

# NOTICE OF PREPARATION

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## Monterey Peninsula Groundwater Replenishment Project Environmental Impact Report

### Introduction

In accordance with the provisions of the California Environmental Quality Act, the Monterey Regional Water Pollution Control Agency (MRWPCA), as California Environmental Quality Act lead agency, is preparing an Environmental Impact Report (EIR) for the proposed Monterey Peninsula Groundwater Replenishment Project (GWR Project). The GWR Project would create a reliable source of water supply by taking highly-treated water from a new advanced water treatment plant, and recharging the Seaside Groundwater Basin (or Seaside Basin) with the treated water using a series of shallow and deep injection wells. Once injected into the Seaside Basin, the treated water would mix with the groundwater present in the aquifers and be stored for future use. The primary purpose of the GWR Project is to provide 3,500 acre-feet per year (AFY) of high quality replacement water to California American Water Company (or Cal-Am) for delivery to its customers in the Monterey District service area; thereby enabling Cal-Am to reduce its diversions from the Carmel River system by this same amount.<sup>1</sup> Cal-Am is under a state order to secure replacement water supplies by December 2016.

This document serves as the Notice of Preparation (NOP) for the EIR for the GWR Project and solicits comments on the scope of environmental issues as well as alternatives and mitigation measures that should be explored in the EIR. Public agencies are invited to comment on the scope and content of the environmental information that is relevant to each agency's statutory responsibilities with regard to the proposed GWR Project. Members of the public also are invited to provide their comments on the scope of the EIR. **The 30-day public scoping period begins on May 31, 2013 and closes at 5:00 PM on Tuesday, July 2, 2013. A public scoping meeting will be held on Tuesday, June 18, 2013 from 6:00 to 8:00 PM at the Oldemeyer Center, Dance Room (986 Hilby Avenue, Seaside, CA 93955).** This NOP provides background information on relevant water supply conditions, briefly describes the proposed GWR Project, and identifies the environmental issue areas that will be analyzed in the EIR.

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<sup>1</sup> Cal-Am is an investor-owned public utility that serves approximately 38,500 customers in the Monterey Peninsula area. Cal-Am's Monterey District service area is shown in Figure 1.

## Project Location

The GWR Project would be located within northern Monterey County and would include facilities located within the unincorporated areas of the Salinas Valley and the cities of Marina and Seaside as shown in **Figures 1 and 2**. The GWR Project would replenish the Seaside Basin, and would provide a portion of the replacement water supplies needed for Cal-Am's Monterey District service area.

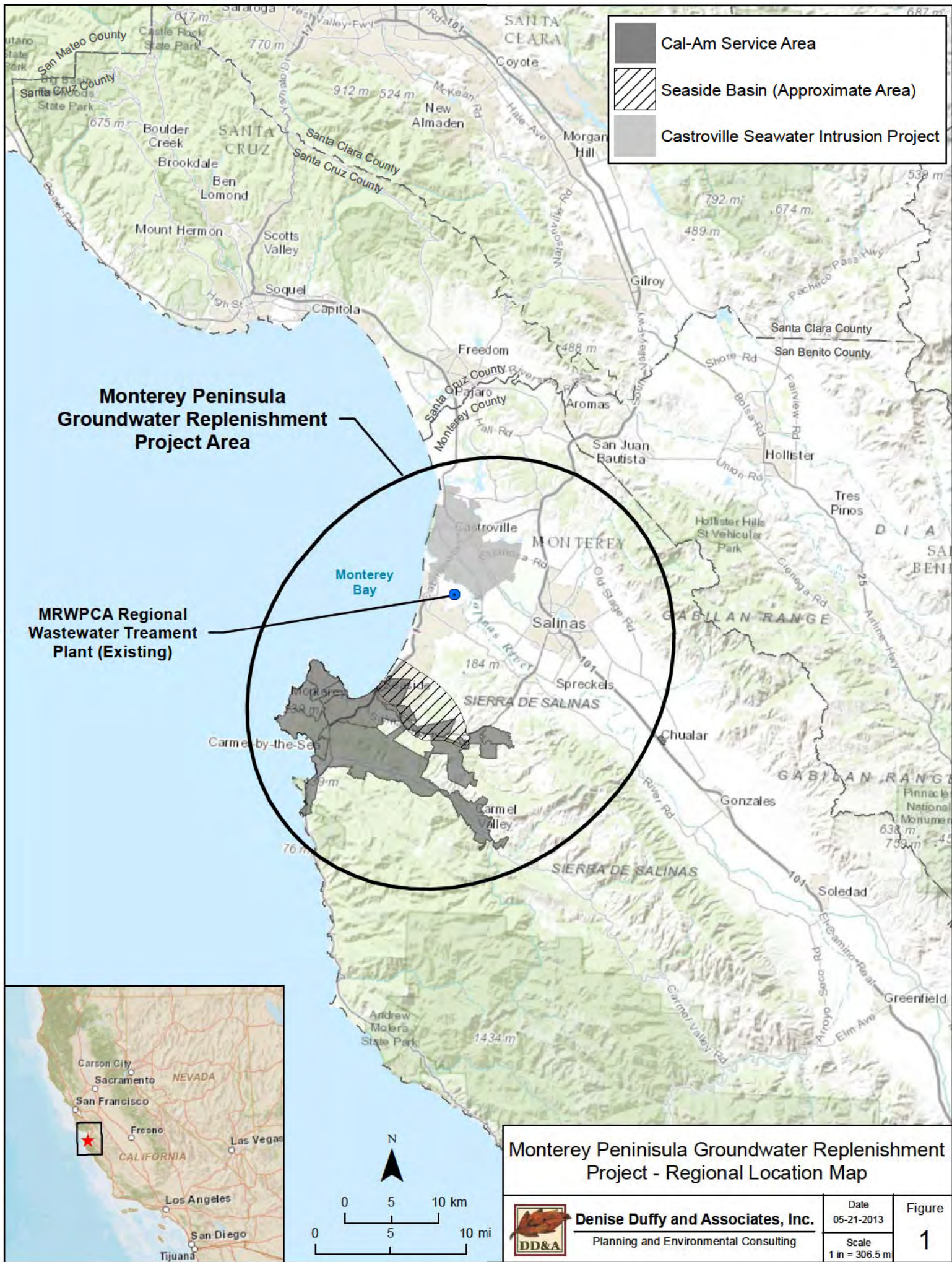
## Project Background




MRWPCA was established in 1979 under a Joint Powers Authority agreement between the City of Monterey, the City of Pacific Grove and the Seaside County Sanitation District. MRWPCA operates the regional wastewater treatment plant, including a water recycling facility (collectively known as the Regional Treatment Plant), a non-potable water distribution system known as the Castroville Seawater Intrusion Project, sewage collection pipelines, and 25 wastewater pump stations. MRWPCA member communities include Pacific Grove, Monterey, Del Rey Oaks, Seaside, Sand City, Fort Ord, Marina, Castroville, Moss Landing, Boronda, Salinas, and other unincorporated areas in northern Monterey County. See **Figure 1**.

MRWPCA's Regional Treatment Plant is located two miles north of the City of Marina, on the south side of the Salinas River, and has a permitted capacity to treat 29.6 million gallons per day (mgd) of wastewater effluent.<sup>2</sup> At the Regional Treatment Plant, water is treated to two different standards: 1) Title 22 California Code of Regulations standards (tertiary filtration and disinfection) for unrestricted agricultural irrigation use, and 2) secondary treatment for discharge through the ocean outfall. Influent flow that has been treated to a tertiary level is distributed to nearly 12,000 acres of farmland in the northern Salinas Valley for irrigation use (the Castroville Seawater Intrusion Project). The Regional Treatment Plant primarily treats municipal wastewater, but also accepts some dry weather urban runoff and other discrete wastewater flows.

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<sup>2</sup> The Regional Treatment Plant currently treats approximately 19 million gallons per day of municipal wastewater from a total population of about 250,000 in the northern Monterey County area shown generally in Figure 1.



