatively contribute to GHG emissions, identify and analyze GHG reduction measures, measures must include performance standards that substantial evidence demonstrates would achieve the emissions reductions necessary, the plan must establish a mechanism to monitor the plan’s progress toward achieving the GHG reductions, and the plan must be adopted in the a public process following environmental review.
- Require “beyond compliance” as a condition for approving new construction. Since adoption of the City’s CAP, the California Energy Commission (CEC) has updated the Building and Energy Efficiency Standards. If constructed today, development allowed by the Project would achieve the 2013 Building and Energy Efficiency Standards. The 2013 Building and Energy Efficiency Standards are 25 percent more energy efficient for residential buildings than the 2008 standards, which are 15 percent more energy efficient than the 2005 standards.

- Establish mandatory green building ordinance for private new construction. Since adoption of the City’s CAP, the State of California has promulgated the California Green Building Standards Code (CALGreen). In addition to the increase building energy efficiency described above, CALGreen requires consideration of other sustainable features into the design of a project.

- Improve bike routes for safety. The Project would result in several bikeway and pedestrian trail improvements along the shoreline. One of the primary objectives of the Project would be to enhance connections between the shoreline and the San Francisco Bay Trail. The Project would improve non-motorized access to the harbor and would develop a Class I bicycle facility along the waterfront. In addition, the Project would include a pedestrian/bicycle bridge across the existing harbor entrance.

- Improve crossings for pedestrians and cyclists at intersections in the City. The Project would ensure that intersection crossings would allow for safe crossings of pedestrians and bicyclists. Furthermore the Project would be to enhance connections between the shoreline and the San Francisco Bay Trail. In addition, the Project would include a pedestrian/bicycle bridge across the existing harbor entrance to improve pedestrian/bicycle crossing.

- Increase urban forest canopy. Many of the existing trees will remain in place. Individual land uses within the Project site are required by the City to prepare and implement a landscaping plan that would include tree planting to improve/increase the urban forestry canopy. The City requires parking lot trees (1 tree per 6 stalls) and would require adherence to Article 19, Landscaping Requirements, of Zoning Code.

- Consider a mandatory curbside recycling and composting programs. The City of San Leandro has implemented a recycling program available to residents and business within the City. In addition, Assembly Bill 341 (AB 341) (2011), which is identified in CARB’s 2008 Scoping Plan, requires mandatory commercial recycling to meet the waste diversion goals. Senate Bill 1018 (SB 1018) (2012) also requires that business that generate 4 cubic yards of more of commercial solid waste per week arrange for recycling service. Tenants within the Project are required to implement a commercial recycling program for recycling.

The Project includes the design features above that would reduce Project-related GHG emissions and would ensure that the Project would not interfere with the City’s ability to implement the actions in the CAP. Therefore, this impact is considered less than significant.

**Conclusion**

Implementation of the Project policies as well as compliance with applicable State standards listed and described above would ensure consistency with State and regional GHG reduction planning efforts. Therefore, this impact would be less than significant.
GREENHOUSE GAS EMISSIONS

Applicable Regulations:
- California Global Warming Solutions Act (AB 32)
- Sustainable Communities and Climate Protection Act (SB 375)
- Greenhouse Gas Emission Reduction Targets (Executive Order S-3-05)
- Clean Car Standards – Pavely (AB 1493)
- Renewable Portfolio Standards (SB 1078)
- California Integrated Waste Management Act of 1989 (AB 939)
- California Mandatory Commercial Recycling Law (AB 341)
- California Advanced Clean Cars CARB/ Low-Emission Vehicle Program – LEV III (Title 13 CCR)
- Heavy-Duty Vehicle Greenhouse Gas Emissions Reduction Measure (Title 17 CCR)
- Low Carbon Fuel Standard (Title 17 CCR)
- California Water Conservation in Landscaping Act of 2006 (AB 1881)
- California Water Conservation Act of 2009 (SBX7-7)
- Statewide Retail Provider Emissions Performance Standards (SB 1368).
- Airborne Toxics Control Measure to Limit School Bus Idling and Idling at Schools (13 CCR 2480)
- Airborne Toxic Control Measure to Limit Diesel-Fuel Commercial Vehicle Idling (13 CCR 2485)
- In-Use Off-Road Diesel Idling Restriction (13 CCR 2449)
- Building Energy Efficiency Standards (Title 24, Part 6)
- California Green Building Code (Title 24, Part 11)
- Appliance Energy Efficiency Standards (Title 20)

Significance Before Mitigation: Less than significant.

4.6.4 CUMULATIVE IMPACT DISCUSSION

GHG-3 Implementation of the Project, in combination with past, present, and reasonably foreseeable projects, would result in significant cumulative impacts with respect to GHG emissions.

As described above, GHG emissions related to the Project are not confined to a particular air basin but are dispersed worldwide. Therefore, the analysis of impacts in Section 4.6.3, Impact Discussion, above, also addresses the Project as a contributor to cumulative impacts. As identified in Impact GHG-1, Table 4.6-5 shows that operation of the Project would exceed BAAQMD’s efficiency metric. Consequently, GHG emissions impacts of the Project are cumulatively considerable, and therefore significant.

Applicable Regulations:
- None

Impact GHG-3: Implementation of the Project would directly or indirectly generate GHG emissions that may have a cumulatively considerable and therefore significant impact on the environment.

Mitigation Measure GHG-3: Implementation of Mitigation Measures GHG-1A through GHG-1F would reduce cumulative GHG emissions impacts.
**Significance After Mitigation:** Significant and unavoidable. Mitigation Measures GHG-1A through GHG-1F would reduce operational GHG emissions to the extent practicable. However, GHG emissions would continue to exceed the BAAQMD regional significance thresholds resulting in cumulatively considerable GHG emissions and GHG-3 would remain significant and unavoidable.
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This chapter describes the regulatory framework and existing conditions related to hazards and hazardous materials within the Project site, and the potential resulting impacts from development of the Project.

### 4.7.1 ENVIRONMENTAL SETTING

#### 4.7.1.1 REGULATORY FRAMEWORK

Hazardous materials refer generally to hazardous substances, hazardous waste, and other materials that exhibit corrosive, poisonous, flammable, and/or reactive properties and have the potential to harm human health and/or the environment. Hazardous materials are used in products (e.g., household cleaners, industrial solvents, paint, pesticides, etc.) and in the manufacturing of products (e.g., electronics, newspapers, plastic products, etc.). Hazardous materials can include petroleum, natural gas, synthetic gas, acutely toxic chemicals, and other toxic chemicals that are used in agriculture, commercial, and industrial uses; businesses; hospitals; and households. Accidental releases of hazardous materials have a variety of causes, including highway incidents, warehouse fires, train derailments, shipping accidents, and industrial incidents.

The term “hazardous materials” as used in this section includes all materials defined in the California Health and Safety Code (H&SC Section 25501(m)):

“A material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. ‘Hazardous materials’ include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the unified program agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.”

The term includes chemicals regulated by the United States Department of Transportation (USDOT), the United States Environmental Protection Agency (USEPA), the California Department of Toxic Substances Control (DTSC), the California Governor’s Office of Emergency Services (CalOES), and other agencies as hazardous materials, wastes, or substances. “Hazardous waste” is any hazardous material that has been discarded, except those materials specifically excluded by regulation. Hazardous materials that have been intentionally disposed of or inadvertently released fall within the definition of “discarded” materials and can result in the creation of hazardous waste. Hazardous wastes are broadly characterized by their ignitability, toxicity, corrosivity, reactivity, radioactivity, or bioactivity. Federal and State hazardous waste definitions are similar, but contain enough distinctions that separate classifications are in place for federal Resource Conservation and Recovery Act (RCRA) hazardous wastes and State non-RCRA hazardous wastes. Hazardous wastes require special handling and disposal because of their potential to impact public health and the environment. Some materials are designated “acutely” or “extremely” hazardous under relevant statutes and regulations.

Hazardous materials and wastes can pose a significant actual or potential hazard to human health and the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Many federal, State, and local programs that regulate the use, storage, and transportation of hazardous
materials and hazardous waste are in place to prevent these unwanted consequences. These regulatory programs are designed to reduce the danger that hazardous substances may pose to people and businesses under normal daily circumstances and as a result of emergencies and disasters.

**Federal Agencies and Regulations**

**United States Environmental Protection Agency**

The USEPA laws and regulations ensure the safe production, handling, disposal, and transportation of hazardous materials. Laws and regulations established by the USEPA are enforced in Alameda County by the California Environmental Protection Agency (CalEPA).

**United States Department of Transportation**

The USDOT has the regulatory responsibility for the safe transportation of hazardous materials between states and to foreign countries. The USDOT regulations govern all means of transportation, except for those packages shipped by mail, which are covered by United States Postal Service (USPS) regulations. The federal Resource Conservation and Recovery Act of 1976 imposes additional standards for the transport of hazardous wastes.

**Occupational Safety and Health Administration**

The Occupational Safety and Health Administration (OSHA) oversees the administration of the Occupational Safety and Health Act, which requires specific training for hazardous materials handlers, provision of information to employees who may be exposed to hazardous materials, and acquisition of material safety data sheets (MSDS) from materials manufacturers. The MSDS describe the risks, as well as proper handling and procedures, related to particular hazardous materials. Employee training must include response and remediation procedures for hazardous materials releases and exposures.

**State Agencies and Regulations**

**California Health and Safety Code and Code of Regulations**

California Health and Safety Code Chapter 6.95 and California Code of Regulations, Title 19, Section 2729 set out the minimum requirements for business emergency plans and chemical inventory reporting. These regulations require businesses to provide emergency response plans and procedures, training program information, and a hazardous material chemical inventory disclosing hazardous materials stored, used, or handled on-site. A business which uses hazardous materials or a mixture containing hazardous materials must establish and implement a business plan if the hazardous material is handled in certain quantities.

