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STAFF REPORT: CDP HEARING

Application Number: 2-19-0555

Applicant: Sonoma County Water Agency

Project Location: At Goat Rock State Beach and the Russian River mouth in the unincorporated Jenner area of Sonoma County (APNs 099-040-002, 099-030-006, and 099-030-007).

Project Description: Re-authorize the Russian River Estuary Management Program for 3 years to allow for estuary management activities at the mouth of the Russian River including: 1) the construction and maintenance of a low velocity lagoon outlet channel from May 15th to October 15th to benefit fish habitat (by sustaining raised water elevations in the Estuary); and 2) sand bar breaching activities to prevent flooding.

Staff Recommendation: Approval with Conditions

SUMMARY OF STAFF RECOMMENDATION

The Sonoma County Water Agency (SCWA) proposes to continue the Estuary Management Program at the Russian River mouth (originally approved under CDP 2-12-004 in 2013 with a limited authorization period) to enhance fish habitat and provide flood protection. The proposed project is located at the mouth of the Russian River within Goat Rock State Beach near the town of Jenner in unincorporated Sonoma County. The project site is located partially on State Parks property and partially on state tidelands (administered by the California State Lands Commission (SLC)) and is

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located just inland of the Russian River Jenner Marine Protected Area (as designated by the California Department of Fish and Wildlife (DFW)). Periodic breaching of the sand bar and lagoon channel maintenance at this site has previously been authorized by the Coastal Commission for the last four decades, most recently in 2013.

The proposed project would re-authorize the Russian River Estuary Management Program for another 3 years to allow for: 1) construction of a lagoon outlet channel during the lagoon management season to control for water levels that support fish habitat from May 15th to October 15th, and 2) artificial breaching from October 16th to May 14th and as necessary from May 15th to October 15th to minimize flooding impacts. The proposed project, also known as the Estuary Management Program, would thus enhance freshwater lagoon conditions from May 15 to October 15 to improve rearing habitat for juvenile salmonids, particularly steelhead, while minimizing the potential for flooding of low-lying properties. The Applicant also proposes the continuation of adaptive management for the program which includes monitoring of biological productivity, water quality, and physical processes in the Estuary in response to changes in water surface elevations in the Estuary-lagoon system; and refinement of management actions to achieve desired water levels to support biological productivity, while simultaneously providing flood control for properties adjacent to the Estuary.

The project area is in and adjacent to several types of significant biological resources, including habitat for anadromous fish, dune habitats, and pinniped haul-outs. As concerns anadromous fish, the Russian River has been designated critical habitat for coho salmon, Chinook salmon, and steelhead, all of which have been listed as threatened species under the federal Endangered Species Act (ESA). In 2008, the National Marine Fisheries Service (NMFS) issued a Biological Opinion (BO) for the Russian River Watershed directing SCWA to change their management practices to provide higher water elevations in the Estuary during the summer months to benefit habitat for juvenile salmonids while avoiding impacts from flooding. Thus, the goals of the proposed project are to improve fish habitat as directed by the NMFS BO while at the same time protecting low-lying development in the area from flooding.

The proposed project can be authorized under the Coastal Act because: (1) it is necessary to provide for the biological productivity of coastal waters appropriate to maintain optimum populations of marine resources as required by Sections 30230 and 30231; (2) it is a permissible use in streams and includes the best mitigation measures feasible, including adaptive management, consistent with the requirements of Section 30236; (3) risks to life and property are minimized consistent with the requirements of Section 30253; and (4) public access is managed in a manner that takes into account public safety and the protection of fragile natural resources as required by Section 30214.

The proposed project has two principal objectives, namely, to protect against flooding at the same time as enhancing fish and wildlife habitat. And it is required to adhere to biological requirements of State Parks, NMFS, and DFW. In addition, the project includes measures to minimize disruption to public access and also includes best management practices (BMPs) to protect coastal waters during all activities. Further,

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pursuant to the Commission's most recent approval, the Applicant has provided numerous monitoring reports that have proven helpful in adapting processes that strike a better balance between flood risk avoidance and ideal salmonid rearing habitat. For example, water levels can be managed at levels higher than previously thought (up to 9 feet) to maximize available steelhead habitat before flood risks start to present themselves. In addition, the outlet channel design has been successfully adapted over time to reduce flushing of fish and sediment out of the Estuary system. Lastly, the overall technical understanding of the river mouth system has evolved, enabling the Applicant to better strategize breaching events with successful results. As a result, there has been a significant reduction in the need for breaching events, which has helped to reduce potential related habitat disturbances.

Development under this permit would be authorized for a term of three years from the date of Commission approval, with the possibility for Executive Director extension for another three years. After that time, a new CDP or a CDP amendment would be required to continue the project. As proposed and conditioned, the Estuary Management Program will protect coastal resources consistent with the requirements of the Coastal Act. Staff recommends that the Commission approve a CDP with conditions, and the motion to implement this staff recommendation is found on page 5 below.

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I. MOTION AND RESOLUTION

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

Motion to Approve CDP: I move that the Commission approve Coastal Development Permit Number 2-19-0555 pursuant to the staff recommendation, and I recommend a **YES** vote.

Resolution to Approve CDP: The Commission hereby approves Coastal Development Permit Number 2-19-0555 and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with 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

This permit is granted subject to the following standard conditions:

- 1. Notice of Receipt and Acknowledgment.** The permit is not valid, and development shall not commence until a copy of the permit, signed by the Applicant 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 Applicant to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. **Approved Project.** Subject to these standard and special conditions (including modifications to the project, mitigation measures, and/or the project plans required by them), this CDP authorizes the continued implementation of the Russian River Estuary Management Program including: 1) continued implementation of a lagoon outlet channel during the lagoon management season, from May 15th to October 15th to benefit fish habitat, and 2) sand bar breaching from October 16th to May 14th and as necessary from May 15th to October 15th to minimize flooding.
2. **Construction Plan.** PRIOR TO ISSUANCE OF THE CDP, the Permittee shall submit two copies of an updated Construction Plan (Plan) to the Executive Director for review and written approval. The Plan shall, at a minimum, include the following:
 - a. **Construction Areas.** The 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 adjacent biological resources as well as to maintain best management practices (BMPs) to protect coastal dune and marine resources on-site and in the surrounding area, including by using offsite areas for staging and storing construction equipment and materials, as feasible. In addition, all construction areas shall avoid sensitive dune plant species, including Tidestrom's lupine, as required in subsection (c) below. Construction (including but not limited to construction activities and materials and/or equipment storage) is prohibited outside of the defined construction, staging, and storage areas.
 - b. **Construction Methods and Timing.** The Plan shall specify the construction methods to be used, including all methods to be used to keep the construction areas separated from sensitive coastal dunes, marine resources and public recreational use areas (including using unobtrusive fencing or equivalent measures to delineate construction areas) and verification that equipment operation and equipment and material storage will not, to the maximum extent feasible, significantly degrade public views during construction. All work shall take place during daylight hours, and all lighting of the beach, river, and dune habitat is prohibited.
 - c. **Dune Plant Avoidance.** The Plan shall include methods to avoid impacts to sensitive dune plant species, including Tidestrom's lupine. All sensitive species shall be avoided during construction, including through locating the defined construction areas required in subsection (a) away from such species. Furthermore, the sensitive dune plant habitat shall be fenced off during construction. For the duration of the construction activities, markers identifying the boundaries of sensitive dune plant habitat shall remain in place. A monitor shall be on site during construction periods to ensure that project activities occur

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within the defined construction, staging, and storage areas and outside of the sensitive dune plant habitat.

- d. **Mitigation Monitoring Plan.** The project shall be conducted in compliance with the requirements of the Mitigation Monitoring Plan, dated August 17, 2011 (see Appendix A) except where the terms and conditions of this CDP require actions more protective of coastal resources.
- e. **Construction BMPs.** The Plan shall use all the BMPs identified in the prior Commission approved Plan (titled the Construction, Monitoring, and Reporting Program for the Russian River Estuary and dated approved December 2013) including but not limited to the requirement for contractors to ensure work crews are carefully briefed on the importance of observing the appropriate precautions and reporting and cleanup of accidental spills; and that construction contracts shall contain appropriate penalty provisions, sufficient to offset the cost of retrieving or cleaning up improperly contained foreign materials.
- f. **No Disruption of Public Access.** The Plan shall ensure that project activities do not block access to the beach at the project site. Temporary signs shall warn the public of construction while construction activities are underway. Signs shall direct the public to safe access routes during construction activities. Signs shall not discourage public access. Signs shall be posted and maintained at key locations, such as the parking lot at Goat Rock State Beach Parking lot, the unofficial beach access trail located on the north side of the beach off Highway 1, and 100 feet on either side of the outlet channel, informing beach goers of project activities.
- g. **Peak Public Access Times Avoided.** Project activities shall occur Monday through Thursday only, to avoid impacts to park visitors during peak visitation times (Friday through Sunday).
- h. **Sand Bar Breaching Limitation.** Except under conditions requiring immediate action to prevent or mitigate loss or damage to life, health, property, or essential public services, the sand bar breaching activities authorized by the CDP shall not be initiated on or within 36 hours prior to any weekend or State holiday.
- i. **Construction Site Documents.** The Plan shall provide that copies of the signed CDP and the approved Plan be maintained in a conspicuous location at the construction job site at all times, and copies of the signed CDP and the approved Plan shall be available for public review on request. All persons involved with the construction shall be briefed on the content and meaning of the coastal development permit and the approved Plan, and the public review requirements applicable to them, prior to commencement of construction.
- j. **Construction Coordinator.** The 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

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emergencies), and that their contact information (i.e., address, phone numbers, email, etc.) including, at a minimum, an email address and a telephone number 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 while still protecting public views as much as possible, 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 and contact information (i.e., address, email, phone number, etc.) 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

- k. Notification.** The Permittee shall notify planning staff of the Coastal Commission's North 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 Plan shall be enforceable components of this CDP. The Permittee shall undertake construction in accordance with this condition and the approved Plan. Minor adjustments to the above construction requirements may be allowed by the Executive Director in the approved Plan if such adjustments: (1) are deemed reasonable and necessary; and (2) do not adversely impact coastal resources.

- 3. Marine Mammal Avoidance and Monitoring.** All work shall avoid the river mouth area where seal haul-out is typically located (see **Exhibit 3** – Pinniped Haul-Outs). In addition, all work shall be conducted consistent with the National Marine Fisheries Service (NMFS) and National Oceanic and Atmospheric Administration (NOAA)-approved seal haul-out plan described in the Incidental Harassment Authorization (April 2013) (IHA) and any updates to this IHA. Project activities shall comply with all mitigation, monitoring and reporting requirements contained in the IHA, including the following requirements:

- a. Avoid Sudden Flushes.** Permittee crews shall cautiously approach the haul-out ahead of heavy equipment to minimize the potential for sudden flushes, which may result in a stampede. Crews on foot shall make an effort to be seen by seals from a distance, if possible, rather than appearing suddenly at the top of the sand bar, again preventing sudden flushes. Boats operating near river haul-outs during monitoring shall be kept within posted speed limits and driven as far from the haul-outs as safely possible to minimize flushing seals.
- b. Avoid Haul-Out.** Permittee crews shall avoid walking or driving equipment through the seal haul-out. Physical and biological monitoring at the haul-out location shall not occur if a pup less than one week old is present at the monitoring site or on a path to the site.

