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STAFF REPORT CDP AMENDMENT

Application Number: 3-15-0144-A5

Applicant: City of Santa Cruz

Project Location: The lagoon and mouth of the San Lorenzo River where it meets the Pacific Ocean adjacent to the Santa Cruz Beach Boardwalk and San Lorenzo Point at the downcoast end of Santa Cruz Main Beach (adjacent to the Seabright State Beach unit of the California Department of Parks and Recreation's Twin Lakes State Beach) in the City of Santa Cruz

Project Description: CDP 3-15-0144 authorizes lagoon-area sand management activities, including mechanical breaching, to prevent flooding in the lower San Lorenzo River area. The amendment proposes to install an in-stream culvert system with an outfall near the ocean along San Lorenzo Point designed to allow lagoon water to flow to the ocean at higher volumes to help improve fishery habitat and reduce the need for artificial lagoon manipulation.

Staff Recommendation: Approval with Conditions

SUMMARY OF STAFF RECOMMENDATION

The San Lorenzo River winds some 30 miles from its headwaters in Castle Rock State Park in the Santa Cruz mountains ultimately to the Pacific Ocean at San Lorenzo Point in the City of Santa Cruz. A seasonal lagoon typically forms at the mouth of the river between the Point and the Santa Cruz Beach Boardwalk each summer/fall, as is typical of many coastal watersheds in California. As is also typical, high river/lagoon levels also

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lead to localized flooding in the lower river area, and the City has historically managed such flooding and related public safety issues via mechanical breaching, where such breaching can lead to adverse resource impacts (including on sensitive fishery species oftentimes present here). Although the base coastal development permit (CDP) still allows various sand management activities, including mechanized breaching if required, the City has been pursuing potential alternate measures to address such flooding and fishery needs without breaching for many years. These efforts have been in partnership and consultation with the California Department of Fish and Wildlife (CDFW), the U.S. Fish and Wildlife Service (USFWS), the U.S. National Marine Fisheries Service (NMFS, also known as NOAA Fisheries), and Commission staff. The result of that collaboration is the culvert bypass system proposed to be added to the CDP authorization here.

In addition to maintaining the ability to utilize the various sand management and breaching activities authorized under the existing CDP, the City proposes to install a culvert bypass system in the San Lorenzo River lagoon that is intended to allow lagoon water to flow to the ocean without breaching the lagoon. It is also intended to provide a stabilized lagoon water elevation designed to support fisheries health. The culvert system would consist of a collection box in the main lagoon area (about 750 feet from the ocean), connected to a sloped pipe that itself is attached to the lower face of the San Lorenzo Point headland, with an outlet on the beach at the ocean end of the culvert. The collection box would passively siphon waters from the deepest part of the lagoon's water column into the culvert where water pressure and gravity would push the water (i.e., "head-driven") to the outlet near the ocean. The collection box would also be equipped with an adjustable overflow pipe designed to allow overflowing surface waters into the culvert and out towards the ocean (e.g., to address acute volume increasing events, such as from storms and wave overtopping).

The Coastal Act authorizes flood protection projects in riverine systems if necessary for public safety or to protect existing development only where such projects are the least environmentally damaging feasible alternative and they incorporate the best mitigation measures feasible. In this case, the City has documented that river flooding adversely impacts existing public infrastructure, other development, and public safety, typically in the summer/fall season when the river forms a lagoon at the river mouth and the water surface levels become elevated. The proposed culvert bypass system provides a less damaging alternative to addressing such impacts than does mechanized breaching, and it should operate to reduce the need for the City to breach the lagoon and/or to implement other sand management activities. It should also benefit fisheries habitat because the culvert system would allow for the City to avoid breaching events, which can damage such resources, and it should also help to improve lagoon water quality for such fisheries.

At the same time, the proposed project, including the culvert bypass system, raises some issues given that it would be installed in a dynamic and ever-changing environment, and in a significant public recreational area and important public viewshed, and the bypass system has not been field tested. Thus, staff is recommending a limited five-year approval to continue to accommodate the Applicant's breaching and sand management activities, and also to allow for the efficacy of the

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culvert bypass system project to be demonstrated. Staff further recommends specific siting, design, construction, and implementation limitations to avoid impacts to natural resources, public access and recreation, and public views as much as possible. This includes requiring that longer-term best management practices (BMPs) and mitigations be applied if the project is successful and intended to be continued past the initial five-year time frame.

In short, staff concurs with the City and the various resource agencies that have been involved with proposed project development that the proposed culvert bypass portion of the project represents an innovative concept that could address multiple coastal resource objectives in a way that limits undue river/lagoon manipulation. Staff recommends approval of a limited-term conditioned CDP to further test that hypothesis. The motion to implement staff's recommendation is found on page 5.

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1. MOTION AND RESOLUTION

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

***Motion:** I move that the Commission **approve** the proposed amendment to Coastal Development Permit Number 3-15-0144 subject to the conditions set forth in the staff recommendation, and I recommend a **yes** vote.*

***Resolution to Approve CDP Amendment:** The Commission hereby approves Coastal Development Permit Amendment Number 3-15-0144-A5 and adopts the findings set forth below on grounds that the development, as amended and subject to conditions, will be in conformity with the policies of the Coastal Act. Approval of the amended permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.*

2. SPECIAL CONDITIONS

This permit amendment is granted subject to the following special conditions, which replace the special conditions of CDP 3-15-0144 (as amended through and including 3-15-0144-A4):

- 1. Approved Project.** This CDP authorizes: (a) sand management activities, including breaching (see **Special Condition 2**); and (b) development, operation and maintenance of the Culvert Bypass System (see **Special Condition 3**), all subject to the terms and conditions of this CDP. Sand management, lagoon breaching, and Culvert Bypass System (CBS) activities and operation are allowed through December 31, 2026, but such authorization shall expire at that time unless this CDP has been amended to allow such activities to continue. If the Permittee seeks to extend the authorization in whole or in part, then the Permittee shall submit a complete CDP amendment application for same to the Commission by June 30, 2026. Any such application shall at a minimum include the final monitoring report identified in **Special Condition 5** (for the time period up through June 30, 2026).

If the CBS authorization is not extended, then all CBS project components shall be removed and all affected areas shall be restored to their pre-development condition or better by December 31, 2026. In addition, the same removal and restoration shall be required immediately if the CBS becomes endangered in a way that cannot be addressed via normal maintenance (and would instead require extraordinary measures, such as armoring). Prior to initiating such CBS removal and restoration

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activities, the Permittee shall submit a plan for same to the Executive Director for review and approval.

If CBS is authorized past December 31, 2026, then it shall only be authorized if its components are hidden from public view as much as possible, and any unavoidably visible components shall be camouflaged such that they appear as to be part of the natural environment as much as possible, including by hiding the pipes and the culvert end via faux bluff treatments along San Lorenzo Point. In addition, such camouflaging measures shall ensure that the unique natural attributes and values of the natural tunnel/arch under San Lorenzo Point, which provides access between Santa Cruz Main Beach and the Seabright Beach unit of State Parks' Twin Lakes State Beach, are protected as much as possible, and shall also be applied in a way that accommodates safe and easy public access across the pipeline itself at the tunnel/arch location. The CBS shall also only be authorized past December 31, 2026 if the amendment application includes compensatory mitigation to offset all coastal resource impacts associated with approved project activities through that time. An amendment that seeks to extend the CBS authorization duration without these required components will be rejected as weakening and lessening the intended effect of this CDP's terms and conditions.