	Cal-Am Service Area
	Seaside Basin (Approximate Area)
	Castroville Seawater Intrusion Project

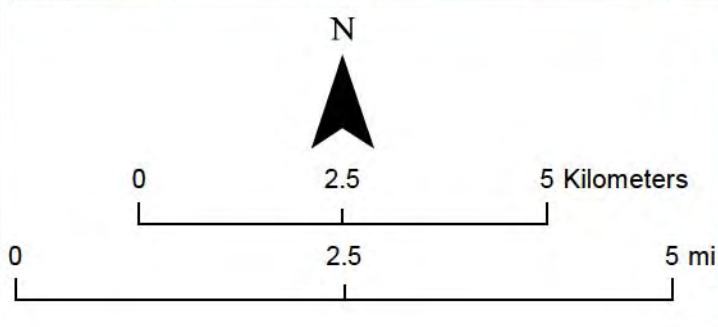
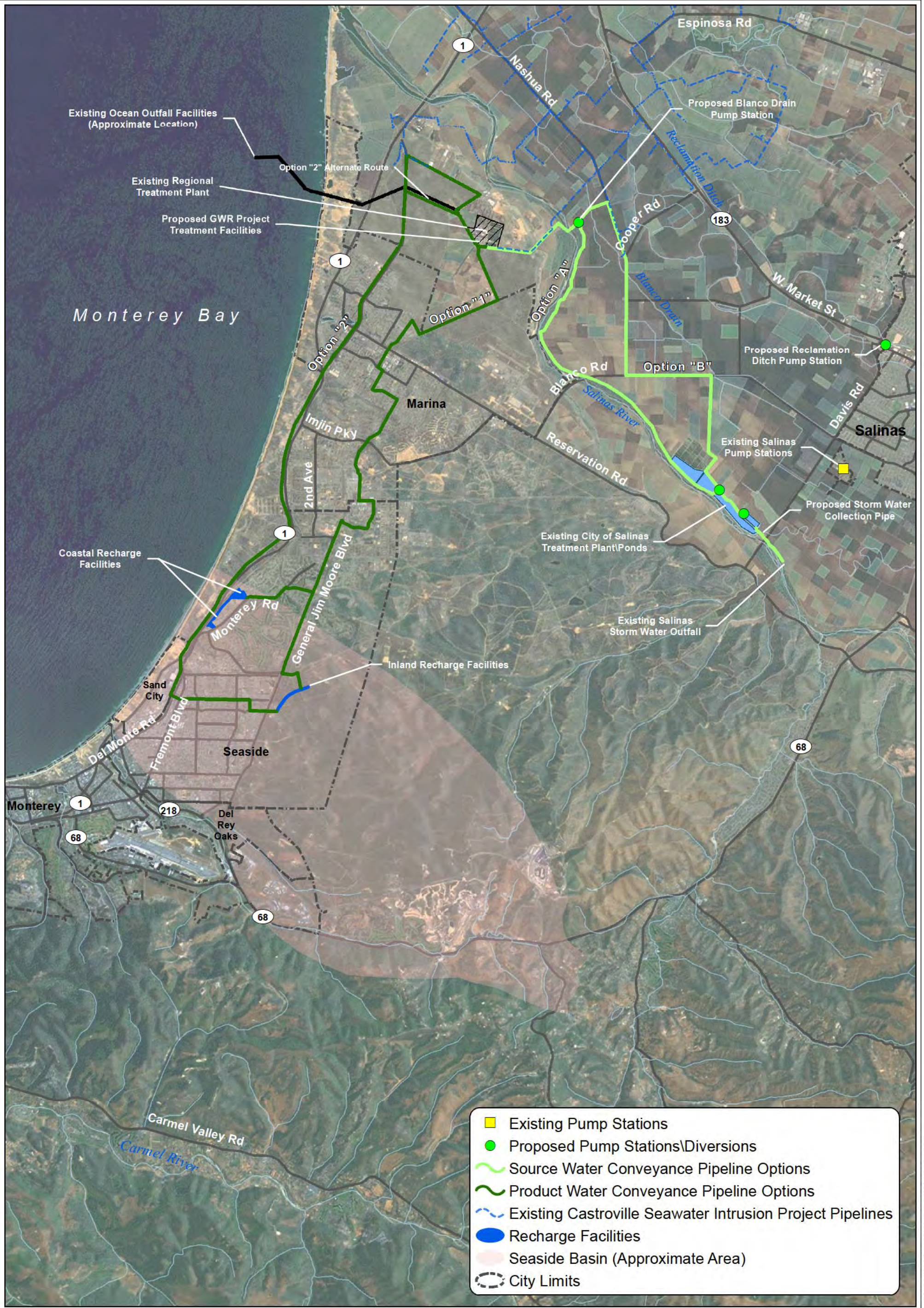
**Monterey Peninsula  
Groundwater Replenishment  
Project Area**

**MRWPCA Regional  
Wastewater Treatment  
Plant (Existing)**

**Monterey Peninsula Groundwater Replenishment  
Project - Regional Location Map**

 <b>Denise Duffy and Associates, Inc.</b> Planning and Environmental Consulting	Date 05-21-2013	Figure <b>1</b>
	Scale 1 in = 306.5 m	

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**Monterey Peninsula Groundwater Replenishment Project - Overview of Key Facilities Map**

<b>Denise Duffy and Associates, Inc.</b> Planning and Environmental Consulting	Date 05-28-2013	<b>Figure</b>  <span style="font-size: 2em; font-weight: bold;">2</span>
	Scale 1 inch equals 1.5 miles	

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### ***Seaside Groundwater Basin***

The Seaside Basin underlies an approximately 19-square-mile area at the northwest corner of the Salinas Valley, adjacent to Monterey Bay (see Figure 1). The hydrogeology of the Seaside Basin has been the subject of numerous studies beginning with a California Department of Water Resources study in 1974. Monitoring data gathered since 1987 shows that water levels have been trending downward in many areas of the basin. A steep decline since 1995 in the northern coastal portion of the basin, where most of the groundwater production occurs, has coincided with increased extraction in that area after the State Water Resources Control Board required Cal-Am to reduce its Carmel River diversions, and instead maximize its pumping in the Seaside Basin.<sup>3</sup>

Groundwater is currently extracted from approximately 37 wells by 20 well owners in the Seaside Basin. Cal-Am owns 12 wells and pumps approximately 80% of the water produced in the basin. In addition, Cal-Am and Monterey Peninsula Water Management District operate a Seaside Basin Aquifer Storage and Recovery system that stores excess Carmel River water supplies during the wet season in the groundwater basin and recovers the banked water during the following dry season for consumptive use. The estimated average yield of the existing Aquifer Storage and Recovery facilities is 1,920 AFY, but varies yearly based on rainfall due to the requirement to maintain adequate Carmel River instream flows.

Historical and persistent low groundwater elevations caused by pumping have led to concerns that seawater intrusion may threaten the Basin's groundwater resources. In 2006, an adjudication process (Cal-Am v. City of Seaside et al., Case No. M66343) led to the issuance of a court decision that created the Seaside Basin Watermaster (Watermaster). The Watermaster consists of nine representatives, one representative from each: Cal-Am, City of Seaside, Sand City, City of Monterey, City of Del Rey Oaks, Monterey Peninsula Water Management District and Monterey County Water Resources Agency, and two representatives from landowner groups. The Watermaster has evaluated water levels in the basin and has determined that while seawater intrusion does not appear to be occurring at present, current water levels are lower than those required to protect against seawater intrusion. Water levels were found to be below sea level in both the Paso Robles (the shallower aquifer) and the Santa Margarita aquifers of the Seaside Basin in 2012; therefore, it is recognized that recharge into both aquifers would be beneficial for protection against seawater intrusion.

### ***State Orders to Reduce Carmel River Diversions***

The 255-square-mile Carmel River Basin is bounded by the Santa Lucia Mountains to the south and the Sierra del Salinas to the north. The Carmel Valley aquifer, which underlies the alluvial portion of the Carmel River downstream of San Clemente Dam, is about six square-miles and is approximately 16 miles long. In the summer and fall, the alluvial aquifer is drawn down by private pumpers that extract approximately 2,200 to 2,400 AFY, and Cal-Am that pumps approximately 7,880 AFY.<sup>4</sup> Historically, this combined pumping has resulted in dewatering of the lower six miles of the river for several months in most years and up to nine miles in dry and critically dry years. Recharge of the aquifer is derived mainly

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<sup>3</sup> See discussion of SWRCB Order No. 95-10 in the following section.