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- c. **Monitoring from Bluff.** During breaching events, all monitoring shall be conducted from the overlook on the bluff along Highway 1 adjacent to the haul-out in order to minimize potential for harassment.
 - d. **Disturbance Recovery.** The Permittee shall maintain a one-week, no-work period between water level management events (unless flooding is an immediate threat) to allow for an adequate disturbance recovery period. During the no-work period, equipment must be removed from the beach.
 - e. **Equipment BMPs.** All equipment shall be driven slowly on the beach, and care shall be taken to minimize the number of shutdowns and start-ups when equipment is on the beach. All work shall be completed as efficiently as possible, with the smallest amount of heavy equipment possible, to minimize disturbance of seals at the haul-out.
 - f. **Haul-Out Maintained.** The Permittee shall conduct seal counts at the Jenner seal haul-out and at nearby coastal and river haul-outs in accordance with methods described in the Russian River Management Activities Pinniped Monitoring Plan (Pinniped Monitoring Plan), dated September 9, 2009, or as updated by requirements of NMFS under the Marine Mammal Protection Act (MMPA). If monitoring during the lagoon management period indicates decreases in overall use at the Jenner haul-out are correlated with increases in use at the three closest haul-outs, then the Permittee shall consult with the Executive Director, NMFS and CDFW to modify the Estuary Management Plan activities such that the haul-out site is restored. Proposed alterations to the approved Estuary Management Plan shall be reported to the Executive Director. No alterations to the approved Estuary Management Plan shall occur without an approved amendment to this CDP, unless the Executive Director determines that no amendment is legally required.
4. **Monitoring Reports.** The Permittee shall continue to annually provide a Monitoring Report to the Executive Director for review and approval. The primary objective of the Monitoring Reports shall be to ensure that approved project activities protect and enhance project area habitats while also protecting development from flooding and enhancing water quality and shall be measured against a clearly defined project baseline, which shall be provided in the Monitoring Reports. The Monitoring Reports shall be based upon an adaptation framework where lessons learned from approved project activities and monitoring are applied through adaptive changes designed to better achieve the primary objective over the course of this authorization. The Monitoring Reports shall include all monitoring components of the Biological Opinion (BO) and the Final Environmental Impact Report (FEIR) for the project

The Monitoring Reports shall be provided annually to the Executive Director for review and approval for as long as activities are authorized by this CDP, with the first annual Monitoring Report due on September 1 of 2020 and subsequent reports due on September 1 of each year thereafter. Each Monitoring Report shall be cumulative and shall summarize all previous results; shall clearly document conditions in the

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project area related to project implementation, including in narrative (with supporting monitoring data) and through photographs taken from the same fixed points in the same directions each year, all commencing from the project baseline; shall include a performance evaluation section where information and results from the monitoring program are used to evaluate the effect of project implementation with respect to flooding, habitat, and water quality impacts, both beneficial and detrimental; and shall include recommendations to address changes that may be necessary in light of monitoring results and/or other information, including revisions based upon more current data and/or species information related to the habitat areas in question, if any. Recommendations shall be implemented within 30 days of Executive Director approval of each Monitoring Report, unless the Executive Director identifies a different time frame for implementation.

All requirements above and all requirements of each approved annual Monitoring Report shall be enforceable components of this CDP. The Permittee shall undertake development in accordance with this condition and the approved Monitoring Reports. Minor adjustments to the above monitoring requirements may be allowed by the Executive Director if such adjustments: (1) are deemed reasonable and necessary and (2) do not adversely impact coastal resources.

5. **Assumption of Risk, Waiver of Liability, and Indemnity.** By acceptance of this CDP, the Permittee acknowledges and agrees, on behalf of itself and all successors and assigns: (a) that the project area is subject to extreme coastal hazards, including but not limited to episodic and long-term shoreline retreat and coastal erosion, high seas, ocean waves, tidal scour, storms, tsunamis, coastal flooding, landslide, earth movement, and the interaction of all of these, many of which will worsen with future sea level rise; (b) to assume the risks to the Permittee and the properties that are the subject of this CDP 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; (d) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the CDP 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 (e) that any adverse effects to property caused by the permitted project shall be fully the responsibility of the Permittee.
6. **CDP Term.** Development under this CDP is authorized for three (3) years from the date of Commission approval (until June, 2023). One request for an additional three-year period of development authorization may be accepted, reviewed and approved by the Executive Director for a maximum total of six (6) years of development authorization, provided the request would not alter the project description and/or require modifications of conditions due to new information or other changed circumstances including development of a new Biological Opinion for the project by the Permittee, U.S. Army Corps of Engineers and National Marine Fisheries Service. The request for an additional three-year period of development authorization shall be

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made at least 120 days prior to June 10, 2023. If the request for an additional three-year authorization period would alter the project description and/or require modifications of conditions due to new information or other changed circumstances, an amendment to this CDP shall be necessary to authorize development beyond June 10, 2023. If the Permittee submits a request or application to continue Estuary management (including breaching and other activities intended to control water elevations) beyond June 10, 2023, such a request or application shall be accompanied by a project alternatives analysis that, at minimum, provides an evaluation of the range of options available to protect against identified flooding risks, other than breaching or controlling water levels in the Estuary, including relocating, elevating, or reinforcing structures.

7. **Other Agency Approval.** PRIOR TO ISSUANCE OF THE CDP, the Permittee shall submit to the Executive Director written evidence that all necessary permits, permissions, approvals, and/or authorizations for the approved project have been granted by Sonoma County, the North Coast Regional Water Quality Control Board, California State Lands Commission, California Department of Parks and Recreation, California Department of Fish and Wildlife, National Marine Fisheries Service, U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service or evidence that no such permits or approvals are necessary. Any changes to the approved project required by these agencies shall be reported to the Executive Director. No changes to the approved project shall occur without a Commission amendment to this CDP unless the Executive Director determines that no amendment is necessary.
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/or (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/or assigns challenging the approval or issuance of this CDP, the interpretation and/or enforcement of CDP terms and conditions, or any other matter related to this 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, its officers, employees, agents, successors and/or assigns.

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A. PROJECT LOCATION AND BACKGROUND

Location

The proposed project is located at the Russian River Estuary, within Goat Rock State Beach near the town of Jenner in unincorporated Sonoma County (APNs 099-040-002, 099-030-006, and 099-030-007) (see Project Location in **Exhibit 1**). The site is bounded by the Russian River to the north and the east and the waters of the Pacific Ocean to the west (see **Exhibit 2** – Project Area Photos). The project site is located at the Russian River Estuary at the confluence of the river and the Pacific Ocean. The Russian River Estuary is a sand bar-built estuary, meaning that a sand bar forms at the river mouth and dams off the connection with the ocean. The sand bar periodically breaches without assistance. However, there has been a long-standing practice of breaching the sand bar when Estuary water elevations encroach on development located on low lying properties surrounding the lagoon.

The project site is located partially on State Parks property and partially on State Lands property. The site also includes a dilapidated, abandoned, and mostly subsurface rock jetty along the sand bar barrier. Prior to the Coastal Act, the jetty and associated seawall, roadway, and railroad were constructed in phases by the Russian River Improvement Company (RRIC) with funds from the RRIC, private sources, the Fish and Game Preservation Fund, and the State of California, and later by the California Division of Water Resources with funding from the Fish and Game Commission and Sonoma and Mendocino Counties (Schulz, 1942).¹ The jetty was essentially abandoned in 1948. Currently, the area is zoned “Public Facilities” within the coastal zone and the LCP designation is “Public/Quasi Public”.

The Russian River drains a large area of Sonoma and Mendocino Counties before discharging to the ocean at Jenner. The estuarine portion of the river extends approximately six to seven miles upstream to a point between Duncan Mills and Austin Creek. Tidal action has on occasion extended as far as ten miles upstream. The rural lands surrounding the Estuary are sparsely developed with the exception of the small unincorporated communities of Jenner, Bridgehaven, and Duncan Mills. The floodplain within the river canyon also contains some agricultural lands. The partially forested river canyon cuts through the Coast Range, creating a dramatic and highly scenic landscape. The headlands at the river mouth rise 50 to 200 feet above the sea, and rocky pinnacles rise from the seafloor offshore. The river turns northward near the mouth where it is flanked by a long barrier beach that extends north from Goat Rock, about 4,000 feet to the south.

The Russian River Estuary and the freshwater marsh on Willow Creek, a tributary that enters the river about a mile upstream from the mouth, provide important habitat for a diverse mix of flora and fauna. Estuaries provide particularly rich habitats, as the mixing of fresh and saltwater concentrates nutrients. A variety of habitat types line the banks of the river, including freshwater marsh, coastal terrace prairie, redwood forest, Douglas fir

¹ (Schulz, 1942) referenced in Magoon et al., *Lost Jetty of California's Russian River* – Report for the 31st International Conference on Coastal Engineering held in Hamburg, Germany.

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forest, north coast riparian scrub, freshwater seep, and Red Alder riparian scrub. The Estuary and river are designated critical habitat for the Chinook salmon, coho salmon, and Steelhead, each of which is listed as either endangered or threatened under the federal Endangered Species Act depending on the type of Chinook, coho, or steelhead. In addition, just offshore is the Russian River Jenner Marine Protected Area as designated by the California Department of Fish and Wildlife (CDFW). The marine protected area is divided into two designations: 1) the ocean side of the Russian River mouth is within the Russian River State Marine Conservation Area (SMCA), and 2) the Estuary side is within the Russian River State Marine Recreational Management Area (MRMA).

There are also many low-lying properties along the riverbanks. According to the Flood Risk Analysis from 2012, 123 properties, structures, and infrastructure were identified as being potentially affected by inundation between 4.5 to 14 feet and especially at water elevations of 10-12 feet. Structures include houses, garages, and sheds. Infrastructure types included roads, stairs, tanks, and boat docks. However, the most recently updated Alternatives Analysis from 2020 stated that “Based on available elevation information and property records, most of the affected areas are not designated living spaces. A more detailed flood analysis, as well as consideration of the elevation of structural members of the buildings, may result in a lower threshold specific to each property.”

Goat Rock, Sonoma Coast State Beach is located at the mouth of the Russian River. The beach is known for its scenic shoreline and easily accessible sandy beach, with picnic tables, parking, and restroom facilities available onsite. As one of the Sonoma Coast State Beaches, the site offers low-cost, visitor-serving and recreational opportunities to the public as no fee is currently charged for use. In addition, the site has several significant biological resources including habitat for the sensitive dune species Tidestrom’s lupine, as well as a colony of harbor seals, protected under the Marine Mammal Protection Act (MMPA), which is frequently found north of the jetty at the opening of the river mouth (see **Exhibit 3** – Pinniped Haul-Outs). Lastly, the Native American Coastal Miwok and Kashia Pomo people have inhabited the Russian River area for thousands of years. Therefore, there may be significant archaeological sites and cultural resources in and around the Russian River Estuary area.

Background

Like many coastal estuaries and lagoons along the California coast, the Russian River Estuary is subject to frequent closure by the formation of a sand bar across the mouth of the Estuary. The sand bar is created by the movement and accumulation of sand by long, low-energy ocean waves that reach the shore during low precipitation, minimum runoff periods. The closure of the Estuary temporarily eliminates tidal exchange and creates a fresh and brackish water lagoon, which gradually increases in depth, raising the water level in the Estuary. Without assisted breaching, the Estuary eventually overtops the sand bar. However, for many years before the Applicant became responsible for Estuary management, the sand bar had been artificially breached by local residents and Sonoma County Public Works to alleviate the threat of flooding to low-lying properties.

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Breaching has historically been accomplished using a bulldozer to excavate a channel through the sand bar. Once breached, the water rushing through the channel acts to quickly widen and deepen the opening. Beginning in the 1980s, the Coastal Commission issued a series of emergency CDPs (ECDPs) to the County to allow breaching to prevent flooding. These ECDPs were conditioned to require the County to conduct an environmental review of the effects of breaching to the estuarine ecology and to subsequently apply for a regular CDP for a long-term breaching program. In 1996, the Commission granted CDP 1-96-09 to SCWA, authorizing periodic breaching for a five-year period ending December 31, 2001. This CDP included conditions requiring SCWA to monitor the effects of breaching to water quality and biological productivity of the Estuary. Accordingly, the SCWA submitted five annual monitoring reports for the years 1996 through 2000, documenting the effects of the breaching program to the water quality of the Estuary, as well as direct and indirect impacts to fish and other macro-invertebrates, pinnipeds and plankton (MSC 1997, MSC 1998, MSC 1999, MSC 2000, and SCWA 2001).