If the Permittee is not in compliance with the permitting requirements of the Coastal Act (including the terms and conditions this CDP or any other Coastal Commission CDPs or other coastal authorizations that apply to the site that are held by the Permittee), the otherwise approved project activities are no longer authorized until the Permittee is in full compliance with the permitting requirements of the Coastal Act (including all terms and conditions of any outstanding CDPs and other coastal authorizations that apply to the site and are held by the Permittee), unless allowed by the Executive Director to abate acute public health, public safety, and/or coastal resource concerns.

- 2. Sand Management and Breaching.** PRIOR TO COMMENCEMENT OF ANY SAND MANAGEMENT AND/OR BREACHING ACTIVITIES, the Permittee shall submit two copies of an updated Sand and Berm Management Toolkit to the Executive Director for review and approval. The updated Toolkit shall be substantially in conformance with the currently approved Toolkit (including with respect to pre-action consultation with regulatory agencies, fishery and biological monitoring, etc.), but it shall be updated to incorporate applicable provisions of Special Conditions 4 and 5; and to incorporate "lessons learned" from past activities, including as directed by the California Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, the U.S. National Marine Fisheries Service (NOAA Fisheries), the Central Coast Regional Water Quality Control Board, and the Executive Director. The updated Toolkit shall be submitted with evidence of consultation with and approval by each of the above agencies.

All requirements above and all requirements of the approved Sand and Berm Management Toolkit shall be enforceable components of this CDP. The Permittee shall undertake development in accordance with this condition and the approved

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Sand and Berm Management Toolkit. Minor adjustments to the above requirements, as well as to the Executive Director-approved Toolkit, which do not require a CDP amendment or new CDP (as determined by the Executive Director) may be allowed by the Executive Director if such adjustments: (1) are deemed reasonable and necessary; (2) do not adversely impact coastal resources; and (3) a CDP amendment is not legally required.

3. **Culvert Bypass System.** All Culvert Bypass System (CBS) development and operation shall be limited in scale and scope to that specifically identified in the plans received by the Commission (entitled *San Lorenzo River Lagoon Culvert*, dated February 2021, see also **Exhibit 3**), with the following changes and clarifications:
 - a. **Camouflaging.** PRIOR TO COMMENCEMENT OF CBS CONSTRUCTION, the Permittee shall submit two copies of a CBS Camouflaging Plan to the Executive Director for review and approval. The Camouflaging Plan shall provide that all CBS components are sited and designed to limit their visibility and to camouflage any visible elements (e.g., via surface materials, paint, etc.) as much as possible. The Plan shall also ensure that the outfall portion of the CBS is also sited and designed to avoid public recreational access impacts as much as possible. All camouflaging elements identified in the approved Camouflaging Plan shall be maintained in their approved state.
 - b. **Water Quality Monitoring.** PRIOR TO CBS OPERATION, the Permittee shall submit two copies of a Water Quality Monitoring Plan to the Executive Director for review and approval. The Water Quality Monitoring Plan shall be prepared in consultation with the Central Coast Regional Water Quality Control Board, and shall be designed to assess and address any potential water quality impacts to human health and the environment due to CBS operation associated with the beach discharge area and the surrounding ocean environment. The Plan shall include a baseline assessment (against which monitoring data can be compared), and shall clearly describe the monitoring and assessment methods to be used, monitoring schedules, and any potential adaptive management measures to be implemented to further improve water quality should adverse conditions be observed due to CBS operations.
 - c. **Water Surface Elevation.** The CBS shall be operated to ensure that the lagoon's water surface elevation is allowed to rise as high as is possible while still addressing flooding impacts, and shall not be operated in a way that would lower such elevation below +5.0 feet NGVD29.
 - d. **Operation.** With the exception of the water surface elevation requirements identified above, the CBS shall be operated consistent with the operational procedures described in Exhibit B of the Initial Study and Negative Declaration "Response to Comments" (see **Exhibit 7**). The Permittee shall also operate the CBS in consultation with the California Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, the U.S. National Marine Fisheries Service (NOAA Fisheries), and the Central Coast Regional Water Quality Control Board.

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- e. **Mitigation Measures.** The project shall incorporate and comply with all avoidance and minimization measures for biological impacts identified in the Initial Study and Mitigated Negative Declaration (see **Exhibit 7**).
- f. **Maintenance.** The Permittee shall be responsible for maintaining the CBS in its permitted and required state at all times.

All requirements above and all requirements of the above-described approved plans shall be enforceable components of this CDP, and the Permittee shall undertake development in accordance with this condition and the approved plans. Minor adjustments to the above requirements, as well as to the Executive Director-approved plans, which do not require a CDP amendment or new CDP (as determined by the Executive Director) may be allowed by the Executive Director if such adjustments: (1) are deemed reasonable and necessary; (2) do not adversely impact coastal resources; and (3) a CDP amendment is not legally required.

- 4. **Culvert Bypass System Construction Plans.** PRIOR TO COMMENCEMENT OF CULVERT BYPASS SYSTEM CONSTRUCTION, the Permittee shall submit two copies of a Construction Plan to the Executive Director for review and approval. The Construction Plan shall, at a minimum, include the following:
 - a. **Construction Areas.** The Construction Plan shall identify the specific location of all construction areas, all staging areas, and all construction access corridors in site plan view. All such areas within which construction activities and/or staging are to take place shall be minimized to the maximum extent feasible in order to have the least impact on public access and shoreline resources, including by using inland areas away from the beach and beach access points for staging, storing, and moving construction equipment, personnel, and materials to the maximum extent feasible. Special attention shall be given to siting and designing construction areas in order to minimize impacts to public beach access and public views of the area, including but not limited to public views across the site. Intertidal areas shall be avoided to the maximum extent possible.
 - b. **Construction Methods.** The Construction Plan shall specify the construction methods to be used, including all methods to be used to keep the construction areas separated from public recreational use areas and users as much as possible (including using unobtrusive temporary fencing or equivalent measures to delineate construction areas), and including verification that equipment operation and equipment and material storage will not, to the maximum extent feasible, significantly degrade public access and public views during construction. CBS construction shall take place in early morning hours as much as possible, and lighting of the work area is prohibited.
 - c. **Construction Timing.** Construction is prohibited during weekends, from the Saturday of Memorial Day through Labor Day inclusive, and during non-daytime hours (i.e., from one-hour after sunset to one-hour before sunrise), unless due to extenuating circumstances the Executive Director authorizes such work.

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- d. **Construction BMPs.** The Construction Plan shall identify the type and location of all erosion control and water quality best management practices that will be implemented during construction to protect coastal resources, including at a minimum all of the following:
1. **Runoff Protection.** Silt fences, straw wattles, or equivalent apparatus shall be installed at the perimeter of all construction areas to prevent construction-related runoff and sediment from discharging from the construction area or towards the beach, river/lagoon, and ocean. Special attention shall be given to appropriate filtering and treating of all runoff, and all drainage points, including storm drains, shall be equipped with appropriate construction-related containment, filtration, and treatment equipment. All erosion and sediment controls shall be in place prior to the commencement of construction as well as at the end of each workday.
 2. **Equipment BMPs.** Equipment washing, refueling, and servicing shall take place at an appropriate off-site and inland location to help prevent leaks and spills of hazardous materials at the project site, at least 50 feet inland from the beach and preferably on an existing hard surface area (e.g., a road) or an area where collection of materials is facilitated. All construction equipment shall also be inspected and maintained at a similarly sited inland location to prevent leaks and spills of hazardous materials at the project site.
 3. **Good Housekeeping BMPs.** The construction site shall maintain good construction housekeeping controls and procedures at all times (e.g., clean up all leaks, drips, and other spills immediately; maintain appropriate materials on-site to address inadvertent spills or release of contaminants; keep materials covered and out of the rain, including covering exposed piles of soil and wastes; dispose of all wastes properly, place trash receptacles on site for that purpose, and cover open trash receptacles during wet weather; remove all construction debris from the site; etc.).
 4. **Rubber-tired Construction Vehicles.** Only rubber-tired construction vehicles are allowed on the beach, except track vehicles may be used if the Executive Director determines that they are required to safely carry out construction. When transiting on the beach, all such vehicles shall remain as far away from the ocean and river/lagoon as possible and avoid contact with ocean and river/lagoon waters.
 5. **Construction Material Storage.** All construction materials and equipment placed on the beach during daylight construction hours shall be stored beyond the reach of tidal waters. All construction materials and equipment shall be removed in their entirety from these areas by one-hour after sunset each day that work occurs, except for necessary erosion and sediment controls and construction area boundary fencing where such controls and fencing are minimized in their extent.

