

CALIFORNIA COASTAL COMMISSION

SAN DIEGO AREA
7575 METROPOLITAN DRIVE, SUITE 103
SAN DIEGO, CA 92108-4421
(619) 767-2370



Th19a

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STAFF REPORT: AMENDMENT

Application No.: 6-16-0248-A1

Applicant: San Elijo Lagoon Conservancy/California Department of Parks and Recreation

Agent: Brian Leslie

Location: San Elijo Lagoon Inlet; Cardiff State Beach south of the inlet fronting the Pacific Coast Grill; Seaside Terrace north of Cardiff State Beach/Seaside parking lot; San Elijo Lagoon Dunes east of Coast Highway 101; and Cardiff State Beach Living Shoreline Project on Cardiff State Beach between the Chart House and Seaside Terrace, Encinitas, San Diego County.

Original Project Description: Removal of sand and cobbles from lagoon inlet as necessary over a period of five years to maintain tidal flow and placement of excavated material on adjacent Cardiff State Beach and two dune habitat enhancement sites.

Proposed Amendment: Allow placement of up to 20,000 cy of excavated material within the Cardiff State Beach Living Shoreline Project area during the first year of dune construction and up to 10,000 cy per year thereafter for areas in need of maintenance.

Staff Recommendation: Approval with Conditions

SUMMARY OF STAFF RECOMMENDATION

In November 2017, the Commission approved creation of the Cardiff State Beach Living Shoreline Project, a rock and sand dune system located along the back beach of Cardiff State Beach to reduce wave erosion and overtopping of Highway 101 (CDP #6-17-0596). The source of sand for these new dunes was identified as the subject San Elijo Lagoon annual inlet dredging program. The original permit for this project authorized sand placement at three sites: 1) on Cardiff State Beach south of the inlet in the inter-tidal zone fronting the Pacific Coast Grill; 2) at Seaside Terrace north of Cardiff State Beach/Seaside parking lot; and 3) San Elijo Lagoon Dunes located approximately 2,000 ft. south of the Chart House on the eastern side of Coast Highway 101. The proposed amendment will add the footprint of the Cardiff State Beach Living Shoreline Project as an additional allowable sand placement site in order to create and maintain the dune system.

As currently approved, each spring, approximately 25,000 cubic yards (cy) of sand and cobbles are removed from the San Elijo Lagoon inlet in the vicinity of the Coast Highway 101 bridge overcrossing via conventional earthwork equipment (i.e., excavator and trucks) to maintain circulation and water quality in the lagoon. The amendment would allow placement of up to 20,000 cy of excavated material within the Cardiff State Beach Living Shoreline Project area during the first year of dune construction and up to 10,000 cy per year thereafter for areas in need of rebuilding. Sand from the San Elijo Lagoon inlet was identified for the dune construction and maintenance due to its coarse gradation. Sand placement operations would be similar for the Cardiff State Beach Living Shoreline Project area as for existing sites (i.e., trucks end-dump sand and smaller construction equipment contour the dunes). This amendment does not increase the volume of sand being dredged from the San Elijo Lagoon inlet nor increase the volume of sand being placed on the beach. Rather, it would reallocate the way in which sand will be used along Cardiff State Beach as a part of annual inlet maintenance events.

The amendment will be consistent with all existing special conditions. **Special Condition #1** maintains the permit term of five years to provide the Commission the ability to reassess the need and limitations on opening the lagoon mouth in the future and **Special Condition #2** restricts dredging activities to certain dates to avoid adverse impacts on sensitive species and to avoid adverse impacts to public beach access during high use times of the year. **Special Condition #3** requires conformance with approved dune enhancement plans at Seaside Terrace and the San Elijo Lagoon Dunes, and **Special Condition #5** requires the applicants continue to provide annual monitoring reports.

Special Condition #4 has been modified and **Special Condition #6** has been added to ensure that the placement of sand in the new Cardiff State Beach Living Shoreline Project area is consistent with the specific requirements associated with sand placement for that project. Specifically, **Special Condition #4** maintains the existing monitoring requirements for the three previously approved sand placement sites, and requires monitoring in the Cardiff State Beach Living Shoreline Project area consistent with the requirements previously approved for that permit. Similarly, **Special Condition #6** requires the applicants to prepare a Grunion

Monitoring and Avoidance Plan should any dune construction or maintenance work need to occur below the wrack line during grunion spawning.

Commission staff recommends **approval** of coastal development permit application 6-16-0248-A1 as conditioned.

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APPENDICES

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EXHIBITS

[Exhibit 1 – Project Location](#)

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I. MOTION AND RESOLUTION

Motion:

*I move that the Commission **approve** the proposed amendment to Coastal Development Permit Application No. 6-16-0248-A1 subject to the conditions set forth in the staff recommendation.*

Staff recommends a **YES** vote on the foregoing motion. Passage of this motion will result in conditional approval of the amendment and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution:

The Commission hereby approves coastal development permit amendment 6-16-0248-A1 and adopts the findings set forth below on grounds that the development as amended and conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. 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.

II. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

NOTE: Appendix A, attached, includes all standard and special conditions that apply to this permit, as approved by the Commission in its original action and modified and/or supplemented by all subsequent amendments, including this amendment no. 6-16-0248-A1. All of the Commission's adopted special conditions and any changes in the project description proposed by the applicant and approved by the Commission in this or previous actions continue to apply in their most recently approved form unless explicitly changed in this action. New conditions and modifications to existing conditions imposed in this action on amendment no. 6-16-0248-A1 are shown in the following section. Within Appendix A, changes to the previously approved special conditions are also shown in strikeout/underline format. This will result in one set of adopted special conditions.

