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W22b

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STAFF REPORT: REGULAR CALENDAR

Application No.: 3-20-0014

Applicant: Soquel Creek Water District

Location: Cities of Santa Cruz and Capitola, and Santa Cruz County.

Project Description: Authorization of a water recycling and groundwater replenishment project, including development of a new tertiary water treatment facility at the Santa Cruz Wastewater Treatment Facility (SC WWTF) in the City of Santa Cruz; a new Sea Water Intrusion Prevention (SWIP) facility and associated monitoring wells in the City of Capitola; and separate pipelines for the conveyance of source water, reverse osmosis concentrate, and advanced purified water between the SC WWTF, the SWIP well site, and other new advanced water purification and SWIP facilities located outside the coastal zone.

Staff Recommendation: Approval with conditions.

SUMMARY OF STAFF RECOMMENDATION

The Applicant, the Soquel Creek Water District, proposes to purify treated municipal wastewater from the City of Santa Cruz Wastewater Treatment Facility (SC WWTF) and

use it for groundwater basin recharge in its water supply area. To accomplish this, the District proposes a new tertiary treatment facility that would be sited at the SC WWTF (near Neary Lagoon in the City of Santa Cruz), an advanced water purification facility in unincorporated Live Oak in Santa Cruz County, Sea Water Intrusion Prevent and monitoring wells at three locations in the County, and separate pipelines for the conveyance of source water, reverse osmosis concentrate, and advanced purified water between the SC WWTF, the purification facility, and the wells. The proposed project extends through portions of the cities of Santa Cruz and Capitola, as well as unincorporated areas of Santa Cruz County (and various project components are outside the coastal zone and thus are not subject to this CDP), and facilities in the coastal zone include the tertiary treatment facility and appurtenances at the SC WWTF, segments of tertiary, reverse osmosis concentrate, and purified water pipelines passing through multiple coastal zone jurisdictions, and one of the Seawater Intrusion Prevention and monitoring well sites. Because the project passes through all of these jurisdictions, as well as a portion in the Commission's original jurisdiction, all parties have agreed to processing a consolidated CDP under the Coastal Act.

The proposed project is intended to use treated wastewater that would otherwise be discharged into the ocean to help improve groundwater health by injecting it underground in various locations in the District's lower water supply aquifer. This type of project thus helps to make water supply more sustainable, thereby helping to enhance community water supply security, while also putting scarce water resources to their highest and best use and avoiding ocean discharge. The Commission has seen other projects of this type, and it is clear evidence of the way in which water supply is being re-conceptualized in many coastal communities, including here in Santa Cruz County. At a broad level, the proposed project promotes a variety of Coastal Act coastal resource protection objectives.

That said, a project of this magnitude and complexity is not without potential issues and concerns of its own with respect to protection of water quality, biological resources, and public views, as well as coastal hazard risks at portions of the proposed project nearest the ocean. Thus staff is recommending a series of conditions to ensure that such resources are appropriately protected, including during construction. Specifically, **Special Conditions 1 and 2** require final project plans and a construction plan that will ensure the project's impacts to coastal resources are avoided (and where unavoidable minimized and mitigated), and **Special Condition 3** requires that the District adhere to the project's EIR Mitigation Monitoring and Reporting Program (thus making those requirements an enforceable part of this CDP). Moreover, **Special Condition 4** requires the District to provide a Recycled Water Management Plan to maximize its recycled water efforts. **Special Condition 5** requires that the District acknowledge and accept the potential coastal hazard risks associated with development at the SCWWTF, and **Special Condition 6** makes the District's long-term sea-level rise adaptation plan an enforceable part of this CDP. **Special Condition 7** includes enhanced public notice for the residents around the proposed injection well on Monterey Avenue (as requested by the City of Capitola), and **Special Conditions 8 through 11** provide for other agency approvals, minor changes, future approvals, and indemnity for potential litigation fees.

3-20-0014 (Pure Water Soquel Project)

In sum, the proposed project will reduce ocean discharges and improve groundwater quality and aquifer health, while also helping to address seawater intrusion, and will allow for an improved and more resilient community water source. The project is designed to accommodate both existing development as well as development that would be allowed under the LCPs involved here, and should not lead to any inappropriate growth inducement. Staff has worked closely with the Applicant on the proposed project, and the Applicant is in agreement with the terms and conditions of the CDP. Thus, staff recommends that the Commission **approve** the CDP as conditioned, and the motion to do so is found on page 4 below.

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EXHIBITS

- Exhibit 1** – Project Overview
- Exhibit 2** – Tertiary Treatment Facility at SC WWTF – Project components
- Exhibit 3** – Tertiary Treatment Facility at SC WWTF – Preliminary Site Plan
- Exhibit 4** – Tertiary Treatment Facility at SC WWTF – Existing Conditions
- Exhibit 5** – Tertiary Treatment Facility at SC WWTF – Visual Simulation
- Exhibit 6** – San Lorenzo River Crossing
- Exhibit 7** – Monterey Ave Well Site – Location and Existing Conditions
- Exhibit 8** – Monterey Ave Well Site Plan
- Exhibit 9** – Monterey Ave Well Site – before/after Photo Simulations
- Exhibit 10** – Mitigation Monitoring and Reporting Program
- Exhibit 11** – Correspondance in Opposition of Project
- Exhibit 12** – District Correspondance in Response to Opposition
- Exhibit 13** – FEMA Flood Map for SC WWTF
- Exhibit 14** – Photos of Flood Protection system at SC WWTF

I. MOTION AND RESOLUTION

Motion:

I move that the Commission approve Coastal Development Permit 3-20-0014 subject to the conditions set forth in the staff recommendation specified below.

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

Resolution:

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

II. STANDARD CONDITIONS

- 1. Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the 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 of interpretation of any condition will be resolved by the Executive Director or the Commission.
- 4. Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
- 5. Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the applicant to bind

all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

1. **Final Plans. PRIOR TO ISSUANCE OF THE CDP**, the Permittee shall submit two full-size sets of Final Plans with graphic scale to the Executive Director for review and approval. The Final Plans shall be prepared by a licensed professional or professionals (i.e., architect, surveyor, geotechnical engineer, etc.), and shall be based on current professionally surveyed topographic elevations for the entire project site. The Final Plans shall be substantially in conformance with the proposed project description (prepared by ESA (dated January 2020) and dated received in the Coastal Commission's Central Coast District office on January 20, 2020) but shall be modified to achieve compliance with this condition, including that the Final Plans shall show the following required changes and clarifications to the project:

a) **Tertiary Treatment Facility Design.** The design and appearance of all Santa Cruz Wastewater Treatment Facility development shall minimize impacts to public views. The plans shall clearly identify all measures that will be applied to ensure such design aesthetic is achieved, including with respect to all structures and all other project elements within the public viewshed. Development shall be sited and designed so as to reduce its visibility from the public viewshed to the maximum extent possible. At a minimum, the plans shall clearly identify all structural elements, materials, and finishes (including through site plans and elevations, materials palettes and representative photos, product brochures, etc.). Development shall blend with the existing topography as much as possible. Grading and retaining walls shall be minimized.

b) **Pump Stations and Related Development Design.** All pump stations and all related development, including all power boxes and buildings, shall be sited and designed to limit impacts on public views as much as possible, including through limiting their footprint, siting elements below ground, minimizing the scale of any necessary above-ground elements, limiting above-ground access components (including manhole/hatch entries), using surface treatments and structural designs consistent and compatible with the immediately surrounding environment, limiting lighting to that necessary for public safety, removing non-native invasive plant species and landscaping with appropriate native plant materials (see also **Special Condition 1(c)**) including so that landscaping can help soften the appearance of any elements that are unavoidably above ground and to ensure seamless connectivity to the surrounding habitat and vegetation as much as possible.

c) **Above-grade Structures.** For any above-grade structures, the Permittee shall coordinate with the staff in the Planning, Public Works, and Water Departments for the respective jurisdiction to review materials, aesthetics, siting, visibility, landscaping features, sight lines (for ensuring safety of vehicles, pedestrians, and bicyclists), and other implications of the above-ground structures.

