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STAFF REPORT
CDP APPLICATION

Application Number:	**3-20-0546**
Applicant:	Port San Luis Harbor District
Project Location:	Avila Pier just offshore the unincorporated community of Avila Beach in San Luis Obispo County
Project Description:	Rehabilitation of the currently partially closed Avila Pier including repair or replacement of 48 timber piles; replacement of almost all pier decking, pile caps, stringers, and associated hardware; repair of the boat landing and above deck buildings; removal of 16 derelict pilings; and follow-up authorization for prior temporary emergency closure of the pier
Staff Recommendation:	Approval with Conditions

SUMMARY OF STAFF RECOMMENDATION

Port San Luis Harbor District's Avila Pier extends out into San Luis Bay from the coastal community of Avila Beach, which is a prime visitor destination on California's central coast. Avila Pier is an iconic piece of the area's valuable coastal infrastructure (and the fifth longest wooden pier in California) making it a centerpiece of recreation and coastal tourism in the area. Avila Pier provides for public access along its entire length, including taking in the expansive view of the shoreline and San Luis Bay, as well as providing for a variety of distinct public access and visitor-serving uses and amenities (including boating and fishing). A combination of heavy storms that damaged the pier in the winter of 2014 and its heavy use by the public for wildlife viewing resulted in its closure in 2015. About half of Avila Pier has since been re-opened to the public, but most of the seaward half remains closed to public use. The Applicant proposes to

perform structural repairs necessary to rehabilitate the Avila Pier and its boat landing to reestablish and enhance public access along the full length of the pier.

Specifically, the proposed project includes the repair or replacement of timber components, such as the pilings, decking, and ancillary structures, and repair of the existing boat landing as well as replacement of fender pilings that support the boat landing. The proposed project also includes removal of 16 derelict piles located off the of the upcoast end of the pier, repair of pier buildings (i.e., restrooms and the bait and tackle shop) and other pier facilities as needed. Repairs to these facilities will not result in an increase in their footprint or scope. Finally, the proposed project includes coastal development permit (CDP) authorization for the previous closure of Avila Pier pursuant to emergency CDP number G-3-15-0018.

The proposed pier project will not only reestablish important public access, but it will also *improve* and *enhance* public access in the longer term. Thus, the proposed improvements will benefit public recreational access while also respecting the character and design values that make the pier an iconic part of the shoreline and the visitor experience. These improvements are welcome, and fully supportable under the Coastal Act.

At the same time, there is the potential for some adverse impacts during construction, particularly with respect to the potential effects of pile installation on a subsurface petroleum hydrocarbon plume (referred to as the Outlier Plume) that is located under the base of Avila Pier, as well as several isolated pockets of similar contamination that are located further seaward under the pier. The concern is that installation of piles in these areas could disrupt the hydrocarbon plume or these isolated pockets and cause a release of hydrocarbons and/or hydrocarbon laden sediment into the ocean. While the likelihood of a release is believed to be low at this time due to the weathered asphalt-like consistency of the material, it remains a risk because adverse impacts to coastal resources are possible if a spill/release does occur. The project incorporates oil spill prevention measures and includes an Oil Spill Response Plan that provides effective containment and cleanup measures should an accidental spill occur. Additional potential adverse impacts exist with respect to the potential effects of noise associated with pile installation on wildlife and the potential for water quality impacts. Fortunately, these construction impacts are readily addressed through best management practices (BMPs) familiar to the Commission from past open water projects similar this one (e.g., preconstruction surveys, “soft” construction starts, sound dampening measures, debris containment, marine wildlife exclusion zones/observers, etc.). In terms of longer term water quality and coastal resource impacts post-construction, the treated wood products being used would be the least toxic as possible, and Commission water quality staff have concluded that there would not be significant adverse impacts from potential leaching, including with BMPs employed (e.g., coatings, etc.).

In short, staff believes that this project will improve and enhance Avila Pier, and by extension the public recreational use and enjoyment of it. Therefore, staff recommends **approval** with the below special conditions to address potential coastal resource

impacts and to ensure consistency with the Coastal Act. The motion and resolution to effectuate this recommendation are found on **page 5** below.

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EXHIBITS

1. MOTION AND RESOLUTION

Staff recommends that the Commission, after public hearing, **approve** a coastal development permit for the proposed development. To implement this recommendation, staff recommends a **YES** vote on the following motion. Passage of this motion will result in approval of the CDP as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Motion: *I move that the Commission* ***approve*** *Coastal Development Permit Number 3-20-0546 pursuant to the staff recommendation, and I recommend a* ***yes*** *vote.*

Resolution to Approve CDP: *The Commission hereby approves Coastal Development Permit Number 3-20-0546 and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.*

2. STANDARD CONDITIONS

This permit is granted subject to the following standard conditions:

1. **Notice of Receipt and Acknowledgment**. The permit is not valid and development shall not commence until a copy of the permit, signed by the Permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the Permittee to bind all future owners and possessors of the subject property to the terms and conditions.

3. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. **Final Pier Project Plans**. PRIOR TO ISSUANCE OF THIS CDP, the Applicant shall submit, for Executive Director review and approval, two full-sized sets of Final Pier Project Plans. The Final Pier Project Plans shall be in substantial conformance to the plans submitted in the CDP application (titled "Avila Pier Repairs, Moffat Nichols 09/25/2020") but shall be modified to incorporate the following requirements:

   a. **Type D Repairs.** Replace Note #2 from Sheet S-003 with "Type D repair can be used in-lieu of all other repair types at contractors' option in locations not located within 50 feet of the identified hydrocarbon plume and/or isolated contamination pockets."

   b. **Piling Numbers.** Identify the number of piles to be repaired or replaced using the Type A, B and D method's, highlighting the number of piles located within 50 feet of the identified hydrocarbon plume and/or the isolated contamination pockets in the Repair Phasing Tables (Sheet S-003).

   c. **Pile Driving Limitations.** Include a note on project plans indicating that mechanical pile driving within 50 feet of the identified hydrocarbon plume and the isolated pockets of contamination (as shown in **Exhibit 3**) is prohibited between January 1st and April 30th.

   d. **Oil Spill Contingency Plan.** The Oil Spill Contingency Plan (see Exhibit 9) shall be implemented whenever pilings are removed or installed within 50 feet of the identified hydrocarbon plume and/or isolated contamination pockets, and/or at any time where evidence of an oil spill is detected. In the case of a detected oil spill, all work (past oil spill containment and response) shall cease, and the Permittee shall immediately contact the Executive Director for direction prior to resuming any project activities. The Executive Director shall have the discretion to further limit allowed project activities to reduce any threat from such oil spill to a level of insignificance.

   e. **Mitigations Measures.** Include a sheet that describes all mitigation measures as proposed and modified as necessary to incorporate the requirements of **Special Conditions 3, 4, 5, 6, and 7.**

   The Permittee shall undertake the development in accordance with the approved Final Pier Project Plans. Minor adjustments to the approved Final Pier Project Plans may be allowed by the Executive Director if such adjustments: (1) are deemed reasonable and necessary; (2) do not adversely impact coastal resources; and (3) do not legally require a CDP amendment.

2. **Boat Landing Project Plans.** PRIOR TO CONSTRUCTION OF THE BOAT LANDING, the Permittee shall submit, for Executive Director review and approval, two full-sized sets of Boat Landing Project Plans that depict the final configuration of

and the materials to be used for the fixed boat landing. The Plans shall also identify the number and location of fender pilings to be replaced and include a sheet that describes all mitigation measures as proposed and modified as necessary to incorporate the requirements of **Special Conditions 1, 3, 4, 5, 6, and 7**. Alternatives to treated wood (such as concrete, metal, fiberglass, plastic, wood-plastic composites, or naturally decay-resistant wood species) shall be used for replacement of the fixed boat landing's decking if feasible, and the Plans shall include an evaluation of the feasibility of using such alternatives. The Permittee shall undertake the development in accordance with the approved Boat Landing Project Plans. Minor adjustments to the approved Boat Landing Project Plans may be allowed by the Executive Director if such adjustments: (1) are deemed reasonable and necessary; (2) do not adversely impact coastal resources; and (3) do not legally require a CDP amendment.

3. **Piling Replacement Mitigation Measures.** The following mitigation measures shall be implemented during all pile replacement activities to protect marine mammals, sea turtles, and fish:

   a. **Piling Repair and Replacement.** Damaged creosote-treated piles shall be prioritized for replacement instead of repair, except when located within 50 feet of the identified plume and/or isolated contamination pockets. Damaged ACZA-treated piles shall be repaired or replaced as proposed.

   b. **Steelhead Migration.** If pile driving activities are proposed to occur within the steelhead's known migrating season in or out of San Luis Creek (January 1st through May 31st), the Permittee shall, at the beginning of each of these months, consult with California Department of Fish and Wildlife (CDFW) and National Marine Fisheries Service (NMFS) regarding whether there are indications of such steelhead migration. If either agency indicates that there are indications of steelhead migration, the Permittee shall notify the Executive Director and pile driving activities shall not occur during that month.

   c. **Marine Wildlife Monitor.** One qualified marine wildlife monitor (MWM) shall be present to conduct observations during all pile driving activities. MWM duties shall be dedicated to observing marine wildlife only and the MWM shall not be assigned other pile driving-related duties. The MWM shall have the appropriate safety and monitoring equipment (e.g., binoculars, etc.) adequate to conduct monitoring activities and shall be located at an effective vantage point to observe the entire of all exclusion zones without obstruction.

   d. **Exclusion Zones.** A 500-foot exclusion zone shall be implemented for cetaceans and sea turtles, and a 100-foot exclusion zone shall be implemented for sea otters during all pile driving activities. Pinnipeds (i.e., sea lions and seals) are subject to the requirements of **Special Condition 3(e)** below.

   e. **Pinniped Exclusion Zone.** Pinnipeds (i.e., sea lions and seals) shall have a discretionary exclusion zone of 100 feet wherein the effects of pile driving on

pinnipeds located within that exclusion zone shall be monitored and adjusted as needed by the MWM using the following criteria:

1. If the normal commotion of preparing the work site for the day's pile driving does not cause any pinnipeds in the discretionary exclusion zone to disperse, the MWM will record this in the required logs (see **subsection (f)** below).

2. If pinnipeds remain within the discretionary exclusion zone after the initial ramp-up period, regular pile driving activities may proceed if the pinnipeds do not exhibit any observable signs of injury or distress.

3. If one or more pinnipeds appear injured or distressed, the MWM shall direct pile driving activities to cease until the pinnipeds leave the discretionary exclusion zone or until the pinnipeds are determined by the MWM to no longer be at risk.

f. Submittal of MWM Logs. The Marine Wildlife Monitor (MWM) shall maintain a daily log of observed marine animals' (i.e., marine mammals and sea turtles) behavior that shall be of sufficient detail to determine whether the project causes observable effects to marine animals. A copy of the MWM's logs shall be submitted to the Executive Director when mitigation measures (i.e., shut down or delay of pile driving activities) are implemented five or more times within a seven-day period, and a complete copy of all logs shall be provided at the end of construction. At a minimum, the daily log observations shall include:

1. The date and time that monitored pile driving activity begins and ends.

2. Pile driving activities (e.g., the number of timber piles being driven and their location on the wharf, the type of hammer being used, etc.) occurring during each observation period.

3. Weather parameters (e.g., wind speed and direction, percent sky cover, visibility, precipitation, etc.).

4. Ocean conditions (e.g., water level fluctuation, tides, etc.).

5. A map showing species, numbers, location, and, if possible, sex and age class of all observed marine animals.

6. A description of any observable marine animal behavior patterns, including those in response to pile driving activities, including their location and distance relative to the work site, exclusions zones, and direction of travel.