After the CDP issued in 1996 expired, a later CDP for Russian River Estuary management was issued on May 15, 2002 (CDP 2-01-033) and amended on June 14, 2010 (CDP 2-01-033-A1), to periodically breach the sand bar at the mouth of the Russian River for flood control purposes. Subsequently, ECDPs 2-12-002-G, and 2-13-005-G were issued for breaching of the sand bar at the Russian River Mouth. The most recent CDP (CDP 2-12-004) was approved in August of 2013 and had a three-year authorization period with an option to extend for an additional three years (which was requested and granted). Thus, CDP 2-12-004 expired August 15, 2019. Since its expiration, there has been one additional emergency permit (ECDP 2-20-002-G) issued for sand bar breaching. This application serves as the follow up regular CDP application for this latest emergency permit, as well as a request to reauthorize the overall program for an additional 3-year period.

Based on SCWA's database, there have been 198 recorded river closures between 1996 and 2019. On average, 6 breaches per year occurred between 1996 and 2009. During the period from May 15 to October 15, there has been an annual average of 1.6 beach management actions and 1.3 self breaches, including citizen breaches. Outside this period from October 16 to May 14, there was an average of 2.9 artificial breaches and 2.1 self-breaches, including citizen breaches. These averages cover 24 years, however, after 2012 management consisted of artificial breaching and/or installing a lagoon outlet channel during the lagoon management period and artificial breaching outside of this period.

Federal Framework

Section 7 of the Endangered Species Act, 16 USC Section 1536(a)(2), requires agencies to consult with National Marine Fisheries Service (NMFS) regarding potential impacts to marine and anadromous species under NMFS jurisdiction if they are proposing an "action" that may affect listed species or their designated habitat. Each federal agency is to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. If a listed species may be present,

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the local agency conducts a biological assessment to analyze potential effects of the project on listed species and critical habitat in order to establish and justify a determination of the level of potential effect. The NMFS Russian River Biological Opinion (BO) issued in 2008 concluded that the continued operations of Coyote Valley Dam and Warm Springs Dam by the U.S. Army Corps of Engineers (USACE) and SCWA in a manner similar to recent historic practices, together with SCWA's stream channel maintenance activities and Estuary Management activities including artificial breaching, were likely to jeopardize and adversely modify critical habitat for endangered coho salmon and threatened steelhead. As discussed further below, the BO recommended "reasonable and prudent alternatives" to artificial breaching activities to avoid jeopardizing or adversely modifying habitat. The Russian River BO directed the Applicant to change its management of the Russian River Estuary's water surface elevations with the intent of improving juvenile salmonid habitat while minimizing flood risk (NMFS Russian River Biological Opinion 2008).

The BO included a series of actions to be taken by the Applicant, in coordination with NMFS and California Department of Fish and Wildlife (CDFW), to provide benefits to listed salmonids. Many of the actions mandated by the BO required additional review consistent with other state and federal regulations. The Estuary Management Program approved under CDP 2-12-004 was one of a series of actions undertaken by the Applicant to meet the requirements of the NMFS BO. The Estuary Management Program provides independent utility (i.e., must be implemented to achieve a purpose irrespective of other Russian River Instream Flow and Restoration (RRIFR) elements) in achieving these goals and necessitates implementation separately from other actions identified in the BO in order to meet the objectives and schedule in the BO.

By complying with the BO, the Applicant may continue to carry out its water supply, stream channel maintenance, and Estuary management activities without risking potential criminal and civil liability under the federal Endangered Species Act for the incidental "take" of listed fish species. Moreover, compliance with the BO requirements is necessary for the Applicant to obtain the permits and approvals from other agencies necessary for the Applicant to carry out its activities.

NMFS Biological Opinion

As stated above, in 2008, the NMFS issued the BO for the Russian River Watershed. The BO is a federal mandate to implement measures to reduce or avoid impacts to listed salmonids. The BO addressed Water Supply, Flood Control Operations, and Channel Maintenance conducted by USACE, the Applicant, and the Mendocino County Russian River Flood Control and Water Conservation District (MCRRFCD) in the watershed. The Applicant's Estuary Management Program is one of the many avenues for flood control, water diversion and storage, hydroelectric power generation, and fish production and passage activities that occur in the Russian River watershed that are addressed in the BO. The BO is a culmination of more than a decade of consultation between the Applicant, USACE, and NMFS regarding the impact of the Applicant's and USACE's water supply and flood control activities on three fish species listed under the federal Endangered Species Act: Central California Coast steelhead, Central California Coast coho salmon, and California Coastal Chinook salmon. CDFW issued a

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consistency determination on November 9, 2009, finding that the BO was consistent with the requirements of the California Endangered Species Act (CESA) and adopted the measures identified in the BO. Based on consultation with CDFW² the proposed activity is not inconsistent with the marine protected area (MPA) designations at issue (the Russian River State Marine Conservation Area and the Russian River State Marine Recreational Management Area).

The BO concluded that artificially elevated inflows to the Estuary during the low flow season (May through October) and historic artificial breaching practices have significant, adverse effects on the Russian River's estuarine rearing habitat for juvenile salmonids, particularly steelhead. The historic method of artificial breaching, which is done in response to rising water levels in the Estuary, results in a tidal marine environment in the Estuary, with shallow depths and high salinity. The BO concludes that breaching practices impact rearing habitat by limiting the formation of a freshwater lagoon. According to NMFS, fresh or brackish water lagoons at the mouths of many streams in central and southern California often provide depths and water quality that are highly favorable to habitat for rearing salmon and steelhead.³

Additionally, NMFS determined that Estuary management activities are likely to jeopardize the continued existence of some of the salmonid species affected by such actions, and adversely modify their critical habitats. Thus, NMFS provided a Reasonable and Prudent Alternative (RPA) to the proposed program that 1) avoids jeopardy to the species and adverse modification of critical habitat, 2) can be implemented in a manner consistent with the intended purpose of the action, 3) is economically and technically feasible, and 4) is within the legal authorities of USACE, SCWA, and MCRRFCD. The RPA (implemented through CDP 2-12-004) does not eliminate all impacts to listed salmonids, and therefore, an Incidental Take Statement is also provided.

Estuary Management Program Findings

Since the advent of the RPA as implemented through the Estuary Management Program, approved by the Commission through CDP 2-12-004, the Applicant has submitted annual reports and Adaptive Management Plans that have provided valuable data and resulted in modified management strategies to improve artificial breaching of the Russian River Estuary so as to strike a better balance between flood risk avoidance and ideal salmonid rearing habitat. The submissions have also demonstrated other valuable lessons learned in regards to water level management including that the Russian River is an oceanographically-driven system (unlike many others on the Central Coast), that water quality is not significantly affecting forage species, and that water levels can be managed at levels higher than previously thought (up to 9 feet) to

² Personal communication between Dr. Craig Shuman (Regional Manager, Marine Region, CDFW) and Dan Carl (District Director, North Central Coast District, CCC).

³ National Marine Fisheries Service. Biological Opinion for Water Supply, Flood Control Operations, and Channel Maintenance conducted by the U.S. Army Corps of Engineers, the Sonoma County Water Agency, and the Mendocino County Russian River Flood Control and Water Conservation District in the Russian River Watershed. p. 243. September 2008.

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maximize available steelhead habitat before flood risks start to present themselves. Further, outlet channel design has been successfully modified to reduce flushing of fish and sediment out of Estuary system. Lastly, the process for determining when to breach has evolved to the point where the Applicant is able to communicate early and strategize artificial breach events with successful results. As a result, there has been a significant reduction in the need for artificial breach events since 2009.

According to SCWA, since 1996 there have been a broad range of closures and Russian River mouth beach management activities. These events are affected by winter flooding and heavy surf. The greatest number of closures was 15 in both 2008 and 2009. In both these years there were 13 breaching activities conducted by SCWA and two self-breaches. There have also been years (like 2011) where there have been no river closures.

Jetty Study Findings

Part of the CDP 2-12-004 project included a geotechnical study to determine the location and nature of the relic jetty that was constructed in several stages between 1929 and 1948 and was subsequently abandoned. See **Exhibit 4** for photos of the relic jetty. The jetty extends from Goat Rock to the south of the Estuary approximately 1,000 feet across the barrier sand bar that forms at the mouth of the Russian River. At the northern extent of the sand bar, the jetty extends out to sea for approximately 500 feet. It was projected that the jetty influences the seasonal closure of the mouth of the Russian River by reducing the flow of water through the sand bar. Due to uncertainty around its construction and its current dilapidated condition, it was unclear the exact role the structure played in natural and artificial breaching of the Estuary.

With the benefit of CDP 2-12-004, SCWA used geophysical techniques including well installation and evaluation of the nature and extent of subsurface features of the sand bar to determine that, with respect to flood risk, removing the jetty would increase the potential risks associated with closed inlet and ocean wave scenarios. However, it was also found that removing the jetty would decrease fluvial flood risk by increasing seepage rates by 20%. This data has been used to help determine how the Estuary water and ocean water that seeps through the sand bar interacts and how seepage is influenced by the jetty. The information has also been used to augment an on-going investigation on how the jetty influences the seasonal closure of the Estuary and whether or not removing portions of the jetty will continue to benefit fish habitat in the Estuary (see Substantive File Documents). Ultimately, the study determined that current management conditions would need to remain the same to mitigate for flood risks and that removing the jetty or parts of the jetty would not necessarily benefit fish habitat.

B. PROJECT DESCRIPTION

Overview

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The proposed project would re-authorize the Russian River Estuary Management Program for another 3 years to allow for: 1) construction of a lagoon outlet channel during the lagoon management season, from May 15th to October 15th, and 2) artificial breaching from October 16th to May 14th and as necessary from May 15th to October 15th to minimize flooding impacts. The proposed project, also known as the Estuary Management Program, would enhance freshwater lagoon conditions from May 15 to October 15 to improve rearing habitat for juvenile salmonids, particularly steelhead, while minimizing the potential for flooding of low-lying properties.

The Applicant also proposes the continuation of adaptive management including 1) monitoring of biological productivity, water quality, and physical processes in the Estuary in response to changes in water surface elevations in the Estuary-lagoon system; and 2) refinement of management actions to achieve desired water levels to support biological productivity, while simultaneously providing flood control for properties adjacent to the Estuary.⁴

Lagoon Outlet Channel

The Applicant proposes to continue the creation of a lagoon outlet channel to maintain a minimum water elevation of 7 feet in the Estuary during the 'lagoon management period' (May 15th to October 15th). The project also prevents flooding of structures bordering the Estuary by limiting maximum water levels to 9 feet. Thus, the proposed project would have a target water elevation of between 7 feet and 9 feet from May 15th to October 15th.

Project implementation will continue to increase the duration of freshwater lagoon conditions during the lagoon management period to increase freshwater habitat available for rearing salmon and steelhead. The duration of freshwater lagoon conditions will remain at the target of 1 to 5 months with an average of one-month as compared to the shorter 5 to 14 day durations that were experienced prior to the approval of CDP 2-12-004. This longer duration of 1 to 5 months is consistent with freshwater lagoons observed in some other coastal river systems and is based on lessons learned from project monitoring under the CDP.

⁴ Recognizing the variable and dynamic nature of the Russian River system, influence from external human inputs, and the future uncertainty of natural conditions, the Estuary Management Program is intended to be implemented as an adaptive management program. Adaptive management is a decision process that promotes flexible decision-making within a given set of accepted criteria that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood. Adaptive management requires: 1) monitoring of biological productivity, water quality, and physical processes in the Estuary in response to the changes in management actions that control water surface elevations in the Estuary-lagoon system; and 2) refinement of management actions to achieve desired water levels to support improved biological productivity, while simultaneously providing flood management for properties adjacent to the Estuary. Adaptive management also recognizes the importance of natural variability in contributing to ecological resilience and productivity. Adaptive management is not an experimental 'trial and error' process; rather, it provides a structured approach to resource management. It is an iterative process in which the actions and tasks implemented to meet the management objectives are continually revisited and revised based on monitoring results and analysis relative to performance. Although predicting the actual outcome of the actions may be uncertain, actions are implemented purposefully, in coordination with regulatory agencies, with a specific intended outcome.

