

CALIFORNIA COASTAL COMMISSION

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**F10a**

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STAFF REPORT: REGULAR CALENDAR

Application No.:	9-19-1250
Applicant:	City of Santa Barbara
Agents:	See Appendix B
Location:	East Beach, south of Cabrillo Boulevard, City of Santa Barbara, CA (APN #17-191-03)
Project Description:	Replacing and relocating part of the seawater intake system of the City of Santa Barbara's Charles E. Meyer Desalination Facility.
Staff Recommendation:	Approval with Conditions

SUMMARY OF STAFF RECOMMENDATION

The City of Santa Barbara ("the City") proposes to repair and maintain a portion of the seawater intake system for its desalination facility by replacing and relocating several components of that intake system. These components include a section of intake pipeline along with fittings, pipeline segments, wiring, and other equipment located within a concrete "weir box." These components and the weir box are currently located on the City's East Beach, and the City proposes to replace and reinstall them about 60 feet inland at a higher elevation on the beach.

¹ On April 16, 2020, Governor Newsom signed Executive Order N-52-20, which, among other things, suspended certain Coastal Act and Permit Streamlining Act deadlines for a period of 60 calendar days.

The City originally installed the pipeline and its associated protective riprap in the 1930s as part of a wastewater treatment facility. The City abandoned the pipeline in the 1970s, but in the 1990s repurposed it by installing a liner and other new components so it could serve as the desalination facility intake. During recent renovations within the pipeline's weir box, the City determined that several components needed to be replaced and relocated to allow for needed repair and maintenance activities. Because of the intake system's design limitations, and due to prior regulatory determinations, there are limited alternative locations for these components, all of which would require shoreline protection. The City proposes to provide the necessary protection by relocating part of the existing riprap that protects the components at their current location to the new location, and removing that part of the existing riprap no longer needed to protect existing or new components. This would result in an overall approximately 150 square-foot reduction of riprap on this part of the beach.

The proposed activities constitute repair and maintenance of an existing facility under Section 30610 of the Coastal Act. Although some repair and maintenance activities are exempt from CDP requirements, Section 13252(a) of the Commission's regulations requires a CDP for repair and maintenance activities, such as these, that involve the use of mechanized equipment in or adjacent to coastal waters or that involve placing materials within coastal waters. In situations like this, the Commission reviews the development associated with the proposed repair and maintenance for Coastal Act policy consistency and can regulate the method of repair, but it does not analyze or regulate the underlying, existing and previously approved development.

The project would involve work on the beach that could adversely affect beach habitat, coastal water quality, and public access and recreation. The standard of review is the Coastal Act's Chapter 3. To provide conformity with relevant Chapter 3 provisions, Commission staff is recommending several Special Conditions that would require the City to conduct project activities using best management practices and in a manner that protects nearby sensitive species, including Western snowy plover and grunion, and that provides for prevention and response to any spills or releases of hazardous materials. In addition, [Special Conditions 2](#) and [3](#) would require the City to maintain the relocated riprap in its approved location and to return to the Commission with a permit amendment before climate change or sea level rise-related hazards create unsafe conditions for the project components. [Special Condition 10](#) would require the City to provide public access amenities to mitigate for the loss of beach recreational value resulting from relocating project components to an area of beach currently available to beach users.

Recommendation: Commission staff believes the project, as conditioned, conforms with applicable Coastal Act policies, and therefore recommends **approval** of coastal development permit application 9-19-1250.

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Appendix B – Applicant’s Agents

EXHIBITS

Exhibit 1 – Location Map

Exhibit 2 – Site Plan

Exhibit 3 – City’s Proposed Avoidance and Mitigation Measures

Exhibit 4 – April 13, 2020 Technical Memorandum: Rip-Rap Relocation and Removal Plan, prepared by Carollo Engineers, Inc. for City of Santa Barbara

Exhibit 5 – Existing, Post-Construction, and Expected Future Beach Profiles

I. MOTION & RESOLUTION

Motion:

I move that the Commission **approve** Coastal Development Permit No. 9-19-1250 pursuant to the staff recommendation.

Staff recommends a **YES** vote on the foregoing motion. Passage of this motion will result in approval of the permit as conditioned 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 the coastal development permit and adopts the findings set forth below on the 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 feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment.

II. STANDARD CONDITIONS

This permit is 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

1. **Other Approvals.** PRIOR TO STARTING CONSTRUCTION ACTIVITIES, the Permittee shall provide to the Executive Director a copy of the project's General Construction Activity Stormwater Permit as issued by the Regional Water Quality Control Board or evidence that the permit is not needed. The Permittee shall inform the Executive Director of any changes to the project required by this permit. Such changes shall not be incorporated into the project or undertaken until the Permittee obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.
2. **Riprap Maintenance.** The Permittee shall ensure that all riprap placed to protect project components remains within the area on the beach approved for that riprap placement as shown on Figure 4 of Exhibit 4 of the Commission's adopted findings for this project. Within 60 days of any movement of riprap away from that area, the City shall relocate the riprap to within the approved area. The Executive Director may extend this 60-day period for good cause.
3. **Coastal Hazards Adaptation Report.** By 2040, or at the time that sea level has increased by 2.2 feet over its current Mean High Water² elevation of 4.55 feet NAVD88 at the Santa Barbara tide gauge, whichever occurs first, the Permittee shall prepare, for Executive Director review and approval, a Coastal Hazards Adaptation Report describing conditions at and near the development site and of the approved development. The Report shall describe the experienced increase in sea level rise at that time and the increases expected during the subsequent period of at least 20 years, the experienced rate of shoreline recession and the rate of recession expected during that subsequent period, the experienced coastal hazards at the site, including wave uprush, storm energy, tsunami runup elevations, etc., and any damage or other impacts to the development, along with the hazards expected during that subsequent period. The Report shall also evaluate all potential adaptation measures or intake system modifications that may be needed at that time or during the subsequent period in order to maintain the approved development in a safe, operable condition and to minimize impacts to coastal resources, including sand supply, habitat, and public access. The Report shall also consider how individual adaptation measures to address impacts to the approved development relate to broader resiliency needs and adaptation planning for the entirety of the intake system and desalination facility. The Executive Director may determine, based on a review of the report, that the applicant must submit a complete CDP application for modification of the approved portions of the intake system if the approved development is, or will soon be, subject to coastal hazards that compromise its structural stability or operational abilities, or result in impacts to coastal resources not addressed in this CDP. Such modification could include removal of the intake system and the riprap if it is no longer needed or if an environmentally superior feasible alternative exists.

² Current Mean High Water is based on the 1983 – 2001 Tidal Epoch.