7. A description of implementation of any required mitigation measures (e.g., shutdown or delay of piling driving activities, etc.)

8. Other human activities in the area.

4. **Water Quality Construction Best Management Practices (BMPs).** The following water quality best management practices shall be implemented during all proposed activities to protect coastal water quality and related coastal resources:

    a. **Selection of Treated Wood.** For all components of the wharf and ancillary structures that the Permittee proposes to repair or replace using preservative-treated wood, the Permittee shall comply with the following requirements:

        1. **Wood Preservatives and Sealants.** Treated wood used for repair or replacement of components of the pier, including piles, support structures, decking, and railings, shall be treated with the preservative Ammoniacal Copper Zinc Arsenate (ACZA) except for the handrails. All handrails shall be treated Copper Azole (CA-C). All fresh cut ends treated wood shall be sealed with penetrating sealer.

        2. **Minimum Preservative Retention Level.** All treated wood shall be treated to the standards of the lowest appropriate Use Category for each component of the structure to ensure that the treated wood does not exceed the minimum preservative retention level. Wood treated to the standards for a higher Use Category (i.e., with a higher preservative retention level) than is necessary for that component shall not be used.

        3. **BMP Mark.** Only treated wood that has been certified as produced for use in aquatic environments shall be used (as indicated by a BMP Mark or Certificate of Compliance) in accordance with industry standards such as the Best Management Practices for the Use of Treated Wood in Aquatic and Wetland Environments by the Western Wood Preservers Institute, et al.

        4. **Topical Preservative Application.** Any topical preservatives (e.g., Copper Naphthenate) applied to cut ends and drilled holes in treated wood shall be applied sparingly, and in a matter that will prevent drips and spills of the preservative into the marine environment. Once dried, cut ends and drilled holes shall be sealed with a penetrating sealer.

    b. **Debris Containment and Disposal.** All debris shall be effectively contained, collected, and properly disposed of. For all work over sandy beach areas, containment netting or similar measures shall be placed under the pier to collect such debris, including to avoid debris contact with beach areas. For all work over ocean areas, containment netting and/or other floating containment measures (contained via booms, boats, or a combination of both) shall be applied to avoid debris entering ocean waters. Tarps or other containment devices shall also be used to capture all debris, sawdust, oil, grease, rust, dirt, drips, and spills resulting from over-water or over-beach construction and demolition activities.

5. **Nesting Bird Surveys.** Nesting birds and their nests shall be protected during construction by use of the following measures:

a. **Nesting Bird Surveys.** For any construction work that would occur during the avian breeding season (i.e., February 15th to September 1st), pre-construction surveys shall be completed by a qualified wildlife biologist, approved by the Executive Director, with experience in observing reproductive and nesting behavior to identify displays of nesting behavior and/or active nests (i.e., as occupied by eggs or nestlings). The following shall apply:

    1. **Timing.** Surveys shall commence no more than 30 days prior to the initiation of construction and may occur weekly thereafter over the breeding season, with the last survey occurring no more than 72 hours prior to the start of construction in any given area. The Permittee shall submit all nesting bird surveys to the Executive Director within 7 days of completion.

    2. **Coverage.** Surveys may be focused on specific work areas rather than necessarily covering the entire pier, and they may be sequenced as needed to address specific work areas and schedules over the course of the breeding season. Surveys shall be performed extending 300 feet from the project work area to locate any active non-raptor nests and within 500 feet to locate any active raptor (bird of prey) nests, including areas above the pier's deck (e.g., rooftops, eaves, etc.) and below the pier's deck (e.g., substructures viewed from the water).

    3. **Nest Identification and Buffers.** If it is determined that construction may affect active nests, the qualified biologist shall establish a no-disturbance buffer around the nests and all project work shall halt within the buffer until the qualified biologist determines the nest is no longer in use. These buffer distances are 300 feet for non-raptors and 500 feet for raptors, unless evidence is provided to the Executive Director to conclusively show that a different distance is appropriate, and the Executive Director concurs with that determination. Maps identifying the location of any active nests detected shall be provided, showing the date of survey and nest stage (e.g., eggs, nestlings, etc.) and all buffers.

b. **Buffer Exceptions.** Minor project components limited to the use of hand tools and light power tools (e.g., hand drills but not jack-hammers or power saws) are allowed within established buffers, provided that a buffer of no less than 50 feet within which no construction activity is allowed shall be applied to active nests in consultation with the qualified biologist. In addition, blinds and similar materials shall be placed between the active nests and the work area to avoid visually disturbing nesting birds. The placement of the blinds shall be overseen by the qualified biologist, who will observe nest sites and parent behavior over the course of activities, or until he/she is satisfied that the nesting birds will not be significantly disturbed by the work in that area. Any birds that begin nesting within an active construction area or buffers amid construction activities may be assumed to be habituated to construction-related noise and disturbance levels. No prescribed buffers are required to be established around active nests in these cases; however, further encroachment shall be avoided, the nests shall continue to be monitored by the qualified biologist and if the nesting birds begin to show

distress associated with construction activities, then the prescribed no-disturbance buffers shall be reestablished.

c. **Construction Halts.** If under any circumstances either construction staff or the qualified biologist observe signs of nesting distress (e.g., parents flush from the nest and do not readily return as activities continue, anxious warning calls, etc.), then work shall be stopped immediately, and the qualified biologist shall consult with the Executive Director to determine necessary modifications to activities. Activities shall resume only after the biologist and the Executive Director are satisfied that the modifications are sufficient to avoid continued disturbance to the nests.

d. **Reporting**. A monitoring report shall be provided to the Executive Director within 90 days of construction completion and shall include: the maps from each nest survey conducted that year; a brief narrative describing the survey methods and observations of the species' tolerances to noise, vibration, and visual disturbance cues; a record of maintenance and repair activities carried out during the nesting season, including their location relative to active nests; and a discussion of any incidents have resulted in a need for further consultation with the qualified biologist and/or the Executive Director.

6. **Use of Public Parking for Staging.** The use of public parking spaces (as shown in **Exhibit 6**) for staging/storing of construction equipment and/or materials shall be limited to use of the Avila Beach Parking Lot area (and not on Front Street); shall be confined in such a way as to have the least possible impact on public use of the lot (e.g., sited and clustered to minimize impacts on general circulation, etc.); shall be minimized to the maximum extent feasible from the Friday before Memorial Day weekend until the day after Labor Day; and shall ensure that at least 325 parking spaces in this lot remain available to the general public at all times. Further, all construction access between staging/storing areas and work areas at Avila Pier shall be conducted in a manner that limits impacts to general public access as much as possible, and shall not be allowed to completely close down public streets or public areas (other than work areas on Avila Pier itself) to general public access.

7. **Timing of Construction Work.** All work shall take place between 7 a.m. and 7 p.m. on non-holiday weekdays, except that the Executive Director may authorize non-pile-driving and non-in-water nighttime work due to the demonstration of extenuating circumstances, and subject to all appropriate mitigation measure to avoid lighting of coastal water and beaches, and to avoid coastal resources impacts, as much as possible. Lighting of work areas is prohibited.

8. **Minor Modifications.** Additional development beyond the pier rehabilitation activities specified in this approval shall be submitted for a determination of CDP requirements (i.e., a separate CDP, a CDP amendment, a CDP waiver, a CDP exemption). Minor adjustments to the terms and conditions of this CDP may be allowed by the Executive Director if such adjustments: (1) are deemed reasonable and necessary; (2) do not adversely impact coastal resources; and (3) do not legally require a CDP amendment.

4. FINDINGS AND DECLARATIONS

A. Project Location and Description

Project Location

Port San Luis is located south of Morro Bay and north of Pismo Beach, on the northern portion of San Luis Bay, adjacent to the unincorporated coastal community of Avila Beach in San Luis Obispo County. San Luis Bay is characterized by several different habitats, including a rocky shoreline with offshore rocks, intermittent sandy beaches, nearshore kelp beds, bluff-top terraces backed by steep hills, and a riparian area near the mouth of San Luis Obispo Creek. San Luis Bay extends between downcoast Fossil Point and the upcoast United States Army Corps of Engineers breakwater extending from Point San Luis itself.

The Applicant, Port San Luis Harbor District, owns and manages the two public piers that extend into San Luis Bay (i.e., Harford Pier and Avila Pier),[1] with Avila Pier is located seaward of the community of Avila Beach nearer to Fossil Point. The pier is 1,685 feet long and consists of 111 framed rows of piles (known as bents). The pier has an average width of 20 feet except at its seaward terminus, which is approximately 120 feet in width, and covers an area of about 44,450 square feet, or just over an acre. The pier is the fifth longest wooden pier in California and accommodates a variety of coastal-related and coastal-dependent activities, including recreational fishing, recreational boating, and wildlife viewing. Pier facilities are provided on the end of the pier and include public restrooms, a small bait and tackle shop, a skiff hoist, and a boat landing at the east side of the end of the pier. Avila Pier is open for pedestrian use only (i.e., there is no public vehicular access to the pier).

See **Exhibit 1** for an aerial photo of the project vicinity and **Exhibit 2** for photos of the pier and its surroundings.

Background

San Luis Obispo County constructed the present-day Avila Pier in 1908, shortly after construction of the breakwater at Point San Luis. Originally, the pier contained a large warehouse and several hoists and was an important fishing and passenger pier due to its length relative to most other piers at that time. The last significant rehabilitation of the pier was completed in 1985 after large sections were destroyed in the extreme winter 1983 El Niño storms. The first 150 feet of the pier closest to land was also replaced in 2000 as part of the Unocal oil spill remediation project in Avila Beach.[2] In addition to typical deterioration over time, severe winter storms caused significant damage to the pier in 2014. Then, in 2015, a large group of humpback whales visited San Luis Bay,

[1] A third pier that extends into the Bay is used by Cal-Poly for marine research purposes (formerly the Unocal (now Chevron) Pier).

[2] Much of the seaward side of the community of Avila Beach was torn down and the underlying soils removed in what was one of the largest environmental remediation efforts in U.S history in the late 1990s. Approximately 70,000 cubic yards of contaminated materials were ultimately removed, and the town was rebuilt atop clean soils in the early 2000s, at a cost of nearly a quarter-trillion dollars at the time (and nearly a half-trillion in today's dollars).

which led to a massive increase in foot traffic on Avila Pier and resulted in significant swaying of the pier. Due to structural integrity and public safety concerns, Commission staff issued the Applicant an emergency coastal development permit (ECDP) authorization (G-3-15-0018) to close Avila Pier to the public until repair and rehabilitation of the pier was completed. About half of Avila Pier has since been re-opened to the public but the seaward-most half of the pier remains closed to the public. According to the most recent engineering assessment, it is estimated that 48 piles will need to be repaired or replaced to restore full capacity and access to the pier.

Most recently, a portion of the lower public boat landing became completely detached during storms in 2019. The storm ripped the landing's supporting connection hardware, resulting in the boat landing breaking off from the deck platform.

As indicated above, in 2000, Unocal (now Chevron) conducted an oil spill clean-up in Avila Beach, which included excavation of the beachfront area of the town to remove oil-contaminated soils and replacement of a portion of Avila pier (up to Bent #7).[3] Around this time, a separate hydrocarbon plume was discovered underneath portions of Avila Pier, now known as the Outlier Plume. The Outlier Plume has been monitored since that time and has remained relatively stable, and thus it has not been required to be removed. The Applicant has worked closely with the Central Coast Regional Water Quality Control Board (RWQCB), the California Department of Fish and Wildlife (CDFW), and Chevron to address concerns regarding the potential for release of oil from the Outlier Plume during pile driving maintenance activities, and to gather information on the state of the existing Plume.