- d) Landscaping.** The Final Plans shall include a landscape plan for all proposed development, as well as the areas surrounding pump stations, and other related development, where such landscaping shall be consist of native, non-invasive, and drought-tolerant species that provide appropriate screening and softening of development features in public views as much as possible. The landscape plan shall require all non-native plants on the site to be removed and the site kept free of such plants for as long as any portion of the approved development exists at this site. The landscape plan shall provide that all landscaped areas on the project site shall be maintained in a litter-free, weed-free, and healthy growing condition. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or as may be so identified from time to time by the State of California, and no plant species listed as a “noxious weed” by the State of California or the U.S. Federal Government shall be planted or allowed to naturalize or persist on the site.
- e) Lighting Minimized.** Exterior lighting shall be wildlife-friendly, shall use lamps that minimize the blue end of the visible light spectrum, and shall be limited to the minimum lighting necessary for pedestrian and vehicular safety purposes. All lighting (exterior and interior) shall be sited and designed so that it limits the amount of light or glare to the maximum extent feasible (including through uses of lowest luminosity possible, directing lighting downward, etc.). The Final Plans shall be submitted with documentation demonstrating compliance with these lighting requirements.
- f) Public Streets.** Public Streets, bicycle lanes, sidewalks and related infrastructure impacted during construction for Pure Water Soquel shall be returned to a state as good, or better, than their condition prior to construction.
- g) Windows and Other Surfaces.** All windows shall be non-glare glass, and all other surfaces shall be similarly treated to avoid reflecting light. All windows shall be bird-safe (i.e., windows shall be frosted, partially frosted, or otherwise treated with visually permeable barriers that are designed to prevent bird strikes).
- h) Utilities.** The Final Plans shall clearly identify all utilities (e.g., water, stormwater, gas, electrical, telephone, data, etc.) and the way in which they will be connected to inland distribution networks. All such utilities shall be located underground to the maximum extent feasible.

All requirements above and all requirements of the approved Revised Final Plans shall be enforceable components of this CDP. The Permittee shall undertake development in conformance with this condition and the approved Revised Final Plans.

- 2. Construction Plan.** PRIOR TO ISSUANCE OF THE CDP, the Permittee shall submit two copies of a preliminary phased Construction Plan for each project component to the Executive Director for review and approval. The Construction Plan shall, at a minimum, include and provide for the following:

- a) **Grading.** The Construction Plan shall include a grading plan where site grading shall be limited to the minimum necessary to construct the project.
- b) **Construction Areas.** The Construction Plan shall identify the specific location of all construction areas, all staging areas, and all construction access corridors in site plan view. All such areas within which construction activities and/or staging are to take place shall be minimized to the maximum extent feasible in order to have the least impact on riparian corridors and public views, as well as to employ best management practices (BMPs) to protect water resources onsite and in the surrounding area. 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.
- c) **Construction Methods and Timing.** The Construction Plan shall specify and demonstrate that all construction methods to be used shall avoid riparian resources and public view impacts as much as possible, including use of trenchless construction methods and other BMPs as much as possible. With the exception of construction at the Monterey Avenue well site, construction work during nighttime is prohibited absent authorization from the Executive Director that such work will not adversely impact coastal resources and if lighting is minimized as identified in **Special Condition 1(e)**.
- d) **Traffic Control Plan.** The Construction Plan shall identify all roads that may be impacted during construction, and shall specify measures to ensure their continued operation and to avoid impacts to adjacent areas, including neighborhoods, businesses, and public recreational access destinations, to the maximum extent feasible, including in terms of potential emergency access and evacuation.
- e) **Property Owner Consent.** The Construction Plan shall be submitted with evidence indicating that the owners of any properties on which construction activities are to take place, including properties to be crossed in accessing the site, consent to such use of their properties.
- f) **Best Management Practices.** The Construction Plan shall clearly identify all construction BMPs to be implemented during construction, including their location and their specific use parameters. The plan shall also contain provisions for specifically identifying and protecting any natural drainage swales (i.e., with sand bag barriers, filter fabric fences, straw bale filters, etc.) to prevent construction-related runoff and sediment from entering into these natural drainage areas, which ultimately deposit runoff into the Pacific Ocean. Silt fences, straw wattles, or equivalent measures shall be installed at the perimeter of all construction areas. At a minimum, the plan shall also include provisions for stockpiling and covering of graded materials, temporary stormwater detention facilities, revegetation, and restricting grading and earthmoving during rainy/inclement weather. The Plan shall indicate that: (a) dry cleanup methods

are preferred whenever possible and that if water cleanup is necessary, all runoff shall be collected to settle out sediments prior to discharge from the site, and that all de-watering operations shall include filtration mechanisms; (b) offsite equipment wash areas are preferred whenever possible; if equipment must be washed onsite, the use of soaps, solvents, degreasers, or steam cleaning equipment shall be prohibited; in any event, such wash water shall be collected and appropriately disposed offsite, and shall not be allowed to enter any natural drainage areas; (c) concrete rinsate shall be collected and appropriately disposed offsite, and shall not be allowed to enter any natural drainage areas; (d) good construction housekeeping shall always be required (e.g., clean up all leaks, drips, and other spills immediately; refuel vehicles and heavy equipment offsite and/or in one designated location; keep materials covered and out of the rain (including covering exposed piles of soil and wastes); dispose of all wastes properly, place trash receptacles on site for that purpose, and cover open trash receptacles during wet weather); and (e) all erosion and sediment controls shall be in place prior to the commencement of grading and/or construction as well as at the end of each day. Particular care shall be exercised to prevent foreign materials from making their way to natural drainage areas. Contractors shall insure that work crews are carefully briefed on the importance of observing the appropriate construction BMP precautions and reporting any accidental spills and/or other forms of discharge.

- g) Post-Construction.** All construction areas shall be restored to their pre-construction state or better upon completion of work including in conformance with **Special Condition 1(d)** above with respect to landscaping. Where appropriate and feasible, roads/sidewalks impacted by construction shall employ stormwater management infrastructure BMPs, including bioswales, pervious pavers, garbage traps, and vegetative strips.
- h) Construction Site Documents.** The Construction Plan shall provide that a copy of the signed CDP and the approved Construction Plan be maintained in a conspicuous location at each construction job site at all times, and that such copies shall be available for public review on request. The signed CDP and approved Construction Plan shall also be retained in the project file at the Commission's Central Coast District office and be available for review by the public on request. All persons involved with the construction shall be briefed on the content and meaning of the CDP and the approved Construction Plan, and the public review requirements applicable to them, prior to commencement of construction.
- i) Construction Manager.** The Construction Plan shall provide that a construction manager be designated to be contacted during construction should questions arise regarding the construction (in case of both regular inquiries and emergencies), and that his/her contact information (i.e., address, phone numbers, email address, etc.) including, at a minimum, a telephone number (with message capabilities) and an email 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 manager should be contacted in the case of questions regarding the construction (in case of both regular inquiries and emergencies). The construction manager shall record the contact information (name, phone number, email, 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. Any critical and/or significant complaints and related responses shall be reported to the Executive Director as soon as possible, and all complaints and all actions taken in response shall be summarized and provided to the Executive Director on a weekly basis.

- j) Construction Specifications.** The construction specifications and materials (including all construction contracts) shall include appropriate penalty provisions to address non-compliance with the terms and conditions of this CDP and the approved Construction Plan, including provisions sufficient to offset the cost of retrieving or cleaning up improperly contained foreign materials, and provisions that require remediation for any work done inconsistent with the terms and conditions of this CDP and the approved Construction Plan.
- k) Notification.** The Permittee shall notify planning staff of the Coastal Commission's Central Coast District Office at least 3 working days in advance of commencement of construction, and immediately upon completion of construction.

All requirements above and all requirements of the approved Construction Plan shall be enforceable components of this CDP. The Permittee shall undertake construction in accordance with this condition and the approved Construction Plan.

