Addendum to the
Santa Cruz Water Rights Project
Final Environmental Impact Report

Beltz 8 and 12 Aquifer Storage and Recovery Project

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Table of Contents

SECTION PAGE

Acronyms and Abbreviations iii

1 Introduction 1
- 1.1 Background 1
- 1.2 California Environmental Quality Act Compliance 1

2 Project Description 5
- 2.1 Project Context and Water Supply Planning Background 5
  - 2.1.1 City of Santa Cruz Water Supply Advisory Committee 5
  - 2.1.2 2022 Securing Our Water Future Policy 5
  - 2.1.3 Cooperative Groundwater Management Agreement 6
  - 2.1.4 Santa Cruz Mid-County Groundwater Sustainability Plan 6
- 2.2 Project Location and Setting 8
- 2.3 Proposed Beltz 8 and 12 Aquifer Storage and Recovery Project 8
  - 2.3.1 Previously Evaluated Project 10
  - 2.3.2 Modified Project 14
- 2.4 Project Approvals 29

3 EIR Consistency Analysis 31
- 3.1 Hydrology and Water Quality 33
  - 3.1.1 Existing Conditions 33
  - 3.1.2 Project Impact Analysis 35

4 References and Preparers 51
- 4.1 References Cited 51
- 4.2 List of Preparers 51

FIGURES

1 Project Overview 9
2 Proposed Beltz 8 ASR Facilities 15
3 Proposed Beltz 12 ASR Facilities 16

TABLES

1 Proposed Aquifer Storage and Recovery Capacity and Estimated Operation from Santa Cruz Water Rights Project Environmental Impact Report 11

APPENDICES

A Adopted Mitigation Monitoring and Reporting Program

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
1,2,3-TCP	1,2,3-Trichloropropane
ADI	Area of Direct Impact
ANSI	American National Standards Institute
APN	Assessor's Parcel Number
ASR	aquifer storage and recovery
C-S	Service Commercial and Light Industrial land use designation
CDP	census-designated place
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
City	City of Santa Cruz
County	County of Santa Cruz
CWD	Central Water District
DWR	California Department of Water Resources
EIR	environmental impact report
GHWTP	Graham Hill Water Treatment Plant
GPS	global positioning system
GSP	Groundwater Sustainability Plan
LACM	Natural History Museum of Los Angeles County
M-1	Light Industrial zone district
MAMP	monitoring and adaptive management plan
MBARD	Monterey Bay Air Resources District
MGA	Santa Cruz Mid-County Groundwater Agency
mgd	million gallons per day
mgy	million gallons per year
MHE	Mobile Home Exclusive zone district
MMRP	mitigation monitoring and reporting program
MS4	Municipal Separate Storm Sewer System
MT CO_2e	metric tons of carbon dioxide equivalent
NAHC	Native American Heritage Commission
NSF	National Sanitation Foundation
P	Public Facility/Institutional land use designation
PF	Public Facilities zone district
PRIMP	Paleontological Resources Impact Mitigation Program
Proposed Project	Beltz 8 and 12 Aquifer Storage and Recovery Project
R-MH	Mobile Home land use designation
R-UH	Urban High Density Residential land use designation
RM	Multi-Family Residential zone district
RMP	representative monitoring point
SGMA	Sustainable Groundwater Management Act
SLF	Sacred Lands File

Acronym/Abbreviation	Definition
SOWF	Securing Our Water Future
SqCWD	Soquel Creek Water District
STC	Sound Transmission Class
SVP	Society of Vertebrate Paleontology
SWRCB	State Water Resources Control Board
TBD	to be determined
TDH	Total Dynamic Head
WSAC	Water Supply Advisory Committee
WTP	Water Treatment Plant
WY	water year

1 Introduction

1.1 Background

This document constitutes Addendum #2 to the Santa Cruz Water Rights Project Final Environmental Impact Report (EIR) (State Clearinghouse No. 2018102039), certified by the City of Santa Cruz (City) in December 2021. The Santa Cruz Water Rights Project EIR evaluated the potential environmental impacts of modifications to the City's existing water rights to allow more options for where and how those water rights can be used, and associated water supply augmentation components and surface water diversion improvements. The petitions to modify the City's water rights are pending approval by the State Water Resources Control Board (SWRCB). If approved, the City will then take steps to implement minimum instream bypass flows and other elements of the water rights modifications. Meanwhile, the City is pursuing associated infrastructure improvements that would allow for better use of limited water resources regardless of the water rights modifications approval. These infrastructure improvements include the Beltz 8 and 12 Aquifer Storage and Recovery (ASR) Project (Proposed Project), which is the focus of this Addendum.

One of the water supply augmentation components analyzed in the Santa Cruz Water Rights Project EIR was the active recharge of regional aquifers through direct injection of surface water supplies for later recovery and use, referred to as ASR. The total ASR capacity analyzed in the EIR was 4.5 million gallons per day (mgd) for injection infrastructure and 8.0 mgd for extraction infrastructure. This would include both new ASR facilities at unidentified locations (analyzed at a program level) and Beltz ASR facilities at existing Beltz well facilities (analyzed at a project level). The ASR analysis in the EIR addressed improvements at the City's existing Beltz 8, 9, 10, and 12 facilities to allow for the conversion of these existing groundwater wells to ASR wells. This EIR Addendum has been prepared to address minor changes to the proposed upgrades to existing groundwater extraction infrastructure to convert them to ASR infrastructure at the Beltz 8 and 12 facilities. Proposed modifications to the previously evaluated project since certification of the Santa Cruz Water Rights EIR include minor design and project boundary changes at Beltz 8 to accommodate upgrades to the sanitary sewer and storm drain infrastructure on site; modifications to proposed tanks, piping, and pumping rates at Beltz 12; installation of an orthophosphate system at each site; refinements to the construction schedule and equipment; and identification of staging areas.

1.2 California Environmental Quality Act Compliance

The California Environmental Quality Act (CEQA) (California Public Resources Code Section 21000 et seq.) and regulations implementing CEQA, known as the CEQA Guidelines (14 California Code of Regulations Section 15000 et seq.), serve as the main framework of environmental law and policy in California. CEQA applies to most public agency discretionary actions that have the potential to adversely affect the environment. CEQA requires public agencies to inform decision makers and the public about the potential environmental impacts of proposed projects and to avoid or reduce those environmental impacts to the extent feasible. If significant adverse impacts cannot be avoided, reduced, or mitigated to below a level of significance, the public agency is required to prepare an EIR and balance the project's environmental concerns with other goals and benefits in a statement of overriding considerations.

Once an EIR or other CEQA document has been certified for a project, Sections 15162-15164 of the CEQA Guidelines define the standards for determining the appropriate level of subsequent environmental review and

Section 15164 addresses the specific circumstances requiring the preparation of an addendum to an EIR. If new significant impacts or a substantial increase in the severity of previously identified impacts would result, then preparation and circulation of a subsequent or supplemental EIR for additional public review is required. However, when it can be determined that neither the proposed changes to the project, changed circumstances, or new information result in the identification of new significant impacts, or the substantial increase in the severity of significant impacts identified in the certified EIR, an addendum to the EIR may be prepared. Public review of an addendum is not required under CEQA. This Addendum will be included in or attached to the Santa Cruz Water Rights Project EIR and considered during the City's consideration of project approval.

Pursuant to Section 15164(a) of the CEQA Guidelines, the lead agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred. Under CEQA Guidelines Section 15162, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

- Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:
    - The project will have one or more significant effects not discussed in the previous EIR;
    - Significant effects previously examined will be substantially more severe than shown in the previous EIR;
    - Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
    - Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

The City has determined that an Addendum to the certified Santa Cruz Water Rights Project EIR is the appropriate environmental documentation for the Proposed Beltz 8 and 12 ASR Project. The certified Santa Cruz Water Rights Project EIR evaluated the installation of upgrades to the Beltz system at the existing Beltz 8, 9, 10, and 12 facilities to allow for ASR at a project level. Since the certification of the EIR, the City is now pursuing the Beltz 8 and 12 upgrades and design plans are available for these two Beltz facilities. Overall, the location and nature of the Beltz 8 and 12 upgrades currently proposed is consistent with the overall Beltz ASR project described in the Santa Cruz Water Rights Project EIR. Some minor changes have been made to the project design, but the project sites remain the same with some minor project boundary changes. However, changes in the project description would not warrant a subsequent CEQA document, such as an EIR or negative declaration (per Section 15162 of the CEQA Guidelines) as explained in this Addendum. In addition, there are no changes in the project circumstances, or any substantial new information, that would warrant preparation of such a subsequent CEQA document (per Section 15162 of the CEQA

Guidelines). The environmental analysis in this Addendum examines whether the revisions to the description of the project would result in any new significant impacts that were not previously identified in the prior EIR or would result in any substantial increases in the severity of previously identified effects. As demonstrated in the analysis in this Addendum, the Proposed Project as modified would not result in any new significant impacts or substantially more severe impacts than were previously identified in the EIR. The information contained within this Addendum is provided as a disclosure document, consistent with Section 15164 of the CEQA Guidelines and will provide a basis for the City to make an administrative determination that the prior EIR and environmental determinations fully address the Proposed Project.

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2 Project Description

This chapter provides a description of the Proposed Beltz 8 and 12 ASR Project (Proposed Project) and includes information about the project context and water supply planning background; the project location and setting; the project that was previously evaluated in the Santa Cruz Water Rights Project EIR; the project modifications contemplated in this addendum; and project approvals that would be required. The chapter is supported by information from the City's consulting design engineer, as well as information from Santa Cruz Water Rights Project EIR, which analyzed the Beltz 8 and 12 ASR Project at a project level (Peterson, pers. comm. 2024; City of Santa Cruz 2021).

2.1 Project Context and Water Supply Planning Background

The following information is summarized from Section 3.2, Project Background, of the Santa Cruz Water Rights Project EIR, and from other more recent sources of information.

2.1.1 City of Santa Cruz Water Supply Advisory Committee

The City formed the Water Supply Advisory Committee (WSAC) in 2014 to "explore, through an iterative, fact-based process, the City's water profile, including supply, demand and future risks; analyze potential solutions to deliver a safe, adequate, reliable, affordable and environmentally sustainable water supply; and, to develop recommendations for City Council consideration" (WSAC 2015). The WSAC developed the WSAC Final Report on Agreements and Recommendations in October 2015 to provide significant improvement in the sufficiency and reliability of the City water supply by 2025.[1] Following City Council acceptance of the WSAC's recommendations in November 2015, the City Council directed staff to incorporate the Water Supply Augmentation Strategy into the Water Department's 2020 Urban Water Management Plan. Among others, the recommendations included active recharge of regional aquifers by using existing infrastructure and potential new infrastructure in the Purisima aquifer in the Soquel-Aptos Basin (now referred to as the Santa Cruz Mid-County Groundwater Basin), in the Santa Margarita/Lompico/Butano aquifers (now referred to as the Santa Margarita Groundwater Basin) in the Scotts Valley area, or in both to store water that can be available for use by the City in dry periods.

2.1.2 2022 Securing Our Water Future Policy

The City initiated a climate change vulnerability analysis that was specifically designed to assess water system performance over a wide range of plausible future climate conditions and identify the range of supply deficits that the City needs to plan for to achieve reliability. The 2022 Securing Our Water Future (SOWF) Policy adopted by the City Council in November 2022 brings this work together and sets a supply reliability goal that meets all customer demand without assuming that water supply curtailments will be used as a drought management tool (City of Santa Cruz 2022). The SOWF Policy acknowledges that, due to the length of time required to develop water supply augmentation projects and the need to use an ongoing and evolving understanding of the impacts of climate change on water supply reliability, incremental implementation of augmentation projects to address

[1] Since 2015, the City has approved a stepwise implementation of the WSAC Water Supply Augmentation Strategy that may result in final implementation beyond 2025.

the supply deficit will be required. To reduce the vulnerability to nearer-term droughts, however, supply augmentation producing at least 500 million gallons per year of additional supply by 2027 should be completed (City of Santa Cruz 2022).

2.1.3 Cooperative Groundwater Management Agreement

In 2015, the City and the Soquel Creek Water District (SqCWD) entered into a cooperative monitoring/adaptive groundwater management agreement. This agreement was developed to ensure the following groundwater management objectives are met: (1) protect the Santa Cruz Mid-County Groundwater Basin from seawater intrusion; (2) allow for redistribution of groundwater pumping inland; (3) maintain inland and coastal groundwater levels to abate seawater intrusion; and (4) provide both agencies flexibility to respond to changing conditions. The agreement also includes groundwater pumping goals, which are defined as maximum annual limits. The agreement addresses groundwater pumping activities of the City and SqCWD, but does not explicitly address the operation of ASR facilities, as WSAC planning efforts were not far enough along at the time the agreement was executed. While ASR could be designed to achieve the four groundwater management objectives of the agreement described above, there are some elements of the agreement that do not apply to ASR, such as the groundwater pumping goals. Since the development of this agreement, the Santa Cruz Mid-County Groundwater Agency (MGA) has developed a groundwater sustainability plan (GSP) for the Santa Cruz Mid-County Groundwater Basin that does contemplate ASR among other management actions to restore the Basin, discussed further below. The City and SqCWD are currently exploring options to revise, amend, replace, or abolish the cooperative groundwater management agreement to provide both agencies flexibility to pursue projects and operate within the Basin consistent with the GSP, as well as with the groundwater management objectives of the cooperative groundwater management agreement.

2.1.4 Santa Cruz Mid-County Groundwater Sustainability Plan

The City joined with the SqCWD, Central Water District (CWD), County of Santa Cruz (County), and private well representatives to form the MGA, the local groundwater sustainability agency created pursuant to the requirements of California's Sustainable Groundwater Management Act (SGMA), enacted in September 2014. The MGA prepared a GSP for the now redefined Santa Cruz Mid-County Groundwater Basin, which covers the mid-Santa-Cruz-County region and is generally bounded by Branciforte Creek on the west, the unincorporated communities of Aptos and La Selva Beach on the east, the Zayante fault (somewhat below Summit Road) on the north, and the Pacific Ocean on the south (as shown on Figure 3-3 of the Santa Cruz Water Rights Project EIR). The Santa Cruz Mid-County Groundwater Basin includes the former Soquel Valley Basin and portions of three adjacent basins—the West Santa Cruz Terrace Basin, the former Santa Cruz Purisima Formation Basin, and the original Pajaro Valley Basin. The Soquel Valley Basin was identified by the state as a groundwater basin subject to critical conditions of overdraft. Over-pumping in the Santa Cruz Mid-County Groundwater Basin resulted in a groundwater overdraft condition and seawater intrusion along the coast. The City pumps from a portion of the Purisima Formation in the Santa Cruz Mid-County Groundwater Basin, which local officials have recognized as threatened by potential over-pumping with an ongoing risk of seawater intrusion that could jeopardize the future production of the City's groundwater sources (City of Santa Cruz 2016).

The California Department of Water Resources (DWR) approved the Santa Cruz Mid-County Groundwater Basin GSP on June 3, 2021 as being found to satisfy the requirements of SGMA (DWR 2021). The GSP sets sustainability management criteria for each of the five sustainability indicators applicable to the Santa Cruz Mid-County

Groundwater Basin and identifies projects and management actions to achieve and maintain Basin sustainability. Baseline projects and management actions (Group 1), in conjunction with other projects and management actions planned to reach sustainability (Group 2), include water conservation and demand management, installation and redistribution of municipal groundwater pumping, Pure Water Soquel, ASR in the Beltz system and elsewhere, water transfers/in lieu groundwater recharge and distributed stormwater managed aquifer recharge. Additional potential future projects and management actions may be evaluated in the future (Group 3). The GSP will guide ongoing management of the Santa Cruz Mid-County Groundwater Basin with a goal to achieve and maintain the Basin's sustainability goal within 20 years and over a 50-year planning and implementation horizon (MGA 2019).

Consistent with the WSAC Final Report, the Santa Cruz Mid-County Groundwater Basin GSP indicates that ASR would inject excess surface water, treated to drinking water standards, into the natural structure of Basin aquifers for use as an underground storage reservoir. The ASR project modeled for the GSP optimizes existing City infrastructure as a more efficient use of available resources to inject excess drinking water into Basin aquifers. The GSP acknowledges, however, that eventual implementation of the ASR project may include new infrastructure. Drinking water stored in the Basin from an ASR project would provide a drought supply for the areas served by the City. The GSP further indicates that information generated by pilot test evaluations will help inform the degree to which ASR can fulfill the City's strategy to improve the reliability of its water supply, along with helping to evaluate whether an ASR project can be developed and operated in a manner that will achieve both supply reliability and groundwater sustainability benefits.

According to the GSP, Basin groundwater elevations are expected to increase with ASR's injection of excess surface water, treated to drinking water standards, and continued Basin management. ASR withdrawals would be managed to balance groundwater withdrawals with ongoing groundwater sustainability requirements of the GSP. Benefits would be evaluated using the existing groundwater monitoring well network and data management systems to compare groundwater levels over time. Potential impacts of recovering water from the Basin through ASR would be monitored to ensure ongoing groundwater sustainability is maintained. Specifically, operation of an ASR system would be conducted consistent with the GSP in such a way that it avoids negative impacts on protective groundwater elevations and chloride concentrations at coastal monitoring wells.

In May 2022, the MGA was awarded a Sustainable Groundwater Management Act Implementation grant for projects that address groundwater sustainability. A regional water resources optimization study for projects and management actions identified in the GSP is underway and is expected to be completed April 2025. A calibrated groundwater model has been developed for the Mid-County Groundwater Basin. It is now used as a tool to simulate groundwater and surface water interactions.

The MGA submits an annual report to the DWR to demonstrate that progress is being made toward meeting interim milestones that are defined in the GSP and that lead to achieving groundwater sustainability. The 2023 annual report indicates that the Basin continues to be in a state of overdraft, thereby presenting a risk of seawater intrusion. There are undesirable results for seawater intrusion because 7 coastal representative monitoring points (RMPs) have 5-year moving average groundwater elevations below their respective minimum threshold groundwater elevation proxies, and 5 RMPs in the Seascape area have chloride concentrations that exceed minimum thresholds for seawater intrusion (MGA 2024).

2.2 Project Location and Setting

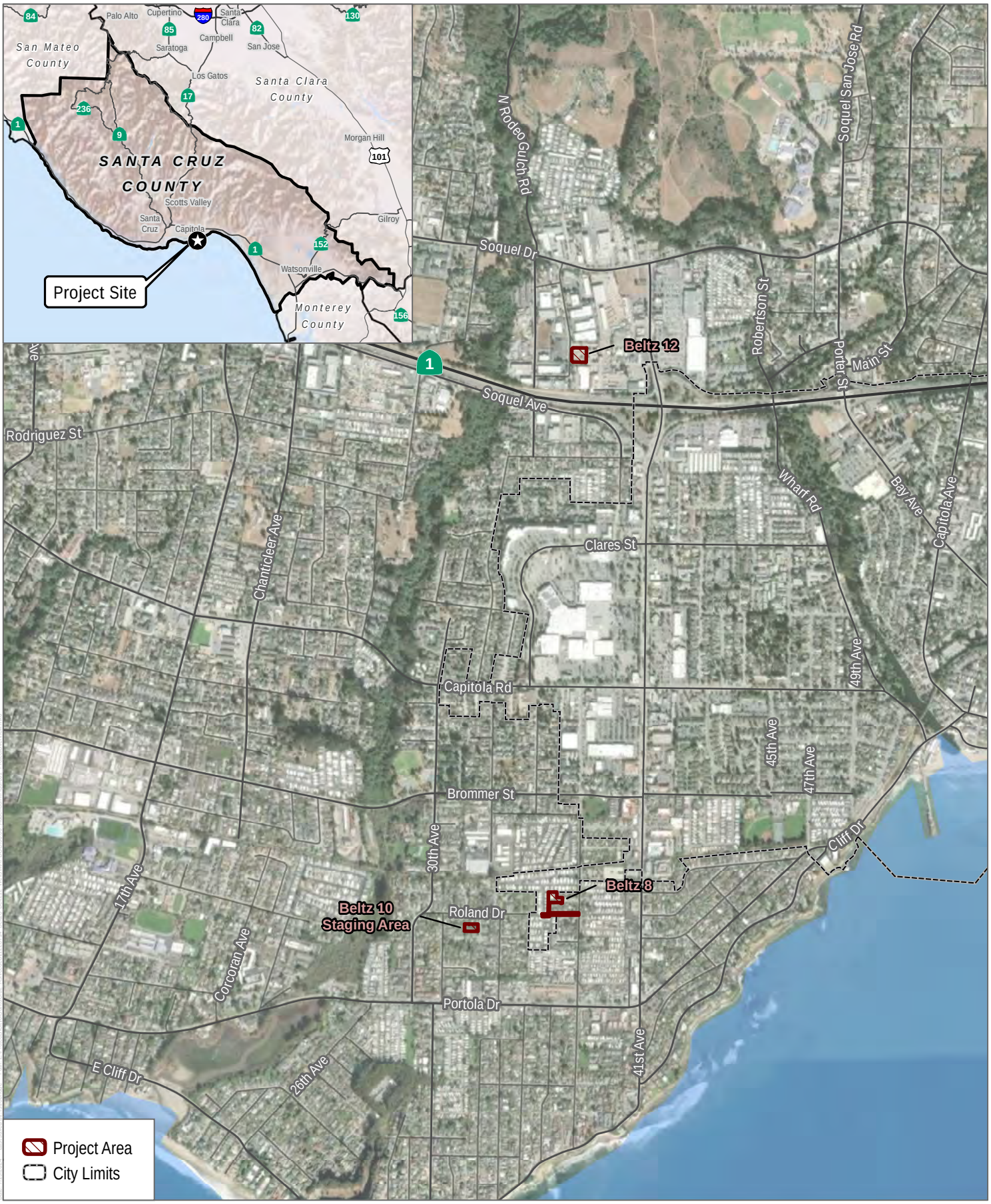
The Proposed Project is located east of the City limits on two separate City-owned properties in the unincorporated area of the County, on the northern coast of Monterey Bay (see Figure 1). Beltz 8 and associated treatment facilities are located at 3701 Roland Drive (Assessor's Parcel Number [APN] 032-02-131) in Pleasure Point, a census-designated place (CDP) in the County. Beltz 12 and associated treatment facilities are located at 2750 Research Park Drive (APN 030-18-170) in Soquel, an unincorporated town and CDP in the County, approximately 1.2 miles north of Beltz 8.

The Beltz 8 site is approximately 17,511 square feet (0.40 acres), is a flag lot configuration, and is located in a developed residential area on land designated as Public Facility/Institutional (P) within the Public and Community Facilities (PF) zone district. Surrounding land is designated Urban High Density Residential (R-UH) and zoned Multi-Family Residential (RM) within unincorporated Santa Cruz County to the east, and designated Mobile Home (R-MH) and zoned Mobile Home Exclusive (MHE) within the City of Capitola to the north, south, and west. The site is located within the Coastal Zone. The site is developed with the City's Beltz 8 well and associated treatment facilities, including (1) a pump control and chemical storage buildings; (2) an iron and manganese treatment system consisting of two pressurized dual media filter tanks; (3) one 75,000-gallon backwash tank used in the iron and manganese treatment; and (4) a 210-foot-deep well that has a casing diameter of 14 inches, submersible pump and concrete pedestal, station piping including treated water pipeline, and a sewer connection that connects to other facilities in Roland Drive. The Beltz 8 facility was originally constructed between 1952 and 1967, and subsequently modified and/or expanded in 1971, 1985, and 1998.

The Beltz 12 site is approximately 28,445 square feet (0.65 acres), is square shaped, and is located in a developed service commercial/light industrial area on land designated Service Commercial and Light Industrial (C-S) and within the Light Industrial (M-1) zone district. The lands surrounding Beltz 12 ASR facility site are within the same land use designation and zone district. The site is not located within the Coastal Zone. The site is developed with the City's Beltz 12 well and associated treatment facilities, including (1) a pump control and chemical storage building; (2) an iron and manganese treatment system consisting of a pressurized filter tank with various media inside; (3) two backwash tanks used in the iron and manganese treatment that each have a capacity of 35,000 gallons; (4) an ammonia treatment tank and piping; and (5) a 640-foot-deep well that has a casing diameter of 16 inches, submersible pump and concrete pedestal, station piping including treated water pipeline, sewer connections, and stormwater drainage facilities that connect to other facilities in Research Park Drive. The Beltz 12 facility was originally constructed in 2013 and the ammonia treatment tank and piping were added in 2024.

2.3 Proposed Beltz 8 and 12 Aquifer Storage and Recovery Project

The Proposed Project consists of converting the City's existing Beltz 8 and 12 groundwater well facilities to ASR facilities. The purpose of the Proposed Project is to increase the emergency and drought resiliency of the City by augmenting water supply, water storage, and fire flow capacities. Beltz 8 and 12 ASR was previously evaluated in the Santa Cruz Water Rights Project EIR (City of Santa Cruz 2021), referred to as the previously evaluated project. Since then, modifications to the Proposed Project have been made, and more detailed design information has been developed. The previously evaluated project and currently Proposed Project are described in detail in the following sections. The description of the currently Proposed Project focuses on modifications to the previously evaluated project.



SOURCE: ESRI 2020, City of Santa Cruz 2020

DUDEK

0 750 1,500 Feet

FIGURE 1

Project Overview

Beltz 8 and 12 Aquifer Storage and Recovery Project

2.3.1 Previously Evaluated Project

This section provides information about the proposed improvements to the Beltz 8 and Beltz 12 facilities evaluated in the certified Santa Cruz Water Rights Project EIR (previously evaluated project). The information in this section is from the Santa Cruz Water Rights Project EIR, Section 3.4.3.1, Aquifer Storage and Recovery Facilities, pages 3-37 to 3-51.

2.3.1.1 Overview of Aquifer Storage and Recovery Capacity and Operations

As described in EIR Section 3.2.1, Water Supply Planning Background, the City's Water Supply Augmentation Strategy includes active recharge of regional aquifers through ASR. ASR involves injection of surface water, treated to drinking water standards, for storage during normal or wet periods in local groundwater basins, which would act as underground storage reservoirs. This stored water can then be available for use by the City in dry periods via extraction.