Project Description

The Applicant proposes to perform structural repairs necessary to rehabilitate the Avila Pier and its boat landing. See **Exhibit 4** for the proposed project plans. Specifically, the proposed project entails:

Pier Timberwork Repair and Replacement

The proposed project includes the repair or replacement of 48 of the 784 timber piles supporting Avila Pier, 90 percent of the pier's decking, 5 to 10 percent of the pile caps, 1 to 2 percent of the stringers, 25 to 30 percent of the pier's hardware, and 1 to 2 percent of the pier's railings.

The project proposes to repair and/or replace Avila Pier pilings that have been identified as damaged, deteriorated, or missing. Of the 48 piles identified, 32 would be repaired and 16 would be replaced using conventional pile driving methods (i.e., an impact hammer), and 13 piles are located within the hydrocarbon plume and/or isolated pockets of contamination (of which 5 would be replaced). **Exhibit 3** shows the location

[3] The existing Avila Beach neighborhood was a major crude oil shipping port during the 20th century. Union Oil (which became Unocal (now a subsidiary of Chevron)), along with other companies, laid the largest oil pipeline project in the world prior to World War I (over 200 miles), which terminated in the tidewater facilities at Avila. Field storage for 27 million barrels of oil was created at a tank farm in San Luis Obispo as well as at Avila Beach. Unocal transported an average of eight to ten million barrels of crude oil and refined products per year until ceasing operations in the mid-1990s.

of the 48 pilings proposed for repair or replacement, and the methods to be used for each.[4] During piling repair activities, the Applicant would also assess the potential need to install new piles if the proposed piling repair methods are determined to be infeasible.

Pier timberwork also consists of the temporary removal of timber decking, stringers, railings, and pile caps as required to install piles from the pier deck, and includes the replacement of any of these pier components found to be deteriorated during this work. Replacement piles, decking, pile caps, railings, and stringers, and all other lumber and timber components will be treated with ammoniacal copper zinc arsenate (ACZA) preservative, prior to installation. When piling replacement is necessary, the Applicant proposes to use ACZA-treated Douglas fir piles dipped with a marine-grade epoxy/polyurethane coating to prevent leaching of the ACZA preservative into marine environment. Corroded or missing hardware used for bracing, anchoring, and securing timber components and utility lines or other appurtenant structures, would also be replaced. Deteriorated connection hardware identified in the repair plans would be replaced with hot-dip galvanized hardware, or stainless steel when feasible.

Public Boat Landing Repair

The proposed project includes the repair of damaged portions of the boat landing near the eastern end of the pier to restore the boat landing to its prior design, footprint, and function. Minor modifications in design and materials may be made to reinforce the boat landing's durability to reduce potential future damages to it during storm surges, high winds, and anticipated sea level rise conditions. Deteriorated fender piles will be replaced as necessary to restore the boat landing's usability.

Other

The proposed project also includes the removal of 16 derelict fender pilings located off the of the west (upcoast) end of the pier, as well as the repair of the restrooms, the bait and tackle shop, utility lines, and other pier facilities as needed. Repairs to these facilities will not increase their footprint or scope. Finally, the proposed project includes regular CDP authorization for the temporary closure of Avila Pier pursuant to ECDP G-3-15-0018.

Access During Construction

The landward half of the pier that is currently open to the public would be closed during construction, but the surrounding beach area will remain open and accessible to the public other than times when a brief closure is necessary for public safety (such as during decking replacement). The proposed project is anticipated to take 10 months. To limit impacts to public access, no work will occur on weekends or holidays. Proposed construction activities will only occur during daylight hours (i.e., from 7am to 7pm) on weekdays only.

Mitigation Measures

[4] See the "Pier Piling Repair" subsection in the "Biological Resources and Water Quality" section below for a detailed description of the various proposed piling repair methods.

The proposed project includes a robust set of mitigation measures and best management practices (BMPs) developed pursuant to a biological assessment for the project to protect water quality and biological resources during construction activities. In addition, the proposed project also includes mitigation measures approved by the Commission in 2020 for the repair and maintenance program for the nearby Harford Pier (CDP 3-18-1230). See **Exhibit 5** for the proposed mitigation measures and BMPs, **Exhibit 7** for the proposed Wildlife Contingency Plan, and **Exhibit 9** for the proposed Oil Spill Contingency Plan.

B. Standard of Review

The proposed pier is located entirely within the Commission's retained CDP jurisdiction Proposed construction staging and access is located in the San Luis Obispo County's CDP jurisdiction, but the County, the Applicant and the Executive Director have agreed to consolidated CDP processing. The standard of review for development within the Commission's retained jurisdiction and for consolidated CDP applications is Chapter 3 of the Coastal Act, with the San Luis Obispo County LCP providing non-binding guidance.

C. Coastal Act Use Priorities

Applicable Coastal Act Provisions

The Coastal Act defines coastal-dependent and coastal-related as follows:

> ***Section 30101:*** *"Coastal-dependent development or use" means any development or use which requires a site on, or adjacent to, the sea to be able to function at all.*
>
> ***Section 30101.3:*** *"Coastal-related development" means any use that is dependent on a coastal-dependent development or use.*

Coastal Act Section 30001.5 states, in relevant part:

> ***Section 30001.5:*** *The Legislature further finds and declares that the basic goals of the state for the coastal zone are to:*
>
> *(a) Protect, maintain, and where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources….*
>
> *(c) Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of private property owners.*
>
> *(d) Assure priority for coastal-dependent and coastal-related development over other development on the coast…*

Coastal Act Sections 30234 and 30234.5 also provide specific protections for boating harbors and commercial fishing. They state:

Section 30234: *Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.*

Section 30234.5: *The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.*

Analysis

Coastal-dependent and coastal-related developments are among the highest priority Coastal Act uses. Avila Pier is one of two publicly accessible piers in San Luis Bay, and it is located at the heart of Avila Beach and its main commercial area, and also at the heart of the beach itself, which together draw tourists from other parts of the County, inland communities, and all over the world.[5] The pier is the fifth longest wooden pier in California and accommodates a variety of coastal-related and coastal-dependent activities, including recreational fishing,[6] recreational boating, and wildlife viewing. Pier facilities are provided on the 120-foot-wide terminus of the pier and include public restrooms, a small bait and tackle shop, a skiff hoist, and a boat landing at the east (downcoast) end of the pier. The boat landing typically serves as the main access point for transient vessels, with the Port District's anchorage area located upcoast of the pier and near Harford Pier. Individuals can fish from the pier or can set off on kayak or on stand-up paddle board from the pier's boat landing. In the spring, one can fish for halibut, salmon, and mackerel off the pier; rockfish, sharks and barracuda are caught in the summer and the fall.

Heavy storms that damaged the pier in the winter of 2014 combined with the extraordinarily heavy use of the pier by the public for whale viewing (during which the pier began to sway) resulted in Avila Pier's closure in 2015. About half of Avila Pier has since been re-opened to the public, but the seaward half remains closed to the public. Recreational boating and fishing on the pier are coastal-dependent priority uses that cannot function without a safe pier. The proposed project will restore the use and capacity of the entire length of the pier.

The proposed project supports coastal-dependent and coastal-related uses, and the pier is integral to the continuation of such uses. Further, ocean boating and fishing are coastal-dependent priority uses under the Coastal Act, and the continuation of these uses requires a safe and stable pier. Overall, the pier also provides significant public

[5] Avila Beach is a significant visitor destination, particularly for other nearby County residents, but also especially for visitors from California's Central Valley for whom Avila Beach is the first coastal area they typically encounter along Highway 101 heading west and south.

[6] Avila Pier does not support commercial fishing due to its relatively small size, and commercial fishing operations in Port San Luis utilize the nearby Harford Pier, which is located just over a mile upcoast of Avila Pier within San Luis Bay.

recreational access opportunities (see also “Public Access and Recreation” section below), consistent with the Coastal Act’s use priorities. Accordingly, the proposed project to rehabilitate the pier is considered a high priority under the Coastal Act.

Coastal Act Section 30234 calls for the protection of boating facilities, and it provides that such facilities shall be updated where feasible. Relatedly, Coastal Act Section 30234.5 recognizes the economic, commercial, and recreational importance of fishing activities. In terms of consistency with Coastal Act Sections 30234 and 30234.5, the pier supports both recreational fishing and boating activities. The proposed project will allow fishing and boating uses from the pier to be reestablished and thus is essential to maintaining such uses. Therefore, the Commission finds that this project implements, and is consistent with, the Coastal Act’s use priorities as articulated above, including Sections 30234 and 30234.5.

D. Public Access and Recreation

Applicable Coastal Act Provisions

As indicated above, one of the Coastal Act’s enumerated goals is to maximize public recreational use and enjoyment in the coastal zone. To do so, the Coastal Act requires that public recreational access opportunities be maximized, and specifically protect public recreational activities in coastal areas, such as the boating, fishing, and visitor-serving activities and opportunities found in Avila Beach and on Avila Pier. Applicable provisions include:

> ***Section 30210.*** *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*
>
> ***Section 30211.*** *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*
>
> ***Section 30213.*** *Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred…*
>
> ***Section 30220.*** *Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.*
>
> ***Section 30221.*** *Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.*

> ***Section 30224.*** *Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, by developing dry storage areas, increasing public launching facilities, providing additional berthing space in existing harbors, limiting non-water-dependent land uses that congest access corridors and preclude boating support facilities, providing harbors of refuge, and by providing for new boating facilities in natural harbors, new protected water areas, and in areas dredged from dry land.*

These overlapping Coastal Act policies protect public recreational access to and along the beach/shoreline and to offshore waters for public recreational access purposes, particularly free and low-cost access. Importantly, the Coastal Act Section 30210 direction to maximize access and recreational opportunities represents a different threshold than to simply provide or protect such access, and it is fundamentally different from other like provisions in this respect. Namely, it is not enough to simply *provide* access to and along the coast, and not enough to simply *protect* access; rather such access must also be *maximized*. This terminology distinguishes the Coastal Act in certain respects, and it provides fundamental direction with respect to projects along the California coast that raise public access issues, like this one.

Analysis

Although Avila Beach still has a working commercial fishing pier (i.e., Harford Pier) and the inland areas have extensive apple orchards, tourism is now the main industry due to its attractive beach facilities, as well as camping and lodging opportunities. Avila Beach is considered by many to be a hidden gem as it is easily missed by visitors traveling by on the heavily used Highway 101, though it is still an extremely popular visitor destination in San Luis Obispo County. These visitors come not only for the quaint coastal architecture, and its shops and restaurants fronting the shoreline, but also for its family friendly beaches, and to access the two public piers in San Luis Bay. When completely open, Avila Pier provides for public access along its entire length, including taking in the expansive view of the shoreline along San Luis Bay, including towards San Luis Point, but also downcoast towards Pismo Beach, the Oceano Dunes and the Guadalupe-Nipomo dunes complex (the largest such intact coastal dunes system in the world, and a federally designated National Landmark), and both Point Sal and Point Conception further off to the south. The Pier also provides for a variety of distinct public access and visitor-serving uses and amenities (including boating and fishing). The pier is always open to the public free of charge, and it is a beloved and heavily used public facility.