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- e. **Restoration.** All construction debris shall be removed, and all beach area and other public recreational access and use areas and all beach access points impacted by construction activities shall be restored to their pre-construction condition or better within three days of completion of construction. Any native materials impacted, including beach sand, shall be appropriately filtered as necessary to remove all construction debris.
- f. **Construction Site Documents.** The Construction Plan shall provide that copies of the signed CDP and the approved Construction Plan be maintained in a conspicuous location at the construction job site at all times, and that such copies are available for public review on request. All persons involved with the construction shall be briefed on the content and meaning of the CDP and the approved Construction Plan, and the public review requirements applicable to them, prior to commencement of construction.
- g. **Construction Coordinator.** The Construction Plan shall provide that a construction coordinator be designated to be contacted during construction should questions arise regarding the construction (in case of both regular inquiries and emergencies), and that his/her contact information (i.e., email, address, phone number, etc.) including, at a minimum, a telephone number (equipped with voicemail) and email address that will be made available 24 hours a day for the duration of construction, is conspicuously posted at the job site where such contact information is readily visible from public viewing areas, along with indication that the construction coordinator should be contacted in the case of questions regarding the construction (in case of both regular inquiries and emergencies). The construction coordinator shall record the name, contact information, and nature of all complaints received regarding the construction, and shall investigate complaints and take remedial action, if necessary, within 24 hours of receipt of the complaint or inquiry. All complaints and all actions taken in response shall be summarized and provided to the Executive Director on at least a weekly basis.
- h. **Construction Specifications.** The construction specifications and materials shall include appropriate control provisions that require remediation for any work done inconsistent with the terms and conditions of this CDP, and shall ensure that all workers are carefully briefed on the importance of observing the construction precautions given the sensitive work environment.
- i. **Notification.** The Permittee shall notify planning staff of the Coastal Commission's Central Coast District Office at least three working days in advance of commencement of construction, and immediately upon completion of construction.

All requirements above and all requirements of the approved Construction Plan shall be enforceable components of this CDP. The Permittee shall undertake development in accordance with this condition and the approved Construction Plan. Minor adjustments to the above requirements, as well as to the Executive Director-

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approved Plan, which do not require a CDP amendment or new CDP (as determined by the Executive Director) may be allowed by the Executive Director if such adjustments: (1) are deemed reasonable and necessary; (2) do not adversely impact coastal resources; and (3) a CDP amendment is not legally required.

- 5. Annual Monitoring Reports.** The Permittee shall regularly monitor the project area and all project activities, and shall record information and data pertaining thereto (i.e., photographs taken from the same locations (including pre-project baseline photographs), weather, tides, surface water elevation, lagoon configuration, etc.) on at least a once per month basis. By December 31st of each year of authorization (i.e., 2021, 2022, 2023, 2024, 2025, and 2026), the Permittee shall submit a report that provides all such monitoring materials and that identifies all approved project activities for that calendar year, where all such activities shall be evaluated for their effectiveness. This shall include flood avoidance, fisheries habitat enhancement, and impacts from approved project activities on water quality (including under the parameters identified in **Special Condition 3(b)**), public views, public safety, and public recreational access, as well as in terms of proposed measures that could be applied to improve project effectiveness and coastal resource protection more broadly. Such monitoring shall also explicitly identify flooding impacts at various water surface elevations to determine the maximum water surface elevations that can be maintained without significant flooding damage to private property and public infrastructure. All such reports shall include appropriate supporting documentation and metrics, and shall provide a section comparing that year's activities and issues to prior years.

If the Executive Director determines that the Culvert Bypass System is leading to significant public recreational access impacts, whether as a result of reviewing the annual reports or otherwise, including specifically at the natural tunnel/arch between Main Beach and Seabright Beach and at the outfall, then the Permittee shall immediately provide a remediation plan to the Executive Director for review and approval to reduce such impacts to a level of insignificance.

- 6. Other Agency Approvals.** PRIOR TO IMPLEMENTATION OF ANY APPROVED PROJECT ACTIVITIES, the Permittee shall provide to the Executive Director written documentation of authorizations from all entities from which such authorization is necessary for the approved project (including at a minimum the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, National Marine Fisheries Service (NOAA Fisheries), California Department of Fish and Wildlife, Central Coast Regional Water Quality Control Board, and the Monterey Bay National Marine Sanctuary) or evidence that no such authorizations are required from each of these entities. The Permittees shall inform the Executive Director of any changes to the project required by any other such authorizations. Any such changes shall not be incorporated into the project until the Permittee obtains a Commission amendment to this CDP, unless the Executive Director determines that no amendment is legally required. The City shall notify the Executive Director of any potential changes to the approved project resulting from other agency authorizations, including any subsequent modifications to any such authorizations. Copies of all monitoring reports required under other

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agency authorizations (including all monitoring plans submitted to the California Department of Fish and Wildlife and the National Marine Fisheries Service) shall be submitted to the Executive Director when they are completed.

7. **Assumption of Risk, Waiver of Liability, and Indemnity Agreement.** By acceptance of this CDP, the Permittee acknowledges and agrees on behalf of itself and all successors and assigns:
 - a. **Coastal Hazards.** That the site is subject to extreme coastal hazards including but not limited to episodic and long-term shoreline retreat and coastal erosion, high seas, ocean waves, storms, tsunamis, coastal flooding, landslides, bluff and geologic instability, sea level rise, and the interaction of same;
 - b. **Risk Assumption.** To assume the risks to the Permittee and the property that is the subject of this CDP of injury and damage from such hazards in connection with this permitted development;
 - c. **Armoring Waiver.** To waive any rights that the Permittee may have under Coastal Act Section 30235, the City of Santa Cruz LCP, or other applicable laws, to shoreline armoring to protect the Culvert Bypass System and other development authorized by this CDP;
 - d. **Liability Waiver.** To unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards;
 - e. **Indemnification.** To indemnify and hold harmless the Coastal 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,
 - f. **Permittee Responsible.** That any adverse effects to property and/or the environment caused by the approved project shall be fully the responsibility of the Permittee.
8. **Liability for Costs and Attorneys' Fees.** The Permittee shall reimburse the Coastal Commission in full for all Coastal Commission costs and attorneys' fees (including but not limited to such costs/fees that are: (1) charged by the Office of the Attorney General; and (2) required by a court) that the Coastal Commission incurs in connection with the defense of any action brought by a party other than the Permittee against the Coastal Commission, its officers, employees, agents, successors and assigns challenging the approval or issuance of this amended CDP. The Permittee shall reimburse the Coastal Commission within 60 days of being informed by the Executive Director of the amount of such costs/fees. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission.