4. **Assumption of Risk, Waiver of Liability and Indemnity by the Permittee.**
 - a. By acceptance of this permit, the Permittee acknowledges and agrees: (i) that the site may be subject to hazards, including but not limited to waves, storms, flooding, landslide, erosion, and earth movement, all of which will worsen with future sea level rise; (ii) to assume the risks to the permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards; and (v) that the mean high tide line is ambulatory in nature and may migrate inland due to sea level rise; thus, the development and associated shoreline protection may become located on public trust lands at some point in the future and, if so, may require a lease from the State Lands Commission and/or may need to be removed if it substantially interferes with public access or other public trust resources.
 - b. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the Applicant shall submit a written agreement, in a form and content acceptable to the Executive Director, incorporating all of the above terms of this condition.
5. **Habitat Restoration.** The Permittee shall implement habitat restoration, including removal of invasive and non-native species, planting of native species, and monitoring in a 0.16-acre area extending about 1,000 feet south of the new weir box location, as described in the City's October 2019 *Draft East Beach Weir Box Relocation Habitat Restoration Plan*.
6. **Avoidance and Minimization Measures.** The Permittee shall conduct all project activities consistent with the Avoidance and Minimization Measures identified in Section 6.0 of its September 2019 Biological Assessment for the Charles Meyer Desalination Facility, provided as Exhibit D of its coastal development permit application and included as Exhibit 3 of these Findings. The Applicant shall additionally submit, for Executive Director review and approval, the names and qualifications of proposed biologists who will be implementing these measures. Upon request by the Executive Director, the Applicant shall provide all nest survey reports and monitoring results described in these measures.
7. **Grunion Monitoring & Avoidance Plan.** Prior to conducting any project activities at the beach between March 1 and August 31, the Permittee shall prepare, submit, and obtain Executive Director review and approval of, a Grunion Monitoring and Avoidance Plan, written by a qualified biologist, that provides for the following:

- a. The Plan shall identify expected grunion runs as identified in current annual California Department of Fish and Wildlife (CDFW) documentation to determine possible grunion spawning periods.
 - b. Using the above-referenced CDFW documentation, the Permittee shall identify any grunion runs expected to occur during any two-week period prior to or during any project work scheduled to occur at or below the high tide line. If grunion runs are expected during those work times, the Permittee shall first monitor the beach area of the work site for any possible grunion runs during those expected times. Monitoring shall be conducted by a qualified biologist at least 30 minutes prior to, and two hours following, the predicted start of any spawning event.
 - c. If monitoring detects a grunion run (i.e., more than 100 fish within the approximately 200-foot wide work area on the beach), the applicant shall avoid all work at or below the high tide line for a minimum of two weeks to ensure grunion eggs are not disturbed.
 - d. All identified grunion runs shall be reported promptly to the Executive Director. Monitoring results shall be made available to the Executive Director upon request.
8. **Construction Best Management Practices.** The Permittee shall conduct all project activities subject to the following:
- a. Prior to the commencement of project activities, the limits of the work areas and staging areas shall be delineated so as to limit the potential area affected by construction to the minimum safely required. All vehicles, equipment and materials stockpiles shall be restricted to within the delineated work area. Project equipment and vehicles shall remain as high on the upper beach as possible and shall avoid contact with ocean waters to the maximum extent feasible. Disturbance to beach wrack shall also be minimized to the maximum extent feasible.
 - b. Best Management Practices (BMPs) shall be designed to prevent sediment and potential pollutants from entering coastal waters. The BMPs shall be implemented prior to or concurrent with construction and maintained throughout the project. The use of temporary erosion and sediment control products (such as fiber rolls, erosion control blankets, mulch control netting, and silt fences) that incorporate plastic netting (such as polypropylene, nylon, polyethylene, polyester, or other synthetic fibers) shall be avoided.
 - c. All debris resulting from project activities shall be removed from the beach by the end of each workday. Any excavated beach sand shall be redeposited on the beach and graded to natural beach contours.
 - d. During construction, all trash shall be properly contained, removed from the worksite, and disposed of on a regular basis. No construction materials, debris, or waste shall be placed or stored where it may be subject to wave or tidal erosion and dispersion. Any debris inadvertently discharged into coastal waters shall be recovered immediately and disposed of consistent with the requirements of this coastal development permit.

- e. Any fueling and maintenance of construction equipment shall occur within designated staging areas. Mechanized heavy equipment and other vehicles shall not be fueled within 100 feet of coastal waters unless within an area where any potential spills can be fully contained.

9. **Hazardous Material Spill Prevention and Response.**

- a. PRIOR TO STARTING CONSTRUCTION ACTIVITIES, the Permittee shall submit, and obtain Executive Director review and approval of, a project-specific Hazardous Materials Spill Prevention and Response Plan for all vehicles to be used for project activities. The Plan shall include:
 - a list of all fuels and hazardous materials that will be used or might be used during the proposed project, together with Material Safety Data Sheets for each of these materials;
 - specific protocols for monitoring and minimizing the use of fuel and hazardous materials during project operations, including Best Management Practices that will be implemented to ensure minimal impacts to the environment;
 - an estimate of a reasonable worst case release of fuel or other hazardous materials on the project site or into coastal waters resulting from project repair or maintenance activities;
 - all identified locations within the project footprint of known or suspected buried hazardous materials, including current or former pipelines, underground storage tanks, and the like;
 - a list of all spill prevention and response equipment that will be maintained on-site;
 - the designation of the onsite person who will have responsibility for implementing the plan;
 - a detailed response and clean-up plan in the event of a spill or accidental discharge or release of fuel or hazardous materials; and,
 - a telephone contact list of all regulatory and public trustee agencies, including Coastal Commission staff, having authority over the development and/or the project site and its resources to be notified in the event of a spill or material release.

The Permittee shall ensure that all onsite project personnel participate in a training program that describes the approved Plan, identifies the Plan's requirements for implementing Best Management Practices to prevent spills or releases, specifies the location of all clean-up materials and equipment available on site, and specifies the measures that are to be taken should a spill or release occur.

- b. In the event that a spill or accidental discharge of fuel or hazardous materials occurs during project construction or operations, all non-essential project construction and/or operation shall cease and the Permittee shall implement spill response measures of the approved Plan, including notification of Commission staff. Project construction and/or operation shall not start again until authorized by Commission staff.

- c. If project construction or operations result in a spill or accidental discharge that causes adverse effects to coastal water quality or other coastal resources, the Permittee shall submit an application to amend this permit, unless the Executive Director determines no amendment is required. The application shall identify proposed measures to prevent future spills or releases and shall include a proposed restoration plan for any coastal resources adversely affected by the spill or release.

The Permittee shall implement the Plan as approved by the Executive Director. Any proposed changes to the approved Plan, including those resulting from a use of different vessels or equipment than originally proposed, shall be reported to the Executive Director. No changes to the approved Plan shall occur without a Commission approved amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

10. **Public Access Improvements.** PRIOR TO STARTING CONSTRUCTION ACTIVITIES, the Permittee shall submit, for Executive Director review and approval, a proposed plan to increase or enhance public access on or to the City's beaches. The plan shall describe proposed access amenities or improvements costing at least \$76,467 and/or that will benefit no fewer than 100 beach users each year. The plan is to include a detailed description of the proposed amenities or improvements, their locations, and a schedule showing that they will be implemented within one year of the start of project construction.

IV. FINDINGS & DECLARATIONS

A. PROJECT DESCRIPTION AND BACKGROUND

The City of Santa Barbara (“the City”) is proposing to replace and relocate several components of the intake system used by the City’s seawater desalination facility. These project components include a section of intake pipeline, along with fittings, pipeline segments, wiring, and other equipment located within a concrete “weir box.” The weir box serves as a “pull point” and splice location for power and communication cables that run between the facility, located about 800 feet inland of the beach, and pumps located at the end of the intake structure about 2,500 feet offshore. The components to be replaced and relocated are on the City’s East Beach.