Every oceanfront pier in California has, at one time or another, had to be rebuilt, or at least in great part, repaired and renovated. Winter storms that can magnify the wind, waves, and ocean currents have routinely damaged and many times destroyed entire piers. Heavy use by the public can also degrade the stability of very old overwater structures such as Avila Pier. As previously described, public access is currently only available on the landward half of the pier due to the structural instability of the seaward half of the pier. The primary goal of the proposed project is to complete the necessary repairs identified in 2019 to reestablish access along the full length of the pier.

However, the proposed project will not only reestablish public access, it will also *improve* and *enhance* public access over the longer term, including as the proposed project includes replacement of approximately 90 percent of the existing decking to provide a smooth surface that will enhance access, especially as it will help better allow for Americans with Disabilities Act (ADA) accessibility. Further, the proposed project also includes rehabilitation of Avila Pier's boat landing, which was significantly damaged following a storm in 2019. The proposed project includes reconstruction of the landing in its former footprint but may also include the use of reinforced or stronger materials for improved future resiliency against storms and better adaptability to sea level rise.

In addition to the enhancement of public pedestrian and recreational access opportunities on Avila Pier, the proposed project also includes improvements to boat-able waterways surrounding the pier. Specifically, there are currently 16 derelict creosote piles located adjacent to the west side of the pier. These piles not only present water quality challenges due to the creosote they contain continuing to leach into open ocean waters, but they also can be a dangerous hazard to recreational boaters. The Applicant proposes to remove these 16 piles. Such removal will open additional open water area that can be used for public recreational access (e.g., for boats, kayaks, stand-up paddleboards, etc.), and potential safety issues associated with the presence of these derelict piles will be appropriately mitigated.

While the proposed project will protect and enhance the significant public access and recreation opportunities and facilities provided by the pier over the long term, it will nevertheless temporarily disrupt coastal access during construction activities in the short term.

Most notably, the pier will be closed for the duration of proposed activities—an estimated timeframe of up to 10 months. The surrounding beach area will remain open and accessible to the public to the maximum extent feasible, but access to areas under the pier on land and in the water may be restricted at times during construction to ensure public safety. However, while such unavoidable impacts may occur, the proposed activities will only occur during the weekday daylight hours (i.e., here identified as between 7am and 7pm for ease of construction)[7] and will not occur on weekends or holidays to minimize disruptions during peak public use times. **Special Condition 7** codifies these construction timing restrictions.

Further, the proposed pile driving activities produce significant noise, which may be disruptive to residents and visitors in the vicinity of the pier. However, the project proposes to do piling repair instead of piling replacement when feasible, and piling

[7] The Commission typically defines daylight hours as one-hour before sunrise to one-hour after sunset. Here, the Applicant has committed to construction when daylight allows, and not when it is too dark to work or when lighting would be required. As a result, the 7am to 7pm timeframe and these accompanying measures ensure that construction will only actually take place between one-hour before sunrise to one-hour after sunset, and likely even a more limited time in the early morning hours most of the time (given sunrise in relation to 7am), and a more limited time during evening hours during late spring and summer times. As a result, the Commission need not condition the project to ensure it takes place between one-hour before sunrise to one-hour after sunset in this case.

repair activities will not result in the generation of significant noise. When piling replacement is necessary, noise generation from pile driving will be relatively short in duration (less than ten minutes to drive a pile, including when using a soft-start technique before peak pile driving commences).

Another potential impact to public access due to the project includes the potential displacement of public parking to store construction materials and related equipment. To minimize such parking displacement, the Applicant has proposed to maximize materials/equipment storage either offsite in the Harbor District's storage yard (when materials are not needed for immediate use) and on stable portions of the pier when the materials/equipment are needed for use in the near term. However, the Applicant has also proposed to use the Harbor District's Avila Beach Public Parking Lot and parking spaces on Front Street for materials and equipment storage and staging, if needed, to provide for operational flexibility. Specifically, the crane and reach lift, which are needed for certain pier rehabilitation construction activities, are slow-moving large equipment that would cause recuring traffic impacts if they traveled along Avila Beach Drive regularly during the construction period[8]. Thus, the Applicant proposes to store the crane and reach lift in public parking spaces shown in **Exhibit 6,** which is in close proximity to Avila Pier. This parking lot contains 372 free general public parking spaces, and the Applicant proposes to use no more than 30 spaces for equipment and material storage only if necessary, meaning that at least 342 parking spaces in this lot would remain available to the public during pier rehabilitation in that scenario. The ability to store certain materials and equipment in a portion of this parking lot will help to limit the time needed for construction; without the potential use of the lot, transferring materials and equipment to and from the Harbor District's storage yard would be very time consuming and has the potential to significantly extend the time of pier rehabilitation activities.

At the same time, the Applicant also proposes to use 6 free public parking spaces along nearby Front Street immediately adjacent to the beach for construction purposes (again, see **Exhibit 6**). Although use of a portion of the parking lot can be found appropriate, including as there would remain a sizable amount of publicly available free parking spaces there, the use of spaces along Front Street is not appropriate. Front Street is the prime visitor destination in Avila Beach, and has very limited parking to begin with, and it would adversely impact public access if these prime public access parking spaces were instead used for construction purposes. Again, it would be better for general public access if any public parking spaces used for construction purposes were confined within the larger and more inland parking lot itself, and not on Front Street. Thus, if those six spaces were shifted to the inland parking lot, then the Applicant would require 36 spaces in the parking lot for construction purposes on and off for some 10 months. Allowing such limited construction use can be allowed in this case provided such use is appropriately circumscribed.

[8] The Harbor District's storage yard is located at the base of the Harford Pier about 1.6 mile driving distance away.

Accordingly, the use of public parking spaces (as shown in **Exhibit 6**) for staging/storing of construction equipment and/or materials is limited to use of the Avila Beach Parking Lot area (and not on Front Street); must be confined in such a way as to have the least possible impact on public use of the lot (e.g., sited and clustered to minimize impacts on general circulation, etc.); must be minimized to the maximum extent feasible from the Friday before Memorial Day weekend until the day after Labor Day; and must ensure that at least 325[9] parking spaces in this lot remain available to the general public at all times. Further, all construction access between such inland parking lot staging/storing areas and work areas at the Pier must be conducted in a manner that limits impacts to general public access as much as possible, and cannot be allowed to completely close down public streets or public areas (other than work areas on Avila Pier itself) to general public access to use. See **Special Condition 6**.

Conclusion

Although the proposed project requires complete closure of the pier and may temporarily displace some public parking, special conditions can help to minimize any impacts, and the proposed improvements when completed will ultimately increase public access amenities and overall use of the pier, and improve the pier's resiliency, including by minimizing the pier's vulnerability and susceptibility to significant storm damage, which has resulted in the previous closure of the entire pier and the current partial pier closure. Thus the proposed project will maintain and enhance public recreational access and facilities, including for fishing, recreation, boating, and other visitor-serving activities and, as conditioned, is consistent with the above-cited Coastal Act public access and recreation provisions.

E. Biological Resources and Water Quality

Applicable Coastal Act Provisions

Although the proposed project clearly provides for Coastal Act priority uses and development, including in terms of protecting and enhancing public recreational and visitor-serving access, as described above, the proposed is also located over the beach, San Luis Bay, and the Pacific Ocean, all of which project raise concerns around the protection of marine resources during project implementation. Coastal Act Sections 30230, 30231, and 30233 each protect such marine resources in a variety of ways, including limiting overwater/fill development to seven enumerated use types. They state:

> ***Section 30230.*** *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

[9] If 325 such parking spaces are protected for general public use, that means that the Applicant is allowed their 36 spaces plus a buffer of approximately 30% for contingencies (or a total of up to 47 spaces).

Section 30231. *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Section 30233(a). *The diking, filling, or dredging of open coastal waters…shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following: (1) New or expanded port, energy, and coastal-dependent industrial facilities. … (3) In open coastal waters…new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities. … (7) Nature study, aquaculture, or other similar resource-dependent activities. …*

Analysis

Background

Port San Luis Harbor is formed by Point San Luis itself (to the west and upcoast), to which has been attached a roughly half-mile long man-made breakwater. This large rock breakwater helps to form a protective coastal embayment that provides sheltered habitats with a relatively deep-water connection to the ocean. And Port San Luis Harbor and San Luis Bay more broadly support a diverse complex of marine and coastal habitats, including open ocean, kelp forests, rocky subtidal, sandy beaches, and a coastal river mouth. In fact, schooling baitfish (such as anchovies and krill) attract a wide variety of marine mammals and birds to feed within the bay. While the abundance of some of the whale species varies seasonally, other species such as seals and sea lions, porpoises, dolphins, and otters are year-round residents. Of the seasonal species, gray whales (both eastern and western populations) are typically present during their predictable migration along the coast (moving southward in the late fall/winter and northward in the spring), while others, such as humpback whales, are typically present during feeding aggregations in the summer months. However, marine mammal presence is difficult to predict and not all species and individuals follow these general trends. Predictions of marine mammal presence and density are typically based on average observations over many years and therefore may not reflect the actual behavior of all individuals within a species, or the variation in abundance or occurrence that may occur in a single year or season.

To identify potential project impacts to marine wildlife, the Applicant prepared a Biological Assessment to evaluate potential biological impacts, including with respect to

threatened, endangered or otherwise special status species.[10] Special status species with the potential to occur at or near the project location include California Least Tern (*Sternula antillarum*), Green Turtle (*Chelonia mydas*), Loggerhead Turtle (*Caretta caretta*), Leatherback Turtle (*Dermochelys coriacea*), Olive Ridley Turtle (*Lepidochelys olivacea*), South Central California Coast Steelhead (*Oncorhynchus mykiss irideus*), Humpback Whale (*Megaptera novaeangliae*), and Southern Sea Otter (*Enhydra lutris nereis*). The area also has a significant bird population, including shorebirds that make their nests on various attributes in both the built and natural environment, as well as migratory birds that may stay for shorter periods of time during their journey along the Pacific Flyway.

Rehabilitation of the nearly 1,700-foot-long, 44,000-square-foot pier would include the repair of 32 existing timber piles and replacement of 16 timber piles (out of a total of 784 existing timber piles supporting Avila Pier), replacement of 90 percent of the decking, along with replacement of pile caps, stringers, and associated hardware, as well as the repair of the damaged boat landing and related pilings located near the seaward east end of the pier. As shown in **Exhibit 2**, the proposed pier rehabilitation project site is located within and above the beach and areas of intertidal and subtidal sandy habitat in nearshore coastal waters. Pier work within these areas has the potential to adversely affect coastal and marine water quality, habitats, and wildlife, including due to pile installation activities themselves, construction noise and debris more generally (including during removal of damaged wood and hardware and installation of replacement materials), and the presence of wood preserving chemicals (including the potential for them to leach into marine waters over time).

Treated Wood and Other Materials

The proposed project involves construction over or adjacent to coastal waters, which can cause water quality impairment from sediment disturbance and runoff, equipment leaks, and spill of construction materials with the potential to adversely affect water quality and marine habitat through the discharge of harmful materials and disturbance of contaminated sediments in coastal waters. Of additional concern is the use and maintenance of preservative-treated wood components in or over aquatic environments. Specifically, the proposed project includes repair or replacement of many of the pier's preservative-treated wood components (including the wooden piles supporting the pier as well as decking, railings and associated posts, and the pier's fixed boat landing) with similar wooden components treated with ammoniacal copper zinc arsenate (ACZA).[11]

Avila Pier, like all coastal wharves and piers, is exposed to extreme elements, not the least of which is the ocean itself, and these elements generally require materials

[10] Titled "Biological Assessment-Avila Pier Rehabilitation Project," by Padre Associates, Inc. (July 2020).