**California Environmental Protection Agency**

One of the primary agencies that regulate hazardous materials is the CalEPA. The State, through CalEPA, is authorized by the USEPA to enforce and implement certain federal hazardous materials laws and regulations. The California DTSC, a department of the CalEPA, protects California and Californians from exposure to hazardous waste, primarily under the authority of the RCRA and the California Health and
The DTSC requirements include the need for written programs and response plans, such as Hazardous Materials Business Plans (HMBPs). The DTSC programs include dealing with aftermath clean-ups of improper hazardous waste management, evaluation of samples taken from sites, enforcement of regulations regarding use, storage, and disposal of hazardous materials, and encouragement of pollution prevention.

**California Division of Occupational Safety and Health**

Like OSHA at the federal level, the California Division of Occupational Safety and Health (CalOSHA) is the responsible state-level agency for ensuring workplace safety. The CalOSHA assumes primary responsibility for the adoption and enforcement of standards regarding workplace safety and safety practices. In the event that a site is contaminated, a Site Safety Plan must be crafted and implemented to protect the safety of workers. Site Safety Plans establish policies, practices, and procedures to prevent the exposure of workers and members of the public to hazardous materials originating from the contaminated site or building.

**California Building Code**

The State of California provided a minimum standard for building design through the California Building Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations (CCR). The 2013 CBC is based on the 2012 International Building Code (IBC), but has been modified for California conditions. The CBC is updated every three years, and the current CBC went into effect in January 2014. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local city and county building officials for compliance with the CBC typical fire safety requirements of the CBC; the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildlife hazard areas.

**California Emergency Management Agency**

The California Emergency Management Agency (CalEMA) was established as part of the Governor's Office on January 1, 2009 – created by Assembly Bill 38 (Nava), which merged the duties, powers, purposes, and responsibilities of the former Governor’s Office of Emergency Services with those of the Governor’s Office of Homeland Security. The CalEMA is responsible for the coordination of overall State agency response to major disasters in support of local government. The agency is responsible for assuring the State's readiness to respond to and recover from all hazards—natural, manmade, emergencies, and disasters—and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts.

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1 Hazardous Substance Account, Chapter 6.5 (Section 25100 et seq.) and the Hazardous Waste Control Law, Chapter 6.8 (Section 25300 et seq.) of the Health and Safety Code.
The California Department of Forestry and Fire Protection (CAL FIRE) has mapped fire threat potential throughout California. The CAL FIRE ranks fire threat based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The rankings include no fire threat, moderate, high, and very high fire threat. Additionally, the CAL FIRE produced the **2010 Strategic Fire Plan for California**, which contains goals, objectives, and policies to prepare for and mitigate for the effects of fire on California’s natural and built environments.

**California Fire Code**

California Code of Regulations, Title 24, also known as the California Building Standards Code, contains the California Fire Code (CFC), included as Part 9 of that Title. Updated every three years, the CFC includes provisions and standards for emergency planning and preparedness, fire service features, fire protection systems, hazardous materials, fire flow requirements, and fire hydrant locations and distribution. Similar to the CBC, the CFC is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions.

**California Department of Transportation and California Highway Patrol**

Two State agencies have primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies: the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). Caltrans manages more than 50,000 miles of California’s highway and freeway lanes, provides intercity rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Caltrans is also the first responder for hazardous material spills and releases that occur on those highway and freeway lanes and intercity rail services.

The CHP enforces hazardous materials and hazardous waste labeling and packing regulations designed to prevent leakage and spills of materials in transit and to provide detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the CHP, which conducts regular inspections of licensed transporters to assure regulatory compliance. In addition, the State of California regulates the transportation of hazardous waste originating or passing through the State.

Common carriers are licensed by the CHP, pursuant to the California Vehicle Code, Section 32000. This section requires licensing every motor (common) carrier who transports, for a fee, in excess of 500 pounds of hazardous materials at one time and every carrier, if not for hire, who carries more than 1,000 pounds of hazardous material of the type requiring placards. Common carriers conduct a large portion of the business in the delivery of hazardous materials.

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Federal and State Hazardous Materials-Specific Programs and Regulations

Asbestos-Containing Materials Regulations

Asbestos-containing materials (ACM) are materials that contain asbestos, a naturally occurring fibrous mineral that has been mined for its useful thermal properties and tensile strength. ACM is generally defined as either friable or non-friable. Friable ACM is defined as any material containing more than one percent asbestos. Friable ACM is more likely to produce airborne fibers than non-friable ACM, and can be crumpled, pulverized, or reduced to powder by hand pressure. Non-friable ACM is defined as any material containing one percent or less asbestos. Non-friable ACM cannot be crumpled, pulverized, or reduced to powder by hand pressure. When left intact and undisturbed, ACM does not pose a health risk to building occupants. Potential for human exposure occurs when ACM becomes damaged to the extent that asbestos fibers become airborne and are inhaled. Inhalation of asbestos airborne fibers can lead to various health problems, the most serious of which includes lung disease.

State-level agencies, in conjunction with the USEPA and OSHA, regulate removal, abatement, and transport procedures for ACMs. Releases of asbestos from industrial, demolition, or construction activities are prohibited by these regulations and medical evaluation and monitoring is required for employees performing activities that could expose them to asbestos. Additionally, the regulations include warnings that must be heeded and practices that must be followed to reduce the risk for asbestos emissions and exposure. Finally, federal, State, and local agencies must be notified prior to the onset of demolition or construction activities with the potential to release asbestos. Specifically, BAAQMD Regulation 11, Rule 2, requires a written plan or notification of intent to demolish or renovate be provided to the District at least ten working days prior to commencement of demolition or renovation.

Lead-based Paint

Lead-based paint (LBP), which can result in lead poisoning when consumed or inhaled, was widely used in the past to coat and decorate buildings. Lead poisoning can cause anemia and damage to the brain and nervous system, particularly in children. Like ACM, LBP generally does not pose a health risk to building occupants when left undisturbed; however, deterioration, damage, or disturbance will result in hazardous exposure. In 1978, the use of LBP was federally banned by the Consumer Product Safety Commission. Therefore, only buildings built before 1978 are presumed to contain LBP, as well as buildings built shortly thereafter, as the phase-out of LBP was gradual.

Polychlorinated Biphenyls

The USEPA prohibited the use of polychlorinated biphenyls (PCBs) in the majority of new electrical equipment starting in 1979, and initiated a phase-out for much of the existing PCB-containing equipment. The inclusion of PCBs in electrical equipment and the handling of those PCBs are regulated by the provisions of the Toxic Substances Control Act (TSCA), 15 United States Code Section 2601 et seq. Relevant regulations include labeling and periodic inspection requirements for certain types of PCB-containing equipment and outline highly specific safety procedures for their disposal. The State of California likewise regulates PCB-laden electrical equipment and materials contaminated above a certain threshold as hazardous waste; these regulations require that such materials be treated, transported, and disposed accordingly. At lower concentrations for non-liquids, regional water quality control boards may exercise discretion over the classification of such wastes.
HAZARDS AND HAZARDOUS MATERIALS

CalOSHA’s Lead in Construction Standard is contained in Title 8, Section 1532.1 of the California Code of Regulations. The regulations address all of the following areas: permissible exposure limits (PELs); exposure assessment; compliance methods; respiratory protection; protective clothing and equipment; housekeeping; medical surveillance; medical removal protection (MRP); employee information, training, and certification; signage; record keeping; monitoring; and agency notification.

Regional Agencies and Regulations

San Francisco Bay Regional Water Quality Control Board

The Porter-Cologne Water Quality Act⁴ established the State Water Resources Control Board (SWRCB) and divided the state into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB). The San Francisco Bay Region (Region 2) is the Regional Water Quality Control Board (San Francisco Bay RWQCB) which regulates water quality in the vicinity of the Project and Project site itself. The San Francisco Bay RWQCB has the authority to require groundwater investigations when the quality of groundwater or surface waters of the state is threatened, and to require remediation actions, if necessary.

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) has primary responsibility for control of air pollution from sources other than motor vehicles and consumer products (which are the responsibility of CalEPA and California Air Resources Board [CARB]). The BAAQMD is responsible for preparing attainment plans for non-attainment criteria pollutants, control of stationary air pollutant sources, and the issuance of permits for activities including demolition and renovation activities affecting asbestos containing materials (District Regulation 11, Rule 2) and lead (District Regulation 11, Rule 1).

Alameda County Fire Department

The Alameda County Fire Department, (ACFD) through a contract for services, provides service to the City of San Leandro. These services include fire suppression, urban search and rescue, fire prevention and public education. The nearest fire stations to the Project site are ACFD Station 10 located less than one mile to the northeast and ACFD Station 11 located just over one mile to the southeast.

Airport Land Use Commission

Alameda County established an airport land use commission (ALUC), in accordance with State law, and subsequently adopted an Airport Land Use Compatibility Plan (ALUCP) for the Oakland International Airport (OAK). The ALUCP is the primary document used by the Alameda County ALUC to help promote compatibility between OAK and its environs. More specifically, the ALUCP acts as a guide for the ALUC and local jurisdictions in safeguarding the general welfare of the public as OAK and the areas surrounding the airport grow. This document also serves as a tool for the Alameda County ALUC in fulfilling its duty to review airport and land use development proposals within the airport influence area (AIA) or referral area associated with the airport. The Project site is within the AIA.