During the facility’s recent recommissioning in 2015,³ the City determined that these components were subject to leaks and damage. In 2017, and pursuant to CDP #9-14-1781, the City conducted temporary repairs with the understanding that longer-term repairs would soon be needed to allow the facility to operate for its expected 20-year minimum design life.

Onshore components of the desalination facility are within the City’s Local Coastal Program (“LCP”) jurisdiction and are located at 525 East Yanonali Street and 420 Quinientos Street in downtown Santa Barbara (see **Exhibit 1 – Location Map**). The project components to be replaced and relocated are within the Commission’s retained jurisdiction in coastal waters and on the City’s East Beach (see **Exhibit 2 – Site Plan**).

Background & History

The City built its desalination facility in the mid-1990s in response to state and regional drought conditions.⁴ It operated for just a short time before being deactivated when the drought ended. The facility’s intake system was built, in part, by installing a liner within an abandoned wastewater treatment pipeline located under East Beach. The pipeline had originally been installed in the 1930s and was protected by riprap since that time, most of which is still in place.

The City kept the facility in “caretaker” status and maintained its NPDES permits during the next couple of decades. In 2014, it applied to the Central Coast Regional Water Quality Control Board (“Regional Board”) and the Commission to recommission the facility. In January 2015, the Regional Board approved the proposed recommissioning, finding that as an existing facility, the City could retain the existing intake rather than having to build a new, subsurface intake system, but also requiring that the City update

³ In February 2015, the Commission approved CDP 9-14-1781 authorizing the facility recommissioning.

⁴ In March 1991, the City approved coastal development permit (“CDP”) #91-CDA-06 for construction and temporary operations of the onshore portions of the facility, and in May 1991, the Commission approved CDP #4-91-18 for construction and temporary operation of facility components within its retained jurisdiction on the beach and in offshore water. In December 1995, the City approved CDP 95-0045 for long-term operation of onshore portions of the facility, and in October 1996, the Commission approved CDP 4-96-119 for long-term operation of portions of the facility within its jurisdiction.

the offshore intake screens, provide mitigation funding,⁵ and conduct a feasibility study to determine whether the facility could install a feasible and less damaging intake alternative.⁶ The City's study, which evaluated six types of subsurface intake methods and was completed and presented to the Board in 2017, concluded that there were no feasible, less environmentally damaging alternative intake systems.⁷ In February 2015, the Commission approved CDP No. 9-14-1781, which allowed for repair and maintenance of the existing intake system.⁸ The intake modifications approved at that time included intake pipeline repairs, screen installation, replacement of various fittings and cables, and other similar activities.

In 2017, the City discovered leaks within the weir box and the pipeline transition fittings and conducted temporary repairs pursuant to the repair and maintenance approval provided through CDP No. 9-14-1781. During these repair activities, the City determined that the design and location of the existing weir box would likely lead to ongoing maintenance problems, due to design constraints within the box and the lack of space between the box, pipeline, and fittings needed to conduct repairs. In May 2019, the Executive Director issued a permit waiver (9-19-0304-W) allowing the City to conduct geotechnical investigations needed to determine potential locations for a modified weir box. Through this current CDP application, the City proposes to resolve these repair and maintenance issues by installing a new, redesigned weir box and section of pipeline at a slightly more inland and higher elevation location, which it expects will provide an expected service life of about 20 years. This development activity will help repair the overall intake structure and desalination facility that was previously approved through CDP No. 4-96-119, and for which previous repair work was conducted pursuant to CDP No. 9-14-1781.

Proposed Project Activities

⁵ The Board required the City to provide \$500,000 to fund marine productivity restoration efforts in the nearby Upper Devereux Slough, which drains to the Santa Barbara Channel.

⁶ Under the 2015 Ocean Plan amendment applicable to seawater desalination facilities, the State and Regional Water Boards have "primary authority" to determine the best available and feasible intake methods for those facilities.

⁷ The City's Subsurface Desalination Intake Feasibility Study evaluated: 1) vertical wells, 2) lateral beach wells, 3) horizontal collector wells, 4) slant wells, 5) offshore infiltration galleries, and 6) horizontal directionally drilled wells. It investigated the potential to install each of these intake methods near the current intake location at East Beach, as well as at nearby West and Ledbetter Beaches.

⁸ Pursuant to Coastal Act Section 30610, the Commission considered the proposed recommissioning to be repair and maintenance. Pursuant to Section 13252(a) of the Commission's regulations, repair and maintenance activities such as these require a CDP because they involve the use of mechanized equipment in or adjacent to coastal waters and involve placing materials in coastal waters. When reviewing repair and maintenance activities, however, the Commission reviews the proposed activities and regulates the method of repair, but does not review the underlying, previously approved development.

The proposed project involves the following main activities related to the repair and maintenance of the existing intake:

- 1) **Conduct biological surveys:** Before any repair/relocation activities, the City would conduct surveys to detect any nesting birds near the project site. If active nests are found, work would not occur or would occur only with appropriate buffers. These and other measures are described below in Section E of these Findings.
- 2) **Place temporary fencing and stormwater protection measures:** The City would install temporary construction fencing around an approximately one-acre work area on the beach to provide for public safety.
- 3) **Demolish and remove weir box and fittings:** The City would remove the existing weir box and pipeline fittings, with most of the buried pipeline between the two to be cut and removed.
- 4) **Prepare subgrade at new weir box and fittings locations:** To provide adequate structural support for the new components, the City will excavate to depths of up to about 15 feet below the existing grades and will install piles to support the weir box.
- 5) **Install new weir box, pipeline section, and fittings:** The new weir box will be a concrete vault with a footprint of about eight by 16 feet and a depth of about 10 feet. The top of the box would be at +9 feet NAVD88 and its base, with foundation, would be at about -3.5 feet NAVD88. This would place the top of the box just below the current range of seasonal beach elevations at the site, which vary from about +10 to +14 feet NAVD88. The weir box would be located about 60 feet north of the existing weir box site and adjacent to the fittings location. The new weir box will be somewhat smaller than the existing weir box – 128 square feet instead of the existing box’s 161.5 square feet. To reduce potential impacts, the new box and other components will be pre-assembled rather than constructed on site.
- 6) **Relocate part of existing riprap to protect new weir box and remove a portion of remaining, existing riprap:** The existing weir box and pipeline have been protected by riprap for the past approximately 90 years. The City proposes to relocate some of that existing riprap several dozen feet inland to protect the new weir box and intake pipeline from wave action or erosion. Some of the existing riprap will be removed, and the rest will be reconfigured or will remain in place to provide continued protection for the existing underlying pipeline. Currently, the existing riprap covers about 11,000 square feet of beach and intertidal area, whereas removing some of that riprap and relocating part of the rest to protect the new and relocated equipment would result in about 150 square feet less riprap overall on the upper beach. Existing riprap that extends furthest into the intertidal and deeper water would remain in place (see Section D of these Findings and Exhibit 4 for additional details).

