SANTA CRUZ WHARF MASTER PLAN

REVISED

Mitigated Negative Declaration / Initial Study

October 2016

NOTICE OF RECIRCULATION

The Santa Cruz Wharf Master Plan Initial Study/Mitigated Negative Declaration (IS/MND) has been revised and is being recirculated for public review in accordance with provisions of the California State CEQA Guidelines section 15073.5. Additional analyses have been provided in Section VI-Biological Resources based on biological reviews that are included in Attachment E. New text is shown in underlined text, and deleted text is shown as ~~strikeout text~~. Comments received on the March 2016 IS/MND during the public review period are included in Attachment C along with responses provided by the City. Additional comments received after the public review period are included in Attachment D.

The City requests that comments be limited to the new material. Comments on the Mitigated Negative Declaration should be in writing to Norm Daly at the address below or emailed to NDaly@cityofsantacruz.com from October 18 through November16, 2016.

City of Santa Cruz
Economic Development Department
337 Locust Street
Santa Cruz, CA 95060

City of Santa Cruz

SANTA CRUZ WHARF MASTER PLAN

Initial Study / Mitigated Negative Declaration

March 2016

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CITY OF SANTA CRUZ

Mitigated Negative Declaration

The Administrator of Environmental Quality of the City of Santa Cruz has prepared this Negative Declaration for the following described project:

Project: Santa Cruz Wharf Master Plan **Application No.:** Not Applicable

Project Location: Santa Cruz Wharf in the City of Santa Cruz (see attached map).

Project Description: The project consists of adoption and implementation of the Wharf Master Plan and construction of two near-term projects recommended in the Master Plan. The two proposed near-term projects are relocation of the Wharf entry gate and construction of the East Promenade for pedestrian use. The Wharf Master Plan includes the following elements and recommendations:

1. *Policies and Actions*
2. *Recommendations for Expansion, New Construction and Improvements*
   - *Wharf Expansion and New Facilities*: The following new facilities are proposed: a new promenade on the east side of the Wharf; a new walkway on the west side of the Wharf; three new buildings; and two new ADA accessible boat landings. The Master Plan also considers remodeling and intensified use of existing structures.
   - *Structural Wharf Improvements:* Improvements include installation of new and replacement piles, lateral bracing, and roadway and utility improvements, including improvements to the Wharf's trash collection system.
3. *Circulation/Parking Improvements* are proposed to more efficiently utilize the existing circulation area and encourage alternative transportation, including restriping of existing parking areas with potential for some increased spaces. Relocation of the Wharf entrance further south onto the Wharf is proposed.
4. *Design Standards* for new and development and renovation of existing buildings.

Applicant: City of Santa Cruz

Applicant Address: City of Santa Cruz, Economic Development Department
337 Locust St., Santa Cruz, CA 95060
Santa Cruz, CA 95060

The City of Santa Cruz Economic has reviewed the proposed project and has determined that the project, based on the Initial Study attached hereto, will not have a significant effect on the environment with implementation of mitigation measures. An Environmental Impact Report is not required pursuant to the California Environmental Quality Act of 1970. This environmental review process and Mitigated Negative Declaration has been completed in accordance with the State CEQA Guidelines and the local City of Santa Cruz CEQA Guidelines and Procedures.

The following mitigation measures will be incorporated into the project design or as conditions of approval, to ensure that any potential environmental impacts will not be significant.

Impact	Mitigation
Biological Resources – Special Status Species. Implementation of the proposed Wharf Master Plan and future construction of proposed improvements would result in new structural development, some of which would require installation of timber piles into marine waters, including construction of the two near-term planned projects – relocation of the Entry Gate and construction of the East Promenade. The project would not result in permanent direct or indirect adverse impacts on marine habitats or populations of any special status species or marine mammals known or expected to occur in the project area. However, construction and resulting underwater sound levels could indirectly affect special status species or other marine mammals or fish species if any are present in the marine waters in the vicinity of the Wharf during construction activities. Although construction is not expected to harm or injure individual fish or marine mammals, underwater sound levels resulting from installation of piles could result in disturbance to protected marine mammals.	MITIGATION MEASURE 1: Prepare and implement a hydroacoustic, fish and a marine mammal monitoring plan that implements measures to avoid exposure of marine mammals to high sound levels that could result in Level B harassment that may include, but are not be limited to, the following: • Marine mammal observations shall be conducted to determine use of the area by marine mammals before pile driving begins. Observations could be conducted from a boat or from the Wharf. • Pre-construction monitoring to update information on the animals' occurrence in and near the project area, their movement patterns, and their use of any haul-out sites. • Pre-construction training for construction crews prior to in-water construction regarding the status and sensitivity of the target species in the area and the actions to be taken to avoid or minimize impacts in the event of a target species entering the in-water work area. • Establishment of an underwater "exclusion zone"—defined as the distance where underwater sound levels exceed 180 dB if whales are present, and 190 dB if seals and sea lions are present—will be established. This will be refined based on hydroacoustic measurements in the field and in consultation with NOAA Fisheries. • Marine mammal monitoring of the exclusion zone will be conducted prior to commencement of pile driving and underwater excavation activities. • Pile-driving activities will not commence until marine mammals are not sighted in the exclusion zone for 15 minutes. This will avoid exposing marine mammals to sound levels in excess of the Level A criteria. • Underwater noise will be measured with a hydrophone during pile-driving to verify sound levels and adjust the size of the exclusion zone as necessary. • In-water construction biological monitoring to search for target marine mammal species and halt project activities that could result in injury or mortality to these species. • Prohibit disturbance or noise to encourage the movement of the target species from the work area. The City will contact USFWS and NOAA Fisheries to determine the best approach for exclusion of the target species from the in-water work area. • Data collected during the hydroacostic, fish and marine mammal monitoring will be reported to NMFS in a post-construction monitoring report (usually required to be completed between 60 and 90 days after construction is complete). Observations and data will be reported more frequently, if required by NMFS.

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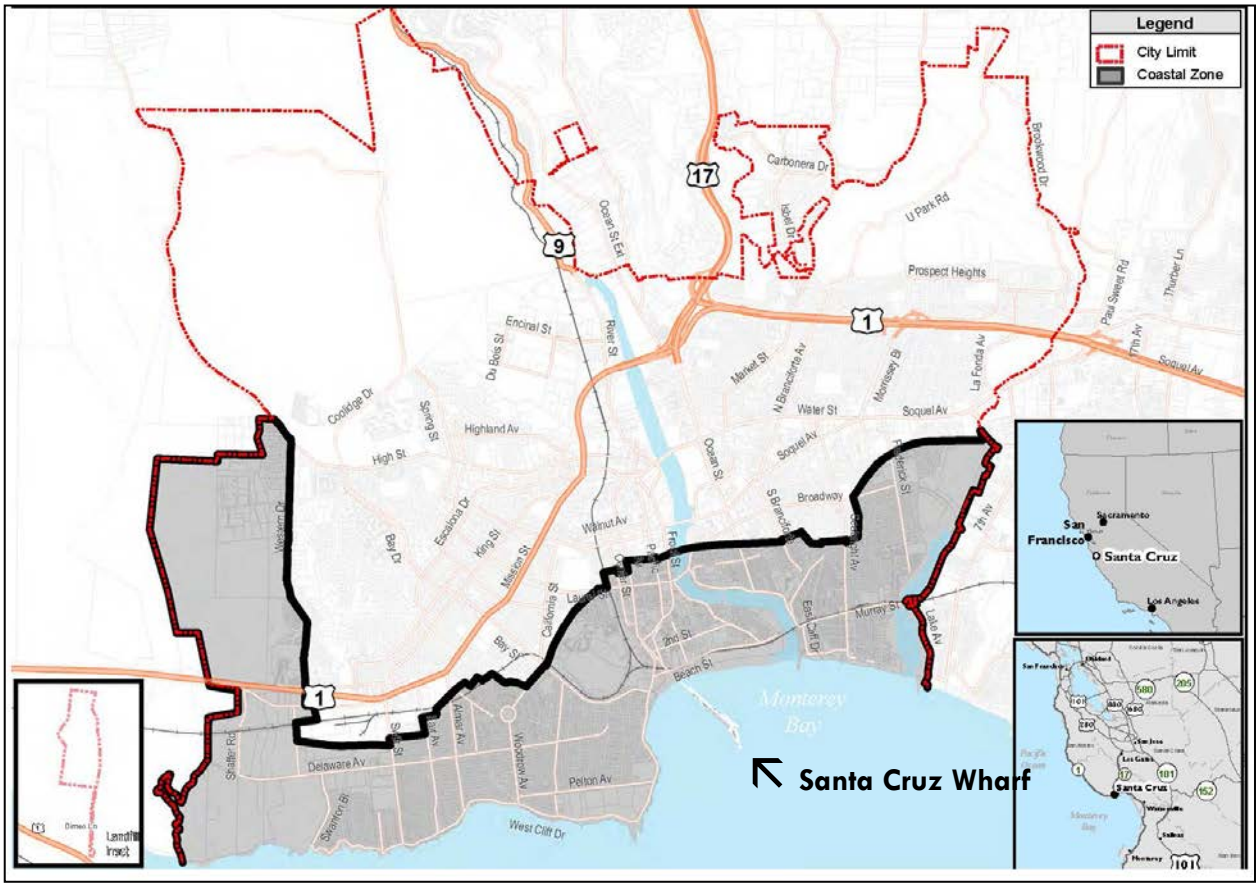
Biological Resources – Nesting Birds. Implementation of the proposed Wharf Master Plan and future construction of proposed improvements could disturb nesting birds if nesting occurs at the time of future construction.	**MITIGATION MEASURE 2**: Conduct a pre-construction survey if future construction would occur during the nesting season. No less than seven days prior to initiation of construction activities, including pile-driving, scheduled to begin during the nesting season for pigeon guillemot, western gull, or other species potentially nesting on the Wharf (February 15 through September 15, or as determined by a qualified biologist), the City shall have a nesting bird survey conducted by a qualified biologist to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the disturbance zone or within 300 feet of the disturbance zone. If active nests are found, pile-driving or other construction activities within 300 feet of the nests (or as determined by the qualified biologist in consultation with CDFW) shall be postponed or halted, until the nest is vacated and young have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. Bird surveys shall include inspection of areas underneath the Wharf for indications of nesting by pigeon guillemots, inspection of rooftops for nesting western gulls, and inspection of any other areas within 300 feet of the construction zone where birds may be nesting.

J. Rebagliati

By: Juliana Rebagliati
Planning and Community Development Director
Administrator of Environmental Quality

10/14/16
Date

PROJECT LOCATION



I. BACKGROUND

1. **Project Title:** Santa Cruz Wharf Master Plan

2. **Lead Agency Name and Address:**
   City of Santa Cruz
   337 Locust St., Santa Cruz, CA 95060
   Santa Cruz, CA 95060

3. **Contact Person and Phone Number:** Norm Daly, (831) 420-5109
   NDaly@cityofsantacruz.com

4. **Project Location:** Santa Cruz Wharf in the city of Santa Cruz; see Figure 1-1[1].

5. **Project Applicant's/Sponsor's Name and Address:**
   City of Santa Cruz
   Economic Development Department
   337 Locust St., Santa Cruz, CA 95060
   Santa Cruz, CA 95060

6. **General Plan Designation:** Regional Visitor Commercial

7. **Zoning:** Beach Commercial (CB)

8. **Public Agencies Whose Approval or Review Is Required:**
   - California Coastal Commission*: Approval of Wharf Master Plan as Public Works Plan
   - California Regional Water Quality Control Board (RWQCB): Clean Water Act Section 401 Water Quality Certification for some future projects implemented pursuant to the Wharf Master Plan that are located within the waters of Monterey Bay
   - U.S. Army Corps of Engineers (ACOE): Clean Water Act Section 404 Permit for some future projects implemented pursuant to the Wharf Master Plan that are located within the waters of Monterey Bay
   - NOAA Fisheries (also known as National Marine Fisheries Service): Approval of Incidental Harassment Authorization for the East Promenade due to potential disturbance to marine mammals during construction

[1] All figures are included at the end of the document for ease of reference.

* The Santa Cruz Wharf is within the coastal zone, and due to its location over coastal waters, development on the Wharf is subject to coastal permit authority of the California Coastal Commission (CCC). Coastal Commission staff has suggested that the Wharf Master Plan be submitted to the Coastal Commission for approval as a Public Works Plan. Pursuant to section 30605 of the California Coastal Act, a Public Works Plan may be approved similar to a Local Coastal Plan (LCP) for a local jurisdiction, in order to promote greater efficiency for the planning of public works development projects and as an alternative to project-by-project review. The Commission can approve a Public Works Plan if it finds, after full consultation with the affected local governments, that the proposed plan is in conformity with the certified LCP in the jurisdiction affected by the proposed public works. Prior to commencement of any development pursuant to a certified Public Works Plan, the City would need to notify the Commission of the project and show that it is consistent with the certified plan. Any subsequent review by the Commission of a specific project contained in the certified public works plan is limited to imposing conditions consistent with Coastal Act.

9. **Background:** The Santa Cruz Wharf extends into the Monterey Bay between Cowell and Main Beaches for a distance of approximately a half a mile and is owned and operated by the City of Santa Cruz. It is a major visitor attraction featuring restaurants, fishing areas, fish markets, gift shops and other businesses. A brief history of the Wharf is provided below, which is summarized from information provided in the *Santa Cruz Wharf Master Plan*.

History of Wharf. The Santa Cruz Wharf is the last remaining of six piers constructed along the Santa Cruz shoreline. It was built in 1914 as a City-owned and operated facility, primarily for shipment of materials. The Wharf is a timber pier, entirely constructed of wood and supported by approximately 4,445 Douglas fir piles. The Wharf is the longest timber pile-supported pier structure in the United States and one of the longest in the world. Called a wharf because of its early function in off-loading cargo, the Santa Cruz Wharf is actually a pier structure that extends to deep water, historically facilitating the mooring of large vessels, unlike a wharf which typically runs parallel to the shore. The Santa Cruz Wharf originally was envisioned as a commercial enterprise built with public funds to further the economic development of the City. Soon after its construction, the Wharf became an attractive facility for the mooring and off-loading of commercial fishing vessels.

Since its construction in 1914, the Wharf has expanded from approximately 4.2 acres to 7.5 acres. The Wharf increased by 3.3 acres between the 1950s and the 1980s for commercial uses and parking. Figure 1-2 illustrates the expansion of the Wharf over time.

Over the years, the Wharf has evolved in role, function and identity. From its initial role as a cargo handling and shipping pier to its later adaptation to serve the commercial fishing industry, the early decades of the Wharf were closely tied to the resources of Monterey Bay. After World War II and beginning in the 1950s, the Wharf was significantly expanded

for commercial uses and parking. The commercial uses were initially a direct outgrowth of the commercial fishing industry, incorporating fish sales and featuring prepared seafood dishes in an open air setting in close conjunction with off-loading and handling of the daily catch.

The Wharf no longer serves the commercial fishing industry. Currently, the Wharf is one of a number of destination attractions in the Beach Area of the City. The City estimates that approximately 2.5 million visitors currently come to the Wharf annually. Although the Wharf provides opportunities for pier fishing, kayak and small fishing boat rentals, the Wharf's current identity is primarily related to the commercial uses along its length.

City Plans Regarding Wharf Studies. The need for a comprehensive study of the Wharf is identified in several City plans. The City's existing Local Coastal Plan (LCP) includes policies that call for: updating the design guidelines for the Wharf area, addressing the area's importance as both a center of tourism and residential area (LU 2.2.1); developing and implementing a promotion and management plan aimed at attracting local residents and enhancing recreational and economic opportunities and promoting visitor use (ED 2.4.3, ED 5.5.3); and analyzing parking for and access to the Wharf (CIR 6.4.2.7, PR 1.7.1.2, PR 1.7.1.3). The Wharf is also one of nine access components described in the LCP "Access Plan".

The Beach/South of Laurel Comprehensive Area Plan (B/SOL Plan), adopted by the City Council in 1998, recommends that a comprehensive analysis of the Wharf be conducted. In 2002, the California Coastal Commission approved a LCP Amendment that replaced the former Beach Area Plan policies with new policies that were developed from recommendations and provisions in the B/SOL Plan. Specifically, policy LU 2.7 calls for completion of a comprehensive analysis of the Wharf to include study of its two fundamental and interrelated aspects: maritime and retail uses. Additionally, the policy indicates that the study should examine the feasibility of expanding maritime activity, visitor amenities, and expanding local resident marketing. The policy indicates that elements of this study should include, but not be limited to, the following:

- ❒ Physical inventory;
- ❒ Access, circulation and parking;
- ❒ Additional maritime potential;
- ❒ Marine sanctuary potential;
- ❒ Design and architectural character;
- ❒ Signature physical features or programs;
- ❒ Retail mix and performance; market niche; and
- ❒ A cost/benefit analysis of recommendations stemming from analysis.

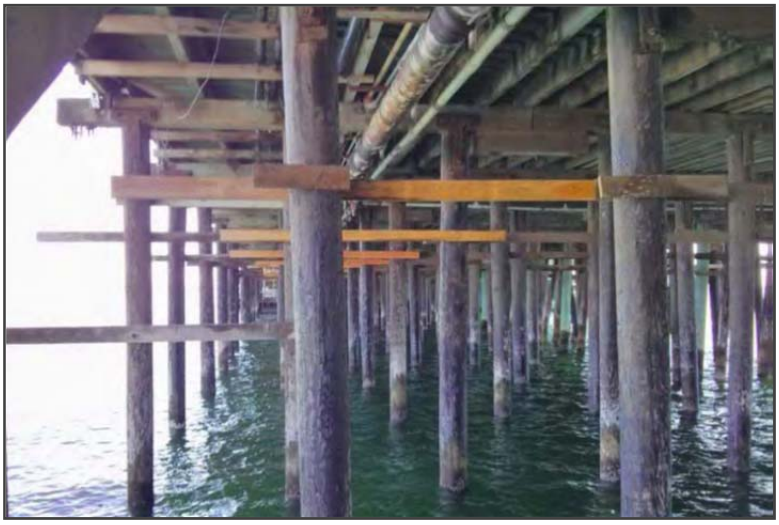
The City's *General Plan 2030*, adopted in June 2012, also addresses the Wharf to include linking Downtown and the Wharf (LU3.5) and fostering improved recreational and economic opportunities at the Wharf (LU3.5.3).

Current Wharf Master Plan Effort and Environmental Review. The Wharf Master Plan was prepared with federal U.S. Department of Commerce Economic Development Administration (EDA) funding and was completed in October 2014. As part of the Master Plan effort, an engineering review was conducted to assess the condition of the piles, the overall integrity of the structure and the paving and substrate of roadways, parking areas and sidewalks. In October 2014, the City Council accepted the Wharf Master Plan and directed staff to proceed with environmental review and authorized the City Manager to execute all documents and take any other administrative actions necessary to complete the environmental review. An Initial Study and Mitigated Negative Declaration (IS/MND) were prepared and circulated for a 30-day public review period from March 14 through April 12, 2016. Comments received on the March 2016 IS/MND during the public review period are included in Attachment C along with responses provided by the City that were submitted to the City Council in August 2016. Additional comments submitted to the City in August 2016 after the close of the public review period are included in Attachment D. In response to some of these comments, new biological reviews were conducted, and the IS/MND has been revised to include the additional information. Additional analyses have been provided in Section VI-Biological Resources based on the biological review that is included in Attachment E. New text is shown in underlined text, and deleted text is shown with a ~~strikeout~~.

II. ENVIRONMENTAL SETTING

The Santa Cruz Wharf is situated at the southern end of Pacific Avenue at Beach Street within the Beach Area of the City of Santa Cruz. Figure 1-1 shows the Wharf location in relation to the Beach and Downtown areas of Santa Cruz. The Wharf extends into Monterey Bay for a distance of approximately 2,700 feet; the initial 200± feet span the City's Main Beach. From shallow waters at the shore, the Wharf extends to water depths of 35 feet at its far end and stands approximately 23 MLLW[2] level. The Santa Cruz Beach Boardwalk and the City's Main Beach are located to the east, and Cowell Beach and the Dream Inn are located to the west. A mix of visitor-serving and commercial uses is located along Beach Street to the north of the Wharf.

Monterey Bay was designated a national marine sanctuary by the federal government in 1992. The Monterey Bay National Marine Sanctuary (MBNMS) extends from Cambria on the south to Marin County on the north, encompassing 276 miles of shoreline. It extends seaward an average of 30 miles from shore—covering more than 5,000 square miles of ocean. The Sanctuary, administered by the National Oceanic and Atmospheric Administration (NOAA), was established to promote resource protection, research, education, and public use. It boasts one of the most diverse marine ecosystems in the world, including the nation's largest kelp forest and one of North America's largest underwater canyons. The Santa Cruz Wharf and associated Beach Area are located outside of the MBNMS boundaries, but are located within the city limits of the City of Santa Cruz.



The Wharf is supported by 4,445 12-inch diameter Douglas fir timber piles. On average, piles are driven about 15-20 feet into the sand seafloor in rows (bents) at approximately 15-foot centers, and spaced along the row. The bents are spanned by 4 x 12 inch beams ("stringers"). At the south end of the Wharf, horizontal members (ledgers) were installed at elevation 9 ft. MLLW (12 feet below top of pile) to provide lateral bracing to the piles, which are longer due to water depth at the end. The photo above shows a representative view of the Wharf pile and bent components. On average, 10 to 30 piles are replaced each year. Two inches of asphalt paving overlays the Wharf deck on roads and walkways.

[2] MLLW is a tidal datum that refers to Mean Lower Low Water.

The Wharf currently is approximately 7.5 acres in size, 67% of which is used for vehicular circulation, parking and commercial development; approximately 50% of the Wharf is used for vehicular circulation and parking. There are 433 vehicle and 16 motorcycle public parking spaces on the Wharf. The parking areas also include large enclosures for trash collection, Wharf equipment, rental boats and a variety of other appurtenances.

The Wharf is one of a number of destination attractions in the City's Beach Area; the beach area is an important visitor attraction during the summer months and on weekends when the Boardwalk is open. The Wharf currently has approximately 60,000 square feet of commercial building space, which is occupied by tenants with a variety of short- and long-term ground leases, building leases and licenses from the City. Of this total, approximately 40,000 square feet is leased to restaurants and 20,000 square feet to retail uses, almost all of which are located along 1,300 feet of frontage on the west side of the Wharf. Other buildings on the Wharf include a building for Wharf operations and a life guard building.

The Wharf provides opportunities for pier fishing, as well as kayak and small fishing boat rentals. There are five active landings presently on the Wharf for boat access. Two are available to the public, two for boat and kayak rentals, and a landing is used by Wharf Staff. These landings are all functional but they are subject to seasonal wave damage (SOURCE VII.7)[3]. There also are remnants of a landing that was formerly used by the party fishing boat operated by Stagnaro family, located at Bent 103. The fixed landing is still in place, but the dock was removed and is not accessible (Ibid.). The existing landings include:

- Kayak Access (Bent 52): This landing is used by the kayak rental business on the Wharf. There is a small floating dock accessed by a ladder from the fixed landing and storage shelves beneath the Wharf for kayaks and equipment. The dock is used only by patrons of the kayak rental and has a locked gate at the top of the stair when the business is closed.
- Boat Rental landing (Bent 68): There is a small landing used by the fishing boat rental concessionaire. Directly above the landing is a crane used to lower the wooden rental boats into the water. This facility is used solely by patrons of the boat rental concessionaire.
- Public Landing 1 (Bent 72): A landing with a floating dock the length of the landing is available for public use for short-term loading and off-loading to Santa Cruz Wharf.
- Wharf Staff Landing (Bent 80): This landing is used by the Wharf staff to launch their boats for access to the underside of the Wharf for maintenance and repair work. There is a 3-ton jib crane installed above to launch their boat and other municipal boats for emergencies.
- Public Landing 2 (Bent 150): This is the second public and most southerly landing available to the public for short-term loading and offloading to Santa Cruz Wharf. There is no floating dock and access is by a ladder that is used at all water levels.

The Wharf also supports demonstration and/or research projects. In 2011, the University of California at Santa Cruz (UCSC) in collaboration with the City of Santa Cruz undertook a study to evaluate solar and wind renewable energy technologies at the Wharf. With approval from the

[3] All reference (source) documents references are summarized in SECTION VII of this document.

California Coastal Commission, the project included the temporary installation of a solar panel, a small-scale vertical axis wind turbine, and sensors on a platform on the roof of the Wharf Headquarters building. During the summer of 2015, a sun-powered streetlight was installed to test new solar technology.

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III. PROJECT DESCRIPTION

The proposed project evaluated in this Initial Study consists of:

A. Adoption and implementation of the Wharf Master Plan; and

B. Construction of two projects recommended in the Master Plan:
   1) Entry Gate Relocation and
   2) The East Promenade.

This Initial Study considers the impacts of both the implementation of the Wharf Master Plan, as well as construction of the first two projects to be implemented pursuant to the Plan—the Entry Gate Relocation and the East Promenade. All elements of the Master Plan are considered in the impact analyses, although some elements, such as policies and design standards, might serve to avoid or mitigate potential impacts. Specific recommended improvements and buildings also are evaluated in this Initial Study to the degree that the improvements are described in the Master Plan. Further description is provided below.

A. WHARF MASTER PLAN

The Wharf Master Plan recognizes that the Wharf serves different roles within the City, and the Plan addresses a number of study objectives established by the City related to economic development, design and development standards, re-visioning of public spaces, enhancement of recreational use and public access, integration of educational and scientific resources and assets, and public safety. The Plan presents the following three strategies to address these objectives:

1) **Engage the Bay and Expand Public Access, Recreation and Boating.** The first strategy calls for the physical expansion of the perimeter of the Wharf for public access, recreation, fishing and boating. Planned improvements include a wide promenade on the east side of the Wharf, two new boat landings, overlooks, and the completion of a walkway on the west side of the Wharf.

2) **Enhance Existing Public Space and Activities, Circulation and Parking.** The second strategy is aimed at enhancing the existing public areas on the Wharf, including the area devoted to vehicular circulation and parking and three underutilized public spaces: 1) where the deck widens to accommodate commercial uses; 2) where the direction of the line of commercial buildings changes; and 3) at the southern end of the Wharf. This strategy includes the reorganization of existing parking areas for greater efficiency, to reduce pedestrian/vehicular conflicts, and to create a more attractive entrance. For the key underutilized public spaces, the strategy is aimed at expanding opportunities for publicly-oriented activities and creating a built form that gives orientation to the visitor experience and adds diversity to the Wharf's venues.

3) **Improve Commercial Vitality and Building Design.** The third strategy calls for expanding the number, mix and attractiveness of commercial uses on the Wharf within the existing footprint devoted to these purposes with preparation of a marketing plan to guide City efforts for outreach to potential tenants.

The Master Plan addresses the following objectives that were articulated in the Master Plan work program and/or emerged or were reinforced during the community outreach and planning process.

- ❒ Improve business and economic development opportunities.
- ❒ Enhance opportunities for recreational use and public access.
- ❒ Integrate education and research initiatives.
- ❒ Promote sustainable development and sound green building practices.
- ❒ Enhance the pedestrian environment and provide improved bicycle facilities.
- ❒ Prepare design approaches that will provide guidance and elevate the quality of buildings and public spaces.
- ❒ Improve parking control systems and create a more inviting arrival experience.
- ❒ Improve service and maintenance operations.
- ❒ Enhance public safety.
- ❒ Increase the effectiveness of leasing, marketing and regulatory practices.

Overview of Master Plan Elements and Recommendations

The Wharf Master Plan includes the following elements and recommendations, which are further described in the following subsections.

1. *Policies and Actions*

2. *Recommendations for Expansion, New Construction and Improvements*
   - ❒ *Wharf Expansion and New Facilities*: The following new facilities are proposed: a new promenade on the east side of the Wharf; a new walkway on the west side of the Wharf; three new buildings; and two new accessible boat landings. The Master Plan also considers remodeling and intensified use of existing structures. Figure 2-1 shows the Master Plan conceptual layout and location of new and expanded facilities.
   - ❒ *Structural Wharf Improvements:* Improvements include installation of new and replacement piles, lateral bracing, and roadway and utility improvements, including improvements to the Wharf's trash collection system.

3. *Circulation/Parking Improvements* are proposed to more efficiently utilize the existing circulation area and encourage alternative transportation, including restriping of existing parking areas with potential for some increased spaces. Relocation of the Wharf entrance further south onto the Wharf is proposed.

4. *Design Standards* are included in the Master Plan that address building design elements, which are further explained below.

Development Overview. The proposed improvements would expand the Wharf by approximately 2.5 acres, and as a result, sections of the Wharf devoted to public access, recreation and open space would increase from 26% to 60%. These improvements include the East Promenade, Westside

Walkway and two boat facilities; the locations are conceptually shown on Figure 2-2. Three new buildings would result in approximately 15,000 square feet of new building space for public-oriented uses. A series of three-dimensional model renderings of proposed structural improvements is shown on Figure 2-3. The Master Plan also identifies two specific locations for potential infill of existing commercial space that could result in construction of approximately 4,000 square feet and provides a preliminary estimate of additional potential expansion of existing buildings. The existing building footprint, as well as the area for vehicular circulation and parking, would be maintained, but reconfiguration of existing parking areas is proposed, which could provide a 10-15% increase in the number of spaces within the existing parking footprint (approximately 45-65 spaces).

Visitor Use. Overall visitor use at the Wharf could increase, although there are no projections of future visitor use at the Wharf. The City estimates that approximately 2.5 million visitors currently come to the Wharf annually. Implementation of the Wharf Master Plan could result in some increase in visitors to the Wharf due to: 1) enhancement of existing public spaces, including expansion and increased public and private events at the Wharf; 2) expansion of opportunities for boat tours and small craft launches; and 3) potential increase in commercial uses and parking within the existing development footprint. A specific level of increased use cannot be accurately estimated. The environmental analyses in this Initial Study consider potential increases in visitor use of the Wharf in relevant sections based on the range and characteristics of improvements proposed in the Master Plan.

Demonstration Projects. One of the Master Plan "Actions" is to provide opportunities for research and demonstration projects, including but not limited to the marine environment, energy, water use and recycling. Specific types of projects are not identified, but based on existing demonstration projects underway at the Wharf (wind research, photovoltaic energy), such projects are anticipated to be related to scientific research and in some cases could involve temporary installations or uses. The Master Plan Actions also call for the City to foster and participate in mutually cooperative relationships and ventures with science and educational entities such as the Monterey Bay National Marine Sanctuary Exploration Center, the Seymour Marine Discovery Center, the Moss Landing Marine Laboratories, and the University of California at Santa Cruz.

Wharf Master Plan Policies and Actions

The Wharf Master Plan includes ten policies and supporting actions that address the preservation, restoration, improvement, and management of the Wharf over time. According to the Master Plan, the policies and actions "recognize the importance of the Wharf as a visual and historic landmark, its potential as a more significant recreational and open space resource within the unique environmental setting of the Monterey Bay National Marine Sanctuary, and its potential for becoming a more attractive commercial recreational destination that contributes to the quality of life and economic vitality of the Beach Area, the City and the region as a whole." Table 1-1 summarizes the Master Plan's policies and supporting actions.