- 3. EIR Mitigation Monitoring and Reporting Program.** The District shall, as enforceable requirements of this CDP, implement and adhere to all mitigation measures applicable to project components in the Coastal Zone that are included in the Mitigation Monitoring and Reporting Program prepared for the project and certified by the District. A full list of these mitigation measures is provided in **Exhibit 10**.
- 4. Recycled Water Management Plan.** PRIOR TO CONSTRUCTION OF THE SC WWTF, the Permittee shall submit two copies of a Recycled Water Management Plan (RWMP) to the Executive Director for review and approval. The objective of the RWMP shall be to ensure that the maximum amount of tertiary-treated recycled water is produced, and the maximum amount of such water is used for beneficial reuse purposes, including injected underground in locations that will maximize its ability for groundwater replenishment and indirect potable reuse, including over the long term and taking into account potential sea level rise and increased aquifer seawater intrusion, and replacing existing potable water use with recycled water use where feasible and appropriate. In addition, the RWMP shall ensure that the sites designated for injection of treated wastewater are designed to maximize the long-

term health and sustainability of groundwater and surface water and related resources (including wetlands, streams, creeks, lakes, riparian corridors, marshes, etc.) as much as possible, including with respect to potential sea level rise and increased aquifer seawater intrusion.

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

5. Coastal Hazards Risk – Tertiary Treatment facility at SC WWTF. By acceptance of this CDP, the Permittee acknowledges and agrees, on behalf of itself and all successors and assigns, to all of the following:

(a) Coastal Hazards. That the SC WWTF site is subject to coastal hazards including but not limited to episodic and long-term shoreline retreat and coastal erosion, high seas, ocean waves, tsunamis, tidal scour, coastal flooding, landslides, bluff and geologic instability, bluff retreat, liquefaction and the interaction of same, many of which will worsen with future sea level rise.

(b) Assume Risks. To assume the risks to the Permittee and the property that is the subject of this CDP of injury and damage from such coastal hazards in connection with this permitted development.

(c) Waive Liability. To unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such coastal hazards.

(d) Indemnification. To indemnify and hold harmless the Coastal Commission, its officers, agents, and employees with respect to the Commission's approval of the development 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 coastal hazards.

(e) Permit Applicant Responsible. That any adverse effects to property caused by the permitted development shall be fully the responsibility of the permit applicant.

6. Coastal Hazards Response – Tertiary Treatment Facility at SC WWTF. By acceptance of this CDP, the Permittee acknowledges and agrees, on behalf of itself and all successors and assigns, to all of the following for the new Tertiary Treatment Facility at the SC WWTF as authorized under this CDP:

(a) CDP Intent. The intent of this CDP is to allow for the proposed development to be used consistent with the terms and conditions of this CDP for only as long it remains safe without additional measures (beyond ordinary repair and/or maintenance, as articulated in this condition below) to protect the structure from coastal hazards (as these hazards are defined by **Special Condition 5(a)** above). The intent is also to ensure that the proposed development be removed

and the affected area restored under certain circumstances (as further described in this condition) consistent with the Removal and Restoration Plan required in subsection (d) of this special condition.

- (b) Shoreline Armoring Prohibited.** Additional future shoreline armoring (including but not limited to additional or augmented seawalls, revetments, retaining walls, gabion baskets, tie backs, piers, groins, caissons/grade beam systems, etc.) that is intended to protect the proposed development shall be prohibited.
- (c) Section 30235 Waiver.** Any rights that the Permittee may have to construct and/or maintain shoreline armoring to protect the proposed development, including rights that may exist under Coastal Act Section 30235, the City of Santa Cruz Local Coastal Program, or any other applicable laws, are waived.
- (d) Removal and Restoration Plan.** The Permittee shall submit two copies of a Removal and Restoration Plan (RRP) to the Executive Director for review and written approval that accounts for the following when any of the following criteria are met:
- i. Unsafe Conditions.** If any portion of the approved project and related development is threatened and/or damaged by coastal hazards (as defined by **Special Condition 5(a)**), and if a government agency has issued a final order, not overturned through any appeal or write proceedings, that the threatened and/or damaged portion of the approved development is not to be occupied or used, and if such government agency concerns can only be abated through construction of coastal armoring devices, the RRP shall provide that all development meeting the “do not occupy or use” criteria is removed to the degree necessary to allow for such government agency to allow use of the remainder of the development after implementation of the approved RRP, including full removal if use is not possible for a reduced-scale development.
 - ii.** The RRP shall be submitted as soon as possible, but in no case later than 30 days after any of the above criteria are met. Consistent with the District’s Adaptation Strategy, the RRP shall also ensure that: (a) all non-building development necessary for the functioning facility is relocated as part of the removal episode; (b) all removal areas are restored to their approximate pre-construction condition, or that of a more natural quality consistent with adjacent natural areas; and (c) all modifications necessary to maintain compliance with the terms and conditions of this CDP, including the objectives and performance standards of these conditions, are implemented as part of the RRP.

If the Executive Director determines that an amendment to this CDP or a separate CDP is legally required to implement the approved RRP, then the Permittee shall submit and complete the required application within 30 days of such determination. The RRP shall be implemented immediately upon Executive Director or Commission

approval of the RRP, as the case may be. The Permittee shall undertake development in accordance with the approved RRP.

7. Public Notice.

- a. Soquel Creek Water District shall send out pre-construction notices to all properties within 200 feet of the Monterey Well Site and hold a pre-construction meeting no less than 30 days prior to construction. The letter and meeting shall address the option of alternative accommodations during night drilling consistent with the EIR mitigation measures.
- b. For properties within 201 - 500 feet of the Monterey well site, the Soquel Creek Water District shall send out pre-construction notice no less than 30 days prior to construction with emergency contact information and project information as identified within the EIR mitigation measures.

8. Other Authorizations. PRIOR TO CONSTRUCTION OF THE WATER RECYCLING FACILITY, the Permittee shall provide to the Executive Director written documentation of authorizations from the Central Coast Regional Water Quality Control Board, the State Water Resources Control Board, the California Department of Fish and Wildlife, the National Marine Fisheries Service, and the U.S. Army Corps of Engineers, or evidence that no such authorizations are required. The Permittee shall inform the Executive Director of any changes to the project required by any other such authorizations. Any such changes shall not be incorporated into the project until the Permittee obtains a Commission amendment to this CDP, unless the Executive Director determines that no amendment is legally required.

9. Minor Changes. The Permittee shall undertake development in conformance with the terms and conditions of this CDP, including with respect to all Executive Director-approved plans and other materials, which shall also be enforceable components of this CDP. Any proposed project changes, including in terms of changes to identified requirements in each condition, shall either (a) require a CDP amendment, or (b) if the Executive Director determines that no amendment is legally required, then such changes may be allowed by the Executive Director if such changes: (1) are deemed reasonable and necessary; and (2) do not adversely impact coastal resources.

10. Future Permitting. All future proposed development related to this CDP shall require a new CDP or a CDP amendment that is processed through the Coastal Commission, unless the Executive Director determines a CDP or CDP amendment is not legally required.

11. 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 Permittees against the Coastal Commission and/or its officers, employees, agents, successors and assigns challenging the approval or issuance of this CDP, the

interpretation and/or enforcement of the CDP 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 and/or its officers, employees, agents, successors and assigns.

IV. FINDINGS AND DECLARATIONS

A. Project Background and Description

Background

The Soquel Creek Water District (District), which provides public water service for some 40,400 residents in the unincorporated Santa Cruz County communities of Aptos, La Selva Beach, Opal Cliffs, Rio Del Mar, Seascape, Soquel, and portions of the City of Capitola, relies solely on groundwater sources for its water supply. The Santa Cruz Mid-County Groundwater Basin (Basin 3-001), the primary source of water for the District and many others in the Santa Cruz Mid-County region, is designated by the State of California as “Critically Overdrafted” (due to historical over-pumping and extraction of groundwater exceeding what could naturally be replenished by rainfall) and has active seawater intrusion occurring. Seawater intrusion has been detected onshore in some of the coastal monitoring wells in the basin and along the entire coastline of the District’s service area, which has been confirmed by water quality sampling and geophysical mapping.

Despite conservation efforts by the District, the groundwater basin remains critically overdrafted and an additional water supply is required to supplement the natural recharge of the basin and combat seawater intrusion from moving further inland. As part of this project, the District is planning to construct a new 2.3-million-gallon-per-day recycled water facility to produce tertiary treated water for groundwater replenishment via injection into the groundwater basin at specific locations in the aquifer. The intent is to pump treated wastewater into the basin to prevent seawater intrusion and help bring the basin back to a sustainable state. The District’s Board has set the project’s target completion date as December 2022.