⁴ California Water Code Sections 13000 et seq.
Local Agencies and Regulations

City of San Leandro Environmental Services Section

The State of California transferred administration and enforcement of major environmental programs to local agencies in 1996 in accordance with Senate Bill 1082 (Health and Safety Code 25404). The local agencies under this legislation are known as Certified Unified Program Agencies (CUPAs). The purpose of this legislation was to simplify environmental reporting by streamlining the number of regulatory agency contacts a facility must maintain, and by requiring the use of more standardized forms and reports.

The City of San Leandro Environmental Services Section (ESS) is the CUPA for San Leandro. As such, this section regulates the storage, use, treatment, and disposal of hazardous materials and wastes within the City. State CUPA programs for which the Environmental Services Division is responsible include the:

- Hazardous Materials Business Plan (HMBP) program;
- Hazardous waste generator program;
- California Accidental Release Program (CalARP);
- Above ground petroleum storage tank program;
- Underground tank program; and
- Tiered Permitting for on-site hazardous waste treatment.

In addition, the ESS is responsible for:

- Enforcement of the hazardous materials requirements of the Uniform Fire Code;
- Response to citizen’s complaints; and
- Technical, investigative, and site cleanup services for hazardous materials incidents.

City of San Leandro General Plan 2002 (Updated 2011)

The City of San Leandro’s General Plan was adopted by the San Leandro City Council in May 2002. The Plan was updated in 2011 with the certification of the city’s new Housing Element. Chapter 6 of the San Leandro General Plan addresses environmental hazards in the City, including wildfire, hazardous materials, and emergency preparedness. Chapter 6 also establishes goals, policies, and actions, which are listed in Table 4.7-1, to reduce identified hazards to acceptable levels.

City of San Leandro Hazard Mitigation Master Plan

The City of San Leandro’s Hazard Mitigation Master Plan (Hazard Plan) is intended to prepare the community for potential life threatening emergencies, such as fire, flood, and earthquakes. The Hazard Plan is essentially a “road map” for action involving hazard mitigation and emergency preparedness. In general, the Hazard Plan includes guiding principles, such as community education, establishing early warning systems for notifying the community of emergencies, and continuing training and updating of emergency preparedness.
## Table 4.7-1 | Goals, Policies and Actions of the San Leandro General Plan Relating to Hazards and Hazardous Materials, Emergency Preparedness, and Airport Impacts

<table>
<thead>
<tr>
<th>Goal/Policy Number</th>
<th>Goal/Policy/Action Text</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal 30</strong></td>
<td><strong>WILDFIRE HAZARDS: Minimize urban wildfire hazards, both within the City and throughout the East Bay Hills.</strong></td>
</tr>
</tbody>
</table>
| Policy 30.01 | **Fire Prevention:** Adopt and enforce building and fire prevention codes that require property owners to reduce wildfire hazards on their properties.  
  **Action 30.01-A: Creekside Vegetation**  
  Manage vegetation along San Leandro Creek to reduce wildfire hazards. |
| Policy 30.02 | **Fire Prevention:** Ensure that the planning and design of development in high fire hazard areas minimizes the risks of wildfire and includes adequate provisions for vegetation management, emergency access, and firefighting. |
| Policy 30.03 | **Mutual Aid:** Work collaboratively with other jurisdictions and agencies to reduce wildfire hazards in San Leandro, with an emphasis on effective vegetation management and mutual aid agreements.  
  **Action 30.03-A: Task Force Participation**  
  Continue to participate in multi-jurisdictional task forces and programs that address wildfire hazards in the East Bay Hills. |
| **Goal 33** | **HAZARDOUS MATERIALS: Protect local residents and workers from the risks associated with hazardous materials.** |
| Policy 33.01 | **Regulatory Compliance:** Work with the appropriate county, regional, state, and federal agencies to develop and implement programs for hazardous waste reduction, hazardous material facility siting, hazardous waste handling and disposal, public education, and regulatory compliance.  
  **Action 33.01-A: CUPA Programs**  
  Continue to implement State programs as required by the City’s Certified Unified Program Agency (CUPA) designation.  
  **Action 33.01-B: Implementation of County**  
  Hazardous Waste Management Plan Support Alameda County in the implementation and enforcement of the County Hazardous Waste Management Plan. Periodically review the Plan to ensure that it meets acceptable safety standards.  
  **Action 33.01-C: Review of Groundwater Reports**  
  Regularly review monitoring reports and other data published by state, federal, and regional agencies to track the condition of groundwater plumes and environmental cases in the City. |
| Policy 33.02 | **Clean-Up Of Contaminated Sites:** Ensure that the necessary steps are taken to clean up residual hazardous wastes on any contaminated sites proposed for redevelopment or reuse. Require soil evaluations as needed to ensure that risks are assessed and appropriate remediation is provided. |
| Policy 33.03 | **Design Of Storage And Handling Areas:** Require that all hazardous material storage and handling areas are designed to minimize the possibility of environmental contamination and adverse off-site impacts. Enforce and implement relevant state and federal codes regarding spill containment facilities around storage tanks.  
  **Action 33.03-A: Implement Fire Code**  
  Administer appropriate sections of the Uniform Fire Code to ensure that buildings comply with hazardous materials policies. |
| Policy 33.04 | **Separation From Sensitive Uses:** Provide adequate and safe separation between areas where hazardous materials are present and sensitive uses such as schools, residences, and public facilities.  
  **Action 33.04-A: Zoning Review**  
  Consider zoning standards that ensure that new housing is not developed in areas where relatively large quantities of hazardous materials are handled or stored, and that limit the use of hazardous materials by new businesses located in or near residential areas. |
| Policy 33.05 | **Incident Response:** Maintain the capacity to respond immediately and effectively to hazardous materials incidents. Provide ongoing training for hazardous materials enforcement and response personnel. |
### Table 4.7-1
**Goals, Policies and Actions of the San Leandro General Plan Relating to Hazards and Hazardous Materials, Emergency Preparedness, and Airport Impacts**

<table>
<thead>
<tr>
<th>Goal/Policy Number</th>
<th>Goal/Policy/Action Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy 33.06</td>
<td><strong>Household Hazardous Wastes:</strong> Promote public education about the safe disposal of household hazardous waste, such as motor oil and batteries, including the locations of designated household hazardous waste disposal sites.</td>
</tr>
<tr>
<td></td>
<td><strong>Action 33.06-A: Publicity of Household Hazardous Waste Information</strong> Work with Alameda County and ACI to publicize household hazardous waste collection events and provide each household with information on the location and operating hours of the nearest household hazardous waste collection facilities.</td>
</tr>
<tr>
<td>Policy 33.07</td>
<td><strong>Hazardous Building Materials:</strong> Ensure the safe and proper handling of hazardous building materials, such as friable asbestos and lead based paint. If such materials are disturbed during building renovation or demolition, they should be handled and disposed of in a manner that protects human health and the environment.</td>
</tr>
<tr>
<td>Policy 33.08</td>
<td><strong>Public Awareness:</strong> Increase public awareness of hazardous material use and storage in the City, the relative degree of potential health hazards, and the appropriate channels for reporting odor problems and other nuisances.</td>
</tr>
<tr>
<td></td>
<td><strong>Action 33.08-A: Disclosure to Property Owners</strong> Pursuant to the California Health and Safety Code, enforce community disclosure laws (e.g., Right-to-Know laws) that inform property owners of the presence of hazardous materials nearby.</td>
</tr>
<tr>
<td>Policy 33.09</td>
<td><strong>Community Preparedness:</strong> Ensure that the City's Emergency Preparedness programs include provisions for hazardous materials incidents, as well as measures to quickly alert the community and ensure the safety of residents and employees following an incident.</td>
</tr>
<tr>
<td></td>
<td><strong>Action 33.09-A: Automated Dialing System</strong> Develop and implement an automated telephone dialing system to notify residents in the event of a disaster such as a chemical spill or other hazardous materials incident.</td>
</tr>
<tr>
<td>Goal 34</td>
<td><strong>EMERGENCY PREPAREDNESS:</strong> Attain—and sustain—comprehensive and highly effective emergency preparedness and recovery programs.</td>
</tr>
<tr>
<td>Policy 34.01</td>
<td><strong>Preparedness As A Top Priority:</strong> Establish emergency preparedness as a top City priority. Staffing and funding levels for local preparedness programs should be sufficient to keep all residents and business well informed and prepared in the event of a major earthquake or similar disaster.</td>
</tr>
<tr>
<td></td>
<td><strong>Action 34.01-A: Development of Emergency Operations Center</strong> Develop a dedicated Emergency Operations Center, possibly as a component of another new community facility such as a Senior Center.</td>
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<td></td>
<td><strong>Action 34.01-B: Siting of Arks</strong> Complete the siting of emergency supply cargo containers or “arks” at locations around the City by the end of 2002. Ensure that each ark is properly maintained and that the contents are periodically inspected and updated.</td>
</tr>
<tr>
<td></td>
<td><strong>Action 34.01-C: Essential Service Facility Upgrades</strong> Complete the seismic upgrades of the City’s essential service facilities, including fire stations.</td>
</tr>
<tr>
<td>Policy 34.02</td>
<td><strong>SEMS Planning:</strong> Use the Standard Emergency Management System (SEMS) as the basis for the City’s Emergency Preparedness programs. The City should maintain and periodically update a SEMS-based emergency preparedness plan that provides direction and identifies responsibilities following a disaster.</td>
</tr>
<tr>
<td>Policy 34.03</td>
<td><strong>Public Education And Awareness:</strong> Promote public education and awareness on all aspects of emergency preparedness, including the type and extent of hazards in the community, measures to reduce the likelihood of damage and injury, provisions for emergency supplies, steps to take immediately after a disaster, and the locations of shelters and medical facilities,</td>
</tr>
<tr>
<td></td>
<td><strong>Action 34.03-A: Educational Materials</strong> Prepare printed guides, handbooks, and other mass media that can be distributed to students, neighborhood groups and homeowners to improve emergency preparedness.</td>
</tr>
</tbody>
</table>
### Table 4.7-1

**Goal/Policy Number** | **Goal/Policy/Action Text**
--- | ---

**Goal 37**  
**AIRPORT IMPACTS:** Minimize the local impacts and hazards created by air traffic, ground operations, and all other aviation activities, particularly those associated with Oakland International Airport

**Policy 34.04**  
**Drills:** Conduct periodic emergency response exercises to test the effectiveness of local preparedness procedures. Maintain SEMS training programs to ensure that City personnel are sufficiently prepared to respond to an emergency and staff an Emergency Operations Center.