Table 1-1. Summary of Wharf Master Plan Policies & Actions

POLICY	Action [SEE MASTER PLAN FOR FULL TEXT.]
1. Maintain and restore the characteristics that distinguish the Wharf as a unique physical and cultural landmark during its period of historic significance, when its role was closely related to the bay and maritime and commercial fishing activities.	▪ Maintain timber piles and wood sub-structure construction. ▪ Maintain linear form of the Wharf with an open leeward side and buildings clustered on the windward edge. ▪ Construct a new Landmark Building at the bayward end of the Wharf. ▪ Utilize renewable hardwood decking in pedestrian areas.
2. Strengthen the Wharf and increase its resiliency to extreme weather conditions, seismic events and sea level rise.	▪ Continue maintenance and ongoing replacement of piles and decking. ▪ Provide continuity of stringers and caps and additional bolts. ▪ Increase vertical piles along width of Wharf. ▪ Provide outriggers in the deeper water area. ▪ Limit truck traffic to minimize damage to Wharf paving and substrate.
3. Provide for the expansion of the perimeter of the Wharf to create more significant opportunities for public access, fishing, open water swimming, boating and linear recreational activities that will orient the visitor to the Bay and engage the waterfront environment.	▪ Construct a wide promenade along the eastern edge. ▪ Construct a walkway on the western side. ▪ Design the access improvements to add to structural resilience. ▪ Improve bicycle and pedestrian facilities/ connections to trail systems. ▪ Provide new accessible boating and landing facilities. ▪ Construct a South Landing facility on the east side adjacent to the East Promenade for kayak, paddleboat and fishing boat rentals. ▪ Construct a landing facility for larger vessels at the eastern bayward end for science, education, research, sports fishing and whale watching. ▪ Construct a new gangway, float and ladder adjacent to the Westside Walkway and near the Gateway Building. ▪ Utilize the new recreation, public access and open space improvements to enhance the identity and market appeal of Wharf.
4. Provide public oriented activities and a built form that gives structure and orientation to the visitor experience, expresses the unique characteristics of the Wharf and provides a more diverse and varied dimension to its venues and offerings.	▪ Heighten the visual, historic and environmental characteristics of three underutilized locations. ▪ Construct a Landmark Building. ▪ Provide a stepped edge along the eastern bayward end adjacent to the Landmark Building. ▪ Create a stepped overlook that extends out into the bay. ▪ Consider relocation of the Marcella to a more prominent location and consider expanding the collection of historic vessels. ▪ Construct a multi-sided Events Pavilion. ▪ Construct a Gateway Building at the beginning of the Wharf. ▪ Consider locating changing rooms, restrooms and a sauna and a gathering space of limited size in a portion of the Gateway Building. ▪ Design the Landmark Building, Events Pavilion and Gateway Building to heighten their prominence and architectural distinction. ▪ Develop programming for public-oriented activities for Landmark Building.
5. Provide for an increase in the number, diversity, seasonality and appeal of events and make the educational, scientific, historic, environmental and cultural dimensions of the Wharf an integral and meaningful part of the visitor experience.	▪ Develop plan for interpretative elements and events that is updated on an ongoing basis. ▪ Designate an Events Curator to implement the plan and to manage and promote year-round events and interpretative programs. ▪ Provide integration of scientific and educational initiatives and nonprofit and for-profit activities within the Gateway Building. ▪ Provide interpretative elements. ▪ Encourage mobile exhibits, docents and dynamic messaging. ▪ Provide opportunities for research and demonstration projects including but not limited to the marine environment, energy, water use and recycling; foster and participate in mutually cooperative relationships and ventures with science and educational entities such as the Monterey Bay National Marine Sanctuary Exploration Center, the Seymour Marine Discovery Center, the Moss Landing Marine Laboratories, and the University of California at Santa Cruz. ▪ Identify an appropriate location for the Suring Museum. ▪ Consider use of the Events Pavilion for community celebrations.

Table 1-1. Summary of Wharf Master Plan Policies & Actions

POLICY	Action [SEE MASTER PLAN FOR FULL TEXT.]
6. Do not expand the Wharf for vehicular circulation and parking but utilize the existing footprint more efficiently and effectively for these functions and to improve the arrival experience.	▪ Eliminate visual clutter and physical obstructions within the parking area. ▪ When the East Promenade is constructed, restripe the parking lot to provide for perpendicular spaces and a widened sidewalk. ▪ Relocate the parking control booths southward. ▪ Improve parking management systems. ▪ Encourage the use of validation and demand pricing systems. ▪ Improve alternative modes of travel, including pedestrian, bicycle, and public transit and shuttles. ▪ Provide a row of efficient high quality light fixtures on the east side of the parking spine and remove the light fixtures on the west side. Incorporate lighting onto the building frontages and storefronts for the sidewalk area. ▪ Improve the paving and substrate of the vehicular access and parking areas.
7. Do not expand the Wharf footprint for commercial uses but within the existing footprint, increase the amount, intensity, diversity, and appeal of the commercial venues on the Wharf.	▪ Increase the number and continuity of business and create a mix of shops, take-out, and eating and drinking establishments. ▪ Provide opportunities for establishments of different sizes, offering a variety of products and menus, and a mix of businesses. ▪ Encourage small food and retail carts at selected locations. ▪ Select Wharf businesses and activities that reflect the unique culinary, artisanal and environmental attributes of the region. ▪ Allow and encourage the use of upper floors to free up the ground floor spaces for active, publicly-oriented uses. ▪ Encourage the use of wind-protected rooftop terraces for outdoor dining.
8. Improve the appearance of the commercial buildings, the attractiveness of the storefronts and adjacent sidewalk and the quality of the pedestrian experience.	▪ Design storefronts to create a positive relationship between indoor and outdoor spaces and encourage commercial uses that open to the sidewalk. ▪ Provide for transparency in the commercial storefronts, encouraging views through to the west as well as to the making of goods and products. ▪ Discourage and limit blank walls, indented entrances and angular building facades. Utilize shallow liner uses along the sidewalk to encourage pedestrian engagement. ▪ Encourage sloped roofs with clerestory windows and enclose mechanical equipment within the roof volume. ▪ Promote a continuous permanent canopy over the sidewalk with integrated lighting and signage. ▪ Reduce impediments to pedestrian movement along the sidewalk and maintain the finished floor of storefronts at sidewalk grade.
9. Improve public services and facilities and enhance a sense of safety, security, comfort and convenience on the Wharf.	▪ Provide efficient and effective way of collecting trash and refuse. ▪ Increase the presence of police and security. ▪ Improve and enlarge public restrooms in three locations at the end of the Wharf, adjacent to Wharf Headquarters and at the Events Pavilion. ▪ Expand the lifeguard station. ▪ Design Wharf entrance so Wharf can be fully closed for both vehicles and pedestrians in after hours in an attractive and unobtrusive way. ▪ Limit anchorages on the windward west side of the Wharf and implement the west walkway not only to provide public access. ▪ Develop a coordinated plan for rapid response, evacuation and protocols to be followed in the event of an emergency. ▪ Evacuate the Wharf during periods of predicted extreme waves.
10. Implement proactive management, leasing and marketing for the Wharf.	▪ Develop marketing plan and actively solicit innovative, desirable and sustainable new enterprises. ▪ Pursue a proactive approach to tenant selection and utilize a competitive bid process for tenants. ▪ Pursue coordinated advertising and promotional efforts. ▪ Prepare implementation program that identifies potential funding for improvements and for on-going maintenance and management. ▪ Augment staff resources to better achieve market, promotional, and tenanting opportunities as well as for the design of projects.

Proposed New Facilities and Improvements

NEW FACILITIES

East Promenade and Walkways. A new promenade along the eastern side of the Wharf and a new walkway on the western side of the Wharf are proposed. According to the Master Plan, the East Promenade will provide the backbone for a series of other improvements, including the Small Boat Landing, the South Landing, and a Terrace Overlook that are all intended to enhance public access along the entire length of the Wharf and add to the recreational, educational, and scenic dimensions of the Wharf. The location of these proposed improvements is shown on Figure 2-2, and a model rendering of the improvement in relation to other proposed Wharf improvements is shown on Figure 2-3.

- The "**East Promenade**" would be created through an extension of the Wharf on the east side, generally beginning at the point where the Wharf widens to accommodate parking and extending approximately 165 feet to the end of the Wharf. This expansion will result in the addition of approximately 1.5 acres to the Wharf. The expanded area is proposed for enhanced public access. No parking or new structures are proposed within the East Promenade. The majority of the East Promenade will be constructed at a slightly higher elevation than the existing Wharf with a lower section at the eastern edge that will be at approximately the same elevation as the existing Wharf. Figure 2-4 shows a cross section of the East Promenade. Additionally, the East Promenade is designed for use by emergency vehicles to avoid delays due to traffic on the Wharf roadway.

  The East Promenade is one of the two specific projects proposed for near-term implementation. Conceptual plans have been developed, and project details are provided further below in subsection B-PROPOSED NEAR-TERM PROJECTS.

- A "**Terrace Overlook"** is proposed at the southernmost tip of the Wharf, extending from the East Promenade. The Overlook will descend further than the edge of the East Promenade and would include three amphitheater steps leading to a 7-foot wide area where the guardrail would be located. See conceptual model on Figure 2-3.

- A new "**Westside Walkway**" is proposed on the west side of the existing commercial buildings to provide public access and to complete a full one-mile circuit of pedestrian access around the entire perimeter of the Wharf. The walkway will be 10 to 12 feet wide and totals approximately 10,440 square feet. It will be built approximately eight feet below the existing Wharf deck level to allow for undisturbed visual access from the existing restaurants and commercial spaces along that edge. A cross section is shown on Figure 2-4. A 160-foot slope transition zone at either end will provide access from the Wharf deck to the new walkway. Lockable gates would be installed at the top to control access after dark and during inclement weather.

Boat Landings. The Master Plan recommends the construction of two new boat landings for expanded and accessible marine-related activities along the East Promenade. The "**Small Boat Landing**" will provide expanded facilities for smaller recreational vessels and for Wharf operations. The "**South Landing**" would provide for the temporary mooring of larger vessels for whale watching, bay tours, sports fishing and mooring of educational and scientific research vessels. Figure 2-2 shows the location of these facilities.

- The **Small Boat Landing** will provide expanded and accessible docking facilities for kayak, paddleboard, and fishing boat rentals as well as Wharf Operations. It also will provide expanded and improved support and storage space for the boating facilities as well as public use for temporary tie-in of small vessels. The new facility will be 315 feet long and will be located generally across from the Wharf Headquarters between Bents 68 and 89. It will have an 8,500 square foot upper deck level at the same elevation as the East Promenade at +25 MLLW, and a slightly smaller lower platform level at +13 MLLW. The two levels will be interconnected by stairs and ADA (American with Disabilities Act) compliant accessible ramps, which would also will connect to an 85-foot long gangway and a 540-square foot float. Two kiosks will be located on the upper deck for kayak and fishing boat rentals and the relocated bait and tackle shop. The deck level also provides storage for rental fishing boats, a davit to lower the boats into the water, and storage of kayaks. The upper deck will be built in a similar way as the East Promenade so that it can support pedestrians as well as truckloads, and will have hardwood decking and guardrails except where openings are needed for davits to lower the vessels. The lower platform may also include an outdoor shower and a changing room for swimmers, fishermen, kayakers, and Wharf Operations staff. From the platform level, four lowered landings at approximately +9 MLLW will be provided to facilitate direct service access by ladder to the vessels and to the float. Figure 2-4 shows a cross section, and Figure 2-5A shows conceptual plans for the Small Boat Landing levels.

- **South Landing** is a larger vessel landing facility that is proposed at the deep water end of the Wharf in the location originally configured for the berthing of vessels. It includes a 20-foot wide, 75-foot long fixed platform and an approximately 200-foot long, 12-foot wide access ramp. The landing will be designed to provide for the transient mooring of vessels up to 200 tons and approximately 120 feet in length. A model of the facility is shown on Figure 2-3, and a concept plan is provided in Figure 2-5B. It is anticipated that this landing will provide temporary mooring for research and visitor-serving vessels, such as whale watching, bay cruises, sports fishing, and educational and scientific research vessels, including those of the National Marine Sanctuary, the Monterey Bay Aquarium, and UCSC. The facility also could provide landings for public use and emergency evacuation if required. However, this facility is not intended as a terminus for cruise ships of any tonnage, to provide moorings for extended periods of time, or to provide shuttle access for any type of large vessel.

New Buildings and Infill/Expansion of Existing Buildings. Three new buildings are proposed on the Wharf: a Gateway Building at Wharf entrance (3,000 square feet), the Landmark Building at the end of the Wharf (6,000 square feet), and an Events Pavilion (6,000 square feet) for a total of 15,000 square feet. The general location of each building is shown on Figure 2-1. A model depicting the new structures is present on Figure 2-3. The buildings would support public uses rather than commercial uses, such as visitor center and museum. These buildings are further described below.

- A new **Gateway Building** is proposed where the existing row of commercial buildings begin within an approximate 5,000 square foot area where the Wharf widens. The historic fishing vessel, the Marcella, is currently displayed in this area. An existing small building would be removed, and the existing boat rental business in this location would be relocated to the new boat rental kiosk at the planned Small Boat Landing. The new Gateway Building will be approximately 3,000 square feet in size, publicly-oriented in nature, and support a mix of cultural, educational, scientific and recreational activities. The larger portion of the building (approximately 2,000 square feet) is envisioned to function as a visitor center.

  Approximately 1,000 square feet of the new Gateway Building may be devoted to an Open Water Swim Club, which could include restrooms, changing rooms, a sauna and meeting space. The Open Water Swim Club would have direct access to the Westside Walkway that would be connected to an 85-foot long gangway and float to the bay. Access would be provided seasonally; during the winter months, the float would be removed and secured to a pair of piles specifically designed for that purpose. In addition, a permanent ladder will be provided for emergency purposes.

- The **Events Pavilion** is a 6,000 square foot building proposed in the approximate 10,500 square foot open area where the Wharf changes direction to the southwest, sometimes called the South Commons. The area is used for occasional outdoor public events, and the proposed new facility would provide a weather-protected space that could be used regularly and to a greater degree than current use. It is envisioned that the facility could provide for a wider range of uses, including educational and environmental programs, lectures, performances and festivals as well as private events such as parties and weddings. In the gap area between the adjacent buildings on the sidewalk, four small retail spaces totaling approximately 1,100 square feet are proposed, and an additional 1,800 square feet of existing building expansion is identified for potential intensification. A conceptual site plan is shown on Figure 2-5C. Additionally, existing restroom facilities will be improved and expanded.

  The building is envisioned as a pavilion-like form incorporating the existing stairways and elevator to the existing upper floor uses and would be fairly transparent with 12-foot high fully operable glass doors that completely open up to create an indoor/outdoor relationship when weather permits. On the waterside, the building would adjoin an outdoor waterfront space that ranges in width from 15 to 35 feet, which connects directly to the sidewalk.

- The **Landmark Building** is proposed at the bayward end of the Wharf adjacent to an existing building (the Dolphin Restaurant) within an approximate 13,000 square foot area that is intended to re-create the "Municipal Wharf" warehouse (Freight Building) that formerly occupied this space until sometime in the mid-1900s. The 6,000 square foot building is envisioned at a height of 40 to 45 feet, which is taller than other commercial buildings on the Wharf, in order to provide stature and prominence. The prominent location of the Landmark Building would allow for the integration of indoor and outdoor experiences and is anticipated to be a "major attraction and draw to visitors". Uses could include a combination of cultural, educational and commercial uses as well as the possibility of a small conference and lecture facility. The Santa Cruz Surfing Museum has expressed its interest in using a portion of this structure.

  An approximate 4,000 square foot area will remain between the Landmark Building and the end of the Wharf. It is anticipated that this area would primarily be used for fishing but it would also provide an area for viewing the bay. The Master Plan identifies this area for the potential relocation of the historic fishing vessel Marcella that is currently located at the northern end of the Wharf.

The Master Plan also identifies two areas for potential infill and expansion of existing buildings, which could result in construction of approximately 4,000 square feet of new building space. One location is the area of the Events Pavilion, and the other is at the landward end of the commercial uses on the Wharf. The Master Plan indicates that expansion of the buildings directly to the south of the Events Pavilion could result in addition about 1,800 square feet of commercial space, and four small spaces adjacent to the Events Pavilion have been identified for potential retail expansion of approximately 1,100 square feet. Figure 2-5C shows these locations. Both ground and second floor improvements are envisioned. On the landward end of the Wharf, the Master Plan also proposes remodeling and infill that would add approximately 1,230 square feet of ground floor space within the existing footprint of the Wharf.

The Master Plan encourages the development of second floors for uses such as rooftop dining within existing developed structures. The Plan provides a preliminary estimate that potential remodels and intensification within the existing commercial building footprint could result in a 20-30% increase in building space separate from the three new buildings. This would be approximately 12,000-18,000 square feet based on the existing approximate 60,000 square of buildings on the Wharf and would include the above specific infill locations. The Master Plan does not propose specific locations for potential intensification other than the two locations identified above, nor is it known when such expansion and intensification may occur. Currently, plans are being developed to replace the existing Miramar Restaurant within the existing building footprint, including replacement piles and decking as needed.

Policy 9 of the Wharf Master Plan calls for improvement of public services and facilities to enhance safety, security, comfort and convenience on the Wharf. One Action under this policy calls for expansion of the lifeguard station to better accommodate service needs and accessibility requirements. Specific site plans have not yet been developed, but City staff has indicated that the

expansion would involve either a single-story remodel or remodel with a second floor addition. New triangular deck sections would be added to the existing structure to provide critically needed lateral stability of the Lifeguard Headquarter structure as the existing building extends from the west side of the Wharf and is subjected to wave action. These decks would be uncovered spaces used for bike storage, equipment and other similar uses. It is estimated that the added deck surface (both sides) will be approximately 1,300 square feet in size and will require a total of approximately 15 additional piles. The expansion would be within the overall estimated infill/expansion described above. Initial design elements for the two-story remodel include the following:

- Two story structure with lifeguard tower with a 360-degree view within the Master Plan height limit of 35 feet.
- Inclusion of the following elements on the second floor: office, meeting room, computer room, kitchen, and sleeping area.
- New entry and ADA-accessible bathrooms and showers on the first floor.
- Storage for equipment and vehicles on the first floor.

For the purpose of impact evaluation, this Initial Study assumes that the implementation of the Master Plan could result in development of approximately 20,000 square feet of new building space. This includes 15,000 square feet of primarily public uses within the three new proposed buildings and approximately 5,000 square of expanded building space for retail and commercial uses. An additional 10,000± square feet of expanded commercial building space within existing buildings is a long-term possibility that is suggested in the Master Plan, but is somewhat speculative in terms as no specific locations are identified. Additionally, potential expansion of existing structures could occur under existing conditions with or without implementation of the Master Plan.

STRUCTURAL WHARF IMPROVEMENTS

The proposed new facilities would require installation of nearly 800 new timber piles as summarized below in order to support new improvements and/or to increase the lateral stability of the Wharf. Additionally, approximately 225 existing piles will require replacement over time. As indicated above, plans are being developed to replace the existing Miramar Restaurant within the existing building footprint, including replacement piles as needed. New and replacement piles are expected to be 12-inch diameter timber.

The new piles are estimated for the following proposed facilities:

- ❒ The *East Promenade* will be supported by approximately 525 new timber piles as shown on the preliminary engineered drawings. The East Promenade will be built as an extension of the Wharf and aligned with the existing Wharf bents. The timber bents (or beams) will be 12 inches by 12 inches in size.
- ❒ The *Westside Walkway* will require approximately 112 new piles. Two 6-inch by 12-inch dimensional lumber beams at each bent line will be provided and bolted to the two new piles and connected to the first existing pile on the Wharf for improved lateral stability.

- The 1,500 square foot fixed landing of the proposed *South Landing* will be supported by six bents with three piles each for a total of 18 piles, and the upper platform and ramp will require an additional 34 piles. Two 6-inch by 12-inch dimensional lumber beams will be provided at each bent line and will be bolted to both sides of the piles supporting the landing. The beams will also extend to tie in to the first pile of the adjacent East Promenade for stability.
- From the lower platform level of the *Small Boat Landing*, four lowered landings will be provided to facilitate direct access by ladder to the vessels and to the float. The landing deck will be supported by 66 piles, and the floating docks will be supported by 8 piles. The float will be held in place by four guide piles with detachable connections so that it can be removed during winter months. The gangway will have two piles on either side that will hold it in place when it is raised during the period of time that the float is taken away.
- The *Relocated Entry* will require approximately 24 new 12-inch timber piles and as well as six 14-inch steel piles to support the entry gate frame and sign.
- *Lifeguard Headquarters* remodel/expansion would require approximately 15 new piles.

As part of the Master Plan effort, an engineering review was conducted to assess the condition of the piles, the overall integrity of the structure and the paving and substrate of roadways, parking areas and sidewalks. The assessment concluded that the Wharf generally is in good condition, but there is a need for pile replacement, although the engineering review indicates that less than 5% of the existing Wharf piles require replacement (approximately 225 piles or less). With continued ongoing maintenance and incremental replacement of the structural elements as needed, the life of the Wharf will be extended well into the future.

The Master Plan also proposes installation of ten outriggers below the stepped edge of the East Promenade, which will extend 25 feet to the east at the elevation and in the same plane of the existing ledgers. The purpose is to provide horizontal bracing, which will increase the stiffness and reduce the sway of the Wharf at its bayward end and provide better resiliency during extreme storms (see conceptual model in Figure 2-3).

There also is a need for a general improvement to the pavement and substrate of the Wharf. The Engineering Report recommends replacement of asphalt paving throughout the road and parking areas. Other recommended improvements include removal of all abandoned piping beneath the Wharf and provision of extended fire sprinkler coverage where needed.

ALTERNATE GARBAGE COLLECTION SYSTEM TO REDUCE TRUCKS

The Master Plan recommends improvements to the existing trash collection system for the Wharf to eliminate the use of centralized garbage and reliance on large garbage trucks that are currently the greatest source of damage and incur the greatest amount of maintenance costs to the City. The Master Plan suggests that consideration be given to the use of an automated vacuum collection system that has been used extensively in Scandinavian countries and more recently been adopted for use in some areas in the United States. Collection of trash and recyclables could occur directly

from individual businesses and staff-loaded stations on the Wharf with horizontal transport in a 20-inch stainless steel pipe under the Wharf to an off-site collection center that has not yet been identified. Alternative approaches include the use of smaller collection trucks and more frequent pick-ups combined with smaller refuse and recycling compactor locations on the Wharf or with a close-by offsite collection center to which refuse and recyclables can be delivered by electric or other alternatively powered vehicles.

Circulation, Parking Improvements

The Master Plan recommendations include: relocation of the existing Wharf entrance; reconfiguration of existing parking areas; parking management programs; and improvements to bicycle, pedestrian and other alternate transportation modes.

RELOCATION OF WHARF ENTRANCE

The existing Wharf entrance is proposed to be relocated further south where the Wharf widens and the parking begins (see Figure 2-1). The new location is designed to accommodate two entrances and two exit gates as currently exists. One entrance lane would be configured so that it could be converted to an exit lane during peak periods when exiting volumes exceed arrivals. The center lane, which most directly aligns with the roadway on either side of the gate, would be wider to accommodate emergency and construction vehicle access. A concept plan is shown on Figure 2-5D. The Entry Gate Relocation is one of the two specific projects proposed to be implemented in the near term. Conceptual plans have been developed, and project details are described further below in subsection B-PROPOSED NEAR-TERM PROJECTS.

The Master Plan also proposes installation of an approximate 6 to 8-foot high sign at the relocated entrance that announces the Wharf as the Gateway to the Monterey Bay National Marine Sanctuary. Although, an example is provided in the Master Plan as shown on Figure 2-6, the Master Plan indicates that full-scale mock-ups of the proposed gateway signage, addressing size, shape, color and potential illumination, would be further reviewed before the sign design is finalized.

PARKING

The Master Plan does not propose expansion of the existing parking area, but instead proposes reconfiguration of some parking areas, which could provide a modest increase of up to 10-15% in number of spaces within the existing parking footprint (approximately 45-65 spaces). The Master Plan also proposes use automated pay stations similar to what is used in the Downtown garages that would be evenly distributed in areas determined by the City's Public Works Parking Division staff along the length of the parking spine. Recommendations for continued parking management include continuation of minimizing employee parking on the Wharf, provision of reserved parking for lifeguards and City employees, and development of a parking pricing strategy.

BICYCLE, PEDESTRIAN AND ALTERNATIVE TRANSPORTATION MODES

The Master Plan recommendations also include improvements for pedestrian and bicycle access, increasing the supply of bicycle parking, and encouraging a shuttle system. The Master Plan proposes that bicycle parking (64 spaces) be provided along the western edge of the East Promenade in the transition area between the vehicular parking and the promenade. The Plan indicates that 64 spaces could be initially provided with up to 150 bicycle parking spaces ultimately anticipated that as demand warrants. The improvement program for the existing sidewalk area calls for widening to 15 feet and for the entire area to be repaved in concrete with a concrete curb. The Plan addresses potential shuttle service from the Downtown and other remote parking areas to the Wharf and Beach Area.

Design Standards

The Master Plan establishes design development standards for the evolution of buildings over time. These standards are aimed at improving the curb appeal of the businesses and the quality of the pedestrian experience. The Design Standards seek to develop a collective identity and a high standard of quality and sustainable design while allowing for individual expression. The standards require all businesses to have a finished floor at sidewalk grade. In addition, a continuous canopy with lighting that extends from the storefronts over the sidewalk is proposed to provide weather protection for pedestrians. The Design Standards address:

- ❒ Building form and height
- ❒ Building materials and color
- ❒ Green building design
- ❒ Windows and visual access
- ❒ Roofs
- ❒ Signage and storefront displays.

The Master Plan Design Standards are included in Attachment A.

B. PROPOSED NEAR-TERM PROJECTS

Entry Gate Relocation

The existing entry gate to the Wharf is proposed to be relocated approximately 540 feet further south on the Wharf from its current location. The existing and proposed entry locations are shown on Figure 2-6. The City anticipates that this project will be the first project to be implemented under the new Master Plan within the next two to three years. Construction is expected to take approximately six months to complete.

The new entry is designed to provide two inbound lanes and two outbound lanes with staffed kiosks at the entrance. The site plan is shown on Figure 3-1A. The entrance will be framed with a

roll down, transparent gate so that the Wharf can be closed when not in operation. The gate structure would be approximately 18 feet in height and would span the width the Wharf. Figures 3-1B and 3-1C show plan cross section and elevation of the entry gate and sign structure.

The Wharf entrance relocation will include a new timber deck extension on the east side of the Wharf with a truss frame and new guardrails. The deck extension totals approximately 800 square feet to accommodate more efficient pedestrian movement. Installation of 24 new 12-inch timber piles is proposed as shown on Figure 3-1B. The piles would be installed to a depth of approximately 15 feet below the ground surface as is typical with the existing piles. Additionally, six 14-inch steel piles will be installed to support the entry gate frame and sign. The project includes removal of existing asphalt, decking and stringers in the location of new piles and minor utility relocation.

A sign at the top of the entry gate is recommended in the Master Plan, but a sign is not included in the current project proposal. As previously indicated, the Master Plan proposes installation of a 6 to 8-foot tall, 70-foot long sign at the relocated entrance, subject to further review and design. The City intends to develop a future entrance sign design through a public process, and a specific design is not included in this project.

East Promenade

The proposed East Promenade will result in expansion of the Wharf on the east side by 26-30 feet for a total of approximately 63,800 square feet (1.5 acres); see location on Figures 2-1 and 2-2. A conceptual site plan is presented on Figure 3-2A. The City anticipates that this project will be implemented under the new Master Plan within the next three to five years, and construction is expected to take approximately 12-16 months to complete.

The facility will consist of a hardwood deck supported by 12-inch timber piles. The expanded area will be constructed at a slightly higher elevation than the existing Wharf with a step-down section at the eastern edge that will be approximately the same level as the existing Wharf elevation. Figure 3-2B shows the site plan and cross sections for the first segment, which is representative of the other segments. The existing lower landing and stairway for boat access will be retained; an existing dock will be relocated to the end of the landing with a walkway constructed between the existing steps and dock. Existing parking spaces will be restriped, which will provide an approximately 60 new parking spaces.

An approximate 18-inch tall seat wall is located on the western edge along the parking side of the East Promenade to provide additional separation from the adjacent parked vehicles and an informal resting place. A seating bench is also proposed on the east side of the proposed promenade. According to the Master Plan, the stepdown along the eastern edge will provide a place for sitting, fishing and viewing without interrupting visual access from the main deck level for those who are walking, strolling, jogging or bicycling. According to the Master Plan, new light fixtures and leaning rails that also serve as bike racks will be placed in line with the seat wall on the west side of the Promenade.

The East Promenade will be supported by approximately 525 new timber (Douglas fir) piles. The piles are driven approximately 15 feet into the sand seafloor (SOURCE VII.7). The underlying structure will be similar to, and integrated with, the existing Wharf and will be integrated with it. It will be built as an extension of the Wharf and aligned with the existing Wharf bents. The extended timber bents (beams) will be 12 inches by 12 inches in size, and will be supported by new piles and stringers (joists).

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IV. ENVIRONMENTAL CHECKLIST

Environmental Factors Potentially Affected by the Project: The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

✓	Aesthetics		Agricultural & Forest Resources	✓	Air Quality
✓	Biological Resources	✓	Cultural Resources	✓	Geology / Soils
✓	Greenhouse Gas Emissions		Hazards & Hazardous Materials	✓	Hydrology / Water Quality
	Land Use / Planning		Mineral Resources	✓	Noise
	Population / Housing	✓	Public Services		Recreation
✓	Transportation / Traffic	✓	Utilities/Service Systems	✓	Mandatory Findings of Significance

A. Instructions to Environmental Checklist

1. A brief explanation is required (see VI. "Explanation of Environmental Checklist Responses") for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question (see VII. Source List, attached). A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that any effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where incorporation of mitigation measures has reduced an effect from "Potentially Significant

Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.

5. Earlier Analysis may be used where, pursuant to the tiering, program EIR, or other California Environmental Quality Act (CEQA) process, one or more effects have been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case a discussion should identify the following on attached sheets:
    a) *Earlier Analysis used*. Identify earlier analyses and state where they are available for review.
    b) *Impacts adequately addressed*. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c) *Mitigation measures.* For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. The explanation of each issue should identify:
    a) The significance criteria or threshold, if any, used to evaluation each question; and
    b) The mitigation measure identified, if any, to reduce the impact to less than significance.

B. Use of Earlier Analyses

In analyzing the proposed project, the City may consider whether existing environmental documents already provide an adequate analysis of potential environmental impacts. An earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA provisions, if it can be determined that one or more effects have been adequately analyzed in an earlier EIR or negative declaration (State CEQA Guidelines section 15063(c)(3)(D)).

In accordance with CEQA (Public Resources Code section 21093) and State CEQA Guidelines section 15152, "tiering" refers to using the analysis of general matters contained in a broader EIR (such as one prepared for a general plan) with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on the issues specific to the later project. Agencies are

encouraged to tier the environmental analyses for separate but related projects including general plans, which can eliminate repetitive discussions of the same issues. Tiering is appropriate when the sequence of analysis is from an EIR prepared for a general plan, policy, or program to an EIR or negative declaration for another plan, policy, or program of lesser scope, or to a site-specific EIR or negative declaration. The EIR or Negative Declaration on a later project can limit the analysis to the later project effects which: 1) were not examined as significant effects on the environment in the prior EIR; or (2) are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means. Tiering is also limited to situations where the project is consistent with the general plan and zoning of the city or county in which the project is located.