An estimated 3,000-acre-feet per year (AFY) of supplemental supply could be required to address regional water shortage needs, including basin-wide groundwater overdraft and drought resiliency. Plans to meet the basin-wide sustainability state by 2040 are currently being addressed through an independent effort under the Santa Cruz Mid-County Groundwater Agency (MGA). The District is a partner member of the MGA and on November 15, 2018, the Pure Water Soquel Project was identified as one of the

supply projects to be included in the Groundwater Sustainability Plan.¹ The District's Project has the goal of injecting 1,500 AFY of supplemental purified water in the groundwater basin, while allowing for conveyance infrastructure and treatment footprints capable of accommodating treatment system expansion to address basin-wide needs.²

Project Description

Under the Project, the District will obtain treated municipal wastewater (source water) and purify it to produce high-quality purified water for groundwater basin recharge. Project treatment facilities include a new tertiary treatment facility at the Santa Cruz Wastewater Treatment Facility (SC WWTF) in the City of Santa Cruz, and an advanced water purification facility at a site near the intersection of Chanticleer Avenue and Soquel Drive (the Chanticleer Advanced Water Purification Facility (AWPF)) in Live Oak. The District will install Sea Water Intrusion Prevention (SWIP) and monitoring wells at three locations, including one at Twin Lakes Church (Twin Lakes Church SWIP well) in Aptos, one on District property near Willowbrook Lane (Willowbrook Lane SWIP well) in Aptos, and at District-owned property near the Monterey Avenue-Kennedy Drive intersection (Monterey Avenue SWIP well) in Capitola. In addition, the Project includes separate pipelines for the conveyance of source water, reverse osmosis (RO) concentrate, and advanced purified water between the SC WWTF, advanced water purification facilities, and the SWIP wells. The conveyance pipelines will pass through portions of the cities of Santa Cruz and Capitola, as well as unincorporated areas of Santa Cruz County. **Exhibit 1** shows the Project facilities and locations, the coastal zone, and coastal local government jurisdictions, each of which is described further below.

Treatment Facilities

Secondary effluent from the SC WWTF, which is currently disinfected with ultraviolet (UV) light and discharged to Monterey Bay National Marine Sanctuary (Sanctuary), will be used as the source water for the Project. To achieve 1,500 AFY of purified water production, the District will divert approximately 2.8 million gallons per day (mgd)³ of un-

¹ The draft Groundwater Sustainability Plan for the Basin was presented to the MGA Board of Directors on July 18, 2019. An open public comment period ran from July 18, 2019, to September 19, 2019. The final Plan was approved by unanimous vote by the MGA Board on November 21, 2019. The final Plan will be submitted to the Department of Water Resources (DWR), which will open a 60-day period during which the public can provide comments to DWR on the final Plan.

² Notably, the project has been awarded a State Proposition 1 Groundwater Implementation Grant in the amount of \$50 million. The award was unanimously made at the November 2019 State Water Resources Control Board (State Board) meeting in Sacramento. In addition to the \$50 million grant, the State Board also approved a \$36 million loan through its State Seawater Intrusion Control Loan Program at a 1.3% interest rate.

³ Treated, disinfected effluent is discharged to the Pacific Ocean (Monterey Bay), approximately one mile offshore at a depth of 110 feet below the water's surface (Carollo 2017). The WWTF has an average dry weather (ADW) design capacity of 17 mgd and was designed to treat up to 81 mgd during peak wet weather (i.e., peak hour wet weather [PHWW]). The 2014 average daily flow rate was approximately 8.1 mgd. Average daily flow rates are projected to increase to approximately 8.29 mgd by 2035 (Carollo 2017).

disinfected treated secondary effluent flow for further treatment at a new tertiary treatment facility constructed at the SC WWTF. The tertiary treatment facility will include secondary effluent flow equalization, automatic straining, and membrane filtration. Total production capacity through membrane filtration will be approximately 2.3 mgd. Approximately 0.3 mgd of the tertiary-filtered effluent will be treated using UV disinfection to meet California Code of Regulations (CCR), Title 22 recycled water requirements for unrestricted non-potable reuse. The remaining 2.0 mgd of tertiary effluent from the new tertiary treatment facility at SC WWTF will be disinfected and transported through a new conveyance line to the Chanticleer AWPf site.

The Chanticleer AWPf will include tertiary effluent flow equalization, a reverse osmosis (RO) membrane system, a UV advanced oxidation process (AOP) system, and post-treatment facilities, and will be configured in a way that will allow for future expansion, if warranted. Ancillary facilities including process tanks, transfer pumps, chemical feed/storage facilities, electrical equipment, and cartridge filters will also be part of the Chanticleer AWPf. An RO concentrate pump station and conveyance pipeline will return RO concentrate to the SC WWTF for disposal via the existing ocean outfall. To secure 1,500 AFY of purified water, the RO and UV-AOP systems will be designed for approximately 1.6 mgd production capacity and continuous operation at the design flow rate.

Groundwater Recharge Facilities

The purified water from the Chanticleer AWPf will be conveyed to the Twin Lakes Church, Monterey Avenue, and Willowbrook Lane SWIP well sites, and groundwater replenishment. Well facilities at each site will be located on a concrete pad, will rise to heights of approximately six feet above ground surface, and be collectively capable of replenishing approximately 1.3 mgd (1,500 AFY) of purified water into the groundwater basin. Purified water will be delivered to the SWIP well at low pressure (approximately 15 pounds per square inch [psi]).

Each well site will be equipped with an in-ground equalization basin or tank and a submersible pump for flushing and discharging well backwash water into the equalization facility, a backwash discharge pump to discharge backwash water from the equalization facility to the nearby sanitary sewer, and an air gap to ensure separation between backwash and purified water. Two monitoring wells will be located at or near each SWIP well site.

Conveyance Facilities

The District will install new infrastructure, including pumps and pipelines, for the conveyance of tertiary effluent, RO concentrate, and purified water. The three major conveyance components include:

- (1) A pump station, surge tank, and dedicated pipeline for conveyance of tertiary effluent from the SC WWTF to the Chanticleer AWPf for advanced purification;

(2) A pump station, surge tank, and a dedicated pipeline (co-located with the SC WWTF tertiary effluent line) for conveyance of RO concentrate from the Chanticleer AWPf back to the SC WWTF; and

(3) A purified water pump station, surge tank and dedicated purified water pipelines from the Chanticleer AWPf to SWIP wells and potential connection points for future irrigation customer connections.

The District selected the conveyance pipeline route based upon optimal treatment approach and alignment feasibility (e.g., sufficient space within rights-of-way, avoiding potential conflicts with existing utilities and avoiding environmental impacts). The route generally follows disturbed or existing developed road rights-of-way. The pipeline diameters will be up to 18 inches for the dedicated RO concentrate pipe from the AWPf to the SC WWTF (4.4 miles) and the dedicated purified water pipeline from the AWPf to the SWIP well sites (4.6 miles), and up to 16 inches for the dedicated tertiary pipeline from the SC WWTF to the AWPf (4.4 miles). Pipes will be either plastic or metal.

Project Components within the Coastal Zone

Pure Water Soquel components planned for the coastal zone include the tertiary treatment facility and appurtenances at the SC WWTF; segments of tertiary, RO concentrate, and purified water pipelines passing through multiple coastal zone jurisdictions, and a SWIP well at the Monterey Avenue site, all of which are discussed in more detail below.

SC WWTF Tertiary Treatment System

The District proposes to develop a new tertiary treatment facility within the existing developed SC WWTF site, in the City of Santa Cruz. The tertiary treatment facility will treat secondary effluent from the SC WWTF to tertiary effluent quality for conveyance from the SC WWTF to the offsite AWPf. Primary tertiary treatment facility components will include pump stations; strainer, membrane filtration, and UV disinfection systems; a surge tank; chemical storage and waste containment areas; an electrical substation; and operations and electrical control rooms.

Exhibit 2 shows an overview of potential tertiary treatment facility components and pipeline alignments at the SC WWTF, along with potential locations for siting those components. **Exhibit 3** presents a preliminary site plan showing the project's main tertiary treatment facility components. Tertiary treatment facility components will range in heights from approximately 14 to 32 feet and accommodating these improvements will require modifications to the layout of existing facilities, including partial or full demolition of the existing facilities.