**Action 34.04-A:** Radio 1610
Maintain and upgrade Radio 1610 AM. Implement a program with the school districts to increase resident and student awareness of this broadcasting band, so that it may provide information as effectively as possible in the event of an emergency.

**Action 34.04-B:** Siren Testing
Conduct periodic testing of the City’s emergency warning sirens, and educate the public and school children about the procedures to follow in the event the sirens are sounded

**Policy 34.05**  
**Training Programs:** Maintain community-based emergency preparedness training programs targeted to neighborhoods and businesses groups. Ensure that such programs respond directly to local needs and are well publicized throughout the community.

**Policy 34.06**  
**Emergency Shelters:** Identify essential emergency facilities in the City, including shelters, and take the necessary actions to ensure that they will remain operational following a disaster.

**Action 34.06-A:** Information on Shelters
Develop a list of emergency shelters and medical facilities in the City. Publicize this information in local newspapers, neighborhood newsletters, cable TV, and printed materials.

**Action 34.06-B:** Disaster Response Equipment
Procure facilities and equipment to improve the City’s response capabilities following a major disaster, including mobile emergency communication and medical trailers, electric power generators, and ham radio equipment.

**Policy 34.07**  
**Schools and Hospitals:** Coordinate local emergency preparedness efforts with the San Leandro and San Lorenzo Unified School Districts, and with local hospitals. Work with both School Districts to facilitate the seismic retrofitting of school buildings and to implement disaster preparedness curricula targeted to students.

**Policy 34.08**  
**Businesses and Social Service Agencies:** Coordinate emergency planning efforts with other jurisdictions, the business community, and social service agencies, including agencies serving special needs groups such as seniors and persons with disabilities.

**Policy 34.09**  
**Multi-Lingual Information:** Ensure that emergency preparedness information, including printed material, radio broadcasts, video, and other media, is available in Spanish, Chinese, and other major languages spoken by San Leandro residents, as well as in English.

**Policy 34.10**  
**Funding Sources:** Pursue a variety of funding sources, such as grants, low-interest loans, and tax credits, to retrofit community facilities and assist residents and businesses with seismic upgrades.

**Action 34.10-A:** Transfer Tax Rebates
Consider a program wherein a portion of the local real property transfer tax would be rebated back to qualifying property owners undertaking seismic upgrades within one year after the purchase of the property.
**4.7.1.2 EXISTING CONDITIONS**

This section describes existing conditions related to hazardous materials, airport hazards, and wildlife fires within the Project site.

**Hazardous Materials Sites**

California Government Code Section 65962.5 requires the CalEPA to compile, maintain, and update specified lists of hazardous material release sites. CEQA (California Public Resources Code Section 21092.6) requires the lead agency to consult the lists compiled pursuant to Government Code Section 65962.5 to determine whether the project and any alternatives are identified on any of the following lists:

- **EPA NPL:** The EPA’s National Priorities List includes all sites under the USEPA’s Superfund program, which was established to fund cleanup of contaminated sites that pose risk to human health and the environment.

- **EPA CERCLIS and Archived Sites:** The EPA’s Comprehensive Environmental Response, Compensation, and Liability Information System includes a list of 15,000 sites nationally identified as hazardous sites. This would also involve a review for archived sites that have been removed from CERCLIS due to No Further Remedial Action Planned (NFRAP) status.
HAZARDS AND HAZARDOUS MATERIALS

- EPA RCRIS (RCRA Info): The Resource Conservation and Recovery Act Information System (RCRIS or RCRA Info) is a national inventory system about hazardous waste handlers. Generators, transporters, handlers, and disposers of hazardous waste are required to provide information for this database.

- DTSC Cortese List: The DTSC maintains the Hazardous Waste and Substances Sites (Cortese) list as a planning document for use by the State and local agencies to comply with the CEQA requirements in providing information about the location of hazardous materials release sites. This list includes the Site Mitigation and Brownfields Reuse Program Database (CalSites).

- DTSC HazNet: The DTSC uses this database to track hazardous waste shipments.

- SWRCB LUSTIS: This stands for the Leaking Underground Storage Tank Information System and the SWRCB maintains an inventory of USTs and leaking USTs, which tracks unauthorized releases.

The required lists of hazardous material release sites are commonly referred to as the “Cortese List” after the legislator who authorized the legislation. Because the statute was enacted more than 20 years ago, some of the provisions refer to agency activities that were conducted many years ago and are no longer being implemented and, in some cases, the information required in the Cortese List does not exist. Those requesting a copy of the Cortese Lists are now referred directly to the appropriate information resources contained on internet websites hosted by the boards or departments referenced in the statute, including DTSC’s online EnviroStor database and the SWRCB’s online GeoTracker database. These two databases include hazardous material release sites, along with other categories of sites or facilities specific to each agency’s jurisdiction.

A search of the online databases on July 16, 2014, revealed one listing within the Project site. The San Leandro Marine Center at 80 San Leandro Marina was listed as a Cleanup Program Site as a result of a release of waste oil (i.e., mix of motor, hydraulic, and lubricating oils) potentially affecting soil. The cleanup status of this site is “Completed-Case Closed,” as of October 27, 1995. In addition, the GeoTracker database identified one Undergroud Storage Tank (UST) permitted (Facility ID 01-007-000040) within the Project site located at 40 San Leandro Marina.

In addition, there are four major groundwater plumes in San Leandro that are undergoing site characterization and/or remediation. These are known as the 1964 Williams Street plume, the Caterpillar plume, the distant warm area (DWA) plume, and the Hester Street plume. The DWA plume is approximately 0.4 miles east of the Project site, as discussed in Chapter 4.8, Hydrology and Water Quality.

Existing or Proposed Schools

There are no existing or proposed schools within ¼-mile of the Project site. The nearest school is Garfield Elementary School located, at 13050 Aurora Drive, just over ¼-mile to the northeast.

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Airport Hazards

The Oakland International Airport (OAK) is located less than 2 miles from the Project site to the northwest. The Project site is within the airport influence area, as described in Section 4.7.1.1, Regulatory Framework. There are no other public use airports within 2 miles of the Project site. Likewise, there are no private airstrips on or near the Project site.

Wildland Fire Hazard

CAL FIRE evaluates fire hazard severity risks according to areas of responsibility (i.e., federal, state, and local). According to CAL FIRE, and as depicted on Figure 4.7-1, there are no very high fire hazard severity zones (VHFHSZ) within the Local Responsibility Area with the exception of a small area near the City’s south center boundary. Also as depicted on Figure 4.7-2, there are no moderate, high, and very high fire hazard severity zones in the State Responsibility Areas in the vicinity of the Project site.

4.7.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, the Project would have a significant impact regarding hazards and hazardous materials if it would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
2. 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.
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼-mile of an existing or proposed school.
4. 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, create a significant hazard to the public or the environment.
5. Be located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport it results in a safety hazard for people residing or working in the project area.
6. Be within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area.
7. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

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San Francisco Bay

Figure 4.7-1
Very High Fire Hazard Severity Zones within the Local Responsibility Area
Figure 4.7-1: Special-Status Plant Species

Figure 4.7-2: Fire Hazard Severity Zones in State Responsibility Areas

Source: Fire and resource Assessment Program (FRAP), 2007; Alameda County, 2013; City of San Leandro, 2014; PlaceWorks, 2014.
HAZARDS AND HAZARDOUS MATERIALS

8. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

4.7.2.1 THRESHOLDS NOT DISCUSSED FURTHER

With regard to Thresholds 3, 4, 6, and 8, as discussed previously in Section 4.7.1.2, Existing Conditions, the Project is not located within ¼-mile of an existing or proposed school, is not located on an agency-listed hazardous materials site that could result in a significant hazard to the public or the environment, is not on or in the vicinity of a private airstrip, and is not within an area where wildland fires pose a significant risk of loss, injury, or death. Therefore, no further discussion of the Project’s impacts related to these thresholds of significance is warranted in this Draft EIR.