The preparation of this Initial Study has drawn from analyses contained in the *City of Santa Cruz General Plan 2030 EIR* (April 2012), which includes the Draft EIR volume (September 2011) and the Final EIR volume (April 2012). The Santa Cruz City Council certified the EIR and adopted the *General Plan 2030* on June 26, 2012. The General Plan EIR is a "program" EIR prepared pursuant to State CEQA Guidelines section 15168, which reviewed environmental impacts associated with future development and buildout within the City's planning area that would be accommodated by the General Plan. Specific future improvements and development at the Wharf were not noted or evaluated in the *General Plan 2030* EIR, and there were no site-specific impacts identified. However, as part of the overall estimated buildout, the EIR considered construction of approximately 1,090,000 square feet of commercial uses and 310 approved hotel rooms throughout the City to the year 2030 (SOURCE VII.1b-DEIR page 3-12-14), as well as 3,350 residential units, 1,274,000 square feet of office space, and 775,000 square feet of industrial uses. Since 2009 (the General Plan EIR "baseline" year), approximately 525,000 square feet of commercial space has been developed, is under construction or has been approved throughout the City, which is about half of the buildout estimate that was evaluated in the General Plan EIR. It is also noted that less than 100,000 square feet of office space and approximately 100,000 square feet of industrial space has been constructed since the General Plan baseline year.

The Wharf Master Plan could result in construction of three new buildings totaling 15,000 square feet that would be available for primarily public uses with some potential commercial uses. The Master Plan also identifies two locations in which approximately 4,000 square feet of commercial space could be constructed as infill to in existing structures. As previously indicated, the Master Plan encourages the development of second floor uses and provides a preliminary estimate that potential intensification within the existing building footprint could result in a 20-30% increase in building space separate from the three new buildings. This would be approximately 12,000-18,000 square feet, including the above specific infill locations. The Master Plan does not propose specific locations for potential intensification other the two locations identified above nor is it known when such expansion and intensification may occur.

This Initial Study assumes that the implementation of the Master Plan could result in development of approximately 20,000 square feet of new building space for public use. This includes 15,000 square feet of public uses within the three new proposed buildings and approximately 5,000 square of

expanded building space for retail and commercial uses. This amount of development is well within the remaining amount of commercial buildout that was evaluated within the General Plan EIR.

An additional 10,000± square feet of expanded commercial building space within existing buildings is a long-term possibility that is suggested in the Master Plan, but is somewhat speculative in terms as no specific locations are identified. Additionally, potential expansion of existing structures could occur under existing conditions with or without implementation of the Master Plan. For the purpose of a worst-case discussion, even if all the estimated intensified building space is constructed, structural development at the Wharf could total approximately 35,000 square feet. Therefore, the maximum development potentially accommodated by the Wharf Master Plan would be well within the commercial buildout evaluated in the General Plan EIR.

In accordance with CEQA and the State CEQA Guidelines, this Initial Study is being "tiered" from the *General Plan 2030* EIR. This approach is in accordance with State CEQA Guidelines section 15152, which encourages lead agencies to use an EIR prepared for a general plan or other program or ordinance, when the later project is pursuant to or consistent with the program or plan. The Initial Study tiers from the *General Plan 2030* EIR for the following topics outlined below:

- ❒ Greenhouse Gas Emissions
- ❒ Public Services
- ❒ Public Services and Utilities, except for water supply
- ❒ Cumulative Impacts

The *General Plan 2030* EIR is on file at the City's Planning and Community Development Department, 809 Center Street, Room 107, Santa Cruz, California from 8:00 AM to 12:00 PM and 1 to 5 PM, Monday through Thursday and Friday mornings from 8:00 AM to 12:00 PM. The documents are also available for review on the City of Santa Cruz Planning Department's website at: http://www.cityofsantacruz.com/departments/planning-and-community-development/general-plan-2030.

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
1. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?			✓	
b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?				✓
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			✓	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			✓	
2. AGRICULTURE AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement Methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? (VII.1b-Figure 4.15-1 in DEIR)				✓
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				✓
d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				✓

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?				✓
b) Violate any air quality standard or contribute to an existing or projected air quality violation?			✓	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				✓
d) Expose sensitive receptors to substantial pollutant concentrations?				✓
e) Create objectionable odors affecting a substantial number of people?				✓
4. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		✓		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				✓
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			✓	
d) 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?		✓		✓
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓
5. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?			✓	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?				✓
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				✓
d) Disturb any human remains, including those interred outside of formal cemeteries?				✓
e) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074?				✓
6. GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. (VII.Ib) ii. Strong seismic ground shaking? iii. Seismic-related ground failure, including liquefaction? iv. Landslides? (VII.Ib-DEIR Figure 4.10-3)			 ✓ ✓	 ✓ ✓
b) Result in substantial soil erosion or the loss of topsoil?				✓
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			✓	

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				✓
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				✓
7. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				✓
8. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				✓
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				✓
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ miles of an existing or proposed school?				✓
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				✓
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				✓
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				✓
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✓

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
h) 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? (VII.Ib-DEIR Figure 4.6-1)				✓
9. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?				✓
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (for example, the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				✓
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				✓
d) 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 rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				✓
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			✓	
f) Otherwise substantially degrade water quality?			✓	
g) Place housing within a 100-year flood-hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				✓
h) Place within a 100-year flood-hazard area structures which would impede or redirect flood flows?				✓
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			✓	
j) Inundation by seiche, tsunami, or mudflow?			✓	

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):		Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
10.	**LAND USE AND PLANNING. Would the project:**				
a)	Physically divide an established community?				✓
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				✓
c)	Conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan?				✓
11.	**MINERAL RESOURCES. Would the project:**				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? (VII.1a, 1b)				✓
b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				✓
12.	**NOISE: Would the project:**				
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?				✓
b)	Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?			✓	
c)	Substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				✓
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			✓	
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✓
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				✓

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
13. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				✓
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				✓
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				✓
14. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or need for new or physical altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
a) Fire protection?			✓	
b) Police protection?			✓	
c) Schools?				✓
d) Parks?				✓
e) Other public facilities?				✓
15. RECREATION. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			✓	
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?		✓		
16. TRANSPORTATION/TRAFFIC. Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			✓	

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with an applicable congestion management program, including, but not limited to level of service standard and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?				✓
c) 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?				✓
d) Substantially increase hazards due to a design feature (for example, sharp curves or dangerous intersections) or incompatible uses (for example, farm equipment)?				✓
e) Result in inadequate emergency access?				✓
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				✓
17. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				✓
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction or which could cause significant environmental effects?				✓
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				✓
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			✓	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			✓	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			✓	
g) Comply with federal, state, and local statutes and regulations related to solid waste?				✓

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
18. MANDATORY FINDINGS OF SIGNIFICANCE. Would the project:				
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			✓	
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects.)			✓	
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				✓

DISCUSSION OF ENVIRONMENTAL CHECKLIST

See Section **VI--ENVIRONMENTAL EVALUATION** for discussion.

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V. DETERMINATION

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	✓
I find that the proposed project MAY have a significant effect on the environment and an ENVIRONMENTAL IMPACT REPORT is required.	
I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

Norm Daly
Development Project Manager
Wharf Property Manager

14 Oct. 2016
Date

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VI. EXPLANATION OF ENVIRONMENTAL CHECKLIST RESPONSES

1. Aesthetics

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

a. *Have a substantial adverse effect on a scenic vista;*
b. *Substantially damage scenic resources, including visually prominent trees, rock outcrops, or historic buildings along a state scenic highway;*
c. *Substantially degrade the existing visual character or quality of the site and surroundings, i.e., be incompatible with the scale or visual character of the surrounding area; or*
d. *Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.*

(a) Scenic Views – *Less-than-Significant Impact*. The project site consists of the Santa Cruz Wharf. Maps developed for the City's *General Plan 2030* and included in the General Plan EIR identify the Wharf as a "visual landmark" and identify panoramic views of the Monterey Bay and surrounding area from the Wharf (SOURCE VII.1b- DEIR Figure 4.3-1). According to this map, 360-degree panoramic views are available at the end of the Wharf that include the Monterey Bay to the east, south and west and nearshore development and distant mountains to the north. The Wharf is within a mapped panoramic view as seen from West Cliff Drive. Panoramic views are also mapped along East Cliff including from a small park on San Lorenzo Point above the San Lorenzo River mouth that include views of the Wharf. The City's Local Coastal Program (LCP) also identifies scenic viewpoints and panoramas from the Wharf, and the Wharf is within a mapped scenic viewpoint as seen from East Cliff Drive (SOURCE VII.2a-Map CD-3). Representative views of the Wharf from West Cliff Drive and from East Cliff Drive are shown on Figure 4-1.

Impact Analysis. Adoption and implementation of the Wharf Master Plan and future construction of new facilities, including construction of the two near-term planned projects – relocation of the Entry Gate and construction of the East Promenade – would result in new structural development, but would not eliminate, obstruct or substantially adversely affect a scenic view. Therefore, potential impacts to scenic views would be *less than significant* as explained below.

Master Plan

Adoption and implementation of the Wharf Master Plan would result in expansion of the Wharf, new structural development that includes the East Promenade, a Small Boat Landing, three new proposed buildings, and potential expansion of existing buildings. Views from the Wharf are considered panoramic views, and the Wharf is within panoramic views as seen from West Cliff Drive and East Cliff Drive. Some of the buildings and improvements proposed in the Master Plan would be visible from these areas. The three new buildings may be up to 45 feet in height and expansion of existing buildings could be constructed up to 35 feet in height according to

the Design Standards included in the Wharf Master Plan. These heights are consistent with existing zoning regulations that allow a 40-foot height in the CB zone, and an additional 20% increase in height with approval of a Planned Development Permit. Future development supported by the Wharf Master Plan would slightly increase overall structural height and massing, but would be located in areas of existing structural development and heights would be consistent with existing zoning requirements.

New development would be located on the west side of the Wharf where the existing buildings are located. Therefore, new or expanded buildings would not block or obstruct scenic views of the surrounding Monterey Bay and views toward the shoreline as seen from the vantage points along the Wharf. The proposed new "Landmark Building" at the end of the Wharf would not substantially block scenic views of the shore and distant mountains as seen looking toward the front of the Wharf as views would be available along the remainder of the Wharf. An artist rendering from this vantage point that includes background views of the Boardwalk is provided in the Master Plan shown on Figure 5. The Wharf Master Plan also includes a new stepped overlook at the end of the Wharf that would enhance access and viewing in this location.

From West Cliff Drive, new and infill structures would not obscure or change the prominent views of the bay that are visible in the foreground and to the south of the Wharf. From this vantage point, the Wharf, Boardwalk and distant mountains are prominent features in views from West Cliff Drive. Figures 4-1provides a representative view from West Cliff Drive. New structural development would not alter the foreground views of the ocean or the views of the Boardwalk and distant mountains seen in the background behind the Wharf.

From East Cliff Drive, new and/or infill structures would not obscure or change the prominent views of the bay that are visible in the foreground and to the south of the Wharf. From this vantage point, the bay, beach, Wharf, Boardwalk and Dream Inn and other structural development are prominent visual features with tree canopies framing part of the background view. Figure 4-1 provides a representative view of the Wharf from East Cliff Drive. New structural development would slightly obscure distant narrow view of the ocean as seen from San Lorenzo Point due to construction of the proposed Landmark Building. However, this would not be considered a substantial change as the predominant ocean views that are in front of the Wharf from this location are the dominant feature of the scenic views in this location and would not be altered.

At some viewpoints along East Cliff Drive, new structural development would slightly obscure distant views of the Lighthouse at Lighthouse Field due to construction of the proposed Events Pavilion. The Lighthouse is identified as a

"visual landmark" on maps developed for the City's *General Plan 2030* and included in the General Plan EIR. General Plan Policy CD3.2 seeks to ensure that the scale, bulk, and setbacks of new development preserve public views of city landmarks where possible. However, the distant view of the Lighthouse would be potentially blocked from a very limited viewpoint, and distant views of the Lighthouse would remain available at other locations along East Cliff Drive and in the surrounding area. Therefore, this is not be considered a substantial change as the predominant ocean views in front of the Wharf are the dominant feature of the scenic views in this location, which would not be altered. Therefore, the adoption and implementation of the Wharf Master Plan would not result in substantial adverse impacts on a scenic vista. The aesthetic impact of new structures upon the visual character of the surrounding area is assessed below in subsection 1(c).

Entry Gate Relocation

The proposed relocation of the Wharf entry gate would move the entrance approximately 540 feet south onto the Wharf from its current location with construction of new gate and sign. The entrance gate would be constructed with six steel piles that span the Wharf width with roll-down transparent metal gates. The structure would have a narrow profile and would be transparent as shown on Figures 3-1B and 3-1C. The gate structure would be approximately 18 feet in height, and the gate height is slimier to the height of the existing 22-foot tall light poles on the Wharf. A future Wharf sign potentially could add another six to eight feet in height on top of the gate.

The proposed new entry gate and sign would be most visible in the vicinity of the structure. From scenic vista points along West Cliff Drive, the narrow profile and height of the entrance gate would be difficult to distinguish from other surrounding development and the distant views of the Boardwalk rides. This would also be true from East Cliff drive where the entrance would blend in with the other Wharf and background development, including the Dream Inn which is a prominent visual feature from this vantage point. In either case, the new entrance gate and future sign would not eliminate, obstruct or substantially alter a scenic view. The prominent foreground bay views, sweeping bay views south of the Wharf, and background distant views, including those of identified "visual landmarks" would be unaffected by this planned improvement. Therefore, proposed near-term construction of the relocated entrance with gate and sign would not result in a substantial adverse impact to a scenic view. The aesthetic impact of the new gate and sign upon the visual character of the surrounding area is assessed below in subsection 1(c).

East Promenade

Construction of the East Promenade would result in expansion of the Wharf surface laterally by approximately 26 to 30 feet to the east at a slightly higher elevation than the existing Wharf surface. No structures would be sited on the promenade, although a new Small Boat Landing would be developed at the northern end at some unknown future date. The

promenade would not affect scenic views from the Wharf and would expand public access and viewing on the east side of the Wharf. The promenade would not be visible from West Cliff Drive and would have no effects from this location. From East Cliff Drive, the eastward expansion would appear at the same height as the existing Wharf, and would not block views of the bay. Therefore, proposed near-term construction of the East Promenade would not result in a substantial adverse impact to a scenic view.

(b) Scenic Resources – *No Impact*. As indicated above in subsection 1(a), maps developed for the City's *General Plan 2030* and included in the General Plan EIR identify the Wharf as a "visual landmark", and it is a prominent feature of the Santa Cruz waterfront. The Wharf does not contain trees nor is it located adjacent to a state-designated scenic highway. The project site is located adjacent to Monterey Bay, which can be considered a scenic resource.

Adoption and implementation of the Wharf Master Plan and future construction of proposed facilities would not remove or damage scenic resources, such as trees or natural features that could be considered scenic as none exist on the Wharf. The Wharf itself is considered a visual landmark in the City's General Plan, however, there would be no removal or demolition of the Wharf structure. As indicated above in subsection 1(a), some of the buildings and improvements proposed in the Master Plan would be visible from public areas where the Wharf is visible, such as West Cliff Drive, but implementation of future development would not result in adverse impacts to scenic views. The aesthetic impact of new structures is assessed below in subsection 1(c), but as discussed would not result in a substantial degradation of the visual character of the area including the Wharf itself. The development and improvements recommended in the Wharf Master Plan would enhance public access, including expansion of the Wharf that would be a new open space area for public access and recreational use. None of the improvements recommended in the Master Plan would damage the Wharf in an adverse way. Therefore, the project would not result in an impact to a scenic resource.

(c) Effects on Visual Character of Surrounding Area – *Less-Than-Significant Impact*. The Santa Cruz Wharf is located within the developed Beach area of the City. The visual character of the surrounding area is characterized by a mix of developed and undeveloped lands with Monterey Bay being a prominent visual feature in the area. The bay surrounds the Wharf, and public beaches are located on both sides of the Wharf. The Santa Cruz Beach Boardwalk on the east side of the project site is the prominent development in the area. There is a mix of visitor serving and commercial uses along Beach Street. The Dream Inn, located on a hill along West Cliff Drive west of the Wharf, is a visually prominent structure in the area due to its 10-story height, and is identified as a "visually distinctive structure" in the City's LCP (SOURCE VII.2a-Map CD-3).

The Wharf structure is characterized by its linear form that extends approximately 2,200 feet into Monterey Bay where it turns sharply to the west for a distance of approximately 500 feet. Commercial buildings line the western edge of the Wharf, and the Wharf road and paved parking areas dominate the remainder of the Wharf.

The Wharf is prominently visible from a number of locations along West Cliff Drive and the adjacent Main and Cowell Beaches. The Wharf and project area site also are visible from the edge of the small park on top of San Lorenzo Point off of East Cliff Drive. Representative views of the Wharf from these locations are shown on Figure 4-1. As shown, the views from West Cliff Drive feature the Wharf as a linear feature framed by the ocean in the foreground, and the Boardwalk, other development and distant mountains are in the background. The Boardwalk, especially the Coconut Grove, roller coaster and other rides, is the prominent visual feature. Existing motels and homes in the beach area and Beach Hill are visible on the other side of the Wharf.

From East Cliff Drive and San Lorenzo Point off of East Cliff Drive, the Wharf also has linear appearance framed by the water in the foreground and distant tree cover and larger homes along West Cliff Drive in the background. From this viewpoint, closer views of the Boardwalk and the tall Dream Inn are prominent visual features.

Impact Analysis. Adoption and implementation of the Wharf Master Plan and future construction of new facilities, including construction of the two near-term planned projects – relocation of the Entry Gate and construction of the East Promenade – would result in expansion of the Wharf and new structural development. However, the planned improvements would not be out of scale with the surrounding area and would not substantially degrade the visual character of the surrounding area. Therefore, the impact is considered *less than significant* as explained below.

Master Plan

Adoption and implementation of the Wharf Master Plan would result in expansion of the Wharf by approximately 2.5 acres with creation of the East Promenade and Westside Walkway. New structural development includes three new proposed buildings, the East Promenade, two new boat landings, and potential expansion/infill of existing structures. The potential impacts of the proposed East Promenade are discussed below, and as indicated, its appearance would be of similar scale and materials as the current Wharf, and this project would not degrade the visual characteristics of the surrounding area. Similarly, addition and replacement of piles and the potential new refuse/recycling disposal system under the Wharf would not be highly visible. The new timber support piles have the same appearance as the existing Wharf structural elements and would not adversely affect the visual quality of the surrounding area.

The three new proposed buildings would be of similar massing as the existing row of buildings on the Wharf. Infill of existing buildings near the Events Pavilion and the northern end of the existing buildings would result in expanding the building mass in this area. As a result the west side of the Wharf would essentially be lined with a row of buildings that would be buffered on each side by open areas provided by the East Promenade and Westside Walkway.

The three new buildings would be slightly taller than existing buildings. The Design Standards identify an overall building height of 35 feet on the Wharf, except the three new buildings may be up to 45 feet in height. However, as previously mentioned, these heights are consistent with existing zoning regulations that allow a 40-foot height in the CB zone, and an additional 20% increase in height could be allowed with approval of a Planned Development Permit. The planned Gateway Building and Events Pavilion would be similar to existing two-story buildings on the Wharf. The proposed Landmark Building at the end of the Wharf would be somewhat larger and taller than other existing buildings. However, the Plan's actions call for construction of the new Landmark Building reminiscent in scale and industrial form of the large warehouse structure that once was located at the bayward end of the Wharf. An artist rendering from this vantage point that includes background views of the Boardwalk is provided in the Master Plan shown on Figure 5.

The three new buildings, as well potential future expansion of existing buildings would be of similar mass and scale as portions of the existing Wharf buildings. New and expanded structures would less massive and not out of scale with other larger structures in the vicinity, including the Coconut Grove building at the Boardwalk and the Dream Inn. Furthermore, the positioning of the buildings will break up the mass of the structures by placing the new buildings at the beginning, center and end of the Wharf. (See the building models on Figure 2-3). The Events Pavilion is envisioned as having tall glass doors that could be opened for combined utilization of indoor and outdoor space, which would also reduce the appearance of structural mass for this building.

The Design Standards that are included in the Wharf Master Plan provide a framework to guide future expansion and remodeling of existing structures and to provide continuity and interest in design. According to the Master Plan, these standards, which are included as Attachment A of this document, are aimed at improving the curb appeal of businesses and the pedestrian experience, as well as providing a stronger relationship between indoor and outdoor uses with creation of high quality design. The Design Standards address building form, building height, windows, roofs, signage, storefront displays and green building design among other design elements. With implementation of the Design Standards, development of new structures and remodeling of existing buildings could result in an overall improvement of the visual appearance of the Wharf.

Therefore, the new buildings would not adversely degrade the visual character of the Wharf or surrounding area or result in a significant impact.

Entry Gate Relocation

The proposed relocation of the Wharf entrance would move the existing entry gates and booths approximately 540 feet further south from its current location at the landward end of the Wharf. The entrance gate would be

constructed with six steel piles that span the Wharf width with roll-down transparent gates. The gate structure would be approximately 18 feet in height. It would have a narrow profile and would be transparent as shown on Figures 3-1B and 3-1C. The gate height is similar to, but less than, the height of existing 22-foot tall light fixtures on the Wharf. The gate would be most visible from the Wharf road entrance off of Beach Street and from locations in proximity to the sign. Figure 4-2 provides a view of the Wharf where the entrance would be relocated. As can be seen, the gate would appear as a narrow span in front of existing buildings and would be lower in height than existing light fixtures and buildings. From more distance viewpoints, such as along West Cliff Drive, the gate would not be prominently visible due to its narrow width and openness in design. Additionally, the entrance would not be easily discernible from some of the taller Boardwalk rides that are visible in the background. Similarly from East Cliff Drive, the new entrance gate would be not be visually distinctive given surrounding views of other development with coastal bluffs in the background.

Therefore, the relocated Wharf entrance would not adversely degrade the visual character of the Wharf or surrounding area or result in a significant impact.

The Master Plan proposes installation of an approximate 6 to 8-foot high, seventy foot long sign at the relocated entrance, that reads:

S A N T A C R U Z W H A R F

Gateway to Monterey Bay National Marine Sanctuary

Although an example is provided in the Master Plan as shown on Figure 2-6, the Master Plan indicates that full-scale mock-ups of the proposed gateway signage, addressing size, shape, color and potential illumination, should be constructed for review before the graphic design of the sign is finalized. A Wharf entrance sign is included as part of the entry gate facility, but a design has not yet been developed or reviewed. The sign would be within the general dimensions identified in the Master Plan. When proposed, a design will be developed through a public process, taking into account the surrounding visual characteristics, to ensure that a future sign is compatible with the surrounding area.

East Promenade

Development of the East Promenade would not result in construction of buildings, but would expand the Wharf's surface further to the east for enhanced public access and recreational uses. To create continuity with the bayward end, the promenade will also extend through the East Parking Lot. To do so without a loss of parking, the Wharf also will be minimally extended eastward in this area.

The East Promenade with a wood deck would be of similar scale as the current Wharf surface, and it would have a low-profile appearance as no structures are proposed. The project would expand the open space

pedestrian areas of the Wharf, and would generally be blocked from view along West Cliff Drive due to existing buildings along the Wharf. From San Lorenzo Point, the extension would be on a similar plane as the existing Wharf deck and roadway and would not be highly discernable.

Below the stepped edge of the East Promenade at the bayward end of the Wharf, ten outriggers will extend 25 feet to the east at the elevation of the existing ledgers and in the same plane to provide horizontal bracing. Given the distance, these features would blend with the existing Wharf structure and would not be highly visible. These wood features would be visible from the Main Beach and East Cliff Drive, but would appear as part of the piles and structural elements of the wharf. Given the distance to East Cliff Drive, these features would blend with the existing Wharf structure and would not be highly visible. The Master Plan indicates that aesthetically, the outriggers also create an interesting intertwining of the bay and the structure of the Wharf.

Therefore, construction of the East Promenade would not adversely degrade the visual character of the Wharf or surrounding area or result in a significant impact.

(d) Create New Source of Substantial Lighting or Glare – *Less-Than-Significant Impact*. The Wharf is located with an existing developed area. The Santa Cruz Beach Boardwalk is located to the east of the Wharf, and the hotel and other commercial development are found along Beach Street. Lighting of the Boardwalk rides and facilities provides a striking nighttime visual feature. The Wharf is currently has a system of light fixtures along the pedestrian walkways, roadway, and parking area that consist of approximate 22-foot tall poles with hooded lights, spaced at intervals of approximately 100 feet; the pedestrian walkway lights are spaced at approximate 50-foot intervals. There is also exterior lighting associated with the existing buildings, which is typical of signage lighting of commercial buildings.

Impact Analysis. Adoption and implementation of the Wharf Master Plan would result in some expansion of existing Wharf lighting that would blend with existing Wharf light fixtures and structural lighting. The project is located within a developed area with existing sources of lighting, and the limited addition of lighting would not be considered a new source of substantial light or glare. Thus, the impact would be *less than significant*.

Master Plan

Adoption and implementation of the Master Plan would result in future changes in Wharf lighting. One of the "Actions" in the Policy section is to: "Provide for a row of efficient high quality light fixtures on the east side of the parking spine and remove the light fixtures on the west side that constrain pedestrian movement." This action also calls for incorporation of lighting into the building frontages and storefronts for the sidewalk area.

The lighting concept for the vehicular and parking areas set forth in the Master Plan calls for the placement of light fixtures along the inland edge of

the East Promenade and on both sides of the parking area. This will result in the placement of 26 light fixtures every 75 feet on center and in line with the seat wall along the parking lot edge with an additional six light fixtures on the opposite side in the parking lot, for a total of 32 light fixtures. The light fixtures will be approximately 18 feet in height, which is slightly lower than existing light poles on the Wharf. The features will provide adequate lighting for the East Promenade as well as the vehicular access and parking areas, and with additional canopy lighting along the sidewalk, will eliminate the need for light fixtures on the sidewalk adjacent to commercial uses. Lighting is not anticipated along the Westside Walkway due to adequate lighting from buildings and generally it is not anticipated that the walkway would be accessible in evening hours. According to the Master Plan, the lighting concept is designed to protect the night sky, enhance views to the shore and highlight the commercial storefronts.

New lighting would be compatible with existing Wharf lighting and is located within an area that already has extensive nighttime lighting at the Boardwalk and other developments in the area. Therefore, implementation of the Wharf Master Plan would not result in creation a new source of substantial light or glare in the area.

Entry Gate Relocation

The proposed relocation of the Wharf entrance would move the existing kiosks approximately 540 feet further south from its current location with construction of an approximate 18-foot tall entrance gate. The gate would span the Wharf deck and would have roll-down gates within a gate frame that would also have lighting, although the type of lighting is not specified. However, the lighting would be within the gate frame and directed downward. Given the extent of other existing lighting in the area, the new entrance lighting and fixtures would not create a new source of substantial light or glare in the area. As previously indicated, a sign on the entry gate is recommended in the Master Plan, but is not part of the current proposal, and will be designed and reviewed at a future time at which time potential lighting or illumination will be reviewed.

East Promenade

Future development of the East Promenade would not result in construction of buildings, but would expand the Wharf's surface further to the east for enhanced public access and recreational uses. An 18-inch high seat wall will be built along the parking side of the East Promenade to provide additional separation from the adjacent parked vehicles and an informal resting place. According to the Master Plan, new light fixtures and leaning rails that also serve as bike racks will be placed in line with the seat wall. It would be expected that new lighting along the seat wall would be the same height or lower than existing light fixtures on the Wharf and would directed downward and shielded as is typical of these types of fixtures. Details of lighting will be provided in accordance with Master Plan provisions as part of the detailed design and building plans. As indicated above, new lighting on the Wharf

would be compatible with existing Wharf lighting and is located within an area that already has extensive nighttime lighting at the Boardwalk and other developments in the rea. Therefore, the construction of the East Promenade would not create a new source of substantial light or glare in the area.

2. Agriculture & Forest Resources

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

a. *Convert prime farmland, unique farmland or farmland of state importance to non-agricultural uses;*
b. *Conflict with existing zoning for agricultural use or a Williamson Act contract;*
c. *Conflict with existing zoning for, or cause rezoning of, forest land;*
d. *Result in the loss of forest land or conversion of forest land to non-forest use; or*
e. *Involve other changes to the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.*

The project site consists of the Santa Cruz Wharf that extends into the Monterey Bay between the City of Santa Cruz Main Beach and Cowell Beach. The project site does not contain prime or other agricultural lands as mapped on the State Farmland Mapping and Monitoring Program (SOURCE VII.1b-DEIR Figure 4.3). The site is not designated for agricultural uses in the City's General Plan, and is not located adjacent to agricultural lands. The project site is not zoned Timberland Preserve, and does not support trees or timber resources. Thus, the proposed project would not result in conversion of agricultural or forest lands or lead to conversion of agricultural or forest lands.

3. Air Quality

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

a. *Conflict with or obstruct implementation of the applicable air quality plan;*
b. *Violate any air quality standards or contribute substantially to an existing or projected air quality violation, i.e. result in generation of emissions of or in excess of 137 pounds per day for VOC or No_x, 550 pounds per day of carbon monoxide, 150 pounds per day of sulfur oxides (SO_x), and/or 82 pounds per day of PM_{10} (due to construction with minimal earthmoving on 8.1 or more acres per day or grading/excavation site on 2.2 or more acres per day for PM_{10}) pursuant to impact criteria for significance developed by the MBUAPCD (MBUAPCD, "CEQA Air Quality Guidelines," February 2008);*
c. *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);*

d. Expose sensitive receptors to substantial pollution concentrations; or

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

(a) Conflicts with Air Quality Plans – *No Impact*. In 1991, the Monterey Bay Unified Air Pollution Control District (MBUAPCD) adopted the *Air Quality Management Plan* (AQMP) for the Monterey Bay Region in response to the California Clean Air Act of 1988, which established specific planning requirements to meet the ozone standards. The California Clean Air Act requires that AQMPs be updated every three years. The MBUAPCD has updated the AQMP five times. The most recent update, the Triennial Plan Revision 2009-2011, was adopted in 2013. The 2013 AQMP relies on a multilevel partnership of federal, State, regional, and local governmental agencies. The 2013 AQMP documents the MBUAPCD's progress toward attaining the state 8-hour ozone standard, which is more stringent than the state 1-hour ozone standard. The 2013 AQMP builds on information developed in past AQMPs and updates the 2008 AQMP. The primary elements from the 2008 AQMP that were updated in the 2012 revision include the air quality trends analysis, emission inventory, and mobile source programs (SOURCE VII.4a).

The project consists of implementation of the Wharf Master Plan and construction of new recreational and open-space infrastructure and visitor-serving buildings on the Wharf. Neither implementation of the Master Plan nor construction of the two near-term planned projects – relocation of the Entry Gate and construction of the East Promenade – would result in new population or population growth. Policies and elements of the Plan support green building concepts and improved pedestrian and bicycle access. Potential vehicular emissions are below thresholds that would be considered significant as discussed below in subsection 3(b-c), and the discussion with the MBUAPCD staff indicate that implementation of the Plan and the two near-term projects would not result in conflicts with or obstruct implementation of the existing air quality management plan for the region.

(b-c) Project Emissions – *Less-Than-Significant Impact*. To protect public health, both the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards (AAQS) that are the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety to protect public health and welfare. The national standards address six criteria pollutants, including ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, fine particulate matter (both PM_{10} and $PM_{2.5}$, which refer to particles less than 10 microns and 2.5 microns, respectively), and lead. The state standards, which are generally more stringent than the federal standards, apply to the same pollutants as the federal standards do, but also include sulfate, hydrogen sulfide, and vinyl chloride.