Access to the SC WWTF site is generally restricted to authorized personnel, and views into the site are mostly obscured by intervening topography, fencing, and/or vegetation. **Exhibit 4** shows photographs of project sites within the SC WWTF's restricted access areas, which are not plainly visible from public vantage points, as well as photographs depicting views towards the project areas from the adjacent La BARRANCA and Neary Lagoon parks. As is evident from the photographs, existing SC WWTF structures are

visible from public trails within the Neary Lagoon Park, particularly the 60-foot-tall dewatering tower.

Exhibit 5 shows a conceptual aerial view rendering of the project's tertiary treatment facility after construction. The rendering is intended to represent the potential height and bulk of the tertiary treatment facility, in the context of the developed SC WWTF site. As is evident in the exhibit, the system will be covered by an open sided metal canopy. The canopy will be the tallest project component, and in no case will any project feature be taller than the existing dewatering tower. All project facilities will be of a size and finish consistent with the aesthetic of existing surrounding structures. It is likely that the project facility would be briefly seen in the context of existing facilities by trail users traveling southeast along the Neary Lagoon trail. However, the existing vegetation and berm shown would be retained and would continue to screen most views of the existing and proposed treatment facility components.

Potential pipeline routing within the SC WWTF is also shown in **Exhibit 2**. Project pipelines within the SC WWTF site include a line conveying secondary treated effluent to the tertiary treatment facility, lines conveying tertiary effluent to the AWPf and to onsite storage for City use, a pipeline conveying RO concentrate from the AWPf for disinfection and ocean discharge, and a pipeline conveying waste flows from the tertiary facility to the SC WWTF headworks via storm drain. Note: all surface runoff that flows to SC WWTF storm drains is routed through the SC WWTF headworks for treatment (i.e., same as the raw sewage) prior to being discharged to the ocean via the facility's ocean outfall.

The new tertiary treatment facility will be designed to produce sufficient quantities of tertiary effluent to replace the amount currently produced onsite for the SC WWTF's existing and potential future uses, plus that required to meet the District's groundwater replenishment source water target.

Conveyance Pipelines

The District will install new pipelines within portions of the City of Santa Cruz, City of Capitola, and Santa Cruz County, as well as within a portion of the City of Santa Cruz over which the Coastal Commission retains CDP jurisdiction. With the possible exception of the San Lorenzo River crossing, all pipelines within the coastal zone will be buried below ground surface. In terms of the San Lorenzo River, the District will either install the pipes beneath the San Lorenzo River, or hang the pipes from the Laurel Street Bridge (see below).

The pipelines will measure up to 18 inches in diameter for conveyance of tertiary effluent between the tertiary treatment facility (SC WWTF) and Chanticleer AWPf, and for conveyance of RO concentrate between the Chanticleer AWPf and SC WWTF; and up to 16 inches in diameter for conveyance between the Chanticleer AWPf and SWIP well sites.

The District selected the pipeline routes based upon the optimal treatment approach and alignment feasibility (e.g., sufficient space within rights-of-way, potential conflicts

with existing utilities, environmental impacts). The routes generally follow disturbed or existing developed road rights-of-way. The pipes will be made of high-density polyethylene, polyvinyl chloride, or steel.

San Lorenzo River Crossing Options – Trenchless or Bridge Mounted

The District is evaluating a trenchless crossing of the San Lorenzo River, near the Laurel Street Bridge. Under this option, the District would utilize a micro-tunneling installation technique. This approach will require excavating temporary launching and receiving pits for the trenchless crossing, one pit on either side of the river. A small remotely operated boring machine will be used to bore a tunnel between the launching and receiving pits, and a jack-and-bore method similar to that described previously will be used to push pipes through the tunnel. The pits will each extend to maximum depths of 50 feet below ground surface. Each pit will measure approximately 20 feet wide by 35 feet long. The trenchless construction sites under consideration are shown in **Exhibit 6**; the design-builder will select the specific sites and determine the locations of the launching and receiving pits within those sites. The proposed trenchless crossing sites are urban in character, i.e. the one on the west side of the river is paved, the one on the east side consists of Mimi De Marta Dog Park. Outside of the launching and receiving pits, there will be no significant grading. Trees within and adjacent to the staging areas will be protected and no tree removal is anticipated. Within one of the pits, the District will install a small concrete vault along the pipeline alignment, providing access to the pipe and an air release valve. Upon completion of construction, all excavations within the staging areas will be filled, the vault will be buried, and the sites will be returned to their approximate pre-construction condition.

The District is also considering mounting the conveyance pipelines to the Laurel Street Bridge. Under this option, the District will utilize one or both of the staging areas identified in **Exhibit 6** for the trenchless crossing of the San Lorenzo River. However, no excavation of launching and receiving pits will be required. All trees will be protected; no tree removal is anticipated. During construction, any equipment, material and labor for mounting to the bridge will be restricted to the bridge and staging areas. Under this option, the Project will utilize open-trench construction to install the pipes between the road and top of levee where the pipes will daylight. Between the levees, construction crews will work from the top of the bridge deck, using scaffolding suspended from the bridge or similar methods, to avoid impacts on the San Lorenzo River banks and bed. The bridge-mounted crossing will not require temporary construction equipment or material staging, nor will it require that any temporary or permanent structures be placed within the San Lorenzo River. As with the trenchless crossing, upon completion of construction all equipment will be removed and the staging areas will be returned to their approximate preconstruction condition. The pipeline or pipeline enclosure, if visible from public vantage points, will be finished in a manner consistent with the architectural aesthetic and color of the bridge.

Monterey Avenue Seawater Intrusion Prevention (SWIP) Well

Within the City of Capitola's coastal zone, the District will repurpose its existing, out-of-service production well near the Kennedy Drive-Monterey Avenue intersection into a groundwater SWIP well. The well site is not accessible by the public and is set back

from Monterey Avenue by approximately 130 feet, and is accessible from the east via a private driveway. The property is almost entirely obscured from public view by an approximately 10-foot-tall concrete block wall, which bounds the property to the north and west, and an approximately 8-foot-tall fence that bounds the site to the east and south. **Exhibit 7** shows the well site's eastern fence line and general site location, as viewed from Monterey Avenue.

At one time the approximately 0.08-acre site hosted a fully-equipped groundwater production well facility that pumped directly into the District's distribution system after onsite iron and manganese treatment. Currently, the well site is not equipped with a well pump and motor and has been out of service since December 2005. The well's 10-inch riveted steel casing was retrofitted in 2004 with a polyvinyl chloride liner and pre-packed screen. **Exhibit 7** also shows photographs taken from within the existing fencing, showing several pieces of equipment and structures that remain at the site.

Redevelopment of the well site is expected to result in a net reduction in onsite impervious surface area. In addition, a substantial portion of the site surrounding the proposed development will remain undeveloped. This will allow for continued infiltration of stormwater runoff from SWIP well facilities.

A preliminary site plan is presented in **Exhibit 8**. As the figure shows, the purified water conveyance pipeline will enter the well site from the east, through the alley off of Monterey Avenue. Electrical service will be provided from a nearby overhead power line; however, the current electrical service may need to be improved.

Exhibit 9 shows conceptual renderings of the Monterey Avenue SWIP well site—as viewed from within the existing fencing—before and after construction.

B. Consolidated CDP

Coastal Act Section 30601.3 provides the Commission with the authority to act upon a consolidated permit for proposed projects that require a coastal development permit from both a local government with a certified local coastal program (LCP) and the Commission. This authority is triggered if the applicant, the local government and the Executive Director (or Commission) consent to consolidate the permit, provided that public participation is not substantially impaired by that review consolidation. As discussed above, the various project components pass through the Commission's original jurisdiction (at the San Lorenzo River crossing) as well as the Cities of Santa Cruz and Capitola, and Santa Cruz County, all of which have agreed, with the consent of the Applicant and the Executive Director, to consolidate permit action consistent with Coastal Act Section 30601.3. Moreover, the hearing will be located in Scotts Valley, just a few miles away from the proposed project, so public participation should not be substantially impaired. The standard of review for such consolidated permits is the Coastal Act, with LCP policies used for guidance.