The Santa Cruz Water Rights Project includes installation and operation of ASR facilities within the Santa Cruz Mid-County Groundwater Basin inside or outside the areas served by the City, and in the Santa Margarita Groundwater Basin outside the areas served by the City to allow for injection of treated water from the City's Graham Hill Water Treatment Plant (GHWTP) and subsequent extraction. This would include new ASR facilities at unidentified locations (referred to as "new ASR facilities" in the EIR) and Beltz ASR facilities at the existing Beltz well facilities (referred to as "Beltz ASR facilities" in the EIR). In the EIR analysis, overall, ASR was a programmatic component of the Santa Cruz Water Rights Project; however, as a subcomponent of ASR, Beltz ASR facilities was a project component of the Santa Cruz Water Rights Project. The Santa Cruz Water Rights Project includes the addition of underground storage supplements to the City's post-1914 appropriative permits and licenses for the Beltz ASR facilities because those are the only proposed ASR facilities whose locations and proposed capacities are currently known.

As described in EIR Section 3.2.1, the total ASR capacity analyzed the EIR was intended to provide sufficient capacity to address the City's water supply objectives as identified in Section 2.1. ASR would have a total proposed injection infrastructure capacity of 4.5 million gallons per day (mgd) and a proposed extraction infrastructure capacity of 8.0 mgd. The injection infrastructure sizing is smaller than the extraction infrastructure sizing because diverted surface water could be injected for groundwater storage over multiple years to be available for extraction over a shorter timeframe during drought or dry periods. Based on water supply modeling, it is estimated that with this infrastructure capacity, an average of approximately 233 million gallons per year (mgy), with a maximum of up to approximately 702 mgy, of treated surface water could be injected into the groundwater basins, and an average of approximately 176 mgy, with a maximum of approximately 1,064 mgy, of injected water could be extracted. To contribute to groundwater sustainability of the Santa Cruz Mid-County Groundwater Basin and the Santa Margarita Groundwater Basin, estimated annual operations show that long-term average extraction volumes would be lower than long-term average injection volumes. However, maximum annual extraction volumes could exceed injection volumes during drought or dry periods when more water supply is needed to meet City demands. Table 1 summarizes the ASR proposed capacity and operational volumes analyzed in the EIR. As a subcomponent of ASR, Beltz ASR would provide only a portion of the total ASR capacity and operations.

Table 1. Proposed Aquifer Storage and Recovery Capacity and Estimated Operation from Santa Cruz Water Rights Project Environmental Impact Report

	Proposed Capacity (mgd)		Estimated Operation (mgy)			
	Injection	Extraction	Average		Maximum	
			Injection	Extraction	Injection	Extraction
Total Aquifer Storage and Recovery (ASR)	**4.5**	**8.0**	**233**	**176**	**702**	**1,064**
New ASR Facilities at Unidentified Locations	TBD	TBD	TBD	TBD	TBD	TBD
Beltz ASR Facilities at Existing Beltz Well Facilities	2.10	2.17[1]	188	137	358	315

Source: Gary Fiske and Associates 2021a, 2021c.
Notes: mgd = million gallons per day; mgy = million gallons per year; TBD = to be determined.
1 Based on the physical limitations of the Beltz well facilities, the maximum extraction capacity at Beltz 8, 9, 10, and 12 is 3.27 mgd. Given that the existing groundwater system at these facilities extracts 1.1 mgd, 2.17 mgd of the total capacity is available for the proposed ASR facilities at these Beltz facilities.

The previously evaluated project also included standard operational practices for ASR facilities that would be implemented during development and operation of ASR facilities. These included Standard Operational Practice #2 to ensure that ASR operations are consistent with applicable adopted existing or future GSPs, and Standard Operational Practice #3 to ensure that ASR facilities comply with the State Water Resources Control Board (SWRCB) Water Quality Order 2012-0010, General Waste Discharge Requirements for Aquifer Storage and Recovery Projects that Inject Drinking Water into Groundwater. The full text of these standard operational practices is provided in Section 2.3.2.5, Applicable Mitigation Measures and Standard Practices, below.

2.3.1.2 Beltz Aquifer Storage and Recovery

The Beltz ASR project component analyzed in the EIR involved the installation of upgrades to the Beltz system at the existing Beltz 8, 9, 10, and 12 facilities to allow for injection of treated water from the City's GHWTP into the Santa Cruz Mid-County Groundwater Basin and subsequent extraction, consistent with the GSP for this basin. The proposed Beltz ASR system in the Santa Cruz Mid-County Groundwater Basin would retain the existing groundwater extraction capacity of the Beltz system of 1.1 mgd subject to seasonal and hydrological constraints. Additionally, the system would be modified to accommodate proposed ASR injection capacity of approximately 2.10 mgd, and proposed ASR extraction capacity of approximately 2.17 mgd[2] (see Table 1 above). With this system capacity, an average of approximately 188 mgy, with a maximum of up to approximately 358 mgy, of treated surface water could be injected and an average of approximately 137 mgy, with a maximum of approximately 315 mgy, of injected water could be extracted from the Beltz ASR component (see Table 1 above). To contribute to groundwater sustainability of the Santa Cruz Mid-County Groundwater Basin per the GSP, estimated annual operations show that average extraction volumes would be lower than injection volumes. However, maximum annual extraction volumes could exceed injection volumes during drought or dry periods when more water supply is needed to meet City demands.

2 Based on the physical limitations of the Beltz well facilities the maximum capacity at Beltz 8, 9, 10, and 12 is 3.27 mgd. Given that the existing groundwater system at these facilities pumps 1.1 mgd, 2.17 mgd of the total capacity is available for the proposed ASR facilities at these Beltz facilities.

The previously evaluated project included the following ASR upgrades to the Beltz 8 and Beltz 12 facilities.

Beltz 8 Aquifer Storage and Recovery Facility Upgrades

For injection purposes, a new permanent supply pipeline between the well and the existing on-site distribution system piping would be installed. The pipeline would be approximately 120 feet in length and 6 inches in diameter, and would be installed within the existing City-owned property along an already-paved alignment. A new storm drain pipeline between the existing tank and the existing storm drain inlet would also be installed and used during the injection process. For maintenance purposes and to maintain well efficiency, during an injection cycle, the well would be backflushed into the existing tank. Decanted and dechlorinated water from the existing tank would be sent to the storm drain system through this new approximately 14-inch storm drain pipeline.

The new approximately 6-inch injection pipeline would have a backflow prevention device and be capable of delivering up to approximately 400 gpm of treated water. Modifications to the wellhead would be made to allow for the installation of multiple 2-inch-diameter stainless steel drop tubes, or a single 3- or 4-inch-diameter drop tube with adjustable flow control valves.

For extraction purposes, the existing submersible pump and motor assembly currently rated at 350 gpm at 155 feet of Total Dynamic Head (TDH) would be removed and replaced with a new submersible pump and motor assembly rated for approximately 800 gpm at approximately 150 feet TDH, which would be capable of extracting approximately 700 gpm. During installation of the new submersible pump, the new injection flow control valves would also be installed inside the well. The control panel for the flow control valves would most likely be installed adjacent to the existing control panel. New piping (approximately two 1-inch-diameter pipes) and electrical conduits (approximately two 1-inch-diameter conduits) would be installed between the wellhead and the new control panel. In addition, as part of a treatment plant upgrade, a second backwash tank might be installed to handle the additional backwash volumes once all existing Beltz wells (8, 9, 10, and 12) are converted to ASR wells. The existing pump and motors might be upsized to handle additional flows from the wells once all wells are converted to ASR wells. The exact size of individual pumps and motors would not be known until after pilot testing of individual wells. No additional nighttime security lighting would be required.

Beltz 12 Aquifer Storage and Recovery Facility Upgrades

For injection purposes, a new permanent supply pipeline between the well and the existing distribution system on Research Park Drive adjacent to the site would be installed. The pipeline would be approximately 100 feet in length and 6 inches in diameter; approximately 35 feet of the pipeline would be installed in paved right-of-way and the remainder would be installed in unpaved right-of-way and in City-owned property at the Beltz 12 ASR facility.

The new injection pipeline would have a backflow prevention device and be capable of delivering up to approximately 400 gpm of treated water delivered from the GHWTP through the City's water distribution system. Modifications to the wellhead would be made to allow for the installation of multiple 2-inch-diameter stainless steel drop tubes, or a single 3- or 4-inch-diameter drop tube with adjustable flow control valves.

For extraction purposes, the existing submersible pump and motor assembly at Beltz 12 currently rated at 400 gpm at 500 feet TDH would be removed and replaced with a new submersible pump and motor assembly rated for approximately 800 gpm at approximately 500 feet of TDH, which would be capable of extracting approximately 700 gpm. During installation of the new submersible pump, the new injection flow control valves

would also be installed inside the well. The control panel for the flow control valve would most likely be installed inside the existing control building. New piping (approximately two 1-inch-diameter pipes) and electrical conduits (approximately two 1-inch-diameter conduits) would be installed between the wellhead and the existing control building. In addition, a second pressurized media filter tank used in the iron and manganese treatment system may be installed if needed to handle the additional flow delivered from the well. No new backwash pipelines would be installed, but modification to the existing backwash piping would be made to facilitate flushing into and draining of the existing backwash tanks.

No additional monitoring wells would be constructed as there is an existing monitoring well approximately 70 feet from Beltz 12 from which adequate monitoring data can be obtained. Additionally, no additional nighttime security lighting would be required.

Beltz ASR Construction Characteristics

Construction of the proposed upgrades at each of the Beltz ASR facility sites was anticipated to occur over a 1- to 3-month period. For the purposes of the EIR analysis, the Beltz 12 ASR facility upgrades were assumed to be constructed from July 5, 2022, to September 9, 2022, and the Beltz 8 ASR facility upgrades were assumed to be constructed from September 12, 2022, to January 6, 2023. Equipment to be used to perform the work would include an excavator or backhoe, support trucks for tools and equipment, and a drill rig. It is expected that a four-person crew would perform the work at each site. Disposal of dry construction waste would likely occur at the County's Buena Vista Landfill or the City's Dimeo Lane Landfill/Resource Recovery Facility. Disposal of non-dewatered construction waste such as drilling and well development fluids, would likely occur at the Monterey Regional Waste Management District Facility in Marina, California. Except under special circumstances, construction activities would occur between 8:00 a.m. and 5:30 p.m. on weekdays. No construction-related activities would occur on weekends or holidays, or at night.

Beltz ASR Operations and Maintenance Characteristics

For the Beltz ASR system, injection operations would typically take place during the winter months, sometime between the beginning of November and the end of April, and extraction operations would typically take place sometime between the beginning of May through the end of October. This manner of operation of ASR is what the City could reasonably foresee at the time the Santa Cruz Water Rights Project EIR was prepared, and was reflected in the water-system modeling that supported the EIR. However, the EIR acknowledged that it is possible that, in dry conditions, the City might seek to extract groundwater generated by prior ASR injections, during the November-April period. Such extractions were not reflected in the water-system modeling but were discussed qualitatively in the EIR.

During injection and extraction operations, the facilities would run for 24 hours a day, 7 days a week. Operational noise levels would be consistent with existing noise levels. Routine maintenance would consist of one daily visit by a City staff person in a small truck to check on the facility operations at each site. During a typical site visit, City staff would collect information on pressure, water level, and flow rate to ensure that values for each parameter are within expected ranges for either an injection or extraction cycle. In addition, although not at every site visit, it is also expected that staff would periodically collect water quality samples from injected and extracted water to ensure regulatory compliance.

Approximately once a week during injection operations, the wells at Beltz 8 and Beltz 12 would be backflushed to remove particulates deposited in the well filter pack. During extraction, operation of the facilities would remain the

same as under existing conditions. The filter media would be backwashed daily to remove the accumulated iron and manganese. The backwash would then be piped to the backwash tank where the iron and manganese would settle out from the groundwater. The clear water would be recirculated to the wellhead treatment and the remaining sludge, composed of particulate sediment, iron, manganese, and other naturally occurring constituents, would be discharged to the County sanitary sewer lines located immediately adjacent to the Beltz 8 and Beltz 12 sites via existing connections as per current operations. Given that backwashing during injection would also be required, as noted above, ASR at Beltz 8 and Beltz 12 would result in an increase in the sludge that would be discharged to the County sanitary sewer lines. However, these operations would continue to occur under the existing sewer discharge permits with the County and associated requirements related to flow rate, volume, and quality.

2.3.2 Modified Project

The currently Proposed Project is substantially similar to the previously evaluated project. Proposed modifications to the previously evaluated project include minor design and project boundary changes at Beltz 8 to accommodate upgrades to the sanitary sewer and storm drain infrastructure on site; modifications to proposed tanks, piping, and pumping rates at Beltz 12; installation of an orthophosphate system at each site; refinements to the construction schedule and equipment; and identification of staging areas. These modifications are described in the following sections.

It should be noted that the currently proposed Beltz 8 and 12 ASR combined injection capacity of 1.07 mgd and extraction capacity of 1.77 mgd would fall within total the injection capacity of 2.10 mgd and extraction capacity of 2.17 mgd for Beltz ASR Facilities at existing Beltz well facilities shown in Table 1. Therefore, there are no proposed modifications related to capacity of the Beltz ASR Facilities with the Proposed Project.

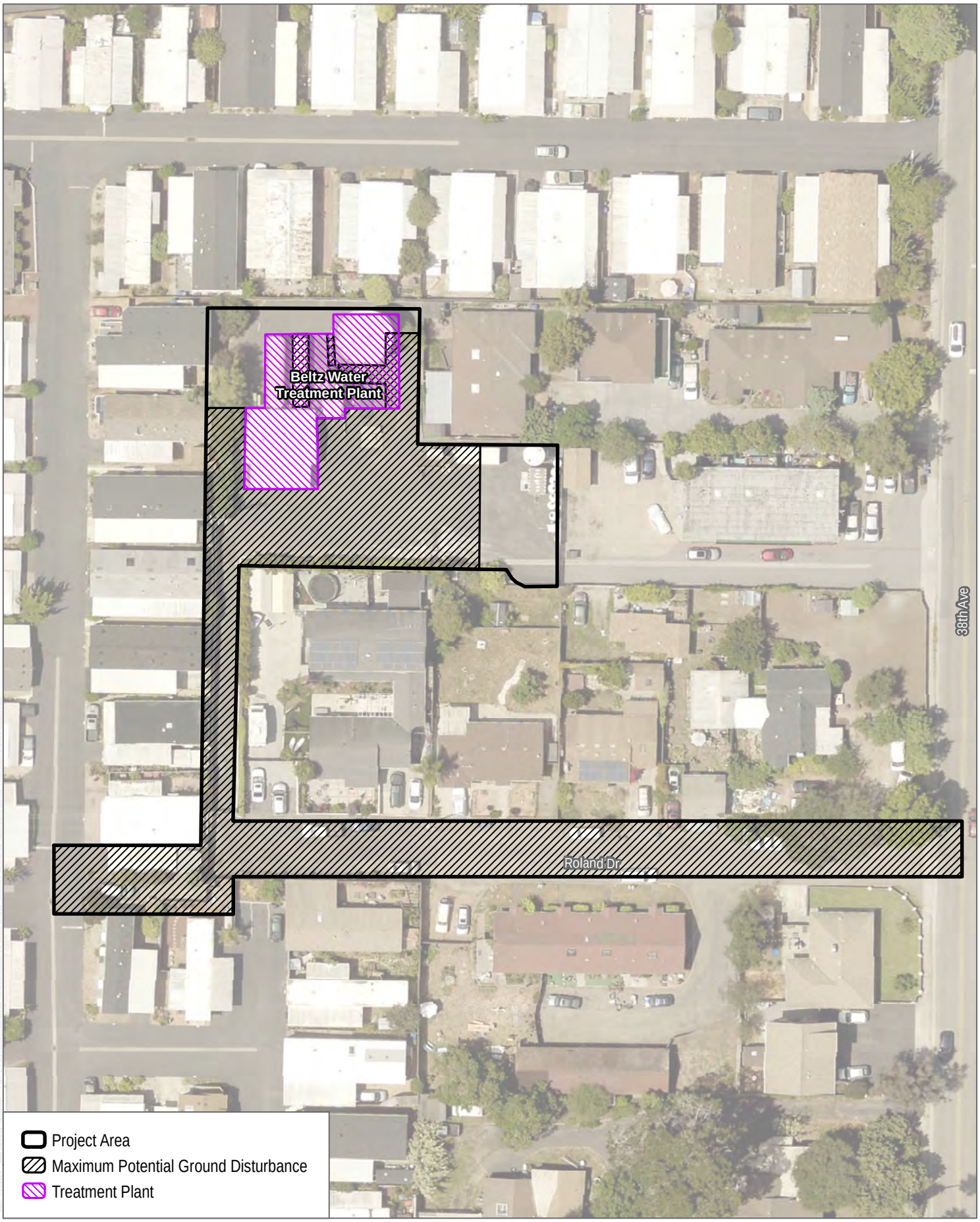
Figure 1 above shows an overview of both sites and the proposed off-site staging area. Figure 2 and Figure 3 show the Beltz 8 and Beltz 12 project sites and maximum ground disturbance limits, respectively. The remainder of the Beltz 12 project site may be used for staging.

2.3.2.1 Beltz 8 Aquifer Storage and Recovery – Design and Project Boundary Changes

Modifications to the previously evaluated project at Beltz 8 include minor design changes, modifications to the existing backwash tank, and refinements to proposed storm drain and sanitary sewer infrastructure, as described below. Minor project boundary changes are associated with the refinements to proposed storm drain and sanitary sewer infrastructure.

Minor Design Changes

Similar to the previously evaluated project, the Proposed Project would include improvements to electrical, instrumentation, and controls infrastructure at Beltz 8. Additionally, as part of the Proposed Project electrical conduit would extend from the well to a new underground sanitary sewer lift station (see further description below). A second control panel would be installed at the sewer lift station to operate the sanitary sewer pumps. New construction would primarily be completed outside of the existing well building. A portion of the roof of the existing building may be removed to replace an existing sodium hypochlorite tank in the same place inside the building.



SOURCE: Esri Aerial Imagery Accessed 2022, City of Santa Cruz 2022, County of Santa Cruz 2020

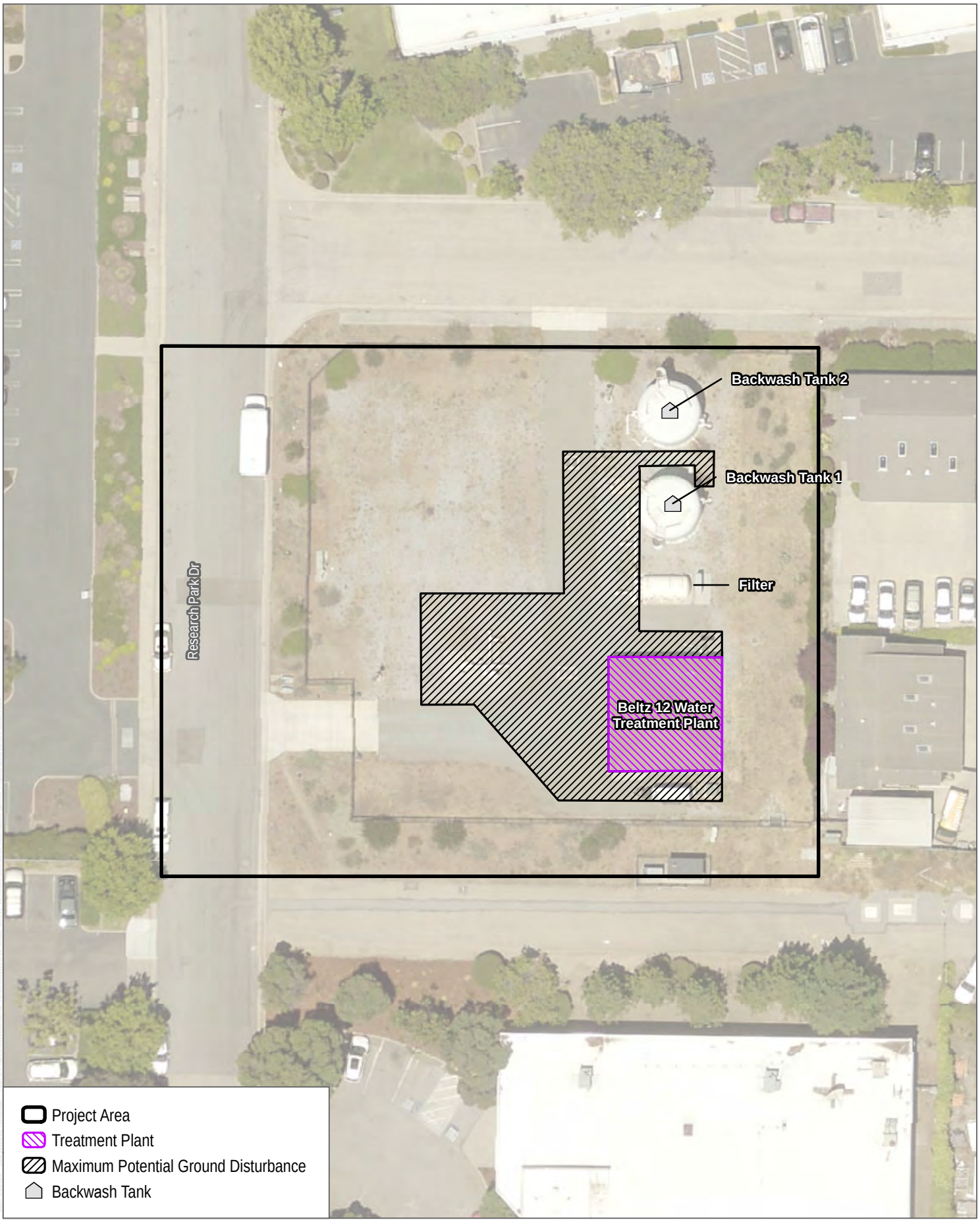
DUDEK

0 30 60 Feet

FIGURE 2

Proposed Beltz 8 ASR Facilities

Beltz 8 and 12 Aquifer Storage and Recovery Project



SOURCE: Esri Aerial Imagery Accessed 2022, City of Santa Cruz 2022, County of Santa Cruz 2020

DUDEK

0 20 40 Feet

FIGURE 3

Proposed Beltz 12 ASR Facilities

Beltz 8 and 12 Aquifer Storage and Recovery Project

A new radio antenna would be installed at Beltz 8 that would be approximately the same height as the existing 30-foot-tall antenna. The new radio antenna would communicate to the GHWTP and would allow ASR injection to continue if the Beltz Water Treatment Plant (WTP), located at the Beltz 8 site, were offline. The new radio antenna would be located near the well control panel.

Instead of installing multiple stainless steel drop tubes in the well, as previously proposed, a new flow control valve would be installed in the well and would use compressed nitrogen gas cylinders to open and close the valve regulating flow into and out of the well. Compressed nitrogen gas cylinders would be stored near the well.

The previously proposed WTP upgrade at Beltz 8, which included installation of a second backwash tank to handle additional backwash volumes, would not be constructed under the Proposed Project, but could be constructed in the future, as contemplated in the Santa Cruz Water Rights Project EIR. However, the existing Beltz WTP 1,400-gallon sodium hypochlorite tank would be removed and replaced with a new 1,300-gallon sodium hypochlorite tank as part of the Proposed Project. Additionally, one of the existing pressure filters at the Beltz WTP would be replaced to increase system reliability. The work would include replacing concrete pads, replacing the existing filter with a new filter of the same capacity or smaller, replacing associated pumps and motors, and some electrical improvements for the pumps and controls system on the filter vessels, and appurtenances.

Modifications to Backwash Tank

The existing backwash tank must be drained between backwash and flushing cycles. Currently there are two methods to drain the tank: (1) reclaim the water through the tank mixing pump to the on-site WTP aeration tank (headworks), and (2) use the tank drain valve to the off-site sanitary sewer line on Roland Drive. The Proposed Project would install a third method of draining the backwash tank which would consist of a tee on the tank mixing pump and selector valves that could direct flow either to the aeration tank or to a new storm drain connection.

Storm Drain and Sanitary Sewer Infrastructure

To accommodate ASR-related well discharges of well backflush water from the existing backwash tank, new storm drain and sanitary sewer connections would be made. A new storm drain pipeline and connection may result in an extension of the original project site ground disturbance boundary to the west and a new sanitary sewer pipeline and connection would result in an extension of the project site ground disturbance boundary to the east along the Roland Drive right-of-way and into 38th Avenue, as depicted on Figure 2. These improvements are further described as follows.

The proposed new storm drain pipeline alignment within the Beltz 8 site would remain within the existing pavement of the site, as previously proposed, but may be reconfigured. There is an existing storm drain pipeline that runs from the existing Roland Drive storm drain inlet in a right-of-way to a storm drain pipeline that runs northeast to southwest through the mobile home park that is to the west of the Beltz 8 site; this storm drain pipeline is currently used by this facility and could continue to be used by the Proposed Project. The new on-site storm drain piping will be tied-in (connected) to the existing 12-inch storm drain pipeline at the base of the driveway on Roland Drive, which is in the public right-of-way, or a new storm drain line may be installed at the base of the driveway extending to the west to connect to the existing larger diameter storm drain line. Discharges to the storm drain would continue to occur under the National Pollutant Discharge Elimination System statewide general permit for drinking water in a manner that would not adversely affect the receiving water.

A new pressurized sanitary sewer pipeline would be installed down the existing driveway and along Roland Drive and travel east to 38th Avenue, connecting to an existing 30-inch sanitary sewer main. The new sanitary sewer pipeline would require a new sewer lift station to pump wastewater through the new sanitary sewer pipeline. The sewer lift station would be installed at the intersection of the existing and proposed sewer lines on the Beltz 8 project site, and associated electrical conduit would also be installed. Discharge operations at the Beltz 8 facility would primarily use the new sanitary sewer line that would be constructed out to 38th Avenue, but the existing sanitary sewer pipeline may remain in service for some wastewater disposal.