The North Central Coast Air Basin (NCCAB), in which the project site is located, is under the jurisdiction of the Monterey Bay Air Pollution Control District (MBUAPCD) and includes Santa Cruz, Monterey and San Benito Counties. The NCCAB is currently in attainment for the federal PM_{10} (particulate less than 10 microns in diameter), ozone, nitrogen dioxide, sulfur dioxide, and carbon monoxide standards and is unclassified or attainment for the federal PM_{25} and lead standards. The basin is designated non-attainment for the state ozone and PM_{10}

standards, and is in attainment for all other state standards, except for carbon monoxide for which it is unclassified.

The MBUAPCD's 2013 AQMP identifies a continued trend of declining ozone emissions in the Air Basin primarily related to lower vehicle miles traveled. Overall, based on monitoring data for 2009-2011, there were fewer exceedance days in the time period 2009-2011 compared to 2006-2008. Therefore, the control measures presented in the 2008 AQMP have not been implemented as the District determined progress was continuing to be made toward attaining the 8-hour ozone standard during the three-year period reviewed (2009-2011) (SOURCE VII.4a).

Impact Analysis. Implementation of the Wharf Master Plan and construction of proposed facilities would result in new structural development, potential increase in parking spaces due to reconfiguration, and a potential increase in visitor use that could lead to increased vehicle trips and emissions. However, the emissions would not exceed MBUAPCD's criteria for significance as discussed below, and the project does not include operations that would result in stationary emissions. Thus, the project would not violate current air quality standards, and would result in a *less-than-significant impact* related to air emissions.

Master Plan

Adoption and implementation of the Wharf Master Plan and future construction of proposed facilities would result in new structural development and a potential increase in visitor use. The proposed three new buildings (Gateway, Events Pavilion and Landmark) would result in an increase of 15,000 square feet of new building space, primarily for non-commercial, public uses. Potential expansion of existing buildings within the existing development footprint could result in the addition of an estimated 4,000 to 18,000 square feet of building space. As previously indicated, the Master Plan encourages the development of second floor uses and provides a preliminary estimate that potential intensification within the existing building footprint could result in a 20-30% increase in building space separate from the three new buildings. This would be approximately 12,000-18,000 square feet, including the above specific infill locations. For a worst-case analysis, it is assumed that all of the estimated intensified building space would be constructed for a total of approximately 35,000 square feet and all the new building square footage would be commercial uses.

New structural development in combination with other Master Plan proposals to enhance/increase visitor use at the Wharf could indirectly result in increased vehicle trips and emissions. Reconfiguration of existing parking areas could result in approximately 45-65 additional parking spaces over the 433 vehicle spaces that currently exist. The Plan also recommends improvements to pedestrian and bicycle facilities, including addition of approximately 65-150 new bicycle parking spaces, which will serve to reduce or offset any potential increase in car trips to the Wharf.

The MBUAPCD's CEQA Guidelines identify thresholds for various land uses under which potential impacts on ozone levels might be affected. There is no specific use that matches the proposed improvements and uses at the Wharf, which are a combination of Visitor Center-type public and quasi-public uses, recreational uses, and commercial uses. The Guidelines indicate that a regional shopping center of less than 120,000 square feet would typically be below thresholds of significance for emissions of criteria pollutants as would approximately 800 single-family residential units and 1,000 apartments (SOURCE VII.4c). Existing commercial structures on the Wharf total approximately 60,000 square feet, and new and expanded development could add approximately 35,000 square feet of new and expanded building area, although it is not known when future development would occur. Even assuming all new facilities would be similar to a commercial shopping center, the size of the proposed facilities, including infill and expansion of existing buildings, would be substantially below the MBUAPCD screening level for potential significant impacts. Furthermore, the Master Plan's policies seek to improve alternative modes of travel, including pedestrian, bicycle, and public transit and shuttles. Implementation of these policies and actions and accompanying Improvement of bicycle and pedestrian facilities, including installation of 65-150 new bicycle parking spaces, would reduce or offset automobile trips and associated emissions. Therefore, indirect emissions associated with new development would result in a *less-than-significant impact*.

Construction of new buildings and facilities would occur over time and would result in minor, short-term, localized increases in exhaust emissions due to construction activities, but would not exceed construction thresholds set by the MBUAPCD. Construction projects generally have the potential to cause short-term increases in exhaust emissions from worker trips to and from the construction site, construction equipment, and grading and site preparation activities that can generate fugitive dust, which may increase volatile organic compounds (VOC) or nitrogen oxides (No_x), the precursors of ozone. The MBUAPCD does not generally require projects to quantify VOC and NO_x emissions from typical construction equipment, because these temporary emissions have been accommodated in State and federally required air plans (SOURCE VII.4c).

Construction activities would involve limited equipment as there would be no excavation or grading required. The Monterey Bay Unified Air Pollution Control District and its CEQA Air Quality Guidelines indicate that 8.1 acres may be graded per day with minimal earthmoving or 2.2 acres per day with grading and excavation without exceeding the PM_{10} threshold of 82 lbs/day, which could result in a significant effect. Since the Wharf is located in the Monterey Bay, construction of structures and improvements identified in the Master Plan would not result in excavation or grading that could lead to potential particulate emissions during construction. Therefore, no significant

impacts related to construction-related emissions would occur, and no mitigation measures are required.

Entry Gate Relocation

The proposed relocation of the entrance to the Wharf would shift the existing Wharf entrance further out onto the Wharf from its current location. The relocation would result in more efficient traffic flows to and from the Wharf, but the improvement by itself would not result in increased emissions. Therefore, this proposed project would not indirectly result in increased emissions, and there would be *no impact* related to air quality with construction of this near-term project.

East Promenade

The proposed East Promenade would expand the Wharf surface area by approximately 1.5 acres and would be devoted to pedestrian use. The facility would not result in construction of buildings and its use would be by visitors on foot or on bicycle. The improvement by itself would not lead to indirect increases in vehicle use or air emissions. Therefore, there would be *no impact* related to air quality with implementation of this near-term project.

(d) Sensitive Receptors – *No Impact*. The project site is located within a developed area of the City of Santa Cruz and is surrounded by visitor uses, including the Santa Cruz Beach Boardwalk to the east. As indicated above, the proposed project would not result in stationary emissions. Thus, the proposed project will not expose sensitive receptors to substantial pollutant concentrations. For CEQA purposes, a sensitive receptor is defined as any residence, including private homes, condominiums, apartments, and living quarters; education resources such as preschools and kindergarten through grade twelve (k-12) schools; daycare centers; and health care facilities such as hospitals or retirement and nursing homes (SOURCE VII.4c).

Diesel particulate matter was identified as a toxic air contaminant (TAC) by the State of California in 1998. Diesel exhaust is emitted from a broad range of on- and off-road diesel engines. Following the identification of diesel as a TAC, the California Air Resources Board (CARB) developed a comprehensive strategy to control diesel PM emissions. The "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (approved by CARB in September 2000) set goals to reduce diesel PM emissions in California by 75% by 2010 and 85% by 2020. This objective would be achieved by a combination of approaches (including emission regulations for new diesel engines and low sulfur fuel program). Since approval of the "Diesel Risk Reduction Plan," CARB has adopted regulations for in-use, off-road diesel vehicles that will significantly reduce particulate matter emissions.

As described above, construction of future buildings and improvements would use limited equipment, which may emit diesel exhaust, including diesel particulate matter, which is classified as a toxic air contaminant. There are no sensitive receptors in the immediate vicinity. Thus, no sensitive receptors would be exposed to substantial pollutant concentrations or diesel emission during construction. Furthermore, compliance with state regulations regarding diesel equipment will substantially reduce diesel emissions.

(e) Odors – *No Impact*. According to the MBUAPCD CEQA Guidelines, land uses associated with odor complaints typically include landfills, agricultural uses, wastewater treatment plants, food processing plants, chemical plants, refineries, and landfills (SOURCE VII.4c). Neither adoption/ implementation of the Wharf Master Plan nor construction of planned structures and improvements would involve uses or construction activities that are generally associated with the creation of objectionable odors. Upon completion of construction, there would be no long-term operations associated with the any of the projects or improvements recommended in the Master Plan that would result in generation of odors. Therefore, there would be *no impacts* related to odors.

4. Biological Resources

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

a. *Have a substantial adverse effect, either directly or through habitat modifications on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;*

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

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

d. *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;*

e. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or*

f. *Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan.*

The Santa Cruz Wharf extends into the Monterey Bay. None of the improvements identified in the Wharf Master Plan include development on land. Therefore, this section focuses on potential impacts to the marine environment.

Regional Marine Setting. Monterey Bay is part of the Monterey Bay National Marine Sanctuary (MBNMS) that was established and designated in 1992 for the purpose of resource protection, research, education and public use. The MBNMS is the largest of thirteen marine sanctuaries administered by the United States Department of Commerce National Oceanic and Atmospheric Administration (NOAA) and it extends from Marin County to Cambria, encompassing nearly 300 miles of shoreline and 5,322 square miles of ocean extending an average distance of twenty-five miles from shore. At its deepest point the MBNMS reaches down 10,663 feet (more than two miles) (SOURCE VII.5a).

Monterey Bay is home to numerous mammals, seabirds, fishes, invertebrates, and algae in a remarkably productive coastal environment. Its natural resources include the nation's largest contiguous kelp forests, one of North America's largest underwater canyons and the closest-to-shore, deep ocean environment off the continental United States. It is home to some of the most diverse and productive marine ecosystems in the world, including a vast diversity of marine life, with 33 species of marine mammals, 94 species of seabirds, 345 species of fish, four species of sea turtles, 31 phyla of invertebrates, and more than 450 species of marine algae. During early spring to late summer, upwelling causes nutrient-rich water to rise to the surface (SOURCE VII.5a).

The nearshore zone extends from the surf out to waters that are approximately 100 feet deep. The continental shelf is the gradually sloping submerged margin of the continent that extends from the nearshore to the shelf break. Beyond the shelf break (at a depth of approximately 650 feet, the continental slope descends more steeply to the ocean floor (SOURCE VII.5b).

Project Site Setting. The Santa Cruz Wharf extends into the Monterey Bay for a distance of approximately 2,700 feet; the initial 200+ feet span the City's Main Beach. Species found on the Wharf include several bird species: brown pelican (*Pelecanus occidentalis*), western gull (Larus occidentalis), and the pigeon guillemot (*Cepphus Columba*). The California sea lion (Zalophus californianus) often haul out (rest) on the Wharf support beams under the Wharf.

The marine habitats in the vicinity of the Santa Cruz Wharf consist of various intertidal, kelp forest, and open-water habitats. Bottom substrates are predominantly soft, sandy sediments in the project vicinity. Species diversity in the intertidal zone is generally low because organisms are subject to daily tidal fluctuations causing varying wet and dry conditions and fluctuations in temperature and salinity (SOURCE VII.11b). Common species include polychaete worms (e.g., *Apoprionospio* sp., *Mediomastus* sp.), anemones, and oligochaete and nematode worms (Ibid.). Kelp forest habitat is located to the southwest of the Wharf adjacent to Lighthouse Point. The kelp forest is composed of the giant kelp (*Macrocystis pyrifera*), bull whip kelp (*Nerocystis luetkeana*), and other red and brown algae (Ibid.). Farther offshore, soft-bottom subtidal areas are characterized by benthic (bottom dwelling) organisms typical of the open-coast soft-bottomed community off much of the California coast (Ibid.).

The open water, or pelagic zone, encompasses the entire water column extending from the surface to the bottom substrate. Many species are associated with open-water habitats over both rocky and sandy substrates, including plankton, benthic organisms and fish. Plankton are generally microscopic plants and animals, free-floating in the open water, and represent the lower levels of the food chain and are important to many marine species, including benthic organisms, fish, and mammals. A variety of marine invertebrates occur within the study area. Fish commonly found in open water in the vicinity of the Wharf include squid (*Loligo opalescens*), anchovies (*Engraulis mordax*), sardines (*Sardinops sagax*), and adults of several

species of anadromous fish such as the Chinook salmon (*Oncorhynchus tshawytscha*) and steelhead (SOURCE VII.11b).

Monterey Bay is an important stop-over point for migratory birds, and currently, there are 94 known species of native and non-native seabirds that occur regularly in Monterey Bay. Along the continental shelf, the dominant species are sooty shearwaters (*Puffinus griseus*), western grebes (*Aechmophorus occidentalis*), Pacific loons (*Gavia pacifica*), brown pelicans (*Pelecanus occidentalis*), and western gulls (*Larus occidentalis*). During summer to fall, blackfooted albatross (*Phoebastria nigripes*), ashy storm-petrel (*Oceanodroma homochroa*), and Guadalupe murrelet (*Synthliboramphus hypoleucus*) can be found foraging over deeper waters of Monterey Bay (SOURCE VII.11b).

Monterey Bay supports several marine mammal species that include the Pacific harbor seal (*Phoca vitulina*), California sea lion (*Zalophus californianis*), Steller sea lion (*Eumetopius jubatus*), Guadalupe fur seal (*Arctocephalus townsendii*), northern elephant seal (*Mirounga angustirostris*), gray whale (*Eschrichtius robustus*), blue whale (*Balaentoptera musculus musculus*), humpback whale (*Megaptera noveangliae*), killer whale (*Orcinus orca*), southern sea otter (*Enhydra lutris nereis*), and a variety of different dolphin and porpoise species (SOURCE VII.5b). The California sea lion and the Pacific harbor seal are the most commonly observed marine mammals in the study area.

(a) Special Status Species – *Less Than Significant with Mitigation ~~Potentially Significant~~*. Species that are listed under the Federal and/or State Endangered Species Acts (ESAs) that have a high potential to occur in the study area include coho and Chinook salmon, steelhead, green sturgeon, and southern sea otter (SOURCE VII.11b). Other special-status species with a high potential to occur are California sea lions and Pacific harbor seals, which are protected under the Marine Mammal Protection Act (MMPA). With the exception of gray whales, which may pass within sight of the shore during their migration, other whale species would typically be found much farther offshore beyond the study area (Ibid.). Each of these species is further addressed below based on a biological assessment conducted as part of the environmental review conducted for the scwd^2 Regional Desalination Project (SOURCE VII.11b) unless otherwise noted. No special status plant species are expected to occur within the project site. The following text summarizes the status and local occurrence of special status species and marine mammal species known to occur within Monterey Bay in the vicinity of the Santa Cruz Wharf. Table 2-1 summarizes the range/population of marine mammal species.

Black abalone, a federally-listed endangered species, is one of seven species of abalone that occur in California and the only species that occurs primarily in shallow water depths no deeper than 15 to 20 feet. It occurs along the shoreline in intertidal habitats where it is found on the faces, overhangs, and cracks of rocks. The project area is located outside the designated critical habitat area; the closest designated area is Natural Bridges State Marine Reserve in Santa Cruz, approximately 2.5 miles west of the project area, where the critical habitat includes the rocky intertidal and subtidal habitats from the mean high water line to a depth of -19.7 feet mean lower low water line. Individuals have been found locally at sites

such as Natural Bridges and Terrace Point. The sandy bottom in the vicinity of the Wharf does not support this habitat type.

- Coho Salmon (*Oncorhynchus kisutch*). The Central California Coast Coho Salmon Evolutionary Significant Unit (ESU) is a federally-listed endangered species that occurs from Punta Gorda in Northern California, south to—and including—the San Lorenzo River that flows into Monterey Bay south of the Wharf. Coho salmon historically have occurred in San Lorenzo River historically. Coho generally return to their natal streams between November and December. Coho salmon typically spend two growing seasons in the ocean before returning to their natal streams to spawn.

- Chinook Salmon (*Oncorhynchus tshawytscha*). Chinook salmon historically ranged from the Ventura River in California to Point Hope, Alaska, on the eastern edge of the Pacific and in the western portion of the Pacific Ocean from Japan to Russia. Four Chinook salmon ESUs have potential to migrate through and forage in Monterey Bay: California Coastal (federally listed threatened species), Sacramento River Winter-Run (state and federally-listed endangered species), Central Valley Spring-Run (state and federally-listed threatened species), and Central Valley Fall/Late Fall-Run (state and federal Species of Special Concern).

- Steelhead. Steelhead, the anadromous form of rainbow trout, steelhead has been divided into distinct population segments (DPSs) along the Pacific coast based upon genetic similarities and watershed boundaries. Three of these DPS are known to occur in the San Lorenzo River and Liddell, Laguna, and Majors Creeks, and have the potential to occur in Monterey Bay. The Central Coastal California steelhead DPS (*Oncorhynchus mykiss*), a federally listed threatened species, occurs in river basins from the Russian River to Aptos Creek. Although variation occurs in coastal California, steelhead usually live in freshwater for one to three years in central California, then spend an additional one to three years in the ocean before returning to their natal stream to spawn. Adult CCC steelhead typically immigrate from the ocean to freshwater between December and April, peaking in January and February, and juveniles migrate as smolts to the ocean from January through May, with peak emigration occurring in April and May.

- Green Sturgeon (*Acipenser medirostris*). Green sturgeon southern DPS is a federally-listed threatened species, and a state-listed species of special concern. Green sturgeon are anadromous fish that spend most of their lives in saltwater, and return to spawn in freshwater. The entire Monterey Bay up to a depth of 110 feet was designated as critical habitat for green sturgeon by the National Marine Fisheries Services (NMFS) in 2009.

- Southern Sea Otter (*Enhydra lutris nereis*). The southern sea otter is a federally-listed threatened species and also is protected by the Marine Mammal Protection Act of 1972 (MMPA). Approximately 16,000 to 18,000 sea otters were formerly distributed along the California coastline. After extensive harvesting in the 18th and 19th centuries, less than a hundred sea otters remained off the isolated coastline of Big

Sur, California. Approximately 2,800 individuals exist in the southern sea otter range, and they have expanded their range north of Santa Cruz (to about Half Moon Bay). Sea otters are observed regularly in the marine study area off of West Cliff Drive and the Santa Cruz Wharf.

- ❒ California Sea Lion (*Zalophus californianus*). The California sea lion is protected under the MMPA. California sea lions breed in Southern California and along the Channel Islands. On occasion, sea lions will pup on Año Nuevo Island in San Mateo County to the north. After the breeding season, males migrate up the Pacific coast and into Monterey Bay. The largest populations of sea lions are on Año Nuevo. In Santa Cruz, sea lions often haul out (come ashore to rest) at the Santa Cruz Wharf and on Seal Rock, which is directly across from the Mark Abbot Memorial Lighthouse to the west of the Wharf.
- ❒ Pacific Harbor Seal (*Phoca vitulina richardii*). The harbor seal is protected under the MMPA. Harbor seals are nonmigratory, and can be found along shorelines and in estuaries throughout North America. Pacific harbor seals use Monterey Bay year-round, where they engage in limited seasonal movements associated with hauling out, foraging, and breeding activities. Harbor seals forage in shallow, intertidal waters on a variety of fish, crustaceans, and a few cephalopods (e.g., octopus). They also consume benthic organisms and schooling fishes. Harbor seals haul out in groups ranging in size from a few individuals to several hundred. Habitats used as haul-out sites include tidal rocks, bayflats, sandbars, and sandy beaches.

Table 2-1.
Summary of Distribution and Population of Marine Mammals Near Wharf

Common Name	Scientific Name	Status [1]	Total Range and Population [1]	
			Range	Abundance
California Sea Lion	*Zalophus californianus*	Not Listed [2]	California to Canada	296,750
Harbor Seal (Eastern Pacific subspecies)	*Phoca vitulina richardii*	Not Listed [2]	Mexico to Alaska	30,968 in California
Southern Sea Otter	*Enhydra lutris nereis*	Threatened	California, Santa Barbara to San Mateo County	2,865
Gray Whale	*Eschrichtius robustus*	Not Listed [2]	North Pacific from Alaska to Mexico	20,990

[1] From "U.S. Pacific Marine Mammal Stock Assessments, 2015." August 2014. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southwest Fisheries Science Center (SOURCE VII.6a)

[2] Not listed as "endangered" or "threatened" under the Endangered Species Act nor as :"depleted" under the Marine Mammal Protection Act.

- ❒ Gray Whale (*Eschrichtius robustus*). Gray whales are protected by the MMPA. Gray whales migrate between summer feeding grounds in the Bering and Chukchi seas, between Alaska and Russia, and winter calving areas in Baja California, Mexico. Gray whales move through Monterey Bay while migrating between summer feeding and winter calving areas. They migrate north from mid-February through May, usually within three miles of shore. Most adult and juvenile whales pass Monterey on their way to Alaska by mid-April. Females heading north with their new calves pass Monterey in April and May. The population migrates south in the fall. During the southern migration, the whales tend to stay much farther offshore than during the northern migration, when they are regularly observed from West Cliff Drive. They are benthic feeders that swim along the bottom on their sides while scooping up sediment containing benthic invertebrates—primarily amphipods. The sediment and benthic amphipods are filtered through their baleen plates (SOURCE VII.11b).

Fully Protected Species. The California Legislature has designated "fully protected" or "protected" species as those which, with limited exceptions, may not be taken or possessed under any circumstances. Species designated as fully protected or protected may or may not be listed as endangered or threatened. The classification of fully protected was the State of California's initial effort in the 1960s to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists for fish, amphibians and reptiles, birds, and mammals were created at this time. Most fully protected species were later listed as threatened or endangered species under more recent endangered species laws and regulations. Fully Protected species may not be taken or possessed at any time, and no licenses or permits may be issued for their take, except as a "covered species" pursuant to a Natural Community Conservation Plan (NCCP) developed under the Natural Community Conservation Planning Act.

The CDFW indicates that fully protected marine species in the vicinity of the Wharf area include: the southern sea otter (*Enhydra lutris nereis*), northern elephant seal (*Miroinga angustirostris*), brown pelican (*Pelecanus occidentalis californicus*), California clapper rail (*Rallus longirostris obsoletus*), and the California least tern (*Sterna antillarum browni*). The northern elephant seal moves throughout Monterey Bay during the migration to and from their breeding grounds.

Coastal Birds. Several comments raised the issue of pigeon guillemots (*Cepphus columba*) and other birds nesting on the Wharf and reported that "a small number of pigeon guillemots nest under the wharf at the south end" and that snowy egrets were also noted to "inhabit" the western side of the Wharf. Pigeon guillemot is a common species that is not a federally or state listed threatened or endangered species and does not possess any special-status species designation (SOURCE V.12a). However, it has been reported as nesting on the Wharf, and there are reports of numerous nests along the cliffs and rocky points between Cowell's Cove and Natural Bridges State Park and nests along the cliffs west of Younger Lagoon (SOURCE VII.1b-DEIR Appendix F-1). The species is listed in the City's *General Plan 2030* EIR (SOURCE VII.1b-DEIR) as a species roosting or nesting on the Wharf, and the Wharf is identified as a sensitive habitat,

Coastal Bird Habitat, in the General Plan 2030. The City's Local Coastal Plan (LCP) Land Use Plan Map EQ-9, Sensitive Species and Habitats, identifies pigeon guillemot as a sensitive species, although the LCP map shows the species in an area near Lighthouse Point (SOURCE VII.1c).

The City's LCP also identifies California brown pelican as a sensitive species, and LCP Map EQ-9 identifies the Wharf as a location for the brown pelican. The City's General Plan 2030 Table 1, Sensitive Management Protocols for Sensitive Species and Habitat, includes the brown pelican as a species that nests or roosts on the Wharf, although it does not describe the exact nature of the species' use of the Wharf. As indicated above, the California brown pelican is a fully protected species for nesting and roosting. Although the General Plan EIR and the LCP include brown pelican on a list of nesting or roosting species for the Wharf, Appendix F-1 of the General Plan EIR (*Biological Resources for the City of Santa Cruz General Plan Update*) describes the brown pelican in Santa Cruz only as a potential roosting species (SOURCE VII.1b-DEIR), and this species is not known to nest north of the Channel Islands, off of southern California (SOURCE VII.12a). The only communal roosts in the City are identified as occurring along West Cliff from Lighthouse Point to Younger Lagoon, although it also known to roost on the Wharf (SOURCE VII.1b-DEIR Appendix F-1).

Snowy egret is not a federally or state listed threatened or endangered species, but is on the Special Animals List, but only for nesting colonies, which occur in trees and other vegetation types that are absent from the Wharf . It is not identified as a coastal bird or a bird found at the Wharf in the City's General Plan2030 EIR or the LCP. It is not reported in the General Plan EIR biological report appendix that identifies occurrences of breeding birds within the city of Santa Cruz. Therefore, there would be no impacts to this species as there is no nesting of this species at the Wharf.

Impact Analysis-Marine Mammals. Implementation of the Wharf Master Plan and future construction of proposed improvements would result in new structural development, some of which would require installation of timber piles into marine waters, including construction of the two near-term planned projects – relocation of the Entry Gate and construction of the East Promenade. The project would not result in permanent direct or indirect adverse impacts on marine habitats or populations of any special status species or marine mammals known or expected to occur in the project area. However, construction and resulting underwater sound levels could indirectly affect special status species or other marine mammals or fish species if any are present in the marine waters in the vicinity of the Wharf during construction activities. Although construction is not expected to harm or injure individual fish or marine mammals, underwater sound levels resulting from installation of piles could result in disturbance to protected marine mammals, and thus, this is considered a *potentially significant* impact.

Construction activities that could indirectly affect special status species include: 1) pile driving in which potential sound levels could impact fish and marine mammals; and 2) construction on the Wharf where sound levels could impact marine mammals. Species that could be affected are those protected under the MMPA (California sea lions and

Pacific harbor seals) and special status species (coho salmon, Chinook salmon, steelhead and green sturgeon). The following summarizes potential construction activities resulting from implementation of the Wharf Master Plan and the two proposed near-term projects. The impact discussion that follows would be applicable to those elements identified below.

Master Plan

Adoption and implementation of the Master Plan would result in construction of new development and improvements supported by timber piles that extend into the marine waters to include: expansion of the Wharf to create the East Promenade and a Westside Walkway, construction of two new boat landings, and support for a relocated entrance gate. Approximately 800 new piles will be installed to support these facilities as summarized below.

- East Promenade: 525 new piles
- Westside Walkway: 112 new piles
- South Landing: 52 new piles
- Small Boat Landing: 74 new piles
- Relocated Wharf Entry: 30 new piles
- Lifeguard Headquarters Remodel/Expansion: 15 new piles

In addition, the Master Plan anticipates replacement of approximately 225 existing piles over time. Currently, plans are being developed to replace the existing Miramar Restaurant within the existing building footprint, including replacement of piles as needed.

Four gates will be provided at the ladder access areas to the float for the Small Boat Landing. The float may include a shaped end to provide for stable kayak access as well as side tie up for rental boats or skiffs from sail or motor-boats anchored off shore. NOAA Fisheries-approved sea lion deterrent devices will be provided around the float to prevent sea lion haul-out.

See discussion below on impacts of pile installation and construction.

Entry Gate Relocation

As indicated above, relocation of the Wharf entrance would require approximately 30 new piles.

See discussion below on impacts of pile installation and construction.

East Promenade

As indicated above, construction of the East Promenade would require approximately 525 new piles.

See discussion below on impacts of pile installation and construction.

All piles utilized for Wharf improvements would be 12-inch timber piles, except for six piles for the relocated Wharf entrance that would be 14-inch steel piles. The more

recently installed replacement timber piles at the Wharf are treated with ACZA (ammoniacal copper zinc arsenate) and coated with a polyurea compound (SOURCE VII.7). Generally, the piles are driven in water from depths of 0 to 35 feet and approximately 20 feet into the sand or until refusal is met. An 1800 lb. drop hammer and a 400 lb. follower block are used for driving the pile into the sea floor. The relocation of the Wharf entrance and construction of the East Promenade are proposed as the first projects to be completed within three to five years. The timing of the other projects is not known.

The following discussion addresses: 1) impacts to benthic habitat with additional piles and during installation; 2) potential acoustical impacts to fish and marine mammals due to installation of piles; ~~and~~ 3) potential water quality impacts on fish due to potential leaching of treated wood piles; 4) potential impacts of Wharf lighting on the marine environment; and 5) other potential indirect impacts for recreational use at the Wharf. Future construction of projects recommended in the Wharf Master Plan, including installation of piles, would have no effect on habitat of fully protected species as no habitat would be removed or altered. Indirect impacts from construction and installation of piles are addressed below. The project would not result in take or possession of any fully protected species.

Impacts to Benthic Habitat. Benthic habitat would be removed where the new piles are installed in an amount of approximately 0.8 square feet per pile. Thus, installation of new piles would result in a loss of approximately 550 square feet of benthic habitat; replacement piles would not result in loss of benthic habitat. The loss due to installation of new piles is not considered significant as the location is under the wharf in an area of previous disturbance on a sandy substrate, where species diversity is low, and the area of disturbance is minimal and localized.

During installation, benthic sediments would be temporarily disturbed in the immediate area of pile installation; installation is estimated to take approximately 15-30 minutes per pile. This may result in temporary discharge of sediments into surface waters, which could cause a very minor increase in the water's turbidity in the immediate vicinity on a temporary basis as further discussed below in subsection 9(f). Disturbance of benthic habitat would likely cause both listed and non-listed species of fish, foraging seabirds, and marine mammals to avoid the immediate construction area and areas of increased turbidity during pile installation. Any sediment in the water column would not be expected to be substantial given the temporary nature of the construction disturbance and that sediments are predominantly sandy and sand particles tend to settle quickly and do not generate large or long-lasting sediment plumes (SOURCE VII.11b). Because marine organisms would be expected to avoid the immediate construction area and turbidity would be temporary and limited to the immediate construction zone, pile installation would not have a substantial adverse effect on special-status species that occur or have the potential to occur in the project area. Such activities also would not result in a substantial reduction in the habitat of a fish or wildlife species, cause a fish or wildlife

population to drop below self-sustaining levels, or threaten to eliminate such a population.

Construction Impacts to Fish and Marine Mammals. Installation of piles could result in indirect harm, disturbance or injury and/or harassment to marine mammals or fish, including special status species, which may be in the vicinity of the Wharf during pile installation. The federal Endangered Species Act defines "harm" to include actions that would kill or injure fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, and sheltering. "Harass" is defined as any act that creates the likelihood of injury to a species to such an extent as to significantly disrupt normal behavior patterns such as feeding, breeding, or sheltering.

Current criteria for fish were established in 2008 by the Fisheries Hydroacoustic Working Group (FHWG), whose members include the National Marine Fisheries Service's Southwest and Northwest Divisions, California, Washington, and Oregon Departments of Transportation, the California Department of Fish and Wildlife, and the U.S. Federal Highway Administration. Although these criteria are not formal regulatory standards, they are generally accepted as viable criteria for underwater noise effects on fish. Accumulated sound energy levels (SEL[4]) above 187 dB for large fish and 183 dB for larval fish (less than 2 grams body weight) were determined to be potentially detrimental to fish (SOURCE VII.6c). No threatened or endangered fish of less than 2 grams body weight were determined to be present in the project area in past surveys of the area, but larvae of fish species managed under the Magnuson-Stevens Act may be present (SOURCE VII.11b), and thus, the 183 dB SEL threshold was used for this analysis. Behavioral effects are not covered under these criteria, but could occur at these levels or lower. Behavioral effects may include fleeing and the temporary cessation of feeding or spawning behaviors (SOURCE VII.11b).

