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Staff:	W. Horn-V
Staff Report:	12/17/20
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STAFF REPORT: REGULAR CALENDAR

Application No.:	**4-19-0339**
Applicant:	**Carpinteria Sanitary District**
Agent:	Stantec Consulting Services, Inc.
Location:	5300 Sixth Street, City of Carpinteria, Santa Barbara County
Project Description:	Retention of embankment repairs constructed pursuant to Emergency Coastal Development Permit G-4-18-0024, including 10 linear feet of 1-ton gradation grouted rip rap and 170 linear feet of ½-ton gradation un-grouted rip rap. The proposed project also includes the removal of 200 linear feet of H-piles and steel plating, and replacement with 250 linear feet of corrugated sheet pile with 1,110 square feet of concrete fill, as well as planting of native riparian vegetation.
Staff Recommendation:	Approval with conditions.

SUMMARY OF STAFF RECOMMENDATION

Commission staff recommends that the Commission **approve** coastal development permit application (CDP) 4-19-0339 with the following nine (9) special conditions: (1) Riparian Habitat and Restoration Plan, (2) Length of Development Authorization, (3) Assumption of Risk, (4) Required Approvals, (5) Right of Entry, (6) Removal of

Excavated Material, (7) Sensitive Species Surveys, (8) Best Management Practices, and (9) Sensitive Aquatic Species Protection Plan.

The Carpinteria Sanitary District (CSD) is proposing to retain its existing embankment located in Carpinteria Creek and to authorize new repairs to it. The embankment protects the existing wastewater treatment plant (WWTP), and it was damaged by debris flows caused by the Thomas Fire and an extreme rain event. In December 2017 the Thomas Fire burned large areas of Ventura and Santa Barbara Counties until it was eventually contained in mid-January 2018. On the morning of January 9, 2018, while the Thomas Fire was still burning, an extreme rain event occurred over portions of Ventura and Santa Barbara Counties and quickly led to a series of debris flows within the watersheds of the area, including Carpinteria Creek. This caused significant damage to natural habitats and development in the area. Following the events of the debris flow, CSD staff determined that that while the embankment was relatively intact, the sheet pile and footing had been severely damaged and undermined at several locations. This represented a significant vulnerability that could result in failure of the embankment and threaten the stability of the WWTP.

As such, pursuant to a request by CSD, on October 18, 2018 the Executive Director issued Emergency Permit No. G-4-18-0024 for temporary stabilization of the embankment consisting of the: placement of 1-ton gradation grouted rip rap for a distance of 10 feet, installation of H-piles and steel plating along 200 feet, and placement of ½-ton gradation un-grouted rip rap along 170 feet. Following the completion of engineering investigations, in April 2019 CSD submitted the subject application to retain the 1-ton gradation grouted rip rap and the ½-ton gradation un-grouted rip rap. The subject application also seeks authorization for removal of the H-piles and steel plating installed pursuant to the emergency permit, and replacement with 250 feet of corrugated sheet pile with 1,110 sq. ft. of concrete fill, as well as planting native riparian vegetation within the project area **(Exhibit 3)**.

Pursuant to information provided by the applicant, the proposed repairs to the embankment have been designed with a projected 75-year life. The Commission's Sea Level Rise (SLR) Guidance identifies wastewater treatment plants, such as the subject WWTP, as critical infrastructure and typically recommends considering a longer time frame of 100 years or more, as well as the extreme sea level rise scenario.

A coastal hazards analysis provided by the applicant concluded that with the repairs, the embankment footing is estimated to be able to withstand, and the WWTP should be safe from, 5 feet of SLR in conjunction with a 100-year storm. This is approximate to a Medium-High Risk Aversion Scenario through the year 2080, or a 60-year design life. Additionally, engineering and alternatives analyses presented by the applicant indicate that other, longer-lasting embankment protection designs would likely require substantial reconstruction and would likely have greater impacts to the stream and riparian habitats within Carpinteria Creek. Lastly, such designs would require considerable time and funding to plan and implement. But the WWTP must be protected as soon as possible to continue to provide wastewater treatment services and to avoid failure of the embankment and subsequent impacts to resources.

In order to allow the District to protect the WWTP while planning for a longer term embankment protection or other adaptation strategy, the Commission believes that a 20-year authorization period is appropriate in this case. This authorization term ensures safety through 2040 under even the worst-case-scenario sea level rise projections. Thus, **Special Condition Two (2)** authorizes the proposed repairs on a temporary basis for twenty years to allow for the continued operation and function of the WWTP, including to protect water quality and public health, while simultaneously allowing time to plan for future coastal hazard risks. **Special Condition Two (2)** requires the applicant to return to the Commission and submit an application for a CDP amendment and updated hazards report to either remove the permitted development or modify the development as necessary, and explore feasible alternatives. Finally, considering the aforementioned hazard, **Special Condition Three (3)** requires the applicant to assume the risks of hazards to the property and waive any claim of liability on the part of the Commission.

The project is necessary to protect existing development from flooding and the applicant explored a total of four alternatives in addition to the proposed project and determined that the proposed design is the least environmentally damaging alternative while still being able to sufficiently protect the WWTP. Regarding mitigation measures to lessen impacts, **Special Condition One (1)** requires the applicant to submit a Riparian Habitat Mitigation and Restoration Plan for all areas of the site impacted or displaced by the development. Additionally, Carpinteria Creek contains habitat for a variety of sensitive animals and plants and **Special Condition Nine (9)** requires the applicant to retain the services of an environmental specialist to monitor for and ensure avoidance of impacts to sensitive aquatic species while **Special Condition Seven (7)** requires the applicant to retain the services of an environmental resource specialist to monitor for and ensure avoidance of impacts to sensitive terrestrial species.

Lastly, in addition to mitigating for impacts to species, the applicant has indicated that turbidity curtains will be utilized to minimize disturbance to the water quality of the creek and machinery and equipment will operate from the existing paved area of the WWTP, located outside of the creek. Nonetheless, there is still a possibility that debris, fuels or other hazardous materials could enter the creek environment and degrade water quality, therefore, **Special Condition Eight (8)** requires the implementation of Best Management Practices while **Special Condition Six (6)** requires excavated material to be disposed of at an appropriate location. While these mitigation measures and conditions minimize impacts consistent with Section 30236, they will also protect the water quality of Carpinteria Creek consistent with Section 30231.

Although the Commission has previously certified a Local Coastal Program (LCP) for the City of Carpinteria, portions of the proposed project will be located within an area where the Commission has retained jurisdiction over the issuance of coastal development permits. Pursuant to Section 30601.3 of the Coastal Act, a consolidated permit was requested by the applicant and the City of Carpinteria, and the Executive Director agreed to consolidate the permit action. Thus, the standard of review for this project is the Chapter Three policies of the Coastal Act, with the applicable policies of

the City of Carpinteria LCP used as guidance. As conditioned, the project is consistent with the Chapter Three policies of the Coastal Act. Therefore, Staff recommends that the Commission **approve** CDP No. 4-19-0339 with the proposed conditions. The **motion** and **resolution** to adopt the staff recommendation of approval of the permit can be found on **page 6**.