[11] ACZA is a wood preservative that includes both copper and arsenic that is used to prevent insect infestation, rot, and other sources of wood degradation and breakdown. Dissolved copper is highly toxic to a broad range of aquatic species. However, the arsenic, chromium, and zinc in the metal-arsenate preservatives are less toxic than copper to aquatic organisms in both freshwater and marine environments.

to be used that can withstand such a brutal environment. Historically, that has meant that the wooden components that make up the overwater structure, such as pilings, stringers, decking and railings, were heavily treated with preservatives designed to limit deterioration. This includes creosote preservative treatment for piles, which was historically very commonly used. In the case of Avila Pier, almost all the existing piles were treated with creosote.

Preservative-treated wood has historically been commonly used in the construction of over-water structures because it is economical, easy to install, and provides protection from corrosive saltwater, fungal decay, and marine boring organisms. However, the pesticides in wood preservatives—commonly copper—used to protect the integrity of the structure's wooden components can adversely impact aquatic species by leaching into the water column or accumulating in the underlying sediment. Dissolved copper is highly toxic to a broad range of aquatic species. For example, metals leached into sediments near copper-treated wooden piles in aquatic environments have been found to accumulate in benthic and epibenthic organisms. These metals can bioaccumulate throughout the food chain and can cause toxic effects ranging through higher trophic levels. In addition, humans and mammals that utilize the pier may be directly exposed to the preservatives from frequent contact (such as with railings). Thus, the use of unsealed preservative-treated wood in or over water is of particular concern.

Although today there are many more inert materials that can be and are used in such open water applications (e.g., fiberglass, concrete, and steel), it is still not uncommon for pier operators to use wood-based products that are treated to help limit their deterioration over time in a variety of ways. The Coastal Commission's Coastal Water Quality Program staff has developed recommendations to minimize the water quality impacts of building materials used in overwater and waterfront structures. While Commission Water Quality staff recommends the use of alternative materials instead of treated wood when constructing overwater structures, such staff acknowledges that replacing existing treated wood components with same on an existing wooden pier is a valid engineering reason to do so. In such cases, it is important to ensure that such materials appropriately protect the marine environment. Further, when preservatives are used to treat wooden piles and other in- or over-water structural components, such staff indicate that ACZA is the best choice of preservative if the treated wood is appropriately sealed because the arsenic, chromium, and zinc in the metal-arsenate preservatives are less toxic than copper while still providing effective protection from corrosive saltwater, fungal decay, and marine boring organisms to maintain structural capacity for an extended duration.

The Applicant proposes to use ACZA-treated lumber for all replacement pilings, piling caps, and all other timber components (other than railings). The ACZA-treated wood is pressure-treated with the preservative at a treatment facility. The Applicant will store all treated wood offsite until it is proposed for use. Preparation of the treated wood will occur prior to transport of the materials onto the pier to the maximum extent feasible (e.g., replacement decking will be ordered precut to the

width of the pier to reduce sawdust that includes ACZA from entering the water). **Special Condition 4(a)(1)** codifies the proposed use of ACZA treated wood for all replacement pilings, piling caps, and all other timber components (other than railings). In order to minimize leaching of the wood preservative, **Special Condition 4(a)(1)** also requires that all fresh cut ends of ACZA-treated wood be sealed with penetrating sealer.

For this pier, ACZA-treated wood is generally appropriate to replace damaged or deteriorated components of the pier's wooden structural components. However, one exception is the use of ACZA-treated wood for railings which are expected to come into frequent contact with human hands. Alternatives to ACZA-treated would are recommended for this component because the arsenic in ACZA has high mammalian toxicity. [12] Instead, according to Commission Water Quality staff, Copper Azole (CA-C) is an appropriate preservative choice for components where frequent human contact is expected because these have low mammalian toxicity as CA-C does not contain arsenic. The Applicant proposes to use wood treated with CA-C for hand railings, and **Special Condition 4(a)(1)** codifies this proposal and also requires that all fresh cut ends be sealed with penetrating sealer to minimize leaching of the wood preservative.

When piling replacement is necessary, the Applicant proposes to use ACZA-treated Douglas fir piles dipped with a marine-grade epoxy/polyurethane coating to prevent leaching of the ACZA preservative into marine environment. The marine-grade polyurethane coating is applied to encapsulate all portions of the pilings from the mudline to beyond the area in contact with water. In terms of the potential for bioaccumulation near piles, there is evidence that concentrations of copper in sediments near pilings in moderately flushed areas do not show accumulation of metals. Because the sediment below Avila Pier is well-flushed due to ongoing tidal and wave action, it is therefore anticipated that such trophic transfer of metals from ACZA-treated piles to prey species would not be significant. In this case, it is appropriate to use polyurea-coated ACZA-treated wood replacement piles instead of alternative materials because it won't change the engineering of this pier, which is all wood, and only 2 percent of the existing 784 wooden piles are proposed for replacement (i.e., if more of the piles were being switched out, it would argue for using a different and more inert pile material).

In addition to piling repair and replacement, the Applicant proposes to remove 16 derelict creosote treated pilings located adjacent to the wharf that periodically become exposed during lower tides. These pilings used to support the fixed landing when it was located on the west end of the pier and now serve no function and are a hazard beach goers and boaters/paddleboarders. Further, they may also still contain some residual wood preservative (even though they are at least 36 years old). Thus,

[12] While CA-A has a lower mammalian toxicity, and thus is recommended for the railings which are frequently touched by human hands, it is not appropriate for treating pilings or decking. CA-A leaches significantly more copper into the water, and thus has a greater degree of aquatic toxicity, than does ACZA and CA-A is not registered as an approved preservative for saltwater immersion applications.

removal of these pilings will increase the safety for boaters/paddleboarders as well as remove defunct treated pilings from the marine environment.

Further, most existing pilings that currently support the pier, and the fender pilings that support the boat landing, are treated with creosote[13] which can adversely impact aquatic species by leaching into the water column or accumulating in the underlying sediment. The project proposes to repair 28 of the existing creosote pilings instead of replacing them with ACZA-treated and polyurea wrapped wooden pilings. This proposed method of repair involves wrapping existing piles in a steel-reinforced fiberglass jacket over a significant length of the pile that is sealed on the top and bottom. While this method effectively coats a significant length of the pilings preventing leaching of wood preservatives, similar to the way the proposed polyurea wrapping on new pilings encapsulates the wood preservative to prevents leaching, a portion of the existing treated piling would remain exposed. However, the extent of the pilings that would remain exposed is only expected to potentially contain some residual wood preservative given that the pilings are at least 36 years old and have been exposed to significant water circulation from tidal action given their location in an open-ocean site that quickly dilutes wood preservatives from structures. The fact that they are structurally compromised, thus requiring repair, also indicates that most of the preservative has already leached out as they have been damaged from marine boring organisms that the wood preservative is designed to prevent. Nonetheless, replacement is preferred to repair to address any lingering water quality and related concerns associated with creosote where feasible. To ensure the project is the least environmentally damaging, Special **Condition 3(a)** requires that existing damaged creosote-treated pilings not located over the mapped hydrocarbon plume area be prioritized for replacement instead of repair.

In terms of decking replacement, the proposed project includes replacement of approximately 90 percent of the roughly 44,000-square feet of existing ACZA-treated lumber pier decking. The Commission's Water Qualify staff generally recommends that decking and other components of overwater structures should prioritize the use of alternative materials (e.g., polyethylene, polypropylene, PVC, wood-plastic composites, or naturally decay-resistant untreated wood) instead of treated wood, if feasible. The Applicant has stated that use of alternative decking materials is financially infeasible because the use of such materials would cost approximately $2.4 million compared to $200,000 for ACZA-treated wood decking. As stated above, Avila Pier is an open-ocean pier with significant water circulation below the pier due to tidal action, any of the wood preservative chemicals that leach from treated wood decking will be quickly diluted and thus be less likely to accumulate in the adjacent sediment. Commission Water Quality staff recommendations are to seal all treated wood to minimize the potential for impacts from such preservatives, and this approval is conditioned for same (see **Special Condition 4(a)(1)**).

[13] The pilings that support the first 150 feet of the 1,685 feet long pier nearest the shore were replaced in 2000 as part of the Unocal oil spill remediation project and are treated with ACZA but are not dipped in polyurea.

The proposed project also includes replacement of the fixed boat landing's decking. The ACZA-treated wood decking on the landing requires a higher preservative retention level (0.60 pcf[14] of ACZA) than the decking wood on the pier itself (0.25 pcf of ACZA) as the boat landing is highly subject to ongoing saltwater splash. A higher preservative retention level means there will be more preservative in the wood that may potentially leach into the marine environment. As the boat landing is a separate (and relatively small) structure from the pier, and its decking will require a higher preservative retention level than the pier decking, replacing the boat landing's decking with an alternative material instead of treated wood should be evaluated. **Special Condition 2** requires the use of less toxic alternative decking materials for the fixed landing such as concrete, metal, fiberglass, plastic, wood-plastic composites, or naturally decay-resistant wood species.

Further, while the proposed project includes reconstruction of the damaged landing to the existing footprint, the project description also indicates that minor modifications may be made to the existing design and materials to reinforce the boat landing's durability to reduce potential future damages and to improve its resiliency to future sea level rise.[15] The Applicant has also indicated that additional fender pilings on the boat landing will require replacement but the number will not yet be known until engineers can assess the existing fender pilings structural load capacity. Given that the final design and materials for the fixed boating are not yet known, **Special Condition 2** requires submittal of boat landing project plans that show the configuration and well as the number of fender pilings to be replaced.

Special Condition 4 also includes a number of additional water quality protection measures to be implemented to further protect water quality, including: that all treated wood shall be treated to the standards of the lowest appropriate Use Category to ensure that the it does not exceed the necessary minimum preservative retention level, thus minimizing the amount of preservative that may leach into coastal waters (**Special Condition 4(a)(2)**); that only treated wood that has been certified as produced for use in aquatic environments (as indicated by a BMP Mark or Certificate of Compliance) shall be used when available (**Special Condition 4(a)(3)**); and the sparing application of topical preservative to the cut ends of the treated wood to minimize spills (**Special Condition 4(a)(4)**. These measures together will ensure that water quality is protected against significant impacts during the proposed pier rehabilitation activities.

Lastly, the proposed project also has the potential to impact marine resources and coastal water quality through the incidental release of preserved wood into the marine environment during removal and replacement of preserved wood components. Specifically, the proposed project includes demolition and replacement

[14] Pounds of preservative per cubic foot of wood.

[15] The Applicant has applied for several grants to pay for the pier rehabilitation project, including for repairs and upgrades to the boat landing. A grant has approved that would cover the cost to repair the boat landing in its existing configuration. The Applicant is awaiting a decision regarding another grant application that, if approved, would cover the cost of the envisioned improvements in boat landing design and materials.

of the preserved timber pier components such as decking, cap beams, stringers, and bracing. Due to the substantial amount of preserved wooden elements that may be deconstructed and replaced during implementation of repairs, the possible leaching of ACZA or other preservatives from preserved wood (either in the form of small pieces of wood or sawdust) that may fall into adjacent marine waters presents a potential source of adverse impacts to both water quality and marine biological productivity. To ensure that the preserved wood components associated with the proposed development activities are adequately contained, consistent with Coastal Act Sections 30230 and 30231, **Special Condition 4(b)** requires additional protection measures be implemented to prevent foreign materials from entering the water in accordance with Commission standards. Specifically, this condition requires that heavy-duty mesh containment netting or a floating boom be installed below all work areas where construction discards or other materials could fall into the water during demolition and construction activities.