<sup>4</sup> This pumping quantity is based on the mean water production from the Carmel Valley Alluvial Aquifer between Water Year 2010 and Water Year 2012.

from river infiltration which comprises 85% of the net recharge.<sup>5</sup> The aquifer is replenished relatively quickly each year during the rainy season, except during prolonged periods of extreme drought.

In 1995, the State Water Resources Control Board issued Order No. WR 95-10, which found that Cal-Am was diverting more water from the Carmel River Basin than it was legally entitled to divert. The State Board ordered Cal-Am, instead, to maximize diversions (to the extent feasible) from the Seaside Basin. In addition, a subsequent Cease and Desist Order (SWRCB 2009-0060) issued in 2009 requires Cal-Am to secure replacement water supplies for its Monterey District service area by December 2016 and reduce its Carmel River diversions to 3,376 AFY by the 2016-17 timeframe. Cal-Am estimates that it needs 9,752 AFY<sup>6</sup> of replacement water supplies to reduce its Carmel River diversions to the degree required by the Cease and Desist Order and to reduce its pumping in the Seaside Basin in accordance with the Watermaster's pumping mandates.

Cal-Am, working with local agencies, has proposed construction and operation of a Cal-Am owned and operated desalination project (known as the Monterey Peninsula Water Supply Project)<sup>7</sup> either to provide all of the replacement water needed to comply with the Cease and Desist Order and the Seaside Basin Adjudication, or part of the replacement water if the GWR Project would be capable of producing the rest of the replacement water in a timely manner and at a reasonable cost. The California Public Utilities Commission, as the California Environmental Quality Act lead agency for the Monterey Peninsula Water Supply Project, published a Notice of Preparation of an EIR in October 2012 and intends to circulate a Draft EIR in July 2013.

### ***GWR Project Relationship to the Monterey Peninsula Water Supply Project***

The GWR Project is designed to provide part of the replacement water needed for Cal-Am to comply with the Cease and Desist Order and the Seaside Basin Adjudication. The GWR Project could not produce all of the needed replacement water, but the primary goal of the project is to produce 3,500 AFY to be used by Cal-Am in order to reduce its Carmel River diversions by that same amount. The GWR Project could provide this quantity of replacement water regardless of whether the California Public Utilities Commission approves Cal-Am's application to construct and operate a desalination plant. In other words, the GWR Project could accomplish its objective, and be useful to reducing Carmel River diversions, independent from approval of Cal-Am's proposed desalination plant. While the GWR Project could proceed as an independent project, the GWR Project is related to the Monterey Peninsula Water Supply Project in that the GWR Project could reduce the size of Cal-Am's proposed desalination plant. Further, MRWPCA would not construct the GWR Project unless the California Public Utilities Commission

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<sup>5</sup> U.S. Geological Survey 1984. *Analysis of the Carmel Valley Alluvial Aquifer Groundwater Basin, Monterey County, California*. USGS WRI Report 83-4280; see page 13.

<sup>6</sup> Supplemental Testimony of Richard C. Svindland, January 11, 2013, Attachment 1, Application A.12-04-019 (*Application of CAW for Approval of the Monterey Peninsula Water Supply Project and Authorization to Recover All Present and Future Costs in Rates*)”

<sup>7</sup> In April 2012, California American Water submitted Application A.12-04-019 (*Application of CAW for Approval of the Monterey Peninsula Water Supply Project and Authorization to Recover All Present and Future Costs in Rates*) to the California Public Utilities Commission that is intended to secure replacement water supplies for the Monterey District associated with the regulatory orders and legal decisions described in this section. The MPWSP includes many of the same elements previously analyzed in the Coastal Water Project EIR (CPUC/ESA, 2009); however, key components, including the seawater intake system and desalination plant, have been relocated and/or modified under the current proposal and the current proposal is for private (Cal-Am) ownership of the intake system, desalination facility and conveyance pipeline.



approves a Water Purchase Agreement that authorizes Cal-Am to purchase the water that is produced by the GWR Project.

On April 20, 2012, the Monterey Peninsula Water Management District, MRWPCA, and Cal-Am entered into a Groundwater Replenishment Project Planning Term Sheet and Memorandum of Understanding to Negotiate in Good Faith to, among other things, enable planning and environmental evaluation of a GWR project by the following:

- to commit themselves to evaluate the ways in which a groundwater replenishment project could be effectively accomplished;
- to commit themselves to negotiate in good faith to reach agreement on such a project, should it be deemed viable;
- for MRWPCA to commit to act as lead agency to achieve California Environmental Quality Act compliance for such a project, should it be deemed viable;
- for Monterey Peninsula Water Management District to assist MRWPCA in providing the necessary financial support for planning and California Environmental Quality Act compliance; and
- to identify non-binding preliminary terms of a GWR Project agreement.

In its application to the California Public Utilities Commission for approval of the Monterey Peninsula Water Supply Project, Cal-Am proposed a three-pronged approach to replace most of its Carmel River diversions, as required by the Cease and Desist Order. The three prongs consist of: (1) desalination, (2) groundwater replenishment, and (3) aquifer storage and recovery. Cal-Am's application described the groundwater replenishment "prong" as follows and identified it as water supply that would reduce the capacity of the desalination component by 3,500 AFY:

*"California American Water has entered into a Memorandum of Understanding with the MRWPCA and MPWMD to collaborate on developing the Groundwater Replenishment Project, included as Appendix A. If the Groundwater Replenishment Project has reached certain milestones by the time California American Water begins construction of the desalination plant (currently estimated to be near the end of 2014) and the cost of the water from it is reasonable, California American Water will be able to reduce the size of its proposed desalination plant. California American Water proposes to do this by filing a Tier 2 advice letter."*

## **Project Objectives**

The primary objective of the GWR Project is to replenish the Seaside Basin to produce 3,500 acre-feet per year (AFY) of high quality water that would replace a portion of Cal-Am's water supply as required by state orders. To accomplish this primary objective, the GWR Project would need to meet the following objectives:

- Be capable of commencing operation, or of being substantially complete, by the end of 2016 or, if after 2016, no later than necessary to meet Cal-Am's replacement water needs;
- Be cost-effective such that the project would be capable of supplying reasonably-priced water; and

- Be capable of complying with applicable water quality regulations intended to protect public health.

Secondary objectives of the GWR Project include the following:

- Assist in preventing seawater intrusion in the Seaside Basin;
- Assist in diversifying Monterey County's water supply portfolio;
- Provide additional water to the Regional Treatment Plant that could be used for crop irrigation through the Salinas Valley Reclamation Project and Castroville Seawater Intrusion Project system.