Table of Contents

APPENDICES

EXHIBITS

I. MOTION AND RESOLUTION

Motion:

I move that the Commission approve Coastal Development Permit 4-19-0339 subject to conditions set forth in the staff recommendation.

Staff Recommendation of Approval:

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 Commissioners present.

Resolution to Approve the Permit:

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

II. STANDARD CONDITIONS

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

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

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

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

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

III. SPECIAL CONDITIONS

1. Riparian Habitat Mitigation and Restoration Plan

Prior to issuance of the Coastal Development Permit, the applicant shall submit, for the review and approval of the Executive Director, a detailed Riparian Habitat Mitigation and Restoration Plan. It shall be prepared by a biologist or environmental resource specialist with qualifications acceptable to the Executive Director, for all areas of habitat in the project site that are 1) temporarily disturbed by grading and construction activities or 2) permanently displaced due to project activities, including the installation of rip-rap, concrete, and other armoring.

Within 60 days of the completion of construction, the applicant shall commence implementation of the approved riparian habitat restoration and mitigation plan. The Executive Director may grant additional time for good cause. The plans shall identify the species, extent, and location of all plant materials to be removed or planted and shall incorporate the following criteria:

A. Technical Specifications

The Restoration Plan shall provide for the following:

i. Disturbed off-site riparian habitat shall be restored to provide mitigation for all areas of habitat in the project footprint that are permanently displaced by the proposed development, including the approximately 3,025 sq. ft. area where rip-rap, concrete, and other armoring will be placed, at a ratio of 3:1. Therefore, the plan shall identify a minimum of 9,075 square feet (0.208 acres) of off-site riparian habitat restoration. The mitigation shall be implemented in a suitable location off-site, subject to the review and approval of the Executive Director, that is restricted in perpetuity from development or is public parkland. The mitigation area shall be delineated on a site plan and shall be located within the coastal zone of the City of Carpinteria, and preferably within the Carpinteria Creek Watershed. All invasive and non-native plant species shall be removed from the mitigation area. The restoration plan for off-site mitigation may be prepared and implemented in consultation with South Coast Habitat Restoration (SCHR), or another entity acceptable to the Executive Director.

ii. All areas within the the project site where riparian vegetation has been temporarily disturbed or removed due to construction activities, shall be revegetated at a ratio of 1:1. The project area, including areas of un-grouted rip rap and corrugated sheetpile with concrete backfill, shall be revegetated with native riparian species, including grasses and trees. Only native plant

species that are appropriate for a riparian habitat area shall be planted. All invasive and non-native plant species shall be removed from the project site.

iii. The plan shall specify restoration goals and specific performance standards to judge the success of the restoration effort. The plan shall also provide information on removal methods for exotic species, salvage of existing vegetation, revegetation methods and vegetation maintenance. The plan shall further include details regarding the types, sizes, and location of plants to be placed within the mitigation and revegetation areas. Only native plant species appropriate for a riparian environment and which are endemic to the Carpinteria Creek watershed shall be used. All plant species shall be of local genetic stock. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or by the State of California shall be employed or allowed to naturalize or persist on the site. No plant species listed as a “noxious weed” by the State of California or the U.S. Federal Government shall be utilized or maintained within the property. Successful site restoration shall be defined as revegetation of native plant species onsite that is adequate to provide 90% coverage by the end of the five (5) year monitoring period and is able to survive without additional outside inputs, such as supplemental irrigation. The plan shall also include a detailed description of the process, materials and methods to be used to meet the approved goals, performance standards, the preferable time of year to carry out restoration activities, and a description of the interim supplemental watering requirements that will be necessary.

B. Monitoring Program

i. A monitoring program shall be implemented to monitor the riparian habitat restoration/revegetation for compliance with the specified guidelines and performance standards. The applicant shall submit, upon completion of the initial planting, a written report prepared by a qualified resource specialist, for the review and approval of the Executive Director, documenting the completion of the initial planting/revegetation work. This report shall also include photographs taken from pre-designated sites (annotated to a copy of the site plans) documenting the completion of the initial planting/revegetation work.

ii. Five years from the date of issuance of this coastal development permit, the applicant shall submit for the review and approval of the Executive Director, a Riparian Habitat Restoration Monitoring Report, prepared by a qualified biologist or Resource Specialist, that certifies the off-site restoration/mitigation and onsite revegetation is in conformance with the restoration plan approved pursuant to this Special Condition. The monitoring report shall include photographic documentation of plant species and plant coverage.

iii. If the monitoring report indicates the vegetation and restoration is not in conformance with, or has failed to meet, the performance standards specified in the restoration plan approved pursuant to this permit, the applicant, or its successors in interest, shall submit a revised or supplemental restoration plan

for the review and approval of the Executive Director. The revised restoration plan must be prepared by a qualified biologist or resource specialist and shall specify measures to remediate those portions of the original plan that have failed or are not in conformance with the original approved plan.

2. Length of Development Authorization

A. The approved development is authorized for 20 years from the date of approval [i.e., through January 13, 2041]. By acceptance of this CDP, the Applicant acknowledges and agrees that the development authorized pursuant to this CDP is thus interim and temporary, and is permitted for the time frame identified in order to provide a reasonable period of time for the Permittee to evaluate future risk of coastal hazards as influenced by sea level rise and to plan, develop, and implement any necessary responses to coastal hazards including adaptation or relocation alternatives, to ensure minimization of risk in the long term, and to address any coastal resource impacts associated with maintaining the subject development at this location (e.g., impacts associated with any coastal hazards protection measures, such as flood wall or embankment maintenance or expansion).

B. Prior to the expiration of the authorization period of the development (i.e., before January 13, 2041), the Permittee or its successors shall submit to the Commission an application for a CDP amendment to either (a) remove the approved development in its entirety and restore the affected areas to their pre-development condition, or (b) extend the length of time the development is authorized and modify its design as needed to ensure consistency with the Coastal Act. If a complete application is filed before the end of the authorization period, the authorization period shall be automatically extended until the time the Commission acts on the application.