The Marine Mammal Protection Act (MMPA), adopted in 1972, makes it unlawful to take or import any marine mammal and/or their products. Under this federal law, an incidental harassment permit may be issued for activities other than commercial fishing that may impact small numbers of marine mammals. An incidental harassment permit covers activities that extend for periods of not more than one year, and that will have a negligible impact on the impacted species. Levels of harassment for marine mammals are defined in the Marine Mammal Protection Act as:

- Level A harassment is defined as "[A]ny act of pursuit, torment, or annoyance which has the potential to injure a marine mammal or marine mammal stock in the wild."
- Level B harassment is defined as"[A]ny act of pursuit, torment, or annoyance which has the potential to disturb a marine mammal or marine mammal stock in

[4] SEL refers to sound exposure level that is the constant sound level over 1 second that has the same amount of acoustic energy, as indicated by the square of the sound pressure, as the original sound.

the wild by causing disruption of behavioral patterns, including but not limited to migration, breathing, nursing, breeding, feeding or sheltering."

Any activities that may result in harassment of marine mammals under these guidelines would require an Incidental Take Authorization for fish and/or Incidental Harassment Authorization for marine mammals from NOAA Fishers (NMFS). In 2010, NMFS established interim thresholds regarding the exposure of marine mammals to high-intensity noise that may be considered "take" under the MMPA (SOURCE VII.11c). The NMFS criteria distinguishes between impulse sound, such as that from impact pile driving, and continuous sounds, such as that from vibratory pile driving. The Level A (injury) and Level B (disturbance) threshold levels are summarized below for cetaceans (whales, dolphins, and porpoises) and pinnipeds (seals and sea lions). These thresholds are listed below. Additionally, NOAA also is in the process of reviewing possible thresholds related effects of sound on marine mammal hearing based on ongoing study[5]. To date a draft review guidance report has been issued, but no action has been taken.

- ❒ 190 dB-RMS[6] – Pinniped injury (Level A harassment) for both impact and continuous sounds
- ❒ 180 dB-RMS – Cetacean injury (Level A harassment)) for both impact and continuous sounds
- ❒ 160 dB-RMS – Cetacean and Pinniped disturbance under impact pile driving (Level B harassment)
- ❒ 120 dB-RMS – Cetacean and Pinniped disturbance under vibratory pile driving (Level B harassment)

Currently, neither NMFS nor USFWS have specific take criteria for harassment of sea otters, a federally listed threatened species. In the absence of noise thresholds specific to sea otters, USFWS has used the Level A 180 dB RMS threshold and the Level B 160 dB RMS thresholds for impulse noise; and Level B 120 dB RMS for continuous noise (SOURCE VII.11c).

Different types and diameters of piles produce different underwater sound levels when they are driven. The peak sound pressure levels from driving piles of different sizes and compositions have been measured; they generally range from approximately 172 to 180 dB (for 12- to 14-inch wood piles) to 205 dB (for a 30-inch steel pile) as measured 10 meters (about 33 feet) from the pile (SOURCE VII.3a). Monitoring of driving 12- to 14-inch timber piles showed RMS ranging from 158 to 170 dB at a distance of 10 meters (Ibid.).

[5] July 23, 2015. "DRAFT Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing, Underwater Acoustic Threshold Levels for Onset of Permanent and Temporary Threshold Shifts. Revised version for second Public Comment Period.

[6] RMS refers to the sound pressure level that is square root of the sum of the squares of the pressure contained within a defined period from the initial time to the final time. For marine mammals, the RMS pressure historically has been calculated over the period of the pulse that contains 90 percent of the acoustical energy (SOURCE V.II.3).

Installation of 24-inch concrete piles at the Wharf was considered for an alternative pump station site for the former proposed Regional Desalination project. The analysis identified a sound level of 174 dB RMS at a distance of 33 feet from the pile, based on underwater sound measurements from other projects (SOURCE VII.11b).

Based on data from the above studies, the installation of 12-inch timber piles and six 14-inch steel timber piles would not be expected to exceed Level A thresholds (180-190 dB RMS) that would cause injury to marine mammals. However, marine mammals could be exposed to sound levels exceeding the Level B harassment guidelines (160 dB RMS) in areas near the pile-driving activities due to underwater and air noise. Applicable criteria for marine mammals regarding airborne noise for Level B (disturbance) threshold is 90 dB RMS for harbor seals and 100 dB RMS for all other pinnipeds (e.g., sea lions) (SOURCE VII.11b). Pile driving may result in airborne noise levels that exceed NMFS thresholds for Level B harassment. The crossbeams beneath the Wharf are used, primarily by California sea lions, as a haul-out location. Sea lions hauled-out near the pile driving activities conducted for construction of the East Promenade and buildings at the southern end of the Wharf may be exposed to airborne noise levels exceeding 100 dB in a radius of about 200 feet (Ibid.). This could result in behavioral disturbance to the marine mammals and would be addressed in the Incidental Harassment Authorization.

Pile driving would be expected to result in noise levels below 183 dB SEL for fish species based on monitored sound levels (SOURCE VII.3a). Special-status and other fish in the same area may be exposed to temporary increased sound levels, but would not be expected to cause physical injury or mortality.

Comments from the CDFW indicate that the Department relies on guidance from the multiagency Fisheries Hydroacoustic Working Group for setting sound pressure level safety criteria for fish for pile driving projects and that the agreed upon criteria consists of sound pressure levels (SPL) of 206 decibels (dB) peak and 187 dB (or 183 dB for fish less than 2 grams body weight), which was used in the Initial Study analysis. The CDFW indicates that the agency prefers the use of the vibratory hammer for pile driving and recommends against using a dynamic or impact hammer. If an impact hammer is to be used, the Department recommends the use of a bubble curtain to decrease sound levels and deter sensitive marine species during construction in addition to SPL monitoring. The CDFW also recommends monitoring for impacts to both marine mammals and fish during pile driving. As discussed above, sound levels from pile driving are expected to be below the above criteria based on monitored sound levels for the size and type of piles to be used at the Wharf, and monitoring is included in Mitigation Measure 1 below.

Mitigation Measures. Implementation of the following measure will reduce the impact of potential Level B marine mammal harassment to a less-than-significant level for proposed facilities that require installation of new piles. The measure would be implemented as part of review and approval of an Incidental Harassment Authorization (IHA) by the NOAA Fisheries (also known as National Marine Fisheries Service) that

would be required in which the avoidance measures would be fully detailed. An IHA typically is not issued earlier than one year prior to construction.

MITIGATION MEASURE 1: Prepare and implement a hydroacoustic, fish and a marine mammal monitoring plan that ~~identifies the specific~~ implements measures to avoid exposure of marine mammals to high sound levels that could result in Level B harassment that may include, but are not limited to, the following:

- Marine mammal observations shall be conducted to determine use of the area by marine mammals before pile driving begins. Observations could be conducted from a boat or from the Wharf.
- Pre-construction monitoring to update information on the animals' occurrence in and near the project area, their movement patterns, and their use of any haul-out sites.
- Pre-construction training for construction crews prior to in-water construction regarding the status and sensitivity of the target species in the area and the actions to be taken to avoid or minimize impacts in the event of a target species entering the in-water work area.
- Establishment of an underwater "exclusion zone"—defined as the distance where underwater sound levels exceed 180 dB if whales are present, and 190 dB if seals and sea lions are present—will be established. This will be refined based on hydroacoustic measurements in the field and in consultation with NOAA Fisheries.
- Marine mammal monitoring of the exclusion zone will be conducted prior to commencement of pile driving and underwater excavation activities.
- Pile-driving activities will not commence until marine mammals are not sighted in the exclusion zone for 15 minutes. This will avoid exposing marine mammals to sound levels in excess of the Level A criteria.
- Underwater noise will be measured with a hydrophone during pile-driving to verify sound levels and adjust the size of the exclusion zone as necessary.
- In-water construction biological monitoring to search for target marine mammal species and halt project activities that could result in injury or mortality to these species.
- Prohibit disturbance or noise to encourage the movement of the target species from the work area. The City will contact USFWS and NOAA Fisheries to determine the best approach for exclusion of the target species from the in-water work area.
- Data collected during the hydroacostic, fish and marine mammal monitoring will be reported to NMFS in a post-construction monitoring report (usually required to be completed between 60 and 90 days after construction is complete). Observations and data will be reported more frequently, if required by NMFS.

Impacts to Fish From Treated Wood Piles. As previously indicated, all piles utilized for Wharf improvements would be 12-inch timber piles, except for six piles for the relocated Wharf entrance that would be 14-inch steel piles. The more recently installed replacement timber piles at the Wharf are treated with ACZA (ammoniacal copper zinc arsenate) and coated with a polyurea compound (SOURCE VII.7). ACZA is a wood preservative derived from metal compounds and arsenic that preserve the wood from decay fungi, wood attacking insects, including termites, and marine borers through their toxic properties. These metal-arsenate chemicals are toxic and can produce adverse impacts when used where they can be leached from pilings into the aquatic environment (SOURCE VII.3c).

The primary concern is potential effects of copper concentrations on Pacific salmonids, many of which are managed under the Endangered Species Act (ESA) and the Essential Fish Habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act (SOURCE VII.6b). Copper may affect salmon and EFH by reducing the quality and productivity of the benthic habitat. Copper-treated wood products leach contaminants into the aquatic environment, but the rate of leaching drops off rapidly following installation. For copper-treated products, the leaching, and resultant water column concentrations, drops off to very low levels within a few weeks to a few months, depending upon the exact product and environmental conditions. Effect level thresholds may only be exceeded for short periods of time (Ibid.). The models and studies related to copper-treated wood products show the impacts are localized and only prevalent with large surface area uses (such as bulkheads); in well-mixed areas, dilution is often sufficient to decrease the concentration of CCA or ACZA to inconsequential levels (Ibid.). The most important factor in the models' predictions is the current velocity. If significant water exchange is available to dilute the leached contaminants, then they are not predicted to increase contamination to a problematic level (Ibid.). Overwater uses of treated wood products can also contribute contaminants into the aquatic environment; copper-treated products are expected to leach most of their contamination during the first year as a result of rainfall (Ibid.).

Best Management Practices (BMPs) are recommended as a way to reduce risk to an ESA-listed species and EFH. An underlying assumption in most of the leaching studies and models is that treated wood products installed in aquatic environments will be manufactured in accordance with industry production BMPs. BMP-produced wood should be used in all situations involving potential exposure to ESA listed species or EFH and is already recommended or required by several other state or Federal agencies. Conducting site-specific risk assessments for larger projects proposing to use treated wood is also recommended. Models used by NMFS indicates that installation of 100 or less copper-treated piles at current velocities of 10 cm/sec or more, are not likely to result in problematic water column concentrations, and thus, 100 copper-treated pilings has been used as the threshold recommended to trigger a site-specific risk assessment (SOURCE VII.6b). However, coatings and wrappings are often used along the west coast and can even be used on the overwater portions of projects that may cause problematic levels of contamination in the aquatic environment. With coating, such as that proposed for

treated timber piles used at the Wharf, potential leaching into the marine environmental would be avoided. Specifically, timber piles at the Wharf are sprayed with a polyurea compound that is designed to encapsulate treated timber products to prevent toxins from leaching into the environment, and this coating system has been used for encapsulating AZCA-treated piles.

Impacts Due to Wharf Lighting. The Wharf Master Plan includes policies and recommendations for lighting at the Wharf. A review of potential impacts of lighting on marine habitat and species was conducted that is included in Attachment E and summarized below. The Wharf and surrounding area, including the Santa Cruz Boardwalk, are currently illuminated. The Wharf has lighting at numerous locations along its entire length and width. Lighting includes overhead street-type and parking lot-type lighting, lighting for pedestrians, and business lighting. Existing lighting on the Wharf consists of 115 pedestrian and street lights that stand between 22 feet tall (street lights) and 14 feet tall (pedestrian lights). This includes lights on the western from the parking gates to approximately 1,100 feet; along the entire eastern edge; along an approximate 1,800-foot long strip internally next to the business facades; and, another 400-foot strip within the parking lot. Other lighting consists of business façade building lighting along the sidewalk adjacent to the buildings. Existing light fixtures include LED lights that are rated at 3100 lumens for the street light fixtures and 1875 lumens for pedestrian lights. Building lights are generally in the range of 900-1025 lumens each. The 2014 Wharf Engineering Report (a companion volume to the Wharf Master Plan) also notes that the Santa Cruz Wharf is clearly identified on the nautical chart, is well lit, and has two "obstruction" lights on each corner of the end and indicates that with these fixed aids to navigation (on chart, light and horn) the risk from collision due navigation error is low.

Generally, lighting has the potential to affect essential behavioral activities, physiology, population ecology, and ecosystems of both diurnal and nocturnal wildlife. These effects generally include orientation/disorientation and attraction/repulsion, reproduction, and communication at the behavioral and population ecology level, and competition and predation at the community ecology level, the effects of which would be expected to reverberate to the ecosystem level. However, while there will be the addition of downward-facing entrance lighting at the relocated parking gates, overall lighting associated with the final Master Plan design would be reduced from the current condition as discussed below. One of the goals of the Wharf Master Plan is to protect the night sky. A summary of lighting changes that would occur as result of implementation of the Wharf Master Plan is included in Attachment E.

1. Construction of the East Promenade will move parking lot lighting further from the edge of the Wharf along most of the eastern side of the Wharf. Light structures along the eastern side of the Wharf where the East Promenade will be constructed will be set back from the edge by approximately 28 feet whereas they are currently situated at the Wharf deck edge directly adjacent to the bay. This will result in greater or total shading of the marine environment from the downward glare of the lights as shown on Figure 8. The Master Plan indicates that 32 new light fixtures in

this area generally will be the same type and intensity as existing lights. It also appears that the new lights would replace some of the existing street lights along the eastern edge.

2. Limited lighting will occur along the boat ramps, and no lighting will be placed along the new western walkway.
3. Light structures adjacent to the buildings will no longer be required as they will be replaced by lights inserted into a continuous canopy adjacent to the building facades, which will direct light to the pedestrian paths only and will not be directly visible by the surrounding marine environment. The store-front pedestrian lights will be changed from overhead lamp-post type lighting to integrated and shielded lighting within the pedestrian canopies.
4. Implementation of the other Wharf Master Plan recommendations results in the overall reduction of lights by removing lights from pedestrian areas near the buildings and lowering pedestrian lights along the eastern edge and only including smaller foot-level lights at ramp areas for safety.

Due to relocation of street lights from the edge of the Wharf with the proposed East Promenade, some reduction of lighting on the west side and better placement of lighting adjacent to buildings, the long-term impacts of lighting at the Wharf will be reduced from existing conditions. Thus, potential impacts of lighting resulting from implementation of the Wharf Master Plan on marine and other species is considered to be less-than-significant.

Other Indirect Impacts. No significant impacts are anticipated to occur as a result of potential increased recreational use at the Wharf as a result of implementation of the Wharf Master Plan. There are existing small boat uses at the Wharf and a variety of recreational uses within Monterey Bay in the vicinity of the Wharf, including boating. The Master Plan includes a proposal to construct a new boat landing for research and visitor vessels. At this time it is not known when this facility may be developed, and there is no known schedule of programs or operations that would occur. However, it would accommodate boats of sizes that occur within the Bay, and the Wharf is located in a heavily used area. All boat operators must comply with federal regulations regarding protection of marine mammals.

Future construction of projects recommended in the Wharf Master Plan, including installation of piles, would have no effect on habitat of fully protected species. Indirect impacts to marine mammals that may be in the area related to pile driving are addressed above. Potential indirect impacts to brown pelicans are addressed below. The project would not result in take or possession of any fully protected species.

Impact Analysis-Coastal Birds. Implementation of the Wharf Master Plan and future improvements include expansion of the Wharf for public access, which would not result in removal of nesting habitat for the pigeon guillemot or roosting habitat for California brown

pelican. Construction could result in temporary disturbances, but brown pelicans would be able to continue roosting in various areas around the Wharf, away from construction, while construction activities are underway, and no significant impact would result. After implementation of Wharf Master Plan projects, they would be able to continue using the Wharf. Therefore, implementation of the Wharf Master Plan is not expected to impact the California brown pelican or any other special-status bird species. Potential impacts to the nesting pigeon guillemot are addressed in subsection 4(d) below.

(b) Riparian and Sensitive Habitats – *No Impact*. The project site is the Santa Cruz Wharf that extends into the Monterey Bay for a distance of approximately 3,000 feet from shore. The project would not result in removal of riparian habitat or other sensitive habitat. The City's General Plan identifies the Wharf as a sensitive habitat – Coastal Bird Habitat. The General Plan EIR reports the following birds at the Wharf: pigeon guillemots, western gulls (*Larus occidentalis*) and California brown pelicans. Therefore, removal of nesting habitat for pigeon guillemot and western gull or removal of roosting habitat for brown pelican, could represent a significant impact. However, the proposed Master Plan improvements would result in expansion of the Wharf and would not result in removal of habitat. These species would be able to occupy the Wharf after construction in the same manner as previously. General Plan Action NRC2.2.1 indicates that as part of the CEQA review process for development projects, potential impacts to sensitive habitat should be evaluated and mitigated for sites located within or adjacent to these areas. NRC2.4.1 references biological assessment protocols to be followed to determine if a sensitive biological resource is present, and identifies general avoidance or management strategies to be employed when sensitive biological resources occur. Table 1 of the General Plan, Assessment and Management Protocols for Sensitive Species and Habitat, includes "Coastal Bird Rookeries" in which avoidance of direct impacts is specified, including conducting construction activities outside of the nesting season and/or establishing appropriate construction buffers. Although there would be potential temporary disturbances to brown pelicans and pigeon guillemots as discussed in subsection 4(a) and 4(d), respectively, there would be no loss or alteration of habitat for these species. Potential impacts to nesting species are addressed in subsection (d) below. See subsection 4(c) below regarding potential impacts to wetlands and waters of the U.S.

(c) Wetland Habitats – *Less-than-Significant Impact*. The proposed project will not result in fill of wetlands as none were identified in the project area. However, the project will include temporary work within the waterway, which is considered a "waters of the U.S." The work in the waterway consists of pile driving, and which will result in minor fill (approximately 650 square feet of surface area) to install approximately 800 new 12-inch timber piles to support the East Promenade, entrance relocation, and boat landings. See section 8-Hydrology and Water Quality regarding water quality impacts.

(d) Wildlife Movement/Breeding – *Less Than Significant with Mitigation ~~No Impact~~*. Adoption and implementation of the Wharf Master Plan, including the two near-term projects would not affect movement or breeding of species in the marine habitat surrounding

the Wharf which consists of a sandy substrate and shallow waters. Installation of the piles would be confined to the Wharf area and would not impede underwater movement of fish and marine mammals. Installation of piles as discussed above in subsection 4(a) would have potential temporary indirect construction impacts, but there would be no permanent alteration of habitat. Therefore, the project would have no effect on marine wildlife movement or breeding.

Impact Analysis-Nesting Birds. Implementation of Wharf Master Plan projects would not interfere with the movement of bird species in the project vicinity, as birds could continue to move about the area freely. However, nests of pigeon guillemots and potentially other species (including western gull, which is also known to nest on the Wharf) are protected under the Migratory Bird Treaty Act (MBTA), and they are also protected under the California Fish and Game Code Section 3503. Individual adult pigeon guillemots or other birds are unlikely to be directly killed or injured during construction activities because they are highly mobile and would likely leave the area during construction. However, nesting activities by pigeon guillemots, western gulls, and other native bird species could be disrupted, if construction occurs during the breeding season and the birds are present. Noise and vibration, such as from pile driving, could potentially disturb adult birds and result in abandonment of nests, eggs, and young, and in nesting failure. This would represent a violation of MBTA and the California Fish and Game Code, and would be contrary to policies in the General Plan. Therefore, this impact would be potentially significant.

Implementation of the following measure would reduce potential impacts to nesting pigeon guillemots and other common bird species a less-than-significant level.

MITIGATION MEASURE 2: Conduct a pre-construction survey if future construction would occur during the nesting season. No less than seven days prior to initiation of construction activities, including pile-driving, scheduled to begin during the nesting season for pigeon guillemot, western gull, or other species potentially nesting on the Wharf (February 15 through September 15, or as determined by a qualified biologist), the City shall have a nesting bird survey conducted by a qualified biologist to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the disturbance zone or within 300 feet of the disturbance zone. If active nests are found, pile-driving or other construction activities within 300 feet of the nests (or as determined by the qualified biologist in consultation with CDFW) shall be postponed or halted, until the nest is vacated and young have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. Bird surveys shall include inspection of areas underneath the Wharf for indications of nesting by pigeon guillemots, inspection of rooftops for nesting western gulls, and inspection of any other areas within 300 feet of the construction zone where birds may be nesting.

(e) Conflicts with Local Ordinances – *No Impact*. As noted in section 4(d) above, the Wharf is considered Coastal Bird Habitat in the City (2012). However, implementation of Wharf Master Plan projects would not result in permanent impacts to Coastal Bird Habitat. Potential impacts during construction would be mitigated with pre-construction nesting surveys if needed and protection of nests, consistent with the biological resource study protocols included in the General Plan. There are no other known local policies or ordinances protecting biological resources. Thus, the project would not result in potential conflicts with such policies or ordinances.

(f) Conflicts with Habitat Conservation Plans – *No Impact*. There are no Habitat Conservation or Natural Community Conservation Plans for the project area.

5. Cultural Resources

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

a. *Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the State CEQA Guidelines*;*

b. *Cause a substantial adverse change in the significance of an archaeological resource;*

c. *Disturb any human remains, including those interred outside of formal cemeteries;*

d. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or*

e. *Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074.*

**Pursuant to CEQA Guidelines, "historical resources include a resource listed in, or determined to be eligible for listing in the California Register of Historical Resources; a resource included in a local register of historical resources; and any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.*

A "substantial adverse change in the significance of an historical resource" means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired. The significance of an historical resource is materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources or local register of historical places.

(a) Historical Resources – *Less-than-Significant Impact*.

Background and History. The Santa Cruz Wharf was constructed in 1914, and is the last in a series of six piers that were built on the Santa Cruz waterfront between 1849 and 1914 (SOURCE VII.11a). The Wharf originally consisted of 2,043 Douglas fir piles driven 21 feet into the ocean floor. The number of piles has increased to approximately 4,500 piles with approximately five percent remaining from the original construction (Ibid.). On average, 10 to 30 piles are replaced annually for safety.

The Santa Cruz Wharf has been widened from its original 100-foot width over the years, but the location and length of the Wharf remain unchanged. Since its construction in 1914, the Wharf has expanded from approximately 4.2 acres to 7.5 acres. The Wharf increased by 3.3 acres between the 1950s and the 1980s for commercial uses and parking. Figure 1-2 illustrates the expansion of the Wharf over time.

Over the years, the Wharf has evolved in role, function and identity. The Wharf's initial role as a cargo handling and shipping pier later was adapted to serve the commercial fishing industry. After World War II and beginning in the 1950s, the Wharf was significantly expanded for commercial uses and parking. Davits for lifting fishing vessels into and out of the ocean once lined the Wharf, as did a rail line, warehouses, and fishing-related storefronts (SOURCE VII.11a). The rail line was taken out in the late 1940s to early-1950s, and replaced with a paved deck for vehicle traffic (Ibid.). Numerous davits were removed after construction of the Santa Cruz Harbor in 1964 (Ibid.). The deck of the Wharf has been widened to allow for larger restaurant and other commercial buildings. The commercial uses were initially a direct outgrowth of the commercial fishing industry, incorporating fish sales and featuring prepared seafood dishes in an open air setting in close conjunction with off-loading and handling of the daily catch (Ibid.).

In contrast to the early Santa Cruz wharves that had warehouses and businesses associated with fishing and shipping, the existing wharf is tourist oriented (SOURCE VII.2b). Many of the Wharf's original buildings and structures have been demolished, including a large warehouse building that was located at the bayward end of the Wharf. (See photos on Figure 6.) According to the Wharf Master Plan, this building was significant from a historic point of view because "it gave physical expression to the environmental conditions that made deep water maritime functions possible and that contributed to the configuration of the end of the Wharf to optimize berthing relative to wind and wave conditions." Today, the former largely industrial and commercial oriented historic-era businesses of the Wharf have been replaced by restaurants and other tourist oriented services (SOURCE VII.11a). Over 20 buildings and structures associated with these businesses are located on the deck of the Wharf, as well as other built environment features associated with utilities and lighting (Ibid.).

The *Historic Context Statement for the City of Santa Cruz* (Lehmann, 2000) indicates that within the context of the economic development of Santa Cruz between 1850 and 1950, the Municipal Wharf represents an important property type related to industrial development and transportation (SOURCE VII.2b). The wharves and piers first built in the early days of Santa Cruz's history evolved with the changes in the City's economy. The shipping wharves gave way to a railroad wharf and finally to a fishing and commercial wharf that was constructed in 1914 to serve the City's needs (Ibid.). The wharf has been rebuilt and refurbished over time and the warehouses and commercial fishing boats have been replaced by restaurants and concessions for sports fishing and sightseeing (Ibid.). The Marcella, a circa 1920s fishing boat, is on display at the northern end of existing buildings on the Wharf, and may be the "last remnant of the time when the waterfront served the needs of a booming industrial economy" (Ibid.).

As the last of a series of six piers that were constructed to serve industrial and commercial development in Santa Cruz, and which have been a defining element of the Santa Cruz waterfront since 1849, the Santa Cruz Wharf serves as a vital physical reminder of that history (SOURCE VII.11a).The historical fishing industry was also heavily dependent on the wharves of Santa Cruz, including the Municipal Wharf, prior to 1950 (Ibid.).

Historical Resource Reviews. The Santa Cruz Wharf is included in the City's Historic Building Survey (Volume 1) with a rating of "Excellent", which was based on an evaluation of the structure's historical significance, architectural significance, importance to the neighborhood, alterations, and physical condition. The Wharf is described in the Survey as "a typical ocean pier, originally to accommodate shipping and now largely devoted to restaurants and pleasure fishing." The Wharf is not listed in the City's List of City Landmarks. None of the existing buildings on the Wharf are included in the City's Historic Building Survey.

The Wharf Master Plan recognizes the Wharf as the last remaining pier in Santa Cruz and as a "unique landmark structure that has played a significant role in the historical, cultural and economic evolution of the City." The Plan cites its period of historic significance from the years between 1914 and World War II when its role and functions were most closely tied to the bay and maritime and commercial fishing activities. The Master Plan also indicates that its linear form recalls historic maritime functions for the berthing of large commercial vessels and also is an important characteristic.

For purposes of CEQA review, "historical resources" include:

(1) A resource listed in, or determined to be eligible for listing in the California Register of Historical Resources (CRHR.).

(2) A resource included in a local register of historical resources or identified as significant in an historical resource survey.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

The State CEQA Guidelines (section 15064.5(a)(2)) indicates that a resource in a local register shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant. Furthermore, the State CEQA Guidelines indicate that generally, a resource shall be considered to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources, including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) 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 values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

A review of the historical significance of the Santa Cruz Wharf was conducted in 2012 as part of studies prepared for the Regional Desalination Project since one intake alternative was considered on the Wharf. The review included preparation of a California Department of Parks and Recreation "Primary Record" (DPR) form, which is included in Attachment B of this document. The review concluded that the Wharf has historical significance at the local level due to listing in the City's Historic Building Survey and also is eligible for listing in the California Register of Historical Resources (California Register) under Criterion 1 of the CRHR due to its association with the economic development of Santa Cruz and the long history and role of wharves along the Santa Cruz waterfront.

Evaluation for eligibility for the California Register requires establishment of historic significance and consideration of "integrity," which refers to those features necessary to convey its significance. While a property's significance relates to its role within a specific historic context, its integrity refers to "a property's physical features and how they relate to its significance." The California Register has identified seven aspects of integrity: location, setting, design, materials, workmanship, feeling and association. While the materials of the Wharf have been changed over time, the current materials of both the Wharf substructure and those used on the more modern buildings situated on the Wharf are compatible in character with those used historically. The structure retains integrity of location and overall design, workmanship, feeling and association. The larger context or urban setting in the Beach area of Santa Cruz has evolved over time, becoming increasingly built up and urban, but this has not impaired the overall integrity or visual significance of the Wharf. The Santa Cruz Wharf has been continuously used since its original construction in 1914 and, although it has undergone numerous functional and structural changes since that time, it remains a vital part of the fabric of the Santa Cruz waterfront (SOURCE VII.9).

The Wharf is located in the place where it was originally built in 1914 at the base of Pacific Avenue, which historically provided a direct connection between the Wharf and downtown Santa Cruz. The other piers and wharfs that once lined this part of the Santa Cruz waterfront are no longer extant. In terms of design, the Wharf retains its original design intent to provide Santa Cruz with a direct connection to ocean industries and shipping, despite the fact that its function significantly changed after circa 1950. For example, commercial and recreational fishing operations shifted from the Wharf to the new Santa Cruz Harbor when it was completed in 1964. This historical connection is further enhanced by the setting on the Santa Cruz waterfront, and the wharf's prominence in views from West Cliff Drive and Beach Hill (SOURCE VII.9).

The Santa Cruz Wharf helps convey the sense of place and orientation of Santa Cruz along the waterfront which was integral in the development of the City. It retains its integrity of feeling since it still retains its significant physical characteristics that convey its historic qualities, and evokes a sense of its historical past. It retains its integrity of association as the property is directly linked to past significant events, such as its use in shipping and the fishing industry. The majority of the businesses currently on the Wharf have been present for decades, including a few of the restaurants. These restaurants do not reflect the original fishing-related warehouses and buildings that historically occupied the wharf, but are indicative of the early Italian-American adoption of the Wharf as a place of business, as well as the shift from primary fishing to tourist enterprises by those early families (SOURCE VII.11a).

The Santa Cruz Wharf is the last wharf of the original six that were constructed, and is the only surviving element associated with the shipping and fishing industries of the City from the early 20th century, which further elevates its significance. Although fewer than five percent of the original pilings still exist and there have been additions and alterations to the structure within the past fifty years, which has led to major losses in historic materials, it still conveys its historical significance, especially as the last surviving example of a property type pivotal in the historical development of the City (SOURCE VII.9).

The elements and integrity that make the Wharf potentially eligible for listing in the CRHR exist in its location, design (general placement of deck over piers, and distinct turn at end of pier), setting (e.g., proximity to railroad truss bridge and the Boardwalk), feeling (still "reads" as a large functioning pier), and association (the Wharf is still the place where economic and transportation activities took place that were important in the development of Santa Cruz), rather than specific materials and workmanship which were necessarily replaced and adapted over time to support the continued functioning of the pier (SOURCE VII.11a).

Impact Analysis. Adoption and implementation of the Wharf Master Plan will result in construction of new facilities and improvements that would result in alteration to the Wharf structure. However, the alterations would not materially impair the historical significance of the Wharf, as described below, and therefore, the impact to a historical resource would be *less than significant*.

The Santa Cruz Wharf structure is considered is a historical resource of significance pursuant to CEQA and the State CEQA Guidelines based on its local listing in the City's Historical Building Survey, and a previous review that indicates potential eligibility for listing in the CRHR under Criteria 1 — "association with events that have made a significant contribution to the broad patterns of California's history and cultural heritage".

According to CEQA (section 21084.1), a project that could "cause a substantial adverse change in the significance of an historical resources" may have a significant impact. CEQA Guidelines section 15064.5(b)(1) indicates that a "substantial adverse change in the significance of an historical resource" means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of

an historical resource *would be materially impaired*." Subsection (2) further indicates that the significance of a historical resource is *materially impaired* when a project "demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance" that justify its inclusion in or eligibility for listing in the CRHR or its inclusion in a local register.