3. FINDINGS AND DECLARATIONS

A. Project Location and Description

1. Project Location/Background

The San Lorenzo River winds some 30 miles from its headwaters in Castle Rock State Park in the Santa Cruz mountains, with the last three miles extending through the City of Santa Cruz and the river's historic floodplain,¹ ultimately extending into the Pacific Ocean at San Lorenzo Point (see **Exhibit 1** for a vicinity map, and see **Exhibit 2** for photos of the site). A seasonal lagoon typically forms at the mouth of the river between the Point (which juts out from the bluffs some 400 feet) and the Santa Cruz Beach Boardwalk each summer/fall, as is typical of many coastal watersheds in California. The sandbar that helps form the lagoon evolves seasonally – and daily within seasons – including in response to changing coastal processes (e.g., waves, tides, shifting sand, etc.) as well as inputs from the river's 137-square-mile watershed. The lagoon itself is also constantly evolving due to both freshwater (river) and saltwater (ocean; from tides, wave overtopping, subsurface transfer, etc.) inputs, which tend to be dependent themselves on sandbar variations and coastal storms. In other words, the area where the river intersects the ocean is a dynamic and constantly changing natural area along the immediate shoreline, as is fairly typical of these river/ocean interfaces in central California.

As is also typical, high river/lagoon levels also lead to localized flooding in the lower river area,² as well as other issues,³ and the City has historically addressed such problems via mechanical breaching. But such breaching can lead to adverse resource impacts, including to sensitive fishery species oftentimes present here.⁴ The City has

¹ The stretch of the river through the City is characterized by levees on both sides, originally installed in the 1950s and enlarged in 2003, that serve to channel the river through the City. The levees end about 1,000 feet from the ocean near the railroad overcrossing and the Santa Cruz Beach Boardwalk.

² Including flooding associated with the Santa Cruz Beach Boardwalk, the City's stormdrain system, streets and traffic light electrical systems along East Cliff Drive, the bikeway along the river's levee system (where it drops down below the bridges), residential properties along lower Ocean Street, and even the basement of the historic Del Mar Theater which is a mile away in downtown Santa Cruz (see **Exhibit 4** for a letter from the City's Public Works Director regarding infrastructure flooding impacts, and see **Exhibit 6** for photographs of flooded infrastructure).

³ Including with respect to public access and safety at Santa Cruz Main Beach, an area visited by over one million people annually. Under closed lagoon conditions, a spillover channel eventually forms, and can bifurcate the beach in an upcoast direction making lifeguard access to the ocean edge difficult and sometimes hazardous. The spillover channel is also attractive to children and inexperienced swimmers who wish to avoid the ocean, creating additional safety concerns for beach lifeguards due to an uneven bottom and depth that may be present, as well as water quality concerns. And finally, it can create dangerous conditions that may not be completely apparent to beach goers when a natural breach is imminent (and a person drowned in such a scenario earlier this year after being swept out some 200 yards offshore).

⁴ Including the federally endangered Central California Coast Evolutionarily Significant Unit Coho salmon (*Oncorhynchus kisutch*) and the federally threatened Central California Coast Distinct Population Segment steelhead (*Oncorhynchus mykiss*) that occur or have the potential to occur within the San Lorenzo River's lagoon. Additionally, designated critical habitat for both of these listed species occurs

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been pursuing potential alternate measures to address such flooding, public safety, and fishery needs without such breaching for decades, including in partnership and consultation more recently with the California Department of Fish and Wildlife (CDFW), the U.S. Fish and Wildlife Service (USFWS), the U.S. National Marine Fisheries Service (NMFS, also known as NOAA Fisheries), and Commission staff. Prior City plans have identified the use of a culvert bypass system to help in this regard,⁵ but these efforts never came to fruition (including due to a lack of funding), and mechanical breaching has occurred regularly during that same time frame.⁶

Ultimately, the City developed an updated “San Lorenzo River Interim Management Program” based on review of water quality, stream flow, biological resource, and fisheries data for the river and its lagoon, as well as a review of ‘lessons learned’ from other coastal lagoon management programs underway in central California and northern (including those for Soquel Creek, Scott Creek, the Russian River, and the Pajaro River). City efforts also included feasibility analyses for various options, including based on a water balance model for the lagoon, flow rate criteria for each alternative, lagoon filling rates, and habitat considerations. These included estimates of the amount and percentage of freshwater needed to provide suitable habitat for steelhead and tidewater goby. All of these materials were developed in consultation with CDFW, USFWS, NMFS, and Commission staff, and culminated in the approval of the base CDP here (i.e., CDP 3-15-0144) in 2015 to implement its measures, including a culvert bypass system. Ultimately, however, the City was unable to secure funding for the culvert bypass system, and thus the CDP has been amended several times to adjust its parameters, especially related to ongoing breaching needs (including the addition of a “Sand and Berm Management Toolkit” that governs breaching and sand management activities, and was developed in consultation with the regulatory and resource management agencies). However, the City indicates that it now has both the funding and a qualified bidder to complete the culvert bypass system in 2022.

2. Project Description

The culvert bypass system (CBS) now proposed is slightly different from the version approved in the base CDP (and the CDP’s timing restrictions don’t accommodate the CBS project now), and thus this amendment is necessary. The now proposed CBS would consist of a collection box in the main lagoon area (about 750 feet from the ocean), connected to a sloped 18-inch diameter high-density polyethylene pipe (with some limited steel pipe sections) attached to the lower face of the San Lorenzo Point headland, with an outlet on the beach at the ocean end. The collection box would

within the proposed project reach, and the site also supports Essential Fish Habitat for various life stages of fish managed under the Pacific Coast Groundfish Fishery Management Plan (FMP), Coastal Pelagic Species FMP, and the Pacific Coast Salmon FMP. The tidewater goby (*Eucyclogobius newberryi*), which is a federally listed endangered species and is state listed as a species of special concern, is also known to inhabit the lagoon.

⁵ Including the 1989 San Lorenzo River Enhancement Plan and the 2002 Lower San Lorenzo River and Lagoon Management Plan (part of the San Lorenzo Urban River Plan).

⁶ Including in that last decade or so via a series of emergency CDPs (ECDPs) (see, for example, ECDPs 3-12-009-G and G-3-14-0031).

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passively siphon waters from the deepest part of the lagoon's water column into the culvert (because these waters are still at a higher elevation than the ocean, referred to as "head-driven") where gravity would take the water to the outlet on the beach near the ocean.⁷ The collection box would include a fish screen structure to prevent fish entrainment. It would also be equipped with an adjustable overflow pipe designed to allow overflowing surface waters into the culvert and out towards the ocean (e.g., to address acute volume increasing events, such as storms). The proposed project is intended to keep a stabilized water elevation of no less than +5 feet NGVD29 (or roughly 5 feet above mean sea level), with the overflow pipe accommodating elevations in the lagoon above that level in acute events via an adjustable weir. See **Exhibit 3** for proposed culvert system plans.

The base CDP as amended here will also continue to allow the City of Santa Cruz to undertake management activities to control the water level of the San Lorenzo River's lagoon to prevent localized flooding to public and private properties and infrastructure to the extent such activities are still needed after the culvert has been installed.

Specifically, over the last several years, the City has used several sand management activities, including berming, mechanized breaching, breach "priming" and other management actions to prevent flooding, using various approaches based on changing river conditions. These tools have been used successfully under the base CDP (and the four previous amendments) over the last several years and have proven to better protect coastal resources than breaching the river mouth sand berm alone. Under the prior amendments, the City has been required to notify all the involved natural resource agencies (i.e., the U.S. Army Corps of Engineers, National Marine Fisheries Service (NOAA Fisheries), U.S. Fish and Wildlife Service, the Regional Water Quality Control Board, the California Department of Fish and Wildlife, and Commission staff) and to discuss the preferred management activity for each particular instance, and to obtain written authorization to proceed with that activity, and the City proposes to continue these requirements under this amendment. In addition, all such activities require the use of construction best management practices and extensive biological and water quality monitoring requirements (e.g., pre-activity resource agency consultation, water quality reporting, biological monitors, standard construction BMPs, etc.)