C. The required amendment application shall conform to the Commission's permit filing regulations at the time and shall at a minimum include, along with other required information, a Coastal Hazards Analysis and Adaptation Plan that provides a clear long-term plan to ensure that the approved development minimizes flood hazard risks to the wastewater treatment plant through at least the year 2100. The plan shall include:

   i. Information on flood conditions and other coastal hazards in the project area obtained through periodic monitoring and recording of conditions in the project area during extreme tide and storm events. The information should include an assessment of cumulative changes to the approved development's coastal hazard risk over time.

   ii. A geotechnical analysis of current and future coastal hazards in the project area taking into account local sea level rise, considering medium-high risk aversion and extreme (H++) risk aversion scenarios, and based on the best available science at the time of plan preparation. The analysis shall address flooding associated with large storm events (the 100-year storm or greater), accounting for the confluence of riverine and coastal flooding.

iii. An engineering analysis evaluating the impacts of flooding and other coastal hazards [as determined in the geotechnical analysis in (ii) above] through at least the year 2100 on the development and the wastewater treatment plant.

iv. An evaluation of alternatives to the development approved in the subject CDP and wastewater treatment plant to address any coastal hazard vulnerabilities identified, including but not limited to alternatives involving interim flood-proofing measures (e.g. design changes to the permitted development elevation of wastewater treatment plant structures) as well as relocation of the wastewater treatment plant over the longer-term to an area safe from flooding and other coastal hazards. The information concerning these alternatives must be sufficiently detailed to enable the Coastal Commission to evaluate the feasibility of each alternative for addressing consistency with the Coastal Act, including whether the alternatives minimize risks from coastal hazards and assure stability and structural integrity; and how the alternatives impact coastal resources. The analysis shall include a feasibility analysis of the alternatives that evaluates and considers all potential constraints, including geotechnical and engineering constraints, potential phasing options with timelines, project costs, and potential funding options.

v. A plan for protecting, adapting, relocating, or otherwise changing the current development and the wastewater treatment plant if necessary to maintain safety from flooding and other coastal hazards at defined times beyond the initial 20-year authorization (e.g. 2061, 2071, etc.) or in response to defined triggers in order to minimize risk and assure stability and structural integrity in the long-term (at least through the year 2100), including expected timeframes for any necessary land acquisition, planning, permitting, design, and construction.

3. Assumption of Risk

A. By acceptance of this permit, the Permittee acknowledges and agrees (a) that the site may be subject to hazards, including but not limited to erosion, and flooding; (b) 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; (c) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (d) 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.

B. Prior to the issuance of this 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.

4. Required Approvals

By acceptance of this permit, the applicant agrees to obtain all other State or Federal permits that may be necessary for any aspect of the proposed project (including permits from the California Department of Fish and Wildlife, Regional Water Quality Control Board and the U.S. Army Corps of Engineers). Any proposed changes to the approved final plan that may be required by any other agency shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

5. Right of Entry

Prior to the issuance of this Coastal Development Permit, the applicant shall submit to the Executive Director for review and written approval, evidence of a Right of Entry (ROE) from the California Department of Parks and Recreation (Parks). The ROE shall reflect Parks' consent to the applicant's development, as conditioned by this permit, of portions of the grouted rip rap located on Parks' property.

6. Removal of Excavated Material

Prior to issuance of the Coastal Development Permit, the applicant shall provide evidence to the Executive Director of the location of the disposal site for all excess excavated material from the site. If the disposal site is located in the Coastal Zone, the disposal site must have a valid coastal development permit for the disposal of fill material. If the disposal site does not have a coastal permit, such a permit will be required prior to the disposal of material.

7. Sensitive Species Surveys

The applicant shall retain the services of a qualified biologist or environmental resource specialist (hereinafter, "environmental resources specialist") with appropriate qualifications acceptable to the Executive Director, to conduct surveys of sensitive species (including birds and other terrestrial and marine species) and to monitor all project operations. At least 30 calendar days prior to commencement of any project activities, the applicant shall submit the name and qualifications of the environmental resource specialist, for the review and approval of the Executive Director. The applicant shall have the environmental resource specialist ensure that all project activities are carried out consistent with the following:

A. The environmental resource specialist shall conduct surveys of sensitive species (e.g. raptors, California least tern, black-crowned night herons, great blue herons, snowy egrets, or other sensitive species) no more than

two weeks before any project activities to detect any active sensitive species, reproductive behavior, and active nests within 500 feet of the project site. Follow-up surveys must be conducted 3 calendar days prior to the initiation of construction. The environmental resource specialist shall be onsite during project activities to observe/identify any sensitive species/breeding behavior/nests active within 300 feet (500 feet for raptors/owls) of any project activities.

B. In the event that any sensitive species are present in the project area but do not exhibit reproductive behavior and are not within the estimated breeding/reproductive cycle of the subject species, the environmental resource specialist shall implement a resource avoidance program with sufficient buffer areas to ensure adverse impacts to such resources are avoided. The applicant shall also immediately notify the Executive Director of the presence of such species and which of the above actions are being taken. If the presence of any such sensitive species requires review by the United States Fish and Wildlife Service and/or the California Department of Fish and Wildlife, then no development activities shall be allowed or continue until any such review and authorizations to proceed are received from the relevant agency, subject to the approval of the Executive Director.

C. If an active nest of a federally or state-listed threatened or endangered species, bird species of special concern, or any species of raptor or heron is found, the applicant shall notify the appropriate State and Federal agencies within 24 hours, and shall develop an appropriate action specific to each incident. The applicant shall notify the California Coastal Commission in writing by facsimile or e-mail within 24 hours and consult with the Commission regarding determinations of State and Federal agencies.

D. If an active nest of any federally or state listed threatened or endangered species, species of special concern, or raptor, least tern, blackcrowned night heron, great blue heron, snowy egret, or other sensitive species is found within 300 feet of construction activities (500 feet for raptors), the applicant shall retain the services of an environmental resources specialist with experience conducting bird and noise surveys, to monitor bird behavior and construction noise levels. The applicant shall ensure that the environmental resources specialist is present at all relevant construction meetings and during all significant construction activities (those with potential noise impacts) to ensure that nesting birds are not disturbed by construction related noise. The applicant shall ensure that the environmental resources specialist shall monitor birds and noise during all periods of project activities. Activities may occur only if construction noise levels are at or below a peak of 65 dB at the nest site(s). If construction noise exceeds a peak level of 65 dB at the nest site(s), sound mitigation measures such as sound shields, blankets around smaller equipment, mixing concrete batches off-site, use of mufflers, and minimizing the use of

back-up alarms shall be employed. If these sound mitigation measures do not sufficiently reduce noise levels, construction within 300 ft. (500 ft. for raptors) of the nesting trees/areas shall cease and shall not recommence until either new sound mitigation can be employed or nesting is complete.

E. The applicant shall ensure that the environmental resources specialist is present during all project activities. If the environmental resource specialist becomes aware of any breach in permit compliance or any unforeseen sensitive habitat issues, the environmental resources specialist shall so inform the applicant, and the applicant will cease work. If significant impacts or damage occur to sensitive habitats or to wildlife species, the applicant shall be required to develop and implement a revised, or supplemental, program to adequately mitigate such impacts. The revised, or supplemental, program shall be submitted to the Executive Director for review and approval.

F. For the purpose of this special condition, “sensitive species” shall be taken to mean any special-status wildlife species. Special-status species are species listed as: Endangered, Threatened, or Rare under the federal or state Endangered Species Acts; Candidate Species, California Fully Protected Species, and, pursuant to CEQA Guidelines Section 15380(d), all other species tracked by the California Natural Diversity Database (CNDDB), which are considered by the California Department of Fish and Wildlife to be those species of greatest conservation concern; and locally important species including raptors, herons, and songbirds.

8. Best Management Practices

By acceptance of this permit the applicant agrees to comply with the following construction related requirements:

A. Work shall be confined to the time period between June 1 – October 31, which is during the dry season and outside the estimated peak period of tidewater goby spawning and the outside the non-migration period of steelhead trout. If the situation warrants a limited extension, this period may be extended for a limited period of time if approved by the Executive Director.