2.3.2.2 Beltz 12 Aquifer Storage and Recovery – Modifications to Proposed Tanks, Piping, and Pumping Rate

Piping and Tanks

Electrical, instrumentation, and controls improvements at Beltz 12 would include the following: a new process control module, vendor control panel, motorized valve actuators, pump control system, and instrumentation for level, flow, and pressure monitoring. New construction would primarily be completed outside of the existing well treatment building. A new electrical panel and control transformer for the existing building would be installed to power the additional equipment as well as service lines to the equipment. New discharge piping from the backwash tanks would be constructed to provide better control of discharges to the existing storm drain and sanitary sewer inlets. The previously proposed media filter tank would not be constructed. As mentioned in Section 2.2, Project Location and Setting, an ammonia treatment tank and piping were added to the facility in 2024.

Pumping Rate

The Santa Cruz City Council certified the Beltz Well No. 12 EIR in December 2011 and approved the Reduced Pumping Alternative for Beltz 12 in January 2012 (City of Santa Cruz 2012), which established an approximate groundwater extraction pumping rate for Beltz 12 of 210 gpm (City of Santa Cruz 2011), which is below the design capacity of the well of 800 gpm. The Santa Cruz Water Rights Project EIR did not describe or otherwise identify operational pumping rates for any of the Beltz ASR facilities.

As part of the currently Proposed Project, the maximum pumping rate at Beltz 12 would be increased from 210 gpm up to a new maximum operational rate of 500 gpm. The new maximum operational rate would be utilized for groundwater and ASR extractions. For routine maintenance during the injection season, Beltz 12 would be pumped at a rate of approximately 700-750 gpm for about 30 minutes per week to backflush the well.

Now that the DWR-approved GSP is in place, the City would operate the Proposed Project, including Beltz 12, in a manner consistent with the sustainable management criteria and avoid any undesirable results identified in the GSP for the Santa Cruz Mid-County Groundwater Basin. The adopted GSP prescribes management actions that would be implemented should minimum thresholds be exceeded. This operational approach is also described in the City's Standard Operational Practice #2, which was included in the Santa Cruz Water Rights Project EIR and is applicable to the Proposed Project (see Section 2.3.2.5, Applicable Mitigation Measures and Standard Practices, below).

2.3.2.3 Beltz 8 and 12 Aquifer Storage and Recovery – New Orthophosphate System

An orthophosphate system would be installed at both Beltz 8 and 12 ASR facilities, which was not analyzed in the Santa Cruz Water Rights Project EIR. Orthophosphate is a corrosion inhibitor used at the GHWTP that prevents metal pipe materials from leaching into drinking water by creating a thin coating on the inside of the pipes that serves as a barrier between the pipes and the water. Water in the distribution system that comes from the GHWTP already contains orthophosphate. The new orthophosphate systems would be used to ensure adequate orthophosphate is maintained in the distribution system when receiving treated water from the Beltz groundwater treatment plants.

The orthophosphate systems would include instrumentation, communication, and controls to ensure specific dosing objectives are met. Orthophosphate system components would likely be installed inside the existing buildings at both Beltz 8 and 12. Orthophosphate would be kept in a 55-gallon drum at Beltz 8 and a 25-gallon drum at Beltz 12 on a grate with secondary containment. Prefabricated metering skids may be used for dosing orthophosphate. Belowground tubing and conduit would be required from the building to the injection point on the treated water pipeline. The system would utilize orthophosphate certified per National Sanitation Foundation (NSF)/American National Standards Institute (ANSI) 60[3] standards. Controls would be managed by operators at the GHWTP via radio networks.

2.3.2.4 Changes to Construction Schedule, Equipment, and Staging Areas

Construction of the proposed upgrades at the Beltz 8 and 12 ASR facility sites would occur over an approximately 2-year period from December 2024 to December 2026, longer than contemplated in the Santa Cruz Water Rights Project EIR for the two facilities. Construction at Beltz 12 would occur over approximately 14 months beginning as early as December 2024; construction at Beltz 8 would occur over approximately 18 months beginning in as early as March 2025 until December 2026.

The equipment that would be used to construct the Proposed Project includes a backhoe, excavator, dump truck, crane, concrete-mixing truck, concrete pumper truck, roller-compactor, chemical delivery truck, and conventional flatbed/pickup trucks for equipment, piping, and material deliveries. The City's Beltz 10 facility, located on City-owned property at 977 34th Avenue, has been identified as a temporary staging area for construction vehicles, equipment, and materials during construction of the Beltz 8 improvements. The existing chain-link fence enclosing the Beltz 10 facility is currently set back within the property and may need to be relocated to extend to the site perimeter to expand the available area for staging. Staging may also occur on the Beltz 12 project site during construction of the Beltz 12 improvements.

2.3.2.5 Applicable Mitigation Measures and Standard Practices

The adopted mitigation monitoring and reporting program (MMRP) for the Santa Cruz Water Rights Project, prepared pursuant to CEQA (Public Resources Code Section 21000 et seq.) and the CEQA Guidelines (14 California Code of Regulations, Chapter 3, Sections 15074 and 15097), applies to the Proposed Beltz 8 and 12 ASR Project and is included as Appendix A to this Addendum. This MMRP is intended to be used by City staff, its contractors and

[3] NSF/ANSI 60 is an American National Standard that establishes the minimum health-effects requirements for chemicals, chemical contaminants, and impurities directly added to drinking water during the treatment process to meet health and safety standards.

consultants, and mitigation monitoring personnel to ensure compliance with mitigation measures and standard operational and construction practices that apply to the Proposed Beltz 8 and 12 ASR Project. Mitigation measures include pre-construction surveys and construction habitat protections where appropriate, cultural and tribal cultural resource protections, paleontological resource protections, ammonia and groundwater-level monitoring, and construction noise and vibration measures. Standard operational and construction practices include appropriate operational constraints for ASR, and construction practices to provide for erosion and dust emissions control, water quality and habitat protection, inadvertent discovery of cultural resources, and construction noise notifications. As mentioned in Section 1.2, California Environmental Quality Act Compliance, above, and demonstrated in the analysis in this Addendum, the Proposed Project as modified would not result in any new significant impacts or substantially more severe impacts than were previously identified in the EIR. As such, no changes to the adopted MMRP are proposed or warranted as a result of the Proposed Project modifications. Applicable mitigation measures and standard operational and construction practices are listed as follows.

Mitigation Measures

MM BIO-4: Preconstruction Nesting Bird Survey (Applies to New Aquifer Storage and Recovery [ASR] Facilities and Beltz ASR Facilities, Intertie Improvements, Felton Diversion Improvements, and Tait Diversion and Coast Pump Station Improvements). During the nesting season (February 1 – August 31), no more than two weeks prior to any ground disturbing activities, including removal of vegetation and clearing and grubbing activities, a nesting bird survey shall be completed by a qualified biologist to determine if any native birds are nesting in or adjacent to the study area (including within a 50-foot buffer for passerine species and a 250-foot buffer for raptors). If any active nests of native birds are observed during surveys, an avoidance buffer around the nests shall be established in the field to ensure compliance with California Fish and Game Code Section 3503. The avoidance buffer shall be determined by a qualified biologist in coordination with City staff, based on species, location, and extent and type of planned construction activity. Impacts to active nests shall be avoided until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist.

MM CUL-2: Historic or Unique Archaeological Resources. Unique Archaeological Resources, Historical Resources of Archaeological Nature, and Subsurface Tribal Cultural Resources. Potentially significant impacts to unique archaeological resources, historical resources of an archaeological nature, or subsurface tribal cultural resources on the infrastructure component sites shall be addressed through the following measures:

1. **Identify Potential Unique Archaeological Resources, Historical Resources of Archaeological Nature, and Subsurface Tribal Cultural Resources (Applies to New Aquifer Storage and Recovery [ASR] Facilities and Other Components where Five Years Have Elapsed).** When new ASR facilities sites are identified and those components are being pursued by the City of Santa Cruz (City), a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, shall conduct a California Historical Resources Information System (CHRIS) records search, a Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search and perform an intensive surface reconnaissance within a specifically defined Area of Direct Impact (ADI). Based on the above, all archaeological sites within or near the component site or area of potential effect shall be identified. The sensitivity of the site for discovering unknown resources, shall also be identified. The qualified archaeologist will

prepare a technical report with the results of the above. The qualified archaeologist shall attempt to ascertain whether the archaeological sites qualify as unique archaeological resources, historical resources of an archaeological nature, or subsurface tribal cultural resources. If known or identified resources of these kinds are present on the site, measure c shall be implemented.

This measure shall also be implemented for any other project or programmatic components that are implemented more than five years after the CHRIS records search and NAHC SLF search were conducted.

2. **Standard Sensitivity Training and Inadvertent Discovery Clauses (Applies to all Components).** The City or other lead agency shall include a standard clause in every construction contract for the Proposed Project, which requires cultural resource sensitivity training for workers prior to conducting earth disturbance in the vicinity of a documented cultural-resource-sensitive area, should one be identified in the future. Prior to site mobilization or construction activities on the project site, a qualified archaeologist with training and experience in California prehistory and historical period archaeology shall conduct the cultural resources awareness training for all project construction personnel. The training shall address the identification of buried cultural deposits, including Native American and historical period archaeological deposits and potential tribal cultural resources, and cover identification of typical prehistoric archaeological site components including midden soil, lithic debris, and dietary remains as well as typical historical period remains such as glass and ceramics. The training must also explain procedures for stopping work if suspected resources are encountered. Any personnel joining the work crew subsequent to the training shall also receive the same training before beginning work.

   Consistent with Standard Construction Practice #24, standard inadvertent discovery clauses shall also be included in every construction contract for the Proposed Project by the City or other lead agency, which requires that in the event that an archaeological resource is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease until a qualified archaeologist can evaluate the find and make a recommendation for how to proceed, as specified in measure c.

3. **Evaluate Potential Unique Archaeological Resources, Historical Resources of Archaeological Nature, and Subsurface Tribal Cultural Resources (Applies to all Components).** For an archaeological resource that is discovered during initial site review (measure a) or during construction (measure b), the City or other lead agency shall:

   - Retain a qualified archaeologist to determine whether the resource has potential to qualify as either a unique archaeological resource, a historical resource of an archaeological nature, or a subsurface tribal cultural resource under Public Resources Code section 21074, California Environmental Quality Act (CEQA) Guidelines Section 15064.5, or Section 106 of the National Historic Preservation Act.
   - If the resource has potential to be a unique archaeological resource, a historical resource of an archaeological nature, or a subsurface tribal cultural resource, the qualified archaeologist, in consultation with the lead agency, shall prepare a research design and archaeological evaluation plan to assess whether the resource should be considered significant under CEQA criteria.
   - If the resource is determined significant, the lead agency shall provide for preservation in place, if feasible. If preservation in place is not feasible, the qualified archaeologist, in

consultation with the lead agency, will prepare a data recovery plan for retrieving data relevant to the site's significance. The data recovery plan shall be implemented prior to, or during site development (with a 100-foot buffer around the resource). The archaeologist shall also perform appropriate technical analyses, prepare a full written report and file it with the Northwest Information Center, and provide for the permanent curation of recovered materials. The written report will provide new recommendations, which could include, but would not be limited to, archaeological and Native American monitoring for the remaining duration of project construction.

MM GEO-2: Paleontological Resources Impact Mitigation Program and Paleontological Monitoring. Potentially significant impacts to paleontological resources on the project and programmatic infrastructure component sites shall be addressed through the following measures:

1. **Identify Potential Paleontological Resources (Applies to New Aquifer Storage and Recovery [ASR] Facilities).** When new ASR facilities sites are identified and those components are being pursued by the City or other lead agency, a qualified a qualified paleontologist pursuant to the Society of Vertebrate Paleontology (SVP) 2010 guidelines, shall conduct a paleontological records search from the Natural History Museum of Los Angeles County (LACM) and conduct a desktop geological and paleontological research. Based on the above, all paleontological sites within or near the programmatic component site shall be identified. The sensitivity of the site for discovering unknown paleontological resources, shall also be identified. The qualified paleontologist will prepare a brief technical report with the results of the above. If known or identified resources are present on the site, or if the site has moderate to high sensitivity for paleontological resources, measures b and c shall be implemented.
2. **Develop Paleontological Resources Impact Mitigation Program (Applies to all Known Infrastructure Components and May Apply to New ASR Facilities).** Prior to commencement of any grading activity on infrastructure component sites with moderate to high paleontological sensitivity or that may have such sensitivity at depth, the City or other lead agency shall retain a qualified paleontologist pursuant to the SVP (2010) guidelines. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the Proposed Project. The PRIMP can be written to include all infrastructure components located in sites with moderate to high paleontological sensitivity. The PRIMP shall be consistent with the SVP (2010) guidelines and shall, at a minimum, contain the following elements:
    - Introduction to the project, including project location, description of grading activities with the potential to impact paleontological resources, and underlying geologic units.
    - Description of the relevant laws, ordinances, regulations, and standards pertinent to the project and potential paleontological resources.
    - Requirements for preconstruction meeting attendance by the qualified paleontologist and/or their designee and worker environmental awareness training for grading contractors that outlines laws protecting paleontological resources and the types of resources that may be encountered on site.
    - Identification of locations where full-time paleontological monitoring within geological units with high paleontological sensitivity is required within the project or programmatic sites based on construction plans and/or geotechnical reports.

- Requirements and frequency of paleontological monitoring spot-checks below a depth of five feet below the ground surface in areas underlain by Holocene sedimentary deposits.
- The types of paleontological field equipment the paleontological monitor shall have on-hand during monitoring.
- Discoveries treatment protocols and paleontological methods (including sediment sampling for microinvertebrate and microvertebrate fossils).
- Requirements for adequate reporting and collections management, including daily logs, monthly reports, and a final paleontological monitoring report that details the monitoring program and includes analyses of recovered fossils and their significance and the stratigraphy exposed during construction.
- Requirements for collection and complete documentation of fossils identified within the project site prior to construction and during construction, including procedures for temporarily halting construction within a 50-foot radius of the find while documentation and salvage occurs and allowing construction to resume once collection and documentation of the find is completed. Prepared fossils along with copies of all pertinent field notes, photos, maps, and the final paleontological monitoring report shall be deposited in a scientific institution with paleontological collections. Any curation costs shall be paid for by the City.

3. **Standard Paleontological Clauses in Construction Contracts (Applies to all Infrastructure Components).** The City or other lead agency shall include standard clauses in construction contracts for infrastructure components located in areas with moderate to high paleontological sensitivity. A standard clause shall be included that requires paleontological resource sensitivity training for workers prior to conducting earth disturbance activities. A standard inadvertent discovery clause shall also be included that indicates that in the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot-radius buffer. Once documentation and collection of the find is completed, the monitor will allow grading to recommence in the area of the find.

MM HYD-1: Ammonia Monitoring (Applies to Beltz 12 Aquifer Storage and Recovery [ASR] Facility). Consistent with groundwater monitoring completed for the Beltz 12 ASR Pilot Test Project (Pueblo Water Resources 2020), monitoring for ammonia shall be completed in the Beltz 12 well and the Soquel Creek Water District (SqCWD) O'Neill Ranch well during future Beltz 12 ASR pilot tests and ASR operations. The City shall establish ammonia concentrations beginning at least 12 months prior to commencement of Beltz 12 ASR operations, by conducting quarterly sampling, and obtaining similar sampling data for the SqCWD's O'Neill Ranch well, as provided by SqCWD. During the first year of Beltz 12 ASR injection and extraction operations, the City shall conduct monthly monitoring of ammonia concentrations in groundwater. Following the first year of operations, monitoring of ammonia shall be quarterly. In the event that over a two-year sampling period after initiation of Beltz 12 ASR operations, City ammonia monitoring data, in combination with ammonia monitoring data from the SqCWD O'Neill Ranch well, indicates Beltz 12 ASR operations are not resulting in changes to ammonia concentrations that could adversely affect operations at the SqCWD's O'Neill Ranch well, ammonia sampling shall be discontinued in the Beltz 12 ASR well.

The City ammonia monitoring data, in combination with ammonia monitoring data from the SqCWD O'Neill Ranch well, shall be evaluated to determine if Beltz 12 ASR operations are resulting in changes to ammonia concentrations that could adversely affect operations at the SqCWD's O'Neill Ranch well. If ammonia levels increase above baseline, the City and SqCWD shall cooperatively develop, fund, and implement a hydrogeologic investigation to evaluate the source(s) and distribution of ammonia in the aquifer system and potential causes of the observed ammonia increases. The investigation shall include, if applicable, installation of a monitoring well cluster between the Beltz 12 ASR well and the O'Neill Ranch well to evaluate the gap in data between these two wells.

To the extent that the results of the hydrogeologic investigation indicate that Beltz 12 ASR operations are resulting in ammonia concentrations above baseline concentrations, ASR injection and/or extraction operations shall be modified until ammonia concentrations decrease to baseline (or lower) levels, as demonstrated with monthly (during the first year of operations) or quarterly monitoring data from the Beltz 12 ASR well, and the SqCWD's O'Neill Ranch well, as provided by SqCWD. The Beltz 12 ASR modifications shall be proportional to the degree of impact being caused by Beltz 12 ASR operations (versus O'Neill Ranch well operations). Quarterly monitoring reports shall be prepared to document monitoring results.

Additionally, during the next Mid-County Groundwater Sustainability Plan update process, the City shall work with other member agencies of the Mid-County Groundwater Sustainability Agency to address ammonia as a groundwater quality issue in the basin if warranted based on the outcome of monitoring and any hydrogeologic investigation performed, and incorporate the City's Beltz 12 ASR well and the SqCWD's O'Neill Ranch well into the plan update to allow for the ongoing assessment and monitoring of ammonia concentrations.

MM HYD-2: Groundwater Level Monitoring (Applies to Beltz 12 Aquifer Storage and Recovery [ASR] Facility). Consistent with restrictive effects criteria established in private well baseline assessment reports (Hydro Metrics 2015a, 2015b, 2015c, 2015d, 2015e), the private well monitoring program currently in place under the April 2015 cooperative monitoring/adaptive groundwater management agreement (cooperative groundwater management agreement) and the April 2015 stream flow and well monitoring agreement, between the City of Santa Cruz (City) and Soquel Creek Water District (SqCWD), shall be continued with respect to groundwater levels, and the City will contact and enroll any additional residents with private domestic wells within a 3,300-foot radius of the City's Beltz 12 ASR facility who want to join the program. Consistent with the existing cooperative groundwater management agreement, the City and SqCWD shall share monitoring and mitigating for impacts to third parties, such as private wells found in the area of overlap of 3,300-foot radius around SqCWD's O'Neill Ranch Well and 3,300-foot radius around the City's Beltz 12 well. Monitoring expenses shall be shared equally while mitigation expenses shall be shared proportionately. If private well monitoring reveals impacts to private wells due to the presence of restrictive effects, pump tests shall be conducted to determine proportionality. Monitoring and mitigation of impacts to private wells within a 3,300-foot radius of either the O'Neill Ranch well or Beltz 12 well, but not located in the overlap area, shall be the sole responsibility of the agency whose 3,300-foot radius encompasses the private well.

If demonstrated restrictive effects to nearby private domestic wells occur during ASR pilot testing or operations, the City and SqCWD shall cooperatively develop, fund, and implement a hydrogeologic investigation to evaluate the potential causes of the observed restricted effects in private wells. To the extent that the results of the hydrogeologic investigation indicates that Beltz 12 ASR operations are resulting in restrictive effects, ASR injection and/or extraction operations shall be modified until the corresponding undesirable effects are eliminated, as demonstrated with biannual monitoring data from the private wells. The Beltz 12 ASR modifications shall be proportional to the degree of impact being caused by Beltz 12 ASR operations (versus O'Neill Ranch well operations). Biannual and annual monitoring reports shall be prepared to document monitoring results. In the event that restrictive effects to nearby private domestic wells does not occur during ASR pilot testing or operations, for a period of five years after initiation of Beltz 12 ASR operations, the City's participation in the private well monitoring program will be discontinued. However, the five-year monitoring period will be extended, if necessary, to account for multi-year drought conditions. The determination as to whether to extend the monitoring period will be based on an evaluation of the groundwater monitoring data collected over the five-year monitoring period, in combination with a review of any drought conditions present during that period. Results of this evaluation will be shared with SqCWD and any associated comments by SqCWD will be considered in determining the need for extension of the monitoring program beyond the five-year period.

Additionally, during the next Mid-County Groundwater Sustainability Plan (GSP) update process, the City shall work with other member agencies of the Mid-County Groundwater Sustainability Agency to update information in the GSP related to private wells and the ongoing assessment and monitoring of groundwater levels at these wells, if warranted based on the outcome of monitoring and any hydrogeologic investigation performed. However, the five-year monitoring period will be extended, if necessary, to account for multi-year drought conditions. The determination as to whether to extend the monitoring period will be based on an evaluation of the groundwater monitoring data collected over the five-year monitoring period, in combination with a review of any drought conditions present during that period. Results of this evaluation will be shared with SqCWD and any associated comments by SqCWD will be considered in determining the need for extension of the monitoring program beyond the five-year period.

MM NOI-2: Construction Noise (Applies to all Infrastructure Components). The Proposed Project shall implement the following measures related to construction noise:

- Restrict construction activities and use of equipment that have the potential to generate significant noise levels (e.g., use of concrete saw, mounted impact hammer, jackhammer, rock drill, etc.) to between the hours of 8:00 a.m. and 5:00 p.m., unless specifically identified work outside these hours is authorized by the City's Water Director as necessary to allow for safe access to a construction site, safe construction operations, efficient construction progress, and/or to account for prior construction delays outside of a contractor's control (e.g., weather delays).
- Construction activities requiring operations continuing outside of the standard work hours of 8:00 a.m. and 5:00 p.m. (e.g., borehole drilling operations) shall locate noise generating equipment as far as possible from noise-sensitive receptors, and/or within an acoustically rated enclosure (meeting or exceeding Sound Transmission Class [STC] 27), shroud or

temporary barrier as needed to prevent the propagation of sound into the surrounding areas in excess of the 60 dBA nighttime (10:00 p.m. to 8:00 a.m.) and 75 dBA daytime (8:00 a.m. to 10:00 p.m.) criteria at the nearest sensitive receptor. Noisy construction equipment, such as temporary pumps that are not submerged, aboveground conveyor systems, and impact tools will likely require location within such an acoustically rated enclosure, shroud or barrier to meet these above criteria. Impact tools, in particular, shall have the working area/impact area shrouded or shielded whenever possible, with intake and exhaust ports on power equipment muffled or suppressed. Impact tools may necessitate the use of temporary or portable, application-specific noise shields or barriers to achieve compliance.

- Portable and stationary site support equipment (e.g., generators, compressors, and cement mixers) shall be located as far as possible from nearby noise-sensitive receptors.
- Construction equipment and vehicles shall be fitted with efficient, well-maintained mufflers that reduce equipment noise emission levels at the project site. Internal-combustion-powered equipment shall be equipped with properly operating noise suppression devices (e.g., mufflers, silencers, wraps) that meet or exceed the manufacturer's specifications. Mufflers and noise suppressors shall be properly maintained and tuned to ensure proper fit, function, and minimization of noise.
- Construction equipment shall not be idled for extended periods of time (i.e., 5 minutes or longer) in the immediate vicinity of noise-sensitive receptors.

Standard Operational Practices

2. Operation of the ASR injections and extractions anticipated by the Proposed Project will be consistent with the sustainable management criteria, and will avoid any undesirable results identified in the adopted Santa Cruz Mid-County Groundwater Basin GSP and in any future revisions to the GSP. ASR facilities and associated injections and extractions in the Santa Margarita Groundwater Basin will be planned to be installed and operated after the Santa Margarita Groundwater Basin GSP is prepared, adopted, and submitted to the Department of Water Resources in January 2022. The proposed timing will allow ASR injections and extractions to be consistent with the sustainable management criteria, and avoid any undesirable results identified, in the adopted Santa Margarita Groundwater Basin GSP and in any future revisions to the GSP.

   To avoid any undesirable results in both groundwater basins, minimum thresholds identified in both GSPs will not be exceeded during operation of ASR, as measured at RMPs based on a five-year average, which under the Sustainable Groundwater Management Act will provide for avoidance of undesirable effects and achievement and maintenance of groundwater basin sustainability. To support the achievement of minimum thresholds in the long-term, any early management action triggers identified in the GSPs (e.g., chloride concentration and groundwater elevation triggers in the Mid-County GSP) will also be used in the short-term during ASR operations to identify the need for implementation of early management actions, if any such actions are identified in the GSPs.

3. ASR facilities will be permitted, constructed, and operated in accordance with the SWRCB Water Quality Order 2012-0010, General Waste Discharge Requirements for Aquifer Storage and Recovery Projects that Inject Drinking Water into Groundwater. This Order provides consistent regulation of ASR projects state-wide; provides a streamlined review and permitting process for ASR projects; and ensures compliance with

applicable regulations and policies, including the RWQCB Basin Plans and State Water Board Resolution 68-18 (the Antidegradation Policy). The Order addresses possible elevated concentrations of naturally occurring or anthropogenic constituents in the aquifer, as well as the potential effects of mixing water from different sources, which may cause geochemical reactions in the aquifer that can improve or degrade groundwater quality. The Order requires groundwater monitoring of the injection/extraction wells and monitoring wells to evaluate the potential for groundwater quality changes. In accordance with this Order, a technical report will be required in association with ASR permitting, including a hydrogeologic evaluation (e.g., injected aquifer characteristics) and water quality evaluation (e.g., potential impact to ongoing remediation efforts, mobilization of contaminants). A Monitoring and Reporting Program will be required, including requirements for monitoring of injected water quality, groundwater quality, and groundwater elevation/gradient.

4. Diversions from surface streams to provide water for ASR injections will be limited by the following:

    - No diversions to provide water for ASR injections will occur in months classified as Hydrologic Condition 5 (driest) as defined in the Agreed Flows (see Table 3-5a in the Santa Cruz Water Rights Project EIR).

