PURE WATER SOQUEL: GROUNDWATER REPLENISHMENT AND SEAWATER INTRUSION PREVENTION PROJECT

Final EIR (Responses to Comments)
SCH No. 2016112045

Prepared for
Soquel Creek Water District

December 2018
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### 4. EIR Text Revisions

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CHAPTER 1
Introduction

1.1 Purpose of the Responses to Comments Document

This Responses to Comments document completes the Final Environmental Impact Report (Final EIR) analyzing potential environmental effects associated with the proposed Pure Water Soquel: Groundwater Replenishment and Seawater Intrusion Prevention Project (Project). The Project would supplement natural recharge of the Santa Cruz Mid-County Groundwater Basin with purified water. The purified water would be produced from existing secondary effluent from the Santa Cruz Wastewater Treatment Facility (SC WWTF) and delivered to treatment facilities located in either the City of Santa Cruz or unincorporated Santa Cruz County. The proposed project components include: water treatment facilities; pump stations and pipelines for the conveyance of source water, purified water, and brine; and recharge and monitoring wells.

The Project would help increase the sustainability of the District’s groundwater sources, upon which it currently relies for 100-percent of its water supply, reduce the degree of overdraft conditions in the local groundwater basin, protect against further seawater intrusion in the groundwater basin, and promote beneficial reuse by reducing discharge of treated wastewater to the Monterey Bay National Marine Sanctuary. The Project has been designed specifically to help the District meet its obligations under the Sustainable Groundwater Management Act (SGMA) to reduce net groundwater withdrawals to levels that would facilitate achievement of sustainable groundwater levels by 2040, and in a manner consistent with its Community Water Plan goals. Accordingly, it would provide sufficient treatment capacity to offset the groundwater supply impacts attributable to District pumping.

The Soquel Creek Water District (District), a County Water District formed under Section 30000 et. seq. of the California Water Code providing potable drinking water and groundwater resource management in a portion of Santa Cruz County, California, is the Lead Agency responsible for administering the environmental review of the Project under the California Environmental Quality Act (CEQA). The District published a Draft EIR on the proposed Project on June 29, 2018. The public comment period ended on August 13, 2018. Thus, the Draft EIR review met the CEQA 45-day minimum public review period (CEQA Guidelines §15105). This Responses to Comments document provides written responses to comments received during the public review period.

The Draft EIR together with this Responses to Comments document constitutes the Final EIR for the Project in fulfillment of CEQA requirements as consistent with CEQA Guidelines.
Section 15132. This Responses to Comments document contains the following: (1) a list of persons, organizations, and public agencies commenting on the Draft EIR; (2) copies of comments received on the Draft EIR; (3) the District’s responses to those comments; and (4) revisions to the Draft EIR to clarify or correct information. See Section 1.3, below, for a description of the overall contents and organization of the Responses to Comments document.

The EIR has been prepared pursuant to the requirements of CEQA (Pub. Res. Code §21000 et seq.); the CEQA Guidelines (14 Cal. Code Regs. §§15000 to 15387). The EIR is an informational document for use by (1) governmental agencies (in addition to the District) and the public to aid in the planning and decision-making process by disclosing the physical environmental effects of the Project and identifying possible ways of reducing or avoiding the potentially significant impacts; and (2) the District’s Board of Directors prior to its decision to approve, disapprove, or modify the proposed Project. If the District Board approves the proposed project, it would be required to adopt CEQA findings and a mitigation monitoring and reporting program (MMRP) to ensure that mitigation measures identified in the Final EIR are implemented. See Section 1.2, below, for further description of the environmental review process.

In accordance with CEQA, the responses to comments address environmental issues raised in public comments that concern the adequacy or accuracy of the EIR. These issues include physical impacts or changes attributable to the project rather than any social or financial implications of the project. Therefore, this document provides limited responses to comments received during the public review period that do not relate to the adequacy or accuracy of the EIR.

1.2 Environmental Review Process

1.2.1 Notice of Preparation and Public Scoping

As described in the EIR, the District prepared an Initial Study (IS) and Notice of Preparation of an EIR in November 2016. The District circulated the IS and NOP to local, state, and federal agencies, and to other interested parties for review between November 2016 and January 2017. In response to a Project modification, the District circulated a revised NOP for review between June and July 2017. The initial scoping period ran from November 16, 2016 to January 5, 2017, including a 15-day extension in response to public request. The second scoping period ran from June 22, 2017 to July 22, 2017. The District held three public meetings during the scoping periods; two on December 7, 2016 and one on July 12, 2017. During the scoping periods the District accepted comments, including oral comments during the scoping meetings, from agencies and interested parties identifying environmental issues that should be addressed in the EIR (see Appendix A in the EIR).

1.2.2 Draft EIR Public Review

The Draft EIR for the Project was published on June 29, 2018 and circulated to federal, state, and local agencies and to interested organizations and individuals for a public review period that ended on August 13, 2018. The District made the Draft EIR available for download on its Project website,
the address for which was included in the public notice of Draft EIR availability. Paper copies of the Draft EIR were made available for public review at the following locations:

- Soquel Creek Water District (5180 Soquel Drive, Soquel)
- Downtown Santa Cruz Public Library (224 Church Street, Santa Cruz)
- Branciforte Library (230 Gault Street, Santa Cruz)
- Garfield Park Branch Library (705 Woodrow Avenue, Santa Cruz)
- Live Oak Library (2380 Portola Drive, Santa Cruz)
- Porter Memorial Library (3050 Porter Street, Soquel)
- Aptos Library (7695 Soquel Drive, Aptos)
- La Selva Beach Library (316 Estrella Avenue, La Selva Beach)

On June 29, 2018, the District distributed notices of availability of the Draft EIR, via: (1) the District’s public website; (2) email to more than 300 community member and stakeholder addresses; (3) email (electronic press release) to 100 email addresses, (4) regular mail (postcard) to more than 7,400 owners and occupants of property within 300 feet of any potential project component site; (5) posting of signs at potential Project sites; and (6) publishing a legal notice and display advertisement in a newspaper of general circulation in the Project area (Santa Cruz Sentinel). Additional newspaper display ads providing notice of Draft EIR availability were published in the Soquel Times on June 25, Santa Cruz Sentinel Coastlines on July 1, Aptos Times on July 18, and Santa Cruz Sentinel again on July 24. During the 46-day public review period, the District hosted a public meeting to provide an opportunity for the public and regulatory agencies to learn about the Project and be informed about how to submit comments on the adequacy and accuracy of the Draft EIR. The public meeting was held on July 31 at the Twin Lakes Church, 2701 Cabrillo College Dr., Aptos; eight members of the public presented oral comments during the meeting. During the Draft EIR public review period, the District received five comment letters from public agencies, seven from non-governmental organizations, and 95 from individual members of the public.

1.2.3 Responses to Comments and Final EIR

The District staff distributed this Responses to Comments document for review to the District’s Board of Directors, and notified individuals and organizations that commented on the Draft EIR and well as other interested parties that the Response to Comments document was available for review on the District’s website and at the District Headquarters. Following completion of the Final EIR, the District Board will consider certification of the Final EIR, and will decide whether to approve or deny the Project. CEQA also requires the adoption of findings prior to project approval in cases where the certified EIR identifies significant environmental effects (CEQA Guidelines §§15091 and 15092) and a MMRP (§15097). The findings must include a statement of overriding considerations for any impact identified in the EIR as significant adverse impacts that cannot be mitigated to less-than-significant levels (CEQA Guidelines §15093[b]). The District is required to adopt CEQA findings and the MMRP prior to approving the proposed project.
1.3 Agency-Initiated Project Description Revisions

After publication of the Draft EIR, District staff determined minor revisions to the Project description and updates to the impact discussions were warranted. These revisions include adjustments to the layout of the proposed Twin Lakes Church Recharge Well Site, description of aquifer testing for well site suitability, as well as clarifications regarding generator use at Project sites during construction. The EIR text modifications resulting from these changes are shown in Chapter 4, EIR Text Revisions. As presented therein, sections of the EIR concerning biological resources, air quality, hydrology resources – groundwater, energy conservation, greenhouse gas emissions, and noise have also been updated accordingly. None of these changes substantially affects the impact analysis, nor do they result in any determinations of new or substantially greater significant impacts.

1.4 Document Organization

This Responses to Comments document consists of four chapters, plus supplemental attachments, as follows:

- **Chapter 1, Introduction.** This chapter summarizes the purpose of the Responses to Comment and the ongoing and environmental review process to date.

- **Chapter 2, List of Persons Commenting.** This chapter summarizes the state and local agencies, as well as the non-governmental organizations and individuals that commented on the Draft EIR.

- **Chapter 3, Comments and Responses.** This chapter presents the comment letters received during the Draft EIR comment period and responses to those comments.

- **Chapter 4, Draft EIR Revisions.** This chapter displays the changes made to the text of the Draft EIR in response to agency-initiated project-description revisions, comments on the Draft EIR, and included to clarify the Draft EIR text.
CHAPTER 2
List of Persons Commenting

This Responses to Comments document is organized to respond to all oral and written comments received on the Draft Environmental Impact Report (EIR). This section lists all organizations and individuals that submitted comments on the Draft EIR. Commenters are generally grouped according to whether they commented as individuals or represented a public agency or non-governmental organization.

2.1 State Agencies

- Monterey Bay Air Resources District; Hanna Muegge, Air Quality Planner (August 7, 2018) (Comment Letter S-1)

2.2 Local Agencies

- City of Santa Cruz, Public Works Department; Anne Hogan, P.E., Wastewater System Manager (August 13, 2018) (Comment Letter L-1)
- City of Santa Cruz, Water Department; Rosemary Menard, Water Director (August 13, 2018) (Comment Letter L-2)
- County of Santa Cruz, Department of Public Works, Sanitation District; Kent Edler, P.E. (August 13, 2018) (Comment Letter L-3)
- County of Santa Cruz, Health Services Agency, Environmental Health; John Ricker, Water Resources Division Director (August 13, 2018) (Comment Letter L-4)

2.3 Organizations

- Santa Cruz County Business Council; Robert Singleton, Executive Director (August 14, 2018) (Comment Letter O-1)
- Santa Cruz Desal Alternatives; Rick Longinotti, Co-chair (August 5, 2018) (Comment Letter O-2)
- Santa Cruz Desal Alternatives; Rick Longinotti, Co-chair (August 9, 2018) (Comment Letter O-3)
- Sierra Club, Santa Cruz County Group of the Ventana Chapter; Erica Stanojevic, Conservation Committee Chair (August 13, 2018) (Comment Letter O-4)
2. List of Persons Commenting

- Surfrider Foundation, Santa Cruz Chapter; Sarah Mansergh, Water Program Manager/Treasurer (August 13, 2018) (Comment Letter O-5)
- Water for Santa Cruz County; Scott McGilvray (August 13, 2018) (Comment Letter O-6)
- Water for Santa Cruz County; Scott McGilvray (August 14, 2018) (Comment Letter O-7)

2.4 Individuals

- Lee and Meryl Abramson (August 6, 2018) (Comment Letter I-1)
- John Bailey (August 2, 2018) (Comment Letter I-2)
- John Behrens (August 13, 2018) (Comment Letter I-3)
- Karen and Steve Belick (August 11, 2018) (Comment Letter I-4)
- Desiree Carter (August 2, 2018) (Comment Letter I-5)
- Barton T. Coddington (July 2, 2018) (Comment Letter I-6)
- Bruce Daniels (August 13, 2018) (Comment Letter I-7)
- Douglas Deitch (August 8, 2018 PM) (Comment Letter I-8)
- Douglas Deitch (August 13, 2018; 1:52 PM) (Comment Letter I-9)
- Douglas Deitch (August 13, 2018; 2:05 PM) (Comment Letter I-10)
- Douglas Deitch (August 13, 2018; 2:34 PM) (Comment Letter I-11)
- Douglas Deitch (August 13, 2018; 2:36 PM) (Comment Letter I-12)
- Douglas Deitch (August 13, 2018; 2:38 PM) (Comment Letter I-13)
- Douglas Deitch (August 13, 2018; 3:24 PM) (Comment Letter I-14)
- Douglas Deitch (August 13, 2018; 3:44 PM) (Comment Letter I-15)
- Douglas Deitch (August 13, 2018; 5:30 PM) (Comment Letter I-16)
- Mrs. N. diCecco (July 18, 2018) (Comment Letter I-17)
- Ellen Farmer (August 11, 2018) (Comment Letter I-18)
- Ken and Marilyn Files (August 12, 2018) (Comment Letter I-19)
- Paulette Forest (August 1, 2018) (Comment Letter I-20)
- Maria Cecilia Freeman (August 22, 2018) (Comment Letter I-21)
- Gail (no last name provided) (August 9, 2018) (Comment Letter I-22)
- Marilyn Garrett (July 27, 2018) (Comment Letter I-23)
- Cristine Gomez (August 13, 2018) (Comment Letter I-24)
• Bob and Shari Hastings (August 13, 2018) (Comment Letter I-25)
• Nancy Howells (August 12, 2018) (Comment Letter I-26)
• Jan Karwin (August 10, 2018) (Comment Letter I-27)
• Christy Kirven (August 12, 2018) (Comment Letter I-28)
• Daniel F. Kriege, R.E. (August 5, 2018) (Comment Letter I-29)
• Don Larkin (August 13, 2018) (Comment Letter I-30)
• Venus Lee (August 13, 2018) (Comment Letter I-31)
• Teresa Mallen (August 2, 2018) (Comment Letter I-32)
• Karl Maret, M.D., M.Eng, B.Sc.(EE) (August 13, 2018) (Comment Letter I-33)
• James Marshall (August 8, 2018) (Comment Letter I-34)
• Colonel Michael Maxwell (August 9, 2018) (Comment Letter I-35)
• Colonel Terry (Michael) Maxwell (August 13, 2018) (Comment Letter I-36)
• Monica McGuire (August 1, 2018) (Comment Letter I-37)
• Monica McGuire (August 3, 2018) (Comment Letter I-38)
• Monica McGuire (August 12, 2018) (Comment Letter I-39)
• Monica McGuire (August 13, 2018) (Comment Letter I-40)
• Claire Medlane (August 8, 2018) (Comment Letter I-41)
• Michael (no last name provided) (August 1, 2018) (Comment Letter I-42)
• Michael Mora (August 9, 2018) (Comment Letter I-43)
• Bill and Ann Mork, Jeff Stalling, Jim Winters, Mary Winters (August 9, 2018) (Comment Letter I-44)
• Judy Morton (August 13, 2018) (Comment Letter I-45)
• Marcia Noren (August 9, 2018) (Comment Letter I-46)
• Jane Paradise (August 12, 2018; 2:49 PM) (Comment Letter I-47)
• Jane Paradise (August 12, 2018; 3:33 PM) (Comment Letter I-48)
• Lora C. Parkhurst (August 11, 2018) (Comment Letter I-49)
• Teresa Parodi (July 24, 2018) (Comment Letter I-50)
• Jerome E. Paul, MSEE (August 12, 2018) (Comment Letter I-51)
• Jerome E. Paul, MSEE (August 13, 2018) (Comment Letter I-52)
• Fadra Perrin (August 1, 2018) (Comment Letter I-53)
2. List of Persons Commenting

- Gary W. Phillips (July 5, 2018) (Comment Letter I-54)
- Toni Polakoff (August 1, 2018) (Comment Letter I-55)
- Ken Pomper (July 19, 2018) (Comment Letter I-56)
- Brian and Mardi Price (August 1, 2018) (Comment Letter I-57)
- Regan Ray (August 13, 2018) (Comment Letter I-58)
- Jerry Scattini (July 11, 2018) (Comment Letter I-59)
- Bob Schneider (August 5, 2018) (Comment Letter I-60)
- Jack Sillman (August 13, 2018) (Comment Letter I-61)
- Bill Smallman, P.E. (August 6, 2018) (Comment Letter I-62)
- Jessyka Soto (August 13, 2018) (Comment Letter I-63)
- Erica Stanojevic (August 12, 2018) (Comment Letter I-64)
- Wayne Stanton (August 6, 2018) (Comment Letter I-65)
- Wayne Stanton (August 7, 2018) (Comment Letter I-66)
- Wayne Stanton (August 8, 2018) (Comment Letter I-67)
- Wayne Stanton (August 9, 2018) (Comment Letter I-68)
- Wayne Stanton (August 10, 2018) (Comment Letter I-69)
- Wayne Stanton (August 11, 2018) (Comment Letter I-70)
- Wayne Stanton (August 12, 2018) (Comment Letter I-71)
- Becky Steinbruner (August 2, 2018) (Comment Letter I-72)
- Becky Steinbruner (August 4, 2018) (Comment Letter I-73)
- Becky Steinbruner (August 12, 2018) (Comment Letter I-74)
- Becky Steinbruner (August 13, 2018; 9:17 AM) (Comment Letter I-75)
- Becky Steinbruner (August 13, 2018; hand delivery 1) (Comment Letter I-76)
- Becky Steinbruner (August 13, 2018; hand delivery 2) (Comment Letter I-77)
- Becky Steinbruner (August 13, 2018; 4:27 PM) (Comment Letter I-78)
- Becky Steinbruner (August 13, 2018; 4:55 PM) (Comment Letter I-79)
- Nancy Stucker (August 10, 2018) (Comment Letter I-80)
- Nancy Stucker (August 13, 2018) (Comment Letter I-81)
- Larry Takemoto (July 3, 2018) (Comment Letter I-82)
- Jude Todd, PhD (August 13, 2018) (Comment Letter I-83)
2. List of Persons Commenting

- Maria Gitin Torres (July 4, 2018) (Comment Letter I-84)
- Jerome Totes (August 3, 2018) (Comment Letter I-85)
- Gabriel Velazquez (August 9, 2018) (Comment Letter I-86)
- Gabriel Velazquez (August 13, 2018) (Comment Letter I-87)
- Gerardo Velazquez (August 9, 2018) (Comment Letter I-88)
- Gerardo Velazquez (August 13, 2018) (Comment Letter I-89)
- Richard Wameling (August 5, 2018) (Comment Letter I-90)
- Bob and Bonda White (August 4, 2018) (Comment Letter I-91)
- Deb Wirkman (August 13, 2018) (Comment Letter I-92)
- Richard E. Zscheile (August 9, 2018) (Comment Letter I-93)
- Anonymous (August 5, 2018) (Comment Letter I-94)
- Anonymous (August 9, 2018) (Comment Letter I-95)

2.5 Draft EIR Hearing Oral Commenters (July 31, 2018) (Comment Set H)

- Bart Coddington
- Karl Maret
- Monica McGuire
- Becky Steinbruner
- Ken Pomper
- Wayne Stanton
- John Dickinson
- Nancy Stucker
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CHAPTER 3
Comments and Responses

3.1 Comments and Responses

This section presents the comment letters received during the Draft Environmental Impact Report (EIR) comment period, summarizes the substantive comments, and responses to those comments. The comments and responses are organized as listed in Chapter 2.

Responses have been numbered corresponding to bracketed numbers printed on the comment letters. Responses are provided to address issues raised in the comment concerning the adequacy or accuracy of the EIR, and to clarify or augment information in the Draft EIR as appropriate. Where responses refer to changes to the text of the Draft EIR made as a staff-initiated text change, in response to comments on the Draft EIR, or to clarify the Draft EIR text, new language is double underlined, while deleted text is shown in strikethrough. The text revisions are also included in Chapter 4, EIR Text Revisions.
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Dear Mr. Duncan,

Thank you for providing the Monterey Bay Air Resources District the opportunity to comment on the DEIR for the Pure Water Soquel: Groundwater Replenishment and Seawater Intrusion Prevention Project. The Air District has reviewed the document and has the following comments (please see the attachment).

If you have any questions, please don’t hesitate to email or call me at my office.

Thanks,

Hanna Muegge, Air Quality Planner

Monterey Bay Air Resources District

24580 Silver Cloud Court
Monterey, CA 93940
Office: 831-647-9411; Direct: 831-718-8021
www.mbard.org
August 7, 2018

Ron Duncan
General Manager
Pure Water Soquel Project CEQA
4041 Soquel Drive, Ste. A-501
Soquel, CA 95073-3105

Email: purewatersoquelceqa@esassoc.com

Re: Comments on Draft EIR PURE Water Soquel

Dear Mr. Duncan:

Thank you for providing the Monterey Bay Air Resources District (Air District) with the opportunity to comment on the above-referenced document. The Air District has the following comments:

- Mitigation Measure 4.3-la: Construction Emissions Reduction Plan: While ozone precursor emissions are accounted for in the emissions inventory for both reductions of criteria pollutants and diesel particulates, the Air District appreciates limiting off-road construction equipment to Tier 4 emission standards. Whenever feasible, consider using equipment that uses alternative fuels such as compressed natural gas, propane, electricity or biodiesel.

- To further mitigate construction dust and maintain compliance with Air District Rule 402 (Nuisance) and CEQA Guidelines, Section 8.2, please implement the following Best Management Practices.

  Construction Dust:
  - Prohibit all grading activities during periods of high wind (over 15 mph)
  - Water all active construction areas at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure.
  - Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days)
  - Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations, or hydro-seed area.
  - Maintain at least 2'0" of freeboard in haul trucks.
  - Cover all trucks hauling dirt, sand, or loose materials.
  - Plant vegetative ground cover in disturbed areas as soon as possible.
  - Cover inactive storage piles.
  - Install wheel washers or other appropriately effective track-out capture methods at the construction site for all exiting trucks.
  - Post a publicly visible sign which specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the Air District shall be visible to ensure compliance with Rule 402 (Nuisance).

- Permits Required – Air District permits or registration with the California Air Resources Board (CARB) may be required for portable construction equipment with engines 50 hp or greater. Please contact the Air District’s Engineering Division at (831) 647-9411 if you have questions about permitting.

- Tree Removal: In case the trees removed in the staging and construction areas at the Headquarters-West Annex, Chanticleer, and/or Twin Lakes Recharge Well sites are disposed of via wood chipping, please make
sure to contact the Air District’s Engineering Division at (831) 647-9411 to discuss if a Portable Registration is necessary for the wood chipper being utilized for this project.

- **Trenching Activities**—Please be aware of complying with Rule 424 *National Emissions Standards for Hazardous Air Pollutants*. Rule 424 contains the investigation and reporting requirements for asbestos, which includes surveys and advanced notification on structures being renovated or demolished. If old underground piping or other asbestos containing construction materials are encountered during trenching activities, Rule 424 could apply. Rule 424 can be found online at [https://www.arb.ca.gov/drdb/mbu/cur.htm](https://www.arb.ca.gov/drdb/mbu/cur.htm). Please contact Mike Sheehan, Compliance Program Coordinator, at (831) 718-8036 for more information regarding these rules.

Please let me know if you have any questions. I can be reached at (831) 718-8021 or hmuegge@mbard.org.

Best Regards,

Hanna Muegge  
Air Quality Planner  

cc: David Frisbey, Planning and Air Monitoring Manager  
   Mike Sheehan, Compliance Program Coordinator
3.2 Response to Comments from Monterey Bay Air Resources District; Hanna Muegge, Air Quality Planner (August 7, 2018) (Comment Letter S-1)

S-1-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

S-1-2 The Project’s potential to generate criteria air pollutants which could contribute to a violation of ambient air quality standards and the Air District’s significance thresholds for such pollutants are described in Impact 4.3-1. As explained in that section, the Project’s estimated maximum daily construction emissions of the ozone precursor NOx is approximately 243 pounds per day. Pursuant to the Air District’s CEQA recommendations, a project would have a significant environmental impact if its NOx emissions exceeded 137 pounds per day. Alternative fuels are among the measures identified in the Air District’s recommendations as effective at reducing NOx emissions (MBARD, 2008; Table 8-3). Because the Project’s estimated maximum daily construction emissions amount is above the Air District’s significance threshold for NOx, the EIR identifies the impact as significant. Mitigation Measure 4.3-1a, which calls for development and implementation of a construction emissions reduction plan is identified to reduce the impact to a less-than-significant level. In response to the Air District’s comment, the text of Measure 4.3-1a (page 4.3-18) is revised to include identification of alternative fuels among the measures that should be considered by the District to reduce construction-related NOx emissions. The measure is revised as follows:

**Mitigation Measure 4.3-1a: Construction Emissions Reduction Plan.**

The District (and/or its construction contractor(s)) shall develop and implement a Construction Emissions Reduction Plan to substantiate that Project construction-related NOx emissions would not exceed the Monterey Bay Air Resources District (MBARD)’s significance threshold of 137 pounds per day. The plan shall identify a feasible approach to reduce daily emissions that includes limits on the amount of construction activity that shall be conducted simultaneously on any given day, and if necessary to reduce emissions to below the NOx significance threshold, include a commitment for certain diesel-fueled off-road construction equipment of more than 50 horsepower to meet U.S. Environmental Protection Agency (USEPA) Tier 4 emission standards, and/or a commitment to use alternative fuels for certain construction equipment and vehicles.

The plan shall identify the parameters for phasing construction activities associated with each of the Project components to reduce daily construction emissions of NOx. For example, limiting daily construction activities to activities at one pipeline site and at either the Chanticleer Site or at one of the well sites would be sufficient to reduce NOx emissions to less than 137 pounds per day. In addition, although off-road construction equipment at the Chanticleer, Headquarters-West Annex, SC WWTF, Willowbrook Lane Recharge Well, and
Monterey Avenue Recharge Well Sites would be required to meet USEPA Tier 4 emission standards or otherwise be equipped with Level 3 diesel particulate filters per requirements of Mitigation Measure 4.3-4, the Construction Emissions Reduction Plan may include an additional commitment to use a certain percentage of Tier 4 compliant equipment and/or equipment fueled by alternative fuels associated with pipeline construction. The identified construction phasing parameters and the percentage of Tier 4 compliant equipment and/or equipment fueled by alternative fuels associated with pipeline construction would be substantiated within the Plan to define how the resulting emissions would be less than 137 pounds NOx per day using either the air emissions calculations prepared for the Environmental Impact Report or other air emissions calculations estimated using the CalEEMod emissions model.

If the Plan includes a commitment that a certain percentage of pipeline-related off-road equipment would be Tier 4 compliant and/or fueled by alternative fuels, then it shall identify the initial pipeline construction equipment listing with each off-road unit’s horsepower, certified tier specification status, and the associated maximum daily NOx emissions. As new or replacement construction equipment are required, the District shall document each unit’s horsepower, certified engine tier status, and associated maximum daily NOx emissions, consistent with the Plan prior to use on the Project.

S-1-3 The Air District’s regulatory purview under CEQA is explained in Section 4.3, Air Quality. As noted on page 4.3-10, ‘The MBARD does not regulate the emissions of dust and other construction emissions, except to require that each project’s relevant CEQA document quantify the emissions of particulate matter and provide mitigation, if the relevant threshold of significance is exceeded.’ The Project’s potential dust impacts and the Air District’s significance thresholds for dust are described in Impact 4.3-1. As explained in that section, the Project’s estimated maximum daily construction emissions would include up to 62.82 pounds per day of PM10 and 21.12 pounds per day of PM 2.5 emissions. Pursuant to the Air District’s CEQA recommendations, a project would have a significant environmental impact if its PM10 emissions exceeded 82 pounds per day, or if its PM 2.5 emissions exceeded 55 pounds per day. Because the Project’s estimated maximum daily construction emissions are below the Air District’s significance thresholds, the impact is less than significant and no mitigation is required. Nevertheless, based upon the Air District’s comment, the District would endeavor to implement the identified best management practices, as is feasible. The text of pages 4.3-17 (below last paragraph) and 4.3-19 (before Impact 4.3-2) are revised as follows:

Page 4.3-17 revisions:

While not required to reduce a significant impact, at the request of MBARD, the District would endeavor to undertake the best management practices outlined in Improvement Measure 4.3-1c. These measures would further reduce Project dust emissions and minimize the potential for dust-related nuisance.
Page 4.3-19 revision:

*Improvement Measure 4.3-1c applies to all Project components.*

**Improvement Measure 4.3-1c: Construction Dust Best Management Practices**

To the extent feasible, the District should implement the following best management practices during construction:

- Prohibit all grading activities during periods of high wind (over 15 mph)
- Water all active construction areas at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure.
- Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days)
- Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations, or hydro-seed area.
- Maintain at least 2’0” of freeboard in haul trucks.
- Cover all trucks hauling dirt, sand, or loose materials.
- Plant vegetative ground cover in disturbed areas as soon as possible.
- Cover inactive storage piles.
- Install wheel washers or other appropriately effective track-out capture methods at the construction site for all exiting trucks.
- Post a publicly visible sign which specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the Air District shall be visible to ensure compliance with Rule 402 (Nuisance).

S-1-4 This comment is noted. Based upon this comment, the text of Draft EIR Chapter 3, Project Description, page 3-45 is revised as follows:

**State**

- State Water Resources Control Board (SWRCB) Stormwater General Construction Permit and Stormwater Pollution Prevention Plan
- SWRCB consideration for Clean Water State Revolving Fund loan and review of environmental review requirements that must be completed to apply for a loan
• Title 22 compliant Water Recycling Requirements issued by the Central Coast Regional Water Quality Control Board following approval of an Engineering Report by the Division of Drinking Water

• Regional Water Quality Control Board (RWQCB) Section 401 Water Quality Certification and/or a Report of Waste Discharge

• California Department of Fish and Wildlife Section 1600 Streambed Alteration Agreement

• California Coastal Commission Coastal Development Permit

• California Department of Transportation encroachment permit for constructing pipeline with any state rights-of-way

• Permits or registration with the California Air Resources Control Board (CARB) may be required for portable construction equipment with engines 50 horse power or greater

S-1-5 This comment is noted. Please also refer to response to comment S-1-4.

S-1-6 Rule 424 is summarized in EIR Section 4.9, Hazards and Hazardous Materials (page 4.9-11), and is considered in that section’s analysis of the Project’s potential to create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials (Impact 4.9-1, pages 4.9-15 and 4.9-16). As discussed in that section, the Project could involve demolition activities that could encounter asbestos containing materials (ACMs). The analysis notes construction activities would be required to comply with the mandatory requirements of numerous hazardous materials regulations, including Rule 424, and outlines the procedures that would be followed in the event ACMs were determined to exist on the Project site. The analysis concludes that through compliance with these mandatory regulatory requirements, the potential for creation of hazardous conditions due to the use or accidental release of hazardous materials (including asbestos) would be less than significant.
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August 13, 2018

Pure Water Soquel Project CEQA
4041 Soquel Dr., Ste A-501
Soquel, CA 95073-3105

RE: Comments on Pure Water Soquel Draft EIR

Dear Pure Water Soquel Project CEQA:

The City of Santa Cruz Public Works Department has reviewed the Draft Environmental Impact Report, State Clearinghouse No. 2016112045, for the Pure Water Soquel: Groundwater Replenishment and Seawater Intrusion Prevention project Prepared for Soquel Creek Water district dated June 2018. Our comments are attached.

If you have any questions please contact me at 831/ 420-5424 or ahogan@cityofsantacruz.com

Sincerely,

Anne Hogan P. E.
Wastewater System Manager
City of Santa Cruz
831/420-5425
August 13, 2018

Pure Water Soquel Project CEQA
4041 Soquel Dr., Ste A-501
Soquel, CA 95073-3105

RE: Comments on Pure Water Soquel Draft EIR

Dear Pure Water Soquel Project CEQA:

The City of Santa Cruz Public Works Department has reviewed the Draft Environmental Impact Report, State Clearinghouse No. 2016112045, for the Pure Water Soquel: Groundwater Replenishment and Seawater Intrusion Prevention project Prepared for Soquel Creek Water district dated June 2018. Our comments are attached.

If you have any questions please contact me at 831/420-5424 or ahogan@cityofsantacruz.com

Sincerely,

Anne Hogan, P.E.
Wastewater System Manager
110 California St.
Santa Cruz, CA 95060
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2.1 2-1 Introduction
The SCWWTF does not discharge to the Monterey Bay. It discharges to the Pacific Ocean at 36.935556° N Latitude, 122.068889° W Longitude. The Waste Discharge Requirements for the City of Santa Cruz Wastewater Treatment Facility Discharge to the Pacific Ocean, NPDES Permit No. CA0048194, contain provisions for the production of disinfected tertiary recycled municipal wastewater for reclamation use. The distribution and uses of the tertiary recycled water would be covered by other orders.

2.4.2 2-8 Public Scoping
The SCWWTF prefers the option of tertiary treatment at the SCWWTF rather than AWPF.

3.1 3-1 Introduction
The SCWWTF does not discharge to the Monterey Bay. It discharges to the Pacific Ocean at 36.935556° N Latitude, 122.068889° W Longitude, and the conveyance system is sized for a potential expansion to 2.7 MGD. Is the treatment facility also sized for the potential expansion? Has the potential need of other water purveyors (for example Santa Cruz Water Dept.) to require recycled water been addressed?

3.2 3-3 Project Background
Have sand or mixed media filters been considered for tertiary treatment?
Backwash and cleaning waters are discharged into the sewer collection system. Brine is piped back to the WWTF blended with treated effluent and discharged via the existing outfall. Has an impact been evaluated? What is the organic loading of the brine?
The discharge is not in Monterey Bay.

Configurations 3 & 4 eliminate the use of tertiary treated water for irrigation along the way to the next site. This has environmental consequences that should be evaluated. Also pumping secondary effluent in a force main has more environmental consequences in cases of spills or accidents than transporting tertiary effluent.

Footnote 5: What chemicals? Isn’t more accurate to say that tertiary involves filtration technologies and can also include additional chemicals?

Table 3-1: Treatment Config Options

The City strongly prefers tertiary treatment at SCWWT over AWPF. The table does not seem to show a configuration with only Tertiary at SCWWT.

UV is not the only disinfection option for onsite use at the SCWWTF. Could other options such as Chlorine disinfection or pasteurization be considered? Modifications to the layout of the existing facility at the SC WWTF to accommodate project improvements could require relocation of the Wastewater Collection / Flood Control Department to an offsite location either temporarily during construction or permanently. Are the environmental impacts of this relocation included in this EIR?

3.5.2 Secondary or Tertiary Effluent Conveyance

Either tertiary or advanced purified water can be used for irrigation along the alignment of the conveyance pipeline. This is mentioned only in the section on the dedicated purified water pipeline.

3.5.3 Recharge and Monitoring Wells

Monitoring wells not shown on fig 3-8a or 3-8b.

3.6.1 Site Access

Mission St. (business route of Hwy 1) should be listed as a major arterial.

3.6.2 Staging and Laydown Areas

Did consideration of the laydown site include relocation of Wastewater Collections / Flood Control Division?

3.6.3 Preparation and Cleanup

Why would construction waste be off-hauled to the transfer station in Ben Lomond? Was Dimeo Lane considered?

3.6.4 Construction Assumptions

The Construction assumptions for Secondary treated water conveyance and tertiary treatment system at the WWTF include no excavation. Please explain the thinking behind this assumption. Is all piping above ground? Should excavation become necessary for tank footings or other support equipment, how would an environmental review of that excavation be done? Consider a possibility of encountering hazardous materials underground at the WWTF.

3.3-4 Pipeline Installation

AWWA standards also include separation distances from sanitary sewer lines.

3.3-4 Pipeline Route Construction

Is repaving only over the trench or over the entire street? Some of the roads listed have recently been repaved ex: California St.

The City of Santa Cruz has submitted a Letter of Support to the State Water Resources Control Board for the District's application for a Prop 1 implementation grant for the Pure Water Soquel Project.

The City of Santa Cruz has submitted a Letter of Support for the District's application for a US Bureau of Reclamation Water Smart Program grant for the Pure Water Soquel Project.
3.3 Response to Comments from City of Santa Cruz, Public Works Department; Anne Hogan, P.E., Wastewater System Manager (August 13, 2018) (Comment Letter L-1)

L-1-1 This introductory comment is followed by more detailed comments and does not include specific comment about the EIR or any environmental issue related to the Project and so no response is required. This comment is noted.

L-1-2 As discussed in Section 4.3, Air Quality, a screening-level health risk assessment (HRA) was conducted to estimate the potential health risks to sensitive receptors due to the Project. The HRA (EIR, Appendix B) was prepared in accordance with the guidelines recommended by the California Office of Environmental Health Hazard Assessment (OEHHA), and in the absence of specific HRA guidelines from the Monterey Bay Air Resources District (MBARD) follows the methods recommended by the Bay Area Air Quality Management District (BAAQMD). Consistent with the Lead Agency’s responsibility under the California Environmental Quality Act to evaluate the potential physical changes of a Project relative to baseline conditions, the HRA examines the potential health risks of changes in toxic air contaminant (TAC) concentrations in the Project vicinity over TAC concentrations under existing conditions. The primary TAC associated with the Project is short-term diesel particulate matter (DPM) from exhaust emissions for on-site heavy-duty equipment and from material deliveries and hauling of excess spoils and debris (on-road trucks). DPM poses a potential cancer and chronic health risk. The Project would not produce other TACs in sufficient quantities to exceed the health risks posed by DPM from equipment and vehicles, so DPM was the focus of the project-level HRA. The existing wastewater treatment facility operations are considered baseline conditions; therefore, any potential health risks associated with these operations are not part of the Project and are not required to be analyzed in the EIR but rather are considered within the baseline conditions, as noted. In addition, the existing wastewater treatment facility is not a source of TACs that pose a potential cancer and chronic health risk. As discussed on page 4.3-5 of the EIR, “Operation of the Project would result in negligible long-term on-site TAC emissions related to off-site vehicle trips, thereby limiting the associated potential public health risk exposure for sensitive receptors; therefore, the health risk analysis in this EIR focuses on short-term construction activities of the Project.” In addition, as stated on page 4.3-19 of the EIR, “The Project would not include any new or modified stationary sources of air pollutants. The only daily emission sources that would be associated with the Project would be limited to on-road vehicles.” Further, the wastewater treatment facility is a permitted facility under MBARD regulations, and permit conditions account for potential health risks (MBARD Rule 100 and Rule 216). The project would not change the permitted activity for the wastewater treatment facility. For these reasons, the impact on sensitive receptors from ongoing operations at the wastewater treatment facility are not addressed in the EIR.
L-1-3 Construction of the Advanced Water Treatment Facility (AWPF) at the Santa Cruz Wastewater Treatment Facility (SC WWTF) would not interrupt existing onsite operations. Construction equipment and materials would be stored within the construction work areas; out of the way of equipment currently operating at the SC WWTF. Although construction of the pumps and treatment facilities would require the demolition of the existing tertiary treatment facility, the removal of this facility would not interfere with the SC WWTF’s odor control systems.

L-1-4 A discussion of cumulative air quality impacts can be found in EIR Chapter 5, Cumulative Impacts. The air quality construction and operational thresholds established by Monterey Bay Air Resources District (MBARD) were designed for the Air Basin and are intended to address the incremental contributions of individual projects on the quality of the air basin as a whole. Therefore, conformance with the MBARD thresholds ensures that an individual project would not have a cumulative impact with respect to overall air quality within the Air Basin. A comparison of the Project’s (including the proposed AWPF at the SC WWTF) construction and operational emissions to the MBARD criteria pollutant thresholds can be found Impact 4.3-1 and Impact 4.3-2. Construction and operation modeling calculations and assumptions can be found in Appendix B.

L-1-5 Potential effects of Project implementation on Neary Lagoon are addressed in Section 4.4, Biological Resources (Impact 4.4-3). As discussed in that section (pp. 4.4-64 and 4.4-65), the Project would not result in substantial biological resources impacts at Neary Lagoon.

L-1-6 The energy analysis discussed in Chapter 4.6, Energy Conservation, addresses the potential for the Project to consume large amounts of energy in an unnecessary or wasteful manner, and whether the Project’s energy demands would constrain local or regional energy supplies. As explained in that section, the Project’s primary source of electrical power would be provided by Monterey Bay Community Power, delivered via the PG&E power grid infrastructure. Discussed further in Impact 4.6-1 and Impact 4.6-2, the Project would have less-significant-impacts related to the use of large amounts of energy in a wasteful or unnecessary matter, and the potential to constrain local or regional energy supplies. The Project does not propose to obtain power from the treatment plant’s cogeneration facility. Nor would the Project affect the waste streams or sewage treatment process that generates the methane gas upon which the cogeneration plant relies for fuel. For these reasons, the Project’s energy demands would not be expected to reduce the output of the cogeneration facility.

L-1-7 A comparison of the Project’s construction and operational greenhouse gas emissions to the BAAQMD’s annual GHG threshold for development projects can be found in Section 4.8, Greenhouse Gas Emissions (Impacts 4.8-1 and 4.8-2). Construction and operation modeling calculations and assumptions can be found in EIR Appendix B. As explained in Impact 4.8-1, under the Project configuration with the greatest GHG emissions potential (which does include facilities at SC WWTF), the sum of its 50-year
amortized construction GHG emissions and its total net operation emissions would be approximately 405 metric tons CO2e per year. These emissions would be less than the 1,100 metric tons per year significance threshold; therefore, the section concludes the impact would be less-than-significant.

L-1-8 If the commenter’s reference to “accidental sewer spills” concerns the potential for the Project to generate a waste stream in excess of the capacity of the wastewater collection system, please refer to response to comment L-4-13. If the reference concerns the potential for the Project to disrupt underground utility lines during construction, please refer to Section 4.9, Hazards and Hazardous Materials (Impact 4.9-4). As discussed in that section, the Project would be required to comply with California Government Code Section 4216-4216.9, which requires the locating of underground utilities prior to construction in order to prevent accidental damage, including to sewer lines.

L-1-9 The potential for the Project to conflict with established emergency response plans, including emergency vehicle access, is addressed in Section 4.9, Hazards and Hazardous Materials (Impact 4.9-4), and Section 4.15, Transportation (Impact 4.15-1). Both discussions identify the potential for project construction activities to disrupt emergency response, and both identify Mitigation Measure 4.15-1, Traffic Control Plan as a means to reducing the potential for such conflicts. Among the requirements of Mitigation Measure 4.15-1 are that the plan “shall comply with requirements in agreements executed between the District and the public works departments of the cities of Santa Cruz and Capitola, and Santa Cruz County (which have jurisdiction over the public roads in the area), and will include, but not be limited to, the following elements: Construction shall be coordinated with facility owners or administrators of police and fire stations (including all fire protection agencies), hospitals, and schools. Facility owners or operators shall be notified in advance of the timing, location, and duration of construction activities and the locations of detours and lane closures. Emergency service vehicles shall be given priority for access.” With implementation of Mitigation Measure 4.15-1, potential conflicts with the Santa Cruz Wastewater Treatment Facility’s emergency response and evacuation plans would be avoided.

L-1-10 Disposal of water produced during project construction is addressed in Chapter 3, Project Description, Section 3.6.6. As explained in that section (p. 3-37), Water utilized or produced during construction and dewatering would be disposed of in accordance with applicable local and state laws and regulations. Drilling fluid, fluids displaced during well construction (gravel packing), sealing, and initial development water would be stored in tanks on site during construction and then disposed of off-site at an authorized disposal facility. Other development water would be discharged under the District’s Permit for Drinking Water System Discharges to Waters of the United States (Order WQ 2014-0194-DWQ). As needed, on-site treatment, such as a baker tank or settling basin, would be used to ensure turbidity is within the allowable discharge levels. Depending upon turbidity levels, pumping development and pump testing water may be able to be discharged without treatment. Dechlorination of flushing and disinfection fluids would be required before discharging to the storm drain.
Accordingly, the District does not anticipate discharging water produced during well construction into the sanitary sewer system.

L-1-11 As discussed in Section 4.11, Hydrology – Surface Water, a portion of the Santa Cruz Wastewater Treatment Facility (SC WWTF) property adjacent to Neary Lagoon is located within a Federal Emergency Management Agency-identified 100-year flood hazard zone. The potential flood hazard risk of siting an advanced water purification facility at the SC WWTF are addressed in Section 4.11-4, Impacts and Mitigation Measures (Impact 4.11-4). The impact discussion explains, on pages 4.11-61 and 4.11-62, if the SC WWTF is selected, advanced water purification facilities would be located in areas that are already developed within the SC WWTF site with existing flood mitigation. The analysis notes the site could experience minor damage if flooding were to occur and Project facilities at the SC WWTF could be taken off line temporarily for repairs. The discussion concludes such short-term interruption in Project-related operations at the SC WWTF would be a less-than-significant impact because, while such an outage may temporarily halt generation of recharge water and slow the basin recharge process, it would not result in a shortage or lessening of overall water supply via extraction at production wells.

Further, the A99 Zone containing the SC WWTF site is an overflow area from the San Lorenzo River, not an area that conveys flood flows. Because the site is not in an area of flood conveyance and the new levees constructed on the San Lorenzo River reduce flooding in this area, the construction of proposed facilities at the SC WWTF would not cause any change in flooding as shown on the FEMA flood maps in terms of impeding or redirecting flood flows. Staff located at the SC WWTF, which is an existing facility, would not be exposed to increased flood risk as a result of Project implementation.

L-1-12 Potential noise impacts associated with the AWPF at the SC WWTF are discussed in Section 4.13, Noise and Vibration (Impacts 4.13-1 and 4.13-2). As presented in the discussion under Impact 4.13-1, construction of the AWPF would not occur outside of the allowed construction exempt hours found in the City of Santa Cruz noise ordinance. Furthermore, as presented in Impact 4.13-2, construction of the AWPF would not expose nearby sensitive receptors (e.g., residences) to noise levels that would result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project. As a result, the Project’s onsite construction activities would not result in significant noise impacts at the SC WWTF and no mitigation is necessary.

L-1-13 As described in EIR Chapter 2, Introduction, the Santa Cruz Wastewater Treatment Facility discharges to the Monterey Bay National Marine Sanctuary. The EIR’s characterization is based upon the facility’s discharge permit (NPDES No. CA0048194) which states, “Treated wastewater is discharged through a 12,250-foot outfall/diffuser system to Monterey Bay National Marine Sanctuary.” The Sanctuary boundary is more than 40 miles offshore (MBNMS, 2017). However, it is apparent from the comment that the EIR’s use of “Monterey Bay” as the abbreviation for
Monterey Bay National Marine Sanctuary could cause confusion among some readers. Therefore, based upon this comment, Section 2.2 (page 2-1, paragraph 1) is revised as shown below. Refer to Final EIR Chapter 4, EIR Revisions for additional text revisions to clarify the Monterey Bay National Marine Sanctuary from the Monterey Bay. The general water reuse requirement for Municipal Wastewater and Water Agencies would be covered under RWQCB Order #96-011. As noted in this comment, the distribution and uses of tertiary recycled water would require additional use permits. However, the Project does not include new recycled water use customers.

2.1 Introduction

The Soquel Creek Water District (District) is evaluating the Pure Water Soquel: Groundwater Replenishment and Seawater Intrusion Prevention Project (Project), an advanced purified groundwater replenishment project, to supplement natural recharge of the Santa Cruz Mid-County Groundwater Basin (Groundwater Basin) with purified water. The Project would help increase the sustainability of the District’s groundwater supply, which it currently relies upon for 100 percent of its water supply. The Project would reduce the degree of overdraft conditions in the Santa Cruz Mid-County Groundwater Basin, protect against and aid in preventing further seawater intrusion of the groundwater basin, and promote beneficial reuse by reducing discharge of treated wastewater to Monterey Bay National Marine Sanctuary (Monterey Bay MBNMS). The Project facilities include: water treatment facilities; pump stations and pipelines for the conveyance of source water, purified water, and brine; and recharge and monitoring wells. The Project is designed specifically to help the District meet its obligations under the Sustainable Groundwater Management Act (SGMA) to reduce net groundwater withdrawals to levels that would facilitate achievement of sustainable groundwater levels by 2040, and in a manner consistent with its Community Water Plan goals.

L-1-14 The SC WWTF’s preference for a tertiary treatment facility at the SC WWTF, rather than an AWPF at the SC WWTF has been noted.

L-1-15 See response to comment L-1-13.

L-1-16 As noted in Chapter 3, Project Description, the District would construct an Advanced Water Purification Facility (AWPF) capable of producing 1.3 million gallons per day (mgd), approximately 1,500 afy, of purified water - the estimated volume required to offset the portion of the Santa Cruz Mid-County Groundwater Basin’s groundwater overdraft attributable to District groundwater pumping. As described on page 3-8, if a new tertiary treatment system were selected for SCWWTF, it would be designed to produce sufficient quantities of tertiary effluent to replace the amount currently produced onsite for the SCWWTF existing and future potential uses such as La Barranca Park irrigation and a fill-station.
3.3 Response to Comments from City of Santa Cruz, Public Works Department

L-1-17 While sand filters are often used for tertiary treatment; they are not preferred as a pre-treatment to RO / Advanced Water Purification. Membrane filters are typically employed in the AWPF due to log removal credits and also because of their superior pre-treatment for RO. Further, due to tight footprint / space constraints, membrane filters are preferred for the Tertiary Treatment Facility at the SC WWTF. RO cleaning would be anticipated to produce a very small and infrequent stream of waste stream, which would be directed to the sewer collection system after necessary pre-treatment (pH neutralization, etc.). Regarding analysis of brine discharge changes, please see the response to comment I-92-3.

L-1-18 Please refer to response to comment L-1-13.

L-1-19 Consistent with the requirements of CEQA, the EIR focuses on the potential effects of the Project relative to existing physical (See CEQA Guidelines Section 15126.2). The project area does not currently include tertiary treated water for irrigation between the SC WWTF and recharge well sites, and therefore, the CEQA analysis of impacts of associated with construction and operation of the Project does not consider such uses. Regarding effects associated with potential pipeline breaks, see response to comment L-4-4 concerning pipeline construction standards, and L-1-8 and I-58-7 regarding accidental spills.

L-1-20 The chemicals for the tertiary system are noted in Table 3-9 and denoted by MF/UF in the table. For tertiary filtration via membranes, monochloramine is used to help prevent biofouling. As noted in Table 3-9, this is formed using ammonium hydroxide and sodium hypochlorite. Also noted in Table 3-9, other chemicals that could be used with tertiary filtration for membrane cleaning include sodium hypochlorite, sodium bisulfite, sodium hydroxide and citric acid.

L-1-21 The commenter’s preference for a tertiary system at SC WWTF over an AWPF at SC WWTF is noted. As presented in Chapter 3, Project Description (page 3-7), the treatment system configurations under consideration and analyzed in the EIR are as follows:

1. A new tertiary treatment system at the SC WWTF, coupled with an AWPF at the Chanticleer Site for advanced purification of the tertiary effluent; or
2. A new tertiary treatment system at the SC WWTF, coupled with an AWPF at the Headquarters-West Annex Site for advanced purification of the tertiary effluent; or
3. A new AWPF at the Chanticleer Site for advanced purification of secondary effluent from the SC WWTF; or
4. A new AWPF at the Headquarters-West Annex Site for advanced purification of secondary effluent from the SC WWTF; or
5. A new AWPF at the SC WWTF for advanced purification of SC WWTF secondary effluent.
As represented in the descriptions for treatment system configurations 1 and 2, above, both would include a tertiary system at the SC WWTF and an AWPF at a separate off-site location. In response to reviewer’s comment, Table 3-1 (page 3-8) has been revised as follows:

<table>
<thead>
<tr>
<th>Table 3-1</th>
<th>OVERVIEW OF TREATMENT CONFIGURATION OPTIONS AT EACH POTENTIAL LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC WWTF</td>
<td>Chanticleer Site</td>
</tr>
<tr>
<td>Tertiary Treatment System (TTS)</td>
<td>AWPF</td>
</tr>
<tr>
<td>Treatment Configuration 1</td>
<td>✓</td>
</tr>
<tr>
<td>Treatment Configuration 2</td>
<td>✓</td>
</tr>
<tr>
<td>Treatment Configuration 3a</td>
<td></td>
</tr>
<tr>
<td>Treatment Configuration 4a</td>
<td></td>
</tr>
<tr>
<td>Treatment Configuration 5</td>
<td></td>
</tr>
</tbody>
</table>

a Secondary effluent pump station and equalization tank would be required at SC WWTF.

L-1-22 Chlorine and pasteurization disinfection are conditionally approved for non-potable reuse for tertiary disinfection at SCWWTF. UV disinfection was selected for evaluation based on an evaluation of efficacy, footprint, cost and track record of performance.

L-1-23 The location and position of the needed improvements and infrastructure for secondary pump station, tertiary treatment, or AWPF would not require relocation of the collections or flood control department to an offsite location.

L-1-24 The proposed tertiary treatment system at the Santa Cruz Wastewater Treatment Facility (SC WWTF) would encompass an area of 6,000 square feet. In response to this comment, the EIR’s Chapter 3, Project Description is revised as described below. Table 3-2, Components for Treatment Configurations, page 3-11, row ‘1’, column ‘SC WWTF’ is revised as follows:

**Tertiary Treatment System**
- Secondary effluent pump station
- EQ tank (24 ft. in height)
- UF or MF system
- Tertiary ultraviolet (UV disinfection system)
- Tertiary effluent pump station
- Electrical and control room

These components would be sited on an unenclosed concrete pad. The UF/MF and UV AOP systems would be covered by a canopy.

Total Footprint: 6,000 ft²
Table 3-6, Construction Assumptions for the Proposed Project, page 3-26, row “Tertiary treatment system”, column “Construction Area (Permanent)” is revised as follows:

15,000 sq. ft. 6,000 sq. ft.

L-1-25 The EIR Chapter 3, Project Description, acknowledges tertiary treated wastewater can be used for irrigation. As noted on EIR page 3-7 “Pursuant to 22 CCR Section 60304, recycled water must undergo a disinfected tertiary level of treatment prior to use for surface irrigation, but need not undergo the additional RO and oxidation treatment process steps required for IPR.” However, as shown on Figure 3-1 and discussed on page 3-20, the locations of the potential future irrigation connection points, or “turnouts” that are proposed under the Project are all located along the dedicated purified water pipeline, east of the eastern-most potential AWPF site (Headquarters-West Annex). While it is possible that other turnouts along other segments of conveyance pipeline may be desirable at some point in the future, should an irrigation customer be identified, they are not known or proposed as part of the Project. For these reasons, the EIR does not address connection points along pipeline segments that would allow for irrigation with tertiary treated water.

L-1-26 As discussed in Section 3.5.3, Recharge and Monitoring Wells, the monitoring wells would be located at or near each recharge well site, within the identified work area for the recharge well facilities (page 3-23). The specific locations of the monitoring wells has not been determined, and therefore are not shown on Figures 3-8a and 3-8b. The final locations of the monitoring wells would be determined in the course of more advanced Project design, taking into account the environmental factors addressed in the EIR, as well as more advanced hydrogeological testing in the vicinity of the selected well sites. Monitoring well site selection and installation would be undertaken in accordance with the mitigation measures identified in the EIR for the other aspects of project construction activities.

L-1-27 Section 3.6.1 identifies public roadways that would provide primary access to Project sites, including Highway 1. Based upon the reviewer’s comment, the text of Section 3.6.1 is revised to clarify the Draft EIR’s reference to Highway 1 also includes a segment of Highway 1 through Santa Cruz, which is also referred to as Mission Street. Section 3.6.1 (page 3-23) is revised as follows:

3.6.1 Site Access

Existing public roadways would provide the primary access routes to the SC WWTF, Chanticleer Site, Headquarters-West Annex Site, Recharge and Monitoring Well Sites, pipeline construction areas, and staging areas. Highway 1 would be a major throughway for site access. Major arterials would include Highway 1/Mission Street, Capitola Road, Soquel Drive, Broadway, Bay Avenue, Park Avenue, Bay Street, and Cabrillo College Drive. The Project may
require temporary lane closures for roads along the pipeline alignments in order to allow for pipeline installation.

L-1-28 Based on discussions with the SC WWTF operators and management staff, it is not anticipated that relocation of the Wastewater Collections/Flood Control Division would be required. The District is coordinating with City of Santa Cruz to identify an offsite staging area near the SC WWTF that would be available for use during the proposed construction phase.

L-1-29 The Dimeo Lane landfill does not have as much remaining capacity as the transfer station in Ben Lomond and limits what types and amounts of construction waste it accepts; thus, for environmental analysis purposes, such as traffic and construction emissions estimates, the EIR conservatively considers the potential need to haul waste to a facility further than the closest facility (Dimeo Lane), to address the potential that the closer facility is not available to the Project.

L-1-30 As discussed in Section 3.6.4, Construction Activities, Construction Equipment, and Construction Workforce, if treatment facilities were placed at the SC WWTF, the existing tertiary treatment facility would be demolished and Project facilities would be constructed immediately adjacent to and northeast of the existing primary clarifiers. Since the City already would have converted to an alternative source for its onsite, non-potable water, the contractor would demolish the existing tertiary treatment system to make that space available for use by the City or by the Contractor. For the new tertiary treatment facility construction, the Contractor would carry out some excavation within the WWTF boundaries, such as trenching for new pipelines and electrical and signal duct banks and foundation for the new facility structure.

The EIR does consider the need for excavation in association with treatment and conveyance facilities at SC WWTF, and the potential for encountering hazardous substances. Section 4.9, Hazards and Hazardous Materials, explains that prior site investigations during construction upgrades at the SC WWTF encountered soil containing total petroleum hydrocarbons in the diesel and motor oil range. It also acknowledges the SC WWTF site is listed on regulatory agency databases as having an active permitted underground storage tank (page 4.9-3). The discussion in impact 4.9-3 (page 4.9-19) explains further, “Excavation activities may encounter soil with residual levels of fuels, solvents, and/or metals that could expose workers, the public, and the environment to hazardous materials, which would be a significant impact.” To address this impact, the EIR identifies Mitigation Measures 4.9-3a (Health and Safety Plan), and 4.9-3b (Soil Management Plan). Implementation of these plans would ensure that workers are provided appropriate training in the recognition and response to encountering hazardous materials, and that plans are in place that provide procedures for the testing, handling, and disposal of hazardous materials. Appropriate spot testing of soil samples for total petroleum hydrocarbons and lead and other metals (all constituents found and mitigated during the 1990s Secondary Treatment Facility construction) would occur prior to or at the tertiary treatment facility construction commencement.
It is anticipated that some construction equipment and support facilities (e.g., construction trailer) for work at the treatment facility and recharge well sites, would be powered by electricity obtained via temporary connection to the existing electrical grid. The same would apply for construction activities associated with the proposed secondary treated water conveyance at the Santa Cruz Wastewater Treatment Facility. However, it is also conservatively assumed that generators could be required in the interim period between commencement of Project construction activities and establishment of the temporary electrical grid connection. A generator would also be required at each pipeline construction site. Accordingly, in response to this comment and as a staff-initiated change, the EIR’s Chapter 3, Project Description, is revised as presented below. The analysis of potential impacts related to air quality (pages 4.3-17, 4.3-20, 4.3-21), energy (page 4.6-7), greenhouse gas emissions (pages 4.8-12, 4.8-13), and noise (pages 4.13-21, 4.13-23, 4.13-21, 4.13-23) are revised accordingly. Please refer to Final EIR Chapter 4, Final EIR Revisions, for EIR excerpts showing these changes. None of the revision substantially change the analysis, or result in the determination of any new or more significant impacts.

EIR page 3-35 is revised to include the following new paragraph before the heading “Construction Workforce”:

Power Supply

It is anticipated that some construction equipment and support facilities (e.g., construction trailer) for work at the treatment facility and recharge well sites would be powered by electricity obtained via temporary connection to the existing electrical grid. However, as reflected in Table 3-6, it is assumed that generators could be required in the interim period between commencement of Project construction activities and establishment of the temporary electrical grid connection. It is assumed further that a generator would be required at each pipeline construction site.

EIR Table 3-6, Construction Assumptions for the Proposed Project, page 3-26, row “Secondary treated water conveyance”, column “Estimated Construction Equipment (Quantity)” is revised as follows:

- Skip loader (1)
- Back hoe/track hoe (1)
- Fork lift (1)
- Crane (1)
- Scissor lift (1)
- Wiring pulling machine (1)
- Concrete pumping equipment (1)
- Concrete/industrial saw (1)
- Generator (1)

EIR section 3.6.4, Construction Activities, Construction Equipment, and Construction Workforce, explains that the District would require the construction contractor to
follow American Water Works Association (AWWA) standards in construction of Project pipelines. The EIR states (page 3-31), ‘These standards also establish the appropriate separation distances from other existing underground utilities such as underground electrical lines.’ As commenter correctly notes, the Draft EIR’s reference to ‘other existing underground utilities’ includes sanitary sewer lines. Based upon this comment, the Draft EIR Section 3.6.4 (page 3-31) is revised as follows:

**Pipeline Installation**

The District has committed to requiring its contractors to follow American Water Works Association (AWWA) and American Railway Engineering and Maintenance-of-Way Association (AREMA) standards in construction of Project pipelines. The AWWA standards specify the acceptable materials, sizes, placement, and encasement requirements for pipelines. These standards also establish the appropriate separation distances from other existing underground utilities such as underground electrical lines, sanitary sewer lines, and water mains. The AREMA standards provide guidance for construction and operation of rail systems, including for the placement of underground utilities, such as water pipelines, within rail alignments.

L-1-33 As discussed in EIR Section 3.8.1, Regulatory Requirements, Permits, and Approvals, the District could be required to obtain the permits and approvals for Project construction and operation, including obtainment of encroachment permits with the California Department of Transportation, City of Santa Cruz Department of Public Works, County of Santa Cruz Department of Public Works, and City of Capitola Department of Public Works. Coordination with those agencies would confirm rights-of-ways and easement requirements during the design phase and in support of encroachment permit applications.

L-1-34 The District appreciates the City of Santa Cruz’s submittal of letters of support for the funding grants mentioned.
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August 13, 2018

Pure Water Soquel Project CEQA  
4041 Soquel Drive, Suite A-501  
Soquel, CA 95073-3105

RE: Draft Environmental Impact Report for Pure Water Soquel

The City of Santa Cruz Water Department has received and reviewed your Draft Environmental Impact Report (EIR) for the Pure Water Soquel Project (Project) being proposed by the Soquel Creek Water District (District). We understand that the project is a water supply project aimed to supplement natural recharge of the Santa Cruz Mid-County Groundwater Basin with purified water. The project would consist of obtaining treated municipal wastewater from the Santa Cruz Wastewater Treatment Facility and purifying it to produce purified water for groundwater basin recharge. Project components would include an advanced water purification facility or facilities, pump stations and pipelines, and groundwater recharge and monitoring wells.

In planning for water security, the City and District have taken many factors into consideration in the development of the water supply alternatives including but not limited to available resources, conjunctive use, and opportunities for regional collaboration. The City and District have been working independently and together since early 2015 on the implementation of the two plans: the Community Water Plan, and the implementation plan recommended by the Water Supply Advisory Committee (WSAC). There are several common resources being evaluated by the City and the District including excess water from the City’s surface water sources, treated wastewater from the City’s Wastewater Treatment Facility, and seawater. Due to the common resources, and similarities in timelines, there are opportunities for collaboration between the two agencies as well as potential conflicts due to misaligned schedules.

The District prepared the Community Water Plan in 2015 to be used by the District as a “roadmap” to meeting sustainability goals by 2040. The plan is composed of three main areas of action: promoting water conservation, managing groundwater proactively, and seeking additional water supplies. The Draft EIR provides a summary and status of each of these areas of action including River Water Transfers with the City of Santa Cruz as a possible water supply project.

In fall 2015, the Santa Cruz City Council accepted the Final Report on Agreements and Recommendations by the Water Supply Advisory Committee. This report provided an “Implementation Plan and Timeline” for obtaining water security through the study of a package of alternatives: continuing efforts towards increased conservation, groundwater storage options through passive and/or active recharge, and Advanced Treated Recycled Water or Desalination as supplemental or replacement supply in the event groundwater storage proves insufficient to meet the water security goals established by the WSAC. In addition to supply alternatives to be evaluated, the WSAC provided target dates for various milestones and decisions, and a fairly definitive time line for completing the evaluation phase, implementation phase, and attaining water security for the City of Santa Cruz.

The Council further directed the Water Commission to assume policy-level oversight of the implementation of the WSAC agreements and recommendations, directed staff to integrate the WSAC-recommended water supply packaged strategy into the City’s Urban Water Management Plan update, and supported staff’s continuing public information and engagement on water supply strategy. In early 2016,
the Water Commission accepted a detailed initial work plan from staff and has been reviewing and advising staff as it implements that work plan.

At this time we have the following comments on the Draft EIR; comments are both specific to various sections of the document as well as broader comments related to the description, representation, assumptions and conclusions drawn about the alternatives.

Near Term River Water Transfers: The WSAC Final Report describes two phases of river water transfers to increase water supply to the City of Santa Cruz water customers: a near term plan that would use the City’s North Coast sources as a pilot project geared towards understanding the technical or operational opportunities and limitations of in lieu water transfers. The City and District have been working on this alternative since early 2016 with the signing of a “Cooperative Water Transfer Pilot Project for Groundwater Recharge and Water Resource Management Between City of Santa Cruz and Soquel Creek Water District” that frames the terms and objectives of the pilot study, and a consultant-led water quality analysis evaluating this alternative through bench top analysis and if necessary pipe loop studies. The findings of the bench top analysis are promising and the City is anticipating furthering this study through actual water transfers either this or next winter; the timing is dependent upon the District having several of its existing wells functioning more reliably. The City looks forward to working with the District on operational protocols to assist with developing the information on this alternative. The conditions of delivery as described in the agreement mentioned above can and should be tested during this step to improve longer term success of this scenario.

The City has the following comments:

• Section 7 of the Draft EIR describes Alternative 2, Reduced Project with Treated Surface Water Purchase and states that this alternative requires the guarantee that water would be available to the District yearly, and not just during drought years. An analysis should be completed that confirms the need to receive 300 acre feet each year as opposed to a potentially varied regime of water transfers that achieve the same supply reliability objectives. The City is strongly committed to the success of a project that improves water reliability for the City, other agencies and has beneficial impacts to the basin and without evidence to the contrary believes a modified operational approach may be equally successful.

• The District’s analyses should distinguish losses that result from an in lieu project from the losses that result from the Project. Understanding the loss rates in the basin will be needed to fully inform the feasibility of the Project and its potential alternatives.

• The Draft EIR should be updated with most recent findings and recommendations of the joint bench top analysis. The bench top exercise is being completed and the Draft EIR should reflect the findings, next steps, and Board recommendations.

Long Term River Water Transfers: The long term river water transfers would maintain the transfers occurring in the near term scenario described above using the volumes available from the City’s North Coast sources as well as potentially transferring larger volumes of the City’s excess surface water to neighboring water agencies. In addition to the District, these may also include Scotts Valley and San Lorenzo Valley Water Districts. A number of modifications to existing water rights would be required for the success of this scenario. These include providing the City with the ability to divert and deliver water with more flexibility than is currently provided in the language of the state-issued permits and rights. Additionally, the point of use needs to be changed to allow for the transfer of water to the District. These changes are consistent with and supportive of local and state objectives of conjunctive use and regional collaboration. The City is underway in the analysis of this option and anticipates launching the CEQA process later this calendar year.

The City has the following comments:

• Page 7-17 of the Draft EIR references City’s Resolutions NS-17,372 and NS-21,056 as potential impediments to the success of the water transfers scenarios. Policy decisions related to the North
Coast sources have been intended to limit physical growth along the North Coast corridor, not the diversion and allocation of the water resources obtained from these sources.

Page 7-27 of the Draft EIR describes alternatives considered but rejected from further consideration. Included in this table is the Large Scale Surface Water Purchase as a standalone alternative supply source. The project is described with the following limitations; the City has the following comments:

- Would not be reliable during drought. An analysis should be completed that substantiates the need to receive 300-1,500 acre feet each year as opposed to a potentially varied allotment of water transferred with annual or biannual maximum transfers that achieve the same supply reliability objectives. (This comment applies to both the Near Term and Long Term River Water Transfer scenarios.)
- Does not provide additional environmental benefits to surface waters. The City is negotiating a Habitat Conservation Plan with state and federal agencies with a primary objective of providing sustainable fisheries in all life stages. The analyses of both the near and long term water transfer projects includes the ability to meet HCP objectives.
- Feasibility remains uncertain, as availability (i.e., quantity and legal) and certainty of water supply would be managed by City of Santa Cruz. The City is on schedule with its evaluation of alternatives as described in the WSAC Final Report and anticipates the ability to make conclusive agreements by the end of 2020, at the latest. The City recognizes that a successful groundwater storage project could provide significant drought supply for the City as well as a symbiotic relationship between projects, meeting the District’s objectives as well as those of the City’s and is interested in negotiating an agreement that supports these outcomes.
- Does not meet key project objectives of timeliness, affordability, and drought resistance. The City has commented on these items above.

Please note that the City is also developing cost estimates for each of the WSAC alternatives that will provide needed information to the District in its evaluation of alternatives. While the concept of river water transfers assumes use of the City’s existing surface water treatment plant, Graham Hill Water Treatment Plant (GHWTP), modifications and treatment improvements are required at the GHWTP to maintain water quality goals of treated water. Having not been upgraded in any significant way since the late 1980s, the City is evaluating the need for process improvements to meet existing City demands as well as the demands of the near and long term water transfers. In the analysis of treatment improvements, the City is looking at costs to both City customers as well as potential regional partners in future water transfers. Contemporary treatment processes are extremely sophisticated and capable of meeting water quality regulations under a range of source water quality conditions. The cost associated with this level of treatment and reliability include capital expenditures, energy demands, and the handling of treatment byproducts (i.e., solids). The City continues to analyze the range of processes available to produce the required water quality for the variety of end-uses being contemplated. Estimates of costs to City customers and potential regional partners are expected to be available in the next 12 months, plus or minus.

**Advanced Treated Recycled Water:** As part of the WSAC plan, the City is also evaluating the potential use(s) of Advanced Treated Recycled Water and has recently completed the Recycled Water Feasibility Planning Study (RWFPS, June 2018). This two year study was a partnership of the Water and Public Works Departments of the City, and included the District and others as stakeholders in the evaluation of beneficial uses of treated wastewater. Following the development of over 40 potential projects, a screening process that included input from all stakeholders resulted in two preferred alternatives and three reuse opportunities meriting further evaluation. (Refer to RWFPS for additional information.)

The Preferred Alternatives are for non-potable reuse in the City’s service area and include:
- the Santa Cruz Public Works Department Title 22 Upgrade Project and
- the BayCycle Project.
Additional Reuse Opportunities include:

- Coordination with Pure Water Soquel. Continue to work closely with the District to support the evaluation of the Pure Water Soquel project including, but not limited to, the delivery of source water and considerations for benefits of shared infrastructure.

- Explore Groundwater Replenishment in the Beltz Wellfield. Replenish the Santa Cruz Mid-County Groundwater Basin in the Beltz Wellfield area, through a collaborative project with Pure Water Soquel or as an independent City-led project.

- Explore Groundwater Replenishment in the Santa Margarita Groundwater Basin (SMGB). Continue regional discussions related to the benefits and limitations for a regional project in the SMGB, which has the potential to make the region more resilient in the long term.

The City has the following comments:

- The City's RWFPS concluded that supplying the District with treated wastewater from the City's WWTF would not impede the City's efforts in pursuing its own recycled water project pursuant to the WSAC recommendations. As the analysis of the Pure Water Project continues, the City urges the District to continue to work with the City in understanding the opportunities of this shared resource and to design and construct the Project, should it go forward, with other-agency projects in consideration.

- The planning and design of the Project should avoid any impacts to the City's water supply system including distribution piping, pump stations and service lines. If any temporary or permanent impacts to our distribution facilities are anticipated, we request your early coordination with the Water Department.

- Due to the constrained availability in public rights of way, we encourage a high level of scrutiny when considering pipeline alignments. The installation of these larger-diameter pipes could consume a significant amount of already-limited space and reduce opportunities for other projects to proceed. They should be sized and located so as to not impede future projects from developing.

City Groundwater Storage: Finally, the City urges the District to consider the proposed Project as it may relate to future City groundwater storage opportunities considered in the WSAC recommendations. Analysis should include continued investigation into how large the Project needs to be to meet the District's objectives, how long the Project must operate to meet the District's objectives, and what the opportunities and limitations of the Project are relative to potential future groundwater storage opportunities such as in lieu, aquifer storage and recovery, and City indirect potable reuse project(s).

If you require any additional information, please do not hesitate to contact Ms. Sarah Easley Perez at 831-420-5327. We appreciate the opportunity to comment on this Draft Environmental Impact Report.

Sincerely,

Rosemary Menard
Water Director
City of Santa Cruz Water Department

cc: Heidi Luckenbach
    Sarah Easley Perez
3.4 Response to Comments from City of Santa Cruz, Water Department; Rosemary Menard, Water Director (August 13, 2018) (Comment Letter L-2)

L-2-1 The long standing interrelated planning relationship between the City and District, particularly regarding the District Community Water Plan and the City’s efforts associated with the implementation plan recommended by the WSAC is noted, and the District looks forward to continuing to implement the 5-year pilot study with the City, and contributing to City planning associated with the implementing the WSAC implementation plan recommendations. This introductory comment is followed by more detailed comments and responses to these comments focuses on the Pure Water Soquel Project and EIR, and specific comment about the EIR or any environmental issue related to the Project raised in the comments.

L-2-2 Comment noted. Soquel Creek Water District has received a permit amendment from the CA State Water Resources Board that would allow for introduction of surface water supplies in the District distribution system and began in early December 2018.

L-2-3 EIR Section 3.3, Project Objectives states that the overall goal of the Project is to recharge the local groundwater basin with 1,500 afy of purified water for indirect potable reuse and thereby improve its reliability as a water supply source. Thus, the Project’s treatment facilities described in Section 3.5, Proposed Project Components, would be capable of producing 1.3 million gallons per day (mgd), or approximately 1,500 afy, of purified water - the estimated volume required to offset the portion of the basin’s cumulative groundwater overdraft attributable to District groundwater pumping. In considering potential CEQA alternatives to the Project, the overall goal (or basic objective) of a system with a capacity of 1,500 afy was necessary. As described in EIR Section 7.2, Approach to CEQA Alternatives Selection, consistent with CEQA, the approach to alternatives selection for this EIR focused on identifying alternatives that: (1) could meet most of the basic objectives of the project while reducing one or more of its significant impacts, (2) could foster informed decision-making and public participation, and (3) could be feasibly implemented. CEQA Guidelines Section 15364 defines “feasible” as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic,
environmental, legal, social, and technological factors.” CEQA Guidelines Section 15126.6(f)(1) states that “the factors that may be taken into account when addressing the potential feasibility of alternatives include site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent).”

The EIR does not identify any environmental impacts that could result from ‘losses’ from the Project. Further, as discussed in response to comment L-2-3, the Project capacity was designed purposely to meet the overall Project goal of producing 1,500 afy of additional supply for groundwater replenishment. Because the EIR does not identify any environmental impacts that could result from losses from the Project, the identification of CEQA Alternatives did not include consideration of alternatives with a focus on losses. Further, it is noted that the Project is unlike Aquifer Storage and Recovery projects where some water recharged into the ground is considered a ‘loss’ because the same volume cannot be extracted at a later date. For this project, the volume of purified water placed underground through the recharge wells is considered to all be put to beneficial reuse to raise protective water levels, replenish the groundwater basin, and prevent a seawater intrusion barrier.

L-2-5 In response to this comment, EIR page 7-16, paragraph 4 (continuing on page 7-17) has been revised:

In order to undertake this portion of Alternative 2, the 5-year pilot study (2015-2020) evaluating the feasibility and suitability of a surface water purchase would need to be completed, with results ensuring that the surface water source would be compatible with the District’s infrastructure and water supply. Compatibility considerations include pipe corrosion, which could result in aesthetic issues (e.g., brown or red colored water), increased levels of corrosion byproducts (e.g., lead, copper), among other issues. The pilot study could result in identification of additional water quality treatment that would need to be implemented before surface water could be blended with other District water supplies, long-term. The pilot study is currently underway and bench scale testing has been completed and pilot testing began December 3, 2018, laboratory data collection and analysis is nearing completion and may identify an initial need for water quality treatment. This phase of the study would be followed by testing of the recommended treatment approach within a sub-area of the District’s service area, with additional sampling and analysis to determine final recommendations for water quality treatment approaches (District, 2018).
In addition, the following reference has been added to EIR page 7-36:

Soquel Creek Water District (District), 2018. Presentation of Surface Water Purchase Pilot Project Bench Scale Testing Results in collaboration with City of Santa Cruz Water Department, July 17.

L-2-6 The description of the modifications to existing water rights and additional analysis required to implement long term water transfers within this comment is consistent with EIR Section 7.5.4, Participation in City of Santa Cruz’s In-lieu and/or Aquifer Storage and Recover Project(s) as an Alternative Supply Source. This comment is noted.

L-2-7 Comment noted. The District appreciates the Department of Water’s input; however, it is our understanding that City Council consideration of consistency with the 1987 and 1993 restrictions regarding North Coast water supply connections is required. Thus, the EIR text described Alternative 2, Reduced Project with Long-term Surface Water Supply and noted that the City would need to consider whether their 1987 and 1993 restrictions (adopted within City resolutions) formalizing the ban of additional connections to North Coast water supply sources would apply to a long-term agreement with the District is accurate as presented on EIR page 7-17, paragraph 3.

L-2-8 Please see the response to comment L-2-3 regarding the overall Project goal to recharge the local groundwater basin with 1,500 afy of supplemental water.

L-2-9 Please see the response to comment L-2-3 regarding the overall Project goal to recharge the local groundwater basin with 1,500 afy of supplemental water. As discussed, the consideration of potential alternatives to this Project included the ability of an alternative to provide up to 1,500 afy, with facility sizing and operational capacity that would allow for basin recovery in approximately 20 years. EIR Section 7.5.4, Participation in City of Santa Cruz’s In-lieu and/or Aquifer Storage Project(s) as an Alternative Supply Source considered whether a long term water transfer project could meet the objectives of the Pure Water Soquel Project, and notes that, with a commitment to provide the Pure Water Soquel Project with 1,500 afy of supplemental water supply, this alternative could have additional impacts on surface streams as it is unclear at this time whether the City could provide the Project with 1,500 afy of supplemental water supply (meeting the goal of the Project) while meeting their primary objective of providing sustainable fisheries in all life stages.

L-2-10 Please see the response to comment L-2-7.

L-2-11 The District looks forward to reviewing the City’s cost estimates for each of the WSAC alternatives, as it relates to the District’s Community Water Plan. However, regarding CEQA Alternatives to the Pure Water Soquel Project, please see the response to comment L-2-7, as it relates to the timeliness of long-term water transfers compared to the Project.
L-2-12 This comment, indicating that the City has sufficient treated wastewater to serve the Project without impeding the City’s efforts in pursuing its own recycled water project pursuant to the WSAC recommendations, is noted. The District will continue to coordinate with the City on the use of this shared treated wastewater resource.

L-2-13 As discussed in EIR Section 3.8.1, Regulatory Requirements, Permits, and Approvals, the District could be required to obtain permits and approvals for Project construction and operation, including a City of Santa Cruz Department of Public Works Encroachment Permit. This would require that the District coordinate with the City (as well as Santa Cruz County and the City of Capitola) regarding pipeline installation and required regulations and standards, such as any mentioned in this comment.

L-2-14 The District anticipates operation of the facility to be as long as needed to contributing the GW basin’s protective levels and creating the seawater intrusion barrier to keep the freshwater/seawater interface from moving farther inland and under this environmental analysis, a useful life of 50 year of operations is assumed (see EIR Section 3.7) which also complies with Project’s objective of the District’s supply objectives and state mandate under the Sustainable Groundwater Management Act (Section 1.1). The District recognizes that the City also has a future project that would utilize the groundwater basin as a storage project to meet their sole objective of meeting drought needs and that cumulative operations, and this effort is considered in the Cumulative Impact discussion in EIR Chapter 5 and is listed as cumulative project 19. EIR Section 5.2.10, Hydrology – Groundwater, considers the cumulative implementation of regional water supply projects, including the City’s projects and whether the cumulative projects could result in detrimental declines in groundwater levels, degradation of groundwater quality, and the exacerbation of seawater intrusion. The cumulative analysis was general as many of the projects are at the feasibility stage of evaluation (including the City project) and cumulative impacts could not be quantified. Overall, the cumulative impact analysis determined that collective implementation of the projects could improve groundwater resources in the Santa Cruz and Pajaro Valley Basins and would not result in detrimental declines in groundwater levels, degradation of groundwater quality, or exacerbate seawater intrusion.
Hello,
Below are comments from the Santa Cruz County Sanitation District on the Pure Water Soquel DEIR.

Impact 4.17-1, Impact CU-UTL, 3.8.1
The Chanticleer site is located in the SCCSD “Rodeo Basin”, which has been declared by the SCCSD Board as overcapacity. New non-residential connections in this basin are limited to 1,000 gpd of discharge. The DEIR discusses a separate 8” brine conveyance from the AWPF at the Chanticleer site to the City of Santa Cruz WWTP, however the DEIR is silent on whether a new connection to the SCCSD sanitation system will be required, and if so, what the expected discharge will be.

SCCSD is putting together a project to resolve the overcapacity declaration, however that may take 3+ years. SCCSD staff is available to discuss options (such as a connection point outside of the Rodeo Basin) with District staff if the expected discharge will exceed 1,000 gpd.

Section 3.8.1 lists SCCSD as a local agency which may require a sewer connection and discharge permit. As discussed above, please provide more information on whether a connection to SCCSD’s system is needed and what the expected discharge amount is.

3.6.4 Construction Activities / Bridge Crossings (Page 3-33) / 5.2 Cumulative Impacts and Mitigation Measures
As discussed in the DEIR (Page 5-5, #20), SCCSD is currently evaluating a secondary sewer force main project from the D.A. Porath pump station at Lode Street to the City’s WWTP. While alignment alternatives are still being evaluated, the is a potential that SCCSD’s force main alignment and the District’s project alignment may be similar in some locations, or could be beneficial for both agencies if the alignments are similar. One place is at the crossing of the San Lorenzo River. A potential alternative crossing to consider, which SCCSD would be interested in partnering, is a new pedestrian bridge that could accommodate the District’s pipes as well as SCCSD’s. SCCSD’s timing for construction of the project is likely 5-10 years out, depending on funding availability.

Kent Edler, P.E.
Santa Cruz County Department of Public Works
Santa Cruz County Sanitation District
701 Ocean St. Room 410
Santa Cruz, CA 95060
(831) 454-2791

http://www.dpw.co.santa-cruz.ca.us/Home/Sanitation.aspx
3.5 Response to Comments from County of Santa Cruz, Department of Public Works, Sanitation District; Kent Edler, P.E. (August 13, 2018) (Comment Letter L-3)

L-3-1 Please see the response to comment L-4-13 regarding the Project’s effect on the wastewater system in the Live Oak area. As discussed, backwash water and other operational water use would not be substantial and would not affect the wastewater system capacity in this area.

L-3-2 Please see the response to comment L-4-5.
Date: August 13, 2018

To: purewatersoquelceqa@esassoc.com

From: John Ricker, Water Resources Division Director

Subject: Comments on Pure Water Soquel DEIR

Thank you for the opportunity to comment on the Draft Environmental Impact Report (DEIR) for the Pure Water Soquel Project. The County supports the District’s efforts to replenish the groundwater basin and develop a sustainable water supply. We also support the joint use of sites, optimization of economic development for all lands in the County, and minimum impacts to area residents including minimization of construction impacts.

Following are comments on the Pure Water Soquel Project DEIR from Santa Cruz County Environmental Health Division of the Health Services Agency and County Sanitation District Staff.

1.2.1 Background: The DEIR states that an estimated 3,000 afy would be needed to address basin-wide overdraft. No citation or basis for this statement is offered and it is most likely inaccurate. (Also mentioned again on page 6-2.)


3.5.2 Conveyance System: Will the current conveyance agreement provide for minimum separation requirements between drinking water and wastewater lines? Would the proposed changes violate any existing easement agreements, other setbacks, or present a legal challenge in any way?

3.6.4 Construction Activities / Bridge Crossings (Page 3-33) / 5.2 Cumulative Impacts and Mitigation Measures: As discussed in the DEIR (Page 5-5, #20), SCCSD is currently evaluating a secondary sewer force main project from the D.A. Porath pump station at Lode Street to the City’s WWTP. While alignment alternatives are still being evaluated, there is a potential that SCCSD’s force main alignment and the District’s project alignment may be similar in some locations, or could be beneficial for both agencies if the alignments are similar. One place is at the crossing of the San Lorenzo River. A potential alternative crossing to consider, which SCCSD would be interested in partnering, is a new pedestrian bridge that could accommodate the District’s pipes as well as SCCSD’s. SCCSD’s timing for construction of the project is likely 5-10 years out, depending on funding availability.

3.7.1 Facilities Operation and Maintenance, Treatment System: The proposed treatment system appears to be very effective at producing a very good quality water for recharge. What safeguards will be put in place to ensure that the treatment process operates as designed and is not subject to disruption by any
variations in source water quality? It would be useful to specify which water quality parameters would be tested and how often and to what specification would be required to confirm that the finished water met requirements before injection into the aquifer. These standards are likely to be an essential part of the permitting requirements, so this finished water quality matrix should be mentioned. This is also an aspect of the operations and maintenance scope, which may help address total cost when selecting one process over the other. This is discussed briefly on p. 4-10-48, but more detail would be helpful. It would also be useful to describe the testing of post-treatment stabilization processes to ensure that those are consistent and effective (p.4-10-53).

Furthermore, if the finished water were to not meet necessary water quality parameters, and thus could not be legally injected into the aquifer, what contingencies are in place to divert the out of spec. finished water to avoid an illegal discharge? Will the water be able to recirculate back thru the treatment process? Will a large enough storage tank be set aside to test and hold the water volume until it meets spec. (RO process tank? If so, volume? Page 3-11 AWPF section just states 10 ft in height). Would an additional tank increase the proposed footprint of each site? Or, will the water be able to discharge to the sanitary sewer, along with the backwash and cleaning wastes from the treatment system, (as specified on page 3-7 Treatment Technology)? This may also need to be a standard option during times of overflow, maintenance, etc. Or, will the finished water effluent only need to meet spec. a percentage of the time? Lastly, is there an option for surface irrigation at sites other than La Barranca Park, (Cabrillo College, Twin Lakes, Willowbrook, or Monterey)? If none of these contingencies have been planned for, please explain why not.

4.9 Hazards and Hazardous Materials, Proposed Conveyance System – There are many closed and several active HazMat Cleanup Program cases along with RWQCB Lust cases that are not reflected in Figure 4.9-1. This could especially prove to become problematic once digging begins. Several of these sites have been closed under the State’s “Low Threat Closure Policy”. Under this policy, many of the closed sites still have high levels of contamination within the groundwater and/or soil. Additional cases can be found on the State Water Board’s Geotracker and DTSC’s Envirostor websites, and should be identified on Figure 4.9-1. See: http://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=santa+cruz+ca

We can also provide additional listing of sites from our Hazardous materials files.

Furthermore, on page 4.9-3 to 4.8-5 the draft EIR states, “...there are numerous closed sites along all of the conveyance route options have been cleaned up to the satisfaction of regulatory agencies. The closed sites may have residual concentrations of chemicals in soil that are at concentrations below regulatory screening levels but still above detection levels.” This isn’t entirely accurate because some of the sites have been closed with high levels of remaining contaminants but, were allowed to close due to their high cost/low benefit value and location next to utility lines. Thus, if conveyance lines go into these areas, they may exposed to contaminants (vapors, Lead, Arsenic, etc.) because they are prone to following the path of least resistance (via trenches, pipes, and other low resistance pathways).

4.10.2 Groundwater, Environmental Setting: No private wells, State Small water systems, or Small Public Water Systems are mentioned in this section or indicated on the mapped information. Non-municipal users use a similar amount of water as the City or the Central Water District.

Figure 4.10-9 and 10 show private well locations as simulated locations, based on the model grid. However, the locations of most private wells and small water system wells are known, and should be plotted on the figures just as the district wells and the institutional wells are located on the figures.
Water Supply Distribution Systems

Individual Water Systems, State Smalls, or Small Public Water Systems are mentioned in this section nor indicated in the mapped information.

Wastewater

Municipal treatment is discussed however, on-site wastewater treatment is not.

Impact 4.17-1, Impact CU-UTL, 3.8.1

The Chanticleer site is located in the SCCSD “Rodeo Basin”, which has been declared by the Santa Cruz County Sanitation District (SCCSD) Board as overcapacity. New non-residential connections in this basin are limited to 1,000 gpd of discharge. The DEIR discusses a separate 8” brine conveyance from the AWPF at the Chanticleer site to the City of Santa Cruz WWTP, and it discusses discharges to the sanitary sewer line. What would be the expected discharge to the sanitary sewer in terms of volume and quantity.

SCCSD is putting together a project to resolve the overcapacity declaration, however that may take 3+ years. SCCSD staff is available to discuss options (such as a connection point outside of the Rodeo Basin) with District staff if the expected discharge will exceed 1,000 gpd.

If you have questions or would like additional information relative to these comments, please contact me and I can direct you to the appropriate staff person.
3.6 Response to Comments from County of Santa Cruz, Health Services Agency, Environmental Health; John Ricker, Water Resources Division Director (August 13, 2018) (Comment Letter L-4)

L-4-1 This introductory comment is followed by more detailed comments and does not include specific comment about the EIR or any environmental issue related to the Project and so no response is required. This comment is noted.

L-4-2 The estimate of basinwide sustainability needs is based on the 10/27/2015 HydroMetrics WRI memo, Estimated Effects on Sustainable Yield and Pumping Goals of Climate Change and Updated Basin Consumptive Use Using Water Balance Approach, provided for Community Water Plan. Further, the Project capacity is based also on that memo, and is the most up to date information on District and basinwide sustainability needs available at the time of Project planning initiation. However, it is noted that the District, City of Santa Cruz, and other regional water supply agencies are participating in regional water supply sustainability planning as member agencies of the Santa Cruz Mid-County Groundwater Agency, which would further clarify and update basinwide sustainability needs.

L-4-3 In response to this comment and as a staff initiated text change; the EIR (page 3-7, paragraph 1) has been revised:

**Treatment Technology**

The District would utilize advanced purification technology to treat the source water to Indirect Potable Reuse (IPR) standards, which would allow for groundwater replenishment via recharge wells, as well for surface irrigation. Title 22, Social Security, Division 4, Environmental Health, Chapter 3, Water Recycling Criteria, Article 5.2, Indirect Potable Reuse: Groundwater Replenishment - Subsurface Application, of the California Code of Regulations (CCR) sets forth the treatment requirements for IPR projects involving groundwater replenishment. In accordance with the Title 22 IPR regulations, the Project would utilize ultrafiltration (UF) or microfiltration (MF) to yield a tertiary-level of treatment, followed by reverse osmosis (RO) and an ultraviolet light-based advanced oxidation process (UV AOP) to further purify the water to meet drinking water requirements and remove potential constituents of emerging concern (CECs). This level of purification would exceed recycled water requirements for surface irrigation application, as set forth in CCR Title 22, Article 3, Uses of Recycled Water. Pursuant to 22 CCR Section 60304, recycled water must undergo a disinfected tertiary level of treatment prior to use for surface irrigation, but need not undergo the additional RO and oxidation treatment process steps required for IPR. Backwash and cleaning wastes from the treatment system would be discharged into the sewer collection system. Brine...
from the treatment system would be piped back to the SC WWTF, blended with the treated effluent, and discharged via the existing outfall located about 1 mile offshore into the Monterey Bay MBNMS. The operation of treatment and brine disposal systems are described further in Section 3.7.1, Facilities Operations and Maintenance, below.

L-4-4 Please see EIR 3-31, regarding Pipeline Installation, which indicates that the District has committed to requiring its contractors to follow American Water Works Association (AWWA) and American Railway Engineering and Maintenance-of-Way Association (AREMA) standards in construction of Project pipelines. The AWWA standards specify the acceptable materials, sizes, placement, and encasement requirements for pipelines. These standards also establish the appropriate separation distances from other existing underground utilities such as underground electrical lines. The AREMA standards provide guidance for construction and operation of rail systems, including for the placement of underground utilities, such as water pipelines, within rail alignments.

As discussed in EIR Section 3.8.1, Regulatory Requirements, Permits, and Approvals, the District could be required to obtain the permits and approvals for Project construction and operation, including obtainment of encroachment permits with the California Department of Transportation, City of Santa Cruz Department of Public Works, County of Santa Cruz Department of Public Works, and City of Capitola Department of Public Works. Coordination with those agencies regarding rights-of-ways and easement requirements during the design phase will be a part of and support the encroachment permit applications. In addition, coordination with the SWRCB for compliance with the Title 22 Criteria for groundwater replenishment.

L-4-5 The commenter correctly notes that the SCCSD force main project is considered a cumulative project in the Pure Water Soquel EIR. The District will continue to coordinate with the SCCSD regarding pipeline alignments during the final design and planning phase for the Project, should it be approved. However, it is noted that the Pure Water Soquel Project does not include a pedestrian bridge over the San Lorenzo River and it is unclear whether the SCCSD initial planning and environmental review would be complete, prior to completion of the Pure Water Soquel final pipeline design and construction.

L-4-6 As discussed on EIR Page 3-39, facilities operations and maintenance, monitoring, and reporting activities that would be undertaken for the Project consistent with the Groundwater Replenishment Reuse Project requirements under California Code of Regulations Section 60301.390. Accordingly, a monitoring plan would be developed per the requirements within Section 60320 of California Code of Regulations and as part of the Title 22 engineering report, to plan for monitoring and reporting of various water quality parameters. Water quality monitoring, including groundwater, purified water, and the water at various monitoring wells, would be conducted for the constituents per 60320. There are numerous constituents required per various sections
in 60320, such as constituents that include maximum contaminant limits, secondary maximum contaminant limits, total organic carbon, priority toxic pollutants, total nitrogen, nitrate, nitrite, and other chemicals specified by DDW or RWQCB. A stabilization treatment and monitoring approach would be developed during design, including monitoring of specific parameters to ensure that appropriate stabilization is in place. Process controls would adjust chemical dosing and/or shut down recharge to the wells in the event that adequate post-treatment stabilization is not achieved.

Within the advanced treatment train, routine monitoring would be conducted per Section 60320.201 for various constituents, that would alert operators to any potential process issues. In the event of process disruption or decrease in influent water quality, process monitoring would trigger alarms and would shut down the system and redirect any water (source water or finished water) not meeting the required water quality specifications.

L-4-7 Should the finished water not meet water quality requirements, operation of the AWPF would be stopped until the process disruption is addressed, and the water would be stored and diverted through the brine line back to the SC WWTF outfall or discharged to the sanitary sewer; with coordination and approvals from the applicable Department of Public Works. For diversion through the brine line, the water redirected to the WWTF outfall would still be able to meet the NPDES permit requirements for discharge and would remain suitable for discharge even if it is not suitable for recharge into the aquifer. A finished water equalization tank is included in the preliminary design of the AWPF. This tank would be adequately sized (volume determination during the detailed design phase) for diverting water, if required, back to the SC WWTF. Off-spec water would not be directly returned through the AWPF. The AWPF would divert any flow until the treatment train is confirmed to be operating within operational and water recharge quality specifications.

Backwash and cleaning wastes from treatment process would be sent to the sanitary sewer and directed to the WWTF. The flow to the AWPF would be controlled from the SC WWTF and be held constant, thus, overflow at this facility is extremely unlikely; however, provisions would be made in the design to redirect any excess flow to be rerouted back to SC WWTF.

The La Barranca and the fill station at SC WWTF are the only surface irrigation sites considered as part of this project by SC WWTF. For the District, the primary focus of the Pure Water Soquel project is seawater intrusion prevention. With this focus, District is only planning to recharge the purified water in the ground for seawater intrusion prevention and has not selected any sites for irrigation using purified water. However, as discussed on EIR page 3-13, specific irrigation customers have not been identified, but the Project includes potential for connection points for future irrigation customers.

Also see the response to comment L-4-13.
The GeoTracker and EnviroStor websites that list hazardous materials sites were rechecked on October 29, 2018. No additional active hazardous materials sites were noted along the proposed pipeline routes, as shown on Figure 4.9-1. As stated on page 4.9-3, the EIR acknowledges there are numerous closed hazardous materials sites in the project vicinity and acknowledges that residual levels of chemicals may be present at these sites. The potential presence of residual levels of chemicals, as well as the potential to encounter currently unknown hazardous materials sites, is the reason for Mitigation Measures 4.9-3a, Health and Safety Plan, and 4.9-3b, Soil Management Plan. These two mitigation measures are designed to inform workers of the potential to encounter contaminated soil and establish procedures for responding to such circumstances. In addition to checking the GeoTracker and EnviroStor websites, the County of Santa Cruz Environmental Health Department Site Mitigation List was checked, as noted on page 4.9-5; no additional sites were noted. If the County has knowledge of additional active sites that are along the proposed pipeline routes, please provide that information at your earliest convenience.

As discussed in response to comment L-4-8, the District is aware of the potential to encounter contaminated soil along the proposed pipeline routes. The EIR’s Section 4.9 identifies Mitigation Measures 4.9-3a, Health and Safety Plan, and 4.9-3b, Soil Management Plan to reduce potential effects of such encounter. These two mitigation measures are designed to inform workers of the potential to encounter contaminated soil (both in-situ and excavated soil) and establish procedures for responding to such circumstances. Also note that while residual levels of contaminants may remain, the sites would not have been closed if hazardous materials in a liquid (more mobile) state were present. With implementation of the Soil Management Plan, residual contamination in soil along the selected pipeline route, if any, would be below levels that would pose risk to workers or the public, and would therefore pose no risk to pipeline materials.

The EIR’s Section 4.10, Hydrology Resources - Groundwater (Section 4.10.2, Environmental Setting) acknowledges that there are private water supply wells, small water systems, and institutional wells in the Project area and the groundwater modeling conducted to evaluate the aquifer response of the Project accounts for these non-District water systems. The purpose of Figure 4.10-4 is to show District wells, City of Santa Cruz wells, and monitoring wells. The private wells and smaller systems are not plotted because it was not necessary for the purposes of the figure. As mentioned in the comment, Figures 4.10-9 and 4.10-10 show the smaller well systems, private wells and institutional systems that were simulated. For the purposes of modeling, the groundwater model upon which the EIR’s analysis relies on simulated private pumping based on properties that aren’t connected to the District. The groundwater model accounts for stresses on the Santa Cruz Mid-county Groundwater Basin, including private, institutional, and non-District wells that extract groundwater from the Purisima aquifer. The only institutional pumping simulated in the Project recharge area is Cabrillo College, whose wells are shown. Small water systems such as Pine Tree Lane and Potbelly Beach were simulated as private wells 8090, 8091, and 8196. It is
sufficient for the evaluation of groundwater effects in the EIR to simulate private wells and small systems; plotting their actual locations is not necessary to adequately analyze the environmental impacts. That said, the locations of individual non-District private wells and small water systems would be identified in the engineering report that would be prepared to support project permitting.

L-4-11 Section 4.17 concerns the potential for the Project’s to:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (RWQCB);
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Have insufficient water supplies available to serve the Project from existing entitlements and resources, or if new or expanded entitlements are needed;
- Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has inadequate capacity to serve the Project’s projected demand in addition to the provider’s existing commitments;
- Be served by a landfill with insufficient permitted capacity to accommodate the Project’s solid waste disposal needs; or
- Fail to comply with federal, state, and local statutes and regulations related to solid waste.

The water system whose capacity would be affected by the Project is that of the Soquel Creek Water District. The District’s water system is described in sufficient detail within Section 4.17.2, Environmental Setting, to support the impact analysis in 4.17-4. The Project would not rely upon, nor would it otherwise affect the capacities of individual, State, or small public water systems, and therefore detailed setting information on such systems is not needed to support an impact discussion. Nevertheless, for the benefit of the general public, in response to this comment and as a staff initiated text change; the EIR (page 4.17-1) has been revised to include a new paragraph above the heading Wastewater:

**Individual and Small Water Systems**

According to the Santa Cruz County Health Services Agency, there are approximately 130 small water systems in Santa Cruz County, serving roughly 2,500 households. Additionally, there are at least 8,000 private wells in Santa Cruz County that serve between 1 and 4 households. These wells and small systems are primarily located within unincorporated areas of the county, serving individual parcels and small communities. The majority of these small water
systems (those serving between 5 and 199 water connections) are regulated by the County, acting as a Local Primacy Agency for the California Public Health Department. Through its Drinking Water Program, the County helps to ensure that small public water supply systems deliver a reliable and adequate supply of groundwater or surface water to their customers (County of Santa Cruz, Undated).

In addition, the following reference has been added to EIR page 4.17-11


As explained in response to comment L-4-11, the Section 4.17 is primarily concerned with the capacities of utility systems that could be affected by the Project. The wastewater system whose capacity would be affected by the Project is that of the Santa Cruz County Sanitation District (SCCSD). The SCCSD’s wastewater system is described in sufficient detail within Section 4.17.2, Environmental Setting, to support the impact analysis in 4.17-4. The Project would not rely upon, nor would it otherwise affect the capacities of onsite wastewater systems, and therefore detailed setting information on such systems is not needed to support an impact discussion. Nevertheless, for the benefit of the general public, in response to this comment and as a staff initiated text change; the EIR (pages 4.17-1 and 4.17-2) have been revised as follows:

Wastewater

The Santa Cruz County Sanitation District (SCCSD) is a non-profit public agency providing sewage collection, treatment, and disposal services to the unincorporated areas of Santa Cruz County, including the Live Oak, Soquel, and Aptos areas, as well as the City of Capitola. The SCCSD has no wastewater treatment plant of its own. Consequently, sewage is transported from its Lode Street facility to the SC WWTF for treatment and disposal. The SC WWTF is owned and operated by the City of Santa Cruz. The SC WWTF serves the City of Santa Cruz, and the SCCD service area, including portions of Live Oak, Capitola, Soquel, and Aptos.

The SCCSD has treatment capacity rights of 8 million gallons per day at the SC WWTF. The SC WWTF’s design, average dry weather treatment capacity is 17 mgd, with a design peak wet weather treatment capacity of 81 mgd. Treated effluent from the SC WWTF (and also from the Scotts Valley Wastewater Treatment Facility) is discharged to the Monterey Bay National Marine Sanctuary through an ocean outfall over a mile offshore (SCCDPW, 2018a; CCRWQCB, 2017).
While the vast majority of the Project area is serviced by municipal wastewater service through the SCCSD, a large number of developments in the more rural portions of unincorporated Santa Cruz County are served by small collection and treatment systems within Community Service Areas (CSAs) managed by the County, or onsite treatment systems (i.e., septic systems) managed by the property owner. Onsite treatment systems are regulated by the Santa Cruz County Health Services Agency, pursuant to State and local laws and regulations.

L-4-13 As discussed in Chapter 3, Project Description and in response to comment L-4-7, the Project would include a small number of waste streams that would be discharged from the proposed advance water purification facility (AWPF) to the Santa Cruz County Sanitation District’s (SCCSD) collection system. As explained in Section 3.7.1, these include backwash and neutralized cleaning wastes from the microfiltration/ultrafiltration (MF/UF) system and reverse osmosis (RO) system, and possibly groundwater from periodic (e.g., once every two years) well pump testing and maintenance (i.e., flushing of the well and treatment facilities). The anticipated daily volumes of these waste streams from a treatment facility at the Chanticleer Avenue site is anticipated to be less than 1,000 gpd gallons per day (gpd), and would be within the limit for new non-residential connections in this area.

Should the finished water not meet water quality requirements, operation of the AWPF would be stopped until the process disruption is addressed, and the water would be stored and diverted through the brine line back to the SC WWTF outfall or discharged to the sanitary sewer; with coordination and approvals from the applicable Department of Public Works.

As noted in Section 3.8.1, the EIR acknowledges the potential need for an SCCSD sewer connection and discharge permit, and would proceed accordingly if the Project were approved.
August 14th, 2018

To Whom it May Concern,

The Santa Cruz County Business Council would like to express our support for Soquel Creek Water District's Environmental Impact Report certification. Furthermore, we hope the district can move forward in pursuing a supplemental water supply option in accordance with their plan to have a sustainable water supply by 2040.

Soquel Creek Water District relies on 100% groundwater with no imported water from state or federal water projects. The shared groundwater basin—by Soquel Creek Water (District), other municipal water purveyors, small mutual well owners, and over a thousand other private well pumpers—is currently in a state of critical overdraft, which has led to seawater intrusion into our aquifers.

Pure Water Soquel would take municipal wastewater and use advanced water treatment methods to produce 1,500 acre-feet annually of purified water. This purified water would then be injected into the ground to replenish the groundwater basin and provide a barrier against seawater contamination.

The project sites under consideration all have their potential benefits and drawbacks, however, the environmental impacts that would arise from further development would be minimal, and be limited to initial construction.

As the county-wide voice of the business community, the SCCBC looks forward to seeing this project move forward, and as a result of that progress, would hope that the district would begin to roll back their Water Demand Offset (WDO) program. That program, while well intentioned and effective at reducing water use, has proven to be severely restrictive toward new development. Specifically, the WDO program obligations have resulted in very few new housing projects being built in the district at a time of an unparalleled housing supply shortfall in our community.
So long as the District can address the water supply needs of their ratepayers, and their aquifers, we are excited to see this project continue to advance through the public approval process.

Sincerely,

Robert Singleton,
Executive Director, Santa Cruz County Business Council
3.7 Response to Comments from Santa Cruz County Business Council; Robert Singleton, Executive Director (August 14, 2018) (Comment Letter O-1)

O-1-1 As noted, the EIR prepared for the proposed Project considers the environmental impacts of Project construction and operation. However, this comment does not raise any specific comment that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

O-1-2 Thank you for your comment. Adjustments to the District’s Water Demand Offset Program are not part of the proposed Project. As a result, changes to the program are beyond the scope of the Pure Water Soquel EIR.
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Drought?
Salty Groundwater?

Study Session on the PureWater Soquel Draft Environmental Impact Report
Wednesday, August 8, 6pm
Aptos Library
Dear Julia,

I'm disappointed in the Draft Environmental Impact Report for Soquel Creek Water District's project to inject treated wastewater into the aquifer. According to the California Environmental Impact Report, an EIR is supposed to analyze alternatives to a project that could accomplish the goals of the project. You would think that one of those alternatives would be the transfer of water from the San Lorenzo River to the District during months of high river flow. After all, the adopted policy of the City of Santa Cruz is to transfer river water to Soquel and Scotts Valley Districts in order to recharge the aquifers so that water will be stored for drought years. Yet the Draft EIR relegates river water transfers to the section, *Alternatives Considered, But Rejected from Further Analysis*.

Thanks largely to John Ricker at the County of Santa Cruz, river water transfers have been the subject of considerable study by Kennedy/Jenks. City of Santa Cruz consultant Gary Fiske concluded that with improved infrastructure the amount of river water available could refill aquifers in three years. Even with existing infrastructure, large amounts of river water are available for transfer. Nevertheless, Soquel Creek District apparently prefers to go it alone on a high tech, highly energy-intensive wastewater treatment and injection process.

What if we addressed our water challenges with the following principles to guide us?

1. When adapting to climate change (like lower rates of aquifer recharge) we don't worsen the problem that causes climate change, ie burning more fossil fuels.
2. When trying to restore the aquifers, we make social equity a priority. We won't make water customers who are consuming within the aquifer's limits pay to solve problems caused by customers consuming outside those limits.
3. When trying to restore the aquifers, we rely on neighborly collaboration rather than complex technology that could public health at risk if failures occur.

To read my comments on the Draft EIR, [click here.](#)

-Rick Longinotti
Comments on the Draft EIR, Pure Water Soquel Project

The Draft EIR for the Pure Water Soquel Project concludes that the Project is the environmentally superior alternative among those that are analyzed in the Draft EIR. The conclusion results from:

A. Outdated District goals for pumping reduction
B. Inadequate examination of alternatives to the Project
C. Inadequate analysis of energy use of the Project compared to alternatives
D. Lack of clarity about system resiliency, including impacts of plant failure on public health

A. Need to Update District Goals

The Draft EIR is the first District planning document that has incorporated information from a new groundwater model. In contrast to previous District understanding of its overdraft problem, the Draft reports that groundwater levels are estimated to recover over time without building the Project:

“The results show that groundwater levels would increase over time and show recovery to long term stable groundwater levels in the District’s coastal wells...”

These results demonstrate that the District’s goal to achieve 1500 acre-ft per year of supplemental supply is based on outdated information. The District needs to update their goals for pumping reduction.

The news that the No Project Alternative would result in aquifer recovery creates more breathing room to consider alternatives to the Project. The alternatives, alone or in combination, don’t need to meet the minimum 1500 acre-ft/year criterion to be worthy of consideration. Any supplemental water will hasten an aquifer recovery that is expected to happen even without the Project.

Even the new groundwater modeling has incorporated some outdated information. The model adopts the estimate for future District water consumption from the 2015 Urban Water Management Plan. That Plan estimates 2020 water consumption of 3900 acre-feet per year and decreasing to 3200 af/y by 2045. The District’s plan to reduce consumption in spite of growth over time is admirable. However, the starting point for the estimate is significantly overestimated. Actual consumption in 2017 was 3324 af/y. There has not been a pronounced rebound from the 2015 drought year consumption of 3106 af/y. This represents a cultural shift in customer use of water as a result of the drought that is widespread in Northern California. (Southern California, not so much.)
Adjusting the groundwater model to reflect the actual cultural shift in water use would result in even more favorable estimates for aquifer recovery under the No Project alternative.

The EIR needs to revise the Project Objectives, as stated below, based on this new information.

*The overall goal of the Project is to recharge the local groundwater basin with 1500 afy of purified water for indirect potable reuse and thereby improve its reliability as a water supply source.*

Under CEQA guidelines, the goal of a project needs to be formulated in a way that does not unnecessarily narrow the pathways to achieve that goal. Otherwise alternatives to the project will be rejected on the basis that they are not within the narrow pathway to the goal.

Stating that the goal of the project is to recharge the basin with *indirect potable reuse* excludes other ways to recharge the basin, for example, with river water. In order to comply with CEQA guidelines, the mention of 1500 afy and indirect potable reuse need to be stricken from the project goal.

The EIR states a specific objective of the project as follows:

*Replenish the local groundwater basin to prevent further seawater intrusion and develop a sustainable water supply in a timely manner that meets the District’s supply objectives and the State’s mandate under the SGMA.*

As stated above, the District’s supply objectives need to be revised in light of the information from the new groundwater model. Otherwise there is a discrepancy between the District’s supply objectives and what the latest information indicates is required to replenish the basin.

**B. Alternatives Analysis: The EIR needs a thorough and accurate analysis of Large-Scale Water Transfers**

The Draft includes large-scale water transfers in section 7.5, Alternatives Considered, But Rejected from Further Analysis. It is a mistake to exclude this alternative from further analysis since it is the policy of the City of Santa Cruz to partner with the District to pursue this alternative and since the City and County and District have already conducted extensive research that demonstrates the feasibility of water transfers (aka conjunctive use). (See Kennedy/Jenks, *Conjunctive Use and Enhanced Aquifer Recharge* (2011); County of Santa Cruz, *Conjunctive Use and Water Transfers Phase II Final Report* (2015); *Water Supply Advisory Committee Final Report* (2015) Pipe loop study (2018))
The Draft EIR states:

*The primary objective of the Project is to recharge the local groundwater basin with 1500 acre-feet per year of purified water....*

The Draft acknowledges that an equivalent amount of water for recharge could be available from the San Lorenzo River.

*If the pilot project proves successful... the District may consider...participating in the City's In-Lieu and/or Aquifer Storage and Recovery Project(s) that they are pursuing... The In-Lieu and/or Aquifer Storage and Recovery Project(s) could include a larger amount of treated river water (1500 afy)*

The Draft needs to acknowledge that this river water would be available at a much lower energy consumption than from a reverse osmosis plant, according to energy analysis by Brown and Caldwell for the Water Supply Advisory Committee. In fact, the energy intensity of treated river water is lower than the District’s current energy intensity of pumping water from several hundred feet below ground. (Water is heavy.) The lower energy intensity of river water versus treated wastewater is one reason the former is a lower-cost solution.

Why does the Draft EIR reject the river water alternative? (The Draft names this the *Large Scale Surface Water Purchase as a stand-alone alternative supply source*).

The Reasons for Rejection of this alternative are listed in the Draft as follows:

1. *May not substantially lessen environmental impacts*
2. *Feasibility remains uncertain, as availability (i.e. quantity and legal) and certainty of water supply would be managed by City of Santa Cruz.*
3. *Does not meet key project objectives of timeliness, affordability, and drought resistance*

I address each of these below.

1. *May not substantially lessen environmental impacts*

Judging from the Draft EIR’s discussion of Alternative 2, this statement probably refers to the impact on river flow.

*Alternative 2 results in new long-term surface water use that would result in reduction in overall surface water supplies and stream flow volumes and, particularly during drought conditions, and could affect fisheries and other aquatic species....*
This statement reflects a lack of understanding of the water transfer strategy, as recommended by the City of Santa Cruz Water Supply Advisory Committee (WSAC). The National Marine Fisheries Service (NMFS) and California Department of Fish and Wildlife endorsed the water transfer concept for two reasons, according to Jon Ambrose, staff member of NMFS, in a presentation to the Water Supply Advisory Committee.

- River water during high flow periods would be used to replenish local aquifers. This would increase the base flow in area streams, benefiting wildlife.
- The transfer of water to Santa Cruz from the District and Scotts Valley Water District during drought periods would enable Santa Cruz to adhere to a Habitat Conservation Plan that restricts stream diversions even in drought years.

2. **Feasibility remains uncertain, as availability (i.e. quantity and legal) and certainty of water supply would be managed by City of Santa Cruz.**

The water transfer strategy is at least as feasible as the Pure Water Soquel project. The quantity of water available has been analyzed by Gary Fiske Associates for the Water Supply Advisory Committee. (See Agenda document 8a-2 from WSAC April 2015 meeting). Fiske concludes that within current surface water rights constraints (but no constraints on infrastructure), storage of 3.5 billion gallons can be amassed within 3 years. There is no shortage of river water for the purpose of aquifer recharge. The actual amount of time to recharge local aquifers depends on existing infrastructure constraints.

A legal opinion from the County’s water rights attorneys, Best, Best & Krieger (2013) as well as the District’s attorney indicate that the water transfers (aka conjunctive use) are legal, and in fact encouraged by the State Dept. of Water Resources.

The concern that the City would manage the certainty of the water supply can be addressed through contract negotiations. The Draft should note that the City policy prioritizes water transfers for aquifer recharge above the back-up plans of direct potable reuse and desalination. The Water Supply Advisory Committee Final Report anticipates agreements between the City and District that would detail quantities of water to be transferred as well as sharing of capital and operating costs.

3. **Does not meet key project objectives of timeliness, affordability, and drought resistance**

Transfers of water from Santa Cruz to customers in Soquel Creek Water District are planned for this winter (2018-19), according to both districts. The *Water Supply Advisory Committee Final Report* notes, “Even without agreements to return water to Santa Cruz Water Dept. in the future, in lieu recharge strategies can start immediately with existing infrastructure.”

The District has at its disposal the tool of water rationing that could be employed immediately if the District Directors are concerned about the time it takes to implement
any of the alternatives. The EIR should note that water rationing has an immediate impact on water consumption, as is evident with recent experience in Santa Cruz. The EIR should note that a reduction in pumping in District wells in recent years has resulted in significant rise in groundwater levels at District wells. Water rationing pending implementation of any supplemental supply would be protective of groundwater levels.

It is not clear why affordability is mentioned as an obstacle to opting for large-scale water transfers. The operational costs of a wastewater reuse facility are significantly higher than surface water costs due to the energy intensity of reverse osmosis, as well as the costs of replacing membranes.

Water transfers are not drought resistant in the sense that a reliable amount of water is available for transfer each year. Yet it is a mistake to think that they should be. Aquifer recharge is not diminished by drought years so long as the average amount of river water is available over a period of years. Given the large quantities of river water available on average, the amount of time it takes to recharge the aquifer using river water should not disqualify this alternative.

The Draft needs to report that the 1500 a fy average estimated river-water transfer is not an upper limit. The District has the option to collaborate with Santa Cruz in investing in larger treatment and distribution capacity, thereby accelerating the aquifer recharge process. The Conjunctive Use and Water Transfer Phase 2 Final Report identified the capacity to treat turbid water and to divert river water as constraints that could be reduced with further investment. The WSAC Final Report lists a number of City operational constraints that could be reduced, allowing for higher amounts of water for transfer, such as changing the operational rule for reserving water in Loch Lomond.

In summary, the EIR needs to present an accurate picture of the potential of river-water transfers to restore the aquifers to safe levels.