B. No construction material, debris, or waste shall be placed or stored where it may enter sensitive habitat, receiving waters, or be subject to wind, rain, or other erosion or dispersion. Any and all debris resulting from construction activities shall be removed immediately. Any debris inadvertently discharged into coastal waters shall be recovered immediately and disposed of consistent with the requirements of this coastal development permit.

C. Construction vehicles shall be restricted to designated haul routes. Construction equipment and materials shall be stored only in designated staging locations

within paved areas of the wastewater treatment plant (WWTP). Equipment shall not be in contact with coastal waters at any time.

D. Any fueling and maintenance of construction equipment shall occur within upland areas outside of environmentally sensitive habitat areas or within designated staging areas. Mechanized heavy equipment and other vehicles used during the construction process shall not be refueled or washed within 100 feet of coastal waters.

E. Fuels, lubricants, and solvents shall not be allowed to enter coastal waters, sensitive habitat, or wetlands. Hazardous materials management equipment including oil containment booms and absorbent pads shall be available immediately on-hand at the project site, and a registered first-response, professional hazardous materials clean-up/remediation service shall be locally available on call. Any accidental spill shall be rapidly contained and cleaned up.

F. Best Management Practices (BMPs) shall be implemented to control erosion from the disturbed area and prevent sediment and potential pollutants from entering coastal waters and/or sensitive habitat.

G. Non-native or invasive plant species shall be removed by hand where feasible, and herbicide use shall be prohibited.

9. Sensitive Aquatic Species Protection Plan

The applicant shall retain the services of a qualified biologist or environmental resource specialist with experience handling tidewater gobies or other sensitive aquatic species and with the requisite permit(s) and experience in the application of standard survey, capture, and handling methods for tidewater gobies and other sensitive aquatic species. At least 30 days prior to commencement of any onset of work, the applicant shall submit the name and qualifications of the qualified biologist or environmental resources specialist, for the review and approval of the Executive Director. When project activities are occurring while there is water in the lower reaches of the creek, the applicant will exclude tidewater gobies and other sensitive aquatic species from the project area by following the actions:

A. The applicant shall ensure that the qualified biologist or environmental resource specialist retained by the applicant conducts a training session for all operations and maintenance personnel prior to the onset of work. The training shall include a description of the tidewater goby, southern steelhead, and other sensitive aquatic species; their habitats; the specific measures that are being implemented to protect sensitive aquatic species during project activities; and the project limits.

B. The applicant shall ensure that the qualified biologist or environmental resource specialist and a crew working under his/her direction clears all fish, including tidewater gobies, from the area to be disturbed for project activities. The capture, handling, exclusion, and relocation activities identified by the qualified biologist or

environmental resource specialist will be completed no earlier than 48 hours before project activities begin in order to minimize the probability that listed species will recolonize the affected areas during the work.

C. Following project activities, and annually for the duration of the permit, the applicant shall ensure that a qualified biologist or environmental resource specialist completes post project activity surveys, for the review of the Executive Director, for tidewater gobies and other sensitive aquatic species.

IV. FINDINGS AND DECLARATIONS

A. Project Description and Background

The proposed project is a repair of a concrete embankment located along the western bank of Carpinteria Creek, beginning approximately 800 feet upstream of where Carpinteria Creek exits into the Pacific Ocean **(Exhibit 2)**. The embankment comprises the eastern boundary of a wastewater treatment plant (WWTP) owned and operated by the Carpinteria Sanitary District (CSD), a municipal wastewater entity that serves the greater Carpinteria Valley, which includes the City of Carpinteria and portions of unincorporated Santa Barbara County. The existing embankment protects the WWTP from heavy flows within Carpinteria Creek by deflecting water away from the WWTP as it flows downstream and toward the ocean. The proposed project is designed to repair damage sustained by the foundation of the embankment that occurred following the Thomas Fire in December 2017 and a subsequent debris flow event on January 9, 2018.

The Thomas Fire was a large wildfire that began on December 4, 2017, in unincorporated Ventura County and grew to encompass an area of 281,893 acres in both Ventura and Santa Barbara Counties until it was 100 percent contained on January 12, 2018. On the morning of January 9, 2018, while the Thomas Fire was still burning, an extreme rain event resulted in an estimated 0.5 inches of rainfall within a five-minute period. Because the area had recently burned, the extreme rain event quickly led to a series of debris flows within the watersheds of the area, including Carpinteria Creek, and caused significant damage to natural habitats and development in the area.

The CSD wastewater treatment plant and the concrete embankment were constructed in the 1960s prior to the passage of Proposition 20 and the Coastal Act. The embankment is approximately 400 feet long and is comprised of a series of concrete filled sacks topped with a uniform layer of concrete. At the base of the embankment, corrugated sheet pile had been installed five feet from the toe over a length of 344 feet and backfilled with concrete to create a five-foot-wide footing. Following the debris flow, the embankment was completely covered in mud and debris. CSD staff were concerned that the embankment and footing had possibly sustained damage; however, due to the accumulation of sediment from the debris flow they were unable to assess the extent of any potential damage.

In May 2018 the Commission approved Waiver No. 4-18-0303-W, which allowed the CSD to remove soil, vegetation, and debris from the stream in order to assess the condition of the embankment and the sheet pile foundation. That investigation found that while the embankment was relatively intact, the sheet pile and footing had been severely damaged and undermined at several locations. Through the investigation, it was also determined that the damage and voids to and within the footing represented a significant vulnerability that could result in failure of the embankment and threaten the stability of the WWTP.

With the information obtained from the investigation, the CSD then began exploring permanent repairs for the embankment footing. However, as of October 2018, the CSD did not have a feasible permanent repair design identified. Considering the approaching Winter 2018 rainy season and anticipated high water flows within Carpinteria Creek, the CSD was concerned that a final design to repair the embankment would not be ready in time to protect the WWTP. As such, on October 18, 2018, the Executive Director issued Emergency Permit No. G-4-18-0024 for temporary stabilization of the embankment consisting of: placement of 1-ton gradation grouted rip rap for a distance of 10 feet at the northernmost end of the embankment, installation of H-piles and steel plating along 200 feet of the middle portion of the embankment, and placement of ½-ton gradation un-grouted rip rap along the downstream 170 feet of the embankment .

The temporary stabilization authorized in Emergency Permit No. G-4-18-0024 successfully withstood the 2018-2019 rains and in April, 2019 the CSD submitted the subject application to retain the 1-ton gradation grouted rip rap (total area of 1,155 sq. ft.) and the ½-ton gradation un-grouted rip rap (total area 1,260 sq. ft.). The subject application also includes removal of the H-piles and steel plating installed pursuant to the emergency permit, and replacement with 250 feet of corrugated sheet pile with 1,110 sq. ft. of concrete fill as well as planting of native riparian vegetation **(Exhibit 3)**.