1. Special Condition No. 1 of CDP No. 6-16-0248 shall be modified as follows:

1. **Timing of Permit.** This permit is valid for a period of five years from the date of Commission action on the original permit (May 11, 2016). Future lagoon inlet openings beyond this date will require a coastal development permit from the California Coastal Commission or its successor in interest.

2. [Special Condition No. 2 of CDP No. 6-16-0248 remains unchanged and in effect]

3. Special Condition No. 3 of CDP No. 6-16-0248 shall be modified as follows:

3. **Dune Enhancement.** The applicant shall comply with the submitted Dune Enhancement Plan attached to this staff report as Exhibit #2, which includes the following provisions:

- a. 200 cubic yards or less of sand placed at Seaside Terrace per year using a dump truck in the initial year and a front-end loader in subsequent years to avoid disturbing dune vegetation establishment; and
- b. 1,800 cubic yards or less of sand placed at San Elijo Lagoon Dunes per year, where sand would be sidecast from Coast Highway 101 and then spread by bucket brigade (since no heavy machinery is allowed in San Elijo Lagoon).

Any proposed changes to the approved plans shall be reported to the Executive Director. No changes to the plans shall occur without a Coastal Commission-approved amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

4. Special Condition No. 4 of CDP No. 6-16-0248 shall be modified as follows:

4. **Sensitive Species Dune Monitoring.** For original sand placement sites (Cardiff State Beach south of the inlet fronting the Pacific Coast Grill; Seaside Terrace, and San Elijo Lagoon Dunes), ~~D~~during the nesting season (March through September), a qualified biologist shall conduct a site survey for evidence of active nests no more than 72 hours prior to any sand placement. If an active nest is located, then a qualified biologist shall monitor the nest daily and prohibit project activities within 100 feet of the nest, or until the young have fledged and are independent of the adults or the nest is otherwise abandoned. The monitoring biologist shall make practicable recommendations to reduce disturbance in the vicinity of the active nest, such as working in other areas and installing symbolic fencing around the nests. The monitoring biologist shall halt construction activities if he or she determines that the placement activities may be disturbing or disrupting nesting activities. The monitoring biologist shall verify compliance with these avoidance boundaries and verify that the nesting effort has finished in a written report.

The results of the pre- and post-construction surveys shall be documented by the monitoring biologist and submitted to the San Diego office of the California Coastal Commission.

For the new sand placement site (Cardiff State Beach Living Shoreline Project area), the applicant shall retain the services of a qualified biologist or environmental resources specialist (hereinafter, “environmental resources specialist”) with appropriate qualifications acceptable to the Executive Director, to conduct sensitive species pre-work surveys and to monitor the work areas during inlet dredging and beach and dune sand placement activities. Prior to the commencement of inlet maintenance and sand placement activities, the applicant shall submit a description of the environmental resources specialist’s duties and the specialist’s on-site schedule to the Executive Director for review and written approval. The applicant shall implement the following requirements:

- (a) The environmental resources specialist shall:
- i. Survey the proposed work areas and a buffer of 100 feet beyond to determine the presence and behavior of any sensitive species one (1) day prior to commencement of any proposed work;
 - ii. If sensitive species are identified, the environmental resource specialist shall report the results of the survey within 24 hours to the applicant, Executive Director, California Department of Fish and Wildlife (CDFW), and the United States Fish and Wildlife Service (USFWS); and
 - iii. Monitor the work areas during all inlet dredging and sand placement activities.

Pre-Work Biological Surveys. In the event that the environmental resources specialist reports finding any federally or state-designated sensitive wildlife species (including but not limited to western snowy plover or California least terns) exhibiting reproductive or nesting behavior during the pre-work surveys, the applicant shall delay work, and promptly notify the Executive Director, CDFW, and USFWS. Project activities may commence only upon written approval of the Executive Director, following consultation with CDFW and USFWS. The applicant shall submit documentation prepared by the environmental resources specialist that provides the results of each daily pre-work survey, including any sensitive wildlife species observed and their associated behaviors and activities.

- (b) Biological Monitoring During Work. Prior to the initiation of inlet dredging and sand placement activities each day, the environmental resources specialist shall inspect the work areas to preclude impacts to sensitive wildlife species. Inlet dredging and sand placement activities may not occur until all sensitive wildlife species (e.g., western snowy plovers, California least terns) have left the project area and its vicinity. In the event that the environmental resources specialist determines that any sensitive wildlife species exhibit reproductive or nesting behavior, the applicant shall cease work and promptly notify the Executive Director, CDFW, and USFWS, including the nature and location of

the observations made. Sand placement activities may resume only upon written approval of the Executive Director, following consultation with CDFW and USFWS.

- (c) If significant impacts or injury occur to sensitive wildlife species, the applicant shall promptly notify the Executive Director, CDFW, and USFWS. The Executive Director, in consultation with CDFW and/or USFWS, will determine the appropriate action or mitigation to be taken.