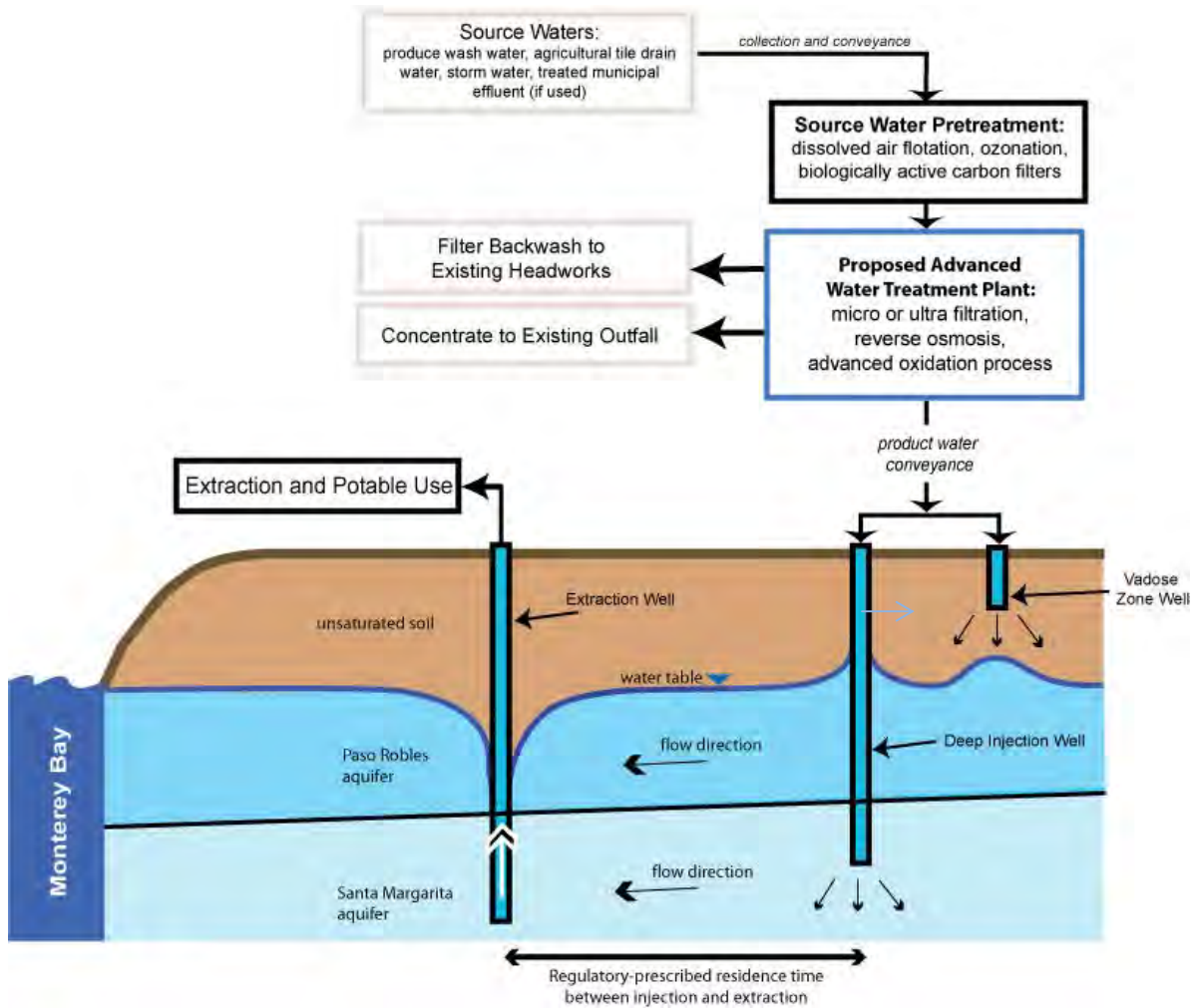
## Proposed Project

MRWPCA's GWR Project proposes to produce and deliver high quality treated water for replenishment of the Seaside Basin with the goal of enabling Cal-Am to reduce diversions from the Carmel River and its alluvial aquifer in compliance with the State Water Resources Control Board's Cease and Desist Order and to comply with the Seaside Basin Adjudication. The location of the GWR Project is shown in **Figure 1**. The GWR Project would include the following new facilities as shown in **Figure 2** and described in the following sections:

- *Source Water Conveyance Facilities:* diversion and collection facilities, including pipelines and pump stations to convey source water to the new treatment facilities,
- *Treatment Facilities:* pretreatment facilities, a new Advanced Water Treatment Plant, and associated facilities at the existing Regional Treatment Plant site to filter and treat the source water,
- *Product Water Conveyance Facilities:* pipelines, pump stations, and appurtenant facilities along one of two optional alignments to convey the treated water to the Seaside Basin, and
- *Replenishment/Recharge Facilities:* pipelines, deep injection and shallow (vadose zone) wells, and backflush facilities to be located at one or both of two optional locations (coastal and/or inland recharge sites) within the Seaside Basin boundaries.

A process diagram illustrating the operation of the GWR Project is provided in **Figure 3**. MRWPCA would construct, own, and operate the GWR Project facilities from source water collection and conveyance through injection into the Seaside Basin. After the recharged water resides within the subsurface soils and aquifer for the prescribed amount of time, the water would be extracted by others at existing municipal water supply wells.

**Figure 3. Overall GWR Project Process Schematic**



MRWPCA is coordinating with Cal-Am, Monterey Peninsula Water Management District, the Seaside Basin Watermaster, the City of Seaside, the City of Salinas, the Marina Coast Water District, Monterey County Water Resources Agency, and other public agency stakeholders regarding the GWR Project. The GWR Project would be designed and implemented in compliance with applicable regulatory requirements to protect public health. In particular, it is anticipated that the California Department of Public Health may require specific residence times for recharged water within the aquifer prior to extraction, which would be verified using tracer tests, if required, and groundwater monitoring.

## **Source Water Conveyance Facilities**

The GWR Project would use a combination of the following source waters as influent to the GWR Treatment Facilities:

- City of Salinas (City) Treatment Plant water,
- Blanco Drain water,
- Storm water collection systems of the City of Salinas and other MRWPCA member entities,
- Secondary or tertiary effluent from the Regional Treatment Plant, and
- Reclamation Ditch water.

A combination of these sources may be needed to meet the GWR Project objectives. The characteristics and availability of these water sources vary seasonally. Therefore, the GWR Project would be designed to accommodate a variety of flows, water quality characteristics, and delivery schedules. The following describes the potential source water types and facilities:

*City of Salinas (City) Treatment Plant water.* The City collects, transports, and treats water predominantly from food processing facilities within the City. Most of this water originates from the washing of produce for packaging (such as bagged lettuce). The water passes through existing pipelines to the City Treatment Plant located on the northwest side of Davis Road adjacent to the Salinas River. The water is aerated and sent to ponds and drying beds where it percolates into the shallow groundwater aquifer or evaporates.

If used as source water for the GWR Project, this water source would be collected at the City Treatment Plant and conveyed using new pipelines and pump stations to the MRWPCA's new GWR Project treatment facilities at the existing Regional Treatment Plant. One new pump station would be located at the City Treatment Plant. The maximum capacity of the pump station would be 10 mgd to allow for maintenance and operational flexibility. The conveyance would be through a new 27-inch diameter pipeline constructed along one of the following two potential routes between the City Treatment Plant and the proposed new Blanco Drain pump station (described below and shown on Figure 2):

- *City Treatment Plant Conveyance Option A.* Approximately 30,000 feet of new pipeline that would follow the farm roads north of and parallel to the Salinas River outside of the riparian vegetation area to the proposed new Blanco Drain pump station, or
- *City Treatment Plant Conveyance Option B.* Approximately 33,000 feet long of new pipeline that would follow paved roads (Blanco Road, Cooper Road, and Nashua Road), and some unpaved farm roads to the new proposed Blanco Drain pump station.

*Blanco Drain water.* The Blanco Drain is an existing system of dirt ditches and short pieces of pipe that collects and conveys agricultural tile drain water<sup>8</sup> and some storm water from about 6,000 acres of land to the Salinas River. The drainage area extends approximately from Highway 1 to Highway 68 along the Salinas River as it crosses Cooper, Blanco, Hitchcock, and Davis Roads. The water flows to an existing pump station owned and operated by Monterey County Water Resources Agency about 4,100 feet northwest of the intersection of Nashua and Cooper Roads. At this point, the water is pumped approximately 600 feet and then discharged to the Salinas River approximately 1,100 feet southeast and

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<sup>8</sup> Tile drainage is an agriculture practice that removes excess water from soil subsurface.

upstream of the existing Salinas River Diversion Facility. The Salinas River Diversion Facility is a seasonal diversion structure operated by the Monterey County Water Resources Agency for the purpose of augmenting the irrigation water supplies for the Castroville Seawater Intrusion Project agricultural land areas (see Figure 1 for the location of the Castroville Seawater Intrusion Project and see Figure 2 for the existing agricultural irrigation supply pipelines).

If Blanco Drain water or City Treatment Plant water is used by the GWR Project as source water, then a new Blanco Drain pump station (see Figure 2) would be built near the site of the existing Monterey County Water Resource Agency pump station. A new 9,000-foot long, 30-inch diameter pipeline would transport water from the proposed new Blanco Drain pump station to the new GWR Project treatment facilities at the Regional Treatment Plant. Directional drilling would be used to cross under the Salinas River, and then the pipeline would be placed along the boundary of the Monterey Regional Waste Management District property to the MRWPCA's existing Regional Treatment Plant site.