B. Project Jurisdiction and Consolidated Review

The proposed project includes components that are located within the City of Carpinteria Local Coastal Program (LCP) jurisdiction, as well as components within the retained jurisdiction of the Coastal Commission. The City of Carpinteria would typically have jurisdiction over the portions of the project within its respective LCP jurisdiction. However, Section 30601.3 of the Coastal Act authorizes the Commission to process a consolidated coastal development permit application, when certain criteria are satisfied, for the entirety of a proposed project that would otherwise require separate coastal development permits from both a local government with a certified local coastal program and the Commission.

Pursuant to Section 30601.3(a)(2), the applicant, appropriate local government, and the Commission may agree to consolidate a permit action for a project that spans local and state jurisdictions. In this case, the City of Carpinteria submitted a letter to Commission staff dated April 30, 2018, requesting that the Commission assume jurisdiction over all activities associated with the proposed project. The applicant both consented to and facilitated this consolidated jurisdictional process.

The standard of review for a consolidated coastal development permit application submitted pursuant to Section 30601.3(a) is Chapter Three of the Coastal Act (commencing with Section 30200), with the appropriate local coastal program(s) used as guidance. Thus, the standard of review for this project is the Chapter Three policies of the Coastal Act, with the applicable policies of the City of Carpinteria Local Coastal Program (LCP) serving as guidance.

C. Coastal Hazards

Section 30253 of the Coastal Act 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.
>
> …

Carpinteria Land Use Plan (LUP) Objective S-4 States:

> Minimize the potential risks and reduce the loss of life, property and economic and social dislocations from flooding.

Section 30253 of the Coastal Act and Objective S-4 of the Carpinteria Land Use Plan (LUP) mandate that new development minimize risks to life and property in areas of high geologic, flood, and fire hazard. The subject development is proposed in order to protect critical infrastructure in an area subject to both coastal and fluvial hazards that are anticipated to be exacerbated in the future due to sea level rise.

The project site is located within Carpinteria Creek in the City of Carpinteria (City). The project area includes the western bed, bank, and channel of Carpinteria Creek, upland disturbed areas, the CSD floodwall, and a portion of the paved area of the CSD facility currently used for operating and staging heavy equipment. Specifically, the project area lies approximately 800 feet upstream of where Carpinteria Creek enters the Pacific Ocean, inland of the 4th Street bridge and Union Pacific Railroad bridge **(Exhibit 2)**.

As previously discussed, in order to address damage resulting from debris flows that occurred in January 2018, the proposed project includes retention of repairs constructed pursuant to Emergency Coastal Development Permit G-4-18-0024, including 1-ton gradation grouted rip rap and ½-ton gradation un-grouted rip rap. It also includes removal of the H-piles and steel plating and replacing them with 250 feet of corrugated sheet pile with 1,110 sq. ft. of concrete fill.

The State of California has undertaken significant research to understand how much sea level rise to expect over this century and to anticipate the likely impacts of such sea level rise. In April 2017, a working group of the Ocean Protection Council's (OPC) Science Advisory Team released "Rising Seas in California: An Update on Sea-Level

Rise Science." This report synthesizes recent evolving research on sea level rise science, notably including a discussion of probabilistic sea level rise projections as well as the potential for rapid ice loss leading to extreme sea level rise. This science synthesis was integrated into the OPC's State of California Sea-Level Rise Guidance 2018 Update. This Guidance document provides high-level, statewide recommendations for state agencies and other stakeholders to follow when analyzing sea level rise. Notably, it provides a set of projections that OPC recommends using when assessing potential sea level rise vulnerabilities for various projects. Taken together, the Rising Seas science report and updated State Guidance account for the current best available science on sea level rise for the State of California.

The appropriate time horizon to use to evaluate sea level rise depends on the anticipated duration of development, after which such development is expected to be removed, replaced, or redeveloped. Pursuant to information provided by the applicant, the proposed repairs to the foundation of the embankment for the WWTP have been designed with a projected 75-year life. The Commission's SLR Guidance identifies wastewater treatment plants, such as the subject WWTP, as critical infrastructure and typically recommends considering a longer time frame of 100 years or more. Although the proposed repairs are intended to protect the WWTP at least through 2095, given the significant risk of public health, safety, and environmental impacts if flooding threatens the integrity of the embankment footing, and by extension the WWTP, considering such a higher risk aversion projection is appropriate in this case.

While uncertainty will remain with regard to exactly how much sea levels will rise and when, the direction of sea level change is clear, and it is critical to continue to assess sea level rise vulnerabilities when planning for future development. Importantly, maintaining a precautionary approach that considers high or even extreme sea level rise rates and includes planning for future adaptation will help ensure that decisions are made that will result in a resilient coastal California. Here, the repairs to the embankment footing constitute protection of critical infrastructure serving the public where failures could have significant coastal resource consequences. In such cases, the OPC Guidance and Coastal Commission SLR Guidance recommend that applicants understand the risks associated with the medium-high risk aversion scenario and extreme (H++) risk aversion scenario and anticipate the need to plan for those scenarios.

The OPC Guidance provides sea level rise projections for twelve California tide gauges, and recommends using the projections from the tide gauge closest to the project site. In this case, the Santa Barbara Tide Gauge is the closest. Given the range of the many uncertainties incorporated into these models, these projections are not precise, but are intended to reflect a precautionary approach. The low-risk aversion scenario is estimated to have a 17% probability of being exceeded, and the medium-high risk aversion scenario has an estimated 1 in 200 chance, or a 0.5%, probability of being exceeded. The extreme risk aversion scenario is based on the extreme ice loss scenario and does not have an associated probability at this time. The physical processes that will lead to the extreme scenario of sea level rise are predicted to be unlikely to occur before the latter part of the century. The following table depicts the

projected sea level rise at the Santa Barbara Tide Gauge under low-risk, medium-high risk, and extreme risk aversion scenarios over the 75-year project life as suggested by the applicant, and over a 100-year project life pursuant to the Commission's SLR Guidance for critical infrastructure.

Projected Sea Level Rise (in feet)			
	Low Risk Aversion	**Medium-High Risk Aversion**	**Extreme Risk Aversion**
2080	2.1	4.3	6.3
2090	2.6	5.3	7.9
2100	3.1	6.6	9.8
2110	3.2	6.9	11.5
2120	3.7	8.2	13.7

Included in the application for the project, CSD provided a memorandum prepared by an environmental scientist that analyzes the proposed repairs considering potential sea level rise (SLR) impacts using what the scientist considered best available modeling and information. That analysis concluded that with the repairs, the embankment footing is estimated to be able to withstand, and the WWTP should be safe from, 5 feet of SLR in conjunction with a 100-year storm, which is approximate to a Medium-High Risk Aversion Scenario through the year 2080. It should be noted that the report also determined that overtopping of the embankment and flooding of the WWTP could occur in scenarios of fluvial flooding within Carpinteria Creek; however, CSD and the scientist were unable to approximate what level of SLR, storm activity, and flooding is expected to result in overtopping and flooding of the WWTP.