5. [Special Condition No. 5 of CDP No. 6-16-0248 remains unchanged and in effect]

6. Special Conditions No. 6 shall be added as follows:

6. Grunion Monitoring & Avoidance Plan. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director, for review and written approval, a Grunion Monitoring and Avoidance Plan that will apply to the new sand placement site (Cardiff State Beach Living Shoreline Project area). The applicant shall retain the services of a qualified biologist or environmental resources specialist (hereinafter, "environmental resources specialist") with appropriate qualifications acceptable to the Executive Director. The applicant shall adhere to the following provisions in order to avoid impacts to mature grunion and to grunion eggs during a spawning event. The annually published California Department of Fish and Wildlife (CDFW) expected grunion runs shall be used to determine possible grunion spawning periods. The plan shall, at a minimum, include the following:

- a) During the grunion spawning period of March 1 through August 31, beginning at least two (2) weeks prior to commencement of inlet dredging and throughout any sand placement activities within the Cardiff State Beach Living Shoreline Project area or within the 15 foot area of sacrificial dunes on Cardiff State Beach, Cardiff State Beach and the route for delivering sand to the dunes shall be monitored for grunion runs, excepting areas where there is no sand, such as 100% cobble.
- b) Grunion monitoring shall be conducted by the environmental resources specialist for 30 minutes prior to, and two hours following, the predicted start of each spawning event. Sufficient personnel shall be utilized to ensure that the entire proposed placement site or truck route is monitored during the specified period. The magnitude and extent of a spawning event shall be defined in 300-foot segments of beach using the Walker Scale.
- c) If a grunion run consisting of 0-100 individual fish per segment (Walker Scale of 0 or 1) is reported within two weeks prior to, or during, proposed work, the applicant does not need to take any avoidance action for grunion eggs.
- d) Within two weeks prior to proposed work, if a grunion run consisting of more than 100 individual fish per segment (Walker Scale of 2, 3, 4, or 5) is

reported, the applicant shall avoid work on the respective beach segment(s) and truck route and additionally, shall avoid a 100-foot buffer on either side of the segment(s) and route, to ensure that no grunion eggs are buried or disturbed. The applicant shall adapt the work schedule or re-route trucks to avoid operations on beach segments and truck routes with a Walker Scale of 2, 3, 4, or 5 and their associated buffers.

- e) If work has already commenced, and a grunion run consisting of more than 100 individual fish per segment (Walker Scale of 2 or 3) is reported, the applicant shall avoid impacts to grunion eggs to the extent feasible, and then shall minimize impacts to grunion eggs through measures pursuant to subsection (g) below.
- f) If beach construction has already commenced, and a grunion run consisting of more than 1000 individual fish per segment (Walker Scale of 4 or 5) is reported, no impacts to grunion eggs may occur. The applicant shall avoid impacts to grunion eggs in that portion of the work area through alteration of the truck route, discharge point, sand spreading, and/or shifting sand receiver site boundaries. Work at impacted locations shall cease if avoidance measures are not feasible.
- g) The applicant shall develop a list of feasible measures, subject to written approval of the Executive Director in consultation with CDFW, NMFS and ACOE, taking into consideration the size of the sand receiver site, stage of mobilization, construction constraints, etc., that may be utilized to allow sand replenishment work to continue while avoiding and minimizing impacts to eggs within the two week spawning period. Under no circumstances shall any mature grunion be buried or harmed as a result of the proposed work.

III. FINDINGS AND DECLARATIONS

A. PROJECT HISTORY/AMENDMENT DESCRIPTION

Original Project

The main goal of the dredging is to keep the inlet open to protect and enhance the water quality and biological productivity of the lagoon. Another goal of the project is to use excavated material for beach nourishment and dune habitat enhancement.

Current annual lagoon inlet maintenance operations involve removal of approximately 25,000 cubic yards (cy) of sand and cobbles from the lagoon inlet in the vicinity of the Coast Highway 101 bridge overcrossing via conventional earthwork equipment (i.e., excavator and trucks), and placement of this sand just downcoast: 1) on Cardiff State Beach south of the inlet in the inter-tidal zone fronting the Pacific Coast Grill; 2) at Seaside Terrace north of Cardiff State Beach/Seaside parking lot; and 3) San Elijo

Lagoon Dunes located approximately 2,000 ft. south of the Chart House on the eastern side of Coast Highway 101 ([Exhibit #1](#)). While the majority of this sand is currently placed in the inter-tidal zone fronting the Pacific Coast Grill, up to 200 cy can be placed at Seaside Terrace and up to 1,800 cy can be placed at the San Elijo Lagoon Dunes. The inlet dredging occurs annually in the April – June timeframe and is currently funded by endowments held by the San Elijo Lagoon Conservancy (SELC).

The Commission has a long history of issuing permits for the lagoon inlet openings and dredging of the main tidal channel (e.g., CDP #s 6-88-463, 6-89-109, 6-89-241, 6-90-128, 6-90-250, 6-91-3, 6-91-258, 6-93-12 and 6-93-194). Originally, openings were proposed based on certain criteria related to dissolved oxygen, salinity, and other water quality conditions as indicators for determining appropriate times to open the lagoon inlet in order to protect the lagoon environment. Later, the Commission approved a number of permits and amendments for opening the lagoon inlet that were proposed as experiments to allow the lagoon inlet to remain open for a longer period of time, and involved the removal of a more substantial amount of material both in the lagoon inlet and in the channel east of the Highway 101 bridge (e.g., CDP #s 6-91-3-A, 6-94-15, 6-95-32, and 6-95-142). In some instances, the work was proposed to occur whether or not the previously proposed criteria were present. Next, the Commission approved a permit for multiple openings of the lagoon over a 2-year period, assuming the same opening criteria regarding dissolved oxygen, salinity, and other water quality conditions as had been proposed in the past had been met (e.g., CDP #6-96-120). Given the beneficial effects of maintaining tidal flow, the Commission has since approved numerous five-year permits allowing for dredging to keep the lagoon open on an as-needed basis, with certain restrictions to avoid impacting public access and recreation (CDP #s 6-99-12, 6-05-07, 6-11-014, and 6-16-0248). The most recent approval (CDP #6-16-0248) also included two additional sand placement sites, Seaside Terrace and San Elijo Lagoon Dunes, for dune habitat enhancement.