4.7.3 IMPACT DISCUSSION

HAZ-1 Implementation of the Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

While commercially available hazardous materials (e.g., fuels, solvents, paints, and some consumer electronics) would be used at various construction sites within the Project site and may generate small amounts of hazardous waste, the waste would be handled in accordance with applicable federal, State, and local laws, policies, and regulations, as described in Section 4.7.1.1, Regulatory Framework. As a general matter, the Project contains office, commercial, recreational and residential land uses and, therefore, would not include manufacturing or research processes that generate substantial quantities of hazardous materials. The City of San Leandro Environmental Services Section and Building and Safety Division coordinate the review of building permits to ensure that hazardous materials requirements are met prior to construction, including required separation between hazardous materials and sensitive land uses, and proper hazardous materials storage facilities. Any businesses that transport, generate, use, and/or dispose of hazardous materials within the Project site would also be subject to existing hazardous materials regulations, such as those implemented by the Environmental Services Section, and hazardous materials permits from the Environmental Services Section. In addition, the San Leandro General Plan contains many and detailed policies and strategies, as also described in Table 4.7.1 in Section 4.7.1.1, that further ensures that new development would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Removal of any permitted USTs would require a permit from the City’s Environmental Services Section. As a condition of the permit, soil sampling would be required at the time of UST removal. If the samples were clean, a no further action (NFA) determination would be forthcoming from the City’s Environmental Services Section. If the samples are determined to be dirty, indicating a product release, the City’s Environmental Services Section would require an investigation to delineate the extent of impacted soil and to determine if underlying groundwater similarly has been impacted. Based on the results of the investigation, soil cleanup may be required. If groundwater has been impacted, the City’s Environmental Services Section may require further investigation and possibly cleanup or they may refer case to the RWQCB. The RWQCB in turn may require further investigation and possibly cleanup. The goal of the City’s
Environmental Services Section and/or the RWQCB would be to ensure adequate investigation and cleanup have been undertaken such that the site does not pose a significant risk to human health or the environment.

The risks, therefore, associated with release of hazardous materials into the environment from the routine transport, use, storage, or disposal of hazardous materials following construction would be less-than-significant.

**Significance Before Mitigation:** Less than significant.

**HAZ-2**

**Implementation of the Project would not 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.**

The Project would facilitate new development, including residential, mixed-use, recreational and commercial uses within the Project site. Demolition of existing structures, including wood and concrete docks, numerous buildings, etc., could potentially result in release of hazardous building materials (e.g., asbestos, lead paint, etc.) into the environment. Use of hazardous materials on newly developed properties after construction could potentially include cleaning solvents, fertilizers, pesticides, and other materials used in the regular maintenance and operation of the proposed uses. Compliance with applicable federal, State, and local laws and regulations regarding handling of these materials described in Section 4.7.1.1, Regulatory Framework, of this chapter, would ensure that potential impacts associated with a reasonably foreseeable upset or accidental release of hazardous materials into the environment would be less-than-significant.

**Significance Before Mitigation:** Less than significant.

**HAZ-5**

**Implementation of the Project within 2 miles of a public airport would not result in a safety hazard for people residing or working in the Project area.**

The Oakland International Airport is located less than two miles northwest of the Project site. As discussed in Section 4.7.1.1, Regulatory Framework, of this chapter, the Project site and its proposed development are within the jurisdiction of ALUC’s ALUCP. Compliance with the ALUCP requirements (see Chapter 4.9, Land Use, Regulatory Framework, for additional details) would ensure that implementation of the Project would not result in a safety hazard for people residing or working in the vicinity of the Project. In addition, the San Leandro General Plan contains many and detailed policies and actions, as described in Table 4.7.1 in Section 4.7.1.1, that would not result in a safety hazard for people residing or working in the vicinity of the Project site.

The Project does not propose the removal or modification of the existing boat launch ramp on Pescador Point. As a result, ACFD’s ability to launch rescue boats from the Project site would not be affected.
Compliance with applicable federal, State, and local laws and regulations regarding air navigation hazards, as described in Section 4.7.1.1, Regulatory Framework, of this chapter, would ensure the associated risks with people residing and working in the vicinity of the Project site would be less-than-significant.

**Significance Before Mitigation:** Less than significant.

**HAZ-7**

Implementation of the Project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

Construction of the Project would result in changes to current circulation through the site for emergency vehicles, cars, buses, bicycles, and pedestrians. The Project proposes to use Marina Boulevard, with direct access to Interstate 880, Monarch Bay Drive, and Fairway Drive to provide access to the Project Site. As described in Chapter 4.13, Transportation and Traffic, the Marina Boulevard interchange at Interstate 880 is planned to be reconfigured and signalized at both northbound and southbound ramps, and Fairway Drive would be widened to three lanes from Merced Street to Miller Street. The existing roadways within the Project site, Mulford Point Drive and Pescador Point, also will be reconfigured. However, no physical components that would interfere with the ability to implement emergency response are proposed. Project plans will include fire and emergency access through all phases of construction and operation. Compliance with provisions of the 2014 California Fire Code and the 2014 California Building Code would ensure that buildout of the Project would not interfere with an adopted emergency response plan or emergency evacuation plan. In addition, the San Leandro General Plan contains policies and actions that further ensures that new development would not conflict with emergency operations in the vicinity of the Project site.

Compliance with applicable federal, State, and local laws and regulations regarding emergency preparedness, as described in Section 4.7.1.1, Regulatory Framework, of this chapter, would ensure future development under the Project would not interfere with an adopted emergency response plan or emergency evacuation plan, such as the Multi-Hazard Mitigation Plan, and impacts would be less than significant.

**Significance Before Mitigation:** Less than significant.

**HAZ-9**

Implementation of the Project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to hazards and hazardous materials.

With respect to hazardous materials in the environment, effects are generally limited to site-specific conditions due to the fact that exposure typically is dependent on proximity to the source of the hazardous material. An exception to this precept would be contaminant groundwater plumes resulting from multiple sources and underlying larger areas. However, as discussed previously in section 4.7.1.2, Existing Conditions, none of the four major groundwater plumes in San Leandro lies beneath or in close proximity to the Project site.
proximity of the Project. The geographic scope for cumulative impacts associated with hazards and hazardous materials, therefore, encompasses the Project site and immediate vicinity.

The cumulative analysis discussions contained in Chapters 4.1 through 4.14 include discussions of growth projections and reference specific projects as to their relevance to impact analyses. Past, present, and reasonably foreseeable projects in the area around the Project site are summarized in Chapter 4, Table 4-1, Cumulative Project List, and include several residential developments, an office development, improvements to the Davis Street Transfer Station, warehouse distribution building, and additions to existing packaging and manufacturing facilities. Potential projects include a future Bay Fair Transit Village, and two residential mixed-use developments. Development of these cumulative projects would involve increased storage, use, and disposal of common cleaning substances, building maintenance products, paints and solvents; however, these potentially hazardous materials would not be of a type or occur in sufficient quantities to pose a significant hazard to public health and safety or the environment. While cumulative development in the vicinity of the Project site would bring more residents into the area, compliance with existing federal, State, local regulations and standards, and the San Leandro General Plan policies listed in Section 4.7.1.1 of this chapter would ensure that risks associated with the transport, storage, use, and disposal of hazardous materials and waste would be less than significant.

As discussed previously, development of the Project would not result in significant impacts from the increased use of hazardous household materials and would not increase exposure to potential hazards associated with wildland fires. The Project would not interfere with implementation of emergency response plans. In addition, potential project-level impacts associated with hazards and hazardous materials would be less than significant through compliance with local, regional, State, and federal regulations, all of which apply to other new development as well. Consequently, construction of the Project in combination with past, present, and reasonably foreseeable projects in the near vicinity would not result in a significant cumulative impact.

**Significance Before Mitigation:** Less than significant.
4.8 HYDROLOGY AND WATER QUALITY

This chapter discusses the regulatory framework, existing conditions, and impacts of the proposed Project related to hydrology and water quality.

4.8.1 ENVIRONMENTAL SETTING

4.8.1.1 REGULATORY FRAMEWORK

This section summarizes key federal, State, regional and local policies and regulations pertaining to hydrology and water quality that are applicable to the proposed Project.

Federal Regulations

Clean Water Act

The U.S. Environmental Protection Agency (EPA) is the lead federal agency responsible for water quality management. The Clean Water Act (codified at 33 U.S.C. Sections 1251-1376) of 1972 is the primary federal law that governs and authorizes water quality control activities by the EPA, as well as the states. Various elements of the Clean Water Act address water quality, and they are discussed below.

Permits to dredge or fill waters of the United States are administered by the U.S. Army Corps of Engineers (Army Corps) under Section 404 of the Clean Water Act. “Waters of the United States” are defined as all waters subject to the ebb and flow of the tide (which includes harbors), interstate waters, water impoundments, streams, rivers, and wetlands. The regulatory branch of the Army Corps is responsible for implementing and enforcing Section 404 of the Clean Water Act and issuing permits. Any activity that discharges fill material and/or requires excavation in waters of the United States must obtain a Section 404 permit. Before issuing the permit, the Army Corps requires that an analysis be conducted to demonstrate that the proposed project is the least environmentally damaging practicable alternative. Also, the Army Corps is required to comply with the National Environmental Protection Act (NEPA) before it may issue an individual Section 404 permit.

Under Section 401 of the Clean Water Act, every applicant for a Section 404 permit that may result in a discharge to a water body must first obtain State Water Quality Certification that the proposed activity will comply with State water quality standards. Certifications are issued in conjunction with Army Corps Section 404 permits for dredge and fill discharges. In addition, a Water Quality Certification must be sought for any activity that would result in the placement of structures in waters of the United States that are not jurisdictional to the Army Corps, such as isolated wetlands, to ensure that the proposed activity complies with State water quality standards. In California, the authority to either grant water quality certification or waive the requirement is delegated by the State Water Resources Control Board (SWRCB) to its nine Regional Water Quality Control Boards (RWQCBs).

Under federal law, the EPA has published water quality regulations under Volume 40 of the Code of Federal Regulations (40 CFR). Section 303 of the Clean Water Act requires states to adopt water quality standards for all surface waters of the United States. As defined by the Clean Water Act, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question and (2)
criteria that protect the designated uses. Section 304(a) requires the EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. In California, the EPA has designated the SWRCB and its RWQCBs with authority to identify beneficial uses and adopt applicable water quality objectives.