Alternatives Analysis: Include Transfers from Purisima to Aromas

The Draft discusses the District’s “proactive groundwater management.” In order to be more complete, this section should discuss the alternative of transferring water from the Purisima Aquifer section of the District to the Aromas Aquifer section. Hydrometrics memo (2015) reports, “current consumptive use in the Purisima is below the pre-recovery goal for that area, so this shows that the District can actually increase its pumping in the Purisima if non-District consumptive use remains constant.” The memo suggests that the District “may facilitate Aromas recovery with a transfer of water from the Purisima to other users in the Aromas.”

C. Energy Use
The Draft acknowledges that “implementation of the Project would increase the District’s total electrical demand by approximately 3600 MWh per year.” The Draft needs to put this 10MWh/day in context. What is the Project’s electrical power consumption per acre-ft of water produced compared to the District’s average power consumed by pumping an acre-ft of water?

The Draft’s Impact 4.6.1 reads, “The Project could use large amounts of fuel or energy in an unnecessary, wasteful, or inefficient manner.” The Draft reports that this impact is reduced to “less than significant with mitigation”. Yet the only mitigation proposed in this section has to do with the energy impact of construction, not the energy impact of operating the plant. Surely the energy consumption of operating the plant for its fifty-year life expectancy dwarfs the energy consumption in constructing the plant. Yet no mitigation for this very large energy expenditure is offered.

To fairly compare the energy use of the Project to the alternatives, the EIR needs to explain that the reverse osmosis plant needs to operate 24 hours a day 365 days a year in order to prevent membrane deterioration. This means that the plant would be operating during the time of the year when there are large amounts of water in the San Lorenzo River available for transfer to the District both for direct consumption and for direct injection into the aquifer. That scenario is equivalent to a homeowner keeping the lawn sprinklers running during a rainstorm. Surely this qualifies as an unnecessary, wasteful, or inefficient use of energy.

D. Resiliency

The Project Objectives include “enhances resiliency.” The EIR would benefit from a discussion of resiliency (or resilience) as applied to the Project and the alternatives.

I suggest that resilience means the ability of a system to adapt to stress under a variety of present and future conditions. A reverse osmosis wastewater treatment system that is at least twice as energy intensive as the District’s current water supply does not enhance resilience. Such a treatment plant would make the District even more dependent on industrial levels of electricity. There are many risks and uncertainties that accompany reliance on high levels of electric power due to the depletion of cheap fossil fuel energy sources. This depletion could have profound impact on the price and even the availability of electric power.

The Draft EIR takes into account a future in which climate change reduces aquifer recharge. The proposed Project is at least in part a climate adaptation strategy. Such an adaptation strategy should not increase the burning of fossil fuels that are the cause of the problem in the first place.

A reverse osmosis wastewater treatment plant is a step away from resilience for another reason. The following observation was raised by local civil engineer Jack Schultz
regarding the reverse osmosis desalination proposal, but it also applies to the Pure Water Soquel Project:

“It is a general principle of engineering that after a certain threshold, an increase in level of complexity of an engineered system is often accompanied by an increase in vulnerability to failure. A simple light switch always functions until it wears out. But as anyone who owns a PC knows, a new computer can crash.”

The vulnerability of a plant due to its complexity puts water users at risk. Treatment of wastewater needs to be error-free in order to protect public health. A failure of plant treatment effectiveness for just a day or two can introduce contaminants into the aquifer.

**Affordability**

The Project Objectives include the development of an “affordable” water source. Hence the EIR should analyze the affordability of the Project in comparison to alternatives. Under CEQA a project is not “feasible” if there are serious doubts as to the ability to afford the project. At a public meeting, the District heard from wastewater treatment consultants who questioned whether the District had a large enough customer base to afford the Project.

Any analysis of affordability should include the impact on increased water rates on customer water use. The City of Santa Cruz’s consultant, David Mitchell, reports a high degree of water demand elasticity based on price. Future water consumption projections including price elasticity should be factored into the groundwater model.

The District should also consider the impact of higher water prices on lower income customers. The EIR reports that residential customers averaged 53 gallons per person per day in 2017. What is not reported is how many district customers use below that amount. Based on earlier analysis for the District by Sue Holt, it is likely that the median residential water use is now below 53 g/p/d. If the customers at the high end of consumption brought their water use down to the current median, how close would the District be to reaching its pumping goal?

The beneficiaries of the Project are not the customers who are already consuming water at or below a level that would achieve the District’s goals (if all customers were consuming at that level). The beneficiaries of the Project are those who are consuming at higher levels. Yet the cost burden would fall on all District customers. The Project fails the equity test when the question is asked, “Who pays and who benefits?”

**Conclusion:**
The Draft EIR’s conclusion that the Pure Water Soquel Project is the environmentally superior alternative rests on outdated District goals, inadequate analysis of alternatives
to the Project, and lack of clarity about resilience and energy intensity of the Project compared to alternatives. It is therefore incomplete and should be revised accordingly.

The District’s formulation of an aquifer recharge strategy would benefit from prioritizing the values for minimizing energy dependence, complexity and financial cost. With these values as a priority, the District would be avidly pursuing an agreement with the City of Santa Cruz to purchase water in lieu of pumping District wells during periods of high river flow. The District would be conducting vigorous cost-benefit analysis of collaborating with Santa Cruz on infrastructure investments to enhance aquifer recharge through surface water transfers.
3.8 Response to Comments from Santa Cruz Desal Alternatives; Rick Longinotti, Co-chair (August 5, 2018) (Comment Letter O-2)

O-2-1 This introductory comment is followed by more detailed comments and does not include specific comment about the EIR or any environmental issue related to the Project not raised in greater detail in the following comments. Please see the response to the comments that follow.

O-2-2 This introductory comment provides a summary of the more detailed comments that follow in the comment letter. This comment is noted and the detailed comments are responded to below.

O-2-3 EIR Section 3.3, Project Objectives states that the overall goal of the Project is to recharge the local groundwater basin with 1,500 afy of purified water for indirect potable reuse and thereby improve its reliability as a water supply source. Thus, the Project’s treatment facilities described in Section 3.5, Proposed Project Components, would be capable of producing 1.3 million gallons per day (mgd), or approximately 1,500 afy, of purified water - the estimated volume required to offset the portion of the basin’s cumulative groundwater overdraft attributable to District groundwater pumping. In considering potential CEQA alternatives to the Project, the overall goal (or basic objective) of a system with a capacity of 1,500 afy was necessary. As described in EIR Section 3.7, in general, under normal operations, the District would operate all of the facilities 24 hours per day, 365 days a year in order to achieve basin recovery within approximately 20 years.

As discussed in EIR Section 7.2, Approach to CEQA Alternatives Selection, consistent with CEQA, the approach to alternatives selection for this EIR focused on identifying alternatives that: (1) could meet most of the basic objectives of the project while reducing one or more of its significant impacts, (2) could foster informed decision-making and public participation, and (3) could be feasibly implemented. CEQA Guidelines Section 15364 defines ‘feasible’ as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” CEQA Guidelines Section 15126.6(f)(1) states that “the factors that may be taken into account when addressing the potential feasibility of alternatives include site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent).”

Regarding the comment that the No Project Alternative shows basin recovery, as discussed on EIR page 4.10-41, the modeled Projected Existing Conditions simulation
includes an assumption of drought curtailment during critically dry years that are not assumed in Project simulations. The modeled results show that groundwater levels would increase over time and show recovery to long term stable groundwater levels in some of the District’s coastal wells but would not reach protective elevations at all coastal monitoring wells or at key monitoring wells. Thus, the No Project Alternative would not meet key Project objectives; the local groundwater basin would not be replenished with any additional water supply to prevent further seawater intrusion. A sustainable water supply would not be developed in a timely manner that meets the District’s supply objectives and the State’s mandate under the SGMA. An affordable, reliable, and drought-resistant supplemental water source would not be developed that contributes to the diversification of the District water supply portfolio and enhances resiliency. There would be no additional environmental benefits, such as to surface and marine waters or provision of an active seawater intrusion barrier (see EIR pages 7-15 and 7-16).

Regarding comments about District water consumption and projections, the District’s 2013 consumption was 4,279 afy, then decreased through 2016. However, in 2017 consumption increased to 3,324 afy (https://www.soquelcreekwater.org/our-water-groundwater/annual-water-production-2007-current). Further, water use projections are being re-evaluated as part of efforts with the Santa Cruz Mid-county Groundwater Agency, to address a rebound (increase) in water use regionally, as well as to anticipate new regulatory drivers (e.g., housing demands, cannabis cultivation, and accessory dwelling units) that may increase water usage. According to the analysis supporting the planning goals for the District’s Community Water Plan, the District would need to limit its net average groundwater withdrawals to no more than 2,300 acre-feet per year (afy) to restore groundwater levels to prevent seawater intrusion in 20 years (SqCWD Urban Water Management Plan 2015, page 5-10 [June 2016]). With net pumping limited to 2,300 afy, the District would experience an estimated shortfall of between 1,000 and 1,600 afy during this time (EIR page 4.10-34).

**Please see the response to Comment O-2-3 regarding aquifer recovery under the No Project Alternative.**

Regarding Project objectives, while the overall goal of the Project is to recharge the local groundwater basin with 1,500 afy of purified water for indirect potable reuse, and thereby improve its reliability as a water supply source, the consideration of CEQA Alternatives focused on any feasible alternative that could provide up to 1,500 afy of supplemental water supply and develop a sustainable (reliable and drought resistant) water supply in a timely manner to prevent further seawater intrusion and meet the District’s supply objectives and the State’s mandate under SGMA. The CEQA alternatives analyzed in EIR Chapter 7 includes, in addition to the No Project Alternative, a reduced project with treated surface water purchase and a seawater/brackish desalination project. Thus, both CEQA Alternatives to the Project include water supplies other than purified water for indirect potable reuse. Thus the stated goal in the EIR Project Description does not narrow consideration of CEQA alternatives.
O-2-5 Please see the response to comment O-2-3 regarding the Project objectives, and the approach for consideration and selection of CEQA Alternatives. As discussed in EIR Section 7.5.4, Participation in City of Santa Cruz’s In-lieu and/or Aquifer Storage and Recover Project(s) as an Alternative Water Supply Source, this alternative would meet some of the Project objectives, but would not meet objectives related to timeliness and reliability as well as the Project. However, the alternative would not materially alter impacts of the Project and given the uncertainty and timing, this is not a potentially feasible alternative and, therefore, would not meet the requirements of the CEQA Alternatives analysis. While long-term transfers from the City of Santa Cruz would not meet the requirements of the CEQA Alternatives analysis, such transfers are considered part of the District’s Community Water Plan. As discussed in EIR Section 2.2.2 on that plan, the District is currently evaluating this option in coordination with the City.

O-2-6 Consistent with the requirements of CEQA, the EIR focuses on the potential effects of the Project relative to existing physical conditions (see CEQA Guidelines Section 15126.2). Accordingly, EIR Section 4.6, Energy Conservation, considers whether the Project would use large amounts of energy in an unnecessary, wasteful, or inefficient manner. With respect to Project construction, the EIR explains, “annual average fuel use amounts are equivalent to 0.01 percent and 2.6 percent of the total amounts of gasoline and diesel fuel, respectively, sold in Santa Cruz County in 2016.” As commenter accurately notes, the impact discussion concludes that Project construction and decommissioning activities could result in wasteful or inefficient use of energy if construction and decommissioning equipment is not well maintained, if equipment is left to idle when not in use, or if haul trips are not planned efficiently. Mitigation Measures 4.6-1 and 4.3-1b are identified which would reduce such impacts to a less-than-significant level (pages 4.6-7 and 4.6-8).

With respect to operational energy demands, the EIR acknowledges that generating the pressure necessary to move water through reverse osmosis membranes can require a large amount of energy. The analysis reveals Project operations would increase the District’s total electrical demand by approximately 3,600 MWh per year, which is less than 0.01 percent of the total electricity used in in Santa Cruz County in 2016 (page 4.6-8). The section also identifies design elements that would be incorporated into the project to reduce the potential for unnecessary, wasteful, or inefficient energy use (page 4.4-6). With consideration for these design elements, the EIR concludes that Project operations would not have a significant energy impact. Regarding commenter’s assertion that the EIR needs to explain that the treatment facility needs to operate 24 hours a day, 365 days in a year, commenter is referred to Chapter 3, Project Description (page 3-39), which states, “In general, under normal operations, the District would operate all of the facilities – secondary or tertiary effluent pump station, treatment systems, and recharge wells – 24 hours a day, 365 days per year, except during necessary maintenance or cleaning.” This assumption is factored into the Section 4.6 analysis of Project’s operational energy demands.
Please see the response to comment O-2-3 regarding the approach for selection of CEQA alternatives to the Project, including the need to consider alternatives that would reduce significant impact that would occur under the Project. Because operational energy use was not identified as a significant impact, the focus of the alternatives analysis did not include operational energy use impacts.

O-2-7 This introductory comment is followed by more detailed comments and does not include specific comment about the EIR or any environmental issue related to the Project and so no response is required. This comment is noted.

O-2-8 Please see the response to comment O-2-5. As discussed, the selection of CEQA alternatives considers (in part) whether an alternative would reduce one or more significant impacts of the Project. As discussed on EIR page 7-32, under the header “Impact Reduction”, the long-term surface water transfer would avoid the impacts associated with construction and operation of an AWPF, as well as those from conveyance pipelines to and from the SC WWTF. However, installation of the infrastructure upgrades required to achieve the District’s recharge goals (i.e., 1,500 afy), would be expected to result in a similar range of environmental impacts, including significant impacts associated with infrastructure upgrades and recharge well construction. As a result, this alternative would not materially alter impacts of the Project and, therefore, would not meet the requirements of the CEQA alternatives analysis.

O-2-9 See the response to comment O-2-3, describing the CEQA approach for selection of alternatives to the Project, which includes a definition of ‘feasible’ as that “the factors that may be taken into account when addressing the potential feasibility of alternatives include site suitability...and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site.” Also see comment L-2-6, where the City summarizes the efforts that must be completed before the City could enter into a long-term agreement with the District (i.e., when the District can reasonably acquire/control the alternative water supply), which is consistent with the EIR description of processes that must be completed (see page 7-33). The City anticipates completion of a feasibility evaluation of the Water Supply Advisory Committee recommendations and expects to complete this study in 2020. In addition, they would need to complete CEQA analysis of the water rights transfers and execution of the transfers, followed by evaluation, design, and regulatory permit acquisition for the infrastructure and other improvements that would be needed to implement a long-term water transfer. Thus, given the uncertainty and timing, among other issues for such an agreement to participate in the City’s project; this alternative is not a potentially feasible alternative to the proposed Project.

O-2-10 As noted in this comment, the District and City are undertaking a 5-year pilot study for transfer of up to 300 afy to the District, without a need to amend water rights or infrastructure improvements (see EIR Section 2.2.2, Community Water Plan. EIR Alternative 2 includes extension of the 5-year pilot study, in addition to implementing a
reduced Project. As discussed on EIR pages 7-16 through 7-20, this alternative would not meet the Project objectives to the same extent as the Project. Further, while generally feasible, the surface water purchase portion of Alternative 2 is not entirely within the District’s control, as it depend on the successful outcome of the 5-year pilot study and preparation and commitment of a long-term agreement with the City of Santa Cruz. As further discussed on EIR page 7-24, while Alternative 2 would slightly reduce the intensity of construction-related air emissions and energy consumption, and potentially tree removal impacts, relative to those of the Project, it would result in long-term surface water impacts and could result in fisheries/aquatic resources and other natural resources impacts that would not occur under the Project.

O-2-11 This comment suggests that water rationing could be applied until a long-term water transfer is available for implementation. See Section 7.5.3, Implement Water Rationing Program. As discussed on page 7-31, in 2016, per capita water use in the District’s service area was approximately 50 gallons per day, substantially lower than the California average per capita use of 85 gallons per day. Nevertheless, to achieve the Project’s Basin replenishment goal, an additional 30 to 40 percent reduction in water use would be required for the next 20 years (or until surface water transfers are available under the commenters suggestion). To reliably maintain very low consumption, the District would most likely solidify the conservation efforts into a water rationing program. Given the extent of reductions to date, and the already-low levels of consumption, this alternative is considered infeasible.

O-2-12 Consideration of whether a long-term water transfer would meet Project objectives focuses on whether the alternative could achieve basin replenishment in non-drought years, contribute to water supply diversification, allow the District to continue providing high-quality safe water, be timely and allow the District to meet its goal to replenish the basin in approximately 20 years. Cost was not a consideration in eliminating an alternative from further consideration; but was erroneously mentioned in the context of timeliness. In response to comment O-2-12, EIR page 7-33, paragraph 2 has been revised:

**Ability to Meet Project Objectives**

This alternative would meet some of the Project objectives. It would help with Basin replenishment in non-drought years, contribute to water supply diversification, and potentially allow the District to continue providing high-quality safe water (pending results of the Pilot Study). However, given the time required to address the above-noted feasibility, infrastructure, cost and water rights issues, this alternative would not meet the objective of timely implementation. Further, as transfers may be limited to the winter months, during years in which the City has excess supply, the alternative would not meet the objective of providing a reliable water supply, especially if the City would be taking large volumes of water back to meet their drought shortfall needs. Finally, this alternative of providing the District with surface water could have additional impacts on surface streams, with effects on both aquatic habitats and wildlife.
O-2-13 The commenter suggests that river recharge using the average surface water supply available should be considered, rather than simply a reliable annual supply that includes drought periods. One of the primary objectives of the Project is to replenish the local groundwater basin to prevent future seawater intrusion. Achieving the protective groundwater levels to prevent seawater intrusion (see EIR Section 4.10.2) benefits from a consistent and uninterrupted rate of aquifer recharge that is not influenced by fluctuations caused by periods of drought, as would be the case with surface water supply sources. The groundwater modeling (see EIR Section 4.10.4 Approach to Analysis), which was used to evaluate the operation of the Project and its effects on the Purisima aquifer, demonstrates the need for a continuous rate of recharge. As shown graphically in EIR Figures 4.10-6, 4.10-7, and 4.10-8, the groundwater levels increase soon after, and in some cases, within the year of commencing aquifer recharge with purified water. The continual and consistent rate of recharge maintains those increased groundwater levels achieving groundwater levels above the protective elevations. The model outputs also show that if recharge ceases, such as would likely occur during a drought when surface water supplies are less available, water levels decrease rather quickly, approaching pre-Project levels. The capability of the Project to maintain the elevated levels throughout its period of operation depends on actively recharging a reliable and consistent supply of source water into the aquifer. The Project would provide that by utilizing the proposed purified water stream. Considering how rapidly the aquifer responds to the proposed recharge (as shown by the modeling), recharging at an inconsistent rate, for example, from a supply of available surface water that could fluctuate annually due to drought periods, could result in conditions within the Project operation period where groundwater levels decrease, in some cases below protective elevations, either temporarily or for longer periods, thereby not achieving the Project objectives.

O-2-14 The City of Santa Cruz is undergoing studies that would identify the water supply that can be made available to other jurisdictions. However, as discussed in response to comment O-2-3, the consideration of CEQA alternatives to the Project are based on the overall Project goal to identify approximately 1,500 afy in supplemental water supply for groundwater replenishment. Therefore, the discussion of potential surface water transfer alternatives in Chapter 7 is limited to that supplemental supply value.

O-2-15 As discussed in EIR Section 2.2.2, the District is undertaking proactive groundwater management, which allows for redistribution of groundwater pumping away from the coast to slow seawater intrusion, as well as to better operate groundwater wells, ensuring reliability in case of emergencies under the District’s Well Master Plan. However, that Plan does not include direct transfer of groundwater within the basin. Such a transfer is not proposed under the Project. As discussed in response to comment O-2-3, groundwater levels would recover to protective elevations at some coastal well areas under the No Project Alternative, but not throughout the basin. Thus, transfer of groundwater within the basin would not be sufficient to achieve basin replenishment. However, recharge under the Project would allow pumping to be increased in the Purisima area, and shifted away from the Aromas area.
O-2-16  See the response to comment O-2-6.

O-2-17  See the response to comment O-2-6. The suggestion that climate change could affect the availability of electricity to support the Project is speculative. Further, CEQA generally does not require consideration of the effect of environmental conditions on a project’s future, according to the California Supreme Court’s decision in California Building Industry Association v Bay Area Air Quality Management District (S213478, December 17, 2015). An agency must analyze how environmental conditions might adversely affect a project only where the project itself might worsen existing environmental hazards in a way that would adversely affect them, or if one of the provisions of CEQA which require such an analysis for certain airport, school, and housing projects applies.

O-2-18  Please refer to responses to comments I-30-4, L-4-6, and L-4-7 which address the regulatory and technological mechanisms that would be in place to minimize the risk of a water quality impact due to a treatment system failure.

O-2-19  This comment is in regard to the Project objective to: develop an affordable, reliable, and drought-resistant supplemental water source that contributes to the diversification of the District’s water supply portfolio and enhances resiliency. The comment indicates that under CEQA, a project is not feasible if there are doubts as to the ability to afford the project; but does not cite to a specific requirement that states so and no such requirement is known to exist in the CEQA statute and guidelines. Further, while the District has begun to develop a funding plan for the Project, it would not complete or commit to such a plan until and unless the Project is approved, following certification of this EIR. However, there is no indication to date that this Project could not be sufficiently funded.

O-2-20  This conclusion statement was preceded by more detailed comments and does not include specific comment about the EIR or any environmental issue related to the Project and so no response is required. This comment is noted.
Dear Staff,

Robert Ley and Scott McGilvray have asked me to add their names endorsing my comments which I previously sent.

Thanks,
Rick
3.9 Response to Comments from Santa Cruz Desal Alternatives; Rick Longinotti, Co-chair (August 9, 2018) (Comment Letter O-3)

O-3-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.
August 13, 2018
Soquel Creek Water District
purewatersoquelceqa@esassoc.com

The Sierra Club concludes that the Draft EIR Pure Water Soquel Project is insufficient. River Water transfers are not given full analysis, and outdated pumping reduction goals are used when determining need. The EIR also inadequately analyzed energy use. Further, potential negative impacts from contaminants are not accounted for.

The alternatives section indicates that groundwater recovery will occur with no project. This indicates that the in-lieu strategy would have a larger effect than anticipated. Sharing adds system resilience at a potentially significantly lower cost. This possibility merits full study.

The Draft’s Impact 4.6.1 reads, “The Project could use large amounts of fuel or energy in an unnecessary, wasteful, or inefficient manner.” Yet no mitigation for this very large energy expenditure is offered.

It is not clear whether the project is able to address all contaminants.

Therefore, the project needs further environmental review before being further considered.

Sincerely,
Erica

Erica Stanojevic, Conservation Committee Chair
Sierra Club, Santa Cruz County Group
3.10 Response to Comments from Sierra Club, Santa Cruz County Group of the Ventana Chapter; Erica Stanojevic, Conservation Committee Chair (August 13, 2018) (Comment Letter O-4)

O-4-1 This introductory comment is followed by detailed comments that supplement this statement. See below for responses to the commenters detailed comments.

O-4-2 Please see the response to comments O-2-3 and O-2-4.

O-4-3 While this comment is somewhat general, it appears to address the various types of contaminants in the wastewater stream and whether these contaminants would be removed through the treatment process proposed under the Project. There are many chemicals considered to be CECs in a municipal wastewater stream and the water quality analysis in the EIR acknowledges that potential. However, as described in Impact 4.10-3, the treatment process proposed for the Project would remove most of the contaminants and significantly reduce the remainder to concentrations far below any human health screening level; in most cases to at or below levels that can be detected by modern laboratory equipment. The purification process involves a proven technology that involves treating the secondary effluent with membrane filtration, reverse osmosis (RO), and an Ultra Violet (UV) advanced oxidation process (AOP). Microfiltration (MF) is employed before RO to provide removal of small particulate matter that could hinder the RO performance and create barriers to pathogens. RO has been shown to remove compounds that are not typically attenuated by MF such as dissolved minerals and contaminants. RO membranes provide high removal rates for CECs. As RO is a required component for advanced water purification, this treatment sequence meets State of California requirements for advanced water treatment. UV AOP is highly effective at destroying a wide array of CECs because AOP is not selective as to the compounds it destroys. As an example, the anti-inflammatory drug Diclofenac has a human health screening level of 1,800 parts per trillion but its concentration in water treated by a process similar to that proposed Project (MF, RO, UV AOP) is non-detectable or below 1 part per trillion. For context, one part per trillion is equivalent to having one red marble in a pool of 1,000,000,000,000 white marbles. Several comments responses address concerns similar to the one raised by this comment. Please refer to response to comments I-83-13, I-83-9, I-83-11, I-21-5, I-33-7, I-26-2, and I-77-1.

O-4-4 Please see the response to comment O-2-3.

O-4-5 Please see the response to comment O-2-6.

O-4-6 Please see response to comment O-4-3.

O-4-7 This conclusion statement does not provide further comment on the EIR or to any environmental issue related to the Project and so no response is required. This comment is noted.
To Soquel Creek Water District,

I am writing on behalf of the Surfrider Foundation Santa Cruz Chapter to comment on the Draft EIR for the proposed Pure Water Soquel project. In reading through the EIR it was surprising to see that the concept of water transfers between Santa Cruz and Soquel Creek wasn’t given additional consideration as a viable alternative. Since one of the main objectives for this project is to enhance protection from seawater intrusion it would seem that a project that would store water in the aquifer as a banking system would enhance your water supply and act as an important wedge against seawater intrusion.

The City of Santa Cruz and Soquel Creek Water District are currently in the middle of a 5-year research plan with a small amount of water being transferred to Soquel Creek-about 300afy this upcoming winter. This pilot project was always designed to transfer this small amount for research and testing purposes. If found feasible the transfer could be equivalent to 1500afy, depending on infrastructure constraints. The success of this pilot project could significantly impact design considerations for the Pure Water Soquel project. It is our considered opinion that this alternative, and the utilization of the 300afy and more of water transferred should be kept at the top of the list of water supply sources for the Soquel Creek Water District.

Both Alternative 2 and the Large Scale Surface Water Purchase as a Standalone Alternative Supply Source offer some advantages that don’t seem to have been addressed in this EIR. The most significant is that the water being delivered to Soquel Creek would be potable and would not need to be injected into the ground first. This water source would be usable for any water need-direct to customer, injection and water banking, use in infiltration ponds etc. This creates greater flexibility in the water supply, could reduce pumping and energy needs (when used directly both water extraction from the ground and injection of treated water energy savings would be realized), is more affordable (the initial infrastructure is already in place) and the research is already 2 years farther along in development. The initial chemical compatibility testing has provided positive results and practical testing this winter will provide an even better understanding of this resource.

On the specifics of the design of the Pure Water Soquel project we do have some additional comments. Constructing the AWPF at the Santa Cruz wastewater facility seems to offer the best alternative. This would minimize the piping systems needed
for conveyance of the different water types, could utilize or expand on energy efficient systems that are already in place at the WWTF and could even be shared with the City of Santa Cruz for such uses as toilet and non-potable water for the Boardwalk and Wharf areas. Expanding to include these uses would have a significant impact during the summer months when these areas are busy and water is most precious. Operationally, the on-site treatment would create better control of the entire throughput system and better chance of catching errors and coordinating solutions to issues.

In developing this EIR we understand that expediency is a major consideration. With the groundwater management plan objectives outlining a sustainable system by 2040 the urgency for a plan is definitely felt. However, do not pass over the alternatives outlined here as they would offer some distinct advantages over a non-potable water source. These need to be further considered throughout the rest of this process.

Thank you for your time and our best wishes in defining a positive solution to a thorny long term problem.

Sincerely,

Sarah Mansergh
Water Program Manager/Treasurer
Surfrider Foundation Santa Cruz Chapter
3.11 Response to Comments from Surfrider Foundation, Santa Cruz Chapter; Sarah Mansergh, Water Program Manager/Treasurer (August 13, 2018) (Comment Letter O-5)

O-5-1 Please see the response to comment letter O-2, which addresses the general comments regarding long-term water transfers asserted here.

O-5-2 Please see EIR Chapter 3, Project Description, which includes construction and operation of an advanced water purification facility at one of three locations, Santa Cruz Wastewater Treatment Facility, Chanticleer Avenue, and the West Annex-Headquarters site. Each treatment facility option is considered in the EIR impact analysis, at an equal level of detail. As discussed on EIR page 3-5, in response to public scoping comments requesting the District consider multiple Project sites (see Chapter 2, Introduction), and to allow flexibility in responding to the interests of local jurisdictions, technical uncertainties, and environmental and economic considerations, the District is considering one or more options for each of these required Project components. Accordingly, this approach to analysis represents the most comprehensive and reasonably conservative analysis feasible, and is intended to provide the public with a full understanding of the range of options under consideration and their potential environmental effects. Based upon information obtained through the environmental analysis, additional engineering feasibility considerations, and continued community engagement, the District would select a final Project configuration (consisting of a single AWPF treatment concept, a single pipeline alignment, and up to 3 recharge wells), from the components evaluated in this EIR, prior to development of final engineering design. Regardless of the location of the treatment facility, the District would be responsible for constructing an operating the treatment facility, including compliance with regulatory requirements regarding system operations. However, inclusion of nonpotable uses, such as for toilet flushing, is not currently included under the Project. Should such uses be proposed in the future, additional planning and CEQA study would be required.

O-5-3 This summary comment is proceeded by more detailed comments and does not include specific comment about the EIR or any environmental issue related to the Project and so no response is required. This comment is noted.
Dear Pure Water Sequel EIR review committee,

Water for Santa Cruz County (WFSCC) is hereby signing on as additional signatory to the comments submitted by Rick Longinotti, for Desal Alternatives. WFSCC endorses and approves of all comments made in this document. Copy attached.

Scott McGilvray
for Water for Santa Cruz County (WFSCC)

> On Aug 13, 2018, at 4:09 PM, Scott McGilvray <scottm@wateraware.net> wrote:
> Attached are comments from Water For Santa Cruz County on the Pure Water Sequel draft EIR.
> In addition to the pdf is a zip folder with the exhibits referenced in the document. Please post these together for convenient access
> Sincerely yours,
> Scott McGilvray
> Water for Santa Cruz County chair
> <WFCC dEIR comments Final.docx><EIR comments supporting docs..zip>
Comments on the Draft EIR, Pure Water Soquel Project

The Draft EIR for the Pure Water Soquel Project concludes that the Project is the environmentally superior alternative among those that are analyzed in the Draft EIR. The conclusion results from:

A. Outdated District goals for pumping reduction
B. Inadequate examination of alternatives to the Project
C. Inadequate analysis of energy use of the Project compared to alternatives
D. Lack of clarity about system resiliency, including impacts of plant failure on public health

A. Need to Update District Goals

The Draft EIR is the first District planning document that has incorporated information from a new groundwater model. In contrast to previous District understanding of its overdraft problem, the Draft reports that groundwater levels are estimated to recover over time without building the Project:

“The results show that groundwater levels would increase over time and show recovery to long term stable groundwater levels in the District’s coastal wells...”

These results demonstrate that the District’s goal to achieve 1500 acre-ft per year of supplemental supply is based on outdated information. The District needs to update their goals for pumping reduction.

The news that the No Project Alternative would result in aquifer recovery creates more breathing room to consider alternatives to the Project. The alternatives, alone or in combination, don’t need to meet the minimum 1500 acre ft./year criterion to be worthy of consideration. Any supplemental water will hasten an aquifer recovery that is expected to happen even without the Project.

Even the new groundwater modeling has incorporated some outdated information. The model adopts the estimate for future District water consumption from the 2015 Urban Water Management Plan. That Plan estimates 2020 water consumption of 3900 acre-feet per year and decreasing to 3200 af/y by 2045. The District’s plan to reduce consumption in spite of growth over time is admirable. However, the starting point for the estimate is significantly overestimated. Actual consumption in 2017 was 3324 af/y. There has not been a pronounced rebound from the 2015 drought year consumption of 3106 af/y. This represents a cultural shift in customer use of water as a result of the drought that is widespread in Northern California. (Southern California, not so much.)
Adjusting the groundwater model to reflect the actual cultural shift in water use would result in even more favorable estimates for aquifer recovery under the No Project alternative.

The EIR needs to revise the Project Objectives, as stated below, based on this new information.

*The overall goal of the Project is to recharge the local groundwater basin with 1500 afy of purified water for indirect potable reuse and thereby improve its reliability as a water supply source.*

Under CEQA guidelines, the goal of a project needs to be formulated in a way that does not unnecessarily narrow the pathways to achieve that goal. Otherwise alternatives to the project will be rejected on the basis that they are not within the narrow pathway to the goal.

Stating that the goal of the project is to recharge the basin with *indirect potable reuse* excludes other ways to recharge the basin, for example, with river water. In order to comply with CEQA guidelines, the mention of 1500 afy and indirect potable reuse need to be stricken from the project goal.

The EIR states a specific objective of the project as follows:

*Replenish the local groundwater basin to prevent further seawater intrusion and develop a sustainable water supply in a timely manner that meets the District’s supply objectives and the State’s mandate under the SGMA.*

As stated above, the District’s supply objectives need to be revised in light of the information from the new groundwater model. Otherwise there is a discrepancy between the District’s supply objectives and what the latest information indicates is required to replenish the basin.

**B. Alternatives Analysis: The EIR needs a thorough and accurate analysis of Large-Scale Water Transfers**

The Draft includes large-scale water transfers in section 7.5, Alternatives Considered, But Rejected from Further Analysis. It is a mistake to exclude this alternative from further analysis since it is the policy of the City of Santa Cruz to partner with the District to pursue this alternative and since the City and County and District have already conducted extensive research that demonstrates the feasibility of water transfers (aka conjunctive use). (See Kennedy/Jenks, *Conjunctive Use and Enhanced Aquifer Recharge (2011)*; County of Santa Cruz, *Conjunctive Use and Water Transfers Phase II Final Report (2015)*; *Water Supply Advisory Committee Final Report (2015)* Pipe loop study (2018))
Santa Cruz Desal Alternatives
Rick Longinotti, Co-chair

The Draft EIR states:

*The primary objective of the Project is to recharge the local groundwater basin with 1500 acre-feet per year of purified water.*

The Draft acknowledges that an equivalent amount of water for recharge could be available from the San Lorenzo River.

*If the pilot project proves successful... the District may consider... participating in the City's In-Lieu and/or Aquifer Storage and Recovery Project(s) that they are pursuing... The In-Lieu and/or Aquifer Storage and Recovery Project(s) could include a larger amount of treated river water (1500 afy)*

The Draft needs to acknowledge that this river water would be available at a much lower energy consumption than from a reverse osmosis plant, according to energy analysis by Brown and Caldwell for the Water Supply Advisory Committee. In fact, the energy intensity of treated river water is lower than the District’s current energy intensity of pumping water from several hundred feet below ground. (Water is heavy.) The lower energy intensity of river water versus treated wastewater is one reason the former is a lower-cost solution.

Why does the Draft EIR reject the river water alternative? (The Draft names this the *Large Scale Surface Water Purchase as a stand-alone alternative supply source*).

The Reasons for Rejection of this alternative are listed in the Draft as follows:

1. *May not substantially lessen environmental impacts*
2. *Feasibility remains uncertain, as availability (i.e. quantity and legal) and certainty of water supply would be managed by City of Santa Cruz.*
3. *Does not meet key project objectives of timeliness, affordability, and drought resistance*

I address each of these below.

1. *May not substantially lessen environmental impacts*

Judging from the Draft EIR’s discussion of Alternative 2, this statement probably refers to the impact on river flow.

*Alternative 2 results in new long-term surface water use that would result in reduction in overall surface water supplies and stream flow volumes and, particularly during drought conditions, and could affect fisheries and other aquatic species.*
This statement reflects a lack of understanding of the water transfer strategy, as recommended by the City of Santa Cruz Water Supply Advisory Committee (WSAC). The National Marine Fisheries Service (NMFS) and California Department of Fish and Wildlife endorsed the water transfer concept for two reasons, according to Jon Ambrose, staff member of NMFS, in a presentation to the Water Supply Advisory Committee.

- River water during high flow periods would be used to replenish local aquifers. This would increase the base flow in area streams, benefiting wildlife.
- The transfer of water to Santa Cruz from the District and Scotts Valley Water District during drought periods would enable Santa Cruz to adhere to a Habitat Conservation Plan that restricts stream diversions even in drought years.

2. *Feasibility remains uncertain, as availability (i.e. quantity and legal) and certainty of water supply would be managed by City of Santa Cruz.*

The water transfer strategy is at least as feasible as the Pure Water Soquel project. The quantity of water available has been analyzed by Gary Fiske Associates for the Water Supply Advisory Committee. (See Agenda document 8a-2 from WSAC April 2015 meeting). Fiske concludes that within current surface water rights constraints (but no constraints on infrastructure), storage of 3.5 billion gallons can be amassed within 3 years. There is no shortage of river water for the purpose of aquifer recharge. The actual amount of time to recharge local aquifers depends on existing infrastructure constraints.

A legal opinion from the County’s water rights attorneys, Best, Best & Krieger (2013) as well as the District’s attorney indicate that the water transfers (aka conjunctive use) are legal, and in fact encouraged by the State Dept. of Water Resources.

The concern that the City would manage the certainty of the water supply can be addressed through contract negotiations. The Draft should note that the City policy prioritizes water transfers for aquifer recharge above the back-up plans of direct potable reuse and desalination. The Water Supply Advisory Committee Final Report anticipates agreements between the City and District that would detail quantities of water to be transferred as well as sharing of capital and operating costs.

3. *Does not meet key project objectives of timeliness, affordability, and drought resistance*

Transfers of water from Santa Cruz to customers in Soquel Creek Water District are planned for this winter (2018-19), according to both districts. The *Water Supply Advisory Committee Final Report* notes, “Even without agreements to return water to Santa Cruz Water Dept. in the future, in lieu recharge strategies can start immediately with existing infrastructure.”

The District has at its disposal the tool of water rationing that could be employed immediately if the District Directors are concerned about the time it takes to implement.
any of the alternatives. The EIR should note that water rationing has an immediate impact on water consumption, as is evident with recent experience in Santa Cruz. The EIR should note that a reduction in pumping in District wells in recent years has resulted in significant rise in groundwater levels at District wells. Water rationing pending implementation of any supplemental supply would be protective of groundwater levels.

It is not clear why affordability is mentioned as an obstacle to opting for large-scale water transfers. The operational costs of a wastewater reuse facility are significantly higher than surface water costs due to the energy intensity of reverse osmosis, as well as the costs of replacing membranes.

Water transfers are not drought resistant in the sense that a reliable amount of water is available for transfer each year. Yet it is a mistake to think that they should be. Aquifer recharge is not diminished by drought years so long as the average amount of river water is available over a period of years. Given the large quantities of river water available on average, the amount of time it takes to recharge the aquifer using river water should not disqualify this alternative.

The Draft needs to report that the 1500 afy average estimated river-water transfer is not an upper limit. The District has the option to collaborate with Santa Cruz in investing in larger treatment and distribution capacity, thereby accelerating the aquifer recharge process. The Conjunctive Use and Water Transfer Phase 2 Final Report identified the capacity to treat turbid water and to divert river water as constraints that could be reduced with further investment. The WSAC Final Report lists a number of City operational constraints that could be reduced, allowing for higher amounts of water for transfer, such as changing the operational rule for reserving water in Loch Lomond.

In summary, the EIR needs to present an accurate picture of the potential of river-water transfers to restore the aquifers to safe levels.

Alternatives Analysis: Include Transfers from Purisima to Aromas

The Draft discusses the District’s “proactive groundwater management.” In order to be more complete, this section should discuss the alternative of transferring water from the Purisima Aquifer section of the District to the Aromas Aquifer section. Hydrometrics memo (2015) reports, “current consumptive use in the Purisima is below the pre-recovery goal for that area, so this shows that the District can actually increase its pumping in the Purisima if non-District consumptive use remains constant.” The memo suggests that the District “may facilitate Aromas recovery with a transfer of water from the Purisima to other users in the Aromas.”

C. Energy Use
The Draft acknowledges that “implementation of the Project would increase the District’s total electrical demand by approximately 3600 MWh per year.” The Draft needs to put this 10MWh/day in context. What is the Project’s electrical power consumption per acre-ft. of water produced compared to the District’s average power consumed by pumping an acre-ft of water?

The Draft’s Impact 4.6.1 reads, “The Project could use large amounts of fuel or energy in an unnecessary, wasteful, or inefficient manner.” The Draft reports that this impact is reduced to “less than significant with mitigation”. Yet the only mitigation proposed in this section has to do with the energy impact of construction, not the energy impact of operating the plant. Surely the energy consumption of operating the plant for its fifty-year life expectancy dwarfs the energy consumption in constructing the plant. Yet no mitigation for this very large energy expenditure is offered.

To fairly compare the energy use of the Project to the alternatives, the EIR needs to explain that the reverse osmosis plant needs to operate 24 hours a day 365 days a year in order to prevent membrane deterioration. This means that the plant would be operating during the time of the year when there are large amounts of water in the San Lorenzo River available for transfer to the District both for direct consumption and for direct injection into the aquifer. That scenario is equivalent to a homeowner keeping the lawn sprinklers running during a rainstorm. Surely this qualifies as an unnecessary, wasteful, or inefficient use of energy.

**D. Resiliency**

The Project Objectives include “enhances resiliency.” The EIR would benefit from a discussion of resiliency (or resilience) as applied to the Project and the alternatives.

I suggest that resilience means the ability of a system to adapt to stress under a variety of present and future conditions. A reverse osmosis wastewater treatment system that is at least twice as energy intensive as the District’s current water supply does not enhance resilience. Such a treatment plant would make the District even more dependent on industrial levels of electricity. There are many risks and uncertainties that accompany reliance on high levels of electric power due to the depletion of cheap fossil fuel energy sources. This depletion could have profound impact on the price and even the availability of electric power.

The Draft EIR takes into account a future in which climate change reduces aquifer recharge. The proposed Project is at least in part a climate adaptation strategy. Such an adaptation strategy should not increase the burning of fossil fuels that are the cause of the problem in the first place.

A reverse osmosis wastewater treatment plant is a step away from resilience for another reason. The following observation was raised by local civil engineer Jack Schultz...
regarding the reverse osmosis desalination proposal, but it also applies to the Pure Water Soquel Project:

“It is a general principle of engineering that after a certain threshold, an increase in level of complexity of an engineered system is often accompanied by an increase in vulnerability to failure. A simple light switch always functions until it wears out. But as anyone who owns a PC knows, a new computer can crash.”

The vulnerability of a plant due to its complexity puts water users at risk. Treatment of wastewater needs to be error-free in order to protect public health. A failure of plant treatment effectiveness for just a day or two can introduce contaminants into the aquifer.

**Affordability**

The Project Objectives include the development of an “affordable” water source. Hence the EIR should analyze the affordability of the Project in comparison to alternatives. Under CEQA a project is not “feasible” if there are serious doubts as to the ability to afford the project. At a public meeting, the District heard from wastewater treatment consultants who questioned whether the District had a large enough customer base to afford the Project.

Any analysis of affordability should include the impact on increased water rates on customer water use. The City of Santa Cruz’s consultant, David Mitchell, reports a high degree of water demand elasticity based on price. Future water consumption projections including price elasticity should be factored into the groundwater model.

The District should also consider the impact of higher water prices on lower income customers. The EIR reports that residential customers averaged 53 gallons per person per day in 2017. What is not reported is how many district customers use below that amount. Based on earlier analysis for the District by Sue Holt, it is likely that the median residential water use is now below 53 g/p/d. If the customers at the high end of consumption brought their water use down to the current median, how close would the District be to reaching its pumping goal?

The beneficiaries of the Project are not the customers who are already consuming water at or below a level that would achieve the District’s goals (if all customers were consuming at that level). The beneficiaries of the Project are those who are consuming at higher levels. Yet the cost burden would fall on all District customers. The Project fails the equity test when the question is asked, “Who pays and who benefits?”

**Conclusion:**
The Draft EIR’s conclusion that the Pure Water Soquel Project is the environmentally superior alternative rests on outdated District goals, inadequate analysis of alternatives
to the Project, and lack of clarity about resilience and energy intensity of the Project compared to alternatives. It is therefore incomplete and should be revised accordingly.

The District’s formulation of an aquifer recharge strategy would benefit from prioritizing the values for minimizing energy dependence, complexity and financial cost. With these values as a priority, the District would be avidly pursuing an agreement with the City of Santa Cruz to purchase water in lieu of pumping District wells during periods of high river flow. The District would be conducting vigorous cost-benefit analysis of collaborating with Santa Cruz on infrastructure investments to enhance aquifer recharge through surface water transfers.
3.12 Response to Comments from Water for Santa Cruz County; Scott McGilvray (August 13, 2018) (Comment Letter O-6)

O-6-1 Comment noted. Please see the responses to comment letter O-2.
The attached comment is intended to replace the comment submitted by Water For Santa Cruz County (WFSCC) yesterday. The only change is that the pagination error has been repaired. This version will be easier to read. For that reason, please replace the comments submitted by WFSCC yesterday with this version.

Scott McGilvray
Water for Santa Cruz County chair.
Comments on the Draft EIR, Pure Water Soquel Project August 13, 2018

Our comment on the Draft EIR relates to section 7.5.4, “Participation in City of Santa Cruz’s In-Lieu and/or Aquifer Storage and Recovery Project(s) as an Alternative Supply Source”. This section conflates in-lieu use with Aquifer Storage and Recovery (ASR). While ASR can be a part of in-lieu use, it is an optional element, yet section 7.5.4 only considers the two together, saddling in-lieu use with the possible disadvantages of ASR. Water transfers for in-lieu “conjunctive use” should be considered separately from and without reference to ASR.

In an in lieu project, groundwater users would agree to forebear pumping groundwater during some periods and instead use surface water which they would not otherwise use, and the conjunctive use program would then utilize groundwater during drier years, over and above historical extractions, and export it or a like amount of surface water from the basin.

This is also known as ‘passive conjunctive use’. Note that ASR is not mentioned. Water transfers can and do occur without the necessity of actively injecting water into the aquifer. If ASR is added to the conjunctive use plan, it is then referred to as ‘active conjunctive use’. We note that the phrase ‘conjunctive use’ appears only twice in the entire EIR, once in the bibliography and once referring to a flood protection plan in Santa Cruz. Given the emphasis by the California Department of Water Resources encouraging such projects and its ability to completely ameliorate SqCWD’s current critical overdraft, this is a serious omission and must be thoroughly addressed.

Scenario for Water Transfers:

Very simply, WFSCC knows that the water transfers using North Coast stream water, which are expected to begin this winter, if expanded and buffered by storage of San Lorenzo River water in Loch Lomond, are more than adequate to meet the needs of the Soquel Creek Water District (SqCWD) for the foreseeable future without any change in water rights. This possibility has not been investigated in this EIR, making the EIR seriously deficient.

Current Water Transfer Capacity:

The capacity of the Graham Hill Water Treatment Plant (GHWTP) to SqCWD intertie is 1.4 million gallons per day (mgd). Without any capital investment or infrastructure changes, if that intertie were full and used every day, over half of SqCWD’s needs would be met (1.4 million gallons x 360 days = 504 million gallons per year [mgy]), even more than the optimal maximum output of Pure Water Soquel (PWS)(450mgy).

Expanding Water Transfer Capacity:

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1 California Water Resources Control Board, Water Transfer Program Information, no date. p. 5 Available at waterforsantacruz.com/soquel-creek-water-district “Water Transfer Program Information”
3 waterforsantacruz.com/soquel-creek-water-district “Santa Cruz 15-Year Water Supply Options”
Any expansion of currently agreed-to water transfers, transfers that are within the bounds of the current SCWD water rights, would require amending the CEQA Cooperative Water Transfer and Purchase Agreement between SqCWD and SCWD.

3 issues are involved in expanding water transfers:
- Pipe capacity
- Storage buffer for storage in high flow times and release in low flow times
- Water rights

From simpler to more complex, these possibilities are:

1) **Expanded intertie but no storage buffer, no increase in water rights:**

In the “Critically Dry Year” of 2018, pumping directly from SLR → GHWTP → SqCWD only on days where flow was much greater than the minimum necessary for fish and possible SCWD needs (over 50cfs), there were 63 days with river flows adequate for transfers, making 88 mg of transfer with the current intertie. With *only an expanded intertie*, if the maximum amount available under current water rights (7.2mgd) were transferred only on those same days, 454 mg (7.2mgd x 63 days = 454mg) could have been transferred, meeting around 50% of SqCWD’s needs for the entire year *with minimal capital investment*. Under conjunctive use the expanded intertie would also prove its worth in sequentially dry years when, as happened several years ago, water needs to be transferred in the other direction, from the Purisima aquifer to the Santa Cruz Water District (SCWD). The current transfer capacity of 1.4mgd is clearly insufficient to meet any significant need that the SCWD might have, a total need that is currently around 7.5mgd, even higher in the summer months when the transfers would be most needed.

2) **Expanded intertie, storage buffer, change in place of use but no increased water rights**

The Santa Cruz Water Department reservoir at Loch Lomond (LL) is used as water storage. This storage could be used as a buffer, filled and partially emptied depending on requirements. In addition to direct transfers to SqCWD, with a change in place of use, under conjunctive use water could also be pumped directly from the San Lorenzo River (SLR) to LL and then withdrawn from LL to pump daily to SqCWD (via the GHWT). Loch Lomond could then be replenished by SLR harvest whenever feasible and SqCWD would not have to be at the mercy of unreliable, unpredictable flows. The current water right is 7.2mgd, year round. Under the current SCWD water right, with an intertie expanded to handle it a transfer of 900mg is possible, almost meeting SqCWD’s total needs. This eliminates any need for PWS.

3) **Expanded intertie, storage buffer, place of use change and increased water rights**

With expanded interties (SLR → LL and GHWTP → SqCWD), use of Loch Lomond as a storage buffer, a negotiated change in water rights on the SLR with accompanying change in place of use—both of which are *encouraged* under current California Department of Water Resources guidelines (see footnote 2)—the supply of water for use by SqCWD is almost limitless. It is so substantial that the failure of the EIR to address this possibility is a dire flaw.

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4 waterforsantacruz.com/soquel-creek-water-district “Water Transfer Agreement
5 waterforsantacruz.com/soquel-creek-water-district “SLR Daily Flows 2018”
In support of this contention, consider the following: Under the proposed “Buffered Transfers” scenario (#2 above), analysis of SLR flow data from the past 51 years shows that all of SqCWD’s water needs could have been met for 78% of the years examined (40 of those 51 years). There were only 3 years in the past 51, 1 in the past 40, and none in the past 20 years when the amount that could be harvested to refill Loch Lomond was less than the maximum amount of 450mgy PWS would produce. Thus over the past 51 years conjunctive use would have outperformed PWS 94% of the time. Because it is a non-technological solution, it would supply water with much higher reliability. The water would also have guaranteed purity and be available at a fraction of the cost of PWS. With expanded water rights (#3 above) SqCWD’s needs could be easily met almost every year.

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6 waterforsantacruz.com/soquel-creek-water-district “Days over 50cfs”
7 waterforsantacruz.com/soquel-creek-water-district “3 Year Rolling Average”
Community Concerns:

“Timeliness”
Water transfers can and will be started this winter. Expanding the interties could be done very expeditiously, certainly much faster and much less expensively than building a PWS treatment plant.

“Water Quality”
The pipe loop test showed no incompatibility between SLR water and SqCWD’s pipes. The water from the river was said to be of better quality than the currently pumped water. And because it is rainwater and not wastewater it is not subject to the many known unknowns of treated wastewater.

“Reliability”
While we are starting to see some changes in rainfall patterns, for the past 81 years this method of supply would have been completely reliable. This also holds true for the past 10 years (see footnote #4). There is no complicated plant to malfunction and no new staff with the requisite skills to operate this highly complex plant will need to be hired, an issue already identified by the consultants as a concern.

EIR District Goals

According to Section 7.5.4 of the draft EIR, water transfers:

“Would not reduce Project impacts”
This is not accurate. Unless the interties are expanded (recommended!), there are no impacts from this project and therefore PWS Project Impacts would not be reduced but rather completely eliminated.

“Would not meet goals of”

Timeliness
This is not accurate. See above. What could be more timely than right now?

Affordability
This is not accurate. The cost of this plan is minimal to modest, depending on the options chosen. Even with an expanded intertie, updates to the GHWTP (which will also have to occur with PWS), and an expanded pipe between the SLR diversion and Loch Lomond, the cost of this plan is less than 1/10th the long-term cost of PWS.

Reliability during drought periods
This is highly debatable. Water transfers would have been complete solutions to SqCWD’s needs for 84% of the past 51 years. Transfers would have provided as much water as PWS would supply (roughly half SqCWD’s needs or 450mg) for 48 of the past 51 years (see footnote #4). After 15 years
the cumulative total available would be 50% more than with PWS (see footnote #3), allowing SqCWD to pump the Purisma aquifer even less than they would have to with PWS. In the years when water transfers were not adequate to completely refill LL, the wells in the Purisima aquifer could then be pumped by SqCWD. NOT pumping the wells for 90% of the previous 51 years would have allowed the aquifer to remain full from natural recharge, making any possibly necessary but very infrequent pumping a non-issue. Allowing significant water transfers to occur now will allow the aquifer to recharge itself naturally, avoiding the possible hazard of introducing ‘known unknown’ substances into a community water supply.

Conjunctive use of San Lorenzo River water is a complete, inexpensive, entirely feasible solution to the water needs of the SqCWD. In order for the EIR to be complete, this alternative needs to be included and comprehensively evaluated on its own merit, not as a partner to ASR, with which it has no necessary connection.

Respectfully submitted

Scott McGilvray
Chair, Water for Santa Cruz County
https://waterforsantacruz.com/
3-year Rolling Average of Water Harvestable at Felton Diversion, San Lorenzo River
San Lorenzo River Flows
Felton Diversion

Worst Harvest Period

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1 Collector

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Santa Cruz 15-Year Water Supply Options

<table>
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<th>Cumulative Harvest (millions of gallons) Assumes Average Rainfall Year (2016)</th>
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| **Option 1:** Transfer N. Coast to SqCWD Jan-May only. Cost = $0.00  
**Option 2:** Transfer N. Coast to SqCWD Jan-May only. Cost = $0.00  
**Option 3:** Add 70% N. Coast June-Dec. begin 2020. Cost = $18 million (increase intertie capacity)  
**Option 4:** PureWater Soquel. Begin 2024. Cost = $183 million  
**Option 5:** Add 500 mg. Permit change implement 2024 Cost = $18 million (increase intertie capacity) |
A water transfer is a reallocation of water among water users. Water transfers provide flexibility in the allocation and use of water in California. Historically, water transfers were usually arrangements between two parties, one with surplus water supply and one in need of additional water. These two parties would reach a mutually acceptable arrangement regarding price and quantity. Approval by appropriate state and federal agencies is a necessary part of the process for these water transfers.

Over time, language was added to the Water Code to expedite the review and processing of short-term water transfers; that is, water transfers in effect less than one year. State and federal agencies developed procedures to assist in the processing of water transfers proposed by local or private entities. For example, U.S. Bureau of Reclamation (Reclamation) accommodates water transfer requests within the Central Valley Project (CVP) through the provisions of the Central Valley Project Improvement Act (CVPIA). Department of Water Resources (DWR) allows use of its State Water Project (SWP) facilities by its contractors and others under the provisions of Water Code section 1810. The State Water Resources Control Board (State Water Board) has given priority to processing short-term water transfers to accommodate the changing needs of water users.

The majority of the water transfers are short-term water transfers that are in effect less than one year. In addition, most water transfers seek to move water from northern areas of the state to central and southern areas. To accomplish this, the seller must either: (a) release water from reservoir storage, or (b) forego direct diversion of water. The water flows downstream to the Sacramento/San Joaquin Delta. In the Delta, the water is diverted using either the State or federal pumps and conveyed in the State or federal canals and delivered to the purchaser. One of the difficulties in arranging transfers is that the pumps can only be used to transfer water when Reclamation or DWR have excess pump and canal capacity. Also, the physical plumbing must be available to actually deliver the water to the purchaser. Water is generally transferred in the months of July, August and September each year. In 2013, short-term water transfers totaling 277,283 acre-feet of water were processed by the State Water Board. This was only a fraction of the total transfers for the year because the majority of the transfers are not regulated by the State Water Board.

**Types of Transfers Regulated by the State Water Board:**

About 95 percent of water transfers are either transfers of water between SWP contractors, or transfers of water between federal CVP contractors. This type of water transfer does not require State Water Board approval except if the point of diversion, purpose of use, or place of use under the CVP's or SWP's water rights need to be changed to accomplish the transfer. However, for a CVP contractor to transfer water to
a SWP contractor outside the CVP service area (or vice-versa), the transferring water right holder (either Reclamation or DWR) must petition the State Water Board for a change in the water rights for either a short-term transfer or a long-term transfer.

The State Water Board regulates water transfers that move water from individuals, water districts and water agencies to South-of Delta purchasers. It also regulates transfers among parties within local watersheds.

A pre-1914 water right holder can change the point of diversion, purpose of use, or place of use, if others are not injured by such change. Thus, pre-1914 water right holders are not required to petition the State Water Board to change the place of use under their right to transfer water. However, there is one situation where a pre-1914 water right holder may choose to petition the State Water Board, and that is for a temporary or long-term change for the dedication of pre-1914 water to instream use under Water Code section 1707. In this case, there are benefits from using a formal process which involves notification of all potential diverters within the instream-use reach of the stream that a portion of the water within that reach of the stream has been dedicated for instream use and is unavailable for diversion. Obtaining State Water Board approval of the change could also protect the water right holder against claims that the water is being abandoned, or that the water right should be forfeited for nonuse during the period of the dedication.

**Water Transfers – What is the Water Used For?**

In 2013, water was transferred for municipal and industrial use, irrigation, instream use (including salinity control and other instream uses), wildlife enhancement, and to facilitate ongoing groundwater banking programs.

The transfers approved in 2013 did not result in the diversion of additional water from the Delta or the delivery of more water to any individual water supplier or user than has been delivered historically. Instead, the changes provided a limited amount of supplemental water to water purchasers to offset a portion of their water deficiencies due to drought and lowered water deliveries by the SWP and CVP.

For municipal water users, such as the Santa Clara Valley Water District, water transfer provided a means to overcome operational difficulties. Santa Clara obtains water from the CVP at San Luis Reservoir. When the reservoir drops to specific levels, there are operational and/or water quality problems which impact Santa Clara’s pumping capacity and potentially impact the ability to meet district demands. In addition, low water levels can result in reduced water quality causing water treatment problems which could result in severe reductions in the quantity of CVP supplies, as well as increased water treatment costs. Santa Clara participated in a water transfer, in order to have its water delivered by DWR. The quantities available to both the SWP and CVP were unchanged, because water was exchanged to prevent any deficits.

For groundwater banking programs, transfers can increase operational flexibility. Metropolitan Water District of Southern California stores a portion of its SWP supply in
the Arvin-Edison Water Storage District groundwater banking facilities. Arvin-Edison is a CVP contractor. If requested to do so, Arvin-Edison returns previously banked water to Metropolitan. One method to recover water in the groundwater basin is by direct groundwater extraction. Expansion of the CVP place of use, however, allows Arvin-Edison the option and flexibility to return Metropolitan’s banked water through an exchange of Arvin-Edison available CVP surface water supplies. This provides greater flexibility in scheduling the return of a quantity of water equivalent to the banked supply, and reduces energy costs associated with groundwater extraction. The water provided to Metropolitan had better water quality, because surface water was returned in lieu of previously banked water. The transfer was designed as a balanced exchange of surface and previously banked groundwater, which resulted in a bucket-for-bucket (one-for-one) reduction in Metropolitan’s groundwater banking account with Arvin-Edison.

For wildlife refuges, water transfers can provide a valuable supply of water to maintain fish and wildlife during times when water is not otherwise available to them. This plays a role in prevention of waterfowl diseases.

For protection of threatened and endangered species, water transfers provide a means to alter streamflow and provide water when the fisheries need the water most. In 2011, Reclamation purchased water from Merced Irrigation District for use in meeting Delta flow objectives. Under this transfer, water was released from Merced’s Lake McClure during April and May of 2012 and 2013 to meet the 31-day pulse flow period in the San Joaquin River at Vernalis. The pulse flow is an enhanced flow to assist the fishery. The water also provided water quality benefits.

**Are There Many Types of Water Transfers?**

There are a number of types of water transfers. Water transfers are grouped into short and long-term transfers. A short-term transfer is any transfer of one-year or less. A long-term transfer is any transfer longer than one year.

There are surface water transfers and groundwater transfers. For surface water transfers, there are stored water transfers and transfer of direct diversion water. For groundwater transfers, there is use of groundwater in lieu of surface water, transfer of banked groundwater, and direct transfer of groundwater.

There are also transfers of imported water, which were previously described.

**Surface Water Transfers:**

In a stored water transfer, the seller releases stored water into the stream system for conveyance downstream to the purchaser or foregoes storage during a period when water would typically be stored and allows that water to flow downstream. To prevent the seller from replacing the water in the reservoir to the injury of other water users, the transfer is subject to reservoir refill criteria. Reservoir refill criteria are a set of conditions to ensure that the transfer of stored water does not affect the storage and diversion capability of the SWP and CVP. The refilling of the vacated storage could affect the ability of the SWP and CVP to store or divert water the following winter if the
winter is dry. In normal or wet years there may be sufficient water to allow the reservoir to fill and spill. In these cases, the effects of the transfer are literally washed out.

Stored water transfers may affect fisheries, both positively and negatively. The transfer is evaluated to determine if there will be a negative impact on the cold water pool in the reservoir needed for later fishery releases. The release of stored water may be beneficially timed to provide instream fisheries benefits.

Transferable water involving water that is diverted directly to use is defined as the reduction in consumptive use of water to the extent of the direct diversion rights. From a practical standpoint, transferable water of agricultural direct diversions is the reduction in evapotranspiration of applied water and the savings in water that would not have been available for downstream use. Therefore, if crops are changed or land is fallowed, the resulting reduction in evapotranspiration of applied water could be transferred. Many water conservation efforts typically do not result in changes in evapotranspiration. They often reduce the amount of surface return flow or deep percolation. In most cases these return flows are used by downstream water users and the removal of these flows could adversely affect legal downstream users or fish and wildlife.

The short-term transfer of directly diverted water is limited in Water Code section 1725 to changes in consumptive use or water that has otherwise been removed from the downstream water supply. Therefore, short-term water transfers involving conserved water do not include reduction in surface returns or reductions in deep percolation unless the returns are to a salt sink (or other unuseable source).

Long-term transfer of conserved water can include reductions in returns or deep percolation provided such reductions do not otherwise adversely affect legal users of water and the reductions in returns do not result in unreasonable affect to fish, wildlife and other instream beneficial uses.

**Groundwater Transfers:**

**Transfers of Water Into and Out of Actively Recharged Groundwater Banks:**

This type of groundwater banking project generally involves the importation of foreign surface water originating from a source not hydrologically connected to the groundwater banking site. The imported water is then injected underground or is applied to spreading grounds where it percolates into the aquifer. The banked water will then be pumped and transferred to non-overlying users during dryer years. The recharge and recovery will be conducted by (or under contract with) an overlying landowner, water district or groundwater management authority. The Kern Water Bank and the Arvin Edison/Metropolitan arrangement are examples of this type of conjunctive use project. The sequence can also be reversed in the case of full aquifers, most commonly found in the Sacramento Valley, such that native groundwater is first extracted and exported to create storage space, and then subsequently replenished from an imported surface source.
Alternatively, the recharge can be accomplished through substitution of surface water supplies for existing groundwater use; and recovery of the recharged water can be accomplished by reversing this arrangement. In an *in lieu* project, groundwater users would agree to forebear pumping groundwater during some periods and instead use surface water which they would not otherwise use, and the conjunctive use program would then utilize groundwater during drier years, over and above historical extractions, and export it or a like amount of surface water from the basin. This differs from groundwater substitution projects, which do not involve the export of groundwater and its replenishment through imported recharge water. The Semitropic Groundwater Banking Program in the San Joaquin Valley is an example of *in lieu* recharge.

In general, a proponent of a conjunctive management project bears the burden of establishing that the recharge and withdrawal of water will not adversely affect, or injure other legal users of the groundwater basin. Determining injury in the groundwater banking context is difficult due to the different standards governing surface water and groundwater. At a minimum, the groundwater banker must avoid raising the groundwater table to a level that invades the root zones of neighboring crops or neighboring structures, or cause risk of liquefaction. It must avoid unreasonably lowering the groundwater table below the level that would result in the dewatering of neighboring wells or increasing the power requirements for pumping, and/or causing subsidence or seawater intrusion. The banker must also avoid degrading the quality of the *in situ* groundwater.

The impact to water quality should also be considered relative to the no injury criterion. Commingling lower quality recharge water with *in situ* groundwater may constitute a legally cognizable injury to other groundwater users. For instance, this could be a problem with recycled municipal wastewater or surface water routed through the Delta. Even pure recharge water can mobilize salts and agricultural chemicals in groundwater basins that have been heavily irrigated historically. In urban areas, there is a similar concern that the raising of the groundwater table as a result of groundwater banking could inadvertently saturate and mobilize chemical compounds, which were previously trapped in the unsaturated upper portions of the soil strata.

In some circumstances, the project may have to obtain a change order from the State Water Board, authorizing a change in point of diversion, place of use, or purpose of use. Such orders will also require a finding of no injury to legal users of water.

The project may also have to comply with regulatory requirements imposed by a local groundwater management authority—such as an AB 3030 groundwater management authority or a permitting authority created by local government ordinance. The local bodies may potentially assert jurisdiction at both the importation/storage and extraction stages, and generally impose their own version of a no injury rule.

**State Water Board Approval for Groundwater Banking:**

A water right permit issued by the State Water Board is required for the appropriation of surface water for use in a groundwater recharge project, except where the project can
be carried out based on another valid basis of right. Beneficial use occurs when water is withdrawn from underground storage and put to use. It is important to note that a pre-1914 right cannot be expanded in season or quantity diverted in order to pursue a new groundwater banking project. Also, a riparian right is not suited for storage projects.

**Recovering Water Banked Through “In Lieu” Arrangements:**

Under an *in lieu* arrangement, the groundwater banker would enter into arrangements with the groundwater basin right holders who already use groundwater for all or a portion of their supply and also have access to surface water deliveries. During periods when the banker desires to recharge groundwater, the overlying landowners would forego pumping and use a substitute surface water supply instead. The aquifer recharges “passively” from natural recharge and, in some cases, from percolation of the applied surface water. When the program desires to extract groundwater for export, the landowner would curtail its surface water use and substitute or increase groundwater pumping. The mass balance in the groundwater basin will be the same whether the water is actively recharged or delivered *in lieu* of groundwater pumping. In both cases during years of storage, more water is contained within the basin than would have been stored absent the program.

One difficulty with in lieu banking is that the program will not be withdrawing groundwater that it has directly and physically put into the aquifer through an active recharge program. Instead, it will require groundwater right holders in some years to forego pumping water that they are otherwise legally entitled to extract and to offset that forbearance by drawing more heavily on the aquifer in other years. California Water Code sections 1005.2 and 1005.4 treat in lieu use of an imported surface water supply as the equivalent of the use of the groundwater, thus legally preserving one’s rights to the supply left in situ. As is the case with active recharge, there are problems of enforcement and accounting. In years of forbearance, the other pumpers might extract the water that the program intended to store. In years of extraction, the contracting landowner’s rates of withdrawal may impair the rights of the correlative pumpers.

**Groundwater Substitution Transfer:**

A groundwater substitution transfer occurs when a water user agrees to transfer surface water diverted under a surface water right to another water user and instead pump percolating groundwater (i.e., groundwater not subject to the State Water Board’s permitting authority) to satisfy the seller’s water needs. The following example illustrates the issues associated with groundwater substitution transfers.

Agency A, an SWP contractor located north of the Delta wants to transfer water to Agency B, another SWP contractor located south of the Delta. Agency A has agreed to pump groundwater to compensate for the reduction in SWP surface water deliveries.

Agency A lies adjacent to the Sacramento River. It uses a mix of SWP contract supply and groundwater to meet water demands. Agency A provides only surface water to
water users within its boundaries. The individual water users maintain and operate their own groundwater pumping systems. Groundwater is pumped from an extensive unconfined to semi-confined aquifer that is hydraulically connected to the Sacramento River. Agency A will not be changing its cropping patterns and will not be fallowing land. Therefore, transfer of its SWP contract supply will result in a shift to increased groundwater pumping to maintain the existing crops.

From a water supply point of view the transfer is straightforward. Agency A foregoes part of its surface water diversion and pumps groundwater to make up the deficit in supply. Agency B receives the transferred water less Delta carriage water required to move the water from Agency A to Agency B. However, to successfully accomplish the water transfer described above, several issues must be addressed.

Agency A does not need a permit from the State to pump percolating groundwater to make up for the reduction in surface water. In certain areas of the State, local ordinances have been enacted to protect local water resources. These ordinances usually require a permit to transfer water, require that the transferor identify and monitor for potential impacts to third parties, and may place conditions or limits on pumping. Pumping may also be limited if the groundwater basin has been adjudicated. Local groundwater management plans adopted under Water Code sections 10750 et seq. (AB 3030) may place further limits on increased pumping from a basin. Water Code section 1745.10 further provides that a water user that makes a short-term or long-term transfer of surface water may not replace that water with groundwater unless the groundwater use is (a) consistent with any groundwater management plan adopted for the affected area, and (b) approved by the water supplier from whose service area the water is to be transferred and the water supplier, if a groundwater management plan for the area has not been adopted, determines that the transfer will not create, or contribute to, conditions of long-term overdraft in the affected basin. A third party could challenge or object to the transfer if the basin is in a state of overdraft, or if the increased pumping adversely impacts the water rights of other overlying owners who pump from the same basin.

As third parties to most transfers through the Delta, the SWP, CVP, and their respective contractors take the position that they could be adversely impacted by groundwater substitution transfers. The issue is whether increased groundwater pumping by the transferring agency results in either reduced groundwater discharge to the river or increased surface water recharge from the river to the aquifer. Either of these scenarios is possible when additional pumping by the transferring agency significantly reduces groundwater levels in aquifers near rivers that are tributary to the Delta. A significant reduction in groundwater levels in turn changes the hydraulic gradient between the river and the aquifer. Either scenario may require DWR and Reclamation to release additional water from upstream storage or reduce Delta exports to meet water quality and flow requirements in the Delta.

Groundwater substitution transfers are reviewed to determine the net amount of additional surface water supply, or transferable water, created through groundwater
substitution. Thus, the transferor must account for: (a) the amount of increased pumping that occurs in support of the transfer during the time that export facilities can convey the water, (b) the extent to which transfer-related groundwater pumping decreases stream flow (resulting from surface water-groundwater interaction), and (c) the timing of those decreases in available surface water supply.

**Other Regulations Affecting Groundwater Transfer - Delta Protection:**

California Water Code section 122071 prohibits the export of groundwater from the “combined Sacramento and Delta-Central Sierra basin” unless the pumping is in compliance with a groundwater management plan approved by the county board of supervisors and subsequently approved by popular vote. The statute does not distinguish native groundwater from imported, foreign water.

**Local Agency Participation:**

Local leadership and initiative are important factors in facilitating water transfers. Successful water transfers are typically proposed by local water agencies and benefit from local involvement in the development of these proposals. Some counties have passed local ordinances to regulate groundwater extraction for water transfer purposes. With adequate public notice, disclosure of proposals and meaningful public participation, local communities can best assess their area’s need for water supplies and determine if there is a potential for transferring water outside of the local region. They can also develop mitigation monitoring and funding programs to address local concerns with water transfers as they develop. While the state and federal water agencies can assist in moving water from one area to another and ensuring the protection of larger public interests, local agencies can lead in the development of the water transfer proposal.

Also, local government is often concerned about how water transfers affect third parties and the social and economic conditions in the county. Water transfer packages need to take these issues into consideration.

Although the parties to the transfer remain responsible for the mitigation of impacts, the optimal approach would be to design programs that minimize or eliminate impacts. The discussion of options for dealing with third parties impacted by a water transfer, and also options for counties impacted socially and economically by a water transfer, needs to take place during the development of a water transfer program. This participation up front will allow local government to help facilitate water transfers that will address local concerns.

As each water transfer is being developed, the following three factors, set forth in various sections of the Water Code, must be evaluated regardless of the approval process for the water transfer:

(1) prevention of injury to other legal users of water;
(2) avoidance of unreasonable effects on fish and wildlife; and

(3) if water is moved by the SWP or other state, regional, or local public agency, actions needed to avoid the unreasonable effects on the overall economy in the county from which the water is transferred.

Including these actions as part of the water transfer from its initial design, as well as a brief assessment of how the proposed transfer would serve public interests, will assist greatly in making the water transfer succeed.
A SUMMARY OF THE CALIFORNIA LAW OF SURFACE WATER AND GROUNDWATER RIGHTS

Set forth below is a brief discussion of the California law of surface water and groundwater rights, including provisions for transfer of different types of water rights and entitlements. These are general provisions. Please consult an attorney regarding specific water right issues. The State Water Resources Control Board’s (“State Board”) website (http://www.waterrights.ca.gov/WRINFO/) includes publications that provide additional information on California water rights.

1. Reasonable and Beneficial Use Doctrine

   Article 10, section 2 of the California Constitution (enacted in 1928) prohibits the waste of water, and requires reasonable use, method of use and method of diversion for all surface and groundwater rights. The doctrine of reasonable and beneficial use is the basic principle defining California water rights: that no one can have a perpetual interest in the unreasonable use of water, and that holders of water rights must use water reasonably and beneficially. (See also Water Code section 275: “The department [of water resources] and [state water resources control] board shall take all appropriate proceedings or actions before executive, legislative, or judicial agencies to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water in this state.”)

2. Riparian Rights

   Riparian water rights are rights that an owner of land contiguous to a natural stream possesses to divert the naturally-available supply directly to use, without artificial storage, for reasonable, beneficial purposes on that riparian land. Riparian land is the smallest parcel of such contiguous land, in a single chain of title from the original private owner, that is within the watershed of the stream. The right arises by virtue of ownership of the riparian land, and is not gained by use nor lost by nonuse. Generally, the riparian right is superior to the other types of surface water rights, but the riparian right does not apply to water that is stored for later use. The riparian right may be junior to an appropriative water right that was perfected before a patent on
the riparian land was issued by the United States. The riparian rights of owners of land that are riparian to the same source are “correlative,” in that, if there is insufficient water under the riparian right for all riparians, each is entitled to a fair share of the available supply based upon the amount of their land and their reasonable water supply needs.

Where interests in the riparian parcel are conveyed or the riparian parcel is subdivided, the riparian right as to any subparcel that is no longer contiguous to the source of water may be severed, absent the intent to retain the riparian nature of the severed parcel.

3. Appropriative Rights

Appropriative rights to surface water are rights to use unappropriated water, that is, water that is surplus to the needs of riparian owners and prior appropriators and prescriptors. Appropriative rights are based not on land ownership, but on actual diversion and use of water. They are rights of priority, in that, if the available surface water supply is insufficient to meet the needs of all appropriators, the one with the earliest priority date is entitled to satisfy his or her needs fully before those with later priority are entitled to any water. An appropriative right may be established to use water for any reasonable, beneficial purpose on any land no matter where located, and to store water from one season for use in a later season, or from one year for use in subsequent years. Just as appropriative rights are gained by use, conversely, once acquired, they may be lost wholly or in part by five years’ nonuse during a time when the water was physically available for use.

Prior to 1914, appropriative rights could be acquired simply by posting or filing a notice, and then diverting and using the water for reasonable, beneficial purposes (referred to as “pre-1914 water rights”). Since 1914, California statutory law has required that an application be filed and a permit obtained from a State agency, now the State Water Resources Control Board. The State Board has the discretion to decide whether unappropriated water exists, and whether the proposed use under the application is reasonable, beneficial and in the public interest. If the State Board finds affirmatively on these issues, it can issue a permit, and then, after the diversion and use facilities have been constructed and the water appropriated has been fully put to beneficial use within the time allowed, the State Board can issue a license confirming that the water right has been perfected by use for the amount used.

Under Water Code sections 5100 through 5108, the holder of an appropriative water right is required to file periodic statements with the State Board of diversion and use of water under the water right. Under section 5108, these statements are for informational purposes only, and neither the failure to file a statement nor any error in information filed will have any legal consequence. From time to time, the State Board has proposed amendments to these provisions that would require filing the statements of diversion and use as a condition to retaining the water
right.

4. Prescriptive Rights to Surface Water

Prescriptive water rights are created by five years’ open and notorious use of water under a claim of right that is adverse to one or more existing prior rights: riparian, appropriative or prescriptive. (But see, *People v. Shirokow* (1980) 26 Cal.3d 301, which held that prescriptive rights could not be obtained against the State’s interest in allocating water in the public interest.) The use must be reasonable and beneficial. As in the case of appropriative rights, a prescriptive water right can be established for use on any land, and water can be diverted directly to use or stored for later use. Prescriptive rights, however, cannot be acquired against public agencies or public utilities. Prescriptive rights, like appropriative rights, can be lost by five years’ nonuse.

5. The Public Trust Doctrine

In *National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, the California Supreme Court held that the State, in accordance with Article 10, section 2 of the State Constitution, as trustee of the “public trust,” retains supervisory control over all the State’s waters to protect navigation, fishing, recreation, ecology and aesthetics. No person has a vested right to appropriate water in a manner harmful to the interest protected by the public trust. “Once the State has approved an appropriation, the public trust imposes a duty of continuing supervision over the taking and use of the appropriated water. In exercising its sovereign power to allocate water resources in the public interest, the State is not confined by past allocation decisions which may be incorrect in light of current knowledge or inconsistent with current needs. The State accordingly has the power to reconsider allocation decisions. . . . No vested rights bar such reconsideration.”

6. The County of Origin Law (State Filings)

In the 1920's and 1930's, the State legislature adopted legislation authorizing massive applications by the State for future water development projects. In order to attempt to allay the fears of areas from which water projects might transfer water, the legislature passed certain “area of origin” laws. Specifically, in 1931 the legislature passed the County of Origin Law (Water Code section 1055), and in 1933 the legislature adopted the Watershed Protection Law (Water Code sections 11460 – 11463), which is discussed in the next section of this document.

The State, acting through the Department of Water Resources (“DWR,” and previously the Department of Finance), is authorized to appropriate water (and has done so) for future water projects (known as “State filings”). (See Water Code sections 10500 - 10507.) The State Board is authorized to release from priority or assign these State filings to other agencies or entities when the release or assignment is for the purpose of development not in conflict with the State water plan. (Water Code section 10504.) Under the County of Origin Law, the State Board is
expressly prohibited from assigning or releasing the priority when, in its judgment, the effect could be to deprive the county in which the water originates of water necessary for its development. (Water Code section 10505.)

The legislative intent and effect of section 10505 was to provide protection for the future interest of the counties of origin by placing restrictions on the authority of the State to transfer or dispose of the priorities vested in the State by filing applications to appropriate unappropriated water. (25 Ops.Cal.Atty.Gen. 8, 15 (1955).) Section 10505 applies only to applications filed by the State. The county of origin provisions do not apply to water rights that are not based on assignment or release of a State filing.


The “Watershed of Origin Protection Act” (Water Code sections 11460 – 11465, sometimes referred to as the “area of origin law”) operates to protect the priority of water rights within the watershed against State export rights in two major ways: (a) by giving protected areas a preferential right to contract for State-developed water, and (b) by allowing later upstream developments within the watershed to obtain priority as against the State’s projects. Water Code section 11460 states: “In the construction and operation by the department of any project under the provisions of this part a watershed or area wherein water originates, or an area immediately adjacent thereto which can conveniently be supplied with water therefrom, shall not be deprived by the department directly or indirectly of the prior right to all of the water reasonably required to adequately supply the beneficial needs of the watershed, area, or any of the inhabitants or property owners therein.”

The area of origin law does not entitle protected areas to State-developed water free of charge, nor does it allow the protected areas to gain any priority against entities other than the State who may export water out of the watershed. Area of origin rights are not transferable to an area outside the area of origin. The area of origin law does not create any hierarchy of preference between areas included within the same watershed. The Central Valley Basin contains two watersheds: one comprising the Sacramento River and its tributaries down to and through the Delta, and another comprising the San Joaquin River and its tributaries. (29 Ops.Cal.Atty.Gen. 136 (1957).)

The United States must comply with the area of origin law when it seeks a priority established under a state filing (Water Code section 10500). (See 25 Ops.Cal.Atty.Gen. 8, 28 - 29 and Water Code section 10505.5: “Every application heretofore or hereafter made and filed pursuant to section 10500 . . . shall provide that the application, permit or license shall not authorize the use of any water outside the county of origin which is necessary for the development of the county.” Under Water Code section 11128, the area of origin law applies to
the operation of the federal Central Valley Project. (See also, California v. United States (1978) 438 U.S. 645.)

8. The Delta Protection Act

Article 4.5 of Division 6 of the Water Code (commencing with section 12200) sets forth the Delta Protection Act, which provides a first priority to provision of salinity control and maintenance of an adequate water supply in the Sacramento-San Joaquin Delta (“Delta”) Delta for reasonable and beneficial uses of water, and relegates to lesser priority all exports of water from the Delta to other areas for any purpose.

9. Groundwater Rights

Groundwater rights attach to percolating groundwater, which includes all groundwater that does not comprise a subsurface stream or the underflow of a surface stream. An underground stream is a stream or river flowing in a definite channel in an underground watercourse. The underflow of a surface stream is the water in the soil, sand and gravel comprising the bed of a stream in its natural state and essential to its existence. Water in a stream’s underflow or an underground stream is treated like surface water for legal purposes, including State Board permitting. It usually is in contact with the surface flow, and flows in the same direction. Courts have classified water rights in percolating groundwater as overlying, appropriative or prescriptive. No water right permit is required to pump percolating groundwater.

Overlying groundwater rights are analogous to riparian rights to surface water. Each owner of land that overlies a common groundwater supply has a right to reasonable, beneficial use of the water of that supply on or in connection with the overlying land. The use of each overlying landowner is “correlative” with the rights of all other owners of land overlying the same groundwater supply. In the event of insufficiency of the supply for the requirements of the overlying landowners, the water may be apportioned among them all by a court decree. There is no priority in time among overlying pumpers.

Similar to riparian rights, the transfer of title to an overlying groundwater right, separate from the land, can result in a permanent severance of the right from the land. Once the overlying water right has been severed, the parcel ceases to be an overlying parcel and it loses its overlying groundwater right. One acknowledged way to transfer the right to exercise an overlying right, without causing a severance of the right, is the transfer of the overlying right to a mutual water company, which acts as an agent or trustee of the owners of the overlying right. At least one case has suggested that the right to exercise an overlying right could also be transferred to a public agency or an agent or trustee without resulting in a severance of the right. (See Orange County Water District v. City of Colton (1964) 226 Cal.App. 642.)
Water users that do not use groundwater on their overlying land are not barred from using groundwater. Such water users include public agencies and owners of non-overlying land. They may extract groundwater, but their rights are analogous to appropriative rights to surface water. Unless there has been an adjudication of the groundwater basin rights, their use is limited to surplus water, which is defined as water in excess of the safe annual yield that is not needed for reasonable, beneficial use by the overlying owners. If the basin is in overdraft, use may be restricted to the overlying owners. As between groundwater appropriators, the one first in time is the first in right, and a prior appropriator is entitled to all the water he or she needs, up to the amount he or she has taken in the past, before a subsequent appropriator may take any groundwater.

Prescriptive groundwater rights are not acquired by taking surplus or excess water. An appropriative taking of groundwater that is not surplus is wrongful, and may ripen into a prescriptive right when the use is actual, open and notorious, hostile and adverse to the original owner, continuous and uninterrupted for the statutory period of five years, and under a claim of right. (See, generally, City of Barstow v. Mojave Water Agency (2000) 23 Cal.4th 1224.) Prescriptive groundwater rights are most often obtained when someone pumps groundwater during an obvious overdraft condition.

10. Groundwater Adjudication

Groundwater rights generally are not quantified unless the groundwater basin is adjudicated. The authority to adjudicate a groundwater basin exists in State courts, and in limited circumstances, with the State Board. In an adjudication, junior groundwater right holders generally try to prove that they have obtained higher priority pumping rights by pumping for at least five years during an overdraft of which the senior groundwater right holders had notice. If the junior right holders prove such a case, then, under the doctrine of “self-help,” the senior right holders retain their priority to only as much water as they actually pumped during the relevant period. In such a situation: (1) an overlying landowner’s “correlative” right to a reasonable share of a basin’s safe yield effectively may be replaced with a right based on its past water usage; and (2) a public agency with only a junior appropriative right may be able to obtain a higher priority. The California Supreme Court has held that Civil Code section 1007 prevents prescription against public agencies’ groundwater rights or such rights that a public utility has dedicated to public use. (See Los Angeles v. San Fernando (1975) 14 Cal.3d 199; City of Barstow v. Mojave Water Agency (2000) 23 Cal.4th 1224; Hi-Desert County Water Dist. v. Blue Skies Country Club, Inc. (1994) 23 Cal.App.4th 1723.)

11. Conjunctive Use of Surface Water and Groundwater

page G-2), defines “conjunctive use” as “the operation of a groundwater basin in combination with a surface water storage and conveyance system. Water is stored in the groundwater basin for use by intentionally recharging the basin during years of above-average water supply.” Conjunctive use can involve direct recharge or “in lieu” recharge. “In lieu” recharge occurs when someone uses surface water in lieu of pumping groundwater. The storage aspects of the conjunctive operation of a groundwater basin may contemplate both storage of surface water in available basin storage space and increasing pumping from the basin to create additional storage space.

The conjunctive use of surface water and groundwater is favored under California law and policy. (See Los Angeles v. Glendale (1943) 23 Cal.2d 68, and Los Angeles v. San Fernando, referred to in the previous section.) Water Code section 1242 states that storing water underground, including necessary diversion and spreading operations, is a beneficial use of water if the water stored is later put to beneficial use. Under Water Code section 1005.1, the reduction in the extraction of groundwater by the owner of a right to extract, as result of the use of an alternative supply of water, is deemed to be equivalent to establishing and maintaining a right to extract the groundwater. In other words, a person who reduces his groundwater extraction due to the development of a surface water supply does not diminish, as a result, his groundwater rights.

12. Groundwater Management

Although California does not have centralized groundwater regulation, the Legislature has adopted special legislation for the formation of groundwater management districts in various parts of the State, and authorized other local agencies to exercise groundwater management authority. (See, e.g., Water Code sections 10750 through 10755.)

13. Water Transfers

a. General

The State Board’s website (http://www.waterrights.ca.gov/watertransfer/) includes publications that provide additional information on water transfers.

Several sections of the Water Code contain declarations of state policy favoring voluntary water transfers. For example, Water Code section 109 contains a declaration of state policy favoring voluntary water transfers, and directs DWR, the State Board and all other state agencies to encourage voluntary transfers. Water Code section 475 contains legislative findings and declarations favoring voluntary water transfers, states that the coordinated assistance of state agencies is required for voluntary transfers, and directs DWR to establish an ongoing program to facilitate voluntary water transfers.

Several statutory provisions declare that the act of transferring water will not, by itself,
result in a forfeiture of the underlying water right. For example, Water Code section 1244 states that a water transfer, in itself, will not constitute evidence of waste or unreasonable use, and will not affect any determination of forfeiture of an appropriative right. Water Code section 1745.07 states that no transfer of water pursuant to any provision of law will cause a forfeiture, diminution or impairment of any water right, and that a transfer approved under any provision of law is deemed to be a beneficial use of water by the transferor. (See also, Water Code sections 1010, 1011, 1011.5, 1014 - 1017, 1440, 1731 and 1737.)

The transferability of water depends on the source of the water right being transferred. The following provisions of the Water Code provide authority to carry out water transfers: Water Code sections 1011(b) (“Transfer of Conserved Water”), 1020 through 1031 (“Water Leases”), 1435 through 1442 (“Temporary Urgency Change”), 1700 through 1705 (“Permanent Changes”), 1707 (“Transfers for Instream Uses”), 1706 (“Transfer of Pre-1914 Rights”), 1725 through 1732 (“Temporary Transfers”), 1735 through 1737 (“Long-Term Transfers”), 1740 (“Transfer of Decreed Rights”) and 1745 through 1745.11 (“Transfers by Water Suppliers”). In addition, the enabling legislation for a number of different types of water districts includes authorization to transfer surplus water. See, for example, Water Code sections 22228 (“Irrigation Districts”) and 35425 (“California Water Districts”).

b. Transfers Under a Riparian Water Right

It is well-settled under California law that a riparian water right is not transferable for use on nonriparian land. (See, e.g., People v. Shirokow (1980) 26 Cal 3rd 301, 307.) A riparian owner may, however, enter into a contract under which he or she agrees not to exercise the riparian right for his or her property, so as to increase the downstream water supply. Such an agreement could not prevent a downstream riparian owner from exercising his riparian right. DWR has entered into “water transfer” agreements with riparian landowners in the Delta under which the riparian owner agreed for compensation not to exercise his or her riparian right. Water that was left in the river was pumped from the Delta as part of DWR’s Water Bank operations. Under Water Code section 1707, however, riparian rights are among the water rights that may be included within a change petition to the State Board for the purpose of preserving or enhancing wetlands habitat, fish and wildlife resources, or recreation in or on the water. An adjudicated riparian right can be transferred under Water Code section 1740.

c. Transfers Under an Appropriative Water Right

An appropriative water right can be sold or transferred off the land by changing the place of use under the right. Under Water Code section 1706, the point of diversion, place of use or purpose of use of a pre-1914 appropriate right can be changed if others are not injured by that change. The transfer or other change involving the exercise of a post-1914 appropriate right
requires the approval of the State Board under Water Code sections 1020, 1435, 1700, 1707 (for instream uses), 1725 or 1735, and State Board findings that the proposed transfer would not injure legal users or unreasonably effect fish, wildlife or other instream beneficial uses. Under Water Code section 1729, a water transfer under section 1725 for not longer than one year is exempt from the provisions of the California Environmental Quality Act.

d. Transfers of Groundwater

There are no general statutory procedures for the transfer of groundwater. Under Water Code section 1220, groundwater may not be pumped for export from the combined Sacramento and Delta-Central Sierra Basins (as defined in DWR Bulletin 160-74), unless the pumping is in compliance with a groundwater management plan that was adopted by ordinance of the county board of supervisors and approved by the voters of the county that overlies the affected groundwater basin. No such plans currently exist. Therefore, groundwater may not be pumped for export from the Delta at the present time. DWR contends that the transfer of groundwater for Delta outflow rather than export purposes would not violate Water Code section 1220.

A number of counties within the Sacramento Valley have adopted ordinances that regulate the direct export of groundwater. One such ordinance has been upheld as a valid exercise of the police power that was not preempted by general state legislation. (See Baldwin v. County of Tehama (1994) 31 Cal.App.4th 166.)

In groundwater basins that have been adjudicated by a court, the court's judgment often establishes unique conditions concerning the transfer of groundwater rights in the basin.

e. Transfers of Water Under a Contractual Entitlement

Under California law, the right to water under a contract or as result of owning land within a water district is not transferable in whole or in part without the consent of the water right holder and the water supplier. (E.g., see Water Code sections 382-383 and 1745.04.) Under section 3405(a) of the federal Central Valley Project Improvement Act (Title 34 of Public Law 102-575), the Secretary of the Interior is authorized to approve an application of an individual water user to transfer his or her federal CVP water entitlement without the consent of the water district that holds the CVP contract under which the water is supplied. However, transfers involving more than twenty percent of the CVP water subject to a long-term contract within a contracting district or agency is also subject to review by the district or agency under the provisions specified in Section 3405(a)(1) of the CVP Improvement Act.

f. Transfers by Public Agencies

In addition to the provisions discussed above that deal with the ability to transfer water under different types of water rights, there are numerous statutory provisions that deal with the
authority of public agencies to transfer water. Before a public agency undertakes a water transfer, it must determine that it has authority in its enabling legislation, or elsewhere, to transfer water for use outside its boundaries. Water Code sections 382 and 1745 - 1745.11 provide alternative sources of authority for a public agency to transfer surplus water for use outside of its boundaries. Under Water Code section 1745.10, surface water that is transferred under these provisions may not be replaced with groundwater unless such groundwater use is consistent with a groundwater management plan adopted pursuant to State law for the affected area, or the substitution of groundwater was approved by the transferring agency after it determined that the transfer would not create or contribute to conditions of long-term overdraft in the affected groundwater basin. The transfer would also have to be carried out in compliance with applicable procedural requirements, such as under Water Code sections 1706 or 1725.

g. Determining What Water Is Transferable - The “No Injury” Rule

An important element of any water transfer is determining what quantity, if any, of the water is “transferable,” as a result of the application of provisions of the Water Code that are intended to protect other legal users of water and fish and wildlife from the possible adverse effects of a water transfer. The “no injury” rule originates in the common law, and also is reflected in Water Code provisions intended to protect legal users of water from injury from a water transfer. (See, e.g., Water Code sections 1702, 1706 and 1725.) Under the no injury rule, a water transfer would not be authorized to the extent that it reduced the availability of water for downstream users, regardless of the water priority of those users. Under the no injury rule, only “new water” is transferable, i.e., water that is added to the downstream water supply as a result of the transfer. The rationale for the “no injury” rule is as follows: “. . . California water law protects senior water users (those with the oldest water rights) from junior diverters while protecting junior water right holders from the expansion of senior water rights. Junior water right holders would be harmed if seniors could increase the amount of water they divert under their senior priority. Likewise, juniors could be hurt if seniors could change their point of diversion, place of use or purpose of use in a manner that reduces the quantity or quality of water relied upon by juniors for their diversion. The ‘no injury’ rule protects junior right holders against this kind of harm from senior right holders.” (See A Guide to Water Transfers, July 1999, pages 3-7 and 3-8, published by the State Board.) Under section 3405(a)(1)(M) of the CVP Improvement Act, however, one CVP contractor can transfer unused entitlement under its CVP water supply contract to another CVP contractor for use within the watersheds of origin.

h. Transfers of Conserved Water

Under Water Code section 1011, the right to the use of water that has been reduced as a result of water conservation efforts may be transferred pursuant to any provision of law relating to the transfer of water. For purposes of this section, “water conservation” means the use of less
water to accomplish the same purpose of use allowed under the existing appropriative water right. In order to obtain the benefits of this section, the water right holder must file periodic reports with the State Board that describe the extent and amount of the reduction in water use due to the water conservation efforts.

On December 28, 1999, the State Board issued Order WR 99-012, which involved a proposed transfer of conserved water under Water Codes sections 1725 and 1011 involving licensed water rights of Natomas Central Mutual Water Company. The State Board determined that Natomas could transfer the right to use of the amount of water that Natomas would have consumptively used but for Natomas’ water conservation efforts, but that a reduction in diversions that did not reduce consumptive use could not be transferred under Water Code section 1725. For example, the State Board said that conservation efforts that reduced diversions from the stream and return flows to the stream by equal amounts would not result in consumptive use savings that could be transferred.

State Board Order WR 99-012 describes the purpose of Water Code section 1011 as follows: “Section 1011 preserves an appropriative water right when less water is used under the right due to water conservation efforts. Essentially, section 1011 requires water to be treated as though it were used, when in actuality the water is conserved. Any reduction or cessation in the use due to conservation efforts is ‘deemed equivalent to a reasonable beneficial use....’ Thus, the right to use the amount of water conserved is not subject to forfeiture for nonuse. The right thereby protected from forfeiture may be used later if needed. The right to use the water conserved may also be transferred pursuant to other provisions of law authorizing transfers.”

The State Board order also points out that, since 1980, the State Board has required licensees to document their conservation efforts in the Report of Licensee form that must be filed with the State Board every three years under 23 California Code of Regulations, sections 847 and 848, and that the failure to fill out the section of the form regarding water conservation would deprive the licensee of the benefits of section 1011. The State Board order also states: “It also merits note that Natomas’ failure to report conservation efforts in a timely manner called into question the credibility of its claim to have conserved water. Late reporting raises the question whether the nonuse of water was in fact due to conservation efforts, or if the water user is attempting to characterize nonuse that occurred for some other reason as water conservation in order to obtain the protections of section 1011. Conversely, reporting water conservation in a timely manner, while insufficient in itself to prove water conservation, would tend to support a claim that the nonuse of water was the result of water conservation efforts. For this reason, it is in every water user’s best interest to report water conservation efforts in a timely manner.”

i. Use of Conveyance Facilities for a Water Transfer

As a practical matter, State Water Project and federal Central Valley Project facilities are often needed to convey transfer water to the place of use of the transforee, such as for through-
Delta transfers. Water Code sections 1810-1814 authorize joint use of unused capacity in water conveyance facilities, requiring the state, regional and local public agencies that own water conveyance facilities to make available up to seventy percent of their unused capacity for a bona fide water transfer upon payment of fair compensation, and so long as: (1) no legal user of water would be injured; (2) there would be no unreasonable effect on fish, wildlife or other instream beneficial uses; and (3) there would be no unreasonable effect on the overall economy or the environment of the county from which the water is being transferred. Use of CVP facilities to convey non-CVP water would require a Warren Act contract with the United States (43 U.S. Code sections 523-525 and 2212), which would include provisions to compensate for use of federal facilities and to ensure that the transfer does not interfere with the operation of federal facilities.

j. Third-Party Impacts from a Water Transfer

There has been confusion from time to time regarding the terms used to refer to potential impacts to others resulting from a proposed water transfer. There generally are three types of potential impacts: (1) injury to legal users of water; (2) unreasonable effects on fish, wildlife or other instream beneficial uses; and (3) unreasonable effects on the overall economy of the area from which the water would be transferred.

The requirement to avoid impacts to "legal users" (discussed above) is set forth in various provisions of existing law. For example, see Water Code section 386 (as to State Board approval of certain water transfers), section 1706 (as to a transfer under a pre-1914 water right), section 1707 (as to a transfer for instream uses), section 1727 (as to a temporary transfer under a water right permit), section 1736 (as to a long-term transfer under a water right permit) and section 1810 (as to determinations of DWR concerning use of surplus conveyance capacity).

The requirement to avoid unreasonable effects on fish, wildlife or other instream beneficial uses is also set forth in various provisions of existing law. For example, see Water Code section 386, section 1707, section 1727, section 1736 and section 1810.

The requirement to avoid unreasonable effects on the overall economy of the area from which the water would be transferred (what is commonly referred to as "third-party economic impacts") is provided for in more limited situations. Water Code section 386 has such a provision, but it is in a chapter on State Board approval of water transfers that is rarely used. Water Code Sections 1725 through 1732 are in the chapter that is generally relied on for State Board approval of a temporary water transfer (i.e., for a term of less than one year), and section 1727 requires the State Board to consider only impacts to legal users and instream uses (i.e., the State Board is not authorized to consider third-party economic impacts). The same section 1727 requirements are also contained in section 1736 for approval of a long-term water transfer.
Water Code Section 1810(d) requires DWR, however, to consider all three types of impacts (i.e., to legal users, to instream uses and to the economy of the area from which the water would be transferred) in determining whether to allow use of its surplus water system conveyance capacity for a water transfer.

Generally, transfer water is developed through four methods: (1) surplus water released from storage facilities; (2) substituting groundwater for transferred surface water; (3) fallowing agricultural land to make water available for transfer; and (4) undertaking conservation activities that develop surplus water (e.g., under Water Code section 1011). Transfers from storage and transfers resulting from conservation activities have little or no likelihood to cause third-party economic impacts because these types of transfers do not affect crop production or groundwater pumping. Therefore, it would not seem necessary or appropriate to require an analysis of potential third-party impacts from these two types of transfers.

There are other provisions of existing law that have the effect of limiting the extent to which water transfers that involve land fallowing or groundwater substitution would cause third-party economic impacts. For example, Water Code section 1745.05 (which authorizes water suppliers to transfer surplus water) puts a limit on the amount of land that may be fallowed in connection with a water transfer. Subdivision (b) of this section states: "The amount of water made available by land fallowing may not exceed 20 percent of the water that would have been applied or stored by the water supplier in the absence of any contract entered into pursuant to this article in any given hydrological year, unless the agency approves, following reasonable notice and a public hearing, a larger percentage."

Water Code section 1732 states that a petition for State Board approval of a temporary water transfer that involves the increased use of groundwater to replace transferred surface water must be in compliance with Water Code sections 1745.10 and 1745.11. Sections 1745.10 and 1745.11 generally require a water supplier that increases the use of groundwater to replace transferred surface water to determine that the groundwater use: (1) would be consistent with a groundwater management plan adopted pursuant to State law for the affected area; or (2) would not create or contribute to conditions of long-term overdraft in the affected groundwater basin.

Section 3405 of the federal Central Valley Project Improvement Act (Title 34 of Public Law 102-575) includes provisions that would limit the amount of federal water that a water district could transfer. For example, subsection (a)(1) states in part: "Transfers involving more than 20 percent of the Central Valley Project water subject to long-term contract within any contracting district or agency shall also be subject to review and approval by such district or agency under the conditions specified in this subsection … [including a determination by the Secretary of Interior that the transfer would have no significant long-term adverse impact on groundwater conditions]."

### k. Environmental Review of Water Transfers

See the disclaimer at the end of this document.
In general, water transfers are subject to compliance with the requirements of the California Environmental Quality Act and the National Environmental Policy Act, to the extent applicable. Water Code section 1729 provides an exemption from compliance with CEQA for temporary water transfers under Water Code sections 1725 through 1732.

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**DISCLAIMER**

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**END OF DISCLAIMER**
3.13 Response to Comments from Water for Santa Cruz County; Scott McGilvray (August 14, 2018) (Comment Letter O-7)

O-7-1 This comment is noted; however, as received, the attachment to this newer version of your comment letter was cutoff at the bottom of each page. For this reason, in this Response to Comments document we have included the attachment from your prior submittal to this newer comment letter.

O-7-2 The distinction between ASR and in-lieu use is noted. However, the discussion included in EIR Section 7.5.4 relates to whether either could qualify as an alternative to the Project under CEQA. Please see the response to comment O-2-3 regarding the Project objectives and noting that in considering potential CEQA alternatives to the Project, the overall goal (or basic objective) of a system with a capacity of 1,500 afy was necessary. Also see the response to comment O-2-3 regarding the consideration of surface water transfers as an alternative to the Project. As discussed, water transfers would not materially alter impacts of the Project and given the uncertainty and timing is not a potentially feasible alternative and, therefore, would not meet the requirements of the CEQA Alternatives. The conclusion regarding feasibility is primarily related to the uncertainty in obtaining water rights and factors that relate to the time required to implement a surface water transfer alternative. Separating consideration of water transfer via in-lieu or ASR would not affect the conclusion that surface water transfers would not meet the requirements of the CEQA Alternatives. Therefore, the suggestion to separate discussion of in-lieu and ASR is noted, but not required to foster informed decision-making and public participation.

O-7-3 Please see the EIR discussion of Alternative 2, Reduced Project with Treated Surface Water Purchases and Section 7.5.4, Participation in City of Santa Cruz’s In-lieu and/or Aquifer Storage and Recover Project(s) as an Alternative Water Supply Source and see comment L-2-6 submitted by the City of Santa Cruz Water Department, which describe the additional agreements that would be required to extend transfer of up to 300 afy per year beyond the 5-year pilot study underway, and the agreements, water rights transfer/amendment, environmental and regulatory permitting, and infrastructure improvements that would be required for any increase in water transfer over that amount. Further, the City is currently evaluating the surface water transfers it could make available to adjacent water district’s and expects to complete that evaluation in 2020. The water transfer strategies presented in this comment and following comments would need to be considered by the City as part of that evaluation and are currently speculative. Thus, the commenter’s statement that surface water transfers can be expanded sufficiently to meet the needs of the District has not yet been confirmed by the City; and the statement that such transfers can occur without a change in water rights is incorrect.
O-7-4 While it is acknowledged that transfer of up to 300 afy under the 5-year pilot study would begin this winter; please see the responses to comment O-7-3 regarding the additional studies, agreements, water rights, and infrastructure improvements that would be required to extend and increase water transfers. As discussed in response to comment I-33-2, cost evaluation is not considered in the CEQA alternatives analysis.

O-7-5 Please see the response to comment L-2-5. In that response, an EIR text revision has been made to update the status of the 5-year pilot study, indicating that laboratory testing has been completed and that a test transfer to an isolated portion of the District service area would begin this winter.

O-7-6 Please see EIR page 7-33, paragraph 2 which states: “Further, as transfers may be limited to the winter months, during years in which the City has excess supply, the alternative would not meet the objective of providing a reliable water supply, especially if the City would be taking large volumes of water back to meet their drought shortfall needs.” As discussed in response to comment O-2-3, in considering potential CEQA alternatives to the Project, the overall goal (or basic objective) of a system with a capacity of 1,500 afy was necessary. As described in EIR Section 3.7, in general, under normal operations, the District would operate all of the facilities 24 hours per day, 365 days a year in order to achieve basin recovery within approximately 20 years. Thus, the discussion on EIR page 7-33 regarding the reliability of a long-term surface water transfer is not related to expected overall rainfall and contributions to surface water supplies, but whether that supply could be made available to the District as a supplemental supply reliably, and contribute 1,500 afy to direct or indirect groundwater replenishment in all years.

O-7-7 Infrastructure upgrades and new infrastructure would be expected to support a long-term water transfer, such as upgrades to the GHWTP, expansion of transmission capacity to the District’s distribution system, and construction of ASR wells and other infrastructure under the ASR option. It is not anticipated that interties only would be sufficient. Please see EIR page 7-32, which indicates that a long-term water transfer alternative would avoid the impacts associated with construction and operation of an AWPF, as well as those from conveyance pipelines to and from the SC WWTF. However, installation of the infrastructure upgrades required to achieve the District’s recharge goals (i.e., 1,500 afy), would be expected to result in a similar range of environmental impacts, including significant impacts associated with infrastructure upgrades and recharge well construction. As a result, this alternative would not materially alter impacts of the Project and, therefore, would not meet the requirements of the CEQA alternatives analysis.

O-7-8 Please see the responses to comment O-7-3.

O-7-9 Please see the response to comment O-2-12 which includes a text revision to remove the word “cost” from the discussion of ability for a long-term water transfer alternative to meet Project objectives. As discussed, cost considerations were not part of the
determination of whether or not long-term surface water transfers could qualify as a CEQA alternative to the Project. In addition, any planned or potential upgrades to the City of Santa Cruz’s GHWTP are unrelated to the Pure Water Soquel Project; and no such upgrades are required for the Project.

O-7-10 Please see the response to comment O-7-6.

O-7-11 See the response to comment O-7-3 and I-30-2.

O-7-12 See the responses to comments O-7-2 and O-7-3.
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We fully support this project.

Regards,
Lee & Meryl Abramson
109 Kenneth Drive
Aptos 95003
3.14 Response to Comments from Lee and Meryl Abramson (August 6, 2018) (Comment Letter I-1)

I-1-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.
I think the best location for the post water treatment is near the source. Not in a neighborhood.

Doesn't make sense to me to have this plant located in Soquel.

John Bailey
3.15 Response to Comments from John Bailey (August 2, 2018) (Comment Letter I-2)

I-2-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.
Greetings! I love the idea of recycling anything, and we certainly cannot stand to waste any water. My concern would be pharmaceutical contamination which would include antibiotics, etc. This contamination may lead to more bacterial resistance to commonly used antibiotics as well as creating other health issues. Is there a way that these compounds could be removed from the recycled water? Thank you for any information. -john behrens
3.16 Response to Comments from John Behrens (August 13, 2018) (Comment Letter I-3)

I-3-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-3-2 Please refer to response to comment O-4-3.
Pure Water Soquel Project CEQA
4041 Soquel Dr. Suite A-S01
Soquel, CA 95073-3105
Dear Pure Water Soquel Project CEQA Staff,

I am hereby requesting an extension of time for Public Comment on the PureWater Soquel Project Draft Environmental Impact Report. It is a lengthy document that merits thorough public evaluation. I need more time to carefully read it, research related and appropriate issues of concern, and to respond in a cogent manner.

Please extend the Public Comment period to allow for better public input and analysis. Please notify the public of your decision.

Thank You.

Sincerely,

[Signature]

Karen Belock
3.17 Response to Comments from Karen and Steve Belick (August 11, 2018) (Comment Letter I-4)

In accordance with California Environmental Quality Act (CEQA) Section 15105, the District made the Draft EIR available for public review for 46 days, from June 29 to August 13, 2018. As described below, the Project complied with the noticing and comment period requirements mandated by CEQA.

Section 15105(a), which outlines the public review requirements for Draft EIRs states:

The public review period for a draft EIR shall not be less than 30 days nor should it be longer than 60 days except under unusual circumstances. When a draft EIR is submitted to the State Clearinghouse for review by state agencies, the public review period shall not be less than 45 days, unless a shorter period, not less than 30 days, is approved by the State Clearinghouse.

Pursuant to Section 15087, CEQA requires the lead agency provide public notice of the availability of a draft EIR by at least one of the following procedures to allow the public the review period provided under Section 15105:

- Publication at least one time by the lead agency in a newspaper of general circulation in the area affected by the proposed project.
- Posting of notice by the lead agency on and off site in the area where the project is to be located.
- Direct mailing to the owners and occupants of property contiguous to the project

For the Project, the lead agency distributed the notice of Draft EIR availability as follows:

- State Clearinghouse
- Responsible/Trustee agencies, including transportation agencies and other local agencies
- Santa Cruz County Clerk On-site posting at the Project area Notification of adjacent properties: mailed more than 7,400 postcards to owners and occupants of property within 300 feet of any potential project component site
- Posting on the Soquel Creek Water District website
- Electronic press release to more than 100 email addresses
- Published legal notice or display advertisement in the Santa Cruz Sentinel (three runs), Soquel Times, and Aptos Times
- Monthly e-blast to more than 10,000 addressees in July and August 2018
District staff hand-delivered notices and copies of the Draft EIR to seven (7) area public libraries and, in response to a comment from a member of the public suggesting the EIR’s CD containing appendices might not be complete, returned to the library in question and confirmed their completeness. It also made copies of the Draft EIR available at its main office and website. In addition, the District hosted a public meeting at the Twin Lakes Church from 6:00 pm to 8:00 pm. The public meeting included a formal presentation, followed by opportunity for oral public comment, as well as poster stations attended by technical experts involved with the Draft EIR’s preparation and with whom the public was invited to engage and ask question. Several copies of the Draft EIR were available for public review (with assistance from the Draft EIR’s authors) during the public meeting.

Please also see the response to comment I-37-2, regarding the locations at which mailed and hand delivered comments were accepted.

The lead agency complied with the requirements of CEQA regarding the length of the public comment period and the posting of the notice of Draft EIR availability, and took additional steps not required under CEQA to make the Draft EIR available to the public. As a result, the public comment period was not and will not be extended.
From: Desiree Carter  
Sent: Thursday, August 2, 2018 7:50 PM  
To: purewatersoquelcega  
Subject: NO wastewater plant on Soquel/Capitola

| 1 | Dear Soquel Water District,  
As a home owner here in Soquel I'm greatly opposed to building a waste water plant  
on the lot designated "West Annex" on the corner of Soquel and Capitola. I see no need to overrule the area codes to build in a residentail area. I'm aware that there are other sites to consider. Please take the West Annex option off the table. We do not need the impact a commercial/industrial facitly will make on our local community. |

| 2 | Please consider making a deal with Santa Cruz water to harvest their excess. It seems only fitting that we be grandfathered into their process considering we are all a close knit community.  
Thank you kindly for reviewing my request.  
Kindly,  
Desiree Carter  
3200 Putter Dr.  
Soquel, ca 95073 |
3.18 Response to Comments from Desiree Carter (August 2, 2018) (Comment Letter I-5)

I-5-1 Please see the response to comment O-5-2, regarding the analysis of siting of the advanced water purification facility at one of three locations, the Santa Cruz Wastewater Treatment Facility, Chanticleer Avenue site, or Headquarters-West Annex site, all of which were analyzed at an equal level of detail in the EIR. With respect to land use regulations governing use of the Headquarters-West Annex Site, please refer to response to comment I-44-3.

I-5-2 Please see the response to comment letter O-2, which addresses the general comments regarding long-term water transfers asserted here.
Dear Sirs,

Please proceed with implementing the ground water injection plan.

The technology has been proven, beyond a shadow of a doubt, that it can deliver exceptionally clean water. Do people really think there is a mountain stream in the International Space Station delivering unlimited drinkable water. Grow up folks, this is 2018!

Regards,
Barton T. Coddington
3025 Arlington Dr
Aptos, CA 95003
831-475-5234
3.19 Response to Comments from Barton T. Coddington (July 2, 2018) (Comment Letter I-6)

I-6-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.
From: Bruce Daniels  
Sent: Monday, August 13, 2018 10:31 AM  
To: purewatersoquelceqa  
Subject: Hi folks

In your EIR for Pure Water Soquel

on page 1-2 and section 1.2.1 you state that "the District has declared a Critical Overdraft Groundwater Emergency (ongoing since 2014)". If you look at the Board packet of 6-17-2014 for Item 6.2 you see that the resolution which the Board adopted simply states that "the District hereby declares a groundwater emergency". The California State Department of Water Resources was the agency which determined in January 2016 that the entire basin 3-1 Santa Cruz Mid-County (AKA Soquel Valley), which totally includes the Soquel Creek Water District, to be Critically Overdrafted  
<https://water.ca.gov/Programs/Groundwater-Management/Bulletin-118/Critically-Overdrafted-Basins>

In that same paragraph, there is the following sentence which is not quite accurate as published, but can be made correct by the addition of the two CAPITALIZED words:  
"Newer data now shows the seawater intrusion has not ONLY been detected on shore, but that it is ALSO occurring along the entire coastline of the District’s service area immediately offshore."

on page 1-7 in Table 1-1 in line item for Impact 4.3-2 you tag it with "LS" or Less Than Significant and with "No mitigation required". However the item description says:  
"The Project would generate a long-term increase of criteria pollutant emissions during operations."  
which seems in conflict with the other two tags and not the same as other lines with the same LS tag. So I expect that what you actually intended was a description like:  
"The Project would NOT generate a long-term increase of criteria pollutant emissions during operations."

on page 1-27 in line item for Impact 4.13-3 there is a "LS" label and "No mitigation required". However, the description given does not seem to match this determination and so probably also was intended to be more like:  
"Operation of the Project could NOT result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance."

on that same page 1-27 there is Impact CU-NOI which has a Significance Determination label of "SU" which is not listed and described in the NOTES at the bottom.

- thanks
3.20 Response to Comments from Bruce Daniels (August 13, 2018) (Comment Letter I-7)

I-7-1 Based upon this comment, the text of Draft EIR Chapter 1, Section 1.2.1 (page 1-2, first paragraph) is revised as follows:

The District’s groundwater supply is currently in a state of critical overdraft and the District has declared a Critical Overdraft Groundwater Emergency (ongoing since 2014), meaning more water has been extracted from the aquifers than is added by the natural rate of recharge via rainfall, resulting in depressed groundwater levels.

I-7-2 Based upon this comment, the text of Draft EIR Chapter 1, Section 1.2.1 (page 1-2, first paragraph) is revised as follows:

Newer data now shows the seawater intrusion has not only been detected on shore, but that it is also occurring along the entire coastline of the District’s service area immediately offshore.

I-7-3 Based upon this comment, the text of the Draft EIR Chapter 1, Section 1.4.4, Table 1-1, page 1-7 is revised as follows:

Impact 4.3-2: The Project would not generate a long-term increase of criteria pollutant emissions during operations.

I-7-4 Based upon this comment, the text of the Draft EIR is revised as described below.

Chapter 1, Section 1.4.4, Table 1-1, page 1-27:

Impact 4.13-3: Operation of the Project could not result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance

Chapter 4, Section 4.13, Table 4.13-4, page 4.13-18:

Impact 4.13-3: Operation of the Project could not result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance

Chapter 4, Section 4.13, page 4.13-37:

Impact 4.13-3: Operation of the Project could not result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance

I-7-5 Based upon this comment, the text of the Draft EIR Chapter 1, Section 1.4.4, Table 1-1 footnote, pages 1-6 through 1-31, is revised as follows:

NOTES:
B = Beneficial  LSM = Less than Significant impact with Mitigation  NI = No Impact
LS = Less than Significant impact, no mitigation required  SUM = Significant and Unavoidable Impact with Mitigation
SU = Significant and Unavoidable Impact
Dear Mr. Deitch,

Thank you for your email. I have forwarded this to our purewatersoquelceqa@esaassoc.com address so it can be incorporated into public comment period process and responded to appropriately.