B. Standard of Review

The project area is located within the Coastal Commission's retained CDP jurisdiction area. Thus, the standard of review for the proposed project is the Coastal Act with the

⁷ In addition, the culvert system is designed to preferentially discharge lagoon bottom water so as to help maximize enhanced freshwater fishery needs in the lagoon area. Specifically, water quality monitoring has documented that the water in the lower lagoon water column is of lower habitat quality due to its higher salinity. The proposed culvert system would be capable of extracting these higher salinity waters located at the bottom of the water column via the use of infiltration galleries. When the lagoon water level reaches +5 feet NGVD29 (i.e., roughly 5 feet above sea levels), water would start to seep through a porous sand layer, into the bottom of the infiltration gallery, then flow into a flexible pipe connected to a junction box, and eventually reach the ocean via the outfall. Seepage flows into the infiltration box would be driven by the head difference, therefore, flows into the system would be zero when the lagoon is less than +5 NGVD29 and flows would increase as the water level rises above that elevation.

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City of Santa Cruz's LCP providing non-binding guidance.

C. Flood Control/Habitat Protection

Applicable Coastal Act Provisions

Section 30236 of the Coastal Act governs flood control projects, stating:

Section 30236. 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 flood plain 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.

Thus, Coastal Act Section 30236 authorizes flood protection projects in riverine systems if necessary for public safety or to protect existing development only where such projects (1) meet one of the above three scenarios and (2) incorporate the best mitigation measures feasible. Other Coastal Act provisions are also applicable to such a determination (e.g., habitat protections, public recreational access and view protections, etc.), and this Section 30236 cannot be understood in isolation in that regard. In fact, those other Coastal Act provisions still apply (see also findings that follow for citations), and generally point to the need to find the least environmentally damaging feasible alternative, in addition to issue-specific remedies depending on the facts of any particular case. Also important to that calculation is the protection afforded coastal waters, including rivers, lagoons, sensitive habitats, and the marine environment by the Coastal Act, including:

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

Section 30321. 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 30240. (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on

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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.

Analysis

As discussed above, seasonal lagoon formation at the mouth of the San Lorenzo River has resulted in documented flooding of public and private infrastructure and development in the immediate vicinity of the lower river and in downtown Santa Cruz, including the Boardwalk, the river levee system, City infrastructure, and nearby residential properties (see **Exhibit 4** (letter from City of Santa Cruz Public Works Director regarding flooding impacts), and see **Exhibit 6** for photos of flooded infrastructure). As indicated in the project's Initial Study and Mitigated Negative Declaration "Response to Comments," the City has provided the following additional information and evidence to help document the flooding associated with lagoon elevations exceeding +5 NGVD29 (i.e., approximately 5 feet above mean sea level) and its effects on City infrastructure and other development. The City indicates that:

- The U.S. Army Corps of Engineers' flood control levee pump facilities are designed to operate as standby stormwater pumps and not as continuous water circulating pumps. From July 28, 2014 to October 8, 2014 (73 days) pumps near Bixby Street (i.e., one block further inland than Ocean Street) ran a total of 121 hours while the river was shoaled. Pumping starts at an approximate 4-foot river level. There was no significant change in run times even with a 1-foot control drop that was made in September 2014. In comparison to July 2010 to July 2011 (when river flows were greater and 33.89 inches of rain fell), the pumps at near Bixby Street ran a total of 205 (8.5 days) hours over a one-year period.
- Ground saturation along low-lying areas occurs north of the levee. The associated rise of lagoon waters under streets and into infrastructure north of the levee includes impacts to pavement and street conditions and to stoplight electrical systems. Photos taken on October 22, 2014 when river levels were noted at 5.3 feet at the Soquel Bridge show ground saturation impacts along San Lorenzo Boulevard and Ocean Street (see City CEQA document). These photos also document a sinkhole that occurred at the time of the photo. Additional photos taken on September 16, 2014 show groundwater saturation impacting stoplight electrical wires and street pavement weeping at San Lorenzo Boulevard and Ocean Street when the river was noted at 5 feet at the Soquel Bridge at the time. Flooding of the bikeway on the San Lorenzo levee is also shown in photos from October 22, 2014.
- Flooding in basements of buildings along Pacific Avenue in Santa Cruz has been reported to the City. Most recently, the City of Santa Cruz received reports of flooding in basements of buildings along Pacific Avenue on September 14, 2014 when river levels were above 5 feet.

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This has also affected public access and safety at Santa Cruz Main Beach, an area visited by over one million people annually. Under closed lagoon conditions, a spillover channel eventually forms, and can bifurcate the beach in an upcoast direction making lifeguard access to the ocean edge difficult and sometimes hazardous. The spillover channel is also attractive to children and inexperienced swimmers who wish to avoid the ocean, creating additional safety concerns for beach lifeguards due to an uneven bottom and depth that may be present, as well as due to water quality concerns. And finally, it can create dangerous conditions that may not be completely apparent to beach goers when a natural breach is imminent (and a person drowned in such a scenario earlier this year after being swept out some 200 yards offshore).

In short, the proposed project is necessary to protect existing development and public safety as described under the second scenario under Section 30236. Turning to the second requirement of 30236, the project must also incorporate the best mitigation measures feasible. In order to make this finding, discussion of the coastal resources potentially affected by this proposed project is necessary.

The San Lorenzo River and its lagoon provide important habitats for anadromous, marine and freshwater fish species and waterfowl, including several special status species (namely tidewater goby (*Eucyclogobius newberryi*), Central California Coastal steelhead (*Oncorhynchus mykiss*), Central California Coastal coho salmon (*Oncorhynchus kisutch*)) and their critical habitat. In unaltered natural systems, these “closed” lagoons provide a highly productive environment for rearing juvenile steelhead due to their predominantly freshwater condition with cooler temperatures, high food production, and provision of cover from predators. A lagoon is most productive when it is either entirely freshwater, as in the summer after the mouth has closed and freshwater inflows have displaced residual salt water, or when the water column is a well-mixed combination of salt- and freshwater, typically in the winter months when the river mouth is open to tidal circulation. The lagoon habitat is typically not as biologically productive if it is stratified with a denser layer of salt water underlying a less dense layer of freshwater. In a prolonged stratification condition, steelhead are forced to move to the cool surface waters where little food exists and where they become more vulnerable to predation. Stratified conditions can also result in poor dissolved oxygen levels in bottom waters, which can degrade or destroy habitat for steelhead and their food.

As noted above, the City has tried a variety of methods in order to address flooding due to lagoon formation, including breaching and various sand management activities, but those methods are known to have negative environmental impacts, including to special status species identified above. The proposed culvert bypass system was developed in an attempt to avoid these kinds of impacts, and it is based on an extensive review of existing data on water quality, stream flow, biological resources, and fisheries in the San Lorenzo River Lagoon; and based on a collaboration of the City with federal and state natural resource agencies. Based on this context, the Commission here recognizes that the culvert bypass system appears to meet the both aspects of the second scenario, for now. However, the culvert bypass system is also an experiment of sorts, and its needs to include a duration so that its effectiveness can be tested, and adjusted as need be. Thus, **Special Condition 1** limits this approval to roughly five years (i.e., to the end of

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2026). If the City intends to continue to maintain and operate the culvert bypass system after that time, it will need to apply to retain the system, including applying lessons learned from its initial operation to better protect coastal resources. If not, then it is required to be removed and the area restored (see **Special Condition 1**).