*Storm water from the City of Salinas and other MRWPCA member entities.* Storm water from Salinas and other member entities may also be used for source water for the GWR Project. Storm water from the southwestern portions of the City of Salinas currently travels through existing pipelines to an existing City storm water pump station at the site of MRWPCA's existing Salinas Pump Station (see Figure 2, "Existing Salinas Pump Stations"). The water is then conveyed through an existing 66-inch diameter pipeline to an outfall structure on the Salinas River approximately 1,800 feet southeast of Davis Road (see Figure 2, "Existing Storm Water Outfall").

If this storm water is used as source water for the GWR Project (to augment treated wastewater), then dry weather and low flows of storm water would be conveyed by a new short, on-site pipeline from the City's Salinas storm water pump station to the MRWPCA's Salinas Pump Station and from there to the existing Regional Treatment Plant site. Alternatively, dry weather and low flows of storm water from the Salinas storm water pump station could be used directly for the new GWR Project through existing conveyance systems to the City Treatment Plant near Davis Road adjacent to the Salinas River. Storm water conveyance may occur using either: (1) the City's existing 33-inch diameter pipeline, or (2) when completed, the City's future proposed 42-inch diameter pipeline, both of which would provide a connection from the Salinas Pump Station site to the City Treatment Plant.

To capture and use storm water from the southwestern portions of Salinas during storm events (i.e., high flows), a new extension of the City's existing 66-inch diameter pipeline would be required to convey the storm water to the City Treatment Plant. A new, approximately 2,700-foot long, 66-inch diameter pipeline would be placed along unpaved farm roads adjacent to the Salinas River to convey water between the storm water outfall and the City Treatment Plant (see Figure 2). A new pump station, pipelines and appurtenant facilities at or near the City Treatment Plant would allow the GWR Project to conjunctively operate with the City Treatment Plant process in managing the flow of water through the ponds systems and, ultimately, to the new GWR Project treatment facilities using one of the City Treatment Plant conveyance pipelines (see Options "A" or "B" as shown on Figure 2 and described above under "*City of Salinas (City) Treatment Plant water*").

Other MRWPCA member entities could also send storm water to the Regional Treatment Plant for use by the GWR Project by adding storm water into existing pipelines, manholes, or pump stations within the MRWPCA wastewater collection system.

*Secondary or tertiary effluent from the Regional Treatment Plant.* At the existing Regional Treatment Plant, water is treated to two different standards: 1) tertiary treatment for unrestricted agricultural irrigation use, and 2) secondary treatment for discharge through the ocean outfall. If water treated to secondary standards were used as source water for the GWR Project, then effluent would be withdrawn from the existing 60-inch diameter secondary effluent pipe at the Regional Treatment Plant. A new pump station at the Regional Treatment Plant would pump secondary treated water to the new GWR Project treatment facilities through a new 18-inch diameter pipeline approximately 1,900 feet long. If water treated to tertiary standards were used as source water for the GWR Project, then effluent would be withdrawn from an existing filtered effluent pipeline located at the Regional Treatment Plant (between the Filter Building and the Chlorine Contact Basins). A new pump station would be located adjacent to the Filter Building and would pump tertiary treated water to the new GWR Project treatment facilities through a new 18-inch diameter pipeline approximately 600 feet long.

*Reclamation Ditch water.* The Reclamation Ditch is operated by the Monterey County Water Resources Agency, and a portion of this ditch is shown on Figure 2 just north of Highway 183. The watershed of the Reclamation Ditch includes 157 square miles mostly within Monterey County. The watershed drains the northwestern slopes of the Gabilan Range as well as much of the City of Salinas and its surrounding lands. The Reclamation Ditch system is a network of excavated earthen channels used to drain surface runoff generated in the watershed. Urban runoff from the City of Salinas also drains into various channels of the Reclamation Ditch system via numerous storm water outfalls. The system drains into Tembladero Slough, then the Old Salinas River Channel, and ultimately into Moss Landing Harbor through the Potrero Tide Gates. The Reclamation Ditch system conveys and collects storm water and provides flood control during the winter, but consists mostly of agricultural tile drain water from the land north and west of the City of Salinas during the summer months.

If this source water is used by the GWR Project, the Reclamation Ditch water would be collected about 500 feet northwest of the intersection of Davis and W. Market/Highway 183 Roads. The water would enter a new pump station (see “Reclamation Ditch Pump Station” on Figure 2) constructed at that same location, and then would be pumped to an existing sewer pipeline that flows to MRWPCA’s existing Salinas Pump Station. From that point, the Reclamation Ditch water would be comingled with sewage, pumped, and conveyed through an existing pipeline to the Regional Treatment Plant.

### ***Treatment Facilities***

The new proposed Advanced Water Treatment Plant would produce water suitable for subsurface application in the Seaside Basin. Because one or more potential source waters would contain municipal wastewater, the GWR Project proposes to meet the regulations of the California Department of Public Health for indirect potable reuse. The Department of Public Health has prepared Draft Groundwater Recharge Regulations (March 2013) that require full advanced water treatment for projects that intend to recharge groundwater through injection wells directly into aquifers, including requiring reverse osmosis membranes used in advanced treatment to have 99% sodium chloride removal. The regulations also limit the concentration of total organic carbon and total nitrogen values. Specified treatment levels for pathogen reduction and treatment of chemicals of emerging concern would be required to satisfy Department of Public Health permitting requirements. The GWR Project would be designed to comply with the Draft Groundwater Recharge Regulations if final regulations have not been adopted by the time

of its construction. Once final regulations are adopted, the GWR Project would comply with the final, adopted regulations. This will ensure that the GWR Project meets or exceeds all standards adopted to protect public health.

The GWR Project would include pretreatment of source waters, as needed, including pre-screening, ozone treatment, biological active carbon filtration, and dissolved air flotation. The Advanced Water Treatment Plant would include microfiltration or ultrafiltration, reverse osmosis, and advanced oxidation/disinfection using ultraviolet light with hydrogen peroxide. Post treatment and conditioning would most likely consist of decarbonation and possible introduction of pH adjusting and/or softening chemicals. Reverse osmosis concentrate would flow through a new concentrate pipeline and receiving station (allowing for mixing, sampling for water quality and flow rate) both proposed to be located within the Regional Treatment Plant site.

After mixing and sampling, the concentrate would be discharged into the on-site portion of the existing Regional Treatment Plant ocean outfall system.<sup>9</sup> Filter backwash waste would be routed to the Regional Treatment Plant headworks for secondary treatment, and if demand exists, tertiary treatment and use in the Castroville Seawater Intrusion Project system for agricultural irrigation.

### ***Product Water Conveyance Facilities***

MRWPCA proposes to construct a pipeline, measuring up to 36 inches in diameter, to convey the advanced treated (or “product”) water from the Advanced Water Treatment Plant to the Seaside Basin for injection, along one of two potential alignments as shown in **Figure 2**.

- Product Water Conveyance Option 1 would follow a portion of the recycled water pipeline alignment of the previously approved, and partially-constructed, Regional Urban Water Augmentation Program Recycled Water Project. The pipeline would be located primarily along paved roadway rights-of-way within urban areas. The Recycled Water Project was approved by the Marina Coast Water District in 2005; however, only portions of the recycled water distribution system have been built and no recycled water has been delivered to urban users. If not committed to use with recycled water for irrigation at the time of GWR Project construction, the MRWPCA may pursue using a portion or portions of the pipeline originally proposed for the Recycled Water Project by Marina Coast Water District (i.e., converting the purpose of the pipeline for use by the GWR Project). MRWPCA is exploring the feasibility of several options, including shared use of the pipeline with Marina Coast Water District, use of the pipeline by the GWR Project only, and construction of a new parallel pipeline within the same or a parallel right of way and easement, including accommodating any regulatory-required separation distances from pipelines carrying potable and recycled water.
- Product Water Conveyance Alignment Option 2 would follow a portion of the potable product water conveyance pipeline alignment of Cal-Am’s proposed desalination project that is currently the subject of California Public Utilities Commission application A.12-04-019. The pipeline alignment would start at the northern boundary of the Regional Treatment Plant access road, then

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<sup>9</sup> The RTP’s existing Waste Discharge Requirements permit allows up to 375,000 gallons per day of concentrate to be disposed through the outfall without amendment or revision to the permit; the GWR Project would exceed that amount so would require a permit amendment.