Sincerely,
-Melanie

Melanie Mow Schumacher, P.E. | Special Projects-Communications Manager Soquel Creek Water District | 5180 Soquel Dr., Soquel CA 95073 | www.soquelcreekwater.org direct 831-475-8500 x153 | main 831-475-8500 | email melanies@soquelcreekwater.org

-----Original Message-----
From: ddeitch@pogonip.org <ddeitch@pogonip.org>
Sent: Wednesday, August 8, 2018 9:58 AM
To: Melanie Mow Schumacher <MelanieS@soquelcreekwater.org>; citycouncil@cityofsantacruz.com; cityonahillpress@gmail.com; Melanie Mow Schumacher <MelanieS@soquelcreekwater.org>; bod <bod@soquelcreekwater.org>; Douglas Deitch <ddeitch@got.net>; Zach Friend <Zach.Friend@santacruzcounty.us>; Carlos Palacios <Carlos.Palacios@santacruzcounty.us>; John.leopold@co.santa-cruz.ca.us; ryan.coonerty@co.santa-cruz.ca.us; bruce.mcpherson@co.santa-cruz.ca.us; joohnlaird9@aol.com; Mark Primack <mark@markprimack.com>
Subject: Questions/ from phone message .today..

Melanie,

1. How many a/f/yr contemplated to be injected in Purisma/SqCWD
   a. where?
   b. at what depth?

2. What is purported current "sustainable yield" of SqCWD's ground water resources?
   a. From what source/study, please cite and link?

3. What is current a/f/yr water usage in SqCWD's legal jurisdiction and, as well, it's natural hydrological ground water region "jurisdiction" by private and other well owners?

4. Re: DPR-Direct Potable Reuse
   a. Where, if anywhere, is DPR mentioned, studied, etc. in DEIR?
   b. Do you know when the projected date when DPR is/will available to use by SqCWD and SCMU, etc, in California?
   c. Do you know if the cleaned water currently contemplated to be used to inject and recharge aquifers is/will be of the same standards/cleanliness/purity as DPR is/will be?

5. Was current/more recent info on recent extraordinary recharge of local aquifers in SqCWD naturally w/o injection over the last 2 years noted in DEIR or the fact that other similar injection recharge efforts referred to and touted in Orange County and Monterey occur in localities which have only around 1/2 the average annual rainfall as does the SqCWD area?

Thank you for prompt response.

Douglas Deitch

Property and private well owner @ 540 and 545 Hudson Lane, Aptos

Executive Director, Monterey Bay Conservancy, a 501c3 Monterey Bay and California Water Policy Thinktank
www.facebook.com/montereybayconservancy
www.thebestthatmoneycantbuy.com

(25 y/o Pilot Project @ Zmudowski Beach: https://www.facebook.com/dougieforcongress/photos/a.1591989751040397.1073741827.1591961497709889/1953766944862674/?type=3&theater)

www.lomejorqueeldineronopuedecomprar.com
https://www.linkedin.com/pulse/damming-golden-gate-douglas-deitch/

and at 11:25 @ SWRCB, 4/19/2016 @ www.thebestthatmoneycantbuy.org

831.476.7662

(... contiguous to SqCWD 45 year property and well owner ... the entire time with SqCWD illegally overusing it's only legal JUNIOR WATER RIGHT to pump and sell only surplus water.)
3.21 Response to Comments from Douglas Deitch
(August 8, 2018 PM) (Comment Letter I-8)

I-8-1 Please see EIR Chapter 3, Project Description, and Section 4.10, Hydrology Resources – Groundwater. As discussed throughout the EIR Project Description, the Project includes recharge of approximately 1,500 afy of advanced treated water at up to three recharge wells. There are five recharge well locations under consideration in the EIR, as shown on Figure 3-1. The wells would recharge water into the Purisma A and BC units, which are described in Section 4.10, Hydrology Resources – Groundwater.

I-8-2 As described in Chapter 1, Summary, the District estimates the proportion of the Santa Cruz Mid-County Groundwater Basin’s cumulative groundwater overdraft attributable to District groundwater pumping is approximately 1,500 acre-feet per year. The District estimates further that an estimated 3,000 acre-feet per year of supplemental supply could be required to address cumulative groundwater overdraft basinwide (see also response to comment L-4-2). The EIR’s Section 4.10, Hydrology Resources – Groundwater, considers the potential for the proposed 1,500 acre-foot per year Project to result in unfavorable groundwater conditions in the Basin, such that nearby wells are damaged, experience substantial loss of yield, or can no longer be operated (Impact 4.10-2). As explained in the impact analysis, Project-specific groundwater model simulations concluded that in no case would the Project lower groundwater below the pre-Project levels, nor would the Project cause groundwater levels in any municipal, private, or monitoring well to fall below the top of the wells screen. Rather, the model results showed the Project would increase groundwater levels in the Basin and would have a beneficial effect on non-district, District, and private wells. Please also see the responses to comments L-2-3.

I-8-3 This comment does not raise a concern that relates to physical impacts of the Project. Nevertheless, for commenter’s reference, an overview of groundwater rights generally, and as pertains to the District specifically, is presented in Section 4.10, Hydrology Resources – Groundwater. As explained in that section, the District’s rights and responsibilities related to storage and capture of water within the Santa Cruz Mid-County Groundwater Basin is summarized as:

- The District has the right to recapture water that has been added to the groundwater supply as a result of recharge;
- The District has the right to prevent other groundwater producers from extracting the replenished supply, although this could require litigation, and in some cases, adjudication of all rights to the groundwater basin may be necessary to determine rights to the total supply; and
- The underground storage and recovery of the groundwater basin cannot substantially interfere with the basin’s native or natural groundwater supply.
I-8-4  Direct potable reuse is not considered under the proposed Project, and therefore, is not addressed in the Pure Water Soquel EIR. Regarding the California Water Boards consideration of direct potable reuse regulations, please see the following website: https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/direct_potable_reuse.html.

I-8-5  This comment does not raise a concern that relates to physical impacts of the Project. Nevertheless, for commenter’s reference, groundwater conditions in the Project area, including recharge rates, are described in EIR Section 4.10. As explained on page 4.10-9:

The aquifers are primarily recharged (refilled) by precipitation infiltrating into the soil and the amount of annual rainfall directly influences the volume of groundwater recharge the Basin receives. For instance, in a drought year like Water Year 2014 when annual rainfall in Santa Cruz was 14.4 inches, Basin recharge was estimated at 800 afy, while in Water Year 2016, with 32.6 inches of rainfall, the groundwater aquifers were estimated to receive 11,300 afy of recharge. However, groundwater conditions where the Project is planned in the Purisima Formation near the coast do not vary in response to these year-to-year changes in recharge due to distance from the recharge areas and proximity to the coastal boundary (HydroMetrics WRI, 2017b).
I am submitting this DEIR comment in two different capacities:

1. First, as contiguous 44 year unincorporated county, non/outside of SqCWD private home and property owner @ 540 and 545 Hudson Lane, Aptos (APN 04008119 and 04008120) and private well owner, manager, and constructor of 3 private wells and a spring system on this property

2. As Executive Director/Founder of Monterey Bay Conservancy, a 501c3 Monterey Bay and California water policy thinktank (www.facebook.com/montereybayconservancy)

In its "FACT SHEET", (EXHIBIT 1/attached), the Soquel Creek Water District describes itself as a nonprofit, local government agency that has purported for over 30-40 years, at least in my experience, that has provided water resource management within its service area to deliver a safe and reliable supply of high quality water to meet present and future needs.

Nothing could and can be further from the truth and reality. If this was or is true, then why is (really "are") the SqCWD (plural) aquifers, along with Pajaro and Salinas Valleys' officially identified as the most critically overdrafted and mismanaged in this entire state if not county (Exhibits 2/attached and 2a/attached)? How about because they are?

As a private well owner of now 2 different wells contiguous to SqCWD, my rights to ground water through my wells I constructed, paid dearly for, manage, and maintain is a right legally superior to all others except other private well owners, including SqCWD. SqCWD legal right to pump and sell ground water within its jurisdiction is junior to mine and always has been only a limited and junior right to pump ONLY "surplus water" in the aquifers which may be available. In other words, SqCWD's junior water right was and is limited to pumping only ground water which is not overdrafted water. However, as Exhibit 3/attached illustrates, SqCWD virtually never (if ever?) did this and constantly overdrafted and as Exhibit 4/attached illustrates was not changed by the 2014 GSA.

SqCWD does not have the legal and sufficient right to do or inject anything into our ground water except reduce SqCWD's ground water overpumping to below sustainable yield and more yearly to make up for the water SqCWD has illegally taken over it's legal right over the decades. SqCWD knows and has known for decades that this overdrafting violates both our Local Coastal Plan and County Well Ordinance (Exhibit 5) but for years has just ignored the problems as have our BOS (www.pogonip.org/ord.htm), CCRQQB (https://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/docs/ag_order2/4.pdf), CALIFORNIA COASTAL COMMISSION (www.thinklocalactlocal.com, www.begentlewiththeearth.org), DEPARTMENT OF WATER RESOURCES, AND SWRCB (PLEASE SEE: @ 11:25 @ www.thebestthatmoneycantbuy.com, where I recommended 4/19/2016 that SWRCB intercede in the Monterey Bay.

I will be appearing before them later this month again after 2 years and reiterating and emphasizing my request.

This is the reason for and cause of the SqCWD and our ground water problems and concerns now.

The DWR's Mark Cowin in 2015 emphasized that:
“The most important thing that can happen is for counties to pass or strengthen ordinances that limit over-pumping,” California Department of Water Resources director Mark Cowin, said at a Wednesday morning press conference releasing the new data, collected by the National Aeronautics and Space Administration. “It will take that kind of action to have any real effect.”

Last year, the state created a framework to regulate groundwater — the first time in state history — but it won’t be fully implemented until 2020. And then it will take a decade or two for water levels to rebound, Cowin said. (EXHIBIT 6 @ http://www.santacruzsentinel.com/general-news/20150819/central-valley-locales-sinking-2-inches-a-month-as-groundwater-is-drained/)

Santa Cruz County has such a law and a Local Coastal Plan, too @ www.pogonip.org/ord.htm.

SqCWD and the County BOS must follow it and declare a county wide ground water emergency and follow ours laws and LCPs, like the CCC and Dr. Charles Lester didn’t! ... www.lawandorderliberal.net. Gary Patton thinks so, too. (EXHIBIT attached).

Gary likes my Monterey Bay Estuarine National Monument, as well, too! (Exhibit/ attached)

Was DPR w/o any injection, analyzed? Don’t we get twice the rain as Monterey and Orange County so our aquifers could and, in fact, did recover very well naturally in recent years from just the natural recharge of the rail. Why can’t we wait for DPR to be approved and standards established very soon. Then we could reduce pumping even more and be far less risky and costly.

btw/fyi ...My proposal run down @ www.thebestthatmoneycantbuy.com will produce/can provide 1/10 of it’s conserved 27,000 a/f/yr by pipeline to SqCWD and SCMU, same as old desal would have, from now sustainably pumped ground water in Aromas Red Sands in both SqCWD and PVWMA, both of which should be terminated, long with SC Water and the others, and merged into one Monterey Bay Regional Water Authority. It was cited by USGS’ Randy Hanson in 1998 @ http://www.pogonip.org/WaterDocs/98USGSTechnicalMemorandum.pdf Did you analyze this?

Was City of Santa Cruz water waste and leakage analyzed. It’s massive. Their leaks and failed infrastructure will be ours if we let SC Water get their incompetent mitts into our ground water. SC Water has only a very small interest and use in BELTZ WELLS of Purisima ground water. We would be wise to keep it that way. Why SW Water has 2 reps and votes on Soquel/Aptos GSA is nonsense, as well.

Douglas Deitch
Monterey Bay Conservancy

540 Hudson Lane, Aptos, Ca., 95003
Soquel Creek Water District
The Soquel Creek Water District is a nonprofit, local government agency that provides water resource management within its service area to deliver a safe and reliable supply of high-quality water to meet present and future needs in an environmentally sensitive and economically responsible way.

The History of the District
Founded in 1981, the “Soquel Creek County Water District’s” purpose was to provide flood control and water conservation services. The District acquired the Monterey Bay Water Company in 1984 and discontinued flood control services. In 1983, “County” was dropped from the name and the District became known as Soquel Creek Water District.

The General District
Today, the District serves about 30,000 customers through nearly 15,000 connections in four service areas within mid-Santa Cruz County. Ninety percent of our customers are residential.

Our service area encompasses seven miles of shoreline and extends from one to three miles inland into the foothills of the Santa Cruz mountains. The city of Capitola is the only incorporated area in the District. Unincorporated communities include Aptos, La Selva Beach, Opal Cliffs, Rio Del Mar, Seascape, and Soquel.

The District Today
The District produces approximately 5,000 acre feet of water annually. This is equal to approximately 1.6 billion gallons of water (“One acre foot of water equals 325,851 gallons and is enough water to cover a football field one foot deep”). The District currently receives 100 percent of its water from two groundwater aquifers. The Purisma Aquifer provides two-thirds of the District’s annual production for Capitola, Soquel, and Aptos. The Aromas Red Sands Aquifer provides the remaining one-third for the communities of Seascape, Rio Del Mar, and La Selva Beach.

Our Water Supply System
The District operates 18 active production wells. Estimated production capacity of all wells is over 15 million gallons per day. Our system encompasses approximately 130 miles of pipeline. The pipes range in diameter from two to 16 inches. Our 18 water storage tanks have a capacity of 7.3 million gallons.

Water Resource Management
Since 1981, the District has maintained an extensive monitoring and management program to better define our underlying groundwater resources. Seventeen monitoring wells, strategically placed along the coast, monitor water quality and groundwater levels in the two aquifers that make up our water supply. All wells are sampled to measure chlorides, nitrates, total dissolved solids and static water level as an early warning of the threat of salt water intrusion.

Water Conservation
The District is committed to encouraging efficient water use. Visitors to our office may obtain useful free education materials to help them in their conservation efforts. Hardware, incentives, and informational assistance are offered to District customers to help them implement water conserving measures at home.

How the District is Governed
The District is governed by a five-person Board of Directors elected to rotating four-year terms by the registered voters throughout the District’s service area. The Directors are responsible for policy decisions which govern the operations of the District. They meet regularly on the first and third Tuesday of each month at 7:00pm in the District’s headquarters Board room.

Board of Directors:
Bruce Daniels  Dr. Don Hoenschemeyer  Dr. Bruce Jaffe
Dr. Thomas Lahnue  Daniel F. Krieger

District Employees
The Soquel Creek Water District’s staff consists of 36 full-time employees assigned to five departments: Administration, Engineering, Operations and Maintenance, Conservation and Customer Service, and Financial Services.

Laura J. Brown: General Manager
Michelle Boisen: Financial and Business Services Manager
Jeffrey N. Gailey, PE: Engineering Manager/Chief Engineer
Taj Dufour: Operations and Maintenance Manager
Ron Duncan: Conservation/Customer Service Fisk

District Finances
The District’s operating income is derived from water rates, service charges, and water capacity fees (we do not receive any tax revenues). From these sources, all of the District’s operating expenses are covered, including capital improvements, gas and electricity costs, water quality costs, wages and benefits for staff, supplies and services, insurance premiums, bond debt, and prudent reserves for emergencies and unexpected shortfalls in revenue.

How to Reach Us
Office address: 5180 Soquel Drive
Mail to: P. O. Box 1530, Capitola, CA 95010
Tel: (831) 473-4291 Fax: (831) 473-4291
Email: info@soquelecreekwater.org
Website: www.soquelecreekwater.org
Office hours: Monday - Friday 8:00am to 5:00pm
(Closed from noon to 1:00pm)
### Critically Overdrafted Basins

<table>
<thead>
<tr>
<th>Basin Number</th>
<th>Basin/Subbasin Name</th>
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<tbody>
<tr>
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<td>Soquel Valley</td>
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<tr>
<td>3-02</td>
<td>Pajaro Valley</td>
</tr>
<tr>
<td>3-04.01</td>
<td>180/400 Foot Aquifer</td>
</tr>
<tr>
<td>3-04.06</td>
<td>Paso Robles Area</td>
</tr>
<tr>
<td>3-08</td>
<td>Los Osos Valley</td>
</tr>
</tbody>
</table>
Douglas Deitch
3540 Porter Gulch Rd.
Aptos, CA 95003

AN OPEN LETTER TO SOQUEL CREEK WATER DISTRICT VOTERS

Dear Soquel Creek Water District Voters and Customers,

I strongly urge you to replace the currently seated Soquel Water District Board to protect our ground water. No other measure is more critical to addressing our regional water crisis and to craft regional solutions. The following information is supplied to you to aid you in making the most informed decision in selecting the next Board of the Soquel Creek Water District in the upcoming election. After reading this, please feel free to contact me directly by phone at 476-7662 or email at ddeitch@pogonip.org with any questions or discussion involving the material below. To review the lawsuit mentioned below, supporting materials, or the Grand Jury Complaint filed on this matter, please visit www.monterybayconservancy.org.

Soquel Creek Water District (SCWD) pumps its water (approximately 6,000 acre feet per year-AFY) from two different ground water basins. Two thirds of its water comes from the "Purisima" basin roughly underlying Soquel, Soquel Hills, and Capitola. One third of its water comes from the "Aromas Red Sands" basin (shared with the Pajaro Valley water district-PVWMA), which begins in Apros/Rio del Mar and extends through Seascape, La Selva Beach, and the Pajaro Valley.

The present board and management of SCWD have always consistently stated that there is no "overdraft" in SCWD. However, this statement is disingenuous and as well as being grossly untrue. In fact, the overdraft in the "Purisima" alone is now acknowledged to be around 600 AFY by SCWD. However, SCWD has never acknowledged or quantified its share of the Aromas basin overdraft, shared with PVWMA.

The total Aromas Red Sands basin overdraft is 47,000 AFY or 200% of the safe sustainable 24,000 AFY basin yield. 85% of this use and overdraft is agribusiness. This Aromas basin 47,000 AFY overdraft causes a yearly permanent loss of ground water storage capacity in this shared basin of 15,000 AFY!

One acre foot per year serves two four-person families. Consequently, SCWD's and PVWMA's Aromas overdraft causes a yearly and permanent basin water storage loss (year in, year out) of enough water storage to serve 120,000 people. Every year, this is the amount of our groundwater that is permanently thrown away. Incidentally, the total population of Santa Cruz County is around 260,000.

What is this worth, in economic terms? Santa Cruz (SCMU) anticipates spending around $70 million to address its long term need of around 6,000 AFY and SCWD anticipates spending around $30 million to address its 2,000 AFY long term need. This adds up to $100 million for 8,000 AFY of new supply from somewhere.

At this rate, the 15,000 AFY water storage capacity overused and thrown away yearly by SCWD and PVWMA has a value of approximately $200 million. Every year!

For over the last two years, I have been involved in a lawsuit with the Santa Cruz County Board of Supervisors to protect our groundwater resources to require the Board to enforce their "Well Ordinance" and declare a "ground water emergency" in this situation (which the "Well Ordinance" requires that they do).

I have requested on numerous occasions to the presently seated SCWD board that SCWD join me in this lawsuit to have the "Well Ordinance" enforced by the Supervisors to protect our regional groundwater resources. I have gone so far as to offer to pay for the cost of having SCWD's legal counsel review my suit and advise the present SCWD board on its merits and the advisability of joining my action.

The current board of SCWD has consistently ignored me (and many others), my offer, and my lawsuit. Most significantly, the current SCWD board has never voiced any objection or in any way attempted to address or curtail PVWMA's unconscionable, yearly, primarily agribusiness' waste of our irreplaceable mutually shared Aromas ground water resource. Sadly, I have concluded that the presently seated, long term board has no understanding of this, or apparently any other contemporary regional water issues such as MTBE, Chromium 6, or arsenic contamination. Please replace them. This waste and mismanagement must be stopped.

Respectfully submitted,

Doug Deitch
Mid County Overpumping History

Douglas Deitch: This chart, if accurate, is illustrative of the virtual 30 year plus complete illegal "surplus" ground water right water overuse of Squaw Creek Water District and failure of mission, as self described below by SQCWD, and due diligence of SQCWD, even under the current board majority since 2002, in listening and considering others opinions and proposals regarding how our overdraft should legally and sensibly be managed and eliminated...

www.pogonip.org/eir.htm,
www.pogonip.org/alm.htm,
www.thebestthatmoneycanbuy.net,
www.thinklocalactlocal.com,
www.douglasdeitch.com,
www.ourinconvenienttruth.net

The Soquel Creek Water District is a nonprofit, government agency that provides water resource management within its service area to deliver a safe and reliable supply of high-quality water to meet present and future needs in an environmentally sensitive and economically responsible way.

The History of the District
Founded in 1961, the "Soquel Creek County Water District" purpose was to provide flood control and water conservation services. The District acquired the Monterey Bay Water Company in 1964 and discontinued flood control services. In 1963, "Ct" was dropped from the name and the District became known as Soquel Creek Water District.

Like · Reply · January 1 at 10:20am ·
G666noch

Write a comment...
... please specifically note re: “New Ground Water Sustainability” legislation,

“10720.5. NO MODIFICATION OF WATER RIGHTS OR PRIORITIES, AND NO DETERMINATION OF WATER RIGHTS PURSUANT TO THIS PART
(a) Groundwater management pursuant to this part shall be consistent with Section 2 of Article X of the California Constitution. Nothing in this part modifies rights or priorities to use or store groundwater consistent with Section 2 of Article X of the California Constitution, except that in basins designated medium- or high-priority basins by the department, no extraction of groundwater between January 1, 2015, and the date of adoption of a groundwater sustainability plan pursuant to this part, whichever is sooner, may be used as evidence of, or to establish or defend against, any claim of prescription.
(b) Nothing in this part, or in any groundwater management plan adopted pursuant to this part, determines or alters surface water rights or groundwater rights under common law or any provision of law that determines or grants surface water rights.”
Santa Cruz County Sentinel

County water supplies dwindle

By ROBIN MUSSITELI
Sentinel staff writer

Despite several years of above average rainfall, streams and underground water supplies are continuing to drop while increased demand is driving agencies to find new sources.

This stark conclusion is from a draft study released Wednesday by the county Planning Department and Environmental Health Service on resources monitoring and management of Santa Cruz County water.

The study will go to the county Board of Supervisors in April with recommendations for more comprehensive water supply planning and more extensive erosion control measures.

The two-year study has concluded:

- Groundwater levels have declined significantly in many critical water basins and that pumping in the county's major underground aquifers exceeds natural recharge rates.
- Streamflows have been diminished, and in some areas depleted, by surface diversions and wells.
- Fish habitat has been degraded by sediment and streamflow depletion to the point that streams are drying up during summer months.
- Water quality is threatened by saltwater intrusion and pollution.

There is a serious need to develop additional water supplies and to coordinate all water-related activities.

More comprehensive water management is more than a priority, the study concluded. "It has become a necessity."

Underground aquifer systems that provide much of the county's water are severely stressed, according to the study. Increasing demand coupled with the most recent drought from 1987-92 resulted in progressive degradation of groundwater quality, lowered groundwater levels and significant reduction of water to many county streams.

Despite above average rainfall from 1993-95, the aquifers do not seem to have recovered, said John Rieker, county water quality program manager and an author of the study. Well pumping in all of the county's major aquifers appears to exceed natural recharge rates, resulting in overdraft of the different aquifers, he said.

The study does not include this year's rainfall, but does include those previous above-average rainfall years, said Rieker. "We keep hoping we'll see some recovery, but haven't," said Rieker.

"The "mining" or overdraft of groundwater levels has resulted in seawater intrusion in the county's coastal aquifers that now exceed water use by all urban areas in the north county, the study said.

Seawater has moved into the coastal aquifers underlying the Pajaro Valley and is now starting to push north into the La Selva Beach area of the Soquel Creek Water District and to a lesser extent, into the Seascape area, according to the study.

While less than the Pajaro Valley, the volume of seawater in those areas "should not be considered insignificant," said the study.

In the Scotts Valley and Pescadero areas, groundwater levels have declined by as much as 150 feet, causing dry areas of the Santa Margarita aquifer. As the water levels have dropped, water districts have pushed down to the deeper Lompico aquifer to supply water.

This deeper aquifer, because it gets less natural recharge, is likely to be depleted at a faster rate than the upper Santa Margarita aquifer.
The Soquel Creek Water District stated that their well supplies are still in excellent shape in spite of an increase of Salt Water found in monitoring wells along Aptos, Seascape and La Selva Beach coastlines.

The test results from the planning staff said an increase in salt water has been found in a monitoring well near the seashore in the Seascape area. The increase was first noticed by the Soquel Water District in August and described as "modest."

Soquel Creek Executive Director, Laura Brown, said the district has spent a million dollars monitoring the coastal aquifer, and has given the results to the county on a regular basis.

"We have had a model monitoring program since 1981," Brown said, "and we intend to continue the program." She said the well closest to the sea near La Selva Beach has shown an increasing amount of salty water in recent years.

"It's like a river changing course," Brown explained. "Because of falling water levels in the Pajaro Valley, the water stream in the Aromas Red Sands Aquifer (which feeds into the area) is now flowing in that direction (toward the Pajaro Valley), and away from the coast."

Water District consultant, Joe Scalminini, claimed the problem is due to overdraft in the Pajaro Valley where supplies of water are being used up faster than they can be replaced.

"Brown went on to explain that the Pajaro Valley is the low part of the aquifer... (and, because of the overdraft) a salt water 'wedge' has developed... It poses no threat to (Soquel Creek) production wells," she said.

Supervisor Walt Symons added that, "I'm very concerned about the water problems in the Pajaro Valley. People along the coast have to be seriously concerned."

Watsonville city water is pumped to Pajaro Dunes, while Soquel Creek is supplying water to several other small coastal developments along San Andreas Road.

Brown said inferences that the Soquel Purisma Aquifer is in danger of salt water intrusion are overstated.

One third of the district's water supply comes from Aromas Red Sands Aquifer, while two thirds comes from the Purisma Aquifer that reportedly is a series of very large underground lakes that do not connect to the Aromas Red Sands Aquifer.

Brown called the County's findings, "...Nothing new. We are currently in the process of putting a plan together."

"We don't have a crisis," assured Brown. "Behavior in one aquifer is not a precursor to the other."

She emphasized that the two aquifers are not attached to each other. "They're not even in the same geological formation... The ground water is not the same," she added.

Symons said there is a possibility some or all of the problem has been caused by the shifting Eastern Pacific Plate. "We need to check out geodetic movement... Nobody has taken a look at these problems."

The Pajaro Valley Water Management Agency is considering a pipeline that would bring in water from an outside source to shore up the ground water supplies in their area. The Agency claimed that getting federal water from the San Felipe Project is at least ten years away.

The biggest drain on water that the county has to be more concerned about are the large housing projects that are proposed by the Redevelopment Agency, Symons pointed out. "All of the low income housing we are proposing will gobble up the water... How can you say there's no water and then say more affordable housing must be built!"
April 24, 1981

Douglas Deitch
3540 Porter Gulch Road
Aptos, CA 95003

Dear Mr. Deitch:

I appreciate very much your application to serve on the Water Advisory Commission. I have recently made an appointment to the Commission, but hope that you will retain your interest in the needs and problems concerning water. I would like to be able to call upon your help in the future. Your willingness to serve our community is greatly valued.

Sincerely yours,

[Signature]

ROBLEY LEVY, Supervisor
Second District
Doug, I appreciate your consistent efforts to draw attention to the importance of the Santa Cruz County ordinance you are citing to in this comment. If you will notice, the action taken on January 6, 1987 would have been a consent agenda final adoption of an ordinance debated and adopted preliminarily at an earlier meeting. I don't, in fact, remember the genesis of this item, which you have always attributed to me. Maybe that isn't correct. On January 6, 1987, I signed the ordinance on behalf of the Board, since I was the Chairperson. That doesn't mean that I actually did anything special, and the "Patton Record" was my (not infallible) effort to document those items for which I could claim some personal responsibility, and that I thought important when I did the recording. Probably, I just omitted a reference that in retrospect I should have placed within the listing; or possibly I had nothing at all to do with the ordinance, in terms of personal leadership, and so omitted it from the list on that basis. At any rate, I am glad that this ordinance exists, and I tend to agree with you that those in charge of Santa Cruz County government at the current moment would do well to think about utilizing its provisions.
3.22 Response to Comments from Douglas Deitch
(August 13, 2018; 1:52 PM) (Comment Letter I-9)

I-9-1 This introductory comment is followed by more detailed comments and does not include specific comment about the EIR or any environmental issue related to the Project and so no response is required. This comment is noted.

I-9-2 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-9-3 This comment asserts the District does not have the legal right to recharge water into the groundwater aquifer. The water used for this Project originates from groundwater that has been extracted within the same aquifer identified to receive the groundwater back through recharge via the well. Available storage space in a groundwater basin is considered a public resource. Further, under Water Code, Section 7075, the District can store water in the basin and retrieve it, as needed.

I-9-4 The commenter recommends that the Soquel Creek Water District follow the Santa Cruz County Local Coastal Plan, as well as County ordinances concerning water wells, which are laws and regulations that the commenter believes would limit over-pumping. As described in EIR, Section 3.8.1 of the Project Description, California Government Code sections 53091 (d) and (e) provide that facilities for the production, generation, storage, treatment, or transmission of water supplies are exempt from local (i.e., city and county) zoning and building ordinances. Accordingly, the Project would not be subject to such local regulations, including any associated with the requirement to obtain planning and building permits, or setbacks and height restrictions. The project includes recharge of the groundwater basin and does not include additional groundwater pumping that could result in basin over pumping. That said, Government Code section 53091 does not exempt the Project from requirements of any certified Local Coastal Program, including coastal development permit requirements. Further, as noted in Section 3.8.1 of the EIR, the Water District will be seeking a Santa Cruz County Planning Department Coastal Development Permit, Department of Public Works Encroachment Permit, and Department of Environmental Health Well Drilling Permit.

I-9-5 See the response to comment I-8-4.

I-9-6 See response to comments I-60-2 and I-62-11 regarding the scope of the EIR and the broader regional water planning context.

1 Id.; Central and West Basin Water Replenishment District v. Southern California Water Co. (2003) 109 Cal.App.4th 891, 904-905 [“that subsurface storage space is a public resource is amply supported by the Constitution and the Water Code”].
I-9-7 While the purpose of the comment regarding potential leakage from existing wastewater pipelines is unclear, please see the response to comment L-4-4 regarding appropriate materials and separation distances from other existing underground utilities. Further comment regarding the City of Santa Cruz is noted but does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required.
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On 8/13/18 1:52 PM, Douglas Deitch wrote:

> I am submitting this DEIR comment in two different capacities:
>
> 1. First, as contiguous 44 year unincorporated county, non/outside of
> Squel Creek Water District (SqCWD) private home and property owner @ 540 and 545 Hudson Lane, Aptos
> (APN 04008119 and 04008120) and private well owner, manager, and constructor of 3 private wells and a spring system on this property
>
> 2. As Executive Director/Founder of Monterey Bay Conservancy, a 501c3 Monterey Bay and California water policy thinktank (www.facebook.com/montereybayconservancy)
>
> In it's "FACT SHEET", (EXHIBIT 1/attached), the Soquel Creek Water District describes itself as a nonprofit, local government agency that has purported for over 30-40 years, at least in my experience, that it has provided water resource management within it's service area to deliver a safe and reliable supply of high quality water to meet present and future needs.
>
> Nothing could and can be further from the truth and reality. If this was or is true, then why is (really "are") the Squel Creek Water District's (SQCWD, plural) aquifers, along with Pajaro and Salinas Valleys' officially identified as the most critically overdrafted and mismanaged in this entire state if not county (Exhibits 2/attached and 2a/attached)? How about because they are?
>
> As a private well owner of now 2 different wells contiguous to Squel Creek Water District, my rights to ground water through my wells I constructed, paid dearly for, manage, and maintain is a right legally superior to all others except other private well owners, including Squel Creek Water District. SqCWD legal right to pump and sell ground water within it's jurisdiction is junior to mine and always has been only a limited and junior right to pump ONLY "surplus water" in the aquifers which may be available. In other words, Squel Creek Water District's junior water right was and is limited to pumping only ground water which is not overdrafted water. However, as Exhibit...
3/attached illustrates, SqCWD virtually never (if ever?) did this and constantly overdrafted and as Exhibit 4/attached illustrates was not changed by the 2014 GSA.

SqCWD does not have the legal and sufficient right to do or inject anything into our ground water except reduce SqCWD's ground water overpumping to below sustainable yield and more yearly to make up for the water SqCWD has illegally taken over it's legal right over the decades. SqCWD knows and has known for decades that this overdrafting violates both our Local Coastal Plan and County Well Ordinance (Exhibit 5) but for years has just ignored the problems as have our BOS (www.pogonip.org/ord.htm), CCRQQB (https://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/docs/ag_order2/4.pdf), CALIFORNIA COASTAL COMMISSION (www.thinklocalactlocal.com, www.begentewiththeearth.org), DEPARTMENT OF WATER RESOURCES, AND SWRCB (PLEASE SEE: 11:25 @ www.thebestthatmoneycanbuy.com, where I recommended 4/19/2016 that SWRCB intercede in the Monterey Bay).

I will be appearing before them later this month again after 2 years and reiterating and emphasizing my request.

This is the reason for and cause of the SqCWD and our ground water problems and concerns now.

The DWR's Mark Cowin in 2015 emphasized that:

"The most important thing that can happen is for counties to pass or strengthen ordinances that limit over‐pumping," California Department of Water Resources director Mark Cowin, said at a Wednesday morning press conference releasing the new data, collected by the National Aeronautics and Space Administration. “It will take that kind of action to have any real effect.”

Last year, the state created a framework to regulate groundwater — the first time in state history — but it won’t be fully implemented until 2020. And then it will take a decade or two for water levels to rebound, Cowin said."

Santa Cruz County has such a law and a Local Coastal Plan, too @ www.pogonip.org/ord.htm.

SqCWD and the County BOS must follow it and declare a county wide ground water emergency and follow ours laws and LCPs, like the CCC and Dr. Charles Lester didn’t! ... www.lawandorderliberal.net. Gary Patton thinks so, too. (EXHIBIT attached). Gary likes my Monterey Bay Estuarine National Monument, as well, too! (Exhibit/ attached)

Was DPR w/o any injection, analyzed? Don't we get twice the rain as Monterey and Orange County so our aquifers could and, in fact, did
> recover very well naturally in recent years from just the natural
> recharge of the rail. Why can’t we wait for DPR to be approved and
> standards established very soon. Then we could reduce pumping even
> more and be far less risky and costly.
> > btw/fyi ...My proposal run down @ www.thebestthatmoneycantbuy.com will
> produce/can provide 1/10 of it’s conserved 27,000 a/f/yr by pipeline
> to SqCWD and SCMU, same as old desal would have, from now sustainably
> pumped ground water in Aromas Red Sands in both SqCWD and PVWMA, both
> of which should be terminated, long with SC Water and the others, and
> merged into one Monterey Bay Regional Water Authority. It was cited by
> USGS’ Randy Hanson in 1998 @
> http://www.pogonip.org/WaterDocs/98USGSTechnicalMemorandum.pdf Did you
> analyze this?
> > Was City of Santa Cruz water waste and leakage analyzed. It’s massive.
> Their leaks and failed infrastructure will be ours if we let SC Water
> get their incompetent mitts into our ground water. SC Water has only a
> very small interest and use in BELTZ WELLS of Purisima ground water.
> We would be wise to keep it that way. Why SW Water has 2 reps and
> votes on Soquel/Aptos GSA is nonsense, as well.
> >
> > Douglas Deitch
> > Monterey Bay Conservancy
> > 540 Hudson Lane, Aptos, Ca., 95003
> >
Surprised Pact May Be Off

"Surprise" is the reaction from the heads of both the Soquel Creek County Water District and the Santa Cruz Water Department following theSC City's Council's refusal Tuesday to sell excess water to Soquel.

The recommendation from the city's Water Commission to negotiate with the Soquel district had been approved unanimously. Soquel is hoping to purchase excess city water from Nov. 1 to April 30 for the next two or three years to help alleviate its present groundwater overdraft.

However, instead of approving the request, the council agreed to call for a meeting of all government agencies and water companies in the area to discuss overall needs and problems.

Soquel Water District Manager Bob Johnson termed the action "disturbing." He pointed out the city of Santa Cruz currently has water flowing out to the ocean and the facilities to transfer water already are linked up.

"Since we don't have any off-stream storage facilities, we're only asking for the amount of water we can use. We were hopeful this would help both of us. I just didn't anticipate that the council wouldn't authorize at least negotiations for an interim contract," said Johnson.

Soquel's board of directors had, in fact, already budgeted $200,000 in their 1980-81 budget for the purchase of water.

By using Santa Cruz's excess water, Soquel had hoped not to be forced to draw from its underground water supply. Last year a U.S. Geological Survey had revealed only 6,000 acre feet of underground water, when it was previously assumed there was 10,000 acre feet.

Morris Allen, director of the city's Water Department, felt an agreement would have been "a very good arrangement for the area."

He said the revenues could make a major impact on the city's need for a water rate increase. "We could have certainly used the revenues," he added.

The meeting the council desires is expected to involve the city councils of Santa Cruz, Capitola and Scotts Valley, as well as the water departments in Santa Cruz, Soquel, Scotts Valley and San Lorenzo Valley.

Assistant City Manager Richard Wilson called it a major undertaking. He wants to schedule the meeting in early September.

If the meeting is successful and the council eventually approves an agreement with Soquel in September, it would thereupon for excess water to be sold to Soquel this winter, according Allen.

"It if doesn't work out, the Soquel district could be forced to undertake the Glenwood project on a very accelerated basis," he said.

The $25 million Glenwood Dam has been projected for 1997 on the west branch of Soquel Creek, between Highway 17 and Old San Jose Road. The Soquel district recently acquired an estimated 135 acres in the area.

The meeting was encouraged by Councilman Michael Rotkin. He termed the issue "the most significant council would face in the next three or four years."

Rotkin's concern was tied to the high rate of growth in the Soquel district and the possibility the district could become dependent on buying the surplus water from the city. The September meeting is expected to look into regional development of the water supply, population densities and future planning of the individual bodies.

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Clipped from Santa Cruz Sentinel, 17 Jul 1980, Thu, Page 20

Sorry Mis Amigos y Mis Vecinos,

It's all completely ILLEGAL AND UNSUSTAINABLE!!!

As this Sentinel article from 1980 clearly documents, Soquel Creek Water District, since at least 1980 but well before, has been only illegally, tragically, and continually to this very moment overusing/overdrafting SqCWD's only "junior" legal right to pump and sell for profit ONLY "surplus" (below the sustainable yield) ground water, which may be available within SqCWD's boundary and shared with the other higher/superior priority water rights of private and the other well owners of/in these ground water commons/resources, CAUSING whatever yet to be specified "impure water problem" SqCWD's (and SCMU's, etc.) sewage water "Pure Water Soquel"'s dangerous and risky injection scheme is meant to address, rather than just reducing pumping to SqCWD's legal and junior right "surplus only" limit, developing one or more supplemental supplies like desal or recycle DPR to service the customers that SqCWD so imprudently and illegally supplies water to that SqCWD has no legal right to, and let our ground water commons refill naturally and safely in the manner that Mother Nature over eons has already so successfully accomplished before our intervention ...
AN OPEN LETTER TO SOQUEL CREEK WATER DISTRICT VOTERS

Dear Soquel Creek Water District Voters and Customers,

I strongly urge you to replace the currently seated Soquel Water District Board to protect our ground water. No other measure is more critical to addressing our regional water crisis and to craft regional solutions. The following information is supplied to you to aid you in making the most informed decision in selecting the next Board of the Soquel Creek Water District in the upcoming election. After reading this, please feel free to contact me directly by phone at 476-7662 or email at ddeitch@pogonip.org with any questions or discussion involving the material below. To review the lawsuit mentioned below, supporting materials, or the Grand Jury Complaint filed on this matter, please visit www.montereybayconservancy.org.

Soquel Creek Water District (SCWD) pumps its water (approximately 6,000 acre feet per year-AFY) from two different ground water basins. Two thirds of its water comes from the “Purisima” basin roughly underlying Soquel, Soquel Hills, and Capitola. One third of its water comes from the “Aromas Red Sands” basin (shared with the Pajaro Valley water district-PVWMA), which begins in Aptos/Rio del Mar and extends through Seascape, La Selva Beach, and the Pajaro Valley.

The present board and management of SCWD have always consistently stated that there is no “overdraft” in SCWD. However, this statement is disingenuous and as well as being grossly untrue. In fact, the overdraft in the “Purisima” alone is now acknowledged to be around 600 AFY by SCWD. However, SCWD has never acknowledged or quantified its share of the Aromas basin overdraft, shared with PVWMA.

The total Aromas Red Sands basin overdraft is 47,000 AFY or 200% of the safe sustainable 24,000 AFY basin yield. 85% of this use and overdraft is agribusiness. This Aromas basin 47,000 AFY overdraft causes a yearly permanent loss of ground water storage capacity in this shared basin of 15,000 AFY!

One acre foot per year serves two four-person families. Consequently, SCWD’s and PVWMA’s Aromas overdraft causes a yearly and permanent basin water storage loss (year in, year out) of enough water storage to serve 120,000 people. Every year, this is the amount of our ground water that is permanently thrown away. Incidentally, the total population of Santa Cruz County is around 260,000.

What is this worth, in economic terms? Santa Cruz (SCMU) anticipates spending around $70 million to address its long term need of around 6,000 AFY and SCWD anticipates spending around $30 million to address its 2,000 AFY long term need. This adds up to $100 million for 8,000 AFY of new supply from somewhere.

At this rate, the 15,000 AFY water storage capacity overused and thrown away yearly by SCWD and PVWMA has a value of approximately $200 million. Every year!

For over the last two years, I have been involved in a lawsuit with the Santa Cruz County Board of Supervisors to protect our ground water resources to require the Board to enforce their “Well Ordinance” and declare a “ground water emergency” in this situation (which the “Well Ordinance” requires that they do).

I have requested on numerous occasions to the presently seated SCWD board that SCWD join me in this lawsuit to have the “Well Ordinance” enforced by the Supervisors to protect our regional ground water resources. I have gone so far as to offer to pay for the cost of having SCWD’s legal counsel review my suit and advise the present SCWD board on its merits and the advisability of joining my action.

The current board of SCWD has consistently ignored me (and many others), my offer, and my lawsuit. Most significantly, the current SCWD board has never voiced any objection or in any way attempted to address or curtail PVWMA’s unconscionable, yearly, primarily agribusiness’ waste of our irreplaceable mutually shared Aromas ground water resource. Sadly, I have concluded that the presently seated, long term board has no understanding of this, or apparently any other contemporary regional water issues such as MTBE, Chromium 6, or arsenic contamination. Please replace them. This waste and mismanagement must be stopped.

Respectfully submitted,

Doug Deitch
3.23 Response to Comments from Douglas Deitch (August 13, 2018; 2:05 PM) (Comment Letter I-10)

I-10-1 The commenter links a Facebook posting regarding the District’s water rights. Please see the response to comment I-9-3. The remainder of this comment letter consists of additional comments submitted to separately.
On 8/13/18 2:04 PM, ddeitch@pogonip.org wrote:

DEPARTMENT OF WATER RESOURCES, AND SWRCB (PLEASE SEE:@ 11:25 @ www.thebestthatmoneycantbuy.org, where I recommended 4/19/2016 that SWRCB intercede in the Monterey Bay.

My materials delivered and reviewed by SRWCB 4/19/2016, attached
April 24, 1981

Douglas Deitch
3540 Porter Culch Road
Aptos, CA  95003

Dear Mr. Deitch:

I appreciate very much your application to serve on the Water Advisory Commission. I have recently made an appointment to the Commission, but hope that you will retain your interest in the needs and problems concerning water. I would like to be able to call upon your help in the future. Your willingness to serve our community is greatly valued.

Sincerely yours,

Robley Levy
ROBLEY LEVY, Supervisor
Second District
Central Valley locales sinking 2 inches a month as groundwater ... 

http://www.santacruzsentinel.com/general-news/20150819/centr...

U.S. Geological Survey hydrologist Michelle Sneed is photographed at a ground water leveling well along the Delta-Mendota Canal Tuesday, Feb. 11, 2014 near Los Banos, Calif. Damage to the canal from possible groundwater issues is being studied by the agency. (Aric Crabb/Bay Area News Group)

By Lisa M. Krieger, lkrieger@mercurynews.com

Posted: 08/19/15, 6:37 PM PDT | Updated: on 08/19/2015

5 Comments

Satellites measuring the great Central Valley reveal that the land is dropping faster than ever before, as the state’s devastating drought causes thirsty Californians to drain a subterranean reservoir.

Some places are sinking almost 2 inches a month, a trend that so alarms officials that they are urging regulation of new wells.

“The most important thing that can happen is for counties to pass or strengthen ordinances that limit over-pumping,” California Department of Water Resources director Mark Cowin, said at a Wednesday morning press conference releasing the new data, collected by the National Aeronautics and Space Administration. “It will take that kind of action to have any real effect.”

Last year, the state created a framework to regulate groundwater — the first time in state history — but it won’t be fully implemented until 2020. And then it will take a decade or two for water levels to rebound, Cowin said.

NASA found two “hotspots” of greatest subsidence. One was near the town of Corcoran, between Fresno and Bakersfield. Another was near the town of El Nio, near Chowchilla.

The scientists also found areas near the California Aqueduct sank up to 12.5 inches, with eight inches of that occurring in just four months of 2014.

Subsidence has already damaged wells, roads, bridges and aqueducts — and further sinking has the potential to damage them still more, according to authorities. Already, changes in elevation mean that state irrigation water must be moved into the Delta-Mendota Canal from behind the Mendota Dam, located at the confluence of the San Joaquin River and Fresno Slough, said Jeanine Jones, DWR’s deputy drought manager and interstate resources manager.

“Because of increased pumping, groundwater levels are reaching record lows — up to 100 feet lower than previous records,” Cowin said in a prepared statement. “As extensive groundwater pumping continues, the land is sinking more rapidly and this puts nearby infrastructure at greater risk of costly damage.”

The floor of the fertile Central Valley is filled with deep layers of clay, sand and gravel, left by ancient lakes and streams. Between these layers is fresh water, called aquifers.

As water is extracted, the layers’ loose clay particles compress, stacking like pancakes. Then the heavy ground above them collapses. Even when the aquifer recovers, the ground may stay damaged, capable of holding less water.

NASA obtained the subsidence data by comparing satellite images of the Earth’s surface over time.
Weighing in on the desal debate, Doug Deitch of the Monterey Bay Conservancy and multiple runs for supervisor wonders why nobody mentions a 1987 well ordinance that could have been invoked to stop aquifer overdraft.

By Douglas Deitch

ON JAN. 6, 1987, then-Supervisor chairman Gary Patton signed into law the "County Well Ordinance." This law, one of many conceived and designed by Mr. Patton, was intended to protect our groundwater from contamination from a number of possible causes. In this ordinance, saltwater intrusion from basin overdraft was and still today is specifically noted and covered by this law.

Mr. Patton’s law was carefully crafted by him as a part of our local coastal plan so, notwithstanding the promise of desalination or anything else, the natural limit of local water supplies could not legally be ignored by our supervisors. This was achieved by requiring that the Board of Supervisors immediately declare a groundwater emergency and take specific remedial measures in any county groundwater basin which is in overdraft and drawing water beyond that basin's sustainable yield.

Although quite possibly all county basins were actually in overdraft in 1987, the first comprehensive County Water Resources Report in 1998 officially established these overdraft conditions in all our local aquifers. In this report, saltwater intrusion resource loss in Soquel Creek's and PWWMA's shared basin, the Anomus Red Sands, was estimated to be 15,000 acre feet of loss per year. Water use was quantified at a massive yearly 200 percent or three times overdraft, around 90 percent used and exported in 25 percent of this county's berries. No remedial or any actions have ever been taken by our supervisors, as required by Mr. Patton's law.

To replace this amount of water loss would require construction and full time operation of around seven new $40 million to $100 million Santa Cruz desal plants. Put another way, Soquel Creek Water District is draining the equivalent of seven desal plants a year to saltwater intrusion, year in and year out for 20--30 years, at one end of their district, and they want to partner with SCMU to build one plant by 2015 at the other end to address this problem?

Does this seem like a "sustainable" solution? We will have lost the equivalent of another 42 Santa Cruz desal plants' water by then--and that's added on to the 84 plant's worth of water officially lost since 1998! We're talking billions of dollars of our irreplaceable water supply permanently gone, expropriated from our water commons in every product by primarily transnational tenant agribusinesses like Driscoll's, Dole, CalGiant and TriCal--the Bromide Barons-- and yes, UC, too.

That's why the late Marc Reisner, author of Cadillac Desert, speaking here in 1998, described this same loss as "the worst in the world."

I have heard and read with much interest a number of Mr. Patton's recent letters and statements on the radio and in news articles in this paper last week and elsewhere relating to our water, the new desal plant, USCC expansion, Altimira Lane development in Watsonville and other local land use matters in the Greater Monterey Bay Region. Yet, since 1998, I have never one time heard one word from Mr. Patton mentioning his well reliance and its requirement, crafted by him, that our Board of Supervisors declare a "groundwater emergency" and implement the reasonable and required remedial measures he designed into the law to protect our water supply for us, our children and our grandchildren. I wish he would please explain to us all why he hasn't and why he remains silent while his well ordinance and the water supplies it is designed to protect and conserve is ignored and disregarded continuously since 1998 by his successors, supervisors Wormhoudt and Connerty, and, apparently, by himself as well.

Aptos resident Doug Deitch is executive director of the Monterey Bay Conservancy.

Send a letter to the editor about this story.
Gary A. Patton Doug, I appreciate your consistent efforts to draw attention to the importance of the Santa Cruz County ordinance you are citing to in this comment. If you will notice, the action taken on January 6, 1987 would have been a consent agenda final adoption of an ordinance debated and adopted preliminarily at an earlier meeting. I don't, in fact, remember the genesis of this item, which you have always attributed to me. Maybe that isn't correct. On January 6, 1987, I signed the ordinance on behalf of the Board, since I was the Chairperson. That doesn't mean that I actually did anything special, and the "Patton Record" was my (not infallible) effort to document those items for which I could claim some personal responsibility, and that I thought important when I did the recording. Probably, I just omitted a reference that in retrospect I should have placed within the listing; or possibly I had nothing at all to do with the ordinance, in terms of personal leadership, and so omitted it from the list on that basis. At any rate, I am glad that this ordinance exists, and I tend to agree with you that those in charge of Santa Cruz County government at the current moment would do well to think about utilizing its provisions.

March 27 at 9:26am · Unlike · 👍 5
ORDINANCE NO. 3806

AN ORDINANCE REPEALING EXISTING CHAPTER 7.70 RELATING TO WATER WELLS AND ADDING NEW CHAPTER 7.70 RELATING TO WATER WELLS

SECTION I

Chapter 7.70 of the Santa Cruz County Code is hereby repealed.

SECTION II

Title 7 of the Santa Cruz County Code is hereby amended by adding Chapter 7.70 thereto, said new Chapter to read:

CHAPTER 7.70

Sections:

7.70.010 Purpose of Provisions.
7.70.020 Definitions.
7.70.030 Permit—Required—Issuance.
7.70.040 Permit—Expiration
7.70.050 Permit—Suspension or Revocation.
7.70.060 Licensed Contractor Required.
7.70.070 State Reporting.
7.70.080 Inspections.
7.70.090 Technical Standards.
7.70.100 Special Groundwater Protection.
7.70.110 Pajaro Groundwater Protection Zone.
7.70.120 Soquel Creek Service Area Restrictions.
7.70.130 Groundwater Emergencies.
7.70.140 Abatement—Investigation.
7.70.150 Abatement Generally.
7.70.160 Nuisance—Abatement of Safety Hazard.
7.70.170 Variances.
7.70.180 Amendments.

7.70.010 Purpose of Provisions.

It is the purpose of this chapter to provide for the construction, repair, and reconstruction of all wells, including cathodic protection wells, test wells and monitoring wells, to the end that the groundwater of this county will not be polluted or contaminated and that water obtained from such wells will be suitable for the purpose for which used and will not jeopardize the health, safety or welfare of the people of this county. It is also the purpose of this chapter to provide for the destruction of abandoned wells, monitoring wells, test wells, and cathodic protection wells found to be public nuisances, or when otherwise appropriate, to the end that all such wells will not cause pollution or contamination of groundwater or otherwise jeopardize the health, safety or welfare of the people of this county. It is also the purpose of this chapter to implement policies of the County General Plan and the Local Coastal Program Land Use Plan.

-1-
A groundwater emergency shall be declared in areas demonstrated to be experiencing a groundwater overdraft exceeding the safe yield in order to prevent further depletion and degradation of water resources where such degradation threatens the public health, safety and welfare of the community. The emergency shall have no effect on drilling of monitoring or cathodic protection wells.

a. Declaration. A declaration of a groundwater emergency shall be made by the Board of Supervisors only after a public hearing. Such an emergency shall be declared by resolution of the Board after the public hearing to consider all relevant information such as, but not limited to, the most current groundwater study, recommendations of water purveyors and the Water Advisory Commission and only after the following findings can be made:

1. The designated area is experiencing a groundwater overdraft exceeding the long-term average annual recharge of groundwater resource;
2. The creation of new wells or the expansion of existing wells will significantly increase the demand on the affected aquifer and thereby increase the overdraft; and
3. The continuation of the overdraft will result in further depletion and degradation of the water resource that can lead to, but is not limited to, impairment of the aquifer or allowing the ingress of low-quality or saline waters.

b. Immediate Measure to Alleviate. In areas where a groundwater emergency is declared, the Board of Supervisors shall take action to establish water conservation measures to limit construction of new wells to regulate pumping from or expansion of existing wells, and in order to prevent further depletion and degradation of the affected aquifer. In taking these actions, the Board shall give consideration to the seasonal needs of agriculture including, but not limited to, the following factors:

1. Agriculture’s need to repair, maintain and replace existing wells serving existing agricultural use acreage;
2. Well construction for agricultural use to serve existing agricultural acreage when new parcels are created due to change in legal ownership, split parcels or parcels created by change in zoning laws or other governmental regulations; and
3. The different water requirements of agricultural crops.

c. Long-term Measures to Alleviate. The Board shall initiate actions such as, but not limited to, joint power agreements with other agencies with the goal of finding permanent solutions to the groundwater problem.

d. Duration. A groundwater emergency and the measures enacted to alleviate the emergency shall remain in effect until rescinded as established in Subsection F of this Section.

e. Annual Review. The establishment of a groundwater emergency and all actions to alleviate the emergency shall be reviewed by the Board of Supervisors within one year of the date of enactment of the measures at a public hearing to decide whether the declaration of emergency shall remain in effect.
Ordinance No. 3306

7.70.180 Amendments

Any revision to this chapter which applies to the coastal zone shall be reviewed by the Executive Director of the California Coastal Commission to determine whether it constitutes an amendment to the Local Coastal Program. When an ordinance revision constitutes an amendment to the Local Coastal Program, such revision shall be processed pursuant to the hearing and notification provisions of Chapter 13.03 of the Santa Cruz County Code, and shall be subject to approval by the California Coastal Commission.

SECTION III

This ordinance shall take effect upon certification by the State Coastal Commission, or after 30 days, whichever is greater.

PASSED AND ADOPTED this 6th day of January, 1987, by the Board of Supervisors of the County of Santa Cruz by the following vote:

AYES: SUPERVISORS Forbus, Levy, Mehl, Cucchiara, Patton
NOES: SUPERVISORS None
ABSENT: SUPERVISORS None

Chairperson of said Board

APPROVED AS TO FORM:

Henry C. Chakalos
County Counsel

CC:
County Counsel
Planning
Environmental Health
Health Services Agency
Doug Deitch on "Community Perspectives"
January 23, 1996
The Soquel Creek Water District stated that their well supplies are still in excellent shape in spite of an increase of Salt Water found in monitoring wells along Aptos, Seascape and La Selva Beach coastlines.

The test results from the planning staff said an increase in salt water has been found in a monitoring well near the seashore in the Seascape area. The increase was first noticed by the Soquel Water District in August and described as "modest."

Soquel Creek Executive Director, Laura Brown, said the district has spent a million dollars monitoring the coastal aquifer, and has given the results to the county on a regular basis.

"We have had a model monitoring program since 1981," Brown said, "and we intend to continue the program." She said the well closest to the sea near La Selva Beach has shown an increasing amount of salty water in recent years.

"It's like a river changing course," Brown explained. "Because of falling water levels in the Pajaro Valley, the water stream in the Aromas Red Sands Aquifer (which feeds into the area) is now flowing in that direction (toward the Pajaro Valley), and away from the coast."

Water District consultant Joe Scalimann claimed the problem is due to overdraft in the Pajaro Valley where supplies of water are being used up faster than they can be replaced.

"Brown went on to explain that the Pajaro Valley is the low part of the aquifer... and because of the overdraft a salt water "wedge" has developed... it poses no threat to (Soquel Creek) production wells," she said.

Supervisor Walt Symons added that, "I'm very concerned about the water problems in the Pajaro Valley... People along the coast have to be seriously concerned."

Watsonville city water is pumped to Pajaro Dunes, while Soquel Creek is supplying water to several other small coastal developments along San Andreas Road.

Brown said inferences that the Soquel Purisma Aquifer is in danger of salt water intrusion is overstated.

One third of the district's water supply comes from Aromas Red Sands Aquifer, while two thirds comes from the Purisma Aquifer that reportedly is a series of very large underground lakes that do not connect to the Aromas Red Sands Aquifer.

Brown called the County's findings... "Nothing new. We are currently in the process of putting a plan together."

"We don't have a crisis," assured Brown. "Behavior in one aquifer is not a precursor to the other."

She emphasized that the two aquifers are not attached to each other. "They're not even in the same geological formation... The ground water is not the same," she added.

Symons said there is a possibility some or all of the problem has been caused by the shifting Eastern Pacific Plate. "We need to check out geodetic movement... Nobody has taken a look at these problems."

The Pajaro Valley Water Management Agency is considering a pipeline that would bring in water from an outside source to shore up the ground water supplies in their area. The Agency claimed that getting federal water from the San Felipe Project is at least ten years away.

The biggest drain on water that the county has to be more concerned about are the large housing projects that are proposed by the Redevelopment Agency. Symons pointed out, "All of the low-income housing we are proposing will gobble up the water... How can you say there's no water and then say more affordable housing must be built?"
September 20, 1999

Douglas Deitch
3540 Porter Gulch Road
Aptos CA 95003

Dear Mr. Deitch:

The Santa Cruz Civil Grand Jury is in receipt of your complaint dated September 3, 1999, and assigned case #SD99-104.

We will advise you of the disposition of this complaint.

Thank you for bringing this matter to our attention.

Sincerely yours,

Al Richard, Foreperson
It's all about 'our' water, right?

I'm very concerned about our water. After reading this, I hope you will be, too. Did you notice how I said "our" water? Although I, like around maybe 2,000 of my neighbors in Soquel Creek Water District, have my own private well, it's still all "our" water. Make no mistake about it.

In case you didn't know, excluding the relatively small amount provided to the City of Santa Cruz from the San Lorenzo River, by far the largest proportion of "our" water supply in Santa Cruz County and the entire Monterey Bay Region is water stored in the ground and is supplied to us via someone's well. We don't import water. We are entirely dependent on it. And unreplaceable underground storage in a number of different basins or aquifers. And, by the way, don't expect that the boundaries of these basins correspond in any consistent or logical way to the boundaries of the above ground agencies that oversee "our" water. They don't.

All my neighbors (including my water district, Soquel Creek Water District) and I have our straws in the same two underground reservoirs, the Purisima and the Arroyo, which lead to the south. Purisima supplies about two-thirds of SCWD's water, with Arroyo Reds Sands making up the rest. We all just can't see it.

SCWD customers pay for the district's services and overhead in their bills. Whether we receive service or not, none of us pay anything currently for "our" water, like they say we must in Pajaro (PVWMA). It's "free" here. History has shown us again and again how the greatest of civilizations and societies have been toppled from their heights through their foolish inattention to or their arrogant or greed driven miscalculations about their water. I would hope that we could somehow be different here. However, apparently, it looks like we must have a low historian count here in the Monterey Bay Area.

I had been basically a city dweller for all my 21 years when I married and moved to the Santa Cruz Mountains 30 years ago, and I acquired my first well. From water. Try it sometime and you'll start getting the idea about what's

When I considered moving to my present home in Aptos five years later, the first thing I did was walk into the kitchen, turn on the faucet, and draw a glass of the finest. I never left.

My family and I have been fortunate enough to enjoy this natural blessing that has been freely provided to us except for small electronic and equipment costs. We all in this region have been blessed by this wonderful, hidden resource which has been created over eons in geologic time by the filtering flows and storage of this most essential fluid. This abundant natural system could have operated continuously at its original productivity and would have provided our children and us with a sustainable supply for all of our reasonable needs. However, our needs have grown and are not reasonable. As a result of this, our underground resource, which we all must necessarily and reasonably attempt to share to sustain our selves, cannot and will itself be sustained.

The reason for this failure is that our needs now require that agriculture and farming (which use 80 percent or more of our supply without any control) chronically overdraw our underground storage. The massive overdraft causes approximately an annual and permanent loss of irreplacable underground storage capacity, equal to two Loch Lomonds worth (15,000 acre feet) of water storage. The needs further require that thousands of acres of orchard be ripped up to be replaced by water intensive fields and crops using 3 to 4 or more times as much water. These new crops drink hard and deep into coastal aquifers until chloride (salt) levels escalate beyond the crop's tolerance. Once polluted with saltwater, wells are moved inland until they are also claimed by chloride and made

...etc...

"Free water must, by definition, cost nothing. However, there are enormous costs. We just haven't started paying them yet."
June 12, 1998

RE: SETTING PUBLIC HEARING TO CONSIDER DECLARATION OF GROUNDWATER EMERGENCY IN THE PAJARO VALLEY

Dear Members of the Board:

There has been considerable public discussion about the status of the groundwater resources in the Pajaro Valley. On June 2, 1998, the voters in the Pajaro Valley Water Management Agency’s (PVWMA) jurisdiction adopted Measure E which mandated, for a period of 10 years, that the PVWMA shall postpone design or construction of a pipeline to import water into the Pajaro Valley, imposed a 10 year moratorium on the purchase by the PVWMA of water from any source outside of its boundaries, and also mandated a reduction in the augmentation fees charged to water users in the Pajaro Valley, fees which are used as a means of supporting projects to improve or develop water resources.

There seems to be little doubt that the water resources available to the PVWMA and its users are in a state of overdraft. Last week, in considering Item 22 on our Board agenda related to creation of positions in the County government to help focus the development of County water policies, we also accepted a document entitled "An Evaluation of Water Resources Monitoring and Management Efforts in Santa Cruz County." The summary of that document, made a part of the agenda item as Attachment 6, in the section entitled "Findings Specific to South County/Pajaro," made the following factual finding:

"2. Annual pumping in the Pajaro Basin is 60,000 acre-feet/year. The net yield of the basin is cited in the Basin Management Plan as 31,000 acre-feet/year. Overdraft is approximately half of demand. The PVWMA is planning to develop an additional 25,000 acre-feet/year to meet demands through the year 2040."
April 11, 2000

Douglas Deitch
3540 Porter Gulch Road
Aptos, CA 95003

Dear Mr. Deitch:

Thank you for your letter dated April 6, 2000, requesting that the Board reconsider the action taken at our February 15, 2000, meeting with regard to Item 61, a progress report on ongoing activities to mitigate overdraft in the Pajaro Valley. It is my personal belief that the action taken by the Board at that time was appropriate and, accordingly, I am respectfully declining your request to bring the matter back before the Board. However, I have circulated a copy of your letter to each Supervisor for their individual consideration.

Sincerely,

MARDI WORMHOUDT, Chair
Board of Supervisors

MW:ted

cc: Clerk of the Board
Planning Department

1977A6
June 19, 1998

Douglas Deitch
Pogonip Foundation
501 Mission Street
Santa Cruz, CA 95060

Dear Mr. Deitch:

Thank you for your letter dated June 17, 1998, requesting that the Board set a public hearing to consider a declaration of the existence of a countywide groundwater emergency. I believe that Board members clearly understood that you felt that this matter should be considered on a countywide basis—not just with regard to the Pajaro Valley Water Management Agency. Despite this fact, there were not three votes for the recommendation of Supervisor Almquist to hold a public hearing related to the PVWMA, nor was any motion made to hold a hearing to discuss this matter on a countywide basis. However, I have provided a copy of your letter to each member of the Board for their individual consideration.

Sincerely,

JANET K. BEAUTZ, Chairperson
Board of Supervisors

JKB:ted

cc: Clerk of the Board
    Members, Board of Supervisors
    Planning Department

1024A6
Top health official comes under fire
California's health chief tried to block an
anti-Rite Aid ad, a drugstore chain that
contributed to Gov. Davis' campaign.

State, Page A13

LOCAL

Water activist sues county board

By DANNY WHITE
Senior Staff Writer

SANTA CRUZ — Doni Feldt, an envi-
ronmental candidate in this year's Board of
Supervisors race, is suing the board, saying it
has been negligent in its handling of the Pa-
jarro Valley water troubles.

Feldt, a property manager, made a
money request to the county to build a new water
supply line that would serve the rural areas of
the county, including the Pajarro Valley, which
is facing water supply problems due to the over-
draft and sea water encroaching into the
underground supply of fresh water.

Supervisors considered declaring a
regional water emergency last year, which
would have allowed the county to take over
water management duties from the Pajarro
Valley Water Management Agency. Ulti-
ately, the supervisors opted against the
idea in part because of concerns over their
local jurisdiction.

Supervisor Mari Wormhoudt said Friday
that the lawsuit, filed in Santa Cruz County
Superior Court, strikes her as a publicity
stunt.

"Supervisors and the board are con-
sidering a major water emergency in the
area. It is a major disaster," said Feldt.

The lawsuit, filed by Feldt, the county,
and the Water Management Agency, argues
that the supervisors have not handled the
crisis properly.

"If he thinks that (the water problem) is going to be solved
by his filing a lawsuit against the Board of
Supervisors, I wouldn't want to rely on him to
water my garden."

— Mari Wormhoudt, county supervisor

Supervisors, I wouldn't want to rely on him
to water my garden.

"I would like to see something done. I don't
have time to wait."

— Feldt

The Pajarro Valley Water Management
Agency has argued that the supervisors
doesn't have authority over it because its
jurisdiction was created by the state.

Feldt's suit was filed May 12. The
suit claims the court has until early June
to respond.

In recent years, the board has been divid-
ed over the idea of a regional water emer-
gency.

Wormhoudt said the county can't make
any changes.

The Pajarro Valley water agency estimates
that Pajarro Valley farmers and residents
use about 45,000 acre feet of water per year.

Lawsuit

Continued from Page A9

"He is using his information and
supply troubles. He is seeking to
make money on the water crisis,"Hanson said.

Hanson said the court system is
not an appeals forum to settle this
kind of case.

"This is what I do all the time,"
said Hanson, noting that he has
taken suits against several counties,
including Sonoma and Mendocino,
for failing to upgrade "deficient"
water systems.

The lawsuit was filed June 19.

Panel seeks school site

Soquel bond defeat forces a
team effort

By JORDI CUNA
Senior Staff Writer

CAPITOLA — Last year they were
lavishing lake views and sleek new
opponents of Measure Q, the bond
measure defeated by voters in the
Soquel Union Elementary School
District, in November, have joined
bond advocates to try to find a suit-
able site for a school.

It's going to take 18 months, at
least, to site a school site,
"We are going to work on it,
"We want to be very thorough and
careful about choosing the right
site because there are so few available," he
added.

"It'll be a site that's chosen,
everyone's working toward a
community project," said Soquel
City Councilman Keith Snyder, who
came up with the idea after talking
with the community.

The task force, which includes
elected officials from Soquel,
the school district, Santa Cruz
County and some civic
volunteers, had field
take shape

John Winkler
San Lorenzo Valley
Elementary School

Volunteers help field take shape
August 28, 2003

Mr. Douglas Deitch
3540 Porter Gulch
Aptos, CA 95003

Reference: Request for Grand Jury Action
Complaint cc- 03-001
RE: County Board of Supervisors

Dear Mr. Deitch,

This is to acknowledge receipt of your complaint referenced above. Your request will be considered by the Santa Cruz County Grand Jury. Should you have additional information, please forward it for inclusion with the complaint file.

Law and policy prohibit the Grand Jury from disclosing any aspect of an inquiry. Recommendations, if any, may be contained in the Grand Jury Final Report.

Be assured that your identity will be known only to the Grand Jury. We are sworn to secrecy to ensure confidentiality of your identity and any information you may supply to us.

Sincerely,

Otis Johnson, Foreperson
2003-04 Santa Cruz County Grand Jury

cc: Grand Jury File
CC Committee
www.ourinconvenienttruth.com
Jan 7, 2007

Groundwater Emergency
tbegentlewiththeearth.org voices

Douglas Detch Wrote in For State Assembly-29th District 2E NO on Stone
Like This
Santa Cruz Community Television

Sponsored
Final Program
Environmental Impact Report

Basin Management Plan

State Clearing House No.: 9302-3035

VOLUME 1: Revised Draft EIR

Pajaro Valley Water Management Agency
executing the BMP. The No Project Alternative is defined as no remedial action. That is to say, no plans, policies, programs, or projects would be undertaken by the PVWMA or any other body or individual in the Basin. Ground water would continue to be the source of water for agricultural irrigation, industrial and commercial use, and domestic residential use. Ground water use would increase to meet higher future water demand. The Basin’s overdraft condition would worsen. Seawater intrusion would continue to advance underneath the coastal lands at the current rate of 10,000 acre feet per year or higher. Irrigation with ground water would continue along the coast area until the salt content in the soils built up to the point where agricultural crops could not grow. Domestic Wells along the coast would also become unusable as the sodium content increased. No substitute water supplies would become available other than purchasing bottled water.

1.2.4 Demand Management Only Alternative = following

Section 10.2.4, Demand Management Only Alternative, of the BMP contains a more detailed discussion. This alternative would use only demand management measures to achieve the Agency’s water management objectives: to balance water use and supply in the Basin and progressively decrease seawater intrusion. The Basin would be brought into balance through mandatory basin-wide pumping controls only, for residential, agricultural, and industrial users. Ground water modeling has indicated that it would be necessary to reduce ground water use by 60 percent from current levels. All users in the Basin would receive only 40 percent of their current needs by the year 2040. Since municipal and industrial users comprise 23 percent of current use, the major reduction would fall on agricultural users. In effect, this would reduce agricultural operations by 40 to 60 percent and halt or reduce current levels of municipal and industrial development (refer to the following socioeconomics discussion). This Alternative represents the most probable scenario if the State Water Resources Control Board were to intervene. State intervention would occur as a result of the PVWMA’s failure to implement a BMP, which is in essence what would occur under this Alternative. The State by statutory adjudication would institute someone to regulate and oversee the appropriation of water in the Basin, resulting in stringent pumping controls.

There are however, other ways the Demand Management Alternative could be formulated which would involve the acquisition of land or water rights to meet overdraft reduction goals. The BMP considered a demand management element which involved the acquisition of land to meet overdraft reduction goals. The retirement of 6,500 acres of coastal area land from irrigated agriculture could allow long-term sustainable pumping of 50,000 AFEV. This water could be shared by the remaining...
So ... to get to the point: @ www.thebestthatmoneycanbuy.com

I have an 8000 acre real estate acquisition/project/deal here in the Monterey Bay which doubles as a shovel ready but no shovel even required 24,000 acre feet per year $400,000,000 Prop 1 funded ground water and habitat/wetlands/coastal access "Coast Dairies II" type conservation project.

May I describe it to you as I did recently in a comment to "Shaping Ground Water Storage" in the California Water Blog @ http://californiawaterblog.com/.../shaping-water-storage-in-.../

"Douglas Deitch says:
November 20, 2014 at 11:39 am

As we all know, our natural systems such as particularly our ground water aquifers, provide the best opportunities for California water storage. Just eliminating chronic overdraft and water mining of critically important food production related water commons to stop the bleeding and commence living within the sustainable agricultural carrying capacity would be a major victory and is a more than obvious place to start.

Monterey Bay Conservancy has been continuously proposing such a water project in the Monterey Bay/Pajaro Valley-PVWMA Region since 1996 (http://www.pogonip.org/solution.html, http://www.pogonip.org/WaterUSCSTechnicalMemorandum.pdf, http://www.begentlewiththeearth.net/, http://www.begentlewiththeearth.org/) to correct the decades long massive ag overdrafting and water mining in this area which has actually increased by over 27% over the last few growing seasons in response to this record drought, with no production reductions at all.

With the passage of the $7.5 billion water bond, around $400,000,000 is now available to implement a shovel ready (but no shovel even required) immediate and 100% sure fire in perpetuity 24,000 acre foot per year water conservation project which will terminate all future salt water intrusion in this area, provide sustainable local ground water for all users, protect in perpetuity some of this country's most rare and critical habitats, wetlands, and farmlands, improve coastal access, improve and diversify the local economy and protect food production, and publicly acquire and fallow/dry farm, for around $50,000 per acre ... http://www.santacruzsentinel.com/.../retired-federal-judge-buy... the around 8000 plus acres of irrigated farmlands, 25% of Pajaro Valley's total, on the ocean side of Highway One from La Selva Beach, in Santa Cruz County, to Elkhorn Slough in Monterey County.

I submit there is no better utilization of around 5% of this bond's funding in the State of California ... and commencing living within our water means here in the Monterey Bay.

If you think this approach might be a good one, as well, please repost this and pay a few bucks to "boost" it to others here in the Monterey Bay and California on Facebook who might feel the same.

Many thanks,

Douglas Deitch
Douglas Deitch says:
May 17, 2015 at 8:14 am

... please specifically note re: “New Ground Water Sustainability” legislation,

“10720.5. NO MODIFICATION OF WATER RIGHTS OR PRIORITIES, AND NO DETERMINATION OF WATER RIGHTS PURSUANT TO THIS PART
(a) Groundwater management pursuant to this part shall be consistent with Section 2 of Article X of the California Constitution. Nothing in this part modifies rights or priorities to use or store groundwater consistent with Section 2 of Article X of the California Constitution, except that in basins designated medium- or high-priority basins by the department, no extraction of groundwater between January 1, 2015, and the date of adoption of a groundwater sustainability plan pursuant to this part, whichever is sooner, may be used as evidence of, or to establish or defend against, any claim of prescription.
(b) Nothing in this part, or in any groundwater management plan adopted pursuant to this part, determines or alters surface water rights or groundwater rights under common law or any provision of law that determines or grants surface water rights.”
3.24 Response to Comments from Douglas Deitch
(August 13, 2018; 2:34 PM) (Comment Letter I-11)

I-11-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.
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On 8/13/18 2:04 PM, ddeitch@pogonip.org wrote:
> DEPARTMENT OF WATER RESOURCES, letter attached
Dear Mr. Godwin,

This submitted application(s) for proposed basin boundary modification(s) by the Pajaro Valley Water Management Agency, as well as the related application by the “Mid County Ground Water Basin” on which I have also commented on and incorporate by this reference to this comment, by Douglas Deitch, emailed December 19, 2015 which can be viewed/located @ page 4 @ http://sgma.water.ca.gov/basinmod/docs/download/450, cannot be approved at this time due to inadequate, unsatisfactory, incomplete, or untrue responses provided in both applications to required questions in the applications.

Specifically, under “G. General Existing Groundwater Management”, since PVWMA or SqCWD in its/their entire 32+ year existence HAS NEVER NOT MASSIVELY OVERDRAFTED IT’S/THEIR BASIN(S) and not totally failed in their respective "missions" (to wit, for PVWMA: “Section 102 of the Agency’s Charter states: "Water resource management activities carried out under this act in the public interest shall recognize the following objectives:

(a) Local groundwater resources should be managed toward the avoidance and eventual prevention of conditions of long-term overdraft, land subsidence, and water quality degradation.
(b) Local economies should be built and sustained on reliable, long-term supplies and not long-term overdraft as a source of water supply.
(c) Water management programs should include reasonable measures to prevent further increases in the amount of long-term overdraft and to accomplish continuing reduction in long-term overdraft, …

the four required responses to the questions: “1. Explain how sustainable groundwater management exists or could likely be achieved in the basin,” “2. Explain how the proposed boundary modification would affect the ability of adjacent groundwater basins to sustainably manage groundwater in those groundwater basins.”, “3. Provide a historical summary of the sustainable management of groundwater levels in the proposed basin(s) or subbasin(s)”, and “4. Discuss potential impacts to state programs resulting from the proposed boundary modification, including, but not limited to, the California Statewide Groundwater Elevation Monitoring (CASGEM), Groundwater Management Plans developed pursuant to AB 3030, Groundwater Sustainability Plans developed.
pursuant to the Sustainable Groundwater Management Act, any applicable state or regional board plans, and other water management and land use programs:” cannot be answered with any credibility or ANY successful record of management or any performance other than results after 30 years which have produced the most severe and catastrophic ground water commons tragedy in the history of the Monterey Bay Region.

“Those who cannot remember the past are condemned to repeat it”, said George Santayana and DWR’s Mark Cowin just said “The most important thing that can happen is for counties to pass or strengthen ordinances that limit over-pumping.” California Department of Water Resources director Mark Cowin, said at a Wednesday morning press conference releasing the new data, collected by the National Aeronautics and Space Administration. “It will take that kind of action to have any real effect.”

Last year, the state created a framework to regulate groundwater — the first time in state history — but it won’t be fully implemented until 2020. And then it will take a decade or two for water levels to rebound, Cowin said.”

(https://www.facebook.com/MontereyBayConservancy/photos/a.392629640759139.87659.177055962316509/1028178490537581/?type=3&theater)

In this regard, absolutely no mention is made or any attention given by PVWMA to our Local Coastal Plan under the local and unique in the State ground water sustainability law, our “Santa Cruz Well Ordinance”, and laws contained therein which has outlawed any ground water overdraft since in 1987, but has been continuously and intentionally ignored and unenforced by the California Coastal Commission, Santa Cruz County supervisors, PVWMA, and apparently everybody else? (please see @ www.pogonip.org/ord.htm , www.pogonip.org/alm.htm ,

Finally, the most recent map of below sea level ground water levels progression from the years 2011-2013 in PVWMA, a full year before the 2014 PVWMA BMP was approved, indicate clearly that the situation has gotten far worse over this period and pumping during this period through 2014 at least has increased significantly 27% to require new studies to update this very questionable 2014. Does this 2014 BMP even state anywhere what the “sustainable yield” of PVWMA is in the first place anywhere? Does a ground water basin like PVWMA on the coast which is completely below sea level actually have any sustainable yield, at all.

Also, in the “Mid County Basin” application and formation process “private well owners’, such as myself ARE NOT BEING GIVEN ADEQUATE OR IN SOME INSTANCES ANY NOTICE OF THE VAROIOUS PROCEEDINGS AND I BELIEVE THAT THIS IS INTENTION BY MR. RICKER TO MAINTAIN COUNTY CONTROL.

RESPECTFULLY SUBMITTED,
Douglas Deitch/ED
Monterey Bay Conservany
(Also private well owner/resident @ 540 HudsonLane, Aptos, Ca., 95003
3.25 Response to Comments from Douglas Deitch
(August 13, 2018; 2:36 PM) (Comment Letter I-12)

I-12-1 As discussed in Chapter 3, Project Description, the District acknowledges the contribution its pumping has had to overdraft conditions within the Santa Cruz Mid-County Groundwater Basin. And as explained in Chapter 3, the District is undertaking the Project to help replenish the Basin, in partial fulfillment of its obligations under the Sustainable Groundwater Management Act. As noted on page 3.3, “The proposed Project’s treatment facilities described in Section 3.5, Proposed Project Components, would be capable of producing 1.3 million gallons per day (mgd), approximately 1,500 afy, of purified water – the estimated volume required to offset the portion of the basin’s cumulative groundwater overdraft attributable to District groundwater pumping.” Thus, the EIR acknowledges, and the Project is intended to address the issues identified in commenter’s letter (overdraft conditions) attributable to District pumping activities, as well as other regional activities.
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On 8/13/18 2:04 PM, ddeitch@pogonip.org wrote:
> DEPARTMENT OF WATER RESOURCES, AND SQCWD (and PVWMA) grant requests
Dear DWR,

"A ground water basin pumped down to below sea level has no sustainable yield..." Douglas Deitch @ www.thebestthatmoneycantbuy.org @ 17:15

I am requesting that you please withhold approving these two $1.5 million grant applications and any others from both PVWMA and all the member districts/companies/eg particularly SqcWDD, SCMU, et al, comprising the so called "Santa Cruz Mid County Ground Water Agency" until DWR and SWRCB performs a complete independent review and public hearing on the on going, 40+ year intentional, massive, and reckless violations of our ground water sustainability act (ie our "well ordinance" and our Local Coastal Plan @ www.pogonip.org/ord.htm, www.pogonip.org/alm.htm) by continuous, massive, and reckless intentional documented ground water overdrafting county wide in 1998, and probably well before (www.begentlewiththeearth.com),


Please also see/review my brief more recent testimony 4/19/2016 before SWRCB on this very matter @ www.thebestthatmoneycantbuy.org @ 11:20 (minute/second), during which Ms. Marcus referred me to you, while she was holding the very article cited/link below, and our local Gary Patton "GSA' and LCP I had just provided her and the entire board with in her hand.

The importance of local laws and LCPs such as ours to achieve "sustainability" ( ie. www.lawandorderliberal.org 1996) despite the new 2014 SGMA and their enforcement was emphasized in 2015 by DWR's Mark Cowin ( @ ....
DATE: 8/19/2015),
https://www.facebook.com/MontereyBayConservancy/photos/a.392629640759139.87659.177055962316509/1028178490537581/?type=3&theater, to wit:

"The most important thing that can happen is for counties to pass or strengthen ordinances that limit over-pumping," California Department of Water Resources director Mark Cowin, said at a Wednesday morning press conference releasing the new data, collected by the National Aeronautics and Space Administration. "It will take that kind of action to have any real effect."
Last year, the state created a framework to regulate groundwater — the first time in state history — but it won’t be fully implemented until 2020. And then it will take a decade or two for water levels to rebound, Cowin said."

However, strengthening or even merely just enforcing our 40+ year old laws and LCPs is something that, most particularly the California Coastal commission and its staff, the SWRCB, our county supervisors, city councils, and water districts is something these entities and individuals simply refuse for well over the last 20 years to do.


The DWR and SWRCB must intercede, most importantly by immediately withholding any more funding until the DWR and SWRCB are confident that these two agencies, both with only a 35+ year track record of continuous and massive ground water mismanagement, incompetence, overdrafting of the two aquifers they draw from are up to the job and task at hand.

As an almost 50 year next door/contiguous "neighbor" and multiple well owner and non voting "district observer" ( https://www.facebook.com/photo.php?fbid=792060187509020&set=pb.100001151386333.-2207520000.1518265693.&type=3&theater ) on SqCWD's boundary line, I doubt it.

PVWMA was formed in the early 1980's, controlled by the Farm Bureaus who appoint 3 of the 7 members of the board, to import water by pipeline and charge well owners by acre foot for the water they pump. The pipeline never did and never will happen. Now these aquifers are officially the most critically overdrafted and mismanaged in this state if not the entire country.

SqCWD and PVWMA are connected, too.

http://www.pogonip.org/WaterDocs/AptosTimes_96.pdf

The late Joe Scalmanini was fired as SqCWD hydrologist shortly after this article appeared.

SqCWD, one the other hand, was originally a small private local water company which has only a junior water right to pump and sell only "surplus water" which might be available, which junior right SqCWD has been continuously illegally exceeding and overpumping and selling since their beginning to this moment. SqCWD's overpumping should have been shut down by the County of Santa Cruz and Coastal Commission under our "Well Ordinance" in 1998 and continuously since then, if anybody was following our laws and LCPs.

Now SqCWD, this junior water right holder, wants to inject "cleaned water" into our aquifers that SqCWD ruined in the first place by illegally overdrafting, as they are still continuing to do.

Same with PVWMA, but it's 90% ag there and in our shared Aromas Red Sands aquifer.

The DWR needs to very closely look into this law and LCP breaking and put a stop to it.

I am available anytime to make a complete presentation to you. Please call on me.

Here's my 25 year old partial solution, the 9000 acre "Monterey Bay Estuarine National Monument".
Respectfully,
Best/health/tikkun olam,
Douglas Deitch
ED/Founder Monterey Bay Conservancy- 2 501c3 Monterey Bay and California Water Policy Thinktank
501 Mission Street, #1
Santa Cruz, California, 95060
831.476.7662
www.facebook.com/montereybayconservancy
3.26 Response to Comments from Douglas Deitch
(August 13, 2018; 2:38 PM) (Comment Letter I-13)

I-13-1 Please see the response to comment I-12-1.
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540 Hudson well, Aptos:
https://www.facebook.com/ MontereyBayConservancy/photos/a.215880731763765.54128.177055962316509/1061897417165688/?type=3&theater

Rejection letter by GSA:

On 8/13/18 1:52 PM, Douglas Deitch wrote:

> I am submitting this DEIR comment in two different capacities:
> 
> 1. First, as contiguous 44 year unincorporated county, non/outside of SqCWD private home and property owner @ 540 and 545 Hudson Lane, Aptos 
> (APN 04008119 and 04008120) and private well owner, manager, and constructor of 3 private wells and a spring system on this property 
> 
> 2. As Executive Director/Founder of Monterey Bay Conservancy, a 501c3 Monterey Bay and California water policy thinktank (www.facebook.com/montereybayconservancy)
>
> In it’s “FACT SHEET”, (EXHIBIT 1/attached), the Soquel Creek Water District describes itself as a nonprofit, local government agency that has purported for over 30-40 years, at least in my experience, that has provided water resource management within it’s service area to deliver a safe and reliable supply of high quality water to meet present and future needs.
>
> Nothing could and can be further from the truth and reality. If this was or is true, then why is (really “are”) the SqCWD (plural) aquifers, along with Pajaro and Salinas Valleys’ officially identified as the most critically overdrafted and mismanaged in this entire state if not county (Exhibits 2/attached and 2a/attached)? How about because they are?
>
> As a private well owner of now 2 different wells contiguous to SqCWD, my rights to ground water through my wells I constructed, paid dearly for, manage, and maintain is a right legally superior to all others except other private well owners, including SqCWD. SqCWD legal right to pump and sell ground water within it’s jurisdiction is junior to mine and always has been only a limited and junior right to pump ONLY “surplus water” in the aquifers which may be available. In other words, SqCWD’s junior water right was and is limited to pumping only ground water which is not overdrafted water. However, as Exhibit 3/attached illustrates, SqCWD virtually never (if ever?) did this and constantly overdrafted and as Exhibit 4/attached illustrates was not changed by the 2014 GSA.
>
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btw/fyi Douglas Deitch

Monterey Bay Conservancy

540 Hudson Lane, Aptos, Ca., 95003
August 17, 2015

Douglas Deitch
540 Hudson Lane
Aptos, CA 95003

Dear Douglas,

Thank you for your interest and desire to be part of the solution for groundwater sustainability. Without involvement from the community of groundwater users it will be difficult, if not impossible, to reach the goal of sustainability of our groundwater basins by 2040.

We received 25 applications to represent private well pumpers in our groundwater basins. The Soquel-Aptos Groundwater Management Committee (SAGMC), which is currently comprised of two representatives each from the Soquel Creek Water District, Central Water District, Santa Cruz City, and Santa Cruz County, is adding three representatives from the private well community. The applicants’ qualifications were very strong, which reflects the awareness and commitment of private well pumpers.

A subcommittee of the SAGMC is making recommendations for the three private well representatives to the entire SAGMC, which will vote on the representatives at the Thursday August 20, 2015 SAGMC meeting. The meeting is at 7:00 pm in the Capitol Community Room. Although you are not among the three the subcommittee is recommending for appointment, we encourage you to continue to be involved in the effort. There will be many opportunities for you to participate in the dynamic process of forming a Groundwater Sustainability Agency and to develop a plan for groundwater sustainability for generations to come.

Sincerely,

The SAGMC Private Well Representative Selection Subcommittee:
Bruce Jaife, Soquel Creek Water District
John Benich, Central Water District
Micah Pomer, City of Santa Cruz
John Richer, County of Santa Cruz

Douglas Deitch
540 Hudson Lane
Aptos, CA 95003

Douglas Deitch

January 15, 2016 - Edited

Res ipsa loquitur?

https://www.facebook.com/MontereyBayConservancy/photos/p.1044027792285984/1044027792285984/?t=3&theater
## Soil Control Lab Report

**Date Received:** October 2, 2015  
**Reporting Date:** October 12, 2015

### Parameters and Results

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<tr>
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<td>10/07/15</td>
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</tr>
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**Monterey Bay Conservancy**

https://www.facebook.com/.../vb.../913428978705473/...

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**The Lord giveth...**
00:15

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**986 Views**

**Douglas Deitch** is at The Garden of Eden.  
October 2, 2015 - 📺

The Lord giveth... lawandorderliberal.org (1996), ourinconvenienttruth.org (1999)

---

**Write a comment...**
3.27 Response to Comments from Douglas Deitch
(August 13, 2018; 3:24 PM) (Comment Letter I-14)

I-14-1 This comment letter consists of resubmittal of a prior comment letter, with the addition of two cited resources regarding wells in Aptos and the Groundwater Sustainability Agency. The additional resources have been reviewed and do not appear to raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project, beyond those raised in comment letter I-9 and so no additional response is required. Please see the responses to comment letter I-9.
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From: Douglas Deitch <ddeitch@got.net>  
Sent: Monday, August 13, 2018 3:44 PM  
To: ddeitch@pogonip.org; purewatersoquelceqa  
Subject: Re: Pure Water Soquel DEIR comment-The use of 2 acre site next door to SqCWD HQ for plant instead of housing will have a significant effect on environment ...

In this severe housing emergency ... Re: Pure Water Soquel DEIR comment-The use of rare and unreplaceable 2 acre site next door to SqCWD HQ for water plant instead of housing will have an unmitigatable significant effect on environment ...

On 8/13/18 3:24 PM, ddeitch@pogonip.org wrote:
> 540 Hudson well, Aptos:
> https://www.facebook.com/MontereyBayConservancy/photos/a.2158807317673
> 65.54128.177055962316509/1061897417165688/?type=3&theater>
> Rejection letter by GSA:
> 51386333.-2207520000.1534198583.&type=3&theater
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> >>
> >> 1. First, as contiguous 44 year unincorporated county, non/outside of
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> >> and constructor of 3 private wells and a spring system on this
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> >> 2. As Executive Director/Founder of Monterey Bay Conservancy, a 501c3
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> >> In it's "FACT SHEET", (EXHIBIT 1/attached), the Soquel Creek Water
> >> District describes itself as a nonprofit, local government agency
> >> that has purported for over 30-40 years, at least in my experience,
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> >> to deliver a safe and reliable supply of high quality water to meet
> >> present and future needs.
> >>
> >> Nothing could and can be further from the truth and reality. If this
> >> was or is true, then why is (really "are") the SqCWD (plural)
> >> aquifers, along with Pajaro and Salinas Valleys' officially
> >> identified as the most critically overdrafted and mismanaged in this
> >> entire state if not county (Exhibits 2/attached and 2a/attached )?
> >> How about because they are?
> >>
> 3.28-1
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Douglas Deitch

Monterey Bay Conservancy

540 Hudson Lane, Aptos, Ca., 95003
3.28 Response to Comments from Douglas Deitch
(August 13, 2018; 3:44 PM) (Comment Letter I-15)

I-15-1 This comment letter consists of resubmittal of a prior comment letter, with the addition of one comment concerning land use and housing availability, addressed here. Please see the responses to comment letter I-14 for responses to the resubmitted portions of the letter. With respect to the new comment, CEQA is concerned with the direct and indirect physical effects of a Project on the environment. The potential effects of the Project related to housing are addressed in Section 4.14, Population and Housing. As discussed in that section, the Project would have a significant effect related to housing if it were to displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. As explained in the impact analysis (Section 4.14.4), the Project would not remove housing or otherwise displace people. Nor would the Project induce large numbers of people to relocate to the area resulting in an indirect increase in demand for housing. For these reasons the EIR concludes the Project’s effect related to housing would be less than significant. In sum, while there may be a regional need for housing whose fulfillment would have significant effects on the environment, the subject housing demand was not caused by the Project. Please refer to response to comment I-58-2 for additional discussion of the indirect effects of the Project related to growth.
A previous 2001 SqCWD "successful" Dr. Bruce Daniels et al ground water project 2 blocks from SqCWD HQ.... which had a significant effect on environment ... see attachments

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Douglas Deitch

Monterey Bay Conservancy

540 Hudson Lane, Aptos, Ca., 95003

>
Soquel water board hires consultant on MTBE

By JONDI GUMZ
SENTINEL STAFF WRITER

Saying they must do more to protect their water supply from MTBE contamination, Soquel Creek Water District directors unanimously agreed Tuesday night to hire a consultant to review what’s been done already and recommend future steps.

Directors expect to award a contract in April. The expense to the district won’t be determined until the bids come in.

MTBE, added to gas statewide to reduce air pollution, makes water taste like turpentine and is suspected of causing cancer.

The latest figures show 56 sites in Santa Cruz County contaminated by MTBE, with the Quik Stop Market at 5505 Soquel Drive topping the list.

None has been found in any of the 17 wells serving the Soquel Creek district’s customers.

However, directors are concerned because the contamination at the market property — 210,000 parts per billion — is far above the acceptable level of five parts per billion and is within a half-mile of three district wells.

People with private wells nearby also have expressed concern.

Director Bruce Daniels said other jurisdictions where water is threatened by MTBE have hired consultants as well.

MTBE, added to gas statewide, makes water taste like turpentine and is suspected of causing cancer.

By law, the Central Coast Regional Water Quality Control Agency is responsible for overseeing MTBE cleanups in Santa Cruz and five other counties, but the staff workload is heavy, with 370 contamination sites under review.

“I’m sorry they don’t have more staff, but that’s a state issue,” said board president Dan Kripe.

Because of community interest, the next issue of the water district’s newsletter will include a report to customers on the MTBE situation, Laura Brown, the district’s general manager, said.

Aptos resident Doug Deitch, who closely follows water issues, told directors he wants them to push for a local ban of MTBE.

The county’s Hazardous Materials Advisory Commission will discuss the feasibility of a local ban this month. The group will meet at 4 p.m. March 22 at the county offices at 1020 Emeline Ave., Building F. For more information, call Steve Schneider at 454-2022.

Contact Jondi Gunz at jgunz@santa-cruz.com.
However, directors are concerned because the contamination at the market property — 210,000 parts per billion — is far above the acceptable level of five parts per billion and is within a half-mile of three district wells.

People with private wells nearby also have expressed concern.

Director Bruce Daniels said other jurisdictions where water is threatened by MTRF have hired consultants as well.
3.29 Response to Comments from Douglas Deitch
(August 13, 2018; 5:30 PM) (Comment Letter I-16)

I-16-1 The comment includes reference to a MTBE investigation conducted in 2001. The status of that investigation, and the extent to which it relates to the Project is addressed in this response. The remainder of the comment letter includes prior comment letters I-9 and I-14. Please see the responses to those comment letters. The RWQCB case related to MTBE at the referenced site due to underground storage tanks leaks was closed in 2014. The RWQCB found that the site investigation and corrective action carried out at the underground storage tank site was in compliance with the requirements of subdivisions (a) and (b) of Section 25296.10 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.3 of the Health and Safety Code and that no further action related to the petroleum release at the site is required. The current level of MTBE is non-detect. EIR Impact 4.10-5 does consider whether elevated local groundwater levels caused by the Project could degrade groundwater quality by inducing flows that intersect with groundwater contamination plumes or existing shallow soil contaminants. The analysis shows that there are no known, active contaminant plumes in the District’s service area. Furthermore, known and undiscovered shallow soil contamination, would not be disturbed because the Project would not be operated under conditions where groundwater draw up would approach the ground surface and shallow soils where soil contamination is typically found. Therefore, the impact is considered less than significant.
Gentlemen:

I write about the pure water project proposed in several venues in the area. I realize a need for something against salt water intrusion, but havegrave concerns over the possible placements you have chosen.

They seem way too close to density of homes given disruption, night lights, unwanted noise, etc, etc, this will produce. It's not something we can try on, and, if it's not a good fit - blow it away. It seems the best perhaps could be next to the freeway/chalet/clear property - if there is a best.

But the worst would be next to your home office! How can you imagine this would be what neighbours in the vicinity would really be happy with.

Please consider seriously.

Sincerely,

Mrs. N. di Cecco

3050 Browns Ln, Soquel
3.30 Response to Comments from Mrs. N. diCecco
(July 18, 2018) (Comment Letter I-17)

I-17-1 This introductory comment is followed by more detailed comments and does not include specific comment about the EIR or any environmental issue related to the Project and so no response is required. This comment is noted.

I-17-2 Please see EIR Sections 4.15, Transportation, 4.2, Aesthetics, and 4.13 Noise and Vibration. Section 4.15, Impacts 4.15-1, 4.15-3, and 4.15-4 discusses potential traffic disruption associated with project construction and operation and finds that Project construction could temporarily reduce roadway capacity, impede access to adjacent roadways, and impair access to alternative transportation options. This impact would be reduced to less than significant levels with implementation of traffic control measures. Section 4.2, Impact 4.2.2 addresses potential lighting impacts and indicates that the only construction lighting required would be for recharge well construction over a 2-week period. Standard construction lighting includes shielding and the ability to focus lighting downwards on the work area. The only permanent light source used during operation of the Project would be exterior security lights at the Chanticleer or Headquarters-West Annex sites; and motion-sensor activated securing lighting at recharge well sites. The area requiring lighting would be at building entrances and along parking and pathways, which would not be in close vicinity to residences or other land uses that would be sensitive to light and glare. In particular, for the treatment sites, the entrances of structures that could require lighting are oriented towards the center of each site; rather than exterior areas that are closer to other land uses. Further, the security lighting would be in keeping with existing lighting at other nearby commercial and institutional light uses, in addition to roadway lighting. For these reasons, construction and operation of the Project would not constitute a new source of substantial light or glare.

Section 4.13 addresses potential noise impacts and finds there would be no substantial noise impacts during project operation. As discussed in Impact 4.13-1, as previously discussed, construction activities at the Chanticleer Site, Headquarters-West Annex Site (first 2.5 months of construction activities, during construction of a sound retention wall that would be permanently placed between the Headquarters-West Annex site and adjacent properties to the south and portions of the east boundary), Willowbrook Lane Site, and Pipeline Alignments would expose nearby sensitive receptors to noise levels that would exceed the County of Santa Cruz construction noise standard. Implementation of Mitigation Measure 4.13-1a and Mitigation Measure 4.13-1b would attenuate construction noise levels by at least 5 dB; however, noise levels would not be reduced below the County of Santa Cruz construction noise standard. In addition, construction activities at the Monterey Avenue Recharge Well Site would occur outside of the allowed hours specified in the City of Capitola noise ordinance due to 24-hour drilling. Therefore, a significant impact would occur at this sites. Even with implementation of Mitigation Measures 4.13-1a and 4.13-1b, Project construction activities at these sites
would continue to exceed the County of Santa Cruz and City of Capitola noise standards. Therefore, a significant and unavoidable impact with mitigation would occur at these sites. However, as noted, significant and unavoidable noise impact would end after completion of construction activities that exceed noise standards or would be substantially higher than ambient noise levels.

I-17-3 Please see the response to comment I-69-1, regarding the analysis of siting of the advanced water purification facility at one of three locations, the Santa Cruz Wastewater Treatment Facility, Chanticleer Avenue site, or Headquarters-West Annex site, all of which were analyzed at an equal level of detail in the EIR.
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Inadequacies in the CEQA document were pointed out to me by a concerned friend in the Sierra Club. She (and many others) cannot understand how a thorough study of the proposed Pure Water Soquel Project can ignore and leave out the possibility of water transfer from the San Lorenzo River.

There will be a positive environmental impact when Santa Cruz shares its water from the San Lorenzo River with the Soquel Creek Water District. The current report on the table completely ignores this fact. Soquel is not in this alone and would be irresponsible to make decisions that way.

What is the possibility for a mediator to help sort out the fears and differences among the professionals involved so a more complete picture emerges?

There are some very positive aspects to re-shaping water rules and policy in our area, and it's time the board took advantage of a sincere offer to cooperate.

How can the public help in this effort? Please let me know.

Thank you,
Ellen Farmer
621 Fairmount Ave
Santa Cruz, CA 95062

Ellen Farmer Collaborative Ventures 831-750-9799 ellen.farmer@yahoo.com
3.31 Response to Comments from Ellen Farmer  
(August 11, 2018) (Comment Letter I-18)

I-18-1 Please see responses to Comment Letter O-4; regarding responses to comments submitted by the Sierra Club, Santa Cruz County Group, including responses regarding potential water transfers, including potential transfers from the San Lorenzo River. When considering the adequacy of the EIR, the Water District is entitled to weigh the evidence relating to the accuracy and sufficiency of the information in the EIR and to decide whether to accept it. It may adopt the environmental conclusions reached by the experts that prepared the EIR, even though others may disagree with the underlying data, analysis, or conclusions. (Laurel Heights Improvement Ass’n v. Regents of Univ. of Cal. (1988) 47 Cal.3d 376, 408.) Further the Water District may reject criticism from an expert or a regulatory agency on a given issue as long as its reasons for doing so are supported by substantial evidence. (Id.) That being said, the District and its consultants are always open to discussing the Project with constituents and others.
Soquel, Can Soquel Creek Water District tell me, without doubt, that medicines that go down the toilet will be removed before this wastewater is pumped into the aquifer?

Ken and Marilyn Files
Aptos
3.32 Response to Comments from Ken and Marilyn Files (August 12, 2018) (Comment Letter I-19)

I-19-1 Please review the analysis presented in EIR Section 4.10, Hydrology Resources – Groundwater (Impact 4.10-3). The water purification process proposed for the Project is capable of eliminating or greatly reducing the concentrations of pharmaceutical compounds. This conclusion is based on previous studies and success with similar projects in California and the U.S. As discussed in the EIR analysis, California regulations require that potable reuse projects produce a high-quality water that meets state and federal potable water standards. The World Health Organization (WHO) studied the occurrence of the pharmaceuticals in drinking-water sources world-wide and concluded that most of the pharmaceuticals present in source water pose a very low health concern because they are present in trace amounts; in most cases, at least 1,000 times lower than the lowest established effective medical dose. Removal efficiencies for pharmaceuticals and constituents of emerging concern (CECs) reported by the WHO showed a removal range of 91 to 100 percent of detected pharmaceuticals by micro-filtration/reverse osmosis (MF/RO) process and up to 100 percent with ultraviolet advanced oxidation process (UV AOP). The treatment process proposed for the Project employs MF, RO, UV and AOP. Once the water undergoes advanced treatment and purification process, any trace amounts that may remain would be either diluted by the aquifer, adsorbed to the soils or destroyed by existing microbes in the groundwater formation. Please also see responses to comments I-33-5 and I-77-1.
From: Paulette Forest
Sent: Wednesday, August 1, 2018 6:37 PM
To: purewatersoquelcega
Subject: Waste Water Treatment Facility

I am highly opposed to having the Soquel Avenue/Capitola Avenue location for the Waste Water Treatment facility. I live just a few doors down. I can hardly handle the noise that already exists in this neighborhood not to mention the increase in traffic and the fact that this is a residential neighborhood. I cannot afford to move elsewhere, I am on a fixed income. This location (Capitola Ave./Soquel Ave.) is in no way an appropriate location for an industrial waste water facility. There are families and children (mostly low income) and elderly folks. I cannot help but think that the fact that it is a low income area has somehow played a part in the reasoning to have the plant in this location. I pray that you will look at your other more feasible options as they are much more appropriate. Please remove this location from your consideration altogether. Thank you for your time.

Paulette Forest
3.33 Response to Comments from Paulette Forest
(August 1, 2018) (Comment Letter I-20)

I-20-1 Please see the response to comment O-5-2, regarding the analysis of siting of the advanced water purification facility at one of three locations, the Santa Cruz Wastewater Treatment Facility, Chanticleer Avenue site, or Headquarters-West Annex site, all of which were analyzed at an equal level of detail in the EIR. Please see the response to comment I-17-2 regarding the EIR analysis of noise and traffic. Please also see the response to comment I-44-3 regarding the land use designation of the Headquarters-West Annex site.
From: Maria Cecilia Freeman
Sent: Wednesday, August 22, 2018 11:04 AM
To: purewatersoquelceqa
Cc: Maria Cecilia Freeman
Subject: Fwd: Undelivered Mail Returned to Sender
Attachments: Comments_DraftEIR_PWSProject.pdf

Hello,

I submitted my comments on the draft EIR for Pure Water Soquel on August 13 at 3:17 pm, well before the deadline. Five days later I received the message I'm forwarding, below, saying my comments were not delivered. I'm attaching them to this message and I want them to be included and responded to.

I don't understand what the problem is, but I know I met my responsibility to respond within the public comment period, so I want my comments to be considered. Please acknowledge their receipt and confirm that they will be included.

Thank you,

Maria Cecilia Freeman
1771 Jennifer Drive
Aptos, CA 95003
831-708-2477
831-325-5525
mcf-art.com

Begin forwarded message:

From: MAILER-DAEMON@smtpgrave03.b.hostedemail.com (Mail Delivery System)
Subject: Undelivered Mail Returned to Sender
Date: August 18, 2018 at 4:15:34 PM PDT
To: freeman@baymoon.com

This is the mail system at host smtpgrave03.b.hostedemail.com.
I'm sorry to have to inform you that your message could not be delivered to one or more recipients. It's attached below.
For further assistance, please send mail to postmaster. If you do so, please include this problem report. You can delete your own text from the attached returned message.

The mail system <purewatersoquelceqa@eassoc.com>="purewatersoquelceqa@eassoc.com"; connect to eassoc.com[52.6.224.208]:25: Connection timed out
Reporting-MTA: dns; smtpgrave03.b.hostedemail.com
X-Postfix-Queue-ID: 551AC1DD114
X-Postfix-Sender: rfc822; freeman@baymoon.com
Arrival-Date: Mon, 13 Aug 2018 22:18:43 +0000 (UTC)
Comment by Maria Cecilia Freeman
1771 Jennifer Drive
Aptos, CA 95003

The Draft EIR for the Pure Water Soquel Project, in Section 4.10 "Hydrology Resources – Groundwater" concludes with regard to Impact 4.10–3 that injection of advanced treated wastewater into groundwater in the Purisima aquifer "would not degrade aquifer water quality or violate water quality standards." The Community Handbook for the Draft EIR states that "as the injection of advanced treated wastewater would be adequately treated, the potential for degradation of the ambient potable groundwater ... would [be] negligible and this impact is considered less than significant."

This conclusion is based on incomplete evidence and inadequate data, and lacks consideration of independent research pertinent to outcomes of advanced wastewater treatment. This conclusion is unwarranted and clearly arbitrary.

To support this conclusion the Project tests for just six chemicals, only four of which are considered health-based indicators: 17-beta-estradiol, NDMA, Triclosan, and Caffeine, plus DEET and Sucralose as performance-based indicators (in accord with the 2013 CA Recycled Water Policy). This woefully inadequate testing regimen leaves wide open the possibility that the Project may result in permanent degradation of the Purisima Aquifer through contamination with trace levels of other pharmaceuticals, pesticides, endocrine disruptors, carcinogens and other contaminants of emerging concern harmful in concentrations so minute that they are even difficult to detect. This possibility is not addressed in the Project Draft EIR.

Research in the past decade has shown that even the advanced wastewater treatment technology proposed by the Project is incapable of removing all contaminants of emerging concern. Impact analysis in the Draft EIR, including assessment of degradation of groundwater, was based on reports by Carollo Engineers and studies by Brown and Caldwell, both firms with an interest in "engineering solutions for today’s water challenges," to borrow a slogan from the latter's website. The scope of these studies is inadequate to discover and document adverse effects on water quality as a result of groundwater recharge by the Project. Also, there is no consideration of risk to water quality from system failure or even imperfect operation. Research by scientists outside of the water-reuse industry casts doubt on traditional risk-assessment methods when it comes to safe levels of chemicals in drinking water, as well as the effectiveness of advanced wastewater treatment such as the Project proposes. The Draft EIR looks at incomplete evidence.

The Draft EIR asserts that the Project "would not violate water quality standards." State drinking water standards also rely heavily on support from studies carried out by firms with an interest in water-reuse technology. In the past, earlier standards for maximum contamination levels of some chemicals have been rejected in the
courts or revised as new information emerges (consider the cases of Chromium 6 or MTBE). The same may occur with respect to contaminants being tested in the effluent of the advanced wastewater treatment proposed in the Project: future experience and research may reveal new effects on health and the environment from contaminants of emerging concern, even in trace amounts, and cause revision in standards. In fact, there are no state drinking water standards for most of the contaminants of emerging concern that will escape complete removal by advanced wastewater treatment. Yet once this effluent is injected into the aquifer, it is there forever.

The Draft EIR fails to engage the Precautionary Principle with respect to the presence of even tiny amounts of contaminants in the water that would result from the proposed treatment model and be injected permanently into potable groundwater, possibly significantly degrading its quality forever.

Contrary to the Report's conclusion that this impact is "less than significant," I believe it is so highly significant that it goes to the heart of the viability of this alternative.

Because of this significant negative impact from the "Pure Water Soquel" Project, I want to see serious consideration of an alternative project that does not risk contamination of the aquifer by injection of treated wastewater. The Draft EIR should include a thorough analysis of possible conjunctive use between the Soquel Creek Water District and Santa Cruz, known as the water transfer alternative, identifying all the possible sources of surface water, not just the San Lorenzo River, and assessing possible use of Loch Lomond as storage and a transfer medium. The overall goal of the Project should embrace the specific objectives listed in section 7.2.1, but not be worded in such a way that it excludes thorough consideration of alternative ways to meet those objectives in an environmentally better way than the Pure Water Soquel Project.
3.34  Response to Comments from Maria Cecilia Freeman (August 22, 2018) (Comment Letter I-21)

I-21-1  Information regarding the evidence and data used to arrive at the conclusions in the EIR and the confidence in those sources can be found in response to comments I-83-6 and I-83-8. An explanation of the indicator chemicals used to monitor CECs in effluent is provided in responses I-83-6 and I-83-13. The effectiveness of the proposed advanced treatment process is discussed in EIR Section 4.10, Hydrology Resources – Groundwater (Impact 4.10-3), and in response to comment I-83-9. Analysis of the potential for purified water to degrade the Purisima aquifer can be found in the EIR’s Impact 4.10-3, and this topic is addressed further in response to comments I-83-10, I-83-18, I-33-5, I-77-1, I-77-1, and I-92-12. With respect to perceived conflicts of interest or bias by water resource engineering firms, please refer to response to comment I-83-7.

I-21-2  Responses to comments regarding water quality risks from system failure can be found in response to comment I-30-2. Confidence in best available science and regulation in risk assessment, monitoring, and analysis of chemicals in drinking water and the effectiveness of the advanced water treatment system are discussed amidst other related issues in response to comments I-83-6, I-83-7, I-83-9, I-83-11, and I-83-13.

I-21-3  The presumption that State drinking water standards are in some way biased by firms that have an interest in water-reuse technology is not supported by evidence. Please refer to response to comment I-83-7 for further discussion. It is inappropriate to compare instances of Chromium-6 and MTBE contamination to the chemical concentrations expected from an advanced water purification process. While it is true that Chromium 6 regulations were updated and the effects of MTBE were reevaluated, those compounds have been released in considerable quantities and still remain in the environment (soil and groundwater). In contrast the CECs that could exist in the untreated municipal waste stream of the SC WWTF would be removed or greatly reduced through the proposed treatment process and would result in purified water that is of higher quality than the potable water found in conventional treatment systems. If CECs did survive the treatment system and enter the groundwater formation, they would be at extremely low concentrations, if detectable, and would be far lower than human health screening levels and well within the margin of safety. When water undergoes aggressive treatment, as it would under the proposed advanced treatment process, and is regularly monitored, the potential that elevated concentrations remain in the groundwater is negligible. Also refer to the EIR Impact 4.10-3, and responses to comments I-83-6 and I-83-9.

I-21-4  The lead agency’s charge under CEQA is to evaluate the potential physical effects of a Project on the environment; make a determination, based upon ‘substantial evidence’ as to the significance of those potential effects, and identify feasible mitigation to avoid or minimize such impacts. Explained further in CEQA Guidelines Section 15064(b), “The
determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data...” Similarly, Section 15064(f) states, “The decision as to whether a project may have one or more significant effects shall be based on substantial evidence in the record of the lead agency.” And Section 15064(f)(5) clarifies further, “Argument, speculation, unsubstantiated opinion or narrative, or evidence that is clearly inaccurate or erroneous, or evidence that is not credible, shall not constitute substantial evidence. Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts.”

The Precautionary principle states that if an activity or action threatens to harm human health or the environment, precautionary measures should be employed even if the cause and effect of the action is not scientifically proven. While the precautionary principle may be an appropriate general rule for decision-making in some contexts, CEQA prescribes a clear standard to which the lead agency is held in making determinations regarding the significance of a potential environmental effect. Moreover, contrary to the assertion in the comment, there are adequate precautions built into the Project to establish a high level of confidence, based upon substantial evidence, that the groundwater would not become degraded and human health would not be negatively impacted.

First, there is ample scientific evidence and case studies supporting that the advanced water treatment process proposed under the Project would entirely remove or greatly reduce the concentrations of CECs and EDCs in the treated water recharged into the Purisima aquifer, if they exist in the water in the first place. The treatment and purification process would either reduce concentrations of regulated compounds far below human health screening levels or eliminate them altogether. Removal rates for non-regulated CECs, EDCs and many compounds exceed 98% (Carollo, 2017). The treatment systems are highly researched and proven technologies that are used worldwide to treat water for potable use standards.

Second, the California’s SWRCB Recycled Water Policy and Groundwater Replenishment Regulations require that water intended for recharge meet applicable health screening levels and require monitoring of treated water and groundwater. It is the burden of the District to prove that the treated water slated for recharge into the Purisima aquifer would safely and effectively assimilate into the existing groundwater formation.

Third, the Project has been reviewed by the NWRI (NWRI, 2017) Independent Advisory Panel that comprises experts in the field of human health and water quality and who have concluded that the Project is plausible, feasible and protective of human health.

Based on the substantial evidence presented regarding system efficiency, regulations, and expert review, the EIR (Impact 4.10-3) concludes that the Project would not result
in a significant impact under CEQA. Please also refer to response to comments I-83-9, I-83-13, I-26-2, and I-33-5.

I-21-5 As discussed in response to the prior comments the Project would not result in a significant water quality impact associated with recharge of purified water to the groundwater basin, and use of the groundwater as a potable water resource. Thus, consideration of a CEQA alternative that focuses on potential water quality impacts is not required. However, please see the response to comment letter O-2, which addresses the general comments regarding long-term water transfers asserted here.
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To whom it may concern:

After studying the PureWater Soquel Community Handbook: A Guide to the Draft EIR and Review Process, I have some concerns regarding Figure 5 - treatment system configuration options, which are graphically diagrammed on page 7.

My first concern is that the disposal line for the brine and backwash waters from the microfiltration system is not accounted for in any of the 5 system configurations shown.

My second concern is that the disposal line for the R/O brine water is diagrammed in all 5 system configurations as being returned to the City of Santa Cruz Waste Water Treatment Facility (SC WWTF) outfall line.

Both of these mandatory waste lines will account for a large volume of water (approx 250,000 gals/day) that will have very high concentrations of nitrates and ammonia, if the source water for this project is the secondary effluent from the SC WWTF. The R/O brine line will also contain a high concentration of Total Organic Carbon (TOC), which will cause the SC WWTF to violate its NPDES permit EVERY DAY, if this brine line is allowed to discharge into the WWTF outfall line.

From December 2017 to July 2018, the secondary effluent from the SC WWTF had an average nitrate concentration of approximately 12mg/L, an average ammonia concentration of approximately 22mg/L, and an average TOC of approximately 15.9mg/L. Based on your expected daily raw water and purified water flows, you can now calculate how many pounds of ammonia, nitrate and TOC will need to be safely disposed of as wastewater flows from your water purification plant.