None of the planned facilities and improvements envisioned in the Master Plan would demolish, destroy, or relocate the Wharf. The adoption of the Master Plan and subsequent construction of anticipated improvements would not alter the Wharf's association with the economic history of Santa Cruz nor would it change the Wharf's location. The proposed improvements will be executed in similar materials as have been used historically on the Wharf and new structures or amenities proposed are of similar type, scale, massing and materials as those already in existence on the Wharf. The new buildings and amenities proposed will not impair the historic character, feeling or association of the Wharf and they will be designed to be compatible with the current and past elements along the Wharf. All of the proposed improvements appear to have been designed with the *Secretary of the Interior's Standard for the Treatment of Historic Properties* in mind, and the overall intent of the proposed project is to ensure the longevity of the Wharf both materially and economically. While improvements envisioned in the Wharf Master Plan may increase uses along the Wharf, the overall historic aesthetic of the Wharf will not be impacted (SOURCE VII.9). When considered collectively, the suggested long-term maintenance, increased uses, improved infrastructure, and new building and amenities will not result in "substantial adverse change" in the historical significance of the Santa Cruz Wharf and therefore, the impact to a historic resource would be less than significant (Ibid.). The elements of the Master Plan and the two proposed near-term projects are further reviewed below based on a historical review conducted by a+h, architecture + history (SOURCE VII.9).

Master Plan

At program level, one of the Wharf Master Plan's key strategies is enhancement and preservation of the Wharf, which is recognized in the Plan as a historically significant landmark. The Wharf is the last remaining pier in Santa Cruz and according to the Wharf Master Plan, it is "a unique landmark structure that has played a significant role in the historical, cultural and economic evolution of the City."

The Master Plan's policies and actions support consideration of the Wharf as a historical resource. The Plan's first policy seeks to "Maintain and restore the characteristics that distinguish the Wharf as a unique physical and cultural landmark during its period of historic significance, when its role was closely related to the bay and maritime and commercial fishing activities." To support this policy, the Master Plan Actions include:

- Maintaining the timber piles and wood sub-structure construction that are essential to the Wharf's identity and to its continued longevity;
- Maintaining the linear form of the Wharf with an open leeward side and buildings clustered on the windward edge;

- Construction of a new Landmark Building that is reminiscent in scale and industrial form of the large warehouse structure that once was located at the bayward end of the Wharf; and
- Utilizing renewable hardwood decking in pedestrian areas and minimalist guardrails, where feasible, to recall the wood structure and unobstructed perimeter of the historic maritime Wharf.

The Plan's policies and actions support the preservation and continual maintenance of the Wharf's timber piles and wood sub-structure as being essential to its identity and historic character. In addition, its linear form that recalls historic maritime functions, reaching out to deep water for the berthing of large commercial vessels, is also an important characteristic, which the Master Plan also recognizes and supports maintaining.

Adoption and implementation of the Wharf Master Plan would support future improvements to the Wharf, resulting in the following physical alterations to the wharf structure:

- Physical expansion of the eastern perimeter of the Wharf (approximately 2.5 acres) for public access, recreation, fishing and boating.
- Installation of new (approximately 800) and replacement (approximately 225) 12-inch timber piles and six 14-inch steel piles.
- Installation of ten outriggers below the stepped edge of the East Promenade that will extend 25 feet to the east at the elevation of the existing ledgers and in the same plane to provide horizontal bracing to the Wharf.
- Provision of a Small Boat Landing across from relocated Wharf entrance that would be approximately 315 feet long with an upper deck, lower gangway and approximate 5,000 square foot float.
- Creation of a landing for research, sightseeing vessels (South Landing) with an approximate 1,500 square foot platform.
- Provision of water access from Westside Walkway for the Swim Club via an approximate 85-foot long gangway and float to the bay.
- Potential installation of a 20-inch stainless steel pipe under the Wharf for transport of refuse to an off-site collection center to be identified by the City.
- Surface repaving/stormwater controls.
- Construction of three new buildings and potential expansion of some existing buildings on top of the Wharf.

While many of these improvements would be considered alterations to the historic Wharf structure, they ultimately provide for the long-term maintenance, care and use of the structure. The new or remodeled/infill buildings could potentially change or alter the historic Wharf in scale, massing and materials. However, none of the planned facilities and improvements envisioned in the Master Plan would demolish, destroy, or relocate the Wharf such that it could no longer convey its historic

significance. None of the proposed projects is of such a scale or intervention that the Wharf would no longer be considered an important visual feature of the Santa Cruz waterfront. The improvements will enhance the ability of the Wharf to continue to contribute the economic vitality and tourist industries of Santa Cruz. The Wharf structure would be expanded for the East Promenade and Westside Walkway, but the expansion would retain the same linear form as currently exists. The other improvements would not substantially alter the Wharf in a way that would diminish its historic significance (SOURCE VII.9).

The 2001 DPR form indicates that the eligibility and significance of the Wharf relate to its association with the economic development of Santa Cruz and long history of wharves along the Santa Cruz waterfront. The adoption of the Master Plan and subsequent construction of anticipated improvements would not alter the Wharf's association with the economic history of Santa Cruz nor would it change the Wharf's location. Future improvements would not adversely impact the physical characteristics that convey the historical significance of the Wharf as none of the improvements would not alter the overall historic integrity of the resource. The Wharf has evolved and changed over time as uses, needs, and users have changed. These incremental alterations and improvements have not resulted in any significant physical changes that impacted the historic character of the Wharf (SOURCE VII.9).

Landmark Building. The Master Plan proposes construction of a new "Landmark Building" at the end of the Wharf. The new building will be sited in the historic location of a large warehouse. According to the Master Plan, "the restoration of this building would re-establish a strong visual terminus to the Wharf" and "would provide an icon tied to its maritime traditions". The Master Plan indicates that this building and location "recalls the historic warehouse structure that once occupied this key location." The re-introduction of this feature near the southern terminus of the Wharf is in keeping with the historic character and uses. The building will be designed to reflect the shape and form, but will not necessarily mimic, the historic structure that once stood at this end of the Wharf. The proposed structure, while not fully designed, appears to be compatible in its scale, massing, and materials to both the current and historic structures of the Wharf as well as the overall location and placement at the southern end of the structure. In conclusion, the construction of this new structure on the Wharf will not result in the "substantial adverse chance" of the significance of the Wharf and will not visually alter the Wharf, such that it can no longer convey its significance (SOURCE VII.9).

West Side of Wharf. The improvements proposed for the West side of the Wharf are mostly structural (new piles) and cosmetic (improvements to the facades of the existing buildings) with a slight expansion of the Wharf to the west to accommodate the Westside Walkway. These alterations will not

change the overall character of the Wharf and will not impair the ability of the Wharf to convey its historic significance (SOURCE VII.9).

Entry Gate Relocation

The proposed relocation of the Wharf entrance would move the existing kiosks approximately 550 feet further south from its current location. An entrance gate would be constructed with six steel piles that span the wharf width with roll-down transparent gates. The gate structure would be approximately 18 feet in height and a sign could be another six feet in height on top of the gate. A Wharf entrance sign is included as part of the entry gate facility, but a design has not yet been developed or reviewed. The sign would be within the general dimensions identified in the Master Plan. When proposed, a design will be developed through a public process. The structure would have a narrow profile and would be transparent as shown on Figures 3-1C and 3-1D. The relocation will include a new timber deck extension on the east side with a truss frame and new guardrails. The deck extension totals approximately 800 square feet.

The entrance relocation will result in physical alteration of the Wharf structure with a small expansion of the deck, which will be constructed of wood, and installation of 30 piles – 24 12-inch piles and six 14-inch steel piles. The alteration would not change the location or setting of the Wharf, and the 12-inch timber piles are the same as those that are currently used to replace damaged or worn piles. The change would not adversely affect the physical characteristics of the Wharf that convey its historic qualities and would not result in "substantial adverse change" in the significance of the historic resource (SOURCE VII.9).

East Promenade

As indicated above, construction of the East Promenade would not demolish, destroy, or relocate significant elements of the Wharf. Expansion of the Wharf by approximately 1.5 acres to create the East Promenade would retain the same linear form of the Wharf as currently exists. The expansion would result in a pedestrian facility with a hardwood deck supported by approximately 525 new 12-inch timber piles. This linear addition to the Wharf is designed to reflect the maritime character of the original Wharf structure. The materials used and the design employed would be consistent with the other incremental changes and features that have been added to the Wharf over time. The East Promenade improvements will not result in a significant visual change to the Wharf, nor will they result in the "substantial adverse change" in the significance of the Wharf as a historic resource (SOURCE VII.9).

CONCLUSION: The Santa Cruz Wharf has an important place in the City's history and it is an identified historic resource. The proposed project would not result in cumulative changes that would impair the significance of this historic resource. Overall, the proposed changes are in concert with the recommendations found within the Secretary of the Interior's Standards for the Treatment of Historic Properties. The project employs

materials and elements that will marry the older materials, buildings and components of the Wharf with the proposed new elements and interventions necessary for both the structural and economic longevity of the historic resource. None of the proposed components of the project would result in impaired historic integrity of the resource, nor would they rise to "substantial adverse change" in the significance of the historic resource. Further, given the life-long incremental changes that have occurred on the Wharf, these proposed alterations are in keeping with the past accumulations of repairs, upgrades and expansions that have retained the Wharf's place as an important Santa Cruz commercial and tourist destination. As discussed above, adoption and implementation of the Wharf Master Plan and construction of proposed projects and future buildings and improvements would not cause a substantial adverse change in the significance of this historical resource, and the impact is less than significant (SOURCE VII.9).

Under Municipal Code Chapter 24.08, Part 10, alteration of a historic building or structure on the City's Historic Building Survey would require a permit if the wharf structure itself would be modified. The purpose of this permit is to ensure that new construction and alterations are allowed in a manner which retains the integrity of the City's historic landmarks, buildings, sites and Districts over time.

(b, d, e) Archaeological and Tribal Cultural Resources – *No Impact*. According to maps developed for the City's *General Plan 2030* and included in the General Plan EIR, the project site is not within a mapped "sensitive" archaeological or "sensitive" historical archaeological area (SOURCE VII.1b-Figures 4.9-1 and 4.9-3, DEIR). The project area is not within a mapped sensitive archaeological area as shown in the City's Local Coastal Plan (SOURCE VII.2a-Map CR-2).

State Assembly Bill 52, effective July 1, 2015, recognizes that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in tribal cultural traditions, heritages, and identities. The law establishes a new category of resources in the California Environmental Quality Act called "tribal cultural resources" that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation. Public Resources Code section 21074 defines a "tribal cultural resource" as either:

(1) Sites, features, places, cultural landscapes, sacred places and objects with cultural value to a California Nature American tribe that is either listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or

(2) A resource determined by the lead agency chooses, in its discretion and supported by substantial evidence, to treat as a tribal cultural resource.

The California Public Resources Code section 21084.2 now establishes that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." The Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic

area of a proposed project.

The project site is the Santa Cruz Wharf that extends into the Monterey Bay. The site, including the existing Wharf entrance that is on land off of Beach Street, is not located within an area of known archaeological sensitivity or archaeological resources. Adoption and implementation of the Wharf Master Plan, including construction of the first two projects, would result in construction on the Wharf and within Monterey Bay. The project site is located within the developed Beach Area of the City. There are no known resources on or adjacent to the site that would be considered a tribal cultural resource. No Native American tribe has contacted the City of Santa Cruz and requested consultation. Therefore, the project would not result in impacts to archaeological resources or cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074.

(c) Paleontological Resources – *No Impact*. According to maps developed for the City's *General Plan 2030* and included in the General Plan and General Plan EIR (SOURCE VII.1a-page 23 & VII.1b-Figure 4.9-5), the sandy beach adjacent the project site is within an area mapped as Holocene Alluvium geologic formation. Although this formation is generally considered too young to contain paleontological resources, it is considered moderately sensitive for paleontological resources because it is underlain by sedimentary geologic units that have a high paleontological sensitivity (SOURCE VII.1b-DEIR). The project site is the Santa Cruz Wharf that extends into the Monterey Bay, and it is not located within an area of sensitive paleontological resources.

Adoption and implementation of the Wharf Master Plan, including construction of the first two projects, would result in construction on the Wharf and within Monterey Bay. Thus, the proposed project would not result in excavation or land disturbance within beach and adjacent areas, which have been highly disturbed due to natural wave, tidal and river processes. Therefore, the proposed project would not result in the discovery of unknown paleontological resources during construction.

6. Geology and Soils

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

a. *Expose people or structures to potential substantial adverse effects resulting from the rupture of a known earthquake fault, seismic ground shaking, landslides, or seismic-related ground-failure, including liquefaction, and that cannot be mitigated through the use of standard engineering design techniques;*

b. *Result in substantial soil erosion or the loss of topsoil and subsequent sedimentation into local drainage facilities and water bodies;*

c. *Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide or slope failure;*

d. *Be located on an expansive soil, as defined by the Uniform Building Code (1997) or subject or other soil constraints that might result in deformation of foundations or damage to structures, creating substantial risks to life or property; or*

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

(ai) Fault Rupture – *No Impact*. The project site is located in a seismically active region of California and the region is considered to be subject to very intense shaking during a seismic event. The City of Santa Cruz is situated between two major active faults: the San Andreas, approximately 11.5 miles to the northeast, and the San Gregorio, approximately 9 miles to the southwest. There are no active fault zones or risk of fault rupture within the City (SOURCE VII.1b). Therefore, fault rupture through the site is not anticipated.

(aii-iv, c) Seismic & Geologic Hazards – *Less-than-Significant Impact*. The project would be subject to seismic shaking. According to maps developed as part of the City's recently adopted *General Plan 2030* and included in the General Plan and General Plan EIR, the project site is located in an area identified as being subject to liquefaction hazards (SOURCE VII.1a-page 10-5 & V.1c-Figure 4.10-4).

According to the Engineering Report prepared as part of the Wharf Master Plan, the Wharf structure is all timber construction that can be separated into three functional areas: foundation (piles and cap); deck (stringers decking and paving); and superstructure (buildings on top). The Wharf foundation (piles) act as cantilever elements as the piles transfer all forces (support) into the seafloor by embedment of approximately 15 feet. The piles support vertical loads (weight) by bearing on the pile tip and friction for the length of embedment. The piles resist lateral loads (wave, earthquake, etc.) by embedment into the soil that produce a bending moment within the embedded portion of the pile. The Wharf deck (stringers, decking) span as simple beams between pile bents. At the south end of the Wharf, horizontal members installed at elevation 9 ft. MLLW (12 feet below top of pile provide lateral bracing to the piles. Decking members span across multiple stringers for vertical loads (weight). The entire timber deck assembly is flexible and acts as a unit to spread load to adjacent members, particularly large point loads (such as a truck wheel). For lateral loads, the deck assembly acts as a diaphragm (flexible) to transmit loads across many multiple piles in the foundation (SOURCE VII.7).

The Engineering Report included an inspection of all existing wharf piles (approximately 4,450). The piles are the most critical element of the structure as they transmit all loads to the supporting seafloor soils. The inspections indicated that the piles are in good condition overall. Less than five percent of the existing piles require replacement (SOURCE VII.7). Notable exceptions are underneath buildings where replacement is difficult with the building structure in place. The report indicates that a major factor contributing to the longevity of the piles has been the practice of using Douglas fir piles treated with preservative (different treatment methods have been used on the existing piles depending on the time period they were installed). Observed damage to the piles is caused by storm waves, floating logs and marine borers. The assessment concluded that the continued replacement of damaged piles will allow the continued functioning of the Wharf well into the future (Ibid.).

The engineering review also included a structural evaluation of the Wharf that assessed the condition of the existing structural members and analysis of their capacity to safely support the imposed loads (weight, waves, earthquake, etc.). The review concluded that the condition of the structure is good due to the quality of original construction and continuous maintenance (SOURCE VII.7).

A preliminary analysis of the Wharf performance in a seismic event was included in the Engineering Report. The Wharf is in a seismically active area and has withstood a number of earthquakes during its 100 year in existence. These include the Loma Prieta earthquake in 1989, whose epicenter was approximately five miles from the Wharf. This earthquake caused significant damage to Santa Cruz including damage to the downtown area that required significant reconstruction, however there was no damage to the Wharf as a result of the Loma Prieta Earthquake (SOURCE VII.7). The vertical timber pile construction of the Wharf is inherently flexible (Ibid.).

Impact Analysis. Adoption and implementation of the Wharf Master Plan and future construction of proposed facilities and improvements would result in exposure of new structural development to seismic hazards. However, with implementation of the recommendations of the Engineering Report prepared as part of the Wharf Master Plan, the impact would be *less than significant*.

Master Plan

Adoption and implementation of the Wharf Master Plan and future construction of planned improvements and structures would result in: physical expansion of the Wharf to create a pedestrian promenade and a walkway on the west side; construction of three new buildings (Gateway, Events Pavilion and Landmark); and potential intensification of existing buildings and uses on the Wharf. The new facilities would be supported by additional piles as needed for support, and the additional width provided by the East Promenade will also enhance the lateral stability and strength of the Wharf (SOURCE VII.8). The Master Plan provides additional piles and outriggers at the southern end of the Wharf that will provide additional lateral strength.

The Engineering Report concluded that the continued replacement of damaged piles will allow the continued functioning of the Wharf well into the future and that the condition of the wharf structure is good due to the quality of original construction and continuous maintenance (SOURCE VII.7). Implementation of other engineering recommendations would support structural loads with consideration of seismic design factors. These recommendations include, but are not limited to:

- Continued replacement of piles as damaged and installation of additional piles for lateral stability and where required for additions to the Wharf.
- Replacement of deteriorated elements such as stringers, decking and pile caps.
- Provisions of as design parameters for future facilities.

- Reduce large vehicle access onto the Wharf and limit access to restricted areas.
- Perform design level seismic analyses for structural additions to the Wharf.

Therefore, with the additional piles and lateral support that will be provided as part of the expansion of the Wharf and with implementation of other recommendations outlined in the Engineering Report, the future construction of improvements and structures on the Wharf would not expose people or property to potential substantial adverse impacts.

Entry Gate Relocation

The proposed relocation of the entrance further onto the Wharf includes a new entrance and slight deck expansion that would be supported by additional 12-inch timber piles. The entry will include a gate and sign structure that will be supported by six 14-inch steel piles. The proposed entrance will be designed in accordance with engineering recommendations and would not expose people or structures to potential substantial adverse impacts.

East Promenade

Construction of the East Promenade will result in physical expansion of the Wharf by approximately 1.5 acres to the east to create a pedestrian promenade. As indicated above, the additional width provided by the East Promenade will also enhance the lateral stability and strength of the Wharf. The facility will be supported by 525 new 12-inch timber piles and supporting members. The East Promenade structure is designed of similar material and configuration to the existing timber wharf, which provides compatibility and additional lateral strength to the Wharf to withstand wave and other lateral loads (SOURCE VII.7). The Wharf structure acts as a cantilever structure (piles) connected with a diaphragm (deck). By adding piles to the width of the Wharf this increases the stiffness, and reduces deflections and stress in the existing piles (Ibid.). As previously indicated, the additional piles and outriggers at the southern end of the Wharf will provide additional lateral strength (Ibid.). The East Promenade is designed to support pedestrian loading, and in addition, to support emergency fire vehicles. The Engineering Report provides engineering recommendations and design parameters for the East Promenade, including loads for emergency vehicles. Thus, the proposed expansion and new pedestrian promenade will be designed in accordance with engineering recommendations and would not expose people or structures to potential substantial adverse impacts.

(b) Erosion – *No Impact*. According to maps developed as part of the City's recently adopted *General Plan 2030* and included in the General Plan EIR, the project site is not located within an area that is mapped as having soils with a high erosion potential (Beaches) (SOURCE VII.1b, DEIR-Figure 4.10-6). The project site is the Santa Cruz Wharf that extends into the Monterey Bay. Adoption and implementation of the Wharf Master Plan, including construction of the first two projects, would result in construction on the Wharf that is located over the waters of

the Monterey Bay. There would be no onland excavation, grading or construction that would potentially result in soil erosion or loss of topsoil. Thus, no impacts related to erosion would occur.

(d) Expansive Soils – *No Impact*. The project site is the Santa Cruz Wharf that extends into the Monterey Bay. Adoption and implementation of the Wharf Master Plan, including construction of the first two projects, would result in construction on the Wharf and within Monterey Bay. There would be no onland excavation, grading or construction that would potentially result in soil erosion or loss of topsoil. Thus, no impacts related to expansive soils would occur.

(e) Use of Septic Systems – *No Impact*. The project site is within the City of Santa Cruz and served by the City's municipal sanitary sewer system. Construction of new buildings and improvements that are proposed in the Wharf Master Plan would be served by the existing sewer system and will not use septic systems.

7. Greenhouse Gas Emissions

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

a. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or*
b. *Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.*

(a) Greenhouse Gas Emissions – *Less-than-Significant Impact*. Climate change refers to any significant change in measures of climate, such as average temperature, precipitation, or wind patterns over a period of time. Climate change may result from natural factors, natural processes, and human activities that change the composition of the atmosphere and alter the surface and features of the land. Significant changes in global climate patterns have recently been associated with global warming, an average increase in the temperature of the atmosphere near the Earth's surface, attributed to accumulation of greenhouse house gas (GHG) emissions in the atmosphere. Greenhouse gases trap heat in the atmosphere, which in turn heats the surface of the Earth. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities (SOURCE VII.1b-DEIR). Climate change models predict changes in temperature, precipitation patterns, water availability, and rising sea levels, and these altered conditions can have impacts on natural and human systems in California that can affect California's public health, habitats, ocean and coastal resources, water supplies, agriculture, forestry, and energy use (Ibid.).

The most common GHG that results from human activity is carbon dioxide, followed by methane and nitrous oxide (SOURCE VII.1b-DEIR). The primary contributors to GHG emissions in California are transportation (about 37%), electric power production (24%), industry (20%),

agriculture and forestry (6%), and other sources, including commercial and residential uses (13%). Approximately 81% of California's emissions are carbon dioxide produced from fossil fuel combustion (Ibid.).

The State of California passed the Global Warming Solutions Act of 2006 (AB 32), which requires reductions of GHG emissions generated within California. The Governor's Executive Order S-3-05 and AB 32 (Health & Safety Code, § 38501 et seq.) both seek to achieve 1990 emissions levels by the year 2020. Executive Order S-3-05 further requires that California's GHG emissions be 80 percent below 1990 levels by the year 2050. AB 32 defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrocarbons, perfluorocarbons and sulfur hexafluoride.

The California Air Resources Board (CARB) is the lead agency for implementing AB32. In accordance with provisions of AB 32, CARB has completed a statewide Greenhouse Gas (GHG) Inventory that provides estimates of the amount of GHGs emitted to, and removed from, the atmosphere by human activities within California. In accordance with requirements of AB32, a Scoping Plan was adopted by CARB in December 2008 and updated in 2014. The Scoping Plan and 2014 Update identify emissions reduction measures and actions related to energy, transportation, agriculture, water conservation and management, waste management, natural resources, green building, and cap-and-trade actions.

The City's *General Plan 2030* includes goals, policies and actions on climate change, including reducing community-wide greenhouse gas emissions 30 percent by 2020, reducing 80 percent by 2050 (compared to 1990 levels), and for all new buildings to be emissions neutral by 2030. In October 2012, the City also adopted a "Climate Action Plan" that outlines the actions the City will take over the next ten years to reduce greenhouse gasses by 30%.

Impact Analysis. Implementation of the Wharf Master Plan and construction of proposed facilities would result in new structural development and potential expansion of visitor use that would indirectly contribute to greenhouse gas emissions, although implementation of the Plan and future construction would not result in new stationary emissions. The level of future development envisioned in the Plan would not generate GHG emissions at a level considered significant. Therefore, the impact would be *less than significant*.

Master Plan

Adoption and implementation of the Wharf Master Plan and future construction of planned improvements would result in construction of three new buildings (Gateway, Events Pavilion and Landmark). a potential modest increase in parking (45-65 spaces), and potential intensification of existing buildings and uses on the Wharf, which could result in indirect GHG emissions related to vehicle trips and energy use. The proposed new buildings total approximately 15,000 square feet, and the Master Plan identifies potential expansion of existing commercial buildings of approximately 4,000 square feet in two locations. The new buildings would be primarily for publicly oriented uses and activities. As previously indicated, the Master Plan encourages the

development of second floor uses and provides a preliminary estimate that potential intensification within the existing building footprint could result in a total 20-30% increase in building space separate from the three new buildings. This would be approximately 12,000-18,000 square feet, including the above specific infill locations. The Master Plan does not propose specific locations for potential intensification other the two locations identified above, nor is it known when such expansion and intensification may occur.

This Initial Study assumes that the implementation of the Master Plan could result in development of up 20,000 square feet of new building space. This includes 15,000 square feet of public uses within the three new proposed buildings and approximately 5,000 square of expanded building space for retail and commercial uses. An additional 10,000± square feet of expanded commercial building space within existing buildings is considered a long-term possibility that is suggested in the Master Plan. However, this possibility could occur under both existing conditions and with implementation of the Master Plan. However, for a worst-case analysis, it is assumed that all of the estimated intensified building space would be constructed for a total of approximately 35,000 square feet and all the new building square footage would be commercial uses.

As indicated in Section IV.B, the City's *General Plan 2030* EIR included an analysis of GHG emissions associated with future development and buildout accommodated by the General Plan, which included 3,350 residential dwelling units with an associated population increase of 8,040 residents and approximately 3,140,000 additional square feet of new commercial, office and industrial uses by the year 2030, including approximately 1,090,000 square feet of commercial uses. The General Plan EIR concluded that GHG emissions would not be considered substantial compared to long-term forecasts and state and regional targets, and the impact was considered less than significant. The analysis is included on pages 4.12-24 to 4.12-31 of the Draft EIR volume and pages 3-26 to 3-27 of the Final EIR volume (SOURCE VII.1b).

The proposed project size (15,000 square feet within three new structures and potentially 5,000 square feet of commercial expansion and infill) would be within the overall amount of commercial and non-residential development evaluated in GHG emissions analysis included in the General Plan EIR as summarized above in Section IV.B. This Initial Study tiers off and incorporates by reference the General Plan EIR (as discussed in Section IV.B above) for the greenhouse gas emissions analysis, which concluded impacts would be less than significant.

Entry Gate Relocation

The proposed relocation of the entrance further south onto the wharf from its current location would not result in new structural development that could indirectly result in increased air or greenhouse gas emissions. The

relocation will provide more efficient accessibility for vehicles entering and exiting the wharf, but would not affect the number of vehicles accessing the Wharf. The exit kiosks would use minimal energy as currently exists. Therefore, this near-term project would have *no impact* related to GHG emissions.

East Promenade

The proposed East Promenade would expand the Wharf surface area by approximately 1.5 acres, and would be devoted to pedestrian use. The facility would not result in construction of buildings that would require services or energy, except for some new light fixtures. The use of this new area would be by visitors on foot or on bicycle. The improvement by itself would not lead to indirect increases in vehicle use or greenhouse gas emissions. New lighting would be energy-efficient LED or solar lights, which would not result in a substantial indirect generation of GHG emissions. Therefore, there would be *a less-than-significant impact* related to GHG emission with implementation of this near-term project.

(b) Conflict with Applicable Plans – *No Impact*. The project would not conflict with state plans adopted for the purpose of reducing greenhouse gas emissions. The State's "Scoping Plan" includes strategies for transportation, energy, water and other sectors that are not directly applicable to the proposed project.

In October 2012, the Santa Cruz City Council adopted a Climate Action Plan (CAP) that addresses citywide greenhouse emissions and reduction strategies. The CAP outlines the actions the City and its partners may take pertaining to reduction of greenhouse gas emissions to meet the goals and implement the policies and actions identified in the *General Plan 2030*. The CAP provides City emissions inventories, identifies an emissions reduction target for the year 2020, and includes measures to reduce energy use, reduce vehicle trips, implement water conservation programs, reduce emissions from waste collection, increase solar systems, and develop public partnerships to aide sustainable practices. Measures are outlined for the following sectors: municipal, residential, commercial, and community programs. The CAP includes an implementation chapter that identifies tracking and reporting of the success of the measures, including City staff responsibilities.

One measure in the CAP seeks to implement pilot projects that support development of emerging alternative energy technologies through partnerships with UCSC or other stakeholders, and a specific action calls for identifying funding to support the development of an energy research facility at the Wharf and other locations. As previously indicated, the Wharf supports or has supported demonstration and/or research projects on the Wharf. In 2011, the University of California at Santa Cruz (UCSC) in collaboration with the City of Santa Cruz undertook a study to evaluate solar and wind renewable energy technologies at the Wharf that included the temporary installation of a solar panel, a small-scale vertical axis wind turbine, and sensors on a platform on the roof of the Wharf Headquarters building. During the summer of 2015, a sun-powered streetlight was installed to test new solar technology.

One of the Master Plan "Actions" is to provide opportunities for research and demonstration projects, including energy, water use and recycling. Specific types of projects are not identified, but based on existing demonstration projects underway at the Wharf (wind research, solar lights), such projects are anticipated to be related to scientific research. The Master Plan also recommends improvements to the existing trash collection system for the Wharf to eliminate the use of centralized garbage and reliance on large garbage trucks. Alternative approaches include the use of smaller collection trucks and more frequent pick-ups combined with smaller refuse and recycling compactor locations on the Wharf or with a close-by offsite collection center to which refuse and recyclables can be delivered by electric or other alternatively powered vehicles. These policies, actions, and proposed improvement, in combination with construction of the East Promenade for pedestrian and bicycle use, would support the measures and actions outlined in the CAP. Thus, adoption and implementation of the Wharf Master Plan and future construction of recommended improvements would not conflict with provisions of the City's adopted Climate Action Plan.

8. Hazards & Hazardous Materials

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

a. *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;*
b. *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;*
c. *Emit hazardous emissions or handle hazardous materials or waste within ¼ miles of an existing or proposed school;*
d. *Be located on a site that 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;*
e. *Impair the implementation of or physically interfere with an adopted emergency response or evacuation plan; or*
f. *Expose people or structures to a significant risk of loss, injury or death involving wildland fires.*

The Santa Cruz Wharf is not located on a list of hazardous materials sites (d), near an airport, air strip, or wildland fire hazard area (f).

(a-c) Use of Hazardous Materials/Create Hazard – *No Impact*. The project consists of implementation of the Wharf Master Plan and construction of new buildings and improvements on the Wharf. Neither implementation of the Master Plan nor construction of the two near-term planned projects – relocation of the Entry Gate and construction of the East Promenade – would result in uses or operations that would create risks associated with hazardous material use. The project is not located within ¼ mile of an existing or proposed school, and would not result in a stationary source of emissions. Construction would not

include development that would store or use hazardous materials. Existing boat rentals and associated fuels would continue to be stored and contained in compliance with all applicable local, state and federal regulations.

(e) Emergency Access Plans – *No Impact*. The City has developed a fire suppression protocol in the event of a fire and evacuation of the Wharf in the event of an emergency. Thus, adoption an implementation of the Wharf Master Plan would not impair the implementation of or physically interfere with an adopted emergency response or evacuation plan. The proposed expansion of the Wharf and relocated entry would improve emergency vehicle access to the Wharf.