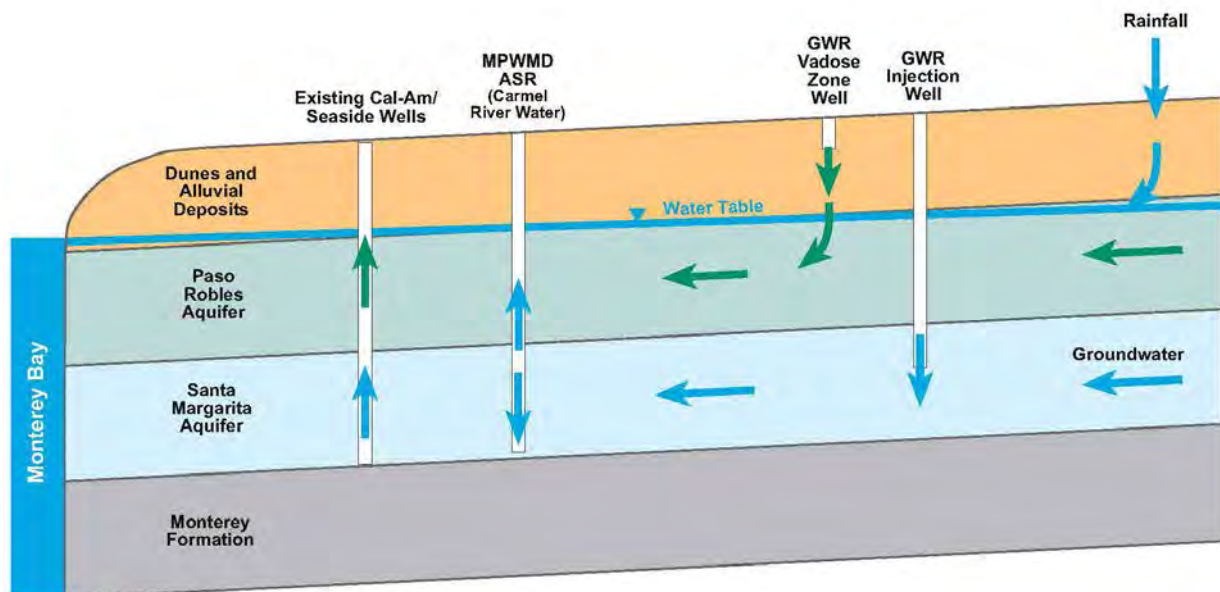
follow Charlie Benson Road to the west to Del Monte Boulevard. Alternatively, the pipeline to Del Monte Boulevard could follow the existing MRWPCA outfall pipeline alignment from the western boundary of the Regional Treatment Plant. This pipeline alignment would turn south on Del Monte Boulevard and be located either within the roadway or within land owned by the Transportation Agency for Monterey County adjacent to the roadway. After Del Monte Boulevard crosses under Highway 1, the pipeline is currently proposed to be within or parallel to the Transportation Agency's land that follows the former rail line in that location. The pipeline would continue south past Fort Ord Dunes State Park and into the City of Seaside turning east at Auto Center Parkway and Del Monte Boulevard. At this point, the pipeline would turn east following Auto Center Parkway/La Salle Avenue until either Lincoln or Havanna Streets to connect the pipeline to San Pablo Avenue. For more information about this alignment option, see the relevant CPUC NOP dated October 2012 at: [www.cpuc.ca.gov/Environment/info/esa/mpwsp/index.html](http://www.cpuc.ca.gov/Environment/info/esa/mpwsp/index.html).

Each pipeline alignment option would also require one or more pump stations, flow control valves, and other appurtenant facilities. In addition, pipelines to connect the above alignment options to the coastal and/or inland recharge sites (described below) would be required. The selection of the appropriate pipeline alignment/locations and/or performance standards for determining the locations will be assessed as part of a feasibility study that MRWPCA is currently conducting.

### **Replenishment/Recharge Facilities**

The GWR Project would include subsurface groundwater recharge facilities, including shallow (or vadose zone) and deep injection wells located at inland and, if feasible, coastal locations within the Seaside Basin. The vadose zone wells would inject water into the unsaturated soils overlying the uppermost aquifer (the unconfined Paso Robles Aquifer), and the deeper wells would directly replenish the confined Santa Margarita Aquifer. A conceptual diagram of the GWR Project recharge operations is provided in **Figure 4**.

**Figure 4. GWR Recharge Concept Schematic**





With groundwater levels currently below sea level in both the shallower Paso Robles and deeper Santa Margarita aquifers, recharge into both aquifers would be beneficial for protection against seawater intrusion. Most of the existing groundwater pumping for potable use is from wells perforated in the Santa Margarita Aquifer. Accordingly, the Santa Margarita Aquifer is targeted to receive most of the GWR Project water through direct injection. The GWR Project may also recharge high quality water into the Paso Robles Aquifer using shallower vadose zone wells. This proposed configuration of injection wells is intended to provide maximum flexibility for well operation and for optimizing both short-term groundwater production and long-term storage in the Basin.

The design for injection wells at each location has been developed based on the current understanding of the subsurface conditions and typical well capacities. The groundwater modeling evaluation to be conducted as part of the EIR will be used to optimize the number, type, location, and design of GWR Project wells. The following sections describe the proposed inland and coastal recharge facilities.

*Inland Recharge Facilities.* The inland recharge location is assumed to include four deep injection wells and four vadose zone wells that would be located in an approximate 3,000-foot long strip of land about 1,000 feet south of Eucalyptus Road and east of General Jim Moore Boulevard. MRWPCA has been working with the City of Seaside and the Fort Ord Reuse Authority to identify an acceptable location for the proposed inland recharge facilities, and the location that currently appears to be feasible is a City-planned utility corridor as shown in **Figure 2**. Wells would be placed approximately 1,000 feet apart to minimize pumping interference between the wells. Collectively, the eight wells at the inland location would be designed to recharge up to approximately 6,000 gallons per minute (gpm) of water into the Seaside Basin to allow for backup, well maintenance, and other operational benefits (such as optimization of replenishment effectiveness) while still meeting the annual volume objectives. It is anticipated that recharge amounts allocated to each well type and target aquifer could readily be adjusted based on basin conditions that will be determined through ongoing monitoring. Monitoring wells would be constructed in key locations surrounding the recharge facilities to measure water quality and water levels and to measure for tracer constituents during tracer tests that may be required by regulatory agencies. Well operations will be adapted to the results of the monitoring so that the GWR Project continually complies with applicable regulatory and permitting requirements established to protect human health and water quality.

*Coastal Recharge Facilities.* The coastal recharge facilities would include three deep injection wells and four vadose zone wells located on two undeveloped parcels immediately east of Highway 1 and west of the Bayonet and Black Horse Golf Course, as shown in **Figure 2**. Collectively, these wells would be able to recharge about 3,150 gpm of water. Due to the shallower water table at the coast, vadose zone wells would be shallower, and the long-term ability of the coastal wells to replenish both the Santa Margarita and Paso Robles aquifers would likely be less than the replenishment ability of the inland wells. The locations for the proposed coastal recharge facilities were determined based on an analysis of available land and known aquifer characteristics. The Seaside Watermaster requested the inclusion of the coastal recharge facilities in the GWR Project due to the potential benefit they may provide to preventing seawater intrusion and that organization has begun an analysis of the potential benefits of these facilities on the Seaside Basin.

*Maintenance and Monitoring Characteristics.* As previously described, the GWR Project would be operated based on a total annual recharge volume of 3,500 AFY to replace water supplies for Cal-Am's Monterey District service area. It is anticipated that well maintenance and rehabilitation would occur on an as-needed basis. A monitoring program, including tracer tests if required by regulatory agencies, would be implemented and coordinated with other ongoing monitoring programs in the Seaside Basin to allocate water between vadose zone and deep injection wells, and to ensure adequate residence time of the GWR Project water in the Seaside Basin in compliance with regulatory and permitting requirements adopted to protect public health. The GWR Project would be designed to allow for operational flexibility, allowing variation in the amounts of recharge by well over time.