While returning this highly concentrated wastewater to the SC WWTF outfall for immediate ocean disposal is not an option, disposal into the sewer lines that feed into the SC County Wastewater Facility (SCC WWF) located at Lode Street is a good and viable option. This facility has flow equalization ponds that are intentionally dosed with purchased Calcium Nitrate (brand name Bioxide) as a means of controlling the production of Hydrogen Sulfide and other nuisance odor gasses. Increasing the total county waste water flow through key, remote, county pump stations and providing a free source of nitrate at the same time by directing the PureWater Soquel plant brine water will lead to lower holding times in the county sewer system, less production of corrosive gasses, lower chemical cost at the SCC WWF and much lower brine line construction costs for the PureWater Soquel project.

I urge you to open communications with the SC County Public Works office and Lode Street operators in regards to exploring this positive reuse disposal option.

Also, as listed on Pages 35-36 of Appendix E: Capitola GP and SCC GP EIR Summary of Impacts, most of the sewer lines in the Live Oak area are already expected to be overcapacity by 2035, with no remediation plan available for this Significant impact. Again, working with the SCC WWF to find the best, most beneficial disposal site for the microfiltration and R/O brine and backwash wastewater appears to be the only feasible option for dealing with the unintended byproducts of your proposed purification system.

Please contact me at this email address if you have any follow up questions or would like to discuss the material put forth here. Thank you for considering my comments.

-Gail
3.35 Response to Comments from Gail (no last name provided) (August 9, 2018) (Comment Letter I-22)

I-22-1 Please see the response to comment I-75-2 regarding the purpose and content of the Community Handbook that was made available as an accompaniment to the EIR. The fate of wastes from the microfiltration/ultrafiltration (MF/UF) system is described in EIR Chapter 3, Project Description, Section 3.7.1, Facilities Operations and Maintenance (page 3-40). The figure in question is also included as EIR Figure 3-2, Options for Treatment Trains, but includes the brine line. The figure is a simplified graphical representation of a complex treatment process. Neither the Community Guide Handbook, nor the simplified treatment options diagram is meant to supplement the detailed text of the EIR.

I-22-2 Please see the response to I-92-3. As discussed, the analysis presented in the EIR (Impact 4.11-2) supports the impact conclusion that implementing the Project, including return of Project brine to the SC WWTF outfall would not substantially increase the concentration of constituents in Monterey Bay receiving waters as compared to baseline conditions in a manner that would adversely affect water quality, marine habitat, aquatic wildlife. As such, consideration of alternative brine discharge locations (such as to the sanitary sewer) would not be required to consider a CEQA alternative to the Project, as such an alternative would not reduce a significant impact of the Project.

I-22-3 Please see the response to comment L-4-13 regarding the Project’s handling of waste streams and the anticipated effect relative to the capacity of the Santa Cruz County Sanitation District collection system.
7/27/18

To members Soquel Creek
Water District Board

Recently, the approx. 1,000 page E.I.R. document was released. Because the public requires time to study and evaluate the voluminous material on your proposed "pure" water project, I am requesting an extension of the public comment period. Clearly, very serious environmental and financial implications exist. It is within your power to extend the comment period, thus promote democratic participation.

Please respond to this request.

Thank you,

Ms. Marilyn L. Garrett
351 Redwood Heights Rd.
Aptos, CA 95003-9705

3.36-1
3.36 Response to Comments from Marilyn Garrett
(July 27, 2018) (Comment Letter I-23)

I-23-1 Please refer to response to comment I-4-1.
Soquel water district,

I've expressing my opinion on the water transfer system. The water transfer system has not been fully addressed.

I want the Soquel district to look into alternatives prior to deciding upon the water transfer system.

As a business owner and property owner I’m asking alternatives be sought first. Thank you

Respectfully,

Cristine Gomez
831 840-1379

Sent from my iPhone
3.37 Response to Comments from Cristine Gomez
(August 13, 2018) (Comment Letter I-24)

I-24-1 Please see the response to comment letter O-2, which addresses the general comments regarding long-term water transfers asserted here.
From: Bob Hastings
Sent: Monday, August 13, 2018 7:16 PM
To: purewatersoquelceqa
Subject: Fwd: Today is the last day to submit comments about the Pure Water Soquel Draft EIR
Attachments: Pure Water Soquel comments - Project.pdf

---------- Forwarded message ----------
From: Bob Hastings <bhastings@alumni.ucdavis.edu>
Date: Mon, Aug 13, 2018 at 2:37 PM
Subject: Fwd: Today is the last day to submit comments about the Pure Water Soquel Draft EIR
To: Shari <sharih@ucsc.edu>

Sent from my iPad

Begin forwarded message:
We also support the comments in the attached email.

Bob and Shari Hastings
2700 Gary Drive

I am not sure how current this list is, but I wanted to remind you that today (August 13) is the last day Soquel Creek Water District will accept comments about the Pure Water Soquel project potentially slated for our block.

These are the comments our household submitted with the Morks. Basically, it states that we support the project being built at the far more appropriate (and industrial) Chanticleer site.

About the project: https://www.soquelcreekwater.org/PWS-CEQA

To submit comments: purewatersoquelceqa@esassoc.com

Jeff Stallings
Jim Winters
Mary Winters
2771 Gary Drive
To: Soquel Creek Water District
   Board of Directors
   Pure Water Soquel Project
   Staff (Ron Duncan, Melanie Mow Schumacher, Taj Dufor)

CC: John Leopold, Santa Cruz County Supervisor
    Jessica York, The Santa Cruz Sentinel
    Kara Meyberg Guzman, Managing Editor, The Santa Cruz Sentinel
    Jacob Pierce, News Editor, Good Times Magazine

From: Bill and Ann Mork of 2776 Gary Drive, Soquel
      Mary Winters and Jim Winters and Jeff Stallings of 2771 Gary Drive, Soquel

Date: August 6, 2018

Subject: Comments in response to the Pure Water Soquel Draft EIR

About the Commenters

- Bill and Ann Mork's home at the end of the Gary Drive cul-de-sac is directly adjacent to Soquel Creek Water District's headquarters and maintenance yard. The Morks purchased their home July 1967, four years before Soquel Creek Water District broke ground on their headquarters building at 5180 Soquel Drive.

- Mary and Jim Winters and Jeff Stallings's home is also at the end of the Gary Drive cul-de-sac, directly adjacent to both Soquel Creek Water District's headquarters/maintenance yard and the proposed Pure Water Soquel site at 2850 Capitola Avenue (referred to as the “West Annex” by SqCWD and in the remainder of this document.)

Summary
We feel strongly that the Pure Water Soquel project is ill-suited to our residential neighborhood and should be constructed at either the Chanticleer site or the Santa Cruz Waste Water Treatment Facility, both of which are already zoned for industrial use.

Further, long-term and ongoing environmental impacts (noise/dust) exist at the current maintenance facility and we feel that these operations should be relocated to a non-residential-adjacent property, with a 12-foot wall built to contain any remaining operations.

However, we understand the need to address future water needs of the area and support the Pure Water Soquel project being constructed in one of the two other (industrial) sites included in the draft EIR.
The Soquel Creek Water District headquarters and maintenance yard

As documented in the publication "The History of the Soquel Creek Water District, 1961-1988" by Sandy Lydon at the Department of History, Cabrillo College, construction for the current headquarters building was started in February 1971, with the first board of directors meeting held in the new building on November 3, 1971. To reiterate: By this time, the Morks had lived in their home (across what was then an empty lot) for over four years.

During the intervening decades, Soquel Creek Water District's headquarters expanded ("mission creep") into a full-fledged maintenance facility, far more industrial, loud and dirty than any other business, public or private, in the area. It is our contention that the nature of the maintenance yard never suited this location and should be relocated as part of the Pure Water Soquel project.

Of particular concern are the gravel and steel plate operations. Bill Mork (94 and in home hospice) reports that when large trucks fill the gravel container (about 20 yards from the Mork's bedrooms) or District staff remove gravel from the container, fine dust particles settle in the area around their home, and the sound is so jarring that "I about jump out of my chair every time."

We want to know if an EIR was ever completed for the District's maintenance yard and if the Ongoing Operations and Maintenance Plan allows for the fine particulates that settle over our homes during the use of the gravel operation, or for the noise created both by the gravel operation and the steel plate operation (less than 20 yards from the Winters/Stallings home.)

If an EIR was completed for the maintenance yard, or if the Ongoing Operations and Maintenance Plan allows for releasing fine particulates (gravel operation) and loud noises (gravel and steel plate operations), we would like to obtain copies.

The Sea Water Intrusion "Emergency"

Also documented Sandy Lydon's "History of the Soquel Creek Water District, 1961-1988", the District was made aware of sea water intrusion by USGS geologist Ken Muir in December of 1978, nearly 40 years ago.

If this is now an emergency, it is one of the District's making, due to deferred maintenance, mismanagement and neglect. Therefore, to declare that this "emergency" is so dire that the district can override the residential land use designation for the West Annex property is, at best, disingenuous, if not legally questionable.

We also question why the District proceeded with purchasing the West Annex property in August 2016 for $2 million (more than double its worth, according to Zillow and Trulia) without having first completed the draft EIR to select the best location. All indications are that the district chose this site for Pure Water Soquel and has contorted and skewed "facts" to fit this conclusion.
The West Annex is surrounded by the homes of citizens in their 60s, 70s, 80s and 90s, people who are at home during the day and who would be seriously and adversely affected by a three-year industrial construction project.

**The Chanticleer Site: A much better option**

We have taken multiple trips to the Chanticleer site and find it to be far better suited than the West Annex for Pure Water Soquel:

- The site at Chanticleer Avenue and Soquel Avenue is already industrial, surrounded by warehouses, a car repair shop, a window installation company, and Highway 1 rather than the homes of citizens in their 60s, 70s, 80s and 90s.
- While there is one residential home within view of the site, no components of Pure Water Soquel would need to be located anywhere near this residence.
- In contrast, plans for Pure Water Soquel at the West Annex site specify buildings and parking lots just a few yards from our bedrooms, including chemical storage, lab space, backhoe and dump truck parking. This layout is utterly unacceptable, especially in light of the noise and dust emanating from the current maintenance facility.
- Entrances and exits to Highway 1, both northbound and southbound, are less than half mile away from the Chanticleer site. This proximity will be key both during construction and for on-going operations.

**The West Annex Site**

We will do everything we can to stop Pure Water Soquel from being constructed in at the West Annex site in our residential neighborhood, including taking legal action to delay and halt the project.

We are aware that the nature of elections for the Soquel Creek Water District's board almost certainly precludes any of the current directors from losing their seats, and that they have, by all indications, already settled on the West Annex Site for Pure Water Soquel, if only to justify the $2 million expenditure for the parcel.

This being the case, if and when plans are drawn up for the site, we demand that it be reconfigured to locate the chemical storage, lab space, backhoe and dump truck and car parking along Soquel Avenue at the front of the site rather than directly adjacent to our homes at the rear of the site. We also demand that a 12-foot wall replace the inadequate rusted chain link fencing that currently separates our homes from these SqCWD properties.

**Contact Information**

Bill and Ann Mork  (831) 331-5182  jim@jimwinters.com
Jim Winters  (415) 786-7893  wintersmary39@gmail.com
Mary Winters  (831) 462-1049  jeff@jeffstallings.net
Jeff Stallings  (831) 471-8257
This response to Soquel Creek Water District’s Draft EIR for Pure Water Soquel was written, reviewed and submitted by:

Bill Mork  
Date: 7-30-18

Ann Mork  
Date: 30 July 2018

Mary Winters  
Date: August 2, 2018

Jim Winters  
Date: 9/2/2018

Jeff Stellings  
Date: 8/6/2018

I-25-1 Thank you for your comment. Please refer to responses provided to comment letter I-44, correspondence submitted by Mork, Winters, and Stallings.
Comment Letter I-26

Tocinello
450 Mission Rd
Capitola, CA 95010

Pure Water Tocinello Project
CEQA
4041 Tocinello Dr.
Suite A 501
Tocinello, CA 95073-3105
August 12, 2015

To Whom It May Concern,

I am writing to you in opposition to your plan to build a water treatment plant on a site that is not designed for industrial use and is located near homes. This idea would not be safe for everyone. Treated water cannot be "pure" of certain pharmaceutical chemicals even after treatment. It would be very expensive. You need to rethink future plans for overdeveloping of our county, at the expense of all our neighbors. I vote "No" to the proposed development.

Sincerely,

Nancy Noreika
400 Xarren Rd.
Aptos, CA 95003
3.39 Response to Comments from Nancy Howells (August 12, 2018) (Comment Letter I-26)

I-26-1 Please refer to response to comment I-44-3 regarding zoning of Project sites.

I-26-2 The treatment and water purification process proposed for the Project is capable of eliminating or greatly reducing the concentrations of pharmaceutical compounds prior to recharging water into the Purisima Aquifer. This conclusion is based on previous studies and success with similar projects in California and the U.S. Please review the analysis presented in EIR Section 4.10, Hydrology Resources – Groundwater (Impact 4.10-3). As discussed in that analysis California regulations requires that potable reuse projects produce a high quality water that meets state and federal potable water standards and provides for an advanced oxidation process (AOP) that is capable of further reduction of trace level organic pollutants, should they pass through the RO process. The World Health Organization (WHO) studied the occurrence of the pharmaceuticals in drinking-water sources world-wide and concluded that most of the pharmaceuticals present in source water pose a very low health concern because they are present in trace amounts; in most cases, at least 1,000 times lower than the lowest established effective medical dose. Removal efficiencies for pharmaceuticals and CECs reported by the WHO showed a removal range of 91 to 100 percent of detected pharmaceuticals by micro-filtration/reverse osmosis (MF/RO) process and 52 percent to 100 percent by Ultraviolet Advanced Oxidation Process (UV AOP). The treatment train proposed for the Project employs MF, RO, UV and AOP.

I-26-3 CEQA is concerned with the potential physical adverse effects of a Project on the environment. While project costs are relevant factors in determining whether a project alternative is feasible, unless there is a clear connection between a project’s cost and a physical environmental change, it is beyond the scope of CEQA. In the present case, there is no clear connection between the cost of the Project and a physical environmental effect. Therefore, considerations of cost are beyond the scope of the EIR.
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Greetings,

In addition to the attached comments that I have already submitted by U.S. Mail, I would like to add the following. On page two of my comments, I observed that the EIR should include a cost benefit analysis comparing the cost (per acre foot) of the proposed PureWater Soquel Project with inter-agency conjunctive use of potential surface water from the City of Santa Cruz. Just to be clear, the analysis should include all costs, such as, new pipelines, maintenance, energy costs, and additional staffing requirements including salaries and benefits in addition to the costs already mentioned in my written comments: land acquisition, easements, construction, mitigation measures, financing and ongoing operations.

It is essential that the public be informed of the true cost of the proposed project and its environmental impacts as compared to possible alternatives.

Respectfully,

Jan Karwin
August 8, 2018

Pure Water Soquel Project CEQA  
4041 Soquel Drive, Suite A-501  
Soquel, CA 95073-3105

Subject: Comments on the Draft Environmental Impact Report for the Proposed Pure Water Soquel Groundwater Replenishment and Seawater Intrusion Prevention Project

Gentlepersons:

Thank you for the opportunity to comment on the Draft EIR of the proposed Pure Water Soquel Project. I will focus my comments on the topic of Alternatives which begins on page 7-1 and specifically on Alternative 2 which begins on page 7-16.

I’m extremely disappointed that Soquel Creek Water District (SqCWD) seems to have rejected the top recommendation of the widely representative Water Supply Advisory Committee (WSAC) whose recommendations were based on extensive research and expert scientific and engineering advice. WSAC’s top recommendation was inter-agency conjunctive use of surface and groundwater resources in cooperation with the City of Santa Cruz, including the concepts of aquifer storage and recovery (ACR) and in-lieu recharge, otherwise known as water transfers. Although Alternative 2 of the dEIR describes purchasing a limited amount of surface water from the City of Santa Cruz, the inappropriate requirement that this surface water be available even during periods of drought is contrary to the concept of conjunctive use and arbitrarily disqualifies inter-agency water transfers from consideration. Guaranteed availability on an annual basis is an unreasonable and irrational condition to place on surface water supplies as part of a conjunctive system. Availability is usually averaged over several years to reflect the variability of weather from year to year. The standard model of conjunctive use of surface and groundwater utilizes surface water when it’s available for direct potable use and/or groundwater recharge and draws upon groundwater supplies during periods of low rainfall.

One might expect that the machine-like design of a wastewater recycling facility would make it a reliable source of water. However, that may not be the case. Complex systems are more difficult to operate and have more component parts that could break down or become unavailable. And as the dEIR points out, the regional wastewater treatment facility, located at one of the lowest elevations in the county, will be vulnerable to flooding and possible interruption of operations in the event of a tsunami or extreme weather events coupled with expected sea level rise.

Another troubling aspect of recycled wastewater is the potential for groundwater contamination. Although “purified” wastewater may meet current California water quality standards for indirect potable reuse, California has not yet set standards for pharmaceuticals, personal care products and other emerging contaminants, such as, nitrosamines. The risk of contaminating groundwater supplies remains a serious concern.
The dEIR should provide a complete cost benefit analysis (per acre foot of water) along with an environmental impact assessment of the WSAC recommended water transfers compared to the proposed Pure Water Soquel project. Costs should include land acquisition, easements, construction, mitigation measures, financing and ongoing operations. The goal should be to provide adequate water supply and promote sustainability of the Santa Cruz Mid-County Groundwater Basin while avoiding wasteful and unnecessary costs and environmental impacts.

I urge Soquel Creek Water District to further engage with the City of Santa Cruz in cooperative pursuit of conjunctive use of surface and groundwater supplies as a potentially more cost efficient and environmentally sound solution to meeting future water supply needs while securing a sustainable groundwater basin.

Respectfully,

Jan Karwin
3.40 Response to Comments from Jan Karwin (August 10, 2018) (Comment Letter I-27)

I-27-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. Nevertheless, for the commenter’s reference, CEQA is concerned with the potential physical effects of a project on the environment. Section 15131 of the CEQA implementing regulations states, “economic or social effects of a project shall not be treated as significant effects on the environment.” Section 15131 states further, “An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes” (emphasis added). The commenter asserts a cost-benefit analysis is required to evaluate the potential financial, social, and environmental costs that could result from physical changes that the commenter attributes to the project. As noted above the CEQA (Section 15131) provides for consideration of economic and social effects to the extent they would be the cause of a physical environmental change. CEQA does not require analysis of the potential costs that could result from a physical change attributed to the project. The physical change the commenter identifies as driving the social impacts for which the commenter requests costs and benefits be analyzed concern water quality. Physical changes of a project related to water quality are within the purview of CEQA. The implications of Project implementation on water quality are discussed at length in Draft EIR Section 4.9, Hazards and Hazardous Materials, Section 4.10, Hydrology Resources – Groundwater, and Section 4.11, Hydrology Resources – Surface Water. Please also refer to I-33-2 for additional discussion of how economic factors relate to CEQA and alternatives. This comment is noted.

I-27-2 Please see the response to comment letter O-2, which addresses the general comments regarding long-term water transfers asserted here.

I-27-3 Please refer to response to comment I-30-2, which addresses potential for system failure, including from natural disasters, such as flooding.

I-27-4 Refer to the EIR Section 4.10, Hydrology Resources – Groundwater (Impact 4.10-3), for the analysis of potential Project impacts on the groundwater in the Purisima aquifer. As stated there and in several other comment responses, the proposed advanced treatment process is expected to filter, treat, and purify the wastewater to such a degree that it is of better quality than conventional municipal water systems. As also discussed, the District must comply with regulations set forth by the State (see EIR Section 4.10.3, Regulatory Framework) for the reuse of recycled water to protect against water quality degradation. Once recharged into the aquifer, any trace residual contaminants would become diluted, adsorbed into the soils, or consumed by microbes. In addition to EIR Impact 4.10-3 and EIR Section 4.10.3, please also see response to comment I-83-9 for information regarding the effectiveness of the treatment stream,
response to comment I-83-13 for additional information on indicator chemicals, and I-26-2 and I-33-5 regarding the treatment process and potential for degrading the Purisima aquifer.

I-27-5 Please see the response to comment I-27-1.

I-27-6 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. Nevertheless, for the commenter’s reference, EIR Chapter 2, Introduction, provides a summary of ongoing coordination between the District and the City of Santa Cruz as concerns transferring treated river water (from Santa Cruz North Coast Water Supplies and potentially the San Lorenzo River) to the District’s system in the winter (when there are excess flows). This comment is noted.
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On Aug 12, 2018, at 6:12 PM, Christy Kirven wrote:

Dear Pure Water Soquel Project CEQA Staff,

I would like an extension of the Public Comment period for the Draft EIR Report. I know that a similar request has been rejected by Ron Duncan but, as recently came to light, by a man trying to hand deliver his response, the mailing address given for comments turns out to be non-existent. How many will be lost at the post office or never received? Fixing this error should include, at a minimum, the additional 15 days allowed in the longest CEQA response time, 60 days. Extending it in the first instance would have helped people feel like their voices actually are valued, at a small cost to the District. Having a funky address now just undermines confidence in the whole operation.

I have three areas I would like to address:

1) The Draft EIR states at 1.1 the second bullet point, that one of the objectives of the Project is to provide affordable water, yet nowhere in the document is cost addressed.

2) I am concerned about pollution of the aquifer by injection of the so called "pure water" into the existing Purisma Basin, shared with Santa Cruz.

3) The Alternatives discussion is based on outdated information and misinformation as to Santa Cruz City Water being able and willing to provide sufficient treated river water to refill the aquifers of all three regional water suppliers.

4) It is hard to get very specific about cost, since it is not addressed in the document. I would just say the Draft EIR can't be adopted as stands on that account.
Point number two is very complex and the document sidesteps the very deep issues and instead does a lot of talking about construction and hazardous materials along the pipe routes and so forth. The Draft EIR states in table 4.10-2, a summary of the rules for recycled water use –there are myriad unregulated chemicals, too many to feasibly check for and so the state has devised a surrogate TOC, total organic carbon measure for CECs that are unregulated. Such a method does not address the potential for harm from these chemical though, only some effort to try to quantify one class of them. The injection of these unregulated chemicals which may survive the treatment process into the aquifer is disturbing, even to the state:

I quote from the state water board website as an example of the potential, in fact, likely degradation of the aquifer from using recycled sewage as a source water, no matter how it is treated. This is one small item from many that needs addressing but even the state has no grip on it. "Future Plan. Given the NDMA detections associated with drinking water sources and treatment, NDMA is a good candidate for future regulation (i.e. establishment of drinking water standard, also known as a maximum contaminant level of MCL). Thus, we requested a PHG from the Office of Environmental Health Hazard Assessment. A PHG is the first step in the regulatory process. OEHHA (2006) established a 3-ng/L PHG for NDMA. An MCL for NDM will likely not be available for several years, so the 10-ng/ notification level will continue to be used to provide information to local governing agencies and consumers."

https://toxics.usgs.gov/highlights/ndma_biodegradation.html This article states:

"N_nitrosodimethylamine (NDMA) is an unintended, highly toxic byproduct of the chlorination of wastewater at many wastewater treatment plants. Water-resource managers in California became concerned about the potential for NDMA to reach ground water after NDMA was detected in two drinking water wells located near a water reclamation facility where treated wastewater was injected directly into the subsurface to recharge ground water."

Pharmaceuticals are excreted or tossed into the toilets and are unregulated and they may survive the treatment process. https://toxics.usgs.gov/highlights/antidepressants_fish.html-This is an interesting article about one pharmaceutical class, antidepressants found in fish downstream from a plant like the Santa Cruz Wastewater Treatment Plant. The drugs were in fishes brains. California has no regulations requiring the removal of pharmaceuticals from recycled water so there are no tests for their presence in the water so, though "pure water" will be treated more than the source for this article, there is no guarantee that a myriad of pharmaceuticals will not be present and potentially still active.

The proposed source water starts as sewage. Sure astronauts drink recycled pee, their own and not within a system that transfers all kinds of toxins to the plants. Homeowners wash paint brushes in their sinks, surf board repair kids toss whatever into sinks...Business and industrial sites are monitored by the Santa Cruz Wastewater Treatment Plant crews but not homes where ignorance and oblivion mean that all kinds
of materials get into the sewage. At the Marina plant they have pamphlets telling people to not throw leftover pharmaceuticals into the toilet, but they pass through their bodies, often still potent. If the District wants control of the water they need to go stand over the sinks and toilets of the areas sewage customers.

I will not belabor this point as the EIR is supposed to avoid degradation of the aquifer if possible. So what alternatives got short shrift? Chapter 7 talks about rejected alternatives.

Regional Transfers are mentioned starting at page 7-16 with a reduced project combined with sale of water from Santa Cruz to Soquel. At the bottom of page 7-16 it states that "5 year compatibility studies between the Santa Cruz source and Soquel infrastructure need to be made": but the results are in already, and they are compatible. This alternative is mostly still an expensive large footprint set of stuff, The Project, only smaller but most of the footprints will still need to be made at an unmentioned price, only lower than the big ones whose price tag is missing. (It is true I did not have time to read the whole document, but Cost ought to be in the chapter headings at least.)


No mention is made of a current contract to receive Santa Cruz water, 100 million gallons this year from north coast streams, not restrained by water right problems.

Resting Soquel wells, however much by current use of these waters will help avoid saltwater intrusion this year at a defined price, yet to be determined but undoubtedly cheaper than The Project which could maybe be done in five years. The Locquifer plan, Santa Cruz's Plan A backbone could cheaply and easily supply water for all three area water suppliers, replenishing aquifers more rapidly if rains are good but assuredly even in low rain years.

Thank you for addressing my comments, Christy Kirven

1425 Seabright Ave, Santa Cruz.
3.41 Response to Comments from Christy Kirven (August 12, 2018) (Comment Letter I-28)

I-28-1 Please refer to response to comments I-4-1 and I-37-2.

I-28-2 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted. Please refer to response to comment I-27-1 for additional discussion of economic considerations under CEQA.

I-28-3 The treatment and water purification process proposed for the Project is capable of eliminating or greatly reducing the concentrations of CECs and other compounds prior to recharging water into the Purisima Aquifer. This conclusion is based on previous studies and success with similar projects in California and the U.S. The Project would treat wastewater through an advanced treatment and purification process that would produce water that is likely of higher quality than tap water or water that is available for purchase in bottles. Please see the EIR’s Impact 4.10-3 for analysis of groundwater quality and potential impacts related to recharging advanced treated water into the Purisima Aquifer. Also see responses to comments I-77-1, I-33-5, and I-92-10.

I-28-4 Please see the response to comment letter O-2, which addresses the general comments regarding long-term water transfers asserted here.

I-28-5 Please see the response to comment I-28-1.

I-28-6 This first paragraph responds to the portion of the comment regarding the indicator chemicals (referred to as surrogates in the comment) used by the State to identify classes of CECs in the treated water. (The following discussion are excerpts from comment response I-83-7 and I-83-11, please refer to those comments for additional information). Classes of chemicals can be used to test for a range of CECs. Chemicals are characterized according to their physical and chemical properties, which dictate how they respond to each treatment technology. Specific chemicals are then monitored as ‘indicators,’ meaning they indicate how well other chemicals in the same category are being removed by the treatment system. These indicators are also chosen because they are commonly present in the pre-treated water, which is necessary to determine how well they are removed by treatment. Before a project can be permitted, the project proponents must generate a list of site-specific compounds to use as indicators; these compounds are selected based on the treatment processes employed and the monitoring that has occurred.

This paragraph responds to the portion of the comment about the recharge of unregulated chemicals that may survive the treatment process and be recharged into the aquifer. Please see the EIR’s Impact 4.10-3, and response to comments I-77-1 and I-33-7 for additional information. Consistent with the comment, understandably, there are many CEC including EDCs and pharmaceuticals that can be released into the
environment. However, only a fraction of those end up in the wastewater treatment stream and still only a fraction of those survive the treatment and water purification process. Those that do survive have concentrations that are either not detectable (in the parts per trillion range) or are so low that they do not approach the maximum contaminant level or the SWRCB Human Health Screening level. The Project would treat wastewater using a treatment process that would be designed to eliminate or greatly reduce the concentrations of CECs or other contaminants in the wastewater stream. Through compliance with recycled water regulations, which includes monitoring, and utilizing the proposed state-of-the-art treatment process, use of recycled water for groundwater recharge is not expected to degrade the public or private groundwater supplies. The District must comply with the rules set forth by the SWRCB’s Recycled Water Policy and its Groundwater Replenishment Regulations, which are informed by the best available science. The SWRCB regulations would not permit the District to recharge water that contains CECs in concentrations that appear to approach or exceed human health screening levels.

Regarding pharmaceuticals, as discussed in response to comment I-26-2, the treatment and water purification process proposed for the Project can destroy or significantly reduce the concentrations of pharmaceutical compounds prior to recharging the water into the Purisima aquifer. Advanced treatment processes can typically reduce concentration of pharmaceutical concentrations to at or below the level detectable by modern analytical laboratories that test drinking water (Carollo, 2017). This conclusion is based on previous studies and success with similar projects in California and elsewhere the U.S. Please also see the analysis presented in EIR Impact 4.10-3.

Regarding NDMA, this compound is regulated by the State of California and can be removed effectively by ultraviolet (UV) treatment through direct photolysis, which is a requirement of potable reuse in California. The treatment process proposed for the Project would include a UV and advanced oxidation process (AOP) that can reliably reduce NDMA concentrations to below 10 ng/l (10 parts per trillion), which is the Notification Level the State of California Division of Drinking Water has assigned and which they believe to be protective of public health. Typical purification systems can remove NDMA to a concentration of 5 parts per trillion or less (NWRI, 2017).

I-28-7 Please see response to comment I-28-6.

I-28-8 Please see the response to comment letter O-2, which addresses the general comments regarding long-term water transfers asserted here.
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People:

I have had an opportunity to review information on Purewater Soquel and the current EIR on the project. Is the project expensive? Yes. Is the supply of water from a pristine mountain stream? No. Can Soquel Water District afford the project and clean up the water to an acceptable level to help meet our local needs? Yes.

I have been in the water business since I worked on the construction of Anderson Dam in 1950. Anderson Dam cost three million dollars to build. A new dam of similar size to be built in the same area is now estimated to cost one billion dollars. Water was cheap then. Not now!

The EIR points out in detail, how the reclaim water will be carefully treated, delivered and
injected into the ground. I managed a similar project in Palo Alto in the 1980’s. We developed a drinking water supply from their waste water! It works! The movement of the water once in the ground will be monitored to insure it is safe. Water with a wide variety of chemicals and pollution levels seep into the ground water supply all the time. The underground soil operates as a natural treatment plant. The Water District shall maintain a system to assure us that the water we drink is safe.

Many projects have come and gone and some are still on the shelf. Most are in partnership with others. Some have not gone well. This project will be a sole project of the Water District, except for the water source. The ground water basin is over drafted and must be refilled. This project can meet that need without significant negative impact on the environment. THE WATER DISTRICT CAN WAIT NO LONGER!

Daniel F. Kriege

I-29-1 While this comment indicates that similar projects have been implemented and that the impacts of the Project have been considered in the EIR, this comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.
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Any contamination of the Soquel Creek Water District’s aquifers would be disastrous — both because the aquifers are the sole source of water for the District and because it would be nearly impossible to remove contaminants once they are introduced. Therefore, within its environmental review process and as a decision-making board outside that process, the District must thoroughly assess:

(a) Whether pumping treated wastewater into the aquifers could, at some point in the system’s operation, contaminate the water supply.

(b) What level of risk of that happening would be acceptable, if there is any acceptable level at all.

Contamination could occur for any number of reasons, including:

**Breakdowns.** All machinery fails at some point in its lifetime. Breakdowns should be expected and planned for. What happens when the filtering process fails? What backup systems are in place to protect the aquifers? What kinds of failures do they protect against, and what kinds would they miss? What if a backup system itself breaks down?

**Natural disasters.** Catastrophic earthquakes, fires, tsunamis and other disasters happily do not occur every day, but they do occur. What happens when they do?

The lesson of the Fukushima Daiichi nuclear disaster in 2011 is that even systems designed to withstand catastrophic events can be overwhelmed in unforeseen circumstances.

**Unknown contaminants.** In a world awash with chemical products, there’s no way to test for or to filter out all potential contaminants. So, of necessity, efforts are concentrated on a small set of chemicals. But that means that you do not know what potential contaminants are being introduced into the aquifers with the wastewater.

Many chemicals are incorporated into new products and released into the environment with little or no prior testing to determine if they are completely safe. As a result, there has been a steady stream of revelations about products that have turned out not to be safe. A recent example is glyphosate, the herbicide in Roundup, now believed to cause cancer. But history is replete with many other examples. Consider, for instance: lead paint; DDT; asbestos; the drug thalidomide, which caused birth defects when taken by pregnant women; fire-retardant chemicals (PBDEs), later found to be toxic, in children’s pajamas; ozone-depleting chlorofluorocarbons (CFCs) in aerosols; the pesticide chlorpyrifos, now under a court-ordered ban; BPA and BPS leaching from plastic water bottles; and so on.
In other words, you cannot know whether something that’s not being completely filtered out of the wastewater will turn out to be harmful.

Add to that uncertainty two other factors: (1) New products, and new chemicals, are being introduced all the time. Since we cannot know the future, we cannot know what problems these new substances will present to the filtration system. (2) People put all manner of materials in the wastewater stream — household cleaners, prescription drugs, paint, fertilizer, crud of various sorts washed off of hands and clothes, etc. To be effective, the wastewater filtration system must at least be cognizant of it all and the potential for contamination, even if it doesn’t filter everything out. It’s possible, for example, that the stream will combine substances that together are more dangerous than either alone.

**Revised standards.** The standards that are set for acceptable levels of dangerous substances tend to be revised downward over time, as new research reveals that levels previously thought to be relatively safe put people at risk. For example, in 2006 the standard for arsenic in the water supply was revised down from 50ppb (parts per billion) to 10ppb.

It’s possible, therefore, that while you believe you’re keeping a contaminant at safe levels, you would actually be introducing it at unsafe levels.

With these considerations in mind, let’s return to the questions we began with:

(a) Could pumping treated wastewater into the aquifers contaminate the water supply?

Given that wastewater contains and combines very many substances and potential contaminants, and given the many routes to contamination mentioned above, especially the “unknown unknowns” — the fact that we don’t know what all those routes or possible contaminants are — it seems almost certain that the water supply will be compromised under this plan. It is a mistake to think that we know enough at present to do this safely over time.

(b) What level of contamination risk would be acceptable?

Given that the aquifers are the District’s sole water source and that they would be impossible to de-contaminate, no level of risk should be acceptable.

There are alternatives. The District should investigate ones that do not introduce foreign substances into the aquifers.
3.43 Response to Comments from Don Larkin
(August 13, 2018) (Comment Letter I-30)

I-30-1 The Project has a very low potential of contaminating the groundwater supply in the
Purisima aquifer. Prior to recharge, the water would be treated and purified to a degree
superior to that of potable water from a conventional water system. This is discussed in
the EIR Section 4.10, Hydrology Resources – Groundwater (Impact 4.10-3). Additional
discussion on this topic is provided in responses to comments I-83-10, I-83-12, I-83-18,
O-4-3.

I-30-2 As discussed in Section 4.10, Hydrology – Groundwater Resources (Impact 4.10-3; less
than significant), existing regulations applicable to the Project require a comprehensive
monitoring program to protect groundwater quality. Specifically, as discussed on
page 4.10-48, real-time monitoring systems must be in place to identify failures in the
system to avoid recharging the groundwater with non-purified water. There are specific
monitoring technologies for each process in the Project treatment sequence (MF/UF,
RO, and UV-AOP) which provide water managers with the ability to control the
treatment process in real time to ensure the process is working as intended. For
example, in some systems, if the required UV dose is not provided for pathogen
disinfection, the plant automatically shuts down. Facilities can be designed, engineered,
and operated to limit opportunities for failure, regardless of cause (e.g., earthquake,
tsunami, power outage, etc.), and ensure proper system operation.

With respect to tsunamis specifically, EIR Section 4.11, Hydrology – Groundwater
Resources, acknowledges the SC WWTF site is located within a tsunami inundation
hazard zone, and the existing and proposed SC WWTF facilities would be subject to
flood risk in the event of a tsunami (page 4.11-62). However, as noted, in the event of a
tsunami, real-time treatment process controls would allow the facility to be shut down
until any issues that may affect water quality have been resolved. While the specific
technologies employed may vary across projects, the regulatory requirements for
redundant monitoring and response systems to protect against aquifer contamination do
not. For the proposed Project, the District would apply a Hazard Analysis Critical
Control Point (HACCP) methodology; a well-documented and established
methodology, used by several water utilities around the country, to address these very
issues. See for example, The WaterReuse Research Foundation (WRRF) produced
2014 report which addresses these very issues, provides HCAAP plan templates for
consideration by water agencies, and provides recommendations regarding their
application and implementation. During the detailed design phase, the Project’s
Professional Design Team would use the HACCP to determine points in the treatment
train for monitoring that would trigger shut down of the Advanced Water Purification
Facility (AWPF) should parameters fall outside of expected limits. Similarly, critical

1 WaterReuse Research Foundation (WRRF), 2014. Utilization of Hazard Analysis and Critical Control Points
Approach for Evaluating Integrity of Treatment Barriers for Reuse. Project 09-03. Available online at:
hazard_analysis.pdf. Accessed November 30, 2018
control points (CCPs) would be established throughout the treatment process train, not just at one point. The AWPF would remain shut down until the process or operations issue were resolved. The UV monitoring mentioned above is an example of monitoring at a CCP. Another example of monitoring to control a CCP is conducting a daily pressure decay test for the MF/UF system to monitor membrane integrity. Should a membrane module fail a pressure decay test, the module can be taken out of service for diagnostic and maintenance activities.

Regarding commenter’s question concerning an acceptable level of risk, that decision is not one for the District to determine, as it is obligated to comply with established regulations protecting against such impacts, and technologies designed to satisfy this requirement exist and are proposed for use in the Project.

I-30-3 It is important to note that the treatment system proposed for the Project filters out and destroys many chemicals including CECs pharmaceuticals, and EDCs and pesticides. Granted, there are many chemicals that can be placed into the municipal wastewater stream. And while relatively fewer in number, the indicator chemicals that are identified through state regulations are considered to represent certain classes of compounds. The treatment system does not discriminate as to what chemicals are destroyed or reduced through the treatment process. Please also refer to the EIR’s Impact 4.10-3, and responses to comments I-83-6 (Use of indicator chemicals), I-83-9, I-83-10, I-83-20, I-26-2, and I-92-10.

I-30-4 The water purification system proposed for the Project is designed to destroy or greatly reduce the contaminants in the source water prior to injection into the Purisima aquifer. This includes new compounds and compounds that may form through mixing within the source water. The District can and would know whether certain constituents are being filtered out through monitoring of the water prior to and after it has been injected into the aquifer through monitoring requirements prescribed through the State Recycled Water Policy and regulations for groundwater replenishment (see EIR section 4-10.3, Regulatory Framework).

I-30-5 Water quality standards can be revised based on new information regarding the human health risks. The research on CECs in treated water is also evolving over time as new chemicals and treatment technologies are developed. The SWRCB recognizes this and for that reason reconvenes its Science Advisory Panel every 3 to 5 years to update its recommendations for CEC monitoring for the State’s Recycled Water Policy. Please refer to responses to comment I-83-6 for additional details on the SWRCB Advisory Panel. The CEC thresholds for human health risk are considered with very conservative margins of error. If CECs were detected in the groundwater after the purification process, they would be far below established human health screening levels. So even if certain levels were revised downward, there would still be a negligible potential that concentrations of CECs would approach unsafe levels in groundwater after treatment. Please also review response to comment O-17-8 regarding the level confidence in California’s water reuse regulations. Response to comment I-48-8 provides a summary
of the latest recommendations by the SWRCB’s Science Advisory Panel for CEC monitoring and treatment.

I-30-6 New CECs will likely be developed and used in the future and some may find their way into the municipal wastewater streams. However, the state-of-the-art treatment technology that has been developed to treat these chemicals can destroy a wide range of classes of contaminants. The effectiveness of the advanced treatment process has been demonstrated in treatment systems throughout the nation. This issue is addressed in EIR Impact 4.10-3. As explained in the EIR’s Impact 4.10-3, considering California’s Groundwater Replenishment Regulations, its Recycled Water Policy, monitoring recommendations from the SWRCB’s Science Advisory Panel and the NWRI, the District has concluded that recharge of advanced treated, purified, water would be adequately treated and the potential for degradation of the ambient potable groundwater in the Purisima A and BC units would be negligible.

I-30-7 Please refer to response to comment I-30-2.

I-30-8 As discussed in response to the above comments, Project operations would not result in a significant hydrology or water quality effect. Please refer to EIR Chapter 7, Alternatives, which considers alternatives that could meet most of the basic objectives of the Project while reducing one or more of its significant impacts (emphasis added), could foster informed decision-making and public participation, and could be feasibly implemented. CEQA does not require consideration of alternatives with regard to project impacts that are less than significant.

EIR Chapter 7, Alternatives identifies and analyzes in detail the implications of a ‘No Project’ alternative and two action alternatives. The action alternatives include one which would involve implementation of a similar project with reduced treatment capacity (volume), with supplemental supply through surface water purchase from the City of Santa Cruz. The other action alternative would involve construction of a desalination plant to supplement or replace the water supply that would be provided by the Project. In addition, Chapter 7 includes identification and discussion of other alternatives that were considered but rejected from further analysis, due to issues of feasibility, ability to meet project objectives, and/or degree of environmental impact. These other alternatives ranged from alternate site locations, a project capable of purifying raw wastewater, an expanded water rationing program, a large-scale surface water purchase, water purchase from a regional desalination project, and a new dam and reservoir. In sum, while a significant hydrology or water quality impact would not occur under Project operations, the EIR does consider a range of alternatives to the Project, including several that would not include groundwater recharge.
Comment Letter I-31

3030 Crystal Heights Dr.
Soquel, CA 95073-2513

Pure Water Soquel Project CEQA

4041 Soquel Drive, Suite A-501
Soquel, CA 95073-3105

SGCWD
Aug 13 2018
RECEIVED
3:07 PM
Dear Pure Water Soquel Project CEQA Staff,

I am hereby requesting an extension of time for Public Comment on the PureWater Soquel Project Draft Environmental Impact Report. It is a lengthy document that merits thorough public evaluation. I need more time to carefully read it, research related and appropriate issues of concern, and to respond in a cogent manner.

Please extend the Public Comment period to allow for better public input and analysis. Please notify the public of your decision.

Thank you.

Cordially,

Venus Lee
3030 Crystal Heights Drive  
Soquel, CA 95073  
August 11, 2018

Pure Water Soquel Project CEQA  
4041 Soquel Drive, Suite A-501  
Soquel, CA 95073-3105

Dear Pure Water Soquel Project CEQA Staff,

I am hereby requesting an extension of time for Public Comment on the PureWater Soquel Project Draft Environmental Impact Report. It is a lengthy document that merits thorough public evaluation. I need more time to carefully read it, research related and appropriate issues of concern, and to respond in a cogent manner.

Please extend the Public Comment period to allow for better public input and analysis. Please notify the public of your decision.

Thank you.

Cordially,

Anson Lee
3.44 Response to Comments from Venus Lee
(August 13, 2018) (Comment Letter I-31)

I-31-1 Please see the response to comment I-4-1.

I-31-2 Please see the response to comment I-4-1.
I don’t understand why the water district doesn’t recharge the aquifer from water taken from Soquel Creek in winter months. How many millions flow into the sea during winter plus everyday of the year.

If it conflicts with parcels with water rights along the creek, I’d suggest making a generous reimbursement to those parcel owners. It’s worth a try rather than all the complicated and controversial plans in consideration.

Teresa Mallen
3. Comments and Responses
3.45 Response to Comments from Teresa Mallen
(August 2, 2018) (Comment Letter I-32)

I-32-1 Please see the response to comment letter O-2, which addresses the general comments regarding long-term water transfers asserted here.
Please find attached my Public Comments on the Pure Water Soquel Draft EIR prepared by your group in accordance with the public review process.

--
Dr. Karl Maret
9099 Soquel Dr. #2, Aptos, CA 95003
(831) 662-8421
Hours: Mon 10-1pm PT, Wed 10-5pm, Thurs 10-5pm
Public Comment on the Draft EIR entitled PUREWater Soquel (PWS)

By Dr Karl Maret

9099 Soquel Dr., Bldg2, Aptos, CA 95003

Submitted Aug 13, 2018

Is the Use of Treated Wastewater Aquifer Injection the Best Approach (PWS) to the Problem?

This is a matter of impartially weighing all the alternatives which in Santa Cruz include the San Lorenzo River, North county stream runoff, the Lochquiwer proposals put forth by Water for Santa Cruz and other concerned individuals and groups. These “alternatives” are not fully discussed in Section 7 of the dEIR. As stated initially there:

the proposed Pure Water Soquel Project (Project). CEQA Guidelines Section 15126.6(a) states that an environmental impact report (EIR) must describe and evaluate a reasonable range of alternatives to the project that would feasibly attain most of the project’s basic objectives but would also avoid or substantially lessen any identified significant adverse environmental effects of the project. Specifically, the CEQA Guidelines (Section 15126.6) set forth the following criteria for selecting and evaluating alternatives:

It is my firm belief that Section 7 is purposely too short and inadequate to properly evaluate the possible benefits of this surface water transfer approach. The main objection in the dEIR to this solution is that this “Alternative 2” would not be achieved in a timely enough manner as stated on page 7-17:

Alternative 2 would meet most of the project objectives. It would meet the overall goal of recharging the local groundwater basin and of supplementing the District’s water supply by 1,50\(\text{afy}\). However, the goal to replenish the local groundwater basin to prevent further seawater intrusion and develop a sustainable water supply in a timely manner that meets the District’s supply objectives and the State’s mandate under SGMA would not be met to the same extent as the Project. The Project includes groundwater recharge in areas of the District deemed most at

Section 7 needs to be expanded to include a complete assessment of the steps that were taken to achieve cooperation with all stakeholders (including Santa Cruz water district, the State of California and other Water Districts) and what specific timely steps are considered to be the impediment to surface water transfer and treatment for aquifer recharge. The costs associated with all alternatives need to be outlined in a clear manner so that the citizens and customers of the SCWD can be properly informed of the expected future cost of water with every decision taken. The consumers of water of SCWD did an admirable job in conserving water during the drought of the last 5 years and will be motivated to help find an equitable
solution if given clear and objective information. A cost-benefit analysis needs to be provided of every approach to be adopted including both the construction costs and maintenance costs of every possible solution.

It has been estimated that implementation of the project as outlined in the dEIR would increase the district’s electrical demand by 3600 MWh. At current California commercial electricity rates estimated at $0.15 per kWh that would represent an additional operational cost of $540,000 per year just for electricity alone. How does this cost as well as the ongoing cost of maintenance and disposables needed to run this complex system impact the price per delivered gallon to each SCWD customer in the coming years? Electricity delivery from an aging transmission and distribution system may itself be a potential risk factor that is not mentioned in the report in the current scenario of global climate change that is definitely impacting California today.

As can be seen from the above graph from an April 2018 report, wastewater treated aquifer injection to serve as a seawater intrusion barrier represents only 7.6% of the 2015 practices in California. I believe it is not the only solution for our area at the edge of a huge expanse of redwood trees with flowing water year-round and cyclical run-offs that can be sustainably harvested. This surface water will have much lower chemical contaminants than the proposed wastewater reclamation system injected into the aquifer. Potential contaminants added to our aquifers, that is the drinking water supply of future generations, may have potential adverse health consequences, as discussed further below.
Toxicity Concerns regarding Constituents of Emerging Concern (CEC) found in Treated Wastewater

As stated on Page 13 Section 4.10 on Hydrology Resources –Groundwater the dEIR listed the sources of contamination of the Aromas and Purisma aquifer as reproduced below:

contamination threats. In 2014-15, the District completed its source water assessment for its District wells tapped within the underlying Purisima Formation and Aromas aquifer. Assessment for the Polo Grounds Wells and the Aptos Jr. High Well were completed in 2011. Aromas aquifer supplies are most vulnerable to agricultural contaminants, on-site residential septic systems and potential leakage from sewer lines. Purisima Formation supplies are most vulnerable to contamination from dry cleaners, historical and active automobile gas stations, sewer collection systems, home manufacturing, grazing, known contaminant plumes, photo processing/printing establishments, and utility stations/maintenance areas. The District monitors potential contamination near its wells and works with other agencies to proactively protect the quality of its groundwater resources (District, 2010).

To this list the District now proposes to add a potentially long list of possible contaminants that may be present in recycled wastewater including trace amounts of endocrine disrupting chemicals EDC (of which around 1400 are currently known or suspected); other chemicals which are in known to be in everyday use (around 85,000 are described and may show up unknowingly unless tested rigorously); and pharmaceuticals or their metabolites which are found in wastewater (Greater than 1800 pharmaceuticals are approved in the US; an EPA survey of 50 wastewater treatment plants found low concentrations of pharmaceuticals present in every treated water sample). https://blog.epa.gov/blog/tag/pharmaceutical-residues-in-municipal-wastewater.


The dEIR appears to have used the guidelines of the State Water Resources Control Board report from 2010 and not the updated guidelines from 2018. There have been changes in the significance of certain CECs as shown in the graphic below.
The EIR needs to reflect the most current state of scientific understanding which is always changing as new data becomes available. There are new recommendations for monitoring nitrosamines which now reflect concern not only of NDMA but also NMOR as health indicators while others such as estradiol, triclosan and caffeine are no longer recommended as health indicators. Specifically on page 41 of the 2018 report it states:

“Comparison of the two tables reveals that as a result of the updated MEC and MTL information, three of four 2010 health-based indicator CECs (17β-estradiol, triclosan and caffeine) are no longer included in the 2018 health-based indicator list. All three of those compounds were removed from the list because the updated large monitoring data sets collected by California utilities over the past seven years indicate that concentrations are consistently below MTLs (i.e., the MEC/MTL ratio is equal to or less than 1) and that continued monitoring based upon potential human health concerns is no longer necessary.

For secondary/tertiary treated effluents, the 90th percentile concentration of NDMA is about eight times higher than the MTL and, therefore, NDMA is retained as a human health-based indicator. In addition, the MEC data collected since 2010 indicate that 90th percentile concentrations of N-nitrosomorpholine (NMOR) and 1,4-dioxane exceed the MTL by about 9-fold and 7-fold, respectively and thus warrant addition as human health indicators.”

There are 418 CECs listed that are now being investigated of possible health concerns. It is important that the best approach to groundwater recharge be found that protects the health of
future generations. Monitoring the purity of our drinking water aquifers after wastewater injection thus becomes a principal concern of the end user, the customers of SCWD. These customers need to know what risks they will be facing from potentially greater presence of CECs after treated wastewater injection into the aquifer, if these levels will increase over time as increasing numbers of chemicals end up in raw wastewater, and at what cost of continuous monitoring to protect the public. Already the 2010 report of the scientific advisory panel outlined the challenges of the diversity of CECs and their analysis, as shown below:

“Because CECs represent an extremely broad spectrum of compounds, developing a single all-encompassing technique for their analysis is highly unlikely. These chemicals vary widely in their physico-chemical properties (e.g., polarity, molecular weight, pKa, water solubility, etc.) making analysis by traditional analytical techniques difficult. Additionally, the concentration of many CECs in the environment can be quite low, typically sub-microgram per liter, which further increases the complexity of analysis by necessitating extraction and concentration steps.”

In protecting our health, water is a principal factor and must receive the highest priority for purity and long-term safety by being free from chemicals. While toxicology studies typically examine the adverse effects of only single chemicals, it is well known that exposure to multiple chemicals simultaneously often creates a much higher adverse health effect. Toxicology studies of simultaneous multiple chemical exposures are rare and thus we have limited data on the additive effects of multiple chemicals in our water supply. The scientific advisory board report in 2010 clearly acknowledges this:

“A shortcoming of human health risk assessments is that most of those are conducted on a chemical-by-chemical basis. The effects of each individual chemical can be summed to derive an estimate of the effect from all the chemicals included in the evaluation but in most cases, information on non-additive effects of the chemicals is not available. This has led to concerns that mixtures of CECs may have greater effects than can be discerned by or are predicted by risk assessments that simply add the effects of chemicals. Another limitation of risk assessments is that they only evaluate the potential effects of chemicals known or suspected to be present in recycled water and are limited to chemicals for which toxicity information is available. Recycled water almost certainly has a great many more chemicals than we are able to identify or have toxicity information for.”


The dEIR proposes to study only 6 chemicals (NDMA, DEET, 17beta-estradiol, triclosan, sucralose, and caffeine) and I believe this approach is already out of date. It is well known that nitrosamines are not sufficiently eliminated by the ultrafiltration and reverse osmosis steps, so the final step of UV is then relied upon to eliminate them. Any failure in this complex, expensive wastewater treatment process potentially exposes our community to long-term contamination issues and health risks from these potent carcinogens.
It is vital to revisit the dEIR from an expanded perspective to more fully re-examine Alternative 2 discussed in Section 7 of the report to utilize the abundant surface water flows and construct the necessary infrastructure if feasible.

Thank you for considering these comments.

Respectfully submitted,

Karl Maret, M.D., M.Eng, B.Sc.(EE)

August 13, 2018
3.46 Response to Comments from Karl Maret, M.D., M.Eng, B.Sc.(EE) (August 13, 2018) (Comment Letter I-33)

I-33-1 Please see the response to comment letter O-2, which addresses the general comments regarding long-term water transfers asserted here.

I-33-2 Based on CEQA “first principles” limiting its reach to significant adverse effects on (i.e., changes to) the physical environment, as defined in CEQA Guidelines section 15382’s definition of “significant effect on the environment: significant effect on the environment means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant. Economic factors may be considered when identifying whether alternatives to a Project are feasible (CEQA Guidelines Section 15364. However, in evaluating the feasibility of alternatives to the Pure Water Soquel Project, no alternative was eliminated from further analysis under CEQA due to economic factors alone; and only two potential alternatives (participation in DeepWater Desal and a new reservoir/dam) mentioned economic factors as part of the discussion of feasibility (see EIR Section 7.5, Alternatives Considered, but Rejected from Further Analysis). Because no potential alternatives were dismissed from further analysis under CEQA due to economic factors, a cost analysis of the Project alternatives is not required to understand the physical environmental impacts of the Project, the feasibility of alternatives, or the comparison of physical environmental impacts between the Project and alternatives.

I-33-3 The commenter identifies the Project’s reliance upon the existing electrical system for power as a risk factor. The object of the risk is not made clear in the comment. It is assumed commenter is referring to the risk of the existing electrical grid being unable to support the added Project demand, either through failure of the electrical grid’s infrastructure or insufficient capacity to serve the Project, or both. Discussion of Project electricity demand and impact on the electrical grid is addressed in EIR Section 4.6, Energy Conservation. On page 4.6-2, the EIR explains that the electrical grid in the Project area is owned and maintained by the Pacific Gas and Electric Company (PG&E). As an electrical utility, PG&E is responsible for maintaining the electrical power grid in accordance with applicable state and federal regulations. Such responsibility is beyond the control of the Soquel Creek Water District, and beyond the scope of this EIR. Regarding service capacity, on page 4.6-9, the EIR explains that the Project’s estimated electrical demand would be roughly 3,600 MWh per year, which would represent less than 0.01 percent of the total electricity used in Santa Cruz County in 2016. For these reasons, it is reasonable to conclude that the Project’s electricity
demands could be reasonably accommodated within the existing available electrical
generation and transmission facilities.

I-33-4 The District has determined the use of advanced purified wastewater for replenishment
of the Purisima aquifer is a viable and environmentally conducive approach to prevent
further seawater intrusion. As discussed in EIR Impact 4.17-2, wastewater is an
available and reliable source and the District and City of Santa Cruz have entered into a
memorandum of understanding (MOU) regarding the provision of secondary effluent
from the SC WWTF for the Project. The MOU provides information from the City of
Santa Cruz regarding the availability of source water and acknowledges that use of
approximately 1.6 MGD of secondary treated effluent represents approximately 20% of
the Santa Cruz WWTF average daily flow rates. The City indicates that the volume of
the District’s proposed use would leave an adequate effluent supply available in the
event the City determines that it needs or wants to develop recycled water for City use.
The Project would treat, purify and recharge wastewater that would otherwise be
discharged to the ocean. The treatment and purification process uses proven technology
that ensures the contaminants are either destroyed or greatly reduced to amounts below
human health screening levels so exposure and risk to human health is negligible.
Please see the response to comment letter O-2, which addresses the general comments
regarding long-term water transfers asserted here. Also see the responses to further
comments below regarding water quality impacts associated with Project
implementation.

I-33-5 The Project would not add new contaminants to the Purisima aquifer. As discussed in
the EIR, Impact 4.10-3, wastewater from the SCWWTF would be advanced treated and
purified using a combination of micro-filtration, reverse osmosis, ultraviolet advance
oxidation. This treatment process is proven to destroy or at least significantly reduce
concentrations of contaminants that may be in the wastewater stream to concentrations
far below maximum contaminant levels and human health screening levels. Consistent
with the comment, understandably, there are many CEC including EDCs and
pharmaceuticals that can be released into the environment. However, only a fraction of
those end up in the wastewater treatment stream and still only a fraction of those
survive the treatment and water purification process. Those that do survive have
concentrations that are either not detectable in the parts per trillion range or are so low
that they nowhere near approach the maximum contaminant level or the SWRCB
Human Health Screening level. Please refer to response to comment I-83-9 for
additional discussion on the effectiveness of the treatment process and response to
comments I-83-18, I-77-1 and I-92-10 regarding degradation to water quality in the
Purisima aquifer.

I-33-6 The June 2018 release of the SWRCB Science Advisory Panel Report (Monitoring
Strategies for the Chemical of Emerging Concern (CECs) in Recycled Water) was
released close to the date of Draft EIR publication. Consequently, Section 4.10.3
(Regulatory Framework) did not include a discussion of the reconvening of the
SWRCB Science Advisory Panel, nor the release of the Panel’s latest 2018 Report.
Based upon this comment, EIR Section 4.10.3 (page 4.10-22, before the heading “Salt and Nutrient Management Plan”) is revised to include the following summary of the 2018 Science Advisory Panel’s findings, recommendations and conclusion. It should be noted that the latest findings and conclusions of the SWRCB Science Advisory Panel, as presented in its 2018 report, do not change the EIR’s conclusions regarding impact significance.

**SWRCB Science Advisory Panel**

The Recycled Water Policy adopted in 2009 was intended to support sustainable local water supplies and promote the use of recycled water in a manner that is protective of human health and the environment. The Policy recognized the challenge of addressing the potential risks of unregulated chemicals referred to as constituents of emerging concern (CECs), that effects of CECs on human health and aquatic life is a rapidly evolving field, and that regulatory requirements need to be based on best available science. Consequently, the Policy required SWRCB to convene the Science Advisory Board to make CEC monitoring recommendations for recycled water. An initial six-member Panel convened in 2010 and delivered their initial recommendations in 2012. In 2013, the Policy was amended to include monitoring requirements for CECs based on the recommendations of the Science Advisory Panel. Because of the rapid evolution of CEC science and measurement technology, the Policy also required that a Science Advisory Panel revisit and update CEC monitoring recommendations, as needed, every five years. In December 2016, the SWRCB directed staff to reconvene the Science Advisory Panel to update its recommendations for monitoring CECs in recycled water and to update the Recycled Water Policy considering changes that have taken place since 2013. In July 2017, a Panel of seven national experts in the fields of chemistry, biochemistry, toxicology, environmental microbiology, epidemiology, risk assessment, and engineering with more than 150 years of combined experience investigating CEC issues, was convened to update and expand upon the original Panel recommendations currently specified in the Policy. The report issued by the Science Advisory Panel in April 2018 is the first update following the initial recommendations (SCCWRP, 2018).

**Summary of 2018 Science Advisory Panel Regarding CEC's**

The SWRCB Science Advisory Panel reconvened in 2017 to update recommendations for monitoring CECs in recycled water and to update the Recycled Water policy (Policy) based on changes since the last policy update in 2013. The 2018 Panel updated its recommendations from 2010 and expanded their recommendations to include surface water augmentation (SWA) and all non-potable reuse applications in the State of California allowed under Title 22. The Panel also evaluate potential risks for all routes of human exposure to CECs and explored the state-of-the-science regarding the likelihood of human health impacts posed by antibiotic resistant bacteria/antibiotic resistance genes (ARB/ARGs) in recycled water.
The Panel published a report of findings and conclusions regarding evaluation and monitoring of CEC’s in water reuse projects (SCCWRP, 2018). The 2018 report addresses public health protection, which requires that microbiological pathogens and some chemicals in municipal wastewater be attenuated before potable reuse and discharge to the environment. Water recycling practices require appropriate treatment barriers and monitoring strategies to minimize exposure to a wide range of CECs that may be harmful to human health (SCCWRP, 2018). As described in detail in the Science Advisory Panel’s 2018 report (SCCWRP, 2018), the reconvened 2017 Panel provided updates and recommendations to the recycled water policy, as described below. The 2017 Panel:

- Updated the list of CECs and other monitoring parameters. For indirect potable water reuse practices, the Panel updated monitoring trigger levels (MTLs) based on toxicological information gathered from several new sources, including state, federal, industry and international organizations, as well as based on the Panel’s own professional judgment. The result of this update was a revised set of MTLs, some higher and some lower than MTLs used in 2010, and others included for the first time.

- Developed an approach that relies on comparing the exposure to CECs in recycled water for non-potable Title 22 reuse scenarios to exposure to CECs in water produced for potable reuse. This comparison revealed that potential exposures and potential human health risks associated with CECs in non-potable use scenarios are expected to be 10% or lower than exposure to CECs in water intentionally consumed in the potable reuse scenario.

- Updated measured environmental (or effluent) concentrations (MECs) based on more recent data collected by water reuse facilities in California. The Panel retained its conservative assumption of considering MECs for CECs measured in secondary/tertiary effluent as feed water for recycled water facilities. In addition, the Panel reviewed available monitoring data for individual treatment processes and product water for GWR applications as well as some select CEC monitoring studies outside of California.

- Updated MECs and MTLs and employed them to screen a total of 489 CECs (increased from 418 in 2010) using the same screening framework used by the 2010 Panel to identify candidate compounds for monitoring. This exercise indicated that regular monitoring of three of four 2010 health-based indicator CECs (17\%\beta-estradiol, triclosan and caffeine) is no longer necessary, as the monitoring data set collected over the past several years (2008-2017) indicate that concentrations are consistently below MTLs.

- Concluded that the collected monitoring data indicated that concentrations of N-nitrosodimethylamine (NDMA) were eight times higher than the MTL and, therefore, NDMA should be retained as a human health-based indicator. Of the remaining CECs screened, the 90th percentile MECs for two compounds, N-nitrosomorpholine (NMOR) and 1,4-dioxane, exceed their respective MTLs by factors of 9 and 7, respectively, thus warranting their addition as human health indicators.
Recommends implementation of the estrogen receptor alpha and aryl hydrocarbon receptor (ER-α and AhR, respectively) assays for screening of CECs in potable reuse projects. These assays are now sufficiently standardized and robust for screening level data collection and assessment over the next 3 to 5 years.

Concluded that antibiotic resistance is still a major challenge and potentially an issue for any wastewater discharge into the environment. Apparently, the causes for antibiotic resistance are still not well known and the current studies do not show that antibiotic resistance transmission is a consequence of water reuse practices. Focused investigations are needed to better understand the occurrence, fate and risks associated with ARB and ARGs in recycled water applications across California and the SWRCB should encourage the collection of data in recycled water and sites within California while keeping abreast of scientific advances related to methods and risk assessment. The Panel recommends that the SWRCB consider the results of more definitive research showing an actual relationship of antibiotic resistance to recycled water before changing its current policy.

Concluded that it is critical to establish a formal CEC monitoring and assessment program for recycled water that is responsive to rapidly changing CEC issues. This is due to the uncertainty that is inherently associated with the universe of chemicals that might occur in recycled water now and in the future. New knowledge might also point to direct evidence for health relevance justifying the need for a continuous updating process that cannot be provided by convening a review panel only every five (or more) years. Instead, these programmatic upgrades should be reviewed internally as well as by independent experts on a relatively frequent (e.g. triennial) schedule.

Recommends a more flexible and responsive program should be developed to update CEC monitoring recommendations in response to rapidly emerging science, technology advances and monitoring (screening) data collected. In this context, the SWRCB should consider taking a more active role in procuring, managing and assessing CEC monitoring data and associated toxicological thresholds, that are subject to rapid/continual evolution. The Panel recommends that the SWRCB reconvene an independent Panel to review proposed changes to CEC monitoring recommendations every three years.

In addition, the following reference has been added to EIR page 4.10-60:

**Southern California Coastal Water Research Project (SCCWRP), 2018, Monitoring Strategies for Constituents of Emerging Concern (CECs) in Recycled Water, Recommendations of a Science Advisory Panel, SCCWRP Technical report 1032, April.**

Contrary to the assertion in the comment, the EIR does reflect the most current understanding of the potential contaminants that the Project could introduce to the Purisima aquifer and public water supply. The conclusions in the EIR reflect the current regulatory framework encompassing recycled water and groundwater replenishment, as described in EIR section 4.10.3. The SWRCB Scientific Advisory Panel has assisted in developing the requirements of the Recycled Water Policy, which does, and will continue
to consider the increasing number of CECs and the evolving research into how these compounds affect human health at low doses in recycled water. Specifically, the findings and recommendations of the Science Advisory Panel on NDMA, NMOR and the CEC indicator chemicals would be incorporated into, and would inform the Recycled Water Policy, thereby ensuring that as more chemicals come on the market and more research is conducted on these chemical compounds, the SWRCB regulations would keep pace to protect human health. The Project would be required to comply with all requirements set forth by the most recent iteration Recycled Water Policy. Please see response to comment I-33-6 which discusses the current findings and recommendations by the recently reconvened Science Advisory Panel. Also see response to comment I-83-6 for a description and associated discussion about the primary sources that the EIR relied on in its analysis regarding CECs in groundwater.

The 2010 SWRCB Science Advisory Panel recognized the shortcomings of human health risk assessments on a chemical by chemical basis. However, this is a matter of ongoing consideration and research. The Project would be subjected to any and all changes and advancements in the field of research into CECs as it would continually transform and update the Recycled Water Policy.

The EIR does not “propose to study only six chemicals”. These chemicals were not chosen by the District or the technical analysts associated with the EIR. To clarify, the six chemicals that the commenter references are six of the chemicals that were initially identified by the SWRCB 2010 Science Advisory Panel as indicator chemicals to determine the presence of certain CEC’s in treated water [also see response to comment I-83-6 (Indicator Chemicals) and I-83-13]. The 2010 Panel developed a risk-based framework for prioritizing and selecting CECs for recycled water monitoring, which was then used to develop a list of monitoring parameters, including four health-relevant and four performance-based (“Cindicator”) CECs to demonstrate a consistent capacity for reduction of CECs by recycled water treatment processes. This initial list of eight CECs, representing multiple source classes (e.g., pharmaceuticals, personal care products, food additives, and hormones), were identified for groundwater recharge (GWR) potable reuse applications (SCCWRP, 2018). The reconvened 2017 Science Advisory Panel (also see comment response I-33-6) concluded that regular monitoring of three of four 2010 health-based indicator CECs (17β-estradiol, triclosan and caffeine) is no longer necessary, as the monitoring data set collected over the past several years (2008-2017) indicate that concentrations are consistently below Monitoring Trigger Levels (MTLs). However, they concluded that the collected monitoring data indicated that concentrations of N-nitrosodimethylamine (NDMA) were eight times higher than the MTL and should be retained as a human health-based indicator and because they exceeded their MTLs. N-nitrosomorpholine (NMOR) and 1,4-dioxane were added as human health indicators. The SWRCB, through the Science Advisory Panels, continues to update and refine CEC monitoring and risk assessment and review the evolving research into human health effects of CECs.

I-33-8 Please see the response to comment I-33-1.
Pure Water Soquel Project
CEQA
4041 Soquel Dr. Suite A501
Soquel, Ca. 95073

95073-310541
Original letter sent without signature.

This copy is signed.

FLY IT PROUDLY!
Pure Water Soquel Project August 8, 2018
CEQA
4041 Soquel Dr. Ste. A501
Soquel, Ca. 95073

Your plan for a 90 million dollar new plant is ridiculous. The water we need is available now and has been for years as a Transfer Program from Santa Cruz Water District.
It is available for 3, 4, 5 (fiscally) years and comparably inexpensive, 600 thousand dollar program now. As opposed to 120 million to start building a plant 3 or 4 years from now. You could be heroes to work with or lead the several water districts of North Santa Cruz County to develop a long term North County water plan for all instead of denying the importance of transfer and/or continuing a selfish, unnecessary, costly building program. At this time don’t plan and work for a big plant. Plan for “transfer” and a future cooperative North County Water Program.

In closing, your continuous 2 year announcements on starting the water transfer “this fall, next spring, after the pipes are flushed,”
in the next few months" were not followed up.
Your leadership is questionable or lacking.

James Marshall

JAMES MARSHALL
4160 JADE ST. SYC. 4
CAPITOLA, CA. 95010

(831) 462-4714
3.47 Response to Comments from James Marshall (August 8, 2018) (Comment Letter I-34)

I-34-1 Please see the response to comment letter O-2, which addresses the general comments regarding long-term water transfers asserted here.

I-34-2 While not the subject of the Project, the short-term water transfer project is described in the EIR as a related project under the Community Water Plan (EIR Section 2.2.2, Community Water Plan), and as described that project is currently underway. Please see the District’s website regarding water transfers for an update on the short-term water transfer: https://www.soquelcreekwater.org/Water-transfers.
Soquel Creek Water District Attention Of: Mr. Ron Duncan, et al.
District Attention Of: Board of Directors and its Senior Staff
4041 Soquel Drive
Soquel, California 95073-3105

REQUEST OF 15 DAY EXTENSION TO FILE WRITTEN COMMENTS ON THE PENDING DRAFT EIR on the PURE WATER SOQUEL PROJECT.

1. Myself and others last night informed a member of your Board of Directors, Dr. Bruce Daniels, that both individually and collectively we are requesting an extension of time beyond Monday, 13 August 2018 to file our written comments to the Pure Water Soquel Project Environmental Impact Draft and Review (EIR).

2. When I visited your offices recently, for the primary purpose to pay a SCWD Water Bill your staff informed me that the EIR Draft was not available to review nor to read. Thus the first opportunity I had to read it was last tonight at the ad EIR information session at the Aptos Public Library.

3. Myself and others made clear to Dr. Daniels that we would understandably need more time and calendar days---- to fully read, review, analize, possibly research appropriate portions of concern, and formulate our most relevant written comments, etc.

4. Please extend the comment period until at least 27 August 2018 or longer and inform myself and others of the public that this is accomplished.

Thank you for your courtesy and assistance in this matter.

Colonel Michael Maxwell  MMGOODGUY1@GMAIL.COM
3.48 Response to Comments from Colonel Michael Maxwell (August 9, 2018) (Comment Letter I-35)

I-35-1 Please see the response to comment I-4-1 regarding requests for extension of the Draft EIR comment period. In addition, the Draft EIR was made available at the customer service counter in the lobby of the District headquarters for the entirety of the comment period from June 29, 2018 to August 13, 2018; as well as at seven local area libraries and on the District website.
To: Soquel Creek Water District (SCWD) EIR Staff and Consultants and Also to the Direct Attention of Each of the SCWD Board of Directors.

1. SENT AS AN ATTACHED WORD DOCUMENT in seven pages to be fully included in the public record and awaiting SCWD Staff Reply(s) to each numbered paragraph and sub-paragraphs.

2. Please confirm receipt of these Public Comments and the inclusion of them in any and all forthcoming "Pure Water Soquel " Project EIRs and all related publications, and all Press Releases to the Media, etc.

3. Please include me in the interested recipients in this matter.

Thank you for your assistance, courtesy, and timely prompt responses and reply(s).

Colonel Terry Maxwell
MMGOODGUY1@GMAIL.COM
831-475-2775

******************************************************************************
SPECIFIC PUBLIC COMMENTS:

1. This Entire Proposed “Pure Water Soquel Project” Should Be Rejected Completely — for many irrefutable reasons and the most relevant reality and the most relevant valid facts:

   —Including now for several decades the Many Acts of Incompetence, Poor Judgment, Profligate Over-Spending and Negligence;

   —Demonstrated by both the current-incumbent and several prior Members of the Boards of Directors and Senior Staff of the Soquel Creek Water District (SCWD).

2. This Entire Draft EIR and the Proposed “Pure Water Soquel Project” Should Be Rejected Completely:

   —Because of the unjustifiable and logically inexplicable Failures of the the Boards of Directors and Senior Staff of
the Soquel Creek Water District (SCWD) to Consider IN THE Draft EIR ALL Known ALTERNATIVES.

3. This Entire Draft EIR and the Proposed “Pure Water Soquel Project” Should Be Rejected Completely:

—Because of the unjustifiable and logically inexplicable Failures of the the Boards of Directors and Senior Staff of the Soquel Creek Water District (SCWD) to Consider ALL KNOWN and ACHIEVABLE ALTERNATIVES and Mitigations:

— Such as suspending the “Aptos Village” water hookups and water service to avoid ANY further Extractions or Depletions of our SCWD Acquifers until bonafide additional water transfers, as the LOCQUIFER levels of adequate full recharging of the acquifers has in fact been realized and achieved.

—FIRST CORRECT the inexcusable Negligence and Failures for fifteen (15) years by the the Board of Directors and Senior Staff of the Soquel Creek Water District (SCWD) — to negotiate and coordinate and if necessary to confront the other local jurisdictions such as the City of Santa Cruz and others regarding the Regional California Monterey Bay and the Central California Coast Water Resources — Water Demand Surges, Depletions of Rainfall, Ground Water Depletions, and Sea Water Intrusion Threats to Acquifers, etc.

—Because for fifteen (15) years and longer the Board of Directors and Senior Staff of the Soquel Creek Water District (SCWD) — could have coordinated with State of California Water Resources Officials and the Governors Office and the State Legislature and if necessary to confront the other local jurisdictions, such as the City of Santa Cruz to induce and/or compel regional water resources cooperation

4a. FAILUREs TO Even Mention, Acknowledge-Recognize or even to CONSIDER THE “LOCHQUIFER PLAN” Alternative In this Draft EIR—
—Renders This Draft-EIR Irrelevant And NOT in CEQA FULL COMPLIANCE For Any Honest and for Any Fully Informed Further Consideration(s).

—Also Exposes the Factual Intellectual Dishonesty and the Public Policy Negligence by the Proponents of the “Pure Water Soquel Project.”

4b. And Also Exposes the Profligate Financial Wastes and Fiduciary Irresponsibility Done by the SCWD Board of Directors and Staff for Many Years involving many millions of dollars.

—Involving more than one-hundred-million dollars coming from and belonging to the Soquel Creek Water District Customers and Ratepayers, et al.

5a. Indeed, among the financially cheaper, more ecologically sensible, and more environmentally ethical and healthful alternatives—is the “LOCHQUIFER PLAN” authored by Engineer Jerry Paul and for more than five (5) years made known to and available to the Board of Directors and Senior Staff of the Soquel Creek Water District (SCWD).

5b. Years ago, I also observed and witnessed at public meetings before the Board of Directors and Senior Staff of the Soquel Creek Water District (SCWD) Jerry Paul presenting this innovative and very cost-effective proposal to the entire room.

5c. And proposing, that for only a mere $25,000 to $50,000 the LOCHQUIFER concept and prototype demonstration could readily be have been accomplished. Instead, the Board of Directors and Senior Staff of the Soquel Creek Water District (SCWD) rudely rejected any serious consideration and has instead profligately misspent in the aggregate millions of SCWD Customers money on the ill-conceived and in complicity fraudulently advocated “prior DESAL Plant” Project.
5d. Similar mistakes to the $17,000,000 ineptly wasted on the terminated JOINT DESAL PROJECT before by the Soquel Creek Water Board — appear to now being made in this “Pure Water Soquel.”

5d. I also on two occasions years ago, urged the the Board of Directors and Senior Staff of the Soquel Creek Water District (SCWD) to budget $25,000 fo funding an adequate evaluation and advocacy communications to the Santa Cruz City Water Department, et al. Negligently the SCWD Board and Management never conducted any evaluative efforts or tasks portion of this much improved concept and cost-effective approach, etc.

5e. Two of the Soquel Creek Water District Board members and one senior staff person subsequently wrongly belittled Mr. Jerry Paul and his well-presented efforts and equally illogically and inconsiderate two of them later ridiculed me.

6a. This Entire Draft EIR and the Proposed “Pure Water Soquel Project” Should Also Be Rejected Completely:

6b. Because, the ADVERSE ENVIRONMENTAL IMPACTS of the proposed “Pure Water Soquel Project” far exceeds the mitigated environmental impact of very cleaner LOCHQUIFOR source waters.

6c. Because, the LOCHQUIFOR SOLUTION PROVIDES much More Sanitary and Much Lower in Residual Chemical Contaminants Containing Water.

6d. The Pure Water Soquel Project is simply a human sewage recycling plan that will cost five (5) times more than Lochquifer; Pure Water Soquel will produce only about 40% as much water.

--- Thus, the Lochquifer is more than 12 times or 1,200% more financially and operationally favorable for the taxpayers, the water customers and rate payers.

7a. Why is Soquel Creek Water District backing a drinking water resource plan to use partially-safe recycled sewage — instead of the LOCHQUIFER plan that will use abundant river and stream water— to save the region about $300 Million (approximately $10,000 per household and family)?
7b. LOCHQUIFER is also better environmentally, partly because it will consume about 83% less energy per gallon of water produced for aquifer recharging.

7c. Also, LOCHQUIFER promises to recharge the aquifer much sooner, create a huge underground store of water, make wells immune to ocean saline poisoning.

7d. With LOCHQUIFER our entire region may be "drought-proof" in only about 3 years.

8a. So why is the SCWD advocating to waste such a large amount eg., $183,000,000 + of the voters' and customers’ money—to build sewage recycling facilities;

—that will obtain far less water and much less sanitary water than both “River Water Transfers” and “North Coast Stream Rights Transfers” at 600 million annual gallons are both available to provide?

9a. Calling it “PURE WATER ANYTHING” is a Fraudulent Misrepresentation and is a fraud in itself BY ITS PROPONENTS.

9b. —Because, it does NOT yield Fully Pure Water, Nor Purified Water and Certainly NOT Water Free of All Pollutants, Effluents, Chemicals, Microbials, and Cancer Causing Chemical Residues, etc.

10a. The LOCHQUIFER Solution or its equivalent will happen in the future, perhaps not too distant in Santa Cruz County, California.

10b. Thus, to fund and build the “Pure Water Soquel Project” as now proposed carries the obvious substantial risks — that those hugely expensive facilities will ultimately just sit idle, due to overwhelmingly stiff competition from the forthcoming to that to the LOCHQUIFER Solution, etc.

11a. If Soquel Creek Water District would, simply offer to pay the $27Million cost of the LOCHQUIFER in exchange for prompt implementation, the SCWD would and will save their Customers and
Rate Payers between $183 Million and $300 Million in capital, operating, and finance costs, etc.

11b. Whereupon the massive new LOCHQUIFER water source would cost Santa Cruz City NOTHING; except for some refurbishments, which the City is planning to do anyway.

11c. LOCHQUIFER fundamentally only requires widening two existing pipelines and installing a well.

12a. The better alternative regional ONLY REAL SOLUTION will be a fully informed strategic approach of regional collaboration and consolidation of regional water resources.

12b. I am reluctantly now of the well-informed opinion that: The California State Water Authority or its equivalent in Sacramento or a Federal Government Trustee ---should be petitioned to immediately take-over and consolidate all the numerous regional redundant and wasteful water boards and resources, etc.

12c. Such that the very feasible LOCHQUIFER Solution with all its many cost savings and environmental-ecological benefits can be timely implemented soon.

12d. Also No other approach will address and can cure the institutional and bureaucratic dysfunctions that plague and have been demonstrated for many years by the SCWB and the City of Santa Cruz Water Department, et al.

12e. To stand-up to the corrupt behaving Santa Cruz County Supervisors---dominated by the Damn Developers --that the late Rick Meyers warned us about years ago!

13a. TO STOP AND REDUCE THE IRRESONSIBLE ACQUIFER OVER-DRAFTING COUNTY-WIDE AND REGIONAL-WIDE.
13b. TO STOP AND REDUCE THE ADVERSE TREND OF ALWAYS INCREASING COSTS AND CHARGES INFLECTED ON - IMPOSED UPON --- ALL THE WATER CUSTOMERS and RATE-PAYERs.

13c. To stop the $100 million to $300 million “Pure Water Soquel” wasteful spending now being proposed and pushed by the SCWB! And replace it with the only costing $23 Million LOCHQUIFER or equivalent.

Colonel Terry Maxwell
4940 East Walnut Street
Soquel, California 95073
3.49 Response to Comments from Colonel Terry (Michael) Maxwell (August 13, 2018) (Comment Letter I-36)

I-36-1 Please see the responses to comment letters O-2, O-3, O-6, O-7, and I-72 through I-79, and the response to the Draft EIR oral comments (Section 3.109) provided by Becky Steinbruner.

I-36-2 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-36-3 While the commenter requests analysis of all known alternatives in the Project EIR, CEQA requires consideration of a reasonable range of alternatives. As discussed in EIR Section 7.1, Introduction, an EIR need to consider every conceivable alternative, but must consider and discuss a reasonable range of feasible alternatives in a manner that will foster informed decision-making and public participation. The ‘rule of reason’ governs the selection and consideration of EIR alternatives, requiring that an EIR set forth only those alternatives necessary to permit a reasoned choice. The lead agency (the Soquel Creek Water District) is responsible for selecting a range of project alternatives to be examined and for disclosing its rationale for choosing the alternatives.

EIR Section 7.2 describes the process of developing a reasonable range of Project alternatives for analysis in the EIR. Consistent with CEQA, the approach to alternatives selection for this EIR focused on identifying alternatives that: (1) could meet most of the basic objectives of the project while reducing one or more of its significant impacts, (2) could foster informed decision-making and public participation, and (3) could be feasibly implemented. CEQA Guidelines Section 15364 defines “feasible” as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” CEQA Guidelines Section 15126.6(f)(1) states that “the factors that may be taken into account when addressing the potential feasibility of alternatives include site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent).” The process of developing a reasonable range of Project alternatives in this EIR included consideration of the following:

- Project Objectives, which are included in Chapter 3, Project Description, and restated below in Section 7.2.1, Project Objectives.
- Significant Impacts of the Project, which are described in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures and Chapter 5, Cumulative Impacts, and
summarized below in Section 7.2.2, *Significant Environmental Impacts*. The consideration of impacts includes both significant impacts that could be mitigated to less than significant levels and impacts that would remain significant and unavoidable, with mitigation.

- Types of alternatives to the Project, including:
  - Engineering and locational alternatives. Project planning and engineering feasibility included consideration of a number of additional site locations and treatment technologies. This chapter considers whether other engineering and locational alternatives could constitute potentially feasible alternatives to this Project.
  - Alternative water supplies. The Pure Water Soquel Project is one of the water supply elements of the District’s Community Water Plan (see Section 2.2.2, *Community Water Plan*). The system-wide elements of that plan include water conservation, protective groundwater management, and additional water supply elements – Pure Water Soquel, river water transfers with the City of Santa Cruz, desalination from Moss Landing, and stormwater capture. The water conservation and protective groundwater management elements of the Community Water Plan are underway, while the additional water supply elements are each in separate planning phases, as described in Section 2.2.2. While each element of the Community Water Plan is underway separately, this chapter considers whether an element of the plan or a variation of a plan concept could also qualify as a potentially feasible CEQA alternative to this Project.
  - Public and agency scoping comments, and other input received. The District received a range of suggestions during the EIR scoping period. These included alternative AWPF sites, such as rural, non-residential, and less-populated areas, among others; alternative water supplies, such as atmospheric extraction, excess water from the City of Santa Cruz, Nearly Lagoon, Loch Lomond Reservoir, grey water, rain water, and stormwater, among others; and alternative water conveyance facilities, such as rail car transport of source water from SC WWTF to treatment site location. This chapter considers whether any recommendations received during the scoping process (where they might be different than the concepts described above) could qualify as a potentially feasible CEQA alternative to this Project.

From that process, a reasonable range of alternatives that would meet most project’s basic objectives, would reduce one or more significant impacts of the Project, and were found to be feasible was defined and are described in Section 7.3, *Analysis of CEQA Alternatives*. However, some alternatives were eliminated from consideration based on their inability to meet most of the Project’s basic objectives, their infeasibility, and/or their inability to reduce the project’s environmental impacts. These alternatives and the reason(s) they were eliminated from further consideration are described in detail in Section 7.5, *Alternatives Considered, but Rejected from Further Analysis*.

Please see the response to comment letter O-2, which addresses the general comments regarding long-term water transfers asserted here.
While suspension of additional water service to new customers would avoid additional/new water demands within the District; it would not achieve a water use reduction or supplemental water supply that would be required to meet the Project objective to replenish the basin to prevent further seawater intrusion and develop a sustainable water supply, or diversify the District’s water supply portfolio and enhance resiliency.

I-36-5 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-36-6 See the response to comment I-36-4.

I-36-7 Please refer to response to comment I-19-1 which addresses generally the proposed treatment system and its effectiveness at removing chemicals and other undesirable elements from the source water prior to use for aquifer replenishment.

I-36-8 See the response to comment I-36-4.

I-36-9 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.
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From: Monica McGuire <monica.healingcoach@gmail.com>
Sent: Wednesday, August 1, 2018 6:29 PM
To: Melanie Mow Schumacher <MelanieS@soquelcreekwater.org>
Subject: Please put onto your website the comment form you said, last night, is required for people to comment on the Draft EIR

Dear Soquel Creek Water District Employees, Board members, etc.,

I just looked at https://www.soquelcreekwater.org/news/latest-news/soquel-creek-water-district-releases-draft-environmental-impact-report-proposed and saw several issues that are as unsettling as the misleading title for last night, calling it a Public-Community Meeting. On the only website page I could see easily:

1. You don’t include the comment form that was handed out last night with warnings that only that form will be accepted. Please clarify if that information was wrong, or make that form easy to get, fill out, and email as needed

2. The official "45 days to respond" needs to be extended to the
maximum time of 60 days for response at the very least, as requested by another community member.

3. That webpage is marked "Posted on June 29th, 2018. For Immediate Release” is further evidence that the public keeps getting far too short a time to have access to information, and time to respond. Was there a different page during the first 4 weeks of the ticking clock? And if so, where is that / Is it still available?

4. I repeat my great disappointment at the format last night which lacked group/community meeting aspects - which attendees expected because of the title. And, the great need for discussion and transparency in such a huge expenditure EIR continues.

Please create an easy-to-see link for site visitors to see the presentation made, and post a link to the transcript of the event, including the overly-limited community input, in order to help people discern what to question and comment on.

Thank you and please let me know your responses to these items as soon as possible,
~Monica McGuire

Monica McGuire
831 465-1851  Landline

Please see me interviewed about Self-Healing Lifestyles:
https://www.youtube.com/watch?v=lqMRx_spFK1 on TranformationalMessengerTV
and
https://www.facebook.com/self.healing.lifestyles/?pnref=lhc
and
https://www.linkedin.com/in/monica-mcguire-6b57a313?trk=hp-identity-name
3.50 Response to Comments from Monica McGuire (August 1, 2018) (Comment Letter I-37)

I-37-1 CEQA Guidelines Section 15087(i) indicates that public hearings may be conducted on the environmental documents, either in separate proceedings or in conjunction with outer proceedings of the public agency. Public hearings are encouraged, but not required as an element of the CEQA process. If a public agency chooses to hold a public hearing on the environmental documents, there are no requirements regarding the format or content of a public hearing. Regarding the Draft EIR public meeting, and as indicated on the Notice of Availability for the Draft EIR and the District’s CEQA website for the project, a public meeting was held to receive public comments regarding the scope, content, and analysis provided in the Draft EIR. The meeting was described as a ‘public meeting’ and the format of the meeting described as including an open house with information stations, a short presentation, and a public comment period. It was also noted that public comments would be accepted orally, via court reporter, or in writing at the meeting. All District announcements regarding the availability of the Draft EIR for review and the public meeting identified the purpose and format of the meeting as described in the Notice of Availability. Further, the news release described in this comment refers to the public meeting as: Community members are also invited to attend and participate in a public meeting on the proposed Project, featuring an open house with information stations, short presentations, and opportunities for submitting comments either orally or in writing: Tuesday, July 31, 2018 – 6–8 pm Twin Lakes Church, Monschke Hall 2701 Cabrillo College Drive, Aptos.

I-37-2 The comment form made available during the July 31, 2018 public meeting is available on the District website (https://www.soquelcreekwater.org/PWS-CEQA); however, there was no statement made during the public meeting or otherwise that the form was the only method of submittal for written comment. Rather, the form was made available as an option, with all other formats of written comment also being acceptable. During the Draft EIR comment period, written comments were accepted via email, by mail, and hand delivery at the District headquarters. A drop off location was identified for submittal of written comments at the public meeting, but none were provided by members of the public.

I-37-3 Please see the response to comment I-4-1.

I-37-4 The referenced webpage (https://www.soquelcreekwater.org/news/latest-news/soquel-creek-water-district-releases-draft-environmental-impact-report-proposed) was posted on the District’s “Latest News” webpage on June 29, 2018, which was the first day of the 45-day Draft EIR review period. The “Latest News” announcement included a brief summary of the project and CEQA process, information about the Draft EIR comment period timeline, how comments could be submitted, and information about the public meeting. The announcement also included a link to the overall CEQA webpage (https://www.soquelcreekwater.org/PWS-CEQA), where the Draft EIR and other CEQA materials were available as of that date, and remain available.
I-37-5 Please see the response to comment I-37-3, above.

I-37-6 The District maintains a project website that includes information about the project; the CEQA process, and how interested parties can stay informed. The CEQA information page, found at https://www.soquelcreekwater.org/PWS-CEQA, includes the presentation and other materials from the July 31, 2018 public meeting. The transcript of the event is included in this Response to Comments document (see Section 3.109).
From: Monica McGuire <monica.healingcoach@gmail.com>
Sent: Friday, August 3, 2018 5:47 PM
To: Melanie Mow Schumacher <MelanieS@soquelcreekwater.org>
Subject: Re: Please put onto your website the comment form you said, last night, is required for people to comment on the Draft EIR

Thank you for your responses, Melanie.

I have reworded some of what I wrote that you didn’t respond to, thinking I might not have made myself clear. Can you please respond to (or forward as needed) these requests, too?

- Asking SqCWD to extend the official "45 days to respond" to the maximum time allowable (60 days), as requested by another community member.

- My great disappointment at the format of this latest "Public-Community Meeting," which lacked so many "group/community meeting" aspects. Many fellow attendees said they, too, expected more group discussion and interaction because of the title of the event. Please forward this note to future meeting planners, that more open discussion (and transparency about decision making) seems needed when huge expenditures are being made on behalf of the public, as this EIR intends (especially when the public will not have a vote in the matter).
- Also, please create an easy-to-see link for site visitors to see the presentation made, and post a link to the transcript of the event, including the overly-limited community input, in order to help people discern what to question and comment on.

Thank you,

~Monica

Monica McGuire
831 465-1851  Landline

Please see me interviewed about Self-Healing Lifestyles:
https://www.youtube.com/watch?v=lqMRx_spfKI on TransformationalMessengerTV
and
https://www.facebook.com/self.healing.lifestyles/?pnref=lhc
and
https://www.linkedin.com/in/monica-mcguire-6b57a313?trk=hp-identity-name
3.51 Response to Comments from Monica McGuire  
(August 3, 2018) (Comment Letter I-38)

I-38-1 Please see the response to comment I-4-1.
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Dear Soquel Creek District Staff and Board,

The confusion that several of us had 2 weeks ago (attending the public meeting) about the different addresses is clearly not solved. I, too, feel very concerned at more than the shortage of time to respond, and the shortage of answers to important questions so that we can feel confident that our responses will be accepted.

I agree that it seems you may not know about all the people who may have made requests that you extend the deadline, but to the wrong physical address. Most people I have spoken to didn’t know anything about all this, and the rest feel drastically under-informed.

There are still several reasons besides the above added discomfort, that make me renew my request for a deadline extension. The enormous SIZE of the Draft EIR, and shortness of time to attempt to respond to it, and only 2 weeks since you held a disappointing, answer-less public “comment meeting” (and no other), are still very good reasons for you to extend the deadline and alert far more people that they have something to comment ON.

The huge expenditures so far, plus the high costs still to come by your clear push for this EIR to become your full plan, those are good enough reason to take a better pause and allow the public to respond!

If nothing else, and in case this request is also denied, please tell me EXACTLY where people are able to bring written responses, and by what time, tomorrow.

Thank you,
~Monica McGuire

Monica McGuire
831 465-1851 Landline
Please see me interviewed about Self-Healing Lifestyles:
https://www.youtube.com/watch?v=lqMRx_spfKI on TransformationalMessengerTV
and
https://www.facebook.com/self.healing.lifestyles/?pnref=lhc
and
https://www.linkedin.com/in/monica-mcguire-6b57a313?trk=hp-entity-name

On Aug 12, 2018, at 12:28 AM, Becky Steinbruner
<ki6tkb@yahoo.com> wrote:

Dear Soquel Creek Water District Board and Staff,
I would like this communication made public on the next Board agenda but ask
for an immediate response from General Manager Ron Duncan.

With Mr. Zscheile's permission, I am forwarding you his message stating that
he was unable to hand-deliver his written request for more Public Comment time
on the Draft PureWater Soquel Project Draft EIR to the address that is provided
in the EIR, the Community Handbook and on the District website. When he
subsequently went to District Office, staff gave him very confusing information,
contradicting the information given in the draft EIR and on your District website.

I find it troubling that other citizens may have attempted to submit comments
and requests for more time to review the Draft EIR but were not able to do so
and did not have time nor the wherewithal to visit the District Office to enter
their letters there. This could be construed as a violation of CEQA guidelines by
the Lead Agency obstructing public comment.

PLEASE EXTEND THE PUBLIC COMMENT PERIOD AND CLARIFY FOR
THE PUBLIC HOW THOSE WHO PREFER TO HAND-DELIVER THEIR
LETTERS MAY DO SO.

I am concerned that the public is not being given accurate information that could
be viewed as the District's willful obstruction of public comment on the
PureWater Soquel Draft EIR.

I have asked twice since June 29 that the District extend the public comment
period but received no response. I asked to be notified of the District's decision
regarding extending the public comment period, but received no notification regarding the issue. I can only view this unresponsive attitude as arrogant disregard for the value of meaningful public input in the CEQA process regarding PureWater Soquel Project.

Mr. Duncan, I beseech you as the General Manager to extend the public comment period from the current minimal 45 days to the maximum of 60 days. Having organized and lead three public study sessions in an effort to assist and encourage public participation in the CEQA process for the District’s PureWater Soquel project, I assure you that the public is keenly interested in commenting effectively on the Draft EIR. However, the document and related issues are vast and complicated. The size of the document limits many like myself, with rudimentary computer systems, to rely on fitting in personal time to carefully examine the EIR during public library hours and thus effectively limits the amount of time any one individual can labor to understand the document information and relevance.

Please extend the Public Comment period. Please respond.
Sincerely,
Becky Steinbruner
831-685-2915

Show original message
On Friday, August 10, 2018 11:59 PM, Becky Steinbruner <ki6tkb@yahoo.com> wrote:

Hi, Dick,
Thank you for letting me know about this. The address on the template letter is the address given in both the Community Handbook and Draft EIR, as well as on the website. Here is the text of what is on the website as of today:

Posted on August 10th, 2018
In accordance with the provisions of the California Environmental Quality Act (CEQA), a Draft Environmental Impact Report (EIR) for the proposed Pure Water Soquel Project (Project) has been prepared. The Project is comprised of various facilities and pipelines, including: an advanced water purification system; pipelines for conveyance of source water, brine, and purified water; and groundwater recharge wells. The Project would involve the advanced purification of treated municipal wastewater for groundwater aquifer recharge, to help address critical overdraft conditions in the Santa Cruz Mid-County Groundwater Basin and to prevent further seawater intrusion. The Draft EIR is available for public review online at www.soquelcreekwater.org/purewatersoquel. See website for locations to view in person.
Request(s) for an extension of the Draft EIR comment period have been received and reviewed. The 45-day comment period remains June 29 through August 13, 2018. All comments must be postmarked or received via email by August 13, 2018 for consideration in the Final EIR.
Comments can be submitted via email to purewatersoquelceqa@esassoc.com or via mail to Pure Water Soquel Project CEQA, 4041 Soquel DR, STE A-501, Soquel, CA 95073 -3105.

For more information visit www.soquelcreekwater.org/purewatersoquel

With your permission, I would like to forward your message to Ron Duncan and other staff, as well as the Board of Directors. This makes me wonder if other letters being sent to the 4041 Soquel Drive address are even being received and
That the District staff at the Office had no knowledge of the 4041 address is troubling, to say the least.

Thanks again,
Becky
685-2915

On Friday, August 10, 2018 10:38 PM, Dick Zscheile <Dickz225@Comcast.net> wrote:

Becky:

After the Wednesday meeting you organized at the Aptos Library, I wrote a letter to Pure Water Soquel, using your letter’s address.

Tried to hand deliver it only to find there is no such address. I took it to the Soquel Creek Water District Office where they said it should be delivered there. They knew nothing of your address of 4041 Soquel Drive.

If other mail their letters to that address, they will miss the deadline of Monday, Aug 13th.

Maybe an email correction would be in order….

Dick Zscheile
3.52 Response to Comments from Monica McGuire (August 12, 2018) (Comment Letter I-39)

I-39-1 Please see the response to comment I-4-1.

I-39-2 Please see the response to comment I-37-2.

I-39-3 Please see the response to comment I-37-2.
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Overview of who I am and my views/inputs:

My main work is to advocate for people seeking healthier ways of living and healing from the multitudes of ailments that afflict our modern, badly-toxified society. I work to expand on the Health that people HAVE, but eliminating toxins and toxic inputs is an important part of regaining health. This goes for companies and organizations as well, and I see multiple ways that the SqCWD could benefit from a cleaning out of what is giving them (the district) a bad name.

1. **POOR IMPRESSION OF CARE AND OPENNESS ON THE PART OF THE Soquel Creek Water District (SqCWD) to ensure that ESA would create ways and time for the public to take in such copious material. We needed to have REAL access (EARLY ON) for learning, asking questions, AND getting answers along the way, plus adequate time to give our input.**

   The poor public impression of the SqCWD right now has been worsened by how ESA handled all this. We have worked hard to avail ourselves to learn and respond, and yet ESA worsened the impression of the SqCWD being more closed than open to us.

2. **HUMAN HEALTH and the Environmental effects ON OURSELVES, animal and plant life, and on our soil:**

   Having studied water (and human hydration) for 3 decades, and I work diligently to inform people of the HUMAN NEEDS for TRULY pure (and clear-of-chemicals) water. My Health and Healing Coach work is multi-faceted, but Hydration is a key need for more than 75% of adults and increasing numbers of children. Beyond our need to DRINK truly clean water, all water we bathe in and touch is entering our bodies, too. I feel shocked that the SqCWD staff and board are so cavalier about the obvious dangers from the multitudes of potential mistakes and disasters inherent in the chemically-treated but still inadequate nature of the plan proposed here.

3. **DANGERS vs. ELEGANCE and seeking to work MORE like Nature, not less:**

   So many chemical additions for treated wastewater systems (promoted by this Draft EIR (dEIR) still seem unnecessary in light of what I know. The system also looks overly costly, and fraught with all the complicated dangers it represents when compared to multiple other options that look under-evaluated.

4. **CONCERNS THAT WARNINGS ARE NOT HEEDED and COSTS are misrepresented:**

   The small size of our county (300,000) and fraction of those who are rate payers in the SqCWD, was WARNED as being too small for the scope of the treatment plan by the experts Soquel Creek hired to come speak (in Fall 2017), about their successes
Here is more detail on each of the topics above:

1. **POOR IMPRESSION OF CARE AND OPENNESS ON THE PART OF THE Soquel Creek Water District (SqCWD):**

   Among these disturbing choices and omissions, THIS EIR is FURTHER EVIDENCE of the SqCWD’S LESS-THAN-ADEQUATE INTERACTIONS with THE PUBLIC (from their customers to the rest of this county, also affected by their decisions).

   This is the AQUIFER for far more than the people who pay SqCWD bills, and it is SO very AFFECTED BY SqCWD, that I think you all owe it to the entire county to do more homework before embarking on what looks like "a choice already made" to adopt this wastewater system, speciously called, a "Pure Water" system. "Pure Water" has specific meaning in English, and this system as proposed in this EIR doesn’t fit the English definition.

   - Although I appreciate Bruce Daniels’ willingness to meet with me and other members of the public today ON the day of the shortest-allowable deadline to comment, my first comments are all on the lack of openness and interest I too-often see from SqCWD in what the public wants or asks for.

   - We, the paying public who finance the water district jobs, constituents of the elected Water Board Directors, could become much better allies to the staff and board if we felt listened to. Telling us that you are doing all you can is not helpful, because we are trying to help you see that OUR EXPERIENCE of the district is terribly negative, e.g.:

     a. RIGHT NOW the cold “NO,” (with no reasons given) to our multiple requests for more time to comment on the dEIR has further hurt SqCWD’s reputation. Although learning that it was ESA who chose to deny us, this became another reason to not trust what ESA is doing with the dEIR. (Please re-read my comments and requests in the Sentinel Letter to the Editor.)

     b. At Board meetings. I strongly dislike the feeling at board meetings, especially cutting off public who take time to attend, not answering or responding too much of the time, and misuse of the Brown Act interpretation as an excuse to do so.

     AND NOTE: The Central Water Board constituents and guests have far better experiences. I learned this by attending CWD meetings. Those staff and board members, as a group, are actively listening to what any visitors say and offer.

     c. I account for the challenges of needing to interact with the public about sometimes complicated information and processes, but this is not a new topic. I wonder why SqCWD chooses as they do in light of CWD’s superior choices, and Soquel’s countless historical lessons by predecessor, plus so many other successful models to choose from. That said, I also trust that most of the staff and board are
likely doing their best. I would add “most of the time,” but my impression is, rather, “...some of the time,” because of all I am writing here. I wish to see consistent care about the public. Instead, I am left to wonder about what the SqCWD staff intend, since they seemed to be part of the policies chosen at the July 31st meeting, for example.

d. The district has a poor reputation despite telling us they got a "transparency award" because the opposite impression fills the community. Add to that the many ways the EIR is flawed (as I learned from connecting with others like Rick Longinotti, Deb Wirkman, Jude Todd, Becky Steinbrunner, Scott McGilvray, and Karl Maret). We are all responding with technical, ethical, and procedural criticisms beyond this dEIR, including the years of process up till now. **What WILL ESA and the DISTRICT DO, **[now]**? Is there any hope for BETTER HONORING of THE TIME AND CARE we RESPONDERS (to the dEIR) HAVE GIVEN, NOW?**

e. Further lack of faith comes with hearing the huge price-tag ~ is $700,000 really what the dEIR cost?! For that cost, at least a shorter and more digestible REAL-JOURNALIST-STYLE-3RD-PARTY summary of the dEIR should have been created and mailed to every customer at the start of the comment period, with access to more, easily indexed layers online. The one given 2 weeks before the end of the 45 days was adding insult to injury. I find it "overly slick" and spun to make the project look inevitable, which is an awfully common tactic these days. Finally, with such high costs, a public vote would be fair, too. (Fat chance.)

f. The lack of printed Appendices at libraries seems highly suspect, as well. Most people won't venture to even skim through a 3-inch document, so even fewer attempt to print MORE off a CD were ever possible. I did my best but had to pick and choose details to consider. What a ridiculous notion to invite people to try to read 3-6 months worth of reading in 45 days… it is even too much to have asked the Board to read and digest, for such a high cost.

g. I could feel better about that if the dEIR included a fair and equal treatment (and pursuit) of the WSAC-recommended sooner and better use of Water Transfers. This may be the most egregious downfall of the dEIR. … with the disregard of the public in the planning. Why would the ESA company choose to run a sham event (the July 31st Public Comment Meeting) invited to comment or respond but limited to 3 minutes each, even when only 10 people spoke and an entire hour remained?

2. HUMAN HEALTH and our AFFECT ON OURSELVES and our environment:

The fact that ozone and other technology can remove some pernicious chemicals, but that they (or other combinations) can reappear in the dark underground aquifer is terrifying. It is entirely unacceptable that any number of mishaps (in technology OR just in patchy availability of the 24/7 electricity needed to keep it running) can poison our entire aquifer.
The fact that our skin can filter out some toxins, chemicals, and other pollutants better than our internal organs is why a number of us are surviving the toxic onslaught of too much technology already in most of our lives.

3. **DANGERS vs. ELEGANCE and seeking to work MORE like Nature, not less:**

I have watched too many highly questionable actions along with too many shut doors and windows ~ all of which prevent simple, elegant, low-cost use of Mother Nature ideas and examples.

When I hear Ron Duncan tout the ways Soquel Creek has studied the Danish systems, I wonder what he means compared to what was presented to me at the international water conferences in Heidelberg from 2007-2010. The PhD’s and water scientists I heard speak were excited about their high tech methods of testing for what was wrong, and what was needed, but most speakers harkened to what third-world countries have been forced to learn in order to sustain drinking water supplies.

Countless studies on water that have excited and helped countries the most were more often the simplest solutions: Ancient methods of Rainwater Harvesting and Storage are still the most efficacious, and least costly, but not addressed here.

Please see [https://www.ruivial.de](https://www.ruivial.de) to understand how Germany and Denmark are moving more toward simpler systems, not more complex and expensive ones. Also see [https://www.ruivial.de/decentralised-wastewater-treatment-literature-review/](https://www.ruivial.de/decentralised-wastewater-treatment-literature-review/)

I also find dishonesty in the dEIR by not fully addressing the EXTREMELY LOUD OPERATING SOUND problem with the R.O. systems. We learned that the San Jose plant takes care of that problem by having their similar R.O. system out in the middle of freeways, nowhere near homes or businesses.

Ron Duncan told us on 7/31/18 that we just have to deal with issues (or some such phrase) … and yet the draft and board are not clear in relaying this drawback.

- A full mile of added pipeline seems crazy, and rife with further dangers, too.

4. **CONCERNS THAT WARNINGS ARE NOT HEEDED and COSTS are misrepresented:**

a. The small size of our county (300,000) and fraction of those who are rate payers in the SqCWD, was a WARNING by the experts SqCWD brought to speak in Santa Cruz (in Fall 2017) about their successes with this technology in much larger counties.

b. I continue to feel horrified at the amounts of money that are bantered about, and passed off as partly paid by grants (some of which are actually loans),

3.53-4
with too little explanation of common sense answers to ratepayers. The natural filtration of soils, gravel, wood chips, and other natural materials point to the best filtration system: NATURE. I encourage ESA and all water district personnel to study the direction that experts in Denmark and Germany are going… to simpler systems.

c. Expensive systems tend to make people question (for good reason) the honesty of the political and/or bureaucratic processes that propose the expenses. Although I am a supporter of thinking outside the box, and looking at combination solutions, my interest stops when huge sums get borrowed that our children and grandchildren inherit. Again, I ask the SqCWD to see what the Central Water District did with a recent project. They finished their work ahead of time and way under budget. If they can do so well, Soquel can, too. **What was attempted to keep the dEIR costs reasonable?**

d. In reading what scientists and water experts have said about this dEIR looking incomplete, less scientific than desired, and entirely slanted to the ONE alternative, I trust the huge price tag even less. I also can see why MOST people become despondent about how high price tags for government and utility choices "look corrupt". This is not an accusation, but another request to ensure our questions get answered, and our criticisms get REAL responses.

e. The costs and needs for the Water Transfer alternative are misrepresented in addition to not enough information given about that option, showing prejudice to pay much more for something… and again looking like there is padding included.

Monica McGuire, 18-year Health and Healing Coach, Entrepreneur, Mother, Local Area Active Advocate, Mediation, Former P.R. and Corporate work in 21 years as a Santa Cruz county resident
And before in L.A.: Relational Database designer/co-creator and Operations Management, Customer and Technical Service Trainer and Manuals Writer in Steele Systems, Inc. whose clients included the L.A. Hyperion Water Treatment Plant and the Port of L.A.
B.A. Anthropology, Film, and Journalism at USC

**Monica McGuire**
831 465-1851 Landline
Please see me interviewed about Self-Healing Lifestyles:

https://www.youtube.com/watch?v=lqMRx_spfKQ on TransformationalMessengerTV

and

https://www.facebook.com/self.healing.lifestyles/?pnref=lhc

and

https://www.linkedin.com/in/monica-mcguire-6b57a313?trk=hp-identity-name
3.53 Response to Comments from Monica McGuire (August 13, 2018) (Comment Letter I-40)

I-40-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. However, see the response to comment I-4-1 regarding public distribution and availability of the Draft EIR. In addition, the District has maintained a public website (www.soquelcreekwater.org) and on that site there are dedicated webpages on its Community Water Plan and plan components, including its yearlong process on evaluating various water supply options that led to further evaluation of purified recycled water, water transfers and desalination (www.soquelcreekwater.org/node/169 and www.soquelcreekwater.org/node/23). The Community Water Plan pages have been published and updated regularly since 2014 and include a ‘stay informed’ section for community members to sign up for updates from the District. The website and email announcements provide information on meetings related to the Project, such as the three CEQA scoping meetings held on the Project, prior to preparation of the Draft EIR: www.soquelcreekwater.org/our-water/pure-water-soquel-groundwater-replenishment-and-seawater-intrusion-prevention-project.

I-40-2 The District is committed to providing the highest quality of drinking water to its customers. The Project would treat wastewater through an advanced treatment and purification process that would produce water that is likely of higher quality than tap water or water available for purchase in bottles. Contrary to the assertion that the water is chemically treated, it is not. The proposed treatment process uses filtration, reverse osmosis and ultraviolet light and advanced oxidation to destroy the chemicals and other contaminants; no chemicals are added to the water. The State of California requires all such projects treat, monitor, recharge, and distribute the recycled water in strict compliance with current regulations. The Project is designed to utilize wastewater that would otherwise flow to the ocean, to reduce seawater intrusion, and to protect the Purisima aquifer. The District is committed to developing an effective project and complying with all of California’s water reuse regulations.

I-40-3 This introductory comment is followed by more detailed comments and does not include specific comment about the EIR or any environmental issue related to the Project and so no response is required. This comment is noted.

I-40-4 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-40-5 Please see response to comment I-40-1.

I-40-6 Please see the response to comment I-40-2.

I-40-7 Please see the response to comment I-40-1.
I-40-8 Please see the response to comment I-40-1.

I-40-9 Please see the response to comment I-40-1.

I-40-10 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. However, it is noted that the District complies with the Brown Act, as required.

I-40-11 Please see the response to comment I-40-10.

I-40-12 Please see the response to comment I-40-1.

I-40-13 Please see the response to comment I-40-1.

I-40-14 Please see the responses to comments submitted by the commenters cited here.

I-40-15 Please see the response to comment I-40-1.

I-40-16 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. However, it is noted that CEQA does not require a separate summary document (other than the EIR Summary Chapter included in the EIR) and the Community Guide made available during the entire EIR review period, and was made available on the Project website at: https://www.soquelcreekwater.org/sites/default/files/documents/Advanced-Water-Purification/Draft_EIR/Soquel_Creek_DraftEIR-Community-Handbook_FINAL_06-29-2018_singlepage.pdf.

I-40-17 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-40-18 Please see the response to comment I-4-1.

I-40-19 Please see the response to comment letter O-2, which addresses the general comments regarding long-term water transfers asserted here. Please see the response to comment I-40-2 regarding the Draft EIR public meeting format.

I-40-20 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-40-21 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.
I-40-22  This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-40-23  Please see the response to I-93-1.

I-40-24  The working paper provided in a link by the commenter concerns raw wastewater collection and treatment. The Pure Water Soquel does not propose raw wastewater collection and treatment; thus, the paper appears to have no relevance to the Project. This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-40-25  EIR Impacts 4.13-3 and 4.13-5 consider the operational noise associated with the Project. As discussed in those impact discussions the primary noise source associated with Project operation would be the onsite pumps. The pumps at the AWPF sites would be fully enclosed and would operate during both daytime and nighttime hours, while the recharge well backwash and backwash tank pumps at the recharge well sites would be fully submerged in water and would only operate for three hours once every three months during daytime hours. This is unlike the Silicon Valley Advanced Water Purification Center, where operational pumps are outside the facility and not enclosed in a sound dampening structure.

The Project EIR analysis considers the operational noise levels of Project equipment, the types of enclosures that would be in place, the distance to the closest sensitive receptor, and existing ambient noise levels at those receptors. The analysis discloses the noise level associated with Project operation at those sensitive receptors and compares the level with both ambient noise levels and the standards and requirements of the local jurisdictions. As discussed in both impact discussions, the operational noise levels at all Project locations would not expose nearby sensitive receptors to noise levels that exceed local daytime or nighttime noise standards, or result in a substantial increase over existing ambient noise levels. Thus, the Project would have a less than significant operational noise impact.

I-40-26  The context of this comment is unclear, and as written, this comment does not appear to raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-40-27  EIR Chapter 3, Project Description, describes the various pipelines under consideration as part of the Project, along with the anticipated construction and operations requirements. The potential effects of pipeline construction and operation are addressed in EIR Chapter 4, Environmental Setting, Impacts, and Mitigation Measures. With respect to “dangers” generally, commenter is referred to Section 4.3, Air Quality, which addresses health risks; Section 4.7, Geology and Paleontology, which addresses seismic hazards; Section 4.9, Hazards and Hazardous Materials, which addresses hazardous materials exposure; and Section 4.10, Hydrology Resources - Surface Water,
which addresses tsunamis and flooding. Commenter is also referred to responses to comments L-1-8, L-4-9, and I-58-7 which also address pipelines and/or hazards.

I-40-28 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-40-29 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-40-30 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-40-31 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-40-32 While the commenter suggests the EIR appears incomplete and less scientific than desired; no specific comment is provided. This comment is noted.

I-40-33 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-40-34 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.
Dear Mr. Jaguer, Project Manager

Pine Water Project

This sounds like a ill-conceived project that could cause major damage to our area.

We have lived here for 38 years and I am shocked by the plan and the way it is being presented to us.

Charles Martin
P.O. Box 1206
San Jose, CA 95101
3.54 Response to Comments from Claire Medlane
(August 8, 2018) (Comment Letter I-41)

I-41-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.
From: mjr1911@aol.com
Sent: Wednesday, August 1, 2018 4:35 PM
To: purewatersoquelceqa
Subject: Draft EIR

I think that the proposed route from the City of Santa Cruz WWTP is a stupid idea. Plus it will cost a lot of money. Even the routes proposed do not make sense. Why did you not look at putting a recycle plant at either at the Nob Hill area or at Lode Street which is where all the sewerage goes to before being pumped to the city. It would be at least half the cost and benefit the people in this District instead of burdening us with higher rates to pay of the Bond or Grant.
I think the Board is off track with this proposal and most likely will never be built.
Michael @ Searidge Ct.
Sent from Mail for Windows 10
3.55 Response to Comments from Michael (no last name provided) (August 1, 2018) (Comment Letter I-42)

I-42-1 Please see EIR Section 7.5.2, which considers an AWPF with raw municipal wastewater, as suggested by the commenter. As discussed in Section 7.5.2, that alternative was eliminated from further evaluation because it would have increased environmental effects associated with construction and operation compared to the Project. Such a facility would need to be larger than the AWPF proposed using secondary treated effluent, due to the need to add primary and secondary treatment. Further, such a facility would result in greater noise, odor, and energy consumption impacts than the Project.
From: michael mora
Sent: Thursday, August 9, 2018 12:31 PM
To: purewatersoquelceqa
Subject: Pure Water Soquel Project CEQA

1. Given the concern by many responsible water quality and medical experts, I am concerned about the amount of pesticides, THMs, pharmaceuticals, hormone disrupters, nano particles, etc. that will pass the filtration step either by design or inadvertently and migrate into the Purisima Formation.