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Physical establishment of the outlet channel during the lagoon management period is similar in terms of equipment and duration as artificial breaching. However, in contrast to the steep, narrow pilot channel historically used for artificial breaching, the lagoon outlet channel under the Estuary Management Program allows for the construction of a shallow, wide, low velocity outlet. The exact location, width, and length of the channel depends upon physical parameters, such as the width of the barrier beach, river flow, and ocean conditions. In general, the channel is excavated diagonally across the barrier beach in the same general location where such a channel has been observed to naturally occur, between the jetty and approximately 1,500 feet to the northwest. When configuring the outlet channel for the first time each year at the start of the management period (approximately May 15th), machinery can operate for two consecutive working days. One or two pieces of heavy equipment (e.g., an excavator or bulldozer) is used to move sand on the beach to create and maintain the outlet channel. Channel construction and modification is typically initiated during low tide so that after several hours of work, the removal of the final portion of the beach berm occurs near high tide. This practice minimizes the head difference between the Estuary and ocean, reducing the potential for the reconnected channel to scour into a fully tidal inlet. The quantity of sand moved would depend on beach topography, ranging from less than 100 cubic yards to approximately 2,000 cubic yards. Any sand excavated from the channel is immediately smoothed into the adjacent beach north and south of the channel to promote natural removal and to minimize changes to beach topography outside of the outlet channel (PWA, 2010).

Over the course of the lagoon management period, the outlet channel may close. The Applicant proposes resuming adaptive management of the outlet channel's width, slope, and alignment in consultation with the NMFS and CDFW when the outlet is closed. The Applicant proposes this activity when the barrier beach has re-closed and water levels have reached a target of 7 feet during the lagoon management period. The number of maintenance events depends upon natural conditions and outlet channel performance. Artificial breaching or lagoon outlet channel maintenance events as further discussed below, could be as many as 31 per year, including 18 events from May 15th to October 15th during the Lagoon Management Period and 13 events from October 16th to May 14th during the Artificial Breaching Period. All breaching activity and maintenance events are scheduled and conducted to comply with restrictions in the IHA and by State Parks, which limit maintenance events during harbor seal pupping season (before June 15) and during peak visitation times.

Artificial Breaching

The Applicant proposes to continue artificial breaching to control flooding between October 16th and May 14th (the Artificial Breaching Period). The project also proposes artificial breaching between May 15th and October 15th under certain conditions such as declines in water quality or if water surface elevations are above 9 feet at the Jenner gauge to minimize flooding potential. Artificial breaching would continue to occur in order to minimize flood risk to existing structures. Artificial breaching entails excavation of a steep, narrow pilot channel and results in rapid draining of the Estuary. Breaching is

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done in the same general location as natural breaches. The proposed project includes up to 18 artificial breaching events each year during the Artificial Breaching Period.

C. STANDARD OF REVIEW

The Coastal Commission retains permitting jurisdiction over historic tidelands, including the property that is the subject of this permit application. As a result, the standard of review for the proposed project is the Coastal Act, although the certified Sonoma County LCP can provide non-binding guidance.

D. ALTERATION OF RIVERS

Applicable Policies

Coastal Act Section 30236 limits alterations of rivers and streams except for water supply, limited flood control, and habitat improvement projects, and requires such projects to incorporate the best mitigation measures feasible. Section 30236 states:

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.

Consistency Analysis

The proposed project includes the continuation of the Russian River Estuary Management Program originally authorized in 2013 involving artificial breaching of the Russian River Estuary and construction of a lagoon outlet channel at the mouth of the Russian River during the lagoon management period (May 15th through October 15th). Therefore, the project includes substantial alterations of the Russian River and can only be allowed pursuant to Coastal Act Section 30236 for necessary water supply projects, certain flood control projects, or habitat improvement projects. The proposed project has two objectives. The first is to improve fish habitat, as further discussed in the Marine and Biological Resources Section below. The second is to continue to provide flood control to protect existing development on the low-lying properties surrounding the Estuary. As discussed further in the Hazards Section below, the flood control objective would be achieved by maintaining the water elevation at no more than 9 feet during the lagoon management period and artificially breaching the Estuary throughout the year when necessary to protect existing development when water limits approach or surpass the 9-foot water elevation limit.

Flood control projects are only allowed pursuant to Section 30236 where no other method for protecting existing structures is feasible (again, see "Hazards" section below for detail on development which is potentially subject to flooding). In addition to the proposed Estuary Management Program, a range of alternatives were evaluated through the EIR and previously approved CDP 2-12-004 including: No Project, Reduced Alternative 8 Foot Maximum, Alternative Flood Management, Structural Conveyance,

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and Flood Containment Barriers. The Applicant's consultant submitted an updated Alternatives Analysis in May 2020 re-examining the following alternatives: Structural Modification, Flood Containment Barriers, Enclosed Conveyance, Seasonal or Permanent Flume/Weir, and the proposed Estuary Management Program. Where appropriate, the following considerations were made and updated for each alternative: engineering feasibility, cost, environmental evaluations, and ability to meet project objectives. The latest Alternatives Analysis concluded that the Russian River Estuary Management Program including lagoon outlet channel management and artificial breaching conducted in accordance with the Russian River Biological Opinion was still the superior alternative as it was in 2012. The largest benefit associated with the chosen alternative as proposed includes the ability for the program to be updated annually according to the previous year's analysis of physical processes in the Estuary and on the beach formation, habitat conditions, and outlet channel performance.

It should be noted that one such potential alternative - the removal of the jetty groin - was studied in accordance with the conditions of the BO and CDP 2-12-004. Through CDP 2-12-004, the Applicant examined the condition and characteristics of the existing jetty structure, assessed groundwater permeability, investigated wave-driven sediment transport, as well as inlet and beach morphology (ESA PWA 2017). The study also compared four alternatives for modifying the jetty, including a no-action alternative. Ultimately, it was determined that jetty removal or jetty alteration would not significantly change risks to flooding nor would it substantially contribute to the objective of more frequent or sustained lagoon conditions. Additional details of the jetty alternatives' evaluation, environmental considerations, and probable costs can be found in ESA PWA (2017).

As such, and as discussed further below, the Commission finds that the proposed project is the best method to protect existing structures and minimize flood hazards while maintaining and enhancing habitat for listed salmonids, including steelhead as required by Sections 30230 and 30231 of the Coastal Act. The alternatives are further described below.

Alternatives

The EIR, Russian River Estuary Management Plan Alternatives Evaluation,⁵ the Alternatives Analysis from 2020, and the jetty study approved under CDP 2-12-004 evaluated a number of alternatives to the project. The alternatives are described below.

No Project

As analyzed in the EIR, this alternative would continue current artificial breaching activities during summer months consistent with past practices, resulting in saline conditions within Estuary and precluding formation of perched freshwater lagoon conditions. Under this alternative, the modified breaching program would not be implemented. Therefore, this alternative would not meet the fundamental project goal of providing a minimum of 7 feet water elevations during the lagoon management period to

⁵ Russian River Estuary Management Plan – Alternatives Evaluation, prepared by ESA/PWA, and dated June 5, 2012.

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improve rearing habitat for juvenile salmonids as required by Sections 30230 and 30231 of the Coastal Act. Further, since flooding is a natural component of the River system, this alternative would not avoid the need for artificial breaching activities to occur on the beach as breaching could occur consistent with the past practice of artificially breaching the lagoon when necessary to protect existing development. As such, the No Project Alternative would not protect biological resources as directed by the Coastal Act and is not a more feasible method to protect structures in the floodplain consistent with all requirements of the Coastal Act.

Reduced Alternative 8-Foot Maximum

This alternative proposes a maximum water target level of 8 feet (compared to the proposed project alternative of a target of between 7 feet and 9 feet). Under the Reduced Alternative, structures would still be affected as further discussed below in the Hazards Section. This alternative would have similar impacts to those of the proposed project, but it would provide a lesser amount of habitat for juvenile salmonids (966 acre-feet less than the proposed project alternative). Further, it is possible that more maintenance events for the lagoon outlet channel would be necessary if this alternative were to be implemented, leading to additional impacts on public access and harbor seals. As such, the Reduced Alternative would not maintain and enhance marine resources and protect public access as directed by the Coastal Act and is not a more feasible method to protect existing structures in the floodplain consistent with all applicable requirements of the Coastal Act.

Alternative Flood Management

This alternative would allow the Estuary to naturally breach. Under this alternative, the Applicant would cease artificial breaching and would manage the Estuary to accommodate water levels associated with natural breaching events. This alternative would have impacts similar to the proposed project except that more structures and infrastructure would be exposed to flooding risks. In addition, natural breaches would be uncontrolled and unsupervised, which could create hazardous conditions for beach visitors and lagoon users. Furthermore, relying on natural breaching could impact property owner safety by exposing portions of their property to periodic inundation. As such, this alternative would not meet the project objectives related to maintaining and protecting public health and safety as it pertains to property owners, visitors, and lagoon users. This alternative could necessitate modification or elevation of structures and/or negotiation with private landowners for purchase of easements or properties affected. These options are potentially cost prohibitive. Furthermore, this alternative would not meet fundamental project goals of managing Estuary water levels to minimize flood hazard. As such, it would not meet the project objectives relating to implementing, operating and maintaining management techniques in a technically and economically feasible manner. In sum, the Flood Management alternative would not support achievement of project objectives to avoid flooding, would not avoid coastal hazards and protect and enhance coastal resources, including water quality (due to impacts from flooded structures) and public access as directed by the Coastal Act, and is not a more feasible method for protecting structures in the floodplain consistent with all applicable requirements of the Coastal Act.

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Structural Conveyance

This alternative would involve the installation and maintenance of temporary or permanent beach structures. Such structures could include culverts with gravity flow or pumping, a standpipe on the beach, or a flume weir (seasonal cobble or permanent concrete) on the barrier beach. Because installation of the mechanisms and their presence on the beach could incur public safety concerns, this alternative does not meet project goals to maintain and protect public health and safety as it pertains to visitors, lagoon users, and public resource agency employees. Furthermore, there are significant challenges associated with technical and engineering feasibility and costs and funding mechanisms. For example, the 2020 Alternatives Analysis report states that this alternative would not avoid activities on the barrier beach related to beach management and would also incur short-term biological impacts related to those activities. Construction of a culvert or pumping station would require heavy equipment on the beach, dust, and noise-related impacts. As such, the Structural Conveyance Alternative would not support achievement of project objectives, would not protect and enhance coastal resources including marine resources and public access as directed by the Coastal Act, and is not a more feasible method for protecting existing structures in the floodplain consistent with all applicable requirements of the Coastal Act.

Flood Containment Barriers

This alternative involves the construction of earthen berms or seawalls along the Estuary. Barriers would be built along the frontage of the at-risk properties to avoid or mitigate damages caused by flooding and prolonged inundation. Berms or seawalls would require space for permanent installation and be designed to allow detention and drainage of landside runoff. Implementation of this alternative requires substantial construction to install seawalls and/or levees, which would incur traffic, dust, and noise-related impacts to residents and visitors. A permanent containment structure between properties and the riverfront may limit public access to the river and beaches. Additionally, the height of the containment structures may be up to 10 feet in some locations, potentially completely restricting existing views and permanently altering the aesthetic character of the riverfront. As such, the Flood Containment Barriers Alternative would not achieve project objectives, would not protect and enhance coastal resources including marine resources due to lack of habitat benefits through lagoon management; and public access as directed by the Coastal Act, and is not a more feasible method for protecting existing structures in the floodplain consistent with all applicable requirements of the Coastal Act.