Accordingly, as conditioned by the CDP, the use of treated wood for the proposed repair and maintenance activities will be consistent with Sections 30230 and 30231's policies related to biological productivity or water quality.

Pier Piling Repair

Structural damage of timber piles at the waterline is commonplace in marine environments. Tidal action, saltwater exposure, marine borers, and general weathering are all examples of factors affecting the lifecycle of timber piles.

The project proposes to repair or replace Avila Pier pilings that have been identified as damaged, deteriorated, or missing. Two different pile repair techniques, depending on the conditions and locations of the piles, are proposed to be used where it has been determined that repair methods could restore the full load capacity of the existing piling, thus making piling replacement unnecessary. The two proposed piling repair techniques are as Type A and Type B[16] and are described below:

Type A	To be used when the former pile is completely missing. The existing pile cap will have 4"x12" timber beams bolted on both sides allowing the load over the missing pile to be redistributed to the surrounding piles.
Type B	This method involves wrapping existing salvageable piles in a steel-reinforced fiberglass jacket. The jacket will then be sealed at the bottom of the pile using multipurpose marine epoxy grout and at the top with top seal epoxy. Once sealed, non-shrink cementitious underwater grout will be injected or gravity fed to fill the annular void between the pile and fiberglass jacket. The top seal of the jacket will then be beveled.

[16] A third repair method, a piling splicing technique described as Type C, was originally proposed but the Applicant states that this method is no longer proposed for use. A fourth method, Type D, does not involve piling repair but instead involves installation of entirely new timber piles using conventional pile driving methods.

Four timber pilings would be repaired in place using Type A; 28 would be repaired using Type B. The Type A repair method has limited potential for impacts to water quality. Repair method Type B involves installation of a custom-made steel reinforced fiberglass jacket assembled to the precise specifications of each repair project, which is commonly known as the FX-70 structural piling repair and protection system. The FX-70 system eliminates the need to dewater the site or build cofferdams as the structure can generally remain in service while the pile repair is executed. This type of piling repair includes the use of marine epoxy grout and thus has the potential to introduce grout to the marine environment. However, the proposed project includes appropriate containment and mitigation measures to protect water quality during Type B piling repair activities as seen on the list of proposed BMPs (see **Exhibit 5**). Thus, with the proposed BMPs, the Commission finds that the proposed piling repair methods adequately protect water quality, consistent with Coastal Act Sections 30230 and 30231.

Noise Impacts During Pile Driving

The proposed project includes replacement of 16[17] existing pier pilings from bent 30 (located slightly above the mean-high-tide line) to bent 82 (located nearly 1700 feet offshore) as shown in **Exhibit 3**. Replacement piles will be installed using a hydraulic pile driver. The replacement piles are proposed to be small-diameter (i.e., less than 16-inch diameter) Douglas-fir piles treated with an ACZA preservative and encapsulated within a continuous marine grade polyurea coating, from just below the mudline to just above mean high water line, to prevent leaching of wood preservatives into the marine environment.

Because timber pile driving activities would be carried out both above and within marine waters, the project has the potential to result in adverse impacts to both marine organisms and the marine environment. Specifically, the proposed pile driving would result in the generation of elevated levels of underwater sound in nearshore waters known to support several species of marine mammals, including harbor seals, California sea lions, southern sea otters, and numerous species of dolphins, porpoises, and whales. Such species are protected under the Marine Mammal Protection Act. Several of these species are listed under the federal and/or state Endangered Species Acts, including the southern sea otter (threatened) and three whale species: the blue, humpback, and killer whales (all endangered).

Marine mammals, in particular cetaceans such as whales, dolphins, and porpoises, are known to be susceptible to disturbance and injury from high levels of human-generated underwater sound (see also below). Marine mammals rely on sound for communication and the ability to sense their environment for a variety of critical life functions (e.g., traveling, finding mates or young, foraging, etc.). Although an animal may communicate and sense its environment in many ways and with a variety of different sensory organs, light can only penetrate a few hundred feet underwater while sound can travel much farther. Because water is denser than air, sound travels

[17] During piling repair activities, the Applicant would also assess the potential need to install new piles using a hydraulic pile driver if the previously described repair methods are determined to be infeasible for particular damaged pilings, so there could be more than 16 piles replaced.

faster and farther in the ocean. Its speed and distance depend on the density of the water (determined by its temperature, salinity, and depth) and the frequency of the sound, measured in hertz (Hz). For example, noise waves bend toward colder, denser water.[18] Some sounds, particularly low-frequency ones, can cover vast distances, even across ocean basins. As a result, cetaceans and other marine mammals have evolved to rely primarily on sound to sense their environment, communicate, and avoid predators. Increased anthropogenic generated noise in the marine environment has been shown to interfere with these activities and in some cases to cause internal injury, stranding, and mortality. Similar adverse impacts exist for fish, turtles, and invertebrates as they also use sound for basic life functions.

The striking of a pile by a pile-driving hammer creates a pulse of sound that propagates through the pile and radiates out through the water column, seafloor, and air. Exposure of marine mammals or fish to low levels of sound for a relatively long period of time, or exposure to higher levels of sound for shorter periods of time, may result in auditory tissue damage (damage to the sensory hair cells of the ear) or temporary hearing loss referred to as a “temporary threshold shift” (TTS). Species may recover from TTS in minutes to days following exposure. An additional possible effect on hearing from loud underwater sound is referred to in the literature as a permanent threshold shift (PTS). PTS is a permanent loss of hearing and is generally accompanied by death of the sensory hair cells of the ear. Several studies carried out in recent years suggest that instantaneous exposure to a peak sound pressure level (known as SPL) as well as from accumulated exposure to a lower sound level over a longer period (known as cumulative sound exposure level (SEL)) can affect hearing through auditory tissue damage.

Marine mammals have been divided into hearing sensitivity groups, referred to as functional groups, under the assumption that there will be differences in hearing sensitivity and dynamic hearing range between the various species. For example, it is assumed that there are only minor differences between the hearing systems of baleen whales, and thus all baleen whales are classified into the Low-Frequency cetaceans hearing group, while pinnipeds in the water are divided into phocid seals (earless) and otariids (eared seals) (NMFS 2018). NOAA (National Oceanic and Atmospheric Administration) Fisheries compiled and summarized the best available information on the effects of sound on marine mammals' hearing into the NMFS (National Marine Fisheries Service) “Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing.” This document provides technical guidance for assessing the effects of underwater man-made sound on the hearing of marine mammal species (i.e., onset of PTS and TTS) by identifying acoustic thresholds that may harass or injure marine wildlife. In addition, substantial progress has been made in quantifying marine mammal hearing and the effects of noise on hearing for a range of taxa in the past few years with updated acoustic thresholds being released annually over the past two years, with the most recent

[18] See, for example, https://www.nrc.gov/docs/ML1225/ML12250A723.pdf.

guidance published in 2019.[19] This most recent update reflects the latest science and generally indicates that animals are more sensitive than previously thought, and includes acoustic thresholds for amphibious species, such as the sea otter, and reclassified several function groups based on new scientific knowledge. Similarly, in 2008, an interagency working group comprised of representatives of state and federal resource management agencies from California, Oregon, and Washington developed recommendations of peak and accumulated sound levels to be used as thresholds for injury to fish, which are used as the current standard.

Pile driving produces high sound pressure levels in both the surrounding air and underwater environment. The Applicant's Biological Assessment includes examples of sound levels produced from striking different types of piles and an analysis of potential hydroacoustic impacts on fish and marine mammals from pile installation. To minimize the damaging effects of sound to marine mammals and fish during pile driving activities, the Applicant proposes to implement monitoring of exclusion zones (EZs)[20] that correspond to the maximum or most conservative radius where sound levels are no longer expected to adversely impact the hearing of marine mammals based on modeling of the extent of sound pressure levels from impact and vibratory pile installation relative to marine mammal thresholds.[21] While the Commission typically requires hydroacoustic surveys be completed to determine the appropriate EZ for a project, the Applicant proposes to employ an EZ of 500 feet for all cetaceans and turtles. This EZ exceeds the EZ determined from the results of hydroacoustic testing done recently at the nearby Harford Pier, which is also located in San Luis Bay. The proposed EZ of 500 feet is significantly larger than the TTS noise thresholds (or EZ's) of 2 feet and 17 feet or even the most conservative PTS threshold (which constitutes take) of 131 feet determined by the recent hydroacoustic testing for the adjacent Harford Pier. Given the proximity of the Harford Pier to Avila Pier, the similar water depths and substrates at both sites, the similar pile materials, pile diameters, and types of pile driving equipment that would be used for both projects, the proposed EZ's would provide effective protection for cetaceans and sea turtles during the proposed repairs to the Avila Pier as well. Sea otters would have an EZ of 100 feet because underwater hearing sensitivity of the sea otter is greatly reduced compared to cetaceans and sea turtles (Southall et al., 2019). See **Special Condition 3(d)** for the required EZs for cetaceans, sea turtles,

[19] Southall et al, 2019.

[20] The exclusion zone is defined as the radial distance between the work site and the locations at which the maximum recorded peak sound pressure level (SPL) or cumulative sound exposure level (SEL) falls below the temporary threshold shift (TTS) and permanent threshold shift (PTS) levels for marine mammals and fish.

[21] The NMFS Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing and Manual for Optional User Spreadsheet Tool was used to determine the distance at which the cumulative sound level for a permanent threshold shift (PTS) in marine mammal hearing would be exceeded. The Applicant is proposing to extend the Exclusion Zones beyond the resulting isopleth of the maximum PTS for cetaceans (155 dB for high-frequency cetaceans) from 120 feet (36.6 meters) to 500 feet (152 meters), and the maximum PTS for pinnipeds (185 dB for phocid pinnipeds) from 52 feet (16 meters) to 100 feet (30 meters) to ensure the protection of marine wildlife.

and sea otters.

The EZ's are proposed to be monitored by a dedicated Marine Wildlife Monitor (MWM) who would also monitor the behavior of all pinnipeds (i.e., harbor seals and sea lions) located within 100 feet of pile driving activities and who would have the authority to direct that pile driving activities cease if any pinnipeds appear injured or distressed (**Special Condition 3(e)**).[22] The proposed use of a MWM to monitor for marine mammals, sea turtle, sea otters, and pinnipeds is codified by **Special Condition 3(c)**. **Special Condition 3(f)** requires the MWM to maintain a daily log of observed marine animals' behavior that is required to be of sufficient detail to determine whether the project causes observable effects to marine animals. This condition also requires submittal of the logs when mitigation measures (i.e., shut down or delay of pile driving activities) are implemented five or more times within a seven-day period to assess whether additional measures are required to minimize impacts to nearby marine species.

Additional measures to minimize noise impacts include the Applicant's proposal to conduct pre-activity environmental orientations for all personnel prior to conducting work, and the use of the "soft start" or ramp-up technique to allow fish and mammals to vacate the area before peak sustained pile driving commences (which is a common requirement of the Commission for such pile work). A list of all proposed measures to minimize potential impacts of the proposed pile driving and construction activities on marine mammals and sea turtles can be seen in the "Marine Wildlife Contingency Plan" (see **Exhibit 7**). The proposed project also includes all mitigation measures required for a similar repair and maintenance permit approved for adjacent Harford Pier in 2020 (CDP 3-18-1230) (seen in the "Proposed BMPs and Mitigation Measures" in **Exhibit 5**). The measures proposed in **Exhibits 5** and **7**, along with those in **Special Condition 3,** will together ensure that the damaging effects of sound to marine mammals, sea turtles, and fish will be minimized during pile driving activities. Further, **Special Condition 1(d)** requires that all mitigation measures as proposed and modified by **Special Conditions 3, 4, 5, 6, and 7** be included on the project plans.