When water quality does not meet Clean Water Act standards and compromises designated beneficial uses of a receiving water body, Section 303(d) of the CWA requires that water body be identified and listed as “impaired”. Once a water body has been designated as impaired, a Total Maximum Daily Load (TMDL) must be developed for the impairing pollutant(s). A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards, with a factor of safety included. Once established, the TMDL allocates the loads among current and future pollutant sources to the water body. In the vicinity of the Project site, Lower San Francisco Bay is listed as a Section 303(d) impaired water body.¹

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established by the Clean Water Act to regulate municipal and industrial discharges to surface waters of the United States, including discharges from municipal separate storm sewer systems (MS4s). Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring and other activities.

Under the NPDES Program, all facilities which discharge pollutants into waters of the US are required to obtain an NPDES permit. Requirements for storm water discharges are also regulated under this program. In California, the NPDES permit program is administered by the SWRCB through the nine RWQCBs. The City of San Leandro lies within the jurisdiction of San Francisco RWQCB (Region 2) and is subject to the waste discharge requirements of the Municipal Regional Stormwater Permit (Order No. R2-2009-0074) and NPDES Permit No. CAS612008, as amended by Order No. R2-2011-0083 in 2011. The Alameda County permittees include Alameda County, the Alameda County Flood Control and Water Conservation District, and 14 cities, including San Leandro. The current Municipal Regional Stormwater Permit (MRP) will expire at the end of 2014 and a new permit is due to be reissued in 2015.

Under Provision C.3 of the MRP, the co-permittees use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent

increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low impact development (LID) techniques.

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA also issues Flood Insurance Rate Maps (FIRMs) that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection is established by FEMA. FEMA’s minimum level of flood protection for new development is the 100-year flood event, also described as a flood that has a 1-in-100 chance of occurring in any given year.

Additionally, FEMA has developed requirements and procedures for evaluating earthen levee systems and mapping the areas affected by those systems. Levee systems are evaluated for their ability to provide protection from 100-year flood events and the results of this evaluation are documented in the FEMA Levee Inventory System (FLIS). Levee systems must meet minimum freeboard standards and must be maintained according to an officially adopted maintenance plan. Other FEMA levee system evaluation criteria include structural design and interior drainage.

Minimum NFIP floodplain management building requirements are applicable to some portions of the Project site per Title 44 Code of Federal Regulations, Sections 59 through 65. The portion of the project west of Monarch Bay Drive and just north of the existing boat launch is located in a Special Flood Hazard Zone VE, which is defined as a coastal flood zone where base flood wave heights are 3 feet or greater, or where other damaging base flood wave effects have been identified. The project areas east of Monarch Bay Drive are outside of the 100-year floodplain. As required by the FEMA regulations, all development constructed within the Special Flood Hazard Zone (as delineated on the FIRM) must be elevated so that the lowest floor is at or above the base flood elevation level. The term “development” is defined by FEMA as any man-made change to improved or unimproved real estate, including but not limited to buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials. Per these regulations, if development in these areas occurs, a hydrologic and hydraulic analysis must be performed prior to the start of development, and must demonstrate that the development does not cause any rise in base flood elevation levels, as no rise is permitted within regulatory floodways. Upon completion of any development that changes existing Special Flood Hazard Areas, the NFIP directs all participating communities to submit the appropriate hydrologic and hydraulic data to FEMA for a FIRM revision, as soon as practicable, but not later than six months after such data becomes available.

FEMA is currently conducting a new coastal study called the California Coastal Analysis and Mapping Program (CCAMP) that will revise and update flood and wave data for San Francisco Bay and its estuaries.

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HYDROLOGY AND WATER QUALITY

The analyses rely on a combination of hydrodynamic models and wave models to calculate elevated still water levels (SWELs), wave heights, and overland wave propagation that will be used to produce updated FIRM panels. These analyses along with local topographic data will to be used to evaluate the location and extent of Special Flood Hazard Areas (SFHAs) and base flood elevations (BFEs). The preliminary maps will be produced in 2015. However, a preliminary map provided by FEMA shows the portion of the project south of Pescador Point Drive would be eliminated from the 100-year floodplain but the areas east of Monarch Bay Drive would be within the 100-year floodplain.

Rivers and Harbors Act of 1899

Under the Rivers and Harbors Act of 1899, the Army Corps requires permits for activities involving the obstruction of the navigable capacity of any waters of the United States or the construction of any structures in or over navigable waters of the United States, including ports, canals, navigable rivers or other waters. “Navigable waters” under Section 10 of the Rivers and Harbors Act are defined as “those waters of the United States that are subject to the ebb and flow of the tide shoreward to the mean high water mark and/or are presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce.” Pursuant to Section 10 of the Rivers and Harbors Act, the Army Corps administers this regulatory program separate from the Section 404 program. A Section 10 permit may be required for structures or work outside the limits of navigable waters if the structure or work affects the course, location, condition, or capacity of the water body.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (FWCA) provides the basic authority for the U.S. Fish and Wildlife Service (FWS) to evaluate impacts to fish and wildlife from proposed water resource development projects. This Act requires that all federal agencies consult with the FWS, the National Marine Fisheries Service, and State wildlife agencies (i.e., the California Department of Fish and Wildlife) for activities that affect, control, or modify waters of any stream or bodies of water. Under the Act, the FWS has responsibility for reviewing and commenting on all water resources projects. For example, the FWS would provide consultation to the Army Corps with regard to issuance of a Section 404 permit.

If a project may result in the “incidental take” of a listed species, an incidental take permit is required. An incidental take permit allows a developer to proceed with an activity that is legal in all other respects but that results in the “incidental taking” of a listed species. A Habitat Conservation Plan (HCP) must also accompany an application for an incidental take permit. The purpose of the HCP is to ensure that the effects of the permitted action or listed species are adequately minimized and mitigated.

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6 Email correspondence between FEMA, Alameda County, and the City of San Leandro in December 2013 and preliminary FIRM maps provided by FEMA.
State Regulations

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act (Water Code sections 13000 et seq.) is the basic water quality control law for California. The act established the SWRCB and divided the state into nine regional basins, each under the jurisdiction of a RWQCB. The SWRCB is the primary state agency responsible for the protection of California’s water quality and groundwater supplies. The RWQCBs carry out the regulation, protection, and administration of water quality in each region. Each regional board is required to adopt a water quality control plan or basin plan that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region’s ground and surface water, and local water quality conditions and problems. As described above, San Leandro is within the jurisdiction of the San Francisco Bay RWQCB (Region 2).

The Porter-Cologne Act also authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements (WDRs), NPDES permits, Section 401 water quality certifications, or other approvals. Other State agencies with jurisdiction over water quality regulation in California include the California Department of Health Services (DHS) for drinking water regulations, the California Department of Fish and Wildlife (CDFW) and the Office of Environmental Health and Hazard Assessment (OEHHA).

State Water Resources Control Board (SWRCB) General Construction Permit

In California, the SWRCB has broad authority over water quality control issues for the State. The SWRCB is responsible for developing statewide water quality policy and exercises the powers delegated to the State by the federal government under the CWA.

Construction activities that disturb one or more acres of land that could impact hydrologic resources must comply with the requirements of the SWRCB Construction General Permit (2009-0009-DWQ) as amended by 2010-0014-DWQ. Under the terms of the permit, applicants must file Permit Registration Documents (PRDs) with the SWRCB prior to the start of construction. The PRDs include a Notice of Intent (NOI), risk assessment, site map, Storm Water Pollution Prevention Plan (SWPPP), annual fee, and a signed certification statement. The PRDs are now submitted electronically to the SWRCB via the Storm Water Multiple Application and Report Tracking System (SMARTS) website.

Applicants must also demonstrate conformance with applicable best management practices (BMPs) and prepare a Storm Water Pollution Prevention Plan (SWPPP), containing a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection, and discharge points, general topography both before and after construction, and drainage patterns across the project site. The SWPPP must list BMPs that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. Additionally, the SWPPP must contain a visual monitoring program, a chemical monitoring program for nonvisible pollutants if there is a failure of the BMPs, and a sediment-monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Some sites also require implementation of a Rain Event Action Plan (REAP). The updated Construction General Permit (2010-0014-DWQ), effective on September 2, 2012 also requires applicants to comply with post-construction runoff reduction requirements.
California Coastal Act of 1976

The California Coastal Act of 1976 established three designated coastal management agencies to plan and regulate the use of land and water in the coastal zone: the California Coastal Commission, the San Francisco Bay Conservation and Development Commission, and the California Coastal Conservancy. Under California’s federally approved Coastal Management Program, the California Coastal Commission manages development along the California coast except for San Francisco Bay, while the San Francisco Bay Conservation and Development Commission oversees development. The mission of the California Coastal Conservancy is to purchase, protect, restore, and enhance coastal resources and provide shoreline access. Additional information on the San Francisco Bay Conservation and Development Commission, which has jurisdiction for projects in and around San Francisco Bay, is discussed in the Local Regulations section.

State Updated Model Water Efficient Landscape Ordinance (Assembly Bill 1881)

The updated Model Water Efficient Landscape Ordinance requires cities and counties to adopt landscape water conservation ordinances by January 31, 2010 or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Water Efficient Landscape Ordinance (WELO). The City of San Leandro adopted the Bay-Friendly Landscape Ordinance in accordance with AB1881. The ordinance incorporates landscape protocols developed by the Alameda County Waste Management Authority (StopWaste) and all parameters in the WELO. The ordinance became effective as of February 1, 2010.

Local Regulations

San Francisco Bay Regional Water Quality Control Board

Regional authority for planning, permitting, and enforcement is delegated to the nine Regional Water Quality Control Boards (RWQCBs). The regional boards are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in the plans. San Leandro is within the jurisdiction of the San Francisco Bay RWQCB (Region 2).