Monitoring reports submitted by SELC in compliance with past permits document that inlet maintenance operations have been a success. Water quality conditions have improved and the diversity and abundance of species observed in the lagoon have drastically increased. In addition, inlet maintenance operations have had very few negative impacts on recreation. During the past year two inlet operations, June 2015 and June 2016, the inlet area around Cardiff State Beach was posted with precautionary advisory signs due to inlet maintenance operations for a total of 20 days, and no additional beach postings were needed because bacteria did not exceed approved levels. In addition, while sand was placed at Seaside Terrace and San Elijo Lagoon Dunes during the May 15, 2016 dredging operation, after the first two weeks of December 2016, the sand was still too saline for any productive planting. SELC did limited planting just prior to the end of December 2016, encouraged by a single rain event, and expects to discuss the success of the dune habitat enhancement in the upcoming 2016/2017 monitoring report.

Amendment Description

The amendment would add the footprint of the Cardiff State Beach Living Shoreline Project as an additional sand placement site. In November 2017, the Commission approved the Cardiff State Beach Living Shoreline Project (CDP #6-17-0596), which involves the creation of a 'living shoreline' dune system consisting of rock covered by sandy dunes to provide protection for Coast Highway 101 in Encinitas. In order to create the approved dunes on top of the existing beach and revetment, up to 20,000 cy of sand from this dredging program will be needed during the first year of dune construction. As designed, the dune system, including the underlying revetment, would be covered by sand year round, but it is expected that the dune system will erode and require additional sand to rebuild the dunes over time, particularly as sea level rises. Therefore, up to 10,000 cy of sand from the subject dredging program may be needed for future maintenance of the dunes each year.

Placement of sand at the new site within the footprint of the Cardiff State Beach Living Shoreline Project would involve similar operations as those required for placement of sand on Cardiff State Beach fronting the Pacific Coast Grill. Excavated inlet materials are loaded into trucks and driven down the beach above the high tide line/wrack line to the maximum extent possible. Trucks would drive below this line only at times when the beach is narrowed to the point where this avoidance measure becomes impractical. Trucks would end dump sand into five- to six-ft. mounds. Once placed, the mounds will be spread by hand or with earthwork equipment, depending on the amount of sand needed. The duration of sand placement work is also contingent on the amount of sand needed in a given year. Currently inlet maintenance work takes about 7 days to complete. After construction of the dunes, in a year with significant dune erosion for example, 10,000 cy of sand may be needed to repair the dunes. Under this scenario, it is estimated that 7 days would be needed to repair the dunes (14 days of work total) and this maintenance work would require 400 truck trips along the project reach. In this case, the contractor would use 3-4 dump trucks to conduct this work. Assuming these truck trips occur over a total 14-day period, about 28 truck trips would occur per day. Typically, work would be conducted from north to south, but this will depend on the condition of the beach and other external factors that may impact the efficiency of the work.

While the proposed development is located within the City of Encinitas, it is located within the Commission's area of original jurisdiction and as such, the standard of review is Chapter 3 policies of the Coastal Act, with the City's Local Coastal Program (LCP) used as guidance.

B. BIOLOGICAL RESOURCES

Section 30230 of the Coastal Act states:

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.

Section 30231 of the Coastal Act states:

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(b) of the Coastal Act states:

Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.

Section 30240 of the Coastal Act states:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

In addition, the following policies of the City's LUP provide guidance regarding biological resources and water quality:

Resource Management (RM) Policy 2.3 states:

To minimize harmful pollutants from entering the ocean environment from lagoons, streams, storm drains and other waterways containing potential contaminants, the City shall mandate the reduction or elimination of contaminants entering all such waterways...

RM Goal 10 states:

The City will preserve the integrity, function, productivity, and long term viability of environmentally sensitive habitats throughout the City, including kelp-beds, ocean recreational areas, coastal water, beaches, lagoons and their up-lands, riparian areas, coastal strand areas, coastal sage scrub and coastal mixed chaparral habitats. (Coastal Act/30230/30231/30240)

RM Policy 10.3 states:

The City shall explore the prevention of beach sand erosion. Beaches shall be artificially nourished with excavated sand whenever suitable material becomes available through excavation or dredging, in conjunction with the development of a consistent and approved project. The City shall obtain necessary permits to be able to utilize available beach replenishment sands (as necessary, permits from the Army Corps of Engineers, California Coastal Commission, Department of Fish and Game, EPA, etc.). (Coastal Act/30232)

The dredging is restoration originally permitted under Section 30233(a) and, as described below, adding an additional placement site will not have an adverse impact on any sensitive habitat. Sand from the San Elijo Lagoon inlet was targeted for the Cardiff State Beach Living Shoreline Project dune construction and maintenance due to its coarse gradation. Sediment within the lagoon inlet is 96% sand or greater. Cardiff State Beach ranges from 88% to 99.9% sand, where the coarsest gradation (99.9%) is located at the back beach where the dune system will be built. Thus, the lagoon inlet sand and the back beach portion are physically compatible (98.6% and 99.9% sand, respectively). Because the sand that will be placed within the footprint of the Cardiff State Beach Living Shoreline Project matches the physical properties of the sand already onsite, the ecological integrity of the beach will be maintained.