Finally, pile driving has the potential to impact south central California coast steelhead migrating from San Luis Creek (located approximately 1,000 feet upcoast of Avila Pier) during their known spawning window (January through May). During annual steelhead monitoring of San Luis Creek, CDFW staff captured footage of six fish, potentially steelhead, migrating through the creek system over a ten-day period. Thus, there is the potential that steelhead could be using San Luis Bay during spawning migrations concomitant with proposed pile driving activities. To minimize impacts, the Biological Assessment[23] states that pile driving activities may be postponed until after the fish migration window if either CDFW staff or NMFS staff have evidence of steelhead

[22] Pinnipeds are widely understood to be accustomed to a noisy waterfront and not to be easily deterred by human activities such as pile driving. The behavior will be monitored and pile driving activities will cease if any pinnipeds within 100 feet from active pile driving are observed to be distressed.

[23] Titled "Biological Assessment-Avila Pier Rehabilitation Project," by Padre Associates, Inc. (July 2020).

migration into San Luis Creek during January through May. To ensure that no impacts to migrating steelhead may result from the proposed pile driving activities, **Special Condition 3(b)** requires the Applicant to consult with CDFW and NMFS at the beginning of each month during steelhead's known migration season and requires pile driving activities not occur during that month if there are indications that steelhead are migrating at that time.

With these measures in place, adverse impacts to marine mammals, sea turtles, and fish species during pile driving activities are appropriately addressed, and the project can be found consistent with Coastal Act Sections 30230 and 30231 in this respect as well.

Ocean Fill

Coastal Act Section 30108.2 defines "fill" as "earth or any other substance or material … placed in a submerged area." The Applicant proposes to repair and/or replace Avila Pier pilings that have been identified as damaged, deteriorated, or missing. Of the 48 piles identified, the Applicant proposes to replace 16 timber piles and repair 28 existing pilings using a steel reinforced fiberglass jacket (i.e., the Type B repair method).[24] Installation of these new piles and reinforcing jackets into the submerged nearshore zone would constitute "fill" of approximately 12 square feet of open coastal waters, as that term is defined in the Coastal Act. The project also includes removal of 16 derelict pilings and replacement of the fixed landings' fender pilings as needed.

The Commission may find a project that includes filling of open coastal waters to be permissible if the project meets the three tests of Coastal Act Section 30233(a). The first test requires that the proposed activity fits within one of seven use categories described in Coastal Act Sections 30233(a)(1)-(7). The second test requires that no feasible less environmentally damaging alternative exists. The third and final test mandates that feasible mitigation measures are provided to minimize any of the project's adverse environmental effects.

The overall purpose of the proposed project is to repair a recreational and fishing pier and an associated boat landing. As such, the project would result in the creation of "boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities," which are described as allowed uses in in open coastal waters pursuant to Coastal Act Section 30233(a)(3). Therefore, the Commission finds that the project meets the first test for fill of open coastal waters under Coastal Act Section 30233(a).

The second prong of the 30233(a) test requires the project to be the least environmentally damaging feasible alternative. Coastal Act Section 30108 defines

[24] The remaining four piles identified are currently missing. There is an excess number of existing pilings under the pier and additional piles are not necessary to restore the structural capacity of the pier. In such cases, the existing pile cap will have 4"x12" timber beams bolted on both sides allowing the load over the missing pile to be redistributed to the surrounding piles (i.e., a Type A repair), which will not result in additional fill of coastal waters.

"feasible" as "…capable of being accomplished in a successful manner within a reasonable period, considering economic, environmental, social and technological factors." As stated above, a primary driver of the proposed project is to reestablish full public access of the pier while also providing for additional improvements such as ADA accessibility. A 2015 assessment of the integrity of the existing piles supporting Avila Pier concluded that approximately 211 pilings needed repair or replacement. However, there were concerns over a potential release of materials from such extensive pile driving in the vicinity of the hydrocarbon plume located under the base of the pier (see "Oil Spill Prevention" section below). The Applicant underwent rigorous considerations of alternative piling repair options in lieu of pile driving to minimize impacts, and a revised assessment in 2019 determined that the pier has an excess number of pilings than what is necessary to support the pier structure. Now the proposed project includes replacement of just 16 pilings, Type B repair of 28 existing pilings, and Type A pile cap reinforcement where four pilings are completely missing.

Thus, as initially envisioned in 2015, the project would have required repair or replacement of approximately 211 pilings. The project as proposed now only requires replacement of 16 pilings and Type B repair of 28 existing pilings. Additionally, the proposed project includes removal of 16 derelict pilings that used to support the fixed landing in its previous location on the side of the pier. Finally, the proposed project is to repair the existing pier structure in its existing configuration with materials generally similar to the original construction. Because the proposed work involves repair of existing infrastructure, there are no alternative locations for the project that could entirely avoid coastal waters. Based on the above considerations, the Commission therefore finds that there are no feasible less environmentally damaging alternatives to the proposed fill, as conditioned, and that the project therefore meets the second prong of the Coastal Act Section 30233 test.

The final requirement of Coastal Act Section 30233(a) is that filling of coastal waters may be permitted if feasible mitigation measures have been provided to minimize any adverse environmental impacts. The mitigation measures associated with this project include: construction and water quality best management practices; marine habitat and wildlife protective measures; additional spill prevention measures to prevent spillage and/or run-off of construction related materials, sediment, or contaminants; a requirement to immediately recover and remove fugitive project materials that enter the ocean or beach area; limits on when and how pile driving can occur, in order to minimize its disturbance to marine life; and nesting bird survey requirements (see *Nesting Birds* section below; also see **Exhibit 5** and **Exhibit 7**). These feasible mitigation measures will minimize the project's adverse environmental impacts. Thus, the Commission finds that the third and final test of Coastal Act Section 30233(a) has been met. Because the three tests have been met, the Commission finds the proposed project consistent with Section 30233 of the Coastal Act.

Nesting Birds

Avila Pier was closed to recreational use and pedestrian traffic for several years; more recently, the landward half of the pier has been reopened to the public, but the seaward half of the pier remains closed. During these full and partial pier closures, the pier's use

by wildlife, particularly seabirds, has grown. Although no nesting behavior on the pier has been observed by Harbor District staff, nesting activities could have gone unnoticed. Roosting by common seabird species, including cormorants, pelicans, and seagulls, frequently occurs on the pier. While roosting use is expected to decline during construction and after re-opening of the pier to the public, there are abundant natural roosting sites in the project area—for example, the offshore rocks and islets in the Shell Beach and Fossil Point areas—that supported these birds before the pier's closure and will do so again after the pier's complete reopening. To help ensure that seabird nesting activity that may be occurring on the pier is not disturbed or lost during construction, **Special Condition 5** requires pre-construction nesting surveys be completed by a qualified biologist no more than 72 hours prior to commencement of construction activities completed during nesting bird season (i.e., between February 15th and September 15th). Such surveys are required to be conducted within 300 feet from the proposed work area and to be conducted every 14 days during project construction throughout the nesting season. Additionally, if nesting is observed, **Special Condition 5** requires a no-construction-activity buffer of 300 feet for non-raptor nests and 500 feet for raptor nests detected in the survey (except that minor repair activities using only hand tools or light power tools[25] shall only require a 50-foot buffer from nests). This condition also requires the submittal of nesting bird surveys and annual monitoring reports to the Executive Director for review. With these measures in place, adequate populations of breeding birds will be appropriately maintained consistent with the protections afforded them by the Coastal Act.

Lighting of the Marine Environment

The effects of artificial light on shallow marine species, including fish, amphipods, and sessile invertebrates have been documented in recent years, and include effects on physiology, navigation, reproductive behavior, predation success, community structure, and ecosystem services (i.e., the benefits people obtain from ecosystems, such as food and recreation).[26] Artificial night lighting could potentially affect terrestrial and avian species associated with the shore (e.g., sleeping organisms become more susceptible to predation by nocturnal species). Sessile marine organisms could be affected by changes to diurnal cues for reproduction, by being more visible to predators, or due to altered growth patterns (e.g., photosynthesizers). To minimize impacts from artificial lighting of the marine environment, **Special Condition 7** includes construction timing restrictions as proposed by the Applicant (i.e., construction may take place on non-holiday weekdays only) and prohibits nighttime lighting of coastal waters and restricts construction activity to between 7 a.m. and 7 p.m. only.

Biological Resources and Water Quality Conclusion

The proposed project entails rehabilitation of Avila Pier to reestablish and enhance public access along the length of the pier. Most of the proposed activities, other than pile driving, would have relatively low potential for significant adverse impacts to

[25] Minor repair activities may include replacement of railings, as well as repair of the restrooms, the bait and tackle shop, utility lines, and other pier facilities.

[26] Garratt, M., et al. (2019). *Mapping the consequences of artificial light at night for intertidal ecosystems*. Science of the Total Environment, 691, 760-768.

biological resources and water quality as proposed and conditioned herein, including because the use of equipment in the water is limited. The proposed project includes approved BMP's for a similar repair and maintenance permit for a nearby pier as well as additional BMPs to protect water quality (such as maintaining good construction-site housekeeping controls and procedures and coating any ACZA-treated timber piles with polyurea) as well as biological resources (including noise minimization techniques during pile driving, and observation of exclusion zones for marine mammals and sea turtles by a marine wildlife monitor during all pile driving activities). A list of the Applicant's proposed mitigation measures can be seen in **Exhibit 5**. The BMPs and mitigation measures described in **Exhibit 5**, as refined and modified by the terms and conditions of this CDP, are enforceable components of the project.

In addition to the proposed measures and required conditions described above, **Special Condition 8** allows for minor project changes and requires that any modifications to activities authorized by this CDP shall require a CDP amendment, unless the Executive Director determines that such modifications will not adversely impact coastal resources and that no amendment is legally necessary. As conditioned, the project is consistent with Coastal Act Sections 30230, 30231, and 30233.

F. Oil Spill Prevention

Applicable Coastal Act Provisions

The proposed project, which includes conventional pile driving within and near a known hydrocarbon plume, must demonstrate that effective oil spill prevention and response measures are in place that meet the standards of Coastal Act Section 30232, which states:

> ***Section 30232****. Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*

Analysis

Outlier Plume

As discussed in the "Background" section above, a hydrocarbon plume, commonly referred to as the "Outlier Plume," exists under Avila Pier. Although a plume of hydrocarbon-laden material was removed from a huge swath underlying the town of Avila Beach and the foot of the pier in the late 1990s, another plume was discovered shortly thereafter, thus tabbed the Outlier Plume. The Outlier Plume has been monitored since that time and has remained relatively stable, and thus it has not been required to be removed. See **Exhibit 3** for a graphic depicting the location of the Outlier Plume in relation to the pier.