That said, it is also important for the lagoon to maintain an adequate depth to provide habitat for protected species. According to a May 1, 2015 comment letter from the California Department of Fish and Wildlife (CDFW), a lagoon water surface elevation of +5 feet NGVD29 (or about 5 feet above sea level) is the minimum depth that would still adequately protect species:

... CDFW advised the City that in order to reduce impacts to special-status fish species, the 5.0-foot was the point at which no further reductions to WSE [water surface elevation] should occur. CDFW also indicated that temporary channel outlets should be constructed of dimensions in a manner to reduce the probability of uncontrollable lagoon draining events. Furthermore, an emergency permit issued by another agency for emergency mechanical breaching of the San Lorenzo River lagoon in September 2014 also addressed these concerns and included several special conditions, including one to ensure that the lagoon did not dewater below five feet. Therefore ... CDFW recommends the Project specify that channel excavation will retain a lagoon WSE of 5.0 feet as measured at the train trestle bridge staff gage.

Similar concerns were raised by the National Marine Fisheries Service (NMFS, also known as NOAA Fisheries) in its May 1, 2015 comments on the project's environmental document:

Due to serious concerns regarding the quality and quantity of steelhead rearing habitat in the San Lorenzo River Lagoon, NMFS recommends the City manage the lagoon at a water surface elevation (WSE) of at least five feet (ft) NGVD29.

While the City has not provided a detailed analysis of which water surface elevations directly result in which specific impacts to existing structures and development, and to public safety, it does appear that flood protection is needed to protect existing structures at higher water surface elevations.⁸ And, at a minimum that water surface elevation

⁸ Each of the resource agencies that commented on the project's CEQA documentation identified the lack of precise information of flood impacts as problematic in terms of defining the "target" water surface elevation. For example, CDFW indicated:

The IS/MND ... describes the facilities and infrastructure subject to flooding such as the Santa Cruz Beach Boardwalk (Boardwalk), residential streets, and the levee and drainage system. However, ... the IS/MND does not adequately quantify or relate the extent of flooding to lagoon WSE [water surface elevation].

Similarly, NMFS indicated:

The MND states flooding occurs when the lagoon WSE is above five ft, but does not provide exact flood stage elevations for local infrastructure. The MND states that Boardwalk facilities have been flood-proofed (new pump, resealing below-grade, and above-grade seawall), but a WSE where flooding now occurs at the Boardwalk or other City or federal facilities (e.g., levees) is not given. The MND does mention the pump system at the levees starts at approximately four ft, storm drain and

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cannot be allowed to go below +5 NGVD29, per resource agency comments. Thus, any management program for the lagoon needs to strike an appropriate balance between protecting important coastal resources, such as fisheries habitat, while also minimizing the summer/fall flooding and public safety problems in the surrounding areas caused by high lagoon levels. The proposed project seeks to establish a management program by which lagoon habitat, flooding of public and private properties, and public safety and access conditions can be addressed during the interim period and evaluated for cost, reliability, and effectiveness.

With all of this in mind, the Commission finds that the culvert bypass system incorporates the best mitigation measures feasible for a temporary (5 year) authorization. The identified collaboration across resource agencies has led to the incorporation of a range of best management practices (BMPs) to limit and offset potential impacts. At the same time, the project would take place in a dynamic natural environment, and there is the potential for resource impacts in need of additional mitigation measures. For example, installation of the culvert structure will involve the use of heavy equipment on the beach and in the lagoon. Moreover, if the culvert is not sited, designed and operated appropriately, it could result in impacts to biological resources. And breaching and sand management activities raise their own resource concerns, as identified earlier. Thus, **Special Conditions 2** specifies the parameters for breaching and sand management activities, including pre-activity consultation with resource agencies, biological monitoring requirements, water quality reporting, and general construction BMPs. And **Special Conditions 3 and 4** require a series of protective measures to ensure that the culvert bypass system is installed and operated to minimize impacts to natural resources – and in some cases to enhance existing conditions for these resources. Specifically, prior to construction of the project, **Special Condition 3(d)** further requires implementation of all Mitigation Measures of the Mitigated Negative Declaration (see **Exhibit 7**) to protect sensitive species during installation and removal of the culvert (if the culvert is removed after the 5-year term described in **Special Condition 1**), and **Special Condition 3(e)** requires that the culvert be operated consistent with the operational procedures described in Exhibit B of that document. Further, the final design of the culvert is required to allow for adjustments to maintain different target lagoon water surface elevations in order to allow for a higher elevation if conditions permit it (see **Special Condition 3(c)**). **Special Condition 3(c)** therefore requires that the culvert operation maintain the maximum water surface elevation possible consistent with flood protection. **Special Condition 5** requires the City to monitor flooding impacts at various water surface elevations of the lagoon and provide annual report for each year of authorization (through the end of 2026) to help assess the overall effectiveness of the culvert and other authorized breaching and sand management activities, including at different water surface elevations to determine the maximum water surface elevations that can be maintained without significant flooding damage to private property and public infrastructure. In

basements flood higher than five ft, and the theatre floods at seven ft. Therefore, it is unclear whether or not the lagoon could be managed at an elevation potentially greater than 5.0 ft, such as 5.5, 6.0 or 6.5 ft. Higher elevations would increase the extent and quality of steelhead rearing habitat (i.e., increased depth) while potentially avoiding flooding of local infrastructure.

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addition, the project is conditioned for a detailed construction management plan to ensure that impacts to coastal resources from construction are minimized (see **Special Condition 3**). The project is also conditioned to require that the Permittee evaluate the water quality impacts of the project (see **Special Conditions 3(b) and 5**) as well as the overall effectiveness of the project and its mitigation measures, including related to public recreational access and public views (see also discussions below on these issues).

As conditioned, the project can be found consistent with the Coastal Act policies cited above.

D. Public Access and Recreation

Applicable Coastal Act Provisions

Coastal Act Sections 30210 through 30213, 30220, 30221, and 30223 specifically protect public access and recreation. In particular:

Section 30210. In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30211. Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30213. Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. ...

Section 30220. Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Section 30221. Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

Section 30223. Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

These overlapping policies clearly protect access and recreation opportunities for the public, particularly free and low-cost access such as that available at the Main Beach project site. Section 30210 of the Coastal Act requires the Commission to provide the general public maximum access and recreational opportunities, while respecting the

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rights of private property owners. Section 30211 prohibits development from interfering with the public's right of access to the sea where acquired through use or by legislation. In approving new development, Section 30213 protects lower cost visitor and recreational facilities, including with respect to the beach here. And Sections 30220 through 30223 protect coastal lands like the project site for their ability to accommodate public access and recreation. Finally, the Coastal Act Section 30210 direction to maximize access and recreational opportunities represents a different threshold than to simply provide or protect such access, and is fundamentally different from other like provisions in this respect. Namely, it is not enough to simply *provide* access to and along the coast, and not enough to simply *protect* access; rather such access must also be *maximized*. This terminology distinguishes the Coastal Act in certain respects, and provides fundamental direction with respect to projects along the California coast that raise public access issues, like this one.

Analysis

The Santa Cruz Beach Boardwalk,⁹ other commercial establishments, and the City's Municipal Wharf are located on and adjacent to Santa Cruz Main Beach. These areas together form the most popular beach and general visitor destination in all of Santa Cruz County, and arguably the entire Central Coast of California.¹⁰ An estimated one million visitors annually (with most of these visiting during the summer and fall months) from a variety of locations and economic backgrounds, swim, relax, lay, and generally enjoy the beaches and other amenities found here. Especially during the summer months, the beach area can be packed with families, blankets, and umbrellas, occupying almost its entire area. In addition, Main Beach is connected at San Lorenzo Point to the Seabright Beach unit of the State Department of Parks and Recreation's Twin Lakes State Beach, which itself extends another half-mile downcoast to the Santa Cruz Harbor.¹¹ In short, the project would take place in a very significant public recreational access area.