The San Francisco Bay RWQCB addresses region-wide water quality issues through the creation of the Water Quality Control Plan for San Francisco Bay Basin (Basin Plan). The Basin Plan was updated most recently in June 2013. This Basin Plan designates beneficial uses of the State waters within Region 2, describes the water quality that must be maintained to support such uses, and provides programs, projects, and other actions necessary to achieve the standards established in the Basin Plan. The Water Quality Control Policy for the Enclosed Bays and Estuaries of California, as adopted by the SWRCB in 1995, also provides water quality principles and guidelines to prevent water quality degradation and protect the beneficial uses of waters of enclosed bays and estuaries.

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Bay Protection and Toxic Cleanup Program

In 1989, the California legislature established the Bay Protection and Toxic Cleanup Program with the goal of protecting present and future beneficial uses of the Bay and estuarine waters of California. In addition, the program was tasked with identifying toxic hot spots (i.e., localized areas with elevated concentrations of pollutants) and developing prevention and control strategies to remediate the toxic hot spots. As part of this program in 1993, the San Francisco Bay RWQCB initiated the Regional Monitoring Program (RMP), which includes water quality monitoring near the Project site. The purpose of the program is to assess regional water quality conditions, characterize patterns and trends of contaminant concentrations and distribution in the water column, and identify general sources of contamination to San Francisco Bay. The program has established a database of water quality and sediment quality in the Bay, particularly with respect to trace elements and organic contaminants.

San Francisco Bay Conservation and Development Commission (BCDC)

The California Coastal commission carries out its mandate locally through the San Francisco Bay Area Conservation and Development Commission (BCDC). BCDC’s jurisdiction for San Francisco Bay includes all sloughs, marshlands between mean high tide and five feet above mean sea levels, tidelands, submerged lands, and land within 100 feet of the Bay shoreline. The precise boundaries are determined by BCDC upon request. For planning purposes, BCDC assumes that projects have a lifespan of at least 50 to 90 years.9

Since the issuance of the Governor’s Executive Order S-13-08 on November 2008, BCDC has followed other Natural Resource Agencies in planning for two sea level rise scenarios: 16 inches by mid-century and 55 inches by the end of the century. In April 2009, BCDC published its report with maps indicating zones that could be flooded due to sea level rise and that were based on existing elevations.10 In May 2011, BCDC published a revised draft of its proposed amendments to its master planning document, the Bay Plan. This received considerable public review and environmental review, and was adopted on October 6, 2011.11-12 These amendments include revised findings and policies to adapt to the effects of sea level rise.

As a permitting authority along the San Francisco Bay shoreline, BCDC is responsible for granting or denying permits for any proposed fill, extraction of materials, or change in the use of any water, land, or structure within BCDC’s jurisdiction. Their jurisdiction extends from all tidally influenced portions of the site up to the Mean High Tide and then continuing up to 100-feet inland. Therefore, BCDC would have jurisdiction for most of the proposed project west of Monarch Bay Drive. A permit from BCDC is required

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10 Bay Area Conservation and Development Commission (BCDC), 2009. Living with a Rising Bay: Vulnerability and Adaptation in San Francisco Bay and on its Shoreline.
11 Bay Area Conservation and Development Commission (BCDC), 2011. Staff Report, Revised Preliminary Recommendation and Environmental Assessment for Proposed Bay Plan Amendment No. 1-08 Concerning Climate Change. (For Commission consideration on September 1, 2011.)
for any Bay filling or dredging, which includes piers, pilings, and floating structures moored in the Bay for extended periods. A permit from BCDC would be required before proceeding with shoreline development. Permits may be granted or denied only after public hearings and after the process for review and comment by the City and County has been completed. BCDC will approve the permit if it is determined that the project is in accordance with defined standards for use of the shoreline, provisions for public access, and advisory review of appearance.

Projects in BCDC jurisdiction that involve Bay fill must be consistent with the Bay Plan policies on the safety of fills and shoreline protection. Land elevation changes caused by tectonic activity or consolidation/compaction of soft soils, such as Bay muds, is variable around the Bay. Consequently, some parts of the Bay may experience a greater relative rise in sea level that other areas. According to BCDC policies, new projects on fill or near the shoreline should either be set back from the edge of the shore so that the project will not be subject to dynamic wave energy, be built so the bottom floor level of structures will be above a 100-year flood elevation that takes future sea level rise into account for the expected life of the project, be specifically designed to tolerate periodic flooding, or employ other effective means of addressing the impacts of future sea level rise and storm activity.

Alameda County Flood Control & Water Conservation District

The Alameda County Flood Control and Water Conservation District (ACFCD) is a division of the Alameda County Public Works Agency that develops and maintains flood control systems for the public safety, health, and welfare of Alameda County residents and businesses. Additionally, the ACFCD enforces pollution control regulations governing County waterways.

The ACFCD is in the process of issuing a Hydrology and Hydraulics Manual that will outline the District’s requirements for new developments and modification of existing flood control systems in western Alameda County. The ACFCD requires that primary drainage systems (between 50 acres and 10 square miles) be evaluated for two design storms. The system must convey the five-year storm when using the 100-year tide level of 7.6 feet above sea level (National Geodetic Vertical Datum [NGVD] 29) as an outlet constraint, and must convey the 100-year storm event when using the mean higher high water level of 4.4 feet above sea level (NGVD 29) as an outlet control constraint. In addition, all facilities that are part of the FEMA Flood Insurance Study must be designated to contain the FEMA 100-year storm using FEMA criteria. Where these facilities are subject to tidal backwater effects, two water surface profiles must be calculated and compared. The 100-year tide is run flat (no outflow from the channel), and the FEMA 100-year flow is run against a beginning water surface height of Mean Higher High Water. The higher of these two water surfaces controls the design. Secondary systems (drainage area less than 50 acres) are required to convey the 10-year storm event when using the higher water surface calculated for the two design storms.

Alameda County Clean Water Program (CWP)

Together with 13 other incorporated cities in Alameda County, San Leandro has joined with the Alameda County Flood Control & Water Conservation District, the Zone 7 Water Agency, and Alameda County in the

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Clean Water Program (CWP) initiative. Members of the program are regulated waste dischargers under the 2009 NPDES Permit issued by the San Francisco Bay RWQCB, and are responsible for municipal storm drain systems and watercourses that they own or operate. As part of the permitting process, dischargers must submit a Stormwater Management Plan that describes a framework for management of stormwater discharges during the term of the permit.

The City of San Leandro, as a co-permittee under the NPDES permit, is also subject to the Provision C.3 requirements for new development and redevelopment projects, and includes post-construction stormwater management requirements. Provision C.3 requirements are separate from, and in addition to, requirements for erosion and sediment control and for pollution prevention measures during construction. These requirements apply to all new development or redevelopment projects that create or replace 10,000 square feet of impervious surfaces and specific land use projects that create or replace 5,000 square feet of impervious surfaces (i.e., auto service facilities, retail gasoline outlets, restaurants, and/or uncovered surface parking). Project applicants are required to implement site design measures, source control measures, and stormwater treatment measures to reduce stormwater pollution during operation of the project. The permit specifies methods to calculate the required size of treatment devices.

Alameda County Watercourse Ordinance

The Alameda County Watercourse Ordinance is intended to prevent damage during flooding, control erosion and sedimentation, safeguard and preserve watercourses, and restrict the discharge of pollutants into watercourses. A watercourse is defined as any natural or man-made channel through which water flows continuously or intermittently. The ordinance controls development within and adjacent to watercourses by establishing 20-foot minimum setbacks for buildings from the top of the bank and provides the provisions for the issuance of watercourse permits. Implementation of this ordinance serves to protect surface water and groundwater from erosion, sedimentation, and sources of pollution.

San Leandro General Plan

The City of San Leandro General Plan, adopted in 2002 and updated in 2011, contains goals and policies that pertain to hydrology and water quality. The relevant goal and policies are listed in Table 4.8-1.

San Leandro Municipal Code

Four chapters of the City of San Leandro Municipal Code contain directives pertaining to hydrology and water quality issues, as explained in the following paragraphs:

- Stormwater Management and Discharge Control – Chapter 3-15. This chapter provides the storm water requirements for projects conducted within the City of San Leandro and is consistent with the requirements of the San Francisco RWQCB.