The Outlier Plume has been studied for many years by Unocal and Chevron, the Applicant, and multiple agencies, including the Central Coast Regional Water Quality Control Board (RWQCB) and California Department of Fish and Wildlife's (CDFW)

Office of Spill Prevention and Response (OSPR). The Outlier Plume is buried under roughly two to eight feet of sand, depending on the season and beach/benthic profile, and extends from shore through the intertidal zone and approximately 400 feet seaward into the subtidal zone. The Outlier Plume is approximately two acres in size, generally ranging in thickness from two to three feet with a four-foot maximum thickness. The Plume is made up of a weathered asphalt-like material that has adhered to adjacent sand and sediment, and it is dominated by diesel and crude oil range hydrocarbons (see **Exhibit 8** for photos of the hydrocarbon material in boring samples). In addition to the primary Outlier Plume area, three smaller isolated pockets of contamination showing total petroleum hydrocarbon levels at 500+ ppm have been identified extending further seaward towards the end of the pier. These pockets of contamination are located around the middle and end of the pier and have some different characteristics. Such isolated pockets are disparate (i.e., not part of an identified larger body or "plume"), are deeper under water, and are not typically as affected by seasonal sand cover variations (see **Exhibit 3** for a map of the Outlier Plume and the isolated pockets of contamination relative to Avila Pier).

Potential Project-Related Oil Spills

The probability of a release of hydrocarbons into the ocean environment during pile work appears to be low based on recent studies. Specifically, several agitation studies have been conducted that evaluated how the plume would react under various disturbance conditions, including catastrophic storm/scour events. For hydrocarbon mobilization to occur, plume material would have to be separated from the surrounding sand matrix by vigorous and sustained mechanical actions. According to the studies, the amount of mechanical energy required for partial or full plume mobilization would entail an event that would likely also cause damage to the beach, the seawall, and the town of Avila Beach (i.e., a 500-year storm with sustained wave fronts disrupting the entire balance of sand across the area). According to Dan Niles, RWQCB Engineering Geologist, "A release could occur under certain conditions; however, those conditions involve disturbance events at a regional scale."[27] While the information does not directly address localized disturbances induced by pile driving, including where a pile might be removed and/or driven through the plume or the isolated pockets themselves, it does provide a good idea of what could occur during pile driving work.

Large sections of the pier collapsed in the extreme El Niño storms in winter 1983 (typically used as an example of a 100-year storm in California). The pier was rebuilt the following year and many piles were driven using similar pile driving techniques as are now proposed. According to Harbor District staff, after interviewing members of the rebuilding effort, no one recalled seeing any sheen or released hydrocarbons during that pile driving project. It is also noted that no sheening was documented during previous boring sampling of petroleum impacted sediments from the intertidal and subtidal areas within the area with the highest detected concentrations of petroleum hydrocarbons and polynuclear aromatic hydrocarbons. This makes sense because, as

[27] Personal Communication, Jonathan Bishop (Coastal Commission Oil Spill Program Coordinator) on May 3, 2021.

indicated above, the plume is made up of a weathered asphalt-like material as opposed to being viscous.

Oil Spill Prevention

The first test of Section 30232 requires the inclusion of oil spill prevention techniques, technologies, programs, and procedures to "protect against the spillage of crude oil, gas, or hazardous materials." Here, and to minimize the risk of a release of contaminated materials associated with the plume and the isolated pockets of contamination, the Applicant evaluated three pile repair alternatives (see *Pier Piling Repair* section above), two of which will be implemented during the proposed project (i.e., Type A and Type B). These repair methods avoid disturbance of the Outlier Plume and pockets of contamination because they do not include pile driving activities in those areas. A fourth alternative (Type D) involves piling replacement (i.e., pulling an old pile out of the sediment and installing a new timber pile using conventional pile driving methods). The concern with the Type D method is that the removal of the old pile and hammering/driving in of the new pile could disrupt the plume and cause a release of hydrocarbons or hydrocarbon laden sediments onto the beach or into the ocean. While the likelihood of a release is believed to be low, it remains a risk with the proposed pile driving operations and could have adverse impacts to coastal resources if a spill/release did occur.

The original plans submitted by the Applicant indicated that proposed piling repair and replacement consists of 9 Type A repairs, 29 Type B repairs, 11 Type C repairs, and the use of Type D repairs (i.e., piling replacement) replacement when other repairs are considered infeasible. However, further feasibility analysis determined that piling repair and replacement would consist of 4 Type A repairs, 28 Type B repairs, and 16 Type D repairs, of which five of the latter replacement piles are located within the mapped plume footprint or in the isolated pockets of contamination (again see **Exhibit 3**). This differs from the originally submitted project plans and thus the project plans need to be revised to reflect the current project proposal. In addition, as a precautionary measure given the scales involved and the potential for resource degradation due to disturbance of the plume and/or the isolated contamination pockets, a 50 foot buffer is applied to these areas as an extra precaution against inadvertent disturbance. Thus, **Special Condition 1(b)** requires the project plans be revised to identify the number of piles to be repaired or replaced using the Type A, B and D method's, highlighting the number of piles located within 50 feet of the plume footprint and/or the isolated contamination pockets.

In addition, the original project plans state in the construction notes that: "Type D repair can be used in-lieu of all other repair types at contractors' option" (Note 2, Sheet S-003). While **Special Condition 3(a)** prioritizes the replacement of existing creosote treated pilings where not located within the hydrocarbon plume to reduce the number of creosote-treated pilings in the marine environment, such post-approval discretion of the pile driving contractor could result in additional pilings being driving within the mapped plume area and/or the isolated pockets of contamination. Thus, **Special Conditions 1(a) and 3(a)** modify the requirement to also reference the precautionary 50-foot buffer,

and to indicate that such replacement is prioritized when the piles in question are not located within 50 feet of the plume and/or the contamination pockets.

To further prevent release of contaminants associated with the plume and the isolated contamination pockets, the Applicant proposes to not undertake pile driving during the months when sand coverage over the plume and the contamination pockets is typically at its lowest (January through April). Outside of these months, sand cover over the top of the plume/pockets is expected to help contain the contamination and prevent hydrocarbons from escaping to the surface should the plume become mobilized during pile driving operations, including because the plume is relatively cohesive and not viscous. To ensure that an adequate amount of sand is covering the Outlier Plume and pockets of contamination prior to construction, **Special Condition 1(c)** requires that a note be included on project plans stating that mechanical pile driving and pile removal within 50 feet of the Outlier Plume and other pockets of contamination is prohibited between January 1st and April 30th. (See next section for a discussion of procedures for pile removal and driving activities within 50 feet of the plume/pockets between May 1st and December 31st.)

Oil Spill Response

The second test of Section 30232 requires a proposed project to provide sufficient oil spill response capability to provide "effective containment and cleanup facilities and procedures…for accidental spills that do occur." The Applicant has worked with CDFW OSPR, the RWQCB, and Coastal Commission Oil Spill Program staff to prepare an Oil Spill Contingency Plan (OSCP) for the project (see **Exhibit 9**). The OSCP outlines "Pre-Project Planning," "Monitoring and Detection," "Notifications," and other "Response Protocols" to undertake during the pier rehabilitation project that would effectively contain and cleanup an accidental spill should it occur. The OSCP will be implemented during pile removal and pile driving operations located within 50 feet of the mapped Outlier Plume and other isolated pockets of contamination for any such activities taking place between May 1st and December 31st (as piling replacement is prohibited between January 1st and April 30th by **Special Condition 1(c))**. A number of preliminary measures will be in place prior to construction, including: coordinating/contracting with a certified Oil Spill Response Organization (OSRO) team to ensure their availability in the event of a release of petroleum beyond the capabilities of the Applicant; locating the Harbor District's oil spill response trailer[28] at the base of Avila Pier for quick deployment if needed; and training of all employees and contractors involved in the pier rehabilitation project regarding the OSCP's spill response criteria. And **Special Condition 1(d))** codifies the measures proposed in the OSCP.

Monitoring for oil spills during construction is another important element included in the OSCP. The OSCP requires the designation of a qualified project oversight manager who is trained and responsible for early detection and the reporting of potential hydrocarbon releases. The oversight manager is charged with reporting the spill,

[28] The oil spill response trailer contains a containment boom, absorbent pads and booms, personal protective equipment gear, decontamination equipment, boom anchors and lights, and other necessary tools and materials needed to fight oil spills and/or release of such materials.

notifying agencies, and will initiate other spill response procedures as needed. As mentioned above, if the petroleum release/spill exceeds the capability of the Applicant's equipment and staff/contractors, the Applicant will contact the certified OSRO for spill response assistance.

Finally, if evidence of an oil spill is detected at any time, then the OSCP is required to be implemented immediately, all work (past oil spill containment and response) shall cease, and the Applicant is required to contact the Executive Director for direction prior to resuming any project activities. The Executive Director shall have the discretion to further limit allowed project activities to reduce any threat from such oil spill to a level of insignificance (see **Special Condition 1(d)**).

Conclusion

In conclusion, the pier rehabilitation project largely avoids the need to mechanically drive piles into the Outlier Plume and other areas of hydrocarbon contamination. Given the generally stable nature of such contamination areas, the chance of a release of contaminated materials during the limited pile driving operations appears to be low. However, there remains a threat, and conditions have been applied to appropriately reduce the potential for adverse coastal resource impacts to a level that should not be significant (including applying a 50-foot precautionary buffer, oil spill contingency planning, etc.). Thus, the project as conditioned incorporates appropriate prevention measures and includes an agency prepared Oil Spill Response Plan that provides effective containment and cleanup should an accidental spill occur. As conditioned, the Commission finds the project consistent with Coastal Act Section 30232.

G. California Environmental Quality Act (CEQA)

CEQA Section 21080.5(d)(2)(a) prohibits a proposed development from being approved if there are feasible alternatives and/or feasible mitigation measures available that would substantially lessen any significant adverse effect that the development may have on the environment. The Harbor District, acting as the CEQA lead agency, adopted a Class 1 Categorical Exemption for the Avila Pier Rehabilitation project on the February 27, 2020.

The Commission's review, analysis, and decision-making process for CDPs and CDP amendments has been certified by the Secretary of the Natural Resources Agency as being the functional equivalent of the environmental review required by CEQA (CCR Section 15251(f)). Accordingly, in fulfilling that review, this report has analyzed the relevant coastal resource issues with the proposal and has identified appropriate and necessary modifications to address adverse impacts to such coastal resources. All above findings are incorporated herein in their entirety by reference.

Accordingly, the Commission finds that only as modified and conditioned herein will the proposed project avoid significant adverse effects on the environment within the meaning of CEQA. As such, there are no additional feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse environmental effects that approval of the proposed project, as modified, would have on the environment within the meaning of CEQA. If so modified, the proposed project will

not result in any significant environmental effects for which feasible mitigation measures have not been employed consistent with CEQA Section 21080.5(d)(2)(A).

5. APPENDICES

A. Appendix A – Substantive File Documents[29]

- National Marine Fisheries Service (2018). Revisions to: *Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0): Underwater Thresholds for Onset of Permanent and Temporary Threshold Shifts.* U.S. Department of Commerce, NOAA. NOAA Technical Memorandum NMFS-OPR-59, 167 pp.
- Southall, B., et al. (2019). *Marine Mammal Noise Exposure Criteria: Updated Scientific Recommendations for Residual Hearing Effects*. Aquatic Mammals 45(2): 125-232.
- Moffat and Nichol "Avila Pier Updated Condition Assessment" 2019
- Shoreline Engineering, Inc. "Repair Design Inspection Avila Beach Pier – Timber Piles" (September 1, 2015)
- England Geosystem Environmental Engineering "Additional Characterization Report, Pier Outlier, Avila Beach" (April 16, 2001)
- Padre Associates, Inc. "Biological Assessment-Avila Pier Rehabilitation Project" (July 2020)
- CDP Application File 3-20-0546
- Emergency CDP G-3-15-0018

B. Appendix B – Staff Contact with Agencies and Groups

- Port San Luis Harbor District
- State Water Resources Control Board
- Central Coast Regional Water Quality Control Board

[29] These documents are available for review in the Commission's Central Coast District office.