Of specific concern are Unit D Aquitard and Unit BC Aquifer listed in Draft EIR Table 4.10-1

How are contaminants like the ones I listed measured?:

- by personnel manually
  - On what schedule: hourly, daily, weekly; or
- by instruments specifically calibrated for individual contaminants?
  - What is the calibration schedule? How is it logged?

- What is the notification system if instrumented contaminants go out of the control band? Are personnel on call 24/7 to take corrective action?
- What are the Emergency electrical power sources for the 3 injection sites? Are they diesel, propane, natural gas, or gasoline fueled engines, fuel cells, or other?
- Re: 4.8.4 Impacts & Mitigation measures: Would the use of emergency generators bring the total annual recommended GHC emissions (recommended by the BAAQMD) over the ‘significance threshold’ of 1,100 metric tons CO 2 e per year? Uses being defined by: power outages based on historical experience plus routine required exercising of generators.

2. Alternative plans should be considered:

- use secondarily or tertiary treated water to be transported to parks, campuses, and percolation ponds.
- Steeply rising rate structure to discourage wasteful and non-essential uses. Provide rate incentives to eliminate lawns and plant low water use landscaping.
- Expand water waste monitor hiring like the one employed by City of Santa Cruz.
- Mandate irrigation of vineyards & roadway landscaping by treated waste water.
- Mandate all new housing have a water use plan and site ground water recharge measures.

Michael Mora
Trout Gulch Rd, Aptos, C: 650 248 1216
3.56 Response to Comments from Michael Mora (August 9, 2018) (Comment Letter I-43)

I-43-1 In response to the comments regarding whether contaminants would pass through the advanced treatment system, please refer to EIR Section 4.10, Hydrology Resources – Groundwater (Impact 4.10-3) and responses to comments I-83-9, I-26-2, I-21-2, I-33-5, and I-77-1. Regarding whether contaminants would enter the Purisima aquifer after the water has been through the advanced purification process, please see EIR Impact 4.10-3 and response to comments I-92-10, I-92-12, I-33-5 and I-19-1. With respect to the portion of the comment concerning specific monitoring equipment, monitoring schedules, equipment calibration, personnel schedules, and electric power generation at recharge well sites, these aspects of the Project would be determined during a subsequent design phase. This information is not pertinent to the adequacy of the EIR or relevant to the analysis of environmental impacts under CEQA. As described in Impact 4.10-3, and in responses to comments I-30-2, L-4-6, and L-4-7, the Project would be required to meet strict mandatory regulatory requirements for water quality monitoring and reporting, regardless of which technology is selected. Refer to responses to comments I-79-9 and I-83-4 regarding the project not requiring backup generators.

I-43-2 Regarding additional alternatives that could be considered, use of recycled water for direct landscape irrigation purposes could occur under the Project, when potential irrigation customers are identified. However, use of recycled water for irrigation purposes only would not meet the Project objectives regarding replenishment of the groundwater basin and prevention of further seawater intrusion.

EIR Section 7.5, Alternatives Considered but Rejected from Further Analysis, includes additional water conservation measures in lieu of a supplemental supply project but found that alternative to be infeasible as an alternative to the water supply that could be produced under the Project given historic reductions and current low use; and uncertainty that it could be sustainable to ration for an extensive time period.

Similarly, rate increases and site specific water use plans and onsite recharge would not provide an additional source of water supply that would be similar to the Project.
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Pure Water Soquel,

Please find attached a PDF with our comments about the Pure Water Soquel draft EIR.

We ask that you pay close attending to these comments as we are the neighbors most directly affected not only by the West Annex site, but by potentially illegal dust from the gravel operation at the Soquel Creek Water District’s maintaince yard behind their headquarters building.

Jeff Stalling, Jim Winters and Mary Winters - 2771 Gary Drive, Soquel
Bill and Ann Mork - 2776 Gary Drive, Soquel
To: Soquel Creek Water District
    Board of Directors
    Pure Water Soquel Project
    Staff (Ron Duncan, Melanie Mow Schumacher, Taj Dufor)

CC: John Leopold, Santa Cruz County Supervisor
    Jessica York, The Santa Cruz Sentinel
    Kara Meyberg Guzman, Managing Editor, The Santa Cruz Sentinel
    Jacob Pierce, News Editor, Good Times Magazine

From: Bill and Ann Mork of 2776 Gary Drive, Soquel
    Mary Winters and Jim Winters and Jeff Stallings of 2771 Gary Drive, Soquel

Date: August 6, 2018

Subject: Comments in response to the Pure Water Soquel Draft EIR

About the Commenters
- Bill and Ann Mork’s home at the end of the Gary Drive cul-de-sac is directly adjacent to Soquel Creek Water District’s headquarters and maintenance yard. The Morks purchased their home July 1967, four years before Soquel Creek Water District broke ground on their headquarters building at 5180 Soquel Drive.

- Mary and Jim Winters and Jeff Stallings’s home is also at the end of the Gary Drive cul-de-sac, directly adjacent to both Soquel Creek Water District’s headquarters/maintenance yard and the proposed Pure Water Soquel site at 2850 Capitola Avenue (referred to as the “West Annex” by SqCWD and in the remainder of this document.)

Summary
We feel strongly that the Pure Water Soquel project is ill-suited to our residential neighborhood and should be constructed at either the Chanticleer site or the Santa Cruz Waste Water Treatment Facility, both of which are already zoned for industrial use.

Further, long-term and ongoing environmental impacts (noise/dust) exist at the current maintenance facility and we feel that these operations should be relocated to a non-residential-adjacent property, with a 12-foot wall built to contain any remaining operations.

However, we understand the need to address future water needs of the area and support the Pure Water Soquel project being constructed in one of the two other (industrial) sites included in the draft EIR.
The Soquel Creek Water District headquarters and maintenance yard

As documented in the publication “The History of the Soquel Creek Water District, 1961-1988” by Sandy Lydon at the Department of History, Cabrillo College, construction for the current headquarters building was started in February 1971, with the first board of directors meeting held in the new building on November 3, 1971. To reiterate: By this time, the Morks had lived in their home (across what was then an empty lot) for over four years.

During the intervening decades, Soquel Creek Water District’s headquarters expanded (“mission creep”) into a full-fledged maintenance facility, far more industrial, loud and dirty than any other business, public or private, in the area. It is our contention that the nature of the maintenance yard never suited this location and should be relocated as part of the Pure Water Soquel project.

Of particular concern are the gravel and steel plate operations. Bill Mork (94 and in home hospice) reports that when large trucks fill the gravel container (about 20 yards from the Mork’s bedrooms) or District staff remove gravel from the container, fine dust particles settle in the area around their home, and the sound is so jarring that “I about jump out of my chair every time.”

We want to know if an EIR was ever completed for the District’s maintenance yard and if the Ongoing Operations and Maintenance Plan allows for the fine particulates that settle over our homes during the use of the gravel operation, or for the noise created both by the gravel operation and the steel plate operation (less than 20 yards from the Winters/Stallings home.)

If an EIR was completed for the maintenance yard, or if the Ongoing Operations and Maintenance Plan allows for releasing fine particulates (gravel operation) and loud noises (gravel and steel plate operations), we would like to obtain copies.

The Sea Water Intrusion “Emergency”

Also documented Sandy Lydon’s “History of the Soquel Creek Water District, 1961-1988”, the District was made aware of sea water intrusion by USGS geologist Ken Muir in December of 1978, nearly 40 years ago.

If this is now an emergency, it is one of the District’s making, due to deferred maintenance, mismanagement and neglect. Therefore, to declare that this “emergency” is so dire that the district can override the residential land use designation for the West Annex property is, at best, disingenuous, if not legally questionable.

We also question why the District proceeded with purchasing the West Annex property in August 2016 for $2 million (more than double its worth, according to Zillow and Trulia) without having first completed the draft EIR to select the best location. All indications are that the district chose this site for Pure Water Soquel and has contorted and skewed “facts” to fit this conclusion.
The West Annex is surrounded by the homes of citizens in their 60s, 70s, 80s and 90s, people who are at home during the day and who would be seriously and adversely affected by a three-year industrial construction project.

The Chanticleer Site: A much better option
We have taken multiple trips to the Chanticleer site and find it to be far better suited than the West Annex for Pure Water Soquel:

- The site at Chanticleer Avenue and Soquel Avenue is already industrial, surrounded by warehouses, a car repair shop, a window installation company, and Highway 1 rather than the homes of citizens in their 60s, 70s, 80s and 90s.
- While there is one residential home within view of the site, no components of Pure Water Soquel would need to be located anywhere near this residence.
- In contrast, plans for Pure Water Soquel at the West Annex site specify buildings and parking lots just a few yards from our bedrooms, including chemical storage, lab space, back hoe and dump truck parking. This layout is utterly unacceptable, especially in light of the noise and dust emanating from the current maintenance facility.
- Entrances and exits to Highway 1, both northbound and southbound, are less than half mile away from the Chanticleer site. This proximity will be key both during construction and for on-going operations.

The West Annex Site
We will do everything we can to stop Pure Water Soquel from being constructed in at the West Annex site in our residential neighborhood, including taking legal action to delay and halt the project.

We are aware that the nature of elections for the Soquel Creek Water District’s board almost certainly precludes any of the current directors from losing their seats, and that they have, by all indications, already settled on the West Annex Site for Pure Water Soquel, if only to justify the $2 million expenditure for the parcel.

This being the case, if and when plans are drawn up for the site, we demand that it be reconfigured to locate the chemical storage, lab space, back hoe and dump truck and car parking along Soquel Avenue at the front of the site rather than directly adjacent to our homes at the rear of the site. We also demand that a 12-foot wall replace the inadequate rusted chain link fencing that currently separates our homes from these SqCWD properties.

Contact Information
Bill and Ann Mork (831) 331-5182
Jim Winters (415) 786-7893 jim@jimwinters.com
Mary Winters (831) 462-1049 wintersmary39@gmail.com
Jeff Stallings (831) 471-8257 jeff@jeffstallings.net
This response to Soquel Creek Water District’s Draft EIR for Pure Water Soquel was written, reviewed and submitted by:

Bill Mork  
7-30-18

Ann Mork  
30 July 2018

Mary Winters  
August 2, 2018

Ann Winters  
3/2/2018

Jeff Stallings  
8/6/2018
3.57 Response to Comments from Bill and Ann Mork, Jeff Stalling, Jim Winters, Mary Winters (August 9, 2018) (Comment Letter I-44)

I-44-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-44-2 The purpose of an EIR is to disclose the potential physical environmental changes that could result from implementation of a project. The changes are evaluated relative to the conditions that exist at the time the project is proposed. This is referred to as the baseline condition. Accordingly, to the extent that District operational activities affect baseline conditions, they are addressed in this EIR. for example, Section 4.13, Noise and Vibration describes the existing noise environment at each of the Project sites, including the West Annex site. Similarly, Section 4.3, Air Quality, characterizes existing pollutant concentrations in the project area. However, it should be noted that the baseline condition is only considered insofar as it supports the analysis of a potential Project impact. The EIR does not consider potential effects of baseline conditions independent of the Project or an alternative to the Project. Accordingly, such impact considerations, including whether prior environmental documents were completed for current operating conditions, are beyond the scope of this EIR. However, for informational purposes it is noted that the original headquarters buildings was built according to plans that were approved and permitted by the County of Santa Cruz in 1971. The plans included an office building, shop building and a maintenance and storage yard that abutted Gary Drive. In a letter written in 1969 by the residents of Gary Drive, they stated they welcomed the facility at this location because it would eliminate the possibility of Gary Drive being extended and made a through street. In addition, they stated the current zoning of the property was for a two story building containing 50 apartments and that the Water District Headquarters and Corporation Yard was preferred over residential housing. All three buildings added after the original construction have been permitted by the County.

I-44-3 As discussed in EIR Chapter 2 (page 2-3), the State of California has classified the Santa Cruz Mid-County Groundwater Basin as being in a condition of critical overdraft. As also discussed in EIR Chapter 2 (page 2-1), under the Sustainable Groundwater Management Act (signed into law in 2014), the District is obligated to take actions to reduce net groundwater withdrawals to levels that would facilitate achievement of sustainable groundwater levels by 2040. The land use designations and allowable uses at the various project sites are discussed in EIR Section 4.12, Land Use and Recreation. As discussed in Section 4.12.3, Regulatory Framework, California Government Code Section 53091 (d) and (e) provides that facilities for the production, generation, storage, treatment, and transmission of water supplies are exempt from local (i.e., city and county) building and zoning ordinances. The facilities evaluated in the EIR all relate exclusively to the production, generation, treatment, and transmission
of water and are, therefore, legally exempt from Santa Cruz County, City of Santa Cruz, and City of Capitola building and zoning ordinances. Nevertheless, the EIR considers Project compatibility with underlying zoning. As indicated in Table 4.12-1, and as correctly noted by the commenter, the Headquarters-West Annex site has an R-1 (single-family residential) zoning designation. However, contrary to commenter’s assertion, the Project would not require an “…override [of] the residential land use designation for the West Annex property…”. As discussed on page 4.12-8 of the EIR, the County’s zoning regulations (Chapter 13.10) identify public utility facilities as allowable uses with the zoning classifications of the County sites for which Project components are proposed (including the Headquarters-West Annex site) with a use permit, unless exempt by federal or state law. And so while the Project would not be required to comply with the existing zoning, the proposed advanced water purification facility fits within the definition of Public Utility Facility, and therefore is allowed within the R-1 zoning district.

While the cost and basis of the District’s acquisition of the Headquarters-West Annex property is beyond the scope of this EIR, for commenter’s benefit, it is noted that the District did conduct CEQA reviews in 2015 and 2016 in association with its purchase of the subject property. Specifically, the District prepared Initial Study/Negative Declarations in association with the purchase of properties described as Assessor Parcel Numbers 030-241-22 and 030-241-20 (State Clearinghouse Numbers 2015082032 and 2016042082).

I-44-4 The potential environmental effects of construction at the Headquarters-West Annex site are disclosed in EIR Chapter 4, Environmental Setting, Impacts, and Mitigation Measures. Also, please see the response to comment I-17-2 regarding EIR analysis of traffic, noise, and light impacts, and response to comment I-46-2 regarding EIR analysis of air emissions.

I-44-5 Please see the response to comment O-5-2, regarding the analysis of siting of the advanced water purification facility at one of three locations, the Santa Cruz Wastewater Treatment Facility, Chanticleer Avenue site, or Headquarters-West Annex site, all of which were analyzed at an equal level of detail in the EIR.

I-44-6 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-44-7 Please see the response to comment O-5-2, regarding the analysis of siting of the advanced water purification facility at one of three locations, the Santa Cruz Wastewater Treatment Facility, Chanticleer Avenue site, or Headquarters-West Annex site, all of which were analyzed at an equal level of detail in the EIR.

Regarding the proposed site layout for the Headquarters-West Annex site, please see EIR Chapter 3, Project Description and Figure 3-7 in particular which shows the siting for chemical storage and treatment facilities at the northern portion of the site, close to
Soquel Drive and the existing District Headquarters, with laboratory, storage, and parking located closer to the southern end of the site, with a undeveloped buffer area between the proposed facility and adjacent properties to the south and west. The site would also include a 900 foot long, 10-foot-tall concrete wall along the southern and eastern (partial) boundary of the Headquarters-West Annex Site (see EIR Table 3-2).
From: beachhousemail@aol.com
Sent: Monday, August 13, 2018 11:27 AM
To: purewatersoquelceqa
Subject: Water

Please please....put the Pure Water project someplace other than backing up to Gary Drive, Soquel.....I am a 79 yr. old owner of my home at 2645 Gary Dr. and take great pride in my home, as a shut in due to disability, PLEASE do this somewhere else, I have owned this home for 34 years, my Grandparents were the original owners. Thanking you in advance for moving else where. Judy Morton

Sent from my iPad
3.58 Response to Comments from Judy Morton (August 13, 2018) (Comment Letter I-45)

I-45-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.
To: Bruce Daniels,  
Tom LaHue, Carla Christensen,  
Bruce Jaffe and Rachél Lather  

[***Please see, attached to this email, the EIR map of the West Annex Site, which is located so close to my home that the map includes my parcel, which I have circled.]

My opposition to building a water treatment plant on the West Annex Site, in the midst of our Soquel residential neighborhood, has been on record since 2017. I attended many of your biweekly board meetings and voiced my opposition at the microphone. I submitted my verbal statement to the recorder who you made available to us during your public meeting last year.

The findings in the EIR have not altered my adamant opposition to any industrialized use of the two residential lots you purchased here, contiguous to your administrative offices.

Please, put those vacant lots to their highest and best use, which would either be the construction of much-needed affordable housing units, or the installation of a nicely designed community park! Think of the goodwill either of those uses would provide, as improvements to our community.

The EIR findings confirm that the only reasonable, humane, responsible choice is to build the Pure Water Soquel treatment plant on the commercial Chanticleer site, in combination with the industrial SCWD site.

Your constituents are human beings who deserve to continue the peaceful enjoyment of their homes. We have sacrificed greatly to earn the privilege of living here.

I am 72 years old, and my health conditions related to heart, lungs and neurology would become negatively impacted, should you make the decision to build the treatment plant here.

I stand with Jeff Stallings and Ann Mork, the Gary Drive residents who spoke to you of their opposition during the public comment period at your July 17th Board meeting. I stand with all of my neighbors who have voiced their own reasons for opposing the presence of hazardous chemicals and industrial components being used and stored here.

Elders who live near the West Annex Site would be the most impacted by construction noise and dust. This July 7, 2018 article is to be taken
seriously.  

NOISE ISN’T JUST ANNOYING — IT CAN KILL


PTSD is triggered by the kinds of invasive noise that would penetrate our neighborhood during the lengthy construction period, regardless of the walls you might build. No walls will suffice to contain the particulates and the dust that will infiltrate our homes.

As you know, the Trump administration has rolled back our national environmental protections, which puts our ecosystems and our health at great risk. He is being universally condemned for doing so.

I implore you, do not align yourselves with elected officials who ignore the wellbeing of the people whose best interests they have promised to serve.

Thank you for your consideration.

Sincerely,
Marcia Noren
2755 Rosedale Avenue
Soquel, CA 95073
831-332-2959
Figure 3-7
3.59 Response to Comments from Marcia Noren (August 9, 2018) (Comment Letter I-46)

I-46-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted. Further; development of residential housing or recreation/parks is not within the purview of the Soquel Creek Water District.

I-46-2 Please see the response to comment O-5-2, regarding the analysis of siting of the advanced water purification facility at one of three locations, the Santa Cruz Wastewater Treatment Facility, Chanticleer Avenue site, or Headquarters-West Annex site, all of which were analyzed at an equal level of detail in the EIR. See also the response to comment I-17-2 regarding EIR analysis of noise impacts. As discussed in EIR Impact 4.9-1, the Project would not create a significant hazard to the public or environment through the routine transport, use, disposal, or accidental release of hazardous materials. Construction and operational activities would be required to comply with numerous hazardous materials and stormwater regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials into the environment.

As discussed in EIR Impact 4.3-1, construction emission activities could generate emissions of criteria air pollutants that exceed maximum daily emissions significance thresholds for nitrogen oxides, which would be reduced to less than significant levels through construction emissions reductions measures included in Mitigation Measures 4.3-1a and 4.3-1b. However, releases of particulate matter, or dust, would be beneath emissions significance thresholds. As discussed in EIR Impact, the Project would not generate a long-term increase of criteria pollutant emissions during operations. The Project would not include any new or modified stationary sources of air pollutants. The only daily emission sources that would be associated with the Project would be limited to on-road vehicles. Emissions associated with vehicle rips would be negligible and would not exceed significance thresholds.

I-46-3 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.
August 12, 2018

To: Pure Water Soquel Project CEQA
   4041 Soquel Dr.; Ste A-501
   Soquel CA 95073-3105
   Via email: purewatersoquelceqa@esassoc.com


Dear Pure Water Soquel Project CEQA,

This is in response to the DRAFT EIR dated June 29, 2018, which calls for AWPFs for Secondary, Tertiary and/or Advanced Water Purification Treatment Facilities, which would use “Waste Water Effluent” for their ‘source water’ (vs the other sources: River Water or Salt Water).

We are not opposed to the Wastewater Treatment Project so long as the Project facilities are properly located on appropriate industrial/commercially zoned parcels.

Over these decades our Soquel Community has, through careful planning and commitment, protected our cherished standards for quality of life, health and environment for our Soquel Residential Neighborhoods and which prevented us from “becoming Southern California, Orange County” etc. (which has had lower standards and are now still suffering the consequences).

We oppose ANY of the proposed Industrial Waste Water Treatment Facilities / AWPFs being located at the “West Annex Sites” residentially zoned LOCATION. Substantial, significant NEGATIVE consequences to our health, our environment and our quality of life would result from the inappropriate use of this residentially zoned LOCATION. Here are some of the many serious issues and risks that have not been adequately addressed:

- **The toxic accidental releases** will pollute and contaminate the neighborhood and Soquel Creek due to the inevitable failure of the Plant: earthquakes, flooding, malfunctions, backflows, overflows, pumps and lines.
- **The hazardous materials** uses, including: handling and storage of and ongoing use/processing of chemicals, both above and below ground
- **The pollution:** water (water supply and Soquel Creek), noise, lighting and air
- **The incomplete removal of toxic contaminants:** secondarily treated water is not “pure” or “clean” because it does not guarantee complete removal of bacteria, viruses, unregulated/unmonitored constituents (such as pharmaceuticals, consumer chemicals, coatings, flame retardants, personal care products and others
- **The ground vibrations**
- **The negative impact on soil and geology** (above and below ground)
- **The safety concerns of high traffic artery:** with high volume of children, students, pedestrians, bicycles and autos
The Project is not in compliance with and is violation of: the General Plan, the Soquel Village Plan and the Sustainable Santa Cruz County Final Plan for our residentially zoned neighborhood.

The Violation of our Community Values through the permanent, negative impact on our quality of life, health and environment in our residentially zoned neighborhood.

The permanent, negative changes in the overall Neighborhood Aesthetics in our residentially zoned neighborhood.

The Landscaping which will take decades to grow sufficiently.

In short we oppose the industrialization of our Soquel Residential Neighborhood.

IN SUM: We are not opposed to the Wastewater Treatment Project so long as the Project facilities are properly located on industrial/commercially zoned parcels. The “West Annex Sites” need to be removed from further consideration for this Project AND a more appropriate Industrial/Commercial zoned location should be chosen instead, for all concerned.

We only seek to prevent the decisions being made by the District from devastating the health, the environment, the quality of life and the residential zoning standards that we cherish and seek to preserve in our Soquel Residential Neighborhoods.

Sincerely,

Jane Paradise
2810 Rosedale Ave.
Soquel CA 95073
3.60 Response to Comments from Jane Paradise (August 12, 2018; 2:49 PM) (Comment Letter I-47)

I-47-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-47-2 Please see the response to comment I-44-3 regarding the land use designation of the Headquarters-West Annex site. The potential impacts of developing an advanced water purification facility at the Headquarters-West Annex Site related to the aesthetic character of the neighborhood are addressed in Section 4.2, Aesthetics. Discussed in Impact 4.2-1, while the vacant project site would be fenced during the 24-month construction period, construction vehicles, materials, and equipment may be noticeable and unappealing visual features, as seen by motorists, bicyclists, and pedestrians traveling along Soquel Drive and Capitola Avenue. However, these areas are not scenic in nature and the Project site is an area of limited visual exposure. As explained further in Impact 4.2-1, and illustrated through visual simulations (Figures 4.2-8 and 4.2-9), following construction the building structural design and finishes would appear similar to existing commercial and residential structures in the vicinity. Thus, the visual character of the Project site, as seen from public vantage points to the north of the site, would be consistent with the existing visual character of the area. For these reasons, the EIR concludes the visual character and quality impact associated with development of an advanced water purification facility at the Headquarters-West Annex Site would be less than significant.

I-47-3 Please see the response to comment O-5-2, regarding the analysis of siting of the advanced water purification facility at one of three locations, the Santa Cruz Wastewater Treatment Facility, Chanticleer Avenue site, or Headquarters-West Annex site, all of which were analyzed at an equal level of detail in the EIR. Please also see the response to comment I-44-3 regarding the land use designation of the Headquarters-West Annex site.

I-47-4 Please refer to response to comment I-94-4 for an explanation of a Lead Agency’s responsibility with respect to determining whether an environmental impact may be significant, and the evidentiary basis upon which such determination must rely. The Commenter asserts there are several impacts which the EIR has not adequately addressed; however, no further explanation is provided as to how or why the analysis is inadequate. Nor is any evidence to support these assertions provided. Unfortunately, in the absence of such details, it is not possible to respond directly to the objects of the commenter’s concern. Nevertheless, for the commenter’s benefit, this response identifies areas of the EIR where subjects identified by the commenter as being inadequate are addressed. For a discussion of potential accidental releases of hazardous materials, please see EIR Section 4.9, Hazards and Hazardous materials and response to comment I-58-7. For a discussion of potential impacts of related to disruption of treatment processes due to natural disaster (e.g., earthquake, flooding), please see EIR Sections 4.10, Hydrology.
Resources - Groundwater, Section 4.11, Hydrology Resources - Surface Water, and response to comment I-30-2. For discussions potential impacts related to lighting, air, noise, and traffic, please see EIR Section 4.2, Aesthetics; Section 4.3, Air Quality; and Section 4.13, Noise and Vibration, and Section 4.15, Transportation. Also, please see the response to comment I-17-2 regarding EIR analysis of traffic, noise, and light impacts, and response to comment I-46-2 regarding EIR analysis of air emissions.

I-47-5 This conclusion statement was preceded by more detailed comments and does not include specific comment about the EIR or any environmental issue related to the Project and so no response is required. This comment is noted.
August 12, 2018

To: Pure Water Soquel Project CEQA
4041 Soquel Dr. Ste A-501
Soquel CA 95073-3105
Via email: purewatersoquelceqa@esassoc.org

RE: Comment to DRAFT EIR dtd 6/2018 for Pure Water Soquel Project

Dear Pure Water Soquel Project CEQA:

This Comment concerns the omission of appropriate steps and processes regarding the “AWPF-only Alternative Sites Evaluation” determination by the Soquel Creek Water District, a Public Agency, for the Pure Water Soquel Project, upon which the DRAFT EIR dated June 2018 for Pure Water Soquel Project is based.

Before making any decisions as to which “AWPF-only Alternative Sites” to move forward on, the District did not obtain a new “Revised Feasibility Study”. As they did in March 2016, the District should have hired an independent, professionally qualified engineering company with the depth of experience and expertise in Wastewater Treatment Facilities (vs Well Treatment) to find and evaluate “AWPF-only Alternative Sites”.

Instead, the Board directed the District Staff to produce a “Memo Re: AWPF-only Alternative Sites List”. Unfortunately, the District Staff is not qualified to produce this type of Report. They clearly do not have the expertise, training and experience with the nature (locating real estate, wastewater, planning, zoning) and scale ($60 - $100M) of this Wastewater Treatment Facilities Project. When the 3/7/17 “Memo” was presented, it clearly was superficial, included incorrect information, lacked essential details and depth. The Board agreed by saying the Memo did not give them sufficient information to make any decisions and for District Staff to come back with “Revised Memo”.

The District Staff then hired a “technical consultant” to help them produce a new AWPF-only Alternatives List. In less than 10 business days, they came out with this new 4/4/17 “Revised Memo”, which again was produced by the District Staff (not Brown & Caldwell as they claimed). This Revised Memo did include at least 4 appropriate Commercial/Industrial zoned locations. However, it did NOT include the all-important “Cost Analysis”, which was in the March 2016 Feasibility Study.

The “AWPF-only Alternative Sites Evaluation” being used for the Revised NOP dated June 2017 is in question because the District Board never voted or approved choosing these 3 Alternative Sites (from list of 24). The Board never gave the ‘Subcommittee” authority to decide which AWPF-only Alternative Sites to move forward on. The Board only instructed the Subcommittee to “Review and Evaluate” the Alternative Sites. Instead the “Subcommittee” decided on and moved forward on their choice for the 3 Alternative Sites WITHOUT the required vote/Approval of the District Board.

The District Board, a Public Agency, also denied the required public access and benefit to their positions, reasons and justifications for choosing a particular Alternative Site, including why they were not removing the inappropriate residentially zoned “West Annex Sites” location and instead replacing it with a more appropriate commercial/industrial zoned locations at S.
Rodeo Gulch or 41st Ave / Cory St.

The District Board, a Public Agency, never voted on, thereby never gave, their Approval for the current 3 AWPF-only Alternative Sites being used in DRAFT EIR dated June 2018. These were appropriate, essential steps and processes that were omitted throughout the ‘AWPF-only Alternative Sites Evaluation’ determination process.

Sincerely,

Jane

Jane Paradise
2810 Rosedale Ave.
Soquel CA 95073
Jane.paradise@comcast.net
3.61 Response to Comments from Jane Paradise
(August 12, 2018; 3:33 PM) (Comment Letter I-48)

I-48-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. However, it is noted that a final feasibility study was completed in November 2017 and is available on the District’s website at: https://www.soquelcreekwater.org/sites/default/files/documents/Reports/RecycledWaterFeasibilityStudy_FinalReport_01_3_18.pdf. Also, see the response to comment O-5-2, regarding the analysis of siting of the advanced water purification facility at one of three locations, the Santa Cruz Wastewater Treatment Facility, Chanticleer Avenue site, or Headquarters-West Annex site, all of which were analyzed at an equal level of detail in the EIR.
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Ms. Lora C. Parkhurst
115 Hazel Ct.
Soquel, CA 95073

PureWater Soquel Project CEQA
4041 Soquel Dr.
STE A-501
Soquel, CA 95073-3105
Pure Water Soquel Project CEQA
4041 Soquel Drive
STE A-501
Soquel, CA 95073
August 11, 2018

Pure Water Project EIR,

Residents in the Soquel Creek Water District are aware of the problem of water shortage and overdraft. We are not oblivious and do support solutions, knowing water conservation alone is not enough.

The Pure Water is a good plan, but building this operation in a residential neighborhood is not appropriate. It is appalling that it was even considered when this project originated, even though it’s proximity of the district office probably looked convenient at the time. This parcel of land should not have been purchased by the water district at great expense for this project.

I OBJECT TO USING THE WEST ANNEX SITE, zoned residential, for a water treatment/purification plant. Alternative sites exist that do not degrade our neighborhoods. The Chantcleer site is not in a neighborhood with children and elderly and is close to Highway I, making construction and operation easier.

I know the Board Members and Staff give care and expertise to our water supply now and for the future. But using the West Annex Site for an industrial project is misguided and unnecessary.

Sincerely,

Lora C. Parkhurst
115 Hazel Court
Soquel, CA 95073
3.62 Response to Comments from Lora C. Parkhurst (August 11, 2018) (Comment Letter I-49)

I-49-1 Please see the response to comment O-5-2, regarding the analysis of siting of the advanced water purification facility at one of three locations, the Santa Cruz Wastewater Treatment Facility, Chanticleer Avenue site, or Headquarters-West Annex site, all of which were analyzed at an equal level of detail in the EIR. Also see the response to comment I-44-3 regarding the land use designation of the Headquarters-West Annex site, and regarding purchase of the site by the District.
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Hello

I would again like to express my concern about any type or water plant so close to our homes. I live near the proposed site on Soquel near your offices. I understand the current water issues but placing a water treatment plant on our doorstep will have a permanent impact on our quality of life. I have expressed my concerns multiple times but I feel that I need to once again ask you to consider the full impact of your decision.

There is site proposed near the current Santa Cruz water treatment plant and I cannot imagine why you would not choose that location where the impact will be less to your customers. It just makes the most sense. If you need more office space then the Soquel offices could be expanded but please do not put a water treatment plant so near to where I live.

I have listed the multiple reasons why a plant at the Soquel location would negatively impact us previously and I am sure you are aware of our concerns so I will not again. I will just ask that you seriously consider your decision.

Sincerely, Teresa Parodi
3.63 Response to Comments from Teresa Parodi
(July 24, 2018) (Comment Letter I-50)

I-50-1 Please see the response to comment O-5-2, regarding the analysis of siting of the advanced water purification facility at one of three locations, the Santa Cruz Wastewater Treatment Facility, Chanticleer Avenue site, or Headquarters-West Annex site, all of which were analyzed at an equal level of detail in the EIR.
To the appropriate authorities:

I hereby request that the Pure Water Soquel CEQA EIR public comment period be extended to the maximum 60 days allowed by CEQA law. I find that a number of people including myself are simply unable to respond adequately to the EIR in the mere 45 days ending August 13, 2018. The EIR document and its appendices approach some 1000 pages, and the relevant documents which reveal confirmations, errors and omissions to said EIR constitute perhaps ten thousand pages more. The 45-day limit is particularly unreasonable in cases of omissions, where an intractably huge burden of proof may tend to fall on the public—to adequately prove the benefits, character, elements, feasibility, legal standing and/or costs, etc. of each alternative or concern omitted from the EIR.

Furthermore, there seems to be significant confusion on the parts of the public and the EIR staff and officials as to where to submit hand-carried public comments.

A 15-day extension may make a big difference in the veracity and completeness of the final EIR product.

Thank you for your consideration.

Jerome E. Paul, MSEE
3.64 Response to Comments from Jerome E. Paul, MSEE (August 12, 2018) (Comment Letter I-51)

I-51-1 Please see the response to comment I-4-1 regarding the EIR public comment period. This comment indicated that the EIR includes errors and omissions, but no further information is provided. Thus, this comment does not raise a specific concern that relates to physical impacts of the Project or to any environmental issue related to the Project that can be responded to. This comment is noted.
My comments on the CEQA Draft Environmental Impact Report (dEIR) pertaining to the Pure Water Soquel project are contained herein and attached hereto.

Please regard as being attached hereto and made a part hereof any comments submitted by any of these three other authors:
1. Rick Longinotti (who has been associated with Desal Alternatives and Santa Cruz Water Supply Advisory Committee);
2. the organization Water for Santa Cruz County (waterforsantacruz.com); and

The word "Lochquifer" is likely to come up in various people's comments. A one-page overview of Lochquifer is attached hereto, under the title, "Remarkable Regional Water Supply Solution". Links to quite a few much more comprehensive documents, which are also to be considered attached hereto and made a part hereof, can be found at waterforsantacruz.com/Lochquifer.

If my comment on any subject seems to lack context, definitions, detail, please refer to the relevant sections of the aforementioned documents and authors' comments.

Sincerely,

Jerome E. Paul, MSEE
831-457-0910
This submission includes its e-mail cover letter and all documents attached thereto.

The Draft EIR (dEIR) for the Pure Water Soquel Project concludes that the Project is the environmentally superior alternative among those that are analyzed in the dEIR. The conclusion results from:
A. Inadequate examination of alternatives to the Project
B. Inadequate analysis of energy use of the Project as compared to alternatives
C. Lack of clarity about system resiliency.
D. An inappropriate choice of lead agency for the Project, whose best competitors tend to be regional
E. Misconceptions about grants

A. Inadequate examination of alternatives to the Project
After exhaustive studies, the Santa Cruz City Council and Water Supply Advisory Committee have concluded unanimously that water transfers are the number one water supply alternative.

An example flyer is attached: “Remarkable Regional Water Supply Solution”, to give the basic outline of how some vastly superior alternatives might be achieved.

Examples of some important alternatives to the Project which have been inadequately analyzed by the dEIR.

<table>
<thead>
<tr>
<th>Tier</th>
<th>Tier name</th>
<th>Annual Transfer (Avg. mgy)</th>
<th>Annual Transfer (Avg. AFY)</th>
<th>Tier’s Added Capital Cost</th>
<th>Limiting Factor</th>
<th>How to get to next tier</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pilot test</td>
<td>100</td>
<td>307</td>
<td>~$0</td>
<td>Pilot contract terms, e.g., winter only, and if Loch is full</td>
<td>Free up pilot contract terms</td>
</tr>
<tr>
<td>2</td>
<td>Transfer in all seasons</td>
<td>240</td>
<td>737</td>
<td>~$0</td>
<td>Intertie is only 1.4 mgd</td>
<td>Expand potable intertie to 6 mgd</td>
</tr>
<tr>
<td>3</td>
<td>6 mgd potable intertie</td>
<td>673</td>
<td>2066</td>
<td>$12M</td>
<td>North Coast water draw</td>
<td>Expand water rights to tap S. L. River and Loch; add well at Felton; widen Felton-Loch pipeline. TBD: add a stage to GHWTP</td>
</tr>
<tr>
<td>4</td>
<td>Lochquifer-Sq</td>
<td>1100</td>
<td>3377</td>
<td>$25M+</td>
<td>SqCWD demand (all wells completely off)</td>
<td>Limited injection: Reverse the flow direction of idle production wells</td>
</tr>
<tr>
<td>5</td>
<td>Lochquifer-Sq with well reversals</td>
<td>1450</td>
<td>4452</td>
<td>$8M?</td>
<td>SqCWD demand + injection capacity</td>
<td></td>
</tr>
</tbody>
</table>

3.65-2
B. Inadequate analysis of energy use of the Project as compared to alternatives
Solar: it is a good idea, but it is not fair to include solar in one alternative but not in another. Also, it constitutes getting into the electric business, off the subject of water.

Renewable energy (i.e., from Monterey Bay utility):
- M. Bay is fancy paperwork, but does not reduce the amount of energy PWS uses.
- The District would still be building an energy hog;
- No Coal-fired plant would be de-commissioned because of PWS;
- Energy is fungible

C. Lack of clarity about system resiliency.
Idleness and underuse are bound to result from PWS, because water transfer alternative water is so much cheaper. Idleness deteriorates the RO membranes as well.

D. An inappropriate choice of lead agency for the Project, whose best competitors tend to be regional
The best solutions are regional i.e., Lochquifer. PWS kills the opportunity for a great regional solution, partly by impoverishing the small District, depriving the District of funds needed to participate in any further significant water projects.
Regional solution implies SqCWD is the wrong lead agency. The lead agency should be the County or a Joint Powers agency.

E. Misconceptions about grants
Grants: can be had for in-lieu water transfer alternatives also.
Grants still make taxpayers and rate-payers pay.
Remarkable Regional Water Supply Solution

- Santa Cruz gets a huge new 2.1 Billion Gallon water supply for FREE
- Soquel Creek Water District families & businesses save over $130M ($12,000 per family) from being added to their water bills; taxpayers not forced to fund grants
- Aquifers get refilled very cheaply throughout the middle half of Santa Cruz County
- Public & private wells get high water tables, save pumping costs, repel saline water
- The entire region becomes “drought-proof” within about 3 years
- Local fish extinctions stop; habitats flourish due to big, highly flexible supplies of cool, clean, deep water provided at the times, locations & elevations most needed
- No finance charges necessary. Buying Local. Huge economic benefits to the region.

The Lochquifer Alternative

How can these remarkable claims be made? Mostly by using existing facilities intelligently:

1. Santa Cruz’s Loch Lomond Reservoir isn’t being used much now, because it is being kept very full, as insurance against future drought. The Lochquifer Alternative frees up the Loch by shifting the drought insurance storage job to the local aquifers, which have many times more storage space than the Loch does, because they have been overdrawn by wells for decades.
2. The freed-up Loch would be used to hold massive amounts of new water harvested from the San Lorenzo River in the rainy season, when the flow is often so high that fish tend to avoid it.
3. Water from the Loch would be treated to a high potable standard as it is presently (at the existing Graham Hill Water Treatment Plant), and distributed, not just to Santa Cruz, but also to the Soquel Creek Water District and other places—and not just in the winter, but throughout the entire year. A modest treatment stage may be added in the interest of superior water quality.
4. Recipients of this potable water would shut down their wells, so when Mother Nature puts water into the aquifers every winter, her water stays there and the aquifers recharge.
5. Water from Loch Lomond would also be piped mostly downhill by gravity to do “dry times surface spreading” of water into the aquifers under the Scotts Valley-Felton-Lompico area. Major new water treatment facilities probably will not be required.
6. In critically dry years very little water would be taken from the river; instead the aforementioned wells would be robustly re-activated to provide potable water to the entire region.
7. Implementation mainly involves 4 projects: widen two existing pipelines, install a fish-friendly filtering well (“Ranney collector”), and make a joint application for extended water rights for all in the region (rather than continuing to let 93% of the river’s water just flow out to sea). Small additional pipelines would implement the dry-times surface spreading.

The $130 Million Dollar Letter: Soquel Creek Water District can save about $130M by abandoning their small but expensive, energy-squandering sewage-recycling scheme, and instead, offering to pay Santa Cruz to build Lochquifer, which would supply about 2.4 times more water at about 1/5th the capital cost, a 12x better value. Santa Cruz thus will get a huge new water source at absolutely no cost!

Save aquifers ● Save coastal wells ● Save fish ● Save energy ● Save time ● Buy local ● Save money ● Save a big area

For details and how to support the Lochquifer effort, visit Water for Santa Cruz County: waterforsantacruz.com/Lochquifer
3.65 Response to Comments from Jerome E. Paul, MSEE (August 13, 2018) (Comment Letter I-52)

I-52-1 Please see the responses to comment letters O-2, O-3, O-6, O-7, and I-72 through I-79, and the response to the Draft EIR oral comments provided by Becky Steinbruner.

I-52-2 The attached and linked materials have been reviewed in order to respond to the comments submitted by the commenter.

I-52-3 This introductory comment is followed by more detailed comments and does not include specific comment about the EIR or any environmental issue related to the Project and so no response is required. This comment is noted.

I-52-4 Please see the response to comment letter O-2, which addresses the general comments regarding long-term water transfers asserted here.

I-52-5 EIR Section 4.6 considers Project impacts on energy demand and conservation. As discussed in Impact 4.6-1, with regard to long-term operations, employee personal vehicles would consume an estimated 2,257 gallons of gasoline per year, which would equate to less than 0.01 percent of the total amount of gasoline sold in Santa Cruz County in 2016. In addition to fuel use, implementation of the Project would increase the District’s total electrical demand by approximately 3,600 MWh per year, which would represent less than 0.01 percent of the total electricity used in Santa Cruz County in 2016. Transportation energy use requirements would not be significant relative to the overall sales of transportation fuels in the county, construction and decommissioning activities could result in wasteful or inefficient use of energy if construction and decommissioning equipment is not well maintained, if equipment is left to idle when not in use, or if haul trips are not planned efficiently. For all Project components, the potential for construction and decommissioning to use large amounts of fuel or energy in a wasteful or inefficient manner is considered a significant impact. However, with implementation of Mitigation Measures 4.6-1 (Construction Equipment Efficiency Plan) and 4.3-1b (Idling Restrictions), which would ensure construction activities are conducted in a fuel-efficient manner and minimize idling times for construction equipment and vehicles, the impact would be reduced to a less-than-significant level.

As discussed in Impact 4.6-2, the Project would not constrain local or regional energy supplies, require additional capacity, affect peak and base periods of electrical demand, or otherwise require or result in the construction of new electrical generation and/or transmission facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects.

Because operational energy use impacts would be less than significant; consideration of alternatives related to long-term energy use was not the focus of the identification of CEQA alternatives included in EIR Chapter 7, which includes alternatives that could
meet most of the basic objectives of the Project while reducing one or more of its significant impacts (emphasis added), could foster informed decision-making and public participation, and could be feasibly implemented.

I-52-6 As discussed in EIR Chapter 2, Introduction, the Project is part of the District’s overall Community Water Plan, which also includes the potential for long-term water transfers with the City of Santa Cruz. Thus, Project planning includes consideration for variable uses, such as potential for periods of lower advanced purified water treatment and recharge during periods of the year when water transfers may be available from the City of Santa Cruz. In addition, Project planning is based on average annual production rates, but assumes that daily or periodic production would vary based on the rate of recharge and regulatory requirements associated with treatment and retention times. EIR Section 3.7, Operations and Maintenance, acknowledges that while the overall Project life is 50 years, equipment would be maintained and replaced routinely over the course of the Project. For instance, RO membranes would be replaced every six to eight years.

In conclusion, the design of the treatment facility would allow for variable production rates, and equipment would be routinely maintained. Thus, uncontrolled deterioration of RO membranes or other treatment facilities would not occur.

I-52-7 Formation of a joint powers authority, or requests that Santa Cruz County assume the responsibilities of the Soquel Creek Water District is beyond the scope of the Project. As discussed in EIR Section 2.3, Purpose of this Environmental Impact Report, the District is the lead agency responsible for CEQA environmental review of projects (sponsored) by the District, and thus is the appropriate lead agency for the proposed Project.

I-52-8 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.
From: Fadra Perrin
Sent: Wednesday, August 1, 2018 6:04 PM
To: purewatersoquelceqa
Subject: Location of water treatment plant

I would like to express my opposition to any type of wastewater treatment facility to be located at the Capitola Ave./Soquel Ave. property. This is a residential neighborhood, and completely inappropriate for this type of industrial plant. Our quality of life, property values, and possibly our health would be impacted by allowing this type of facility to be built at this location.

Please consider one of the other options for this project - it’s the right thing to do!

Thank you,
Fadra Perrin
2626 Gary Drive
Soquel, CA
3.66 Response to Comments from Fadra Perrin
(August 1, 2018) (Comment Letter I-53)

I-53-1 Please see the response to comment O-5-2, regarding the analysis of siting of the advanced water purification facility at one of three locations, the Santa Cruz Wastewater Treatment Facility, Chanticleer Avenue site, or Headquarters-West Annex site, all of which were analyzed at an equal level of detail in the EIR.
To Whom It May Concern;

As a forty plus year veteran of the water industry, and a retired President of a successful water utility Management and Operations company, I would like to add the following comments:

First: I fully support reuse of our water supplies. In fact, except for perhaps glacier water, we have been reusing water for centuries. Reuse is not a new concept and should not be viewed as an alien concept.

Second: I hope consideration was given to direct blending and reuse of treated wastewater with treated ground water. While the so called "toilet to tap" may face some public opposition, it is a viable approach. One big advantage is if something were to go wrong in the treatment process, the blending can be immediately stopped with risking contaminating the whole aquifer. Today, technology, automation and multiple barrier treatment systems have made this a very low risk option.

Third: Desalination should be considered as well. While cost is a consideration, desalination is a sustainable long-term option that puts zero load on our finite fresh water supplies. Reverse osmosis technology has made significant advancements and is now a proven and reliable technology for treating seawater.

Again, I fully support taking a proactive approach to all reuse possibilities. The old "Use it Once and Throw it Away" approach to water use should be put in our rear view mirror.

Thank you for your thoughtful work on this important matter,

Gary W. Phillips
1363 49th Ave
Capitola, CA
3.67 Response to Comments from Gary W. Phillips
(July 5, 2018) (Comment Letter I-54)

I-54-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. However, it is noted that the Pure Water Soquel Project is a recycled water project, consisting of recharge of advanced treated secondary effluent, with the extensive treatment and monitoring processes noted by the commenter. That project is the subject of this EIR. In addition, and as discussed in EIR Section 2.2.2, the District is also evaluating potential participation in the DeepWater Desal Project, should that project be approved.
From: Toni Hack <thack@sbcglobal.net>
Sent: Wednesday, August 1, 2018 9:30 PM
To: purewatersoquelceqa
Subject: Oppose water treatment plant

Pure water Soquel:
I’m opposed to the placement of a commercial water treatment plant in a residential area around Capitola Ave and Soquel Dr.
-Toni Polakoff

Sent from my iPhone
3.68 Response to Comments from Toni Polakoff (August 1, 2018) (Comment Letter I-55)

I-55-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.
From: Ken P.
Sent: Thursday, July 19, 2018 11:11 AM
To: purewatersoquelceqa
Cc: purewatersoquel@soquelcreekwater.org
Subject: FW: Comments on Draft EIR

Thanks for the opportunity to comment on the Draft EIR.


The following statement (Page 12) seems misleading:
“Findings of the Draft EIR indicate that Project implementation would have environmental effects:
• All potentially significant environmental effects would be substantially reduced with implementation of specific mitigation measures.” (Construction noise is mentioned in the following bullet, but should be mentioned here, as well). The mitigation at the Willowbrook Lane site is 5db, I don’t know if that is “substantial”.

In light of:
“Findings: The Project’s noise impact during the temporary construction phase would be significant and unavoidable with mitigation.”

In particular, the following statement should be referenced in the Handbook/ Mitigation Measures “Implementation of Mitigation Measures 4.13-1a and 4.1 3- 1b would reduce construction noise exposure at nearby sensitive receptors by requiring the District to implement a Construction Noise Reduction Plan and by providing temporary hotel accommodations for all residences within 200 feet of the well sites during nighttime drilling activities....”.

Comments on Draft EIR
(I do not think that the entire document is searchable on-line because it is divided into several files. Therefore, I could be incorrect when I say that something is missing from the document. Could a global search capability be set up for on-line document review?).

My comments are directed to the Willowbrook Lane Recharge facility.

1. The term “Injection Well” is not included in the Glossary though the recharge well on
Willowbrook meets the EPA’s definition of an injection well (https://www.epa.gov/uic/general-information-about-injection-wells):

“Definition of injection well: An injection well is used to place fluid underground into porous geologic formations. These underground formations may range from deep sandstone or limestone, to a shallow soil layer. Injected fluids may include water, wastewater, brine (salt water), or water mixed with chemicals.”

Consequently, there is no discussion of the characteristics, experiences, and risks of injection wells and the known seismological concerns of residents. Are the recharge wells Federal Class V Injection wells?

2. Aptos is not mentioned in the Visual Character section of Aesthetics 4.2 though some of the sights are in Aptos. There is no discussion of the Aptos-specific characteristics; the existing section erroneously includes Aptos sites in the Soquel area. An acknowledgement that the sites are in Aptos would be more accurate and demonstrate a familiarity with our community.

3. In the Visual Sensitivity section on Willowbrook Lane, there is no acknowledgement or discussion of the fact that the site is adjacent to an elementary school, though it is included in the noise discussion.

4. In the Noise and Vibration section for Willowbrook Lane, Nightime Construction Noise Impacts, there is the statement “the nearest sensitive (sic) to the Project site during the nighttime hours would consist of single-family residence located 175 feet to the east and west of the Project site.” The nearest sensitive receptor to the west actually consists of townhouses and may be less than 175 feet. There is no discussion of the noise impact on the receptor to the west (the back yards/terraces of the homes on Arlington Drive). There is no study of the ambient noise at this receptor in Table 4.13-1 (15-Minute Short-Term Ambient Noise Monitoring Results). This location is considerably quieter than the measured location at the intersection of Willowbrook Lane and Baseline Drive and where people sleep. As a result, there is no discussion of the construction noise’s greater relative impact at this sensitive receptor. Since hotel accommodations are cited as a noise mitigation measure, it would be helpful to have a discussion of the availability, convenience, cost and location of appropriate hotel accommodations, considering the number of people to be relocated. The number of hotel rooms needed should be specified along with potential concerns.

5. The discussion in the Alternatives section in regards to the recharge wells seems incomplete. It was my understanding that an analysis of the number and location of recharge wells would be analyzed, leading to a presentation of ranked alternative approaches to the recharge wells, with the relative merits of each option delineated. Unless I missed this analysis, the omission seems significant. What is the probability of each recharge well being constructed? When and how will the recharge wells be selected? Can the EIR be certified without this information? Should the EIR be certified without this information?

6. “In 1.5 Areas of Known Controversy and Issues to be Resolved,” there should be a
section acknowledging the concern of some residents with seismological issues.

7. It would be helpful to have 3-D illustrations (with width, height, and length indications) of the appearance of the finished recharge well sites.

Thank you for considering my inputs.

Sincerely,
Ken Pomper
3027 Arlington Drive
Aptos, CA 95003
3.69 Response to Comments from Ken Pomper
(July 19, 2018) (Comment Letter I-56)

I-56-1 Please see the response to comment I-88-3 regarding the purpose and content of the Community Handbook that was made available as an accompaniment to the EIR. As discussed in the above referenced response, the Community Handbook is not meant to supplant the analysis in the EIR. Nonetheless, the Community Handbook statement in question is accurate. As discussed in EIR Impacts 4.3-1 and 4.3-2, construction activities at the Willowbrook Lane site would be significant. Implementation of Mitigation Measures 4.3-1a and 4.3-1b are recommended to reduce significant construction noise impacts on sensitive receptors in proximity to the Willowbrook Lane site. As explained in the analysis for each impact, the recommended measures would reduce construction noise levels by at least 5dB and provide alternative nighttime accommodations for potentially affected residents which would eliminate noise impacts for those residents. As noted, these reductions would be substantial, but the impact would remain significant.

I-56-2 The Draft EIR document found at: https://www.soquelcreekwater.org/PWS-CEQA is provided as a single pdf of the entire EIR, as well as individual EIR chapters/sections. All files are searchable documents.

I-56-3 The US EPA’s Underground Injection Control (UIC) program classifies wells into five categories (https://www.epa.gov/uic):

- Class I industrial and municipal waste disposal wells
- Class II oil and gas related injection wells
- Class III solution mining wells
- Class IV shallow hazardous and radioactive waste injection wells
- Class V wells that inject non-hazardous fluids into or above underground sources of drinking water
- Class VI - Wells used for Geologic Sequestration of CO2

Class V well, commonly known as a shallow injection well, is used to inject non-hazardous fluids underground. Fluids are injected either into or above an underground source of drinking water. Class V wells include aquifer storage and recovery wells. As discussed in EIR Section 4.10, Hydrology Resources – Groundwater, Subsection 4.10.3 Regulatory Framework, the wells would be constructed in accordance with state well construction guidelines. Regarding seismic impacts caused by injection (or recharge) wells, as discussed in Section 4.7, Geology and Paleontology of the EIR, there are no known active faults at the locations of any of the proposed project components, including the recharge well locations. In addition, there are no known active or inactive faults at the locations of any of the proposed project components, including the
With respect to the portion of the comment concerning the proximity of the Willowbrook Recharge Well Site to Santa Cruz Montessori, schools are not considered a sensitive land use for aesthetics. Nevertheless, even if they were, the only portion of the school property from which the Project would be plainly visible is the parking lot; views from the other portions of the property are obscured by a perimeter fence and intervening buildings and vegetation. With respect to the portion of the comment concerning Aptos, the following revisions are made in response to this comment.

Section 4.2.2, Environmental Setting, page 4.2-11 (paragraph 1) is revised as follows:

**Visual Character**

The visual study area is large enough such that it encompasses several parks and neighborhoods with distinct visual character, including the Westside, Boardwalk, and Seabright/Midtown, neighborhoods of the City of Santa Cruz; the unincorporated Santa Cruz County communities of Live Oak, and Soquel and Aptos; and the City of Capitola. The general visual character of each area, in the vicinity of Project facilities, is described as follows:

Section 4.2.2, Environmental Setting, page 4.2-11 (paragraph 1) is revised as follows:

- The Soquel and Aptos portions of the Project area also includes a blend of residential and commercial uses; however, commercial areas are more limited, primarily occurring along Soquel Drive and roads bisecting Highway 1. While the area does not have an untouched natural setting due to the dense presence of structures, utilities, and roads, a greater presence of mature trees in landscaping (compared to other areas near Project facility locations) provides a more naturalistic appearance than other Project areas. However, the density of development and mature trees limits views in most Project areas to the immediately surrounding area. The Cabrillo College area is an exception to the enclosed view, single family residential/commercial character of the area, consisting of a complex of large educational buildings and outdoor recreation areas, as well as an adjacent religious worship and education campus (Twin Lakes Church and School) dispersed throughout the area, providing a more sprawling developed character with more open views within the complex area.

Section 4.2.4, Impacts and Mitigation Measures, page 4.2-28 (paragraph 2) is revised as follows:

**Pipeline Alignments**

The proposed pipeline alignments run along and cross streets within the Westside, Boardwalk, and Seabright/Midtown neighborhoods of the City of Santa Cruz, the unincorporated Santa Cruz County communities of Live Oak, Soquel and Aptos; and the City of Capitola. Views within these areas are
dominated by urban development. The open-cut trench method would be used for most of the pipeline construction. This method involves initial delineation and ground-clearing of the work area; grading or pavement cutting; excavation of the trench; placement of the pipe; backfilling of the trench; and restoration of the work surface. The appearance of pipeline construction sites, would include open trenches, soil stockpiles, and heavy construction vehicles and equipment. While pipeline construction sites are likely to be unsightly, similar construction activities are fairly typical of the urban setting and occur periodically for other reasons (such as road improvements or other utility upgrades/maintenance, etc.). Further, the location of the pipeline excavation would advance along pipeline segments as work progresses, generally at a rate of 100 linear feet per day (see Section 3.6.4, Construction Activities, Construction Equipment, and Construction Workforce). Bridge crossings and use of trenchless technologies in limited areas would include similar equipment and activity levels, with work concentrated in a focused work area (rather than moving through a pipeline alignment reach) for up to approximately 10 to 30 working days per crossing. Following construction activities, all construction debris and waste would be removed from sites and disturbed areas would be returned to their approximate pre-construction conditions (see Section 3.6.5, Excavation, Stockpiling of Soils, and Spoils Disposal). Once construction is complete, pipelines would be buried or substantially within the annular space of bridges, and would not be visible; or could be slightly visible where attached to bridges. Given that construction activities would be temporary and fairly typical of the urban setting, and that pipelines would not be visible following completion of construction, impacts on visual character and quality would less than significant.

As explained in Section 4.13 (Impact 4.13-1), to quantify construction-related noise exposure that could occur at the nearest sensitive receptors, it was assumed that the two loudest pieces of construction equipment would operate at the closest location of the Project sites to the nearest off-site sensitive receptors. Based upon the conceptual site layout, as shown in EIR Figure 3-8a, construction activities would be expected to occur in the central and eastern portions of the site, approximately 175 feet from the nearest sensitive receptors, including the townhomes identified by the commenter. As discussed in Impact 4.13-1 and 4.13-2, construction of the Willowbrook Recharge Well Site is expected to expose nearby sensitive receptors to noise levels that would exceed Santa Cruz County’s daytime and nighttime noise standards. The EIR concludes the impact would be significant and mitigation is identified to reduce the impact. Based upon this comment, the text of page 4.13-24 (paragraph 3) is revised as follows:

**Nighttime Construction Noise Impacts.** The loudest pieces of construction equipment that would operate at the Willowbrook Lane Site during the nighttime hours is a rotary drill rig and air compressor. Since classes held at the Santa Cruz Montessori school would not be in session during the nighttime hours, the nearest sensitive to the Project site during the nighttime hours would consist of single- and multi-family residences located 175 feet to the east and west of the Project.
site. As shown in Table 4.13-6, these single- and multi-family residences would be exposed to L_{max} and L_{eq} construction noise levels of 71 dBA and 66 dBA, respectively, during nighttime drilling. The nearest sensitive receptors to the Willowbrook Lane site would be exposed to construction noise levels that would exceed the County’s nighttime exterior noise standard of 60 dBA L_{eq}. This would result in a significant impact with respect to exposure of persons to, or generation of, noise levels in excess of local standards.

With respect to ambient noise, commenter accurately notes Table 13-1 presents the results of short-term noise surveys conducted to characterize generally the existing ambient noise environment in the vicinity of the Project sites. However, as explained in Section 4.13.4, Impacts and Mitigation Measures (subsection Approach to Analysis), the daytime and nighttime exterior noise standards found in the County of Santa Cruz noise ordinance were used to evaluate whether construction of the facilities and recharge wells would cause a substantial temporary or periodic increase in ambient noise levels at sensitive receptors near the Project sites. The noise levels in Table 13-1 were not used in this analysis. The commenter requests the EIR consider the availability, convenience, cost, and location of hotel accommodations provided for under Mitigation Measure 4.13-1b. Pursuant to CEQA Guidelines Section 15126.4(a)(1), “An EIR shall describe feasible mitigation measures which could minimize significant adverse impacts, including where relevant, inefficient and unnecessary consumption of energy.” As defined in the CEQA Guidelines (Section 15364) ‘Feasible’ means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” Given the small number of sensitive receptors to which Mitigation Measure 4.13-1b would apply (a few dozen at most), relative to the thousands of hotel rooms in the Santa Cruz area, and considering the short duration of its application (about 2 weeks), the Lead Agency has concluded the mitigation is feasible.

Please see EIR Chapter 3, Project Description which includes construction and operation of recharge wells at up to three of five locations described in the EIR. Each recharge option is considered in the EIR impact analysis, at an equal level of detail. As discussed on EIR page 3-5, in response to public scoping comments requesting the District consider multiple Project sites, and to allow flexibility in responding to the interests of local jurisdictions, technical uncertainties, and environmental and economic considerations, the District is considering one or more options for each of these required Project components. Accordingly, this approach to analysis represents the most comprehensive and reasonably conservative analysis feasible, and is intended to provide the public with a full understanding of the range of options under consideration and their potential environmental effects. Based upon information obtained through the environmental analysis, additional engineering feasibility considerations, and continued community engagement, the District would select a final Project configuration (consisting of a single AWPF treatment concept, a single pipeline alignment, and up to 3 recharge wells) from the components evaluated in this EIR, prior to development of final engineering design.
I-56-7 Section 1.5 identifies issues and areas of controversy that have been identified by government agencies or feature prominently in the community, as represented through public comment. Seismological issues were not raised by government agencies and did not feature prominently among the scoping comments received (see Section 2, Introduction, Table 2-1 for a summary of all scoping comments). Nevertheless, in response to the comment, Section 1.5, page 1-32 (first bullet) is revised as follows:

- **Project Location and Community Character**

  Comments were received that requested additional information regarding the potential effects of a purification facility in or near a residential neighborhood setting, including potential impacts related to: hazardous materials; water, noise, light, and air pollution; ground vibration; soil, and geology, and seismological issues; increased traffic; land use compatibility; and neighborhood aesthetics, among others. Chapter 3, Project Description, provides a detailed description of the Project components under consideration, the construction process, operational requirements, and schedule. For example, the Project description includes a list of chemicals that could be required for Project operation, along with their purpose and volumes. Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, provides a project-level analysis of potential effects on the environment for each of the Project components identified in the Project description. Chapter 4 is organized by environmental topic, and addresses each of the items identified above. For example, Section 4.9, Hazards and Hazardous Materials, addressed the storage, handling, and use of hazardous materials, and measures designed to prevent and respond to an accidental release. Similarly, Section 4.12, Land Use and Recreation, explains that public utility facilities (e.g., water purification facilities and associated infrastructure) are allowable uses under the zoning regulations pertinent to the project sites under consideration.

I-56-8 Chapter 3, Project Description, Section 3.5.3, Recharge and Monitoring Wells, provides narrative descriptions of the proposed locations, heights, and masses of the well facilities. In addition, Figures 3-8a and 3-8b depict the approximate aerial extents and locations of the facilities proposed at each prospective well site. As presented in Section 4.2, Aesthetics, the District has determined that this level of information is sufficient to provide substantial evidence to support the analysis of visual impacts. As a result, additional illustrations are not needed to support the EIR’s conclusions. This comment is noted.
From: Mardi McRae <mardipants@me.com>
Sent: Wednesday, August 1, 2018 7:30 PM
To: purewatersoquelceqa
Subject: NOWAY

In regards to the Soquel Ave/ Capitola location: this is NOT an appropriate location for an industrial level wastewater treatment plant! There are other options that don’t threaten this neighborhood OF family’s and schools!!! Consider those other options! Please!
NO WAY!
~ Brian and Mardi Price
2715 Orchard St
Soquel

Sent from my iPhone
3.70 Response to Comments from Brian and Mardi Price (August 1, 2018) (Comment Letter I-57)

I-57-1 Please see the response to comment O-5-2, regarding the analysis of siting of the advanced water purification facility at one of three locations, the Santa Cruz Wastewater Treatment Facility, Chanticleer Avenue site, or Headquarters-West Annex site, all of which were analyzed at an equal level of detail in the EIR.
Draft Environmental Impact Report
Public Meeting

Public Comment Form

Comments must be postmarked by **August 13, 2018** for consideration in the Final EIR. Comments may be submitted at the public meeting on July 31, via email to purewatersoquelceqa@esassoc.com or by U.S. Postal Service to the address below (this form can be folded as shown on reverse and mailed without an envelope; standard postage [$0.50] required).

**MY COMMENT IS ABOUT** (please mark an “X” next to all that apply):

- [x] Alternatives Evaluation
- [ ] Aesthetics
- [ ] Air Quality
- [ ] Greenhouse Gas Emissions
- [x] Hazards & Hazardous Materials
- [ ] Biological Resources
- [x] Hydrology Resources
- [ ] Cultural Resources
- [ ] Land Use and Recreation
- [ ] Noise and Vibration
- [ ] Geology and Paleontology
- [ ] Population and Housing
- [ ] Transportation
- [ ] Tribal Cultural Resources
- [ ] Utilities and Service System
- [ ] Other: ____________________

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**SEE ATTACHMENT**

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***Please Print*** (use additional sheets if necessary)

**NAME:** REGAN RAY

**ORGANIZATION (if applicable):**

**ADDRESS:** 222 OWL RIDGE WAY, APHTOS, CA 95003

**EMAIL (OPTIONAL):** MY MAIL ADDRESS IS: P.O. BOX 131, APHTOS, CA 95001

**PHONE (OPTIONAL):**

Do you wish to withhold your name and contact information from public review or from disclosure under the Freedom of Information Act?  [x] No  [ ] Yes

If submitting your comments by mail, please mail it before **August 13, 2018** to:

**Pure Water Soquel Project CEQA**
4041 Soquel Dr., Ste A-501
Soquel, CA 95073-3105

For more information visit www.SoquelCreekWater.org/purewatersoquel
ATTACHMENT TO PUBLIC COMMENT FORM
COMMENTS TO DRAFT EIR

EACH AND EVERY SECTION OF CHAPTER 6 OF THE DRAFT EIR FAILS TO COMPLY WITH SECTION 15126.2 OF THE CEQA GUIDELINES FOUND IN TITLE 14 OF CALIFORNIA RULES AND REGULATIONS.

THE APPLICABLE PARTS OF SAID SECTION 15126.2 READ AS FOLLOWS: 15126.2 CONSIDERATION AND DISCUSSION OF SIGNIFICANT ENVIRONMENTAL IMPACTS. (a) The Significant Environmental Effects of the Proposed Project. An EIR shall identify and focus on the significant environmental effects of the proposed project......Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected....
(d) Growth-Inducing Impact of the Proposed Project. Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment. ( emphasis added). Note: Authority cited: Sections 21083, 21083.05, Public Resources
When read together, Sections 6.1, 6.1.1, 6.1.2, and 6.2 of Chapter 6 of the Draft EIR constitute a shocking shell game of misleading and contradictory statements that can only have been drafted with the intent to confuse the public about the significant environmental impacts that will admittedly result from the proposed project. Said Sections utterly fail to comply with CCR 15126.2's requirements of a detailed discussion of the significant environmental effects of the Proposed Project which the Draft EIR admits will occur. Said Sections and all of Chapter 6 utterly fail to comply with CCR 15126.2's requirement that an EIR shall identify and focus on the significant environmental effects of the proposed project. It shocks the conscience that the authors of this Draft EIR thought that they could get away with such a bad faith and deceptive document.

Section 6.1 starts off well enough with a recital of the CEQA guidelines and requirements of CRR Section 15126.2(d) which states, as cited above, that the EIR must discuss the ways in which the proposed project could foster population growth, either directly or indirectly. However the analysis in Section 6.1 of the draft EIR wrongfully refuses to admit that the proposed project will indirectly foster population growth even though it is admitted in other parts of the draft EIR that the proposed Project will cause population growth. Relying on the bald faced lie that the project would not foster population growth, the authors of the draft EIR made no detailed discussion whatsoever as is required by CEQA of the environmental impact of the population growth that will result from the proposed project. CRR Section 15126.2(d) requires that “an EIR shall identify and focus on the significant environmental effects of the proposed project” but this Draft EIR does not identify any specific environmental impact at all in Section 6.1. Instead, at the bottom of page 6-2 of Section 6.1 of the draft EIR, the authors make the bad faith assertion that there is no need to make a detailed discussion of environmental impacts of population growth caused by the Project in this draft EIR because it is premature at this time. The draft EIR must be rejected for such outrageous misrepresentations. Section 6.1 sadly ends with the mention that public comments may have been raised during the scoping process which might address some significant environmental impacts and these are available at some undisclosed section of Appendix A which contains all public comments made in the scoping process. This attempt to evade CEQA responsibilities and hide the truth is completely unacceptable and the Draft EIR must be rejected on these
grounds as the document simply does not comply with the CEQA guidelines on these very important issues.

More importantly, said Section 6.1 is contradicted three separate times in other sections of this draft EIR. At the bottom of page 6-9 of Section 6.1.2 it is admitted that the project will indirectly cause population growth. Additionally later in this Section at the top of page 6-10 it is stated that some of the indirect effects of the population growth will be significant and unavoidable. Later in the draft EIR in the last bullet comment of Section 6.2 on page 6-10 it is again admitted that the proposed project would indirectly cause population growth and that the effects would be significant. Since it is admitted that the Project will foster population growth, this draft EIR must identify and make a detailed discussion of all environmental impacts that population growth will cause.

SECTION 6.1.1 AND SECTION 6.1.2 OF CHAPTER 6 OF THE DRAFT EIR WRONGFULLY RELY UPON THE 25 YEAR OLD EIR OF THE SANTA CRUZ COUNTY PLAN AND THEREFORE FAIL TO COMPLY WITH CALIFORNIA CODE OF REGULATIONS SECTION 15126.2(a) and 15126.2(c) and 15126.2(d) WHICH REQUIRE A DETAILED DISCUSSION OF IDENTIFIED ENVIRONMENTAL IMPACTS CAUSED BY THE PROPOSED PROJECT

It is very disturbing that the authors of this EIR believe that they have no obligation to discuss or analyze or identify in any way any of the foreseeable environmental effects of the proposed project which will result from the increased population growth. They pretend that they can avoid their obligations under CEQA by using the discussions and analysis of population growth set forth in the Santa Cruz County General Plan EIR which was made in 1993 and is 25 years old!!!! This is exactly what the authors of this draft EIR relied on in Sections 6.1.1 and Section 6.1.2 of the draft EIR wherein they quote outdated and no longer relevant material from the 1994 Santa Cruz County Plan's EIR. This is outrageous and shocking to the conscious and can only be viewed as a bad faith attempt to mislead the public and minimize the environmental impacts. Reliance on a 25 year old EIR now is not enough and violates the very purpose of CEQA requirements and thus renders this Draft EIR a sham and fails to comply with Section 15126.2 of Title 14 of the California Rules and Regulations.
SECTION 6.2 OF CHAPTER 6 OF THE DRAFT EIR FAILS TO COMPLY WITH CALIFORNIA CODE OF REGULATIONS SECTIONS 15126.2(c) WHICH REQUIRES THAT THE EIR IDENTIFY AND DISCUSS ALL SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROJECT WHICH ARE UNAVOIDABLE

Section 6.2 of the draft EIR is written very deceptively and is another sad example of the fraudulent hide-the-ball mentality of the draft EIR. Said Section 6.2 gives the impression to a reader that the Section is only concerned about the noise that will occur during construction of the project. However, hidden at the end of said Section, the authors sneak in a major admission and revelation that has nothing to do with noise. The third and final bullet comment of said Section reads in pertinent part as follows: “The Project could indirectly support growth by removing some water supply limitations as an obstacle to growth........” “The effect would be significant and unavoidable.” Nothing follows. No discussion of any specific environmental effect such as increased traffic congestion at intersections and highways or the need for infrastructure development or larger schools, etc., and all the additional development that is necessary to keep up with the increased population growth that more water will foster. The authors of the draft EIR utterly failed CEQA guidelines in Section 6.2 of the draft EIR and the draft EIR must be rejected on these grounds until they do their job and amend the draft EIR to identify and discuss in detail the environmental impacts of population growth that the Project will cause.

SECTION 6.3 OF CHAPTER 6 OF THE DRAFT EIR FAILS TO COMPLY WITH CALIFORNIA CODE OF REGULATIONS SECTION 15126.2(c) WHICH REQUIRES A DETAILED DISCUSSION OF ANY SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL DAMAGE WHICH CAN RESULT FROM ENVIRONMENTAL ACCIDENTS ASSOCIATED WITH THE PROJECT.

On page 6-11 of Section 6.3 of the Draft EIR, it is admitted in various places that operation of the Project will involve numerous unspecified hazardous materials, which, if spilled or discharged accidentally, “could trigger irreversible environmental damage”, and “effect groundwater quality” and “pose a hazard to the environment”. These admissions automatically trigger CEQA guidelines and Section 15126.2(c)
requirements of a detailed discussion of the specific hazards posed with sufficient clarity and content such that the public and readers of the EIR are able to understand the risks to the environment. Unfortunately, the authors of this EIR wrongfully attempt to dodge all responsibilities under CEQA by making the outrageous, self-serving assumption, which is unsupported by any statement of facts, that accidents will simply not occur during the life of the Project and therefore they maliciously conclude Section 6.3 by claiming that "the Project would not result in significant irreversible environmental changes." This kind of nonsense makes a mockery of CEQA and must not be allowed. Of course accidents can happen in any situation or operation. Human error and equipment breakdown or failure can never be ruled out and to say otherwise is either wishful thinking or a recipe for disaster.

Sincerely,

REGAN RAY
222 OWL RIDGE WAY, APTOS, CA
P. O. BOX 131, APTOS, CA 95001
3.71 Response to Comments from Regan Ray (August 13, 2018) (Comment Letter I-58)

I-58-1 This introductory comment is followed by more detailed comments and does not include specific comment about the EIR or any environmental issue related to the Project and so no response is required. This comment is noted.

I-58-2 EIR Chapter 6 addresses multiple CEQA topics, including growth-inducing impacts, significant unavoidable adverse impacts, and significant irreversible environmental changes. Growth-inducing impacts are addressed in Section 6.1, which includes subsections concerning population, water supply and land use (subsection 6.1.1), and removal of an impediment to growth (subsection 6.1.2). Section 6.1 begins with an introductory discussion of the CEQA requirements as concerns growth analysis, examples of project types which could contribute directly or indirectly to growth, and a summary of the analysis presented in the subsections that follow. This introductory discussion is the subject of the commenter’s claims.

Commenter asserts “...the analysis in Section 6.1 of the draft EIR wrongfully refuses to admit that the proposed project will indirectly foster population growth even though it is admitted in other parts of the draft EIR that the proposed Project will cause population growth”. As noted previously, the subject of the commenter’s assertion appears to be the introduction to Section 6.1, exclusive of subsections 6.1.1 and 6.1.2, the latter of which is devoted entirely to the discussion of the Project’s potential to remove an impediment to growth, and the potential environmental effects resulting therefrom.

Commenter also claims “...the authors of the draft EIR made no detailed discussion whatsoever as is required by CEQA of the environmental impact of the population growth that will result from the proposed project.” Again, the subject of commenter’s assertion appears to be the introduction to the Section 6.1 growth section. As explained in the introduction to Section 6.1, and more fully in subsections 6.1.1 and 6.1.2, the EIR examines the anticipated impacts of planned growth and the degree to which the Project could contribute to those impacts by removing a barrier to realizing that planned growth.

The District is not charged with planning or regulating growth. Rather its charge is to provide water in accordance with planned growth. As explained in Section 6.1.1, growth and development within the District’s service area is controlled through the general plans and ordinances of the corresponding local government (i.e., Santa Cruz County and City of Capitola) (pages 6-6 through 6-8). The general plans of these local governments set forth the growth vision, or build-out, for their respective jurisdictions. The potential environmental effects of realizing that growth are analyzed and disclosed pursuant to CEQA. The range of environmental effects identified in the CEQA
documents for build-out under the Santa Cruz County and City of Capitola General Plans are detailed in EIR Section 6.1.1 and Appendix E.

As explained in Section 6.1.2 (page 6-9), the environmental documents prepared for the respective general plans both identify impacts associated with insufficient water supply. Thus, water supply availability is a potential barrier to realizing build-out under these plans. As explained in Chapter 3, Project Description (page 3-1), and reiterated in Section 6.1.1 (page 6-9), the Project has been sized to offset impacts on the groundwater basin attributable to past and present District withdrawals, and not to facilitate an expansion of District water supply or distribution. The EIR nevertheless acknowledges that by improving water supply reliability and sustainability within the groundwater basin, the Project would remove a potential barrier to realizing planned growth within its service area (i.e., under the Santa Cruz County and City of Capitola general plans). As noted previously, the potential environmental effects of realizing build-out under these plans are addressed in the CEQA documents for those jurisdictions, and restated in EIR Section 6.1.1 and Appendix E.

EIR Section 6.1.2 (pages 6-9 and 6-10) plainly acknowledges that by removing a potential barrier to growth under these general plans, the impacts of such growth would be attributable, at least in part, to the Project. Section 6.1.2 concludes:

> These environmental impacts are the indirect effects of growth that would be supported in part by the Project. Detailed summaries of these impacts are presented in Appendix E. Some of the indirect effects of growth identified in the EIRs prepared for those general plans would be significant and unavoidable. As enumerated in Section 6.1.1, Population, Water Supply, and Land Use (subsection Development Policies and Plans), these impacts generally concern air quality, aesthetics, hydrology and water quality, land use, public services, utilities, transportation, and greenhouse gas emissions. aesthetics, hydrology and water quality, land use, public services, utilities, transportation, and greenhouse gas emissions.

Finally, the commenter asserts further that “...at the bottom of page 6-2 of Section 6.1 of the draft EIR, the authors make the bad faith assertion that there is no need to make a detailed discussion of environmental impacts of population growth caused by the Project in this draft EIR because it is premature at this time.” Again, the subject of the commenter’s claim is the introduction to Section 6.1, exclusive of subsections 6.1.1 and 6.1.2. In said introduction, the reader is reminded on page 6-2 that the Project consists of an Advanced Water Purification Facility (AWPF) capable of producing 1.3 million gallons per day (mgd), approximately 1,500 afy, of purified water – the estimated volume required to offset the portion of the Santa Cruz Mid-County Groundwater Basin’s groundwater overdraft attributable to District groundwater pumping. Accordingly, the EIR’s growth analysis concerns the potential effects of an AWPF capable of producing 1.3 mgd.
The EIR discloses in multiple locations, including in Chapter 3, Project Description (page 3-3) and in Section 6.1 (page 6-2) that the Project’s conveyance infrastructure would be sized to accommodate a future expansion to address overdraft conditions basin-wide.

Further, the discussion on page 6-2 makes clear that: (1) project expansion is not proposed or reasonably foreseeable; (2) the communities that would receive water from an expanded project are unknown at this time; and (3) project expansion and potential growth-related effects would be subject to and addressed through subsequent CEQA analysis. The discussion concludes that for these reasons a detailed assessment of the potential growth effects of a Project expansion is premature.

As explained in the paragraphs above, and in subsections 6.1.1 and 6.1.2 of the EIR, the potential environmental effects associated with the Project’s removal of a potential barrier to growth are addressed in detail. What is not addressed in detail are the potential effects of an unplanned expansion, whose water would be used in an unknown location, at an unknown time.

I-58-3 Commenter correctly notes that comments submitted during the scoping periods related to growth impacts are summarized in the introduction to Section 6.1 and presented in full in EIR Appendix A. Commenter is also referred to EIR Chapter 2, Introduction (Table 2-1), which lists all scoping period commenters, the nature of the comments, and the section of the EIR where the comments were addressed.


I-58-5 As noted in response to comment I-58-2, above, the EIR identifies the potential environmental effects of planned growth, as provided for under the 1994 County of Santa Cruz and 2014 City of Capitola general plans. The response explains further that to the extent that improved water supply reliability due to the Project would enable realization of build-out under those general plans, the environmental effects of that build-out would be attributed, at least in part, to the Project. Those potential environmental effects are disclosed in the CEQA documents prepared for the County of Santa Cruz and City of Capitola general plans, and are restated in EIR Section 6.1.1 and Appendix E.

Commenter asserts the EIR inappropriately relies upon the impact analysis and conclusions presented in Santa Cruz County’s 1993 General Plan EIR. Notably, Santa Cruz County has not comprehensively updated its general plan since its 1994 adoption. Accordingly, the policies of the general plan continue to provide the framework for planned growth within the County, and the General Plan EIR remains in effect. The General Plan EIR identifies a number of significant impacts that would be expected to result from the planned growth provided for under the general plan. These impacts are summarized in EIR Section 6.1.1 and Appendix E.

The EIR’s reliance upon the General Plan EIR’s analysis and impact conclusions are supported by the conclusions of the County’s 2015 Housing Element Update Initial Study/Negative Declaration (IS/ND), adopted in February 2016 (State Clearinghouse...
Number: 2015102001). As noted in the EIR (page 6-7), the housing element includes objectives to construct 1,833 new housing units, of which 636 would be for low- to extremely-low-income households, 262 for moderate-income households, and 935 for above-moderate household by 2023.

The Housing Element represents the County’s most current vision for planned growth. The County’s 2015 Housing Element IS/ND considers the potential environment effects of the growth planned under the Housing Element across 17 environmental topics. In each case, the County concludes that, with reliance upon existing policies and regulations applicable to growth within the County, including especially the 1994 Santa Cruz County General Plan, the effects of Housing Element implementation would be less than significant or would have no impact. For example, the IS/ND’s discussion of population and housing impacts notes the Housing Element would accommodate growth within existing developed areas, and would not involve extensions of utilities (e.g., water, sewer, or new road systems) into areas previously not served. With respect to public services and other topics where the types and extents of impacts are site- or area-specific, the IS/ND notes that the future projected development could, in some cases, have impacts. However, it also acknowledges that without specific details regarding each development, the degree of impact is impossible to determine with any precision. Therefore, in the absence of specific development proposals, the document relies upon general plan policies related to maintenance of public service provisions and requirements for site-specific environmental review to protect against significant impacts.1

In summary, even though the District does not propose to increase water supply or expand distribution under the Project, the EIR conservatively assumes the Project could remove a barrier to realizing build-out under the County’s existing general plan, and thereby contribute indirectly to impacts of said growth as described in the 1993 General Plan EIR. More recent planning and CEQA analysis through the County’s 2015 Housing Element update process found that the most current and reasonably foreseeable future growth would not result in impacts greater or substantially different than those identified in the General Plan EIR. For these reasons, regardless of its age, the General Plan EIR remains relevant, and the EIR’s reliance upon the analysis and conclusions of that document is appropriate.

I-58-6 Commenter correctly states that EIR Section 6.2 (page 6-10) discloses the Project could result in direct and indirect significant and unavoidable effects related to noise, and indirect significant and unavoidable effects related to removal of a barrier to growth. And it is acknowledged that the introduction to EIR Section 6.2 could be clearer with respect to potential effects related to growth. The text of that introduction is revised accordingly, as described below. However, contrary to commenter’s assertion that the authors “sneak in” a “major admission” that is “hidden” concerning growth effects, the

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3. Comments and Responses

3.71 Response to Comments from Regan Ray

Disclosure in question - the Project’s potential to removal barrier to growth which could result in significant unavoidable impacts - is the very subject and conclusion of the preceding 10 pages of analysis. Indeed, the bullet in question incorporates by reference the discussion in Section 6.1, Growth-inducing Impacts, which describes in detail the types of effects related to growth that could be attributed to the project. Notably, the conclusion to that discussion: “These environmental impacts are the indirect effects of growth that would be supported in part by the Project.” appears on the page immediately preceding and on the same page as Section 6.2 and the bullet point in question (pages 6-9 through 6-10). Therefore, the discussion in Section 6.2 plainly and clearly identifies the significant environmental effects that cannot be avoided by the Project.

Text of Section 6.2 is revised as follows:

Section 15126.2(b) of the CEQA Guidelines requires that an EIR identify significant environmental effects that cannot be avoided by the Project, including those that can be mitigated, but not to a less-than-significant level. The analysis in Chapter 4 identifies all adverse impacts associated with the Project and those impacts that cannot be avoided. The analysis in Chapter 4 determined that the Project would result in impacts related to noise that, even with implementation of mitigation measures, would remain significant and unavoidable. Chapter 6 also identifies potential significant and unavoidable effects to which the Project could contribute by removing a barrier to growth. These impacts are summarized below:

I-58-7 Commenter correctly notes that EIR Section 6.3 acknowledges the Project would require the use of hazardous materials whose accidental release or mishandling could result in significant environmental effects (page 6-11). The discussion in Section 6.3 incorporates by reference the detailed discussion of such potential effects presented in EIR Section 4.9, Hazards and Hazardous Materials. Both Sections 4.9 (pages 4.9-15 and 4.9-16) and 6.3 (page 6-11) explain the Project would require the use of potentially hazardous materials, including fuels, oils, lubricants, solvents, cements, adhesives, paints, and other chemicals.

Section 4.9-3, Regulatory Framework (pages 4.9-7 through 4.9-12) describes in detail several mandatory, non-discretionary federal, state, and local regulatory requirements governing use of hazardous materials, including their transport, storage, handling, and use; as well as accidental spill prevention, response, and clean-up. Both Section 4.9 and 6.3 also disclose that accidental spill of hazardous materials required for Project implementation could adversely affect construction workers, the general public, and the environment (pages 4.9-15 and 4.9-16) and 6.3 (page 6-11).

However, the EIR (Impact 4.9-1; pages 4.9-15 through 4.9-18) also explains at length that through the District’s adherence to mandatory regulatory requirements and with oversight from agencies with jurisdiction, as described in Section 4.9-3, the potential
for creation of hazardous conditions would be rendered less than significant. Under CEQA, the Courts have held that compliance with mandatory regulatory requirements designed to mitigate the very impact addressed in the EIR constitutes substantial evidence that the lead agency may rely upon to conclude impacts would be reduced to a less than significant level. (Oakland Heritage Alliance v. City of Oakland (2011) 195 Cal.App.4th 884, 903; Mission Bay Alliance v. Office of Community Inv. & Infrastructure (2016) 6 Cal.App.5th 160, 205.) Accordingly, this analysis forms the basis of the conclusion in Section 6.3 that Project implementation would not involve hazardous materials releases which would result in significant irreversible environmental changes.
Keep pushing to get this project approved and running. We must be proactive and you are going in the right direction.

Sent from my iPhone
3.72 Response to Comments from Jerry Scattini
(July 11, 2018) (Comment Letter I-59)

I-59-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.
The referenced EIR is inadequate for a number of reason. Within the alternatives section, they did not consider an alternative of water purchases only from the City of Santa Cruz with minor upgrades in infrastructure to the SC system; plan and conveyance capacity upgrades. Instead they have chosen a mechanical process plant that is way beyond the affordability of such a small water district such as Soquel.

The sad reality is that SqCWD hitch their fortunes to the SC Water Department who tried to construct the same advanced water treatment and was stopped by political groups such as the Sierra Club. Having spent millions and failed, here they are again trying to construct the same plant except for a much smaller rate payer base. This project will give SqCWD the highest water rates in the state and make it more unaffordable than it is now.

Another alternative not considered is a LAFCO process, whereby the SqCWD and SC Water Department are merged, redundancy eliminated and water transfers between the two watersheds can happen as needed to bring hydrological balance back to this area. This is a much cheaper alternative that only needs the political will to be realized.

Regards

Bob Schneider
3.73 Response to Comments from Bob Schneider (August 5, 2018) (Comment Letter I-60)

I-60-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. However, it is noted that EIR Chapter 7, Alternatives, includes an alternative that includes long-term provision of a small amount of water purchase from the City of Santa Cruz coupled with a reduced Project. A larger water purchase could not occur with only minor upgrades infrastructure, as suggested by the commenter; however, a large water transfer with the required water rights and other infrastructure improvements is also considered in EIR Chapter 7.

I-60-2 Formation of a joint or broader regional water supply agency is beyond the scope of this Project. However, it is noted that the District, City of Santa Cruz, and other regional water supply agencies are participating in regional water supply sustainability planning as member agencies of the Santa Cruz Mid-County Groundwater Agency. Further, the District and City are coordinating on planning related to elements of the District’s Community Water Plan and the City’s Water Supply Advisory Committee recommendations.
Comment Letter I-61

Pure Water Soquel Project CEQA
4041 Soquel Drive, Suite A-501
Soquel, CA 95073-3105

Dear Pure Water Soquel Project CEQA Staff,

I am hereby requesting an extension of time for Public Comment on the PureWater Soquel Project Draft Environmental Impact Report. It is a lengthy document that merits thorough public evaluation. I need more time to carefully read it, research related and appropriate issues of concern, and to respond in a cogent manner.

Please extend the Public Comment period to allow for better public input and analysis. Please notify the public of your decision.

Thank you.

Sincerely,

[Signature]
3.74 Response to Comments from Jack Sillman  
(August 13, 2018) (Comment Letter I-61)

I-61-1 Please see the response to comment I-4-1.
Comment Letter I-62

PUREWATER SOQUEL
PROJECT CEQA
4041 SOQUEL DR, STE A-501
SOQUEL, CA 95073-3105
August 6th, 2018

Board of Directors
Soquel Creek Water District
Pure Water Soquel Project CEQA
4041 Soquel DR, STE A-501
Soquel, CA 95073 -3105

Dear California Environmental Quality Act Project Review Members,

RE: Pure Water Soquel Project DEIR.

I organized my comments on the Draft Environmental Impact Report, DEIR, for the above project in the form of an outline, including my qualifications, an alternate plan proposal, conjunctive use and comments on all of the various other concerns involved with this project.

1. My Qualifications: For simplicity I attached my current resume. I have over 30 years experience as Estimator/Project manager for water infrastructure. I am an expert on cost. I am also a licensed Engineer, and an elected Director for the San Lorenzo Valley Water District. I also have been active politically by both promoting various design proposals and supporting open space/watershed preservation for close to twenty years, and have a deep interest in urban water infrastructure planning and design.

2. Alternate Plan, (attached): I also attached my proposal for recycled water, which was presented in 2014. I am submitting that only a portion of this plan be constructed instead of the proposed plan being considered because not only will it cost less, it will have the ability to add extremely beneficial improvements in the future, whereas the proposed plan cannot. To date, I have not received any criticism of this plan. Even though this plan is more detailed the current plan under review, it has not been criticized in the current DEIR. It is imperative that all alternative plans are criticized along with detail explanations why the proposed plan is preferred. That way the best, most effective plan that improves the quality of the environment is found. This is an extremely important, "Brainstorming", review that you are a part of. It must be shown that this plan is inferior to the proposed plan. Perhaps the overall best plan incorporates some of the attached plan along
with the proposed plan. I hope this information is useful in making the final decision, and is not meant to compete with the proposed plan.

3. Conjunctive Use: It's important to also note that there are many other commenters who are against the project for other reasons. Desal Alternative’s Rick Logonotti makes the claim that there is enough water that can be transferred from the San Lorenzo Valley, SLV, with the existing infrastructure to supply the District’s needs, fill the Purrisima aquifer in three years, and prevent any threat of saltwater intrusion. Clearly, this is a statement, which is impossible to prove as fact. Even if SLV were able to fill the Purrisima, then what, would we have to have another 3 year filling period in the future? It takes energy and expense to inject water into the ground, when it is much more cost effective and beneficial to build water storage reservoirs? Moreover, there is no possible way to test his claims scientifically, so it really must be discarded on something this important.

For one, the length and duration of future droughts are impossible to predict. Second, as you know, my Water District, the San Lorenzo Valley Water District, SLVWD, and the Scotts Valley Water District, are deeply involved with trying to solve the problem of a low groundwater levels in the Santa Margarita Groundwater Basin, SMGB. We are also trying very hard to restore the Fish Habitat, and transferring more water out of SLV exasperates this serious problem. Restoring the Fish Habitat is an extremely exciting environmental benefit, which we all need to keep focused on obtaining that goal. While transferring some water makes sense, I do not see this as a solution to the problem. It’s really a tactic by groups as Mr. Logonotti’s to stop all development, even if that development benefits the environment. So, I highly applaud the SqCWD Board for proceeding with the use of recycled water using advanced treatment and the basic concepts of this Pure Water Project.

Mr. Logonotti, also fails to recognize the environmental benefit of stopping the pollution of secondary treated wastewater. Yes this water has been treated and disinfected, but it carries hundreds of thousands of tons of excess nutrients into the Bay every year, which causes disease and high bacteria, counts at our beaches. By recycling, the nutrients are contained and removed by bacteria, rather than causing disease in sea life. This is an enormously positive improvement on the environment, which you must consider and explain why your plan will not be able to include this improvement in the future. Your job is to improve the quality of the environment, and need to move towards recycling all wastewater, particularly all the wastewater treatment plants which pollute the ocean.

Mr. Logonotti also cites the work of John Ricker, who I would like to simply note that he is not a Civil Engineer. And, a Mr. Gary Fiske, who’s poorly, constructed webpage for Gary Fiske and Associates does not list any of his qualifications. His linked in page does not have his qualifications. He also states the Kennedy Jenks has extensively studied this problem. Are Mr. Ricker, Mr. Fiske, and Kennedy Jenks willing to provide documents to the citizens of Santa Cruz County that they
guarantee there will be no need for water infrastructure, now and into the future? Perhaps it is not needed now, but what happens if it is in the future? These are very long term planning projects that just cannot happen overnight if a 4-5 year drought occurs and their conjunctive use plan fails? Are you going to trust these consultants who do not even list their education and background? All the consultants have been performing their work under your direction, which has been confined to only looking at your District, not the overall, bigger picture of the entire County, which this has a huge impact.

Last year, the District was considering designing it’s own Sewage Treatment Plant, a “Scalping Plant” when all the infrastructure is already in place to move water to an recently upgraded Waste Water Treatment plant which treats the water very close to standard recycled water. Essentially, you would be duplicating infrastructure. That is called a waste of money. This and other very poor engineering decisions continue. How can we have any faith in Kennedy Jenks and other Engineering Firms, with this poor record of advice?

4. Important Design Constraints:

Clearly, the design engineer on this project did not follow these important constraints because he was only thinking of your District, not the entire County, which is:

A. Utilize the Railroad Corridor exclusively for the distribution pipelines.
   Reason: Because the installation and maintenance costs are less than a third of the cost of pipes place in paved streets, saving tens of millions.

B. Install the treatment plant as close to the Santa Cruz Wastewater Plant, SCWWTP, as possible so that, in the future all of the water it currently discharges would be available. The site for this is at the northeast corner of Natural Bridges Avenue, and Delaware Street, (This is the site of the formerly planned Desal Plant). This site is adjacent to the Rail Corridor so that a filter backwash line can be installed back to the SCWWTP. Reason: Large Diameter pipe required, so the length must be short to cut cost, and the space required to treat 100% of all the water needs to be available for the future.

C. Install a water diversion structure on Delaware Street at the current outfall pipe capable of diverting all of the water, or a portion thereof. Any excess water not diverted shall overflow out existing outfall pipe.

D. Design the treatment plant to also produce standard recycled water, which requires minimal amount of energy to produce. A dedicated distribution pipeline also placed in the Rail Corridor for this purpose.

E. Maximize the number of areas the water can be distributed to which will insure maximum profits from the wholesale of water and guaranteed protection from saltwater intrusion.
5. Design Flaws of Current Plan:

A. Current plan is very vague with no specific locations of size of pipe, locations, and water treatment and production. Therefore, cost estimate of $90 million is not valid.

B. Plan calls for using a small portion of the water available. If, in the future, plans to utilize and produce more recycled water, the entire project will become unusable and obsolete. Pipeline and Treatment Plant size should be sized and located for possible future upgrades.

C. Plan does not call for use of standard recycled water. The secondary treated water from the current treatment plant is very close to the requirements of Class A recycled water, so that very little cost and energy to produce it. This water can economically be distributed to the farms in the North Coast, Seascape Golf Course, expanded Recycle Water use and detention ponds in Watsonville area and other large landscape users, and large fire protection services among other uses.

D. Plan is specific on injection well sites. Please provide all engineering data and calculations for determining these sites because this alternate plan includes building the wells along the Rail Corridor. Please justify the cost of the proposed site location, including the depth and type of soil in the permeable layer. Please show proof that there is not a permeable layer under the Rail Corridor adequate for our needs.

6. Attached Alternate Plan Benefits:

The attached, “Recycled Water Plan”, is far superior that the plans developed. A portion of this plan can be developed for under $90 million, producing and distributing the equivalent amount or more of water into the groundwater basin. The main areas and costs for this plan are:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Unit</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Water Diversion Structure, (Delaware St at Outfall)</td>
<td>1 LS</td>
<td>$10 Million</td>
</tr>
<tr>
<td>2</td>
<td>36&quot; Diameter Pipeline on Delaware St from Diversion Structure to Treatment Plant, (approx 6500 LF).</td>
<td>1 LS</td>
<td>$5 Million</td>
</tr>
<tr>
<td>3</td>
<td>Treatment Plant able to Advance Treat identical amount of water but able to upgrade to use 100% of wastewater discharge with backwash line to SCWWTP.</td>
<td>1 LS</td>
<td>$50 Million</td>
</tr>
<tr>
<td>4</td>
<td>18&quot; Pure Water Distribution Line from Treatment Plant to injection well sites along Rail Corridor, (approx. 30,000 LF, with several bridge crossings)</td>
<td>1 LS</td>
<td>$10 Million</td>
</tr>
<tr>
<td></td>
<td>Injection Wells, (6 each)</td>
<td>1 L.S</td>
<td>$1 Million</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td><strong>$76 Million</strong></td>
</tr>
</tbody>
</table>

**Description of Construction Areas and Cost Estimate Justifications:**

Note: A more detailed, accurate cost estimate can be provided, especially for the pipeline installations.

**A. Water Diversion Structure:** This is a structural concrete vault build over the large diameter outfall pipe on Delaware Street. The wastewater flows into a large vault, approximately 10' x 10' x 20' deep, (Actual size requires engineering), and then the water overflows out existing outfall pipe out to the ocean. The structure is connected to a pump station, which can be above ground to pump water out of the vault and into a 36" diameter force main on Delaware Street to the Treatment Plant. $10 Million is a conservative figure for this part of the project. Initial pumps can be installed, with option of adding more pumps in the future.

**B. 36" Diameter Sewer Force Main:** Estimate of $5 Million is $770 per foot, which is highly conservative and can have a lower, more accurate estimate provided. Includes all pavement restoration. Actual size requires engineering.

**C. Treatment Plant:** Basically using the cost figures from the City of San Jose's plant recently built several years ago for about $75 million. This plant was built on cheap land, but the land price is negligible. It is able to produce 10 million gallons per day of "Pure Water". This plant will require a concrete reservoir to accept water from item "B". The building structure large enough to make needed add ons for treating more water, treating standard recycle water equipment. Outside the building room made available for other structures, tanks etc. as needed. Initially most of what is required is the reverse osmosis equipment for the proposed amount, or more, of "Pure Water" desired. A filter backwash, "brine", line is needed to be installed in the Rail Corridor back to the SCWWTP inlet. It will also include a pump station to pump water into an 18" Force Main from the plant to Soquel/Capitola area to injection well sites.

**D. 18" Pure Water Force Main:** This estimate is based on $300 per foot. As you may know a "Rail Trail" is planned in the Rail Corridor, so this pipeline could, in fact, be placed during the construction of this bike path so that the cost would drop significantly. More engineering is required to determine if a booster pump station(s) maybe required depending on demand. Estimate is relatively conservative, and can also be made very accurate.

**E. Injection Well Sites:** These can be placed inside the Rail Corridor as shown on the attached plan. It might be desired to place the well sites closer to the coast in sections, such as Aptos, where the Rail Corridor veers inland. For now, we only need 6 in the Soquel/Capitola area to inject the identical
amount of water you are proposing in this plan. There are numerous active
and abandoned well sites near the rail corridor, which should have
information on exactly where the permeable layer of soil is, along with the
rate of production, which can be used to determine how much water can be
injected. Again, please provide all data and information from the Engineer,
which determined the placing of the proposed well sites in this plan.

Benefits over proposed plan:

A. Produces and distributes equivalent or more water for $14 Million dollars
less the proposed plan.
B. Plan is specified with exact locations so construction estimate can be detailed
and made accurate, whereas current plan is vague and does not have that
option available.
C. Plan provides means for future standard recycled water production and
distribution, which may include added facilities to the treatment for this
along with a 25-mile pipeline, which would extend to the north coast farms
to the recycled water plant in Watsonville. Numerous customers along near
this pipeline can purchase and utilize this water. It also can be injected into
the groundwater basin, (explained in part 7-Saltwater Intrusion), saving
hundreds of millions of gallons of water which naturally escapes into the
ocean every year.
D. Plan has the ability to stop all pollution of secondary treated sewage into the
Bay.
E. Plan provides an advanced, “Pure Water”, pipeline which can be extended to
Watsonville, and onto Moss Landing with the possible utilization of water
from the “Deep Water Desal Plant” being planned for construction.

7. Saltwater Intrusion: As I am assuming you are well aware, the actual
understanding of the physics of saltwater intrusion is quite simple. The fresh water
level must be above seawater level. The water enters the groundwater from rain,
so it is not critical where the injection wells are placed. Except for:

The current regulation from the Department of Drinking Water for “Indirect Potable
Reuse”, is that that Advanced Treated Recycle is two months, which is about 1 mile
travel time in sandy soil. This water however is being used for Direct Potable, so
this requirement may be waived in the future. The well location need to be simply
placed 1 mile away from a production well, and have the ability to inject a certain
amount of water without it flooding above ground.

There are numerous used and unused wells near the Rail Corridor. An injection well
is simply a production well in reverse. It’s actually less costly to maintain because
the slits on the well casing do not get clogged, and require acid wash cleaning as
production wells do.
Current rules for injection of Standard Recycle are that it must be detained 6 months and be mixed 50/50 with potable water, so this is approximately 3 miles away. This makes it not possible to place injection wells along the coast. However, again, most of these regulations do not follow science, and these also can be subject to change in the future, if the following scientific facts are followed:

This water can be injected near the coastline and would not be able to seep inland unless there is saltwater intrusion. Placed at this point, the water molecules seep towards the area of lowest pressure, which is sea level. Billions of gallons of fresh water seep in this area, at the base of the cliffs and river and streams, into the ocean every year. It's not possible for these molecules of water to seep upwards towards the much higher fresh water table due to pressure. This pressure, of say 50 feet or around 20 psi, would force or squeeze this water out into the ocean, the same way it keeps the saltwater out.

This is a proven scientific fact, because the saltwater does not intrude from the exact water pressure. There is a layer of saltwater and freshwater mixing, a brackish water layer, in varying width. So, the water molecules injected in this area go in the direction of the base of the cliffs, sea level, at the mixture layer, pushed out into the ocean. This is how is creates a sort of liquid liner, the recycled water is pushed out into the ocean, holding back the fresh water to a certain degree. It is not quite as beneficial as the other uses, but nonetheless it is helpful to maintain a high ground water level along the coastline, and a way to use up any excess standard recycle water.

The next wrong assumption has been that this would be a complete waste of money because here you have built this entire infrastructure and spending to dump waste water into the ocean. For one, this is not a waste, because the water would have otherwise been polluting the bay. Now it is placed underground for a term so that bacteria can break down the nutrients, rather that causing disease in animals in the ocean.

But, by far, the most important benefit, is every molecule of this water, will stop a molecule of fresh water seeping down the ocean cliffs. It provides a sort of water barrier, which will protect and slow down the natural freshwater seepage into the ocean.

Water distribution systems are best designed to have the most places to distribute the water as possible, as discussed above in important design criteria. This way, all of the, up to 10 million gallons a day, can effectively be utilized. The best use is to be able to sell the water to consumers, then the next would be to store it in reservoirs or tanks, next to inject the pure water for indirect potable reuse. All water left over can go to these standard recycle water injection wells near the coastline. Careful controls and monitoring can be used to direct the water to its most effective use. The proposed plan has a single, much inferior, single use and that is to inject, “Pure Water” in a very small, single area.
8. Concluding remarks and questions:

A beginning portion of the attached plan can be constructed for $14 million dollars than the proposed plan in the DEIR. Please explain in detail why the proposed plan is superior than the plan described in this document?

How can the $90 million estimate provided be accurate if the proposed plan is non-specific?

How does the proposed plan utilize future upgrade, more production, and distribution of storage of water without being completely deemed obsolete and replaced?

Why settle for a single benefit of injecting a small portion of the water available with no possible upgrades for $90 million, when you can achieve the same goal for $76 million and have the future benefits of wholesale of “Pure Water” and Standard Recycled Water using less energy, creating a “Liquid Liner” stopping billions of gallons of freshwater going into the ocean, stop all threat of saltwater intrusion, have the ability to connect to Deep Water Desal, not negatively impact SLV and Scotts Valley and cease all wastewater pollution into the ocean?

How does the proposed plan help utilize Deep Water Desal in the future?

Why does the plan not utilize the rail corridor to place pipelines exclusively, costing less than a third, an opt to place some pipelines in City Streets?

Why does the plan consider a small area for placing injection wells, when these can be placed anywhere which is 1 mile for existing production wells, and does not caused flooding above ground?

How does your plan prevent sewage pollution better than the attached alternate?

Why does your plan not produce and distribute standard recycle water?

In a more serious drought, how can your plan guarantee that the threat of saltwater intrusion will not happen? The attached alternate can use up to 10 million gallons per day from the SCWWTP to guard against saltwater intrusion, by not only using this water, injecting it in the ground for indirect potable, also creating a liquid barrier along the coastline, AND a means to connect to Deep Water Desal. The proposed plan has none of these extremely beneficial benefits to the environment. Why do you ignore them and settle for an inferior plan, which will become useless if these benefits are desired in the future?
Does the proposed plan have these benefits which can be added onto this alternate plan: i.e. Standard Recycle Water Use, use 100% of the water out of SCWWTP, inject Standard Recycle saving fresh water ground water from seeping into ocean, connection to Deep Water Desal, plan specific with accurate construction cost estimates, lower initial cost. Is there really anything better about it than the attached plan?

No question, this is a monumental decision to invest $90 million on something that really needs to be the best possible. Are you going to trust a person who maybe a terrific Water Resources Director, but has zero experience in designing and building water production, distribution and water storage facilities and basically drop all investment into recycled water, claiming conjunctive use will solve the problem forever, or a least a significant amount of time, 50+ years or more. Or in ten years are you going to have to say we should have, and could have after wasting $90 million?

Don Alley and Associates have been doing an excellent job of monitoring the Fish Habitat for over a decade, and his work in worth his expense simply for water quality. It is also critical to have the opportunity to restore this habitat to pristine conditions. Now, more water is planned, per the “Conjunctive Use” plan to draw more water out of our Fall Creek facility. Is there a reason why his firm has been removed from monitoring this critical area? Is there a Conflict of Interest by having someone approved by the County to oversee it?

Santa Cruz County is very similar in size and population to Marin County, yet has only a single water storage reservoir of only 9,200 acre ft vs. Marin Municipal Water District’s seven reservoirs over 80,000 acre ft. Why does the County ignore the fact that these reservoirs provide spectacular recreation areas, store water for potable water use, and percolate billions of gallons of water into the groundwater basin?

The undeniable fact is that Loch Lomond is an improvement on the environment. Is not that what the Environmental Quality Control Act created for? Should you not be considering and requiring other Water Districts to build reservoirs, despite following outdated logic that all reservoirs are bad. Liars who claim there exists an elephant banana slug that will be wiped out by the construction of the Zayante Reservoir? Yes, some reservoirs do destroy too much Salmon/Coho real estate, and do not make good recreations areas, but don’t reject those which do not take up significant fish real estate and make good recreations areas- those are an improvement on quality of the environment, especially due to the fact that a diminish groundwater basin as the single most devastating tragedy that can occur. Saltwater intrusion would make Santa Cruz County near inhabitable. The Redwood Forests would become brush-covered mountains like the Santa Barbara area.

Much of the attention has been focused on paying millions of dollars to consultants who call themselves “Environmentalists”, when; in fact, they do not use sound judgment on making decisions like this one. They are more interested in collecting a
paycheck, than to really help the Environment and/or use these issues to stop growth.

Then, the City spends over a year looking at alternatives to the failed Desal plan. Their solution, conservation, conjunctive use and the "Lochquifer" plan. This solution is at best, precarious.

Scotts Valley and the San Lorenzo Valley, SLV, must build more water storage, and the ideal area to do so is the abandoned sand quarries, the Hanson and the Olympia. Yet, this will also be met with controversy. But all of this "Conjunctive Use" water will be needed to fill these reservoirs. Moreover, SLV, will continue to improve septic systems and erosion control, so that septic and silt pollution are less of a problem and more water from heavy storms can be extracted with zero negative effect on the fish habitat.

Soquel Creek must install a system, which can be expanded to be able to make full use of 100% of the water discharge from the SCWWTP, which this alternate plan provides for $76 million dollars. The proposed plan cannot make the same claim, nor can it provide an accurate estimate, because it is too vague with many variables. Moreover, since it won't have the option of making full use of the SCWWTP water, the District will use water from SLV per Mr. Logonotti. This is unacceptable to take water from an area, which also has a severe lack of water production and storage facilities.

Please improve your plan so that it will have the future ability to treat 100% of the SCWWTP wastewater and incorporate all of the cost saving measures described above. If not, explain how your proposed plan will.

Sincerely,

Bill Smallman, P.E.
**Summary**

Self-motivated problem solver on heavy construction infrastructure projects with extensive experience from initial design to final completion of projects. Strong technical background, an ability to work collaboratively, and a commitment to achieving corporate goals.

- Project Management
- Estimating and Sales
- Design-Build
- Safety Training
- Microsoft Office
- Microsoft Project
- Heavy Bid & Job
- Value Engineering
- Change Orders
- Auto-Cad

**Professional Experience**

**Estimator/Project Manager, Northern Underground Construction.** August 2016 to July 2017.

Worked short time with the ex-President of Lewis and Tibbitts as Estimator and Project Manager for underground utility work.

**Estimator/Project Manager/Design-Build Engineer, Lewis and Tibbitts Inc** September 1997-August 2016.

Worked close to 20 years estimating, managing construction and design for water projects in the Bay Area. Most of my work was for our main client, the San Jose Water Company. Key member of company to increase sales for the company from less than 1 million per year to over 20 million per year. I am a licensed P.E. and have managed the design of water main replacement projects, (Design-Build), which also oversaw the construction phase as well.

**Estimator/Project Engineer, Various General Engineering Contractors** July 1989 to August 1997

I worked as Project Engineer for the construction of several large projects, (see below), namely the Penn Valley Wastewater Collection and Treatment, City of Santa Cruz Wastewater Secondary Treatment Improvements, City of Turlock Digester #5, City of San Lucas Wastewater Collection and Treatment, and numerous water and sewer main replacement projects.

**List of large projects:**

**Penn Valley Wastewater Collection and Treatment Plant:** Installation of a septic tank effluent pump system, S.T.E.P., for 500 residences which involve installing force mains to a treatment plant which consisted of two aeration ponds, a control building, a earthen dam reservoir and an irrigation system. Native American artifacts were discovered which I helped mitigate.
San Lucas Wastewater Collection System and Treatment Plant: Installation of a Gravity Pipeline System for around 200 homes to a deep 12" main boring under railroad tracks to deep grinder pump lift station to force main piping to treatment plant with two aeration ponds, controls, to irrigation system.

City Santa Cruz Waste Water Treatment Plant Improvement Project: Installation of large retaining wall approximately 1000 feet long, numerous mechanical improvements on existing equipment, large excavation and shoring next to rail road tracks to make room for six new tricking filter structures, new digester requiring precast pile driving, specialized piping and pumping equipment, and large diameter steel piping.

City of Turlock Digester #5 Project: Installation of large +/-100’ diameter, 50’ tall digester, control building, pumps, boiler, yard piping connections to existing plant, and mechanical work.

Education

California State University at Chico CA, Bachelor of Science in Civil Engineering. May 1989
Licensed Professional Engineer CA# C77329

Key Qualifications

1. Extensive “Hands-on” experience of water infrastructure improvement projects from initial design to completion.

2. Expertise in all aspects of design, construction cost, permitting, legal issues, etc.

3. Excellent communication and computer skills. Recently joined “Toastmasters”.

4. Extreme interest in promoting and constructing the most effective, high quality, water systems to the betterment of community.

5. Elected Director for the San Lorenzo Valley Water District, a 7800 customer based Water District where I live.

6. Created, “Water Solutions for Santa Cruz County”, www.scwatersolutions.com, which include five conceptual design proposals for improving water production and storage for the entire County over 30,000 acre-feet per year, and recommendation and outline for creating a Regional Water Authority in charge of maintaining the ground water levels and the wholesale of water.
The Recycle Plan

By Bill Smallman, P.E.
www.scwatersolutions.com
Introduction

During the environmental impact review for the Desalination Plant, (Desal), recycled water, (Recycle), was studied. The three main reasons why Desal was preferred over Recycle are:

1. Cost of distribution pipelines is too high.
2. You cannot inject the water into the ground because actual types of soil layers are unknown, too complex, and the water will contaminate wells.
3. The water came from toilets, and this makes me feel icky.

Several important developments happened since that time disputing these three reasons. The most important of which as Advanced Recycle Treatment plants are being constructed, and the water chemically analyzed, it is being discovered that the water is actually equivalent or better in quality than Desal. And, it uses about 1/3 the energy to produce. The Department of Public Health, CDPH, is constantly changing regulations with new technology. They reduced the detention time and removed the blending requirements for Advanced Recycle injection. The detention time was lowered from 6 months to 2 months. This meant injection wells had to be only 1 mile from potable wells. Eventually CDPH will approve injecting the water directly into distribution systems, i.e. "Direct Potable Reuse". In addition, the Railroad Corridor was purchased, and everybody is realizing that this would be an ideal, cost effective area to install the distribution pipelines. And, they are seeing a train with a very poor business plan, likely to fail, and a very expensive parallel bike path. The treatment plant and the distribution pipelines just became a bargain vs. the 125 million parallel bike path and train. Finally, people are starting to use good scientific judgment instead of "icky" feelings to make this extremely vital decision.

Cost and Productivity

Productivity: After initial construction, this system will produce, on average, 4 million gallons per day, MGD, of standard recycled water, and 4 MGD of purified, (advanced recycle), water. It will also provide a means for an emergency water connection to Deep Water Desal.

Cost: The cost for the Advanced Recycle Treatment Plant is 60 million, excluding land purchase. This includes a long pipeline connection to the sewage treatment plant. The cost for the long distribution pipelines is 50 million. This includes attaching pipe to, and improving all bridge structures. 15 million is allocated for injection wells and initial water service connections and hydrants. This does not include solar panel paving blocks or other utilities, and these be paid by others. It does include restoring as a bike path with asphalt surface if the solar paving block idea is not used. This would forgo the equivalent, estimated 125+ million, slow constructed, parallel bike path and train.
The Recycled Water Plan Steps

1. Build and Advanced Treated Recycled Water Treatment Plant at the corner of Delaware Avenue and Natural Bridges Drive. Cost is 60 Million. The plant has the capability of either creating standard recycled water or purified water. The purified water is as good or better quality as Desal, and uses about 1/3 of the energy to produce. The aversion to it is purely psychological. If you drink from the tap, this is less than 1.5 % of the total water you use each day. Buy bottled water and support this superior plan.

2. Develop plans for direct piping connections to distribution systems. The Department of Public Health will approve “Direct Potable Reuse” after further chemical analysis of the water. Scientific data trumps emotions when developing important regulations.

3. Divert the 8.4 Million Gallons of Water per day, currently carrying pollution into the Bay, down to the new plant in a large pipeline down Delaware Avenue to the plant.

4. Build two transmission mains, one standard recycle and the other purified water in the railroad corridor from Davenport to Watsonville.

5. Construct about 40 injection wells along the pipeline route in critical areas.

6. Connect pipelines to the Pajaro Valley Water Management Agency’s Recycle Plant and Distribution System.

7. Add additional services for irrigation, (both North and South County farms), golf courses, manufacturing and fire protection.

8. If needed, construct an emergency pipeline, 6 miles long, through farmland, to the Deep Water Desal Plant in Moss Landing. Added cost is around 2-3 million.
Utility Corridor

This is by far more beneficial, both environmentally and economically to the citizens of Santa Cruz County than a train, which may have to be subsidized. Do not let the Regional Transportation Commission build it. Instead:

1. Sell salvaging rights to a demolition contractor. Remove and salvage steel rails and ties. This can be done in about 2 months. The net profit from doing this is estimated to be around $650,000. In the interim, the corridor can immediately be used as a gravel path.
2. Seek out other utility companies, which may be interested in investing in the project, lowering overall cost.
3. Install a 16” or 18” Recycled Water and Advanced Recycle pipelines on either side. The pipelines would be attached to all of the bridges at crossings.
4. Install injection wells every ½ mile. They would be able to inject about 100 gallons a minute of each type of water, (There are some issues with injecting the standard recycle, which I will explain later).
5. The entire path restored as a bike path. A new product could possibly restore the surface, which is a solar panel paving block. These blocks can come with LED lights to light up the delineation lines at night. The energy sold to PG&E and used to power injection well pumps.
For simplicity, to really understand the physics of saltwater intrusion, imagine the ground as one, homogeneous, packed sand with the same amount of permeability. This will also help understand how the water moves when you inject water under pressure into it. In reality, the ground often has layers of low permeable rock, which can divert the water. Nature is always imperfect, so the water finds its way around these obstacles, and always moves in the direction of lowest pressure. Saltwater weighs slightly more, and the pressure is equalized when the freshwater is about $\frac{1}{2}$" higher. This is why saltwater creates a wedged curved barrier with the freshwater. The freshwater has to stay above the mean sea level to prevent intrusion; most Hydrologists recommend ten feet minimum. The freshwater seeps down and seeps into the ocean, as it continually does this naturally. There is one way to slow it down, which I will explain later.