Standard Construction Practices

1. Implement erosion control best management practices for all construction activities occurring in or adjacent to jurisdictional aquatic resources (resources subject to permitting under Clean Water Act Section 404, Clean Water Act Section 401, Porter-Cologne Water Quality Act Section 13000 et seq., and/or California Fish and Game Code Section 1600). These measures may include, but are not limited to, (1) installation of silt fences, fiber or straw rolls, and/or bales along limits of work/construction areas and from the edge of the water course; (2) covering of stockpiled spoils; (3) revegetation and physical stabilization of disturbed graded and staging areas; and (4) sediment control including fencing, dams, barriers, berms, traps, and associated basins.

2. Provide stockpile containment and exposed soil stabilization structures (e.g., Visqueen plastic sheeting, fiber or straw rolls, gravel bags, and/or hydroseed).

3. Provide runoff control devices (e.g., fiber or straw rolls, gravel bag barriers/chevrons) used during construction phases conducted during the rainy season. Following all rain events, runoff control devices shall be inspected for their performance and repaired immediately if they are found to be deficient.

4. Implement wind erosion (dust) controls, including the following:
    - Use a water truck;
    - Water active construction areas as necessary to control fugitive dust;
    - Hydro seed and/or apply non-toxic soil binders to exposed areas after cut and fill operations;
    - Cover inactive storage piles;
    - Cover all trucks hauling dirt, sand, or loose materials off site; and
    - Install appropriately effective track-out capture methods at the construction site for all exiting trucks.

5. Locate and stabilize spoil disposal sites and other debris areas such as concrete wash sites. Sediment control measures shall be implemented so that sediment is not conveyed to waterways or jurisdictional resources (resources subject to permitting under Clean Water Act Section 404, Clean Water Act Section 401, and/or California Fish and Game Code Section 1600).

6. Minimize potential for hazardous spills from heavy equipment by not storing equipment or fueling within a minimum of 65 feet of any active stream channel or water body unless approved by permitting agencies along with implementation of additional spill prevention methods such as secondary containment and inspection.

7. Ensure that gas, oil, or any other substances that could be hazardous to aquatic life or pollute habitat are prevented from contaminating the soil or entering waters of the state or of the United States by storing these types of materials within an established containment area. Vehicles and equipment will have spill kits available, be checked daily for leaks, and will be properly maintained to prevent contamination of soil or water from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease. Any gas, oil, or other substance that could be considered hazardous shall be stored in water-tight containers with secondary containment. Emergency spill kits shall be on site at all times.

8. Prevent equipment fluid leaks through regular equipment inspections.

9. Implement proper waste/trash management.

16. A qualified biologist shall conduct a training-educational session for project construction personnel prior to any mobilization-construction activities within the project sites to inform personnel about species that may be present on site. The training shall consist of basic identification of special-status species that may occur on or near the project site, their habitat, their basic habits, how they may be encountered in the work area, and procedures to follow when they are encountered. The training will include a description of the project boundaries; general provisions of the Migratory Bird Treaty Act, California Fish and Game Code, and federal and state Endangered Species Acts; the necessity for adhering to the provision of these regulations; and general measures for the protection of special-status species, including breeding birds and their nests. Any personnel joining the work crew later shall receive the same training before beginning work.

24. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the Proposed Project, immediately stop all construction work occurring within 100 feet of the find until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find, and whether the archaeological resources qualify as unique archaeological resources, historical resources of an archaeological nature, or subsurface tribal cultural resources. The archaeologist will determine whether additional study is warranted. Should it be required, the archaeologist may install temporary flagging around a resource to avoid any disturbances from construction equipment. Depending upon the significance of the find under CEQA (14 California Code of Regulations Section 15064.5[f]; California Public Resources Code Section 21082), the archaeologist may record the find to appropriate standards (thereby addressing any data potential) and allow work to continue. If the archaeologist observes the discovery to be potentially significant under CEQA, preservation in place or additional treatment may be required.

25. In accordance with Section 7050.5 of the California Health and Safety Code, if potential human remains are found, immediately notify the lead agency staff and the County Coroner of the discovery. The coroner will provide a determination within 48 hours of notification. No further excavation or disturbance of the identified material, or any area reasonably suspected to overlie additional remains, can occur until a determination has been made. If the County Coroner determines that the remains are, or are believed to be, Native American, the coroner will notify the Native American Heritage Commission within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the Native American Heritage Commission must immediately notify those persons it believes to be the Most Likely Descendant from the deceased Native American. Within 48 hours of this notification, the Most Likely Descendant will recommend to the lead agency her/his preferred treatment of the remains and associated grave goods.

26. Notify adjacent property owners of nighttime construction schedules. A Construction Noise Coordinator will be identified. The contact number for the Construction Noise Coordinator will be included on notices distributed to neighbors regarding planned nighttime construction activities. The Construction Noise Coordinator will be responsible for responding to any local complaints about construction noise. When a complaint is received, the Construction Noise Coordinator shall notify the City within 48 hours of the complaint, determine the cause of the noise complaint, and implement as possible reasonable measures to resolve the complaint, as deemed acceptable by the City.

2.4 Project Approvals

The following discretionary approvals[4] would be required for implementation of the Proposed Beltz 8 and 12 ASR Project:

- City of Santa Cruz: Approval of Proposed Beltz 8 and 12 ASR Project facilities
- Regional Water Resources Control Board Division of Drinking Water: Permit to operate an Aquifer Storage and Recovery Project that Injects Drinking Water into Groundwater
- California State Water Resources Control Board action on water rights petitions for change that will enable implementation of full-scale ASR
- County of Santa Cruz: Approval of encroachment permits and traffic control plans for work on 38th Avenue; amendment to sanitary sewer permit (Santa Cruz County Sanitation District Waste Discharge Permit No.1031)
- City of Capitola: Approval of encroachment permits and traffic control plans for work on part of Roland Drive

Other approvals could also be necessary, including review and approval of an Operations Plan from the SWRCB Division of Drinking Water. The Proposed Beltz 8 and 12 ASR Project is primarily located within the unincorporated area of the County of Santa Cruz, with a portion of Beltz 8 within the City of Capitola; however, the City of Santa Cruz is not required to obtain building or grading permits from the County of Santa Cruz or City of Capitola pursuant to California Government Code Sections 53091(d) and (e), which provide that facilities for the production, generation, storage, treatment, or transmission of water supplies are exempt from local zoning and building ordinances. While the Beltz 8 ASR project site is within the Coastal Zone in both the County of Santa Cruz (most of the project site) and the City of Capitola (the portion of the site that extends west under the mobile home park) and is therefore in

[4] Such approvals were applicable to the previously evaluated project as well and are provided here in more detail than in the prior EIR.

the jurisdiction of their respective Local Coastal Programs, the scope of the Proposed Project will not require amendments to the existing facility Coastal Development Permits or new Coastal Development Permits. The repair and replacement work qualifies for an exemption pursuant to Santa Cruz County Code 12.20.064 C and the replacement antenna is exempt from the wireless regulations as it would be solely for public or quasi-public use. The City's design components are mostly below ground and would comply with health and safety requirements.

3 EIR Consistency Analysis

Elements of the modified Proposed Project that have the potential to influence the prior environmental analysis contained in the Santa Cruz Water Rights Project EIR include project boundary changes at Beltz 8 to accommodate a new sanitary sewer pipeline and connection and a potential new storm drain connection, installation of a new radio antenna at Beltz 8, modifications to discharge piping and no longer constructing the originally proposed media filter tank at Beltz 12, replacement of a filter at Beltz 8, identification of an operational pumping rate at Beltz 12, the addition of orthophosphate chemical storage at Beltz 8 and Beltz 12, the identification of Beltz 10 as an off-site staging area, and changes to the construction equipment and schedule.

The Santa Cruz Water Rights Project EIR indicated that the Proposed Project would have no impacts or less-than-significant impacts related to aesthetics, agriculture and forestry resources, air quality, greenhouse gas (GHG) emissions, hazards and hazardous materials, land use and planning, mineral resources, population and housing, public services, recreation, transportation, and wildfire. While the Proposed Project has undergone some minor design changes and modifications to proposed facilities within the existing developed Beltz 8 and 12 sites, project boundary changes to accommodate utility connections within existing rights-of-way, and identification of staging areas, the project changes would not result in new significant impacts or substantially more severe impacts related to these topics. Similarly, there are no changed circumstances or new information that would change the impact conclusions for these topics.

Additionally, the new radio antenna at Beltz 8 would be similar in height to the existing 30-foot-tall antenna, which would not result in new significant impacts or substantially more severe aesthetic impacts.

Regarding air quality, operational criteria pollutant emissions would remain consistent with those described in the EIR, as operations would not substantially change with the Proposed Project modifications. The EIR included modeling of estimated maximum daily construction criteria air pollutant emissions over the assumed construction period.[5] The EIR estimated that maximum daily emissions for construction of all the Beltz ASR facilities would be 1.48 pounds per day of PM_{10}, well below the Monterey Bay Air Resources District (MBARD) threshold of 82 pounds per day. While the Proposed Project as modified now has a longer construction period, the construction methods and equipment used would be similar. Therefore, the maximum daily construction criteria pollutant emissions would be similar to those reported in the EIR. While the anticipated construction schedules for the Beltz 8 and Beltz 12 ASR facility upgrades did not overlap in the previously evaluated project in the EIR, the proposed construction schedules as modified now include some overlap. As a conservative estimate of the overlapped construction activities with the Proposed Project modifications, the worst-case daily emissions for Beltz 8 and Beltz 12 presented in the EIR were summed. The Proposed Project modifications would result in maximum daily emissions from construction of the Beltz 8 and 12 ASR facilities of 1.68 pounds per day of PM_{10}, which would be a minimal increase in comparison to the EIR and remain well below the MBARD threshold of 82 pounds per day. Therefore, the Proposed Project modifications would not result in new significant impacts or substantially more severe air quality impacts.

[5] As mentioned previously, for the purposes of the EIR analysis, the Beltz 12 ASR facility upgrades were assumed to be constructed from July 5, 2022, to September 9, 2022, and the Beltz 8 ASR facility upgrades were assumed to be constructed from September 12, 2022, to January 6, 2023. Under the Proposed Project modifications, construction at Beltz 12 would occur over approximately 14 months beginning in December 2024 until February 2026; construction at Beltz 8 would occur over approximately 18 months beginning in June 2025 until December 2026.

Regarding GHG emissions, the longer construction duration for the Beltz 8 and 12 ASR facility upgrades would result in an increase in GHG emissions, which would be approximately proportionate to the increased construction duration. The EIR analysis estimated that construction of all the infrastructure improvements in the Santa Cruz Water Rights Project would result in the emission of a total of 2,353.09 metric tons of carbon dioxide equivalent (MT CO_2e) per year (of which 93.3 MT CO_2e per year were attributed to the construction of the Beltz 8 and 12 ASR facilities). Amortized over 30 years, construction of the Santa Cruz Water Rights Project infrastructure improvements, including the Beltz 8 and 12 ASR facility upgrades, was estimated to be 78.44 MT CO_2e in the EIR. Additionally, operational emissions were estimated to be 141.23 MT CO_2e per year of operational emissions, resulting in a combined total operational and amortized construction GHGs of 219.67 MT CO_2e per year, below the GHG emissions threshold of 900 MT CO_2e per year.

With the longer construction schedule that is currently proposed, the Beltz 8 and 12 ASR facility construction would result in approximately 399.5 MT CO_2e per year, which would bring total GHG emissions from construction of the Santa Cruz Water Rights Project infrastructure improvements to a total of 2,659.27 MT CO_2e per year, which would be 88.64 MT CO_2e per year amortized over 30 years, slightly greater than the 78.44 MT CO_2e per year previously reported in the EIR. As operational emissions would not substantially change, the Proposed Project as modified would change the total emissions reported in the EIR for operational plus amortized construction GHGs to 229.87 MT CO_2e per year, slightly more than the 219.67 MT CO_2e per year reported in the EIR, but still well below the GHG emissions threshold of 900 MT CO_2e. Therefore, the Proposed Project modifications would not result in new significant impacts or substantially more severe GHG impacts.

The Santa Cruz Water Rights Project EIR indicated that the Proposed Project would have less-than-significant impacts with mitigation incorporated related to biological resources (nesting birds), cultural resources (archaeological resources and human remains), geology and soils (paleontological resources), hydrology and water quality (groundwater quality/ammonia and groundwater supplies), noise (from construction), utilities and service systems (new or expanded water facilities resulting in impacts).

As indicated in Section 2.3.2.5, Applicable Mitigation Measures and Standard Practices, the adopted MMRP for the Santa Cruz Water Rights Project applies to the Proposed Beltz 8 and 12 ASR Project and is included as Appendix A to this Addendum. Mitigation measures that apply to the Proposed Project include nesting bird pre-construction surveys and construction habitat protections where appropriate (MM BIO-4), cultural and tribal cultural resource protections (MM CUL-2), paleontological resource protections (MM GEO-2), ammonia and groundwater-level monitoring (MM HYD-1 and MM HYD-2), and construction noise and vibration measures (MM NOI-2). Standard operational and construction practices include appropriate operational constraints for ASR (Standard Operational Practices #2-4), and construction practices to provide for erosion and dust emissions control (Standard Construction Practices #1-4), water quality and habitat protection (Standard Construction Practices #5-9 and #16), inadvertent discovery of cultural resources (Standard Construction Practices #24-25), and construction noise notifications (Standard Construction Practice #26). Applicable mitigation measures and standard operational and construction practices are listed in Section 2.3.2.5, Applicable Mitigation Measures and Standard Practices and Appendix A.

The Proposed Project modifications would not affect the impact conclusions related to biological resources (nesting birds), archaeological resources, paleontological resources, construction noise, and water utilities. The minor changes to the project site ground disturbance boundary at Beltz 8 involving the addition of Roland Drive right-of-way out to and including 38th Avenue and an area to the west of the project entrance under the mobile home park, are areas that are already paved and developed. Construction disturbance in these already paved and developed

areas does not have the potential to result in new significant impacts or substantially more severe impacts than those previously identified. The applicable mitigation measures for nesting bird pre-construction surveys and construction habitat protections, cultural and tribal cultural resource protections, and paleontological resource protections would continue to reduce these impacts of the Proposed Project to less than significant with the mitigation measures incorporated. Consequently, the impacts of water utilities associated with the Proposed Project would also continue to be less than significant with the mitigation measures incorporated.

Regarding construction noise, while the construction period would be longer (2 years in total, including 14 months at Beltz 12 and 18 months at Beltz 8 with some temporal overlap) for the Beltz 8 and 12 ASR facilities compared to the construction period evaluated in the Santa Cruz Water Rights Project EIR (up to 3 months). Thus, construction would be expected to take place over approximately 14 months at Beltz 12 and 18 months at Beltz 8 (including the filter replacement) during the 2-year period. The effects of construction noise depend largely on the types and specific locations of construction activities occurring on any given day, noise levels generated by those activities, distances to noise-sensitive receptors, and the existing ambient noise environment in the vicinity of the receiver. A longer construction period does not affect these factors and would not result in changes to the modeled noise levels during construction at either the Beltz 8 or Beltz 12 ASR facilities sites, as reflected in Appendix H of the Santa Cruz Water Rights Project EIR. Additionally, the use of Beltz 10 for staging would not result in additional noise impacts, as Beltz 10 was previously evaluated in the Santa Cruz Water Rights Project EIR as a facility for ASR and its use for staging as part of the Proposed Project would not result in additional noise impacts. Therefore, construction noise associated with the Proposed Project would not have the potential to result in new significant impacts or substantially more severe impacts than those previously identified. The applicable mitigation measure to reduce the temporary increase in ambient noise levels during construction would continue to reduce the impact of the Proposed Project to less than significant with the mitigation measure incorporated.

Therefore, the following analysis addresses hydrology and water quality. While the focus of the analysis relates to groundwater and groundwater-dependent ecosystems, all impact categories under this topic are addressed to provide a comprehensive analysis. As demonstrated below, the Proposed Project modifications would not result in new significant impacts or substantially more severe impacts than were previously identified in the EIR regarding any of the environmental topics. Therefore, the certified Santa Cruz Water Rights Project EIR and its environmental determinations fully address the Proposed Project, and an Addendum is the appropriate environmental documentation for the Proposed Project pursuant to CEQA.

3.1 Hydrology and Water Quality

The Santa Cruz Water Rights Project EIR analyzed hydrology and water quality in Section 4.8. The analysis was supported by hydrologic and water supply modeling conducted for the Santa Cruz Water Rights Project, which assesses operations with the implementation of the water rights modifications and all infrastructure components, described in Appendix D of the EIR and in the following discussion.

3.1.1 Existing Conditions

As described in the EIR, the project sites are located within the Soquel Creek Watershed, which drains an area of 42 square miles between the cities of Santa Cruz and Watsonville. Principal land uses in the watershed include urban development, rural residential development, agriculture, parks and recreation, and mining and timber harvesting. The Beltz 12 site is located within the Rodeo Creek Subwatershed and the Beltz 8 and 10 sites are

located within the subwatershed of short intermittent Stream 472, located upstream of Moran Lake. Despite being located within the Soquel Creek Watershed, Rodeo Creek and Stream 472 do not actually drain into Soquel Creek. Rather, these creeks drain directly into Monterey Bay.

The area within and surrounding the Beltz system is urbanized and mostly connected to the City's municipal water system. Within this area, there are no agricultural or industrial users of groundwater in the immediate vicinity of the Beltz system; the only other groundwater wells in the vicinity are identified as remediation/monitoring wells (DWR 2020b). Additionally, there are private domestic wells in the vicinity of Beltz 12.

As previously discussed, the Beltz 8 and 12 ASR facility sites are located within the Santa Cruz Mid-County Groundwater Basin, which is the primary water supply for approximately 50,000 people, including the City of Capitola and unincorporated parts of Santa Cruz County, including Live Oak, Soquel, Aptos, Sea Cliff, Seascape, and La Selva Beach. In addition, the City of Santa Cruz pumps approximately 5% of its water supply from the Beltz wells.

The Santa Cruz Mid-County Groundwater Basin includes the former Soquel Valley Basin and portions of three adjacent basins—the West Santa Cruz Terrace Basin, the former Santa Cruz Purisima Formation Basin, and the original Pajaro Valley Basin. The lateral boundaries of the basin generally follow the definable limits of the stacked Purisima Formation aquifer system, the Aromas Red Sands, and other Tertiary-aged units that occur between the base of the Purisima Formation and the granitic basement of the basin. The Santa Cruz Mid-County Groundwater Basin is bound on the west by the West Santa Cruz Terrace Basin; on the north by the Zayante-Vergeles Fault and the Purisima Highlands Subbasin of the Corralitos Basin; on the east by the Pajaro Valley Subbasin of the Corralitos Basin, and on the south by Monterey Bay (MGA 2019).

The Purisima Formation underlies the entire Santa Cruz Mid-County Groundwater Basin and consists of moderately consolidated, fine- to medium-grained sandstone, with siltstone and claystone interbeds. The Purisima Formation has been divided into hydrostratigraphic units including, from oldest to youngest (i.e., deepest to shallowest), Purisima-AA Aquifer, Purisima-A Aquifer, Purisima-B Aquitard, Purisima-BC Aquifer, Purisima-D Aquitard, Purisima-DEF Aquifer, and Purisima-F Aquifer. An aquitard is a relatively impermeable layer of clay that generally prevents upward and downward movement of groundwater, thus separating aquifers. These geologic units are tilted to the east, which has resulted in some of the younger units being eroded away in the western portion of the basin (i.e., vicinity of the Beltz ASR sites), leaving only the older units as aquifers. Also present in the western portion of the basin is the Tu unit, which consists of undifferentiated Tertiary sandstone. This unit is a localized productive aquifer that includes all non - Purisima water-bearing units between the poorly defined base of the AA aquifer unit and the top of the granitic basement (MGA 2019).

The Purisima Formation is blanketed by the Aromas Red Sands in the eastern third of the basin, and by relatively shallow, localized alluvial and terrace deposits. The Aromas Red Sands, which overlie the Purisima Formation in the hills and coastal terraces east of Valencia Creek, consist of consolidated fine- to coarse-grained sands with lenses of silt and clay. The Aromas Red Sands are divided into an upper and lower unit. The upper unit is generally unsaturated, especially where the water table is drawn down to near sea level. The hydraulic conductivity of the lower unit ranges from 6 to 50 feet per day, whereas the hydraulic conductivity of the upper unit is 3 to 40 feet per day. There is no continuous aquitard between the Aromas Red Sands and uppermost Purisima unit (Purisima F-unit) (MGA 2019).

Beltz wells are located on relatively flat to gently sloping topography. Beltz 8 and 12 are located on Watsonville loam soils, which occur on terraces and alluvial fans, on 0% to 15% slopes. Beltz 10 is located on Elkhorn sandy

loam, which occurs on terraces and alluvial fans, on 2% to 9% slopes. The relatively flat topography would minimize stormwater runoff rates and associated erosion. Watsonville loam soils, which include loam, clay loam, and sandy clay loam, are somewhat poorly drained and have a very low to moderately low capacity to transmit water. Elkhorn sandy loam and clay loam are well drained and have a moderately high capacity to transmit water. The well-drained soils reduce erosion rates by enhancing stormwater infiltration into on-site soils.

3.1.2 Project Impact Analysis

The project impact analysis in Section 4.8 of the Santa Cruz Water Rights EIR addressed impacts related to surface water quality (Impact HYD-1), groundwater (Impact HYD-2), drainage patterns (Impact HYD-3), and flooding (Impact HYD-4). These impacts are addressed herein related to the Proposed Project.

Related to hydrology and water quality, elements of the modified Proposed Project that have the potential to influence the prior environmental analysis contained in the Santa Cruz Water Rights Project EIR include project boundary changes at Beltz 8 to accommodate a new sanitary sewer pipeline and connection and a potential new storm drain connection, modifications to discharge piping, replacement of a filter at Beltz 8, identification of an operational pumping rate at Beltz 12, the addition of orthophosphate chemical storage at Beltz 8 and Beltz 12, and changes to the construction schedule. These elements are therefore evaluated herein, where relevant to the analysis.

Elements of the modified Proposed Project that do not have the potential to influence the prior hydrology and water quality analysis contained in the Santa Cruz Water Rights Project EIR include installation of a new radio antenna at Beltz 8, no longer constructing the originally proposed media filter tank at Beltz 12, the identification of Beltz 10 as an off-site staging area, and changes to the construction equipment. These elements do not have the potential to increase impacts related to surface water quality or groundwater. In particular, the use of Beltz 10 for staging would not result in additional hydrology and water quality impacts, as Beltz 10 was previously evaluated in the Santa Cruz Water Rights Project EIR as a facility for ASR and its use for staging as part of the Proposed Project would not result in additional impacts. Therefore, these elements of the modified Proposed Project are therefore not further evaluated.

3.1.2.1 Surface Water Quality

EIR Impact Summary

Excavations and construction associated with the Beltz ASR facility upgrades could result in short-term erosion of exposed soils. Construction-related activities that result in sediment releases are related to exposing previously stabilized soils to potential mobilization by rainfall/runoff and wind. Such activities include the removal of impervious surfaces, excavations, and soil stockpiling at the site, including soil stockpiles associated with facility upgrades and monitoring well drilling. Erosion could result in sedimentation of downstream drainages, resulting in adverse water quality impacts. As described above, the Beltz 12 ASR facility site is located within the Rodeo Creek Gulch Watershed and Beltz 8, 9, and 10 ASR facility sites are located within the small watershed of intermittent Stream 472, located upstream of Moran Lake.

However, as indicated in Section 2.3.2.5, Applicable Mitigation Measures and Standard Practices, the City has identified standard construction practices that would be implemented by the City or its contractors during construction activities, where relevant, to prevent erosion (Standard Construction Practices #1-4) and protect water

quality (Standard Construction Practices #5-9). These standard construction practices include implementation of erosion best management practices, stockpile containment and exposed soil stabilization, use of runoff control devices, implementation of dust and sediment control measures, spill prevention methods including secondary containment and spill kits, regular equipment inspections, and waste/trash management. In addition, compliance with standard spill prevention and containment regulations would minimize the potential for spills of hazardous materials impacting nearby water bodies during Beltz ASR facility operations. As a result, construction and operations at the Beltz ASR facilities would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality of Rodeo Creek Gulch and intermittent Stream 472, located upstream of Moran Lake and the EIR found that the impact would be less than significant.

Modified Proposed Project Impacts

The Proposed Project modifications would marginally extend the project boundary and would extend the construction duration, but would not change construction methods or operations. Specifically, ground disturbance could be somewhat greater at the Beltz 8 ASR facility site due to the boundary changes and related construction of the new sanitary sewer pipeline and connection and construction of the potential new storm drain connection and associated filter replacement. Additionally, ground-disturbing activities could occur over a longer construction duration at both Beltz 8 and 12 ASR facility sites. While ground disturbance could be somewhat greater and occur over a longer construction duration than previously evaluated, the potential for erosion and sedimentation of downstream drainages would be similar to that previously evaluated, given the implementation of the standard construction practices to prevent erosion (Standard Construction Practices #1-4) and protect water quality (Standard Construction Practices #5-9). Additionally, erosion and sediment control during construction would continue to comply with the County of Santa Cruz Municipal Separate Storm Sewer System (MS4) and the City of Capitola MS4 permit requirements at Beltz 8 in their jurisdiction.

Regardless of reconfigurations of piping, storm drain, and sanitary sewer infrastructure within the sites, discharges to the storm drain would continue to occur under the National Pollutant Discharge Elimination System statewide general permit for drinking water in a manner that would not adversely affect the receiving water. Additionally, sewer discharges would continue to comply with the City's current Santa Cruz County Sanitation District wastewater discharge permit for the facility.