This amendment does not increase the volume of sand being dredged from the San Elijo Lagoon inlet nor increase the volume of sand being placed on the beach. Rather, it would add the Cardiff State Beach Living Shoreline Project footprint as a site for sand placement, and therefore simply reallocate the way in which sand will be used along Cardiff State Beach as a part of annual inlet maintenance events. Potential impacts associated with the placement of sand for the Cardiff State Beach Living Shoreline Project were fully analyzed by the Commission's ecologist through approval of that project. To summarize, adding another site for sand placement does not introduce new or different impacts for the reasons described below:

- Direct burial: The 60-ft. wide Cardiff State Beach Living Shoreline Project footprint consists of approximately 35 feet of sandy back beach with little to no native vegetation and 25 feet of existing riprap. Since there is little to no existing habitat, there will be minor, if any, potential impacts related to direct burial associated with placement of sand to construct the dune system. Since future maintenance of the dune system is expected to mostly occur within the seaward,

unvegetated, 15-ft. wide sacrificial zone, potential impacts related to direct burial of future dune habitat will also be minimized and avoided.

- Indirect burial: The existing San Elijo Lagoon inlet dredging program provides a source of sand to the littoral system and indirect burial of benthic communities can occur as a result of inlet sand being redistributed during periods of energetic waves. The volume of sand removed from the inlet compared to the volume of sand naturally in the littoral system is small. Furthermore, indirect burial of benthic communities during periods of energetic waves is consistent with ambient or natural conditions, and benthic communities are accustomed to living in dynamic environments.
- Turbidity: Placement of sand within the dune system will result in a reduced level of turbidity as compared to direct intertidal placement, because the sand within the dunes will only come into contact with ocean water during extreme waves or erosional events. Turbidity impacts from the project would be similar to that of previously authorized sand placement at Seaside Terrace and the San Elijo Lagoon Dunes and are expected to be minimal.

Therefore, the potential impacts of sand placement related to grain size, direct and indirect burial, and turbidity have been analyzed and determined to be insignificant. Furthermore, the sand authorized to be placed on Cardiff State Beach through separate Commission actions related to the restoration (CDP #6-16-0275) and history of inlet maintenance of the San Elijo Lagoon are based on the fact that the sand removed through the dredging program naturally belongs on downcoast Cardiff State Beach and would be there if not for development and infrastructure constraints to lagoon hydrology.

The Commission approved construction of the Cardiff State Beach Living Shoreline Project with special conditions addressing avoidance of adverse impacts on sensitive species, including but not limited to western snowy plovers, California least terns, and grunion. **Special Condition #4** has been amended and **Special Condition #6** has been added to incorporate all of the relevant requirements of the Cardiff State Beach Living Shoreline Project permit to the subject permit for placement of sand in the Cardiff State Beach Living Shoreline Project area. Specifically, since sand placement activities could occur during the western snowy plover breeding season (March 1 to August 31) and California least tern breeding season (April 1 to September 15), **Special Condition #4** requires biological surveys, monitoring, and a 100-foot buffer around active nests to ensure breeding is not disturbed at the previously approved sand placement sites (Cardiff State Beach south of the inlet fronting the Pacific Coast Grill, Seaside Terrace, and San Elijo Lagoon Dunes), consistent with the original permit (CDP # 6-16-0248). Consistent with the recent authorization for the Cardiff State Beach Living Shoreline Project (CDP #6-17-0596), **Special Condition #4** also requires applicants to survey the Cardiff State Beach Living Shoreline Project area prior to construction activities and, if sensitive species are found, coordinate with CDFW and USFWS to avoid any impacts. Similarly, consistent with the recent authorization for the Cardiff State Beach Living Shoreline Project (CDP #6-17-0596), **Special Condition #6** requires the applicants to prepare a Grunion Monitoring and Avoidance Plan should any dune construction or maintenance

work need to occur below the wrack line during the period when California grunion spawn between early March and late August.

The amendment will be consistent with all existing special conditions. **Special Condition #1** maintains the permit limit of 5 years (until 2021) to allow the Commission the ability to reassess the need and limitations on opening the lagoon inlet in the future given the number of potential future projects in the vicinity of the lagoon that could impact the lagoon, such as the widening of Interstate 5 or double-tracking the railroad line. **Special Condition #2** restricts dredging activities to certain dates to avoid adverse impacts on sensitive species or the biological productivity of the area and to avoid adverse impacts to public beach access during high use times of the year. **Special Condition #3** requires conformance with approved dune enhancement plans at Seaside Terrace and the San Elijo Lagoon Dunes, which limit the volume of sand placement and propose construction methods. **Special Condition #5** requires the applicants continue to provide annual monitoring reports to document the impact of inlet maintenance operations on the lagoon and the success of dune habitat enhancement activities. Thus, the project is consistent with the resource protection policies of Chapter 3 of the Coastal Act.

C. PUBLIC ACCESS

Section 30210 of the Coastal Act states:

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 30212 of the Coastal Act states:

(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where:

(1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources,

(2) adequate access exists nearby...