The City has also included as part of the project activities restoration of habitat along the upper elevation of about 0.16 acres of dunes at East Beach. The proposed site of the new weir box and fittings is at the beach/dune interface and installation would primarily disturb unvegetated areas of the beach, though would include disturbance of about 0.01 acres of beach sand that is occupied by invasive or non-native species, including ice plant (*Carpobrotus edulis*) and Bermuda grass (*Cynodon dactylon*). The restoration is meant to mitigate for the potential loss of vegetation during construction

and to successfully establish appropriate native vegetation near the work site in an area outside the main points of public access and recreation. This is further described in Section E below.

Some project activities, such as weir box removal and installation, may be done using a crane, which will allow the City to install a pre-cast concrete weir box instead of pouring concrete on the beach. All work is proposed to be done during the day, with lighting limited to that needed for safety purposes, which will be directed downward and inward to the work areas. Project work is expected to take about 14 weeks, starting in September 2020. Construction would occur up to 10 hours per day on Monday through Friday only. The project will also include several activities that the Commission previously authorized under, and are subject to conditions of, CDP 9-14-1781, approved in 2015. These include replacing the facility's offshore intake pumps and cables using a support vessel.

B. COMMISSION'S PERMIT AUTHORITY FOR REPAIR AND MAINTENANCE ACTIVITIES

This proposal consists of repair and maintenance activities. Coastal Act Section 30610(d) generally exempts from Coastal Act permitting requirements the repair or maintenance of structures that does not result in an addition to, or enlargement or expansion of, the structure being repaired or maintained. However, the Commission retains authority to review certain extraordinary methods of repair and maintenance of existing structures that involve a risk of substantial adverse environmental impact as described in Section 13252 of the Commission's regulations.

Section 30610 of the Coastal Act provides, in relevant part:

Notwithstanding any other provision of this division, no coastal development permit shall be required pursuant to this chapter for the following types of development and in the following areas:...

(d) Repair or maintenance activities that do not result in an addition to, or enlargement or expansion of, the object of those repair or maintenance activities; provided, however, that if the commission determines that certain extraordinary methods of repair and maintenance involve a risk of substantial adverse environmental impact, it shall, by regulation, require that a permit be obtained pursuant to this chapter.

Section 13252 of the Commission administrative regulations (14 CCR 13000 *et seq.*) provides, in relevant part:

For purposes of Public Resources Code section 30610(d), the following extraordinary methods of repair and maintenance shall require a coastal development permit because they involve a risk of substantial adverse environmental impact:...

(3) Any repair or maintenance to facilities or structures or work located in an environmentally sensitive habitat area, any sand area, within 50 feet of the edge

of a coastal bluff or environmentally sensitive habitat area, or within 20 feet of coastal waters or streams that include:

(A) The placement or removal, whether temporary or permanent, of rip-rap, rocks, sand or other beach materials or any other forms of solid materials;

(B) The presence, whether temporary or permanent, of mechanized equipment or construction materials.

All repair and maintenance activities governed by the above provisions shall be subject to the permit regulations promulgated pursuant to the Coastal Act, including but not limited to the regulations governing administrative and emergency permits. The provisions of this section shall not be applicable to methods of repair and maintenance undertaken by the ports listed in Public Resources Code section 30700 unless so provided elsewhere in these regulations. The provisions of this section shall not be applicable to those activities specifically described in the document entitled Repair, Maintenance and Utility Hookups, adopted by the Commission on September 5, 1978 unless a proposed activity will have a risk of substantial adverse impact on public access, environmentally sensitive habitat area, wetlands, or public views to the ocean...[emphasis added]

The proposed project qualifies as a repair and maintenance under Section 30610(d) of the Coastal Act and Section 13252 of the Commission's regulations because the project: (a) does not involve an addition to or enlargement or expansion of the desalination facility or the intake structure, and (b) does not involve replacement of 50% or more of the desalination facility or the intake structure. Although the proposed repair and maintenance activities will not add to or enlarge the facility, the proposed work involves placing construction materials, removing and placing riprap, rock, sand, and other solid materials, and the temporary use of mechanized equipment, in and within 20 feet of coastal waters. The proposed repair project therefore requires a coastal development permit under CCR Section 13252.

In considering a permit application for a repair or maintenance project pursuant to the above-cited authorities, the Commission reviews whether the proposed method of repair or maintenance is consistent with the Chapter 3 policies of the Coastal Act. The Commission's evaluation of such repair and maintenance projects does not extend to an evaluation of the conformity with the Coastal Act of the underlying existing development.

C. OTHER AGENCY APPROVALS & CONSULTATIONS

The project is additionally subject to permits and approvals from the following:

- City of Santa Barbara: Substantial Conformance Determination, August 2015.
- Central Coast Regional Water Quality Control Board: As noted above, the facility received prior discretionary approvals from the Regional Board. The current project is additionally subject to a General Construction Activity Stormwater Permit from the Regional Board.

[Special Condition 1](#) requires that the City submit proof that it has obtained the above permit or documentation that the permit is not needed.

D. COASTAL HAZARDS AND SEA LEVEL RISE

Coastal Act Section 30235 states, in relevant part:

Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply...

Coastal Act Section 30250(a) states, in relevant part:

New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources.

Coastal Act Section 30253 states, in relevant part:

New development shall do all of the following:

- (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
- (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs...

Coastal Act Section 30101 states:

“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.

For repair and maintenance activities, the Commission analyzes whether a proposed method of repair is consistent with Coastal Act policies; here, that includes analyzing whether the method of repair—i.e., the movement of the intake facility components further up the beach—is consistent with Coastal Act hazard policies. This proposed project involves replacing and relocating several components of an existing seawater intake system and some of its existing protective riprap from a lower elevation on the beach to a slightly higher location on the beach about 60 feet further inland. Components at the new location will be subject to sand movement, erosive forces, and wave uprush, and will therefore require continued protection from riprap to provide structural stability and minimize risks to property in an area that is periodically inundated.

Coastal Act Section 30253 generally prohibits new development from contributing significantly to erosion or geologic instability or from relying on protective devices that would substantially alter natural landforms along bluffs and cliffs. Even in coastal areas without bluffs and cliffs, Coastal Act Section 30250 requires that new development be located in areas where it will not have significant adverse effects on coastal resources. Thus, shoreline protective devices are generally disallowed under the Coastal Act if they will affect natural shoreline processes or have other impacts on visual resources, public access, or other coastal resources. However, Section 30235 of the Act allows for shoreline protection in limited circumstances, including when it is required for coastal-dependent uses or to protect existing structures and is designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Section 30235 is an “override” provision that requires approval of shoreline protection in certain limited circumstances despite the fact that the protection is inconsistent with other Coastal Act provisions. Although shoreline protection must be approved in these circumstances, the Commission still must ensure, under its CEQA obligations, that the approved development is the least environmentally damaging alternative and that any impacts of such protective devices are avoided, or if avoidance is infeasible, mitigated.⁹

Here, the relocated weir box will require continued protection from the relocated riprap, and that riprap may affect natural shoreline processes. The existing riprap is relatively low profile and is often buried beneath the beach sand, but it results in minor disruption of the flow of sand and water along the shoreline. The proposed relocation of approximately 140 cubic yards of this riprap to the higher beach elevation will somewhat reduce but not eliminate these adverse effects on erosion rates and sand supply. Thus, because the method of repair for the intake structure involves constructing a new weir box at a location where shoreline protection is needed, and because that shoreline protection will affect the natural erosion of the beach, the Commission must determine whether the shoreline protection should nevertheless be approved pursuant to Section 30235 because 1) it is protecting a “coastal-dependent” use and 2) because it is designed to eliminate or mitigate adverse effects on local sand supplies.