Installation of a new orthophosphate system for corrosion control at both Beltz 8 and 12 ASR facility sites would result in additional chemical storage at each site. Orthophosphate chemical would be certified as meeting the specifications of NSF/ANSI Standard 60, which is a national standard that establishes the minimum health-effects requirements for chemicals, chemical contaminants, and impurities that are directly added to drinking water. New orthophosphate chemical facilities, unloading areas, and dosing pumps would be designed for full compliance with current safety codes and regulations, with provisions for emergency eye wash/shower stations, chemical spill containment areas, separation between acids and bases, and fire-suppression systems in accordance with applicable regulatory requirements including those instituted by the Department of Drinking Water (DDW).

Given the above, construction and operation of the Proposed Project, including modifications, would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality. The Proposed Project would have a less-than-significant impact on surface water quality, consistent with the impact conclusion in the Santa Cruz Water Rights Project EIR. Therefore, the Proposed Project modifications would not result in new or substantially more severe impacts related to water quality standards, waste discharge requirements, or degradation of water quality than previously identified in the Santa Cruz Water Rights Project EIR.

3.1.2.2 Groundwater

Beltz ASR, including at Beltz 8 and 12, would involve injecting surface water, treated to drinking water standards, into the Santa Cruz Mid-County Groundwater Basin, which would act as an underground storage reservoir, consistent with the GSP for this basin (MGA 2019). The currently Proposed Project involves the installation of upgrades to the existing Beltz system at the existing Beltz 8 and 12 facilities to allow for injection of treated water from the City's GHWTP and subsequent extraction. The following section addresses Impact HYD-2 that analyzes groundwater recharge, groundwater supplies, and the GSP to determine if the currently Proposed Project could result in new significant impacts or in substantially more severe impacts than those previously identified.

Groundwater Recharge

EIR Impact Summary

The EIR concluded that the Beltz ASR facilities would not have an appreciable effect on natural aquifer recharge because additional impervious surfaces would not be created at any of these sites. The Beltz ASR facility sites are currently developed and mostly paved and would not require additional areas of pavement. Injections of treated surface water into the groundwater basin would augment natural groundwater recharge. Beneficial impacts would occur with respect to groundwater recharge, because by design, Beltz ASR facilities would, in aggregate, result in more injection than extraction. This is demonstrated in the EIR and also shown in Table 1 of this Addendum. In this way, Beltz ASR facilities would use the Santa Cruz Mid-County Groundwater Basin like a subsurface reservoir for treated surface water. Beltz ASR-related injection would contribute to the protection of groundwater quality from seawater intrusion and provide for sustainability benefits in the groundwater basin, in compliance with the Santa Cruz Mid-County Groundwater Basin GSP. As a result, the impact of Beltz ASR operations on groundwater recharge would be less than significant.

Modified Proposed Project Impacts

Proposed Project modifications involving boundary changes, reconfiguration of piping and infrastructure and design changes within the project sites would not have implications for groundwater recharge, as they would not result in increases in impervious surface area compared to that previously analyzed. While the Beltz 8 ASR facility would involve a somewhat larger project boundary to accommodate a new sanitary sewer pipeline and connection and a potential new storm drain connection, the additional areas are already paved and developed and would not result in an increase in impervious surface area. Minor design changes (i.e., replacement of a filter at Beltz 8, addition of an operational pumping rate at Beltz 12, and orthophosphate chemical storage on both sites) would have no bearing on groundwater recharge, as such changes also would not result in an increase in impervious surface area. Likewise, the longer construction duration would also not have any bearing on groundwater recharge.

The Proposed Project as modified would still result in operation of ASR facilities that would inject and extract water into and out of the basin, as described in the EIR and summarized above. As indicated in the EIR and per Standard Operational Practice #2, operation of the ASR injections and extractions would be consistent with the sustainable management criteria, and would avoid any undesirable results identified in the adopted Santa Cruz Mid-County Groundwater Basin GSP and in any future revisions to the GSP. The Proposed Project would still have the same beneficial effects on groundwater recharge identified in the EIR. Therefore, the Proposed Project modifications would not result in new or substantially more severe impacts related to groundwater recharge than previously identified in the Santa Cruz Water Rights Project EIR.

Groundwater Supplies and Applicable Groundwater Plan

As indicated above in Section 2.1.4, Santa Cruz Mid-County Groundwater Sustainability Plan, based on the seawater intrusion risk, the Santa Cruz Mid-County Groundwater Basin is considered a high priority groundwater basin in critical overdraft, as defined under the SGMA. As a result, the Santa Cruz Mid-County Groundwater Basin GSP has been prepared for the basin (MGA 2019). DWR approved the GSP on June 3, 2021.

Beltz ASR facilities would be completed in conformance with the Santa Cruz Mid-County Groundwater Basin GSP (see Standard Operational Practice #2 listed in Section 2.3.2.5, Applicable Mitigation Measures and Standard Practices), which would contribute to the sustainability of the basin. A significant impact with respect to a decrease in groundwater supplies would occur if the Beltz ASR facilities were to create or appreciably contribute to any "undesirable results," as defined in the Santa Cruz Mid-County Groundwater Basin GSP, impede sustainable groundwater management of the groundwater basin, or conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Undesirable results are defined generally under SGMA, but more specifically and locally defined by the MGA as:

- **Seawater Intrusion**: Seawater moving farther inland than has been observed from 2013 through 2017.
- **Degraded Groundwater Quality**: Groundwater quality, attributable to groundwater pumping or managed aquifer recharge, that fails to meet state drinking water standards.
- **Chronic Lowering of Groundwater Levels**: A significant number of private, agricultural, industrial, and municipal production wells can no longer provide enough groundwater to supply beneficial uses.
- **Reduction of Groundwater in Storage**: A net volume of groundwater extracted (pumping minus annual volume of managed aquifer recharge) that will likely cause other sustainability indicators to have undesirable results.
- **Land Subsidence**: Any land subsidence caused by lowering of groundwater levels occurring in the basin would be considered significant and unreasonable.
- **Depletion of Interconnected Surface Water**: Significant and unreasonable depletion of surface water due to groundwater extraction, in interconnected streams supporting priority species, would be undesirable if there is more depletion than experienced since the start of shallow groundwater level monitoring through 2015.

As discussed in the EIR, the Proposed Project's groundwater supply impacts would be beneficial, as Beltz ASR facilities would be operated to achieve and maintain sustainability objectives of the Santa Cruz Mid-County Groundwater Basin GSP in terms of an overall raising of groundwater levels. In addition, Beltz ASR facilities would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan, as Beltz ASR facilities would be completed and operated in compliance with the Santa Cruz Mid-County Groundwater Basin GSP per Standard Operational Practice #2. The GSP includes quantifiable minimum thresholds related to (1) groundwater levels and groundwater quality (including seawater intrusion), (2) changes in storage, (3) subsidence, and (4) surface/groundwater connection, such that undesirable effects would not occur, and groundwater basin sustainability would be maintained, as further described below. Early management action triggers identified in the Mid-County Groundwater Basin GSP related to chloride concentration and groundwater elevation triggers would be used in the short-term, as specified in Standard Operational Practice #2, to identify the need for implementation of early management actions identified in the GSP.

Seawater Intrusion

EIR Impact Summary

A series of monitoring wells, within areas served by the City and the SqCWD, have been established in the basin to assess the risk of seawater intrusion. Based on regional groundwater elevation contour maps prepared for the Santa Cruz Mid-County Groundwater Basin GSP, seawater intrusion near the Beltz system has improved substantially from 2005 through 2018, as reported in the Santa Cruz Water Rights Project EIR. General groundwater gradient is toward the south and southeast, toward the ocean.

The Santa Cruz Mid-County Groundwater Basin GSP has evaluated the basin in the context of historical, current, and anticipated future groundwater conditions, and has established minimum thresholds at RMPs which if exceeded, would indicate that an undesirable result (as defined above) is occurring. Minimum thresholds at RMPs for chronic lowering of groundwater levels are based on the groundwater elevation required to meet the typical overlying water demand in the shallowest well in the vicinity of the RMP. Measurable objectives for RMPs are the 75th percentile of historical groundwater elevations for the period of record of each monitoring point. For seawater intrusion, the GSP establishes minimum thresholds for chloride concentrations, but has also established minimum thresholds for coastal monitoring well groundwater elevations that are generally several feet above sea level (i.e., that serve as a "barrier" to seawater intrusion). The groundwater level monitoring network relies on groundwater levels either directly or using groundwater levels as a proxy to determine groundwater basin sustainability with respect to chronic lowering of groundwater levels, seawater intrusion, and depletion of interconnected surface water (MGA 2019). The groundwater quality monitoring network relies on groundwater quality to determine groundwater basin sustainability with respect to degraded groundwater quality and seawater intrusion (MGA 2019).

ASR is identified in the GSP as one of several "projects and management actions" that would contribute to achieving sustainable groundwater management of the basin (i.e., avoiding seawater intrusion and other undesirable results). Therefore, Beltz ASR facilities operated in conformance with the GSP, per Standard Operational Practice #2, would likely have a beneficial impact with respect to the groundwater basin since it allows for the storage of treated surface water in the basin to avoid further seawater intrusion, while supplying the City with additional storage that can be used during dry periods. The GSP would be refined over time and monitoring conducted to verify that Beltz ASR-related extractions are not causing undesirable effects in the groundwater basin. Therefore, the impact of Beltz ASR with respect to seawater intrusion would be less than significant.

Modified Proposed Project Impacts

The Proposed Project modifications would involve changes from what was described in the EIR related to boundary changes and related sewer and storm drain connections at the Beltz 8 site, the reconfiguration of piping and infrastructure within the existing developed Beltz 8 and 12 sites, as well as minor design changes (i.e., replacement of a filter at Beltz 8 and addition of orthophosphate chemical storage at both sites); however, these changes would have no bearing on seawater intrusion. Likewise, the longer construction duration would also not have any bearing on seawater intrusion. The Proposed Project would still consist of implementation of ASR facilities that would inject and extract water into and out of the basin, as described in the EIR and summarized above, with the same expected benefits to seawater intrusion risk described above. The Proposed Project capacity falls within the capacity for Beltz ASR Facilities evaluated in the EIR. Specifically, the currently proposed Beltz 8 and 12 ASR combined injection capacity of 1.07 mgd and extraction capacity of 1.77 mgd would fall within total the injection capacity of 2.10 mgd and extraction capacity of 2.17 mgd for Beltz ASR Facilities at existing Beltz well facilities shown in Section 2.3.1.1, Table 1.

As mentioned above in Section 2.1.4, Santa Cruz Mid-County Groundwater Sustainability Plan, the 2023 annual report indicates that the Basin continues to be in a state of overdraft, thereby presenting a risk of seawater intrusion. There are undesirable results for seawater intrusion because 7 coastal RMPs have 5-year moving average groundwater elevations below their respective minimum threshold groundwater elevation proxies. However, these coastal RMPs are not near the Beltz system; the RMPs near the Beltz system have all met minimum thresholds and, in most cases, measurable objectives (MGA 2024).

As part of the currently Proposed Project, the maximum operational pumping rate at Beltz 12 would be increased from 210 gpm, established when the Santa Cruz City Council approved the Reduced Pumping Alternative from the Beltz Well No. 12 EIR in January 2012 (City of Santa Cruz 2012), up to a new maximum operational rate of 500 gpm. The new maximum operational rate would be utilized for groundwater and ASR extractions. For routine maintenance during the injection season, Beltz 12 would be pumped at a rate of approximately 700-750 gpm for about 30 minutes per week to backflush the well.

While the Santa Cruz Water Rights Project EIR did not identify or describe pumping rates, the modification of the proposed pumping rate for the Proposed Project would not increase the risk of seawater intrusion, as the City would operate the Proposed Project, including Beltz 12, in a manner consistent with the sustainable management criteria and avoid any undesirable results identified in the Santa Cruz Mid-County Groundwater Basin GSP per Standard Operational Practice #2. Additionally, ASR is one of the projects identified in the GSP, along with redistribution of pumping away from the coast, as represented by Beltz 12, Pure Water Soquel and In-Lieu Recharge, to rest and reduce pumping of coastal wells and be consistent with basin sustainability goals to protect the groundwater supply against seawater intrusion. Therefore, the Proposed Project modifications would not result in new or substantially more severe impacts related to seawater intrusion than previously identified in the Santa Cruz Water Rights Project EIR.

Degraded Groundwater Quality

EIR Impact Summary

In addition to groundwater quality issues associated with seawater intrusion, the SqCWD's O'Neill Ranch water supply well has naturally occurring ammonia concentrations that are difficult to treat. These ammonia concentrations, which increase with depth from the ground surface, appear to be increasing in the Santa Cruz Mid-County Groundwater Basin due to natural causes. Proposed ASR injection at the Beltz 12 well could potentially affect the high concentrations of ammonia, resulting in increased or decreased ammonia concentrations in SqCWD's O'Neill Ranch well.

As summarized in the Santa Cruz Water Rights Project EIR, pilot testing was completed at the Beltz 12 ASR facility from December 2018 to July 2019. Initial pilot testing at the facility indicated dilution of ammonia concentrations during injection, followed by a return to baseline conditions after extraction operations. Based on sampling of City monitoring wells and the Beltz 12 production well during pilot tests, no detrimental effects related to ammonia were observed. Rather, ASR had a beneficial impact in City monitoring and Beltz 12 production wells with respect to ammonia concentrations in groundwater (Pueblo Water Resources 2020). While it is unlikely that long-term Beltz 12 ASR operations would adversely affect the water quality of the SqCWD O'Neill Ranch well, localized water quality impacts related to elevated ammonia concentrations were conservatively considered in the EIR to be a potentially significant impact.

Each project implemented as part of the GSP, including Beltz 12 ASR, would have its own unique water quality constituents of concern that would apply to monitoring and production wells. As detailed in Standard Operational Practice #3 (see Section 2.3.2.5, Applicable Mitigation Measures and Standard Practices), groundwater quality monitoring plans would be included in use permits granted by the SWRCB with respect to injecting and storing treated drinking water in groundwater aquifers (i.e., SWRCB Water Quality Order 2012-0010, General Waste Discharge Requirements For Aquifer Storage And Recovery Projects That Inject Drinking Water Into Groundwater). The Beltz 12 ASR facility was required to complete at least four quarters of background groundwater quality data to characterize groundwater quality in each aquifer that would receive injected treated water. The Notice of Intent application package associated with the SWRCB ASR order would include a technical report that identifies and describes target aquifers, delineates Areas of Hydrologic Influence, identifies all land uses within the delineated Areas of Hydrologic Influence, identifies project-specific constituents of concern, and assesses groundwater degradation (MGA 2019).

In addition, the EIR identified MM HYD-1, Ammonia Monitoring, which is applicable to the Proposed Project, to avoid conflicts with the Santa Cruz Mid-County Groundwater Basin GSP by requiring: monitoring for ammonia concentrations in groundwater at the Beltz 12 ASR facility well and the SqCWD O'Neill Ranch well; implementation of a groundwater investigation to determine the source of the ammonia if it is determined that ammonia concentrations appear to be increasing as a result of Beltz 12 ASR operations; and implementation of remedial measures, as applicable, based on the results of the groundwater investigation. The EIR determined that with the implementation of MM HYD-1, the impact of Beltz ASR related to ammonia concentrations would be reduced to a less-than-significant level.

Modified Proposed Project Impacts

The Proposed Project modifications would involve changes from what was described in the EIR related to boundary changes and related sewer and storm drain connections at the Beltz 8 site, reconfiguration of piping and infrastructure within the existing developed Beltz 8 and 12 sites, as well as minor design changes (i.e., replacement of a filter at Beltz 8, addition of an operational pumping rate at Beltz 12, and addition of orthophosphate chemical storage at both sites); however, these changes would have no bearing on groundwater quality. Likewise, the longer construction duration would also not have any bearing on groundwater quality. The Proposed Project would still consist of implementation of ASR facilities that would inject and extract water into and out of the basin, as described in the EIR and summarized above. Standard Operational Practice #3 requiring groundwater quality monitoring plans as part of use permits granted by the SWRCB with respect to injecting and storing treated drinking water in groundwater aquifers, would continue to be applicable to the Proposed Project. MM HYD-1 also remains applicable to the Beltz 12 portion of the Proposed Project. Therefore, the Proposed Project modifications would not result in new or substantially more severe impacts related to groundwater quality than previously identified in the Santa Cruz Water Rights Project EIR.

Chronic Lowering of Groundwater Levels

EIR Impact Summary

Beltz ASR injection and extraction activities would potentially have an influence on other beneficial users of groundwater in the Santa Cruz Mid-County Groundwater Basin. The long-term plan in the basin, including the projects and management actions in the GSP, is to move pumping further from the coast to minimize the threat of seawater intrusion. Redistribution of municipal pumping is designed to be paired with projects, such as Pure Water

Soquel, In-Lieu Recharge, and ASR, as a way to: (1) rest and reduce pumping of coastal wells and be consistent with basin sustainability goals to protect the groundwater supply against seawater intrusion; (2) prevent overdraft within the basin and resolve problems resulting from prior overdraft; (3) support reliable groundwater supply and quality to promote public health and welfare; (4) maintain or enhance groundwater levels where groundwater dependent ecosystems exist; and (5) maintain or enhance groundwater contributions to streamflow (MGA 2019). The location of the Beltz 12 well, which was installed more recently than the other production wells in the Beltz system, is reflective of this plan to move pumping further from the coast to minimize the threat of seawater intrusion (MGA 2019).

The area within and surrounding the Beltz system is urbanized and mostly connected to the City's municipal water system. Within this area, there are no agricultural or industrial users of groundwater in the immediate vicinity; the only other groundwater wells in the vicinity are identified as remediation/monitoring wells (DWR 2020b). However, groundwater levels in nearby private domestic wells, northeast of the Beltz 12 ASR facility, may be affected by ASR operations given their proximity. Baseline assessments were completed on five of these nearby wells in 2015 that are currently being monitored under a private well monitoring program being implemented by SqCWD and the City, for select wells within 1,000 meters (approximately 3,300 feet) of the Beltz 12 ASR facility (Hydro Metrics 2015a, 2015b, 2015c, 2015d, 2015e). Four follow-up restrictive assessments were completed on these private wells, through December 2019 (Montgomery & Associates 2019a, 2019b, 2019c, 2019d, 2019e).

Demonstrated restrictive effects are defined as damage to the private well or pump caused by groundwater levels falling below the top of the well screens, or diminution of well yield. When groundwater level falls below the top of the screen, pumping causes water to fall through the screen and into the well. This occurs because the pump normally draws the groundwater level down inside the well faster than water can flow into the well. Freefalling water becomes aerated or entrains air, thus creating several potential problems, including pump cavitation effects, bacteriological growth, and corrosion. Diminution of well yield can occur when well screens are significantly dewatered, thereby causing the well production rate or capacity to be reduced such that the well is rendered incapable of meeting historically measured production (Hydro Metrics 2015a, 2015b, 2015c, 2015d, 2015e).

Consistent with the private well monitoring program being implemented by SqCWD and the City, and consistent with restrictive effects criteria established in the baseline assessments for five nearby private domestic wells, proposed Beltz 12 ASR extractions would result in potentially significant impacts if restrictive effects occur in domestic wells located within 1,000 meters (approximately 3,300 feet) of the Beltz 12 ASR facility. Given the potential for one or more of the above potential restrictive effects on the nearby private domestic wells to occur as a result Beltz 12 ASR operations, the impact related to chronic lowering of groundwater levels in nearby private wells was considered in the EIR to be a potentially significant impact.

The EIR identified MM HYD-2, Groundwater Level Monitoring, which is applicable to the Beltz 12 portion of the Proposed Project, to avoid conflicts with the Santa Cruz Mid-County Groundwater Basin GSP by requiring: continuation of a private well monitoring program already in place; implementation of a groundwater investigation to determine the source of restrictive effects (i.e., associated with Beltz 12 ASR and/or O'Neill Ranch well extractions), if it is determined that restrictive groundwater effects are occurring during future ASR pilot tests and operations; and implementation of remedial measures, as applicable, based on the results of the groundwater assessment. Therefore, with implementation of this mitigation measure, the EIR determined that the impact of Beltz 12 ASR operations related to chronic lowering of groundwater levels at nearby private wells would be reduced to less-than-significant level.

Operation of the Beltz 8 ASR injections and extractions would be consistent with the sustainable management criteria per Standard Operational Practice #2, and would avoid any undesirable results as identified in the adopted Santa Cruz Mid-County Groundwater Basin GSP and in any future revisions to the GSP. Beltz ASR would contribute to restoration of the Santa Cruz Mid-County Groundwater Basin, per the GSP (MGA 2019). As a result, groundwater level impacts associated with Beltz 8 operations were found to be less than significant in the EIR.

Modified Proposed Project Impacts

The Proposed Project modifications would involve changes from what was described in the EIR related to boundary changes and related sewer and storm drain connections at the Beltz 8 site, the reconfiguration of piping and infrastructure within the existing developed Beltz 8 and 12 sites, as well as minor design changes (i.e., replacement of a filter at Beltz 8 and addition of orthophosphate chemical storage at both sites); however, these changes would have no bearing on groundwater levels. Likewise, the longer construction duration would also not have any bearing on groundwater levels. The Proposed Project would still consist of implementation of ASR facilities that would inject and extract water into and out of the basin, as described in the EIR and summarized above. The 2023 annual report for the GSP indicates that the groundwater elevations are above minimum thresholds at all RMPs for chronic lowering of groundwater levels, so there are no undesirable results for chronic lowering of groundwater levels. Groundwater elevations are below the measurable objectives for all of the 17 RMPs for this indicator in water year (WY) 2023. Interim milestones are the same as the long-term measurable objectives based on conditions prior to GSP development, so the GSP has a goal to meet measurable objectives throughout the GSP implementation period (MGA 2024).

As described above, as part of the currently Proposed Project, the maximum operational pumping rate at Beltz 12 would be increased from 210 gpm, up to a new maximum operational rate of 500 gpm. For routine maintenance during the injection season, Beltz 12 would be pumped at a rate of approximately 700-750 gpm for about 30 minutes per week to backflush the well.

While the Santa Cruz Water Rights Project EIR did not identify or describe pumping rates, the modification of the proposed pumping rate for the Proposed Project would not exacerbate chronic lowering of groundwater levels, as the City would operate the Proposed Project, including Beltz 12, in a manner consistent with the sustainable management criteria and avoid any undesirable results identified in the Santa Cruz Mid-County Groundwater Basin GSP per Standard Operational Practice #2. In addition, ASR would have a beneficial impact overall on groundwater levels, because by design, Beltz ASR facilities would, in aggregate, result in more injection than extraction. Furthermore, MM HYD-2 remains applicable to the Beltz 12 portion of the Proposed Project. Given this, there are no proposed changes in the Proposed Project, no changed circumstances, and no new information that would alter the groundwater levels impact conclusions of the EIR. Therefore, the Proposed Project modifications would not result in new or substantially more severe impacts related to chronic lowering of groundwater levels than previously identified in the Santa Cruz Water Rights Project EIR.

Reduction in Groundwater Storage

EIR Impact Summary

Undesirable results related to reduction in groundwater storage would occur if the five-year average net extraction exceeds the sustainable yield (minimum threshold) for any one of the groups of aquifers, including the Aromas Red Sands, Purisima, and Tu aquifers. Although only a total volume for the entire basin is required as a metric for the

reduction of groundwater in storage sustainability indicator, per SGMA regulations, the Santa Cruz Mid-County Groundwater Basin GSP includes separate sustainable management criteria for three separate aquifer groups, including: 1) Aromas Red Sands and Purisima F, 2) Purisima DEF, BC, A, and AA aquifers, and 3) the Tu aquifer. The sustainable management criteria metrics for determining reduction in groundwater storage are based on the sustainable yields for each of the three aquifer groups (MGA 2019).

Beltz ASR would, in aggregate, result in less extraction than injection, but maximum annual extraction volumes could exceed annual injection volumes during dry periods when more water supply is needed to meet City demands. Undesirable results related to reduction in groundwater storage would only occur if the five-year average net extraction exceeds the sustainable yield (minimum threshold) for any one of the groups of aquifers. In addition, the GSP would be refined over time and monitoring would be conducted to verify that ASR-related extractions are not causing undesirable effects in the groundwater basin, including a reduction in groundwater in storage (MGA 2019).

The purpose of the reduction in storage sustainability indicator is to prevent undesirable results for other sustainability indicators. Each of these sustainability indicators are monitored for individual aquifer units. If undesirable results are observed in any aquifer unit or related to pumping from a specific aquifer unit, the most likely management action to eliminate the undesirable result is to change net pumping from the aquifer unit. The change in net pumping would be determined by that which is necessary to eliminate the undesirable result, not based on the reduction of groundwater in storage criteria (MGA 2019).

Localized pumping depressions and groundwater mounding would be part of normal operations during Beltz ASR operations and would be acceptable provided extractions remain within the zone of operational flexibility in maintaining aquifer volume above minimum thresholds over the five-year averaging period. Beltz ASR injection would add to the operational flexibility of the groundwater basin, allowing for increased withdrawals within individual aquifer groupings. Beltz ASR facilities would use the Santa Cruz Mid-County Groundwater Basin like a subsurface reservoir for treated surface water. Based on compliance with the Santa Cruz Mid-County Groundwater Basin GSP, including the associated groundwater monitoring program, Beltz ASR facilities would not result in a reduction in groundwater storage. As a result, the impact of Beltz ASR operations on groundwater storage was found to be less than significant in the Santa Cruz Water Rights Project EIR.

Modified Proposed Project Impacts

The Proposed Project modifications would involve changes from what was described in the EIR related to boundary changes and related sewer and storm drain connections at the Beltz 8 site, the reconfiguration of piping and infrastructure within the existing developed Beltz 8 and 12 sites, as well as minor design changes (i.e., replacement of a filter at Beltz 8 and addition of orthophosphate chemical storage at both sites); however, these changes would have no bearing on groundwater storage. Likewise, the longer construction duration would also not have any bearing on groundwater storage. The Proposed Project would still consist of implementation of ASR facilities that would inject and extract water into and out of the basin, as described in the EIR and summarized above. The 2023 annual report for the GSP indicates that the Tu unit is the only aquifer group with 5-year average net extraction through WY 2023 less than the sustainable yield/minimum threshold. The 5-year average net extraction volumes for the Aromas Red Sands and Purisima F aquifer group and Purisima DEF, BC, A, and AA aquifer group are greater than their respective minimum thresholds. These exceedances indicate undesirable results for this sustainability indicator. Net extraction needs to be reduced to or below minimum thresholds to eliminate undesirable results (MGA 2024).