Additionally, engineering and alternatives analyses presented by the applicant indicate that other, longer-lasting embankment protection designs would likely require substantial reconstruction and would likely have greater impacts to the stream and riparian habitats within Carpinteria Creek. Lastly, such designs would require considerable time and funding to plan and implement. But the WWTP must be protected as soon as possible to continue to provide wastewater treatment services and also avoid failure of the embankment and the subsequent impacts to resources that could result from such failure. In order to allow the District to protect the WWTP while planning for a permanent embankment protection or other adaptation strategy, the Commission believes that a 20-year authorization period is appropriate in this case. This authorization term ensures safety through 2040 under even the worst-case-scenario sea level rise projections. Thus, **Special Condition Two (2)** authorizes the proposed repairs on a temporary basis for twenty years to allow for the continued operation and function of the WWTP. This will allow the CSD to continue to protect water quality and public health, while simultaneously allowing time to plan for future coastal hazard risks.

Special Condition Two (2) specifies that prior to the expiration of the authorization period, the Permittee or its successors shall submit to the Commission an application for a coastal development permit amendment to either: (a) remove the approved development in its entirety, or (b) extend the length of time the approved development is

authorized and modify its design as needed to ensure consistency with the Coastal Act. **Special Condition Two (2)** also requires the permit amendment application to include a Coastal Hazards Analysis and Adaptation Plan that provides a clear long-term plan to ensure that the development minimizes hazard risks to the WWTP as well as to protect coastal resources over the long-term (beyond the initial 20-year authorization through at least 2100).

Pursuant to **Special Condition Two (2)**, the plan must be informed by a geotechnical analysis of current and future coastal hazards, taking into account local sea level rise through at least 2100, considering medium-high risk aversion and extreme risk aversion scenarios, and based on the best available science at the time of plan preparation. **Special Condition Two (2)** also requires the plan to include an alternatives analysis to the development to address any coastal hazard vulnerabilities identified, including but not limited to, alternatives involving design changes to the permitted development, floodproofing of wastewater treatment plant structures, and relocation of the WWTP to an area safe from flooding and other coastal hazards.

Given that the WWTP comprises critical infrastructure serving the public where flooding could have significant coastal resource consequences, it is critical to coordinate the shorter-term development authorization with the longer-term effort in order to ensure the safety and functionality of the WWTP into the more distant future. The OPC Guidance and Coastal Commission Guidance recommend that applicants understand the risks associated with higher sea level rise projections and develop adaptation pathways for those higher scenarios, even if projects are initially designed for lower projections. **Special Condition Two (2)** requires the Applicant to analyze and plan for longer-term, higher-projection risks consistent with OPC guidance. With these conditions in place, the proposed development will minimize flooding risk to the WWTP and protect coastal resources consistent with the requirements of the Coastal Act.

Finally, considering the aforementioned hazards, the Commission also requires **Special Condition Three (3)**, which requires the Permittee to assume the risks of flooding and other hazards to the property and waive any claim of liability on the part of the Commission. Given that the Permittee has chosen to implement the project despite risks from hazards, the Permittee must assume the risks. **Special Condition Three (3)** notifies the Permittee that the Commission is not liable for damage as a result of approving the permit for development. The condition also requires the Permittee to indemnify the Commission in the event that third parties bring an action against the Commission as a result of the failure of the development to withstand the hazards or harm caused as a result of the failure of the development to withstand hazards.

Therefore, for all of the above reasons, the Commission finds that the proposed project, as conditioned, will minimize risk to life and property from hazards, consistent with section 30253(a) of the Coastal Act and Object S-4 of the certified LCP.

D. Environmentally Sensitive Habitat Area and Water Quality

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 30236 of the Coastal Act States:

> Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.

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.

Section 30107.5 of the Coastal Act States:

> "Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

Carpinteria Land Use Plan (LUP) Policy OSC-6c States:

> When alterations to creeks are permitted by the Coastal Act and policies herein, the creek shall be protected by only allowing creek bank and creek bed alterations where no practical alternative solution is available, where the best mitigation measures feasible have been incorporated, and where any necessary State and federal permits have been issued. Creek alterations should utilize natural creek alteration methods where possible (e.g. earthen channels, biotechnical stabilization). Nothing in this policy shall be construed to require the City to approve creek alterations not otherwise allowed herein and by the Coastal Act.

Carpinteria Land Use Plan (LUP) Policy OSC-6d States:

> Carry out and maintain all permitted construction and grading within stream corridors in such a manner so as to minimize impacts on biological resources and water quality such as increased runoff, creek bank erosion, sedimentation, biochemical degradation, or thermal pollution.

Carpinteria Land Use Plan (LUP) Implementation Policy 28 States:

> Prohibit all development within stream corridors except for the improvement of fish and wildlife habitat, development necessary for flood control purposes, (where no other method to protect existing structures in the floodplain is feasible and where protection is necessary for public safety), and bridges and trails (where no alternative route/location is feasible and, when supports are located within stream corridor setbacks, such locations minimize impacts on critical habitat). All development shall incorporate the best mitigation measures feasible to minimize impact to the greatest extent.

Carpinteria Land Use Plan (LUP) Implementation Policy 29 States:

> Limit all development within stream corridors, including dredging, filling and grading, to activities necessary for the construction specified in policy # 28 (see above) and to public hiking/biking and equestrian trails. When such activities require removal of riparian plant species, revegetation with local native riparian plants shall be required. Minor clearing of vegetation may be permitted for hiking/biking and equestrian trails.

Carpinteria Land Use Plan (LUP) Implementation Policy 30 States:

> Prohibit further concrete channelization or other major alterations of streams in the city with the exception of natural habitat enhancement projects, or when the City finds that such action is necessary to protect existing structures and that there are no less environmentally damaging alternatives. Where alteration is permitted, best feasible mitigation shall be a condition of the project.

30231 of the Coastal Act and Policy OSC-6d of the certified LCP mandate that coastal water quality shall be maintained and, where feasible, restored through, among other means, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flows, and minimizing alteration of natural streams. Section 30236 limits channelizations, dams, or other substantial alterations of rivers and streams to flood control projects necessary to protect public safety and existing development and two other types of projects, any of which must incorporate the best mitigation measures available and where there are no feasible alternatives. In addition, Section 30240 of the Coastal Act states that environmentally sensitive habitat areas shall be protected and that development within or adjacent to such areas must be designed to prevent impacts which could significantly degrade those resources. Similarly, Carpinteria LUP policy OSC-6c and Implementation Policies 28, 29, and 30

limit development within riparian environments and require that allowable development is the least environmentally damaging alternative while incorporating the best mitigation measures feasible.

The WWTP site was historically used for farming and/or agriculture as late as 1947. The WWTP was built and began operating in 1951. By 1967 the WWTP expanded, and residential development was present upstream and around the project footprint; however, vegetation located directly adjacent to Carpinteria Creek remained present.

Carpinteria Creek originates in the Santa Ynez Mountains, continues for seven miles through foothills and coastal terrace areas, then eventually reaches the Pacific Ocean. Carpinteria Creek is distinct from other creeks within 100 miles north and south, as it is one of the few perennially flowing streams, even in drought years. This creek is located in the Carpinteria Creek watershed, which is one of approximately 50 sub-watersheds that comprise the South Coast Watershed. The South Coast Watershed is the southernmost hydrologic unit within the Central Coast Basin.