Regarding “coastal-dependent” uses, Coastal Act Section 30101 states that for a use to be coastal-dependent, it must occur “on, or adjacent to, the sea to be able to function at all.” The Commission has several times previously considered seawater desalination intakes to be coastal-dependent, particularly in locations where site constraints do not allow for other types of intakes, such as wells, that could be located away from the shoreline where they could withdraw intruded seawater or brackish groundwater from beneath a more inland site. In 2015-2016, the City conducted an investigation of potential subsurface intake opportunities for this facility as part of its Regional Board review. This study concluded that subsurface intake systems were infeasible along this

⁹ See, e.g., Public Resources Code § 21080.5(d)(2)(i); *Ocean Harbor House Homeowners Assn. v. California Coastal Commission* (2008) 163 Cal.App.4th 215, 241.

part of the shoreline due to their effects on sensitive offshore habitat areas, public access along the shoreline, shallow groundwater, and constructability concerns.¹⁰

Additionally, and as the City describes in its CDP application, the current intake system's design constraints prevent the weir box and its associated structures from being located more than about 60 feet further inland from their current locations. The weir box serves as a "pull point" for electrical and communications cables that run between the desalination facility and the pumps in the offshore intake structures, and the limited distance and angles through which these cables can be pulled restrict any new location to those within about 60 feet of the existing location. This limitation restricts any alternative locations to nearby areas of the beach and therefore, "on, or adjacent to, the sea."

Based on the above, and with the project intended to support an existing coastal-dependent use – i.e., providing seawater to the City's desalination facility – the Commission finds that the proposed development involves repair and maintenance of a coastal dependent facility. The riprap and weir box is therefore permitted because it is required to serve this coastal-dependent use, so long as the project conforms to the other requirement of Section 30235 – that it is designed to eliminate or mitigate adverse effects on local sand supply processes – and also that it is the least environmentally damaging alternative and mitigates any other coastal resource impacts.

Regarding the proposal's effects on sand supply, the proposed work to the intake system would slightly decrease the existing, modest adverse effects on local sand supply processes resulting from the current riprap footprint. The existing intake system includes an area of riprap that protects the current weir box and part of the intake pipeline. The riprap, which was first placed in the 1930s, currently covers about 11,000 square feet of upper and lower beach area, including areas where sand conveyance occurs (see Exhibit 4). The riprap has a relatively low profile, and as the sand builds up in the summer, much of the riprap is buried and sand is able to move across it relatively easily. During the winter when sand elevations are lower and the riprap is exposed, it hinders lateral sand movement to some degree, although the City has not documented a significant buildup of sand on one side or the other in the past. Moving the weir box and associated components, along with the amount of existing riprap that would be needed to protect them, to a higher beach elevation that receives less tidal action and therefore experiences less sand movement, would reduce the existing, relatively limited effect these intake components have on local sand supply conveyance at their current location. The project has therefore been designed to mitigate the already minor impacts on local sand supply.

To evaluate whether the proposed project is the least environmentally damaging alternative method of repair and maintenance, Commission staff evaluated alternatives to the proposed project that would allow continued operation of the intake and did not

¹⁰ See Carollo Engineers, *City of Santa Barbara Subsurface Desalination Intake Feasibility Study*, 2016, and National Water Research Institute, Technical Advisory Panel for City of Santa Barbara Subsurface Desalination Intake and Potable Reuse Feasibility Studies, available at: <https://www.nwri-usa.org/city-of-santa-barbara> (accessed May 21, 2020).

consider alternatives to the intake itself. Commission staff received comments contending that, although development associated with the City's desalination facility may be entitled to shoreline armoring because it is a coastal-dependent facility, the Commission must first conduct a thorough alternatives analysis that evaluates whether entirely different intake structures, such as subsurface wells, might be feasible, less environmentally damaging, and not require shoreline armoring.¹¹ However, because this project is considered repair and maintenance, the Commission is only evaluating alternative methods of repairing and maintaining this portion of the intake system, rather than evaluating alternatives to the underlying development that is being repaired and maintained. Thus, the alternatives analysis included herein is limited to siting, sizing and design of the weir box and riprap and construction methods and timing.

Additionally, as noted above, the Regional Board in 2015 required the City to conduct a more comprehensive alternatives analysis during the Board's certification of the desalination facility. That analysis concluded that any of several types of subsurface intakes were not feasible. The City is currently operating its desalination facility under CDP No. 4-96-119, which establishes several scenarios for facility operations and water production.¹² Should the City at some future date wish to operate the facility beyond those operating scenarios, it would need to apply for a new or amended CDP, at which time the Commission could conduct a comprehensive alternatives analysis to evaluate other intake methods.

For the current proposed project – which involves replacement and relocation of a relatively small section of the approximately 3000-foot long intake system, Commission staff evaluated what alternative designs or methods were available to reduce project impacts. As described above, due to constraints in the engineering of the system, it is not feasible to move the proposed weir box off the beach without replacing the entire intake system. The City's proposed weir box location is an area of sand that is unvegetated or has non-native species only and as far from coastal waters as is feasible, and is thus sited in the least environmentally damaging location, given the engineering constraints of the system.

Furthermore, staff requested that the City provide an analysis describing the minimum amount of riprap that had to remain in place to protect the existing structures, how much of it was needed and could be relocated to protect the new structures, and how much of

¹¹ See March 6, 2020 letter from Surfrider Foundation, Santa Barbara Channelkeeper, and California Coastal Protection Network.

¹² The CDP provides four scenarios under which the City can operate the facility:

1. Intermittent operation (i.e. during drought periods) at a level of up to 3,125 AFY to meet the City's drought needs;
2. Intermittent operation at a level of up to 7,500 AFY to meet regional drought needs of the City and Goleta and Montecito Water Districts;
3. Baseload operation (i.e. during both drought and non-drought periods) at a level up to 7,500 AFY to meet regional needs during drought and to produce water for exchange with other water purveyors during non-drought periods;
4. Intermittent operation at a level up to 10,000 AFY during periods of drought.

it could be removed entirely from the beach. That analysis, provided as Exhibit 4 and described below, resulted in a less environmentally damaging alternative that slightly reduced the existing riprap footprint and the footprint initially proposed by the City. The City's analysis describes how much of the existing riprap would be moved to the higher elevation, how much would be removed entirely from the beach, and how much would remain at its existing location. The City proposes to keep in place most of the existing riprap (about 9,400 square feet) in the lower parts of the beach to protect the underlying intake pipeline, which would remain in place. The City determined, however, that it could relocate part of the riprap that is higher on the beach to the upper beach where it would protect the relocated components. It also determined that it could remove some "excess" riprap from its existing location that would no longer be needed for shoreline protection. This would result in a smaller overall riprap footprint on the higher parts of the beach than currently exists – about 1,482 square feet instead of the existing 1,649 square feet – which would slightly reduce the effects the existing riprap has on local sand movement and would reduce the amount of riprap covering areas of the beach used by the public.