### ***Extraction***

After the GWR Project water achieves residence time in the Seaside Basin in accordance with regulatory requirements, extraction of groundwater that includes GWR Project water would occur using existing potable wells, disinfection treatment processes, and distribution systems. No new extraction wells are proposed as part of the GWR Project. Because the GWR Project water would be produced in accordance with California Department of Public Health requirements which are protective of public health, and because the water would meet the applicable residence time requirements within the groundwater basin, no additional treatment beyond current operations would be required after the water is extracted. The amount and quality of water to be extracted and used would be monitored pursuant to applicable regulatory requirements.

## **Construction Methods and Schedule**

The GWR Project is proposed to be constructed with typical construction methods and equipment, although directional/horizontal drilling may be used for potential source water pipeline crossing(s) of the Salinas River and installation through major intersections along the pipeline corridor. A schedule has been developed for the planning, design, and construction components of the project with a target date of December 2016 for initial groundwater recharge activities to commence.

## Permits and Agreements Anticipated to be Required

As previously discussed, the Monterey Peninsula Water Management District, MRWPCA, and Cal-Am jointly entered into a Groundwater Replenishment Project Planning Term Sheet and Memorandum of Understanding to Negotiate in Good Faith on April 20, 2012. MRWPCA would need to enter into other agreements with entities/agencies who may control the source waters and rights of way, including but not limited to: 1) Monterey County Water Resources Agency to obtain water from Blanco Drain and Reclamation Ditch sources; 2) Monterey County Water Resources Agency, Marina Coast Water District, or both, for use of Regional Treatment Plant effluent and use of various water conveyance facilities and rights of way; and 3) the City of Salinas for source water from its Treatment Plant and stormwater system, and for possible electrical power purchase. MRWPCA would also need to enter into a water purchase agreement with the Monterey Peninsula Water Management District (contingent on a water purchase agreement between Cal-Am and the Monterey Peninsula Water Management District) for the GWR Project water. Other agreements not currently identified may also be required.

**Table 1** is an initial list of agencies and entities that may be involved in permitting and/or approving one or more aspects of the GWR Project. This list is preliminary and may require revision as the GWR Project's design, including construction and operational characteristics, are further developed.

<b>Table 1: Potential Permits and Approvals Required</b>	
<b>Agency /Entity</b>	<b>Permitting Regulation/Approval Requirement</b>
<b>Federal Agencies</b>	
U.S. Environmental Protection Agency	Class V Underground Injection Control Program (Part C, Safe Drinking Water Act [SDWA])
Monterey Bay National Marine Sanctuary	Review and coordination of all RWQCB 404, Section 10, and NPDES permits
U.S. Fish and Wildlife Service	Endangered Species Act compliance (ESA Section 7 consultation) Fish and Wildlife Coordination Act (16 USC 661-667e; Act of March 10, 1934; ch. 55; 48 stat. 401)
U.S. Dept. of Interior: NOAA – Fisheries	Endangered Species Act compliance (ESA Section 7 consultation)
Army Corps of Engineers	Nationwide Section 404 Permit (Clean Water Act, 33 USC 1341) Section 10, Rivers and Harbors Act Permit (33 U.S.C. 403)
Federal Aviation Administration	Form SF 7460-1 Notice of Proposed Construction & Alteration for Airport Airspace Aeronautical
<b>State Agencies</b>	
California Public Utilities Commission	Coordination regarding the MPWSP Certificate of Public Convenience and Necessity (Application No. 12-04-019)
State Water Resources Control Board, Regional Water Quality Control Board	General Construction Activity Storm Water Permit (WQO 99-08-DWQ) Water rights permit for development of new surface water diversions Waste Discharge Requirements (Water Code 13000 et seq.) 401 Water Quality Certification (CWA Section 401) National Pollutant Discharge Elimination System (NPDES) Permit (CWA Section 402)
California State Lands Commission	Right-of-Way Permit (Land Use Lease) (California Public Resource Code Section 1900); Lease amendment
California Department of Fish and Wildlife	Incidental Take Permits (CA Endangered Species Act Title 14, Section 783.2) Streambed Alteration Agreement (California Fish and Game Code Section 1602)
California Coastal Commission	Coastal Development Permit (Public Resources Code 30000 et seq.)
California Department of Public Health	Permit to Operate a Public Water System (California Health and Safety Code Section 116525) Approval for Recharge of Highly Treated Water
California Department of Transportation	Encroachment Permit (Streets and Highway Code Section 660)
California State Historic Preservation Officer	Section 106 Consultation, National Historic Preservation Act (16 USC 470)
California State University Monterey Bay	Right of Way Agreements and/or Easements
<b>Regional/Local Agencies</b>	
City of Salinas	Electricity Power Purchase Agreement
Cities of Seaside and Marina, Sand City, Salinas (potential)	Use Permits, encroachment/easement permits, grading permits and erosion control permits may be required pursuant to local city/County codes.
Fort Ord Reuse Authority	Coordination with FORA for Right of Entry
Monterey Bay Unified Air Pollution Control District	Authority To Construct (Local district rules, per Health and Safety Code 42300 et seq.) and Permit To Operate (Local district rules)
Monterey County Health Department, Environmental Health Division	Well Construction Permit (MCC, Title 15 Chapter 15.08, Water Wells) Hazardous Materials Business Plan (Health and Safety Code Chapter 6.95) Hazardous Materials Inventory (Health and Safety Code Chapter 6.95) Review of Discharges/WDR modifications Variation on Monterey County Noise Ordinance (MCC 10.60.030)
Monterey County Public Works Department	Encroachment Permit (Monterey County Code (MCC) Title 14 Chapter 14.040)
Monterey County Resource Management Agency	Use Permit (MCC Chapter 21.72 Title 21) may be required pursuant to County codes. Coastal Development Permit. (Public Resources Code 30000 et seq.) Grading Permit (M.C.C., Grading and Erosion Control Ordinance, Chapter 16.08 – 16.12) Erosion Control Permit (MCC, Grading and Erosion Control Ordinance, Chapter 16.08 – 16.12)
Monterey County Water Resource Agency	Coordination/agreements for components within MCWRA-controlled waterways and involving the Castroville Seawater Intrusion Project and Salinas Valley Reclamation Project
Monterey Peninsula Water Management District	Water System Expansion Permit (Monterey Peninsula Water Management District Board of Directors Ordinance 96)
Monterey Reg. Waste Management District	Electric Power Purchase Agreement
Seaside Basin Watermaster	Permit for Injection/Extraction
Transportation Agency of Monterey County	Easement
Water Agencies (other)	Participation/purchase agreements
<b>Private Entities</b>	
Landowners	Land lease/sale; easements and encroachment agreements
California American Water Company	Water purchase agreement with Monterey Peninsula Water Management District
PG&E	Electric Power Will-Serve Letter/Purchase Agreement

## Environmental Effects to be Analyzed

The GWR Project EIR will evaluate potential environmental effects associated with construction, operation, and maintenance activities. The EIR will assess the following issues of potential environmental effect:

*Aesthetic Resources:* Project facilities would be sited in potentially scenic and open space areas; however most facilities would be underground or located on existing water and wastewater facility sites. Those facilities that are not located on existing water and wastewater facility sites would be designed to visually blend into the environment through use of vegetative screening and/or appropriate paint colors. The EIR will evaluate visual/aesthetic impacts related to the GWR Project's above-ground facilities.

*Air Quality and Greenhouse Gas Emissions:* The EIR will evaluate construction- and operation-related emissions of criteria air pollutants. The GWR Project will be evaluated in accordance with all applicable federal, state, and regional rules and guidelines. Potential human health risks at nearby sensitive receptors from emissions of diesel particulate matter and toxic air contaminants during construction and operations will be addressed. The EIR will also address greenhouse gas (GHG) emissions during construction and operations, and describe any potential conflict the GWR Project may have with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG.