Jetty Modification

Through the previous CDP 2-12-004, the project also conducted a jetty study to provide information to better understand potential alternatives for Estuary management to enhance fish habitat and provide flood protection. It was projected that the jetty influences the seasonal closure of the mouth of the Russian River by reducing the flow of water through the sand bar. Due to uncertainty around its construction and its current dilapidated condition, it was unclear the exact role the structure played in natural and artificial breaching of the Estuary. However, using geophysical techniques including well installation and evaluation of the nature and extent of subsurface features of the sand bar, the study determined that, with respect to flood risk, removing the groin would

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increase the potential risks associated with closed inlet and ocean wave scenarios. However, it was also found that it would decrease fluvial flood risk due to seepage rates increasing by 20%. Ultimately, it was found that current management conditions would need to remain the same to mitigate for flood risks and that removing the jetty or parts of the jetty would not necessarily benefit fish habitat. This data has been used to help determine how the Estuary water and ocean water that seeps through the sand bar interacts and how seepage is influenced by the jetty. The information has also been used to augment an on-going investigation on how the jetty influences the seasonal closure of the Estuary and whether or not removing portions of the jetty will continue to benefit fish habitat in the Estuary (see Substantive File Documents). As such, the evaluation concluded that removal of the jetty would not serve as a project alternative to Estuary management but would instead require continued reliance on Estuary management.

Proposed Project

The proposed project would use outlet channel creation to maintain perched freshwater lagoon conditions from May 15th to October 15th and would provide a maximum of 4,565-acre feet of storage volume at 9 feet. In addition, the proposed project includes artificial breaching at any time of the year in order to minimize the potential for flooding of development surrounding the Estuary's edge. Lastly, the proposed project includes adaptive management measures to monitor biological productivity, water quality, and physical processes in the Estuary in response to changes in water surface elevations in the Estuary-lagoon system and refinement of management actions to achieve desired water levels to support biological productivity, while simultaneously providing flood control for properties adjacent to the Estuary.

The monitoring and refinement of management strategies has already proved a successful approach with respect to this Program, including the finding that water levels can be managed at levels higher than previously thought (closer to 9 feet) to maximize available steelhead habitat before flood risks start to present themselves. Further, outlet channel design has been successfully modified to reduce flushing of fish and sediment out of Estuary system. Lastly, the process for determining when to breach has evolved to the point where the Applicant is able to communicate early and strategize artificial breach events with successful results. As a result, there has been a significant reduction in the need for artificial breach events since 2009. Thus, the project would meet the fundamental project goals of enhancing rearing habitat for juvenile salmonids (particularly steelhead) and manage Estuary levels to minimize flood hazard by targeting an average water level between 7 and 9 feet.

In sum, the proposed project, as conditioned, represents the most feasible method for protecting existing structures in the floodplain consistent with all applicable requirements of the Coastal Act.

Feasible Mitigation Measures

The proposed project, as conditioned, incorporates the best mitigation measures feasible as required by Section 30236 and consistent with all other applicable provisions of the Coastal Act. Special conditions require submittal of annual monitoring reports

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pursuant to the requirements of annual Monitoring Reports approved by the Executive Director to ensure that the permissible development does not result in long-term degradation of the surrounding habitats and achieves the objectives for which it is intended. Special conditions also minimize the project's potential impacts on flooding hazards, maintain water quality and protect biological resources. In particular:

- **Special Condition 2** imposes various construction responsibilities that must be adhered to during construction to protect water quality and sensitive habitats in and adjacent to the project area. **Special Condition 2** also requires maintenance activities to be conducted in accordance with the construction methods typically required by the Commission to protect water quality and marine resources during construction, including maintaining good construction site housekeeping controls and procedures, the use of appropriate erosion and sediment controls, a prohibition on equipment washing, refueling, or servicing on the beach, etc.
- **Special Condition 6** limits the authorization period of the proposed Estuary Management Program to three years, allowing for one three-year extension of this term if it is requested and approved by the Executive Director. Any such future permitting must be in relation to monitoring data and lessons learned regarding the approved project and must include an updated evaluation of a full range of alternatives.
- Finally, **Special Condition 4** requires annual monitoring reports to be submitted for Executive Director's review and approval to ensure that the various standards and restrictions required by the terms and conditions of this CDP continue to be implemented during the course of long-term maintenance and adaptive management operations, and that the project remains the most protective of coastal resources during the course of this authorization.

Conclusion

The dual objectives of the project are the improvement of fish habitat and flood alleviation to protect existing structures and development in the floodplain, which are both permissible uses under Section 30236. Further, no other feasible measures currently exist for protecting existing structures within the area, making such protection necessary to protect public safety and existing development. Therefore, the proposed project is a permissible alteration of a river under Coastal Act Section 30236. Further, the proposed project, as conditioned, incorporates the best mitigation measures feasible. Therefore, the Commission finds that as conditioned herein, the proposed project is consistent with the requirements of Coastal Act Section 30236.

E. MARINE AND BIOLOGICAL RESOURCES

Applicable Policies

Coastal Act Sections 30230, 30231, and 30240 afford protection of marine resources and their associated biological productivity and state:

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

Environmentally sensitive habitat areas (ESHAs) are defined in Section 30107.5 of the Coastal Act as areas 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 development. Coastal Act Section 30240 states that ESHA shall be protected against significant disruption of habitat values and that only uses dependent on the resources shall be allowed within an ESHA. Section 30240 also requires that development adjacent to such areas be sited and designed to prevent impacts that would significantly degrade those areas, and be compatible with the continuance of the ESHA.

Section 30240:

(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.

Consistency Analysis

The project area is in and adjacent to several types of significant biological resources, including habitat for anadromous fish, sensitive dune habitats, and pinniped haul-outs. In accordance with Coastal Act Section 30240, the Commission must consider whether the re-authorization of the Estuary Management Program as proposed and conditioned would continue to prevent impacts that would degrade the environmentally sensitive habitat areas near the project site and protect against any significant disruption of those habitat values. In addition, pursuant to Coastal Act Section 30230, the Commission

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must evaluate whether the proposed project would continue to be carried out in a manner that will sustain the biological productivity of the river and Estuary and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes. Finally, consistent with Coastal Act Section 30231, the Commission must determine if the project will continue to protect the biological productivity and the quality of the Russian River Estuary to maintain optimum populations of marine organisms.

For over 18 years, significant amounts of data have been collected and numerous reports have been prepared to evaluate fisheries, wildlife, and aquatic habitat impacts at the Russian River Estuary. The primary sources include information collected by various agencies including NMFS, CDFW, and USFWS, and monitoring reports on water quality and fisheries survey data compiled by the Applicant. In the early 1990s an Estuary ecosystem management plan was developed followed by five years of monitoring. Then, in 2003, the Applicant began fish population ecology studies and water quality monitoring, which are ongoing. The Applicant also commissioned the study of the physical processes of the barrier beach. In 2008, NMFS issued the BO for three Russian River salmonids: coho salmon, Chinook salmon, and steelhead. Further, in 2013, NMFS issued an Incidental Harassment Authorization for marine mammals that utilize the Russian River mouth. Pursuant to the authorization of CDP 2-12-004, for the past six years the Applicant has submitted annual reports that have included extensive information on water quality conditions, habitat dynamics, and sensitive species surveys including as they relate to Estuary management activities. All these agency reviews and long-term monitoring efforts have helped to inform adaptive management of the Estuary Management Program to benefit sensitive species and their associated habitats while meeting the dual purpose of flood control.

Fish Habitat

With regard to anadromous fish, Chinook salmon, coho salmon and steelhead all spawn in the Russian River, and each of these species is listed as threatened or endangered under the federal Endangered Species Act, depending on the type of species. In fact, the Russian River is within an Evolutionary Significant Unit for each of the three listed fish species. NMFS has also designated the estuarine and freshwater portions of the Russian River, including all waterways, substrate, and adjacent riparian zones (except the areas above the Warm Springs and Coyote Valley dams and within tribal lands) as critical habitat for each of the three species.⁶ All three fish species are anadromous – migrating upstream from the ocean as adults to spawn in the river – although the steelhead may also spend their entire life in freshwater. The fish lay their eggs in gravel beds, and the eggs generally hatch in winter and spring. Juveniles spend varying amounts of time rearing in the river and/or tributaries and then migrate out to the ocean. coho salmon and steelhead are native to the Russian River, although these fish have also been planted in the river from other river systems. It is uncertain whether native populations of Chinook salmon used the Russian River historically; however stocked Chinook presently spawn in the river.

⁶ Federal Register 64(86):24049-24062; 65(32):7764-7787.

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Thus, the Russian River marine environment is considered an environmentally sensitive habitat area (ESHA) under Section 30240 of the Coastal Act, and all Estuary management activities must be conducted in a manner that will prevent impacts which would significantly degrade these habitats and shall be compatible with the continuance of such habitats. Further, in addition to requiring that marine resources shall be maintained, enhanced, and where feasible, restored, Sections 30230 and 30231 specifically state that the biological productivity of coastal waters appropriate to maintain optimum populations of all species of marine organisms must be maintained and, where feasible, restored. As discussed in more detail herein, the project's stated purpose is to continue to maintain the functional capacity and biological productivity of coastal waters in order to maintain healthy populations of listed species.

The proposed project will continue to provide necessary benefits to steelhead and other listed salmonids as it will increase needed "critical habitat" for these listed species. In particular, the proposed project will continue to maintain and enhance rearing habitat for the threatened and endangered salmonid species (particularly steelhead) by reducing tidal influence and increasing the amount of habitat area and fresh water available to rearing steelhead and salmon during the Lagoon Management Period, giving them greater protection from predation. As designed the lagoon outlet channel also limits the number of juveniles that are flushed out to sea before they are ready for the ocean environment in comparison to the standard channel used for emergency breaching. In turn, the likelihood of survival and recovery of these species increases.

Annual monitoring and reporting requirements of CDP 2-12-004 required evaluation of the project benefits and/or adverse impacts to steelhead and salmonids, the effectiveness of the program to achieve optimal lagoon elevations, and evaluation of potential habitat benefits if water levels could go higher than 9 feet. Evidence from the 2018 Annual Report suggests that there is an increase in invertebrate prey for juvenile steelhead when Estuary management activities create newly flooded habitat. Further, the monitoring results found that water quality is not affecting primary prey species as densities were consistent year to year regardless of variability in freshwater outflow or Estuary closure events. The monitoring results also determined that water levels can be managed at levels higher than previously thought (closer to the 9-foot level) to maximize available steelhead habitat before flood risks start to present themselves. In addition, the outlet channel design has been successfully adapted over time to reduce flushing of fish and sediment out of Estuary system. Lastly, the overall technical understanding of the river mouth system has evolved, enabling the Applicant to better strategize artificial breach events with successful results. As a result, there has been a significant reduction in the need for artificial breach events reducing potential related habitat disturbances.

One potential adverse effect on water quality from the project includes a seasonal increase in nutrient and pathogen levels as a result of water remaining in the Estuary for longer periods of time before entering the ocean. However, the 2018 Annual Report states that seasonal changes to temperature, pH, and dissolved oxygen during the monitoring seasons have largely followed similar patterns each year since the implementation of the Biological Opinion in 2009, suggesting that conditions have been relatively stable and therefore beneficial for habitat conditions. In sum, the continuation

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of the project will allow the Applicant to manage the Estuary for ideal fish rearing habitat and comply with the terms of NMFS's BO.

Thus, as evidenced in the latest annual monitoring reports, Estuary management activities will maintain optimum populations of listed marine resources and will prevent impacts to ESHAs consistent with Coastal Act Sections 30240, 30230 and 30231.