9. Hydrology and Water Quality

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

a. *Violate any water quality standards or waste discharge requirements;*
b. *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge;*
c. *Substantially alter the existing drainage pattern of the site or area;*
d. *Substantially alter a stream in a manner that would result in substantial offsite erosion or siltation or flooding;*
e. *Substantially increase the rate or amount of surface runoff which would exceed capacity of existing or planned storm drain facilities, cause downstream or offsite drainage problems, or increase the risk or severity of flooding in downstream areas;*
f. *Substantially degrade surface water quality;*
g. *Result in construction of habitable structures within a 100-year floodplain as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, which would expose people or structures to a significant risk of loss, injury or death due to flooding;*
h. *Locate structures within a 100-year flood hazard area that would impede or redirect flood flows;*
i. *Expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam; or*
j. Expose people or structures to a significant risk of loss, injury or death as a result in inundation by seiche, tsunami, or mudflow.

Adoption and implementation of the Wharf Master Plan would not involve new discharges that would violate any water quality standards or waste discharge requirements (a). The Wharf is located within a developed area and is situated over the Monterey Bay, and future improvements would not affect groundwater supplies (b). The project site is not located adjacent to or in proximity to a stream, and implementation of the Master Plan and future construction of recommended improvements would have no effect on an existing stream or watercourse (d).

(d, e) Stormwater Runoff – *Less-than-Significant Impact*. The City's storm drain system is comprised of a wide variety of conveyance systems such as underground pipes, small open drainage channels, creeks, and the San Lorenzo River. The system includes numerous storm drain inlets and catch basins throughout the City, and five pump stations that discharge stormwater directly into the San Lorenzo River. In addition, along both the east and west sides of the City, there are stormwater outfalls that discharge onto the beaches or cliffs and into Monterey Bay.

The Wharf extends into the Monterey Bay. The current road surface has no slope and drains through the cracked pavement into the ocean. The constant moisture accelerates deterioration of the underlying timber structure (SOURCE VII. 7).

An Engineering Report was prepared as part of the Wharf Master Plan that included review of storm water drainage from the Wharf and provided recommendations for drainage and water quality controls.

Impact Analysis. Implementation of the Wharf Master Plan and construction of proposed facilities would result in new structural development with some increase in impervious surfaces, but would not significantly increase runoff volumes or rates or exceed capacities of storm drain facilities. Therefore, the impact would be *less than significant*.

Master Plan	Adoption and implementation of the Wharf Master Plan and future construction of planned improvements would result in expansion of the Wharf's surface area and construction of three new buildings (Gateway, Events Pavilion and Landmark) as well as potential intensification of existing buildings. The buildings would be constructed on impervious paved surfaces. The expanded Wharf could result in some increase in impervious surfaces that would result in an increase in stormwater runoff. However, since the Wharf is located in the Monterey Bay, there are no downstream stormwater drainage constraints. The Engineering Report prepared in conjunction with the Master Plan provides a series of recommendations to collect and treat runoff for water quality control as discussed below in subsection 9(f). As a result, any increased runoff would not substantially alter the existing drainage pattern of the area or exceed capacity of storm drainage facilities.
Entry Gate Relocation	The proposed relocation of the entrance further south onto the wharf from its current location would expand the Wharf's surface area by approximately 800 square feet. The relocation will provide more efficient accessibility for vehicles entering and exiting the wharf, but would not affect the number of vehicles accessing the Wharf. Any increased runoff would not substantially alter the existing drainage pattern of the area or exceed capacity of storm drainage facilities.
East Promenade	The proposed East Promenade would expand the Wharf surface area by approximately 1.5 acres, and would be devoted to pedestrian use. Runoff

would continue to flow into the bay, but there would be no vehicle use in this area that could contribute pollutants to the runoff. Increased runoff would not substantially alter the existing drainage pattern of the area or exceed capacity of storm drainage facilities.

(f) Water Quality – *Less-than-Significant Impact*. The proposed project is located on the Santa Cruz Wharf that extends into Monterey Bay for a distance of 3,000 feet (approximately one-half mile). Storm water runoff currently flows off the Wharf surface or through cracks in the pavement directly in the Monterey Bay.

Within urbanized areas such as the City, pollutants frequently associated with storm water include sediment, nutrients, oil and grease, heavy metals, and litter. The primary sources of storm water pollution in urban areas include automobiles, parking lots, landscape maintenance, construction, illegal connections to the storm water system, accidental spills and illegal dumping.

Urban runoff and other "non-point source" discharges are regulated by the 1972 Federal Clean Water Act (CWA), through the National Pollutant Discharge Elimination System (NPDES) permit program. In 1999, the U.S. Environmental Protection Agency (EPA) promulgated Phase II Storm Water Regulations under the authority of the Clean Water Act section 402 that required the State Water Resources Control Board (SWRCB) to issue NPDES permits to operators for Discharges of Storm Water from Small Municipal Separate Storm Sewer Systems (MS4 General Permit). In 2003, the SWRCB adopted the General Permit for storm water discharges from Small MS4s.

Between 2004 and 2009, the City of Santa Cruz developed a Storm Water Management Program (SWMP) to fulfill the requirements of the Phase II NPDES General Permit for Discharges of Storm Water from Small Municipal Separate Storm Sewer Systems (MS4 General Permit) and to reduce the amount of pollutants discharged in urban runoff. The City's SWMP, which was approved by the Central Coast RWQCB on April 14, 2009, is a comprehensive program to reduce the amount of pollutants discharged in urban runoff and to improve and protect water quality.

In 2013, a new statewide NPDES Small MS4 General Permit was adopted by the SWRCB, and the City updated its SWMP into a "Guidance Document" for the transition between the requirements of the previous permit and those of the new General Permit as required for permit coverage. The program elements of the NPDES permit include education and outreach, public involvement, illicit discharge detection and elimination, construction site runoff control, pollution prevention, post-construction and program effectiveness assessment.

Impact Analysis. Implementation of the Wharf Master Plan and construction of proposed facilities would result in expansion of the Wharf, but with implementation of stormwater treatment features recommended in the Engineering Report, future construction of facilities and improvements would not result in a substantial degradation of water quality. Therefore, the impact would be *less than significant*.

There are three potential issues affecting water quality as a result of construction of new development and improvements: 1) water quality degradation from stormwater runoff; 2) water quality degradation during construction; and 3) potential water quality issues regarding the type of coating that is on the timber piles. Each will be addressed separately. Since the issues apply to all future development and improvement, the impact is discussed as a whole and not separated between the Master Plan and the two near-term projects.

Stormwater Quality. Stormwater quality treatment is a consideration for roadways due to accumulation of sediments, oils, and grease from vehicles. Water quality treatment is not required for paved pedestrian-only areas or existing building roof areas. For new buildings, the Engineering Report recommends that roof downspouts direct roof runoff onto vegetated areas or into cisterns/rain barrels for reuse. New walkways constructed with decking boards and gaps to allow for drainage would not require treatment since the surface would be pervious.

As indicated above, the current road surface has no slope and drains through the cracked pavement into the ocean. The Engineering Report indicates that when repaving, the pavement can be sloped to collect the water into inlets that can treat the runoff through media (carbon filtration) before discharge into the bay water. A conceptual design in presented in the Engineering Report. The system would provide a seal over the deck boards to eliminate seepage below and a collection system to allow any trapped water that may collect at the bottom of the asphalt to be drained through a deck "bleeder". Thus, the recommended paving system will treat stormwater runoff before it is discharged into the Monterey Bay, which does not currently occur (SOURCE VII.7). Structural water quality treatment, such as oil and grease chambers, swirl chambers and media filters also would be feasible water quality treatment tools at the Wharf. With implementation of this system and above measures as recommended in the Engineering Report, surface runoff from paved surfaces with vehicle use would be pre-treated to prevent degradation of the marine waters below the Wharf.

Construction Water Quality. The proposed project could inadvertently result in discharge of construction-related contaminants, but implementation of Best Management Practices required by the City's stormwater management regulations would avoid or minimize impacts to a less-than-significant level, and no mitigation measures are required. Construction would not involve grading or excavation, and thus, would not result in erosion-related water quality impacts. Implementation of best management practices required by the City's stormwater ordinance would include measures to protect water quality, such as proper storage, disposal and cleanup of equipment fuels.

During installation of the pilings, benthic sediments would be temporarily disturbed in during installation of the piles, which are estimated to take approximately 15-30

minutes to install per pile. This may result in temporary discharge of sediments into surface waters, which could cause a very minor increase in the water's turbidity in the immediate vicinity on a temporary basis. Given the limited area of disturbance and short duration, the level of temporary turbidity arising from pile driving would not result in a significant impact on water quality due to the temporary and localized nature of the effect.

Timber Pile Treatment Effects on Water Quality. The proposed new facilities would require installation of nearly 700 new timber piles in order to support new improvements and/or to increase the lateral stability of the Wharf. Additionally, approximately 225 existing piles will require replacement over time. New and replacement piles would be 12-inch diameter timber (Douglas fir) piles. The more recently installed replacement timber piles at the Wharf are treated with ACZA (ammoniacal copper zinc arsenate) and coated with a polyurea compound (SOURCE VII.7). ACZA is a wood preservative derived from metal compounds and arsenic that preserve the wood from decay fungi, wood attacking insects, including termites, and marine borers through their toxic properties. These metal-arsenate chemicals are toxic and can produce adverse impacts to aquatic habitat and species when used where they can be leached from pilings into the aquatic environment (SOURCE VII.3a) as discussed above in subsection 4a. However, use of coating on the pile or wrapping piles would prevent leaching of toxic materials in the treated piles from leaching into the bay. Specifically, timber piles at the Wharf are sprayed with a polyurea compound that is designed to encapsulate treated timber products to prevent toxins from leaching into the environment and protecting the timber from marine borers, and this coating system has been used for encapsulating AZCA-treated piles without any adverse impacts to water quality.

(g-i) Flood Hazards– *Less-than-Significant Impact*. The Wharf is not located within a floodplain of a stream, but its location within the bay subjects the facility to costal storms and waves and future sea level rise.

Coastal Storms and Wave Run-up. Studies have found a progressive increase in wave-energy levels in the North Atlantic and North Sea since the 1950s and in the North Pacific since the late 1970s, possibly due to global climate change (SOURCE VII.7). Over the last 15 years, the U.S. west coast has experienced unusually intense wave conditions and the storm frequency and magnitude seem increasing. Although some variations exist, the general trend indicates an increase of average significant wave height and average peak wave period. A study of the California central coast by the U.S. Geological Survey (USGS) observed a trend of significant average wave height increase of 1.4 foot over the past 22 years (Ibid.). The long-term trend also suggests greater storm intensity over the study period. During El Niño months, the mean significant wave height is higher and larger waves are more frequent (30% more frequent than average for waves exceeding 4 meters). In contrast, during La Niña months, their increases are less profound (Ibid.).

It is also noted that FEMA is currently updating coastal Flood Study information for the shoreline and coastal communities along the Pacific coast. The update includes new coastal hazard analyses to define the 1- and 0.2%- annual-chance coastal flood events (the 100- and 500-year coastal flood events), and revise the boundaries of Special Flood Hazard Areas (SFHAs) along the coast of Santa Cruz County[7]. SFHAs will be mapped based on the results of new coastal hazard modeling. These updates have not yet been completed.

Santa Cruz Wharf was located behind Lighthouse Point for the natural shelter provided at this location. However, this location is on the open coast and subject to inherent forces of the sea. The elevation of Wharf deck (23 ft. MLLW) is sufficient to keep the Wharf deck above all but the infrequent, highest waves which can be up to 20 ft. in height (SOURCE VII.7). As sea level rises waves will be closer to the Wharf deck more frequently. Additional piles to widen the Wharf will increase the Wharf's ability to withstand these waves and other lateral forces. The Master Plan also proposes installation of ten outriggers below the stepped edge of the East Promenade, which will extend 25 feet to the east at the elevation and in the same plane of the existing ledgers. The purpose is to provide horizontal bracing, which will increase the stiffness and reduce the sway of the Wharf and provide better resiliency during extreme storms. The outriggers will create a more resilient form, enabling large waves to more readily pass through the structure. The planned West Walkway as called for in the Master Plan will protect the west side of the Wharf and buildings. These elements combined with the continued maintenance performed by the Wharf staff will allow the Wharf to continue to resist the forces of the sea (SOURCE VII.7). Evacuation of the Wharf during periods of predicted extreme waves also would be implemented as occurred in 1985 and 1998.

Sea Level Rise. The rise in global sea level is attributed to the thermal expansion of ocean water and the melting of mountain glaciers and ice sheets around the globe. Although sea level rise is not a new phenomenon, having been a major natural component of coastal change throughout time, the current concern is that with increased global warming and melting of ice sheets on Greenland and West Antarctica, the rate of change may increase. Average global sea level has risen between five to nine inches during the 20th century as reported by the International Panel on Climate Change (IPCC), nearly one-tenth of an inch each year (SOURCE VII.3b). Along California's coast, sea level already has risen by an average of seven inches over the last century – three inches at Los Angeles, eight inches at San Francisco, and an estimated six inches at La Jolla near San Diego (Ibid). Sea level rise will result in direct and indirect impacts including: increase risk of flooding, storm surges and inundations, erosion, shoreline retreat and loss of wetlands.[8] Current estimates indicate that sea level in California south of Cape Mendocino is projected to increase by 17 to 66 in the year 2100, according to the 2012 National Research Council *Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* report (Ibid.).

[7] FEMA web page, "Open Pacific Coast Study, Santa Cruz County, California. Accessed February 29, 2016. Available online at: http://www.r9map.org/Pages/ProjectDetailsPage.aspx?choLoco=44&choProj=273.

[8] Committee on Sea Level Rise for the Coasts of California, Oregon and Washington; Past, Present and Future, Washington D.C: The National Academies Press. June 2012.

Rising sea levels, storms of increasing intensity and an alternating series of floods and drought threaten the City of Santa Cruz in the coming decades. With funding from FEMA, the City has prepared a "Climate Adaptation Plan". The objectives of this Plan are to identify and evaluate the potential impacts of climate change on the City, analyze the severity of the hazards that the City faces, and develop potential adaptation responses to reduce the risk and exposure of the City to these hazards. The first step identified potential risks in a "Vulnerability Study", prepared as a collaborative effort between the City's Adaptation Team and UCSC scientists. The study identified potential facilities vulnerable to risks of sea level rise, including beaches, West Cliff Drive, the City's wastewater treatment facility and the Santa Cruz Harbor (SOURCE VII.2d). The study also addressed coastal storm and cliff erosions hazards, as well as the potential for increased precipitation and flooding. Based on this study, the City has developed action items with priorities to respond to specific risks and hazards related to climate change that will build adaptive capacity into policies, programs and infrastructure. Action A-16 in the Adaptation Plan calls for protection and preservation of City buildings, identifying the Wharf and infrastructure as a high priority.

Because of its location and deck elevation (+23 ft., MLLW) Santa Cruz Wharf should continue to function well into the future. Review by the City's Climate Action staff indicates that the existing Wharf deck elevation will be above sea levels that currently are projected over the next 100 years based on current sea level rise projections. The proposed East Promenade expansion would be slightly higher than the existing Wharf deck elevation. The Westside Walkway would be slightly lower than the existing deck, but also would be above projected sea level rise levels. Thus, implementation of the Master Plan and construction of structures and facilities, including the two near-term projects – the Entrance Relocation and East Promenade – would not result in increased exposure to hazards associated to sea level rise. However, the existing approximate 200-foot segment of the Wharf that spans the beach may be subject to greater coastal flooding in the future as a result of sea level rise. However, there are no planned improvements in this location.

j) Tsunami Inundation– *Less-than-Significant Impact*. According to maps developed as part of the *General Plan 2030* and included in the General Plan and General Plan EIR (SOURCE VII.1a-page 106 & V.1.b-Figure4.7-1, DEIR), the project site is located within a tsunami inundation zone, as are most of the downtown and beach areas of Santa Cruz. Tsunamis are produced when movement occurs on faults in the ocean floor, usually during very large earthquakes. California is at risk from both local and distant source tsunamis. Eighty-two possible or confirmed tsunamis have been observed or recorded in California during historic times, most of which were small and only detected by tide gages. Eleven were large enough to cause damage and four events resulted in deaths. Santa Cruz, like many coastal cities, is exposed to impacts from tsunamis (SOURCE VII.2e). The National Oceanic and Atmospheric Administration operates a tsunami warning system, giving several hours' notice to allow evacuation of threatened areas to prevent injuries.

Since the March 2011 Tohuku, Honshu Island tsunami in Japan, the City has worked with the County and other agencies in emergency plans. The City's Hazard Mitigation Plan inventories

areas in the City subject to tsunamis and sets forth a mitigation strategy that includes continuation of an up to date Emergency Operations Plan, an effective public information program and continuing collaborative efforts with the County, other Cities, agencies and community organizations to facilitate collaborative efforts in providing up-to-date tsunami mapping, preparation, information, warning dissemination and education. The project does not include construction of habitable structures that would expose people or habitable structures to potential tsunami inundation. Implementation of the Wharf Master Plan and future construction of improvements or structures on the existing developed Wharf would not increase or exacerbate tsunami risks, and emergency operations are place and continue to be updated to address emergency plans in the event of a tsunami.

10. LAND USE AND PLANNING

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

a. *Physically divide an established community;*
b. *Conflict with any applicable City land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect; or*
c. *Conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan.*

(a) Divide An Established Community– *No Impact*. The project site is located at the on the Santa Cruz Wharf. Adoption and implementation of the Wharf Master Plan and construction of proposed facilities and improvements would occur on or adjacent to the Wharf. The project would not divide an established community.

(b) Consistency with Local Policies– *No Impact*. Adoption and implementation of the Wharf Master Plan and subsequent construction of recommended structures and improvements would not result in conflicts with policies in the City's certified Local Coastal Plan (LCP) or adopted General Plan or other policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect, including policies regarding biological resources as discussed in section 4(e) above. The project does support a number of LCP and General Plan policies and directives for the Wharf as discussed below.

General Plan Policy LU3.53 supports improved recreational and economic opportunities at the Santa Cruz Wharf, which constitute primary strategies of the Wharf Master Plan and its recommended improvements. The Wharf Master Plan responds to the following LCP policies to update design guidelines and management plans for the Wharf. The Wharf is also one of nine access components described in the LCP "Access Plan.

LU 2.2.1 Update land use and design guidelines for the Beach and Wharf area addressing the area's importance as both a center of tourism and residential area.

ED 2.4.3 Develop and implement a promotion and management plan for the Municipal

Wharf aimed at attracting local residents and enhancing recreational and economic opportunities while protecting the Monterey Bay. (See policy L 2.2.1, PR 1.7.12)

ED 5.5.3 Identify ways to enhance and promote the identity of existing and potential visitor areas in the City such as Downtown, Beach Area, San Lorenzo River, Yacht Harbor, UCSC, West Cliff and East Cliff Drives, and the Wharf.

PR1.7.1.3 Maintain free bicycle and pedestrian access to the Wharf.

PR 1.7.9 Fishing access on the Municipal Wharf shall not be reduced.

The Wharf Master Plan process also responds to the following Beach/South of Laurel area LCP policies regarding Wharf. The Plan provides the comprehensive analysis set forth in the policies, and the Plan provides Design Standards and is responsive to the other LCP policies.

CD 1.20 Maintain the "Wharf Design Criteria" until the results of the proposed wharf study are approved.

LU 2.7 Complete a comprehensive analysis of the wharf to include study of its two fundamental and interrelated aspects: its maritime aspect and its retail aspect. Elements of this study should include, but not be limited to:

- Physical inventory
- Access, circulation and parking,
- Additional maritime potential,
- Marine sanctuary potential,
- Design and architectural character,
- Signature physical features or programs,
- Retail mix and performance,
- Market niche, and
- A cost/benefit analysis of recommendations stemming from analysis.

The study should examine the feasibility of expanding maritime activity, expanding visitor amenities, and expanding local resident marketing.

(c) Conflict with Habitat Conservation Plan – *No Impact*. The project site is not located within an area covered by an adopted Habitat Conservation Plan or Natural Community Conservation Plan.

12. NOISE

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

a. *Expose persons to or generate noise levels in excess of standards established in the County's "Land Use Compatibility for Community Noise" chart;*

b. *Expose persons to or generate excessive groundborne vibration or groundborne noise levels;*

c. *Result in a substantial permanent increase in ambient noise levels above existing levels if it will expose outdoor activity areas of noise-sensitive land uses to a 5 dB increase in noise where existing noise levels are below 60 dBA L_{dn}, a 3 dB increase in noise where existing noise levels are between 60 and 65 dBA L_{dn}, or a 1.2 dB increase in noise where existing noise levels are above 65 dBA L_{dn}. An outdoor noise standard of 65 dBA (CNEL) at the property line shall be used in the assessment of operational noise impacts; or*

d. *Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels authorized by the General Plan or Noise Ordinance.*

The project site is not located near an airport or private airstrip.

(a,c) Exposure to Noise – *No Impact***.** The Wharf and surrounding area are subjected to a variety of noise sources from Boardwalk rides, outdoor activities on the Wharf and adjacent beaches, vehicular traffic and sounds of the ocean. Intermittent train passage occurs on the railroad tracks along Beach Street just north of the existing Wharf entrance .

Implementation of the Wharf Master Plan and future construction of proposed improvements including the two near-term planned projects – relocation of the Entry Gate and construction of the East Promenade – would not result in new uses that would increase existing ambient noise levels. The Wharf expansion is for enhanced pedestrian and bicycle use, and other envisioned buildings also would be primarily publicly-oriented with some potential for expansion of commercial buildings. These uses would be similar to existing uses on the Wharf and surrounding recreational activities in the beach area. Thus, the project would not result in exposure of persons to noise levels in excess of standards in the City's General Plan regarding land use-noise compatibility.

(b, d) Temporary Construction Noise– *Less-than-Significant Impact***.** Ambient noise levels in the project area are characterized by ocean waves, rides and activities at the adjacent Santa Cruz Beach Boardwalk, other recreational activities in the area and vehicular traffic.

Impact Analysis. The proposed project would result in short-term construction-related noise as improvements and structures recommended in the Wharf Master Plan are planned and constructed. At this time, only two of the recommended projects in the Plan are proposed: the Entrance Relocation and East Promenade. The exact timing of implementation is not known, but expected to be within two to three years. The timing of construction of other facilities and structures is not known. Thus, construction would occur at unknown intervals and would result in temporary construction-related noise. Given the small size and type of the new and replacement piles – 12-inch timber piles – no significant vibration impacts are anticipated based on experience with installation of replacement piles as part of annual Wharf maintenance. There are no residential or other sensitive uses adjacent in the vicinity of Wharf. Construction noise would be temporary and intermittent, and noise levels would fluctuate throughout any given day. Given other sound sources in the area, most notably the ocean and Boardwalk, and due to the limited duration and short-term nature of the construction, temporary construction noise is considered a *less-than-significant impact*.

13. POPULATION AND HOUSING

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

a. *Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure;*

b. *Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere; or*

c. *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.*

The project consists of adoption and implementation of the Master Plan for the Wharf and subsequent construction of recommended structures and improvements, including two near-term projects: relocation of the Wharf entry and construction of the East Promenade. The project will not result in new residential development, and will not directly or indirectly result in new population or population growth. The project will not result in displacement of housing units or residents as none exist on the Wharf.

14. PUBLIC SERVICES

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

a. *Result in substantial adverse physical impacts associated with provision of new or physically altered facilities, the construction of which could cause significant impacts, in order to maintain acceptable service for fire protection, police protection, schools and parks.*

The project consists of adoption and implementation of the Santa Cruz Wharf Master Plan. Future improvements include: expansion of the Wharf for public access and recreational uses; construction of three new buildings totaling 15,000 square feet for public uses; and improvements to enhance visitor use at the facility. Additionally, up to approximately 18,000 square feet of expanded commercial and retail uses may be developed as part of further remodel and second floor expansion of existing commercial buildings. Future improvements constructed in accordance with the Plan do not include residential structures, and implementation of the Plan would not result in in residential population or demand for school and park services.

(a-b, e) Fire, Police, & Other Public Services – *Less-than-Significant Impact*. The proposed project will be served by existing public services. The project will have no measurable effect on existing public services in that the incremental increase in demand will not require expansion of any services to serve the project. Construction of new fire or police facilities to serve the project would not be warranted. New development will be required to install automatic fire sprinklers and alarms in accordance with City requirements and comply with other Fire Department recommendations regarding access.

As indicated in Section IV.B, the City's *General Plan 2030* EIR included an analysis of impacts to public services associated with future development and buildout accommodated by the General Plan, which included 3,350 residential dwelling units with an associated population increase of 8,040 residents and approximately 3,140,000 additional square feet of new commercial, office and industrial uses by the year 2030, including approximately 1,090,000 square feet of commercial uses. The EIR analyses concluded that impacts of potential development and buildout accommodated by the General Plan would be less-than-significant for fire and police protection services and parks and recreation. (The analyses are included on pages 4.6-33 to 4.6-40 of the Draft EIR volume and pages 3-19 to 3-22 of the Final EIR volume.)

The proposed project size (15,000 square feet within three new structures and potentially 5,000+ square feet of commercial expansion and infill) would be within the overall amount of commercial and non-residential development evaluated in the General Plan EIR. This Initial Study tiers off and incorporates by reference the General Plan EIR (as discussed in Section IV.B above) for the public services analysis, which concluded impacts to public services would be *less than significant*.

15. RECREATION

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

a. *Increase the use of existing parks or recreational facilities such that substantial physical deterioration would occur or be accelerated; or*

b. *Include recreational facilities or require construction or expansion of recreational facilities which might have an adverse physical effect on the environment.*

a) Increased Use of Parks – *Less-than-Significant Impact*. The project consists of expansion and improvements to the Santa Cruz Wharf in part to enhance public access. As result, some increase in use of and visitation to the Wharf is expected. However, the Master Plan and the Engineering Report provide recommendations regarding maintenance and structural improvements to accommodate future uses and users. Thus, continued and future use of the Wharf would not lead to a level of use that would result in a substantial physical deterioration of the Wharf.

b) Recreational Facilities with Potential Adverse Impacts. Adoption and implementation of the Wharf Master Plan and future construction of improvements would provide enhanced public access and additional recreational opportunities an existing City recreational facility. Impacts of the proposed project are evaluated in this Initial Study. Potentially significant impacts have been identified regarding biological resources, which can be mitigated to a less-than-significant level as discussed in subsection VI.4.

16. TRANSPORTATION/TRAFFIC

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

a. *Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;*

b. *Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;*

c. *Result in change in air traffic patterns;*

d. *Substantially increase hazards due to a design feature (for example, sharp curves or dangerous intersections) or incompatible uses (for example, farm equipment);*

e. *Result in inadequate emergency access; or*

f. *Conflict with adopted policies, plans, programs that support supporting alternative transportation (for example, bus turnouts, bicycle racks).*

There are no adopted congestion management programs for the project area (b), and the project is not located near an airport and would not affect air traffic patterns (c).

(a) Traffic & Circulation System – *Less-than-Significant Impact*. Regional access to the Beach area and Wharf site is provided from Highways 1, 9, and 17, which are referenced as state routes (SR) by the California Department of Transportation (Caltrans). Primary access from these highways to the Beach area is along Ocean Street. Major roadways in the vicinity of the Wharf are Pacific Avenue, Front Street, Beach Street, and Bay Street.

Local Access and Circulation. In the project vicinity, Pacific Avenue extends from downtown Santa Cruz to Beach Street. Beach Street is a two-lane east-to-west arterial that runs parallel to the coastline of Monterey Bay. It is a one-way roadway heading east past Pacific. The City recently completed a roundabout at the intersection of Pacific Avenue. There is a buffered bicycle path on the south side of the street, and metered on-street parking on the north and portions of the south side. West Cliff Drive is a two-lane street that runs parallel to the coastline west of Pacific Avenue. A multi-use paved path is located on the ocean side of West Cliff Drive.

All intersections in the vicinity of the Wharf are operating at acceptable levels of service D or better (SOURCE VII.2f). A roundabout was recently completed at the Pacific Avenue-Wharf Entrance and Beach Street intersection, which operates at an acceptable level of service C under existing conditions. "Level of Service" (LOS) is used to identify the magnitude of traffic congestion and delay at intersections. Traffic flows along city streets typically are controlled by the volume and capacity of the nearest intersection. Intersections are rated based on a grading scale of LOS "A" through LOS "F," with LOS A representing free-flowing conditions and LOS F representing congested conditions. The City of Santa Cruz has established LOS D as the

minimum acceptable LOS for overall intersection operations during weekday AM and PM peak hours. However, the existing *General Plan 2030* accepts a lower LOS at major regional intersections if necessary improvements would be too costly or result in significant environmental impacts (Policies M3.1.3, M3.1.4).

The project area is served by alternate modes of transportation. Sidewalks exist on both sides of the street along Pacific Avenue and Beach Street. A walkway from Beach Street extends along the eastern side of the Wharf. The City of Santa Cruz's bicycle system contains of off-street multi-use paths (Class I), on-street bicycle lanes (Class II), and on-street bicycle routes (Class III). Class I bike paths in the project vicinity include West Cliff Drive and the San Lorenzo River levees. Class II bi-directional lanes exist along the southern side of Beach Street.

The Monterey Bay Sanctuary Scenic Trail Network (MBSST) is proposed to span the Monterey Bay from Lover's Point in Pacific Grove (Monterey County) to Wilder Ranch just north of the city of Santa Cruz. The Santa Cruz County Regional Transportation Commission (SCCRTC) adopted a final Master Plan in November 2013. The Wharf is located within Segment 7-8, in which the existing bicycle path along Beach Street is identified.

Transit service in the area is provided by the Santa Cruz Metropolitan Transit District (SCMTD). The project area is served by three existing routes: Routes 3, 19 and 71. In addition to the SCMTD transit services, a Downtown Trolley service has been in operation since 2010, which provides service between the Downtown and the Wharf/Beach areas between Memorial Day and Labor Day. The shuttle operates on 30 minute headways in either direction. The Santa Cruz Trolley Consortium, Inc., a non-profit corporation, operates the trolley, which is owned by the City of Santa Cruz. The service also is sponsored by the Downtown Association and numerous businesses and organizations.

The former Union Pacific Railroad rail line forms a continuous, single-track, 32-two mile corridor from Davenport to the City of Watsonville. The Santa Cruz County Regional Transportation Commission (RTC) finalized purchase of the right-of-way in October 2012. The Santa Cruz County RTC selected Iowa Pacific Holdings, doing business locally as the Santa Cruz and Monterey Bay Railway, to operate freight and potential future passenger rail service along the corridor.

The Santa Cruz Big Trees and Pacific Railway Company operates a tourist-oriented passenger service between Felton and the Santa Cruz Beach Boardwalk on its nine-mile track line from Santa Cruz to its current terminus at Roaring Camp. The service is provided daily during mid-June through the end of August, and weekends and holidays in May, early June, September through October, late November, and December. The trains run twice in each direction every day during regular operations, and partially use the tracks that cross Pacific Avenue just north of the intersection of Pacific Avenue and Beach Street.