*Biological Resources:* The EIR will evaluate potential impacts on terrestrial special-status animal and plant species, sensitive habitats, mature native trees, and migratory birds believed to occur in the GWR Project area. The GWR Project may result in changes to the quantity and quality of the treatment plant effluent discharged through the existing MRWPCA outfall to Monterey Bay; therefore, potential effects on marine resources will be evaluated. The EIR will include a summary of the federal Endangered Species Act Section 7 compliance activities and will recommend feasible mitigation measures to reduce significant impacts on biological resources.

*Cultural Resources:* The EIR will review cultural resource records and evaluate potential impacts on historic, archaeological, and paleontological resources, and human remains in the Project area. The EIR will include a summary of the National Historic Preservation Act Section 106 compliance activities. Standard mitigation measures to protect cultural resources will be included in the EIR.

*Geology and Soils:* Construction and operation will occur in a seismically active region. As such, the proposed GWR Project structures could be subject to potential seismic and geologic hazards. The EIR will identify potential seismic, liquefaction, landslide, soil erosion, and expansive soil impacts expected to result from development of the proposed GWR Project. Standard building requirements would be included to protect buildings and structures from seismic risks.

*Hazards and Hazardous Materials:* The EIR will summarize documented soil and groundwater contamination in the Project area, and evaluate the potential for hazardous materials to be encountered during construction. The analysis will also consider the proper handling, storage, and use of hazardous chemicals that may be used during construction and operation. Existing hazardous materials regulatory requirements would be followed to protect workers and the public from exposure to hazardous materials. Airport safety hazards will also be addressed.

*Hydrogeology and Groundwater Quality:* Construction and operation of the Project could affect groundwater levels and quality in the Seaside, Carmel Valley, and Salinas Valley Groundwater Basins.

Through the use of groundwater modeling and hydrogeologic analyses, the EIR will evaluate changes in local groundwater quality, storage, and levels within the groundwater basins as a whole and their subbasins, as appropriate. Potential effects on the seawater/freshwater interface (i.e., seawater intrusion) will also be evaluated. The project would be designed to comply with California Department of Public Health and Regional Water Quality Control Board standards and requirements to protect public health and water quality.

*Hydrology and Surface Water Quality:* Construction and operation of the Project could affect surface water quality and hydrologic systems/processes in the construction areas. Potential impacts to be evaluated include alteration of drainage patterns and increase in stormwater flows due to increase in the amount of impervious surfaces, and degradation of surface water quality as a result of erosion and sedimentation, hazardous materials release during construction, and construction dewatering discharges. The project would be designed to comply with standard construction and operational requirements and permits under the National Pollutant Discharge Elimination System and Waste Discharge Requirements.

*Land Use and Planning:* Implementation of the proposed GWR Project includes construction and operation of new facilities and water supply infrastructure. The EIR will evaluate the proposed GWR Project for consistency with established plans, policies, and regulations, as well as compatibility with the existing and future land use patterns in the GWR Project area, including adjacent land uses. The proposed GWR Project's functional and physical compatibility with surrounding uses will also be analyzed. Because most conveyance facilities will be underground, and because the proposed treatment facilities would be located at the existing Regional Treatment Plant, significant effects on land use patterns are not anticipated.

*Noise:* The EIR will evaluate construction- and operation-related noise and vibration increases and associated effects on ambient noise levels, relative to applicable noise standards, and will address the potential for impacts to nearby sensitive land uses.

*Population and Housing:* Implementation of the proposed GWR Project would enhance the reliability of the water supply within the Monterey Peninsula area, but the project would provide replacement water rather than new water to serve growth. The EIR will describe the relationship of water supply to population growth in the area. The EIR will identify current population and employment projections and identify local planning jurisdictions with the authority to approve growth and mitigate secondary effects of growth.

*Transportation and Traffic:* The EIR will generally describe the types of construction activities that would generate temporary increases in traffic volumes along local and regional roadways. The installation of pipelines within or adjacent to road rights-of-way could result in temporary lane closures and traffic delays. The analysis will use information about construction activities (e.g., the numbers of trucks and workers) to the extent such information is available. The analysis will generally describe the types of traffic control plan measures that would be used to reduce impacts to vehicular traffic, traffic safety hazards, public transportation, and other alternative means of transportation.

*Other Environmental Issues:* Other environmental issues that will be evaluated in the EIR include the Project's potential impacts on public services and utilities, including the Project's beneficial effect on water supply reliability; water rights for project source water; effects on energy delivery systems due to fossil-fuel resource use; and effects on agricultural, mineral, and forest resources. The EIR also will evaluate potential growth-inducing impacts that could result from implementation of the Project. The EIR

will address whether the Project could result in impacts that would be significant when combined with the impacts of other past, present and reasonably foreseeable future projects (i.e., cumulative impacts).

*Alternatives:* California Environmental Quality Act requires that an EIR evaluate a reasonable range of feasible alternatives to the project, or to the location of the project, that would attain most of the basic project objectives but that could avoid or substantially lessen any of the significant effects of the project. The EIR will identify the potentially significant impacts of the proposed Project. The findings of the EIR impact analysis will guide the refinement of an appropriate range of feasible alternatives to be evaluated in the EIR that would avoid or substantially lessen significant impacts, while still meeting the project objectives. MRWPCA is seeking comments from agencies, stakeholders and the public regarding feasible alternatives for evaluation in the EIR. The EIR will include, at a minimum, a discussion of impacts associated with the No Project Alternative.

## **Environmental Review Process**

The MRWPCA has determined that the GWR Project may have a significant effect on the environment and an EIR is required. The MRWPCA is the Lead Agency for California Environmental Quality Act purposes. The MRWPCA anticipates seeking State Revolving Fund funding from the California State Water Resources Control Board. Therefore, the requirements of California Environmental Quality Act-Plus will be met and the analysis in the EIR will be conducted in compliance with those requirements. Currently, the potential for federal funding or permitting for the project is unknown; however, if a federal agency must issue a discretionary permit for the GWR project or approve some component of the project such as funding, compliance with the National Environmental Policy Act may be necessary.

The first step in the environmental review process is the formal public scoping process, for which this NOP has been prepared. Following the public scoping period, the Draft EIR will be prepared and circulated for a 45-day public review period. Public comments on the Draft EIR will be accepted in writing during the review period or verbally at a formal public meeting to be held by the MRWPCA. The MRWPCA will then prepare written responses to the comments on environmental issues raised during the public review period, and a Response to Comments document will be prepared. That document will be considered by the MRWPCA, along with the Draft EIR and any revisions to the draft based on responses to comments, for certification as the Final EIR.

## **Scoping and Public Meeting**

The California Environmental Quality Act mandates that a scoping meeting be held for projects of statewide, regional or area-wide significance. To ensure that the public and regulatory agencies have an opportunity to ask questions and submit comments on the scope and content of the EIR, a scoping meeting will be held during the NOP review period. The location and date of the scoping meeting is:

**Date: Tuesday, June 18, 2013**

**Time: 6:00-8:00 PM**

**Location: Oldemeyer Center, Dance Room (986 Hilby Avenue, Seaside, CA 93955)**

The scoping meeting will start with a brief presentation providing an overview of the proposed GWR Project. Following the presentation, interested parties will be provided an opportunity to interact with MRWPCA staff and its technical consultants. Participants are encouraged to submit written comments; comment forms will be supplied at the scoping meeting. Written comments may also be submitted anytime during the NOP scoping period to the mailing address, fax number, or email address listed below.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but not later than 30 days after receipt of this notice. The scoping comment period will close at **5:00 PM on Tuesday, July 2, 2013**. Please include a name, address, email address, and telephone number of a contact person in your agency for all future correspondence on this subject. **Please send your comments to:**

**Monterey Regional Water Pollution Control Agency**

**ATTN: Bob Holden**

**5 Harris Court, Bldg D**

**Monterey, CA 93940**

**Phone: (831) 372-3367 or (831) 422-1001**

**Fax: (831) 372-6178**

**E-mail: [GWR@mrwpca.com](mailto:GWR@mrwpca.com)**

This Notice of Preparation is available electronically at the MRWPCA website:

[www.mrwpca.org](http://www.mrwpca.org).