Special Condition 4 requires the continued monitoring and reporting on flooding, habitat and water quality in order to document the potential effects of the project on improving rearing habitat for juvenile salmonids over time and to inform the Applicant on how to best manage the Estuary for optimum results as future conditions change.

Groundwater Conditions

Based on its natural characteristics, the area surrounding the Estuary experiences seasonal impacts to groundwater. Saltwater influence has been a recurring condition in wells located along the Estuary since at least the 1950s, based upon historical well logs. The wells that could be affected by the project are not part of a municipal water system nor are there municipal groundwater supply wells in the area. The Franciscan Complex that underlies the lower Russian River Valley is considered predominantly non-water-bearing and, therefore, does not yield significant quantities of water to wells (DWR, 2003 cited in DEIR, 2010). The approximately two-mile portion of the underlying groundwater basin under the Estuary from the Pacific Ocean upstream to approximately Willow Creek is identified as an area with a low or highly variable groundwater yield (SCWA, 2010).

Several designations indicate the current variability of groundwater quality in the area. With respect to groundwater beneficial uses identified in the North Coast RWQCB Basin Plan, the Estuary portion of the Lower Russian River Basin identified Municipal and Domestic Water Supply as a "potential" beneficial use and does not identify Groundwater Recharge as a beneficial use. The RWQCB has listed the entire Russian River on the 2006 Clean Water Act (CWA) Section 303(d) List of Water Quality Limited Segments (RWQCB, 2007a) for sedimentation/siltation and temperature impairments. Several hydrologic sub-areas within the Russian River watershed are also listed for impairments including specific conductivity, pH, low dissolved oxygen, nutrients, indicator bacteria, and mercury. The lower section of the Russian River where the project site is located includes 303(d) impairments.

The project would increase the frequency and duration of higher freshwater levels in the Estuary and is not anticipated to directly affect groundwater recharge or reduce groundwater supplies. The project includes a lagoon management period which would take place during the dry season (approximately May through October), when most of the flow in the Russian River consists of water released from Lake Mendocino or Lake Sonoma. At this time, brackish water intrusion in local groundwater wells is considered an existing condition, and there is no evidence to indicate it would change under the proposed project. Data currently available does not show that the historic method of artificial breaching or other alternatives would reduce or avoid secondary effects to groundwater impacts. If the proposed project is implemented, it is anticipated that conditions would remain within the range of those experienced within the Estuary over

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the past 22 years, and the seasonal variations of salinity in the groundwater would continue to occur. Further, groundwater impacts from the proposed project would be less severe as compared to the impacts that would result from letting the Estuary naturally breach or the impacts from historical breaching practices. Comments from local residents suggest that water in wells located close to the Estuary becomes brackish (from saltwater intrusion) during certain times of the year and remains that way until the rainy season begins or there are changes in Estuary conditions. These comments suggest that tidally-influenced ocean water periodically flows upstream, partially mixing with freshwater, and enters the aquifer that supplies the local water wells, resulting in seasonally brackish conditions.⁷

As stated previously, the proposed project limits tidal influence during the summer months to maintain higher elevations of freshwater in the Estuary. Information regarding the closure of the sand bar on groundwater and the exchange between groundwater and surface water of the Russian River is limited. With extended barrier beach closures, salinity conditions would be expected to follow the trends observed historically during closures. Extended closed conditions would change the local distribution of salinity levels in the Estuary as fresh/saltwater stratification occurs. This would reduce salinity levels within some areas of the Estuary and may increase it within other areas of the Estuary. Based on studies of surface water and groundwater interaction in upstream reaches of the Russian River, it is anticipated that the exchange between surface water and groundwater will vary based in part on distance from the river, amount of localized groundwater pumping, and seasonal variations in river stage.

As discussed above, water quality monitoring reports state that results have remained similar to those in previous years, suggesting that conditions have been relatively stable and have not resulted in significant changes to salinity levels in the Estuary as fresh/saltwater stratification occurs. Thus, there appears to have been no significant impacts to groundwater stores past natural variability consistent with Coastal Act 30231.

Dune Habitat

With regard to sensitive dune habitats, Tidestrom's lupine is located adjacent to the southeastern corner of the typcail channel site. This lupine is federal and state-listed endangered and a CNPS List 1B species, and, thus, dune habitat in the project area is also considered ESHA under Coastal Act Section 30240. Tidestrom's lupine is a perennial, rhizomatous herb of the legume family (Fabaceae) with silvery leaves. This species grows in coastal dune habitats in Marin, Sonoma, and Monterey counties. It produces light blue to lavender-colored flowers during its April through June blooming period. Tidestrom's lupine is known to occur in the sand along the east (Estuary) side of Goat Rock Beach. Also, plants have been observed within the stabilized dunes north and east of Goat Rock State Beach as recently as this year, 2020. David Cook of SCWA performs an annual springtime survey to confirm presence of the Tidestrom's lupine. The project would avoid known occurrences of this plant and would be located on unvegetated beach sand that does not provide suitable habitat for the lupine.

⁷ This is consistent with the findings of previous studies that brackish water is found in wells extending from the river mouth up to Duncans Mills (USGS, 1965 and DWR, 2003 cited in DEIR 2010).

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Therefore, the proposed project would not directly impact Tidestrom's lupine or its habitat.

However, there is a potential to indirectly impact Tidestrom's lupine because equipment and personnel would travel in close proximity to lupine habitat. Thus, to ensure adverse impacts to Tidestrom's lupine is avoided, consistent with Section 30240(b), **Special Condition 2** is applied, requiring all construction areas to avoid sensitive dune plant species, including Tidestrom's lupine, by locating the defined construction areas away from such species. Furthermore, the sensitive dune plant habitat is required to be fenced off when artificial breaching activity and lagoon channel maintenance is occurring. For the duration of the project, markers identifying the boundaries of the sensitive dune plant habitat must remain in place. Lastly, **Special Condition 2** requires that a monitor be present onsite during construction to ensure that project activities occur within the defined construction, staging, and storage areas and outside of the sensitive dune plant habitat. The Applicant proposes additional mitigation and monitoring measures as outlined in the updated Mitigation Monitoring Plan incorporated into the proposed project through **Special Condition 4**. Thus, as proposed and conditioned and with these mitigation measures, the project will be consistent with Section 30240(b) and the protection of environmentally sensitive habitat areas.

Pinniped Resources

With regard to pinniped haul-outs, the mouth of the Russian River is an important habitat area for both harbor seals and, to a lesser degree, California sea lions. Harbor seals haul-out at the sandspit on either side of the river mouth and forage both inside the Estuary and in the ocean nearby year-round. During peak use periods in late winter and mid-summer, harbor seals at the river mouth number in the hundreds. Typically, seal haul-outs are located north of the jetty at the river mouth (see **Exhibit 3** – Pinniped Haul-Outs), where pupping activity has been documented. Page 24472 of the Federal Register notice of the 2012 IHA notes that the "Pupping season for harbor seals at the mouth of the Russian River typically peaks during May. However, pupping is known to begin in March and may continue through the end of June; pupping season for harbor seals is conservatively defined here as March 15 to June 30." A small number of California sea lions, usually no more than five individuals, forage in the area near the river mouth from December through June each year but do not usually haul-out at the site.

Seals in this area have been habituated to impacts from beach visitors, kayakers, park vehicles, and Highway 1 traffic. Page 24473 of the Federal Register notice of the 2012 IHA mentions that "Pinnipeds have coexisted with regular Estuary management activity for decades, as well as with regular human use activity at the beach, and are likely habituated to human presence and activity." As such, the NMFS and NOAA-approved seal haul-out plan described in the 2012 Incidental Harassment Authorization allows for some minimal disturbance to the haul-out area, and the proposed project is considered similar to a minimal habitual disturbance to which the seals are accustomed, according to NMFS.

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The Applicant is proposing to implement the project pursuant to the requirements of the IHA. The IHA requires seal avoidance and minimizing disturbance when possible, mitigation measures, monitoring by a pinniped biologist, and reporting requirements. In addition, the IHA states that, "During pupping season, management events may occur over a maximum of two consecutive days per event and all Estuary management events on the beach must be separated by a minimum no-work period of one week." The proposed project would be carried out pursuant to these requirements. A biological monitor will be onsite during activities. If there is a significant disturbance to the seal haul-out, project activities will be relocated to avoid significant impacts to seals.⁸ **Special Condition 3** requires the Applicant to carry out the project in compliance with the IHA.

In addition, all work shall be conducted consistent with the NMFS and NOAA-approved seal haul-out plan described in the Incidental Harassment Authorization (NMFS, 2013). Project activities shall comply with the conditions contained in the IHA, including all mitigation, monitoring and reporting requirements. In addition, the Applicant shall cooperate with federal, state, or local agencies monitoring the impacts of the project activities. Along with mitigation measures to be incorporated, the IHA requires monitoring for the presence and behavior of marine mammals prior to, during, and after all management events. At a minimum, the project will comply with the following requirements as outlined in the IHA:

- SCWA crews will cautiously approach the haul-out ahead of heavy equipment to minimize the potential for sudden flushes, which may result in a stampede, which is a particular concern during pupping season.
- SCWA staff will avoid walking or driving equipment through the seal haul-out.
- Crews on foot will make an effort to be seen by seals from a distance, if possible, rather than appearing suddenly at the top of the sand bar, again preventing sudden flushes.
- During breaching events, all monitoring will be conducted from the overlook on the bluff along Highway 1 adjacent to the haul-out in order to minimize potential for harassment.
- Equipment will be driven slowly on the beach and care will be taken to minimize the number of shutdowns and start-ups when the equipment is on the beach. All work will be completed as efficiently as possible, with the smallest amount of heavy equipment possible, to minimize disturbance of seals at the haul-out. Boats operating near river haul-outs during monitoring will be kept within posted speed

⁸ The method for recording disturbances follows those in Mortenson (1996) including alerts, movement, and flight. Disturbances will be recorded on a three-point scale that represents an increasing seal response to the disturbance. The time, source, and duration of the disturbance, as well as an estimated distance between the source and haul-out, are recorded. It should be noted that only responses falling into Mortenson's Levels 2 and 3 (i.e., movement or flight) will be considered as harassment under the MMPA (NMFS 2013).

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limits and driven as far from the haul-outs as safely possible to minimize flushing seals.

- SCWA will maintain a one-week no-work period between water level management events (unless flooding is an immediate threat) to allow for an adequate disturbance recovery period. During the no-work period, equipment must be removed from the beach.

Management actions, including physical and biological monitoring, will not be conducted if a pup less than one week old is present at the monitoring site or on a path to the site. If a pup less than 1 week old is on the beach where heavy machinery will be used or on the path used to access the work location, the management action will be delayed until the pup has left the site or the latest day possible to prevent flooding while still maintaining suitable fish rearing habitat. In the event that a pup remains present on the beach in the presence of flood risk, SCWA will consult with NMFS to determine the appropriate course of action. SCWA will coordinate with the locally established seal monitoring program (i.e., Stewards' Seal Watch) to determine if pups less than 1 week old are on the beach prior to a breaching event.

If, during monitoring, observers sight any pup that might be abandoned, SCWA will contact NMFS stranding response network immediately and also report the incident to NMFS' Southwest Regional Office and NMFS' Office of Protected Resources within 48 hours. Observers will not approach or move the pup. Thus, as proposed and conditioned and with these mitigation measures, the project will be consistent with Section 30240(b) and the protection of environmentally sensitive habitat areas.

Water Quality

CDP 2-12-004 noted that the project could have significant impacts on water quality in the Estuary as compared to the past practice of artificial breaching when water elevations reach 4.5 to 7 feet. It was further predicted that implementation of the proposed project could seasonally increase nutrient and pathogen levels as a result of water remaining in the Estuary for longer periods of time before being discharged to the ocean. However, to address potential impacts from increased nutrient and pathogen levels during the lagoon management period, the Applicant has conducted annual monitoring reports that document tracking of hourly salinity, water temperature, dissolved oxygen, and pH data at six stations. Three constituent monitoring programs were also developed: the first is the BO's water quality monitoring, the second is the Temporary Urgency Change Petition's surface water sampling program, and the third is the Stipulated Judgment's sediment sampling requirement. Nutrient and indicator bacteria grab sampling at three stations is also conducted. Further, CDP 2-12-004 special conditions required that the Applicant evaluate the success of the outlet channel to sustain raised water elevations and improve water quality conditions in the Estuary.