**Injection Wells**

Standard production wells have a casing pipe that has slits on the sides of it in layers of permeable sand to allow water to flow into it. A pump is placed on the bottom and pumps water, (less than the amount seeping in the casing), up through a carrier pipe. This well can be made into an injection well by simply removing the pump and carrier pipe, sealing the top of the casing, and installing a pressure pump which fills the entire casing with pressurized water. An injection well is far less costly to maintain because there is no carrier pipe, and the slits do not get clogged up with silt requiring costly acid treatment that production wells require.
Groundwater Injection
The California Department of Health, CDPH, recently changed its regulations about ground water injection using Advanced Recycled Water. As stated earlier, chemical analysis will show that has a higher quality than Desal and produced for less cost. CDPH will further look at this scientific data and eventually allow this water to be directly injected into the distribution system(s). For now, and in the future, the ground provides a cheap water storage area with no evaporation. So, the Advanced Recycle could be injecting up to about 4000 gallons a minute along the corridor with the goal of adding to rainfall and keeping the ground water level 10 feet above sea level and insuring that saltwater intrusion does not occur. This water simply adds more water with rainfall that seeps down from gravity into the basin. Another added option idea is to inject the standard recycle deeper and closer to the freshwater/saltwater barrier. CDPH will not allow this if there is any chance this water will migrate to a production well in less than 6 months. As stated earlier, the physics show that this water under pressure will push the other molecules of water to the area of lowest pressure at the apex. It is highly unlikely there is a non-permeable layer of rock, with no cracks, that the water would not move around it and eventually move up the barrier and then seeps into the ocean, receiving some additional treatment underground. Keep in mind that we are not talking about water moving in open air, the water molecules are moving in between a lattice of soil particles. So the recycled water seeps into the ocean, and the freshwater seeping down from gravity meets this water and mixes with the water coming up. A fixed amount of water seeps and mixes with the saltwater, so this slows the amount of freshwater seeping into the ocean is reduced.

Other Important Considerations

Both the Santa Cruz and Watsonville Waste Water Treatment Plant produce about the same amount of secondary treated wastewater. The Pajaro Valley Water Management Agency, PVRMA, recycles about ½ of Watsonville’s wastewater. At certain times of the year, they have a surplus of standard recycled water, and could contribute water into the utility corridor pipelines. In the future, an Advanced Recycle Treatment Plant could be built next to the PVRMA facility, adding another valuable potable water source connected to the utility corridor distribution pipeline.

The distribution of standard recycled water for agriculture can be expanded to a degree that it may not be necessary to inject any of it into the ground water basin. I believe that PVRMA could expand distribution further into the Pajaro Valley. In addition, in between Watsonville and La Selva Beach, and in between Santa Cruz and Davenport are farms, which could easily accept large irrigation services. The utility corridor goes through Seascape golf course and resort, which could accept a large, low cost, service to connect to their irrigation system. Longer branch lines could possibly be installed to other large landscape and fire protection services. Fire hydrants would be installed along the bike path. All of this water will replace water that is currently being supplied from the ground water basin.
The Santa Clara Valley Water District and City of San Jose recently constructed an Advanced Recycled Treatment Plant next to San Jose’s large, 110 MGD, wastewater treatment plant, which purifies about 10 MGD. Santa Cruz produces, on average, 8.4 MGD, and it is wasted into the ocean. The recovery rate for recycle is 100%, because any backwash water simply goes back to the sewage treatment plant. With Desal, the backwash is brine water and dumped into the ocean. So if you assume about 0.4 MGD of backwash, the plant could produce 4 MGD of Standard Recycle and 4 MGD of purified Advanced Recycle. The plant would have the flexibility to produce one or the other. In comparison, the proposed Desal plant was to produce only 2.6 MGD of purified water. In addition, the reverse osmosis filters, RO, are identical for Advanced Recycle and Desal. There is a new RO filter material, “Graphene”, being developed, which claims to cut energy use even further.

Saltwater has 35,000 parts per million of salt. Secondary treated wastewater has a fraction of that of chemicals that can be broken down by bacterial action. Water from the ocean also has these chemicals in addition to the salt. In fact, the only motivation to construct the Deep Water Desal plant, DWD, is that there are less organic chemicals. The salinity is about the same. The San Jose plant just started operation and they plan to do extensive chemical analysis of this water which is likely to show that it is of equal or higher quality than Desal. It makes no sense whatsoever to desalinate seawater if you have wastewater that can be recycled, yet many people, even highly educated people, still feel Desal is better just because of where the water comes from. Their minds are controlled by emotions, not by critical scientific thought.

The final tab for the San Jose plant was reported in the newspaper to be 72 million. This includes long pipeline connections to the wastewater treatment plant. The lowest bid for the construction of the project was 43 million, which increased to 57 million. Santa Cruz would need a plant of the same capacity, but may elect to only advance treat ½ of the water, and the other half to standard recycle, so the number of reverse osmosis filters would be cut in half. This would significantly lower cost and energy use, so around 60 million, is a good estimate.

When designing a recycled water system, it is best to add more areas where the water can go than can be produced. This guarantees all the water will go to effective use. For example, the Scotts Valley Recycled Water System always had a surplus, and they discovered that they could effectively provide water to the Pasatiempo Golf Course. For all these years Scotts Valley could have been providing this water to Pasatiempo, if the initial designers had this foresight. This system provides for the maximum amount of possible service areas and flexibility. This is because the utility corridor goes through the most populated areas in the County, and some of the largest agricultural areas. A treatment plant that can produce either standard recycle or purified water, allows the flexibility of producing which type of water which is needed most, with it being desirable to produce mostly standard recycle because it uses less energy.
Effectiveness, Practicability, Environmental and Community Considerations

► **Effectiveness:** The water that comes out of the wastewater treatment plants is free and easily diverted by pipeline modifications to an Advanced Recycled Water Treatment Plant. The technology is really not confined to desalination; it is basically removal of unwanted chemicals of any water. Saltwater is something we have basically an infinite source of, and could potentially lead to unlimited growth. Recycle has far less unwanted chemicals, which also are removed by bacterial action. Bottom line, Recycle is more effective than Desal. It is a finite water source, and force people to design a sustainable system. Taking the Desal route, this leaves the legacy of unlimited growth, depleting all other resources for future generations.

► **Practicability:** Having the railroad corridor available to change into a utility corridor is almost like getting a “Gift from God”. It runs along the coastline through the most populated areas of the County. It also runs through acres of very fertile agricultural properties. On top of this, it is close to the coast, so it is the ideal location to inject water to prevent saltwater intrusion. In short, it is by far the most practical area to place these pipelines. If Desal was deemed the most practical solution, then Advanced Recycle is even more practical, because using it requires less energy, less cost, and using it eliminates pollution in the Bay.

► **Environmental Considerations:** There are no negative environmental impacts for this proposal, only enormously positive ones. First, the 8.4 million gallons of water currently dumping into the ocean carries an enormous amount of organic chemical pollution. Its true bacteria continue to break down these chemicals, but it is also a breeding ground for disease. The RO technology provides a means to remove these chemicals and send them back to the sewage treatment plant, which allows more time for the bacteria to break them down so that it does not create disease in people or animals.

► **Community Considerations:** Following this plan, the railroad corridor can quickly become a gravel path for hikers and bicyclists, and then restored as a paved bike path. Proposition 116 has language in it that the corridor must be used for a train. Does this make any sense if the train is not financially sustainable? Moreover, who are the person(s) responsible for influencing this requirement into this legislation? There is no timeline to build the 125 million dollar parallel bike path, yet the City and Soquel Creek Water District were fully ready to spend 125 million on Desal. In my opinion, the real needs of the Community are being ignored by this folly of a train and parallel bike path, when the Community can immediately have a gravel path and, in the future, a paved bike path and a sustainable water system. What has priority? Water or Train?
3.75 Response to Comments from Bill Smallman, P.E. (August 6, 2018) (Comment Letter I-62)

I-62-1 The qualifications provided have been reviewed to the extent that they relate to the comments submitted by the commenter. However, this comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-62-2 Recycled water for irrigation purposes could occur under the Project, if irrigation customers are identified. As noted on EIR page 3-20, Project pipelines would include potential connection points for future supply to irrigation customers. Provision of recycled water to areas outside the District and areas adjacent to the Project facilities, such as in Watsonville, is beyond the scope of this Project. Irrigation or non-potable recycled water use alone would not be sufficient within the District to offset existing groundwater uses at a level that would meet the Project objectives related to replenishment of the local groundwater basin to prevent further seawater intrusion that meets the District’s supply objectives and the State’s mandate under SGMA.

I-62-3 This comment summarizes concerns regarding one of the alternatives considered but dismissed from further consideration in EIR Section 7.5 (large scale water transfers/purchases), noting that water transfers are less reliable than recycled water options. This comment is noted. However, the qualifications of team members of the City of Santa Cruz planning efforts is not within the scope of this Project and its CEQA analysis.

The comment further identifies the environmental benefit of recycled water projects in reducing discharges of secondary treated wastewater and requests that the reduction in discharges be addressed in the EIR. Impact 4.11-2 discusses water quality impacts associated with operational discharges into Monterey Bay. The discussion notes that the Project would achieve the Project Objective of providing environmental benefits, such as to surface and marine waters, by reducing the volume of treated effluent discharged to Monterey Bay under existing conditions, as well reduced SC WWTF discharges overall. The amount of treated effluent that can be diverted from the SC WWTF to the District, for use as part of the Pure Water Soquel Project, is subject to agreement from the City of Santa Cruz and must consider City needs for potential recycled water needs. As such, it is not expected that the Project could utilize 100 percent of the secondary treated effluent, as requested by the commenter. As discussed in EIR Impact 4.17-2, the District and City of Santa Cruz have entered into a memorandum of understanding (MOU) regarding the provision of secondary effluent from the SC WWTF for the Project’s operational source water. The MOU is intended to provide a framework for negotiation of a Project Agreement and does not create a binding contractual obligation. The MOU provides information from the City of Santa Cruz regarding the availability of source water and acknowledges that use of approximately 1.6 MGD of secondary treated effluent represents approximately 20% of
the Santa Cruz WWTF average daily flow rates. The City indicates that the volume of the District’s proposed use would leave an adequate effluent supply available in the event the City determines that it needs or wants to develop recycled water for City use.

I-62-4 As discussed in EIR Section 3.3, Project Objectives, the overall goal of the Project is to recharge the local groundwater basin with 1,500 afy of purified water for indirect potable reuse (IPR) and thereby improve its reliability as a water supply source. The specific objectives of the Project are to:

- Replenish the local groundwater basin to prevent further seawater intrusion and develop a sustainable water supply in a timely manner that meets the District’s supply objectives and the State’s mandate under the SGMA.
- Develop an affordable, reliable, and drought-resistant supplemental water source that contributes to the diversification of the District’s water supply portfolio and enhances resiliency.
- Continue to provide District customers with a high-quality and safe water supply.
- Provide additional environmental benefits, such as to surface and marine waters.

The site identified in this comment would be closer to the Santa Cruz WWTF than the Chanticleer or Headquarters-West Annex sites included in the Pure Water Soquel Project. In addition, the Pure Water Soquel Project considers an advanced water purification facility at the Santa Cruz WWTF, as well as a tertiary water treatment facility at that location. Siting of an advanced water purification facility at the location identified by the commenter would reduce the length of pipelines between the secondary effluent source water and an advanced treatment facility at the Chanticleer or Headquarters-West Annex, which would reduce the environmental impacts associated with construction of the source water and brine return lines. However, in order to meet Project objectives, the advanced treated water would need to be piped to the Soquel Creek Water District service area, and recharged in locations at or near the areas identified in the Pure Water Soquel Project Description (EIR Chapter 3), in order to replenish the local groundwater basin, meeting the District’s supply objectives and the State’s mandate under SGMA, as well as to diversify the District’s water supply portfolio. An advanced treated water pipeline between the site suggested by the commenter would be longer than the pipeline extent proposed under the Pure Water Soquel Project, for any potential treatment configuration, and would therefore result in greater environmental impacts than under the Project as described in the EIR.

However, it is noted that the Pure Water Soquel Project includes turnouts that would allow for provision of recycled water to irrigation landscape customers, if any are identified. Further, the District continues to participate in planning of regional water supply solutions through its role in the Santa Cruz Mid-County Groundwater Basin Agency, and through development of its Community Water Plan, which considers water transfer options with the City of Santa Cruz.
I-62-5 Please see the response to comment I-62-2 above regarding potential for irrigation water distribution to be included as part of the Project, should customers be identified. Also see the response to comment I-62-4 regarding consideration of siting of a treatment facility in the vicinity of the existing railroad corridor. Section 3.5.2, Conveyance System, includes the sizing of all pipeline components, Section 3.4, Project Location, identifies the location of all project facilities, and Section 3.7, Operations and Maintenance describes the proposed water treatment and production approach.

The need for additional treatment and recharge capacity beyond that needed to address Project objectives has not been identified at this time. Should future expansion of treatment and recharge capacity be considered, additional planning studies and CEQA analysis would be required.

Comments regarding Project cost do not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required.

I-62-6 Please see the response to comment I-62-4. Further, as noted in the prior response, comments regarding Project cost do not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required.

I-62-7 As discussed on EIR page 3-1, the EIR considers an advanced purification system capable of treating secondary effluent to meet State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) recycled water standards for groundwater replenishment via recharge; with recharge requirements that include a two-month retention time of recharged treated water. Thus, the location of recharge wells were carefully selected for areas where that requirement could be achieved, and where recharge would meet project objectives related to groundwater replenishment and prevention of further seawater intrusion in a timely manner. See also the response to comment I-62-4, regarding siting of a treatment facility in the vicinity of the railroad corridor.

I-62-8 Please see the response to comment I-62-5 regarding Project costs.

I-62-9 Please see the response to comment I-62-5 regarding potential for future expansion.

I-62-10 Please see the response to comment I-62-5 regarding project costs.

I-62-11 Regarding requests to implement broader regional water planning solutions, as discussed in EIR Chapter 2, introduction, the District’s Community Water Plan includes consideration of additional water supply augmentation projects beyond the Pure Water Soquel project, including participation in the DeepWater Desal Project and long-term water transfers with the City of Santa Cruz. Further, the District is participating in regional water planning as part of the Santa Cruz Mid-County...
Groundwater Agency. However, the EIR for the Pure Water Soquel Project is limited to that Project and alternatives to the Project that would meet most of the Project objectives while reducing one or more of the significant environmental impacts of the Project.

I-62-12 Please see the response to comment I-62-11 regarding project costs.

I-62-13 Please see the response to comment I-62-7 regarding siting of recharge well locations.

I-62-14 Please see the response to comment I-62-2 regarding the overall scope of the Project, which does not consider connections beyond the District service area or areas adjacent to the Project facilities.

I-62-15 Please see the response to comment I-62-4 and I-62-11 regarding how the Project relates to the broader regional water planning context.

I-62-16 This comment summarizes comments within the overall comment letter. Please see the responses to comments above.
Pure Water Soquel Project CEQA
2041 Soquel Dr, Suite A-501
Soquel CA 95073-3105
Dear Pure Water Soquel Project CEQA Staff,

I am hereby requesting an extension of time for Public Comment on the PureWater Soquel Project Draft Environmental Impact Report. It is a lengthy document that merits thorough public evaluation. I need more time to carefully read it, research related and appropriate issues of concern, and to respond in a cogent manner.

Please extend the Public Comment period to allow for better public input and analysis. Please notify the public of your decision.

Thank you.

Sincerely,

[Signature]

[Name]
3.76 Response to Comments from Jessyka Soto (August 13, 2018) (Comment Letter I-63)

I-63-1 Please see the response to comment I-4-1.
Aloha Soquel Creek Water District,

I am saddened to read that the Draft EIR for the Pure Water project does not include a full study of the possibility of sharing. We who sat on the Water Supply Advisory Committee want to be able to share our excess water with you. At the very least sharing can augment our groundwater supply at a low cost.

The Draft EIR Pure Water Soquel Project is insufficient. River Water transfers are not given full analysis, and outdated pumping reduction goals are used when determining need. The EIR also inadequately analyzed energy use. Further, potential negative impacts from contaminants are not accounted for.

The alternatives section indicates that groundwater recovery will occur with no project. This indicates that the in-lieu strategy would have a larger effect than anticipated. Sharing adds system resilience at a potentially significantly lower cost. This possibility merits full study.

The Draft’s Impact 4.6.1 reads, “The Project could use large amounts of fuel or energy in an unnecessary, wasteful, or inefficient manner.” Yet no mitigation for this very large energy expenditure is offered.

It is not clear whether the project is able to address all contaminants.

The Draft EIR also deserves a full 60 day public comment period as it is a major public infrastructure project addressing our primary need.

Therefore, the project needs further environmental review before being further considered.

Blessings,

Erica Stanojevic
3.77 Response to Comments from Erica Stanojevic
(August 12, 2018) (Comment Letter I-64)

I-64-1 Please see the responses to comment letter O-4. Further, in response to the request to extend the comment period, see the response to comment I-4-1.
The Finance of Water

There are few subjects that can put you to sleep faster than an in-depth discussion of public finance. But understanding the finances behind how water gets to your home or business allows you to make better decisions about how you use your water and how you can help guide the Board and employees of Soquel Creek Water District to make better decisions on your behalf. In previous articles on the Finance of Water, we will try to give you a better understanding of your water rates, how we develop our annual budget, and the tools we use to inform the public on our financial performance.

Our District’s primary source of revenue comes from money collected from ratepayers for water service. We also have a small amount of money that we collect from customers putting new homes of subdivisions, and a modest bit of interest that we earn on money held in reserves. But most of the money we collect is from customers. This isn’t the case for every water agency. Some water agencies are part of a city, county, and receive some money from that government’s general fund. Some water agencies generate their own private tax revenue. Revenues from water rates is what enables us to provide reliable, clean water 24 hours a day, 7 days a week.

The District is not a part of a city or county and is not regulated by the Public Utilities Commission (which oversees privately owned utilities). It is a special district of the State of California. A part of local government that is designed to fulfill a very specific public role such as water service. The District and all of its operations are governed by five board members that are elected locally by customers. These board members must live in the area served by the District, so it’s truly a case of customer service. Many District employees are also customers. This type of local focus ensures that the needs of the customer are the heart of everything we do. When our District raises water rates, the board members and employees are impacted as well. There is no discount for employees. As a public agency, we strive to make the rates to be fair and equitable, meaning our customers, board members and employees all pay the same rates and receive the same level of service.

So how do we set water rates? District staff does not do this work in isolation to the complexities involved. We hire an independent financial consultant who specializes in rate setting to develop our rates to be fair and equitable.

Our next article in the series will discuss how water rates are developed in California and specific steps the District is taking to evaluate the way we bill customers for water service.
3.78 Response to Comments from Wayne Stanton (August 6, 2018) (Comment Letter I-65)

I-65-1 This comment on the District’s Community Water Plan summary of Plan elements is noted. As discussed in EIR Section 2.2.2, the Community Water Plan serves as the District’s roadmap to meeting its goal of sustainability by 2040 and the District is evaluating the noted elements of the Plan. This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no further response is required.
Aug. 7, 2018

Pure Water Soquel Project CEQA
4041 Soquel Drive, Suite A-501
Soquel CA 95073-3105

To the EIR:

I have said this before. To put any kind of industrial operation in the middle of a residential neighbor is just plain WRONG. The existing plant is pushing it way to far as it is. The noise, traffic, and vibrations are way too much for a residential neighborhood already. We hear the "beep beep" of the trucks and tractors all day and often late into the night. Everytime one backs up we have to hear it. Then there is the rumble rumble of the trucks coming and going, ("no dear that wasn't an earthquake, just another truck"). But this plant was there before a lot of the homes were built, so we live with it.

They shouldn't have been able to just change the zoning so they can build another plant. NOT RIGHT. The board had the zoning changed before they bought the adjoining property. Another sneaky move. Now they say they have to use it because they own it. Well, they could always sell it back as residential property and make a very nice profit.

This is just one of the many reasons this treatment plant should not be built on the Soquel Dr. property. There are many more. I hope my fellow neighbors have responded. I know, it is difficult and time consuming to write letters. Never knowing if the right people are even getting the letters. That's why the board would not let citizens ask questions or give feedback verbally. That's not a 'Public Meeting'.

Please don't let this happen to our neighborhood.

Thank You / Wayne Stanton

Wayne Stanton
3.79 Response to Comments from Wayne Stanton (August 7, 2018) (Comment Letter I-66)

I-66-1 Please see the response to comment I-44-2 regarding the existing setting at the District Headquarters. This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-66-2 Please see the response to comment I-44-3 regarding zoning of the Headquarters-West Annex site. As noted by the commenter, should the District identify District-owned properties as underutilized, the property(ies) could be identified as surplus property that could be sold.
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Dear EIR Board:

I wonder why are we doing this Toilet-to-Tap 'experiment'? No one wants it, and even if it does work it will be another 20-30 years before we have enough water in the aquifer to have lawns again. (told to me my one of the project leaders) They are still building homes and offices as we speak and they want to build more, many more. This is nothing but a quick fix. This experiment won't cover all the future needs. Some feel the board is just trying to make a name for themselves.

Dump the whole thing and go for Desalination right now. Something they are using all over the world. It works. After all we live right on the coast of the biggest water supply in the world. Use it.

Sure, it is expensive now, just think what it will cost 5 years from now.

Turn this project down and recommend something that will work soon.

Sincerely

Wayne Stanton
3.80 Response to Comments from Wayne Stanton (August 8, 2018) (Comment Letter I-67)

I-67-1 Regarding the comment to pursue a desalination project instead of the proposed project, EIR Chapter 7 includes consideration of a local desalination project (CEQA Alternative 3) and considers but dismisses from further analysis participation in the DeepWater Desal project. As discussed in EIR Section 7.2, Approach to CEQA Alternatives Selection, consistent with CEQA, the approach to alternatives selection for this EIR focused on identifying alternatives that could meet most of the basic project objectives of the project while reducing one or more of its significant impacts, could foster informed decision-making and public participation, and could be feasibly implemented. CEQA Alternative 3, Seawater/Brackish Desalination Plant for local water supply purposes, would meet most of the project objectives and would decrease the intensity of some of the significant short-term impacts identified for the Project. However, it would result in additional construction and operational impacts compared to the Project and could not be implemented within the same timeframe as the Project. As discussed in Section 7.4, Comparison of Alternatives, the Project would be environmentally superior as compared to Alternative 3.

As discussed in Section 7.5, Alternatives Considered, but Rejected from Further Analysis, participation in the DeepWater Desal Project as an alternative supply sources may avoid some impacts of the Project, but would result in additional environmental impacts. The alternative was eliminated from further analysis because it would not meet the Project objectives of providing a timely or affordable alternative supply.
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Wayne Stanton
3020 Crystal Heights Dr.
Soquel, CA 95073

Pure Water Soquel Project CEQA
4041 Soquel Drive, Suite A-501
Soquel, CA 95073-3105

OAKLAND CA 945
31 AUG 2018 PM 6:1

Comment Letter I-68
Pure Water Soquel Project CEQA
4041 Soquel Drive, Suite A-501
Soquel, CA  95073-3105

Dear Pure Water Soquel Project CEQA Staff,

I am hereby requesting an extension of time for Public Comment on the PureWater Soquel Project Draft Environmental Impact Report. It is a lengthy document that merits thorough public evaluation. I need more time to carefully read it, research related and appropriate issues of concern, and to respond in a cogent manner.

Please extend the Public Comment period to allow for better public input and analysis. Please notify the public of your decision.

Thank you.

Sincerely, Wayne L. Stanton

There is new information available (new time) and I would like as much more time as possible, say 45 more days.

Thanks

Wayne
3.81 Response to Comments from Wayne Stanton
(August 9, 2018) (Comment Letter I-68)

I-68-1 Please see the response to comment I-4-1.
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Aug. 10, 2018

Wayne Stanton
3020 Crystal Heights Dr.
Soquel, CA 95073

Pure Water Soquel Project CEQA
4041 Soquel Dr., Suite A-501
Soquel, CA 95073-3105

Dear EIR Board:

If you are still thinking of doing the PureWater Soquel (toilet-to-tap) water aquifer recharging experiment.

I just took a drive over to the proposed Chanticleer Ave. site and found it to be a far better place to build the water treatment plant. First it's not in the middle of residential housing area. It's bordered on two sides by roads. There are business on the other two and probably zoned for commercial or industrial. There is a lot of undeveloped land there. It would be less of a disturbance, and safer for a lot of people.

I think the Soquel Water District board should take a better, more in depth look into that potential site. They seem to have locked into the West Annex site on Soquel Drive without really exploring this site.

Like I said, "if they must" go with the PureWater experiment, this would be a better place.

Now I'm hearing about other options to the problem that need too be studied further. But will take additional time.

Thank You for the Consideration.

Wayne Stanton

Wayne Stanton
3.82 Response to Comments from Wayne Stanton
(August 10, 2018) (Comment Letter I-69)

I-69-1 Please refer to response to comment O-5-2.
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Mr. Wayne Stanton  
3020 Crystal Heights Dr.  
Soquel, CA 95073

Pure Water Soquel Project CEQA  
4041 Soquel Drive, Suite A-501  
Soquel, CA 95073-3105

SAN JOSE CA 950  
23 AUG 2018 PM 4 L
Wayne Stanton
3020 Crystal Heights Dr.
Soquel, CA 95073

PureWater Soquel CEQA
4041 Soquel Drive, Suite A-501
Soquel, CA 95073-3105

Dear PureWater EIR Board:

I have complained about the placement of the water treatment plant on the West Annex Soquel Dr. site for many of the obvious reasons. Now it has been brought to my attention about the noise and vibrations of the plant in the construction phase. With pile drivers and jack hammers day and night for an extended time. This is a residential neighborhood with many seniors and working families. They need their sleep. NOT ACCEPTABLE.

A much better place for this type of industrial undertaking would be the Chanticleer Ave. site. Better

Or better yet one of the other possibilities that doesn’t include sewer water.

Soquel Drive is not the right place for any kind of plant. Period.

Thank You / Sincerely

Wayne Stanton

Wayne Stanton
3.83 Response to Comments from Wayne Stanton (August 11, 2018) (Comment Letter I-70)

I-70-1 The potential noise and vibration impacts of construction of an advanced water purification facility at the Headquarters-West Annex site are addressed in EIR Section 4.13, Noise and Vibration. As explained on page 4.12-22, construction activities at the Headquarters-West Annex site would occur during daytime hours only, no nighttime construction is proposed. As explained further on pp. 4.13-22 and 4.13-23, people in the vicinity of the Headquarters-West Annex site would be expected to experience noise levels in excess of the County’s daytime noise standard during daytime hours for the first 2.5 months of construction, during which time a soldier pile or concrete block wall would be constructed along a portion of the site’s perimeter. Once installed, the wall would reduce noise impacts during the remaining 21.5 months of construction to levels below the County’s daytime noise standard.

I-70-2 Please see the response to comment O-5-2, regarding the analysis of siting of the advanced water purification facility at one of three locations, the Santa Cruz Wastewater Treatment Facility, Chanticleer Avenue site, or Headquarters-West Annex site, all of which were analyzed at an equal level of detail in the EIR.

Also note that the Project does not include treatment of raw wastewater, rather it includes treatment of secondary effluent from treated wastewater. Consideration of raw wastewater as a source water for the Project is an alternative that was considered but dismissed from further analysis (see EIR Section 7.5.2). As discussed, such an alternative would result in greater operational impacts than the Project. Further, operational impacts associated with treatment of raw wastewater was raised during CEQA Scoping; resulting in a request by the District Board of Directors to discontinue planning efforts associated with potential use of raw wastewater as source water for the Project.
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Dear Sir:

Please give us (me) at least 15 more days to study this EIR draft.

I didn't get the copy of the draft handbook until very late, at a meeting. Should of got it in the mail long ago.

Need more time, a lot to digest.

Thanks / Wayne Stanton
3.84 Response to Comments from Wayne Stanton (August 12, 2018) (Comment Letter I-71)

I-71-1 Please see the response to comment I-4-1.
From: Becky Steinbruner
Sent: Thursday, August 2, 2018 7:15 PM
To: purewatersoquelceqa
Cc: Melanie Mow Schumacher; Becky Steinbruner
Subject: REQUESTING PUBLIC COMMENT PERIOD EXTENSION FOR PUREWATER SOQUEL PROJECT DRAFT EIR

Dear ESA CEQA Staff,

I am hereby requesting that your agency extend the Public Comment Period for the PureWater Soquel EIR. It is a very large and complex document that merits thorough public review. I have limited time to read the EIR because I cannot access the document on my home computer and must rely on the Public Library computer system. Their hours conflict with my work hours, so I have not had sufficient time to review the document and may not be able to thoroughly read it and research appropriate issues within the next 10 days.

Further, the CD in the printed copy available at the Public Library of the EIR that provides the public with the Appendices does not contain Appendix A.

Please extend the Public Comment Period for the draft EIR by the maximum time allowed by CEQA law. Please notify me of your decision as soon as possible.

Thank you very much.
Sincerely,
Becky Steinbruner
3441 Redwood Drive
Aptos, CA 95003
831-685-2915
ki6tkb@yahoo.com
3.85 Response to Comments from Becky Steinbruner (August 2, 2018) (Comment Letter I-72)

I-72-1 Please refer to response to comment I-4-1. Regarding the comment that the CD in the printed copy of the available at the Aptos Public Library did not include Appendix A of the EIR; CDs were tested prior to distribution; and again after the commenter raised the concern noted here. Appendix A was available on the CD in the printed cop of the EIR available at the Aptos Public Library; as well as on the District website.
Hi, Ms. Schumacher,

Thank you for your attention to this issue. Did you test the CD on the library computers? I have found that sometimes documents require certain software be installed in order to open them. The library computer system does not allow patrons to download software to do that.

I will try again next Monday and let you know if there are any problems.
Thanks again.
Becky Steinbruner
3.86 Response to Comments from Becky Steinbruner (August 4, 2018) (Comment Letter I-73)

I-73-1 Please refer to response to comments I-4-1 and I-75-4.
Dear Soquel Creek Water District Board and Staff,

I would like this communication made public on the next Board agenda but ask for an immediate response from General Manager Ron Duncan.

With Mr. Zscheile’s permission, I am forwarding you his message stating that he was unable to hand-deliver his written request for more Public Comment time on the Draft PureWater Soquel Project Draft EIR to the address that is provided in the EIR, the Community Handbook and on the District website. When he subsequently went to District Office, staff gave him very confusing information, contradicting the information given in the draft EIR and on your District website.

I find it troubling that other citizens may have attempted to submit comments and requests for more time to review the Draft EIR but were not able to do so and did not have time nor the wherewithal to visit the District Office to enter their letters there. This could be construed as a violation of CEQA guidelines by the Lead Agency obstructing public comment.

PLEASE EXTEND THE PUBLIC COMMENT PERIOD AND CLARIFY FOR THE PUBLIC HOW THOSE WHO PREFER TO HAND-DELIVER THEIR LETTERS MAY DO SO.

I am concerned that the public is not being given accurate information that could be viewed as the District’s willful obstruction of public comment on the PureWater Soquel Draft EIR.
I have asked twice since June 29 that the District extend the public comment period but received no response. I asked to be notified of the District's decision regarding extending the public comment period, but received no notification regarding the issue. I can only view this unresponsive attitude as arrogant disregard for the value of meaningful public input in the CEQA process regarding PureWater Soquel Project.

Mr. Duncan, I beseech you as the General Manager to extend the public comment period from the current minimal 45 days to the maximum of 60 days. Having organized and lead three public study sessions in an effort to assist and encourage public participation in the CEQA process for the District's PureWater Soquel project, I assure you that the public is keenly interested in commenting effectively on the Draft EIR. However, the document and related issues are vast and complicated. The size of the document limits many like myself, with rudimentary computer systems, to rely on fitting in personal time to carefully examine the EIR during public library hours and thus effectively limits the amount of time any one individual can labor to understand the document information and relevance.

Please extend the Public Comment period. Please respond.
Sincerely,
Becky Steinbruner
831-685-2915

Show original message
On Friday, August 10, 2018 11:59 PM, Becky Steinbruner <ki6tkb@yahoo.com> wrote:

Hi, Dick,

Thank you for letting me know about this. The address on the template letter is the address given in both the Community Handbook and Draft EIR, as well as on the website. Here is the text of what is on the website as of today:

Posted on August 10th, 2018

In accordance with the provisions of the California Environmental Quality Act (CEQA), a Draft Environmental Impact Report (EIR) for the proposed Pure Water Soquel Project (Project) has been prepared. The Project is comprised of various facilities and pipelines, including: an advanced water purification system; pipelines for conveyance of source water, brine, and purified water; and groundwater recharge wells. The Project would involve the advanced purification of treated municipal wastewater for groundwater aquifer recharge, to help address critical overdraft conditions in the Santa Cruz Mid-County Groundwater Basin and to prevent further seawater intrusion. The Draft EIR is available for public review online at www.soquelcreekwater.org/purewatersoquel. See website for locations to view in person.

Request(s) for an extension of the Draft EIR comment period have been received and reviewed. The 45-day comment period remains June 29 through August 13, 2018. All comments must be postmarked or received via email by August 13, 2018 for consideration in the Final EIR.

Comments can be submitted via email to purewatersoquelceqa@esassoc.com or via mail to Pure Water Soquel Project CEQA, 4041 Soquel DR, STE A-501, Soquel, CA 95073 -3105.

For more information visit www.soquelcreekwater.org/purewatersoquel
With your permission, I would like to forward your message to Ron Duncan and other staff, as well as the Board of Directors. This makes me wonder if other letters being sent to the 4041 Soquel Drive address are even being received and recorded?? That the District staff at the Office had no knowledge of the 4041 address is troubling, to say the least.

Thanks again,
Becky
685-2915

On Friday, August 10, 2018 10:38 PM, Dick Zscheile
<Dickz225@Comcast.net> wrote:

Becky:

After the Wednesday meeting you organized at the Aptos Library, I wrote a letter to Pure Water Soquel, using your letter’s address.

Tried to hand deliver it only to find there is no such address. I took it to the Soquel Creek Water District Office where they said it should be delivered there. They knew nothing of your address of 4041 Soquel Drive.

If other mail their letters to that address, they will miss the deadline of Monday, Aug 13th.

Maybe an email correction would be in order….

Dick Zscheile
3.87 Response to Comments from Becky Steinbruner (August 12, 2018) (Comment Letter I-74)

I-74-1 Please refer to response to comment I-4-1 and I-37-2. Regarding the comment that the address listed for submittal of Draft EIR comments did not exist, the address of 4041 Soquel Drive, Suite A-501, Soquel, CA 95073-3105 is the location of a UPS store where mailed and hand delivered comment letters were accepted. Comment letters were also accepted at the District Headquarters.
Dear CEQA staff,

I am writing to ask for an extension of the Public Comment period for the Pure Water Soquel Project Draft E.I.R. It is a very complex document and I need more time to read and research related issues in order to thoughtfully and completely respond.

I have personally organized and lead three public study sessions in order to help the people respond and participate in the CEQA Review process. At all three meetings, people felt they needed more time than the 45-day minimally required time allowed. By CEQA guidelines, Public Comment period may be as long as 60 days. Please extend the public comment period to 60 days.

In the course of the three study sessions, it also became clear to me that many people thought the "Community Handbook: A Guide to the Draft Environmental Impact Report and Public Review Process" published by Soquel Creek Water District (20 pages) was complete in it's summary of topics. This is NOT TRUE. The Handbook LACKS DISCUSSION
of critical Topics:
- Aesthetics
- Biological Resources
- Cultural Resources
- Energy Conservation
- Geology's Paleontology
- Greenhouse Gas Emissions
- Hydrology Resources - Surface Water
- Population and Housing
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems

Topics included in the Handbook Summary (Air Quality, Hazards and Hazardous Materials, Hydrology Resources - Groundwater, Land Use and Recreation, and Noise and Vibration), while referencing the appropriate and corresponding Chapters of the Draft EIR, do not reference any of the associated Appendices. This is critical information that draws the public's attention to technical information available for review. The Handbook is deficient.

While the Appendices may have been available to those people with home computer systems with capacity to download large files, I could not, and therefore had to rely on the public library. I have difficulty reading computer screen displays for long periods of time, and therefore rely on printed material. The Appendices were NOT available in printed copy at the library and until nearly 2 weeks into the Public Comment period, it was not clear to me
that the Appendices were on a CD in an Envelope in the back of the E.I.R. document. District staff made hand-written notation in the Table of Contents at that time after I sent comment about the problem.

I had further problems with Appendix A access, using the CD in the Aptos Library printed copy. I sent comment recently about the problem and received a phone call from Ms. Mow-Schumacher. Subsequently, when I visited the Aptos Library (August 8) the problem seemed to have been remedied. HOWEVER, it was very difficult - nearly impossible - to read the SMALL PRINT of most of the Public Scoping comments sent. I need to be able to read easily the actual text of Scoping Comments in order to clearly evaluate if the Public’s concerns have truly been addressed in the Draft E.I.R. because I want to verify that the summaries of Scoping comments stated in the document and the Handboock are complete and accurate. This is a deficiency and begs that the Public Comment Period be extended and the Appendix A material be re-formatted so as to be easily read by the Public.

Please extend the Public Comment period.

Sincerely,

Becky Steinbruner

V: Ron Duncan
3.88 Response to Comments from Becky Steinbruner (August 13, 2018; 9:17 AM) (Comment Letter I-75)

I-75-1 Please refer to response to comment I-4-1.

I-75-2 The District prepared the Community Handbook to assist the community in understanding the scope of the EIR and the comment process; however, the Community Handbook is not required under the California Environmental Quality Act. Accordingly, while the Community Handbook may include a briefer summary of the EIR content than the commenter preferred, the content of the Community Handbook does not render the EIR or review process incomplete or inadequate.

Further, as described in the introduction to the Community Handbook (p. 1), the document states that it “is intended to provide background information and an overview of the Project and key elements of the EIR, including mitigation measures.” The Community Handbook states, under the heading Summary of Project Impacts and Mitigation Measures, that the summary is not intended to be comprehensive. The introduction to the summary states, “While there are 15 environmental resource areas analyzed in the EIR, this handbook presents a summary of the five resource areas of most interest to the community, based on public comments received during the scoping period.”

I-75-3 Please refer to response to comment I-75-2.

I-75-4 As explained in response to comment I-4-1, the Lead Agency complied with the noticing and public review requirements set forth in California Environmental Quality Act Section 15087 and 15015. The District undertook additional efforts, beyond those required under CEQA, to facilitate public review of the Draft EIR. For example, CEQA Guidelines Section 15087(g) encourages, but does not require Lead agencies to make copies of the Draft EIR available at the office of the Lead Agency and public libraries serving the project area. On June 29, 2018, the first day of the public review period, the District posted a copy of the Draft EIR at its headquarters office in Soquel, and provided copies of the Draft EIR to seven (7) area public libraries. On August 3, District staff confirmed the completeness of the library copies, including appendices.

The District also posted the Draft EIR to its website for the entire duration of the public review period. However unfortunate that commenter encountered difficulty navigating the Draft EIR, the District complied with and went beyond the requirements of CEQA. Therefore, the comment period is not extended. The commenter indicates that difficulty of reviewing the print of the scoping comment letters included in EIR Appendix A of the EIR meant that the commenter was unable to verify whether all public scoping comments were addressed in the EIR. The CEQA guidelines do not require that scoping comments be included in an EIR, but requires consideration of information and comments provided (CEQA Guidelines Section 15084(c).
The EIR analysis included consideration of all public comments submitted during the scoping period and the Draft EIR comment period allows for members of the public to provide comment on the impact resulting analysis presented within the EIR. If a commenter felt that the analysis and conclusions presented in the EIR was not complete or insufficient; comment regarding the EIR analysis should be presented in the form of Draft EIR comments. However, as noted above provision of the scoping comments as part of the EIR is not required and the possible inability for a member of the public to review all scoping comments submitted does not make the analysis and conclusions of the EIR inadequate.
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3441 Redwood Drive
Aptos, CA 95003
August 13, 2018

Porewater Soguel Project CEQA
4041 Soguel Drive, Suite A-501
Soguel, CA 95073-5105

Dear CEQA Staff,

Enclosed are three sets of protest petitions regarding the Porewater Soguel, demanding the opportunity to allow the public to vote on this project.

Adopting the project will cause great controversy unless the public is allowed to vote.

Please allow public vote.

Sincerely,

Becky Steinbruner
PETITION TO THE
MIDCOUNTY GROUNDWATER AGENCY
AND
SOQUEL CREEK WATER DISTRICT

We, the undersigned residents of Santa Cruz County, demand that you allow us to vote by ballot to approve or disapprove current plans in process to inject treated sewage water into the local groundwater supply (PureWater Soquel Project).

NAME (Please print) E-MAIL OR MAILING ADDRESS

Marilyn Garrett  351 Redwood Hts, Rd, Aptos 95003
Anne Whitney  1606 Soquel Ave, Santa Cruz, 95026
Jude Todd  3655 Brommer CR 1F, SC 95072
Monica McGuire  monica.leadingcoach@gmail.com
Gary Lindstrom  Aptos California 95003@Gmail.com
Maria Cecilia Freeman  1771 Jennifer Drive, Aptos 95003
Regan Ray  run@reganrun@yahoo.com ApTOS
Anthony Seliskar  5606 Soquel Dr, Soquel 95073
Marilyn Garrett  351 Redwood Hts, Rd, Aptos 95003
Nancy Stucker  nancy93972@gmail.com
PETITION TO THE
MIDCOUNTY GROUNDWATER AGENCY
AND
SOQUEL CREEK WATER DISTRICT

We, the undersigned residents of Santa Cruz County, demand that you allow us to vote by ballot to approve or disapprove current plans in process to inject treated sewage water into the local groundwater supply (PureWater Soquel Project)

NAME (Please print) E-MAIL OR MAILING ADDRESS

Bob Roberts  ODYSSEYG 1916 C@Gmail.com
Veda Ozelle  Vozelle@yahoo.com
Dan Stevenson
Maria Marsili  7227 Madera Dr. Aptos
Jonathan Crockett rocketts@Gmail.com
Gene Burk  mamsgene@gmail.com
Janella J. Gaskill beachnit@packelli.net
Robert B. Gaskill beachnit@packelli.net
Andrew J. Hesford PO Box 437 Aptos
Vicky Malan  PO Box 1201 Capitol

2/4 3.89-3
PETITION TO THE MIDCOUNTY GROUNDWATER AGENCY AND SOQUEL CREEK WATER DISTRICT

We, the undersigned residents of Santa Cruz County, demand that you allow us to vote by ballot to approve or disapprove current plans in process to inject treated sewage water into the local groundwater supply (PureWater Soquel Project)

<table>
<thead>
<tr>
<th>NAME (Please print)</th>
<th>E-MAIL OR MAILING ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mary Me Loud</td>
<td><a href="mailto:AngelMMQ1@gamil.com">AngelMMQ1@gamil.com</a></td>
</tr>
<tr>
<td>Jack Overstreet</td>
<td><a href="mailto:digishaman@cox.net">digishaman@cox.net</a></td>
</tr>
<tr>
<td>F.J. Bressingham</td>
<td>3365261</td>
</tr>
<tr>
<td>Christopher Blanco</td>
<td><a href="mailto:friecominundur@yahoo.com">friecominundur@yahoo.com</a></td>
</tr>
<tr>
<td>Howard Menge</td>
<td>P.O. Box 1743 APTOS 93001</td>
</tr>
<tr>
<td>Tom Davis</td>
<td>1415 E. Derado SC 95062</td>
</tr>
<tr>
<td>James Schweberger</td>
<td>No Sewage 4 Drinking</td>
</tr>
<tr>
<td>Stephen Conknon</td>
<td>No sewage in bottle water</td>
</tr>
</tbody>
</table>

3/4/89-4
PETITION TO THE MIDCOUNTY GROUNDWATER AGENCY AND SOQUEL CREEK WATER DISTRICT

We, the undersigned residents of Santa Cruz County, demand that you allow us to vote by ballot to approve or disapprove current plans in process to inject treated sewage water into the local groundwater supply (PureWater Soquel Project)

NAME (Please print)           E-MAIL OR MAILING ADDRESS

John Eastman                  johnne@myaecstuman.com
Marilyn McNair                maidenofwater@sbcglobal.net
Billy Viner                   billyvainer@gmail.com
Gudrun Vandenberg
Linda MacDonald                The Numa WaterAgency
Louis Feletk                  The Numa WaterAgency
Joyce Megallanes              153 Ranchitos de Sol, Aptos
Karen Sanderson               4495 Fairway Dr. Soquel
Louis Teemans                 PO Box 3329 Santa Cruz 95063
Bernard Kaufeld               655 Wildwood P Way 95075
Hristina LeBlanc              655 Wildwood Way 95075
PETITION TO
THE
SANTA CRUZ MIDCOUNTY
GROUNDWATER AGENCY:
We, the undersigned residents of Santa Cruz County, demand that you allow us to vote by ballot to approve or disapprove current plans in process to inject treated sewage water into the local groundwater supply.

NAME (print, please) e-mail or mailing address

BECKY STEINBRUNER BeckySt KI6TKB@yahoo.com
JOHN BERGSTROM jbergstrom.ia@gmail.com
J. COBBETT ybhoi@keyfox.com
Judy Kuehlborn 38 carol way - APTOS, CA
Avis MYERS 100 CAROL WAY, APTOS
Emily Turnquist 933 Penselle Lane #3 Capitola
Holly Aruff 732 Seaciff Dr, APTOS
Thomas Stumbaugh 111 Vista Mar Cir, APTOS
PETITION TO
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NAME (print, please) e-mail or mailing address
Elizabeth A. Zanzig ramona12@comcast.net
Daphne Schmitz PO Box 1417, APTOS, CA 95001
Matthew Schreiber mathew.schreiber@gmail.com
Robin Bayne Shaylaah@gmail.com
Sue Meyer 2435 Feet St., Aptos
Gary Knowles 106 Fife Ln., APTOS
Kathy Knowles 104 Fife Ln., APTOS

2/1/73.99-7
PETITION TO
THE
SANTA CRUZ MIDCOUNTY GROUNDWATER AGENCY:
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NAME (print, please)  e-mail or mailing address

Janice Tempel Wolf  jatewo@yahoo.com
Roy Wolf  208c6al88@yahoo.com
Andrew Gutierrez  aj90100@gmail.com
Michael Parella  michaelparella62@gmail.com
Joanne Ferland-Parella  joannelfp@gmail.com
Sheila E. Eckel  seaeckel@sbcglobal.net
Tina Bamford  Tina.Bamford@gmail.com
PETITION TO
THE
SANTA CRUZ MIDCOUNTRY
GROUNDWATER AGENCY:
We, the undersigned residents of Santa
Cruz County, demand that you allow
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disapprove current plans in process to
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<table>
<thead>
<tr>
<th>NAME (print, please)</th>
<th>e-mail or mailing address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richard Bruce</td>
<td>4625 N Robb Calh Soquel</td>
</tr>
<tr>
<td>Cathleen Felchison</td>
<td>703 Explorers Caypoph</td>
</tr>
<tr>
<td>Marc Kiefer</td>
<td><a href="mailto:marc.kiefer@comcast.net">marc.kiefer@comcast.net</a></td>
</tr>
<tr>
<td>John Suter</td>
<td><a href="mailto:jack@gmail.com">jack@gmail.com</a></td>
</tr>
<tr>
<td>Andrea C.</td>
<td><a href="mailto:andrewkou@yahoo.com">andrewkou@yahoo.com</a></td>
</tr>
<tr>
<td>Denise Reed</td>
<td>800 Vin Hill Rd, Santa Cruz, CA</td>
</tr>
<tr>
<td>Carol D.</td>
<td>534 Middlefield</td>
</tr>
</tbody>
</table>
PETITION TO
THE
SANTA CRUZ MIDCOUNTY GROUNDWATER AGENCY:
We, the undersigned residents of Santa Cruz County, demand that you allow us to vote by ballot to approve or disapprove current plans in process to inject treated sewage water into the local groundwater supply.

NAME (print, please)       e-mail or mailing address

Marilyn Garrett 351 Redwood Hts. Rd, Aptos
Amy Rozayle 2002 Seascape Aptos, CA
Lora Allanson Lora@allanomensurance.com
Acacia Stone ajjs2017@gmail.com
Brian Laufer brie.laufer@gmail.com
Christina McVear 6044 Jason Ct, Aptos
PETITION TO
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NAME (print, please) e-mail or mailing address

Jeff Marsili jeffmarsili@yahoo.com
Alexandra Ryon alipryor4@sbcglobal.net
Maria Abreu  miasabreu@gmail.com
Mary Simpson marysimpson@earthlink.net
DIANE ADAMSON Jn Adamson adamsonc@gmail.com
John Eastman johme@myeastman.com
MARIA MARZILLI  brmarzili@att.net
PETITION TO
THE
SANTA CRUZ MIDCOUNTY GROUNDWATER AGENCY:
We, the undersigned residents of Santa Cruz County, demand that you allow us to vote by ballot to approve or disapprove current plans in process to inject treated sewage water into the local groundwater supply.

NAME (print, please) e-mail or mailing address

Jessalyn Steinman jessalynsteinman@gmail.com
Jonathan Crockett ROCKETTJ @ GMAIL.COM
Lowell Webb WebbsFarmssuppliers@yahoo.com
Kristen Batchelor Kdhre187@gmail.com
Linda C Herzog Burt
Danielle Burnett-Foster daniellereneeburnett@yahoo.com
Susie Pohnaszek pohnaszek@gmail.com
PETITION TO
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We, the undersigned residents of Santa
Cruz County, demand that you allow
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disapprove current plans in process to
inject treated sewage water into the
local groundwater supply.

NAME (print, please)     e-mail or mailing address

Josie Moss          240 Cox Rd, Aptos
Thomas Terrill      3062 Aptos Hill Ln, Aptos
Kevin Ippisch      115 1824 Lane, Aptos
Scott Palk            1914 Terrace, Aptos
Jan Burne             3845, west of Santa Cruz
Jody Ford            160 Lytle St, Aptos

Allie van der Drup     1712 Evergreen Court, Aptos
PETITION TO
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SANTA CRUZ MIDCOUNTY
GROUNDWATER AGENCY:
We, the undersigned residents of Santa Cruz County, demand that you allow us to vote by ballot to approve or disapprove current plans in process to inject treated sewage water into the local groundwater supply.

NAME (print, please)   e-mail or mailing address
Jason Jan Agee   1712 Barrington St SANTA CRUZ
Jerry Shimizu   125 Sandhill Rd PESCOS
Priscilla Williams   scruzman@sbcglobal.net
Perry Williams   percywilliam2004@yahoo.com
Fereshteh Kianer   fereshtehKian@yahoo.com
Peggy Williams   pegwillatty@gmail.com
Rebecca Huber   rebecca.huber@gmail.com
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We, the undersigned residents of Santa Cruz County, demand that you allow us to vote by ballot to approve or disapprove current plans in process to inject treated sewage water into the local groundwater supply.

NAME (print, please) e-mail or mailing address

Stephen Stires stephen_stires@puckline
Matthew Davault 930 Cathedral Dr
Mike Davault 930 Cathedral Dr
Kate Sandusky 2270 Redwood Dr
Lucille Dekort 2269 Redwood Dr, Aptos
Linda Giacomazzi Baker 1846 Redwood Dr, Aptos
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NAME (print, please) e-mail or mailing address

Rachel Williams  Rwm00973@outlook.com
Ail Breene  sabrown@aol.com
Erika Steinhbrunner, Phnkelf4@yahoo.com
Sandy Clay  sclay75@gmail.com
Kyle Ward  kyleward@ebold.com
Holger BLECH  firemedicine410@comcast
Bill Paling  stratbill@gmail.com
PETITION TO
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NAME (print, please)  e-mail or mailing address
Cliff Corriner  myname@crubio.com
Kara O'Loughlin  karam2013@gmail.com
Rodger Baker  rabeck@gmail.com
Kevin Collins  klc89wic@gmail.com
Stuart Smithwel  3441 Redwood Dr.
Max Rain  735 Cathedral Dr.
Steve Miller  220Cwister-La Apos
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NAME (print, please) e-mail or mailing address

Bob Mertalia rocco_dog@prodigy.net

JAN CHAPLIN — — — 5035 E. WALNUT ST SOQUEL 95073

CRAIG ALBEE 3680 HARDIN LA SEQUA

Christine Kurio 212 Trillium Way Aptos 95003 95073
duncan@sbgglobal.net

Elizabeth Duncan & Stephen Shires 3805 Pacific Heights Dr. Aptos CA 95003

KRIS GRABOW Kristine. louise.g @ google.com

Helen Bernshadskaya maglia12@gmail.com
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NAME (print, please) e-mail or mailing address

MacDonald Ellis mcellis82@gmail.com
Nigel Strombon nigelstrombon@yahoo.com
Michèle D. Wolfe balancedlivingguide@gmail.com
Marilyn Jarrett 351 Redwood St, Aptos
Jennifer Walker 2051 Chanticleer Ave, Unit 12
Steve Anderson 1457 Hillside Dr. Aptos, CA

Uladimir Kopylov

3-8-19-15
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NAME (print, please) e-mail or mailing address

Jillian Engbers jillian-engbers@comcast.net

Ken-Kay W. Advogel 3 Woodbrds @ ATT.Net

John Stalling jeffstree@gmail.com

Mary Crouser

Melanie Cleaveland mcleveland@aol.com

Aileen Sator buddashaft@aol.com

Kathleen Wilson
PETITION TO
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We, the undersigned residents of Santa Cruz County, demand that you allow us to vote by ballot to approve or disapprove current plans in process to inject treated sewage water into the local groundwater supply.

NAME (print, please)  e-mail or mailing address
Glenda Whiting  glenda@whiting.e.com
Michelle Hansen  hansenpaula@ymail.com
Jude Todd  todd@yesc.edu
Zandra Hughes  zk1wi@me.com
Ron Hughes  RONHUGS@ME.COM
Kowsh Noval  Kowsh@icloud.com
Cheryl Ridgway  ridgway2@comcast.net
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NAME (print, please) e-mail or mailing address

Becky Steinbruner KI6TKB@yahoo.com
Ann Bunn cibxbunn@comcast.net
Mary Guizio/Bridgette Grever mhguizio@comcast.net
Mikel Hailey monaclese@comcast.net
Deb & Robert Dixon aafive@baymoon.com
Anna Seliski 9yg3 Montrey Presign

Anthony Anthony Seliski 3006 Suezuel Dorf Spinal

5/8/07
PETITION TO
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NAME (print, please)   e-mail or mailing address

Lorella Blankentinlorettaatsc@gmail.com

April Hyde   april.lorraine413@gmail.com

Michael Hemmert   185 Creek Creek Blvd, South Valley CA

Amy Hemmert   185 Creek Creek Blvd, SV, CA

Debra Friedman   2000 Kennedy Dr, Aptos

Shawn Much   swyachov@yahoo.com, Aptos, CA 95003

Kumiyu Takay   Untitled
PETITION TO
THE
SANTA CRUZ MIDCOUNTY GROUNDWATER AGENCY:
We, the undersigned residents of Santa Cruz County, demand that you allow us to vote by ballot to approve or disapprove current plans in process to inject treated sewage water into the local groundwater supply.

NAME (print, please) e-mail or mailing address
Nina Schlubohm desoro@yahoo.com
Yolande Burros ye.burras@nwestern.edu
Judith Astone donnajudy@cruze.com
Alice Mestrom APTOS Aptos Aptos
Tomas Catane Aptos
Jude Monah Aptos
Gayle McCredie Aptos
PETITION TO
THE
SANTA CRUZ MIDCOUNTY
GROUNDWATER AGENCY:
We, the undersigned residents of Santa Cruz County, demand that you allow us to vote by ballot to approve or disapprove current plans in process to inject treated sewage water into the local groundwater supply.

NAME (print, please)          e-mail or mailing address

Elizabeth Knights  Elizabeth@Knightsandco.com
Michael John Rense       300 Townsend
Mike Prunece             1001 West CA 80810
Dorothy Ledbetter        dledbetter@calcentral.com
Erik Ledbetter           erik.c.ledbetter@gmail.com
Loren Ledbetter          210 Golf Club Dr, Santa Cruz, CA 95060
Lauren Linkemyer         lauren.appleaday@gmail.com
PETITION TO
THE
SANTA CRUZ MIDCOUNTY
GROUNDWATER AGENCY:
We, the undersigned residents of Santa Cruz County, demand that you allow us to vote by ballot to approve or disapprove current plans in process to inject treated sewage water into the local groundwater supply.

NAME (print, please)  e-mail or mailing address

Michael Miller  P.O. Box 1722  Aptos 95003
Lois Robin  robin@baymamaine.com
Matt Miller  137 Almar Ave, Santa Cruz, CA 95060
Kate Whitmore

Kathie Perrenoud  ross@perrenoud.com
Allison K Baker  1476 Redwood Dr. Aptos
Bela Stelnbruhn  3441 Redwood Dr. Aptos, CA 95003
PETITION TO
THE
SANTA CRUZ MIDCOUNTY
GROUNDWATER AGENCY:
We, the undersigned residents of Santa
Cruz County, demand that you allow
us to vote by ballot to approve or
disapprove current plans in process to
inject treated sewage water into the
local groundwater supply.

NAME (print, please) e-mail or mailing address

Ardien DeVincenzii arden.ardenaer1@yahoo.com

StaPt PANS Russells Art.
3.89 Response to Comments from Becky Steinbruner 
(August 13, 2018; hand delivery 1) 
(Comment Letter I-76)

I-76-1 As CEQA is concerned with the potential physical effects of a project on the environment, comments pertaining to the public’s involvement in determining whether the Project should be approved and by what mechanism are beyond the scope of the EIR. Please also refer to response to comment I-79-11. The comment is noted.
Comment Letter I-77

3441 Redwood Drive
Aptos, CA 95003
August 13, 2018

Purewater Soquel Project CEQA
4041 Soquel Drive, Suite A-501
Soquel, CA 95073-3105

Dear Purewater Soquel Project CEQA staff,

I do not support Purewater Soquel Project as a viable project to address the Project Objectives.

As a private well owner, I am concerned the project will increase risk of NDMA, pharmaceuticals, and endocrine disruptors being injected into the drinking water supply of the Midcounty area’s residents. The study by Carollo, 2017 did not address all CEC’s in Santa Cruz City wastewater treatment assessment, which was requested in the Scoping Comments made by D. Wirkman. The Final EIR must give complete assessments of all possible contaminants and clearly present possible health risks to humans and animals regarding contamination by the CEC’s. There are no State Drinking Water standards established for these CEC’s, so it is deceptive of the EIR analysis to state the treated water will meet such standards thereby misleading the public.

The energy required for Purewater Soquel Projects R/O pumps and injection pumps is substantial. "The R/O pumps are energy hogs," said the Carollo Engineering Consultant to the District’s Supplemental Supply Committee. This information is lacking in the Draft EIR.

The costs of this project's long-term energy requirements are huge but are missing from the Draft EIR.
PETITION TO THE
MIDCOUNTY GROUNDWATER AGENCY
AND
SOQUEL CREEK WATER DISTRICT

We, the undersigned residents of Santa Cruz County, demand that you allow us to vote by ballot to approve or disapprove current plans in process to inject treated sewage water into the local groundwater supply (PureWater Soquel Project)

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3.90-2
There must be risk assessment included in the Final EIR analysis, including failure of real-time monitoring regarding failure of treatment and injection facilities. When there are malfunctions immediately, there will be redundancy built into monitor such contamination problems in real time, such as the example of the Marina Sewage Treatment Malfunction (January, 2018) that also supposedly had high-technology monitoring redundancy, resulted in 4.9 million gallons of raw sewage being dumped into Monterey Bay. If such an accident/failure occurred with PureWater Soquel facilities, the public drinking water supply would be forever contaminated. The Final EIR must compare and contrast the Marina Sewage Treatment Incident with risk analysis of PureWater Soquel Project. The draft EIR simply states the possibility of contamination would be avoided with assurances of permit issuance to operate the facility. This is inadequate evaluation.

The Alternatives (7.0) are incomplete and must include hydrologic models of the groundwater levels if all Soquel Creek Water District production wells
PETITION TO THE
MIDCOUNTY GROUNDWATER AGENCY
AND
SOQUEL CREEK WATER DISTRICT

We, the undersigned residents of Santa Cruz County, demand that you allow us to vote by ballot to approve or disapprove current plans in process to inject treated sewage water into the local groundwater supply (PureWater Soquel Project)

NAME (Please print) E-MAIL OR MAILING ADDRESS

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3.90-4
The Draft EIR is deficient in that it does not consider Dr. Andy Fisher's work and the groundwater-managed aquifer recharge possibilities within District area. The final EIR must discuss/analyze this alternative.

Sincerely,

Becky Steindruiner
PETITION TO THE
MIDCOUNTY GROUNDWATER AGENCY
AND
SOQUEL CREEK WATER DISTRICT

We, the undersigned residents of Santa Cruz County, demand that you allow us to vote by ballot to approve or disapprove current plans in process to inject treated sewage water into the local groundwater supply (PureWater Soquel Project)

NAME (Please print)  E-MAIL OR MAILING ADDRESS
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3.90-6
3.90 Response to Comments from Becky Steinbruner (August 13, 2018; hand delivery 2) (Comment Letter I-77)

I-77-1 Please see the EIR, Impact 4.10-3, for the analysis of potential impacts to groundwater quality. The Project would treat wastewater using a treatment process that would be designed to eliminate or greatly reduce the concentrations of CECs or other contaminants in the wastewater stream prior to recharging the water into the aquifer. Through compliance with recycled water regulations, which includes monitoring, and utilizing the proposed state-of-the-art treatment process, use of advanced purified water would not be expected to degrade the public or private groundwater supplies. The District must comply with the rules set forth by the SWRCB’s Recycled Water Policy and its Groundwater Replenishment Regulations, which are informed by the best available science. The SWRCB regulations would not permit the District to use water that contains CECs in concentrations that appear to approach or exceed human health screening levels. Regarding NDMA, this compound is regulated by the State of California and can be removed effectively by ultraviolet (UV) treatment through direct photolysis, which is a requirement of potable reuse in California. The treatment process proposed for the Project would include a UV and advanced oxidation process (AOP) that can reliably reduce NDMA concentrations to below 10 ng/l (10 parts per trillion), which is the Notification Level the State of California Division of Drinking Water has assigned and which they believe to be protective of public health. Typical purification systems can remove NDMA to a concentration of 5 parts per trillion or less (NWRI, 2017). For additional information on the sources of scientific data that supports the EIR analysis, refer to response to comment I-83-6. Information regarding reliance on the current laws regulating recycled water in California, refer to response to comment I-83-7. Additional information on the effectiveness of the treatment process is provided in response to comment I-83-9. Supplemental information on the effects of the Project on the Purisima aquifer is provided in response to comments I-83-13, I-83-18 and I-26-2.

I-77-2 EIR Section 4.6, Energy Conservation, describes the anticipated energy demands of Project construction and operation. Regarding Project operations, as noted on p. 4.6-8, “In addition to fuel use, implementation of the Project would increase the District’s total electrical demand by approximately 3,600 MWh per year, which would represent less than 0.01 percent of the total electricity used in in Santa Cruz County in 2016 (CEC, 2018b).” With respect to energy costs, CEQA is concerned with the potential physical adverse effects of a Project on the environment. While project costs are relevant factors in determining whether a project alternative is feasible, unless there is a clear connection between a project’s cost and a physical environmental change, it is beyond the scope of CEQA. In the present case, there is no clear connection between the cost of the Project and a physical environmental effect. Therefore, considerations of cost are beyond the scope of the EIR.
I-77-3 Consistent with the requirements of CEQA, the EIR focuses on the potential effects of the Project relative to existing physical conditions (see CEQA Guidelines Section 15126.2). The Monterey One Water incident noted in this comment involved accidental release of raw sewage due to an equipment failure on the headworks bar screen. The Project does not include equipment for the treatment, conveyance, or other handling of raw sewage. With respect to the portion comment concerning risk of system failure, redundancy, and regulatory requirements, commenter is referred to responses to comments I-30-2, L-4-6, and L-4-7.

I-77-4 The suggestion that the EIR Chapter 7 analysis should include hydrologic models of groundwater levels that would result from implementation of the CEQA alternatives is noted. However, as discussed on EIR page 7-1, EIRs are required to include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. Section 7.2, Approach to CEQA Alternatives Selection, indicates that consistent with CEQA, the approach to alternatives selection for the EIR focused on identifying alternatives that could meet most of the basic objectives of the project while reducing one or more of its significant impacts, foster informed decision-making and public participation, and could be feasibly implemented. Groundwater modeling would not be required to understand whether or not a CEQA alternative could achieve Project objectives associated with groundwater basin replenishment and avoidance of further seawater intrusion. Further, no significant impacts were identified associated with Project operation, such as impacts on the groundwater basin. Thus, consideration of the impacts of CEQA alternatives impacts on the groundwater basin is not required. See also the responses to comment letter O-2 regarding water transfers, and whether such alternatives should be considered further in the EIR.

I-77-5 Dr. Fisher’s study of aquifer recharge utilizing stormwater in the Pajaro Valley area is noted and is consistent with the District’s consideration of stormwater capture as part of the Community Water Plan. As discussed in Section 2.2.2, Community Water Plan, the District has identified a few locations which may be suitable for stormwater recharge, the process of recharging the groundwater basin with available stormwater. Current activities include confirming recharge site suitability with on-site testing and analysis. The District’s goal is for each stormwater recharge project to recharge approximately 10-50 afy. The estimate of available stormwater recharge capacity in the District area is substantially less than the Project recharge capacity of 1,500 afy. Thus, stormwater recharge may be a feasible addition to the overall water supply portfolio of the Project but would not be sufficient to replace the Project; or to meet the basic objectives of the Project, which include replenishment of the local groundwater basin to prevent further seawater intrusion. Thus, stormwater recharge would not qualify as a feasible CEQA alternative to the Project. As discussed in response to comment I-77-4, the approach to alternatives selection for the EIR focused on identifying alternatives that could meet most of the basic objectives of the project while reducing one or more of its significant impacts, foster informed decision-making and public participation, and could be feasibly implemented.
From: Becky Steinbruner [mailto:ki6tkb@yahoo.com]
Sent: Monday, August 13, 2018 2:09 PM
To: Ron Duncan <RonD@soquelcreekwater.org>
Cc: Bruce Jaffe <BruceJ@soquelcreekwater.org>; Bruce Daniels <BruceD@soquelcreekwater.org>; Carla Christensen <CarlaC@soquelcreekwater.org>; Tom Lahue <TomL@soquelcreekwater.org>; Rachel Lather <rachell@soquelcreekwater.org>; Karen Reese <KarenR@soquelcreekwater.org>; Becky Steinbruner <ki6tkb@yahoo.com>
Subject: PLEASE CONSIDER EXTENDING PUBLIC COMMENT ON PUREWATER SOQUEL PROJECT DRAFT EIR

Dear Mr. Duncan,

I understand that, since the District Board will not meet until August 21, the decision regarding extending public comment for the PureWater Soquel Project Draft EIR is your decision. I brought a written request to District Offices this morning asking for more time. You were too busy to meet with me.

Please extend public comment time.
Becky Steinbruner
3.91 Response to Comments from Becky Steinbruner
(August 13, 2018; 4:27 PM) (Comment Letter I-78)

I-78-1 Please see the response to comment I-4-1.
Dear PureWater Soquel Project CEQA staff,

I first of all protest the District Manager's refusal to extend Public Comment Period, despite many requests by the public to do so, in order to submit thoughtful and well-researched comments. I have requested more time four times.

Therefore, my comments will be brief and without as much research documentation as I would have preferred. I feel this is possible willful obstruction by the District to cause the public to submit generalized comments that may be easily dismissed by during the Final EIR evaluations.

Overall, the Draft EIR (hereafter referred to as "the document") vastly neglects the long-term operational impacts and instead focuses on the construction phase. This is evident in Appendix B, which does not address the possible impacts of NDMA in the processed water that would be injected into the groundwater at depths similar to the nearby production and private wells. Please address this deficiency.

PROJECT OBJECTIVES NOT ADEQUATELY ADDRESSED IN DOCUMENT

1) Because the stated Project Purpose is to "develop an affordable, reliable and drought-resistant supplemental water source that contributes to the diversification of the District's water supply portfolio and enhances resiliency" the issue of AFFORDABILITY must be discussed in the document but is not. There must be a Cost/Benefit Analysis included in the final document to assess the social and economic impacts of the District's plan to again increase customer rates and postpone important Capital Improvement projects (Special Board Meeting agendas 6/26/2018 and 7/24/2018). According to the 2017 Board Budget Workshop materials, the District already has the second-highest rates in the state for a system their size. There have been successful legal actions regarding the invalid rate structuring the District has in place (Mr. Boyd and Mr. Cole have both brought legal action and won.)

2) Another stated Project Objective is to "Replenish the local groundwater basin to prevent further seawater intrusion and develop a sustainable water supply in a timely manner that meets the District's supply objectives and the State's mandate under SGMA." I feel the Project does not accomplish this objective because the document states groundwater levels would not be restored for 20 years. The Model shown in Section 4.10 does not show proof of meeting preventing seawater intrusion because the water injection sites are not located in areas within the District where saltwater intrusion has been observed in monitoring wells and the Model shows the injected water taking 5-8 years to move a short distance from the injection site. I want to see a Model using actual soil borings to define the geo-hydrologic impacts of the Project.

Chapter 7 ALTERNATIVES

Not all possible alternatives were evaluated, therefore the document is deficient. It does not consider a reservoir on the 160-acre land holding that the District owns in the mountains above Soquel. This comment was made by Mr. Joseph Calcagno (page 2-12). Lochquifer proposal was not evaluated, even though it was requested to be included by Mr. Webb in Scoping Comments (page 2.49). There is insufficient analysis of energy comparisons for Alternative #2 as compared to the Project, as well as more timely addressing the seawater intrusion issue. According to Santa Cruz Sentinel interviews with Ron Duncan, the groundwater levels are at an historic high, just with conservation and one very wet winter.....this must be discussed in the document in terms of the ability of Alternatives being
superior to the Project.

AIR QUALITY NOT ADDRESSED FAIRLY
Chapter 4.3 addressed construction impacts more than operational impacts. The ambient air quality used for measurement in the document was taken at a location 2.7 miles northeast of the Santa Cruz Wastewater treatment plant (Santa cruz 2544). This does not represent the ambient air quality of the residential neighborhoods where the treatment facilities are proposed nor where the injection well sites are proposed. This is inaccurate ambient measurement for the true site locations and must be addressed in the final document.

The document also does not address the air quality impacts of any generators needed at all sites for emergency operations during prolonged power outages. The final document must address these impacts on children and adults with asthmatic challenges, since many of the proposed locations are near homes, schools and churches.

AESTHETICS NOT ACCURATELY ADDRESSED
Section 4.1 does not provide any 3-D Diagrams that were presented to the District Board 11/17/2017 with the Project Feasibility Study. To address public scoping comments (Bob Mettalia pg. 2-18, Pam Silkwood on behalf of Jane Paradise pg. 2-44) the final document must include accurate 3-D Diagrams that clearly show existing residential areas and schools.

THE DOCUMENT DOES NOT ADDRESS ISSUES OF PUBLIC CONTROVERSY
I have submitted multiple petitions signed by local residents, many of which are ratepayers, demanding the opportunity to vote on the PureWater Soquel Project. District Board members have, at various times, led members of the public to believe that the District would hold at least a protest ballot action to give the rate payers the ability to weigh-in on the cost burden of the Project. This is now not being honored. The document Summary must, by CEQA law 15123 B (2), identify and discuss "areas of controversy known by the Lead Agency including issues raised by agencies and the public, and 3) issues to be resolved among choice of alternatives."

That multiple petitions and public testimonies have demanded the right of the public to be able to vote on the PureWater Soquel Project is clear evidence that the District is aware of the controversy the Project has among the public and it's ratepayers. This must be discussed. Also, there has been much public discussion about the Alternative 2 and Lochquifer (which was not even considered as an alternative) being superior to solving the groundwater problems in an affordable and more timely manner, so this controversy must also be addressed in the final document.

SCOPING COMMENTS DEFICIENT
I have had much trouble accessing the Scoping Comments on the CD provided by the District. In now reviewing the printed copy, I CANNOT FIND THE MULTIPLE SCOPING COMMENTS THAT I MADE, BOTH ORAL AND IN E-MAIL. I ALSO CANNOT FIND ORAL COMMENTS MADE BY MY DAUGHTER, BRIA STEINBRUNER.

This appears to be willful neglect.

Sincerely,
Becky Steinbruner
831-685-2915
3.92 Response to Comments from Becky Steinbruner
(August 13, 2018; 4:55 PM) (Comment Letter I-79)

I-79-1 Please refer to response to comment I-4-1.

I-79-2 Please refer to EIR Section 4.10, Hydrology Resources – Groundwater (Impact 4.10-3) for the discussion and analysis of operational impacts associated with advanced treatment of water and the recharge of the water into the Purisima aquifer. The EIR’s Impact 4.10-3 analyzes whether introducing advanced purified water into the existing groundwater supply of the Purisima aquifer units would degrade aquifer water quality or violate water quality standards. The analysis concludes that the Project, through the proposed treatment technology and compliance with mandatory state groundwater regulations, would adequately treat and remove the chemicals of concern and the CEC’s present in the water stream generated by the Santa Cruz Waste Water Treatment Facility far below human health screening levels and below limits considered safe for human consumption. The EIR considers further whether the Project could harm human health or contaminate the aquifer and concludes the advanced water purification processes would greatly reduce or eliminate the concentrations of trace CEC’s or other chemicals of concern to levels protective of human health. As the recharge of advanced treated water would be adequately treated, the potential for degradation of the ambient potable groundwater in the Purisima A and BC units would be negligible. Regarding NDMA, this compound is regulated by the State of California and can be removed effectively by UV treatment through direct photolysis, which is a requirement of potable reuse in California. The treatment process proposed for the Project would include an ultraviolet (UV) and advanced oxidation process (AOP) which can reliably reduce NDMA concentrations to below 10 ng/l (10 parts per trillion), which is the Notification Level the State of California Division of Drinking Water has assigned and which has found to be protective of public health. Typical purification systems can remove NDMA to a concentration of 5 parts per trillion or less (NWRI, 2017).

I-79-3 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-79-4 Please see the EIR Chapter 3, Project Description (Sections 3.2 and 3.3) for a description of the Project and its objectives. Please also see EIR Section 4.10, Hydrology Resources - Groundwater (Section 4.10.4, Approach to Analysis, and Impact 4.10-2) for a description of the groundwater modeling and how that modeling supported the groundwater analysis. As stated in the comment, one primary objective of the Project is to replenish the local groundwater basin to prevent further seawater intrusion. The Project proposes to accomplish that objective through pumping distribution that directs pumping away from the coast and recharging the Purisima A and BC units with purified water. The recharge well sites are not located where seawater intrusion has been detected along the coast, as the comment correctly points out; they are located inland from the coast in an area determined suitable for
groundwater recharge. As presented in the EIR’s Impact 4.10-2, groundwater modeling and analysis project that the combination of groundwater recharge and reduced pumping along the coast would increase groundwater levels and achieve protective groundwater elevations at the coastal wells. The statement in the comment that groundwater levels would not be restored for 20 years is unclear and may have been due to confusion regarding the length of the proposed 20-year Project period. The EIR’s Figures 4.10-6, 4.10-7 and 4.10-8 clearly illustrate the aquifer response to the Project and show that groundwater levels would increase within the year that recharge begins. Groundwater levels would decline substantially after the 20-year Project period when active recharge ceases, but they would remain at or above the protective levels and, in some cases, would be higher than they would be under the existing conditions. The comment states that the travel time for recharged water could be 5 to 8 years. That is true in some cases. As discussed in the EIR’s, Impact 4.10-3, the travel times would vary depending on the recharge site and distance to private or public wells but are projected not to exceed 25 years. However, the travel time of the recharged water would not be an indication of whether the Project is achieving its objective or successfully raising the protective groundwater levels at the coastal wells; the travel time would merely indicate the amount of response residence time and the rate at which the water approaches other production wells. The SWRCB requires that recharged treated water remain in the aquifer formation for at least 2 months. The comments states that the model must use actual soils borings. The GSFLOW groundwater model (see EIR Section 4.10.4), which was used to analyze the response of the Purisima aquifer to the Project, was developed and calibrated with geohydrologic data that was based on soil samples and groundwater pumping data obtained from drilling, sampling, and testing monitoring wells in the Project area.

I-79-5 Please see the response to comment I-36-3 regarding CEQA consideration of a reasonable range of alternatives. Further, see EIR Section 7.5.6, which included consideration of a new storage reservoir at the site noted in this comment. As discussed in Section 7.5.6, development of a new reservoir would meet some of the Project objectives, but would result in greater environmental impacts than the Project. Further, the feasibility of such an alternative is unknown as the District does not have surface water rights that would be required for water storage reservoir.

I-79-6 Please see the response to comment letter O-2, which addresses the general comments regarding long-term water transfers asserted here.

I-79-7 Please refer to responses to comments O-2-6 and O-2-11 regarding energy consumption and groundwater levels with conservation only.

I-79-8 With respect to the commenter’s assertion that construction impacts are addressed more than operational impacts, commenter is referred to Section 4.3.4, Impacts and Mitigation Measures (subsection Approach to Analysis). As explained in that section, the Project would involve extensive construction, involving a wide range of equipment, which would generate a wide range of emissions of regulated air pollutants. In contrast,
3. Comments and Responses

3.92 Response to Comments from Becky Steinbruner

Project operations would involve no new or modified stationary sources of pollutants. Long-term daily emissions sources would be limited to vehicle trips associated with six additional commuting workers. As explained in the EIR, for this reason, operational emissions are addressed qualitatively. With respect to the commenter’s assertion that the ambient air quality measurement is inappropriate, it is noted that the location of the sensor (2544 Soquel Drive, Santa Cruz) is on one of the proposed pipeline routes and represents roughly the mid-point between eastern-most and western-most Project components. Nevertheless, the ambient air quality information is presented for purposes of establishing the Project setting generally, but is not used as the basis for impact analysis. Rather, as explained in Section 4.3.4, Impacts and Mitigation Measures (subsection Approach to Analysis), individual and cumulative air quality impacts were assessed by comparing the estimated levels of Project pollutant emissions to thresholds established by the Monterey Bay Air Pollution Control District.

I-79-9 A stand-by generator is not proposed for the advanced water purification facility, or other Project components’ operations. Therefore, the Project would have no air quality impacts associated with emissions from generators during emergency operations. See also response to comment I-83-4 regarding facility power disruption.

I-79-10 The commenter is referred to EIR Chapter 3, Project Description, Section 3.5.1, Source Water and Treatment, and Section 3.5.3, Recharge and Monitoring Wells, which provide narrative descriptions of the proposed locations, heights, and masses of the advanced water purification facilities (AWPF) and recharge wells. In addition, the commenter is referred to Figures 3-5, 3-6, 3-7, 3-8a and 3-8b which depict the approximate aerial extents and locations of the facilities proposed at each prospective AWPF and recharge well site. The commenter is also referred to Section 4.2, Aesthetics, Figure 4.2-7 which presents a photo simulation of an AWPF at the Chanticleer Avenue Site, and Figures 4.2-8 and 4.2-9 which present photo simulations of an AWPF at the Headquarters-West Annex Site. The District has determined that this level of information provides substantial evidence to sufficient to support the analysis of visual impacts. As a result, additional illustrations are not needed to support the EIR’s conclusions. This comment is noted.

I-79-11 In response to this comment, the text of Chapter 1, Summary, page 1-34, is revised to acknowledge this is an issue that has been raised in public comment and remains to be resolved, as presented below. However, it is also noted that the issue to be resolved does not relate to a physical environmental impact that affects the EIR’s analysis and so is not addressed elsewhere in the document.

- Response to Comments, and Final EIR, and Project Approval Determination

Following close of the public comment period, responses to comments received during the Draft EIR comment period will be prepared and, together with any corresponding revisions to the Draft EIR, will constitute a Final EIR. The Final EIR will be considered and acted upon by the District’s
Board of Directors at a noticed public hearing. After the Board has acted upon the Final EIR, it may make a decision regarding whether to approve the Project. It is noted that public comments have been submitted in response to the Draft EIR requesting the decision regarding project approval be subject to a vote by Soquel Creek Water District ratepayers. While not an area of controversy that relates to a physical environmental effect requiring consideration in the EIR, it is an issue raised by some public commenters.

I-79-12 Please see the response to comment letter O-2, which addresses the general comments regarding long-term water transfers asserted here.

I-79-13 CEQA Guidelines Section 15083 provides that the Lead Agency may undertake a scoping process through which it engages with persons or organizations it believes would be concerned with the environmental effects of a Project. Unless requested by the State, a public scoping is not required under CEQA. And even when a Lead Agency elects to undertake a scoping process, CEQA does not require publication in the EIR of comments received during a scoping period. Nevertheless, as discussed in Chapter 2, Introduction (Section 2.4.2, Public Scoping), the District held two separate scoping periods, spanning more than 60 days, during which members of the public were invited to submit comments on the Notices of Preparation. A summary of the scoping comments is provided in Table 2-1, including those submitted orally and via email. The full text of those comments is provided in Appendix A. However unfortunate that commenter experienced difficulty navigating the EIR, the comments in question are included in the EIR, even though not required under CEQA. Thus, the EIR is not deficient with respect to scoping comment presentation.
From: Nancy Stucker
Sent: Friday, August 10, 2018 11:58 AM
To: purewatersoquelceqa
Cc: bod@soquelcreekwater.org; rond@soquelcreekwater.org
Subject: Extend to 60 days comment period Draft EIR PureWater Soquel

Nancy Stucker
2707 Lafayette Street
Soquel, CA 95073
August 10, 2018

Pure Water Soquel Project CEQA
4041 Soquel Drive, Suite A-501
Soquel, CA 95073-3105
Re: Request for Extension of Comment Period
Dear Pure Water Soquel Project CEQA Staff,

I am hereby requesting an extension of time for Public Comment on the PureWater Soquel Project Draft Environmental Impact Report. Due to the fact that the EIR is extremely long, I believe the public needs more time to evaluate it and submit comments. I certainly need more time to carefully read it and respond thoughtfully. Please extend the Public Comment period to allow for better public input and analysis. Please notify the public of your decision.

Cordially,

Nancy Stucker

cc: Carla Christensen
   Dr. Bruce Daniels
   Dr. Bruce Jaffe
   Dr. Tom LaHue
   Rachél Lather
   Ron Duncan
3.93 Response to Comments from Nancy Stucker (August 10, 2018) (Comment Letter I-80)

I-80-1 Please see the response to comment I-4-1.
From: Nancy Stucker
Sent: Monday, August 13, 2018 4:58 PM
To: purewatersoquelceqa; rond@soquelcreekwater.com; bod@soquelcreekwater.com; tajd@soquelcreekwater.org; melanies@soquelcreekwater.org
Subject: Comments on Draft EIR for Pure Water Soquel

I am writing to respond to the draft EIR on Pure Water Soquel. I feel that the report is incomplete in a number of areas. I feel the following adverse environmental effects of Pure Water Soquel should make the construction of such a facility unacceptable at the Headquarters-West Annex site.

4.2 Aesthetics

Impact:
The visual character, quality, and exposure of the Headquarters-West Annex site, which is surrounded by residences, would be highly affected by the project and the mitigation is insufficient. The Visual Sensitivity of the Headquarters-West Annex site is high.

Problems with the Draft EIR:
The Visual Exposure is insufficiently described in Table 4.2-1. Photos 8 and 9 (Figure 4.2-4) of the Headquarters-West Annex site are insufficient and do not reflect the residential nature of the area. They do not show a view from Gary Drive or from Rosedale Avenue, nor do they show the residences across the street from Photos 8 and 9 on Soquel Drive, Aguazul Drive, Crystal Heights Drive, Paseo del Sol, and Douglas Drive.

The visual exposure to the AWTP would not be limited or brief to these residents, it would be constant. Constant visual exposure to the site is a significant negative visual factor. The “green fencing” seen by Capitola Avenue residents and passers-by is irrelevant in judging the view of the final project. The EIR is incorrect in stating that “views from Capitola Drive [sic – should be Capitola Avenue] are limited by mature trees and the PG&E substations adjacent to Capitola Drive [sic].” There are many viewing angles that will be seen from residences and passers-by on Capitola Avenue, Soquel Drive, Aguazul Drive, Rosedale Avenue, and Gary Drive that are not blocked by mature trees and the PG&E substation. The project will include large, industrial structures that will be higher than final barriers. These points are omitted from section 4.2.2 of the Draft EIR.

The Draft EIR is written in such a way as to equate the residential use of the Chanticleer site with that of the Headquarters-West Annex site:

“The Live Oak and Capitola areas includes [sic] a blend of residential, commercial, and light industrial uses, with commercial and light industrial uses predominantly clustered along roads fronting or bisecting Highway 1, such as Soquel Avenue.”

“The Soquel area also includes a blend of residential and commercial uses;
However, commercial areas are more limited, primarily occurring along Soquel Drive and roads bisecting Highway 1.

The EIR should more clearly describe the overwhelmingly residential nature of the Headquarters-West Annex site. Capitola Avenue and Rosedale Ave are the two roads that bisect Highway 1 at the Headquarters-West Annex site. There is only one “commercial” element bordering Capitola Avenue, the PG&E substation. The only commercial areas on Rosedale Avenue are at the end of the street, far from the Headquarters-West Annex site, adjacent to Highway 1.

There are four photos of the Chanticleer site and two of the Headquarters-West Annex site. The photos of the Chanticleer site are angled in order to show residential usage in the background, whereas the photos of the Headquarters-West Annex site omit any residential structures, although these surround the site.

Zoning is not mentioned in the visual comparison of sites. The impact of an industrial structure in a residentially zoned area is far more negative than the impact of an industrial structure in an industrially zoned area.

Changes recommended:
More photos reflecting the residential nature of the Headquarters-West Annex site area should be included in the EIR. The visual impact of the project at the Headquarters-West Annex site from all residences, including from higher vantage points like residences on Soquel Drive and Aguazul Drive and immediately adjacent residences on Rosedale Avenue and Gary Drive should be accurately described. Views from Rosedale Avenue and Gary Drive should be given equal treatment with those presented in the current Draft EIR. The views blocked by mature trees and vegetation are exaggerated in the Draft EIR. The visual impact of the project at the Headquarters-West Annex site should be analyzed from every residence that can view the site, especially since these residences are within a residentially zoned area.

A consideration of the zoning of the Chanticleer and Headquarters-West Annex sites should be included in section 4.2.2, as should the number of residences within the sightline of each site, in order to more fairly analyze the visual impact of the proposed project at the two sites. The zoning for areas surrounding the Headquarters-West Annex R-1 and RM. is

The EIR should state the number of residences near both the Chanticleer and the Headquarters-West Annex sites, not just describe them both as having combined uses including residential.

The exposure of the final project and structures projecting above visual barriers in the visual simulations are just that, simulations, and there is no guarantee that the final project will look anything like the simulations. Building proportions, such as mass, form, and height would likely not look like the visual simulations in the Draft EIR.

I support the elimination of the Headquarters-West Annex site from consideration based on the negative visual impact of an industrial complex surrounded by residences in a residentially zoned area. The visual exposure to the Pure Water Soquel facility would be 24-7 for the residences surrounding the Headquarters-West
Annex site, not “limited and brief”. I often view the project site when walking on Capitola Avenue, Soquel Drive and Gary Drive, and it is very visible from many angles on these roads.

4.2-18 Soquel Master Plan

The Draft EIR states “the policies appear to apply to structural development to the west of the Headquarters-West Annex site.”

Problem with the Draft EIR:
The above statement is patently false. The property purchased by Soquel Creek Water District adjacent to the District Office, the proposed Headquarters-West Annex site, is included in the Soquel Village Plan (see http://www.sccoplanning.com/Portals/2/County/Planning/policy/soquel_redo.pdf?ver=2007-09-08-010000-000). Parcels APN: 030-241-20 and 030-241-22 are within the boundaries of the Soquel Village Plan. All land uses described in the Soquel Village Plan apply to parcels 030-241-20 and 030-241-22 which are zoned R-1-6 and are included in the Soquel Village Plan. An AWTP at the Headquarters-West Annex site is in conflict with the County General Plan and Sustainable Santa Cruz County Final Plan as well, and with existing land uses (Residential Zoning).

Recommendation:
Include, at every relevant point in the EIR where the Soquel Master Plan is mentioned or should be mentioned, that the proposed Headquarters-West Annex site falls within the boundaries of the Soquel Village Master Plan. All relevant aspects of the Soquel Village Master Plan as it applies to land use on the proposed Headquarters-West Annex site should be included in the EIR. If an AWTP is not in accordance with the Soquel Village Master Plan, it should be noted wherever relevant in the EIR and should be a clear reason to eliminate the Headquarters-West Annex site from consideration for an AWTP.

The fact that an AWTP at the Headquarters-West Annex site conflicts with the County General Plan, Soquel Village Plan, Sustainable Santa Cruz County Final Plan, and existing land uses (Residential Zoning) should be acknowledged in the EIR and considered reason enough to eliminate the Headquarters-West Annex site from consideration for the construction of an AWTP.

4.9 Hazards and Hazardous Materials

Impact:
Hazards and hazardous materials include injecting unwanted chemicals into the groundwater, as well as the storage of hazardous materials and the existence of biohazards at the project site.

4.9-2
Impact:
Hazardous substances in the form of NDMA, endocrine disruptors, pharmaceuticals, and pesticides in the treated water may be injected into recharge wells.

Problems with the Draft EIR:
Recharge Wells
The Draft EIR states the recharge well sites would only receive water treated to drinking water standards and that this water would not be a hazardous material, resulting in no impact.

However, the water treated at the AWTP will use wastewater as the source water. This water has NDMA, endocrine disruptors, pharmaceuticals, and pesticides that cannot necessarily be eliminated through the AWTP process. These chemicals will then be injected into the aquifer, the source of our drinking water. These chemicals are not mentioned in the Draft EIR nor are the potential effects of the existence of these chemicals in the source of Soquel Creek Water District drinking water.

There may be no drinking water standards available for some substances remaining in the water treated at the AWTP, but that does not mean that these substances do not pose a hazard to the quality of the ground water if injected into recharge wells. If there are no “drinking water standards” for substances that can remain in the AWTP-treated water, this phrase should not be used to justify a rating of “no impact.” These substances that may remain, and for which there are no drinking water standards, should be analyzed individually as potential hazards to our groundwater, the source of our drinking water.

Changes recommended:
Hazardous substances found in wastewater that could remain in the water after the AWTP process should be included in the hazards posed in the EIR. The possible existence of unwanted chemicals that are not mentioned in “drinking water standards,” but could nonetheless be hazardous to the health of humans and the environment, should be described and examined in the EIR. If the hazard is unknown, it should not be judged as resulting in no impact, it should be stated as an unknown hazard.

Analysis of the hazards of NDMA being injected into the ground water should be examined. An EPA fact sheet regarding NDMA can be found at https://www.epa.gov/sites/production/files/2014-03/documents/ffrrfactsheet_contaminant_ndma_january2014_final.pdf

Any adverse effect that may be posed by chemicals remaining in the AWTP-treated water should be analyzed and discussed in the EIR, whether there are drinking water standards for these substances or not. What’s more, the effect of injecting AWTP-treated water into only two recharge wells, where the water will be concentrated in a small area, should also be analyzed in the EIR in terms of the potential hazardous effect of chemicals remaining in the treated water.

The EIR should include hazards posed by contamination caused by technological malfunction at the AWTP site. Technology cannot be expected to function perfectly all the time. These hazards should be evaluated in terms of their effect to nearby residences at the proposed sites.

4.13 Noise and Vibration

Impact:
Noise to a residentially zoned area if the Headquarters-West Annex site is chosen for the AWTP.

Problems with the Draft EIR:
A wall is proposed to mitigate construction noise at the Headquarters-West Annex site, but a wall is not proposed to mitigate construction noise at the Chanticleer site, thereby making the Headquarters-West Annex site appear more suited to the project

Recommended Change:
Include a sound mitigation measure for the Chanticleer site, such as the wall proposed for the Headquarters-West Annex site, in order to make a more equal comparison of the two sites.

Include the number of residences affected by the noise at all sites, not just compare the distance of the nearest residence at each site. This comparison unfairly favors the Headquarters-West Annex site by only noting the 50-foot (Chanticleer) versus 55-foot (West Annex) distance of the nearest residence without taking into account the number of residences in close proximity to the sites. The Headquarters-West Annex site has a far greater number of residences around it than the Chanticleer site, which is only separated from Highway 1 by the frontage road. How many residents will be affected by noise should be taken into account, not just the distance of one multi-family residence at the Chanticleer site.

Include the zoning of each site in judging the impact of noise and vibration and take into account the effect of noise in a residentially zoned area versus an area zoned for light industrial use. Nighttime measurements of current noise levels should be conducted from the edges of the Headquarters-West Annex site on Capitola Ave, Soquel Drive, Gary Drive, and Rosedale Avenue and compared to the noise level of actual AWTPs, not to “Project pump specifications and conceptual site plans provided by the Project applicant.” These “conceptual” site plans may be unrealistic and conceived with overly-optimistic estimates by the Project applicant. All comparisons of Project operation noise levels should be compared to actual functioning AWTPs.

Alternatives

Impact:
More cost-effective and less construction-heavy alternatives that also have the benefit of having a smaller energy usage than needed for the operation of an AWTP can be used to increase the water supply available to Soquel Creek Water District much faster than and instead of an AWTP and can mitigate the overdraft evaluated to exist by the District.

Problems with the Draft EIR:
The EIR does not adequately evaluate alternatives such as water transfers from North Coast water and the Lochquifer alternative conceived by Jerry Paul. Capital cost comparisons and energy use comparisons of these alternatives versus an AWTP are non-existent in the Draft EIR.
Recommendation:
In order to compare actually evaluate alternatives to an AWTP, these two viable
proposals must be evaluated fully. Turbidity studies and a study of Ranney collector wells in relation to these alternatives should be completed. A cost-benefit analysis of increasing the pipe size in order to allow the Lochquifer alternative to be effective should also be done. A full and complete analysis of the speed with which water transfers from Santa Cruz can begin mitigating the problem defined by the Soquel Creek Water District as early as this winter should be undertaken before any evaluation of the construction of an AWTP is concluded. Such an alternative could begin solving the problem as early as this winter by allowing some mid-county wells to rest.
A cost-benefit analysis must be conducted to fairly compare alternatives to an AWTP. Water must be affordable and the cost to ratepayers must be a factor in the EIR when comparing an AWTP to the two very real and viable alternatives mentioned above.

Respectfully,
Nancy Stucker
2707 Lafayette Street
Soquel, CA 95073
3.94 Response to Comments from Nancy Stucker (August 13, 2018) (Comment Letter I-81)

I-81-1 This introductory comment is followed by more detailed comments and does not include specific comment about the EIR or any environmental issue related to the Project and so no response is required. This comment is noted.

I-81-2 The commenter indicates that the visual sensitivity of the Headquarters-West Annex site should be described as “high” rather than “low to moderate” as listed on EIR page 4.2-14 because residential uses would be highly affected by the Project. As discussed on EIR page 4.2-1, visual sensitivity is defined in this EIR as the overall measure of a site’s susceptibility to adverse visual change and is based on the combined factors of visual quality, viewer types and volumes, and viewer exposure to the project. As discussed in paragraph 4 of EIR page 4.2-2 (Visual Study Area), because the Project area is in both urban and heavily vegetated open space settings, trees, shrubs, and buildings quickly restrict or block views of Project components as viewers move away from Project sites; consequently, these elements limit the visual study area in most places to publicly accessible locations immediately surrounding Project components. For the purpose of this analysis, the visual study area is limited to publicly accessible locations immediately surrounding Project components due to the limited number of private viewpoints in the proximity of Project sites. Obstruction or alteration of a few private views in a project’s immediate vicinity is not generally regarded as a significant environmental impact. (Mira Mar Mobile Community v. City of Oceanside, supra, 119 Cal.App.4th at pp. 492-493 [distinguishing public and private views; “[u]nder CEQA, the question is whether a project will affect the environment of persons in general, not whether a project will affect particular persons”]; Association for Protection etc. Values v. City of Ukiah (1991) 2 Cal.App.4th 720, 734 [3 Cal. Rptr. 2d 488] [views of “only a few of the neighbors,” not “persons generally,” were affected]; compare Quail Botanical Gardens Foundation, Inc. v. City of Encinitas, supra, 29 Cal.App.4th at pp. 1603-1604 [blocking of view from public park].) There are few residential parcels immediately adjacent to the site, which have partial views of the site due to the existing fencing, intervening vegetation, and a PG&E substation that dominates views. There are no parks, plazas, or other areas where large number of the public can view the site. As viewed from public areas (e.g., from the streets and sidewalks in the vicinity of the site), the visual sensitivity of the site is identified as low to moderate because, while the site has a moderate visual quality, most of the site is not visible from public viewpoints and affected viewers are only briefly exposed (EIR page 4.2-14).

The commenter indicates that the setting photos included in EIR Section 4.2 should be expanded to include views of the site from Gary Drive and Rosedale Avenue, and includes views of the residential structures on streets surrounding the Headquarters-West Annex site; and indicate that setting photos selected for the Chanticleer feature residential uses. Existing public views of the Project site from Gary Drive and Rosedale
Avenue are restricted due to the existing residential structures on those streets, and are limited to the roof tops of existing Headquarters structures. The views included in the EIR from Capitola Avenue and Aguazul Drive (Figure 4.2-4) represent viewpoints where more of the site can be seen from publicly available areas. Views from additional public areas near the Headquarters-West Annex site would not be appreciably different than the views selected, given the relatively limited public views of the site from surrounding areas. Regarding the statement that setting photos for the Chanticleer site highlight residential uses, it is noted that the structures included in Figure 4.2-3 of the Chanticleer site do include structures in Photo 4 because the Chanticleer site has two commercial parcels inset within the overall site, that can be seen in most public viewpoints of the Chanticleer site (similar to the PG&E parcel inset in the West Annex site). There is also a dilapidated and unoccupied structure within the Chanticleer site. Views of residential uses are not available within public views of the Chanticleer site.

As shown on Figure 3-7, the largest structures proposed for a AWPF at the Headquarters-West Annex Site are oriented towards Soquel Drive and between the existing PG&E Substation and the existing Headquarters building. The West Annex site includes mature trees adjacent to Capitola Avenue in this area. The site layout included smaller structures and landscaping towards the southern portion of the site, where there are fewer existing trees that would screen proposed structures from views from Capitola Avenue. For that reason, the visual simulations presented for the Headquarters-West Annex site focus on views of the site from areas closest to the larger structures. While viewing angles from further south on Capitola Avenue would not have large / mature trees directly within view, the view of Project landscaping with proposed structures in the background would not be materially different than the simulated view directly across from the largest proposed structures.

Regarding the EIR description of the Live Oak and Capitola areas, EIR page 4.2-11 includes a Visual Character description of the overall study area; and descriptions of the neighborhoods within the study area, but is not intended to describe the site character of each Project location. That description follows on EIR pages 4.2-12 through 4.2-17. The Chanticleer site description notes adjacent commercial and institutional uses, with residential uses in the background; and does not describe the site a residential use area as asserted in this comment.

As discussed on EIR Page 4.2-22, the simulated Project conditions are based on preliminary Project designs and landscape plantings at maturity (approximately 10 years after planting); and could be adjusted during final Project design, including details such as landscape planting palette, paint and fencing colors, and some adjustment of building layouts. However, the simulations do portray the planned building mass, form, and height. Regarding discussion of the Headquarters-West Annex zoning, land use designations, and general plan consistency, please see the response to comment I-44-3.

Please see response to comments I-81-4 and I-81-5.
3. Comments and Responses

3.94 Response to Comments from Nancy Stucker

I-81-4 Please see the EIR’s Section 4.10, Hydrology Resources – Groundwater (Impact 4.10-3) for the analysis of treated wastewater and its effects on the Purisima aquifer. The water that would be conveyed to the recharge wells for recharge into the Purisima aquifer would undergo an advanced purification process. The quality of that water would be better than water provided by most conventional municipal water systems. The treated water in no way would be categorized as a hazardous waste. The source of this water is indeed wastewater, but the treatment process is proven to reliably to destroy CECs including NDMA, endocrine disrupting compounds, pharmaceuticals and pesticides, as well as a host of other chemical classes. To clarify, the finding of “no impact” in the case of treated water quality, is not based solely on whether there is a drinking water standard. The “No impact” conclusion is based on the understanding that the water recharged into the aquifer would be treated and purified and would not contain hazardous substances.

There are many CEC including EDCs and pharmaceuticals that can be released into the environment. However, only a fraction of those end up in the wastewater treatment stream and still only a fraction of those survive the advanced purification process. Those that do survive have concentrations that are either not detectable in the parts per trillion range, or are so low that they do not approach the maximum contaminant level or the SWRCB Human Health Screening level. Most chemicals found at very low concentrations in advanced purified water are likely simple common compounds, like acetic acid (vinegar), that are small enough to get through reverse osmosis membranes but are innocuous. Large molecules such as pharmaceuticals are removed and destroyed during the advanced purification process. Regarding NDMA, this compound is regulated by the State of California and can be removed effectively by UV treatment through direct photolysis, which is a requirement of potable reuse in California. The treatment process proposed for the Project would include an ultraviolet (UV) and advanced oxidation process (AOP) which can reliably reduce NDMA concentrations to below 10 ng/l (10 parts per trillion), which is the Notification Level the State of California Division of Drinking Water has assigned and which they believe to be protective of public health. Typical purification system can remove NDMA to a concentration of 5 parts per trillion or less (NWRI, 2017).

I-81-5 Please see EIR Section 4.10 (Impact 4.10-3) which evaluates the water quality effects of recharging treated wastewater into the Purisima aquifer. Also see response to comment I-81-4, which provides additional information on the quality of advanced purified water, the potential for hazardous materials in that water, and NMDA. Regarding the advanced purified water recharge, please see the EIR’s Impact 4.10-3, which discusses the use of the two recharge wells that would recharge purified water, the residence time that treated water would undergo once recharged, and the required monitoring of the water to ensure the recharge strategy remains protective of Purisima aquifer water quality. Please also refer to response to comment I-30-2, which responds to the portion of the comment regarding potential contamination from a purification system malfunction. As discussed in the response to comment I-92-12, the Purisima
aquifer acting as the environmental buffer to the treatment system allows time to respond to unanticipated treatment process failures, if they were to occur.

I-81-6 The commenter correctly notes that a wall is proposed along a portion of the perimeter of the Headquarters-West Annex site. As described in Chapter 3, Project Description, the wall is a proposed Project component, independent of its implications for noise. And because it is an element of the Project, the effects of the wall must be considered in the EIR’s analysis of potential effects, including those concerning noise. Therefore, while the commenter is also correct in their observation that, once constructed, the wall would have an attenuating effect on construction noise at the Headquarters-West Annex site; the assertion that construction noise attenuation is the basis for the wall’s inclusion in the Project is inaccurate.

The commenter requests that a sound mitigation measure be included for the Chanticleer Site. As discussed in Section 4.13, Noise and Vibration (Impacts 4.3-1 and 4.3-2), construction noise levels at the Chanticleer Avenue Site would be significant. To reduce these impacts, the EIR recommends implementation of Mitigation Measure 4.13-1a which provides for development and implementation of a noise reduction plan. Mitigation Measure 4.13-1a provides that the noise reduction plan shall require the District “Use construction noise barriers such as paneled noise shields, blankets, and/or enclosures adjacent to noisy stationary and off-road equipment. Noise control shields, blankets and/or enclosures shall be made featuring a solid panel and a weather protected, sound-absorptive material on the construction-activity side of the noise shield.”

The commenter asserts the noise analysis should consider the number of residents affected and the underlying zoning of the various sites. Pursuant to CEQA Guidelines Section 15064.7, a lead agency may establish its own thresholds of significance, provided the decision is supported by substantial evidence. As described in Section 4.13.4, Impacts and Mitigation Measures (subsection Approach to Analysis), the significance thresholds used in the noise analysis are based upon the standards identified in the local noise regulations and technical guidance published by federal and State agencies with expertise in the subject matter. Therefore, the selection of the noise thresholds used in the EIR are appropriate for the analysis and supported by substantial evidence. Please see also the response to comment I-44-3 regarding land use designations of proposed Project sites.

The commenter requests that nighttime noise measurements be collected at the Headquarters-West Annex Site. As explained in Section 4.13.2, Environmental Setting, noise surveys were conducted to quantify the existing ambient noise levels at the Project sites. These included 24-hour long-term noise measurements. The locations of these measurements are shown on Figure 4.13-2 and the results are summarized in Table 4.13-2.
The commenter requests the analysis use noise levels of actual treatment facilities, rather than the specifications and conceptual site plans for the proposed Project. The EIR’s noise analysis relies upon the best available Project description information to evaluate Project-specific impacts. The noise levels of proposed equipment and the calculations of attenuation over distance are based upon published technical guidance from federal and state agencies, as identified in Section 4.13. Reliance upon observed noise levels for other Projects would not be appropriate for several reasons. For example, any discrepancies in design, layout, equipment and materials types, and ambient noise levels between the observed facility and the proposed Project would render the observation invalid. As there is no existing project identical to the proposed one, the approach employed in the EIR, which is supported by substantial evidence, is appropriate.

I-81-7 Please refer to response to comment O-2-6 which addresses the EIR’s energy consumption analysis for the Project and alternatives. Please also refer to response to comment I-33-2 which addresses the role of economic considerations in an EIR.

I-81-8 This comment refers to and summarizes comment letter I-52. Please see the responses to comment I-52. Regarding project cost analysis and energy use, see the response to comment I-81-7. Regarding the assertion that a long-term water transfer could begin immediately, as an extension of the 5-year pilot study currently underway, see the response to O-7-3.
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The two most important items in a future groundwater replenishment plant are the following:

1. The plant must include the capability to purify the water to potable standards, so that in the future, when the state permits a "closed loop" system, the water district can directly pump purified water into homes.

2. The Draft RIR objective is to replenish the aquifer, but are well owners, who also use the aquifer, going to share in the cost of the treatment plant? It is unfair (and possible ILLEGAL) for the water district to make only the water district customers pay for the treatment plant.

Larry Takemoto
3.95 Response to Comments from Larry Takemoto
(July 3, 2018) (Comment Letter I-82)

I-82-1  This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-82-2  This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. However, for informational purposes, water supply projects proposed by the Soquel Creek Water District can only extend and apply to water district customers (County Water District Act [30000-33901]). The District only has the ability to fund projects from revenues derived from District customers.

Under the Sustainable Groundwater Management Act, groundwater basins in California are mandated to be sustainable by 2042 (2040 for basins designated critically overdrafted, such as the Santa Cruz Mid County Groundwater Basin (Basin)). The Santa Cruz Mid-County Groundwater Agency oversees groundwater management activities in the Basin and are in the process of developing a groundwater sustainability plan, which will include actions (projects, programs, monitoring, etc.) by all basin users (municipal and private).
Comments on the Draft EIR for PureWater Soquel

My comments on the dEIR address sections 1.1, 4.9, and 7.

1.1 Project Objectives

Among the project objectives are the following:

"Develop an affordable, reliable, and drought-resistant supplemental water source, which contributes to the diversification of the District water supply portfolio and enhances water supply resiliency" (dEIR 1-1)

"Continue to provide District customers with a high-quality and safe water supply" (dEIR 1-1)

I believe that PureWater Soquel (PWS) would not meet these objectives and that conjunctive use (aka water transfers) with Santa Cruz would do a better job of meeting them, as explained below.

Affordability:

The PWS project is significantly more expensive both to construct and to operate than in-lieu water transfers with Santa Cruz. At a recent Soquel Creek Water District Board meeting, wastewater treatment consultants questioned whether such a small district could handle the expense of building and operating a potable reuse system. That was an important question. The actual costs of indirect potable reuse (IPR), including intensive energy use, are very high; the long-term cost of Southern California's IPR systems (construction plus operating costs over 30 years) turns out to be about equal to that of desal (National Resource Council 2012, 162). As energy costs increase in the future, the cost of IPR water will also increase. While any water delivery system uses energy, the PWS project, which requires forcing water through reverse osmosis (RO) membranes, will necessarily be higher than the operational costs of conjunctive use.

Conclusion: The EIR should include total cost comparisons between PWS and both "passive conjunctive use" (in-lieu only) and "active conjunctive use" (in-lieu plus Aquifer Storage and Recovery (ASR)) alternatives.

Reliability, Resiliency, Drought Resistance:

The PWS project would be less, not more, reliable and resilient in the face of droughts, climate change, and other future challenges compared with conjunctive use:

1. Potable reuse works in opposition to water conservation.

3. Ironically, having a recycled potable reuse system can lead to unnecessary use of water, which would be particularly counter-productive during droughts. This is for three reasons: (1) Having what may seem to customers to be an unlimited water supply could be a disincentive to conserve water. (2) Conserving water inside the home puts less water into the sewers, making sewer water more viscous. But potable reuse requires low viscosity (plenty of water) in the sewers for effective operation (National Research Council 2012, 148). (3) Since the contaminant load in the sewers would remain the same regardless of the amount of water used, the resulting higher density of contaminants would tend to accelerate "the corrosion rate of the conveyance system" (Vo et al. 2014:14). Such circumstances would likely require more water to enter the sewers than would otherwise be necessary.
Conclusion: The EIR should consider the ways that PSR would likely work at cross-purposes to water conservation, thus making District customers more vulnerable to drought. The EIR should compare PWS with conjunctive use in this regard.

2. PWS's heavy energy dependence would make the District water supply especially vulnerable to grid failure.

As indicated above, the PWS is very energy intensive, which would make the District more dependent on the electrical grid. Not only is such high energy use financially expensive, but it would make the District's water supply vulnerable in the event of a massive earthquake or – even more likely – cyber attack on the grid or on the PWS plant itself. Such cyber attacks could happen in various ways, from sabotaging one or more regions of the U.S. to a targeted shut-down of one or more utilities, leaving us without power not just for a few days but potentially for several months. While such scenarios – including the resulting chaos and struggle to meet basic needs for water and food – used to be the stuff of science fiction, they are, unfortunately, quite realistic now, as New York Times’ national security correspondent David E. Sanger argues in his new book (2018). With co-author Nicole Perloth, Sanger recently updated findings in his book regarding Russian infiltration of the U.S. power grid, noting that U.S. security firms and government officials now regard the 2015 and 2016 Russian attacks on the Ukrainian power grid as:

…an ominous sign of what the Russian cyber strikes may portend in the United States and Europe in the event of escalating hostilities. Private security firms have tracked the Russian government assaults on Western power and energy operators … since 2011, when they first started targeting defense and aviation companies in the United States and Canada. By … December 2015, the … attacks were no longer aimed at intelligence gathering, but at potentially sabotaging or shutting down plant operations (Perloth and Sanger 2018).

While a prolonged power outage would be extremely challenging for our local community in any case – all water systems require some electricity to operate – we would be safer if our water supply system required less electricity (such as might be generated independent of the grid to operate triaged systems) rather than more. Conjunctive use would rely to some extent on gravitational energy and would not require the massive amount of energy needed to force water through RO membranes.

Conclusion: The EIR must consider the potential impacts of prolonged power-grid outages on PWS as compared with conjunctive use.

3. PWS's hi-tech complexity makes it more vulnerable to factors impacting access to chemicals, replacement filters, and other materials needed to maintain the plant in 24/7 operating condition.

Nowadays, it is not difficult to imagine how tariffs, regional wars, climate changes, cyber attacks, and political shifts and uncertainties could disrupt transportation and availability of chemicals, filters, and other replacement materials for the PWS plant. Such exigencies reduce resiliency and make PWS a poor bet for a safe, reliable water supply. To secure a safe water supply, a system that relies on fewer hi-tech components would be more reliable, thus enhancing resiliency.

Conclusion: The EIR should consider the many downsides to the hi-tech complexity of PWS in comparison to conjunctive use.
Safety:

In addition to the concerns about safety addressed above, I will examine other safety factors of the PWS project in the following section.

4.9 Hazards and Hazardous Materials

The dEIR 4.9.2 defines "hazardous material" to mean, "any material that because of its quantity, concentrations, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment" (dEIR 4.9-1). Yet the dEIR fails to consider whether the effluent from the PWS plant may pose a potential future threat to human or environmental health. The final EIR should be revised in accordance with findings of 21st-century science, which suggest that it could indeed pose such a threat.

Human Health Concerns

The California 2013 Recycled Water Policy requires that the effluent of an advanced wastewater treatment plant be tested for just six chemicals (NDMA, DEET, 17beta-estradiol, triclosan, sucralose, and caffeine) prior to being directly injected into an aquifer (California State Water Resources Control Board 2013).

This short list of indicator chemicals, which includes no pesticides or pharmaceuticals, has been criticized by others, not only for its brevity but also because most of the chemicals are poor indicators (e.g., Eaton and Haghani 2012; Ferrer 2012; Eaton and Wilson 2013). Though it is hoped that a more appropriate, substantial list of indicators will be required in the next revision of the regulations (expected in December 2018), whether that revised version will be sufficiently protective of public health is far from certain, leaving open the potential for long-term health impacts and for the Purisima Aquifer to be permanently contaminated with trace levels of endocrine disruptors, carcinogens, and other substances hazardous to humans and other living organisms.

Yet the dEIR fails to address the possibility that PWS might be hazardous to District customers' health or might contaminate the aquifer with harmful chemicals or other contaminants.

Outside of the water-reuse industry, which stands to gain from having ever more advanced wastewater treatment plants built, there is no consensus in the scientific community about either toxicological or risk-assessment methods to identify or cope with endocrine-disrupting chemicals (EDCs), carcinogens, and other contaminants of emerging concern (CECs). Professor Laura N. Vandenberg, Graduate Program Director at the Amherst School of Public Health, is one of several endocrinologists and public health experts who have been working to bring toxicology and risk assessment into the 21st century. She writes:

Environmental health scientists, experts from The Endocrine Society, and other biomedical professionals have pushed for … regulatory agencies to accept 21st century science. Many of these groups have argued that … a narrow view focused solely on overt signs of toxicity (e.g.,
death, severe loss of body weight, palpable tumors), is not sufficient to evaluate chemical safety. (Vandenberg 2017, 283)

Due to regulatory reliance on traditional methods of toxicology and risk assessment, she concludes, "The increased risk of diseases due to EDC exposures may be significantly underestimated by regulatory agencies around the world" (Vandenberg 2017, 284).

I will endeavor here to explain briefly how views such as those of Vandenberg and many other endocrinologists and other independent scientists relate to IPR in general and the PWS in particular. Please consider the following eleven points:

1. Numbers of chemicals and of known EDCs; inadequate testing for EDCs and CECs. There are now "more than 143 million unique organic and inorganic chemical substances, such as alloys, coordination compounds, minerals, mixtures, polymers and salts..." registered with the Chemical Abstract Service (CAS), a division of the American Chemical Society (American Chemical Society. 2018). Even though only about 85,000 of these chemicals are currently known to be in everyday use and thus likely to show up in municipal wastewater, some of the other 142,915,000 could appear there at any time. Moreover, according to the Endocrine Disruption Exchange, there are currently more than 1400 chemicals known or strongly suspected to be endocrine disrupting chemicals (EDCs) (TEDX 2017). EDCs can impact all the complex and delicate endocrine glands and systems, including the pituitary gland, hypothalamus, thyroid, cardiovascular system, mammary glands, pancreas, ovaries, uterus, prostate, and testes, as well as the brain and adipose tissue (Diamanti-Kandarakis et al. 2009:4). It is impossible to determine how many more chemicals are endocrine disruptors, carcinogens, or contaminants of emerging concern (CECs) because appropriate tests are very rarely undertaken.