C. Water Resources and Water Quality

Applicable Policies

The Coastal Act recognizes the need for water supply projects (see e.g. Section 30236), but also acknowledges that such projects can, by their very nature, result in impacts to important coastal resources. Specifically, the Coastal Act also protects marine and freshwater resources, including in terms of ensuring the protection of coastal water quality, encouraging wastewater reclamation and recycled water, and minimizing alterations of streams and riparian vegetation. Coastal Act Sections 30230 and 30231 specifically state:

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.

Section 30240 of the Coastal Act governs development in environmentally sensitive habitat areas:

(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.

With respect to wastewater treatment facilities, the Coastal Act discusses the relationship between the Commission and the State Water Resources Control Board (State Water Board), including in terms of water quality regulations. Coastal Act Chapter 5 identifies the Legislature's intent that the Coastal Act not "increase, decrease, duplicate or supersede the authority of any [then] existing state agency," while requiring all state agencies to "carry out their duties and responsibilities in conformity with [the

Coastal Act].” Coastal Act Section 30412 includes guidance on implementation of the Coastal Act in relation to the programs of the State Water Board and the Regional Boards. It states in relevant part:

30412 (b). The State Water Resources Control Board and the California regional water quality control boards are the state agencies with primary responsibility for the coordination and control of water quality. The State Water Resources Control Board has primary responsibility for the administration of water rights pursuant to applicable law. The commission shall assure that proposed development and local coastal programs shall not frustrate this section. The commission shall not, except as provided in subdivision (c), modify, adopt conditions, or take any action in conflict with any determination by the State Water Resources Control Board or any California regional water quality control board in matters relating to water quality or the administration of water rights.

Except as provided in this section, nothing herein shall be interpreted in any way either as prohibiting or limiting the commission, local government, or port governing body from exercising the regulatory controls over development pursuant to this division in a manner necessary to carry out this division.

Considering all of the above-referenced Coastal Act sections together and applied to this proposed project, the proposed water recycling facility (WRF) and its associated components must be: (1) sited and designed so as to ensure protection of streams, riparian areas, and groundwater, including both during and post-construction; and (2) operationally designed to treat wastewater in a manner protective of water quality and to allow for wastewater reclamation.

Proposed Project and Analysis

As discussed in detail above, the proposed project includes a series of components, including a new tertiary-treated wastewater treatment facility, new pipelines and pump stations, new recycled water injection wells, and modified effluent streams. The intent is to recycle wastewater otherwise intended for ocean discharge and improve groundwater health by injecting clean recycled water underground in various locations in the lower aquifer for groundwater replenishment and improved aquifer health, as well as to augment water supply in a manner that reuses existing scarce water resources. At this broad level, this current proposal meets numerous Coastal Act water resources objectives.

That said, a project of this magnitude and complexity is not without potential issues and concerns of its own with respect to water supply and water quality protection. Furthermore, some of the proposed project’s specific parameters need additional refinement and specificity to ensure adequate protection of water quality as a result of undertaking the proposed project. These issues are discussed below.

Marine and Biological Resources

Most elements of the proposed project will occur within existing developed areas, with the exception of the creek and river crossings. That said, the project’s environmental

impact report (EIR) considers whether project construction and operation could have a substantial adverse effect on a species identified as a candidate for sensitive or special-status in local or regional plans, policies, or regulations, or by state or federal resource management agencies. Specifically, the EIR explains that project construction near waterways could result in erosion or release of chemicals that could adversely affect special-status fish and amphibians. The EIR also notes that project construction could disrupt breeding and foraging habitat for nesting birds, raptors and bats, and disrupt overwintering habitat for monarch butterflies.

The project's mandatory compliance with the State Water Board's Construction General Permit and Stormwater Pollution Prevention Plan requirements are identified as reducing the noted potential effects on waterways and dependent species. To address other potential effects on special-status wildlife and habitats that could occur in the Project area, the EIR identifies several mitigation measures to address these impacts. The EIR ultimately concludes that, with implementation of the above-described measures, the project's impact on special status species and habitats is reduced to a less-than-significant level.

The EIR also evaluates the potential for the project to adversely impact a riparian habitat or other sensitive natural community, including environmentally sensitive habitat areas (ESHAs). Riparian habitat occurs outside of the project corridor at pipeline stream crossings, and along the pipeline alignment along Soquel Avenue (between Carl Avenue and Bostwick Lane). There is no riparian habitat within the portion of the project footprint proposed within the coastal zone. Native stands of Monterey pine (a type of ESHA) may occur within the coastal zone along Kennedy Drive in Capitola. If the pipeline were installed north of the above-noted segment of Soquel Avenue or east of the above-noted segment of Wharf Road, project construction could temporarily impact the riparian habitat. Similarly, if the pipeline installation along Kennedy Drive were to be installed outside of the paved road right-of-way, the project could adversely affect native stands of Monterey pine, if present. The EIR explains that implementation of various mitigation measures would reduce impacts on sensitive natural communities by providing biological monitoring near sensitive areas, providing environmental training to construction personnel, providing general protection measures, minimizing disturbance to riparian habitat in the project area, and avoiding and protecting native stands of Monterey pines. Again, the EIR concludes that, with implementation of the above-described measures, the project's impact on riparian habitats and sensitive natural communities is reduced to a less-than-significant level.

With respect to construction, the project spans a wide geographic scope and includes multiple discrete components, including the SC WWTF, pipeline infrastructure that would be placed predominantly under existing roads, and two new injection wells. Construction related to all of these project components could have impacts on water quality, both temporary (e.g., through siltation and runoff into creeks and waterways from ground disturbance/grading) and permanent (e.g., through changes in site geography/topography and surface runoff flow), and could have ocean impacts.

The District proposes to address such impacts largely through avoidance measures. Specifically, the District proposes to construct pipelines using trenchless methods as much as possible to avoid direct impacts to other wetlands and streams. That said, water quality impacts could still occur, and the area's hydrologic connections into the Sanctuary (in the Pacific Ocean) demand the highest level of care and protection given its extremely sensitive status. Thus, the project is conditioned to include a construction plan that includes best management practices (BMPs) to protect water quality and marine resources during construction, including minimizing grading as much as possible, maintaining good construction site housekeeping controls and procedures, the use of appropriate erosion and sediment controls, the use of trenchless construction methods or other similar construction techniques that avoid water quality impacts as much as possible, and ocean-work-specific BMPs such as prohibitions on discharge into ocean waters (see **Special Conditions 1 and 2**). Moreover, **Special Condition 3** requires the District to adhere to the Mitigation Monitoring and Reporting Program (**Exhibit 10**), which includes mitigation measures to protect hydrological resources (e.g. construction personnel training, pipeline leak contingency measures, etc.) Thus, as conditioned, construction-related water quality and natural resource impacts will be avoided and/or mitigated in accordance with the Coastal Act.

Apart from construction-related impacts, there are three components of the project that have the potential to affect water quality: (1) the diversion of some of the effluent from the SC WWTF for tertiary treatment and advanced water purification, (2) the injection of the resulting water into aquifers as part of the SWIP program, and (3) the creation of a new brine stream as a byproduct of the first component. The first component only improves the quality of the water, so it presents no issues with respect to the Coastal Act's water quality provisions. However, water quality concerns have been raised with respect to the other two project components.⁴

The injection of the tertiary treated and purified water into the wells is directly regulated by the Central Coast Regional Water Quality Control Board (Regional Board), which has

⁴ Specifically, issues have been raised regarding water quality concerns related to both the proposed effluent discharge (i.e. the brine discharge that will run back to the SC WWTF site from the Chanticleer Advanced Water Purification Facility following treatment, ultimately for ocean disposal), as well as the treated water being injected into the wells (see **Exhibit 11**). In that regard, the District has prepared an informational supplement to respond to these concerns (see **Exhibit 12**). That document includes a lengthy discussion of these issues but, in short, with respect to the residual stream being routed from the purification facility at Chanticleer back to the wastewater treatment plant for ocean discharge, because the project uses specialized technologies with reverse osmosis, the purified water will be extremely low in salts, nutrients, and other constituents. Moreover, the District has prepared a Draft Anti-Degradation Study, and a final Anti-Degradation Study is pending and will be submitted as part of the Project permitting including with the Regional Board. With regard to groundwater resources, a water quality monitoring plan is currently being prepared as part of the Title 22 Engineering Report that would monitor water quality within the groundwater aquifer as well as throughout the AWPF. Screening of CECs in the source water to the AWPF is being conducted as part of the Pure Water Soquel Program and once completed will be addressed in the AWPF design and summarized in the Title 22 Engineering Report. **Special Condition 8** requires the District to obtain other agency approvals, including from the Regional and State Water Boards, prior to construction of the project.

established specific, numeric water quality standards for the water that will be injected. Although the Commission has independent authority to ensure that development does not impair marine resources (30230) or coastal water quality (30231), the injection wells are not part of the marine environment, and the Regional Board standards for the injection wells take into account the protections at the heart of section 30231. The Coastal Act also prohibits the Commission from taking action “in conflict with any determination by the [water boards] in matters relating to water quality” (30412(b)), or setting standards “that duplicate regulatory controls established by [any other] state agency” (30401). Thus, the Commission finds no water quality-related basis on which to object to the injection well component of the project. As for the brine stream, it will flow directly back into the WWTF, where it will be mixed in with the existing waste stream before the final product will be released as effluent from that treatment plant, which is also subject to detailed standards set by the Regional Board.⁵

In sum, the Commission does not find the Project to be inconsistent with Sections 30230 or 30231.