As discussed above, annual water quality monitoring reports state that results have remained similar to those in previous years, suggesting that conditions have been relatively stable and therefore beneficial for habitat conditions. **Special Condition 4** requires the continued monitoring and reporting on water quality to inform the Applicant

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on how to best manage the Estuary for optimum results as future conditions change. As proposed, if water quality declines below acceptable thresholds or if flooding is imminent, the Applicant will artificially breach the lagoon. Therefore, potential adverse impacts to water quality will continue to be avoided. To ensure the project is implemented as proposed, **Special Condition 1** requires that the project adhere to the standard and special conditions, mitigation measures and updated project plans included in this CDP.

It was also understood that these impacts would be less severe as compared to the impacts that would result from leaving the Estuary in its natural state or the impacts from historical breaching practices. The historic method of artificial breaching adversely affects water quality by creating a tidal marine environment with shallow depths and high salinity. The proposed project has proven to benefit water quality by increasing water elevations and increasing the amount of freshwater maintained, thereby improving salmonid rearing habitat.

Regarding breaching and maintenance activities, such construction will occur on the beach, avoiding the need for equipment in the water, and minimizing impacts on marine resources and water quality. However, construction activity at the water's edge always has the potential to cause adverse impacts. Therefore, **Special Condition 2** requires maintenance activities to be conducted in accordance with the construction methods typically required by the Commission to protect water quality and marine resources during construction, including maintaining good construction site housekeeping controls and procedures, the use of appropriate erosion and sediment controls, a prohibition on equipment washing, refueling, or servicing on the beach, etc. As conditioned, the project is consistent with Coastal Act Sections 30230 and 30231 regarding protection of marine resources and water quality.

Conclusion

The proposed project will continue to maintain and enhance biological productivity to support sensitive marine resources, including steelhead, coho and Chinook salmon, consistent with Coastal Act Sections 30230 and 30231. As proposed and conditioned, measures to protect marine and biological resources have been incorporated into the project and there will be minimal disruption to marine resources during construction and for the duration of the project. Measures to avoid impacts to marine mammals, including the harbor seal colony, have been incorporated into the project. In addition, the project will avoid all sensitive dune plants, including Tidestrom's lupine. And finally, construction best management practices have been proposed to avoid water quality impacts. The project will not have any significant adverse impacts on coastal resources, including biological resources and sensitive species. Therefore, the Commission finds that as proposed and conditioned the project is consistent with the water quality, biological resource and sensitive habitat protection requirements of Coastal Act Sections 30230, 30231, and 30240.

F. PUBLIC ACCESS AND RECREATION

Applicable Policies

Coastal Act Sections 30210 through 30224 specifically protect public access and recreational opportunities, including visitor-serving resources. 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 30214 (a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:

- (1) Topographic and geologic site characteristics.
- (2) The capacity of the site to sustain use and at what level of intensity.
- (3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses. ...

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.

Consistency Analysis

The public access and recreation policies of the Coastal Act protect public recreational access opportunities, especially lower cost visitor facilities and water-oriented activities. Section 30214 requires that public access be implemented in a manner that takes into account public safety, the capacity of the site, and the fragility of natural resources in

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the area. As previously described, the proposed project is located in a visitor-serving area and in, and adjacent to, a significant natural resource area. Goat Rock State Beach offers low-cost visitor serving public access to the shore, including the no-cost coastal access day use to the beach and associated facilities. As proposed and conditioned, the project will have minimal impact on public access and recreational activities including surfing, beach access, boating, and recreation.

Since the implementation of the 2012 permit program, SCWA has not received any written commentary from the Surfrider Foundation regarding surf conditions. However, the proposed project includes the continuation of more frequent closed channel conditions, and, thus, wave conditions may continue to be identified as less preferable for surfing at this particular location compared to the artificial breaching that has historically occurred. For example, artificially breaching the river mouth results in a minor, transitory sand bar forming off of the coast. This minor sand bar temporarily creates favorable conditions for surfing, but because it dissipates quickly and is artificially created, it is not a long-term public recreational resource. Closed conditions are currently experienced by the local surf community and would continue to naturally occur irrespective of the proposed project (FEIR 2011). In addition, the project site is located in a relatively remote area, and because the sand bar is so short-lived, it is generally used only by local surfers. Furthermore, there is no substantial evidence to demonstrate that the other surfing areas south of the river, including North Side Goat Rock, South Goat, Blind Beach, and the Far Cove, would be affected by the Estuary Management Program (FEIR 2011).

With regard to beach access, creating an outlet channel slightly reduces physical access to the north end of Goat Rock Beach. When the mouth of the Estuary is open and tidal, access to the far north end of Goat Rock Beach is limited. However, creating the outlet channel is generally consistent with current barrier beach conditions. Thus, there is no significant adverse impact to public access and recreation from creation of the outlet channel.

Although the project includes measures to protect public access and recreation, the project employs heavy machinery on public property during daylight hours, so the potential to adversely impact public access and recreation still exists. Thus, to ensure the project is carried out to minimize potential impacts to public access as proposed, **Special Condition 2(f)** (No Disruption of Public Access) and **Special Condition 2(g)** (Peak Public Access Times Avoidance) protect public access and recreation in the area, and **Special Condition 1** ensures that the project will be conducted as proposed and conditioned.

Conclusion

As proposed with the submitted mitigation measures, there will be minimal disruption to public access and recreation during construction and the life of the project. The timing and design of the project will allow for continued low-cost visitor serving uses, including public recreation and access at Goat Rock State Beach, in a manner that also protects the fragility of natural resources in the area. Thus, the project, as proposed and conditioned and with the applicable mitigation measures outlined in the Monitoring

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Mitigation Plan, complies with the public access and recreation policies of the Coastal Act.

G. HAZARDS

Applicable Policies

Coastal Act Section 30253 addresses the need to ensure long-term structural integrity, minimize future risk, and to avoid the need for landform altering protective measures in the future. Section 30253 provides, in applicable part:

Section 30253:

- (1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
- (2) 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.

Consistency Analysis

The project proposes to target a water elevation between 7 and 9 feet. According to the 2012 analysis, elevations of 7 feet during closure events affected the shoreline of 80 properties out of the 123 evaluated properties within the Estuary Study Area (along the Russian River shoreline from Jenner to the Duncan Mills area). However, SCWA also identified 25 potentially at-risk structures and infrastructure⁹ that would be affected at elevations of 14 feet (which was selected based on historic floods of about 11 feet plus a FEMA freeboard recommendation of 3 feet).

The flood risk studies provide information on the ranges of water levels that would inundate existing development and is summarized here. At water levels of 4.5 to 7 feet, the following development is inundated: stairs, boat docks and ramps, riprap, seawalls, three lower house foundations, posts, and a boat house. At water levels of 7-9 feet, 9 parcels and associated structures would be impacted. Additional areas that would be inundated include a bottom viewing deck, a lower outbuilding, stilts, a boat shed, two house foundations, and a parking lot. As presented in the study, many of the structures or portions of the structures that would flood at water elevations up to 10.5 feet are either designed to flood or are not inhabited.¹⁰ Water levels of 10 to 12 feet (the estimated water surface elevation if the barrier beach was allowed to naturally breach) may potentially inundate portions of up to 97 properties, including 16 structures. This development includes the bottom or first floor of three houses, a Visitor's Center, two propane tanks, a boat house, two house foundations, lattice, a garage, and a driveway. Most at-risk structures are located in the Jenner area, accounting for 20 properties.

⁹ Structures include houses, garages, and sheds. Infrastructure types included roads, stairs, tanks, and boat docks, among other structures.

¹⁰ Expanded Russian River Estuary Preliminary Flood Risk Management Feasibility Study. Prepared by SCWA. June 4, 2012.

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There are two at-risk structures in Bridgehaven and one structure in Goat Rock area. The State Parks Visitor Center in Jenner is estimated to be the first occupied structure to flood at approximately 10.5 feet inundation. Water levels in the Estuary could reach 12-14 feet under extreme conditions, such as sustained heavy surf coupled with large spring tides. Water levels at this height could inundate 23 structures located near the State Highway 1 Bridge over the Estuary downstream to the mouth of the Russian River, including Highway 1 itself.

The purpose of the proposed breaching program is to improve rearing habitat for juvenile salmonids as directed by the BO while minimizing the risk of flooding in a manner that is consistent with Section 30253 of the Coastal Act. As such, the project proposes to meet the daily water level management targets of between 7 and 9 feet from May 15th to October 15th.¹¹

As a result of implementing the project, the range of water surface elevations that occur in the Estuary would not change. Development along the Estuary is, and has been, subject to water elevations of 9 feet (the maximum proposed in this project) and above. Compared to previous years when artificial breaching was regularly conducted, the duration over which the target water surface elevations (e.g., 4.5 feet to 9 feet, with an average of 7 feet) would be maintained would increase. Between May 15th and October 15th, the duration of target water levels would increase from an average of less than a few days to an average of approximately one to five months. Ultimately, the duration of the target water elevations depends on the performance of the outlet channel. Thus, low lying areas at or below the 9-foot elevation contour, which were previously inundated only sporadically throughout the year, would remain inundated over longer durations during the lagoon management period.

The largest relative increase is the area of inundation between the 4.5- and 9-foot contours over the western half of Penny Island, at the mouth of Willow Creek, and over approximately six gravel bars at and upstream of the Willow Creek Environmental Campground. The increase in the duration of inundation at the 7-foot and 9-foot contours in these areas, would not result in a subsequent increase in the potential for damage to existing structures or buildings, as none exist in these areas. In this case, and in this context, the increase in the duration of flooding, which currently occurs on an episodic basis, would not be considered a potentially significant impact. However, along more localized areas of the Estuary shoreline, the increase in the duration of flooding between 7 and 9 feet could have a potentially significant impact to property and structures. Therefore, as proposed by the Applicant, SCWA shall continue to coordinate with NMFS and work with the property owners to identify measures that would, if necessary, substantially minimize or avoid any damages to existing structures that would occur as a result of implementing the project.

Special conditions of the original CDP required additional monitoring of flood prone areas to provide more detail on the properties and structures at risk at various flood

¹¹ Expanded Russian River Estuary Preliminary Flood Risk Management Feasibility Study, prepared by SCWA and dated June 4, 2012.

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levels in the Estuary, including the 9-foot level and the maximum water elevation of the Estuary (14 foot), to inform potential alternative modification and adaptation strategies. The Applicant was not able to obtain better on-the-ground surveys due to limitations associated with accessing private property. While a more detailed and property-specific study has not been completed, the Alternatives Analysis from May 2020 stated that “a more detailed flood analysis as well as consideration of the elevation of structure members of the buildings may result in a lower threshold specific to each property”. Based on available elevation information and property records, most of the affected areas are not designated living spaces.

In addition, since the last approval the Applicant has indicated that there have been no new reports of actual flooding even with water levels managed closer to 9 feet. In addition, since the time of the last approval, additional information on flooding along the Russian River has been developed by Sonoma County including in 2016 through their updated hazard mitigation plan and completion of an effort to expand the United States Geological Survey (USGS) sea level rise model to include the Russian River Estuary.¹² These tools will assist the Applicant in better understanding the flood risks to surrounding areas as they adapt the Estuary Management Program over time for habitat benefits, including as conditions change with sea level rise.