Native trees that are known to exist in the upper portion of the creek include white alder (*Alnus rhombifolia*), California sycamore (*Platanus racemosa*), black cottonwood (*Populus trichocarpa*) and coast live oak (*Quercus agrifolia*), and in the lower watershed include California sycamore, southern walnut (*Juglans californica*) and arroyo willow (*Salix lasiolepis*). Carpinteria Creek is free flowing and provides habitat for fish, aquatic invertebrates, waterfowl, and other terrestrial and aquatic species. Carpinteria Creek also provides for the transport of sediments and nutrients that sustain biological communities. The tidal estuary that occurs immediately downstream and southwest of the project area provides habitat for many species, including federally listed endangered tidewater goby (*Eucyclogobius newberryi*). Within the project area, Carpinteria Creek contains a natural bottom (including fines and gravel) and supports riparian habitat. Carpinteria Creek also contains breeding populations of listed wildlife species such as tidewater goby and Southern California steelhead trout, as well as other species of federal, state, and local concern.

Environmentally sensitive habitat area (ESHA) is defined by Section 30107.5 of the Coastal Act as “any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments”. Carpinteria Creek, including the area of the proposed project, meets the definition of ESHA per Section 30107.5 due to the presence of the rare and valuable vegetation and species discussed above. Additionally, Carpinteria Creek is designated as ESHA pursuant to the certified City of Carpinteria LCP.

As described above, the CSD facility and embankment were constructed prior to the passage of Proposition 20 and the Coastal Act. As originally constructed, corrugated sheet pile was installed five feet from the toe of the embankment over a stretch of 344 feet and backfilled with concrete to create a five-foot-wide footing . In response to the damage that occurred following the debris flow event in 2018, the District installed temporary stabilization of the embankment including placement of 1-ton gradation

grouted rip rap at the northernmost end of the embankment, installation of H-piles and steel plating along 200 feet of the middle portion of the embankment, and placement of ½-ton gradation un-grouted rip rap along the downstream 170 feet of the embankment pursuant to Emergency Coastal Development Permit G-4-18-0024. The subject application includes retention of both the grouted and un-grouted rip-rap, as well as removal of the H-piles and installation of new corrugated metal sheet pile and the placement of 1,110 sq. ft of concrete fill along a 250-foot portion of the creek and planting of native riparian vegetation **(Exhibit 3)**.

Given that the proposed project is located within Carpinteria Creek, which is designated ESHA by the LCP, opportunities to site the proposed development outside of ESHA are not available. Coastal Act Section 30240 requires that ESHA be protected against any significant disruption of habitat values and provides that new development may not be allowed within ESHA unless the use is dependent on the sensitive resource. Repairs to flood control development within a creek cannot be considered "dependent" upon the ESHA in order to function. However, Section 30236 of the Coastal Act and Carpinteria LUP Policy OSC-6c and Implementation Policies 28, 29 and 30 specifically allow for substantial alterations of rivers and streams in several specific instances including flood control projects where no other method for protecting existing structures is feasible. As such, because the proposed project is necessary to protect the WWTP (which constitutes critical public infrastructure) from flooding it may be an allowable alteration of the creek pursuant to Section 30236 and as described in further detail below, if there are no other methods for protection and the project will include the best mitigation measures feasible.

The CSD submitted an engineering and alternatives analysis which contained a study reviewing the feasibility of four alternatives to the proposed project including: (1) a no project alternative allowing the embankment and footing to remain in their current state; (2) sheet pile driven a narrower distance from the toe of the embankment and backfilled with less concrete; (3) sheet pile driven a shorter distance from the toe of the embankment, backfilled with less concrete, and placement of additional rip rap; and (4) removal of the concrete embankment and installation of a larger sheet pile wall at the top of the slope. All of these alternatives would result in a smaller footprint within Carpinteria Creek as opposed to the final proposed construction; however, the applicant's engineer indicated that none of the alternatives would be able to sufficiently protect the embankment and the WWTP and would also require more intense construction methods, which would result in more impacts to the habitat within Carpinteria Creek. Commission staff coordinated with the applicant, the applicant's engineer, as well as Commission staff coastal engineer Dr. Lesley Ewing, in reviewing the project alternatives and concur with the applicant's determination that the proposed design is the most feasible and least environmentally damaging alternative. Thus, the Commission finds that the applicant has investigated all potential alternative projects and that there are no other feasible alternatives to the proposed project that would avoid or further reduce impacts to sensitive coastal resources.

As discussed above, the footing of the embankment originally consisted of 344 linear feet of sheet pile backfilled with concrete, and the proposed repairs will consist of sheet

pile, un-grouted rip rap, and grouted rip rap. To summarize, the impact area within Carpinteria Creek that would result from the project, a breakdown of the original development, interim emergency repairs, and final proposed repairs is provided in the table below.

Summary of Impact Area (sq. ft.)			
	Sheetpile with Concrete Backfill	**Un-grouted Rip Rap**	**Grouted Rip Rap**
Previous Existing Development	1,720	0	0
Interim Emergency Repairs	0	1,260	1,155
Final Proposed Repair	1,110	1,260	1,155
Additional Impact	610	1,260	1,155
Total Impact Area= 3,025			
Total Required Mitigation (3:1) = 9,075			

Although the proposed project is the environmentally preferred alternative, it will still result in some unavoidable adverse impacts to ESHA resulting from the placement of both un-grouted and grouted rip rap, sheet pile, and concrete within a portion of the site's riparian area. In past permit actions, the Commission has found that in order to ensure that repair work is as consistent as possible with the above referenced resource protection policies of both the Coastal Act and LUP, the impacts to all sensitive riparian habitat areas on site that will be disturbed or displaced as a result of proposed development must be mitigated. Therefore, the Commission finds that **Special Condition One (1)** is necessary to require the applicant to submit a Riparian Mitigation and Restoration Plan, prepared by a biologist or environmental resource specialist, for all areas of the project site temporarily disturbed by grading and construction activities and/or permanently displaced to ensure that adverse effects to the riparian habitat are properly mitigated. The plan shall provide for: 1) revegetation for areas of the project site temporarily disturbed by grading and construction activities (at a ratio of 1:1 or greater) with native plant species of local genetic stock appropriate for riparian habitat and all areas within the embankment footing consisting of un-grouted rip rap and corrugated sheetpile with concrete backfill shall be revegetated with native plants; and 2) the restoration of riparian habitat (at a ratio of 3:1 or greater) as mitigation for all areas permanently displaced by the proposed project. The restoration may be implemented on the project site if appropriate area exists or other available areas, subject to the review and approval of the Executive Director. The restoration area shall be delineated on a site plan. All invasive and non-native plant species shall be removed from the restoration area. In addition, **Special Condition One (1)** also requires the applicant implement an annual monitoring program for a period of five years to ensure the success of the replanting. If the monitoring report indicates that the vegetation and restoration is not in conformance with, or has failed to meet, the performance standards specified in the restoration plan approved pursuant to this permit, the applicant, or

successors in interest, shall submit a revised or supplemental restoration plan for the review and approval of the Executive Director and shall implement the approved version of the plan. The revised restoration plan must be prepared by a qualified biologist or resource specialist and shall specify measures to remediate those portions of the original plan that have failed or are not in conformance with the original approved plan.