Recycled Water Program

As discussed above in “Project Background,” the District relies solely on groundwater sources for its water supply and its groundwater basin is designated by the State of California as “Critically Overdrafted” (due to historical over-pumping and extraction of groundwater exceeding what could naturally be replenished by rainfall) and has active seawater intrusion occurring. Seawater intrusion has been detected onshore in some of the coastal monitoring wells in the basin and along the entire coastline of the District’s service area, which has been confirmed by water quality sampling and geophysical mapping.

The project will reduce ocean discharges and improve groundwater quality and aquifer health, prevent seawater intrusion, and allow for a new, clean, local, and resilient water source. Because of these issues, and because clean, treated water is too precious a resource in California for it to continue to be disposed of in the ocean (as is the case now), and because the Coastal Act encourages water reclamation and the reduction of ocean discharge, the project can be found consistent with the policies cited above. Thus, while final engineering still needed to be performed, including in terms of the

⁵ Concerns have also been raised regarding the District’s lack of review of alternatives (see **Exhibit 11**). Again, the District has prepared a detailed response to these claims (see **Exhibit 12**). In short, the EIR made a detailed analysis of three project alternatives; the no project alternative, the reduced project alternative with treated surface water purchase, and a seawater desalinization project alternative. The EIR also considered but rejected six other alternatives. Ultimately, the EIR concluded that, other than the no project alternative, the project as proposed was the environmentally superior alternative. As discussed in Section G below, the Commission finds that 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).

including in terms of approvals from the State Water Board's Division of Drinking Water for final regulatory compliance, the analysis the District has undertaken has shown that the project can bring clean, tertiary-treated WRF water by pipeline to groundwater injection well sites in the District for groundwater replenishment, and ultimately for residential, commercial, and industrial use.

Special Condition 4 is included to codify and provide performance standards for the District's proposed recycled water program, including to ensure that it is undertaken in a manner that best protects coastal resources. This condition is similar to that which the Commission required for the Morro Bay and Los Osos wastewater projects (i.e., requiring maximum recycled water in a manner that meets applicable drinking water quality requirements, and best protects groundwater aquifers, streams, and their habitats, including in the long term and taking into account potential sea level rise and resultant additional seawater intrusion). As proposed and as conditioned, the project's recycled water components offer an exciting opportunity for the District to materially improve groundwater/surface water quality and aquifer health for both human use and for natural resources, and will give the District a much needed water supply security, all in conformance with the Coastal Act.

D. Coastal Hazards

Coastal Act Section 30235 addresses the use of shoreline protective devices. It states:

Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fish kills should be phased out or upgraded where feasible.

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

New development shall do all of the following:

- (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

Coastal Act Section 30235 acknowledges that seawalls, revetments, cliff retaining walls, groins and other such structural or “hard” methods designed to forestall coastal erosion also alter natural shoreline processes. Accordingly, with the exception of coastal-dependent uses, Section 30235 only requires the approval of shoreline protective works if they are required to protect existing structures or public beaches in danger from erosion. The Coastal Act limits this mandate because shoreline structures can have a variety of negative impacts on coastal resources, including adverse effects on sand supply, public access, coastal views, natural landforms, and overall shoreline beach dynamics on and off site, ultimately resulting in the loss of beaches.

The project only has two elements that involve long-term physical structures that need to be considered in light of this policy – the tertiary treatment facility and the above-ground appurtenances. Both will be constructed within the SC WWTF site, at or slightly above the existing site elevation. The SC WWTF is in a low-lying area that could be subject to periodic or regular coastal flooding during the Project’s lifetime, depending upon rate of sea-level rise.

Flood Risk without Sea Level Rise

According to the Federal Emergency Management Agency (FEMA), the SC WWTF site is located within the San Lorenzo River floodplain, in an area designated Zone A99.

FEMA defines Zone A99 as areas subject to inundation by the one-percent-annual-chance flood event, but that will ultimately be protected upon completion of an under-construction federal flood protection system.

No base flood elevation is identified, but the site's 100-year base flood elevation was interpolated to be approximately 12.9 feet North American Vertical Datum of 1988 (NAVD; Brown & Caldwell, 2019). **Exhibit 13** shows the FEMA flood map and the extent of the Zone A99 at the SC WWTF. The existing SC WWTF is protected by a system of flood control measures consisting of pile-supported walls, a bulkhead at the two-leaf gate entrance by Neary Lagoon, and on-site storm drains and influent pumps that drain the site, supported by standby generators. Photographs of the site's flood protection system elements are presented in **Exhibit 14**. The gate entrance has notches and rack systems that allows the placement of stop-logs to protect the site from flooding. The system is designed to protect the site from flooding up to 15.5 feet above sea elevation NAVD, or roughly 2.6 feet above base flood elevation.

Flood Risk with Sea Level Rise

Regional mapping of sea-level-rise related coastal flooding hazards show portions of the SC WWTF could potentially be affected by coastal flooding with sea-level rise of between 5 and 6 feet. The District considered two such mapping efforts; the first is from the National Oceanic and Atmospheric Administration's (NOAA) Digital Coast Sea Level Rise Viewer, which shows portions of the SC WWTF site subject to increase flooding with 6 feet of sea-level rise (NOAA, 2012); and a second from ESA PWA's (i.e. the Applicant's technical consultant) Monterey Bay Sea Level Rise Vulnerability—Technical Methods Report.

The NOAA Sea Level Rise Viewer presents the extent of inundation relative to the mean higher high water datum. The process used to map inundation areas is described by NOAA as a modified bathtub approach or linear superposition model. The mapping does not consider natural processes, such as erosion, subsidence, or future construction. And while the tool does consider hydro-connectivity (i.e., connection to the ocean), it does not incorporate detailed pipe network or engineering-grade hydrologic analyses. The model indicates the site is low elevation and hydrologically disconnected from the ocean, but could still be affected by sea-level rise. The viewer does not show ocean connectivity until sea level rises to 10 feet.

ESA PWA's mapping employs a more refined modeling approach, factoring additional regional shoreline characteristics, such as wave runup, overtopping, and erosion. This mapping is also available in an online viewer that is hosted by the Nature Conservancy. The ESA PWA vulnerability analysis examines coastal hazards over nine sea-level rise scenarios. The scenarios are based upon National Research Council (2012) projections of sea-level rise at years 2030, 2060, and 2100, under low, medium, and high sea-level increases—the most extreme being 62.6 inches (5.2 feet) of sea-level rise by 2100. With respect to coastal flooding, the study identifies areas that (1) could be subject to flooding by high tides; and (2) areas that could be subject to flooding during large coastal storms. Similar to the NOAA Sea Level Rise Viewer, the study identifies areas directly connected to the ocean, and other potentially affected low-lying areas where

connectivity is uncertain. The areas identified as low-lying with uncertain hydraulic connectivity are expected to have increased groundwater elevations with sea-level rise.

The ESA PWA study identifies “Rising Tide Inundation Zones” areas that could become flooded once per month on average by high tides under future sea-level rise (not including storm events).