In addition to this adaptive management, the Applicant will also monitor the occurrence of sea level rise and implement adaptive management strategies to manipulate outlet channel elevation, alignment, and width, or implement more frequent outlet channel maintenance. As indicated just above, many of the structures, or portions of the structures, that would flood at water elevations up to 10.5 feet are either designed to flood or are not inhabited. Further, the proposed project includes artificial breaching whenever necessary, including during the lagoon management period, to minimize flooding potential to other existing structures.

Finally, a significant hazard is associated with the breaching itself. Breaching the sand bar creates a potential hazard to the public as the water from the river rapidly discharges to the ocean. During the first several minutes immediately following breaching, standing waves in excess of 10 feet high with velocities in excess of 20 feet per second have been observed as the river drains through the breach opening. To address this hazard, the project includes Mitigation Measure 4.13.3 of the EIR which states:

Following outlet channel creation or artificial breaching, the Water Agency will install semi-permanent signage notifying beach users of channel conditions, potential for safety hazards from beach erosion or hydrologic action, and emergency contact information. Signage should be posted and maintained at key locations, such as the parking lot at Goat Rock State Beach Parking lot, the

¹² These model scenarios were incorporated into the Our Coast, Our Future (OCO) web platform by Point Blue Conservation Science (<http://beta.ourcoastourfuture.org/index.php?page=russian-river-projectteam>).

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unofficial beach access trail located on the north side of the beach off Highway 1, and 100 feet on either side of the outlet channel.

The Commission finds that the proposed measures would minimize the risk of hazards to the public caused by the proposed breaching consistent with the requirements of Section 30253 of the Coastal Act.

Because the Applicant proposes to undertake an inherently hazardous activity, the Commission imposes **Special Condition 5**, requiring the Applicant to assume the risks of any losses associated with the proposed breaching due to hazards resulting from the proposed breaching, waive any claim of liability on the part of the Commission for such losses, and indemnify the Commission in the event that third parties bring an action against the Commission as a result of the any hazards associated with the proposed breaching. The Commission finds that **Special Condition 5** is required because the Applicant has voluntarily chosen to implement the project despite the risk of hazards.

Conclusion

The proposed breaching program will improve rearing habitat for juvenile salmonids as directed by the BO while minimizing the risk of flooding as required by the Coastal Act. Based on information developed as a result of the Commission's previous CDP, the project now allows for flood elevations to reach closer to 9 feet, both to enhance habitat and to limit flood damages, and this represents an important change from the previous program, including as the data was developed based on the Commission's desire to better understand what was flooding and necessitating artificial breaching in the first place. The Applicant has refined its analysis in that respect, and indicates that structures that would be affected at the 9-foot level are generally structures meant to be in the water in the first place, and that 9 feet is the appropriate upper bound (as opposed to managing water levels closer to 7 feet as the target water elevation under the prior authorization). This will reduce the need for artificial breaching, and will better enhance fisheries, thus representing an important adaptation since the last CDP.

Therefore, as proposed and conditioned, the Commission finds that the proposed breaching would still be undertaken in a manner that minimizes risks to life and property in areas of high flood hazard and is consistent with Section 30253 of the Coastal Act.

H. CULTURAL RESOURCES

Applicable Policies

Section 30244 of the Coastal Act protects cultural resources. It states:

Section 30244: Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

Consistency Analysis

As described in the project EIR, the Native American Coastal Miwok and Kashia Pomo people have inhabited the Russian River area for thousands of years. Therefore, there may be significant archaeological sites and cultural resources in and around the

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Russian River Estuary area. To protect and conserve these resources, the Federated Indians of Graton Rancheria and the Kashia Band of Pomo Indians, the two federally recognized tribes with ethnographic territory along the mouth of the Russian River, were contacted in 2020 about the project activities. ¹³Specifically, chairpeople from the Cloverdale Rancheria of Pomo Indians, Kashia Band of Pomo Indians of the Stewarts Point Rancheria, the Dry Creek Rancheria Band of Pomo Indians, Lytton Rancheria, Federated Indians of Graton Rancheria, Mishewal-Wappo Tribe of Alexander Valley, and the Guidiville Indian Rancheria were contacted as they were so named on the contact list provided by the Native America Heritage Commission in February 2020.

Previously, a records search was conducted in 2009 to (1) determine whether known cultural resources had been recorded within or adjacent to the Estuary Study Area; (2) assess the likelihood of unrecorded cultural resources based on historical references and the distribution of nearby sites; and (3) develop a context for the identification and preliminary evaluation of cultural resources.

The records search found 25 cultural resource studies on file at the NWIC¹⁴ within and adjacent to the Estuary Study Area dating from 1975 to 2004. The records search also indicated that eight cultural resources have been previously recorded within a half-mile of the Estuary Study Area. None of these resources are located within the immediate area of the project. Furthermore, ground-disturbing activities associated with the outlet channel creation and maintenance would occur in recently deposited and annually disturbed materials that have a very low potential to contain cultural materials. The variations in the annual water surface elevation on the Russian River would remain within previously recorded levels following project implementation. There is a low potential for archaeological materials to be uncovered from the implementation of the Estuary Management Program. However unlikely, the possibility of encountering archaeological materials cannot be entirely discounted. Thus, as part of the project SCWA proposes mitigation measures outlined in the Mitigation Monitoring Plan to address potential impacts to cultural resources consistent with the Coastal Act. **Special Condition 4** requires the Applicant to adhere to the measures in the Mitigation Monitoring Plan, which state as follows:

Inadvertent Discovery of Historical and Unique Archaeological Resources.

If discovery is made of items of historical or archaeological interest, the contractor or Water Agency staff shall immediately cease all work activities in the area (within approximately 100 feet) of discovery. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (“midden”) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials

¹³ Staff reached out to all tribes listed in the staff report but was only able to connect and discuss the project with the secretary of the Dry Creek Rancheria office.

¹⁴ NWIC stands for the Northwest Information Center of the California Historical Resources Information System at Sonoma State University.

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might include stone, concrete, or adobe footings and walls; filled wells or privies; deposits of metal, glass, and/or ceramic refuse, and shipwreck remains. After cessation of excavation the contractor shall immediately contact the Water Agency, State Parks, the U.S. Army Corps of Engineers, and the California State Lands Commission. The contractor shall not resume work until authorization is received from all agencies.

1. In the event of unanticipated discovery of archaeological materials occurs during construction, the Water Agency shall retain the services of a qualified professional archaeologist to evaluate the significance of the items prior to resuming any activities that could impact the site. A qualified maritime archaeologist shall be retained to examine shipwreck remains or related submerged artifacts if discovered near the river mouth during outlet channel creation or maintenance.
2. In the case of an unanticipated archaeological discovery, if it is determined that the find is potentially eligible for listing in the California and/or National Registers, and the site cannot be avoided, the Water Agency shall provide a research design and excavation plan, prepared by a qualified archaeologist, outlining recovery of the resource, analysis, and reporting of the find. The research design and excavation plan shall be approved by the Water Agency, State Parks, and U.S. Army Corps of Engineers. The California State Lands Commission shall provide approval of a research design for shipwreck remains or related submerged artifacts. Implementation of the research design and excavation plan shall be conducted prior to work being resumed. Upon project approval, the Water Agency will coordinate with State Parks and U.S. Army Corps of Engineers to develop an action plan that can be implemented in the event that flooding is imminent and breaching must occur immediately.

Discovery of Human Remains.

If potential human remains are encountered, the contractor or Water Agency staff shall halt work in the vicinity of the find and contact the Sonoma County coroner in accordance with Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5. The Water Agency will also notify by telephone the U.S. Army Corps of Engineers archaeologist and permit manager. If the coroner determines the remains are Native American, the coroner will contact the Native American Heritage Commission (NAHC). As provided in Public Resources Code Section 5097.98, the NAHC will identify the person or persons believed to be most likely descended from the deceased Native American. The Most Likely Descendent (MLD) makes recommendations for means of treating the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98. Work shall cease in the immediate area until the recommendations of the appropriate MLD are concluded.

Therefore, the Commission finds the proposed project as conditioned is consistent with 30244 because reasonable mitigation measures are required.

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I. OTHER AGENCY APPROVALS

Special Condition 7 requires the Applicants to provide all relevant authorizations from Sonoma County, North Coast Regional Water Quality Control Board, California State Lands Commission, California Department of Parks and Recreation, CDFW, USACE, NMFS, and USFWS, or evidence that permits, authorizations, leases or other approvals from these agencies are not necessary.

J. INDEMNIFICATION

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 imposes **Special Condition 8**, requiring reimbursement of any costs and attorneys' fees 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 CDP or challenging any other aspect of its implementation, including with respect to condition compliance efforts.

K. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Section 13096 of the California Code of Regulations requires that a specific finding be made in conjunction with CDP applications showing the application to be consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

SCWA, acting as lead agency, certified an EIR for the project in August of 2011. The EIR evaluated project impacts, identified mitigations to reduce certain impacts, and found some impacts to be significant and unavoidable, in particular related to recreation, water quality, and biological resources. In addition, the EIR found that the proposed project was not the "environmentally superior" alternative, although it was the most suitable to meeting all project objectives. Notwithstanding the identification and analysis of the impacts that are identified in the EIR as being significant and potentially significant which may not be avoided, lessened, or mitigated to a level of insignificance, SCWA, acting pursuant to Public Resources Code Section 21081 and Title 14, CCR section 15093 of the CEQA Guidelines, determined that specific economic, legal, social, technological and other benefits of the proposed project outweighed any unavoidable, adverse impacts of the proposed project and that the project should be approved.

In particular, SCWA determined that the project will improve and enhance rearing habitat for threatened and endangered salmonid species, particularly steelhead, by reducing tidal influence and increasing the amount of habitat area and fresh water available to rearing salmon and steelhead during the Lagoon Management Period, thus increasing the likelihood of the survival and recovery of these species. By so doing, the Project will allow SCWA to comply with the terms of the NMFS BO, and will ensure that

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SCWA operations continue to be protected by the “incidental take statement” contained in the BO, as well as the “Consistency Determination” issued by CDFW, which allows the Water Agency to “take” listed salmonid species during the course of SCWA’s Estuary management, stream maintenance and flood control, and water supply activities without incurring liability under the federal or state Endangered Species Acts. In addition, the project will allow SCWA to continue to provide flood protection to properties and structures surrounding the Estuary, by allowing it to manage Estuary water levels at between 7 and 9 feet.

As a responsible agency, the Commission conducted its analysis of the potential impacts of the proposed development that the Commission is authorized by the Coastal Act to review. The Coastal Commission’s review and analysis of land use proposals has been certified by the Secretary of the Natural Resources Agency as being the functional equivalent of environmental review under CEQA. This report discusses the relevant coastal resource issues with the proposal. The Commission has reviewed the relevant coastal resource issues associated with the proposed project and has identified appropriate and necessary conditions to assure protection of coastal resources consistent with the requirements of the Coastal Act. All public comments received to date have been addressed in the findings above. The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full.

As such, there are no additional feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse environmental effects which approval of the proposed project, as conditioned, would have on the environment within the meaning of CEQA. Thus, if so conditioned, the proposed project will not result in any significant environmental effects for which feasible mitigation measures have not been employed consistent with CEQA Section 21080.5(d)(2)(A).

APPENDIX A – SUBSTANTIVE FILE DOCUMENTS

- Sonoma County Water Agency Jetty Study
- Biological Opinion Incidental Take Statement
- Sonoma County Water Agency Adaptive Management Plan (2018)
- Sonoma County Water Agency Annual Reports for CDP 2-12-004: 2013, 2014, 2015, 2016, 2017, and 2018
- Sonoma County Water Agency Outlet Channel Management Plan (2018)
- Sonoma County Water Agency Alternatives Analysis (2012) Prepared by Environmental Science Associates
- Sonoma County Water Agency Alternatives Analysis (2020) Prepared by Environmental Science Associates
- 2008 NMFS Biological Opinion

APPENDIX B – STAFF CONTACT WITH AGENCIES AND GROUPS

- Surfrider Foundation