As described above, as part of the currently Proposed Project, the maximum operational pumping rate at Beltz 12 would be increased from 210 gpm, up to a new maximum operational rate of 500 gpm. For routine maintenance during the injection season, Beltz 12 would be pumped at a rate of approximately 700-750 gpm for about 30 minutes per week to backflush the well.

While the Santa Cruz Water Rights Project EIR did not identify or describe pumping rates, the modification of the proposed pumping rate for the Proposed Project would not exacerbate reductions of groundwater in storage, as the City would operate the Proposed Project, including Beltz 12, in a manner consistent with the sustainable management criteria and avoid any undesirable results identified in the Santa Cruz Mid-County Groundwater Basin GSP per Standard Operational Practice #2. Furthermore, ASR would have a beneficial impact overall on groundwater in storage, because by design, Beltz ASR facilities would, in aggregate, result in more injection than extraction. Given this, there are no proposed changes in the Proposed Project, no changed circumstances, and no new information that would alter the groundwater storage impact conclusions of the EIR. Therefore, the Proposed Project modifications would not result in new or substantially more severe impacts related to groundwater storage than previously identified in the Santa Cruz Water Rights Project EIR.

Land Subsidence

EIR Impact Summary

Land subsidence is a settling or sudden sinking of the ground surface due to subsurface compaction of earth materials. The principal causes of subsidence in California are aquifer-system compaction related to groundwater extraction, drainage and decomposition of organic soils, and oil and gas extraction. Effects of land subsidence include damage to buildings and infrastructure such as roads and canals, increased flood risk in low-lying areas, and lasting damage to groundwater aquifers and aquatic ecosystems. Based on a review of a U.S. Geological Survey subsidence map (USGS 2020), the study area is not in an area of regional ground subsidence. In addition, none of the conditions that typically result in subsidence (drainage and decomposition of organic soils; underground mining, oil and gas extraction, hydrocompaction, natural compaction, sinkholes, and thawing permafrost; or aquifer-system compaction) is known to be present within the Santa Cruz Mid-County Groundwater Basin and no anecdotal evidence of subsidence related to groundwater extraction is known. No formal subsidence studies have been completed in the region (MGA 2019).

Because historical declines in groundwater have been more than 50 feet, the possibility of aquifer-system compaction exists. However, based on available information, the likelihood of subsidence is low. Susceptibility to land subsidence from groundwater level declines requires aquitards (fine grained silts and clays) above or within which preconsolidation stress thresholds are exceeded. Preconsolidation stress is the maximum amount of past effective stress the soil has experienced. Aquitards in the Santa Cruz Mid-County Groundwater Basin are present between the aquifer units. However, in areas with pumping, the bottom elevations of aquitards are generally more than 100 feet below sea level, which is deeper than typical groundwater levels, resulting in a lack of aquitard dewatering and associated soil compaction (MGA 2019).

The greatest groundwater level declines since recording levels began in 1984 have been in the Purisima BC units of the Santa Cruz Mid-County Groundwater Basin, where declines of approximately 140 feet have occurred. The Purisima A and DEF units have also sustained substantial historical declines in groundwater levels. However, these groundwater levels have since recovered and no subsidence has been documented in the basin because of these declines (MGA 2019). Similarly, subsidence is not anticipated in the future. Implementation of the GSP and avoiding

undesirable results in the other five sustainability indicators would ensure that historic low groundwater levels would not occur in the future. In the highly unlikely event that land subsidence caused by lowered groundwater levels occurs in the basin and is identified as such by observational monitoring, the MGA would immediately regulate groundwater pumping in the area of subsidence. The identification of active land subsidence would trigger the need for dedicated subsidence monitoring and an amendment to the GSP that includes development of sustainable management criteria for the land subsidence sustainability indicator (MGA 2019).

The lack of evidence of subsidence linked to substantial groundwater declines, the lack of the susceptibility of the basin geology to subsidence, and existing regional subsidence monitoring near the Santa Cruz Mid-County Groundwater Basin indicates the inapplicability of the subsidence sustainability indicator for the basin. In addition, ASR operations augment a groundwater basin's natural recharge. As a result, the impact of Beltz ASR facilities with respect to ground subsidence were found to be less than significant in the EIR.

Modified Proposed Project Impacts

Subsidence impacts are site-specific. As discussed above, the Santa Cruz Mid-County Groundwater Basin is not geologically susceptible to subsidence (MGA 2019). There are no proposed changes in the Proposed Project, no changed circumstances, and no new information that would alter the subsidence impact conclusions of the EIR. Therefore, the Proposed Project modifications would not result in new or substantially more severe impacts related to land subsidence than previously identified in the Santa Cruz Water Rights Project EIR.

Depletion of Interconnected Surface Water

EIR Impact Summary

Groundwater-related operational impacts could result if the Proposed Project were to cause negative effects on stream baseflows and related groundwater-dependent ecosystems (e.g., riparian vegetation communities). As described in the EIR, the amount of water extracted on a long-term average basis with the Proposed Project would not exceed the amount of water injected with ASR facilities on a long-term average basis, and therefore would not be expected to affect nearby stream baseflows and related habitats. The nearest streams to the existing Beltz ASR wells consist of an unnamed intermittent stream ("Stream 472") located upstream of Moran Lake, and Rodeo Creek Gulch located upstream of Corcoran Lagoon. Soquel Creek is approximately 0.4 miles east of Beltz 12. Although there is uncertainty associated with the precise relationship between current groundwater pumping at Beltz ASR facility sites and streamflow within overlying creeks based on the Santa Cruz Mid-County Groundwater Basin GSP (MGA 2019), the proposed Beltz ASR facilities would not have an appreciable impact on riparian vegetation communities or special-status species that depend on these localized areas, based on the analysis included in Section 4.8, Hydrology and Water Quality.

The current shallow monitoring wells used to monitor and evaluate interactions between surface water and groundwater are focused on the lower stretch of Soquel Creek, where there are several municipal production wells, which are operated by SqCWD. In addition, multiple depth monitoring well clusters are located near Soquel Creek that are included in the evaluation of surface water and groundwater extractions. No such shallow wells are near the Beltz ASR system, in the vicinity of Rodeo Creek Gulch and unnamed intermittent Stream 472, located upstream of Moran Lake. Under the GSP, new shallow monitoring wells would be added to complete the monitoring network and further evaluate the effects of groundwater extractions on streamflow in interconnected surface waters. At the time the EIR was certified, it was expected that these wells would be installed prior to October 2022 and before

Beltz ASR becomes operational. Six shallow wells were installed in 2022 and 1 well was installed in January 2024; one well could not be drilled due to lack of access (MGA 2024).

Groundwater elevations are used as a proxy for surface water depletion in the GSP as a measure of sustainability because no direct measurable change in streamflow from deep groundwater extraction has been detected in over 18 years of monitoring shallow groundwater levels adjacent to Soquel Creek. Based on monitoring along Soquel Creek, annual rainfall, flows from the upper Soquel Creek Watershed outside of the Santa Cruz Mid-County Groundwater Basin, temperature, and evapotranspiration individually have a much greater measurable influence on streamflow than groundwater pumping. Even though there is no measurable direct change in streamflow from groundwater extraction, there is a demonstrable indirect influence on shallow groundwater connected to the creek from deeper aquifers pumped by municipal and private wells. As these observations are made from a few wells on Soquel Creek only, further study as part of GSP implementation may revise the current understanding of the relationship between streamflow and groundwater. Additional insight into this relationship might necessitate a future change in the GSP's sustainable management criteria for this sustainability criteria (MGA 2019). However, as noted above, seven new shallow monitoring wells to evaluate the effects of groundwater extractions on streamflow in interconnected surface waters were installed in 2022 and 2024, and before Beltz ASR facilities become operational.

Data obtained from groundwater monitoring locations will inform the validity of groundwater levels as a proxy for depletion of interconnected surface water, and better inform if changes are needed to minimum thresholds to avoid undesirable results. Groundwater level data collected will be evaluated annually with respect to streamflow, climate, groundwater usage, and biological responses. In addition, additional streamflow gauges to monitor changes in stream flow will be installed to correlate changes in streamflow from groundwater extraction (MGA 2019).

Beltz ASR would be completed in compliance with the Santa Cruz Mid-County Groundwater Basin GSP per Standard Operational Practice #2. Sustainable management criteria established in the GSP for groundwater level decline and seawater intrusion (i.e., maintaining a seaward groundwater gradient) would contribute to maintaining shallow groundwater levels and protecting streamflow. Based on monitoring completed in Soquel Creek, municipal pumping does not appear to be diminishing streamflow in the basin. As a result, the impact of Beltz ASR facilities with respect to depletion of interconnected surface water was determined to be less than significant in the EIR.

Modified Proposed Project Impacts

The Proposed Project modifications would involve changes from what was described in the EIR related to boundary changes and related sewer and storm drain connections at the Beltz 8 site, the reconfiguration of piping and infrastructure within the existing developed Beltz 8 and 12 sites, as well as minor design changes (i.e., replacement of a filter at Beltz 8 and addition of orthophosphate chemical storage at both sites); however, these changes would have no bearing on interconnected surface water. Likewise, the longer construction duration would also not have any bearing on interconnected surface water. The Proposed Project would still consist of implementation of ASR facilities that would inject and extract water into and out of the basin, as described in the EIR and summarized above.

A voluntary monitoring and adaptive management plan (MAMP) for Soquel Creek was implemented from 2013-2020 due to its designation as steelhead critical habitat. The elements of the MAMP include monitoring Soquel Creek flow and shallow groundwater levels both upstream and downstream of potential pumping impacts. The MAMP was designed to identify whether greater stream level changes occur downstream as a result of the cumulative effect of pumping from the new pumping at the O'Neill Ranch and Beltz 12 wells. The second report in

the MAMP program documented streamflow conditions in Soquel Creek just before and after the SqCWD's O'Neill Ranch well and the City's Beltz 12 well came online (HydroMetrics WRI 2016). Based on the shallow groundwater levels and stream elevations measured and analyzed in the second MAMP report, cumulative effects were not observed, and therefore, streamflow effects caused by pumping the O'Neill Ranch and Beltz 12 wells were not observed. Shallow groundwater levels near Soquel Creek also showed no effects from pumping at the new O'Neill Ranch and Beltz 12 wells. Thus, the second MAMP report concluded that there is not a relationship between changes in creek levels and pumping at these wells.

The 2023 annual report for the GSP indicates that one of five monitoring wells, the shallow well upstream of Beltz 12 near the confluence of Soquel and Bates creeks, has minimum average monthly groundwater elevations below its minimum threshold groundwater elevation proxies. The other four shallow RMPs along Soquel Creek have minimum average monthly groundwater elevation proxies above minimum threshold groundwater elevation proxies. Because undesirable results are defined as any depletion of interconnected surface water RMP having groundwater elevations below its minimum threshold, undesirable results for interconnected surface water depletion are occurring (MGA 2024).

As described above, as part of the currently Proposed Project, the maximum operational pumping rate at Beltz 12 would be increased from 210 gpm, up to a new maximum operational rate of 500 gpm. For routine maintenance during the injection season, Beltz 12 would be pumped at a rate of approximately 700-750 gpm for about 30 minutes per week to backflush the well. While the Santa Cruz Water Rights Project EIR did not identify or describe pumping rates, the modification of the proposed pumping rate for the Proposed Project would not exacerbate impacts on interconnected surface water, as the City would operate the Proposed Project, including Beltz 12, in a manner consistent with the sustainable management criteria and avoid any undesirable results identified in the Santa Cruz Mid-County Groundwater Basin GSP per Standard Operational Practice #2.

Given this, there are no proposed changes in the Proposed Project, no changed circumstances, and no new information that would alter the interconnected surface water impact conclusions of the EIR. As demonstrated in the discussion above, the Proposed Project modifications would not result in new significant impacts or substantially more severe impacts related to interconnected surface water than previously identified in the Santa Cruz Water Rights Project EIR.

3.1.2.3 Drainage Patterns

As described in the EIR, the proposed upgrades to Beltz ASR facilities would result in a negligible increase in impervious surfaces at Beltz 12 and none at Beltz 8. These sites are already mostly developed. The minor project boundary changes at the Beltz 8 site are also in a developed and paved area, and the Beltz 12 site project boundary remains the same as analyzed in the Santa Cruz Water Rights Project EIR. As described under Groundwater Recharge above, none of the Proposed Project modifications would result in an increase in impervious surface area. As such, the Proposed Project would have less-than-significant impacts related to alteration of drainage patterns, consistent with the impact conclusion in the Santa Cruz Water Rights Project EIR. Therefore, the Proposed Project modifications would not result in new or substantially more severe impacts related to drainage patterns than previously identified in the Santa Cruz Water Rights Project EIR.

3.1.2.4 Flooding

As documented in the EIR, none of the Beltz ASR facilities are located in flood zones; therefore, any facility improvements would not be subject to risk of release of pollutants due to inundation. The Proposed Project locations have not changed. As such, the Proposed Project would have no impacts related to flooding, consistent with the impact conclusion in the Santa Cruz Water Rights Project EIR. Therefore, the Proposed Project modifications would not result in new or substantially more severe impacts related to flooding than previously identified in the Santa Cruz Water Rights Project EIR.

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4 References and Preparers

4.1 References Cited

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4.2 List of Preparers

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Appendix A

Adopted Mitigation Monitoring and Reporting Program

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Adopted Mitigation Monitoring and Reporting Program

The adopted mitigation monitoring and reporting program (MMRP) for the Santa Cruz Water Rights Project, prepared pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the CEQA Guidelines (14 California Code of Regulations, Chapter 3, Sections 15074 and 15097), applies to the Intertie-1 Project and is attached. This MMRP is intended to be used by City of Santa Cruz (City) staff, its contractors, and mitigation monitoring personnel to ensure compliance with mitigation measures during project construction and implementation. Mitigation measures identified in this MMRP were developed during the preparation of the EIR prepared for the Santa Cruz Water Rights Project.

The MMRP includes all mitigation measures identified in the EIR and, for each measure, the party responsible for implementation and implementation timing. The MMRP also includes the City's standard operational and construction practices, which would be implemented by the City and its contractors during project operations and construction activities. The applicable measures for the Beltz 8 and 12 ASR Project include those measures marked with a check mark in the left-hand column of the MMRP.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
MITIGATION MEASURES IDENTIFIED IN THE ENVIRONMENTAL IMPACT REPORT			
Biological Resources			
	MM BIO-1: Project Siting (Applies to New Aquifer Storage and Recovery Facilities, Intertie Improvements, and Tait Diversion and Coast Pump Station Improvements). The City shall locate construction activities, including staging, on and adjacent to current development to the maximum extent feasible. All worker parking, equipment storage, and laydown areas should occur within developed areas and maintained rights-of-way, to the extent possible. Dirt or gravel pull-offs to the side of existing roads shall not be used except for temporary staging areas. To minimize temporary disturbances, the City shall restrict all vehicle traffic to established roads, construction areas, and other designated area. If ground disturbing activities associated with staging and work areas will occur outside existing developed areas and maintained rights-of-way, avoidance and minimization of impacts to special-status species and their habitats, sensitive vegetation communities, and jurisdictional aquatic resources shall be prioritized during the site selection process. Other Proposed Project mitigation measures will provide for compensatory mitigation to address potentially significant impacts to special-status species and their habitats (MM BIO-4 through MM-BIO-10), sensitive vegetation communities (MM BIO-11), and jurisdictional aquatic resources (MM BIO-12 through MM BIO-14).	City responsible for limiting construction activities, including staging, to existing developed areas and restricting all vehicle traffic to designated areas. City responsible for implementing other referenced mitigation measures if ground disturbing activities will occur outside existing developed areas. City responsible for inclusion of measure in construction specifications and contracts and periodic inspection. Contractor responsible for implementation.	Include measure in construction specifications and contracts: Prior to construction. Limit construction activities to designated areas: Prior to and during construction. Periodic inspections: During construction.
	MM BIO-2: Instream Construction (Applies to Tait Diversion and Coast Pump Station Improvements). All instream construction activities shall be limited to the low-flow period between June 15 through November 1, except by extension approved by the California Department of Fish and Wildlife (CDFW) and National Marine Fisheries Service (NMFS). If an extension of instream construction activities is determined necessary beyond the low-flow period, then	City responsible for inclusion of measure in construction specifications and contracts. Contractor responsible for implementation. City responsible for providing CDFW and NMFS with a	Include measure in construction specifications and contracts: Prior to construction. Limit in-stream construction to low-flow period: During construction.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	the City shall provide the CDFW and NMFS with a rationale and method that ensures protection of fish species.	rationale and method for protection of fish species, if instream construction activities need to extend beyond low-flow period.	Coordination with CDFW and NMFS: During construction.
	MM BIO-3: Aquatic Vertebrate Rescue and Relocation Plan (Applies to Tait Diversion and Coast Pump Station Improvements). If native fish or native aquatic vertebrates are present during construction of a new or modified intake design, check dam modifications/notching, Coanda intake screen, and other required fish passage upgrades at the Tait Diversion facility, a native fish and aquatic vertebrate rescue and relocation plan shall be prepared. The plan shall be implemented by a qualified biologist during dewatering to ensure that significant numbers of native fish and aquatic vertebrates are not stranded.	City responsible for inclusion of measure in construction specifications and contracts, and for hiring a qualified biologist to prepare and implement relocation plan.	Include measure in construction specifications and contracts: Prior to construction. Plan preparation: Prior to construction. Plan implementation: During construction.
✓	**MM BIO-4: Preconstruction Nesting Bird Survey (Applies to New Aquifer Storage and Recovery [ASR] Facilities and Beltz ASR Facilities, Intertie Improvements, Felton Diversion Improvements, and Tait Diversion and Coast Pump Station Improvements).** During the nesting season (February 1 – August 31), no more than two weeks prior to any ground disturbing activities, including removal of vegetation and clearing and grubbing activities, a nesting bird survey shall be completed by a qualified biologist to determine if any native birds are nesting in or adjacent to the study area (including within a 50-foot buffer for passerine species and a 250-foot buffer for raptors). If any active nests of native birds are observed during surveys, an avoidance buffer around the nests shall be established in the field to ensure compliance with California Fish and Game Code Section 3503. The avoidance buffer shall be determined by a qualified biologist in coordination with City staff, based on species, location, and extent and type of planned construction activity. Impacts to	City responsible for hiring qualified biologist to conduct surveys.	Nesting bird pre-construction survey: Within 7 days prior to initiation of construction activities. Roosting bat survey: Within 30 days prior to tree removal.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	active nests shall be avoided until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist.		
	MM BIO-5: Preconstruction Wildlife Surveys (Applies to New Aquifer Storage and Recovery Facilities, Intertie Improvements, and Tait Diversion and Coast Pump Station Improvements). A qualified biologist shall conduct preconstruction surveys of all ground disturbance areas within off-pavement project footprint areas to determine if special-status wildlife species are present prior to the start of construction. The biologist will conduct these surveys no more than two weeks prior to the beginning of construction.	City responsible for hiring qualified biologist to conduct surveys.	Pre-construction survey: Two weeks prior to initiation of construction activities.
	MM BIO-6: Exclusionary Fencing (Applies to New Aquifer Storage and Recovery Facilities, Intertie Improvements, and Tait Diversion and Coast Pump Station Improvements). High-visibility fencing for Environmentally Sensitive Areas shall be installed around all adjacent special-status species identified during the preconstruction surveys, which shall be retained and not disturbed by the Project, to preclude encroachment within the root-zone of these plants by construction crews or vehicles. A biological monitor shall also accompany the work crew during excavation and installation of exclusion fencing to prevent harm to species that may be active present and moving along the fence route. Buffers that are established around active bird nests and special-status species (including potentially active woodrat nests) to be avoided shall be delineated with flagging. Buffers and fencing for nesting birds shall be maintained until the biological monitor verifies that the birds have fledged. All other fencing shall be maintained in good repair throughout the entire construction period.	City responsible for inclusion of measure in construction specifications and contracts. Contractor responsible for installing and maintaining fencing. City responsible for hiring qualified biologist to monitor work crew during installation of fencing, delineate buffers with flagging around active bird nest and special-status species, and verify that birds have fledged.	Include measure in construction specifications and contracts: Prior to construction. Installation of fencing: Prior to construction Delineating buffers: Prior to construction. Maintaining fencing: During construction. Fencing removal: After birds have fledged.
	MM BIO-7: Biological Construction Monitoring (Applies to New Aquifer Storage and Recovery Facilities, Intertie Improvements, and Tait Diversion and Coast Pump Station Improvements). A qualified biologist shall monitor vegetation removal and ground disturbing activities during all work hours for off-pavement work or once a week	City responsible for hiring qualified biologist to conduct construction monitoring.	Conduct construction monitoring: During construction.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	for all other construction activities. The monitor shall check the exclusion fencing and buffers for active nesting birds once a week, and shall verify when birds have fledged if found present before construction. The biologist shall have stop-work authority in the event that a protected species is found within the active construction footprint. During construction, the biological monitor shall keep a daily observation log and a photo log to describe monitoring activities, remedial actions, non-compliance, and other issues and actions taken. These logs shall be kept on-site and made available for inspection by agency personnel.		
	MM BIO-8: Species Relocation (Applies to New Aquifer Storage and Recovery Facilities, Intertie Improvements, and Tait Diversion and Coast Pump Station Improvements). If special-status wildlife species are observed within the construction area prior to or during construction activities, the biologist shall capture and relocate such individuals out of the area affected by construction activities to nearby habitat that has equivalent value to support the species. The biologist shall identify suitable habitats as potential release sites prior to start of construction activities. If the special-status species is a federally- or state-listed as threatened or endangered, the biologist shall notify the U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, and/or National Marine Fisheries Service, as appropriate, prior to capture and relocation to obtain approval.	City responsible for hiring qualified biologist to conduct surveys, identify potential release sites, monitor project activities, relocate individuals, and notify noted resource agencies if a special-status species is identified prior to relocation.	Surveys and identification of potential release sites: Prior to construction. Monitoring and species relocation: During construction.
	MM BIO-9: Entrapment Avoidance (Applies to New Aquifer Storage and Recovery Facilities, Intertie Improvements, and Tait Diversion and Coast Pump Station Improvements). The construction contractor shall cover all construction-related holes in the ground overnight to prevent entrapment of any native wildlife species. The monitoring biologist shall inspect all construction pipes, culverts, or similar structures that are stored at the work area for one or more nights before the pipe is used or moved. If wildlife species are present, they shall be allowed to exit on their own or a qualified biologist shall	City responsible for inclusion of measure in construction specifications and contracts. Contractor responsible for covering construction-related holes. Biologist responsible for inspection of work area.	Include measure in construction specifications and contracts: Prior to construction. Cover holes and inspect work area: During construction.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	move them out of the construction area to nearby habitat that has equivalent value to support the species. If special-status species are present and are federally or state-listed as threatened or endangered, the biologist shall notify the U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, and/or National Marine Fisheries Service, as appropriate, prior to capture and relocation to obtain approval.		
	MM BIO-10: Preconstruction Special-Status Plant Surveys and Compensation (Applies to New Aquifer Storage and Recovery Facilities and Intertie Improvements). If ground-disturbing activities associated with staging and work areas occur outside existing developed areas and maintained rights-of-way, a qualified biologist shall conduct a focused botanical survey for special-status plants during the appropriate bloom period for each species. If special-status species are not detected, no further surveys or mitigation would be necessary. If any individuals or populations are detected, the location(s) shall be mapped, and a plan focused on compensating for impacts to special-status plants shall be developed and include the following elements and criteria. This plan shall be a component of the project's Habitat Mitigation and Monitoring Plan described in MM BIO-11: a. A description of any areas of habitat occupied by special-status plants to be preserved and/or removed by the project; b. Identification and evaluation of the suitability of on-site or off-site areas for preservation, restoration, enhancement or translocation; c. Analysis of species-specific requirements and considerations and specific criteria for success relative to the project's impact on this species and restoration, enhancement or translocation; d. A description of proposed methods of preservation, restoration, enhancement, and/or translocation;	City responsible for hiring qualified biologist to conduct surveys, prepare plan and implement rehabilitation and monitoring.	Conduct focused plant survey: Prior to construction and during appropriate bloom period. Plan preparation if special-status species are found: Prior to construction. Plan implementation: During construction.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	e. A description of specific performance standards, including a required replacement ratio and minimum success standard of 1:1 for impacted individuals or populations; f. A monitoring and reporting program to ensure mitigation success; and g. A description of adaptive management and associated remedial measures to be implemented in the event that performance standards are not achieved.		
	MM BIO-11: Sensitive Vegetation Communities Compensation (Applies to New Aquifer Storage and Recovery Facilities, Intertie Improvements, and Tait Diversion and Coast Pump Station Improvements). Direct impacts to sensitive vegetation communities shall be mitigated via a combination of on-site and off-site measures. On-site measures shall include rehabilitation for areas temporarily impacted at a 1:1 mitigation ratio, and enhancement for areas permanently impacted at a 2:1 mitigation ratio. Areas temporarily impacted shall be returned to conditions similar to those that existed prior to grading and/or ground-disturbing activities. It is anticipated that a one-time restoration effort at the completion of the project followed by monitoring and invasive weed removal for a minimum of 3 years would adequately compensate for the direct temporary impacts to these vegetation communities. Areas permanently impacted shall be mitigated through on-site enhancement activities including removal of non-native and invasive species for a minimum of 3 years. If additional area is needed to compensate for permanent impacts at a 2:1 ratio, then an off-site location will be identified and evaluated. A Habitat Mitigation and Monitoring Plan shall be prepared and implemented to compensate for the loss of all sensitive vegetation communities (see below). Rehabilitation and enhancement activities with Zayante soils, such as along the City/Scotts Valley Water District intertie, will be revegetated with plants native to the Zayante Sandhills, such as sticky	City responsible for hiring qualified biologist to prepare plan and implement rehabilitation and monitoring.	Plan preparation: Prior to construction. Rehabilitation and plan implementation: After completion of construction activities. Monitoring/weed removal: At least 3 years following rehabilitation.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	monkeyflower (*Mimulus aurantiacus*), deer weed (*Lotus scoparius*), and silver bush lupine (*Lupinus albifrons* var. *albifrons*). These native plants will provide suitable habitat conditions for special-status species that might eventually colonize the temporarily impacted portion of the impact area. These revegetated areas will not include any landscape elements that degrade habitat for the special-status species, including mulch, bark, weed matting, rock, aggregate, or turf grass. The Habitat Mitigation and Monitoring Plan shall detail the habitat restoration activities and shall specify the criteria and standards by which the revegetation and restoration actions will compensate for impacts of the Proposed Project on sensitive vegetation communities and shall at a minimum include discussion of the following: a. The rehabilitation and enhancement objectives, type, and amount of revegetation to be implemented taking into account enhanced areas where non-native invasive vegetation is removed and replanting specifications that take into natural regeneration of native species when applicable. b. The specific methods to be employed for revegetation. c. Success criteria and monitoring requirements to ensure vegetation community restoration success. d. Remedial measures to be implemented in the event that performance standards are not achieved.		
	MM BIO-12: Preconstruction Jurisdictional Delineation (Applies to New Aquifer Storage and Recovery Facilities and Tait Diversion and Coast Pump Station Improvements). If ground disturbing activities associated with staging and work areas will occur outside existing developed areas and maintained rights-of-way, a qualified biologist shall conduct a formal jurisdictional delineation to determine the extent of jurisdictional aquatic resources regulated by the U.S. Army Corps of Engineers, Regional Water Control Board, and/or California Department of Fish and Wildlife within the impact area.	City responsible for hiring qualified biologist to perform jurisdictional delineation.	Conduct delineation: Prior to construction.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	MM BIO-13: Jurisdictional Aquatic Resources Avoidance (Applies to New Aquifer Storage and Recovery Facilities and Tait Diversion and Coast Pump Station Improvements). Future refinements to the Proposed Project shall endeavor to avoid jurisdictional aquatic resources regulated by the U.S. Army Corps of Engineers, Regional Water Control Board, and California Department of Fish and Wildlife, to the extent practicable, through design changes or implementation of alternative construction methodologies. Where feasible and appropriate, all jurisdictional aquatic resources not directly affected by construction activities will be avoided and protected by establishing staking, flagging, or fencing between the identified construction areas and aquatic resources to be avoided/preserved.	City responsible for hiring qualified biologist to establish fencing or flagging to identify aquatic resources to be avoided.	Establish fencing and flagging: Prior to construction.
	MM BIO-14: Jurisdictional Aquatic Resources Compensation (Applies to New Aquifer Storage and Recovery Facilities and Tait Diversion and Coast Pump Station Improvements). For unavoidable impacts to jurisdictional aquatic resources, a project-specific mitigation plan shall be developed, approved by the U.S. Army Corps of Engineers, Regional Water Control Board, and/or California Department of Fish and Wildlife, as appropriate, through their respective regulatory permitting processes, and implemented. The mitigation plan shall specify the criteria and standards by which the mitigation will compensate for impacts of the Proposed Project and include discussion of the following: a. The mitigation objectives and type and amount of mitigation to be implemented (in-kind mitigation at a minimum mitigation ratio of 1:1); b. The location of the proposed mitigation site(s) (within the San Lorenzo River watershed, if possible); c. The methods to be employed for mitigation implementation (jurisdictional aquatic resource establishment, re-establishment, enhancement, and/or preservation);	City responsible for hiring qualified biologist to prepare plan. City responsible for implementing plan.	Plan preparation: Prior to construction. Plan implementation: After completion of construction activities, or as specified in the plan.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	d. Success criteria and a monitoring program to ensure mitigation success; and e. Adaptive management and remedial measures in the event that performance stands are not achieved.		
Cultural and Tribal Cultural Resources			
	MM CUL-1: Historic-Era Built Environment Resources. Potentially significant impacts to historic built environmental resources on the infrastructure component sites shall be addressed through the following measures: a. **Identify Potential Historic Built Environment Resources (Applies to New Aquifer Storage and Recovery Facilities and the Felton Diversion).** When new or upgraded facilities move into project-level design and those developments are being pursued by the City of Santa Cruz (City), a qualified cultural resource specialist shall review the project site and conduct a California Historical Resources Information System (CHRIS) records search. If there are no previously recorded resources or historic era buildings or structures located on the site, no further action is warranted. If these project site review efforts indicate a potential for California Environmental Quality Act (CEQA) historical resources, all buildings and structures within the component site that are 45 years or older, shall be identified and measure b shall be implemented. b. **Evaluate Potential Built Environment Resources (Applies to New ASR Facilities, City/Soquel Creek Water District/Central Water District Intertie – Soquel Village and Park Avenue Pipelines, and the Felton Diversion).** Should potential CEQA historical resources be identified within the above programmatic infrastructure component sites, prior to project implementation, the City or other lead agency overseeing the Proposed Project shall retain a qualified architectural historian, meeting the Secretary of the Interior's Professional Qualification Standards (36 Code of	City responsible for hiring a qualified cultural resource specialist and architectural historian to conduct records search and evaluate potential historic built environment resources.	Conduct records search and evaluate resources: Prior to construction.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	Federal Regulations Part 61), to record such potential resources based on professional standards, to formally assess their significance under CEQA Guidelines Section 15064.5. A Historic Resources Evaluation Report (HRER) shall be prepared by the architectural historian to evaluate properties over 45 years of age under all applicable significance criteria. In consideration of the historic context for the existing water management systems in the region there is a low-likelihood that water management structures that postdate the late 1800s or early 1900s (pioneering water system era) will be found historically significant. Therefore, for existing infrastructure component sites it is likely that the HRER will find that no properties meet the significance criteria and therefore, no CEQA historical resources are likely to be present. No further work shall be required for historic era-built environment properties, buildings, or structures 45 years old or older at these sites that are not found to meet the CEQA historical significance criteria as historical resources. If a property is found to be eligible for listing under the applicable significance criteria and therefore considered a CEQA historical resource, the resource shall be avoided or preserved in place. If avoidance or preservation in place is not feasible, and the historical resource will be modified through design such that it may not be able to convey its historic significance, the City will retain a qualified architectural historian to prepare a subsequent technical report. This required report will assess the proposed project design plans and/or schematics in conjunction with the subject CEQA historical resource and determine whether the Proposed Project conforms with the Secretary of the Interior's Standards for the Treatment of Historic Properties, specifically, the Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Structures). The City shall modify the Proposed Project, as needed, to ensure that the Secretary of the Interior's Standards		