The project will affect public access and recreational in a variety of ways. First,

⁹ The Boardwalk is the West Coast's largest seaside amusement park with over 35 rides and an estimated one-million visitors annually.

¹⁰ Santa Cruz County shoreline and beaches, including those here in the City of Santa Cruz, provide arguably the warmest and most accessible beaches and ocean waters in all of Northern California. With the large population centers of the San Francisco Bay Area, including San Jose, and the Silicon Valley nearby, these areas are significant visitor destinations. Not only are north Monterey Bay weather patterns more conducive to beach recreation than the rest of the Monterey Bay area, but these beaches are generally the first beaches accessed by visitors coming from the north of Santa Cruz. With Highway 17 providing the primary access point from the north (including from the San Francisco Bay Area into the Monterey Bay area), the City of Santa Cruz is the first coastal area that visitors encounter upon traversing the Santa Cruz Mountains. With the added draw of the Boardwalk and the City's other beach area attractions, Main Beach is the most popular beach in all of the Monterey Bay area, and likely along the entire Central Coast.

¹¹ At times the connection between Main Beach and Seabright Beach is blocked by San Lorenzo Point itself, depending on tides, including as it juts out some 400 feet from the bluffs here. There is also a natural tunnel/arch under the point, about 75 feet from its seaward end, providing access between the beaches when sand levels are low enough in the tunnel/arch and the lagoon hasn't filled it with lagoon water.

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breaching and sand management activities have the potential to displace beach users and detract from the beach going experience. Depending on the particular characteristics of the activities (i.e., they are all different and depend on changing conditions at the rivermouth), these impacts may be quite large to quite limited. That said, in all cases, public access and recreational can be adversely affected.

Second, culvert bypass system construction is expected to last approximately two to three months and occupy a large portion of Main Beach near the lagoon. During that time, that portion of Main Beach would be unavailable for public use, displacing public access users during the prime beach access summer season. The City estimates that construction would take 10-12 weeks.

Third, construction will include large equipment and operations that will by their very nature detract from the ambiance of the beach, and its utility for beach goers and users not displaced by such construction but still using the beach adjacent to it. It would also reduce lateral beach access, especially at higher tides when it would block access through the natural tunnel/arch providing access between Seabright Beach and Main Beach.

Fourth, the outfall portion of the culvert bypass system would be exposed near the shoreline edge, where it would be an impediment to access, a potential danger when partially submerged, and an attractive nuisance (e.g., to children intrigued by it), and it could lead to adverse water quality and public health issues from potential contaminants in the lagoon water being transported to the ocean.

Fifth, the culvert bypass system portion of the project will introduce an industrial style pipeline and culvert system into the natural beach area where it will detract from beach users enjoyment of these natural resources, and thus reduce beach use values. This is particularly the case as it relates to the unique natural tunnel/arch feature that would now include a pipeline structure across its very opening.

And sixth, the bypass system pipeline would block the natural beach tunnel/arch under San Lorenzo Point between Main Beach and Seabright Beach. Specifically, the 18-inch diameter pipe would rest at an elevation of approximately three feet above the typical sand elevation at the tunnel/arch entrance (and about five feet below the top of the tunnel/arch), thus blocking all but the most nimble of beachgoers when this access is otherwise available. The beach tunnel/arch often provides the only connection between these two beaches, especially at higher tides when San Lorenzo Point extends into the ocean itself and thus blocks lateral access. Thus, this pipeline impediment is a significant problem.

In terms of construction issues, these can be minimized via a construction plan that limits and constricts beach area construction activities in such a way as to limit impacts to public access and recreation (see **Special Condition 4**). This includes water quality requirements, equipment specifications, and timing restrictions (including limiting work to times outside of the prime summer season between Memorial Day and Labor Day weekends if possible). That said, although BMPs can be applied that will help to reduce

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construction impacts, these impacts cannot be entirely avoided with a project like this. Beach access utility will take a dip during breaching and sand management activities, and during the two to three month expected construction time for the culvert bypass system, especially if conditions dictate it has to take place in or partially in the prime summer season. As to post construction impacts for the bypass system, the project could be better camouflaged so as to not present as such a starkly incompatible structure in the beach area, including specifically at the culvert's outfall location. However, such camouflaging includes significant cost, and as importantly, some camouflaging efforts (e.g. faux bluff screening) could make it more difficult to remove the culvert structure if it is determined that it is not warranted to keep the system past the initial five-year period. And as to issues associated with the pipeline crossing of the natural tunnel/arch, these too are difficult to address. Again, the pipeline could be better camouflaged, but it would also require some more substantial camouflaging at the tunnel/arch, and probably some sort of means for beach goers to traverse the pipeline so that lateral access continues to be provided between the beaches at that location. The same can be said for the outfall location, where it will also be an impediment to public access and a potential attractive nuisance (e.g., to curious children).

For now, and in light of the bypass system's experimental nature, it appears prudent to not require final and permanent camouflaging and other related public access measures, including at the tunnel/arch, and instead to require same if the system is to be retained past the initial five-year period. Such measures would seek to completely hide the structures from public view, and to facilitate through use and access. In the interim, if the pipeline significantly blocks beach access at the tunnel/arch, or the outfall causes significant beach access issues, including in terms of water quality and public health, or if other approved project components do the same, then the Applicant will be required to take remedial measures to ensure that such impacts are reduced to a level of insignificance. The Applicant will be required to monitor project activities and to report on such issues, including annually (see **Special Condition 5**). At the same time, what all of this means is that the unavoidable project area public access and recreational impacts identified above, including for the issues associated with culvert bypass system construction, will remain essentially unmitigated. As a temporary project designed to provide important public benefits, that is acceptable in the interim. However, and in addition to camouflaging, tunnel/arch, and outfall measures, the Applicant will also need to document such impacts, and all such impacts are required by this approval to be accompanied by mitigation should the Applicant seek to extend the authorization (see **Special Condition 1**).¹²

As conditioned, and due to its temporary nature, as well as mitigation upon

¹² For example, the Applicant could pursue offsetting mitigation atop San Lorenzo Point itself, where the Applicant has long discussed a public access enhancement project that can improve the public's access experience there. The Applicant could also pursue projects to close coastal trail gaps in the vicinity, such as the known gap along the shoreline between 4th Avenue and East Cliff Drive near the Harbor. Or the Applicant could pursue coastal trail enhancements at the Harbor itself, or a combination of such projects. The main point is that any extension of authorization needs to be accompanied by offsetting mitigation for impacts both incurred and expected, and the project area provides a rich opportunity environment for such mitigations.

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authorization extension, the approved project can be found consistent with the public access and recreation policies of the Coastal Act.