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## Table 4.8-1  San Leandro General Plan Goal and Policies

<table>
<thead>
<tr>
<th>Goal/Policy Number</th>
<th>Goal/Policy/Action Text</th>
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</thead>
<tbody>
<tr>
<td><strong>Chapter 6, Environmental Hazards</strong></td>
<td></td>
</tr>
<tr>
<td>Goal 29</td>
<td><strong>Mitigation of Natural Hazards.</strong> Reduce the potential for injury, property damage and loss of life resulting from earthquakes, landslides, floods, and other natural disasters.</td>
</tr>
<tr>
<td>Policy 29.01</td>
<td><strong>Risk Management.</strong> Minimize risks from geologic, seismic, and flood hazards by ensuring the appropriate location, site planning, and design of new development. The City’s development review process, and its engineering and building standards, should ensure that new construction is designed to minimize the potential for damage.</td>
</tr>
<tr>
<td>Policy 29.06</td>
<td><strong>Construction in the Flood Plain.</strong> Implement federal requirements relating to new construction in flood plain areas to ensure that future flood risks to life and property are minimized.</td>
</tr>
<tr>
<td>Action 29.06-A</td>
<td><strong>FIRM Amendments.</strong> Continue to work with FEMA to amend and update Federal Insurance Rate Maps (FIRMs) so that they correctly depict flood hazards to the City. Continue the City’s elevation verification program to assist homeowners in determining their flood zone designation and to further refine the flood plain boundaries.</td>
</tr>
<tr>
<td>Policy 29.07</td>
<td><strong>Reducing Flood Hazards.</strong> Work collaboratively with County, State, and federal agencies to develop short- and long-term programs that reduce flood hazards in the City. At the local level, the City will regularly maintain its storm drain system and ensure that those portions of San Leandro Creek under its jurisdiction remain clear of obstructions.</td>
</tr>
<tr>
<td>Action 29.07-A</td>
<td><strong>Coordination with ACFCWD.</strong> Improve coordination with the Alameda County Flood and Water Conservation District to ensure that flood channels are regularly cleaned and maintained.</td>
</tr>
<tr>
<td>Goal 32</td>
<td><strong>Water Quality.</strong> Maintain and improve water quality in San Leandro’s creeks, wetlands, and offshore waters.</td>
</tr>
<tr>
<td>Policy 32.01</td>
<td><strong>Urban Runoff Control.</strong> Continue to implement water pollution control measures aimed at reducing pollution from urban runoff. These measures should emphasize best management practices by residents, businesses, contractors, and public agencies to ensure that surface water quality is maintained at levels that meet state and federal standards.</td>
</tr>
<tr>
<td>Action 32.01-A</td>
<td><strong>Stormwater Pollution Prevention Plans.</strong> As required by state and federal law, require Stormwater Pollution Prevention Plans for qualifying projects and ensure that such projects include appropriate measures to minimize the potential for water pollution.</td>
</tr>
<tr>
<td>Policy 32.02</td>
<td><strong>Clean Water Education.</strong> Promote the public information and participation provisions of the Alameda Countywide Clean Water Program.</td>
</tr>
<tr>
<td>Action 32.02-A</td>
<td><strong>Clean Water Program Educational Components.</strong> Continue to implement programs in coordination with the Alameda County Clean Water Program to better educate the public on urban runoff hazards. Examples of these programs include storm drain stenciling, preparation of brochures and posters, website information, and television and newspaper advertising. Use these programs to increase awareness of clean water laws and the penalties associated with illicit discharges.</td>
</tr>
<tr>
<td>Policy 32.03</td>
<td><strong>Interagency Coordination.</strong> Coordinate water quality planning, regulation, and monitoring with other public agencies that are involved in water resource management. Establish partnerships and task forces with these agencies and with nearby cities as needed to develop programs addressing issues that cross jurisdictional lines.</td>
</tr>
<tr>
<td>Action 32.03-A</td>
<td><strong>NPDES Permit Revisions.</strong> Remain an active participant in discussions of possible revisions to state and federal clean water legislation, including revisions to the Alameda County NPDES stormwater permit.</td>
</tr>
<tr>
<td>Policy 32.04</td>
<td><strong>Water Quality Monitoring.</strong> As required by federal, State, and regional programs, conduct monitoring of water quality in San Leandro waterways to evaluate the progress of local clean water programs and identify the necessary steps for improvement.</td>
</tr>
<tr>
<td>Action 32.04-A</td>
<td><strong>Water Quality Monitoring Programs.</strong> Continue water quality monitoring programs in San Leandro waterways.</td>
</tr>
<tr>
<td>Policy 32.05</td>
<td><strong>Public Works Maintenance.</strong> Implement City Public Works maintenance activities, including scheduled street sweeping and cleaning of storm drains and culverts, to minimize pollution from surface runoff.</td>
</tr>
</tbody>
</table>
### TABLE 4.8-1  SAN LEANDRO GENERAL PLAN GOAL AND POLICIES

<table>
<thead>
<tr>
<th>Goal/Policy Number</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Action 32.05-A</td>
<td>Community Cleanups. Coordinate with community groups to develop clean-up programs for the shoreline, creeks, and flood control channels to remove debris and litter and minimize the potential for surface water pollution.</td>
</tr>
<tr>
<td>Action 32.05-B</td>
<td>Street Sweeping Improvements. Improve the effectiveness of the City’s street sweeping program through measures such as 1) more aggressive ticketing or towing of illegally parked cars (by the San Leandro Police Department), 2) more frequent scheduling of street sweeping, 3) better coordination with trash collection so that sweeping is not hampered by curbside trash containers and recycling bins, 4) installation of “no parking on street sweeping days” signs, and 5) increased public education about the program and the water quality benefits it provides.</td>
</tr>
<tr>
<td>Policy 32.06</td>
<td>Illicit Discharges. Control illicit discharges into the City’s stormwater system through inspections, compliance evaluation, enforcement programs, and tracking activities.</td>
</tr>
<tr>
<td>Policy 32.07</td>
<td>Pre-Treatment Requirements. Maintain and enforce pre-treatment requirements for industries as needed to minimize the discharge of potentially toxic materials into the City’s sanitary sewer system.</td>
</tr>
<tr>
<td>Policy 32.08</td>
<td>Hazardous Spill Response. Maintain and update hazardous spill response and cleanup programs that minimize the potential impacts of toxic spills on water quality.</td>
</tr>
<tr>
<td>Policy 32.09</td>
<td>Nearshore Waters. Ensure the continued improvement of nearshore waters through the regulation of water pollution sources within and around the San Leandro Marina, including boats and live-aboards.</td>
</tr>
<tr>
<td>Policy 32.10</td>
<td>Groundwater Protection. Protect San Leandro’s groundwater from the potentially adverse effects of urban uses. Future land uses should be managed to reduce public exposure to groundwater hazards and minimize the risk of future hazards.</td>
</tr>
<tr>
<td>Action 32.10-A</td>
<td>Groundwater Monitoring. Encourage continued monitoring of local groundwater by State regulatory agencies and take steps to prevent further contamination.</td>
</tr>
<tr>
<td>Policy 32.11</td>
<td>Impervious Surfaces. Encourage the use of porous pavement and other practices to reduce impervious surfaces and the amount of stormwater runoff from parking lots and driveways.</td>
</tr>
</tbody>
</table>

**Chapter 8, Community Services and Facilities**

| Goal 52            | Infrastructure. Ensure that local water, sewer, storm drainage, and solid waste facilities are well maintained; improvements meet existing and future needs; and land use decisions are contingent on the adequacy and maintenance of such facilities. |
|--------------------| Development Impacts. Permit new development only when infrastructure and utilities can be provided to that development without diminishing the quality of service provided to the rest of the City. |
| Policy 52.02       | Fair Share Costs. Require future development to pay its fair share of the cost of improving the water, sewer, drainage, and other infrastructure systems needed to serve that development. Use fees and other appropriate forms of mitigation to cover the costs of upgrading public infrastructure. |
| Policy 52.03       | Coordination. Coordinate local infrastructure planning with Alameda County Flood Control and Water Conservation District (ACFCD) to ensure that infrastructure remains adequate to serve existing and planned development. |
| Policy 52.06       | Drainage. Require drainage improvements for new development which ensure that stormwater runoff is adequately handled both on-site and off-site and which implement state and federal clean water requirements. |
| Policy 52.07       | Maintenance. Ensure that sufficient funding is provided for the ongoing maintenance of City-owned facilities, including streets, street lights, traffic signals, landscaping, street trees, storm drains, public buildings and other infrastructure. |

*Source: San Leandro General Plan, 2011.*
HYDROLOGY AND WATER QUALITY

- **Bay-Friendly Landscaping Requirements for City Projects – Chapter 3-22.** The City of San Leandro has also adopted a Water Efficiency Landscape Ordinance in coordination with StopWaste that exceeds the State’s model ordinance in terms of water savings.

- **Floodplain Management – Chapter 7-9.** The ordinance is designed to protect human life and health, minimize expenditures for costly flood control projects, minimize the need for rescue and relief efforts, business interruptions, and damage to public facilities and utilities. The ordinance also ensures that property owners construct new and substantially improved buildings in the 100-year floodplain in accordance with the National Flood Insurance Program’s goals to protect life and property.

- **Grading, Excavations, and Fill – Chapter 7-12.** This requires projects to prepare erosion control and sedimentation control plans and drainage plans to the City Engineer for approval prior to the start of project construction. The plans will ensure that storm water from the site meets the quality standards dictated by Chapter 3-15, Stormwater Management and Discharge Control. The erosion and sediment control plans must be prepared in accordance with the most current “Association of Bay Area Governments (ABAG) Manual of Standards for Erosion and Sediment Control Measures” and the “Handbook for Erosion and Sediment Control.”

### 4.8.12 EXISTING CONDITIONS

#### Regional Hydrology

The Project is located in the San Francisco Bay Hydrologic Region, which covers approximately 4,500 square miles and encompasses 10 counties, including Alameda County.\(^\text{15}\) It corresponds with the boundaries of the San Francisco Regional Water Quality Control Board (RWQCB) Region 2 and the San Francisco Bay Area Integrated Regional Water Management (IRWM) Plan. The San Francisco Bay Hydrologic Region is a complex network of watersheds, marshes, rivers, creeks, reservoirs, and bays mostly draining into the San Francisco Bay and the Pacific Ocean.

The Project is located within the San Leandro Marina Watershed.\(^\text{16}\) Runoff within the watershed is collected through a system of underground culverts, storm drains, and engineered channels that discharge into San Francisco Bay. The Estudillo Canal Watershed is located just south of the Project site and runoff from this watershed drains into the Estudillo Canal, which ultimately discharges into San Francisco Bay. The creeks, drainage channels, and watersheds in the vicinity of the Project site are shown on Figure 4.8-1.

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Figure 4.8-1

Creeks, Drainage Ways and Watersheds