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	are met such that the historical resource continues to convey its historical significance.		
✓	**MM CUL-2: Historic or Unique Archaeological Resources.** Unique Archaeological Resources, Historical Resources of Archaeological Nature, and Subsurface Tribal Cultural Resources. Potentially significant impacts to unique archaeological resources, historical resources of an archaeological nature, or subsurface tribal cultural resources on the infrastructure component sites shall be addressed through the following measures: a. **Identify Potential Unique Archaeological Resources, Historical Resources of Archaeological Nature, and Subsurface Tribal Cultural Resources (Applies to New Aquifer Storage and Recovery [ASR] Facilities and Other Components where Five Years Have Elapsed).** When new ASR facilities sites are identified and those components are being pursued by the City of Santa Cruz (City), a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, shall conduct a California Historical Resources Information System (CHRIS) records search, a Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search and perform an intensive surface reconnaissance within a specifically defined Area of Direct Impact (ADI). Based on the above, all archaeological sites within or near the component site or area of potential effect shall be identified. The sensitivity of the site for discovering unknown resources, shall also be identified. The qualified archaeologist will prepare a technical report with the results of the above. The qualified archaeologist shall attempt to ascertain whether the archaeological sites qualify as unique archaeological resources, historical resources of an archaeological nature, or subsurface tribal cultural resources. If known or identified resources of these kinds are present on the site, measure c shall be implemented.	City responsible for hiring a qualified archaeologist to conduct records search, prepare cultural resources technical report, evaluate identified resources, and prepare and implement data recovery plan, as warranted City responsible for inclusion of inadvertent discovery clause in construction specifications and contracts. Contractor responsible for implementation of inadvertent discovery clause, which includes cultural resource sensitivity training for workers.	Include measure in construction specifications and contracts: Prior to construction. Identifying and evaluate cultural resources: Prior to construction. Training: Prior to construction and prior to new work crews coming onto the site. Evaluate potential cultural resources: Prior to and during construction, as warranted. Data recovery plan preparation and implementation: During construction if identified resource is determined to be significant.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	This measure shall also be implemented for any other project or programmatic components that are implemented more than five years after the CHRIS records search and NAHC SLF search were conducted. b. **Standard Sensitivity Training and Inadvertent Discovery Clauses (Applies to all Components).** The City or other lead agency shall include a standard clause in every construction contract for the Proposed Project, which requires cultural resource sensitivity training for workers prior to conducting earth disturbance in the vicinity of a documented cultural-resource-sensitive area, should one be identified in the future. Prior to site mobilization or construction activities on the project site, a qualified archaeologist with training and experience in California prehistory and historical period archaeology shall conduct the cultural resources awareness training for all project construction personnel. The training shall address the identification of buried cultural deposits, including Native American and historical period archaeological deposits and potential tribal cultural resources, and cover identification of typical prehistoric archaeological site components including midden soil, lithic debris, and dietary remains as well as typical historical period remains such as glass and ceramics. The training must also explain procedures for stopping work if suspected resources are encountered. Any personnel joining the work crew subsequent to the training shall also receive the same training before beginning work. Consistent with Standard Construction Practice #24, standard inadvertent discovery clauses shall also be included in every construction contract for the Proposed Project by the City or other lead agency, which requires that in the event that an archaeological resource is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease until a qualified		

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	archaeologist can evaluate the find and make a recommendation for how to proceed, as specified in measure c. c. **Evaluate Potential Unique Archaeological Resources, Historical Resources of Archaeological Nature, and Subsurface Tribal Cultural Resources (Applies to all Components).** For an archaeological resource that is discovered during initial site review (measure a) or during construction (measure b), the City or other lead agency shall: ▪ Retain a qualified archaeologist to determine whether the resource has potential to qualify as either a unique archaeological resource, a historical resource of an archaeological nature, or a subsurface tribal cultural resource under Public Resources Code section 21074, California Environmental Quality Act (CEQA) Guidelines Section 15064.5, or Section 106 of the National Historic Preservation Act. ▪ If the resource has potential to be a unique archaeological resource, a historical resource of an archaeological nature, or a subsurface tribal cultural resource, the qualified archaeologist, in consultation with the lead agency, shall prepare a research design and archaeological evaluation plan to assess whether the resource should be considered significant under CEQA criteria. ▪ If the resource is determined significant, the lead agency shall provide for preservation in place, if feasible. If preservation in place is not feasible, the qualified archaeologist, in consultation with the lead agency, will prepare a data recovery plan for retrieving data relevant to the site's significance. The data recovery plan shall be implemented prior to, or during site development (with a 100-foot buffer around the resource). The archaeologist shall also perform appropriate technical analyses, prepare a full written report and file it with the Northwest Information Center, and provide for the permanent		

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	curation of recovered materials. The written report will provide new recommendations, which could include, but would not be limited to, archaeological and Native American monitoring for the remaining duration of project construction.		
Geology and Soils			
	MM GEO-1: Operation of New Aquifer Storage and Recovery (ASR) Facilities in Liquefaction-Prone Areas (Applies to New ASR Facilities). To avoid increasing the potential for liquefaction, ASR injections in new wells located in potential liquefaction zones, as depicted on Figure 4.5-3, shall be maintained and operated such that existing shallow groundwater (i.e., depth generally less than 100 feet) does not rise to within 40 feet of the ground surface. Similarly, ASR injections in potential liquefaction zones shall be maintained and operated such that existing groundwater within a depth of 40 feet or less does not rise closer to the ground surface.	City responsible for monitoring operations to achieve this measure.	Monitoring: During operation of ASR facilities located in potential liquefaction zones.
✓	**MM GEO-2: Paleontological Resources Impact Mitigation Program and Paleontological Monitoring.** Potentially significant impacts to paleontological resources on the project and programmatic infrastructure component sites shall be addressed through the following measures: a. **Identify Potential Paleontological Resources (Applies to New Aquifer Storage and Recovery [ASR] Facilities).** When new ASR facilities sites are identified and those components are being pursued by the City or other lead agency, a qualified a qualified paleontologist pursuant to the Society of Vertebrate Paleontology (SVP) 2010 guidelines, shall conduct a paleontological records search from the Natural History Museum of Los Angeles County (LACM) and conduct a desktop geological and paleontological research. Based on the above, all paleontological sites within or near the programmatic component site shall be identified. The sensitivity of the site for discovering unknown paleontological	City responsible for hiring qualified paleontologist to prepare the PRIMP and conduct worker training and monitoring. City responsible for inclusion of paleontological resource protection clauses in construction specifications and contracts.	Include measure in construction specifications and contracts: Prior to construction. Identifying potential paleontological resources: Prior to construction. PRIMP preparation and worker training: Prior to site grading or excavation. Monitoring: During grading and ground disturbance as specified in the PRIMP.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	resources, shall also be identified. The qualified paleontologist will prepare a brief technical report with the results of the above. If known or identified resources are present on the site, or if the site has moderate to high sensitivity for paleontological resources, measures b and c shall be implemented. b. **Develop Paleontological Resources Impact Mitigation Program (Applies to all Known Infrastructure Components and May Apply to New ASR Facilities).** Prior to commencement of any grading activity on infrastructure component sites with moderate to high paleontological sensitivity or that may have such sensitivity at depth, the City or other lead agency shall retain a qualified paleontologist pursuant to the SVP (2010) guidelines. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the Proposed Project. The PRIMP can be written to include all infrastructure components located in sites with moderate to high paleontological sensitivity. The PRIMP shall be consistent with the SVP (2010) guidelines and shall, at a minimum, contain the following elements: ▪ Introduction to the project, including project location, description of grading activities with the potential to impact paleontological resources, and underlying geologic units. ▪ Description of the relevant laws, ordinances, regulations, and standards pertinent to the project and potential paleontological resources. ▪ Requirements for preconstruction meeting attendance by the qualified paleontologist and/or their designee and worker environmental awareness training for grading contractors that outlines laws protecting paleontological resources and the types of resources that may be encountered on site.		

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	▪ Identification of locations where full-time paleontological monitoring within geological units with high paleontological sensitivity is required within the project or programmatic sites based on construction plans and/or geotechnical reports. ▪ Requirements and frequency of paleontological monitoring spot-checks below a depth of five feet below the ground surface in areas underlain by Holocene sedimentary deposits. ▪ The types of paleontological field equipment the paleontological monitor shall have on-hand during monitoring. ▪ Discoveries treatment protocols and paleontological methods (including sediment sampling for microinvertebrate and microvertebrate fossils). ▪ Requirements for adequate reporting and collections management, including daily logs, monthly reports, and a final paleontological monitoring report that details the monitoring program and includes analyses of recovered fossils and their significance and the stratigraphy exposed during construction. ▪ Requirements for collection and complete documentation of fossils identified within the project site prior to construction and during construction, including procedures for temporarily halting construction within a 50-foot radius of the find while documentation and salvage occurs and allowing construction to resume once collection and documentation of the find is completed. Prepared fossils along with copies of all pertinent field notes, photos, maps, and the final paleontological monitoring report shall be deposited in a scientific institution with paleontological collections. Any curation costs shall be paid for by the City. c. **Standard Paleontological Clauses in Construction Contracts (Applies to all Infrastructure Components).** The City or other lead agency shall include standard clauses in construction contracts		

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	for infrastructure components located in areas with moderate to high paleontological sensitivity. A standard clause shall be included that requires paleontological resource sensitivity training for workers prior to conducting earth disturbance activities. A standard inadvertent discovery clause shall also be included that indicates that in the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot-radius buffer. Once documentation and collection of the find is completed, the monitor will allow grading to recommence in the area of the find.		
Hazards, Hazardous Materials, and Wildfire			
	MM HAZ-1: Review of Hazardous Materials Site Databases (Applies to New Aquifer Storage and Recovery Facilities). Prior to construction where ground disturbance is required, a review of hazardous materials site databases will be conducted within 0.5 miles of the project site where the construction is proposed (project site). A search shall be conducted no more than six months prior to construction. In addition to sites identified in this environmental impact report, each new site identified within 0.5 miles of the project site will be reviewed for environmental contamination that could impact the project site, including soil, soil vapor, and groundwater contamination. If soil, soil vapor, and/or groundwater contamination is identified in the review, MM HAZ-2 will be implemented.	City responsible for review of hazardous site databases, or for hiring a qualified technician to conduct such a database review.	Review of hazardous materials site databases: Prior to construction.
	MM HAZ-2: Hazardous Materials Contingency Plan (Applies to New Aquifer Storage and Recovery Facilities and City of Santa Cruz/Soquel Creek Water District/Central Water District Intertie – Soquel Village Pipeline). Prior to commencement of any construction activities, a Hazardous Materials Contingency Plan (HMCP) shall be developed that addresses known and suspected impacts in soil, soil vapor, and	City responsible for hiring a qualified engineer to develop plan. City responsible for inclusion of plan implementation in	Include measure in construction specifications and contracts if required by MM HAZ-2: Prior to construction.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	groundwater from releases on or near the project sites. The HMCP shall include training procedures for identification of contamination. The HMCP shall describe procedures for assessment, characterization, management, and disposal of hazardous constituents, materials, and wastes, in accordance with all applicable state and local regulations. Contaminated soils and/or groundwater shall be managed and disposed of in accordance with local and state regulations. These regulations, as further described in Section 4.7.2, Regulatory Framework (Section 4.7, Hazards, Hazardous Materials, and Wildfire), include hazardous material transportation (California Department of Transportation and Department of Toxic Substances Control [DTSC]), hazardous waste regulations (U.S. Environmental Protection Agency and DTSC), worker health and safety during excavation of contaminated materials (California Division of Occupational Safety and Health Administration), and local disposal requirements (DTSC and landfill-specific). The HMCP shall include health and safety measures, which may include but are not limited to periodic work breathing zone monitoring and monitoring for volatile organic compounds using a handheld organic vapor analyzer in the event impacted soils are encountered during excavation activities.	construction specifications and contracts. Contractor to implement plan during construction.	Development of plan: Prior to initiation of construction activities. Implementation of plan: During construction.
Hydrology and Water Quality			
✓	**MM HYD-1: Ammonia Monitoring (Applies to Beltz 12 Aquifer Storage and Recovery [ASR] Facility).** Consistent with groundwater monitoring completed for the Beltz 12 ASR Pilot Test Project (Pueblo Water Resources 2020), monitoring for ammonia shall be completed in the Beltz 12 well and the Soquel Creek Water District (SqCWD) O'Neill Ranch well during future Beltz 12 ASR pilot tests and ASR operations. The City shall establish ammonia concentrations beginning at least 12 months prior to commencement of Beltz 12 ASR operations, by conducting quarterly sampling, and obtaining similar sampling data for the SqCWD's O'Neill Ranch well, as provided by SqCWD. During the first year of Beltz 12 ASR injection and extraction operations, the City	City responsible for specified ammonia monitoring at Beltz 12 ASR. City and SqCWD responsible for cooperatively implementing hydrogeologic investigation, as warranted. City responsible for modifying ASR injection and/or extraction operations if hydrogeologic	Establish baseline ammonia concentrations: at least 12 months prior to operations. Conduct monthly monitoring of ammonia concentrations: during first year of operations. Conduct quarterly monitoring of ammonia concentrations: after first year of operations.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	shall conduct monthly monitoring of ammonia concentrations in groundwater. Following the first year of operations, monitoring of ammonia shall be quarterly. In the event that over a two-year sampling period after initiation of Beltz 12 ASR operations, City ammonia monitoring data, in combination with ammonia monitoring data from the SqCWD O'Neill Ranch well, indicates Beltz 12 ASR operations are not resulting in changes to ammonia concentrations that could adversely affect operations at the SqCWD's O'Neill Ranch well, ammonia sampling shall be discontinued in the Beltz 12 ASR well. The City ammonia monitoring data, in combination with ammonia monitoring data from the SqCWD O'Neill Ranch well, shall be evaluated to determine if Beltz 12 ASR operations are resulting in changes to ammonia concentrations that could adversely affect operations at the SqCWD's O'Neill Ranch well. If ammonia levels increase above baseline, the City and SqCWD shall cooperatively develop, fund, and implement a hydrogeologic investigation to evaluate the source(s) and distribution of ammonia in the aquifer system and potential causes of the observed ammonia increases. The investigation shall include, if applicable, installation of a monitoring well cluster between the Beltz 12 ASR well and the O'Neill Ranch well to evaluate the gap in data between these two wells. To the extent that the results of the hydrogeologic investigation indicate that Beltz 12 ASR operations are resulting in ammonia concentrations above baseline concentrations, ASR injection and/or extraction operations shall be modified until ammonia concentrations decrease to baseline (or lower) levels, as demonstrated with monthly (during the first year of operations) or quarterly monitoring data from the Beltz 12 ASR well, and the SqCWD's O'Neill Ranch well, as provided by SqCWD. The Beltz 12 ASR modifications shall be proportional to the degree of impact being caused by Beltz 12 ASR operations (versus O'Neill Ranch well operations). Quarterly monitoring reports shall be prepared to document monitoring results.	investigation indicates that Beltz 12 ASR operations are resulting in ammonia concentrations above baseline concentrations.	Discontinue monitoring: if two-year sampling period of City and SqCWD ammonia monitoring data indicates operations are not resulting in changes to ammonia concentrations that could adversely affect operations at SqCWD's O'Neill Ranch well.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	Additionally, during the next Mid-County Groundwater Sustainability Plan update process, the City shall work with other member agencies of the Mid-County Groundwater Sustainability Agency to address ammonia as a groundwater quality issue in the basin if warranted based on the outcome of monitoring and any hydrogeologic investigation performed, and incorporate the City's Beltz 12 ASR well and the SqCWD's O'Neill Ranch well into the plan update to allow for the ongoing assessment and monitoring of ammonia concentrations.		
✓	**MM HYD-2: Groundwater Level Monitoring (Applies to Beltz 12 Aquifer Storage and Recovery [ASR] Facility).** Consistent with restrictive effects criteria established in private well baseline assessment reports (Hydro Metrics 2015a, 2015b, 2015c, 2015d, 2015e), the private well monitoring program currently in place under the April 2015 cooperative monitoring/adaptive groundwater management agreement (cooperative groundwater management agreement) and the April 2015 stream flow and well monitoring agreement, between the City of Santa Cruz (City) and Soquel Creek Water District (SqCWD), shall be continued with respect to groundwater levels, and the City will contact and enroll any additional residents with private domestic wells within a 3,300-foot radius of the City's Beltz 12 ASR facility who want to join the program. Consistent with the existing cooperative groundwater management agreement, the City and SqCWD shall share monitoring and mitigating for impacts to third parties, such as private wells found in the area of overlap of 3,300-foot radius around SqCWD's O'Neill Ranch Well and 3,300-foot radius around the City's Beltz 12 well. Monitoring expenses shall be shared equally while mitigation expenses shall be shared proportionately. If private well monitoring reveals impacts to private wells due to the presence of restrictive effects, pump tests shall be conducted to determine proportionality. Monitoring and mitigation of impacts to private wells within a 3,300-foot radius of either the O'Neill Ranch well or Beltz 12 well, but not located in the overlap	City and SqCWD are responsible for groundwater level monitoring and implementing a hydrogeologic investigation, as necessary. City is responsible to contact and enroll additional residents with private domestic wells within 3,300 of the Beltz 12 ASR facility. City responsible for modifying ASR injection and/or extraction operations if hydrogeologic investigation indicates that Beltz 12 ASR operations are resulting in restrictive effects.	Contact and enroll additional residents: Prior to Beltz 12 ASR operations. Monitoring of private wells: During Beltz 12 ASR operations. Discontinue monitoring: five years after initiation of Beltz 12 ASR operations, unless monitoring period is extended, as specified.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	area, shall be the sole responsibility of the agency whose 3,300-foot radius encompasses the private well. If demonstrated restrictive effects to nearby private domestic wells occur during ASR pilot testing or operations, the City and SqCWD shall cooperatively develop, fund, and implement a hydrogeologic investigation to evaluate the potential causes of the observed restricted effects in private wells. To the extent that the results of the hydrogeologic investigation indicates that Beltz 12 ASR operations are resulting in restrictive effects, ASR injection and/or extraction operations shall be modified until the corresponding undesirable effects are eliminated, as demonstrated with biannual monitoring data from the private wells. The Beltz 12 ASR modifications shall be proportional to the degree of impact being caused by Beltz 12 ASR operations (versus O'Neill Ranch well operations). Biannual and annual monitoring reports shall be prepared to document monitoring results. In the event that restrictive effects to nearby private domestic wells does not occur during ASR pilot testing or operations, for a period of five years after initiation of Beltz 12 ASR operations, the City's participation in the private well monitoring program will be discontinued. However, the five-year monitoring period will be extended, if necessary, to account for multi-year drought conditions. The determination as to whether to extend the monitoring period will be based on an evaluation of the groundwater monitoring data collected over the five-year monitoring period, in combination with a review of any drought conditions present during that period. Results of this evaluation will be shared with SqCWD and any associated comments by SqCWD will be considered in determining the need for extension of the monitoring program beyond the five-year period. Additionally, during the next Mid-County Groundwater Sustainability Plan (GSP) update process, the City shall work with other member agencies of the Mid-County Groundwater Sustainability Agency to update information in the GSP related to private wells and the		