To ensure that the relocated riprap needed to protect the intake components continues to provide the necessary protection and does not spread out over the beach, [Special Condition 2](#) requires the City to maintain the riprap within its approved footprint. As is evident from the photographs in Exhibit 4, the riprap in the past has been moved by wave action or sand movement to areas away from where it is needed to protect the intake components. [Special Condition 2](#) requires the City, within 60 days of any such movement, to relocate the moved riprap back into its approved configuration where it will provide the needed protection and will not result in adverse effects to public access (see also Section E below).

With this condition in place, the riprap will be maintained within the minimum footprint necessary to provide the needed protection, and the relocated weir box is sited in a manner that minimizes impacts to local shoreline sand supply and movement, and other coastal resources. For these reasons, the proposed project is the least environmentally damaging alternative method of repair and maintenance.

Sea level rise/climate change

Though the riprap and design and location of the weir box should assure that the weir box remains structurally stable for its expected 20-year lifetime, sea level rise could affect its stability over the coming decades, particularly if the structure remains beyond 2040. The locations for the new components are at slightly higher beach elevations than the existing locations, but the weir box and relocated riprap will continue to be subject to seasonal sand movement, erosion, and wave uprush, all of which will be exacerbated by expected increases in sea level and storm energy resulting from climate change. As noted previously and as illustrated in Exhibit 5, the top of the new weir box would be located at +9 feet NAVD88 and its base at -3.5 feet NAVD88. Under existing conditions, this would place the top of the box just below the current range of seasonal sand elevations at the beach, which range from about +10 feet in winter to +14 feet in summer. Under these conditions, the new box would be about four feet below the

beach surface during high summer sand elevations and about a foot below the beach surface during lower sand conditions in the winter. The pipes inside the box would be inundated during high tides, but would drain during low tides.

The City assessed how expected increases in sea level over the next several decades would affect the new proposed structures. Using the “medium-high” and “extreme” risk scenarios from the Commission’s current Sea Level Rise Policy Guidance,¹³ the City identified potential hazards to the structures based on expected future water elevations and amounts of shoreline recession, which are shown in the table below.

Table 1: Expected sea level rise and amounts of shoreline recession

	Sea Level Rise		Shoreline Recession	
	Medium-High Scenario	Extreme Scenario	Medium-High Scenario	Extreme Scenario
Existing	0	0	0	0
2050	1.8	2.5	121	164
2070	3.3	4.9	220	318
All units in feet.				

The City’s assessment focused on determining when three future conditions would occur: 1) when inundation would restrict access to the weir box, 2) when the weir box would be undercut by erosion, and 3) when the new pipeline segment would be exposed due to erosion. For the first condition, the City calculated that a 2.9-foot increase in sea level would result in high tides reaching the weir box foundation, which would cause shallow flooding and would periodically limit access. Under the above scenarios, this condition would be expected to occur sometime between 2055 (for the high-risk aversion scenario) and 2065 (for the medium high risk aversion, high emission scenario). With high tide and waves, temporary flooding could occur sooner. For the second condition, the City’s evaluation showed that the weir box was not expected to be undercut by erosion until after 2100, based on expected increases in sea level and the expected rate of shoreline recession. For the third condition, the City determined that the new pipeline segment would be exposed and possibly undercut when sea level increases by 4.3 feet, which the above scenarios show to be expected by about 2070 (high risk scenario) or beyond.

Although the project design includes components that would allow these structures to experience some damage but resist failure, the City’s CDP application acknowledged that the intake system would require some type of adaptive measures under these future conditions and proposed two thresholds for when to consider what adaptations would be needed:

- To address the likely weir box inundation, the City proposed starting the review process to identify needed modifications when sea level increased by 2.2 feet from

¹³ California Coastal Commission, *Sea Level Rise Policy Guidance*, November 2018.

current levels. This would provide about a decade of lead time before the weir box experienced the periodic flooding expected with a 2.9-foot increase in sea level.

- To address the likely pipeline undercutting, the City proposed starting the review process when sea level increased by 3.3 feet from current levels. This would provide a similar approximately one-decade lead time to identify needed changes.

Under recent projections for these scenarios, these two levels of increase could occur as soon as about 2045 and 2055, respectively.

The City's CDP application included brief descriptions of several possible future adaptation measures – for example, and based on future conditions, the City could consider adding more riprap or other types of shoreline protection to the intake components or constructing an entirely new intake system. However, with uncertainty about the timing, extent, or types of potential future site conditions as well as what adaptation measures may be available, it is difficult to select a proposed approach at this time.

Instead, to ensure that needed measures will be considered and selected at an appropriate time, the Commission is requiring through [Special Condition 3](#) that the City submit, by 2040 or by the time sea level increases by 2.2 feet from its current elevation¹⁴ (whichever occurs first), a report for Executive Director review and approval that describes conditions at the site and of the approved components of the intake system and that evaluates all adaptive measures available at the time to address both existing and expected conditions at the site. Based on the evaluation conducted at that time, [Special Condition 3](#) also requires the City to submit a subsequent CDP application to modify or remove the approved development.

The City has identified an expected operating life for these new project components of about 20 years – i.e., until about 2040. With the earlier adaptation threshold being just at that range or slightly beyond, the timing of the required report would likely mesh with other intake system modifications that may be required. Importantly, the City's desalination facility is also expected to experience sea level rise/climate change effects relatively soon thereafter and the City has identified the need for a detailed study of the facility's vulnerability.¹⁵ The report required through [Special Condition 3](#) would therefore likely help inform any changes that may be needed not only to the weir box and other approved development, but also to the whole intake system and overall facility. In addition, and in recognition that the site of this proposed development could be affected by coastal hazards at any time, the Commission also imposes [Special Condition 4](#), which requires the applicant to assume the risk of development in a hazardous location and to acknowledge that the development may need to be removed

¹⁴ According to the National Oceanic and Atmospheric Administration's tide gauge in Santa Barbara (Station #9411340), the current Mean High Water elevation is 4.55 feet NAVD88; therefore, the 2.2-foot increase would occur when this tide gauge shows that Mean High Water has reached 6.75 feet NAVD88.

¹⁵ See City of Santa Barbara, *Draft City of Santa Barbara Sea-Level Rise Adaptation Plan for the Local Coastal Program Update – Vulnerability Assessment Update*, November 2018. The City has identified possible adverse effects to the facility occurring by about 2060.

if future conditions create additional hazards or make the development inconsistent with public trust resources at the site.

Based on the above, the Commission finds that the proposed development, as conditioned, conforms to the extent feasible to the relevant provisions of the Coastal Act's coastal hazards policies and is the least environmentally damaging alternative. It also finds that the conditions of Section 30235 are met and that the proposed development, including the relocated riprap, is therefore permissible.

E. PROTECTION OF COASTAL WATERS AND SPECIES

Coastal Act Section 30230 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.

Coastal Act Section 30231 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 waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Coastal Act Section 30232 states:

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.

These Coastal Act policies require generally that development be conducted in a manner that protects coastal waters, that it not result in adverse effects to those waters and their associated coastal resources, and that it protect against spills of hazardous substances into coastal waters. The proposed project activities could affect coastal waters, habitats, and species primarily due to heavy equipment operating on the beach, which would create project-related noise and disturbance to nearby wildlife or habitat

and could result in releases of oil, fuel, or other hazardous materials onto the beach or into adjacent coastal waters.