In 2018, the Ocean Protection Council (OPC) published its updated State of California Sea-Level Rise Guidance, which the Coastal Commission subsequently incorporated into its Sea Level Rise Policy Guidance (2018). According to the OPC report’s sea-level rise projection tables (Table 16. Projected Sea-Level Rise (in feet) for Monterey), there is a 0.05% probability (1-in-200 chance; Medium-High Risk Aversion) that 5.5 feet of sea-level rise will occur by 2090. The table further indicates that under the H++ scenario (Extreme Risk Aversion), this amount of sea-level rise could be reached by 2070. It is important to note that the NOAA and ESA PWA models do not consider upland fluvial (river) flooding and local rain/runoff drainage at this location, both of which play a large part in coastal flooding. Ultimately, flooding of low-lying areas adjacent to coastal lagoons is a combined product of both runoff and coastal conditions, making it difficult to ascribe a precise level of flooding for a specific time in the future. Nevertheless, the results of these studies are useful because aside from rare events with coincident high runoff and high tides, it is important to understand when flooding from predictable coastal levels alone (high tides and wave runup events) would become more frequent in the future.

Adaptation Strategy

As noted previously, the tertiary treatment facility’s estimated design life is 50 years. While the SC WWTF site is located in a designated FEMA flood Zone A99, the existing flood protection system is sufficient to protect the project from reasonably foreseeable future flood events (i.e., up to roughly 2.6 feet above base flood elevation). However, as also discussed, under some modeled conditions with future sea-level rise, site inundation could occur. The existing coastal flood hazard mapping indicates site inundation under the H++ scenario (Extreme Risk Aversion) could occur as early as 2070. However, as noted previously, this mapping does not consider upland fluvial (river) flooding and local rain/runoff drainage. With consideration for these factors, in combination with the H++ scenario, it is possible that the SC WWTF could experience sea-level rise related coastal flood hazards sooner than 2070.

Importantly, if the SC WWTF site were to experience frequent or persistent flooding, the District has acknowledged that it could relocate tertiary treatment to the Chanticleer AWPf, and the project would remain viable. In fact, the District evaluated the potential environmental effects of developing a full AWPf at the Chanticleer site in its Project Environmental Impact Report (EIR; ESA, 2018). The EIR identifies a full AWPf at the Chanticleer site as a potential project configuration and evaluates it as such— not as an alternative to the project. Under that option, the EIR describes the full AWPf as requiring approximately 65,000 square feet (1.5 acres) of the 83,700-square-foot (1.9 acres) site. The only process components required at the SC WWTF under this option

are new secondary effluent lift and pump stations, and a new secondary effluent flow equalization tank.

That said, the Tertiary Treatment facility is being proposed at the SC WWTF site, and at that site it is subject to coastal hazards risk. Thus, in order to ensure that the proposed development complies with the Coastal Act requirements identified above, the approval is conditioned to require the District to assume all of the risk for developing in an area of coastal hazards, and to remove development that becomes threatened by such hazards, based on actual circumstances over time. In this way, the project meets the intent of the Coastal Act, and won't be allowed armoring in the future. See **Special Conditions 5 and 6**.

It has been the Commission's experience in evaluating proposed developments in areas subject to hazards that despite recognizing and assuming the hazard risks for shoreline development, that development has continued to occur despite periodic episodes of heavy storm damage and other such occurrences. Development in such dynamic environments is susceptible to damage due to such long-term and episodic processes. Past occurrences statewide have resulted in public costs (through low interest loans, grants, subsidies, direct assistance, etc.) in the tens and hundreds of millions of dollars. As a means of allowing continued development in areas subject to these hazards while avoiding placing the economic burden for damages onto the people of the State of California, applicants are regularly required to acknowledge site hazards and agree to waive any claims of liability on the part of the Commission for allowing the development to proceed. Accordingly, this approval is conditioned for the Applicant to assume all risks for developing at this location (see **Special Condition 5**).

In summary, the selected treatment configuration (Chanticleer having the RO-UV-AOP treatment components and the membrane tertiary treatment components at SC WWTF) will leave sufficient space at the Chanticleer AWP site for future expansion. In the event flood conditions at the SC WWTF necessitate relocation of the tertiary treatment facility, the District would be able to accommodate the relocation to the Chanticleer site, which is outside the Coastal Zone, without substantial issue regarding space, feasibility, or environmental review, consistent with Coastal Act policies requiring that new development be sited away from coastal hazard areas.

E. Visual Resources

Applicable Policy

Coastal Act Section 30251, cited below, protects the aesthetic and visual quality of coastal areas. It states:

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

those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

Proposed Project and Analysis

With respect to the proposed project, as described previously, the Coastal Act is protective of scenic and visual qualities of coastal areas, and requires that new development be sited and designed to protect public views. In this case, the proposed project will be developed in an urban environment and within existing facilities. Still, given the fact that the project plans have not yet been finalized, **Special Condition 1** is included to ensure that the proposed project components are sited and designed in a manner so as to conceal its visibility from the public viewshed as much as possible, to ensure that the development minimizes grading and landform alteration, to provide for vegetative screening, to minimize lighting, and to place utilities underground. Therefore, as proposed and as conditioned, the project should have minimal impacts on visual resources. Overall, as conditioned, the project will not adversely impact, visual resources over baseline conditions. Therefore, as conditioned, the proposed project is consistent with Coastal Act Section 30251.

F. Other

Public Notice and Traffic

Some members of the public have voiced concern regarding construction-related traffic impacts, including in terms of public safety and commercial activity as roads would need to be closed off to traffic for pipeline construction. Such closures may adversely impact egress in emergency situations. To address such concerns, **Special Condition 2(d)** is included to require the District to prepare a traffic management plan to ensure that construction activities have the least impact on road closures and emergency access as possible. In addition, **Special Condition 7** requires that residents located near the proposed injection well site on Monterey Avenue be provided with additional notice of that project element. The District is in agreement with these Conditions.

Other Authorizations

The project requires authorizations from the Regional Water Quality Control Board, the California State Lands Commission, the U.S. Army Corps of Engineers, and potentially other agencies, and this approval is conditioned for evidence of those authorizations. The City is also required to inform the Executive Director of any changes to the project required by any other such authorizations, and any such changes must be incorporated through a CDP amendment, unless the Executive Director determines that no amendment is legally required (**Special Condition 8**).

Minor Changes

This CDP authorizes the project as proposed by the District except as modified by the special conditions. Any project changes, including with respect to any Executive Director-approved plans required pursuant to the special conditions, shall require an

amendment to this CDP, unless the Executive Director determines that no amendment is legally necessary (**Special Condition 9**).

Future Permitting

The Commission fully expects to review any future proposed development at and/or directly related to this project and/or project area, including to ensure continued compliance with the terms and conditions of this CDP through future proposals. Thus, any and all future proposed development at and/or directly related to this project, this project area, and/or this CDP shall require a new CDP or a CDP amendment that is processed through the Coastal Commission, unless the Executive Director determines a CDP or CDP amendment is not legally required (see **Special Condition 10**).

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 Applicants. Therefore, consistent with Section 30620(c), the Commission imposes requiring reimbursement for any costs and attorneys' fees that the Commission incurs in connection with the defense of any action brought by a party other than the District challenging the approval or issuance of this CDP (**Special Condition 11.**)

G. California Environmental Quality Act

Section 13096 of the Commission's administrative regulations requires Commission approval of coastal development permit applications to be supported by a finding showing the application, as modified by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act ("CEQA"). Section 21080.5(d)(2)(A) of CEQA prohibits approval of a proposed development if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant impacts that the activity may have on the environment.

The Soquel Creek Water District, acting as the CEQA lead agency, adopted a Final Environmental Impact Report and Mitigation Monitoring and Reporting Program in December of 2018. The Coastal Commission's review and analysis of land use proposals has been certified by the Secretary of Resources as being the functional equivalent of environmental review under CEQA. The preceding coastal development permit findings discuss the relevant coastal resource issues with the proposal, and the permit conditions identify appropriate modifications to avoid and/or lessen any potential for adverse impacts to said resources.

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

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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

- Pure Water Soquel Environmental Impact Report

APPENDIX B – STAFF CONTACT WITH AGENCIES, ORGANIZATIONS, AND OTHER INTERESTED PERSONS

- Soquel Creek Water District
- City of Santa Cruz
- City of Capitola
- Santa Cruz County
- Becky Steinbruner