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	ongoing assessment and monitoring of groundwater levels at these wells, if warranted based on the outcome of monitoring and any hydrogeologic investigation performed. However, the five-year monitoring period will be extended, if necessary, to account for multi-year drought conditions. The determination as to whether to extend the monitoring period will be based on an evaluation of the groundwater monitoring data collected over the five-year monitoring period, in combination with a review of any drought conditions present during that period. Results of this evaluation will be shared with SqCWD and any associated comments by SqCWD will be considered in determining the need for extension of the monitoring program beyond the five-year period.		
	MM HYD-3: Drainage Improvements (Applies to City of Santa Cruz/Scotts Valley Water District Intertie Pump Station and City of Santa Cruz/Soquel Creek Water District/Center Water District New Intertie Pump Stations). Final pump station designs shall include Low Impact Development features, which would: (1) reduce post-construction stormwater runoff rates to be less than or equal to existing conditions, for a 24-hour, 25-year storm event; and (2) minimize off-site runoff of stormwater pollutants through filtration features, such oil-water separators, vegetated swales, and bioretention basins. These features shall be inspected monthly to ensure functionality.	City responsible for hiring qualified engineer to design Low Impact Development (LID) features. City responsible for inclusion of LID requirements in design and construction specifications and contracts. Contractor to implement LID designs during construction. City responsible for monthly inspections.	Include measure in design and construction specifications and contracts: Prior to construction. Development of LID designs: Prior to construction. Implementation of LID designs: During construction. Inspections: During operations.
Land Use, Agriculture and Forestry, and Mineral Resources			
	MM LU-1: Avoidance of Agricultural and Forest Lands (Applies to New Aquifer Storage and Recovery [ASR] Facilities). The following measures shall be implemented to avoid conversion of Farmland or forest/timberland, and/or conflicts with agricultural zoning in the coastal zone:	City to implement measure during site selection for new ASR facilities.	Avoid agricultural and forest lands: Prior to construction.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	▪ Locate new ASR facilities on sites that do not contain Farmland (i.e., prime, unique, or important farmland under the State Farmland Mapping and Monitoring Program) unless site-specific application of the Land Evaluation and Site Assessment model determines that the site would not result in a significant impact to agricultural lands. ▪ Locate new ASR facilities on sites that do not contain forest/timber land. ▪ Locate new ASR facilities on sites that are not zoned for agricultural uses in the coastal zone.		
Noise			
	MM NOI-1: Operational Noise Levels (Applies to Coast Pump Station Improvements). The Proposed Project shall implement the following measures to reduce the potential for exposure of nearby noise-sensitive receptors to excessive noise levels: ▪ Where feasible, a primary element for the selection of proposed noise-generating equipment (e.g., pumps, motors, transformers, etc.) shall be equipment that inherently does not generate an increase of +3 dB in the ambient noise levels where the existing ambient is below 60 dBA L_{dn}, or a +5 dB increase in the ambient noise levels where the existing ambient is above 65 dBA L_{dn}, as measured at the nearest sensitive receptor. ▪ Where this is not feasible, noise-generating equipment shall be located within a full or partial noise reduction enclosure. The effectiveness of the equipment enclosure to reduce noise level exposure to within the applicable noise level threshold shall be demonstrated through submittal of a focused acoustical assessment.	City responsible for inclusion of operational noise requirements in design and construction specifications and contracts. Contractor responsible for selecting equipment or locating equipment within enclosure and providing focused acoustical assessment. City responsible for review of equipment and focused acoustical assessment.	Include measure in design and construction specifications and contracts: Prior to construction. Review of equipment and focused acoustical assessment: Prior to design approval.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
✓	**MM NOI-2: Construction Noise (Applies to all Infrastructure Components).** The Proposed Project shall implement the following measures related to construction noise: ▪ Restrict construction activities and use of equipment that have the potential to generate significant noise levels (e.g., use of concrete saw, mounted impact hammer, jackhammer, rock drill, etc.) to between the hours of 8:00 a.m. and 5:00 p.m., unless specifically identified work outside these hours is authorized by the City's Water Director as necessary to allow for safe access to a construction site, safe construction operations, efficient construction progress, and/or to account for prior construction delays outside of a contractor's control (e.g., weather delays). ▪ Construction activities requiring operations continuing outside of the standard work hours of 8:00 a.m. and 5:00 p.m. (e.g., borehole drilling operations) shall locate noise generating equipment as far as possible from noise-sensitive receptors, and/or within an acoustically rated enclosure (meeting or exceeding Sound Transmission Class [STC] 27), shroud or temporary barrier as needed to prevent the propagation of sound into the surrounding areas in excess of the 60 dBA nighttime (10:00 p.m. to 8:00 a.m.) and 75 dBA daytime (8:00 a.m. to 10:00 p.m.) criteria at the nearest sensitive receptor. Noisy construction equipment, such as temporary pumps that are not submerged, aboveground conveyor systems, and impact tools will likely require location within such an acoustically rated enclosure, shroud or barrier to meet these above criteria. Impact tools, in particular, shall have the working area/impact area shrouded or shielded whenever possible, with intake and exhaust ports on power equipment muffled or suppressed. Impact tools may	City responsible for inclusion of construction noise requirements in construction specifications and contracts. Contractor responsible for implementation during construction.	Include measure in construction specifications and contracts: Prior to construction. Implementation of measure: During construction.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	necessitate the use of temporary or portable, application-specific noise shields or barriers to achieve compliance. ▪ Portable and stationary site support equipment (e.g., generators, compressors, and cement mixers) shall be located as far as possible from nearby noise-sensitive receptors. ▪ Construction equipment and vehicles shall be fitted with efficient, well-maintained mufflers that reduce equipment noise emission levels at the project site. Internal-combustion-powered equipment shall be equipped with properly operating noise suppression devices (e.g., mufflers, silencers, wraps) that meet or exceed the manufacturer's specifications. Mufflers and noise suppressors shall be properly maintained and tuned to ensure proper fit, function, and minimization of noise. ▪ Construction equipment shall not be idled for extended periods of time (i.e., 5 minutes or longer) in the immediate vicinity of noise-sensitive receptors.		
	MM NOI-3: Construction Vibration (Applies to New Aquifer Storage and Recovery Facilities and all Intertie Improvements). The Proposed Project shall implement the following measures to reduce the potential for structural damage from groundborne noise and vibration: ▪ Vibratory rollers or compactors shall not be used within 15 feet of sensitive receptors. ▪ Heavy equipment required to operate within 9 feet of sensitive receptors shall be limited to rubber-tired equipment.	City responsible for inclusion of construction vibration requirements in construction specifications and contracts. Contractor responsible for implementation during construction.	Include measure in construction specifications and contracts: Prior to construction. Implementation of measure: During construction.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
STANDARD OPERATIONAL PRACTICES INCLUDED IN THE SANTA CRUZ WATER RIGHTS PROJECT			
	1. Ramping rates[1] developed during the pending ASHCP process and agreed to by CDFW and NMFS will be implemented at all City diversion facilities as follows: ▪ During changes in diversion rates, a ramping rate will be implemented at the Laguna Diversion, Liddell Diversion, Majors Diversion, and Tait Diversion to limit downstream flow reductions below the diversions such that the change in stage is no greater than 0.16 feet per hour when fry may be present (January 15 through May 31) and no greater than 0.3 feet per hour at all other times. ▪ During changes in bypass rates downstream of Newell Creek Dam, a ramping rate will be implemented to limit flow reductions in Newell Creek such that the change in stage is no greater than 0.16 feet per hour when fry may be present (January 15 through May 31) and no greater than 0.3 feet per hour at all other times. ▪ During inflation and deflation of the dam at Felton Diversion, a ramping rate will be implemented such that during inflation of the dam, downstream stage decreases will be limited to no more than 0.55 feet per hour, and during deflation of the dam, downstream stage increases below the diversion will be limited to no more than 1.68 feet per hour.	City responsible for implementing all operational practices, including ramping rates.	Throughout operation of all City diversion facilities.
✓	2. Operation of the ASR injections and extractions anticipated by the Proposed Project will be consistent with the sustainable management criteria, and will avoid any undesirable results identified in the adopted Santa Cruz Mid-County Groundwater Basin GSP and in any future revisions to the GSP. ASR facilities	City responsible for implementing all operational practices, including operation of ASR injections and	Throughout operation of ASR injections and extractions. Monitoring minimum thresholds: During operations

[1] Ramping rates are diversion rates that gradually alter diversions from a stream channel to limit the downstream rate of change to stream stage. Stage is the water level in a stream or river defined in reference to a certain height.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	and associated injections and extractions in the Santa Margarita Groundwater Basin will be planned to be installed and operated after the Santa Margarita Groundwater Basin GSP is prepared, adopted, and submitted to the Department of Water Resources in January 2022. The proposed timing will allow ASR injections and extractions to be consistent with the sustainable management criteria, and avoid any undesirable results identified, in the adopted Santa Margarita Groundwater Basin GSP and in any future revisions to the GSP. To avoid any undesirable results in both groundwater basins, minimum thresholds identified in both GSPs will not be exceeded during operation of ASR, as measured at representative monitoring points based on a five-year average, which under the Sustainable Groundwater Management Act will provide for avoidance of undesirable effects and achievement and maintenance of groundwater basin sustainability. To support the achievement of minimum thresholds in the long-term, any early management action triggers identified in the GSPs (e.g., chloride concentration and groundwater elevation triggers in the Mid-County GSP) will also be used in the short-term during ASR operations to identify the need for implementation of early management actions, if any such actions are identified in the GSPs.	extractions consistent with the applicable GSP.	based on a five-year running average. Monitoring early management action triggers: During operations based on short-term data (e.g., 30-day running average).
✓	3. ASR facilities will be permitted, constructed, and operated in accordance with the SWRCB Water Quality Order 2012-0010, General Waste Discharge Requirements for Aquifer Storage and Recovery Projects that Inject Drinking Water into Groundwater. This Order provides consistent regulation of ASR projects state-wide; provides a streamlined review and permitting process for ASR projects; and ensures compliance with applicable regulations and policies, including the RWQCB Basin Plans and State Water Board Resolution 68-18 (the Antidegradation Policy). The Order addresses possible elevated concentrations of naturally occurring	City responsible for implementing all operational practices, including compliance with SWRCB Water Quality Order 2012-0010. City responsible for preparation of a hydrogeologic evaluation and water quality evaluation, and	Throughout project operations.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	or anthropogenic constituents in the aquifer, as well as the potential effects of mixing water from different sources, which may cause geochemical reactions in the aquifer that can improve or degrade groundwater quality. The Order requires groundwater monitoring of the injection/extraction wells and monitoring wells to evaluate the potential for groundwater quality changes. In accordance with this Order, a technical report will be required in association with ASR permitting, including a hydrogeologic evaluation (e.g., injected aquifer characteristics) and water quality evaluation (e.g., potential impact to ongoing remediation efforts, mobilization of contaminants). A Monitoring and Reporting Program will be required, including requirements for monitoring of injected water quality, groundwater quality, and groundwater elevation/gradient.	Monitoring and Reporting Program.	
✓	4. Diversions from surface streams to provide water for ASR injections will be limited by the following: ▪ No diversions to provide water for ASR injections will occur in months classified as Hydrologic Condition 5 (driest) as defined in the Agreed Flows (Table 3-5a).	City responsible for implementing all operational practices, including water diversions from surface streams for ASR injections.	Throughout project operations.
	5. Diversions by the City from surface streams to support City water transfers and/or exchanges to neighboring agencies will be limited by the following: ▪ The City will not divert water from surface streams to transfer to neighboring agencies pursuant to the Proposed Project in months classified as Hydrologic Condition 4 (dry) or Hydrologic Condition 5 (driest) as defined in the Agreed Flows (Table 3-5a).	City responsible for implementing all operational practices, including water diversions from surface streams for water transfers and/or exchanges.	Throughout project operations.
	6. At times when the Loch Lomond Reservoir is spilling during late spring and summer when surface temperatures in the reservoir are warmer and the cooler 1 cfs fish release below the dam (generally between 11°C and 14°C) may not be sufficient to maintain temperatures in Newell Creek below 21°C, which is within the	City responsible for releasing additional flow to achieve specified water temperature at the City stream gage in Newell Creek below the dam.	Throughout project operations.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	suitable range for steelhead and coho, the City will release additional flow through the fish release to achieve a maximum instantaneous temperature of less than 21°C as measured in the anadromous reach of Newell Creek and verified at the City stream gage in Newell Creek below the dam.		
STANDARD CONSTRUCTION PRACTICES INCLUDED IN THE SANTA CRUZ WATER RIGHTS PROJECT			
Erosion and Air Quality Control			
✓	1. Implement erosion control best management practices for all construction activities occurring in or adjacent to jurisdictional aquatic resources (resources subject to permitting under Clean Water Act Section 404, Clean Water Act Section 401, Porter-Cologne Water Quality Act Section 13000 et seq., and/or California Fish and Game Code Section 1600). These measures may include, but are not limited to, (1) installation of silt fences, fiber or straw rolls, and/or bales along limits of work/construction areas and from the edge of the water course; (2) covering of stockpiled spoils; (3) revegetation and physical stabilization of disturbed graded and staging areas; and (4) sediment control including fencing, dams, barriers, berms, traps, and associated basins.	City responsible for inclusion of measure in construction specifications and contracts and periodic inspection. Contractor responsible for implementation.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction. Periodic inspection during construction to ensure no violations.
✓	2. Provide stockpile containment and exposed soil stabilization structures (e.g., Visqueen plastic sheeting, fiber or straw rolls, gravel bags, and/or hydroseed).	City responsible for inclusion of measure in construction specifications and contracts and periodic inspection. Contractor responsible for implementation.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction. Periodic inspection during construction to ensure no violations.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
✓	3. Provide runoff control devices (e.g., fiber or straw rolls, gravel bag barriers/chevrons) used during construction phases conducted during the rainy season. Following all rain events, runoff control devices shall be inspected for their performance and repaired immediately if they are found to be deficient.	City responsible for inclusion of measure in construction specifications and contracts, and periodic inspections. Contractor responsible for implementation.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction. Periodic inspection during construction to ensure no violations.
✓	4. Implement wind erosion (dust) controls, including the following: ▪ Use a water truck; ▪ Water active construction areas as necessary to control fugitive dust; ▪ Hydro seed and/or apply non-toxic soil binders to exposed areas after cut and fill operations; ▪ Cover inactive storage piles; ▪ Cover all trucks hauling dirt, sand, or loose materials off site; and ▪ Install appropriately effective track-out capture methods at the construction site for all exiting trucks.	City responsible for inclusion of measure in construction specifications and contracts, and periodic inspections. Contractor responsible for implementation.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction. Periodic inspection during construction to ensure no violations.
Water Quality Protection			
✓	5. Locate and stabilize spoil disposal sites and other debris areas such as concrete wash sites. Sediment control measures shall be implemented so that sediment is not conveyed to waterways or jurisdictional resources (resources subject to permitting under Clean Water Act Section 404, Clean Water Act Section 401, and/or California Fish and Game Code Section 1600).	City responsible for inclusion of measure in construction specifications and contracts, and periodic inspections. Contractor responsible for implementation.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction. Periodic inspection during construction to ensure no violations.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
✓	6. Minimize potential for hazardous spills from heavy equipment by not storing equipment or fueling within a minimum of 65 feet of any active stream channel or water body unless approved by permitting agencies along with implementation of additional spill prevention methods such as secondary containment and inspection.	City responsible for inclusion of measure in construction specifications and contracts, and periodic inspections. Contractor responsible for implementation.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction. Periodic inspection during construction to ensure no violations.
✓	7. Ensure that gas, oil, or any other substances that could be hazardous to aquatic life or pollute habitat are prevented from contaminating the soil or entering waters of the state or of the United States by storing these types of materials within an established containment area. Vehicles and equipment will have spill kits available, be checked daily for leaks, and will be properly maintained to prevent contamination of soil or water from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease. Any gas, oil, or other substance that could be considered hazardous shall be stored in water-tight containers with secondary containment. Emergency spill kits shall be on site at all times.	City responsible for inclusion of measure in construction specifications and contracts, and periodic inspections. Contractor responsible for implementation.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction. Periodic inspection during construction to ensure no violations.
✓	8. Prevent equipment fluid leaks through regular equipment inspections.	City responsible for inclusion of measure in construction specifications and contracts, and periodic inspections. Contractor responsible for implementation.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction. Periodic inspection during construction to ensure no violations.
✓	9. Implement proper waste/trash management.	City responsible for inclusion of measure in construction	Prior to construction, include measure in construction specifications and contracts.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
		specifications and contracts, and periodic inspections. Contractor responsible for implementation.	Implement measure during construction. Periodic inspection during construction to ensure no violations.
In-Channel Work and Fish Species Protection			
	10. For facilities that are in or adjacent to streams and drainages, avoid activities in the active (i.e., flowing) channel whenever possible. New ASR facilities shall avoid streams and drainages.	City responsible for inclusion of measure in construction specifications and contracts, and periodic inspections. Contractor responsible for implementation.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction. Periodic inspection during construction to ensure no violations.
	11. Isolate work areas as needed and bypass flowing water around work site (see dewatering measures below).	City responsible for inclusion of measure in construction specifications and contracts, and periodic inspections. Contractor responsible for implementation.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction. Periodic inspection during construction to ensure no violations.
	12. Personnel shall use the appropriate equipment for the job that minimizes disturbance to the channel bed and banks. Appropriately tired vehicles, either tracked or wheeled, shall be used depending on the situation.	City responsible for inclusion of measure in construction specifications and contracts, and periodic inspections. Contractor responsible for implementation.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
			Periodic inspection during construction to ensure no violations.
General Habitat Protection			
	13. Avoid disturbance of retained riparian vegetation to the maximum extent feasible when working in or adjacent to an active stream channel.	City responsible for inclusion of measure in construction specifications and contracts, and periodic inspections. Contractor responsible for implementation.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction. Periodic inspection during construction to ensure no violations.
	14. Restore all temporarily disturbed natural communities/areas by replanting native vegetation using a vegetation mix appropriate for the site.	City responsible for replanting.	Upon completion of construction.
	15. Require decontamination of any used tools and equipment prior to entering water ways.	City responsible for inclusion of measure in construction specifications and contracts, and periodic inspections. Contractor responsible for implementation.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction. Periodic inspection during construction to ensure no violations.
✓	16. A qualified biologist shall conduct a training-educational session for project construction personnel prior to any mobilization-construction activities within the project sites to inform personnel about species that may be present on site. The training shall consist of basic identification of special-status species that may occur on or near the project site, their habitat, their basic habits,	City responsible for hiring qualified biologist or trained designee to conduct training.	Training: Prior to construction and prior to new work crews coming onto the site.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	how they may be encountered in the work area, and procedures to follow when they are encountered. The training will include a description of the project boundaries; general provisions of the Migratory Bird Treaty Act, California Fish and Game Code, and federal and state Endangered Species Acts; the necessity for adhering to the provision of these regulations; and general measures for the protection of special-status species, including breeding birds and their nests. Any personnel joining the work crew later shall receive the same training before beginning work.		
Dewatering			
	17. Prior to the start of work or during the installation of temporary water diversion structures, capture native aquatic vertebrates in the work area and transfer them to another reach as determined by a qualified biologist. Capture and relocation of aquatic native vertebrates is not required at individual project sites when site conditions preclude reasonably effective operation of capture gear and equipment, or when the safety of the biologist conducting the capture may be compromised.	City responsible for hiring qualified biologist to be present during dewatering and to implement capture and relocation plan if needed. (Coordinate with the provisions of MM BIO-3 and MM BIO-8.)	Biologist to be present during installation of coffer dam and dewatering. (Coordinate with the provisions of MM BIO-3 and MM BIO-8.)
	18. When work in a flowing stream is unavoidable, isolate the work area from the stream. This may be achieved by diverting the entire streamflow around the work area by a pipe or open channel. Coffer dams shall be installed upstream and downstream, if needed, of the work areas at locations determined suitable based on site-specific conditions, including proximity to the construction zone and type of construction activities being conducted. Coffer dam construction shall be adequate to prevent seepage to the maximum extent feasible into or from the work area. Where feasible, water diversion techniques shall allow stream flows to flow by gravity around or through the work site. If gravity flow is not feasible, stream flows may be pumped around the work site using pumps and screened intake hoses. Sumps or basins may also be used to collect water, where appropriate (e.g., in channels with low flows). The work area will	City responsible for inclusion of measure in construction specifications and contracts and periodic inspection during implementation. Contractor responsible for implementation.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction when work in flowing stream is unavoidable. Periodic inspection during construction to ensure no violations.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	remain isolated from flowing water until any necessary erosion protection is in place. All water shall be discharged in a non-erosive manner (e.g., gravel or vegetated bars, on hay bales, on plastic, on concrete, or in storm drains when equipped with filtering devices).		
	19. If a bypass will be of open channel design, the berm confining the channel may be constructed of material from the channel.	City responsible for inclusion of measure in construction specifications and contracts and periodic inspection during implementation. Contractor responsible for implementation.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction when work in flowing stream is unavoidable. Periodic inspection during construction to ensure no violations.
	20. Diversions shall maintain ambient flows below the diversion, and waters discharged below the project site shall not be diminished or degraded by the diversion. All imported materials placed in the channel to dewater the channel shall be removed when the work is completed. Dirt, dust, or other potential discharge material in the work area will be contained and prevented from entering the flowing channel. Normal flows shall be restored to the affected stream as soon as is feasible and safe after completion of work at that location.	City responsible for inclusion of measure in construction specifications and contracts. Contractor responsible for implementation. City responsible for periodic and post-construction inspection to ensure all imported materials are removed.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction when work in flowing stream is unavoidable. Periodic inspection to confirm compliance with the measure. Post-construction inspection.
	21. To the extent that streambed design changes are not part of the Proposed Project, return the streambed, including the low-flow channel, to as close to pre-project condition as possible unless the pre-existing condition was detrimental to channel condition as determined by a qualified biologist or hydrologist.	City responsible for inclusion of measure in construction specifications and contracts. Contractor responsible for implementation.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction when work in

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
		City responsible for post-construction inspection.	flowing stream is unavoidable. Post-construction inspection.
	22. Remove all temporary diversion structures and the supportive material as soon as reasonably possible, but no more than 72 hours after work is completed.	City responsible for inclusion of measure in construction specifications and contracts. Contractor responsible for implementation. City responsible for post-construction inspection to ensure all imported materials are removed.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction when work in flowing stream is unavoidable. Post-construction inspection.
	23. Completely remove temporary fills, such as for access ramps, diversion structures, or coffer dams upon finishing the work.	City responsible for inclusion of measure in construction specifications and contracts. Contractor responsible for implementation. City responsible for post-construction inspection to ensure all imported materials are removed.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction when work in flowing stream is unavoidable. Post-construction inspection.
Other Practices			
✓	24. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the Proposed Project, immediately stop all construction work occurring within 100 feet of the find until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find, and whether the archaeological resources qualify as unique archaeological resources, historical resources of an	City responsible for inclusion of measure in construction specifications and contracts. Contractor responsible for implementation. (Coordinate with the provisions of MM CUL-2.)	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction. (Coordinate with the provisions of MM CUL-2.)

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	archaeological nature, or subsurface tribal cultural resources. The archaeologist will determine whether additional study is warranted. Should it be required, the archaeologist may install temporary flagging around a resource to avoid any disturbances from construction equipment. Depending upon the significance of the find under CEQA (14 CCR 15064.5[f]; California Public Resources Code, Section 21082), the archaeologist may record the find to appropriate standards (thereby addressing any data potential) and allow work to continue. If the archaeologist observes the discovery to be potentially significant under CEQA, preservation in place or additional treatment may be required.		
✓	25. In accordance with Section 7050.5 of the California Health and Safety Code, if potential human remains are found, immediately notify the lead agency staff and the County Coroner of the discovery. The coroner will provide a determination within 48 hours of notification. No further excavation or disturbance of the identified material, or any area reasonably suspected to overlie additional remains, can occur until a determination has been made. If the County Coroner determines that the remains are, or are believed to be, Native American, the coroner will notify the Native American Heritage Commission within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the Native American Heritage Commission must immediately notify those persons it believes to be the Most Likely Descendant from the deceased Native American. Within 48 hours of this notification, the Most Likely Descendant will recommend to the lead agency her/his preferred treatment of the remains and associated grave goods.	City responsible for inclusion of measure in construction specifications and contracts. Contractor responsible for implementation.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction.
✓	26. Notify adjacent property owners of nighttime construction schedules. A Construction Noise Coordinator will be identified. The contact number for the Construction Noise Coordinator will be included on notices distributed to neighbors regarding	City responsible for inclusion of measure in construction specifications and contracts.	Prior to construction, include measure in construction specifications and contracts.

Santa Cruz Water Rights Project Mitigation Monitoring and Reporting Program

Applicable to Beltz 8 and 12 ASR Project	Mitigation Measures and Standard Practices	Party Responsible for Implementation	Implementation Timing
	planned nighttime construction activities. The Construction Noise Coordinator will be responsible for responding to any local complaints about construction noise. When a complaint is received, the Construction Noise Coordinator shall notify the City within 48 hours of the complaint, determine the cause of the noise complaint, and implement as possible reasonable measures to resolve the complaint, as deemed acceptable by the City.	Contractor responsible for implementation.	Implement measure during construction.
	27. For construction on undeveloped sites or sites with surrounding trees and other vegetation, internal combustion engine equipment shall include spark arrestors, fire suppression equipment (e.g., fire extinguishers and shovels) must be stored onsite during use of such mechanical equipment, and construction activities may not be conducted during red flag warnings issued by the California Department of Forestry and Fire Protection (CAL FIRE). Red flag warnings and fire weather watches are issued by CAL FIRE based on weather patterns (low humidity, strong winds, dry fuels, etc.) and listed on their website (https://www.fire.ca.gov/programs/communications/red-flag-warnings-fire-weather-watches/).	City responsible for inclusion of measure in construction specifications and contracts. Contractor responsible for implementation.	Prior to construction, include measure in construction specifications and contracts. Implement measure during construction.

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