The beach habitat on which the project activities would occur has been affected due to its extensive use for public access and recreation, with the upper beach elevations sparsely vegetated with what are primarily non-native species such as ice plant (*Carpobrotus edulis*) and Bermuda grass (*Cynodon dactylon*). Nonetheless, the beach, including the proposed location of the new weir box and pipeline, is within designated critical habitat for the federally-endangered Western snowy plover (*Charadrius nivosus nivosus*),¹⁶ and the work site is about 300 feet from designated critical habitat for the federally-endangered tidewater goby (*Eucyclogobius newberryi*), which is found in the nearby Laguna Creek estuary. The beach also often serves as an area of seasonal spawning habitat for the California grunion (*Leuresthes tenuis*), which spawns during high tides between March and September.

The coastal waters immediately offshore of the project work area provide a mix of habitat, including open water, kelp beds, seagrasses (including native eelgrasses *Zostera marina* and *Z. pacifica*, and surfgrasses *Phylospadix torreyi* and *P. scouleri*) and several types of hard bottom substrate. The hard bottom substrate – mostly rocky reef or cobble – are more sensitive to disturbance than the surrounding sandy bottom areas and support a diversity of species not commonly found in the soft bottom areas. Similarly, kelp beds and areas of seagrass are considered a more sensitive resource supporting a diversity of species not found in other nearby habitats. These coastal waters also serve, at different times of the year, as habitat for several types of marine mammals, all of which are protected against harm, or harassment under the federal Marine Mammal Protection Act.¹⁷ Pursuant to the federal Magnuson-Stevens Fishery Conservation and Management Act, the offshore waters are designated as Essential Fish Habitat for several dozen species, including a number that are important for commercial and recreational fishing.

The City has conducted several biological surveys in the project area – two in 2014 as part of previous projects related to the desalination facility's intake system, and most recently in September 2019. The surveys found no nests in the project area, though many shorebird, waterfowl, and passerine species were observed foraging in and around the area. There are no recent records of nesting in the immediate project area.

Although the area of the new weir box location is unvegetated or has sparse cover of non-native species, it nonetheless has the potential to serve as habitat for native

¹⁶ In its August 2019 certification of the City's updated Coastal Land Use Plan, the Commission determined that the inclusion of East Beach as part of designated critical habitat for the Western snowy plover did not automatically result in its designation as an environmentally sensitive habitat area ("ESHA"). The City's certified Land Use Plan states that "if southern foredune or nesting habitats for the western snowy plover were found or established in the future, those habitats would be considered ESHA."

¹⁷ Marine mammals can be found year round in the waters offshore of Santa Barbara. Some pass through during annual migrations, such as gray whales (*Eschrichtius robustus*) during December through April each year and humpback whales (*Megaptera novaeangliae*) in May through September each year. Others, including harbor seals (*Phoca vitulina*) are year-round residents.

vegetation and avian species. To address this potential, the City has proposed several mitigation measures meant to avoid or reduce potential adverse effects. It has included in the project some replanting of an area of native beach dune vegetation in about 0.16 acres of upper beach just downcoast of the project site. The planted area would be a strip about 1,000 feet long varying in width up to about 50 feet and located between existing vegetation along the public bike path and the beach. The City plans to install temporary fencing around the areas to be planted, remove any invasive or non-native plants, install a temporary irrigation system, and plant a mix of appropriate native species, including several species of sand verbena (*Abronia* spp.), beach suncup (*Camissoniopsis cheiranthifolia*), and seacliff buckwheat (*Eriogonum parvifolium*). The City will monitor the planted area to ensure success and to ensure no more than 10% (5% after Year 3) of the area includes non-native or invasive plants. It will also provide ongoing reports to the Executive Director describing project implementation and monitoring results. [Special Condition 5](#) requires the City to conduct habitat restoration as described in the October 2019 Draft East Beach Weir Box Relocation Habitat Restoration Plan provided as part of the CDP application.

The City also proposed as part of its project a number of avoidance and minimization measures, such as providing training to workers about the avoidance and minimization measures that are to be implemented during project activities, conducting pre-project nesting bird surveys, monitoring biological activities during the project, providing authority to qualified biologists to modify or shut down project activities if adverse effects are observed, and others (see Exhibit 3 – Avoidance and Minimization Measures). To reduce potential effects on marine mammals from the drilling needed to place pilings beneath the weir box location, the City's proposed measures include a "soft start/ramp-up" process at the beginning of drilling activities that will result in a gradually increasing noise level from drilling meant to alert nearby marine mammals and allow them to move to a safe distance from any noise propagation. To ensure these measures are fully implemented, [Special Condition 6](#) adopts these measures as part of this CDP and additionally requires the City to submit, for Executive Director review and approval, the names and resumes of proposed qualified biologists who will be implementing the measures, the described documentation of worker training, nest survey reports, and biological reports.

Because much of the project site may be used for spawning by grunion, [Special Condition 7](#) provides a number of protective measures to ensure the project does not adversely affect grunion. The grunion is a species of concern due in part to its unique spawning behavior. It spawns on the highest elevations of the beach reached during certain high tides between March and September and its eggs incubate in that area until subsequent high tides about two weeks later move the eggs into the water column. Project activities that occur in this area during that time could damage the incubating eggs. The City is planning on conducting most project activities in the fall of 2020, generally after grunion spawning season, due largely to the favorable sand conditions that will result in less need to transport sand away from the work site. Nonetheless, to ensure grunion are protected, [Special Condition 7](#) requires the City to prepare a Grunion Monitoring and Avoidance Plan that ensures areas used by grunion are not

affected by project activities through monitoring and avoidance, should grunion spawning occur in the work area.

To more fully protect nearby coastal waters and biological resources, [Special Condition 8](#) requires the City to conduct project activities using several construction Best Management Practices, such as removing all trash and debris from the site, operating equipment as far from the coastal waters as feasible, and fueling equipment only when any potential spills can be fully contained.

To ensure all project activities adjacent to coastal waters provide adequate protection against spills and allow for the necessary response should spills occur, [Special Condition 9](#) requires the City to submit a Hazardous Material Spill Prevention and Response Plan for all vehicles and equipment the City proposes to use during project activities. That Plan is to identify maximum spill potential during project activities, identify specific protocols to monitor and minimize the use of fuel and hazardous materials during those activities, identify all spill response equipment that will be immediately available to respond to any spills, a notification list of responsible agencies to be contacted in the event of any spills or releases, and other similar measures meant to avoid and minimize potential spills.

Based on the above, the Commission finds that the project, as conditioned, conforms to the relevant marine life and coastal water protection policies of the Coastal Act.

F. PUBLIC ACCESS, RECREATION, AND VISUAL RESOURCES

Coastal Act Section 30211 states:

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.

Coastal Act Section 30212(a) states:

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, or, (3) Agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.

Coastal Act Section 30214 states, in relevant part:

- (a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public

access depending on the facts and circumstances in each case including, but not limited to, the following:

- (1) Topographic and geologic site characteristics.
- (2) The capacity of the site to sustain use and at what level of intensity.
- (3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.
- (4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.

Coastal Act Section 30221 states:

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.

Coastal Act Section 30251 states, in relevant part:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas...