E. Visual Resources

Applicable Coastal Act Provisions

The Coastal Act requires that scenic and visual qualities of coastal areas be protected, and even enhanced, including by minimizing natural landform alteration. And the Act explicitly requires that coastal views be “protected as a resource of public importance.” Coastal Act Section 30251 states:

Section 30251. *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. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

Analysis

As indicated earlier, the project area is a significant natural riverine and sandy beach area. The project area is also located on and adjacent to a significant natural landform, San Lorenzo Point, which juts out from the bluff some 400 feet adjacent to the river, and includes a unique natural tunnel/arch that connects the beaches on either side of the bluff. Views of this area are thus important, and in many ways iconic, making up the downcoast edge of Main Beach, and the upcoast end of Seabright Beach. These views will be diminished during construction, which will no doubt detract from the areas scenic nature, especially if it occurs during the heavy use summer season. After construction, while the Applicant has applied measures to limit visual impacts (see visual simulations in **Exhibit 8**), the project will not be hidden from view, and will introduce industrial appearing infrastructure into the heart of this significant and protected view. Again, as indicated above, the project could be better camouflaged so as to not present as such a starkly incompatible structure in the beach/point area, but that also includes significant cost and could make it more difficult to remove the culvert structures should it not be warranted to keep the system past the initial five-year period.

Thus, similarly, it appears prudent for now not to require final and permanent camouflaging measures, and instead require same if the system is to be retained past the initial five-year period. Such measures would seek to completely hide the structures from public view so the end result is views of the natural river, bluff, tunnel, and beach features. Such measures appear feasible in the longer term, and are required if this system is going to be operating past the initial five-year period. In the interim, all camouflaging measures are required to be maintained in their approved state for the initial five-year period, and remediation is required to limit such impacts to a level of

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insignificance if the Executive Director determines that that is necessary. See **Special Conditions 1 and 5**. Further, **Special Condition 5** requires that approved project activities, including the culvert bypass system, be regularly monitored and analyzed annually to evaluate the effectiveness of its visual resource mitigation measures as well as potential further mitigation efforts that could be utilized to avoid and/or further mitigate these impacts. And, to be clear, as with public recreational access impacts, unavoidable visual impacts will remain essentially unmitigated. As a temporary project designed to provide important public benefits, that is acceptable in the interim. However, and in addition to the camouflaging, tunnel/arch, and outfall measures described above in the preceding finding, the Applicant will also need to document such impacts, and all such impacts are required by this approval to be accompanied by mitigation should the Applicant seek to extend the authorization (see **Special Condition 1**). As conditioned, the project can be found consistent with the visual resource policies of the Coastal Act.

F. Coastal Hazards

Applicable Coastal Act Provisions

Section 30253 of the Coastal Act states, in applicable 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 ...

The proposed project entails development of critical infrastructure in an area subject to a range of coastal hazards including earthquakes, liquefaction, differential settlement, tsunami inundation, and flooding.

Analysis

Coastal Act Section 30253 requires the proposed project to assure long-term stability and structural integrity, and to minimize risk to life and property in areas of high geologic, flood, and fire hazard. Section 30253 also prohibits shoreline armoring to protect this development if threatened. Here, it is obvious that the project area is a dynamic, ever-changing, and hazardous coastal environment. With respect to the culvert bypass system, the Applicant has not explicitly identified an expected lifetime, but it is clear that it is not intended to be – nor is it probably possible that it could be – safe from coastal hazards for anything but the relatively short term. As an experimental project of sorts, this is not inappropriate, as long as the Applicant acknowledges and ensures that such development is not going to be allowed shoreline armoring to maintain its precarious perch (see **Special Condition 7**). The proposed culvert structures, including the intake valve, piping, and outfall, will all be located in an active river, subject to intense flooding, including significant storm water flows that include downed trees, boulders, etc. as well as significant wave action, particularly near the outlet. It is likely that the project will require regular maintenance to ensure that it remains operational, and this approval requires such maintenance. However, and to be clear, there is no expectation that a structure of the type proposed will last over the

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longer term, especially as coastal hazards are exacerbated at this shoreline location by rising seas, and this approval recognizes same, including requiring removal if the authorization expires and/or the bypass system is endangered by coastal hazards and cannot be protected by non-armoring means (see **Special Condition 7**).

Finally, there is a certain amount of risk involved in development, such as the approved project components here, that is located at the shoreline edge and that can be directly subject to erosion, violent storms, large waves, flooding, earthquakes, and other geologic hazards. These risks can be exacerbated by such factors as sea level rise and localized geography that can focus storm energy at particular stretches of coastline, and by combined effects here associated with riverine impacts. The Commission has sought, through this review, to limit such risks, but they cannot be eliminated entirely, and this fact must be recognized, and liabilities assumed by the Applicant accordingly. Specifically, the Commission's experience in evaluating proposed developments in areas subject to coastal hazards has been that development has continued to occur despite periodic episodes of heavy storm damage and other such occurrences. Development in such dynamic environments is susceptible to damage due to such long-term and episodic processes. Past occurrences statewide have resulted in public costs (through low interest loans, grants, subsidies, direct assistance, etc.) in the tens of millions of dollars. As a means of allowing continued development in areas subject to these hazards while avoiding placing the economic burden for damages onto the people of the State of California, applicants are regularly required to acknowledge site hazards and agree to waive any claims of liability on the part of the Commission for allowing the development to proceed. Accordingly, this approval is conditioned for the Applicant to assume all risks for developing at this location (see **Special Condition 7**).

As conditioned, the project can be found consistent with the coastal hazard policies of the Coastal Act.

G. Other

Coastal Act Section 30620(c)(1) authorizes the Commission to require applicants to reimburse the Commission for expenses incurred in processing CDP applications. Thus, the Commission is authorized to require reimbursement for expenses incurred in defending its action on the pending CDP application in the event that the Commission's action is challenged by a party other than the Applicant. Therefore, consistent with Section 30620(c), the Commission continues to impose **Special Condition 8** requiring reimbursement for any costs and attorneys' fees that the Commission incurs in connection with the defense of any action brought by a party other than the Applicant challenging the approval or issuance of this permit.

H. California Environmental Quality Act (CEQA)

CEQA Section 21080.5(d)(2)(a) prohibits a proposed development from being approved if there are feasible alternatives and/or feasible mitigation measures available that would substantially lessen any significant adverse effect that the development may have on the environment. The City, acting as the CEQA lead agency, adopted a Mitigated Negative Declaration for the proposed project on June 9, 2015, and approved an addendum to the adopted Mitigated Negative Declaration in March of 2019 to address

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proposed project changes. All mitigations associated with the City's adopted CEQA documents are part of the proposed project.

The Commission's review, analysis, and decision-making process for CDPs and CDP amendments has been certified by the Secretary of the Natural Resources Agency as being the functional equivalent of the environmental review required by CEQA (CCR Section 15251(f)). Accordingly, in fulfilling that review, this report has analyzed the relevant coastal resource issues with the proposal and has identified appropriate and necessary modifications to address adverse impacts to such coastal resources. All comments have been addressed herein. The Commission finds that only as modified and conditioned herein will the proposed project avoid significant adverse effects on the environment within the meaning of CEQA. Thus, the proposed project as modified will not result in any significant environmental effects for which feasible mitigation measures have not been employed, consistent with CEQA Section 21080.5(d)(2)(A).

4. APPENDICES

A. Substantive File Documents¹³

- City of Santa Cruz Mitigated Negative Declaration and Addendum, March 2019, Dudek
- City of Santa Cruz Sand and Berm Management Toolkit and Addendum, dated February 1, 2021
- Geotechnical Report, Haro Kasunich, April 30, 2019
- City of Santa Cruz SLR Technical Specifications and Contract Documents, San Lorenzo River Culvert
- City of Santa Cruz Public Outreach Summary

B. Staff Contacts with Agencies and Groups

- U.S. Army Corp of Engineers
- U.S. Fish and Wildlife Services
- National Marine Fisheries Service (NOAA Fisheries)
- California Department of Fish and Wildlife
- California Central Coast Regional Water Quality Control Board
- Surfrider Foundation

¹³ These documents are available for review from the Commission's Central Coast District office.