In addition, the following policies of the City's LUP provide guidance regarding public access and recreation:

Circulation Goal 6 states:

The City will make every effort to provide public access and circulation to the shoreline ...

Recreation (REC) Policy 5.1 states:

The City recognizes Cardiff Beach State Park, San Elijo Beach State Park, South Carlsbad Beach State Park and Moonlight Beach (future City) State Park, as the major visitor destination beaches in the Encinitas area ...

REC Policy 5.5 states:

[...] the City shall assure that existing public parking lots for public beach access points are maintained and that no reduction in the number of existing public parking spaces shall be permitted.

The Coastal Act requires that public access and recreational opportunities be protected and provided. As conditioned, the proposed development will not have an adverse impact on public access to the coast or to nearby recreational facilities. Walking to the beach from Coast Highway 101 currently requires traversing across the existing riprap. Placement of sand for the Cardiff State Beach Living Shoreline Project was fully analyzed in the approval of that permit. The sand placement at this location will alter the recreational experience at Cardiff State Beach by converting a beach characterized by sand backed with riprap approximately 25 feet wide, to a beach backed by dunes approximately 60 feet in width. This is expected to have a positive impact on public access.

While public access within the project footprint will be temporarily restricted during dune construction and maintenance, public access along the beach will be maintained on the seaward side of the dune system. Given the existing beach condition (i.e., approximately 100 feet wide beach), a total of 40 feet in width of dry beach would still typically exist for recreation seaward of the project area during dune construction and maintenance. Public access trails through the new dunes at the Living Shoreline site will be provided.

Therefore, although sand placement associated with the Cardiff State Beach Living Shoreline Project will result in temporary public access impacts, the amendment will result in significant additional beach area that will be returned to its natural state and made available for public use, thereby improving public access and recreational opportunities. Thus, the Commission finds the proposed development, as conditioned, conforms to Sections 30210 and 30212 of the Coastal Act.

D. LOCAL COASTAL PLANNING

Section 30604(a) also requires that a coastal development permit shall be issued only if the Commission finds that the permitted development will not prejudice the ability of the local government to prepare a Local Coastal Program (LCP) in conformity with the provisions of Chapter 3 of the Coastal Act. In this case, such a finding can be made.

While the proposed development is located within the City of Encinitas, it is located within the Commission's area of original jurisdiction and as such, the standard of review is Chapter 3 policies of the Coastal Act, with the City's Local Coastal Program (LCP)

used as guidance. As conditioned, the project can be found consistent with the Chapter 3 policies of the Coastal Act, as well as the goals and standards contained in the City's certified LCP. Therefore, approval of the proposed development, as conditioned, will not prejudice the ability of the City of Encinitas to continue to implement its LCP.

E. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096 of the Commission's Code of Regulations requires Commission approval of Coastal Development Permits to be supported by a finding showing the permit, as conditioned, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment. In May 2017, the California Department of Parks and Recreation adopted a Final Initial Study/Mitigated Negative Declaration for the Cardiff State Beach Living Shoreline Project. The Study concluded that potentially significant impacts would occur, but that impacts would be less than significant with mitigation, such as pre-construction surveys and monitoring during construction, to protect biological resources.

The proposed project has been conditioned in order to be found consistent with the Chapter 3 policies of the Coastal Act. Mitigation measures, including conditions addressing biological resources, will minimize all adverse environmental impacts. As conditioned, there are no feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment. Therefore, the Commission finds that the proposed project is the least environmentally-damaging feasible alternative and can be found consistent with the requirements of the Coastal Act to conform to CEQA.

Appendix A – Conditions of Approval

Permit No. 6-16-0248

II. 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 of 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.

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. **Timing of Permit.** This permit is valid for a period of five years from the date of Commission action. Future lagoon inlet openings beyond this date will require a coastal development permit from the California Coastal Commission or its successor in interest.
2. **Timing of Inlet Maintenance Work.** As proposed, inlet openings shall only occur with the authorization of the State Department of Fish and Wildlife that the dredging, on the date proposed, will not cause adverse impacts on sensitive or endangered species or the biological productivity of the area, and shall adhere to the following criteria:
 - a. No maintenance dredging may occur 14 days before a holiday or scheduled beach event.

- b. No equipment shall be stored on the beach or in the public parking lot overnight, and all equipment must be removed from the beach by Friday.
- c. No work shall occur during the two-week period spanning Easter of any year.
- d. Commission staff shall be notified in writing, by phone, or by email prior to commencement of any dredging.

Openings during the summer months shall be avoided if possible; however, if openings are necessary during the summer, the following additional requirements will be met:

- e. No work shall occur on Fridays, weekends or holidays during the summer months of any year (Memorial Day weekend to Labor Day).

3. **Dune Enhancement.** The applicant shall comply with the submitted Dune Enhancement Plan attached to this staff report as Exhibit #2, which includes the following provisions:

- c. 200 cubic yards or less of sand placed at Seaside Terrace using a dump truck in the initial year and a front-end loader in subsequent years to avoid disturbing dune vegetation establishment; and
- d. 1,800 cubic yards or less of sand placed at San Elijo Lagoon Dunes, where sand would be sidecast from Coast Highway 101 and then spread by bucket brigade (since no heavy machinery is allowed in San Elijo Lagoon).