Additionally, as noted above, the tidewater goby is a federally listed endangered species and a state species of special concern. The applicant's biologist determined that Carpinteria Creek provides habitat for tidewater goby. Gobies typically exhibit an extreme seasonal variation in population size that reflects the variation in salinity, temperature, and hydrologic conditions in a coastal lagoon. Tidewater gobies spawn throughout the year, but it is less frequent in December through March. Peak spawning typically occurs in late April through early May.

Southern California steelhead is also a federally listed endangered species with a high potential to occur within the project footprint, and Carpinteria Creek is designated critical habitat as it is known to support the species. Steelhead typically migrate to marine waters after spending one to two years in fresh water. They then spend two to three years in the ocean before returning to streams to spawn. Adult steelhead are stimulated to begin their upstream migration when there are high winter flows in streams, typically December through March.

Development within Carpinteria Creek has the potential to adversely impact tidewater goby populations and other sensitive aquatic species like Steelhead if project activities occur when the species are present. In order to avoid potential impacts to sensitive species, the Commission finds **Special Condition Eight (8)** necessary to allow for construction activities only during the period between June 1st through October 31st. While Carpinteria Creek is a perennially flowing stream, this period is within the dry season and also outside of the spawning season of the tidewater goby and the migration season of Steelhead. Therefore, limiting work to within this period will help to protect sensitive species from disturbance.

However, even with the limitation of allowing work only during the dry season, it is possible that gobies, Steelhead, or other aquatic species may be in the project area during implementation of project activities and may be potentially impacted. In order to help protect aquatic species from disturbance, **Special Condition Nine (9)** requires the applicant to retain a biologist, or environmental resources specialist, to help clear aquatic species from the area prior to commencement of work. **Special Condition Nine (9)** specifically requires the applicant to submit the name and qualifications of the qualified biologist or natural resource specialist 30 days prior to any onset of construction work, and requires the capture, handling, exclusion, and relocation of any marine species present within the project area to be completed no earlier than 48 hours before project activities begin. **Special Condition Nine (9)** also requires the applicant to obtain from the qualified biologist or environmental resource specialist a post-project monitoring report documenting the measures that were implemented to protect the goby, and the affects that those measures had on the goby population.

As discussed previously, the entirety of Carpinteria Creek is designed as ESHA pursuant to the certified LCP and non-aquatic sensitive species and habitat have been documented both within the creek and within the vicinity of the project site. As such, there are coastal resource issues of concern relating to potential adverse impacts to non-aquatic sensitive species and their habitats from project activities. In order to ensure that project activities avoid impacts to terrestrial sensitive species and habitats, **Special Condition Seven (7)** requires that an environmental resource specialist survey the project area for sensitive species prior to implementation of any project activities and undertake protective measures if any sensitive species are identified. As an additional measure to ensure that the applicant avoids adverse impacts to all other sensitive species **Special Condition Four (4)** also requires that the applicant complies with all permit requirements and mitigation measures required by State and Federal agencies including, the Regional Water Quality Control Board, California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service with respect to preservation and protection of water quality and marine environment. Any change in the approved project that may be required by the above-stated agencies shall be submitted to the Executive Director in order to determine if the proposed change shall require a permit amendment pursuant to the requirements of the Coastal Act and the California Code of Regulations implementing the Coastal Act. Specifically, a portion of the grouted rip rap installed at the upstream end of the embankment is located within the property of California Department of Parks and Recreation (Parks) and as such **Special Condition Five (5)** requires the applicant to obtain approval of a Right of Entry (ROE) from Parks for this portion of the grouted rip rap.

Lastly, Section 30231 of the Coastal Act requires that coastal water quality shall be maintained through various means, including by controlling runoff. Work within riparian environments can result in increased sedimentation, thereby reducing the biological productivity and quality of coastal waters. Sedimentation directly affects riparian ecology by increasing water turbidity. Turbidity reduces the penetration of sunlight needed by aquatic vegetation, which translates to negative effects on plant establishment and overall productivity, which in turn impacts aquatic species that depend on such vegetation for food and cover. In addition, aquatic animals are affected by turbidity in the following ways: reduced visibility for visual predators such as birds and mammals and inhibited feeding effectiveness for benthic filter feeding organisms. Construction of the proposed project within the creek environment has the potential to result in increased turbidity. In response, the applicant has proposed to install a turbidity curtain and silt fencing will be installed around the work area.

The applicant has also proposed that all equipment will be staged and operated from the paved portions of the CSD property located above the embankment; however, there is still the possibility that stream and estuarine environment surrounding Carpinteria Creek could be adversely impacted as a result of the project activities by unintentional introduction of sediment or debris. To ensure that construction material, debris, or other waste associated with project activities does not enter the water, **Special Condition Eight (8)** outlines construction-related requirements to provide for the safe storage of construction materials and removal of debris from the area while **Special Condition Six**

(6) requires the applicant to provide evidence of an acceptable site to receive disposal materials.

Coastal Act Section 30240 limits development within ESHA (such as Carpinteria Creek) to uses dependent upon the ESHA, while Section 30236 and LUP policy OSC-6c and Implementation Policies 28, 29 and 30 more specifically allow for development in creeks necessary in order to protect existing development from flooding when the proposed design is the least environmentally damaging alternative and the best mitigation measures have been incorporated. The proposed project is necessary to repair portions of a footing that supports an existing embankment and protects the existing WWTP development from flood hazards. Additionally, the proposed project design is the least environmentally damaging alternative and includes measures to mitigate impacts. Thus, the proposed development is considered an allowable use. Similarly, the special conditions discussed herein also help to ensure that the project will be consistent with the resource protection policies and provisions of both the Coastal Act and LCP.

Therefore, the Commission finds that the proposed project, as conditioned, is consistent with Coastal Act Sections 30231 and 30236 as well as LUP Policies OSC-6c, OSC-6d and Implementation Policies 28, 29, and 30 regarding ESHA and water quality.

E. California Environmental Quality Act

Section 13096 of the Commission's administrative regulations requires Commission approval of a coastal development permit application to be supported by a finding showing the application, as modified 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 approval of a proposed development if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant adverse impacts that the activity may have on the environment.

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. These findings address and respond to any public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. As discussed in detail above, the proposed project, as conditioned, is consistent with the policies of the Coastal Act. Feasible mitigation measures, which will minimize all adverse environmental effects, have been required as special conditions. **Special Conditions One (1) through Eight (8)** are required to assure the project's consistency with Section 13096 of Title 14 of the California Code of Regulations. As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impacts that the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found to be consistent with the requirements of the Coastal Act to conform to CEQA.

APPENDIX A – Substantive File Documents

Coastal Development Permit Application No. 4-19-0339 and associated file documents.

City of Carpinteria Certified Local Coastal Program