Coastal Act policies require generally that development located adjacent to the shoreline in an area with ongoing public use not interfere with that use and provide access to the shoreline. It also requires that permitted development protect views to and along the coast. The proposed project would occur on a beach and adjacent to a coastal bike path, both of which are used extensively for public recreation and access to the shoreline. The project would result in temporary adverse effects due to the movement and use of mechanized equipment at the work site and the equipment's access to the work site across the public bike path. The City estimates that construction activities will take up to about 14 weeks and require about a one-acre area to be secured with temporary construction fencing to provide for public safety and room for project equipment. They would also result in visual impacts due to the presence of large construction equipment, particularly drilling equipment, on and near the beach, though these impacts are expected to be relatively temporary and minor, as the drilling would take place only during part of the work period.

Longer term, relocating the weir box and moving some of the existing riprap from the current locations relatively low on the beach to a smaller area higher up on the beach will result in a somewhat smaller amount of sandy beach area covered by these components compared to current conditions. The existing weir box covers about 161

square feet and is exposed above the sand during much of the year; whereas the proposed weir box will be slightly smaller – about 128 square feet – and is expected to be covered by sand most of the time. The relocated riprap will cover about 150 square feet less of sandy beach compared with the current covered area, and is also expected to be beneath the sand most of the time. The relocated components will also reduce visual impacts along the shoreline compared to existing conditions, due to the smaller overall footprint and due to them being buried by beach sand during most times of the year, particularly in the summer when beach use is highest. Nonetheless, these components will likely be exposed at times, and would then take up an area of sandy beach that would otherwise be available for public recreational use.

The City provided several graphs showing the expected position of the existing and proposed development in relation to past seasonal high and low beach profiles, post-construction beach profiles, and the high and low profiles expected in 2040 and 2050 (see Exhibit 5). These graphs show that the new weir box and relocated riprap are not expected to be exposed during most predicted future conditions over the next 20 to 30 years. However, the City's analysis does not take into account two important factors that could lead to exposure of the proposed development: (1) increased storm and wave energy due to climate change, and (2) interruption or cessation of long-standing beach nourishment projects. Due to increased potential for storm and wave energy as sea levels rise, projections of beach elevation based on past conditions do not necessarily reflect the increased loss of sand likely to occur due to these phenomena. Additionally, the future of ongoing beach nourishment projects conducted by the City and the Corps of Engineers, which have averaged about 340,000 cubic yards of sand placement each year over the past several decades, is uncertain and could result in additional decreases to beach elevation. While the beach profiles under a scenario of higher storm and wave energy or a scenario where sand placement is stopped or reduced cannot be precisely quantified, either scenario would be expected to result in increased exposure of the weir box and riprap than is currently anticipated.

The City has included several measures meant to minimize the project's effects on public access and recreation. During construction, it will conduct its staging activities away from the beach at the inland location of the desalination facility, and it will shorten the needed work time at the beach by installing pre-built components rather than constructing a new weir box at the site. To further reduce potential impacts, the City will conduct project activities for no more than ten hours per day on weekdays only, which will minimize interference with heavier use of the beach by the public on weekends. Any project-related lighting needed will be directed downward and inward towards the work areas to the extent feasible as needed for safety. Project vehicles will access the weir box area by using an existing public bikeway along the beach. This will result in minor and short-term reductions of public access, but will also reduce potential effects on nearby sensitive species, as described above in Section E. While these would represent impacts to access, recreation, and visual resources, these temporary impacts are relatively minor and are consistent with Chapter 3 policies.

Over the longer term, and as described above in Section IV.D, the project will result in a smaller weir box than is there currently – about 128 square feet instead of the current 161 square feet – and a permanent reduction in the amount of riprap currently present on areas of the beach used by the public – about 1,482 square feet compared to a current 1,649 square feet. Although these reductions will result in a small improvement over the current condition, the relocated weir box structure will result in adverse impacts on public access and recreation due to the materials being placed in an area of sandy beach that currently has no structures and is available for recreational use; To estimate the recreational value lost due to this area being covered by the new weir box, the Commission’s coastal engineer, Dr. Lesley Ewing, applied a beach access and recreation valuation model¹⁸ that uses the value of a day at the beach (consumer surplus) and attendance density to determine a beach recreation value with and without the project. The main project impacts that affect recreational value are changes in available beach area and crowding.

Based on those calculations, the area lost due to being covered by the weir box has a recreational day use value of \$76,467.12 over a twenty-year period, or about \$3,800 per year, and can also be described as about 100 fewer beach users per year. The riprap that is protecting the new weir box was not considered to be a new structure and was not included in the beach valuation because it will be relocated from where it is protecting part of the intake system elsewhere on the beach. In addition, the total beach coverage by the rock will be reduced by 169 square feet, which will have a positive value of beach access and recreation.

To ensure adequate protection of public access, [Special Condition 2](#), in addition to ensuring the riprap remains where it is needed to protect the proposed development, will ensure that the hardened footprint on the beach will not expand beyond the approved area into areas available for access and recreation. In addition, [Special Condition 10](#) requires the City to submit, for Executive Director review and approval, a public access amenity proposal that provides access improvements and/or amenities that are roughly equal to recreational day use values lost due to the presence of the new weir box – i.e., approximately \$76,467 and/or 100 people per year.

With [Special Conditions 2](#) and [10](#) incorporated, impacts to visual resources and public access from the proposed repair and maintenance project will be minimized where feasible. Nonetheless, its long-term impacts to public access and recreation are inconsistent with Coastal Act policies that require maximization of public access to the coast. However, such access impacts are minimized to the extent feasible through designing the riprap to cover as small an area as feasible, requiring future consideration of modifications or removal of project components if sea level rise causes the facility to no longer be operable, and by including the other measures described above. Because the project is a coastal-dependent facility, it is approvable under the Section 30235 override provision, even though some access-related impacts exist.

¹⁸ King, P. et al. (2015) [Improved Valuation of Impacts to Recreation, Public Access, and Beach Ecology from Shoreline Armoring in California](#), San Francisco State University CC-13-22, June 30, 2015

V. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096(a) of the Commission's administrative regulations requires Commission approval of coastal development permit applications to be supported by a finding showing the application, as conditioned by any conditions of approval, 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.

The proposed project has the potential to result in significant adverse environmental impacts to a number of coastal resources. The Commission has identified and adopted ten special conditions necessary to avoid, minimize, or mitigate these impacts. With the inclusion of these special conditions, the Commission finds that, within the meaning of the California Environmental Quality Act of 1970, there are no further feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the proposed project may have on the environment. Therefore, the proposed project, as conditioned, has been adequately mitigated and is determined to be consistent with CEQA.

APPENDICES

Appendix A – Substantive File Documents

City of Santa Barbara, Coastal Development Permit Application #9-19-1250, December 2019.

City of Santa Barbara, Coastal Development Permit Application #9-14-1781, and associated submittals, March through December 2014.

City of Santa Barbara, California Environmental Quality Act, Addendum to Environmental Impact Report, June 10, 2015.

California Coastal Commission, Coastal Development Permit #4-96-119, issued to the City of Santa Barbara for long-term operation of the Charles E. Meyer Desalination Facility, October 11, 1996.

California Coastal Commission, Coastal Development Permit #4-91-18, issued to the City of Santa Barbara for temporary operation (up to 5 years) of the Charles E. Meyer Desalination Facility, May 9, 1991.