Any proposed changes to the approved plans shall be reported to the Executive Director. No changes to the plans shall occur without a Coastal Commission-approved amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

4. **Sensitive Species Dune Monitoring.** During the nesting season (March through September), a qualified biologist shall conduct a site survey for evidence of active nests no more than 72 hours prior to any sand placement. If an active nest is located, then a qualified biologist shall monitor the nest daily and prohibit project activities within 100 feet of the nest, or until the young have fledged and are independent of the adults or the nest is otherwise abandoned. The monitoring biologist shall make practicable recommendations to reduce disturbance in the vicinity of the active nest, such as working in other areas and installing symbolic fencing around the nests. The monitoring biologist shall halt construction activities if he or she determines that the placement activities may be disturbing or disrupting nesting activities. The monitoring biologist shall verify compliance with these avoidance boundaries and verify that the nesting effort has finished in a written report.

The results of the pre- and post-construction surveys shall be documented by the monitoring biologist and submitted to the San Diego office of the California Coastal Commission.

5. **Monitoring Report.** On an annual basis by May 1st of each year, the applicant shall submit for the review and written approval of the Executive Director, a monitoring report for the project. The report shall summarize the effects of the multiple openings, including any changes in the tidal prism caused by external factors (such as upstream development impacts, extreme storm conditions, unusual tides, etc.) that may have contributed to the need for the lagoon inlet openings as well as the project's impacts on the biological productivity of the lagoon and on public access and recreation. The report will also summarize the success of dune habitat enhancement activities and include recommendations for any necessary changes or modifications to the project.

Specifically, the annual report shall include the following information:

- a. The date of the opening(s) which occurred, along with the date of each subsequent closure and the date of any maintenance dredging.
- b. Photos of the beach in front of the lagoon inlet prior to and during dredging activities.
- c. Success reducing invasives and restoring native vegetation in the dune enhancement areas.
- d. Presence of California Least Tern and Western Snowy Plover in the dune enhancement areas.
- e. Any noted adverse impacts on lagoon, beach, or dune resources or adjacent park and recreation areas resulting from dredging or disposal activities, and recommendations to avoid or mitigate these impacts in the future.

The report shall be submitted annually beginning the first year after Commission approval of the permit.

Permit No. 6-15-0248-A1

1. **Timing of Permit.** This permit is valid for a period of five years from the date of Commission action on the original permit (May 11, 2016). Future lagoon inlet openings beyond this date will require a coastal development permit from the California Coastal Commission or its successor in interest.

2. [Special Condition No. 2 of CDP No. 6-16-0248 remains unchanged and in effect]

3. **Dune Enhancement.** The applicant shall comply with the submitted Dune Enhancement Plan attached to this staff report as Exhibit #2, which includes the following provisions:

- a. 200 cubic yards or less of sand placed at Seaside Terrace per year using a dump truck in the initial year and a front-end loader in subsequent years to avoid disturbing dune vegetation establishment; and
- b. 1,800 cubic yards or less of sand placed at San Elijo Lagoon Dunes per year, where sand would be sidecast from Coast Highway 101 and then spread by bucket brigade (since no heavy machinery is allowed in San Elijo Lagoon).

Any proposed changes to the approved plans shall be reported to the Executive Director. No changes to the plans shall occur without a Coastal Commission-approved amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

4. Sensitive Species Dune Monitoring. For original sand placement sites (Cardiff State Beach south of the inlet fronting the Pacific Coast Grill; Seaside Terrace, and San Elijo Lagoon Dunes), ~~D~~during the nesting season (March through September), a qualified biologist shall conduct a site survey for evidence of active nests no more than 72 hours prior to any sand placement. If an active nest is located, then a qualified biologist shall monitor the nest daily and prohibit project activities within 100 feet of the nest, or until the young have fledged and are independent of the adults or the nest is otherwise abandoned. The monitoring biologist shall make practicable recommendations to reduce disturbance in the vicinity of the active nest, such as working in other areas and installing symbolic fencing around the nests. The monitoring biologist shall halt construction activities if he or she determines that the placement activities may be disturbing or disrupting nesting activities. The monitoring biologist shall verify compliance with these avoidance boundaries and verify that the nesting effort has finished in a written report.

The results of the pre- and post-construction surveys shall be documented by the monitoring biologist and submitted to the San Diego office of the California Coastal Commission.

For the new sand placement site (Cardiff State Beach Living Shoreline Project area), the applicant shall retain the services of a qualified biologist or environmental resources specialist (hereinafter, “environmental resources specialist”) with appropriate qualifications acceptable to the Executive Director, to conduct sensitive species pre-work surveys and to monitor the work areas during inlet dredging and beach and dune sand placement activities. Prior to the commencement of inlet maintenance and sand placement activities, the applicant shall submit a description of the environmental resources specialist’s duties and the specialist’s on-site schedule to the Executive Director for review and written approval. The applicant shall implement the following requirements:

- (b) The environmental resources specialist shall:
 - i. Survey the proposed work areas and a buffer of 100 feet beyond to determine the presence and behavior of any sensitive species one (1) day prior to commencement of any proposed work;

- ii. If sensitive species are identified, the environmental resource specialists shall report the results of the survey within 24 hours to the applicant, Executive Director, California Department of Fish and Wildlife (CDFW), and the United States Fish and Wildlife Service (USFWS); and
- iii. Monitor the work areas during all inlet dredging and sand placement activities.