2. Trace levels (parts per billion or trillion) of CECs remain in advanced wastewater treatment effluent. Currently, there is no wastewater treatment train, including those using reverse osmosis, that can remove all contaminants of emerging concern; trace levels – i.e., amounts in the parts per billion or parts per trillion levels – of many CECs, including endocrine disruptors and an array of disinfection byproducts, remain in the effluent (Asano et al. 2007:113; WEF and AWWA 2008:1-6; Raghav et al. 2013:4,7; Schnoor 2014:12A).

3. Trace levels (parts per billion or trillion) of EDCs can induce health problems. EDCs can have adverse impacts on health at extremely low concentrations, even down to parts per trillion. Since such trace levels of EDCs are likely to remain in the PWS plant effluent, District customers (and others who draw from the Purisima Aquifer) are likely to be exposed to EDCs on a regular basis. While acute reactions to such low levels of EDCs are not a concern, frequent exposure to those same levels of chemicals is associated with chronic illnesses, including childhood leukemia and other cancers, allergies, asthma and other respiratory problems, genital malformations in baby boys, early puberty in girls, ADHD, lowered IQ, autism, obesity, diabetes, cardio-pulmonary diseases, immune-system dysfunction, and Parkinsonism; evidence is mounting that endocrine disruptors may also play a role in development of Alzheimer’s disease and other mental illnesses (Alonso-Magdalena 2006; Grandjean et al. 2007; Diamanti-Kandarakis et al. 2009; Birnbaum 2010; Burkardt-Holm 2010; Landrigan 2010; Soto and Sonnenschein 2010; Karoutsou and Polymeris 2012; Sargis et al. 2012; WHO/UNEP 2013; Weiss 2012; Zoeller et al. 2012; Birnbaum 2013; Carpenter 2013; Welshons 2013; Blaszcak-Boxe 2014; Grandjean and Landrigan 2014; Hamblin 2014; Richardson et al. 2014; Schiffer et al. 2014; Bellanger et al. 2015; Konkel 2014; 2015; Genuis and Kelln 2015; Grossman 2015; Trasande et al. 2015).

4. Trace levels of EDCs are especially dangerous for fetuses and young people. Such trace amounts of EDCs and other chemicals can be particularly dangerous for fetuses, infants, and children, whose glands and organs are rapidly developing. When present in the body of a pregnant woman, endocrine
disruptors can be passed on via the placenta to the fetus and via breast milk to the infant. Maternal transmission of EDCs is particularly important because, as explained in the Endocrine Society’s comprehensive review and analysis, *Endocrine-Disrupting Chemicals: An Endocrine Society Scientific Statement*, the age at which one is exposed to these chemicals can make the health impacts more or less significant, and fetal and early postnatal-infant stages are developmental periods when mammals are most vulnerable (Diamanti-Kandarakis et al. 2009). The brain and nervous system, immune system, reproductive system, heart, lungs, and all other crucial organs are being developed at those times; illnesses due to malfunction of those systems and organs that are precipitated during those early months and years may not become apparent until years or even decades later (Diamanti-Kandarakis et al. 2009; see also Colborn, vom Saal, and Soto 1993; Colborn 1997, 2004; Burkhardt-Holm 2010; Kortenkamp et al. 2011; Landrigan and Goldman 2011; Braun 2014; Williams 2013/2014; Grandjean and Landrigan 2014; Whyatt et al. 2014). Moreover, illnesses triggered by chemicals during those vulnerable formative years are often irreversible (Zoeller et al. 2012:4101; WHO/UNEP 2013:13).

5. **Transgenerational epigenetic inheritance of EDC-induced illnesses.** The long delay between exposure to harmful chemicals and their health consequences reaches even longer than early-life exposure and later adult appearance of disease. Research in the last couple of decades has indicated that in some instances harms inflicted by endocrine disruptors and some other chemicals may be passed on to subsequent generations via a process known as transgenerational epigenetic inheritance (Edwards and Myers 2007; Grandjean et al. 2007; Diamanti-Kandarakis et al. 2009:4,7-8; Burkhardt-Holm 2010:484-487; Birnbaum 2010; Daughton 2010:54-55; Birnbaum and Jung 2011; Francis 2011; Guerrero-Bosagna and Skinner 2012; Martin 2013; Head 2014; Tollefsbol 2014).

Linda Birnbaum, Director of the National Institute of Environmental Health Sciences (NIEHS) and National Toxicology Program, has written extensively about the shortfall of traditional risk-assessment and outdated toxicological methods in evaluating the ways that endocrine disruptors and other synthetic chemicals can impact health (Birnbaum 2010). Birnbaum and her colleague Paul Jung, chief of staff at NIEHS, explain transgenerational epigenetics as follows:

> ...we’re born with our genes, but epigenetic changes occur because of environmental influences during development and throughout life. Epigenetics thus provides a measurable “imprint” on DNA expression that may be useful as a biomarker for disease susceptibility. And these imprints can be carried and expressed across generations. (Birnbaum and Jung 2011:818)

It would thus seem advisable for people considering the possible health impacts of trace amounts of drugs and other chemicals in recycled wastewater to attend to epigenetic inheritance, but the topic is rarely addressed in the water-reuse literature or by regulators of the industry. As I'll discuss in #10 below, transgenerational epigenetic inheritance is one of the factors that makes epidemiological studies of potable reuse very difficult.

6. **Mixture effects.** Traditional risk assessment methods that are used to determine safe levels of chemicals typically consider just one chemical at a time. This practice ignores mixture effects; the problem of whether a given chemical's effects will be additive, antagonistic, or synergistic when ingested, inhaled, or absorbed through the skin does not figure into regulations of chemicals in recycled wastewater. To illustrate, studying antibiotics in wastewater treatment plants, Sungpyo Kim and Diana S. Aga, chemists at the State University of New York at Buffalo, note:

> Although a few environmental risk assessment studies suggest that the levels of pharmaceuticals in the environment, including antibiotics, are not a major threat to human health...the chronic effects of mixtures of these microcontaminants remain unknown. Typical health risk calculations are based on a single drug exposure in a lifetime. The synergistic and
antagonistic effects of pharmaceutical mixtures on human[s] and ecology cannot be ruled out, and need to be addressed in risk assessment. For instance, it was demonstrated that a mixture of ibuprofen, prozac, and ciprofloxacin produced 10- to 200-fold higher toxicity in plankton, aquatic plants, and fish. These results imply that a more sophisticated approach for the risk assessment of antibiotics might be necessary to obtain a more accurate assessment of health and ecological risks associated with antibiotics in the environment. (Kim and Aga 2007:568-570, emphasis added)

Research done by endocrinologists, chemists, and many other independent scientists who have considered this issue indicates the need for a more sophisticated approach to risk assessment not only for drugs but also for personal care products, pesticides, and industrial chemicals that find their way into sewer water, trace amounts of which can remain in the treatment plant's effluent.

7. The more contaminated the source water, the more important the list of indicator chemicals. Since advanced wastewater treatment plants use sewage as their source water, and since that source gathers water from hospitals, long-term care facilities, prisons, schools, and other institutions as well as homes, the mix of chemicals going through the treatment train stagers the imagination. There is no way to take account of the ways that those chemicals may react with one another on contact, further complicating the task of evaluating the plant's final output. When testing for chemicals, "you can't find what you don't look for," and if the list of indicator chemicals used to monitor the plant's effluent is insufficient, it will be impossible to know whether the product water is actually safe. The current list of just six indicator chemicals to assure removal of EDCs and other CECs seems woefully inadequate.

8. Metabolic byproducts further complicate the picture. While some consumed drugs may pass through our bodies into sewers largely unchanged, many other drugs create metabolic byproducts after consumption, further complicating risk assessment of chemicals – and chemical mixtures – in recycled municipal wastewater. For example, the anticonvulsant drug carbamazepine is often found in wastewater treatment effluents, though its several metabolites are usually not included in assessments of wastewater plant efficacy. One exception is the study by Miao et al. (2005), which examined wastewater samples for caffeine, carbamazepine, and five of its known 33 metabolites, at least one of which “has been shown to possess similar anti-epileptic properties [to carbamazepine], and it may cause neurotoxic effects” (Miao et al. 2005:7470; see also La Farre et al. 2008). The authors found the treatment process to be effective in removing caffeine but not in removing the carbamazepine metabolites (Miao et al. 2005:7474). This result is significant because if a treatment plant’s efficacy is assessed looking only for the original drug and not its metabolites, then the analysis could overestimate the plant’s treatment efficacy. (Incidentally, this study also illustrates the futility of including caffeine as one of the six indicator chemicals that must be monitored prior to direct injection of advanced-treated wastewater into aquifers.)

9. Metabolites may reconstitute to the original compound. Once broken down, some metabolites can subsequently reconstitute themselves: “some excreted metabolites can also be transformed back into the parent compound” (Jjemba 2008:172; see also Escher and Fenner 2011). A recent study by Qu et al. (2013) on metabolites of the steroid trenbolone indicates that some drugs are transformed into other compounds by light but then revert to the parent drug in darkness. That study found that, while light breaks down trenbolone (TBA) metabolites, the phototransformation products re-convert to the parent compounds in dark conditions; this process “results in the enhanced persistence of TBA metabolites via a dynamic exposure regime that defies current fate models and ecotoxicology study designs” (Qu et al. 2013:350). The authors explain the implications:

These reactions also occur in structurally similar steroids, including human pharmaceuticals, which suggests that predictive fate models and regulatory risk assessment paradigms must
account for transformation products of high-risk environmental contaminants such as endocrine-disrupting steroids (Qu et al. 2013:347, emphasis added).

The ability of some endocrine disruptors’ transformation products to revert to the original chemical in darkness may have implications for IPR. If testing for these revertible chemicals were done only under light conditions, that might potentially lead to erroneous conclusions about the quantity of drugs and their metabolites being introduced into aquifers. (However, the current regulations’ list of six indicator chemicals for IPR does not include any pharmaceuticals.)

Similar studies are needed for a wide range of pharmaceuticals that may remain even in trace amounts in recycled municipal wastewater, which contains every type of drug taken by people in the community: statins, beta blockers, antidepressants, radiotherapeutic agents, sedatives, bronchodilators, antibiotics, diuretics, cytotoxic cancer drugs, anti-psychotics, analgesics, narcotics, drugs to facilitate gender changes, drugs to address erectile dysfunction, “recreational” drugs, etc. Some research has been done on transformation byproducts of X-ray contrast media (Schulz et al. 2008; Kormos, Schultz, and Ternes 2011) and chemotherapeutic cancer drugs (Kosjek and Heath 2011; Zhang et al. 2013).

Other chemicals besides drugs also undergo changes during wastewater treatment (Cwiertny et al. 2014; Ortiz de Garcia et al. 2014). While not much is known about the fate of chemical transformation byproducts in wastewater treatment plants, we can conclude that this phenomenon contributes to the problem of mixture effects discussed earlier. The existing studies suggest that metabolites and transformation byproducts need more research and more attention from the water-reuse industry.

10. Epidemiological research on IPR water is woefully inadequate. Advocates of potable reuse often point out that some IPR plants have been producing water for decades and that there have been no proven instances of people being made ill from drinking recycled water blended with water from other sources. They point to three epidemiological studies of the Montebello Forebay Groundwater Recharge Project in southern Los Angeles County, which produces tertiary-treated water that has been used for groundwater replenishment since 1962. According to the summary provided by Nellor Environmental Associates, “The results of these studies found that after almost 30 years of groundwater replenishment, there was no association between recycled water and higher rates of cancer, mortality, infectious disease, or adverse birth outcomes” (Nellor Environmental Associates n.d.:2). However, I don’t believe that phrasing is accurate. No study examined effects for 30 years. Instead, each of the three studies focused on various illnesses, and they did so over different periods of time: 1962-1980; 1987-1991; and 1982-1993.

The most extensive of these epidemiological studies, Health Effects Study Final Report, by Nellor, Baird, and Smyth (1984), which attempted to control for population mobility, found no measurable adverse health effects, including cancer mortality rates, from 1962-1980. While a decade, or even longer in the case of the 1962-1980 study, may seem like a sufficient timespan for an epidemiological study, it is not an adequate period to discover possible effects of carcinogens. As the EPA’s Manual Guidelines for Water Reuse point out regarding that study:

[The minimal observed latency period for human cancers that have been linked to chemical agents is about 15 years, and may be much longer. Because of the relatively short time period that groundwater containing recycled water has been consumed, it is unlikely that examination of cancer mortality rates would have detected an effect of exposure to reclaimed water resulting from the [Montebello Forebay] groundwater recharge operation.... (US EPA 1992:104)]

That time period is even more inadequate to discover diseases induced by EDCs. As we’ve learned from The Endocrine Society authors and others, the negative health impacts of endocrine-disrupting...
pharmaceuticals and industrial chemicals often do not show up for several decades. Various cancers often don't appear for decades, and Parkinsonism, heart disease, and Alzheimer’s disease typically don’t appear until a person is well into the second half of life. Also, as we’ve seen, EDCs can have negative impacts in the parts-per-trillion range, and if a fetus or infant consumes recycled water for even a short time, it is possible that that exposure could lead to health problems much later in life. Moreover, due to transgenerational epigenetic effects, when EDCs cause methylation of genes in developing oocytes, those impacts – including obesity, diabetes, ADHD, autism, as well as the diseases listed above -- might bypass the child but show up many decades later in disease afflicting his or her offspring.

It would therefore be very challenging to design an epidemiological study that could take account of population mobility and epigenetic effects across a sufficient period of time. Such a study would need to look at more than morbidity, mortality, carcinogenicity, and overt birth defects; all the diseases that EDCs and other CECs can give rise to should be considered. Moreover, a sampling of individuals exposed to the recycled water at various stages of life, along with their offspring (for at least one generation beyond the parents), should be traced. This might be doable, but it would not be easy and would take quite a long time.

More to the point, a study like that, which could reveal long-term health problems generated by drinking recycled water, has not been done. The studies performed to date demonstrate that statistically significant instances of infectious diseases are not caused by drinking recycled water, but they do not support the argument, as advocates contend, that recycled water has no adverse health effects due to consumption of trace amounts of chemical contaminants.

If we are to have useful epidemiology on the safety of potable reuse, controlled retrospective and prospective cohort studies are needed to mitigate health effects concerns.

11. Lack of cost-benefit analyses. Current cost-benefit analyses of IPR are inadequate because they exclude financial costs of healthcare and social costs of illnesses resulting from drinking and bathing in water containing endocrine disruptors and other such contaminants. Nor do cost-benefit analyses factor in potential costs of aquifer degradation due to contaminants of emerging concern.

Conclusion: The EIR should address the potential for the PWS project to have negative long-term health consequences for District customers. The EIR should recognize that State regulations are formulated by people who may have a favorable bias toward potable reuse and who rely on outdated risk-assessment methods; the EIR should balance those views by drawing from studies done by independent scientists (i.e., those with no ties to the water-reuse industry) including endocrinologists and public health experts who are knowledgeable about the features of EDCs discussed in this document. A cost-benefit analysis that includes relative costs of healthcare comparing PWS with conjunctive use should be included in the EIR – otherwise, the EIR is simply working toward recommending the District's preferred project without adequate consideration of more viable alternatives.

Environmental Health Problems

Addition of IPR water to an aquifer risks degrading its quality. When the recycled wastewater is put into an aquifer, it cannot be sequestered, so there is danger of contaminating the aquifer with trace amounts of endocrine disruptors, industrial chemicals, drugs, and other chemicals.

Performance evaluations and monitoring studies of existing IPR systems are not publicly available. The public should have access to data on effluent contaminants, as well as to analysis and preparation for system failure or a disastrous event that could contaminate water supplies for wildlife and humans alike, especially as aging infrastructure deteriorates.
These factors along with those addressed above regarding Human Health Concerns make the PWS project a high-risk venture.

**Conclusion:** The EIR should address the potential for aquifer contamination posed by PWS and compare it with the more environmentally friendly options of conjunctive use.

**Chapter 7: Alternatives**

The dEIR eliminates viable alternatives. I am aware that other writers are addressing this area in their comments, so I won’t attempt to do so in mine. Suffice to say that Water for Santa Cruz has current data and explanations for how conjunctive use between the District and Santa Cruz could obviate any need for PWS. See [https://waterforsantacruz.com/soquel-creek-water-district](https://waterforsantacruz.com/soquel-creek-water-district)

I would like to close with observations regarding potable reuse by Peter Collignon, physician, microbiologist, and professor of clinical medicine at Australian National University. He writes that converting sewage into drinking water is, "from a health perspective," a "'Very High Risk' proposal" (2011, 4). His thesis is summarized in the title of his monograph: "Recycling Water from Sewage into Drinking Water: A 'High Level' Health Risk We Should Only Take as a 'Last Resort'." Fortunately for the Soquel Creek Water District, that "last resort" is not necessary because there is a viable alternative in the form of conjunctive use with Santa Cruz. It is imperative for the future health of the public and the local aquifer that the EIR fairly evaluate not just PWS apart from insufficient alternatives but PWS in comparison with conjunctive use – a much lower risk venture on all counts.

Thank you for considering these comments on the dEIR.

Sincerely yours,

Jude Todd, PhD

Founding member of Santa Cruz Desal Alternatives

**References**

American Chemical Society. CAS Registry. (2018)


3.96 Response to Comments from Jude Todd, PhD (August 13, 2018) (Comment Letter I-83)

I-83-1 This introductory comment is followed by more detailed comments and does not include specific comment about the EIR or any environmental issue related to the Project and so no response is required. This comment is noted.

I-83-2 CEQA is concerned with the potential physical adverse effects of a Project on the environment. While project costs are relevant factors in determining whether a project alternative is feasible, unless there is a clear connection between a project’s cost and a physical environmental change, it is beyond the scope of CEQA. In the present case, there is no clear connection between the cost of the Project and a physical environmental effect. Therefore, considerations of cost are beyond the scope of the EIR.

I-83-3 As explained in EIR Chapter 2, Introduction, the Project is but one of a number of strategies identified in the Community Water Plan for protecting groundwater resources, ensuring water reliability and resiliency, and preparing for climate change. Chief among the Water Plan initiatives is its water conservation program, which involves extensive public education and outreach and through which the District was able to reduce 2017 District customer water consumption by 24 percent relative to 2013 levels. The purpose of the Project is to provide a supplemental supply source to offset an amount of groundwater pumping that is contributing to Basin overdraft conditions. Thus, if the Project were to move forward, the District would continue to its water conservation program. Therefore, it is unlikely that the Project would cause customers to interpret the Project as creating an unlimited water supply.

With respect to the wastewater collection system, the Project would not be expected to substantially affect flows or the density of contaminants entering the collection system. As discussed in Chapter 3, brine from the advanced water purification process would be routed to the SC WWTF’s ocean outfall via dedicated pipeline, and would not flow into the wastewater collection system. As explained in response to comment L-4-13, the amount of wastewater generated by the treatment plant that would be discharged to the collection system for further treatment would be relatively small (1,000 gallons per day), within the range of allowable discharges for new non-residential connections in the area. Further, as discussed in response to comment I-92-18, Project operations could be adjusted according to any variability in wastewater supply, so the Project would not require reduced conservation efforts during drought periods in order to maintain a minimum necessary wastewater supply source.

For these reasons, the Project would not be expected to substantially increase or decrease water conservation, nor would it substantially impact the wastewater collection system through corrosion or otherwise.
I-83-4 The comment misrepresents the implications of a prolonged power outage for the project. Because the plant would serve as an indirect supplemental supply facility, it would not be critical to keep it operating at all times. Therefore, in the event of a power failure, the plant would simply shut down until power were restored and then resume operations. With respect to the portion of the comment concerning foreseeable risk of treatment system disruption, commenter is referred to responses to comments I-30-2, L-4-6, and L-4-7. With respect to the portion of the comment regarding energy use, commenter is referred to responses to comments O-2-6 and II-33-3. With respect to the portion of the comment concerning cost, commenter is referred to response to comment I-27-1.

I-83-5 The suggestion that tariffs, wars, and other external factors could affect the availability of materials required for the long-term operation of the Project is speculative. This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-83-6 Contrary to the assertion in this comment, the EIR effectually considers whether the effluent from the proposed advanced water purification facility would pose a potential future threat to human or environmental health. EIR Impact 4.10-3 analyses whether introducing advanced purified water into the existing groundwater supply of the Purisima aquifer units would degrade aquifer water quality or violate water quality standards. The analysis concludes that the Project would comply with state groundwater regulations and would adequately treat and remove the chemicals of concern and the CEC’s present in the wastewater stream generated by the Santa Cruz Waste Water Treatment Facility far below human health screening levels and below limits considered safe for human consumption. The EIR considers whether the Project could harm human health or contaminate the aquifer through the introduction of CECs or other chemicals of concern into the groundwater supply and concludes that advanced water purification processes would greatly reduce or eliminate the concentrations of trace CECs or other chemicals of concern to levels protective of human health. As the advanced treated water would be adequately treated, the potential for degradation of the ambient potable groundwater in the Purisima A and BC units would negligible.

The comment asserts the EIR should be revised to reflect “21st Century science”, which, for the purposes of this comment response, is interpreted to mean current, state-of-the-art science, focused on water quality and human health risk. The comment claims that use of 21st Century science would lead to a conclusion that the Project would pose a threat to human health and the environment. The presumption that the EIR analysis and its conclusions are based on incomplete evidence, inadequate data, or is otherwise not informed by state-of-the-art water quality and human health science is unfounded. The analyses and the conclusions, as presented in the EIR (Impact 4.10-3), draw upon and are supported by findings from five primary regulatory and scientific sources, as discussed below. These sources and regulations represent the current understanding and research available regarding contaminants in recycled water used for reuse.
SWRCB Recycled Water Policy (see EIR section 4.10.3). The Policy for Water Quality Control for Recycled Water, referred to as the SWRCB Recycled Water Policy was adopted by the SWRCB in February 2009 and was subsequently amended in 2013 to include monitoring for CECs for groundwater replenishment projects. The Recycled Water Policy provides goals for recycled water use in California, guidance for use of recycled water that considers protection of water quality, criteria for streamlined permitting of recycled water projects, and requirements for monitoring recycled water for Constituents of Emerging Concern (CECs). The Recycled Water Policy was a critical step in creating uniformity in how the Regional Water Quality Boards were individually interpreting and implementing the Anti-Degradation Policy in Resolution 68-16 for water recycling projects, including groundwater replenishment projects such as the Project.

SWRCB Final Groundwater Replenishment with Recycled Water Regulations (see EIR Section 4.10.3). The Groundwater Replenishment Regulations went into effect June 18, 2014. In development of the Groundwater Replenishment Regulations, SWRCB Division of Drinking Water (DDW) considered these overarching principles: (1) groundwater projects are replenishing groundwater basins that are used as sources of drinking water; (2) control of pathogenic microorganisms with a risk level that should be the same as that used for the federal Surface Water Treatment Rule for drinking water; (3) compliance with drinking water standards for regulated chemicals; (4) controls for unregulated chemicals; (5) no degradation of an existing groundwater source; (6) use of multiple barriers to protect water quality and human health, and (7) that Projects should be designed to identify and respond to a treatment failure.

National Water Research Institute (NWRI) (see EIR Impact 4.10-3). The NWRI included water industry experts on an Independent Advisory Panel (Panel) that provided the District scientific and technical review of the Project. The goal of the Panel review was to help District staff and local policymakers make informed decisions about the Project to ensure it would be protective of public health and the environment. The Panel provided an independent, third-party review of the technical and scientific components of the proposed Project, including the sampling and monitoring plan for CECs.

Groundwater Replenishment Feasibility Study, Technical Memorandum 2 – CEC removal through advanced Treatment (see EIR Impact 4.10-3). This study, prepared by Carollo Engineers, provides a detailed evaluation of CECs in conventional and purified water and focuses on the state of the industry’s knowledge on CECs in potable water reuse projects, and supplements that information with CEC levels in conventional water supplies. This, and the various other secondary sources used to inform the EIR analysis regarding CEC’s and their potential risks to human health and the environment, rely on state-of-the-art science in the study of water quality.

SWRCB Science Advisory Panel. Please also see response to comment I-33-6, which discusses a text revision in the EIR to include a description of Science Advisory Panel.
In addition to the sources discussed above, additional understanding of monitoring and treatment of CECs is provided through the work of the Science Advisory Panel convened by the SWRCB. The Recycled Water Policy adopted in 2009 was intended to support sustainable local water supplies and promote the use of recycled water in a manner that is protective of human health and the environment. The Policy recognized (1) the challenge of addressing the potential risks of unregulated chemicals referred to as Constituents of Emerging Concern (CECs), (2) that effects of CECs on human health and aquatic life is a rapidly evolving field, and that (3) regulatory requirements need to be based on best available science. Consequently, the Policy required SWRCB to convene the Science Advisory Panel to make CEC monitoring recommendations for recycled water. An initial six-member Panel convened in 2010 and delivered their initial recommendations in 2012. The 2010 Panel produced a risk-based framework for prioritizing and selecting CECs for recycled water monitoring programs, which was then used to develop a list of monitoring parameters, including eight performance-based (“indicator”) CECs to demonstrate a consistent capacity for reduction of CECs by recycled water treatment processes. The Panel also highlighted the need for new monitoring methods, including bioanalytical tools, and developed guidance for interpreting and responding to monitoring results. In 2013, the Policy was amended to include monitoring requirements for CECs based on the recommendations of the Science Advisory Panel. Because of the rapid evolution of CEC science and measurement technology, the Policy also required that a Science Advisory Panel revisit and update CEC monitoring recommendations, as needed, every five years. In December 2016, the SWRCB directed staff to reconvene the Science Advisory Panel to update its recommendations for monitoring CECs in recycled water and to update the Recycled Water Policy considering changes that have taken place since 2013. In July 2017, a panel of seven national experts in the fields of chemistry, biochemistry, toxicology, environmental microbiology, epidemiology, risk assessment, and engineering with more than 150 years of combined experience investigating CEC issues, was convened to update and expand upon the original Panel recommendations currently specified in the Policy. The report issued by the Science Advisory Panel in April 2018 is the first update following the initial recommendations.¹ As stated in the recent report issued by the Science Advisory Panel, “[T]he Panel cannot stress strongly enough that the outcome of the 2018 application of the risk-based framework clearly points to the safety of potable and non-potable reuse practices in California. It is essential that all stakeholders and the public realize that the Panel’s findings and recommendations include a very large margin of safety. That large margin of safety arises from conservative assumptions that are built into each step of the overall human health CEC screening process”.

**Use of Indicator Chemicals.** The comment raises issue with the number of indicator chemicals used to monitor the presence of CECs in advanced purified water. As discussed in the EIR (section 4.10.3), these 6 constituents are 17-β-estradiol, Caffeine,

N-nitrosodimethylamine (NDMA) Triclosan, N,N-diethyl-metatoluamide (DEET), and Sucralose. The comment states that these indicator chemicals have been previously criticized by experts not only because there are just six of them but also because they are poor indicators. Classes of chemicals can be used to test for a range of CECs. Chemicals are characterized according to their physical and chemical properties, which dictate how they will respond to each treatment technology. Specific chemicals are then monitored as ‘indicators,’ meaning they indicate how well other chemicals in the same category are being removed by the treatment system. These indicators are also chosen because they are commonly present in the pre-treated water, which is necessary to determine how well they are removed by treatment. Before a project can be permitted, the project proponents must generate a list of site-specific compounds to use as indicators; these compounds are selected based on the treatment processes employed and the monitoring that has occurred. The NWRI reported that it does not believe that additional monitoring is needed beyond that already specified by the regulations (NWRI, 2017). Nevertheless, it is important to note that the science of monitoring and analysis of CECs in treated water is continually evolving and the SWRCB Science Advisory Panel will continue to reconvene every three years to consider new scientific findings, review monitoring and analytical procedures and will continue to evaluate any CECs that arise in recycled water.

I-83-7 The District and the authors of the EIR have confidence in California’s current recycled water regulations and in the proven technology proposed in the treatment train of the advanced water purification process. The comment asserts that the EIR’s confidence in the SWRCB recycled water regulations is misplaced because the SWRCB regulations are influenced by those with interest in expanding the water reuse within the industry. This assertion is unfounded. As described in response to comment I-83-6, the SWRCB, in preparing its Recycled Water Policy, sought to incorporate the most current scientific knowledge on CECs. In response, a Science Advisory Panel was formed in 2009 to address 1) appropriate constituents to be monitored in recycled water, monitoring methods and detection limits, 2) available human-relevant toxicological information for these constituents, 3) whether the constituent list would change based on the level of treatment, 4) possible indicators (i.e., surrogates) that represent a suite of CECs, and 5) levels of CEC that should trigger enhanced monitoring in recycled water, groundwater, or surface water. As the number of CEC’s increase and the technology of monitoring and analyzing for those constituents advances, the need for updated information is necessary. In response, the SWRCB reconvenes the Science Advisory Panel every 3 to 5 years to review changes in CEC’s, monitoring, analytical advances, and to update recommendations for the Recycled Water Policy. In addition to the SWRCB Science Advisory Panel reviewing the CEC issues on a state-wide level, the District also relies on the findings and recommendations from the NWRI which included an Independent Advisory Panel of water industry experts who provided scientific and technical review of the Project for the District. The Panel provided an independent, third-party review of the technical and scientific components of the proposed Project, including the sampling and monitoring plan for CECs (see EIR Impact 4.10-3).
I-83-8  This comment presents an opinion on the current state of toxicological study and health risk assessment in the scientific community rather than directly addressing issues concerning the adequacy of the EIR. The impact analysis in the EIR relies on the expert opinions of the myriad human health and water quality professionals that compose the SWRCB Science Advisory Panel and the NWRI Independent Advisory Panel. These scientific experts review changes in CEC and EDC use and occurrence, evaluate health risk, review monitoring recommendations, and analytical methodology. The SWRCB acknowledges that the field of assessing health risk of recycled water use is evolving and thus reconvenes the Science Advisory Panel every 3-5 years. Recycled water policy and regulations will adjust accordingly as new information and data are obtained regarding the human health effects and impact of CECs in groundwater. Nevertheless, the CEQA analysis of environmental impacts of the project in the EIR must rely on and reflect the best available scientific data and the most current federal and state recycled water regulations, which, in this case, are set forth by the SWRCB. Evaluating the human health effects of the Project on unsubstantiated scientific findings or conjecture would be inconsistent with the purpose and intent of CEQA.

I-83-9  This comment does not address a particular issue or inadequacy with the EIR, but rather discusses the number of potential CEC, EDC compounds, and other contaminants in the source water for advanced water treatment and describes some of the negative human health effects of exposure. As indicated by the comment, there are many chemicals considered to be CECs and EDCs in a municipal wastewater stream and the water quality analysis in the EIR acknowledges that potential. However, as described in Impact 4.10-3, the treatment process proposed for the Project would remove most of the contaminants and reduce the remainder to concentrations far below any human health screening level. The purification process involves a proven technology that involves treating the secondary effluent with membrane filtration, reverse osmosis (RO), and an Ultra Violet (UV) advanced oxidation process (AOP). Microfiltration (MF) is employed before RO to provide removal of small particulate matter that could hinder the RO performance and create barriers to pathogens. RO has been shown to remove compounds that are not typically attenuated by MF such as dissolved minerals and contaminants. RO membranes provide high removal rates for CECs. As RO is a required component for advanced water purification, this treatment sequence meets State of California requirements for advanced water treatment. UV AOP is highly effective at destroying a wide array of CECs because AOP is not selective as to the compounds it destroys. The simplest mechanisms to dissipate minimal amounts of CECs that might survive the treatment process include: dilution with other groundwater, sorption of chemicals to soil, reaction with other chemicals or minerals in the soil or water, and consumption of the chemicals by microbes. Advanced water treatment technologies mimic and speed up these natural processes to purify water, and do it more quickly and efficiently (NWRI, 2017).

I-83-10  The assertion in the comment that there is currently no water treatment process, including those using reverse osmosis, that can remove all CEC, EDCs and disinfection byproducts is not entirely accurate. The treatment train proposed for the Project (see EIR Impact 4.10-3 and response to comment I-83-9) is expected have high removal
rates for most CEC and EDCs and/or effectively lower other concentrations to below method detection limits. If CEC or EDC compounds did survive the purification process, the concentrations would be exceedingly small and would become diluted in the formation groundwater, attach to soils, react with other chemicals and minerals in the aquifer, and/or become consumed by microbes. In consideration of the extremely low residual CEC and EDC concentrations that could potentially remain post-treatment and enter the groundwater formation, the risk of exposure to District customers is infinitesimally small, especially considering that the groundwater would be treated again once it is extracted from the aquifer and placed into the distribution system. The diseases and medical conditions described in the comment vastly exaggerate the potential human health effects that would occur from the trace concentrations expected in the Purisma aquifer from the Project.

I-83-11 The comment does not address a particular issue or specific inadequacy regarding the EIR, but rather provides a detailed description of transgenerational epigenetic inheritance of EDC-induced illness and concludes that it is one of the factors that make potable reuse difficult. This comment, as with previous comments in this letter, highlight the potential health risks of CECs and EDCs in municipal wastewater stream and water supplies. Understandably, there are concerns that human intake of EDCs, even in small doses over an extended period, could cause negative health effects under certain conditions. While the study of CECs and EDCs on human health is evolving, the EIR for the Project relies on the best available scientific research and the regulations that research has supported and informed. These include, primarily, findings from the SWRCB Science Advisory Panel and the NWRI’s Independent Advisory Panel (discussed in more detail in comment response I-83-6) in addition to the California Recycled Water Policy and Groundwater Replenishment Regulations (see EIR section 4.10.3). The research indicates that the concentrations of CECs remaining in the treated water stream after treatment and purification are very low, if detected at all. The water treatment technology has been proven to be effective at several active treatment facilities in lowering and/or eliminating CEC’s, EDCs and other compounds in the treated water stream. Then, once that water is diluted in the aquifer and any residual chemicals undergo adsorption and microbial activity, whatever trace chemical concentrations remain are eliminated or reduced even further. Research into water quality will continue to evolve and it will surely guide future groundwater reuse regulations. However, for the time being, for the reasons set forth in the EIR, as summarized here, the District has concluded the Project’s treatment train would effectively reduce the potential of exposure to CECs and EDCs in the Purisma aquifer, resulting in a minimal risk to human health.

I-83-12 This comment does not address the adequacy of the EIR, but rather highlights another issue regarding the effects of CECs and other chemicals in municipal water supplies. Understandably, current risk assessment and analytical practices for treated water may typically focus on one chemical or compound at a time rather than considering the effects of mixing chemicals. As research and regulations for analysis and risk assessment of purified water streams evolve, mixing of certain chemicals and its human health effects
may become a higher priority. The commenter is to encouraged to review SWRCB Science Advisory Panel’s April 2018 report titled, Monitoring Strategies for Constituents of Emerging Concern (CECs) in Recycled Water, Recommendations of a Science Advisory Panel, prepared by the Southern California Coastal Water Research Project (SCCWRP) (SCCWRP Technical report 1032, April 2018) (A summary is provided in response to comment I-33-6.) The SWRCB Science Advisory Panel considers chemical mixtures and states in its 2018 report:

The chemical universe is evolving at a rate that is challenging for traditional risk assessment paradigms, particularly evaluating interactions between complex mixtures of chemicals and transformation products formed during treatment and environmental processes. In order to remain vigilant in comprehensive evaluation of constituents of emerging concern (CECs), more modern water quality characterization tools – both analytical and bioanalytical – that may not yet be fully standardized or validated will be needed. Thus, water recycling practices require appropriate treatment barriers and monitoring strategies to minimize exposure to a wide range of CECs that may be harmful to human health.

The information presented in this comment is not particularly applicable to the Project because the treatment and purification process proposed for the Project is expected to remove or greatly reduce the CEC’s and EDC’s in the water prior to recharge thereby reducing the potential for chemical to mix. Source water sampling and analysis for CEC and other chemicals would provide continual monitoring to detect elevated concentrations of CEC’s.

I-83-13 The comment asserts that the list of indicator chemicals used to monitor CEC’s in treated and purified water seems inadequate when considering the number of chemicals going through the treatment process. There are likely some chemicals present in trace amounts in the Wastewater Treatment Facility output, but the amounts are so small that they are not detectable or quantifiable with current methods. The fact that improved analytical methods now allow the detection of minute amounts of chemicals in water does not mean that these chemicals are a risk. Based on the NWRI panel’s understanding of the toxicity of similar chemicals, these trace levels would be below the levels that cause human health risk (NWRI, 2017). It is important to note that people are exposed to chemicals all the time, such as pesticides, pharmaceuticals, and thousands of other products, mostly in the diet and inhaled air. Water is not unique in this issue and treated drinking water may be the purest product that people are exposed to with respect to chemical presence. The job of water managers and researchers is to be proactive in implementing monitoring programs and to continually work to inform, update, and review these programs (NWRI, 2017).

Monitoring the concentrations and toxicities of thousands of potential organic compounds in any water supply would be an infeasible task. Rather than attempting to detect every chemical in the output, the best way to protect human health is to monitor for certain chemicals that ensure the removal of groups of chemicals (NWRI, 2017).
Classes of chemicals can be used to test for a range of CECs. Chemicals are characterized according to their physical and chemical properties, which dictate how they will respond to each treatment technology. As discussed in EIR Section 4.10.3, specific chemicals are then monitored as ‘indicators,’ meaning they indicate how well other chemicals in the same category are being removed by the treatment system. These indicators also are chosen because they are commonly present in the pre-treated water, which is necessary to determine how well they are removed by treatment. As stated in EIR Section 4.10.3, the SWRCB regulations for groundwater replenishment projects with recycled water require a project sponsor in the project’s Engineering Report to recommend CECs for monitoring in the recycled water and potentially in the groundwater. Before a project can be permitted, the project proponents must generate a list of site-specific compounds to use as indicators; these compounds are selected based on the treatment processes employed and the monitoring that has occurred (NWRI, 2017).

The NWRI panel of water quality and human health experts (NWRI, 2017) considers the 2013 California Recycled Water Policy for groundwater recharge to be adequately protective of public health, and the indicators from the policy represent one of many monitoring requirements in California. The requirements were developed by a group of experts in water treatment and public health using information available at that time, with the intent of representing the range of physico-chemical properties of unregulated contaminants potentially in recycled water. The CEC monitoring requirements in the 2013 Recycled Water Policy were reviewed by the SWRCB Science Advisory Panel that was reconvened in 2017 (also see response to comment I-83-6). Also, the State’s Final GRPP regulations, adopted in 2014, contain additional requirements for monitoring regulated and unregulated contaminants. The NWRI panel does not believe that additional monitoring is needed beyond that already specified by the regulations. The 2017 Science Advisory Panel issued its report in April 2018 (see response to comment I-33-6). The SWRCB evaluated and will continue to evaluate CECs that arise in recycled water. The District would be required to produce quarterly and annual reports detailing the results of required groundwater monitoring for both chemical contaminants and bacterial indicators. These regulatory reports are publicly available documents. Also see response to comment I-83-6 regarding indicator chemicals.

I-83-14 The comment provides a detailed explanation of metabolic byproducts and how they can be problematic in water reuse projects. Again, as mentioned previously in responses to comments I-83-8, -9, -11, and -12, the information presented is interesting and thought-provoking, but it does not address the adequacy of the EIR. Rather, it opines on the current state of research in the fields of epidemiology and endocrinology as it relates to the monitoring, analysis, and assessment of human health risks of recycled water reuse. As stated in previous comment responses, the EIR relies on the best available scientific data and information developed by Carrollo Engineers, the SWRCB Science Advisory Panel, and the NWRI Independent Advisory Panel. These resources were composed of experts in the field of human health and water quality. Understandably, the field of research surrounding the presence of CECs in treated water is ever-expanding and
evolving and work to better understand human health effects will continue as more indirect potable reuse project come on line. For additional information regarding the updated recommendations of the SWRCB, the commenter is to encouraged to review SWRCB Science Advisory Panel’s April 2018 report titled, Monitoring Strategies for Constituents of Emerging Concern (CECs) in Recycled Water, Recommendations of a Science Advisory Panel, Prepared by the Southern California Coastal Water Research Project (SCCWRP) (SCCWRP Technical report 1032, April 2018). A summary of this report is provided in the response to comment I-33-6.

I-83-15 The comment contends that epidemiological research on indirect potable reuse projects are inadequate and continues with a technical description of potential risks and negative health effects of CECs and EDCs in recycled water. This comment presents the opinion of the author but does not comment on nor does it address the adequacy of the EIR. Please also see response to comment I-83-14.

I-83-16 Please refer to response to comment I-27-1 which addresses the role of economic considerations under CEQA.

I-83-17 This comment summarizes the Human Health comments above and does not include specific comment about the EIR or any environmental issue related to the Project not addressed in the prior responses and so no response is required. This comment is noted.

I-83-18 The comment inaccurately states that adding water from an indirect potable reuse project to an aquifer degrades its quality. The quality of water produced by advanced treatment systems is significantly better than the quality of water that comes from most conventional surface water supplies (NWRI, 2017). The National Research Council (NRC) demonstrated that from a risk standpoint, engineering potable water reuse projects create a better water quality and less risk (for pathogens and pollutants) compared to conventional water supplies. Additionally, the NRC found that for advanced treatment processes, most chemicals are not detected; those that are detected are found at levels lower than those found in conventionally treated drinking water supplies (Carollo, 2017). The advanced treated water contains fewer disinfection byproducts (DBPs) and other contaminants than treated water from traditional source waters, such as rivers (NWRI, 2017). As discussed in EIR Impact 4.10-3, the removal efficiency of CECs in the SC WWTF secondary effluent were all projected to be between 83 percent and 99.9 percent using advanced treatment and to orders of magnitude below their associated health screening levels. The predicted concentrations of CECs in purified water from a SC WWTF source are expected to be below detection and below their associated maximum contaminant levels (MCL). These results are consistent with current knowledge of both conventional wastewater treatment and advanced water treatment processes. This evidence suggests that the purified water produced by advanced treatment and recharged into the Purisima aquifer would not contain contaminants capable of degrading its groundwater quality. Please also see responses to comments I-83-9 and I-83-13.
I-83-19  This comment summarizes comments made by others, and notes Water for Santa Cruz in particular but does not include specific comment about the EIR or any environmental issue related to the Project and so no response is required. See the response to comment letters O-6 and O-7 submitted by Water for Santa Cruz County.

I-83-20  Please also see comment response I-83-18. As discussed in the EIR (Impact 4.10-3) California regulations require a comprehensive monitoring program to ensure that the quality of the treated water remains high. The monitoring program requires the operator to test, on a quarterly basis, a minimum of two monitoring wells between the point(s) of recharge and extraction for drinking water. In addition, other real time monitoring systems must be in place to identify failures in the system to avoid recharging the groundwater with non-purified water. Online sensor technology is available that provides water managers with the ability to control the treatment process in real time to ensure the process is working as intended. There are specific monitoring technologies for each process in the Project treatment sequence (MF/UF, RO, and UV AOP).
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Thank you for posting the EIR which I read with interest. I am a long time resident and homeowner who has to home filter the poor quality, high priced water provided by SCWD. The time has come to look at consolidation with Districts that have more water than ours. Privatization of water has been one of the great political and social failures of many parts of our country. If New York City and San Francisco, and even our own Watsonville, can provide public utility water that actually serves the public, then we can also.

Monterey Bay Power, the new regional clean energy company, is a good example of a large public private partnership that will lower costs to consumers while improving the environment. We have many brilliant people living in the region. I am sure you can come up with a clean and green solution to water shortages that doesn’t involve as much time and expense as Pure Water, which does not promise cost reduction or improvement in water quality to consumers.

Consolidation of districts could reduce overhead expense, develop appropriate water retention plan and equitable sharing. We cannot make it rain more, but we can be wiser with what we have.

Sincerely,

Maria Gitin Torres
PO Box 216
Capitola, CA 95010

(resident of Aptos)
3.97 Response to Comments from Maria Gitin Torres
(July 4, 2018) (Comment Letter I-84)

I-84-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-84-2 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

While no specific comment is included regarding potential impacts of the Project associated with the quality water that would be produced under the Project, please see EIR Section 4.10, Hydrology – Groundwater, finding that water quality associated with operation of the Project would be less than significant.
To whom it may concern,

I want to register my opposition to the construction of a water treatment plant in the residential neighborhood of Soquel at Soquel Ave. and Capitola Rd. This location is inappropriate for a facility of the industrial nature that is proposed for this project. There are other locations that have been identified that are more suitable for a water treatment plant. To build this plant at the Soquel and Capitola site would risk introducing harmful industrial activities, powerful chemicals and unpleasant noises and views into an existing residential neighborhood that could negatively impact the quality of life of the residents.

Thanks,

Jerome Totes
3896 Aldo Court
Soquel, Calif. 95073
3.98 Response to Comments from Jerome Totes (August 3, 2018) (Comment Letter I-85)

I-85-1 Please see the response to comment O-5-2, regarding the analysis of siting of the advanced water purification facility at one of three locations, the Santa Cruz Wastewater Treatment Facility, Chanticleer Avenue site, or Headquarters-West Annex site, all of which were analyzed at an equal level of detail in the EIR.
Dear Pure Water Soquel Project CEQA Staff,

I request an extension of time for Public Comment on the PureWater Soquel Project Draft Environmental Impact Report in order to allow the public, including myself, to read this extensive document. We need more time to evaluate every section of the EIR and submit comments.

Please extend the Public Comment period so that the public has time to review the entire document. Thank you for your consideration of this request. Please notify the public of your decision.

Respectfully,

Gabriel Velázquez

cc: Ron Duncan
     Dr. Bruce Daniels
     Dr. Tom LaHue
     Carla Christensen
     Dr. Bruce Jaffe
     Rachél Lather
3.99 Response to Comments from Gabriel Velazquez (August 9, 2018) (Comment Letter I-86)

I-86-1 Please see the response to comment I-4-1.
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I am writing to respond to the draft EIR on Pure Water Soquel. I feel that the report is incomplete in a number of areas. I feel the following adverse environmental effects of Pure Water Soquel should make the construction of such a facility unacceptable at the Headquarters-West Annex site.

4.2 Aesthetics

Impact:
The visual character, quality, and exposure of the Headquarters-West Annex site, which is surrounded by residences, would be highly affected by the project and the mitigation is insufficient. The Visual Sensitivity of the Headquarters-West Annex site is high.

Problems with the Draft EIR:
The Visual Exposure is insufficiently described in Table 4.2-1. Photos 8 and 9 (Figure 4.2-4) of the Headquarters-West Annex site are insufficient and do not reflect the residential nature of the area. They do not show a view from Gary Drive or from Rosedale Avenue, nor do they show the residences across the street from Photos 8 and 9 on Soquel Drive, Aguazul Drive, Crystal Heights Drive, Paseo del Sol, and Douglas Drive.

The visual exposure to the AWTP would not be limited or brief to these residents, it would be constant. Constant visual exposure to the site is a significant negative visual factor. The “green fencing” seen by Capitola Avenue residents and passers-by is irrelevant in judging the view of the final project. The EIR is incorrect in stating that “views from Capitola Drive [sic – should be Capitola Avenue] are limited by mature trees and the PG&E substations adjacent to Capitola Drive [sic].” There are many viewing angles that will be seen from residences and passers-by on Capitola Avenue, Soquel Drive, Aguazul Drive, Rosedale Avenue, and Gary Drive that are not blocked by mature trees and the PG&E substation. The project will include large, industrial structures that will be higher than final barriers. These points are omitted from section 4.2.2 of the Draft EIR.

The Draft EIR is written in such a way as to equate the residential use of the Chanticleer site with that of the Headquarters-West Annex site:

“The Live Oak and Capitola areas includes [sic] a blend of residential, commercial, and light industrial uses, with commercial and light industrial uses predominantly clustered along roads fronting or bisecting Highway 1, such as Soquel Avenue.”

“The Soquel area also includes a blend of residential and commercial uses;
however, commercial areas are more limited, primarily occurring along Soquel Drive and roads bisecting Highway 1.”

The EIR should more clearly describe the overwhelmingly residential nature of the Headquarters-West Annex site. Capitola Avenue and Rosedale Ave are the two roads that bisect Highway 1 at the Headquarters-West Annex site. There is only one “commercial” element bordering Capitola Avenue, the PG&E substation. The only commercial areas on Rosedale Avenue are at the end of the street, far from the Headquarters-West Annex site, adjacent to Highway 1.

There are four photos of the Chanticleer site and two of the Headquarters-West Annex site. The photos of the Chanticleer site are angled in order to show residential usage in the background, whereas the photos of the Headquarters-West Annex site omit any residential structures, although these surround the site.

Zoning is not mentioned in the visual comparison of sites. The impact of an industrial structure in a residentially zoned area is far more negative than the impact of an industrial structure in an industrially zoned area.

Changes recommended:

More photos reflecting the residential nature of the Headquarters-West Annex site area should be included in the EIR. The visual impact of the project at the Headquarters-West Annex site from all residences, including from higher vantage points like residences on Soquel Drive and Aguazul Drive and immediately adjacent residences on Rosedale Avenue and Gary Drive should be accurately described. Views from Rosedale Avenue and Gary Drive should be given equal treatment with those presented in the current Draft EIR. The views blocked by mature trees and vegetation are exaggerated in the Draft EIR. The visual impact of the project at the Headquarters-West Annex site should be analyzed from every residence that can view the site, especially since these residences are within a residentially zoned area.

A consideration of the zoning of the Chanticleer and Headquarters-West Annex sites should be included in section 4.2.2, as should the number of residences within the sightline of each site, in order to more fairly analyze the visual impact of the proposed project at the two sites. The zoning for areas surrounding the Headquarters-West Annex R-1 and RM is

The EIR should state the number of residences near both the Chanticleer and the Headquarters-West Annex sites, not just describe them both as having combined uses including residential.

The exposure of the final project and structures projecting above visual barriers in the visual simulations are just that, simulations, and there is no guarantee that the final project will look anything like the simulations. Building proportions, such as mass, form, and height would likely not look like the visual simulations in the Draft EIR.

I support the elimination of the Headquarters-West Annex site from consideration based on the negative visual impact of an industrial complex surrounded by residences in a residentially zoned area. The visual exposure to the Pure Water Soquel facility would be 24-7 for the residences surrounding the Headquarters-West
Annex site, not “limited and brief”. I often view the project site when walking on Capitola Avenue, Soquel Drive and Gary Drive, and it is very visible from many angles on these roads.

4.2-18 Soquel Master Plan

The Draft EIR states “the policies appear to apply to structural development to the west of the Headquarters-West Annex site.”

Problem with the Draft EIR:
The above statement is patently false. The property purchased by Soquel Creek Water District adjacent to the District Office, the proposed Headquarters-West Annex site, is included in the Soquel Village Plan (see http://www.sccoplanning.com/Portals/2/County/Planning/policy/soquel_redo.pdf?ver=2007-09-08-010000-000). Parcels APN: 030-241-20 and 030-241-22 are within the boundaries of the Soquel Village Plan. All land uses described in the Soquel Village Plan apply to parcels 030-241-20 and 030-241-22 which are zoned R-1-6 and are included in the Soquel Village Plan. An AWTP at the Headquarters-West Annex site is in conflict with the County General Plan and Sustainable Santa Cruz County Final Plan as well, and with existing land uses (Residential Zoning).

Recommendation:
Include, at every relevant point in the EIR where the Soquel Master Plan is mentioned or should be mentioned, that the proposed Headquarters-West Annex site falls within the boundaries of the Soquel Village Master Plan. All relevant aspects of the Soquel Village Master Plan as it applies to land use on the proposed Headquarters-West Annex site should be included in the EIR. If an AWTP is not in accordance with the Soquel Village Master Plan, it should be noted wherever relevant in the EIR and should be a clear reason to eliminate the Headquarters-West Annex site from consideration for an AWTP.

The fact that an AWTP at the Headquarters-West Annex site conflicts with the County General Plan, Soquel Village Plan, Sustainable Santa Cruz County Final Plan, and existing land uses (Residential Zoning) should be acknowledged in the EIR and considered reason enough to eliminate the Headquarters-West Annex site from consideration for the construction of an AWTP.

4.9 Hazards and Hazardous Materials
Impact:
Hazards and hazardous materials include injecting unwanted chemicals into the groundwater, as well as the storage of hazardous materials and the existence of biohazards at the project site.

4.9-2
Impact:
Hazardous substances in the form of NDMA, endocrine disruptors, pharmaceuticals, and pesticides in the treated water may be injected into recharge wells.

Problems with the Draft EIR:
Recharge Wells
The Draft EIR states the recharge well sites would only receive water treated to drinking water standards and that this water would not be a hazardous material, resulting in no impact.

However, the water treated at the AWTP will use wastewater as the source water. This water has NDMA, endocrine disruptors, pharmaceuticals, and pesticides that cannot necessarily be eliminated through the AWTP process. These chemicals will then be injected into the aquifer, the source of our drinking water. These chemicals are not mentioned in the Draft EIR nor are the potential effects of the existence of these chemicals in the source of Soquel Creek Water District drinking water.

There may be no drinking water standards available for some substances remaining in the water treated at the AWTP, but that does not mean that these substances do not pose a hazard to the quality of the ground water if injected into recharge wells. If there are no “drinking water standards” for substances that can remain in the AWTP-treated water, this phrase should not be used to justify a rating of “no impact.” These substances that may remain, and for which there are no drinking water standards, should be analyzed individually as potential hazards to our groundwater, the source of our drinking water.

Changes recommended:
Hazardous substances found in wastewater that could remain in the water after the AWTP process should be included in the hazards posed in the EIR. The possible existence of unwanted chemicals that are not mentioned in “drinking water standards,” but could nonetheless be hazardous to the health of humans and the environment, should be described and examined in the EIR. If the hazard is unknown, it should not be judged as resulting in no impact, it should be stated as an unknown hazard.

Analysis of the hazards of NDMA being injected into the ground water should be examined. An EPA fact sheet regarding NDMA can be found at https://www.epa.gov/sites/production/files/2014-03/documents/ffrrofactsheet_contaminant_ndma_january2014_final.pdf

Any adverse effect that may be posed by chemicals remaining in the AWTP-treated water should be analyzed and discussed in the EIR, whether there are drinking water standards for these substances or not. What’s more, the effect of injecting AWTP-treated water into only two recharge wells, where the water will be concentrated in a small area, should also be analyzed in the EIR in terms of the potential hazardous effect of chemicals remaining in the treated water.

The EIR should include hazards posed by contamination caused by technological malfunction at the AWTP site. Technology cannot be expected to function perfectly all the time. These hazards should be evaluated in terms of their effect to nearby residences at the proposed sites.

4.13 Noise and Vibration

Impact:
Noise to a residentially zoned area if the Headquarters-West Annex site is chose for the AWTP.

Problems with the Draft EIR:
A wall is proposed to mitigate construction noise at the Headquarters-West Annex site, but a wall is not proposed to mitigate construction noise at the Chanticleer site, thereby making the Headquarters-West Annex site appear more suited to the project.

Recommended Change:
Include a sound mitigation measure for the Chanticleer site, such as the wall proposed for the Headquarters-West Annex site, in order to make a more equal comparison of the two sites.

Include the number of residences affected by the noise at all sites, not just compare the distance of the nearest residence at each site. This comparison unfairly favors the Headquarters-West Annex site by only noting the 50-foot (Chanticleer) versus 55-foot (West Annex) distance of the nearest residence without taking into account the number of residences in close proximity to the sites. The Headquarters-West Annex site has a far greater number of residences around it than the Chanticleer site, which is only separated from Highway 1 by the frontage road. How many residents will be affected by noise should be taken into account, not just the distance of one multifamily residence at the Chanticleer site.

Include the zoning of each site in judging the impact of noise and vibration and take into account the effect of noise in a residentially zoned area versus an area zoned for light industrial use. Nighttime measurements of current noise levels should be conducted from the edges of the Headquarters-West Annex site on Capitola Ave, Soquel Drive, Gary Drive, and Rosedale Avenue and compared to the noise level of actual AWTPs, not to “Project pump specifications and conceptual site plans provided by the Project applicant.” These “conceptual” site plans may be unrealistic and conceived with overly-optimistic estimates by the Project applicant. All comparisons of Project operation noise levels should be compared to actual functioning AWTPs.

Alternatives

Impact:
More cost-effective and less construction-heavy alternatives that also have the benefit of having a smaller energy usage than needed for the operation of an AWTP can be used to increase the water supply available to Soquel Creek Water District much faster then and instead of an AWTP and can mitigate the overdraft evaluated to exist by the District.

Problems with the Draft EIR:
The EIR does not adequately evaluate alternatives such as water transfers from North Coast water and the Lochquifer alternative conceived by Jerry Paul. Capital cost comparisons and energy use comparisons of these alternatives versus an AWTP are non-existent in the Draft EIR.
Recommendation:
In order to compare actually evaluate alternatives to an AWTP, these two viable
proposals must be evaluated fully. Turbidity studies and a study of Ranney collector wells in relation to these alternatives should be completed. A cost-benefit analysis of increasing the pipe size in order to allow the Lochquifer alternative to be effective should also be done. A full and complete analysis of the speed with which water transfers from Santa Cruz can begin mitigating the problem defined by the Soquel Creek Water District as early as this winter should be undertaken before any evaluation of the construction of an AWTP is concluded. Such an alternative could begin solving the problem as early as this winter by allowing some mid-county wells to rest.

A cost-benefit analysis must be conducted to fairly compare alternatives to an AWTP. Water must be affordable and the cost to ratepayers must be a factor in the EIR when comparing an AWTP to the two very real and viable alternatives mentioned above.

Respectfully,
Gabriel Velazquez
2707 Lafayette Street
Soquel, CA 95073
3.100 Response to Comments from Gabriel Velazquez (August 13, 2018) (Comment Letter I-87)

I-87-1 This comment letter is identical to comment letter I-81. Please see the responses to that comment letter.
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Gerardo Velazquez  
2707 Lafayette Street  
Soquel, CA 95073  
August 9, 2018

Pure Water Soquel Project CEQA  
4041 Soquel Drive, Suite A-501  
Soquel, CA 95073-3105

Dear Pure Water Soquel Project CEQA Staff,

I request an extension of time for Public Comment on the PureWater Soquel Project Draft Environmental Impact Report in order to allow the public to review this lengthy document. We need more time to evaluate the document and submit comments.

Please extend the Public Comment period so that the public may have time to review the entire document. Thank you in advance for your consideration of this request and for notifying the public of your decision.

Sincerely,

Gerardo Velázquez

cc:  Ron Duncan  
     Dr. Bruce Daniels  
     Dr. Tom LaHue  
     Carla Christensen  
     Dr. Bruce Jaffe  
     Rachél Lather
3.101 Response to Comments from Gerardo Velazquez (August 9, 2018) (Comment Letter I-88)

I-88-1 Please see the response to comment I-4-1.
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I am writing to respond to the draft EIR on Pure Water Soquel. I feel that the report is incomplete in a number of areas. I feel the following adverse environmental effects of Pure Water Soquel should make the construction of such a facility unacceptable at the Headquarters-West Annex site.

4.2 Aesthetics

Impact:
The visual character, quality, and exposure of the Headquarters-West Annex site, which is surrounded by residences, would be highly affected by the project and the mitigation is insufficient. The Visual Sensitivity of the Headquarters-West Annex site is high.

Problems with the Draft EIR:
The Visual Exposure is insufficiently described in Table 4.2-1. Photos 8 and 9 (Figure 4.2-4) of the Headquarters-West Annex site are insufficient and do not reflect the residential nature of the area. They do not show a view from Gary Drive or from Rosedale Avenue, nor do they show the residences across the street from Photos 8 and 9 on Soquel Drive, Aguazul Drive, Crystal Heights Drive, Paseo del Sol, and Douglas Drive.

The visual exposure to the AWTP would not be limited or brief to these residents, it would be constant. Constant visual exposure to the site is a significant negative visual factor. The “green fencing” seen by Capitola Avenue residents and passers-by is irrelevant in judging the view of the final project. The EIR is incorrect in stating that “views from Capitola Drive [sic – should be Capitola Avenue] are limited by mature trees and the PG&E substations adjacent to Capitola Drive [sic].” There are many viewing angles that will be seen from residences and passers-by on Capitola Avenue, Soquel Drive, Aguazul Drive, Rosedale Avenue, and Gary Drive that are not blocked by mature trees and the PG&E substation. The project will include large, industrial structures that will be higher than final barriers. These points are omitted from section 4.2.2 of the Draft EIR.

The Draft EIR is written in such a way as to equate the residential use of the Chanticleer site with that of the Headquarters-West Annex site:

“The Live Oak and Capitola areas includes [sic] a blend of residential, commercial, and light industrial uses, with commercial and light industrial uses predominantly clustered along roads fronting or bisecting Highway 1, such as Soquel Avenue.”
“The Soquel area also includes a blend of residential and commercial uses; however, commercial areas are more limited, primarily occurring along Soquel Drive and roads bisecting Highway 1.”

The EIR should more clearly describe the overwhelmingly residential nature of the Headquarters-West Annex site. Capitola Avenue and Rosedale Ave are the two roads that bisect Highway 1 at the Headquarters-West Annex site. There is only one “commercial” element bordering Capitola Avenue, the PG&E substation. The only commercial areas on Rosedale Avenue are at the end of the street, far from the Headquarters-West Annex site, adjacent to Highway 1.

There are four photos of the Chanticleer site and two of the Headquarters-West Annex site. The photos of the Chanticleer site are angled in order to show residential usage in the background, whereas the photos of the Headquarters-West Annex site omit any residential structures, although these surround the site.

Zoning is not mentioned in the visual comparison of sites. The impact of an industrial structure in a residentially zoned area is far more negative than the impact of an industrial structure in an industrially zoned area.

Changes recommended:
More photos reflecting the residential nature of the Headquarters-West Annex site area should be included in the EIR. The visual impact of the project at the Headquarters-West Annex site from all residences, including from higher vantage points like residences on Soquel Drive and Aguazul Drive and immediately adjacent residences on Rosedale Avenue and Gary Drive should be accurately described. Views from Rosedale Avenue and Gary Drive should be given equal treatment with those presented in the current Draft EIR. The views blocked by mature trees and vegetation are exaggerated in the Draft EIR. The visual impact of the project at the Headquarters-West Annex site should be analyzed from every residence that can view the site, especially since these residences are within a residentially zoned area.

A consideration of the zoning of the Chanticleer and Headquarters-West Annex sites should be included in section 4.2.2, as should the number of residences within the sightline of each site, in order to more fairly analyze the visual impact of the proposed project at the two sites. The zoning for areas surrounding the Headquarters-West Annex R-1 and RM is

The EIR should state the number of residences near both the Chanticleer and the Headquarters-West Annex sites, not just describe them both as having combined uses including residential.

The exposure of the final project and structures projecting above visual barriers in the visual simulations are just that, simulations, and there is no guarantee that the final project will look anything like the simulations. Building proportions, such as mass, form, and height would likely not look like the visual simulations in the Draft EIR.

I support the elimination of the Headquarters-West Annex site from consideration based on the negative visual impact of an industrial complex surrounded by residences in a residentially zoned area. The visual exposure to the Pure Water
Soquel facility would be 24-7 for the residences surrounding the Headquarters-West Annex site, not “limited and brief”. I often view the project site when walking on Capitola Avenue, Soquel Drive and Gary Drive, and it is very visible from many angles on these roads.

4.2-18 Soquel Master Plan

The Draft EIR states “the policies appear to apply to structural development to the west of the Headquarters-West Annex site.”

Problem with the Draft EIR:
The above statement is patently false. The property purchased by Soquel Creek Water District adjacent to the District Office, the proposed Headquarters-West Annex site, is included in the Soquel Village Plan (see [http://www.sccoplanning.com/Portals/2/County/Planning/policy/soquel_redo.pdf?ver=2007-09-08-010000-000](http://www.sccoplanning.com/Portals/2/County/Planning/policy/soquel_redo.pdf?ver=2007-09-08-010000-000)). Parcels APN: 030-241-20 and 030-241-22 are within the boundaries of the Soquel Village Plan. All land uses described in the Soquel Village Plan apply to parcels 030-241-20 and 030-241-22 which are zoned R-1-6 and are included in the Soquel Village Plan. An AWTP at the Headquarters-West Annex site is in conflict with the County General Plan and Sustainable Santa Cruz County Final Plan as well, and with existing land uses (Residential Zoning).

Recommendation:
Include, at every relevant point in the EIR where the Soquel Master Plan is mentioned or should be mentioned, that the proposed Headquarters-West Annex site falls within the boundaries of the Soquel Village Master Plan. All relevant aspects of the Soquel Village Master Plan as it applies to land use on the proposed Headquarters-West Annex site should be included in the EIR. If an AWTP is not in accordance with the Soquel Village Master Plan, it should be noted wherever relevant in the EIR and should be a clear reason to eliminate the Headquarters-West Annex site from consideration for an AWTP.

The fact that an AWTP at the Headquarters-West Annex site conflicts with the County General Plan, Soquel Village Plan, Sustainable Santa Cruz County Final Plan, and existing land uses (Residential Zoning) should be acknowledged in the EIR and considered reason enough to eliminate the Headquarters-West Annex site from consideration for the construction of an AWTP.

4.9 Hazards and Hazardous Materials
Impact:
Hazards and hazardous materials include injecting unwanted chemicals into the groundwater, as well as the storage of hazardous materials and the existence of biohazards at the project site.

4.9-2
Impact:
Hazardous substances in the form of NDMA, endocrine disruptors, pharmaceuticals, and pesticides in the treated water may be injected into recharge wells.
Problems with the Draft EIR:
Recharge Wells
The Draft EIR states the recharge well sites would only receive water treated to
drinking water standards and that this water would not be a hazardous material,
resulting in no impact.

However, the water treated at the AWTP will use wastewater as the source water.
This water has NDMA, endocrine disruptors, pharmaceuticals, and pesticides that
cannot necessarily be eliminated through the AWTP process. These chemicals will
then be injected into the aquifer, the source of our drinking water. These chemicals
are not mentioned in the Draft EIR nor are the potential effects of the existence of
these chemicals in the source of Soquel Creek Water District drinking water.

There may be no drinking water standards available for some substances remaining
in the water treated at the AWTP, but that does not mean that these substances do not
pose a hazard to the quality of the ground water if injected into recharge wells. If
there are no “drinking water standards” for substances that can remain in the AWTP-
treated water, this phrase should not be used to justify a rating of “no impact.” These
substances that may remain, and for which there are no drinking water standards,
should be analyzed individually as potential hazards to our groundwater, the source
of our drinking water.

Changes recommended:
Hazardous substances found in wastewater that could remain in the water after the
AWTP process should be included in the hazards posed in the EIR. The possible
existence of unwanted chemicals that are not mentioned in “drinking water
standards,” but could nonetheless be hazardous to the health of humans and the
environment, should be described and examined in the EIR. If the hazard is
unknown, it should not be judged as resulting in no impact, it should be stated as an
unknown hazard.

Analysis of the hazards of NDMA being injected into the ground water should be
examined. An EPA fact sheet regarding NDMA can be found at
https://www.epa.gov/sites/production/files/2014-
03/documents/ffrrofactsheet_contaminant_ndma_january2014_final.pdf

Any adverse effect that may be posed by chemicals remaining in the AWTP-treated
water should be analyzed and discussed in the EIR, whether there are drinking water
standards for these substances or not. What’s more, the effect of injecting AWTP-
treated water into only two recharge wells, where the water will be concentrated in a
small area, should also be analyzed in the EIR in terms of the potential hazardous
effect of chemicals remaining in the treated water.

The EIR should include hazards posed by contamination caused by technological
malfunction at the AWTP site. Technology cannot be expected to function perfectly
all the time. These hazards should be evaluated in terms of their effect to nearby
residences at the proposed sites.

4.13 Noise and Vibration
Impact:
Noise to a residentially zoned area if the Headquarters-West Annex site is chose for
the AWTP.

Problems with the Draft EIR:
A wall is proposed to mitigate construction noise at the Headquarters-West Annex
site, but a wall is not proposed to mitigate construction noise at the Chanticleer site,
thereby making the Headquarters-West Annex site appear more suited to the project

Recommended Change:
Include a sound mitigation measure for the Chanticleer site, such as the wall
proposed for the Headquarters-West Annex site, in order to make a more equal
comparison of the two sites.

Include the number of residences affected by the noise at all sites, not just compare
the distance of the nearest residence at each site. This comparison unfairly favors the
Headquarters-West Annex site by only noting the 50-foot (Chanticleer) versus 55-
foot (West Annex) distance of the nearest residence without taking into account the
number of residences in close proximity to the sites. The Headquarters-West Annex
site has a far greater number of residences around it than the Chanticleer site, which
is only separated from Highway 1 by the frontage road. How many residents will be
affected by noise should be taken into account, not just the distance of one multi-
family residence at the Chanticleer site.

Include the zoning of each site in judging the impact of noise and vibration and take
into account the effect of noise in a residentially zoned area versus an area zoned for
light industrial use. Nighttime measurements of current noise levels should be
conducted from the edges of the Headquarters-West Annex site on Capitola Ave,
Soquel Drive, Gary Drive, and Rosedale Avenue and compared to the noise level of
actual AWTPs, not to “Project pump specifications and conceptual site plans
provided by the Project applicant.” 4.13-17 These “conceptual” site plans may be
unrealistic and conceived with overly-optimistic estimates by the Project applicant.
All comparisons of Project operation noise levels should be compared to actual
functioning AWTPs.

Alternatives

Impact:
More cost-effective and less construction-heavy alternatives that also have the
benefit of having a smaller energy usage than needed for the operation of an AWTP
can be used to increase the water supply available to Soquel Creek Water District
much faster then and instead of an AWTP and can mitigate the overdraft evaluated to
exist by the District.

Problems with the Draft EIR:
The EIR does not adequately evaluate alternatives such as water transfers from North
Coast water and the Lochquifer alternative conceived by Jerry Paul. Capital cost
comparisons and energy use comparisons of these alternatives versus an AWTP are
non-existent in the Draft EIR.
Recommendation:
In order to compare actually evaluate alternatives to an AWTP, these two viable proposals must be evaluated fully. Turbidity studies and a study of Ranney collector wells in relation to these alternatives should be completed. A cost-benefit analysis of increasing the pipe size in order to allow the Lochquifer alternative to be effective should also be done. A full and complete analysis of the speed with which water transfers from Santa Cruz can begin mitigating the problem defined by the Soquel Creek Water District as early as this winter should be undertaken before any evaluation of the construction of an AWTP is concluded. Such an alternative could begin solving the problem as early as this winter by allowing some mid-county wells to rest.

A cost-benefit analysis must be conducted to fairly compare alternatives to an AWTP. Water must be affordable and the cost to ratepayers must be a factor in the EIR when comparing an AWTP to the two very real and viable alternatives mentioned above.

Respectfully,
Gerardo Velazquez
2707 Lafayette Street
Soquel, CA 95073
3.102 Response to Comments from Gerardo Velazquez (August 13, 2018) (Comment Letter I-89)

I-89-1 This comment letter is identical to comment letter I-81. Please see the responses to that comment letter.
Santa Cruz county has an abundance of rainwater each year especially in the mountainous areas. Most of this naturally occurring water supply simply runs off into the ocean. So while we continue to let this happen, the district is hell bent to spend millions and millions of dollars to facilitate me drinking my neighbors toilet water. I sure would be interested in seeing an objective cost trade study comparison between putting rainwater into our groundwater basin vs Pure Water Soquel’s recycled toilet water. And, by the way, the 90M estimate for Pure Water Soquel is seriously low.

Richard Wameling
3.103 Response to Comments from Richard Wameling (August 5, 2018) (Comment Letter I-90)

I-90-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted. However, for general information regarding consideration of surface water supply alternatives, please see response to comment I-93-2.
Pure Water Soquel Project CEQA
4041 Soquel Drive, Suite A-501
Soquel, CA 95073-3105

Dear Soquel Creek Water District:

This letter is in response to the Draft Environmental Impact Report (EIR) for the proposed PUREWater Soquel project (Replenishing Mid-County Groundwater).

We are residents of Capitola and customers of Soquel Creek Water District. We have lived in Capitola at our present address for 33 years. We strongly support the PUREWater Soquel project as proposed by the Board of Directors of the Soquel Creek Water District (SCWD).

Our underground water supply (i.e., aquifers) is threatened by salt water intrusion due to overdraft conditions in our groundwater basin. We applaud the SCWD’s vision, foresight, and plan to provide the customers of the District with a sustainable, high quality, and reliably sourced clean water supply.

Within the scope of the proposed project we feel that “Treatment System Configuration 5” would be preferable. It would locate the advanced water purification tertiary (3-stage) treatment process physically adjacent to the Santa Cruz Wastewater Treatment Facility. In the event of a break in the purified water line clean water would be spilled into the soil (in contrast to water from a secondary or tertiary source water line). This would be more environmentally friendly. However, please understand that we fully support the proposed project regardless of the Treatment Configuration Option chosen.

Thank you.

Sincerely,

Bob and Bonda White
108 Saxon Avenue
Capitola, CA 95010-3448
3.104 Response to Comments from Bob and Bonda White (August 4, 2018) (Comment Letter I-91)

I-91-1 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

I-91-2 Please see the response to comment O-5-2, regarding the analysis of siting of the advanced water purification facility at one of three locations, the Santa Cruz Wastewater Treatment Facility, Chanticleer Avenue site, or Headquarters-West Annex site, all of which were analyzed at an equal level of detail in the EIR. Please also see the response to comment L-1-8, regarding for the potential for Project construction and operations to result in accidental releases of hazardous materials, including that which could result from breaks in existing sewer lines, as well as breaks in proposed secondary effluent and brine conveyance pipelines.

I-91-3 Please see the response to comment I-91-1.
Public Comments on PureWater Soquel Draft EIR

The Soquel Creek Water District has publicly acknowledged, prior to the public comment deadline, that it received requests from the public to extend the 45-day comment period to 60 days. The comment period has not been extended in response to these requests. The draft EIR, appendices and background documents (some of which were not provided on the draft EIR web page) comprise thousands of pages and therefore the requests to extend the deadline to the maximum 60 day public comment period were reasonable and should have been honored in order to facilitate public participation in the CEQA process.

Despite there being a daunting number of pages for the public to review in the draft EIR and associated documents, I find this draft EIR to be incomplete. While there was not sufficient time to thoroughly review all the documents associated with the draft EIR and prepare comments on all topics requiring attention, some of my concerns are discussed below.

First of all, I have a basic question about the District's overall project goal: Is Soquel Creek Water District's primary goal to recycle wastewater from the Santa Cruz WWTF? Why is potable reuse of recycled water the District's stated overall objective – should the goal of the District instead be augmenting its water supply? And should the EIR be a comparison of alternative means for doing so? Since potable reuse has already been selected by the District as the favored project, (see Section 1.1 Project Objectives,) other alternatives to the PureWater Soquel potable reuse project are not given equal consideration in the draft EIR.

Does the proposed project truly promote beneficial reuse? Or will the benefit of water reuse be counteracted by a more concentrated and potentially more toxic waste stream flowing from Santa Cruz WWTF's offshore wastewater outfall? The project would reduce the amount of treated wastewater flowing from the ocean outfall while also increasing contaminants by adding “brine” which is concentrated wastewater from the advanced treatment process – the impacts of a more concentrated effluent are not sufficiently addressed in the draft EIR. An increase in contaminants is deemed acceptable in the EIR as long as the Ocean Plan is not exceeded, and the draft EIR states that this “would not be expected” to happen, but what if it turns out (after the miles of pipes are installed and the costly advanced treatment plant is already built) that the Ocean Plan's contaminant limits or other regulations are indeed exceeded?

Impact 4.11-2 appears to have been determined to be Less than Significant with respect to operation of the proposed PureWater Soquel treatment plant without sufficient information. How were the predictions for the combined effluent for the 20 parameters listed in Table 4.11-5 arrived at? What about other potential contaminants? Many other contaminants have historically been detected in Santa Cruz WWTF effluent and could become more concentrated as a result of the proposed PureWater...
Soquel project. Records of analyses of the sewage flowing into and out of the Santa Cruz WWTF into the Monterey Bay are public information and are available from the Central Coast Regional Water Quality Control Board; recent records of contaminant data collected from Santa Cruz WWTF influent and effluent analyses to meet permit requirements should be provided in the EIR so they are readily available for public review.

A concentrated wastewater AKA “brine” generated by the advanced treatment processes would bypass the Santa Cruz WWTF according to the EIR, and is therefore not treated to reduce contamination prior to discharge in the ocean – nothing gets removed before it flows directly into the ocean outfall pipe where it mixes with WWTF effluent. How frequently would there be water quality monitoring of the combined WWTF effluent and brine that would be discharged to the ocean? How will the “brine” affect Biochemical Oxygen demand in the vicinity of the ocean outfall? Would variations in water consumption, including time-of-day (diurnal) variations, seasonal variations, and future increases in water conservation in the areas served by the Santa Cruz WWTF be detrimental to operation of PureWater Soquel by reducing feed water quality and quantity available for potable reuse and producing a more concentrated, contaminated “brine” for ocean discharge? What procedures and controls will ensure that MF/UF brine and cleaning wastes are directed into the WWTF, as opposed to the RO brine, which is to be discharged directly to the ocean? What kinds of “emergency discharges” might occur at the proposed PureWater Soquel treatment plant and what would be the environmental and public health impacts of these discharges to the ocean? The EIR should provide all of this information for public review.

Is the District planning to bypass detailed water compatibility studies like those they've done for the water transfer supply alternative? Are there are plans to do an advanced treatment pilot study that includes 1) study of the chemical and microbiological changes that occur when the recycled water is mixed with groundwater in the Purisima aquifer (such as leaching of minerals and trace elements); 2) study of chemical and microbiological changes when this new water source is introduced into the District's distribution system, and 3) study of the waste discharges produced by the purification processes and their potential impacts? If a pilot plant study is planned, it is not clear from my reading of the draft EIR. According to the Santa Cruz Sentinel's online website, a 3-month pilot study of techniques for producing tertiary treated water is being done at SCWTF. ([http://www.santacruzsentinel.com/general-news/20180806/coast-line-treatment-pilot-nears-completion](http://www.santacruzsentinel.com/general-news/20180806/coast-line-treatment-pilot-nears-completion)). The proposed Purewater Soquel facility should be subjected to a subsequent pilot plant study of the advanced treatment phase prior to design and construction if the project moves forward.

A pilot plant study using Santa Cruz WWTF effluent for a small-scale advanced treatment study would provide valuable information on how advanced-treated effluent will interact with the local groundwater and the distribution system to help expose any issues with the proposed treatment train before a full-scale plant that is not designed specifically for local conditions is built. This kind of pilot plant study would be in keeping with the level of scrutiny that the city and water district are giving to surface water transfer chemistry, and should be the next step if the District wishes to pursue a potable reuse project.

If implemented properly – e.g. by utilizing a pilot plant studies to zero in on contamination issues in the source wastewater and determine the most suitable treatment alternatives, and to uncover any other issues of concern to be addressed in the design of the costly full-scale PureWater project – then
implementing the Purewater Soquel project would not likely be a more expedient water supply alternative than implementing surface water transfers with the City. The compatibility of treated City water for transfer to Soquel Creek District has already been studied by the two water districts, but links to the complete reports for these studies were not provided on the draft EIR web page – they are currently buried in the agenda packet for the July 17th, 2018 Board of Directors’ meeting. A 5-year pilot project (2015-2020) for surface water transfers with Santa Cruz is mentioned repeatedly in the draft EIR. There is no mention of any plans for a pilot project prior to designing and building the indirect potable reuse PureWater Soquel project. Why is potable reuse not getting the same level of scrutiny as water transfers?

A pilot study for the proposed indirect potable reuse PureWater Soquel Project should include components such as characterization of chemical, biological and physical constituents in the fully treated recycled water, groundwater/aquifer interaction studies, treatment testing and testing of product water/groundwater on segments of the District’s distribution system. Water chemistry does not magically stop happening after treatment – toxic contaminants can form in the distribution system, e.g. from products of the UV and chemical oxidation processes. Distribution system impacts which may affect consumer health, including long-term chemical and microbiological changes to the surface build-up in water distribution pipes due to the addition of recycled municipal sewage water, are not addressed in the draft EIR.

A pilot-scale advanced treatment plant with Santa Cruz WWTF effluent as the feed water would also help determine whether the levels of contaminants in the untreated brine produced by the proposed project might cause ecological harm or violate any regulations. The draft EIR defines the brine as a salt solution only – the chemical composition of the “brine” that will bypass treatment at the Santa Cruz WWTF and flow directly to the ocean outfall should be fully characterized in the EIR.

Environmental impacts such as potential groundwater quality deterioration in the Purisima aquifer from recycled municipal wastewater injection are not sufficiently addressed in the draft EIR. It's not even clear whether additional treatment may be needed beyond current treatment when the injected recycled water is extracted by the District for distribution to customers. How will the long-term water quality of the aquifer be impacted by injection of recycled water? How will the overall groundwater quality compare to the District’s current water supply over the long term?

During the scoping period for the proposed project, many members of the public expressed concerns about water quality and the potential health and environmental impacts of the proposed PureWater Soquel indirect potable reuse project. It is not acceptable for the PureWater Soquel EIR to skip discussion of the treatment technologies that may be used, and how known limitations of the treatment technologies will be addressed. What quality/process control measures will be implemented to protect public health and the environment? Will these quality control analyses be completed in time to prevent substandard water from entering the shared aquifer? How frequently will the recycled water quality be monitored and for what types of contamination? How closely and effectively would the treatment processes be monitored for problems?

In the 2017 Potable Reuse Compendium (EPA/CDM Smith), **indirect potable reuse** is defined as follows:
Indirect potable reuse (IPR): Deliberative augmentation of a drinking water source (surface water or groundwater aquifer) with treated reclaimed water, which provides an environmental buffer prior to subsequent use.

The document does not provide a definition for the term environmental buffer. Response time is generally considered to be a key advantage to including an environmental buffer (such as the Purisima Aquifers) in the treatment process. It can't be assumed that using an environmental buffer will improve overall water quality, however. Water quality changes from injected recycled water over the regulated 2 month retention time, and over the long term, should be the subject of a pilot study and ongoing studies if the project goes forward. Also, the accuracy of the minimum retention times predicted using models should be confirmed with data from tracer studies. Predicted movement of injected water through the aquifer has been modeled, but no analytical tracing studies have produced data that verify the 2-month retention time that is required by current regulations. Are such studies planned to verify the accuracy of the models in predicting the required 2-month retention time?

Proponents of potable reuse frequently mention “de facto reuse.” Here in Santa Cruz County, the municipal wastewater we have available for potable reuse is far more contaminated (e.g. with bacteria, viruses, chemicals) than our surface water sources such as the San Lorenzo River above Highway 1, the North Coast streams, Loch Lomond Reservoir, and the groundwater sources Soquel Creek District currently uses. Treating wastewater from the Santa Cruz WWTF with advanced treatment processes as this project proposes does not guarantee removal of all potentially harmful contaminants. The name PureWater Soquel certainly implies purity, but unfortunately truly “pure” water cannot be guaranteed to ratepayers.

The State Water Resources Control Board website indicates that there is a policy in place for dealing with “Extremely Impaired Sources”:

https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Chemicalcontaminants.html

As of this writing the above-referenced document's URL is:


According to this policy (Procedure Memorandum 97-005),

“Where reasonable alternatives are available, high quality drinking water should not be allowed to be degraded by the planned addition of contaminants. In other words, the MCLs should not be used to condone contamination up to those levels where the addition of those contaminants can be reasonable avoided.”

This “Extremely Impaired Source” designation and procedure applies to municipal wastewater as a potable water supply. Treated surface water from Santa Cruz is available for water transfer to Soquel Creek Water District and is not considered an”extremely impaired source.”
Current health regulations for specific contaminants such as trace elements, organic chemicals, pathogens, and radionuclides in drinking water that the state of California's Department of Drinking Water (a department of the State Water Board) applies were not designed specifically for recycled municipal wastewater. They were designed for treated surface water and groundwater. Here in Santa Cruz, these water sources are far less contaminated than the raw sewage that flows into the Santa Cruz WWTF. Records of analyses of the sewage flowing into and out of the Santa Cruz WWTF into the Monterey Bay are public information and are available from the Central Coast Regional Water Quality Control Board.

Regarding potable reuse of Santa Cruz municipal wastewater, the limited number of enforceable drinking water MCLs that are currently in force are not based solely on health – MCLs are the product of a compromise between studied/known health effects and factors such as cost of treatment and risk assessment modeling. The more stringent, non-enforceable Public Health Goals that have been promulgated for many of the regulated contaminants provide us with a window into potential long-term health impacts of allowing contaminants at currently regulated levels. The combined long-term health and epigenetic effects of contaminant mixtures remaining in recycled wastewater in existing potable reuse projects are a subject of research by independent scientists in fields such as endocrinology and epigenetics. The limited number of potable reuse epidemiological studies that are cited as proof of safety have limitations, and some studies have major flaws. Techniques for evaluating the human toxicity of recycled water are not well established. Member organizations such as WateReuse and WEF that promote and support potable reuse are currently conducting research intended to fill in knowledge gaps.

The current list of MCLs (maximum contaminant levels) and Public Health Goals for drinking water can be found here:
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Chemicalcontaminants.html

Many potential contaminants, including toxic and carcinogenic disinfection byproducts, currently have no health regulations at all. And, the long-term health effects of the combination of contaminants in recycled water are not well known.

Examples of contaminants that currently have no MCL can be found here:
https://www.epa.gov/ccl

Discussion is needed in the EIR of the limited state of knowledge of potential long-term health and environmental impacts of injecting recycled municipal wastewater from the Santa Cruz WWTF into the Purisima Aquifer, the District's main water supply that is shared with other water providers and private well owners. It is not sufficient to simply claim that the state of California will ensure safety when the state and the experts relied on to inform recycled water policy acknowledge that knowledge gaps exist that could have long-term impacts on public health and the environment. (reference: http://www.sccwrp.org/ResearchAreas/Contaminants/RecycledWaterAdvisoryPanel.aspx)
Membranes used in critical advanced treatment processes, such as microfiltration/ultrafiltration (MF/UF) membranes and reverse osmosis (RO) membranes, are known to deteriorate over time and become less effective in screening out contaminants. However, methods for evaluating integrity of membranes are not fully established. The draft EIR states that MF/UF membranes remain in service for 5-8 years, and RO membranes for 6-8 years. There is no discussion of potential impacts of membrane age and membrane integrity on water quality in the draft EIR. Following is a link to an article that I provided in my scoping comments which discusses reverse osmosis membrane fouling and breaches and the difficulty of in-line detection of water quality problems – these are specific, documented examples of how harmful contaminants could pass through a critical treatment process.


Membrane breaches such as those discussed in the above article could lead to pathogens as well as chemical contaminants passing through the treatment process. (Additional Reference: Int J Environ Res Public Health 2009 Mar; 6(3): 1174–1209 (Section 4)) Note that this additional reference also reports that "There are few published epidemiological studies on potable reuse..." (Section 3.1.)

Many people have allergies to certain common pharmaceuticals. (Reference: https://acaai.org/allergies/types/drug-allergies) For example, about 3% of the general population are allergic to sulfonamides such as antibiotics and anti-inflammatory medications; the percentage is much higher in immunity compromised individuals. Might the levels of some pharmaceuticals found in advance treated recycled water be sufficient to cause allergy symptoms? At least one person raised this question in their EIR scoping comments but I did not find any mention of this topic in the draft EIR.

Finally, is the proposed project really a drought-proof solution? The EIR should discuss how reduced water use in times of drought might impact the project in terms of water availability and water quality of both the recycled water and wastewater produced by the project. When water conservation increases, TDS (Total Dissolved Solids) and biochemical oxygen demand can increase and toxic contaminants may become more concentrated. Will the wastewater demands of the proposed PureWater Soquel project force a reduction in efforts to conserve water during drought conditions?

This concludes my public comments on the PureWater Soquel draft EIR.

Deb Wirkman
3.105 Response to Comments from Deb Wirkman (August 13, 2018) (Comment Letter I-92)

I-92-1 Please see the response to comment I-4-1 regarding requests to extend the Draft EIR comment period. This comment suggests that the full content of the Draft EIR was not available on the Draft EIR web page; but does not indicate any portions that were felt to be missing. In reviewing the Draft EIR web page upon release of the Draft EIR and throughout the Draft EIR comment period, the EIR web page was reviewed and included all portions of the Draft EIR.

I-92-2 The EIR Project objectives, as stated on EIR page 3-3 included the overall goal of the Project to recharge the local groundwater basin with 1,500 afy of purified water for indirect potable reuse and thereby improve its reliability as a water source, in order to replenish the local groundwater basin to prevent further seawater intrusion and develop a sustainable water supply in a timely manner that meets the District’s supply objectives and the State’s mandate under SGMA, as well as to achieve other project objectives. However, as described in Section 7.2, Approach to CEQA Alternatives Selection, consistent with CEQA the approach to alternatives selection for this EIR focuses on identifying alternatives that could meet most of the basic objectives of the project while reducing one or more of its significant impacts, could foster informed decision-making and public participation, and could be feasibly implemented. To that end, all water supply augmentation types were considered as CEQA alternatives, if they could meet the overall goal of replenishing the local groundwater basin by providing a similar water supply as the Project. No alternatives were eliminated from consideration only because they did not include purified water for indirect potable reuse. As described in Chapter 7, Alternatives, the CEQA alternatives analysis included three alternatives, the No Project Alternative (required by CEQA); an alternative that included surface water augmentation along with a reduced project; and an alternative that included desalination only. Other alternatives were considered but eliminated from further analysis because they did not meet the key objectives of the Project, did not reduce one or more of the significant impacts of the Project, and/or were determined to be infeasible.

I-92-3 As described in Section 3.1 (page 3-1) of the EIR, the Pure Water Soquel: Groundwater Replenishment and Seawater Intrusion Prevention Project (Project), proposes to beneficially re-use existing municipal wastewater that is currently discharged to the Monterey Bay National Marine Sanctuary. Re-use of wastewater in the manner proposed would increase the sustainability of the District’s groundwater sources by reducing the existing overdraft conditions in the local groundwater basin that the District relies on for 100 percent of its water supply. Additionally, the Project would protect against further seawater intrusion of the groundwater basin and would reduce the volume of treated wastewater currently discharged into the Monterey Bay National Marine Sanctuary by approximately 1.3 mgd.
As described under the section “Brine Disposal” in Chapter 3 (EIR Section 3.7.1), 0.56 mgd of RO concentrate would be conveyed to the SC WWTF to a proposed new brine and effluent receiving, mixing, and monitoring facility where it would be blended with treated effluent for disposal via the existing ocean outfall. The 0.56 mgd of RO concentrate would be blended with existing wastewater effluent flows, which vary seasonally around an average daily flow rate of approximately 8.1 mgd. As discussed in detail under Impact 4.11-2 (EIR Section 4.11.4), while the overall total loading of chemicals and minerals being discharged into Monterey Bay would not be increased as compared to existing conditions (i.e., overall total annual loading to Monterey Bay would remain the same as under current operation without the Project), re-using a portion of the secondary effluent for water supply following RO treatment would result in the concentrations of some constituents associated with the effluent discharged from the outfall to increase.

A detailed and comprehensive project-specific model analysis of water quality changes to receiving ocean waters related to blending the RO concentrate with wastewater and discharging the blended effluent via the ocean outfall was conducted to support the assessment of impacts (presented under Impact 4.11-2, EIR Section 4.11.4). The water quality model analysis determined that the combined discharge would not exceed the dilution requirements defined in the current SC WWTF NPDES permit (ORDER NO. R3-2017-0030, NPDES NO. CA0048194) and would not violate the SC WWTF’s NPDES effluent limits. The NPDES effluent limitations ensure that discharges do not violate waste discharge requirements and that such discharges are consistent with Ocean Plan and Basin Plan water quality objectives upon discharge via the outfall diffuser.

Changes to constituent concentrations in the combined effluent were further assessed to determine whether the predicted increased concentrations of water quality constituents would degrade water quality and adversely affect the beneficial uses of Monterey Bay receiving waters. The results of the water quality model analysis presented in the EIR (Impact 4.11-2) support the impact conclusion that implementing the Project would not substantially increase the concentration of constituents in Monterey Bay receiving waters as compared to baseline conditions in a manner that would adversely affect water quality, marine habitat, aquatic wildlife. Further, implementation of the Project would require that Whole Effluent Toxicity (WET) testing be conducted for the point of discharge, representing an integrated approach for assessing the potential for acute and/or chronic toxicity of proposed discharges to impact marine wildlife within the immediate vicinity of the outfall. Further, Water Code sections 13267 and 13383 require that the proposed discharges comply with the Monitoring and Reporting Program (MRP) requirements of the NPDES Permit program. Implementation of an MRP ensures water quality monitoring data is provided to the CCRWQCB to determine the Discharger’s compliance with NPDES effluent limitations and to assess the need for further investigation, corrective actions (should exceedances occur) or enforcement action, and to protect public health and safety and the environment. See
Response I-92-5 for additional discussion of the water quality monitoring conducted under the MRP.

I-92-4 A detailed impact analysis for operation of the Project regarding water quality impacts to receiving waters is presented in the EIR, under the heading “Water Quality Impacts from Operational Discharges into Monterey Bay” (EIR Impact 4.11-2). A detailed methodology for the water quality assessment of the operational discharges for the proposed Project is presented in the Soquel Creek Water District Regional Recycled Water Feasibility Study (Carollo, 2017; cited in the EIR and available publicly as part of the administrative record). The analysis of operational impacts on Monterey Bay receiving waters presented under Impact 4.11-2 of the EIR provides a summary of the methodology presented in the Carollo (2017) study. Further, as discussed in the EIR, the assessment of impacts to water quality comprehensively apply and consider the applicable regulations discussed in the regulatory setting section (EIR Section 4.11.3), such as the Water Quality Objectives of the California Ocean Plan.

As described in the EIR (page 4.11-55), Carollo (2017) compiled SC WWTF NPDES water quality monitoring data from the 2014 SC WWTF Annual Self-Monitoring Report (SMR) to determine individual constituent concentrations in existing SC WWTF secondary effluent. Carollo (2017) then used the documented constituent concentrations from the 2014 SMR to predict potential constituent concentration in the reverse osmosis (RO) concentrate based on the RO treatment technology efficiency (overall water recovery rate of approximately 72 percent). To assess the proposed operational discharge constituent concentrations following implementation of the Project, Carollo (2017) calculated the combined in-pipe concentration of water quality constituents prior to discharge using a flow-weighted average of each discharge component (i.e., the RO concentrate and the SC WWTF secondary effluent). The in-pipe concentrations of individual constituents in the combined discharge were then compared to both the SC WWTF NPDES effluent limitations as well as the constituent concentrations of pollutants in baseline discharges from the SC WWTF to determine water quality impacts.

Table 4.11-3 (page 4.11-23 of the EIR) presents the numeric Water Quality Objectives (WQOs) for water quality constituents established in the Ocean Plan. The WQOs in the Ocean Plan are incorporated into the SC WWTF NPDES permit for the protection of aquatic life and for the protection of human health from both carcinogens and noncarcinogens. The WQOs detail 21 objectives for protecting aquatic life, 20 for protecting human health from noncarcinogens, and 42 for protecting human health from exposure to carcinogens. As described in the EIR (page 4.11-55), Table 4.11-5 shows a prediction of the combined effluent water quality for constituents identified as having increased concentrations as compared to the SC WWTF’s monthly average effluent limitations. The other potential constituents regulated under the California Ocean Plan (Table 4.11-3) and incorporated into the SC WWTF NPDES permit were not determined to increase in concentration (Carollo, 2017), and so were not carried
3. Comments and Responses
3.105 Response to Comments from Deb Wirkman

forward for more detailed analysis of water quality impacts to receiving waters under Impact 4.11-2 of the EIR.

I-92-5 See response to comment I-92-3 for a detailed discussion of RO concentrate disposal and analyses related to receiving water quality impacts.

Operational discharges (i.e., discharges comprising a combination of RO concentrate and SC WWTF wastewater) resulting from implementation of the proposed Project would require coverage under an NPDES Permit. The existing NPDES permit requires implementation of a Monitoring and Reporting Program (MRP) that includes, in part, periodic water quality monitoring of receiving waters around the point of discharge as well as at reference locations beyond the influence of operational discharges for comparison. The water quality monitoring conducted under an MRP associated with an NPDES permit ensures water quality monitoring data is provided to the Regional Board authorizing the NPDES permit to determine the Discharger’s compliance with NPDES effluent limitations and to assess the need for further investigation, corrective actions (should exceedances occur) or enforcement action, and to protect public health and safety and the environment.

The frequency of monitoring under the MRP varies for different constituents and may occur continuously, daily, weekly, monthly, every 30 days, quarterly, once during a six-month period, or annually depending on the specific constituent in question. As an example, nitrate (which can be associated with increased biochemical oxygen demand) is sampled via a grab sample at a monthly frequency at the point of discharge where a representative sample of effluent discharged through the ocean outfall is collected. The monitoring location and minimum frequency for water quality monitoring for specific constituents with effluent limitations (which incorporate Ocean Plan water quality objectives) are detailed in Tables E1, E2 and E3 of the SC WWTF NPDES permit (ORDER NO. R3-2017-0030, NPDES NO. CA0048194), available publicly and forming a part of the Administrative Record for the EIR.

Biochemical oxygen demand (BOD) is a measure of the amount of oxygen that bacteria will consume while decomposing organic matter under aerobic conditions. If effluent with high BOD levels is discharged, it may accelerate bacterial growth which can consume oxygen and subsequently reduce the dissolved oxygen levels in the vicinity around the point of discharge to levels that are potentially stressful or lethal for fish and aquatic wildlife. Different water quality constituents can affect BOD in receiving waters (e.g., organic content, nitrate, and ammonia). NPDES permits, required for discharge into Monterey Bay, incorporate the water quality objectives of the Ocean Plan for the protection of water quality, human health, marine species, and habitat. The Ocean Plan requires that the dissolved oxygen concentration not be reduced by more than 10 percent from that which occurs naturally (i.e., ambient conditions) as a result of the discharge of oxygen demanding constituents in wastewater discharges. Also, Total Organic Carbon (TOC) is monitored under the SC WWTF NPDES permit MRP every sixth day at the point of discharge. Testing for TOC can provide an accurate measure of
the organic content of water in a shorter time (i.e., several hours versus five days) than a BOD test. For the SC WWTF, the CCRWQCB has determined that there is an adequately robust statistical correlation between TOC and BOD at the facility and has approved the reporting of TOC to meet the technology based effluent limitation for BOD (as allowed by 40 CFR 133).

I-92-6 Please see the response to Comment I-92-18 regarding operational requirements and measure that would ensure appropriate treatment occurs, even with variation in source water quantity and quality. As discussed, the design and operations of the AWPF would allow for adaptation to reduced flow operations if needed to accommodate rare events of process upsets or extremely low flows from SC WWTF. For example, the flow equalization basins included in the Project would attenuate the effects of diurnal flow variation.

Brine discharge would be blended with the SC WWTF effluent in accordance with their NPDES limits. However, rinse and process water utilized during the treatment process, along with any water deemed inadequate prior to recharge would be sent to the SC WWTF via connections to the existing wastewater system; and would not be discharged directly to the outfall.

I-92-7 As explained in Section 4.10 (Impact 4.10-4), the District has undertaken a geochemical characterization of the Purisima aquifer to determine whether there is potential for leaching of metals, and determined that some conditioning to prevent mobilization of chemicals in excess of California standards may be necessary. Explained further in Impact 4.10-4, existing SWRCB regulations establish water quality requirements, including for metals and microorganisms, to protect public health and the effectiveness of the proposed advanced water purification technology in meeting these requirements is known. Based upon the results of these Project studies; existing mandatory regulatory requirements; and the Project’s proposed treatment and monitoring technology and processes, the District has concluded that a pilot study is not necessary to demonstrate the Project would be capable of achieving treatment levels compliant with applicable regulatory standards for the protection of groundwater quality and human health. Given this the District is not proposing to conduct an advanced water treatment pilot study to assess chemical and microbial changes in the groundwater formation after introduction of purified water, nor is it proposing a pilot study to observe those changes when the extracted groundwater enters the distribution system.

As required by State Groundwater Replenishment Regulations, the District would not be permitted to begin using advanced treated water for groundwater replenishment until the proposed monitoring wells were installed. The District would then be required to monitor for water quality changes near the recharge well sites when recharge begins. As discussed in the EIR’s Impact 4.10-4, the District, in strict adherence to the SWRCB Drinking Water Division (DDW) regulations and California’s Anti-Degradation Policy, must conduct the appropriate studies and testing to develop
adequate post-treatment stabilization measures to ensure chemical leaching does not occur to an extent that groundwater quality standards would be violated. Based on the proven advanced water treatment technology that the District proposes to employ for the Project, the quality of the treated water is known and once stabilized prior to recharge, the effects on the existing groundwater in the aquifer can be projected with high confidence.

Furthermore, as discussed in the EIR’s Impact 4.10-4, the treatment process for the advanced water purification is required to include reverse osmosis, advanced oxidation processing, at least three separate barriers for virus removal, and a minimum of two months of subsurface travel time, from the time of recharge to the time of extraction for use. The intent of the response residence time (RRT) is to retain recycled water underground to identify any treatment failure so that inadequately treated recycled water does not enter a potable water system. Retention time was evaluated for the proposed recharge wells using groundwater model particle tracking results. The particle tracking results indicate that the time it takes the purified water to reach a municipal or private groundwater well is much longer than the minimum required subsurface travel time (2 months), and thus, the projected residence times would be well above the regulatory limits.

I-92-8 Please see the response to comment letter O-2, which addresses the general comments regarding long-term water transfers asserted here.

I-92-9 Please see response to comment I-92-7.

I-92-10 The environmental impacts of recharging advanced treated water into the Purisima aquifer are adequately addressed in the EIR’s Impact 4.10-3. The impact was determined to be less than significant. The effects of recharging advanced treated water into the Purisima aquifer are also discussed in response to comments I-30-6, I-33-6, I-33-7, and II-77-1.

Long-term water quality in the Purisima aquifer would be evaluated through continuous groundwater quality monitoring conducted by the District and as required under the SWRCB Groundwater Replenishment Regulations. Under current conditions, the District treats groundwater after extraction, prior to distribution. That process would continue with Project implementation; however, the Project would not require modifications to that treatment regime, or otherwise require post-extraction treatment.

Long term adverse impacts would not be anticipated due to the overall high quality of the advanced treated water and the assimilative capacity (see section 4.10.3) of the Purisima aquifer. The long-term monitoring would assess the groundwater quality and it is expected that over time, the stabilized advanced treated groundwater would have a negligible overall effect of the quality of groundwater in the Purisima aquifer.

I-92-11 The Project includes safeguards to prevent contamination of the Purisima aquifer from operation of the advanced treatment system, treated water conveyance, and recharge.
Please refer to response to comment L-4-6, L-4-7, and I-30-2, which address the regulatory and system controls required to be in place, regardless of selected technology, to protect against treatment system malfunctions and associated public health impacts. Also, as discussed in the response to comment I-92-12, the Purisima aquifer serves as an environmental buffer between the treatment process and the District’s distribution system. The buffer provides a level of water quality equalization and time to respond if unanticipated treatment process failures occur, or if water quality monitoring detects results that are out of compliance.

I-92-12 For the purposes of this document, the environmental buffer, a key element of an indirect potable reuse project, is the Purisima aquifer. The Project would utilize the buffer (Purisima aquifer) as a buffer between the purification step and the distribution step to the District customers. The main functions of the environmental buffer are to provide, through storage, some level of water quality equalization and time to respond if unanticipated treatment process failures occur, or water quality monitoring detects results that are out of compliance.1 Contrary to the assertion in the comment, there is high confidence based on current water reuse regulation, reliable performance of similar water reuse projects, and the groundwater modeling of recharge retention times that the Purisima aquifer, acting as the environmental buffer, would be protective of groundwater quality. The required monitoring would regularly evaluate water quality from the start of recharge through the operation of the Project. Given the modeling results, the required groundwater monitoring, the high quality of the advanced treated water, and the existing good quality of the groundwater in the Purisima aquifer, a pilot study and/or tracer studies are not necessary. Please see response to comments I-92-7 and I-92-10.

I-92-13 The memo cited by the commenter pertains to the use of extremely impaired water sources for direct domestic use. The proposed project is not a direct domestic use project. Rather, the project proposes indirect potable reuse through groundwater replenishment. In contrast to the commenter’s assertion that the State Water Board’s regulations prohibit such projects, as discussed at length in EIR Section 4.10-4, the Project would be subject to and required to comply with the California Code of Regulations, Title 22, Social Security, Division 4. Environmental Health, Chapter 3. Water Recycling Criteria, Article 5.2. Indirect Potable Reuse: Groundwater Replenishment - Subsurface Application, which expressly authorizes such projects, provided applicable requirements and standards, including those for water quality and public health, are achieved.

I-92-14 Please see the response to comment I-92-17 and I-83-6, I-83-7, I-83-13 regarding the water quality impacts of the Project, including assessment of the source water quality.

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As discussed above, the Project would not result in substantial water quality impacts associated with recharge of purified water into the groundwater basin.

I-92-15 The authors of the EIR and the District acknowledge that the universe of CECs and other type contaminants in wastewater streams is expanding as new pharmaceutical and other products are released and consumed by the public. It is also understood that research into the environmental and health affects of CECs in low concentrations is ever-evolving. The analysis of the environmental impacts of the Project relies upon the best available data and information. The proposed treatment process (see response to comment I-83-9) would utilize state-of-the-art technology proven to eliminate or considerably reduce concentrations of CEC compounds and other chemicals to levels which, if even detected, would be far below human health screening levels and margins of safety.

As discussed in response to comment I-83-8, the impact analysis in the EIR relies on the expert opinions of the many human health and water quality professionals that comprise the SWRCB Science Advisory Panel and the NWRI Independent Advisory Panel. These scientific experts review changes in CEC and EDC use and occurrence, evaluate health risk, review monitoring recommendations, and analytical methodology. These panels then provide recommendations that are based on conservative assessments of risk.

The SWRCB acknowledges that the field of assessing health risk of recycled water use is evolving and thus reconvenes Science Advisory Panel every three years. Recycled water policy and regulations will adjust accordingly as new information and data are obtained regarding the human health effects and impact of CECs in groundwater. Nevertheless, the CEQA analysis of environmental impacts of the Project in the EIR must rely on and reflect the best available scientific data and the most current Federal and State recycled water regulations, which in this case are set forth by the SWRCB. The Recycled Water Policy and the Groundwater Replenishment Regulations will continue to evolve and adjust to new findings and conclusions developed by epidemiologists, endocrinologists and other health experts as research and continues and treatment technologies advance.

As explained in the EIR’s Impact 4.10-3, and expanded on in response to comment I-83-6, based on the data and information on human health risk currently available, the District has concluded that the proposed project would be protective of human health.

I-92-16 EIR Section 3.7 describes the overall operations and maintenance requirements of the Project, and the environmental impacts of implementing the Project, including requirements for monitoring project operations, which would include required monitoring and testing to ensure the operational condition of facility components. Regarding membranes, the methods for ensuring membrane integrity are identified in the California Code of Regulations in Section 60320.201. Continuous online monitoring of electroconductivity and/or total organic carbon (TOC) is an established
practice for reverse osmosis (RO) applications, as noted in the reference publication. For projects in California using advanced treatment for groundwater replenishment, online monitoring of at least one of these (electroconductivity or TOC) is required for reverse osmosis per Section 60320.201. Membrane integrity testing, such as pressure decay testing, and online monitoring is the industry standard for membrane operations (refer to EPA’s Membrane Filtration Guidance Manual, Section 4). Regular pressure decay testing during operations would be used to verify MF/UF membrane integrity. These methods would indicate any reduction in membrane integrity that may be caused by membrane age or other conditions, and operational procedures provide direction for maintenance or replacement, as necessary.

I-92-17  As discussed in EIR Impact 4.10-3, and addressed in response to comments I-83-9 and I-83-13, the advanced treatment process proposed for the Project has the proven capability of destroying or significantly reducing the concentrations CECs before the purified water. The concentrations of any remaining CECs in the advanced treated water would be minuscule compared to the regulatory human health screening levels. The health screening levels are primarily established by the federal and state regulatory agencies and represent a threshold for concentrations of various chemicals; water containing chemicals above the thresholds could potentially be harmful to human health. In most cases, the residual concentrations of CECs are reduced by advanced treatment to below 1 part per trillion, which in many cases, is below the concentrations advanced analytical laboratories can detect. As an example, the anti-inflammatory drug Diclofenac has a health screening levels of 1,800 parts per trillion but its concentration in water treated by a process similar to that proposed Project (MF, RO, UV AOP) is non-detectable or below 1 part per trillion. For context, one part per trillion is equivalent to having one red marble in a pool 1,000,000,000,000 white marbles. Given the proposed advanced treatment process and its ability to eliminate CECs, including pharmaceuticals that cause allergic reactions in some people, the EIR’s Impact 4.10-3 analysis concludes the Project’s impact would be less than significant because concentrations of CECs remaining in the advanced treated water would not be close to approaching the established health screening levels or sufficiently high to cause allergic reactions.

I-92-18  EIR Impact 4.17-2 discusses the availability of the source water supply for the Project. As discussed, the District and City of Santa Cruz have entered into a memorandum of understanding (MOU) regarding the provision of secondary effluent from the SC WWTF for the Project’s operational source water. The MOU is intended to provide a framework for negotiation of a Project Agreement and does not create a binding contractual obligation.

However, the MOU does provide information from the City of Santa Cruz regarding the availability of source water and acknowledges that use of approximately 1.6 MGD of secondary treated effluent for the Project represents approximately 20% of the Santa Cruz WWTF average daily flow rates and that sufficient supply would remain available for the City’s current and future water recycling needs. However, should a drought
period and water conservation efforts result in periods when the overall secondary effluent available for the Project and City needs be greatly reduced, the Project includes operational flexibility to reduce production as needed. Thus, there would not be a need to reduce water conservation in order to maintain a specific level of available secondary effluent. Regarding water quality changes to the untreated wastewater due to conservation or other reasons, the Santa Cruz WWTF and proposed AWPF would operate under specific permit conditions that guide identify specific water quality parameters that must be met at the end of each treatment process. Further, operation of a groundwater replenishment reuse project includes operations and monitoring requirements that would identify any unacceptable change in the treated water supply prior to recharge, should any occur due to changes in the untreated wastewater due to conservation or other reasons. See also the response to comment L-4-6.
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The logic behind the current expensive plan for water still puzzles me. Please consider other plans.

Santa Cruz County is not in the Mohave Desert. We receive much water in our mountains, - averaging nearly 50" per year. These mountains are only a few miles from where the water is needed. Salt water intrusion can be stopped when so much rainwater falls nearby.

I ask you to reconsider your current plan and seriously consider getting water from the North Coast aquifers and streams. It is now flowing out into the ocean, even coming up near our shoreline.

I have personally given 1950 era geological maps of this area to John Ricker and Ron Duncan many months ago, relating how a now elderly local hydrologist (Bill Smyth) personally found such water. He has done projects from Hawaii to the Middle East. Such old timers can tell you where to find fresh water upwelling near our shore. Capture it and pump it to the Soquel Creek Water District area.

It is common sense to explore this idea for this area. Funds are always limited. Your recycling plan is expensive and not required for this area where 50" of rain falls.

I also urge you to use the Loch Lomond reservoir to greater advantage.

Sincerely,

Richard E. Zscheile
Home: (831) 462-4130
3.106 Response to Comments from Richard E. Zscheile
(August 9, 2018) (Comment Letter I-93)

I-93-1 EIR Chapter 7 considers alternative concepts similar to those included in this comment. EIR Section 7.5.4 considers an alternative to the Project that includes taking treated winter water from surface water sources (North Coast Water Supplies and the San Lorenzo River) and 7.5.6 considers an alternative that includes construction of a new dam and reservoir in the Santa Cruz Mountains to capture rain and surface water runoff to meet the District’s water supply needs. These alternatives were rejected from further consideration in the EIR because they may not substantially lessen the environmental impacts of the Project, and in some cases may result in additional impacts that would not occur under the Project; feasibility is uncertain, primarily because the District does not have surface water rights; and because the alternatives do not meet key objectives of timeliness and drought reliability. The concept of identifying freshwater upwelling offshore in the ocean is not dissimilar to a desalination alternative, as considered in EIR Alternative (local desalination alternative) and Section 7.5.5 (Participation in DeepWater Desal Project); and the EIR Alternatives analysis noted that these alternatives may not substantially lessen the environmental impacts of the Project, and in some cases may result in additional impacts that would not occur under the Project; and because the alternatives do not meet key objectives of timeliness and drought reliability.
See below objections to the Soquel Avenue/Capitola Avenue location:

Please remove from consideration the Soquel Avenue/Capitola Avenue location for a waste water treatment facility. As an active participant in Soquel issues, I have yet to find more than a handful of individuals who even remotely consider the location an appropriate one. Due to the diligent efforts of residents in the nearby area of the proposed industrial plant, the Chanticleer alternative has been proposed in the draft EIR.

The Soquel Avenue/Capitola Avenue location is NOT an appropriate location for an industrial-level wastewater treatment plant. The location is highly residential (not industrial), and is surrounded with homes, families, children, and pets. Now there are other options - and appropriately the Chanticleer site is next to an auto repair shop and conveniently during construction and afterwards, Highway 1. No homes, families, children, or pets will be impacted by the Chanticleer site.

On the other hand, the West Annex would expand their already loud and dirty maintenance yard, inflicting a three-year construction project on neighbors (many of whom are elderly and who have lived in their homes for over 50 years).

At the recent July 24th meeting at Twin Lakes Church, it was even suggested that residents who are disturbed by the night-time construction (if the West Annex site is chosen) could find hotel accommodations - and be reimbursed by the Soquel Creek Water District - this is totally unacceptable.

The Soquel Avenue/Capitola Avenue location is a HIGHLY residential area - totally inappropriate for an industrial treatment plant. Locate the plant in an industrial area near the freeway - namely, the Chanticleer site.

QUALITY OF LIFE - AESTHETICS - PUBLIC HEALTH CONSIDERATIONS

There have been innumerable studies conducted on the quality of life of individuals living close to waste water treatment plants - NONE of the results have been positive. Significant risk for symptoms such as headache, unusual tiredness, and concentration difficulties have been recorded and an increased possibility for respiratory and skin diseases reported. A high rate of cases of irritability and moodiness have been noticed. Significantly higher gastrointestinal symptoms have been reported. Also, studies have shown the prevalence of pathogenic airborne microorganisms in high numbers from plants.

What about aerosols as a health risk for surrounding homes/families, children and pets? Also, such facilities generate atmospheric emissions and liquid effluent, which may be hazardous to human health.
A nationwide survey in Sweden has shown that an increased risk for headache, concentration difficulties, unusual tiredness and head heaviness has shown forth in individuals living near waste treatment facilities.

Given the multitude risks for humans living near such facilities, I again stress the need for this site to be FAR from homes, families, children and pets. My vote is strongly against any industrial waste water treatment plant at the Soquel Avenue/Capitola Avenue location.

I would prefer that my comments be kept anonymous. Thank you.
3.107 Response to Comments from Anonymous (August 5, 2018) (Comment Letter I-94)

I-94-1 Please see the response to comment O-5-2, regarding the analysis of siting of the advanced water purification facility at one of three locations, the Santa Cruz Wastewater Treatment Facility, Chanticleer Avenue site, or Headquarters-West Annex site, all of which were analyzed at an equal level of detail in the EIR. Please see the response to comment I-44-3 regarding the land use designation of the Headquarters-West Annex site, and regarding purchase of the site by the District.

I-94-2 The potential noise and vibration impacts of construction of an advanced water purification facility at the Headquarters-West Annex site are addressed in EIR Section 4.13, Noise and Vibration. As explained on page 4.12-22, construction activities at the Headquarters-West Annex site would occur during daytime hours only, no nighttime construction is proposed. Therefore, Mitigation Measure 4.13-1b, Offsite Accommodations for Substantially Affected Nighttime Receptors does not apply to the Headquarters-West Annex site.

I-94-3 Please see the response to comment I-94-1, above.