Wharf Trips. City data for entries to and exits from the Wharf were reviewed for 2014. The review reveals that visitors to the Wharf remains relatively constant throughout the year with

peak and higher visits in the summer months. This information provides an estimate of traffic in and out of the Wharf but can also be used to estimate the parking occupancy during the course of a day. Trip generation to the wharf varies from average month of 2,800 vehicles per day to 3,500 vehicles per day during peak months. During the weekday 4 to 6 PM weekday peak hour, trip generation is about 300 trips per hour with 60% entering during that time. The peak movement in and out of the Wharf tends to be an hour or two after the traditional 4 to 6 PM peak hour. This reflects the dominant trip generation associated with the restaurant uses during this time. It is also noted that weekday PM peak hour trips in and out did not change much during the peak season. The additional volume during the course of the summer day came in the early afternoon and later into the evening (SOURCE VII.11a). Traffic data is summarized on Figure 7.

Peak auto parking occupancy in March (considered as an average month) ranged from 314 vehicles midweek, to 404 vehicles on Friday, and to 440 vehicles on Saturday. The peaks in July were very similar on Friday and Saturday. Peak auto parking occupancy during July was not significantly different but remained high for longer periods of time (SOURCE VII.11a).

Impact Analysis. Implementation of the Wharf Master Plan and construction of recommended structures and improvements could result in increased visitor use and vehicle traffic that would not exceed acceptable level of service at the Beach Street/Pacific roundabout. Additionally, Master Plan policies and actions to increase bicycle, pedestrian and other alternative transportation modes would serve to offset at least some of the potential increase in vehicular traffic. Therefore, the impact would be *less than significant*.

Master Plan

Adoption and implementation of the Wharf Master Plan and future construction of planned improvements would expand the Wharf by approximately 2.5 acres, and as a result, approximately 50% of the Wharf's future area would be devoted to public access, recreation and open space areas. These improvements include the eastern promenade, western walkway and two boat facilities. Implementation of the Plan would result in construction of three new buildings (Gateway, Events Pavilion and Landmark), and potential intensification of existing buildings and uses on the Wharf. The three new buildings would result in approximately 15,000 square feet of new building space with publicly-oriented uses, such as visitor center, displays, and possible relocation of the Surfing Museum. The Master Plan identifies potential expansion of existing commercial buildings of approximately 4,000 square feet in two locations. The Master Plan encourages the development of second floor uses and provides a preliminary estimate that potential intensification within the existing building footprint could result in a total 20-30% increase in building space separate from the three new buildings, including the above referenced expansion. This would be approximately 12,000-18,000 square feet, including the above specific infill locations.

The existing footprint for vehicular circulation, parking and commercial development would be maintained, but reconfiguration of some parking areas is proposed, which could provide a 10-15% increase in the number of spaces within the existing parking footprint (approximately 45-65 spaces).

Overall visitor use at the Wharf could increase, although there are no projections of future visitor use at the Wharf. The City estimates that approximately 2.5 million visitors currently come to the Wharf annually. Implementation of the Wharf Master Plan could result in some increase in visitors to the Wharf due to: 1) enhancement of existing public spaces, including expansion and increased public and private events at the Wharf; 2) expansion of opportunities for boat tours and small craft launches; and 3) potential increase in commercial uses and parking within the existing development footprint. A specific level of increased use cannot be accurately estimated. The environmental analyses in this Initial Study consider potential increases in visitor use of the Wharf in relevant sections based on the range and characteristics of improvements proposed in the Master Plan.

The Master Plan policies seek to use the exiting circulation footprint more efficiently (#6) without expanding parking areas with supporting actions to improve alternative modes of travel, including pedestrian, bicycle, and public transit and shuttles; improve bicycle and pedestrian facilities/ connections to trail systems; and reduce impediments to pedestrian movement along the sidewalk.

A review of traffic impacts with implementation of the Wharf Master Plan was conducted by Ron Marquez, consultant to the City's Public Works Department (SOURCE VII.10a) based on review of City information for Wharf gate entries and exits for the entire year of 2014. The vehicle trip generation rate for the Wharf ranged from 47 trip per 1,000 square feet of commercial area per day on average versus 58 trips per 1,000 square feet per day during summer peaks. The existing weekday PM peak hour trip generation rate is about 5 trips per hour per 1,000 square feet of development. This rate compares to that of a shopping center of similar size as provided by the Institute of Transportation Engineers in "Trip Generation Manual 9th edition". This trip rate incorporates the subsidiary uses on the wharf such as the public spaces and boat launching facilities.

The Wharf Master Plan identifies three new buildings (15,000 square feet) for publicly oriented uses and approximately 4,000 square feet of new commercial space with expansion of existing structures. The Plan also provides a preliminary estimate that commercial space could increase by 20 to 30 percent over existing development as part of future remodels and second floor expansion, but does not identify specific locations. The Plan also anticipates from 10 to 15% increase in parking spaces due to restriping of existing parking areas. Implementation of the Master Plan could result in

some increase in visitors to the Wharf due to proposed enhancement of existing public spaces, including expansion and increased public and private events at the Wharf. Using these various figures growth could range from 6.7% to 30%. For purposes of this analysis a growth of 19,000 square feet is used. This accounts for the new publicly-oriented buildings and the expanded commercial space identified in the Master Plan. Although, the Master Plan also indicates that additional second floor expansion could occur, such potential currently exists without the Plan and also is somewhat speculative in terms of location and timing.

Based on the above assumption, implementation of the Wharf Master Plan and buildout would generate 893 new trips per day and 95 new trips during the weekday PM peak hour with 57 entering and 38 exiting during this time. Adding these trips to the study intersection and calculating the new level of service would result in maintaining LOS C. The roundabout has sufficient reserve capacity to accommodate the growth potential of the Wharf Master Plan (SOURCE VII.10a). Therefore, future construction would not result in significant traffic impacts in the vicinity of the Wharf.

The Master Plan policies seek to use the exiting circulation footprint more efficiently (#6) without expanding parking areas with supporting actions to improve alternative modes of travel, including pedestrian, bicycle, and public transit and shuttles; improve bicycle and pedestrian facilities/ connections to trail systems; and reduce impediments to pedestrian movement along the sidewalk. The Master Plan also includes recommendations for increasing the supply of bicycle parking, encouraging a shuttle system and introducing innovative systems of garbage collection that will reduce truck access and the need for on-going maintenance related to heavy truck movement. Specifically, the Master Plan proposes that bicycle parking (64 spaces) be provided along the western edge of the East Promenade in the transition area between the vehicular parking and the promenade. The Plan indicates that 64 spaces could be initially provided with up to 150 bicycle parking spaces ultimately anticipated that as demand warrants. The Plan addresses potential shuttle service from the Downtown and other remote parking areas to the Wharf and Beach Area. Thus, the programmatic components of the Plan seek to expand alternative transportation modes, which would help reduce some of the new trips to the Wharf, and overall, increased trips would not result in a significant traffic impact.

Entry Gate Relocation

The proposed relocation of the entrance further south onto the wharf from its current location would not result in new structural development that would result in generation of new vehicle trips. The relocation will provide more efficient accessibility for vehicles entering and exiting the Wharf, but would not affect the number of vehicles accessing the Wharf. Therefore, this near-term project would have *no impact* related to traffic.

East Promenade

The proposed East Promenade would expand the Wharf surface area by approximately 1.5 acres, and would be devoted to pedestrian use. The facility would not result in construction of buildings. The use of this new area would be by visitors on foot or on bicycle and would not result in increased vehicle trips. The preliminary engineering plans also include restriping of existing Wharf parking areas, which will result in approximately 60 additional vehicle parking spaces over the existing 433 spaces. Since parking occupancy at the Wharf is only at its fullest during period of the summer and when special events are held, the increase of parking would not by itself trigger additional trips to the Wharf. Therefore, there would be *no impact* related to traffic with implementation of this near-term project.

d-e) Access – *No Impact*. Access to the site will be provided by existing roadways, and the proposed project does not include any design features that would result in substantially increased hazards. The proposed relocation of the Wharf entrance further onto the Wharf would help improve traffic flow along Beach Street and on the Wharf itself.

The project would not interfere with or result in inadequate emergency access. The relocated entry and East Promenade will provided enhanced emergency vehicle access over what currently is available. Additionally, the East Promenade will be designed to support fire truck loading requirements so that it can be used for emergency access.

f) Conflicts with Alternative Transportation Policies – *No Impact*. The project would not conflict with any policies, plans or programs supporting alternative transportation, and the Master Plan policies and actions support alternative transportation, and the improvements recommended in the Plan support expansion of pedestrian and bicycle access, including installation of approximately 64-150 bicycle parking spaces.

17. UTILITIES & SERVICE SYSTEMS

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

a. *Exceed wastewater treatment requirements of the Regional Water Quality Control Board;*
b. *Result in a water demand that exceeds water supplies available from existing entitlements and resources, and new or expanded supplies or entitlements may be needed;*
c. *Require or result in construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;*
d. *Require or result in construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;*
e. *Result in wastewater flows exceed treatment plant capacity; or*
f. *Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste demands.*

The project does not include any features that would require discharge or be subject to wastewater treatment or discharge requirements (a). The project will be served by existing utilities and will have no significant effect on existing sewer/wastewater treatment (b,e), storm drainage utilities (c) or solid waste disposal facilities (f) in that the incremental increased demand associated with future visitor uses at the Wharf will not require expansion of any of those services or construction of new facilities to serve the project. The proposed project is an existing use that is currently provided wastewater collection/treatment and solid waste disposal services provided by the City. All sewage on Santa Cruz Wharf is collected by gravity pipes and conveyed to two pump stations on the Wharf that pump sewage to the municipal collection system that goes to the City's wastewater treatment plant. Existing sewer lines on the Wharf are constructed of corrosion-resistant PVC and ABS material and are in good condition according to the engineering review conducted as part of the Wharf Master Plan (SOURCE VII.7). As discussed in subsection 9(c,e), there are no drainage facilities on the Wharf.

Wastewater treatment and solid waste services are adequate to serve continued growth and buildout accommodated by the City's General Plan (SOURCE VII.1b). As indicated in section IV.B above, the City's *General Plan 2030* EIR considered development of approximately 1,090,000 square feet of commercial uses and 310 approved hotel rooms throughout the City to the year 2030 (SOURCE VII.1b-DEIR page 3-12-14), as well as 3,350 residential units, 1,274,000 square feet of office space, and 775,000 square feet of industrial uses to the year 2030 (SOURCE VII.1c). Since 2009 (the General Plan EIR "baseline" year), approximately 525,000 square feet of commercial space has been developed or is under construction throughout the City, which is within the buildout estimate that was evaluated in the General Plan EIR. Thus, the project size of potentially 20,000 square feet of new structural development, as well as potential future expansion of existing uses by another 15,000 square feet, would be within the potential General Plan buildout evaluated in the EIR. The EIR analyses concluded that impacts of potential development and buildout accommodated by the General Plan would be less than significant for wastewater treatment (b,e), solid waste disposal (f), and energy use. Since the size of the proposed project would fall within the total amount of potential development analyzed in the General Plan EIR, no further environmental analysis is required regarding wastewater treatment and solid waste pursuant to Public Resources Code section 21083.3. See subsection 9(c-e) above regarding stormwater drainage.

(d) Water Supply – *Less-than-Significant Impact*. The project site is located within the service area of the City of Santa Cruz Water Department. The City of Santa Cruz Water Department serves approximately 22,000 connections in an approximate 20 square mile area that includes lands within existing City limits, a portion of UCSC, a portion of Live Oak in the unincorporated area of Santa Cruz County, a small part of the City of Capitola and coastal agricultural lands outside City limits.

In December 2011, the Santa Cruz City Council adopted the *2010 Urban Water Management Plan* (UWMP) in accordance with State law, which evaluates water supply and demand within the City's service area over the next 20 years. Additionally, the City of Santa Cruz updated its

General Plan, which was adopted by the City Council in June 2012. The City of Santa Cruz *General Plan 2030* EIR was certified at the same time. In February 2014, the City Council established a Water Supply Advisory Committee (WSAC) to further examine potential supplemental water sources. The WSAC made its recommendations to the City Council in November 2015, which are further described below.

Water Supplies. The City's water system is comprised of four main sources of supply: North Coast sources; San Lorenzo River diversions; Loch Lomond Reservoir; and Live Oak wells. On average, about 84 percent of the City's annual water supply needs are met by surface diversions from the coastal streams and San Lorenzo River, while approximately 12 percent is supplied by Loch Lomond Reservoir and four percent of the supply is derived from the Live Oak Well system (SOURCE VII.2c). Major facilities include two water treatment plants, several pump stations and 16 distribution reservoirs storing almost 15 million gallons of treated water (Ibid.).

Water production has fluctuated over the past ten years; annual production has ranged from a high of nearly 4,400 MGY in 2000 to a low of approximately 3,200 MGY in 2009 (SOURCE VII.2c). Gross water production between 2006 and 2010 averaged approximately 3,500 MGY. Gross water production was 3,077 MGY in 2011 and 3,302 MGY in 2012. Net water production is the amount of treated water produced at the City's two treatment plants, and averages about four percent less than gross production.

The 2010 UWMP estimates a 20-year future water supply in the year 2030 as 4,160 MGY, depending on the outcome of negotiations between the City and regulatory agencies regarding potential limitations on City diversions at its surface water supplies, such as the San Lorenzo River, Laguna Creek and other North Coast diversions, in order to increase base flows for federally listed endangered fish species. Continued access to the same amount of North Coast supply sources will depend on the outcome of a Section 10 "incidental take" permit application and accompanying Habitat Conservation Plan (HCP) that are being prepared by the City pursuant to the federal Endangered Species Act for City activities. The permit and plan must be approved by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (NMFS). The City entered into the HCP process in 2001, and has coordinated and met with U.S. Fish and Wildlife Service and NMFS on HCP-related issues and has conducted a number of studies. A draft HCP has not yet been completed, although draft strategies have been developed.

Water Demand. Based on City records, the water demand for all accounts on the Wharf in 2013 was approximately 8.08 MGY. Based on existing building square footage, this would result in approximately 135 gallons per year per square foot and account for all buildings and visitor use on the Wharf.

As indicated above, water demand in the City's water service area has fluctuated over the past 10 years. The 2010 UWMP reports that water consumption in the service area ranged between approximately 3,800 MGY in 2000 to approximately 2,900 MGY 2010 (SOURCE VII.2c-

Table 4-2). Average annual water demand was approximately 3,900 MGY from 2000 through 2004. Water demand decreased after 2005 to an average demand of slightly less than 3,500 MGY between the years 2005 and 2008. Water demand (metered consumption) was 2,759 MGY in 2011 and 2,928 MGY in 2012. Based on actual use, the adopted 2010 UWMP estimates a 20-year water demand forecast, and indicates that given the recent decline in water consumption and relatively low rate of growth in the service area experienced over the last decade, water demand may stabilize at about 3,500 MGY in the foreseeable future (SOURCE VII.2c).

The 2010 UWMP compares annual growth in water demand attributable to new connections over the last decade with the reduction in water demand accomplished through water conservation programs during the same time. As shown on Figure 6-1 of the 2010 UWMP and cited in the plan, between 2000 and 2010 there was "a larger reduction in water use from water conservation programs than there has been an increase in water use by new connections, with a net decrease over the last ten years of almost 80 million gallons per year." Additionally, the UWMP calls for continued implementation of conservation programs that would serve to further reduce demand, even as the City inevitably grows.

An interim water demand forecast was developed as by the WSAC working from the 2010 UWMP demand forecast. The revised forecast indicates a 20-year total demand of approximately 3,200 MGY, which is lower than the existing UWMP forecast no longer shows an increase in water demand over the next 20 years. The primary reasons is that the 2010 UWMP forecast did not include adjustments for future effects of conservation and higher water rates, as well as an assumed higher UCSC water demand (SOURCE VII.2g).

Water Supply Reliability. The primary water reliability issue currently facing the City of Santa Cruz is the lack of adequate water supply during droughts due to the wide range in the yield of surface water sources from year to year and the City's limited storage capacity. The City faces a series of ongoing challenges that potentially could lead to some loss of existing supply in the future, although it is uncertain at this time to what extent and which supplies might be affected. These considerations include: potential flow releases associated with the HCP as described above, the outcome of water rights petitions, groundwater availability and climate change issues. These considerations are described in section 4.5 of the City of Santa Cruz General Plan 2030 Draft EIR as updated by the Final EIR document that is available for review on the City's website or at the City Planning Department as indicated in Section IV.B above.

The City of Santa Cruz has been actively considering possible new water supplies for nearly 20 years. In 2005, the City adopted an Integrated Water Plan (IWP), which identifies a water management strategy, consisting of three major components: water conservation programs; customer use curtailment (water use cutback) in times of shortage; and a supplemental water supply for drought protection provided by a desalination facility. The City is actively implementing water conservation programs, and also is in the process of developing a Conservation Master Plan. The City, in partnership with Soquel Creek Water District (SqCWD), had proposed a seawater desalination facility as a backup water supply in times of drought.

However, work was suspended on the Final EIR for the facility in 2013, and as previously indicated above, the City Council established a Water Supply Advisory Committee (WSAC) in February 2014 to further examine potential supplemental water sources. The WSAC made its recommendations to the City Council in November 2015 that include the following water augmentation strategies:

- Additional water conservation with a goal of achieving an additional 200 to 250 million gallons of demand reduction by the year 2035.
- Passive recharge of regional aquifers by working to develop agreements for delivering surface water as an in lieu supply to the Soquel Creek Water District and/or Scoots Valley Water District so they can "rest their wells", help aquifers recover and store water that can become available to the City of Santa Cruz Water Department in drought years.
- Active recharge of regional aquifers by using existing and some potential new infrastructure in the regionally shared Purisima aquifer in the Soquel-Aptos basin and/or in the Santa Margarita/Lompico/Butano aquifers in the Scotts Valley area to store water that can be available for use by Santa Cruz in drought years.
- A potable water supply using advanced treated recycled water as its source, as a supplemental or replacement supply in the event the groundwater storage strategies described above prove insufficient to meet the Plan's goals of cost effectiveness, timeliness or yield. In the event advanced treated recycled water does not meet the needs, desalination would become the last element (SOURCE VII.2g).

On November 24, 2015, the City Council unanimously adopted four motions to: 1) accept the WSAC Agreements and Recommendations Final Report; 2) direct staff to integrate the WSAC-recommended water supply packaged strategy into the Urban Water Management Plan update, required by the Department of Water Resources to be submitted by July 1, 2016; 3) direct the Water Commission to assume oversight of the implementation of the WSAC Agreements and Recommendations Final Report and provide no less than semi-annual updates to the City Council; and 4) support staff's continuing public information and engagement on the water supply strategy.

Impact Analysis. Implementation of the Wharf Master Plan and construction of recommended structures and improvements would result in construction of new buildings and enhanced public access, which could result in increased water demand that could be served by existing supplies in normal conditions and would not result in a substantial increase during dry conditions. Therefore, the impact would be *less than significant* as explained below.

Master Plan

Adoption and implementation of the Wharf Master Plan and future construction of planned improvements would expand the Wharf by approximately 2.5 acres with construction of the East Promenade, Westside Walkways walkway and two boat facilities. Implementation of the Plan would result in construction of three new buildings (Gateway, Events

Pavilion and Landmark), totaling 15,000 square feet of publicly-oriented building space. The Master Plan identifies potential expansion of existing commercial buildings of approximately 4,000 square feet in two locations. The Plan also encourages the development of second floor uses and provides a preliminary estimate that potential intensification within the existing building footprint could result in a total 20-30% increase in building space separate from the three new buildings, including the above referenced expansion. This would be approximately 12,000-18,000 square feet, including the above specific infill locations. The Master Plan does not propose specific locations for potential intensification other the two locations identified above, nor is it known when such expansion and intensification may occur. The Master Plan also identifies new, expanded, and/or upgraded public restroom facilities at four locations. An outdoor shower is also identified as a potential amenity for kayakers and ocean swimmers.

Visitor use at the Wharf could increase, although there are no projections of future visitor use at the Wharf. The City estimates approximately 2.5 million people currently visit the Wharf annually. Implementation of the Wharf Master Plan could result in some increase in visitors to the Wharf due to: 1) enhancement of existing public spaces, including expansion and increased public and private events at the Wharf; 2) expansion of opportunities for boat tours and small craft launches; and 3) potential increase in commercial uses and parking within the existing development footprint. However, a specific level of increased use cannot be accurately estimated.

This Initial Study assumes that the implementation of the Master Plan could result in development of up 20,000 square feet of new building space. This includes 15,000 square feet of public uses within the three new proposed buildings and approximately 5,000 square of expanded building space for retail commercial uses. An additional 10,000± square feet of expanded commercial building space within existing buildings is considered a long-term possibility that is suggested in the Master Plan but is somewhat speculative in terms as no specific locations are identified. Additionally, potential expansion of existing structures could occur under existing conditions with or without implementation of the Master Plan.

Based on water demand rates utilized for the General Plan analyses, and assuming a worst-case scenario in which all new buildings are commercial uses, new construction could result in a water demand of 1.3 MGY with 20,000 square feet of new building space. New restrooms and plumbing fixtures in new buildings would be required to utilize water conserving fixtures in accordance with City regulations.

Current water supplies are adequate during normal years to serve the project. The 2010 UWMP and General Plan EIR predict that water supplies

will be adequate in normal years to serve estimated growth within the City of Santa Cruz water service area, although the documents acknowledge that the outcome of the pending HCP may affect supplies in the future. Under present conditions, there are adequate supplies to serve the proposed residence during normal conditions, and the project impact of increased water demand on water supplies under normal conditions is a less-than-significant project impact. During periods of dry years and drought, water customers would be subject to water curtailment as enacted by the City. Based on interim demand forecasts developed by the WSAC, future demand may be substantially lower than identified in the 2010 UWMP, which will be updated in 2016.

The minimal increased water demand associated with the proposed project would not cause any noticeable effects on the level of curtailment that would be required of all water customers in during drought periods. A multiple dry year scenario would require more substantial curtailment of all water customers. However, the proposed project's minimal demand (less than one half of one percent) would not have significant effects on the levels of curtailment that would be required throughout the service area. Additionally, as indicated above, savings from implementation of the City's water conservation program has resulted in a decrease in water demand compared to the growth in new water connections, and interim demand forecasts project no long-term increase in overall water demand. Therefore, the impact of increased water demand on water supplies due to the proposed project under dry conditions is not considered significant. The City continues to administer its water conservation program and also is in the process of developing a Conservation Master Plan. Additionally, based on recent recommendations by the City's WSAC and subsequent City Council action, the City will be reviewing additional strategies to provide supplemental water supplies during droughts as part of the next UWMP update that is scheduled to be prepared in 2016.

Entry Gate Relocation

The proposed relocation of the entrance further south onto the Wharf from its current location would not result in new structural development that would result in generation of new vehicle trips. The relocation will provide more efficient accessibility for vehicles entering but would not result in increased water demand. Therefore, this near-term project would have *no impact* related to water demand.

East Promenade

The proposed East Promenade would expand the Wharf surface area by approximately 1.5 acres, and would be devoted to pedestrian use. The facility would not result in construction of buildings. Therefore, this near-term project would not result in increased water demand, and there would be *no impact* related to water demand.

18. MANDATORY FINDINGS OF SIGNIFICANCE

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

a. *Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory;*

b. *Have impacts that are individually limited, but cumulatively considerable; or*

c. *Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.*

(a) Quality of the Environment – *Less-than-Significant Impact*. As reviewed in this Initial Study, the project would not degrade the quality of the environment. The proposed project would not result in a significant impact on cultural resources or result in elimination of important examples of major period of California history or prehistory as discussed in section Vi.5 above.

The project would have a less-than-significant effect on biological resources during construction with implementation of mitigation measures. Potential biological impacts would occur during construction, and construction of new facilities as part of implementation of the Wharf Master Plan would not affect fish and wildlife in that the project would not substantially reduce habitat, cause a population to drop below self-sustaining levels, or reduce or restrict the range of species. As discussed in subsection 4(a) and 4(d) above, implementation of Wharf Master Plan projects would only result in potential temporary impacts to marine and bird species, including pigeon guillemot and special-status bird species. However, construction-related impacts to marine mammals, fish and nesting birds can be mitigated, and no significant impacts would occur. No permanent loss of habitat would occur to any bird or marine mammal species. Therefore, implementation of Wharf Master Plan projects would not substantially reduce habitat for any species, cause a species population to drop below self-sustaining levels, threaten to eliminate an animal community, or reduce the number or restrict the range of a rare or endangered species.

(b) Cumulative Impacts – *Less-than-Significant Impact*. The EIR prepared for the City's recently adopted *General Plan 2030* identified potential significant cumulative impacts related to traffic, water supply, population, school enrollment and noise associated with growth and development accommodated by the General Plan. The proposed project would not contribute to the identified significant cumulative noise impact as the identified street segments where increased noise levels are projected are outside of the project area (Westside industrial area). The cumulative population impact included growth within the City and at the University of California Santa Cruz campus if the North Campus area were annexed to the City. The

proposed project would not result in construction of residential uses, and thus, would not contribute to cumulative population or school impacts.

The proposed project would contribute to significant cumulative impacts related to traffic and water supply with potential buildout accommodated by the City's General Plan. CEQA allows a lead agency to avoid repeating analyses that were already provided in a certified General Plan EIR (Public Resources Code section 21083.3) for projects that are consistent with the General Plan. Pursuant to section 21083.3(b), if a development project is consistent with the general plan of a local agency for which an environmental impact report was certified, the application of CEQA shall be limited to effects on the environment which are "peculiar to the parcel or to the project" and which were not addressed as significant effects in the prior environmental impact report. Section 15183 of the State CEQA Guidelines provides further guidance related to Public Resources Code section 21083 in order to streamline review of projects consistent with the General Plan for which an EIR was prepared and certified, and to reduce repetitive environmental studies. As indicated in Section IV.B above, the City's *General Plan 2030* EIR considered development of over 1,000,000 square feet of non-residential uses throughout the City to the year 2030 (SOURCE VII.1b). The proposed project is consistent with the *General Plan 2030* and underlying zone district, and neither a General Plan amendment nor rezoning is required, and at the worst case, development accommodated by the Wharf Master Plan would be within buildout estimates evaluated in the General Plan EIR.

The General Plan EIR concluded that traffic from cumulative development and growth would result in unacceptable levels of service at 26 intersections, all of which could be improved to acceptable levels or improved operations (i.e., delays reduced to existing levels), except at eight intersections. Similarly, cumulative traffic along state highways would contribute to existing and future unacceptable levels of service. Implementation of the Wharf Master Plan and construction of new facilities would contribute to cumulative traffic increases at the intersection of Pacific Avenue and Beach Street The LOS of the roundabout at this intersection would decrease to "D" with cumulative traffic, including development on the Wharf, which remains an acceptable LOS under City standards, and there would not be a significant cumulative traffic impact at this location (SOURCE VII.10b).

Implementation of the Wharf Master Plan and construction of new facilities would contribute to significant cumulative traffic impacts at the Highway 1/Highway 9, Mission Street/Bay Drive and potentially Mission/Chestnut intersections. However, increased vehicle trips are expected to be partially offset by use of other transportation modes as promoted in the Master Plan and inclusion of additional bicycle parking spaces. The City Traffic Impact Fee Program includes about a 20% City share of the total for the proposed projects. This in combination with project elements to increase non-auto transportation travel modes to the wharf would mitigate the project's contribution to a significant cumulative traffic impacts, and thus, the project's incremental contribution would not be cumulatively considerable.

As disclosed in the General Plan EIR, the City's future water supply availability continues to be uncertain, and overall water demand continues to decrease. However, the General Plan EIR's

conclusion that cumulative impacts to the City's water supply during dry and potentially normal years has not changed. The City faces a series of ongoing challenges that potentially could lead to some loss of existing supply in the future, although it is uncertain at this time which supplies might be affected and to what extent. These considerations include the preparation of an HCP that could adjust diversions in some scenarios, water rights petitions, and reduction of groundwater production to protect against saltwater intrusion.

The City has pursued construction of a desalination plant or some other supply solution to provide a reliable supplemental water supply in dry years. Although neither this new source of water nor some alternative supply source is required for the proposed project, some new source may be necessary in the future even without the proposed project in order to reduce the severity of City-wide reductions during drought conditions and to provide an increased and more reliable supply in normal years as the City continues to grow under its new General Plan. A desalination plant had been part of the City's overall water supply strategy that also includes conservation and curtailment during droughts, as set forth in the City's adopted *Integrated Water Plan* and *Urban Water Management Plan*. However, as indicated in section VI.17(b-d) above, the City Council formed a Water Supply Advisory Committee (WSAC) to further review water supply options. The WSAC recommendations include: continued conservation, aquifer storage and recovery, and recycled water or desalinated water in the event aquifer storage and recovery options are not viable. The Council accepted the recommendations and will incorporate them into the next Urban Water Management Plan Update and continue to study this options. At this time, the City therefore continues to conclude that it cannot "confidently determine" that a supplemental water source is "reasonably likely. Furthermore, to provide capacity for additional planned growth under a worst case analysis of GP 2030, a supplemental water supply project, either the desalination plant or some other source eventually would need to be identified or expanded, which would require additional design and engineering, environmental review and permit approvals. (The General Plan EIR also summarizes other supplemental water supply options that have been considered by the City over the past 20+ years.)

Project water demand fall within the buildout estimates and water demand accounted for in the General Plan EIR cumulative impact analyses. New facilities and improvements implemented pursuant to the Wharf Master Plan would be subject to City requirements for installation of water conserving fixtures in accordance with City Municipal Code and building requirements. In addition, the 2010 UWMP notes that between 2000 and 2010 "there has been a larger reduction in water use from water conservation programs than there has been an increase in water use by new connections, with a net decrease over the last ten years of almost 80 million gallons per year" (SOURCE VII.2c). Thus, incremental increases in water demand by new development have been offset by increased conservation attained though the City's water conservation program. Additionally, under drought conditions, Wharf occupants and users, like other City customers, would be required to curtail water use by varying amounts, depending on the severity of the drought. The potential increase in Wharf water demand would not substantially exacerbate water supply reliability during a drought or due to cumulative growth because it is not expected to result in any noticeable increase in the

curtailment in customer use that would be implemented during drought conditions. The project water demand represents less than one-half of one percent of the annual water demand. The General Plan EIR indicates that the General Plan includes policies and actions to reduce water demand, promote additional water conservation, manage and protect water supplies, and develop a reliable, supplemental water source, which could be reduce the cumulative impact to a less-than-significant level. The EIR also discloses and discusses uncertainties associated with these future actions.

(c) Substantial Adverse Effects on Human Beings – *No Impact*. No environmental effects have been identified that would have direct or indirect substantial adverse effects on human beings.

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VII. REFERENCES AND DATA SOURCE LIST

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b) California Environmental Protection Agency Office of Environmental Health Hazard Assessment. August 2013. "Indicators of Climate Change in California."

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c) February 2008. "CEQA Air Quality Guidelines."

5. Monterey Bay National Marine Sanctuary References

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b) Sanctuary Integrated Monitoring Network (SIMoN). Accessed October 17, 2015: Kelp Forests; Continental Shelf; Sandy Floor; Open Ocean; Fishes; Marine Mammals; Seabirds and Shorebirds. Available online at: http://www.sanctuarysimon.org/monterey/index.php

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Agencies Contacted

- City of Santa Cruz Economic Development Department – Norm Daly, Joe Hall
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- City of Santa Cruz Public Works Department – Chris Schneiter, Ron Marquez, Consultant
- City of Santa Cruz Water Department – Toby Goddard, Katie Moore
- California Coastal Commission – Dan Carl, Susan Craig, Rainey Graeven, Ryan Maroney, Michael Sandecki
- Monterey Bay Unified Air Pollution Control District – David Frisbey, Bob Nunes, Alan Romero

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