Pre-Work Biological Surveys. In the event that the environmental resources specialist reports finding any federally or state-designated sensitive wildlife species (including but not limited to western snowy plover or California least terns) exhibiting reproductive or nesting behavior during the pre-work surveys, the applicant shall delay work, and promptly notify the Executive Director, CDFW, and USFWS. Project activities may commence only upon written approval of the Executive Director, following consultation with CDFW and USFWS. The applicant shall submit documentation prepared by the environmental resources specialist that provides the results of each daily pre-work survey, including any sensitive wildlife species observed and their associated behaviors and activities.

- (d) Biological Monitoring During Work. Prior to the initiation of inlet dredging and sand placement activities each day, the environmental resources specialist shall inspect the work areas to preclude impacts to sensitive wildlife species. Inlet dredging and sand placement activities may not occur until all sensitive wildlife species (e.g., western snowy plovers, California least terns) have left the project area and its vicinity. In the event that the environmental resources specialist determines that any sensitive wildlife species exhibit reproductive or nesting behavior, the applicant shall cease work and promptly notify the Executive Director, CDFW, and USFWS, including the nature and location of the observations made. Sand placement activities may resume only upon written approval of the Executive Director, following consultation with CDFW and USFWS.
- (e) If significant impacts or injury occur to sensitive wildlife species, the applicant shall promptly notify the Executive Director, CDFW, and USFWS. The Executive Director, in consultation with CDFW and/or USFWS, will determine the appropriate action or mitigation to be taken.

5. [Special Condition No. 5 of CDP No. 6-16-0248 remains unchanged and in effect]

6. Grunion Monitoring & Avoidance Plan. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director, for review and written approval, a Grunion Monitoring and Avoidance Plan that will apply to the new sand placement site (Cardiff State Beach Living Shoreline Project area). The applicant shall retain the services of a qualified biologist or environmental resources specialist (hereinafter, “environmental resources specialist”) with appropriate qualifications acceptable to the Executive Director. The applicant shall adhere to the

following provisions in order to avoid impacts to mature grunion and to grunion eggs during a spawning event. The annually published California Department of Fish and Wildlife (CDFW) expected grunion runs shall be used to determine possible grunion spawning periods. The plan shall, at a minimum, include the following:

- a) During the grunion spawning period of March 1 through August 31, beginning at least two (2) weeks prior to commencement of inlet dredging and throughout any sand placement activities within the Cardiff State Beach Living Shoreline Project area or within the 15 foot area of sacrificial dunes on Cardiff State Beach, Cardiff State Beach and the route for delivering sand to the dunes shall be monitored for grunion runs, excepting areas where there is no sand, such as 100% cobble.
- b) Grunion monitoring shall be conducted by the environmental resources specialist for 30 minutes prior to, and two hours following, the predicted start of each spawning event. Sufficient personnel shall be utilized to ensure that the entire proposed placement site or truck route is monitored during the specified period. The magnitude and extent of a spawning event shall be defined in 300-foot segments of beach using the Walker Scale.
- c) If a grunion run consisting of 0-100 individual fish per segment (Walker Scale of 0 or 1) is reported within two weeks prior to, or during, proposed work, the applicant does not need to take any avoidance action for grunion eggs.
- d) Within two weeks prior to proposed work, if a grunion run consisting of more than 100 individual fish per segment (Walker Scale of 2, 3, 4, or 5) is reported, the applicant shall avoid work on the respective beach segment(s) and truck route and additionally, shall avoid a 100-foot buffer on either side of the segment(s) and route, to ensure that no grunion eggs are buried or disturbed. The applicant shall adapt the work schedule or re-route trucks to avoid operations on beach segments and truck routes with a Walker Scale of 2, 3, 4, or 5 and their associated buffers.
- e) If work has already commenced, and a grunion run consisting of more than 100 individual fish per segment (Walker Scale of 2 or 3) is reported, the applicant shall avoid impacts to grunion eggs to the extent feasible, and then shall minimize impacts to grunion eggs through measures pursuant to subsection (g) below.
- f) If beach construction has already commenced, and a grunion run consisting of more than 1000 individual fish per segment (Walker Scale of 4 or 5) is reported, no impacts to grunion eggs may occur. The applicant shall avoid impacts to grunion eggs in that portion of the work area through alteration of the truck route, discharge point, sand spreading, and/or shifting sand receiver site boundaries. Work at impacted locations shall cease if avoidance measures are not feasible.
- g) The applicant shall develop a list of feasible measures, subject to written approval of the Executive Director in consultation with CDFW, NMFS and ACOE, taking into consideration the size of the sand receiver site, stage of mobilization, construction constraints, etc., that may be utilized to allow sand replenishment

work to continue while avoiding and minimizing impacts to eggs within the two week spawning period. Under no circumstances shall any mature grunion be buried or harmed as a result of the proposed work.

Appendix B – Substantive File Documents

- 2014-2015 San Elijo Lagoon Water Quality Report by San Elijo Lagoon Conservancy
- Cardiff Beach Living Shoreline Project, Final Feasibility Study, February 2016 prepared by Moffatt & Nichol and the San Elijo Lagoon Conservancy for the City of Encinitas and California State Coastal Conservancy
- Final Mitigated Negative Declaration, March 2016 prepared by California Department of Parks and Recreation and Addendum Final Mitigated Negative Declaration, May 2017 prepared by California Department of Parks and Recreation
- 95% Basis of Design Report: Cardiff Beach Living Shoreline Project dated September 2017 prepared by Moffatt & Nichol for the City of Encinitas