I-94-4 The commenter cites a survey on individuals living near waste treatment facilities. Note that the Project does not include a waste treatment facility. Further, the EIR evaluates the potential physical effects of the Project on the environment. CEQA Guidelines Section 15064(b) states, “The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data...” Similarly, Section 15064(f) states, “The decision as to whether a project may have one or more significant effects shall be based on substantial evidence in the record of the lead agency.” And Section 15064(f)(5) clarifies further, “Argument, speculation, unsubstantiated opinion or narrative, or evidence that is clearly inaccurate or erroneous, or evidence that is not credible, shall not constitute substantial evidence. Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts.”

Commenter asserts studies have shown wastewater treatment plants have resulted in various impacts, including related to aesthetic, quality of life, and public health. Unfortunately, the studies in question were not provided, referenced, or otherwise identified. As a result, it is not possible to assess whether the studies underlying commenter’s assertions constitute substantial evidence to support a conclusion of a significant environmental effect. Social effects of a project (e.g., quality of life) are not considered significant under CEQA. However, CEQA may consider as significant a project’s physical change that causes or flows from a social impact (Section 15131). Accordingly, while the EIR does not evaluate the Project’s potential effect on quality of life, it does evaluate potential physical changes which commenter seems to suggest may affect quality of life. For example, Section 4.2, Aesthetics, addresses the potential
impacts on the aesthetic quality, character, and lighting environment that could result from project construction and operation. Section 4.3, Air Quality, addresses the potential health risk impacts of the Project on nearby sensitive receptors. Section 4.9, Hazards and Hazardous Materials, considers the potential for Project implementation to result in accidental releases of hazardous materials. Further, Section 4.10, Hydrology Resources – Groundwater, analyzes the Project’s potential to adversely affect groundwater quality. The analysis and conclusions in each of these sections is supported by substantial evidence identified in the respective sections. Commenter does not reference or call into question the EIR’s analytical approach, methods, conclusions, or supporting evidence.
Dear Pure Water Sequel Project CEQA Staff,

I am hereby requesting an extension of time for Public Comment on the PureWater Sequel Project Draft Environmental Impact Report. It is a lengthy document that merits thorough public evaluation. I need more time to carefully read it, research related and appropriate issues of concern, and to respond in a cogent manner.

Please extend the Public Comment period to allow for better public input and analysis. Please notify the public of your decision.

Thank you.

Sincerely,

A very concerned resident
3.108 Response to Comments from Anonymous
(August 9, 2018) (Comment Letter I-95)

I-95-1 Please refer to response to comment I-4-1.
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SOQUEL CREEK WATER DISTRICT

JULY 31, 2018

6:20 p.m. - 7:11 p.m.

ENVIRONMENTAL IMPACT REPORT

FOR PURE WATER SOQUEL PROJECT

PUBLIC COMMENTS

Twin Lakes Church
2701 Cabrillo College Drive

Court: Cary Blue LaTurno, CSR #9681
Reporters: Creekside Court Reporting
2425 Porter Street, Suite 9
Soquel, CA  95073
(831) 426-5767

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RON DUNCAN: Let's go ahead and get started.

Everybody get a seat.

So welcome. So I am who it says I am. I am Ron Duncan, the general manager for Soquel Creek Water District. And on behalf of our board and our entire staff, I want to say thank you for coming tonight. You can see who has a real vested interest in what's going on.

I'll take just a moment to point out a few things and give a brief intro, and then our -- the consultant ESA, Environmental Science Associates, are going to get up -- and really it's their presentation -- and give the remainder of the presentation. Then about the last half will be an opportunity for public comment.

But I want to recognize we have a couple of board members in the audience. I see Dr. Daniels in the back there.

If you wouldn't mind raising your hand. Thank you.

Dr. LaHue, Dr. Jaffe, and an ex board member, Dr. Horstmeyer, right here.

Now, it is not true you have to be a doctor to be on our board, but -- because we have two women who are not, but one's a civil engineer, and the other one is an environmental scientist. So we do have a powerhouse of a
staff and a board.

So, you know, it's important for us -- our board requested that we have this meeting. This meeting is not even required, but they wanted to hear what you had to say, and that's why they've opened it up, this second half, to public comment.

So I am going to run through a couple slides here, give you a little background. So Soquel Creek Water District, we are basically a vibrant little community of several towns, you know, ranging from Capitola to La Selva Beach, Soquel. You can see the cartoon up there. We are about 40,000-strong residents, mostly residential, vastly residential.

The main thing to note is we are entirely relying on groundwater, 100 percent. Nobody sends us any water. We pump it all from the ground. And therein lies kind of our issue. So our main water challenge is we are short water and have been since about the '80s. We have been overpumping the basin and, in a sense, drawing down the water levels.

But here's the catch. Because we are close to the ocean, the water stops going down, and seawater can start coming in. And here is what happens when a well -- the water level in the well gets lower than the ocean or even if it's even near being lower than the ocean,
seawater starts coming in. And this phenomenon has -- is our nemesis. It's so bad, the State Water Board two years ago declared our basin critically overdrafted. That's their most serious designation. I think we are one of twenty-something basins out of over 500 in the state of California that have that scarlet letter on them.

So this map behind me here shows seawater intrusion that's actually occurring. So it's not just this figment of our imagination or anything like that.

Here in yellow is seawater intrusion that's occurred down in that area, the Monterey area, almost to Salinas. So eight miles inland. You go up to Moss Landing, it's in three miles. This is documented in water wells, seawaters, and they've had to stop pumping and using that water.

This red area is basically the Soquel Creek Water District area along the coast. And there's a couple yellow dots there where we've detected seawater in our monitoring wells along the coast. We have a bunch of monitoring wells right along the coast to warn us when that seawater is approaching. So we detected it.

What we didn't know until about a year ago, well, where is it offshore here? How close is it out in the ocean? How close have we sucked it in? And so through some amazing geophysical work and various partnerships --
you may have remembered -- did anybody see a big 
helicopter flying offshore a few years ago? I see one 
hand in the back. Okay. About a year ago. Well, that 
was, like, a giant metal detector, if you will. I am 
oversimplifying. But they were able to detect how 
close -- where the seawater is in the aquifers that are 
offshore. And usually what happens is groundwater flows 
this way out to the ocean, and, you know, it can be a half 
mile offshore, these aquifers underneath. But in our 
case, it's right at the shore. So what I -- you know, 
it's a terrible thing to have seawater in your aquifer. 

So I would like to suggest -- because people come 
to these meetings, and they have suggestions and their 
perspective of Pure Water Soquel. And that's what we want 
to hear tonight, Pure Water Soquel, the project that's at 
hand or other projects that we are pursuing. We all have 
little differences of opinions and such. 

But I know that we have a unifying factor, a 
common ground, and that is -- I haven't heard anybody in 
many years talk about us not having a problem. And since 
we've had this geophysical survey done, it's solidified. 
So everybody is on board moving forward. You know, we 
have the project tonight. That is one way how to solve 
the problem, but I think on the why, the need, we are 
solid. We are very solid.
But that's not -- but we don't want to be overconfident because most of the populated coastal regions of the world that pump groundwater have not prevented seawater intrusion. About 60 to 70 percent have seawater intrusion. So -- and you can see just our neighbors to the south, they haven't won the fight.

So while I have great hope that this community, we can do it together, you know, we can't rest on our laurels. We have to stay true and vigilant to moving forward.

So with that, I thank you. And I'll turn it over now to Alisa Moore of ESA. I do want to stress that please hold any comments you may have to the public comment period. There will be an opportunity there.

And I do -- this will be reiterated. This is an EIR process. It is not a board meeting. And so what we try to do is take your comments and -- we've got a stenographer over here. It's one way we will be taking them. And record them. And then the scientists will go back and see how to respond to those in the EIR. So tonight I want to give you not a false sense of expectation. There will be no response back to your questions, but we will be feeding that in and taking it to heart throughout the process.

So with that, Alisa Moore.
Oh, I've got to say this. I'd be remiss. I recognized staff -- I mean, the board, but this project would be nowhere without a couple -- without our staff too. And the board gives the direction, but who is doing the work day after day, night after night, we have a couple people. We have our project manager.

Please stand up, Melanie Mow Schumacher, please. So she is the little engine that could and can, does.

And Taj Dufour, he is our engineering manager, right up here, providing strong support.

We don't have a deep bench, but the people we do have are absolutely amazing. I've been doing water my whole life. I haven't worked with a better team, and I wouldn't say that if I didn't mean it.

There's a couple other people out here. Eileen has been helping on the project. Becca has been doing outreach, and Gabriella. So thanks to everyone.

And now I will hand it over.

ALISA MOORE: Thanks, Ron.

All right. Thanks, folks. Welcome and thank you for joining us this evening.

Tonight I want to walk you through a bit of a presentation regarding the Pure Water Soquel project, specifically, which, as Ron mentioned, is one of the
solutions that the district is studying to resolve some of
the concerns that they have regarding water supply and
their basin.

So what I will be sharing with you tonight is an
overview of the project, this project specifically, the
CEQA review process, how impacts of the project were
assessed under CEQA, and describe how you can participate
in the Draft EIR review process.

All right. So first I am going to start with the
project overview, describe a little bit the project that
was analyzed under CEQA, and starting with specifically
the objectives that the project needs to achieve. And
these are the main goals that the district is trying to
achieve for the overall community water plant, as well as
project-specific goals. And those include replenishment
of the local groundwater basin, preventing further
seawater intrusion from occurring, develop a sustainable
water supply in a timely manner, and developing an
affordable and reliable supplemental water source. They
also are looking to diversify and enhance resiliency of
the water supply producing high quality and safe water
supply, as well as providing additional environmental
benefits.

And how they plan to achieve it under this
project, the Pure Water Soquel Project, is through an
advanced water purification process that purifies municipal wastewater and produced up to 1500 acre feet per year of high-quality water that would be recharged into the groundwater basin for future use.

And as part of that process, we've been looking at three different -- so three locations for the waste -- for the advanced treatment facility, as well as five recharge well sites that I will show you in just a minute, and specifically talking about at these treatment locations, the advanced water purification process. That includes microfiltration, reverse osmosis, ultraviolet light, and advanced oxidation. And this is a process that is highly regulated by the State of California and would require certain parameters be met.

For the Pure Water Soquel Project, as mentioned, it is a little hard to see. When you have an opportunity to look into your community handbook, as well as some of the boards in the other room, you will see that for this project, we are considering the source of water that will be from the Santa Cruz Wastewater Treatment Facility and treatment, advanced purification, at three -- one of three locations: at the Santa Cruz Wastewater Treatment plant at a location along Chanticleer Avenue; and then at the Headquarters West Annex site over at the district and recharge at up to three of five locations, two being on
district-owned property along Monterey Avenue -- those are
the black triangles you see here -- the Willowbrook Lane
site; and then here at Twin Lakes Church or across the
road at Cabrillo College.

Specifically for the purification facility,
we just wanted to show you some of the layouts that are
considered and show you generally where within these three
project sites the treatment facility could be placed
within the sites. And, again, you can take a look at our
boards to see these close a little bit more.

And then, finally, the project configuration that
would move forward should the board approve a project,
that consideration of which treatment location, as well as
recharge location and some of the pipeline alignments
would be based on the CEQA scoping and public input
processes already occurred, the environmental analysis
that we are presenting to you tonight, as well as
engineering feasibility considerations and continued
community outreach and input.

Now I am moving into the CEQA process.

PUBLIC COMMENTER: Can I ask you a question?

ALISA MOORE: We'll be taking comments at the end
of this.

PUBLIC COMMENTER: It would be nice, while you've
got it on the screen, if you let us ask questions now.
ALISA MOORE: I'm sorry. We'll be taking comments at the end of this.

All right. So what is the CEQA process and the EIR? The CEQA process is the California Environmental Quality Act, which applies to state and local agency projects and requires that agencies consider the significant environmental impacts before decisions can be made on a project.

And specifically for this project, we have conducted an Environmental Impact Report, which evaluates environmental impacts, demonstrates that impacts can be avoided or reduced, and evaluates environmental alternatives to the project.

This slide presents our timeline and our work approach, and it includes the scoping period which was conducted in 2016 and '17, which then led into the environmental analysis portion and the preparation of the Draft EIR that you now have before you to consider.

After the conclusion of the comment period, we'll be preparing a response-to-comments document, which responds to all the substantive EIR comments that were provided by public and agencies, and then completing a Final EIR, which can be considered by your board for certification.

The purpose of the Draft EIR review period really
is to allow the public and agencies to evaluate the sufficiency of the document and provide input on the impacts that were presented and ways that the significant impacts of the project can be avoided or mitigated.

PUBLIC COMMENTER: Will you allow the public to vote?

ALISA MOORE: The Draft EIR public period --

PUBLIC COMMENTER: If you keep asking questions, we'll never get through this presentation. There is an orderly process set up.

ALISA MOORE: Thank you.

The Draft EIR public --

PUBLIC COMMENTER: So we can see what we are trying to remember, you are going to bring us back a second time so we can --

PUBLIC COMMENTER: Please respect the speaker. She has asked you to hold your comment and questions until the time allowed.

PUBLIC COMMENTER: This is supposed to be a public meeting, and we need to be heard. We came here.

PUBLIC COMMENTER: Please respect the process.

PUBLIC COMMENTER: Tell that lady over there what we want to know.

ALISA MOORE: The Draft EIR public review period has been initiated by submittal of the Draft EIR to the
public and responsible trustee agencies, and as part of that, we are conducting a public meeting, which is what we are having here today, and as Ron mentioned, it's not something that is required under CEQA, but that we have been encouraged to provide to this public.

Now I'll share with you a bit of the Draft EIR content. The Draft EIR includes, in addition to a description of the project as we walked through just a minute ago, which includes the construction and operation requirements of the project. The EIR also includes a description of all the environmental factors that are -- that must be considered in an EIR under CEQA.

In addition, the EIR presents assessment of cumulative impacts, growth-inducing impacts, as well as alternatives to the project that can attain most of the project objectives, reduce or avoid one or more significant impacts of the project, and are feasible. And from a feasibility standpoint, what that means is it must be -- it must have economic, environmental, legal, social, and technological feasibility, as well as be something that the district can reasonably acquire, control, or otherwise have access to.

In our EIR, our Draft EIR, what you'll -- what you'll find presented is that the -- after the conclusion of the impact assessment, we found that all of the
operational impacts of the project would be less than significant.

There were several topics that were found to be significant or potentially significant and require mitigation, and all of those impacts could be reduced to less than significant without mitigation with the exception of construction noise impacts.

I'll talk a little bit about some of the impact topics of interest -- sorry -- that we covered in this Draft EIR. One is air quality. Our air quality assessment found that project construction would generate air pollutants that could exceed air quality standards and requirements. We've presented a mitigation measure series that includes preparation of and implementation of emissions reduction plans, as well as restrictions on the construction operations that reduce impacts to less than significant and below the air quality standards that are required.

In terms of -- sorry -- hazards and hazardous materials, we found that there are some existing and known hazardous material sites fairly close to the project sites that are under consideration; and that if there were some construction disturbances that interrupted those existing sites, there could be hazardous materials exposures. So our mitigation measure includes health and safety plans,
as well as soil management plans to ensure that those releases do not occur.

The hydrology analysis, and particularly related to groundwater, relied on several modeling studies, as well as technical water quality and other technical studies that we relied on as part of our analysis and determined that with the required existing regulatory requirements, the construction operation of the project as it relates to groundwater influences would be less than significant.

And for land use and recreation effects, we find that the project construction operation will not conflict with plans and policies or regulations that govern land use and that project construction may be noticeable from several of the parks and recreation locations near project sites, but they would not restrict or otherwise affect recreational facility access.

Noise and vibration, as mentioned, was the one environmental topic where for construction we found that impacts could remain significant even with mitigation, and that is related to exceedances of existing noise standards from the cities and county that the project sites are within, as well as being -- as evaluation of construction noise compared to the existing ambient noise levels.

And these impacts would last from a range of --
for a range of time. They would be -- the impacts would occur at certain pipeline locations for just a few days while construction is in front of certain sensor receptors. They would be around six months for construction at the Monterey Avenue recharge wellsite and Willowbrook Lane wellsite, recharge wellsite, three months at the Headquarters West Annex site, and up to 24 months at the Chanticleer site.

The mitigation measures that we did include include a noise reduction plan, as well as hotel accommodations for residents impacted by nighttime drilling at the Willowbrook and Monterey recharge wellsites. And then, as mentioned, while the noise impact would be reduced, it would not be reduced sufficiently to be at a less than significant level. So this impact would remain significant but unavoidable with mitigation.

Finally, I am going to take just a moment or two to talk about the remaining parts of the CEQA process before then turning it over to you to speak to us about your comments on the project and the EIR.

Next up, as I mentioned, will be completing a response to comments, and then once that is completed, the board will be able to consider certifying the EIR and then consider approving the project.

If they decide to approve the project, the board
would then enter into design and permitting and construction processes and the obtainment of regulatory requirements that would be needed before the project could move forward.

Once the design and construction would be completed, then the project could be built and operating.

And now I just want to very quickly remind you that we have several methods to receive comments on the Draft EIR, including written comments, written comments that we can receive here today, as well as that can be mailed to us via e-mail, as well as to the address located on the slide, as well as in your packet materials, and we'll also be taking comments in just a minute orally.

And with that, I am going to turn it over to Natalia to talk about our comment session and our open house session.

Thank you.

NATALIA HENTSCHEL: Thank you. Thank you, Alisa.

All right. So now that our presentation has concluded, we are transitioning over into the second part of our meeting that is going to be two concurrent events. One is the open house is going to open back up right next door for anybody who would like to look more detailed at the poster boards, at the materials that the district has brought, as well as provide the written comment. There's
a comment station there with the written comment forms
that are available to you.

That is the place that's available to you	onight. If you have a clarifying question about the
project, about the draft document, about the CEQA process,
you will have district and consultant staff available
there to you where you can engage in one-on-one
conversations for that.

Here in the main hall, we are going to have the
formal oral comment session. If you have a comment that
you would like to provide, we are asking you to fill out a
speaker slip. You should have gotten one when you signed
in today. If you didn't, they are in the back.

Frankie, if you can wave your hand back there.
Frankie can help you.

If you have -- if you are holding on to one right
now, if you can please wave it up in the air, and one of
our staff members with a name tag will come and grab that
from you.

We are asking all speakers to limit their
comments to three minutes. We will have a timer set up
here. We will be giving you notice with both a green,
yellow, and red card as your time comes to a conclusion.

We do have the court reporter that is taking
those comments tonight.
Your comments will not be responded to tonight. Tonight we are taking them down, and they are going to be evaluated by the project team, and they will be responded to as part of the Final EIR.

PUBLIC COMMENTER: Does anybody need a speaker card?

NATALIA HENTSCHEL: And then, as Alisa said, you also have the opportunity to provide your comment in writing to all of those different sites available to you there. Again, you can mail them in. You can e-mail them in as well.

For those of you who are submitting your speaker cards up here, just know that they -- your name will be called. We will have a microphone set up here to the right-hand side of the stage. You can come up at that time.

We are going to take a little break because we need to set up microphones and kind of move things around. So if you haven't had an opportunity to get a cup of coffee or a glass of water or a cookie or if somebody would actually like to -- prefer to transition on over to the open house, you can do that as well. It is just going to take us about three to five minutes to do all of that, and I will call it back up here for the oral comment session.
Again, this is just an opportunity. We acknowledge that everybody has different interests in how they receive information. That's why we are doing tonight the presentation and the open house. That's why there is so much great information on the website for you to look at, because that's also a way these days that a lot of people like to receive their information. And the opportunity here to give oral comment was something that we heard from the public after the scoping period, and we are also directed by the board because of the interest. So we are providing that today along with the other formats for providing comment.

So for right now, just take a little break, and I will call it right back up to session for the oral comment period.

Thank you.

(A recess was taken.)

NATALIA HENTSCHEL: First up, we have Bart Coddington.

Please be sure to state your name when you come up to the comment station so that the court reporter can hear it clearly, and please do direct your comments directly to the court reporter. We want to make sure that we get them word for word.

BART CODDINGTON: Hi. My name is
Bart Coddington.

And what else do you need to give? Name and rank?

NATALIA HENTSCHEL: That's it. Thank you.

BART CODDINGTON: To the board and to Ron and your staff, my comment is, to use a wellborn advertising phrase, just do it.

To the public, I was going to make a snarky comment about growing up, but looking at all the white hair around here, that's kind of a --

A couple of facts. Climate change is real. There are no new sources for water. And this is old technology, cleaning wastewater. Okay. Think about the Space Station. A gallon of water weighs 8 and a half pounds. Do you know how much fuel it would take to get one gallon of water up to the Space Station? There is not a bubbling brook in the Space Station where there's unlimited water. They are drinking purified wastewater and have been for years. So, you know, they are alive. Nobody's died up there. So I said this is old technology, and it's something that we just ought to get on with and do.

Thank you.

NATALIA HENTSCHEL: Thank you, Bart.

Next we have Niel Warren.
I apologize if I don't get your last name right.

Karl Meret.

KARL MERET: Thank you for letting me comment. My name is Dr. Karl Meret. I am a medical doctor and engineer. And I have tried to look at this very long impact report, and what it appears to me is that the alternatives that you considered that are talked about in Section 7, you said that getting water from Santa Cruz through the river, which is also supported by the Water for Santa Cruz community of engineers and others, is essentially briefly considered but dismissed.

In some ways, it appears to me that this is rather a whitewash of wanting to use treated wastewater, which is highly technical, has complexity, and is subject to failure and has very high operating costs.

What the environmental report doesn't seem to address is what the ongoing cost structure would be for the repairs. I've been living in Santa Cruz, and I am a businessman in Aptos and have lived in Aptos for 21 years, and the rates have gone up and up. I realize this is a real serious problem with the saltwater intrusion. The question is how to solve it.

Your solution essentially seems to be a done deal, which is just being whitewashed here in terms of really seriously looking at the other alternatives.
You state on page 717, I believe, that Alternative 2, which is getting water from the river, would meet almost all the objectives that you set out to do but perhaps not in a timely manner.

You state that you have a five-year program that started in 2015, will end 2020, that evaluates the water you are getting from Santa Cruz due to that project. Now, that's only 300 acre feet, and you are trying to achieve 1500 acre feet per year in recharge.

What I am wondering about is why you haven't more seriously considered this objective, which I think will be cheaper both in your construction costs and most likely operational costs, even though it will require building of some pipelines.

I think to make a real impact, I will probably have to submit this in writing, but I would strongly consider the board to reevaluate this project rather than trying to implement this highly technical process.

I am concerned about the health impact if it fails. The pollution of the aquifer needs to be addressed. I don't see that in the depth that it needs to. And once we have biological and bacterial contamination or viruses in the aquifer, which can happen, then there aren't enough things stated how to deal with that threat.
Thank you.

PUBLIC COMMENTER: You can have my three minutes, if you want to.

NATALIA HENTSCHEL: Thank you, Karl.

MONICA MCGUIRE: Hi, there. My name is Monica McGuire. I am a health coach and have lived in Santa Cruz for 22 years. And I have lived in Aptos and also seen my rates rise and rise. And I feel very frustrated having studied now for several years what the water transfer option is and not seeing any serious interest in what looks to be something entirely doable inexpensively and refuting what we heard presented here tonight that the why is so important because we don't get our water shipped here by anybody.

As far as I can tell, the Soquel Creek Water District has refused to take the easy water transfer system as a way to offset the problem, and I do not understand that. I have attended some meetings before and asked these questions and asked that this be looked at. And I feel deeply offended at the way this EIR is being put forward as though every other opportunity has been looked at and that this is what's needed.

My father was involved in reverse osmosis back 30 years ago. I've studied that. I do know how much more
expensive it is, just like the desalination project was for so long, and I don't believe that there's been the very simple explanation of what I read in all of the information that it's important to stay separate from Santa Cruz City Water District, et cetera, because we live in a town that has tremendous mediation options. So saying that this district wants to stay separate from the rest of the county makes no sense to me.

I believe that it's really simple, if there's distrust of any of the other water districts, that we could easily sit down and, with contractual outcomes, remove the fears of becoming dependent on Santa Cruz City or any other area of the county in order to share the abundant water that flows here.

I was raised in Southern California, a real desert, and although we have drought conditions here, we often have extreme amounts of water washing the fish out to sea and other problems, which the water transfer solution beautifully addresses -- beautifully, elegantly, simply, and inexpensively. And I am someone who has studied water more than most people, but I am not a scientist, and it's evident in every way that I've looked at it.

I ask that we all talk to our neighbors and look at the waterforsantacruz.com simple videos which explain
this brilliantly elegant and one-tenth-the-cost system in
order to get a ground swell of more people saying please
don't go forward with an expensive EIR problem, et cetera,
with all the potential health problems that are inherent
in adding more chemical use to our lives. We don't need
more chemical use. We need less.

NATALIA HENTSCHEL: Thank you, Monica.

MONICA MCGUIRE: Thank you.

NATALIA HENTSCHEL: I apologize. I cannot make
out the first name. It starts with a "B" and, the last
name, Steinbruner.

BECKY STEINBRUNER: Thank you. My name is Becky
Steinbruner. I live in the hills of Aptos. I've lived
there with my family for 33 years. I am a customer of
PureSource Water company, a small privately owned water
company that also gets water from the Purisima Aquifer.

I have several concerns about this. First of
all, I want to request that the public be granted more
time to view this very hefty document. 45 days is the
minimum time required by law, and we are allowed to ask
for more, up to 60 days. So I am formally requesting an
extension of public comment time.

I have concerns about the scoping reports. The
comments are not readily available, and on the disk in the
library, they are not there. It's not able -- you are not
able to view them in the appendices as Appendix A. The public needs to be able to see those documents themselves and not just rely on the summaries that are presented by staff.

I have concerns about the proposed horizontal drilling technique to be used to put in the 11 miles of pipeline for this project. How will those -- how will sensitive archaeological areas be treated if there's been horizontal drilling? How would toxic contaminated soils that may not be known be monitored in horizontal drilling?

I feel that the real noise of the reverse osmosis pumps and the injection pumps at the wells are not being made public, not really being truthfully presented to the public. That's Pure Water Santa Clara on Zucker Road. Those pumps run at 89 decibels 24-7. That is well beyond the county's noise limit and there is no excuse to say it's unavoidable. If you live next to it, you would not be happy with this.

I also feel that the possibility of nitrosamine, pollution of a highly carcinogenic compound that is made in the disinfection process, is not being addressed in the document.

And, overall, I think this document does not address the operation of any of this facility but rather focused way too much on construction only. If it's built,
the public will be dealing with its operation long into the future.

The National Water Research Institute recommended a pilot project be built first last September when they did a presentation and reviewed the project. That's not what's happening here.

May I have one minute?

NATALIA HENTSCHEL: Thank you, Becky.

At this time we are going to allow everyone else to finish through. Everyone gets three minutes. Again, your comments can be provided in written form.

BECKY STEINBRUNER: All right. I just want to say I don't think this accomplishes the project goals according to the model.

NATALIA HENTSCHEL: Thank you, Becky.

Next we have Ken Pomper.

KEN POMPER: Hello. I am Ken Pomper. I have a very limited comment. The EIR does not currently include an ambient noise study along Arlington Drive, specifically the backside of the homes there. And the ambient noise study that was done for the Willowbrook Lane recharge was done at a much busier intersection than the environment by the Arlington Drive homes. So I would request that an ambient noise study baseline be done on Arlington Drive hopefully behind the homes because the ambient noise is
extremely low there, so that we know the baseline for
that.

Thanks.

NATALIA HENTSCHEL: Thank you, Ken.

Wayne Stanton.

WAYNE STANTON: Wayne Stanton. I think everybody
knows who I am.

I just want to comment on -- I am unhappy about
this. I thought it was a public meeting, we were going to
ask questions and get answers. That's not happening. It
didn't happen at the scoping meeting.

I am also unhappy that I write a letter to the
EIR and they send it to the Soquel Creek District. I'd
much rather send it directly to the EIR pipe people.

And I'd like to know if this water -- this
peripheral water that's coming from the sewer treatment
plant to us, could we drink it just like that, or does it
have to be sent into the ground? And if it has to be put
in the ground, how long is it gonna be before you just
start giving it to us? I have those kind of concerns.

And the noise and the vibrations that go on at
the yard right now, it's too much, and to put another
plant, a bigger plant right in the middle of a community
like that is just not right.

I would like to see more research done on desal.
I know it's expensive, but all of us property owners, we've lost enough value already just in the fact of this -- already just in the fact of what's happened.

If this works, which is experimental, how long will it be before we can go back to having lawns and vegetable gardens? I would like to have those questions answered.

NATALIA HENTSCHEL: Thank you, Wayne. I believe it's John Dickinson.

JOHN DICKINSON: My name is John Dickinson. I am a Soquel resident. Full disclosure. I have done volunteer work with the Soquel Creek Water District on various studies and things like that are -- if they looking for input from consumers.

About the time I was eight or nine years old, living in New Jersey, my father took me and my brother and sister up to the Wanaque Reservoir, which is where we got our water from where I lived, and he said, "You know, if we are not careful, this reservoir is going to empty out. We are not going to be able to keep refilling it."

Anyone who looks at water will know that groundwater is a rather fragile source. For that matter, so is a lake. Lake Erie has sunk by about 15 feet over the last several years. Water is a fragile resource. And by sending very purified wastewater out to sea, which is
what we are doing now, we are really losing an opportunity
to use that water.

When I entered my senior year of high school, I
took a chemistry course, and my chemistry teacher,
Carl Young -- I'll never forget him since I'm bald and he
had this big, wavy blond hair -- he had just come from a
field trip to a wastewater treatment plant where they were
purifying water. He said it was just tasty and just fine.
That was 57 years ago. So this is not new technology. It
is not a new idea. It's been done before.

Whoever brought up the idea of impurities going
into the water and then being put back into the aquifer
doesn't understand how ground works, how the soil of our
earth works. It is a purification system for water as it
stands right now. Think about when a deer takes a pee in
the woods. What happens to the water? Just think about
it. It goes back to the aquifer.

So, anyway, I just wanted to say that. I think
this is a very smart project. There are projects, by the
way, that do this already all around the country. There
are also projects that simply take the effluent from the
wastewater treatment plants and put it upstream from where
the water is taken out of rivers to feed cities. So
there's plenty of this being done. It's not a new idea,
and it is a damn good idea.
Thank you.

NATALIA HENTSCHEL: Okay. At this time I do not have any more speaker cards.

Is there anyone who has not already provided comment that would like to submit their speaker card?

Okay. Nancy Stucker.

NANCY STUCKER: Yeah. My name is Nancy Stucker. And I also noticed that there was no mention of operating noise or vibration in this summary.

I am also wondering why there is mention of a concrete masonry wall around the Annex site to mitigate noise during construction but nothing suggested like that for the Chanticleer site, thereby making the Annex site look a lot better than the Chanticleer site, but no wall is proposed around the Chanticleer site. Why would that be? And the freeway is on one side of it on top of that. But still it looks like the Annex site, only a 2.5-month period for extra noise there. So there's no explanation of that.

I think this summary is written in favor of the Annex site. It really leans that way, and I think that's very unfortunate.

It also says that there are homes located within 50 feet of the Chanticleer site and the West Annex site but there is no mention of the zoning of these areas, nor
how many homes are within 50 feet of the Annex site versus within 50 feet of the Chanticleer site.

And, finally, there's not much mention at all in the comments, in the summary about the Santa Cruz Wastewater Treatment Facility option, Option Configuration 1. No. I'm sorry. And so I am assuming that if it's not mentioned, there are no problems. I don't know. It's all really focusing on Chanticleer and the Annex and making the Annex look better than Chanticleer when I don't think it is at all.

NATALIA HENTSCHEL: Thank you very much.

Any other speaker cards from anybody who has not already spoken?

Okay. Well, thank you very much. We greatly appreciate your participation in this meeting tonight. The open house is available in the other room until 8:00. Again, that's an opportunity to speak one-on-one with project team members and ask any clarifying questions that you have. There are comment cards and a comment station in that location. So please be sure to submit your comment tonight, if you have the opportunity to do so, but if you'd like to take that comment card home, you'll notice you'll be able to fold that up and stick it straight in the mail. The address is there as well. Be sure to check out the website, e-mail your comments as
well, and take any of the documents that you see provided
for you at the sign-in table and share them with your
groups and organizations and your neighbors.

We appreciate your continued participation in
this project. We know many of you have been following
this since scoping, and we look forward to seeing you
again.

Thanks again.

---oooOooo--
STATE OF CALIFORNIA )
 ) SS:
COUNTY OF SANTA CRUZ )

I, Cary Blue LaTurno, hereby certify that I was present and took down correctly in stenotype to the best of my ability all the proceedings in the foregoing-entitled matter; and I further certify that the annexed and foregoing is a full, true, and correct statement of such testimony.

Dated at Santa Cruz, California, on August 1, 2018.

_______________________________
Cary Blue LaTurno

CSR No. 9681
3.109 Response to Comments from Draft EIR Hearing Oral Commenters (July 31, 2018) (Comment Set H)

Bart Coddington
H-1 See the response to comment letter I-6. The oral comment provided does not raise a concern related to physical impacts of the Project or to any environmental issue related to the Project not included in the commenters written comments.

Karl Maret
H-2 See the response to comment letter I-33. The oral comment provided does not raise a concern related to physical impacts of the Project or to any environmental issue related to the Project not included in the commenters written comments.

Monica McGuire
H-3 See the responses to comment letters I-37 through I-40. The oral comment provided does not raise a concern related to physical impacts of the Project or to any environmental issue related to the Project not included in the commenters written comments.

Becky Steinbruner
H-4 See the responses to comment letters I-72 through I-79. The oral comment provided does not raise a concern related to physical impacts of the Project or to any environmental issue related to the Project not included in the commenters written comments, with the exception of the following.

Regarding the potential environmental impacts associated with directional drilling, this technique would be used for pipeline construction where it is not feasible or desirable to perform open-cut trenching, or install pipes on bridges, as discussed in EIR Chapter 3, Project Description. Specifically regarding potential archaeological resources impacts associated with directional drilling, EIR Impact 4.5-2 addresses potential impacts to known archaeological resources that may be in the vicinity of some potential pipeline alignments and also addresses potential discovery of previously unknown cultural resources. Implementation of Mitigation Measures 4.5-2a and 4.5-2c reduce potential impacts to such resources by ensuring that site constituents are identified in the Project area prior to Project implementation and either avoided during construction, and/or appropriately treated; and by ensuring that if archaeological resources were identified during ground disturbing activities, construction would halt, a qualified archaeological consultant would assess the find, and appropriate actions (including consideration of avoidance) would be enacted.
Specifically regarding potential to encounter contaminated soils during directional drilling activities, EIR Impact 4.9-3 considers such potential and reduces potential impacts to less than significant levels through the implementation of Mitigation Measures 4.9-3a (Health and Safety Plan), and 4.9-3b (Soil Management Plan). These plans would ensure that workers are provided appropriate training in the recognition and response to encountering hazardous materials, and that plans are in place that provide procedures for the testing, handling, and disposal of hazardous materials.

Regarding potential noise impacts associated with Project operation; please see the response to comment I-40-25.

Ken Pomper
H-5 See the response to comment letter I-56.

Wayne Stanton
H-6 See the responses to comment letters I-65 to I-71. The oral comment provided does not raise a concern related to physical impacts of the Project or to any environmental issue related to the Project not included in the commenters written comments, with the exception of the following.

Regarding the format of the EIR public meeting, please see the response to comment I-37-1. Regarding preference of submittal of EIR public comments to the District’s EIR consultant rather than to the District, this comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required.

Regarding treatment technique and retention time, the project considers an advanced purification system capable of treating secondary effluent to meet State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) recycled water standards for groundwater replenishment via recharge.

John Dickinson
H-7 This comment does not raise a concern that relates to physical impacts of the Project or to any environmental issue related to the Project and so no response is required. This comment is noted.

Nancy Stucker
H-8 See the responses to comment letters I-80 and I-81. The oral comment provided does not raise a concern related to physical impacts of the Project or to any environmental issue related to the Project not included in the commenters written comments.
CHAPTER 4
EIR Text Revisions

The following changes to the text of the Draft Environmental Impact Report (EIR) are made as a staff-initiated text change, in response to comments on the Draft EIR, or are included to clarify the Draft EIR text. For each change, new language is double underlined, while deleted text is shown in strikethrough.

Chapter 1, Summary

Section 1.2, Summary of the Proposed Project

In response to comments I-7-1 and I-7-22, EIR page 1-2, paragraph 1 has been revised:

The District’s groundwater supply is currently in a state of critical overdraft and the District has declared a Critical Overdraft Groundwater Emergency (ongoing since 2014), meaning more water has been extracted from the aquifers than is added by the natural rate of recharge via rainfall, resulting in depressed groundwater levels. In addition, and related to the overdraft conditions, the District has detected seawater intrusion in its groundwater supply aquifers at some coastal monitoring wells and recent geophysical mapping has confirmed. Newer data now shows the seawater intrusion has not only been detected on shore, but that it is also occurring along the entire coastline of the District’s service area immediately offshore. Hydrologic analysis and evaluations have concluded that a supplemental water supply is required to restore groundwater levels, and aid in meeting the mandates of the Sustainable Groundwater Management Act (SGMA) that the basin be sustainable by 2040. Based on current hydrologic evaluations and its desired level of risk/uncertainty, the District plans to limit its net average groundwater pumping to no more than 2,300 acre-feet per year (afy) to contribute to basin recovery based on the proportion of its basin consumptive use; the District would need to secure approximately 1,500 afy of supplemental supply to achieve this pumping goal (WSC, 2015). An estimated 3,000 afy of supplemental supply could be required to address basin-wide groundwater overdraft. Plans to achieve basin-wide sustainability are currently being evaluated and refined through an independent effort under the Santa Cruz Mid-County Groundwater Agency (MGA).

In response to comment I-7-2, EIR page i-2,

In response to comments S-1-2, S-1-3, I-7-3 through I-7-5, EIR pages 1-6, 1-7, 1-27, Table 1-1 (and table footers on pages 1-6 through 1-31) have been revised:
<table>
<thead>
<tr>
<th>Impact</th>
<th>Significance Determination</th>
<th>Mitigation Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Air Quality, 4.3</strong></td>
<td></td>
<td><strong>TABLE 1-1</strong>  <strong>SUMMARY OF PROJECT-LEVEL IMPACTS AND MITIGATION MEASURES</strong></td>
</tr>
<tr>
<td><strong>Impact 4.3-1</strong>: The Project would generate emissions of criteria air pollutants that could contribute to a violation of an ambient air quality standard during construction.</td>
<td>LSM</td>
<td><strong>Improvement Measure 4.3-1c applies to all Project components.</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Improvement Measure 4.3-1c. Construction Dust Best Management Practices.</strong></td>
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<tr>
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<td></td>
<td>To the extent feasible, the District should implement the following best management practices during construction:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Prohibit all grading activities during periods of high wind (over 15 mph)</td>
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<tr>
<td></td>
<td></td>
<td>• Water all active construction areas at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations, or hydro-seed area.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Maintain at least 20” of freeboard in haul trucks.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cover all trucks hauling dirt, sand, or loose materials.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Plant vegetative ground cover in disturbed areas as soon as possible.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cover inactive storage piles.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Install wheel washers or other appropriately effective track-out capture methods at the construction site for all exiting trucks.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Post a publicly visible sign which specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the Air District shall be visible to ensure compliance with Rule 402 (Nuisance).</td>
</tr>
<tr>
<td><strong>Impact 4.3-1</strong>: The Project would generate emissions of criteria air pollutants that could contribute to a violation of an ambient air quality standard during construction.</td>
<td>LSM</td>
<td><strong>Mitigation Measure 4.3-1a applies to all Project components.</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Mitigation Measure 4.3-1a: Construction Emissions Reduction Plan.</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The District (and/or its construction contractor(s)) shall develop and implement a Construction Emissions Reduction Plan to substantiate that Project construction-related NOx emissions would not exceed the Monterey Bay Air Resources District (MBARD)’s significance threshold of 137 pounds per day. The plan shall identify a feasible approach to reduce daily emissions that includes limits on the amount of construction activity that shall be conducted simultaneously on any given day, and if necessary to reduce emissions to below the NOx significance threshold, include a commitment for certain diesel-fueled off-road construction equipment of more than 50 horsepower to meet U.S. Environmental Protection Agency (USEPA) Tier 4 emission standards, and/or a commitment to use alternative fuels for certain construction equipment and vehicles.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The plan shall identify the parameters for phasing construction activities associated with each of the Project components to reduce daily construction emissions of NOx. For example, limiting daily construction activities to activities at one pipeline site and at either the Chanticleer Site or at one of the well sites would be sufficient to reduce NOx emissions to less than 137 pounds per day. In addition,</td>
</tr>
<tr>
<td>Impact</td>
<td>Significance Determination</td>
<td>Mitigation Measure</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Impact 4.3-2: The Project would not generate a long-term increase of criteria pollutant emissions during operations.</td>
<td>LS</td>
<td>No mitigation required.</td>
</tr>
<tr>
<td>Impact 4.13-3: Operation of the Project could not result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance.</td>
<td>LS</td>
<td>No mitigation required.</td>
</tr>
</tbody>
</table>

Although off-road construction equipment at the Chanticleer, Headquarters-West Annex, SC WWTF, Willowbrook Lane Recharge Well, and Monterey Avenue Recharge Well Sites would be required to meet USEPA Tier 4 emission standards or otherwise be equipped with Level 3 diesel particulate filters per requirements of Mitigation Measure 4.3-4, the Construction Emissions Reduction Plan may include an additional commitment to use a certain percentage of Tier 4 compliant equipment and/or equipment fueled by alternative fuels associated with pipeline construction. The identified construction phasing parameters and the percentage of Tier 4 compliant equipment and/or equipment fueled by alternative fuels associated with pipeline construction would be substantiated within the Plan to define how the resulting emissions would be less than 137 pounds NOx per day using either the air emissions calculations prepared for the Environmental Impact Report or other air emissions calculations estimated using the CalEEMod emissions model.

If the Plan includes a commitment that a certain percentage of pipeline-related off-road equipment would be Tier 4 compliant and/or fueled by alternative fuels, then it shall identify the initial pipeline construction equipment listing with each off-road unit’s horsepower, certified tier specification status, and the associated maximum daily NOx emissions. As new or replacement construction equipment are required, the District shall document each unit’s horsepower, certified engine tier status, and associated maximum daily NOx emissions, consistent with the Plan prior to use on the Project.

NOTES:
B = Beneficial  LSM = Less than Significant impact with Mitigation  NI = No Impact
LS = Less than Significant impact, no mitigation required  SU = Significant and Unavoidable Impact with Mitigation
SU = Significant and Unavoidable Impact
Section 1.5, Areas of Controversy and Issues to be Resolved

In response to comment I-56-7, EIR page 1-32, bullet 1 has been revised:

- **Project Location and Community Character**
  
  Comments were received that requested additional information regarding the potential effects of a purification facility in or near a residential neighborhood setting, including potential impacts related to: hazardous materials; water, noise, light, and air pollution; ground vibration; soil, and-geology, and seismological issues; increased traffic; land use compatibility; and neighborhood aesthetics, among others.

  Chapter 3, *Project Description*, provides a detailed description of the Project components under consideration, the construction process, operational requirements, and schedule. For example, the Project description includes a list of chemicals that could be required for Project operation, along with their purpose and volumes.

  Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, provides a project-level analysis of potential effects on the environment for each of the Project components identified in the Project description. Chapter 4 is organized by environmental topic, and addresses each of the items identified above. For example, Section 4.9, *Hazards and Hazardous Materials*, addressed the storage, handling, and use of hazardous materials, and measures designed to prevent and respond to an accidental release. Similarly, Section 4.12, *Land Use and Recreation*, explains that public utility facilities (e.g., water purification facilities and associated infrastructure) are allowable uses under the zoning regulations pertinent to the project sites under consideration.

In response to comment I-79-11 EIR page 1-34, last bullet has been revised:

- **Response to Comments, and Final EIR, and Project Approval Determination**

  Following close of the public comment period, responses to comments received during the Draft EIR comment period will be prepared and, together with any corresponding revisions to the Draft EIR, will constitute a Final EIR. The Final EIR will be considered and acted upon by the District's Board of Directors at a noticed public hearing. After the Board has acted upon the Final EIR, it may make a decision regarding whether to approve the Project. It is noted that public comments have been submitted in response to the Draft EIR requesting the decision regarding project approval be subject to a vote by Soquel Creek Water District ratepayers. While not an area of controversy that relates to a physical environmental effect requiring consideration in the EIR, it is an issue raised by some public commenters.

Chapter 2, Introduction

Section 2.1, Introduction

In response to comment L-1-13, EIR page 2-1, paragraph 1 has been revised:

The Soquel Creek Water District (District) is evaluating the Pure Water Soquel: Groundwater Replenishment and Seawater Intrusion Prevention Project (Project), an advanced purified groundwater replenishment project, to supplement natural recharge of
the Santa Cruz Mid-County Groundwater Basin (Groundwater Basin) with purified water. The Project would help increase the sustainability of the District’s groundwater supply, which it currently relies upon for 100 percent of its water supply. The Project would reduce the degree of overdraft conditions in the Santa Cruz Mid-County Groundwater Basin, protect against and aid in preventing further seawater intrusion of the groundwater basin, and promote beneficial reuse by reducing discharge of treated wastewater to Monterey Bay National Marine Sanctuary (Monterey Bay MBNMS). The Project facilities include: water treatment facilities; pump stations and pipelines for the conveyance of source water, purified water, and brine; and recharge and monitoring wells. The Project is designed specifically to help the District meet its obligations under the Sustainable Groundwater Management Act (SGMA) to reduce net groundwater withdrawals to levels that would facilitate achievement of sustainable groundwater levels by 2040, and in a manner consistent with its Community Water Plan goals.

As a staff-initiated text change, EIR pages 2-29 through 2-23, Table 2-1, row “[Name Withheld] (January 5, 2017), column “Commenter, Correspondence Submitted by Mail (cont.)” have been revised:

[Name Withheld]: Becky Steinbruner (January 5, 2017)

Section 2.2, Background

As a staff-initiated text change, and in response to comment L-1-24, EIR page 3-11, Table 3-2, row “1”, column “SC WWTF” has been revised:

Tertiary Treatment System

• Secondary effluent pump station
• EQ tank (24 ft. in height)
• UF or MF system
• Tertiary ultraviolet (UV disinfection system)
• Tertiary effluent pump station
• Electrical and control room

These components would be sited on an unenclosed concrete pad. The UF/MF and UV AOP systems would be covered by a canopy.

Total Footprint: 15,000 ft² 6,000 ft²

Chapter 3, Project Description

Section 3.1, Introduction

In response to comment L-1-13, EIR page 3-1, paragraph 1 has been revised:

The Soquel Creek Water District (District) is evaluating an advanced purified groundwater replenishment project, Pure Water Soquel: Groundwater Replenishment and Seawater Intrusion Prevention Project (Project), to supplement natural recharge of the Santa Cruz Mid-County Groundwater Basin (Basin or Groundwater Basin) with purified
water. The Project would help increase the sustainability of the District’s groundwater sources, which it currently relies on for 100 percent of its water supply. The Project would reduce the degree of existing overdraft conditions in the local groundwater basin, protect against further seawater intrusion of the groundwater basin, and promote beneficial reuse by reducing discharge of treated wastewater to Monterey Bay National Marine Sanctuary (Monterey Bay MBNMS). The Project would provide sufficient capacity to offset the groundwater supply impacts attributable to District pumping.

Section 3.5, Proposed Project Components

In response to comment L-4-3 and L-1-13, EIR page 3-7, paragraph 1 has been revised:

**Treatment Technology**

The District would utilize advanced purification technology to treat the source water to Indirect Potable Reuse (IPR) standards, which would allow for groundwater replenishment via recharge wells, as well for surface irrigation. Title 22, Social Security, Division 4, Environmental Health, Chapter 3, Water Recycling Criteria, Article 5.2. **Indirect Potable Reuse:** Groundwater Replenishment - Subsurface Application, of the California Code of Regulations (CCR) sets forth the treatment requirements for IPR projects involving groundwater replenishment. In accordance with the Title 22 IPR regulations, the Project would utilize ultrafiltration (UF) or microfiltration (MF) to yield a tertiary-level of treatment, followed by reverse osmosis (RO) and an ultraviolet light-based advanced oxidation process (UV AOP) to further purify the water to meet drinking water requirements and remove potential constituents of emerging concern (CECs). This level of purification would exceed recycled water requirements for surface irrigation application, as set forth in CCR Title 22, Article 3, Uses of Recycled Water. Pursuant to 22 CCR Section 60304, recycled water must undergo a disinfected tertiary level of treatment prior to use for surface irrigation, but need not undergo the additional RO and oxidation treatment process steps required for IPR. Backwash and cleaning wastes from the treatment system would be discharged into the sewer collection system. Brine from the treatment system would be piped back to the SC WWTF, blended with the treated effluent, and discharged via the existing outfall located about 1 mile offshore into the Monterey Bay MBNMS. The operation of treatment and brine disposal systems are described further in Section 3.7.1, **Facilities Operations and Maintenance**, below.

In response to comment L-1-21, EIR page 3-8, Table 3-1 has been revised:
TABLE 3-1
OVERVIEW OF TREATMENT CONFIGURATION OPTIONS AT EACH POTENTIAL LOCATION

<table>
<thead>
<tr>
<th></th>
<th>SC WWTF</th>
<th>Chanticleer Site</th>
<th>Headquarters-West Annex</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tertiary Treatment System (TTS)</td>
<td>AWPF</td>
<td>AWPF</td>
</tr>
<tr>
<td>Treatment Configuration 1</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Treatment Configuration 2</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Treatment Configuration 3a</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Treatment Configuration 4a</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Treatment Configuration 5</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

a Secondary effluent pump station and equalization tank would be required at SC WWTF.

As a staff-initiated text change, EIR page 3-22, Figure 3-8a, has been revised to reflect a modified Twin Lakes Church Recharge Well Site layout configuration (see revised figure on page 4-9).

As a staff-initiated text change, EIR page 3-23, Table 3-4 has been revised as follows:

TABLE 3-4
COMPONENTS FOR WELL SITE OPTIONS

<table>
<thead>
<tr>
<th></th>
<th>Willowbrook Lane</th>
<th>Monterey Avenue</th>
<th>Cabrillo College North</th>
<th>Cabrillo College South</th>
<th>Twin Lakes Church</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Recharge well (low pressure)</td>
<td>Backwash discharge pump</td>
<td>Motor control center</td>
<td>Two monitoring wells (in vicinity of the recharge well)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Backwash pump</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Backwash equalization basin/tank</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction footprint (ft²)</td>
<td>6,950</td>
<td>4,150</td>
<td>4,850</td>
<td>3,850</td>
<td>3,850/20,000</td>
</tr>
<tr>
<td>Permanent footprint (ft²)</td>
<td>6,950</td>
<td>3,850</td>
<td>4,850</td>
<td>2,250</td>
<td>2,850</td>
</tr>
</tbody>
</table>

NOTE:

a The number of wells could range from 1 to 3.
b Well siting locations and the number of wells are not dependent on treatment configuration.

Section 3.6, Project Construction

In response to comment L-1-27, EIR page 3-23, has been revised:

3.6.1 Site Access

Existing public roadways would provide the primary access routes to the SC WWTF, Chanticleer Site, Headquarters-West Annex Site, Recharge and Monitoring Well Sites,
pipeline construction areas, and staging areas. Highway 1 would be a major throughway for site access. Major arterials would include Highway 1/Mission Street, Capitola Road, Soquel Drive, Broadway, Bay Avenue, Park Avenue, Bay Street, and Cabrillo College Drive. The Project may require temporary lane closures for roads along the pipeline alignments in order to allow for pipeline installation.

As a staff-initiated text change, EIR page 3-24, paragraph 5 has been revised as follows to reflect the revised Twin Lakes Church Recharge Well Site layout:

Some trees would be removed within the staging and construction areas at the Headquarters-West Annex, Chanticleer, and/or Twin Lakes Recharge Well site. Tree removal could include trees that line the northern boundary of the Headquarters-West Annex Site, trees at the southwest corner of the Chanticleer Site, and/or approximately 13 to 19 trees along the eastern edge of the Twin Lakes Church parking lot. Tree removal would not be required at the sites of the potential Monterey Avenue Recharge Well, the Cabrillo College North Recharge Well, the Willowbrook Lane Recharge Well, or the SC WWTF.

In response to comment L-1-24, EIR page 3-26, Table 3-6, row “Tertiary treatment system”, column “Construction Area (Permanent)” has been revised:

| 15,000 sq. ft | 6,000 sq. ft |

In response to comment L-1-31, EIR page 3-26, Table 3-6, row “Secondary treated water conveyance”, column “Estimated Construction Equipment (Quantity)” has been revised:

- Skip loader (1)
- Back hoe/track hoe (1)
- Fork lift (1)
- Crane (1)
- Scissor lift (1)
- Wiring pulling machine (1)
- Concrete pumping equipment (1)
- Concrete/industrial saw (1)
- Generator (1)

In response to comment L-1-32, EIR page 3-31, paragraph 1 has been revised:

**Pipeline Installation**

The District has committed to requiring its contractors to follow American Water Works Association (AWWA) and American Railway Engineering and Maintenance-of-Way Association (AREMA) standards in construction of Project pipelines. The AWWA standards specify the acceptable materials, sizes, placement, and encasement requirements for pipelines. These standards also establish the appropriate separation distances from other existing underground utilities such as underground electrical lines, sanitary sewer lines, and water mains. The AREMA standards provide guidance for construction and operation of rail systems, including for the placement of underground utilities, such as water pipelines, within rail alignments.
Twin Lakes Church Recharge Well Site

Figure 3-8b
Recharge Well Conceptual Site Plans
This page intentionally left blank
As a staff-initiated text change, and in response to comment L-1-31, EIR page 3-35 has been revised to include the following new paragraph before the heading “Construction Workforce”:

**Power Supply**

It is anticipated that some construction equipment and support facilities (e.g., construction trailer) for work at the treatment facility and recharge well sites would be powered by electricity obtained via temporary connection to the existing electrical grid. However, as reflected in Table 3-6, it is assumed that generators could be required in the interim period between commencement of Project construction activities and establishment of the temporary electrical grid connection. It is assumed further that a generator would be required at each pipeline construction site.

As a staff-initiated text change, EIR page 3-37 has been revised to include a new paragraph which addresses well testing water:

Aquifer testing would be conducted to determine the recharge capacity at the selected test well sites, and to estimate travel times of recharge water to two monitoring wells. The testing would include the use of potable water from the local private fire hydrant at a rate sufficient to maintain a desired water level in the well. Potable water from the local private fire hydrant would be drawn from the District’s water supply and would originate from groundwater wells extracting water from predominantly the same aquifer formations as planned for test well recharge. While not required by the State, the injection of water for hydraulic testing would be performed in accordance with EPA requirements for Class V injection wells. The potable water would be dechlorinated and filtered within the portable storage tanks for particulate matter prior to recharge. A residual chlorine monitor with an automated shut off valve would be utilized to ensure dechlorination is completed prior to transferring the water to the test well. Monitoring would include, among other things, measuring the influent and effluent chlorine concentrations at 30 minute intervals using a chlorimeter. Effluent chlorine concentrations would be controlled by adding sodium thiosulfate to the equalization tank, as needed, at 30 minute intervals. Tracer chemicals would not be introduced into the recharge water used for the testing.

**Section 3.7, Operations and Maintenance**

In response to comment L-1-13, EIR page 3-42, paragraph 2 has been revised:

Waste residuals from the advanced purification process would be returned to the SC WWTF. The facility was originally commissioned in 1928 as a primary treatment facility. In 1998, it was upgraded to a full secondary treatment facility, complete with UV disinfection. Treated, disinfected effluent is discharged to the Pacific Ocean (Monterey Bay MBNMS), 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 million gallons per day (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).

In response to comment L-1-13, EIR page 3-42, paragraph 5 has been revised:

The Project would reduce the overall volume of treated effluent discharged to Monterey Bay MBNMS via the SC WWTF outfall. However, with the brine flowing back into the system, the overall chemical and mineral concentrations of the effluent discharged from the outfall would increase.

Section 3.8, Intended Uses of the EIR

Based upon comment S-1-4, EIR page 3-45 has been revised as follows:

**State**

- State Water Resources Control Board (SWRCB) Stormwater General Construction Permit and Stormwater Pollution Prevention Plan
- SWRCB consideration for Clean Water State Revolving Fund loan and review of environmental review requirements that must be completed to apply for a loan
- Title 22 compliant Water Recycling Requirements issued by the Central Coast Regional Water Quality Control Board following approval of an Engineering Report by the Division of Drinking Water
- Regional Water Quality Control Board (RWQCB) Section 401 Water Quality Certification and/or a Report of Waste Discharge
- California Department of Fish and Wildlife Section 1600 Streambed Alteration Agreement
- California Coastal Commission Coastal Development Permit
- California Department of Transportation encroachment permit for constructing pipeline with any state rights-of-way
- **Permits or registration with the California Air Resources Control Board (CARB) may be required for portable construction equipment with engines 50 horse power or greater**
Chapter 4, Environmental Setting, Impacts, and Mitigation Measures

Section 4.2, Aesthetics

In response to comment I-56-4, EIR page 4.2-11, paragraph 1 has been revised:

Visual Character

The visual study area is large enough such that it encompasses several parks and neighborhoods with distinct visual character, including the Westside, Boardwalk, and Seabright/Midtown, neighborhoods of the City of Santa Cruz; the unincorporated Santa Cruz County communities of Live Oak, Soquel, and Aptos; and the City of Capitola. The general visual character of each area, in the vicinity of Project facilities, is described as follows:

In response to comment I-56-4, page 4.2-11, paragraph 1 has been revised:

- The Soquel and Aptos portions of the Project area also includes a blend of residential and commercial uses; however, commercial areas are more limited, primarily occurring along Soquel Drive and roads bisecting Highway 1. While the area does not have an untouched natural setting due to the dense presence of structures, utilities, and roads, a greater presence of mature trees in landscaping (compared to other areas near Project facility locations) provides a more naturalistic appearance than other Project areas. However, the density of development and mature trees limits views in most Project areas to the immediately surrounding area. The Cabrillo College area is an exception to the enclosed view, single family residential/commercial character of the area, consisting of a complex of large educational buildings and outdoor recreation areas, as well as an adjacent religious worship and education campus (Twin Lakes Church and School) dispersed throughout the area, providing a more sprawling developed character with more open views within the complex area.

In response to comment I-56-4, EIR page 4.2-28 (paragraph 2) has been revised:

Pipeline Alignments

The proposed pipeline alignments run along and cross streets within the Westside, Boardwalk, and Seabright/Midtown neighborhoods of the City of Santa Cruz, the unincorporated Santa Cruz County communities of Live Oak, Soquel, and Aptos; and the City of Capitola. Views within these areas are dominated by urban development. The open-cut trench method would be used for most of the pipeline construction. This method involves initial delineation and ground-clearing of the work area; grading or pavement cutting; excavation of the trench; placement of the pipe; backfilling of the trench; and restoration of the work surface. The appearance of pipeline construction sites, would include open trenches, soil stockpiles, and heavy construction vehicles and equipment. While pipeline construction sites are likely to be unsightly, similar construction activities are fairly typical of the urban setting and occur periodically for other reasons (such as road improvements or other utility upgrades/maintenance, etc.). Further, the location of
the pipeline excavation would advance along pipeline segments as work progresses, generally at a rate of 100 linear feet per day (see Section 3.6.4, Construction Activities, Construction Equipment, and Construction Workforce). Bridge crossings and use of trenchless technologies in limited areas would include similar equipment and activity levels, with work concentrated in a focused work area (rather than moving through a pipeline alignment reach) for up to approximately 10 to 30 working days per crossing. Following construction activities, all construction debris and waste would be removed from sites and disturbed areas would be returned to their approximate pre-construction conditions (see Section 3.6.5, Excavation, Stockpiling of Soils, and Spoils Disposal). Once construction is complete, pipelines would be buried or substantially within the annular space of bridges, and would not be visible; or could be slightly visible where attached to bridges. Given that construction activities would be temporary and fairly typical of the urban setting, and that pipelines would not be visible following completion of construction, impacts on visual character and quality would less than significant.

Section 4.3, Air Quality

As a staff-initiated text change, and in response to comment L-1-31 related to the use of generators during Project construction, EIR page 4.3-17, Table 4.3-4 has been revised:

<table>
<thead>
<tr>
<th>Project Component</th>
<th>Project Emissions (pounds/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROG</td>
</tr>
<tr>
<td>Chanticleer AWPF</td>
<td>2.56</td>
</tr>
<tr>
<td>Recharge Well</td>
<td>2.34</td>
</tr>
<tr>
<td>Pipelines</td>
<td>8.13</td>
</tr>
<tr>
<td>Total</td>
<td>13.00</td>
</tr>
<tr>
<td>MBARD Significance Threshold</td>
<td>137</td>
</tr>
<tr>
<td>Significant Impact?</td>
<td>No</td>
</tr>
</tbody>
</table>

| Source: ESA, 2018. See Appendix B. |

As a staff-initiated text change, and in response to comment L-1-31 related to the use of generators during Project construction, EIR page 4.3-17, paragraph 2 has been revised:

As shown in Table 4.3-4, maximum daily construction emissions of NOx would be approximately 243-245 pounds per day, which would exceed the MBARD’s significance threshold of 137 pounds per day, resulting in a significant impact related to the potential to cause a violation of an ozone and/or NO2 ambient air quality standard. Emissions of ROG, CO, PM10, and PM2.5 would not exceed the MBARD’s respective significance criteria; therefore, impacts associated with these pollutants would be less than significant. Implementation of Mitigation Measures 4.3-1a (Construction Emissions Reduction Plan) and 4.3-1b (Idling Restrictions) would reduce maximum construction-related emissions.
of NOx to less than the 137 pounds-per-day significance threshold. The maximum daily emission reductions would occur as a result of Project component phasing modifications and the potential use of off-road construction equipment that would meet USEPA’s most stringent emissions standards for NOx. Therefore, the impact would be less than significant with mitigation.

2 As of the date of this EIR, the District is continuing to evaluate the specific assemblage of Project components and pipeline alignments. Part of the purpose of the EIR is to evaluate the site options and provide information to inform and support the District’s decision regarding final Project design. Once the final Project configuration has been determined, the selected sites would be known and the design could progress to a more advanced level. At that time, the District (or the District’s contractor) would prepare the Construction Emissions Reduction Plan, based upon the site- and design-specific information. As the Construction Emissions Reduction Plan primarily concerns implementation phasing and/or the availability of high-tiered off-road construction equipment at the time of the construction period, to prepare the Plan before the final Project siting and design has been determined and prior to when the availability of construction equipment is known would be premature.

In response to comment S-1-3, EIR page 4.3-17, below last paragraph has been revised:

While not required to reduce a significant impact, at the request of MBARD, the District would endeavor to undertake the best management practices outlined in Improvement Measure 4.3-1c. These measures would further reduce Project dust emissions and minimize the potential for dust-related nuisance.

In response to comment S-1-3, EIR page 4.3-19, before the heading Impact 4.3-2 has been revised:

Improvement Measure 4.3-1c applies to all Project components.

Improvement Measure 4.3-1c. Construction Dust Best Management Practices.

To the extent feasible, the District should implement the following best management practices during construction:

- Prohibit all grading activities during periods of high wind (over 15 mph)
- Water all active construction areas at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure.
- Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days)
- Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations, or hydro-seed area.
- Maintain at least 2’0” of freeboard in haul trucks.
- Cover all trucks hauling dirt, sand, or loose materials.
- Plant vegetative ground cover in disturbed areas as soon as possible.
- Cover inactive storage piles.
4. EIR Text Revisions

- Install wheel washers or other appropriately effective track-out capture methods at the construction site for all exiting trucks.
- Post a publicly visible sign which specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the Air District shall be visible to ensure compliance with Rule 402 (Nuisance).

In response to comment S-1-2, EIR page 4.3-18, Mitigation Measure 4.3-1a has been revised:

**Mitigation Measure 4.3-1a: Construction Emissions Reduction Plan.**

The District (and/or its construction contractor(s)) shall develop and implement a Construction Emissions Reduction Plan to substantiate that Project construction-related NOx emissions would not exceed the Monterey Bay Air Resources District (MBARD)’s significance threshold of 137 pounds per day. The plan shall identify a feasible approach to reduce daily emissions that includes limits on the amount of construction activity that shall be conducted simultaneously on any given day, and if necessary to reduce emissions to below the NOx significance threshold, include a commitment for certain diesel-fueled off-road construction equipment of more than 50 horsepower to meet U.S. Environmental Protection Agency (USEPA) Tier 4 emission standards, and/or a commitment to use alternative fuels for certain construction equipment and vehicles.

The plan shall identify the parameters for phasing construction activities associated with each of the Project components to reduce daily construction emissions of NOx. For example, limiting daily construction activities to activities at one pipeline site and at either the Chanticleer Site or at one of the well sites would be sufficient to reduce NOx emissions to less than 137 pounds per day. In addition, although off-road construction equipment at the Chanticleer, Headquarters-West Annex, SC WWTF, Willowbrook Lane Recharge Well, and Monterey Avenue Recharge Well Sites would be required to meet USEPA Tier 4 emission standards or otherwise be equipped with Level 3 diesel particulate filters per requirements of Mitigation Measure 4.3-4, the Construction Emissions Reduction Plan may include an additional commitment to use a certain percentage of Tier 4 compliant equipment and/or equipment fueled by alternative fuels associated with pipeline construction. The identified construction phasing parameters and the percentage of Tier 4 compliant equipment and/or equipment fueled by alternative fuels associated with pipeline construction would be substantiated within the Plan to define how the resulting emissions would be less than 137 pounds NOx per day using either the air emissions calculations prepared for the Environmental Impact Report or other air emissions calculations estimated using the CalEEMod emissions model.

If the Plan includes a commitment that a certain percentage of pipeline-related off-road equipment would be Tier 4 compliant and/or fueled by alternative fuels, then it shall identify the initial pipeline construction equipment listing with each off-road unit’s horsepower, certified tier specification status, and the associated maximum daily NOx emissions. As new or replacement construction equipment are required, the District shall document each unit’s horsepower, certified engine tier status, and associated maximum daily NOx emissions, consistent with the Plan prior to use on the Project.
As a staff-initiated text change, and in response to comment L-1-31 related to the use of generators during Project construction, EIR page 4.3-20, paragraph 2 has been revised:

As shown in Table 4.3-5, the maximum cancer and non-cancer risks from Project-related DPM construction emissions exposure to nearby sensitive receptors varies by Project site. The maximum non-cancer risk would not exceed the significance threshold for construction at any of the Project sites, however, the maximum cancer risk would be approximately 104.121 in one million associated with construction at the Headquarters-West Annex Site. Construction at each of the Project sites, with the exceptions of the Twin Lakes Church Recharge Well Site and the Cabrillo College North and South Recharge Well Sites, would result in a cancer risk that would exceed the significance threshold. The associated construction-phase health risk impact is considered significant. Implementation of Mitigation Measure 4.3-4 (Equipment with Tier 4 Engines), which would require that all off-road construction equipment at the Project sites mentioned above have engines that meet USEPA’s most stringent emission standards for particulate matter or are otherwise equipped with Level 3 diesel particulate filters, would reduce maximum construction-related emissions of DPM due to construction at the Chanticleer, Headquarters-West Annex, SC WWTF, Willowbrook Lane Recharge Well, and Monterey Avenue Recharge Well Sites to levels that would reduce the associated cancer risk impacts to less than significant with mitigation. Refer to Table 4.3-6 for the mitigated cancer risks associated with Project construction.

As a staff-initiated text change, and in response to comment L-1-31 related to the use of generators during Project construction, EIR page 4.3-21, Tables 4.3-5 and 4.3-6 have been revised:

| Construction Site | Maximum Cancer Risk (# in one million)
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chanticleer Site</td>
<td>53.7 64.3</td>
</tr>
<tr>
<td>Headquarters-West Annex Site</td>
<td>104.0 120.6</td>
</tr>
<tr>
<td>SC WWTF Site</td>
<td>10.7 15.3 – 33.9 37.9b</td>
</tr>
<tr>
<td>Willowbrook Lane Recharge Well Site</td>
<td>52.0 71.1</td>
</tr>
<tr>
<td>Monterey Avenue Recharge Well Site</td>
<td>65.3 89.4</td>
</tr>
<tr>
<td>Twin Lakes Church Recharge Well Site</td>
<td>2.0 2.7</td>
</tr>
<tr>
<td>Cabrillo College North Recharge Well Site</td>
<td>1.3 1.6</td>
</tr>
<tr>
<td>Cabrillo College South Recharge Well Site</td>
<td>2.3 3.2</td>
</tr>
</tbody>
</table>

| Construction Site | Maximum Non-Cancer Risk (Chronic Hazard Index)
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a</td>
</tr>
<tr>
<td></td>
<td>Maximum Non-Cancer Risk (Chronic Hazard Index)</td>
</tr>
<tr>
<td></td>
<td>b</td>
</tr>
<tr>
<td>Chanticleer Site</td>
<td>0.04 0.05</td>
</tr>
<tr>
<td>Headquarters-West Annex Site</td>
<td>0.08 0.09</td>
</tr>
<tr>
<td>SC WWTF Site</td>
<td>0.02 – 0.03b</td>
</tr>
<tr>
<td>Willowbrook Lane Recharge Well Site</td>
<td>0.42 0.17</td>
</tr>
<tr>
<td>Monterey Avenue Recharge Well Site</td>
<td>0.15 0.21</td>
</tr>
<tr>
<td>Twin Lakes Church Recharge Well Site</td>
<td>0.02 0.03</td>
</tr>
<tr>
<td>Cabrillo College North Recharge Well Site</td>
<td>0.02 0.03</td>
</tr>
<tr>
<td>Cabrillo College South Recharge Well Site</td>
<td>0.01</td>
</tr>
<tr>
<td>Significance Thresholds</td>
<td>10.0 1.0</td>
</tr>
<tr>
<td>Exceeds Threshold?</td>
<td>Yes No</td>
</tr>
</tbody>
</table>

NOTES:

a Health risks for each site were not added to determine total risk, because sensitive receptors are unique to each individual site. There are no individual sensitive receptors that are within 1,000 feet of more than one construction site (i.e. all sites are at least 2,000 feet apart).

b Risk varies by configuration. Configurations 1 and 2 would result in 10.7 15.3 in one million cancer risk and non-cancer chronic hazard index of 0.03. Configurations 3 and 4 would result in 19.8 24.7 in one million cancer risk and non-cancer chronic hazard index of 0.03, and Configuration 5 would result in 33.9 37.9 in one million cancer risk and non-cancer chronic hazard index of 0.02.

Health risk calculations are provided in Appendix B.
### TABLE 4.3-6
**MAXIMUM HEALTH RISK FOR SENSITIVE RECEPTORS FROM CONSTRUCTION EMISSIONS — AFTER IMPLEMENTATION OF MITIGATION**

<table>
<thead>
<tr>
<th>Construction Site</th>
<th>Maximum Cancer Risk (# in one million)(^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chanticleer Site</td>
<td>2.6 3.0</td>
</tr>
<tr>
<td>Headquarters-West Annex Site</td>
<td>4.8 5.5</td>
</tr>
<tr>
<td>SC WWTF Site</td>
<td>0.5 – 1.9(^b) 0.6 – 2.1(^b)</td>
</tr>
<tr>
<td>Willowbrook Lane Recharge Well Site</td>
<td>3.8 4.3</td>
</tr>
<tr>
<td>Monterey Avenue Recharge Well Site</td>
<td>4.5 5.4</td>
</tr>
<tr>
<td>Significance Threshold</td>
<td>10.0</td>
</tr>
<tr>
<td>Exceeds Threshold?</td>
<td>No</td>
</tr>
</tbody>
</table>

**NOTES:**
\(^a\) Health risks for each site were not added to determine total risk, because sensitive receptors are unique to each individual site. There are no individual sensitive receptors that are within 1,000 feet of more than one construction site (i.e. all sites are at least 2,000 feet apart).
\(^b\) Risk varies by configuration. Configurations 1 and 2 would result in 0.5 0.6 cancer risk, Configurations 3 and 4 would result in 0.9 1.1 cancer risk, and Configuration 5 would result in 1.9 2.1 cancer risk.

Health risk calculations are provided in Appendix B.

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**Section 4.4.6, Biological Resources**

As a staff-initiated text change, EIR page 4.4-3, paragraph 5 has been revised due to modifications to the Twin Lakes Church Recharge Well Site layout configuration:

The proposed pipeline alignments are predominantly in paved streets, which provide little habitat for wildlife. Although paved roads themselves generally lack habitat for wildlife, common wildlife could occasionally cross roads in the study area to get to nearby landscaped habitat or non-native forest (i.e., eucalyptus woodland). Thus, developed areas often have similar wildlife species as the landscaped and non-native forest communities discussed below, but with lower rates of occurrence and on a transient basis. Construction sites for the water purification facility at SC WWTP and portions of the Headquarters-West Annex and Twin Lakes Church Recharge Well sites are in developed areas, as are the Monterey Avenue, Willowbrook, and Cabrillo College North, and Cabrillo College South, and Twin Lakes Church Recharge Well sites.

As a staff-initiated text change, EIR page 4.4-47, paragraph 3 has been revised due to modifications to the Twin Lakes Church Recharge Well Site layout configuration:

**Recharge and Monitoring Wells.** Construction of recharge wells at the Monterey Avenue, Willowbrook Lane, and Cabrillo College (North and South) sites, and Twin Lakes Church would occur on developed or highly disturbed property surrounded by urban activity, such as roads, sports fields and a neighborhood park. However, the sites such as Twin Lakes Church also include, or are adjacent to sites with mature trees and shrubs that could support nesting birds. Prior to mitigation, construction associated with the recharge wells could, therefore, have a significant impact on nesting birds.
As a staff-initiated text change, EIR page 4.4-47, paragraph 5 (on to page 4.4-48) has been revised due to modifications to the Twin Lakes Church Recharge Well Site layout configuration:

Special-status Bats

Special-status bats could be impacted if they are present within mature trees that are removed or pruned to accommodate Project construction, or within buildings that would be modified by the Project. Tree removal could be required at the Headquarters-West Annex and Twin Lakes Church Sites, and some sections of the conveyance pipeline. An abandoned building on the Chanticleer Site would be demolished, and structures at the District Headquarters and at the SC WWTF could be relocated. Trees have the potential to be affected at creek crossing locations or in roadway areas adjacent to eucalyptus groves, riparian habitats, parks, and other areas supporting mature trees. If removal were to occur during periods of winter torpor, any bats present would likely not survive the disturbance (Tuttle, 1991). This would be a significant impact.

In response to comment L-1-13, EIR page 4.4-64, paragraph 4 has been revised:

Operational impacts from Project implementation would be limited to changes in treated effluent discharged from the existing SC WWTF ocean outfall. As discussed in Impact 4.4-1, above, from the Project’s alterations to the effluent discharged into Monterey Bay MBNMS would not be expected to result in significant impacts to water quality or marine species in the vicinity of the discharge point. As described further in Section 4.11, Hydrology Resources - Surface Water (Impact 4.11-2), water quality constituent levels would be subject to a number of water quality regulations and standards, including those specified in the NPDES permit for SC WWTF effluent discharges. Through adherence to these requirements, the effluent water quality would remain in keeping with Ocean Plan objectives, and potential effects on sensitive natural marine communities would be less than significant.

As a staff-initiated text change, EIR page 4.4-67, paragraph 2 has been revised due to modifications to the Twin Lakes Church Recharge Well Site layout configuration:

Some trees could be removed within the staging and construction areas at either the Headquarters-West Annex Site, or Chanticleer Site. Tree removal could include trees that line the northern boundary of the Headquarters-West Annex Site, or trees at the southwest corner of the Chanticleer Site. Tree removal at the Monterey Avenue Recharge Well, the Cabrillo College Recharge Well, the Willowbrook Lane Recharge Well and the SC WWTF is not expected. However, Although tree removal at the Twin Lakes Recharge Well site could be required, the site is located outside the coastal zone and therefore would not be subject to the County of Santa Cruz tree protection ordinance.

As a staff-initiated text change, EIR page 4.4-68, Table 4.4-6, row 6 has been revised due to modifications to the Twin Lakes Church Recharge Well Site layout configuration:
### Table 4.4-6
**Summary of Potential Tree Removal**

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Treatment Configuration 1</th>
<th>Treatment Configuration 2</th>
<th>Treatment Configuration 3</th>
<th>Treatment Configuration 4</th>
<th>Treatment Configuration 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWPF (includes Brine PS and Purified Water PS)</td>
<td>Possible removal of tree cluster on SW corner of the site. Estimate the following: 3 Douglas fir, 2 oak, 1 unknown. No tree removal anticipated.</td>
<td>Possible removal of tree line on northern half of site. Estimate the following: 4 Douglas fir, 16 oak, 19 sycamore/aspen/cottonwood, 2 unknown. No tree removal anticipated.</td>
<td>Possible removal of tree cluster on SW corner of the site. Estimate the following: 3 Douglas fir, 2 oak, 1 unknown. No tree removal anticipated.</td>
<td>Possible removal of tree cluster on SW corner of the site. Estimate the following: 4 Douglas fir, 16 oak, 19 sycamore/aspen/cottonwood, 2 unknown. No tree removal anticipated.</td>
<td>No tree removal anticipated.</td>
</tr>
<tr>
<td>Monterey Recharge Well</td>
<td>No tree removal anticipated.</td>
<td>Same as Treatment Configuration 1</td>
<td>Same as Treatment Configuration 1</td>
<td>Same as Treatment Configuration 1</td>
<td>Same as Treatment Configuration 1</td>
</tr>
<tr>
<td>Willowbrook Recharge Well</td>
<td>Trees in middle of proposed lot. Estimate the following: 2 unknown species.</td>
<td>Same as Treatment Configuration 1</td>
<td>Same as Treatment Configuration 1</td>
<td>Same as Treatment Configuration 1</td>
<td>Same as Treatment Configuration 1</td>
</tr>
<tr>
<td>Cabrillo College Recharge Well</td>
<td>Possible removal of trees.</td>
<td>Same as Treatment Configuration 1</td>
<td>Same as Treatment Configuration 1</td>
<td>Same as Treatment Configuration 1</td>
<td>Same as Treatment Configuration 1</td>
</tr>
<tr>
<td>Twin Lakes Church Recharge Well</td>
<td>Possible removal of 13 to 19 trees.</td>
<td>Same as Treatment Configuration 1</td>
<td>Same as Treatment Configuration 1</td>
<td>Same as Treatment Configuration 1</td>
<td>Same as Treatment Configuration 1</td>
</tr>
</tbody>
</table>

**Section 4.6, Energy Conservation**

As a staff-initiated text change, and in response to comment L-1-31 related to the use of generators during Project construction, EIR page 4.6-7 (on to page 4.6-8), paragraph 3 has been revised:

Similar removal efficiencies for pharmaceuticals, and other CECs, and existing technology were reported by the World Health Organization in which an MF/RO process showed a removal range of 91 to 100 percent of detected pharmaceuticals and UV AOP had a reported removal range of 52 percent to 100 percent (Carollo, 2017).

Although the precise amount of construction-related direct energy consumption that would occur under the Project is unknown because the final Project configuration has not been selected, fuel use amounts that would be required for the Project have been estimated based on a conservative Project development scenario of: a tertiary treatment system and pump station at the SC WWTF; an AWPF at the Chanticleer Site; recharge and monitoring wells at each of the three Recharge Well sites; and approximately 11 miles of conveyance pipeline. It is estimated that off-road construction equipment would operate for a total of approximately 23,390 to 25,174 hours and would consume a total of approximately 61,687 to 64,808 gallons of diesel fuel at an average rate of 2.6 to 2.7 gallons per hour over the
construction period, which would occur in as few as 24 months. With regard to vehicle use during construction, workers’ personal vehicles would consume approximately 14,254 gallons of gasoline (assuming an average fuel economy of 20.7 miles per gallon) and heavy haul trucks would consume approximately 187,771 gallons of diesel fuel over the construction period (assuming an average consumption rate of 7.0 miles per gallon) (see Appendix B for all assumptions and fuel use factors). Under the conservative assumption that construction of each Project component in the development scenario would start on the same day, the maximum annual fuel use for off-road construction equipment and haul trucks would be up to approximately 153,060 \( \text{156,181} \) gallons of diesel fuel and construction workers’ personal vehicles would consume up to approximately 10,080 gallons of gasoline during the first year of the construction period.

**Section 4.8, Greenhouse Gas Emissions**

As a staff-initiated text change, and in response to comment L-1-31 related to the use of generators during Project construction, EIR page 4.8-12, paragraph 1 and Table 8-3 have been revised:

**Construction Emissions**

As shown in Table 4.8-3, GHG emissions generated by construction of the Project would total approximately 740 \( \text{803} \) metric tons CO\(_2\)e, which equates to a 50-year amortized annual average value of approximately 14 \( \text{16} \) metric tons CO\(_2\)e (refer to the Approach to Analysis - Construction Emissions discussion for details on the approach this analysis uses relative to short-term construction emissions; and Appendix B for all assumptions associated with the GHG construction emissions).

<table>
<thead>
<tr>
<th>Construction Emission Source</th>
<th>CO(_2)e (metric tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chanticleer AWPF</td>
<td>133.95 152.63</td>
</tr>
<tr>
<td>SC WWTF Facilities</td>
<td>55.55 73.24</td>
</tr>
<tr>
<td>Recharge Wells</td>
<td>129.65 156.24</td>
</tr>
<tr>
<td>Pipelines</td>
<td>420.81</td>
</tr>
<tr>
<td><strong>Total Emissions</strong></td>
<td><strong>739.95 803.07</strong></td>
</tr>
<tr>
<td><strong>50-Year Amortized Annual Average</strong></td>
<td><strong>14.80 16.06</strong></td>
</tr>
</tbody>
</table>

SOURCE: ESA, 2018. See Appendix B.

As a staff-initiated text change, and in response to comment L-1-31 related to the use of generators during Project construction, EIR page 4.8-13, paragraph 1 and Table 4.8-5 have been revised:

As shown in Table 4.8-5, the sum of the 50-year amortized construction GHG emissions and the total net operation emissions that would be associated with the Project is
approximately 405-406 metric tons CO₂e per year. These emissions would be less than the 1,100 metric tons per year significance threshold; therefore, a less-than-significant impact would occur, and the Project would not be considered to contribute substantially to the primary and secondary adverse effects of climate change, such as increases in global temperatures, global rise in sea level, ocean acidification, impacts on agriculture, changes in disease vectors, and changes in habitat and biodiversity.

<table>
<thead>
<tr>
<th>Emissions Source</th>
<th>CO₂e (metric tons per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-Year Amortized Construction Emissions</td>
<td>15 16</td>
</tr>
<tr>
<td>Total Net Operational Emissions</td>
<td>390</td>
</tr>
<tr>
<td>Total Project Emissions</td>
<td>405 406</td>
</tr>
<tr>
<td>Significance Threshold</td>
<td>1,100</td>
</tr>
<tr>
<td>Significant Impact?</td>
<td>No</td>
</tr>
</tbody>
</table>

SOURCE: ESA, 2018. See Appendix B.

Section 4.10, Hydrology Resources – Groundwater

In response to comment I-33-6, EIR page 4.10-22, before the heading Salt and Nutrient Management Plan has been revised:

SWRCB Science Advisory Panel

The Recycled Water Policy adopted in 2009 was intended to support sustainable local water supplies and promote the use of recycled water in a manner that is protective of human health and the environment. The Policy recognized the challenge of addressing the potential risks of unregulated chemicals referred to as constituents of emerging concern (CECs), that effects of CECs on human health and aquatic life is a rapidly evolving field, and that regulatory requirements need to be based on best available science. Consequently, the Policy required SWRCB to convene the Science Advisory Board to make CEC monitoring recommendations for recycled water. An initial six-member Panel convened in 2010 and delivered their initial recommendations in 2012. In 2013, the Policy was amended to include monitoring requirements for CECs based on the recommendations of the Science Advisory Panel. Because of the rapid evolution of CEC science and measurement technology, the Policy also required that a Science Advisory Panel revisit and update CEC monitoring recommendations, as needed, every five years. In December 2016, the SWRCB directed staff to reconvene the Science Advisory Panel to update its recommendations for monitoring CECs in recycled water and to update the Recycled Water Policy considering changes that have taken place since 2013. In July 2017, a Panel of seven national experts in the fields of chemistry, biochemistry, toxicology, environmental microbiology, epidemiology, risk assessment, and engineering with more than 150 years of combined experience investigating CEC issues, was convened to update and expand upon the original Panel recommendations currently.
specified in the Policy. The report issued by the Science Advisory Panel in April 2018 is the first update following the initial recommendations (SCCWRP, 2018).

Summary of 2018 Science Advisory Panel Regarding CEC’s
The SWRCB Science Advisory Panel reconvened in 2017 to update recommendations for monitoring CECs in recycled water and to update the Recycled Water policy (Policy) based on changes since the last policy update in 2013. The 2018 Panel updated its recommendations from 2010 and expanded their recommendations to include surface water augmentation (SWA) and all non-potable reuse applications in the State of California allowed under Title 22. The Panel also evaluate potential risks for all routes of human exposure to CECs and explored the state-of-the-science regarding the likelihood of human health impacts posed by antibiotic resistant bacteria/antibiotic resistance genes (ARB/ARGs) in recycled water.

The Panel published a report of findings and conclusions regarding evaluation and monitoring of CEC’s in water reuse projects (SCCWRP, 2018). The 2018 report addresses public health protection, which requires that microbiological pathogens and some chemicals in municipal wastewater be attenuated before potable reuse and discharge to the environment. Water recycling practices require appropriate treatment barriers and monitoring strategies to minimize exposure to a wide range of CECs that may be harmful to human health (SCCWRP, 2018).

As described in detail in the Science Advisory Panel’s 2018 report (SCCWRP, 2018), the reconvened 2017 Panel provided updates and recommendations to the recycled water policy, as described below. The 2017 Panel:

• Updated the list of CECs and other monitoring parameters. For indirect potable water reuse practices, the Panel updated monitoring trigger levels (MTLs) based on toxicological information gathered from several new sources, including state, federal, industry and international organizations, as well as based on the Panel’s own professional judgment. The result of this update was a revised set of MTLs, some higher and some lower than MTLs used in 2010, and others included for the first time.

• Developed an approach that relies on comparing the exposure to CECs in recycled water for non-potable Title 22 reuse scenarios to exposure to CECs in water produced for potable reuse. This comparison revealed that potential exposures and potential human health risks associated with CECs in non-potable use scenarios are expected to be 10% or lower than exposure to CECs in water intentionally consumed in the potable reuse scenario.

• Updated measured environmental (or effluent) concentrations (MECs) based on more recent data collected by water reuse facilities in California. The Panel retained its conservative assumption of considering MECs for CECs measured in secondary/tertiary effluent as feed water for recycled water facilities. In addition, the Panel reviewed available monitoring data for individual treatment processes and product water for GWR applications as well as some select CEC monitoring studies outside of California.
• Updated MECs and MTLs and employed them to screen a total of 489 CECs (increased from 418 in 2010) using the same screening framework used by the 2010 Panel to identify candidate compounds for monitoring. This exercise indicated that regular monitoring of three of four 2010 health-based indicator CECs (17β-estradiol, triclosan and caffeine) is no longer necessary, as the monitoring data set collected over the past several years (2008-2017) indicate that concentrations are consistently below MTLs.

• Concluded that the collected monitoring data indicated that concentrations of N-nitrosodimethylamine (NDMA) were eight times higher than the MTL and, therefore, NDMA should be retained as a human health-based indicator. Of the remaining CECs screened, the 90th percentile MECs for two compounds, N-nitrosomorpholine (NMOR) and 1,4-dioxane, exceed their respective MTLs by factors of 9 and 7, respectively, thus warranting their addition as human health indicators.

• Recommends implementation of the estrogen receptor alpha and aryl hydrocarbon receptor (ER-α and AhR, respectively) assays for screening of CECs in potable reuse projects. These assays are now sufficiently standardized and robust for screening level data collection and assessment over the next 3 to 5 years.

• Concluded that antibiotic resistance is still a major challenge and potentially an issue for any wastewater discharge into the environment. Apparently, the causes for antibiotic resistance are still not well known and the current studies do not show that antibiotic resistance transmission is a consequence of water reuse practices. Focused investigations are needed to better understand the occurrence, fate and risks associated with ARB and ARGs in recycled water applications across California and the SWRCB should encourage the collection of data in recycled water and sites within California while keeping abreast of scientific advances related to methods and risk assessment. The Panel recommends that the SWRCB consider the results of more definitive research showing an actual relationship of antibiotic resistance to recycled water before changing its current policy.

• Concluded that it is critical to establish a formal CEC monitoring and assessment program for recycled water that is responsive to rapidly changing CEC issues. This is due to the uncertainty that is inherently associated with the universe of chemicals that might occur in recycled water now and in the future. New knowledge might also point to direct evidence for health relevance justifying the need for a continuous updating process that cannot be provided by convening a review panel only every five (or more) years. Instead, these programmatic upgrades should be reviewed internally as well as by independent experts on a relatively frequent (e.g. triennial) schedule.

• Recommends a more flexible and responsive program should be developed to update CEC monitoring recommendations in response to rapidly emerging science, technology advances and monitoring (screening) data collected. In this context, the SWRCB should consider taking a more active role in procuring, managing and assessing CEC monitoring data and associated toxicological thresholds, that are subject to rapid/continual evolution. The Panel recommends that the SWRCB reconvene an independent Panel to review proposed changes to CEC monitoring recommendations every three years.
In addition, the following reference has been added to EIR page 4.10-60:


As a staff-initiated text change, EIR page 4.10-38 has been revised to include a new paragraph (after paragraph 1) which addresses the use of water for aquifer testing as part of the well site selection process:

As discussed in Chapter 3, Project Description, potable water from a local private fire hydrant would be drawn from the District’s water supply and would originate from groundwater wells extracting water from predominantly the same aquifer formations as planned for test well recharge. The potable water would be dechlorinated and filtered for particulate matter prior to recharge, resulting in recharge water similar to the raw groundwater extracted from District production wells. Tracer chemicals would not be introduced into the recharge water used for the testing. The dechlorinated and filtered water would be similar in geochemical composition to the groundwater in the proposed recharge area; thus, recharge of dechlorinated and filtered potable water would not result in a substantial groundwater quality impact.

As a staff-initiated text change, EIR page 4.10-47, below heading: Wastewater Characterization Studies, first full paragraph under bulleted items, fourth sentence has been revised as follows to remove superfluous text:

Similar removal efficiencies for pharmaceuticals, and other CECs, and existing technology were reported by the World Health Organization in which an MF/RO process showed a removal range of 91 to 100 percent of detected pharmaceuticals and UV AOP had a reported removal range of 52 percent to 100 percent (Carollo, 2017).

As a staff-initiated text change, EIR page 4.10-51, first paragraph beneath heading “Response Residence Time (RRT), last sentence has been revised to include the following footnote clarifying the particle tracking results shown in Figures 4.10-9 and 4.10-10 are not intended to represent minimum response residence times:

Please note that Figures 4.10-9 and 4.10-10 represent end points projecting where the recharged water would be 5 years after the cessation of recharge, which does not represent minimum response residence times. The SWRCB DDW’s Groundwater Replenishment Regulations (see Section 4.10.3 and Table 4.10-2) requires that, prior to receiving a permit to operate a recycled water project, a project sponsor must demonstrate, through refined particle tracking and/or tracer studies, that residence time of recharged recycled water of greater than 2 months can be achieved and maintained. The results of the refined residence time studies must be included as part of project permitting and be provided in the project sponsor’s Engineering Report.
As a staff-initiated text change, EIR page 4.10-51 has been updated as follows for sentence clarity:

As the injection of advanced treated wastewater would be adequately treated, the potential for degradation of the ambient potable groundwater in the Purisima A and BC units would be negligible and this impact is considered less than significant.

Section 4.11, Hydrology Resources – Surface Water

In response to comment L-1-13, EIR page 4.11-1, paragraph 4 has been revised:

The Project study area (Project area) consists of the physical footprint of all Project components (Figure 3-1) to characterize baseline conditions and analyze potential impacts associated with the terrestrial components of the Project and Alternatives. Also considered are proposed temporary staging and use areas associated with short-term construction activities. Consideration is given to surface waters adjacent to or crossed by Project features (such as pipelines) or immediately down gradient that may potentially be affected by runoff or drainage. Specific to the offshore marine environment, the Project area relevant to operation of the Project includes Monterey Bay MBNMS, with a focus on the area in the immediate vicinity of the existing SC WWTF outfall.

In response to comment L-1-13, EIR page 4.11-2, paragraph 3 has been revised:

The SWRCB divides surface watersheds in California into management areas based on political and physiographic boundaries. The entire Project area is in the Big Basin Hydrologic Unit, as defined by the Central Coast Regional Water Quality Control Board (CCRWQCB). The project area overlaps with three major watersheds or hydrologic sub-areas within the Big Basin Hydrologic Unit: the Baldwin/Wilder Watershed, the San Lorenzo River Watershed, and the Soquel Creek Watershed (County of Santa Cruz, 2017a). Within these larger watersheds, the Project area within the City of Santa Cruz and the area further east in the unincorporated County and Capitola are further divided into smaller sub-watersheds: the Neary Lagoon, Lower San Lorenzo River, Arana Creek-Rodeo Gulch, Soquel Creek, and Porter Gulch watersheds (County of Santa Cruz, 2017b, 2017c). Several of the creeks in the watersheds that overlap the Project area have culverted sections, but the majority are characterized by open channels (i.e., not enclosed in a culvert or pipe). The Project area also extends into the northern portion of Monterey Bay. A description of each of the relevant watersheds and water bodies (including Monterey Bay MBNMS), listed from west to east, is provided below along with a description of stormwater drainage in the Project area. Watersheds and surface water features are shown on Figure 4.11-1.

In response to comment L-1-13, EIR page 4.11-5, paragraph 1 has been revised:

Monterey Bay is a bay of the Pacific Ocean on California’s Central Coast within the Monterey Bay National Marine Sanctuary (MBNMS). The bay extends between the city of Santa Cruz and the Monterey Peninsula. MBNMS was designated in 1992 as a federally protected marine area off California's Central Coast. It stretches from Marin to Cambria, encompasses a shoreline length of 276 miles and 4,601 square nautical miles of
ocean, and extends an average distance of 30 miles from shore. The shoreline of Monterey Bay is composed primarily of less resistant sand dune and sedimentary deposits that form the ancient sand dune terraces. The primary freshwater inputs to Monterey Bay are through the San Lorenzo, Pajaro, Salinas and Carmel Rivers but other numerous water bodies, such as those described above, flow into the Monterey Bay with peak flows occurring during storm events and during the wet winter months (Figure 4.11-1). Within the Project area, the SC WWTF discharges into Monterey Bay MBNMS via an existing outfall located approximately 1 mile from the shore at a depth of approximately 110 feet.

In response to comment L-1-13, EIR page 4.11-51, paragraph 4 has been revised:

Offshore operational discharges of brine into Monterey Bay MBNMS could impact water quality if contaminant concentrations in receiving waters exceed water quality standards, regulatory requirements, or otherwise a degrade receiving water quality as compared to baseline conditions. The potential for water quality impacts to occur due to operational discharges is assessed for direct and indirect water quality impacts within Monterey Bay MBNMS. Impacts to marine biological resources resulting from water quality changes from Project operational discharges are assessed in Section 4.4, Biological Resources.

In response to comment L-1-13, EIR page 4.11-54 (on to page 4.11-55), has been revised:

**Water Quality Impacts from Operational Discharges into Monterey Bay National Marine Sanctuary**

The Project would not include any mechanism or process that would increase the temperature of the proposed operational discharges to Monterey Bay MBNMS relative to existing discharges from the SC WWTF. Therefore, the Project would not substantially increase the temperature of the discharged effluent, and thermal impacts on receiving waters are not discussed further.

Implementation of the Project would achieve the Project Objective of providing environmental benefits, such as to surface and marine waters, by reducing the volume of treated effluent discharged to Monterey Bay MBNMS under existing conditions as well as reduce SC WWTF discharges overall. The advanced water purification system would operate at an overall water recovery rate of approximately 72 percent. The treatment system would produce up to 1.3 mgd of potable water, requiring an RO feed supply of 1.80 mgd. Based on the RO recovery rate, the treatment process would produce approximately 0.56 mgd of waste residuals (0.26 mgd of MF waste and 0.3 mgd of brine). Brine from the treatment system would be piped back to the SC WWTF to a proposed brine and effluent receiving, mixing, and monitoring facility where it would be blended with treated effluent for disposal via the existing ocean outfall. The MF waste along with all other waste streams except for brine would be sent to SC WWTF via the existing sewer. As described in Section 4.11.2, the SC WWTF has an average dry weather design capacity of 17 mgd and was designed to treat up to 81 mgd during peak hour wet weather. The 2014 SC WWTF average daily flow rate was approximately 8.1 mgd with a peak wet weather flow of about 65.0 mgd; the addition of the waste stream from the AWPF would not exceed that capacity of the SC WWTF or outfall during dry or wet weather.
The Project would reduce the overall volume of treated effluent discharged into Monterey Bay MBNMS via the SC WWTF outfall and would reduce the monthly average discharge of secondary effluent (see Table 4.11-2) by approximately 1.3 mgd. Additionally, the overall loading of chemicals and minerals being discharged into Monterey Bay MBNMS would not be increased as compared to the existing discharge. However, beneficially re-using a portion of the secondary effluent would result in the concentrations of some constituents associated with the effluent discharged from the outfall to increase. Increased concentrations of water quality constituents, if high enough in operational discharges, could degrade water quality and adversely affect the beneficial uses of the receiving waters in Monterey Bay MBNMS and/or violate water quality standards or waste discharge requirements. To assess water quality impacts, the predicted concentrations of water quality constituents present in the operational discharges were analyzed and the constituent concentrations were assessed for compliance with relevant water quality standards, such as NPDES effluent limitations and Ocean Plan water quality objectives.

In response to comment L-1-13, EIR page 4.11-56 (on to page 4.11-57), has been revised:

The assessment of operational discharge water quality determined that, in general, the Project would not exceed NPDES effluent limitations defined in the current permit (Order No. R3-2017-0030) or Ocean Plan water quality objectives and would not degrade water quality relative to baseline conditions. The only parameter that was identified as potentially exceeding the permit effluent limitation (Table 4.11-5) is Total Organic Carbon (TOC). Due to identifying a potential exceedance for TOC, this constituent was assessed further to characterize the potential for water quality to be impacted in Monterey Bay MBNMS. As described above, while in-pipe constituent concentrations may increase due to reduced volume of effluent discharged to Monterey Bay MBNMS, the overall mass (or loading\(^2\)) of constituents discharged would not increase with implementation of the Project (i.e., overall total annual loading to Monterey Bay MBNMS would remain the same as under current operation without the AWPF).

In response to comment L-1-13, EIR page 4.11-59, paragraph 2 has been revised:

Discharges would not be allowed if they do not conform to the NPDES effluent limitations that are prescribed for the protection of receiving water quality and beneficial uses. Adherence to regulatory requirements including those for wastewater discharges associated with the County of Santa Cruz LCP policies (which would be implemented through issuance of a CDP), would ensure that operational discharges do not degrade the quality of receiving waters in Monterey Bay MBNMS or impair designated beneficial uses. Given that the combined discharge would not exceed the dilution requirements of the NPDES permit and would not violate the SC WWTF’s NPDES effluent limits, the RWQCB Basin Plan WQOs for marine habitat, and the Ocean Plan WQOs for marine aquatic life, nor substantially increase the concentration of constituents in Monterey Bay MBNMS.

\(^2\) Loading is typically measured in pounds per day. Since the AWPF treatment process would not add water quality constituents to wastewater but would just remove freshwater via reverse osmosis, there would be no additional pollutant loads entering the Bay through SC WWTF discharge that do not exist in current secondary effluent.
MBNMS receiving waters as compared to baseline conditions, the water quality impact associated with the discharge of brine would be less than significant.

Section 4.13, Noise and Vibration

In response to comment I-7-4, EIR page 4.13-18, Table 4.13-4, column “Impacts” has been revised:

Impact 4.13-3: Operation of the Project could not result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance.

As a staff-initiated text change, and in response to comment L-1-31 related to the use of generators during Project construction, page 4.13-19, Table 4.13-5 has been revised:

| TABLE 4.13-5 |
| REFERENCE CONSTRUCTION EQUIPMENT NOISE LEVELS – (50 FEET FROM SOURCE) |
| Type of Equipment | Lmax, dBA | Hourly Leq, dBA/Percent Used¹ |
| Treatment Facilities and Recharge Wells |
| Fork Lift | 85 | 81/40 |
| Backhoe | 80 | 76/40 |
| Dozer | 85 | 81/40 |
| Crane | 85 | 77/16 |
| Concrete Mixer Truck | 85 | 81/40 |
| Loader | 80 | 76/40 |
| Generator Set | 82 | 79/50 |
| Excavator | 85 | 81/40 |
| Auger/Rotary Drill Rig | 85 | 78/20 |
| Diesel Driven Pump | 77 | 74/50 |

As a staff-initiated text change, and in response to comment L-1-31 related to the use of generators during Project construction, page 4.13-21, Table 4.13-6 has been revised:

| TABLE 4.13-6 |
| SUMMARY OF ESTIMATED NOISE LEVELS AT SENSITIVE RECEPTORS DURING PROJECT CONSTRUCTION WITHOUT MITIGATION |
| Project Component/Site | Loudest Two Pieces of Construction Equipment | Equipment Noise Level at 50 feet (dBA Lmax/ dBA Leq)² | Distance to nearest Sensitive Receptor (feet) | Attenuated Noise Level (dBA Lmax/ dBA Leq)³ |
| Potential AWPF Sites |
| SC WWTF Site | Forklift, Dozer | 85/84 | 520 | 60/59 |
| Chanticleer Site | Forklift, Dozer | 85/84 | 50 | 85/84 |
| Headquarters-West Annex Site AWPF during Wall Construction | Auger Drill Rig, Generator Set, Excavator | 85/83 | 10 | 99/97 102/100 |
| Headquarters-West Annex Site AWPF after wall constructed | Forklift, Dozer | 85/84 | 55 | 74/73bursement
As a staff-initiated text change, and in response to comment L-1-31 related to the use of generators during Project construction, page 4.13-23, paragraph 1 has been revised:

**Daytime Construction Noise Impacts.** There are existing sensitive receptors located within 10 feet of where wall construction would occur, as shown in Figure 3-7. The two loudest pieces of off-road construction equipment that would be operating during the construction of the wall is an auger drill and a generator set and excavator to install the pier foundations. As shown, in Table 4.13-6, the single-family residences south of the proposed wall would be exposed to a noise level to $L_{\text{max}}$ and $L_{\text{eq}}$ construction noise levels of 99-102 dBA and 97-100 dBA, respectively. Noise generated during the construction of the wall would expose nearby single-family residences to noise levels that would exceed the County’s day time noise standard of 75 dBA $L_{\text{eq}}$.

In response to comment I-56-5, EIR page 4.13-24, paragraph 3 has been revised:

**Nighttime Construction Noise Impacts.** The loudest pieces of construction equipment that would operate at the Willowbrook Lane Site during the nighttime hours is a rotary drill rig and air compressor. Since classes held at the Santa Cruz Montessori school would not be in session during the nighttime hours, the nearest sensitive to the Project site during the nighttime hours would consist of single- and multi-family residences located 175 feet to the east and west of the Project site. As shown in Table 4.13-6, these single- and multi-family residences would be exposed to $L_{\text{max}}$ and $L_{\text{eq}}$ construction noise levels of 71 dBA and 66 dBA, respectively, during nighttime drilling. The nearest sensitive receptors to the Willowbrook Lane site would be exposed to construction noise levels that would exceed the County’s nighttime exterior noise standard of 60 dBA $L_{\text{eq}}$. This would result in a **significant impact** with respect to exposure of persons to, or generation of, noise levels in excess of local standards.

As a staff-initiated text change, and in response to comment L-1-31 related to the use of generators during Project construction, page 4.13-31, Table 4.13-7 has been revised:

**TABLE 4.13-7**

<table>
<thead>
<tr>
<th>Project Component</th>
<th>Loudest two Pieces of Construction Equipment</th>
<th>Distance to nearest Sensitive Receptor (feet)</th>
<th>Attenuated Noise Level ($L_{\text{eq}}$)</th>
<th>Applied Day/Night Threshold ($L_{\text{eq}}$)</th>
<th>Exceed Applied Threshold (yes or no)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential AWPF sites</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC WWTF Site</td>
<td>Forklift, Dozer</td>
<td>520</td>
<td>59</td>
<td>75</td>
<td>No</td>
</tr>
<tr>
<td>Chanticleer Site</td>
<td>Forklift, Dozer</td>
<td>50</td>
<td>84</td>
<td>75</td>
<td>Yes</td>
</tr>
<tr>
<td>Headquarters-West Annex Site AWPF and Wall Construction</td>
<td>Auger Drill Rig Generator Set, Excavator</td>
<td>10</td>
<td>97-100</td>
<td>75</td>
<td>Yes</td>
</tr>
<tr>
<td>Headquarters-West Annex Site AWPF after wall constructed</td>
<td>Forklift, Dozer</td>
<td>55</td>
<td>73</td>
<td>75</td>
<td>No</td>
</tr>
</tbody>
</table>
As a staff-initiated text change, and in response to comment L-1-31 related to the use of generators during Project construction, page 4.13-33, paragraph 1 has been revised:

Although noise generated during the last 21.5 months of construction activities would not expose the nearest single-family residences to noise levels that would be considered a temporary substantial noise increase, the operation of off-road construction equipment used during the first 2.5 months of construction would expose nearby single-family residences to noise levels south of that would be considered a substantially increase over the existing ambient. As shown in Table 4.13-7, construction of the wall would expose the nearest single-family residences to a noise level of $92 \pm 100$ dBA $L_{eq}$, above the applied 75 dBA $L_{eq}$ temporary substantial noise increase threshold. This would be a significant impact with respect to temporary substantial increase in ambient noise levels at the residences in the vicinity of the Headquarters-West Annex Site.

In response to comment I-7-4, EIR page 4.37 has been revised:

Impact 4.13-3: Operation of the Project could not result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance

Section 4.17, Utilities and Service Systems

In response to comment L-4-11, EIR page 4.17-1, has been revised to include a new paragraph above the heading Wastewater:

Individual and Small Water Systems

According to the Santa Cruz County Health Services Agency, there are approximately 130 small water systems in Santa Cruz County, serving roughly 2,500 households. Additionally, there are at least 8,000 private wells in Santa Cruz County that serve between 1 and 4 households. These wells and small systems are primarily located within unincorporated areas of the county, serving individual parcels and small communities. The majority of these small water systems (those serving between 5 and 199 water connections) are regulated by the County, acting as a Local Primacy Agency for the California Public Health Department. Through its Drinking Water Program, the County helps to ensure that small public water supply systems deliver a reliable and adequate supply of groundwater or surface water to their customers (County of Santa Cruz, Undated).

In addition, the following reference has been added to EIR page 4.17-11

In response to comment L-4-12, EIR page 4.17-1 (continuing on page 4.17-2) has been revised:

**Wastewater**

The Santa Cruz County Sanitation District (SCCSD) is a non-profit public agency providing sewage collection, treatment, and disposal services to the unincorporated areas of Santa Cruz County, including the Live Oak, Soquel, and Aptos areas, as well as the City of Capitola. The SCCSD has no wastewater treatment plant of its own. Consequently, sewage is transported from its Lode Street facility to the SC WWTF for treatment and disposal. The SC WWTF is owned and operated by the City of Santa Cruz. The SC WWTF serves the City of Santa Cruz, and the SCCD service area, including portions of Live Oak, Capitola, Soquel, and Aptos.

The SCCSD has treatment capacity rights of 8 million gallons per day at the SC WWTF. The SC WWTF’s design, average dry weather treatment capacity is 17 mgd, with a design peak wet weather treatment capacity of 81 mgd. Treated effluent from the SC WWTF (and also from the Scotts Valley Wastewater Treatment Facility) is discharged to the Monterey Bay National Marine Sanctuary through an ocean outfall over a mile offshore (SCCDPW, 2018a; CCRWQCB; 2017).

While the vast majority of the Project area is serviced by municipal wastewater service through the SCCSD, a large number of developments in the more rural portions of unincorporated Santa Cruz County are served by small collection and treatment systems within Community Service Areas (CSAs) managed by the County, or onsite treatment systems (i.e., septic systems) managed by the property owner. Onsite treatment systems are regulated by the Santa Cruz County Health Services Agency, pursuant to State and local laws and regulations.

In response to comment L-1-13, EIR page 4.17-8, paragraph 2 has been revised:

The primary waste streams from Project operations would be the ultrafiltration (UF) or microfiltration (MF) waste, and brine generated from the reverse osmosis (RO) process. The MF/UF waste along with all other waste streams, including that generated by existing and additional District operations staff, except for brine would be sent to SC WWTF via the existing sewer. In a separate pipeline brine from the treatment system would be sent to the SC WWTF where it would be blended with treated effluent for disposal via the existing ocean outfall. Based on the RO recovery rate, the AWPF would produce approximately 0.56 mgd of waste residuals (0.26 mgd of MF waste and 0.3 mgd of brine). The SC WWTF has an average dry weather design capacity of 17 mgd and was designed to treat up to 81 mgd during peak hour wet weather. The 2014 SC WWTF average daily flow rate was approximately 8.1 mgd with a peak wet weather flow of about 65.0 mgd; the addition of the waste stream from the AWPF would not exceed that capacity of the SC WWTF or outfall during dry or wet weather. The Project would reduce the overall volume of treated effluent discharged into the Monterey Bay National Marine Sanctuary via the SC WWTF outfall. As explained further in Section 4.11 (Impact 4.11-2), the Project would be required to comply with applicable regulations.
governing operational discharges, including the Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) (General Permit) (Order No. 2013-0001-DWQ Permit No. CAS000004) and Project-specific amendment to the existing SC WWTF NPDES permit (Order No. R3-2017-0030, NPDES No. CA 0048194). Through adherence to these requirements, Project operations would not exceed treatment requirements. For these reasons, Project operations would be expected to have a less-than-significant effect related to exceeding water treatment requirements or wastewater treatment provider capacities.

Chapter 5, Cumulative Impacts

Section 5.2, Cumulative Impacts and Mitigation Measures

In response to comment L-1-13, EIR page 5-23 (on to page 5-24), paragraph 4 has been revised:

The cumulative projects whose discharge impacts could combine with those of the Project to adversely affect Monterey Bay National Marine Sanctuary (MBNMS) water quality are those in in Table 5-1 which could affect SC WWTF treatment demands and effluent discharges or otherwise involve direct discharges to the ocean (e.g., all except Nos. 9, 13, 16, 17, 18, 19, 21). As discussed under Impact 4.11-2, assessment of the Project brine discharge from the outfall indicates that operational discharges would conform to NPDES effluent limitations, which incorporate Ocean Plan Water Quality Objectives (WQOs). Direct outfall discharges from cumulative projects (i.e., No. 21) would be at sufficient distances such that the likelihood of discharge plumes from different outfalls intersecting or merging and resulting in exceedances of established water quality objectives or adversely affecting beneficial uses of receiving waters (Monterey Bay MBNMS) would be low.

Chapter 6, Other CEQA Considerations

Section 6.1, Growth Inducing Impacts

In response to comment L-1-13, EIR page 6-4 (on to page 6-5), paragraph 2 has been revised:

The Santa Cruz Mid-County Groundwater Basin, from which the District draws 100 percent of its water supply, is currently in a state of critical overdraft and has been identified/characterized as such by the State of California. The District has declared a Groundwater Emergency (ongoing since 2014). Related to the overdraft conditions, the District has detected seawater intrusion in its groundwater supply aquifers at some coastal monitoring wells and along the entire Monterey Bay National Marine Sanctuary (Monterey Bay MBNMS) coastline of the District’s service area. In short, the District presently lacks access to a reliable source of water capable of meeting existing and future demands in a sustainable fashion.

3 Resolution of the Board of Directors of the Soquel Creek Water District Declaring a Groundwater Emergency (Resolution No. 14-22), passed and adopted June 17, 2014.
Section 6.2, Significant Unavoidable Adverse Impacts

In response to comment I-58-6, EIR page 6-10, paragraph 2 has been revised:

Section 15126.2(b) of the CEQA Guidelines requires that an EIR identify significant environmental effects that cannot be avoided by the Project, including those that can be mitigated, but not to a less-than-significant level. The analysis in Chapter 4 identifies all adverse impacts associated with the Project and those impacts that cannot be avoided. The analysis in Chapter 4 determined that the Project would result in impacts related to noise that, even with implementation of mitigation measures, would remain significant and unavoidable. Chapter 6 also identifies potential significant and unavoidable effects to which the Project could contribute by removing a barrier to growth. These impacts are summarized below:

Chapter 7, Alternatives

Section 7.3, Analysis of CEQA Alternatives

In response to comment L-1-13, EIR page 7-8, Table 7-2, row “Impact 4.4-1,” column “Alternative 1: No Project” has been revised:

No Impact

There would be no project construction of pipelines or facilities; therefore, there would be no impact on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.

However, The No Project Alternative would not reduce treated effluent discharge to the Monterey Bay National Marine Sanctuary and thus would not provide any environmental benefits as under the Project.

In response to comment L-2-5, EIR page 7-16, paragraph 4 (continuing on page 7-17) has been revised:

In order to undertake this portion of Alternative 2, the 5-year pilot study (2015-2020) evaluating the feasibility and suitability of a surface water purchase would need to be completed, with results ensuring that the surface water source would be compatible with the District’s infrastructure and water supply. Compatibility considerations include pipe corrosion, which could result in aesthetic issues (e.g., brown or red colored water), increased levels of corrosion byproducts (e.g., lead, copper), among other issues. The pilot study could result in identification of additional water quality treatment that would need to be implemented before surface water could be blended with other District water supplies, long-term. The pilot study is currently underway and bench scale testing has been completed and pilot testing began on December 3, 2018; laboratory data collection and analysis is nearing completion and may identify an initial need for water quality treatment. This phase of the study would be followed by testing of the recommended treatment approach within a sub-area of the District’s service area, with additional sampling and analysis to determine final recommendations for water quality treatment approaches (District, 2018).
In addition, the following reference has been added to EIR page 7-36:

Soquel Creek Water District (District), 2018. Presentation of Surface Water Purchase Pilot Project Bench Scale Testing Results in collaboration with City of Santa Cruz Water Department, July 17.

In response to comment L-1-13, EIR page 7-18, paragraph 2 has been revised:

Assuming completion of the current pilot study and approval of a new 50-year water purchase agreement, Alternative 2 would allow the District to continue to provide customers with a high-quality and safe water supply. Alternative 2 would also provide additional environmental benefits to marine waters, associated with the overall reduction in treated wastewater discharges to Monterey Bay National Marine Sanctuary; however, the volume of the reduction would be less than under the Project. Further, ongoing and long-term use of surface water supplies could impact surface water resources; therefore, environmental benefits to surface waters would not occur.

In response to comment L-1-13, EIR page 7-22, paragraph 2 has been revised:

Alternative 3 is considered a drought-resistant supplemental water source and would increase the diversity of the water District water supply portfolio. Alternative 3 would allow the District to continue providing customers with a high-quality and safe water supply. However, Alternative 3 would not provide additional environmental benefits to marine waters, because it would not reduce treated wastewater discharges to Monterey Bay MBNMS. Further, Alternative 3 could result in additional impacts to Monterey Bay associated with the intake of seawater and discharge of an additional brine supply.

Section 7.5, Alternatives Considered, but Rejected from Further Analysis

In response to comment O-2-12, EIR page 7-33, paragraph 2 has been revised:

Ability to Meet Project Objectives

This alternative would meet some of the Project objectives. It would help with Basin replenishment in non-drought years, contribute to water supply diversification, and potentially allow the District to continue providing high-quality safe water (pending results of the Pilot Study). However, given the time required to address the above-noted feasibility, infrastructure, cost and water rights issues, this alternative would not meet the objective of timely implementation. Further, as transfers may be limited to the winter months, during years in which the City has excess supply, the alternative would not meet the objective of providing a reliable water supply, especially if the City would be taking large volumes of water back to meet their drought shortfall needs. Finally, this alternative of providing the District with surface water could have additional impacts on surface streams, with effects on both aquatic habitats and wildlife.
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